FILED
2018 Jan-16 PM 03:39
U.S. DISTRICT COURT
N.D. OF ALABAMA

IN THE UNITED STATES DISTRICT COURT FOR THE NORTHERN DISTRICT OF ALABAMA

DOYLE LEE HAMM, Plaintiff, v. JEFFERSON S. DUNN, Commissioner, Alabama Department of Corrections, et al., Defendants.	)	Civil Action No. 2:17-cv-02083-KOB **EXECUTION SCHEDULED** **Thursday, February 22, 2018**

DOYLE HAMM'S RESPONSE TO DEFENDANTS' MOTION FOR SUMMARY JUDGMENT

Bernard E. Harcourt
Bar Number: ASB-4316-A31B
Attorney for Doyle Lee Hamm
Columbia Law School
435 West 116th Street
New York, New York 10027
Telephone: (212) 854-1997
Fax: (212) 854-7946

Dated: January 16, 2018

TABLE OF CONTENTS

TABLE OF AUTHORITIES

Cases

Statutes

Other Authorities

Constitutional Provisions

I. INTRODUCTION

This §1983 case presents a straightforward question: Whether an attempted lethal injection as planned for Doyle Lee Hamm in his current medical condition would violate the Eighth Amendment prohibition on cruel and unusual punishment?

The controlling legal standard is also crystal clear. As the Eleventh Circuit recently reaffirmed on September 1, 2017, in the consolidated case of *Frazier v. Commissioner*, Case No. 16-16876, Slip. Op. at p. 5 (11th Cir. September 1, 2017), reversing the District Court for the Middle District of Alabama's grant of summary judgment on a challenge to the Alabama lethal injection protocol, and on September 6, 2017, in the consolidated case of *West v. Commissioner*, Case No. 17-11536, Slip Op. at p. 6-7 (11th Cir. September 6, 2017), also reversing the District Court for the Middle District of Alabama's grant of a motion to dismiss in another challenge to the Alabama lethal injection protocol, the *Glossip/Baze* legal standard requires (1) that the plaintiff demonstrate that the planned method of execution presents a substantial risk of serious harm, and (2) that the plaintiff identify an alternative that is feasible, readily implemented, and in fact significantly reduces a substantial risk of severe pain.

The defendants filed a motion in opposition, *see* Doc. 12, that put into question a number of genuine issues of material fact, *see* Doc. 12 Exhibit D (Affidavit of Dr. Roy F. Roddam); Doc. 12 Exhibit E (Affidavit of James Dennis Butler); Doc. 12 Exhibit F (Affidavit of Kelley McDonald); Doc. 12 Exhibit G (Affidavit of Elisabeth Wood); and Doc. 12 Exhibit H (Akorn, Inc., pharmaceutical label for Midazolam).

This Court is treating defendants' motion in its entirety as a motion for summary judgment. *See* Doc. 13. Therefore, the case is now properly before the Court on defendants' motion for summary judgment.

Under the well-established legal standard for summary judgment, this Court should deny the defendants' motion because, in the affidavits and exhibits that they attach outside the pleadings of their motion and in the arguments that they make in their motion, the defendants have created multiple significant and genuine issues of material fact that are now in dispute concerning the question presented in Doyle Hamm's case—factual disputes that now require a full evidentiary trial. The multiple material issues of fact now in dispute mostly revolve around one central factual disagreement:

1/ *whether the defendants can successfully achieve venous access in Doyle Hamm's situation for purposes of a lethal injection given his current medical condition*.

The multiple material issues of fact that grow out of this central factual dispute include, but are not limited to:

2/ *whether there is now venous access for purposes of drawing blood from Doyle Hamm only in the tortuous little vein on the back of his right hand*;

3/ *whether venous access for purposes of drawing blood from his right hand would provide venous access for purposes of inserting a larger catheter into Doyle Hamm in order to perform a lethal injection from a remote distance from Doyle Hamm*;

4/ *whether Doyle Hamm now suffers from lymphadenopathy and whether that would present a substantial risk of serious harm that might interfere with a humane execution*;

5/ *whether Doyle Hamm's medical condition and venous access got materially worse during the Spring of 2017*;

6/ *whether there exists a feasible, readily implementable, and legal alternative method of execution that would significantly reduce a substantial risk of severe pain*;

7/ *whether the defendants' treatment of Doyle Hamm amounts to cruel and unusual*

punishment; and

8/ *whether defendants' medical treatment (and non-treatment) of Doyle Hamm's cancer amounts to cruel and unusual punishment*.

Because of the multiple material factual disputes surrounding Doyle Hamm's as-applied challenge to the defendants' planned lethal injection of him, this Court should deny defendants' motion for summary judgment and set the case for a full evidentiary trial.

In their affidavits just filed, the defendants also provided evidence for a new ground for relief and a new legal issue about whether the defendants are now currently violating the Eighth Amendment by adding to his sentence of death by lethal injection a constant stream of attempts to draw blood from him in cruel anticipation of his looming appointment with an unnecessarily painful attempted lethal injection. Doyle Hamm is accordingly filing today a first amended complaint and provides the legal and factual arguments for it here.

I. THE LEGAL STANDARD FOR SUMMARY JUDGMENT

The legal standard for summary judgment is well known and has recently been reiterated in the context of a lethal injection challenge where the Eleventh Circuit reversed the District Court for the Middle District of Alabama for granting summary judgment. *See Frazier v. Commissioner*, Case No. 16-16876, (11th Cir. September 1, 2017). As the Eleventh Circuit reiterated in *Frazier*, "Under Rule 56(c), summary judgment is proper 'if the pleadings, depositions, answers to interrogatories, and admissions on file, together with the affidavits, if any, show that there is no genuine issue as to any material fact and that the moving party is entitled to a judgment as a matter of law.'" *Frazier*, Slip Op. at 22-23 (quoting *Celotex Corp. v. Catrett*, 477 U.S. 317, 322 (1986)). The Eleventh Circuit reminded us: "'The movant has the

burden of showing that there is no genuine issue of fact.'" *Frazier,* Slip Op. at 23 (quoting *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 256, (1986)). And, most importantly, the Eleventh Circuit reemphasized in *Frazier* that "'In deciding whether to grant summary judgment, a district court "'may not weigh conflicting evidence or make credibility determinations.'" *Frazier,* Slip Op. at 23 (quoting *Jones v. UPS Ground Freight*, 683 F.3d 1283, 1292 (11th Cir. 2012)).

It is important to emphasize here, with the Eleventh Circuit and well-established Supreme Court precedent, that in determining whether summary judgment is proper, a court must look at the record in the light most favorable to the party opposing the motion, drawing all inferences most favorable to that party, here Doyle Hamm. *Harlow v. Fitzgerald*, 457 U.S. 800, 816 n.26 (1982). Moreover, this Court may not resolve factual disputes if any arise from the pleadings and affidavits. The only legal question on the motion for summary judgment is whether there is a genuine issue as to any material fact. *Id.*

II. THERE ARE GENUINE ISSUES OF MATERIAL FACT IN DISPUTE REGARDING DOYLE HAMM'S EIGHTH AMENDMENT CLAIM

The legal standard in this "as-applied" challenge to lethal injection, given Doyle Hamm's medical condition, is straightforward and well-known to all parties: The Eighth Amendment's prohibition against cruel and unusual punishment forbids applying a method of execution that presents "a substantial risk of significant harm." U.S. Const. Amend. VIII; *Glossip v. Gross*, 135 S.Ct. 2726, 2737 (2015); *Baze v. Rees*, 553 U.S. 35, 50-52 (2008) (plurality opinion); see also *In re Kemmler*, 136 U.S. 436, 447 (1890) (punishments are cruel when they involve "a lingering death"). The Eighth Amendment also precludes the deliberate indifference to a prisoner's

medical condition. *See Estelle v. Gamble*, 429 U.S. 97, 104 (1976) ("We therefore conclude that deliberate indifference to serious medical needs of prisoners constitutes the 'unnecessary and wanton infliction of pain' proscribed by the Eighth Amendment.'"). Where an Eighth Amendment cruel-and-unusual-punishment claim alleges this type of risk of future harm, circumstances must raise the risk of "needless suffering," *Baze*, 553 U.S. at 50 (quoting *Helling v. McKinney*, 509 U.S. 25, 33, 34–35 (1993)); see also *Glossip*, 135 S. Ct. at 2737.

Federal courts have considered the situation of a prisoner sentenced to lethal injection who does not have accessible veins as raising precisely this type of Eighth Amendment violation. *See Nelson v. Campbell*, 541 U.S. 637 (2004) (an Alabama death penalty case involving identical issues of venous access under the Eighth Amendment); *see also* Exhibits A and B (United States District Court of the Middle District of Alabama order appointing special master in David Nelson's case and special master's report). If the executioners cannot, or cannot reasonably, access veins for a lethal injection, the process will cause needless suffering and ultimately will be aborted after many painful attempts. We just recently saw this very situation in the case of death row inmate Alva Campbell in the state of Ohio.[1]

This problem has plagued lethal injection in many states, resulting in aborted and botched executions in violation of the Eighth Amendment. Professor Deborah W. Denno recounts in her 2014 law review article, *Lethal Injection Chaos Post-Baze*, 102 Geo. L.J. 1331, 1356 n.159 (2014), the type of cruel and unusual punishment scenario that happens when a condemned inmate who does not have accessible veins is nevertheless sent to the execution chamber:

> For over two hours [on September 15, 2009, Romell] Broom withstood nearly twenty "puncture wounds," as the execution team made "numerous, unsuccessful" attempts to search for a viable vein that would not collapse when drugs were injected. *See* State v.

[1] *See* Liam Stack, "Execution in Ohio Is Halted After No Usable Vein Can Be Found," *New York Times*, November 15, 2017, available at https://www.nytimes.com/2017/11/15/us/ohio-

> Broom, No. 96747, 2012 WL 504504, at *1 (Ohio Ct. App. Feb. 16, 2012). During this time, the team took breaks, changed execution strategies, probed different access sites on Broom's body, as well as garnered the direct assistance of a staff doctor who was not part of the team. *See id.* After the first forty-five minutes of the execution process, for example, the prison director ordered the team to stop so that they could confer about what to do because nothing was working. *See id.* Ten-to-twenty minutes later, the team reconvened to try to establish an intravenous line (IV) in Broom's biceps, forearms, and hands. When this strategy failed, they called upon the staff doctor to try something else. That doctor unsuccessfully attempted to insert the IV catheters on top of Broom's foot and ankle bone, an excruciating experience for Broom who claimed that the needle entered his ankle bone. *See id.* Ultimately, the execution was halted, and Broom remains alive, awaiting the possibility of a second execution attempt.[2]

In Doyle Hamm's case, the several affidavits and exhibits filed by the defendants accompanying their motion for summary judgment raise a number of genuine issues of material fact regarding this precise Eighth Amendment problem. The central factual dispute concerns whether the defendants can achieve venous access for purposes of a lethal injection in Doyle Hamm's case. Overarching all of the other genuine issues of fact is one central question that is

[2] Professor Denno refers here to Josh Sanburn, *Ohio's Grisly Execution History*, TIME (Jan. 17, 2014), http://nation.time.com/2014/01/17/ohios-grisly-execution-history/. For other cases, though by no means a complete list, of botched lethal injection executions where the prisoner's veins were not accessible, *see* case number 5 of the 1985 execution of Stephen Peter Morin, case number 7 of the 1986 execution of Randy Woolls, case number 8 of the 1987 execution of Elliot Rod Johnson, case number 9 of the 1988 execution of Raymond Landry, case number 16 of the 1992 execution of Rickey Ray Rector, case number 19 of the 1992 execution of Billy Wayne White, case number 23 of the 1996 execution of Richard Townes, Jr., case number 24 of the 1996 execution of Tommie J. Smith, case number 27 of the 1997 execution of Michael Eugene Elkins, case number 28 of the 1998 execution of Joseph Cannon, case number 29 of the 1998 execution of Genaro Ruiz Camacho, case number 30 of the 1998 execution of Roderick Abeyta, case number 32 of the 2000 execution of Christina Marie Riggs, case number 33 of the 2000 execution of Bennie Demps, case number 34 of the 2000 execution of Claude Jones, case number 36 of the 2001 execution of Jose High, case number 37 of the 2006 execution of Joseph L. Clark, case number 39 of the 2007 execution of Christopher Newton, case number 40 of the 2007 execution of John Hightower, case number 41 of the 2008 execution of Curtis Osborne, case number 43 of the 2010 execution of Brandon Joseph Rhode, case number 47 of the 2015 execution of Brian Keith Terrell, case number 48 of the 2016 execution of Brandon Jones, and case number 50 of the 2017 attempted execution of Alva Campbell, listed and discussed at the Death Penalty Information Center, Botched Executions, https://deathpenaltyinfo.org/some-examples-post-furman-botched-executions (last visited Jan. 15, 2018).

clearly in dispute:

A. Whether the defendants can successfully achieve venous access in Doyle Hamm's situation for purposes of a lethal injection given his current medical condition:

In their motion for summary judgment, defendants assert that "the undisputed evidence establishes that [Doyle Hamm] has accessible veins with which a lethal injection may be carried out." Doc. 12 at 26. Defendants argue that their affiant, nurse practitioner James Dennis Butler, "located numerous locations on Hamm's hands, wrists, and feet that could accommodate standard gauge needles used to establish IV access." Doc. 12 at 27.

This factual allegation is directly contradicted by the preliminary report of Dr. Mark Heath attached to the original complaint in this case. *See* Doc. 1, Appendix A; *see also* Exhibit E (Report of J.S. Heath, MD, dated January 16, 2018). Dr. Mark Heath, who has extensive experience in anesthesiology and in the legal and factual issues surrounding lethal injection in general and in Alabama in particular, conducted a physical examination of Doyle Hamm and concluded that "it is my opinion that the state [of Alabama] is not equipped to achieve venous access in Mr. Hamm's case." Doc. 1 at 30 (Appendix A at 7); *see also* Exhibit E at ¶12.

On the ground of this central issue of material fact alone, the defendants' motion for summary judgment should be denied. However, there are a number of other related issues of material fact that also require that the Court deny the defendants' motion.

B. Whether there is now venous access for purposes of drawing blood from Doyle Hamm only in the tortuous little vein on the back of his right hand:

There is a significant factual dispute, especially among defendants' four affiants, as to whether there is currently any access to Doyle Hamm's veins, for purposes of drawing blood,

other than from that tortuous little vein on his right hand.

On the one hand, defendants' affiants, Mr. Butler and Dr. Roy F. Roddam, state that there is easy venous access to Doyle Hamm on his arms, hands, wrists, and feet. Mr. Butler states that Doyle Hamm has veins in his feet that "would easily accommodate a large bore catheter (18 or 16 gauge)." Doc. 12, Ex. E at 2. (That is, incidentally, a *huge* catheter, so these veins must be *extremely* visible). Mr. Butler also found accessible veins that could accommodate 20 to 22 gauge catheters (smaller catheters, the size goes in reverse order) on Doyle Hamm's arms (both the distal radius and the ventral surface of both arms) and on both of his hands. Doc. 12, Ex. E at 2. Somewhat less extreme, defendants' doctor, Dr. Roddam, states that Doyle Hamm has two superficial veins in his right wrist that would provide venous access. Doc. 12, Ex. D at 2. On the basis of these two affiants, it would appear that there is easy access to large veins practically all over Doyle Hamm's extremities.

On the other hand, it appears that there is only one tortuous vein on Doyle Hamm's right hand that can now be accessed and only with great difficulty for purposes of drawing blood. The two other affiant nurse practitioners, Elisabeth Wood and Kelley McDonald, have recently been trying, with some difficulty, to actually draw blood from Doyle Hamm and they have recently *only* been trying to use the one compromised vein on his right hand. If in fact there were so many easily accessible veins on Doyle Hamm's arms, hands, wrists, and feet, then why are the nurses constantly and exclusively trying to access the compromised vein on his right hand for purposes of drawing blood, even after they do not succeed there? Clearly, this is an issue of material fact that is in dispute *within* the defendants' own evidence.

The record of recent attempts at drawing blood from Doyle Hamm is striking—and raises several other legal issues discussed *infra.* The record consists of the following:

1/ On May 5, 2017, Ms. Wood drew blood from Doyle Hamm using the vein on his right hand. Doc. 12 Ex. G at ¶5.

2/ On October 3, 2017, Ms. McDonald had to stick Doyle Hamm two times in the vein on his right hand in order to draw blood. Doc. 12 Ex. F at ¶5.

3/ On October 31, 2017, Ms. McDonald twice attempted to draw blood from Doyle Hamm in the vein on his right hand and did not succeed. Doc. 12 Ex. F at ¶6.

4/ On November 7, 2017, Ms. McDonald again tried to draw blood from Doyle Hamm (one can infer from the way the affidavit is written) using the vein on his right hand and did not succeed. Doc. 12 Ex. F at ¶6.

5/ That same day, November 7, 2017, Ms. Wood drew blood from the vein on Doyle Hamm's right hand. Doc. 12 Ex. F at ¶6; Doc. 12 Ex. G at ¶4.

6/ On November 14, 2017, Ms. McDonald drew blood from Doyle Hamm on his right hand. Doc. 12 Ex. F at ¶6.

7/ On December 18, 2017, Ms. McDonald drew blood from Doyle Hamm on his right hand. Doc. 12 Ex. F at ¶4.[3]

The evidence from nurses Wood and McDonald is consistent with the evidence presented in Dr. Heath's preliminary report, where Dr. Heath indicated that, at the physical examination conducted on September 23, 2017, he did not find any peripheral veins except for one on the back of Doyle Hamm's right hand: "On the dorsum of the right hand there is a small, tortuous vein that is potentially accessible with a butterfly needle." Doc. 1 at 26 (Appendix A at p. 3, ¶7);

[3] Ms. McDonald states that on December 18, 2017, Doyle Hamm would not allow her to draw blood "from anywhere except his right hand." Doc. 12 Ex. F at ¶4. This fact is in dispute too. Doyle Hamm explains that "Recently, I tried to explain to the nurses that the only place that they have been able to draw blood from me, when they did succeed, was from this one vein on my right hand. I was just trying to help then, not telling them not to try elsewhere. I don't like getting pricked so I was just trying to help them." Exhibit F (Affidavit of Doyle Hamm) at ¶5.

see also Exhibit E.

For purposes of defendants' motion for summary judgment, these factual disputes raise a genuine issue of material fact concerning whether there is, now, as of this date, any vein that can be accessed for purposes of drawing blood other than the small, tortuous vein on Doyle Hamm's right hand. On this ground as well, defendants' motion for summary judgment should be denied.

Looking ahead to the merits of this §1983 challenge, the disputed evidence here indicates powerfully that, since Spring 2017, Doyle Hamm's medical condition has materially deteriorated, resulting in the fact that he only has one small tortuous vein on his right hand that can be accessed to draw blood, and only with difficulty. The affidavits and exhibits that defendants attached to their motion also present powerful evidence that they are now engaged in cruel and unusual punishment, as discussed in Part III *infra*.

C. Whether venous access for purposes of drawing blood from Doyle Hamm's right hand would provide venous access for purposes of inserting a larger catheter into Doyle Hamm in order to perform a lethal injection from a remote distance away from Doyle Hamm:

Another related genuine issue of material fact is whether the evidence from nurses Wood and McDonald, regarding the difficult venous access to that small tortuous vein on Doyle Hamm's right hand using a thin needle for purposes of drawing blood, has any bearing on the possibility of inserting a larger catheter into Doyle Hamm for purposes of lethal injection.

Defendants maintain that there is no dispute surrounding venous access for purposes of lethal injection because there is no "evidence of any current difficulty in accessing Hamm's veins, as the affidavits of Ms. McDonald and Ms. Wood noted above establish that they have been able to draw blood from Hamm for routine procedures without substantial difficulty

throughout the past year. See Exs. F, G." Doc. 12 at p. 28. This conclusion rests on a disputed factual contention that access to veins for purposes of drawing blood would satisfy access for purposes of lethal injection. *See* Exhibit E at ¶9 (Report of Dr. Mark Heath).

Along at least three important dimensions, this is clearly in dispute and central to the Eighth Amendment claim:

1/ taking a blood sample can be done with a very fine needle, known in practice as a "butterfly needle;" by contrast, lethal injection is done with a larger catheter that is semi-permanently inserted into a vein;

2/ drawing blood is much less onerous than inserting large quantities of lethal drugs into a vein; and

3/ a blood draw using a needle is done by a practitioner who is situated right next to the patient and is able to use his or her eyes and other hand to make sure that the procedure functions properly; by contrast, the lethal injection of drugs is done by practitioners situated in another room at a great distance from the condemned inmate, who can not always see what is going on with the injection and whether the drugs are going into the vein or into tissue.[4]

As a result, there is a clear issue of material fact as to whether any access to the small tortuous vein on Doyle Hamm's right hand would allow for venous access for purposes of lethal injection. *See* Exhibit E at ¶9. Dr. Heath's preliminary report indicates as much: "It is extremely doubtful, given the way that the correctional staff in Alabama administers the anesthetic agents from another room at distance from the inmate rather than at his bedside, that they will be able to achieve peripheral IV access." Doc. 1 at p. 28 (Appendix A, p. 5, ¶13). It is in fact on this basis

[4] This was the cause, for instance, of the problem in *Glossip* regarding what the Supreme Court referred to as "infiltration," which causes excessive and unnecessary pain. *See Glossip,* 135 S.Ct. at 2734.

that, in Dr. Heath's expert medical opinion, the state of Alabama is unlikely to achieve venous access. Dr. Heath states that "Based on my knowledge of previous Alabama lethal injection procedures and protocols, this small, tortuous vein on his right hand would not provide reliable peripheral venous access." Doc. 1 at p. 26 (Appendix A, p. 3, ¶7).

This is another genuine issue of material fact that is in dispute and demands that the defendants' motion for summary judgment be denied.

D. Whether Doyle Hamm now suffers from lymphadenopathy and whether that would present a substantial risk of serious harm that might interfere with a humane execution:

The next factual dispute concerns Doyle Hamm's lymphatic cancer and whether it would interfere with the venous access during his planned lethal injection. This raises two factual disputes: first, whether Doyle Hamm now suffers from lymphadenopathy; and second, whether it might interfere and cause unnecessary pain and suffering.

Lymphadenopathy is a condition related to lymphatic cancer that causes swelling of lymph nodes. Lymph nodes tend to surround veins and arteries. If Doyle Hamm is experiencing lymphadenopathy during the intended execution, it would create a significant risk of unnecessary pain and suffering. Dr. Heath explains this better than we can in his preliminary report:

> Mr. Hamm has active B-cell lymphoma, a form of cancer that involves the lymph nodes. A large tumor was diagnosed in 2014 and extended from his left eye into multiple areas of the skull behind the face, and through the skull into the middle cranial fossa (the area surrounding the temporal lobe of the brain). In 2014 he also had enlarged lymph nodes in his chest, and it is unclear whether these nodes were or are involved in the malignant process. The lymphoma was treated with radiation and medication, with some improvement; however, recent reported symptoms indicate that the malignancy has returned. There appears to have been no follow-up evaluation to determine whether the cancer has spread into lymph nodes beyond his face and skull. Lymphoma, like other cancers, is a progressive disease if not cured. At this point, there may be significant involvement and enlargement of lymph nodes in other areas of his body, including his neck, chest, and groin. If there are enlarged lymph nodes surrounding the veins in his neck, chest, or groin, it would likely complicate or thwart attempts to obtain central venous access. Doc. 1 at 28-29 (Appendix A at 5-6 ¶14).

This raises two material factual disputes.

(a) *Whether Doyle Hamm suffers from lymphadenopathy*:

Defendants argue that Doyle Hamm does not suffer from lymphadenopathy. They state that "Dr. Roddam has not found evidence of lymphadenopathy in the cervical area of Hamm's body." Doc. 12 at p. 11. Elsewhere in their motion, defendants state that Doyle Hamm is not suffering from serious cranial and lymphatic cancer: "This allegation appears to be false," they write. "While he was treated for lymphatic cancer in 2014, he is currently in remission, is not being treated for that condition, and only 'currently has a basal cell carcinoma ("skin cancer") on the left cheek of his face.' Ex. D at 2. While Hamm alleges the lymphoma has returned, he cites no medical report finding that he is no longer in remission." Doc. 12 at p. 29 n.2.

There is, however, in Doyle Hamm's medical records, sufficient evidence of lymphadenopathy to raise a genuine issue of material fact. Several medical reports from Doyle Hamm's medical records from Brookwood Cancer Center and from the Donaldson Correctional Facility are attached as Exhibits C and D, and they demonstrate this.

1/ First, Doyle Hamm's oncology reports from 2014 indicate that he was suffering from a lymphatic cancer that was causing lymph abnormalities elsewhere in his body (other than the ocular/cranial lymphoma that was diagnosed and treated with radiation in 2014), in his abdomen and chest. The evidence includes:

(i) in a doctor's report dated May 16, 2014, following a CT scan of his head, chest, and abdomen, it is reported, after diagnosing "a large mass in the retro-orbital area on the left extending into the masseter space [cavity in face above jaw, under temple]," that "*In the chest were noted numerous abnormal lymph nodes*" and "*Calcified granulomata were noted within the lung as well. A few small nodes were seen in the abdomen*. The pelvis

was not imaged." Exhibit C (medical records from Brookwood Cancer Center) at p. 5;

(ii) in another pathology report dated April 18, 2014, Dr. Chandar Sekar reported from a CT scan of Doyle Hamm's neck that there were "Enlarged lymph nodes consistent with reactive lymph nodes is seen." Exhibit D (medical records from Donaldson Correctional Facility) at p. 151;

(iii) in another pathology report dated April 18, 2014, Dr. V.C. Scott reported from a CT scan of Doyle Hamm's chest the presence of "adenopathy," a synonym of lymphadenopathy, and indicated that "any of these areas could be due to lymphoma." Exhibit D at p. 152.

2/ Second, the radiation treatment of Doyle Hamm's ocular/cranial lymphoma in 2014 did *not* treat his other problems with abnormal lymph nodes. Doyle Hamm was treated for the ocular/cranial lymphatic cancer only. The mass that the doctors treated was "a tumor extending through the foramina into the pterygoid space and into the middle cranial fossa," in other words the cancerous mass behind his left eye and into the left side of his brain. Exhibit D at p. 111. The radiation consisted of "IMRT to 40Gy over 20 fractions for orbital lymphoma" and was completed on July 11, 2014—with no other radiation or chemotherapy treatment for the rest of his lymphoma even though the doctors had initially suggested chemotherapy. Exhibit D at pp. 135 and 111. As a result, Doyle Hamm's lymphatic cancer associated with his condition of abnormal lymph nodes in his chest, abdomen, and possibly elsewhere has gone entirely untreated and has been allowed to progress unabated since its diagnosis in 2014.

3/ Third, the oncologists diagnosed, in a medical report dated September 16, 2015, more than a year after the radiation, that they observed: "Abnormal enhancement is seen in the left orbit with involvement in the left pterygopalatine fossa and left infratemporal fossa/masticator

space region. Abnormal enhancement is also seen in the inferior orbital fissure and in foramen ovale, and along foramen rotundum on the left." Exhibit D at p. 629. In other words, a year after the radiation treatment, Doyle Hamm still had abnormalities in his left eye and skull.

4/ Fourth, Doyle Hamm's medical records reflect that, since March 2017, Doyle Hamm has been experiencing increased problems associated with lymphadenopathy. The indications of this include:

(i) a "Corizon Progress Report" (a prison medical visit report) dated March 7, 2017, stating that Doyle Hamm complained to the medical staff at the prison that he was suffering from "lumps" or "knots" on his chest, and that they were feeling "tender." The medical practitioner noted on the medical record, after noting that Doyle Hamm was complaining of "'knots' on my chest," and that "These feel like lymph nodes." The practitioner observed that there were "subcutaneous nodules about 2 centimeters in diameter," one of which was "about 6 centimeters below right clavicle." Exhibit D at p. 453;

(ii) a "Sick Call Request" dated March 4, 2017, in which Doyle Hamm complains of a "Need to see the doctor I have lumps in my chest." Exhibit D at p. 472; and

(iii) a "Corizon Nursing Encounter Tool" dated March 5, 2017, in which the practitioner at Donaldson Correctional Facility notes that Doyle Hamm is complaining of "lumps in chest" and observes "4 knots to chest" including in the "right clavicle" and "left armpit." Exhibit D at p. 470.

These medical records present evidence of lymphadenopathy.

5/ Fifth, Doyle Hamm is prescribed significant painkillers for pain behind his left eye where he had ocular and cranial lymphatic cancer. As Doyle Hamm explains, "I take a painkiller

called Norco on a daily basis, 10mgs three times a day, because of the pain that I have in my left eye and behind my left eye. It is prescribed by Dr. Roddam for the pain in the back of my left eye." Exhibit F at ¶8.

6/ Sixth, given that Doyle Hamm has not been treated for his lymphatic cancer beyond the mass behind his left eye, and has not been seen by an oncologist since about 2015 (*see* Exhibit D), there is a substantial issue of fact as to whether his cancer is "in remission," as defendants state.

For all these reasons, there is a factual dispute as to whether Doyle Hamm is suffering from lymphadenopathy.

(b) *Whether Doyle Hamm's lymphadenopathy is likely to present a substantial risk of serious harm that might interfere with a humane execution*:

The second factual dispute is whether Doyle Hamm's lymphadenopathy would interfere and cause a risk of excessive pain. Here again, this is a central factual issue in dispute. As noted, the defendants state that Doyle Hamm has no lymphadenopathy, so it could not interfere with his execution; by contrast, Doyle Hamm's medical expert has provided evidence that his lymphadenopathy would likely present a significant risk of an excessively painful execution. Dr. Heath states that "At this point, there may be significant involvement and enlargement of lymph nodes in other areas of his body, including his neck, chest, and groin. If there are enlarged lymph nodes surrounding the veins in his neck, chest, or groin, it would likely complicate or thwart attempts to obtain central venous access." Doc. 1 at 28-29 (Appendix A at 5-6 ¶14). Dr. Heath therefore concludes that "based on what I know from the David Nelson case, it is my opinion that the state is not equipped to achieve venous access in Mr. Hamm's case. Mr. Hamm's difficult IV access greatly increases the likelihood of an inhumane execution due to infiltration of

the execution drugs, with the onset of paralysis preceding the attainment of adequate anesthesia." Doc. 1 at 30 (Appendix A at 7 ¶16). This matter too, then, is in dispute.

E. Whether Doyle Hamm's medical condition and venous access got materially worse during the Spring of 2017:

Another related genuine issue of material fact is whether Doyle Hamm's medical condition got worse during 2017, creating his current condition of not having accessible veins for purposes of lethal injection.

There is no question that Doyle Hamm's medical condition is evolving. As an original matter, Doyle Hamm had a lengthy medical history that included epilepsy, brain damage, a seizure disorder, significant medications for seizures, extensive intravenous drug use, and cognitive disabilities. *See* Exhibit G (Affidavit of Egon Von Conway). Doyle Hamm's medical condition deteriorated significantly prior to or around February 2014, when he was diagnosed with cranial and ocular lymphatic cancer, specifically with large cell lymphoma that was aggressive and fast growing. *See* Doc. 1 at ¶¶15-22. "The patient appears chronically ill," the doctors found back in 2014. *See* Exhibit D at p. 111.

Doyle Hamm underwent radiation treatment and medication, and for a while there appeared to be some diminution of the ocular and cranial lymphoma. However, beginning in early 2017, the lymphatic cancer has gotten worse and Doyle Hamm has been experiencing lymphadenopathy associated with his earlier diagnosed but untreated cancer. Exhibit D at p. 453, 470, and 472.

It is around that time that Doyle Hamm's veins finally became so compromised from his lengthy medical history, cancer, cancer treatment, and age, that the nurses at Donaldson Correctional Facility have only been able to draw blood with difficulty from one small tortuous

vein on his right hand. *See supra* at pp. 8-9. The resulting lack of venous access is the accumulated result of years of medical problems; but it has only manifested in the last year since March or April 2017. There is, as a result, a genuine issue of material fact as to whether Doyle Hamm's condition got worse in Spring 2017.

This disputed factual question is material to the defendants' claims that Doyle Hamm's §1983 lawsuit is barred by laches and by the statute of limitations.

As a preliminary matter, defendants incorrectly construe this case as a facial challenge to the lethal injection protocol, rather than as an "as applied" challenge in Doyle Hamm's case, arguing that Doyle Hamm should have filed his challenge in 2002 when the Alabama legislature enacted lethal injection. *See* Doc. 12 at pp. 13, 16, 17, 21, 22, and 24. Their entire argument is styled as if Doyle Hamm were challenging the three-drug protocol, which he is not.

In any event, the disputed factual question, if resolved in favor of Doyle Hamm, would preclude the defendants' argument under both laches and statute of limitations grounds.

a) *The laches argument:*

As a legal matter, the doctrine of equitable laches requires the defendants to show that Doyle Hamm delayed in asserting his claim, the delay was inexcusable, and the delay caused undue prejudice to the defendant. *Grayson v. Allen,* 499 F. Supp. 2d 1228, 1236 (M.D. Ala. 2007).

Defendants argue that Doyle Hamm's delay in filing his complaint is "inexcusable" for three reasons: (1) the complaint was filed within a short time of the execution date; (2) the complaint was not filed until several months after the federal habeas proceedings ended; and (3) Alabama has employed lethal injection as a default method of execution since 2002. None of these grounds are sufficient.

First, the time that has passed since Doyle Hamm's conviction is not a stand-alone ground for dismissing the complaint. Throughout this time, Doyle Hamm has pursued legitimate claims during direct appeal, state-court collateral proceedings, and federal habeas corpus proceedings and he should not be penalized for exercising his right to appeal. Defendants cite *Brooks v. Warden*, 810 F.3d 812 (11th Cir. 2016), for the proposition that filing a complaint shortly before a scheduled execution date "alone requires the dismissal of his complaint." But in *Brooks*, the Eleventh Circuit only reached its conclusion to dismiss after also deciding that petitioner had no legitimate *reasons* for delay. *Id.* at 824-25 (evaluating and ultimately rejecting Brooks's "list of reasons to explain why his delay prior to challenging Alabama's execution protocol should be execution"). Thus, automatic dismissal is not warranted based solely on the time between the date the complaint was filed and the scheduled execution date. This Court must also evaluate the legitimate reasons why Doyle Hamm did not, and could not, have filed his complaint any earlier, specifically the disputed questions of fact surrounding his medical condition.

Second, Doyle Hamm could not have filed his §1983 complaint any earlier because his complaint did not become ripe until it was clear he had exhausted the legal claim pertaining to his execution by lethal injection before the Alabama Supreme Court prior to it setting an execution date. The legal question in this case was squarely before the Alabama Supreme Court and under active consideration by that Court until December 13, 2017. As soon as the Alabama Supreme Court made clear that it was no longer considering the legal matter and issued an execution warrant, Doyle Hamm filed this §1983 suit in federal court.

Under principles of comity and federalism, the legal question only became equitably ripe once the Alabama Supreme Court decided not to consider the matter any further. Mr. Hamm

should not have been expected to assume that the Alabama Supreme Court would deny his claims for relief by filing this complaint prior to the final determination of his claims.

The record below is clear that the legal question presented was actively being considered by the Alabama Supreme Court immediately prior to the filing of this §1983 lawsuit. By order dated August 25, 2017, the Alabama Supreme Court ordered the state of Alabama to allow Doyle Hamm to undergo a medical examination by his medical expert, Dr. Mark Heath, to find out his venous condition and ordered "that Hamm give a status update regarding this issue to this Court every seven (7) days from the date of this Order." *See* Exhibit H (Alabama Supreme Court order dated August 25, 2017, ordering weekly updates from Doyle Hamm). Doyle Hamm filed weekly status updates with the Alabama Supreme Court on September 1, 2017, *see* Exhibit I (first update); on September 8, 2017, *see* Exhibit J (second update); on September 15, 2017, *see* Exhibit K (third update); on September 22, 2017, *see* Exhibit L (fourth update); on September 29, 2017, *see* Exhibit M (fifth update); and on October 2, 2017, *see* Exhibit N (sixth update). On October 2, 2017, Doyle Hamm also filed an answer with the Alabama Supreme Court addressing this legal question regarding venous access. *See* Exhibit O (Doyle Hamm's answer). The Alabama Supreme Court ordered the state of Alabama to respond by order dated October 4, 2017, *see* Exhibit P (Alabama Supreme Court order directing state of Alabama to respond by October 18, 2017). The Alabama Attorney General filed a pleading on the central legal question in this case with the Alabama Supreme Court on October 10, 2017, and Doyle Hamm filed a supplemental response on October 11, 2017. *See* Exhibit Q (Doyle Hamm's response dated October 11, 2017). On December 13, 2017, the Alabama Supreme Court set an execution date for February 22, 2017. *See* Exhibit R (Alabama Supreme Court Death Warrant).

During that entire period, the issue was properly before the highest court of the state of

Alabama, which was the proper court to address the question under principles of federalism and comity, and because that is the Court that has the responsibility for ordering that Doyle Hamm be executed. The United States Supreme Court has long recognized "the seriousness of federal judicial interference with state civil functions" and has cautioned against unnecessary federal interference in state judicial proceedings. The United States Supreme Court has emphasized that the principle of comity requires "a proper respect for state functions" and recognition that, in our federalist system, "the National Government, anxious though it may be to vindicate and protect federal rights and federal interest, always endeavors to do so in ways that will not unduly interfere with the legitimate activities of the States." *Younger v. Harris*, 401 U.S. 37, 44 (1971); *see also Huffman v. Pursue, Ltd.*, 420 U.S. 592, 603 (1975) ("[I]nterference with a state judicial proceeding prevents the state not only from effectuating its substantive polices, but also from continuing to perform the separate function of providing a forum competent to vindicate any constitutional objections interposed against those policies."). It was only when the Alabama Supreme Court effectively stopped considering the legal question, by setting an execution date on December 13, 2018, that the issue became ripe for consideration by the federal courts. If the Alabama Supreme Court had ultimately declined to set an execution date, the federal lawsuit would have become moot and valuable federal resources would have been wasted. *See Colo. River Water Conservation District v. United States,* 424 U.S. 800, 817 (1976) (counseling against concurrent federal proceedings where the litigation in federal court would be duplicative of litigation occurring in state court based on "conservation of judicial resources and comprehensive disposition of litigation"). Until the Alabama Supreme Court decided to set an execution date, Mr. Hamm's legal claims were properly before the state court and under consideration by that state court.

Third, the fact that Alabama's default method of execution has been lethal injection since 2002 is irrelevant to this particular as-applied challenge. Doyle Hamm could not have possibly foreseen his diagnosis of cancer or the fact that his veins would become inaccessible in 2017 and thus could not have been expected to challenge the method of execution until these facts were clear to him. In cases in which the plaintiff is alleging this specific type of as-applied challenge—namely, that the method of execution will be unconstitutional as applied to a plaintiff with unique intervening medical conditions—the Eleventh Circuit has looked to the date on which the specific medical conditions were brought to light, not the date on which the execution was codified. *See Siebert v.* Allen, 506 F.3d 1047, 1049 (holding that the district court properly found that plaintiff had not delayed unreasonably "[b]ecause the factual predicate of that claim—namely, Siebert's diagnosis of pancreatic cancer and hepatitis C—was not in place until late May 2007"). The relevant question here is only whether Doyle Hamm has unreasonably delayed since these medical issues were brought to light. Because Doyle Hamm's complex medical conditions did not present a tangible risk of a botched execution until Spring 2017, and because Doyle Hamm was litigating the effect of these medical conditions in the Alabama Supreme Court since June 2017, he could not have brought this complaint earlier. For these reasons, Mr. Hamm did not unreasonably delay in filing his §1983 complaint.

(b) *The statute of limitations argument:*

Doyle Hamm's medical condition has progressed over the years, and it is only in the Spring of 2017 that the combination of his medical conditions began to present a real risk of a botched execution. It is the combined effect of his lengthy medical history, his cancer in 2014, his cancer treatment in 2014, the worsening condition of his veins in 2017, and his age (he turns 61 on February 14, 2018), that together, in the Spring of 2017, created the high likelihood that

any attempted lethal injection would cause excessive pain and cruelty. Accordingly, Doyle Hamm's §1983 complaint is timely under the two-year statute of limitations—or if not, it presents a genuine issue of material fact as to whether the risk arose or was known earlier.

Defendants cite *McNair v. Allen*, 515 F.3d 1168, 1174 (11th Cir. 2008) to argue that it is "well settled" that "a method of execution claims accrues on the later of the date on which state review is complete, or the date on which the capital litigant becomes subject to a new or substantially changed execution protocol." However, this principle is inapplicable to as-applied challenges in which the plaintiff's unique medical conditions were nonexistent or unknown until much later. As defendants themselves note, the *McNair* principle is derived from the clearly settled rule in *Mullinax v. McElhenney*, 817 F.2d 711, 716 (11th Cir. 1987). In *Mullinax*, the Eleventh Circuit held that, in §1983 cases, "the statute [of limitations] does not begin to run until the facts which would support a cause of action are apparent or should be apparent to a person with a reasonably prudent regard for his rights." *Id.* at 716 (quoting *Calhoun v. Ala. Alcoholic Beverage Control Bd.*, 705 F.2d 422, 425 (11th Cir. 1983)). In cases in which plaintiffs develop unique medical conditions that would impede a constitutional execution, the date on which the execution protocol last changed is irrelevant; the only pertinent date is when the plaintiff knew, or should have known, that he would be injured.

In *Gissendaner v. Comm'r, Ga. Dep't of Corrs.*, 779 F.3d 1275, 1281 n.7 (11th Cir. 2015), cited by defendants, the Eleventh Circuit specifically differentiated cases involving newly discovered factors that could impede a constitutional execution. The Eleventh Circuit dismissed the complaint not only because there had been no change in execution protocol but *also* because the "risk factors," specifically Gissendaner's long-standing medical conditions, were not "recent developments." *Id* ("She has always been female, and her complaint contains no factual

allegations suggesting that her obesity or her potential sleep apnea (the chance of which is increased by her obesity) are recent developments."). In clear contrast to *Gissendaner*, Doyle Hamm's medical conditions involve "recent developments," insofar as it was only in the Spring of 2017 that his medical problems presented a truly tangible risk of a botched execution.

Applying the relevant precedent here, the statute of limitations would not begin to run until Doyle Hamm's unique medical conditions presented a real risk of an unnecessarily painful execution in Spring 2017. Doyle Hamm thus had until Spring 2019 to file his complaint and did so well before the statute of limitations expired.

F. Whether there exists a feasible, readily implementable, and legal alternative method of execution that would significantly reduce a substantial risk of severe pain:

Defendants argue that Doyle Hamm's original complaint does not meet the *Glossip/Baze* standard for an alternative means of execution, "much less creates a genuine dispute of fact." Doc. 12 at p. 35.

Today, Doyle Hamm is filing a first amended complaint, however, that clarifies his proposed alternative method of execution—or at the very least, creates a genuine issue of material fact surrounding this legal question.

The Alabama statute requires, in Doyle Hamm's case, an execution via "lethal injection." *See* Ala. Code § 15-18-82.1. The statute's definition of "injection" is not confined to only intravenous injections. The Oxford English Dictionary defines "injection" as "[t]he action of forcing a fluid, etc. into a passage or cavity, as by means of a syringe, or by some impulsive force; *esp.* the introduction in this way of a liquid or other substance into the vessels or cavities of the body, either for medicinal purposes, or (in a dead body or portion of one) in order to exhibit the structure or preserve the tissues." *See* "injection" *OED Online*, Oxford University

Press, June 2017 (www.oed.com/view/Entry/96082, accessed 15 January 2018). An oral form of lethal injection, therefore, is authorized under the Alabama statute *and* also fulfills the Eleventh Circuit's requirement that state law permit the proposed alternative method of execution. *Arthur v. Comm'r, Ala. Dep't of Corr.*, 840 F.3d 1268 (11th Cir. 2016). By contrast to other states that explicitly narrow the term injection to venous injection, the Alabama statute clearly allows for other forms of injection, such as oral injection. As a legal matter, then, an oral lethal injection is a perfectly viable method of execution under Alabama law.

In Doyle Hamm's first amended complaint, filed on January 16, 2018, Doyle Hamm satisfies the *Glossip/Baze* standard by providing exact details and studies supporting an alternative method of execution that (1) is feasible, (2) readily implemented, and (3) would *significantly* reduce the risk of severe pain. *See Glossip*, 135 S.Ct. at 2737 (quoting *Baze*, 553 U.S. at 52).

As recommended by Dr. Charles David Blanke, an experienced physician who specializes in end-of-life care, specifically in medical-aid-in-dying (MAID), Doyle Hamm proposes a ten-gram dose of secobarbital injected orally in four ounces of liquid; alternatively, Doyle Hamm proposes a drug cocktail known to doctors as "DDMP II," which is composed of 1 gram of diazepam, 50 milligrams of digoxin, 15 grams of morphine sulfate, and 2 grams of propranolol, injected orally. *See* Exhibit S (Affidavit of Dr. Charles David Blanke) at ¶ 5, 6 and 11.

a) *Doyle Hamm's alternative method of execution is feasible and readily implemented.*

In his affidavit, Dr. Blanke explains that the standard MAID medication used in Oregon is secobarbital or the drug cocktail DDMP II. *See* Exhibit S. MAID was legalized in Oregon in 1997 through Oregon's Death with Dignity Act (DWDA). The DWDA "allows terminally-ill

adult Oregonians to obtain and use prescriptions from their physicians for self-administered, lethal doses of medications."[5] As a result, Oregon physicians have extensive experience using lethal drugs for end-of-life decisions.

Since MAID was legalized in Oregon in 1997, and as of January 23, 2017, 1,127 people had died after taking lethal medications prescribed under the DWDA. *See id*. p. 5. Of the 1,127 people who died from taking lethal prescriptions between 1997 and January 23, 2017, 668 or 59.3% were prescribed secobarbital, while 17 or 1.5% were prescribed a combination of lethal medications; and of the 133 people who died from taking lethal prescriptions in 2016, 86 or 64.7% were prescribed secobarbital, while 8 or 6% were prescribed a combination of lethal medications. *See id.* p. 10.

Of the 133 people who died from taking lethal prescriptions in 2016, the median range of minutes between ingestion and unconsciousness was 4 minutes; of the 1,127 people who died from taking lethal prescriptions between 1997 and January 23, 2017, the median range of minutes between ingestion and unconsciousness was 5 minutes. *See id.* p. 11. Of the 133 people who died from taking lethal prescriptions in 2016, the median range of minutes between ingestion and death was 27 minutes; of the 1,127 people who died from taking lethal prescriptions between 1997 and January 23, 2017, the median range of minutes between ingestion and unconsciousness was 25 minutes. *See id.* p. 11; *see also* Exhibit T (KNMG/KNMP Guidelines for the Practice of Euthanasia and Physician-Assisted Suicide (The Hague, 5th ed. Aug. 2012) (detailing the exact procedures and protocols to ensure successful and painless death

[5] Oregon Health Authority, *Oregon Death with Dignity Act: Data Summary 2016* 4 (Feb. 10, 2017), attached as Exhibit T hereto and also available at http://www.oregon.gov/oha/PH/PROVIDERPARTNERRESOURCES/EVALUATIONRESEARCH/DEATHWITHDIGNITYACT/Documents/year19.pdf.

by MAID medications).[6]

b) *Doyle Hamm's alternative method of execution significantly reduces the risk of serious harm.*

The law is clear that an alternative means of execution must significantly reduce the risk of serious harm. The U.S. Supreme Court's controlling opinion states clearly that "prisoners 'cannot successfully challenge a State's method of execution merely by showing a slightly or marginally safer alternative.'" *Glossip*, 135 S.Ct. at 2737 (quoting *Baze*, 553 U.S. at 49).

The method used in Oregon and recommended by Dr. Blanke reduces the risk of serious harm—namely a botched execution—from about 7% to about 0.6%. *See infra.* This is a *significant* reduction in risk. In Mr. Hamm's case, the risk is even more dramatically reduced because the possibility of a botched execution by intravenous lethal injection in his case is nearly certain. Thus, an oral dose of lethal drugs reduces the risk of a botched execution in Mr. Hamm's case from nearly 100% to 0.6%.

The Royal Dutch Pharmaceutical Association (KNMP) issued a guide to physicians in 1987, revised in 1994 and then again in 1998, which included their recommendation for the drugs that physicians should prescribe, and the protocols that they should follow when prescribing MAID medications. In the guide, they recommend that physicians prescribe 9 grams of secobarbital or pentobarbital in a 100-milliliter solution. *See* Joanna H. Groenewoud et al., Clinical Problems with the Performance of Euthanasia and Physician-Assisted Suicide in The Netherlands, 342 *New England Journal of Medicine* 551, 633 (2000) (citing Koninklijke Nederlandse Maatschappij ter Bevordering der Pharmacie (KNMP), Technical report concerning

[6] For more information on how MAID medications are made available by pharmacies and prescribed by physicians, *see also The Oregon Death with Dignity Act: A Guidebook for Health Care Professionals* (2008) http://www.ohsu.edu/xd/education/continuing-education/center-for-ethics/ethics-outreach/upload/Oregon-Death-with-Dignity-Act-Guidebook.pdf.

euthanatics [in Dutch]. Den Haag: KNMP, 1987, and Wetenschappelijk Instituut voor Apothekers. Advices for the application of euthanatics [in Dutch]. Medisch Contact 1998:53:1366-8). This method has been shown to "cause a comatose state, followed by a decrease of cardiac output and finally a respiratory arrest." *See id.* p. 80 (citing DJ Sumner et al., "Metabolism of Barbiturate after Overdosage," 8 Br. Med. J. 335 (1975)). In August of 2012, the KNMP together with the Royal Dutch Medical Association (KNMG) released an updated "Guidelines for the Practice of Euthanasia and Physician-Assisted Suicide." *See* Exhibit U. In the case of physician-assisted suicide, which is now referred to in the United States as MAID, the KNMP/KNMG recommends that the physician prescribe 15 grams of barbiturate (pentobarbital or secobarbital) in the form of a drink (mixture of non-therapeutics, see Appendix VI for the formula)." *See* Exhibit U at p. 17. Appendix VI describes the exact mixture to be used, advising the use of either secobarbital or pentobarbital in addition to alcohol, purified water, propylene glycol, saccharin sodium, syrup simplex, and star anise oil. *See id*. p. 41. It also describes the preparation and gives directions for proper storage of the mixture. The patient is advised to take the lethal cocktail orally, and to be sitting up and be in a bed when he or she takes the cocktail. *See id.* p. 17.

The use of MAID medications would result in a significantly lower risk of severe pain than the state of Alabama's lethal-injection protocol. In Oregon, for example, an analysis of the drug effectiveness and complications of patients who had ingested MAID medications since 1998 showed that "[t]he medications were relatively devoid of unexpected toxic effects. Vomiting was unusual (24 patients, 2.4%). Six patients awakened, giving the medications an efficacy rate of 99.4%." *See* C. Blanke et al., "Characterizing 18 Years of the Death With Dignity Act in Oregon," 3 *JAMA Oncol.* 1403, 1405 (2017); *see also* K. Hedberg & C. New,

"Oregon's Death With Dignity Act: 20 Years of Experience to Inform the Debate," 167 *Ann Intern Med*. 579, 581 (2017).

This stands in stark contrast to the 7.12% rate at which lethal injections are botched, mostly due to difficulty in finding veins and errors on the part of the execution staff. In fact, lethal injection has the highest rate of botched executions among all methods of execution (hanging, electrocution, lethal gas, and firing squad.[7] And in Doyle Hamm's case, the risk of a botched execution is nearly certain because of how extremely compromised his veins are.

c) *The defendants can access these drugs.*

The defendants can access the lethal drugs proposed because they are available at pharmacies and are not among the drugs that are restricted from sale to prisons by pharmaceutical companies. As evidenced by the fact that the defendants intend to use midazolam fabricated by Akorn, Inc., *see* Doc. 12 Ex. H (Midazolam drug label submitted by defendants and manufactured by Akorn, Inc.), in direct violation of the regulations set up by Akorn, Inc., the defendants have no difficulty obtaining and using lethal drugs *even* against the specific policies and regulations of the drug manufacturers and pharmaceutical companies.

As an exhibit to their motion, the defendants revealed that they intend to use the lethal drug midazolam made by the pharmaceutical company Akorn, Inc. *See* Doc. 12 Ex. H. Akorn's policy clearly states that its products are not intended for use in lethal injections. *See* Press Release, Akorn Adopts Comprehensive Policy to Support the Use of Its Products to Promote Health (Mar. 4, 2015), http://investors.akorn.com/phoenix.zhtml?c=78132&p=irol-

[7] *See* Death Penalty Information Center, Botched Executions, https://deathpenaltyinfo.org/some-examples-post-furman-botched-executions (last visited Jan. 15, 2018) (citing Austin Sarat, *Gruesome Spectacles: Botched Executions and America's Death Penalty* (Stanford Univ. Press 2014)); *see also* Mona Chalabi, "How Often Are Executions Botched?" FiveThirtyEight (Apr. 30, 2014), https://fivethirtyeight.com/features/how-often-are-executions-botched/ (last visited Jan. 15, 2018).

newsArticle&ID=2022522 (last visited Jan. 15, 2018).

In 2015, Akorn, Inc. implemented its policy, which condemned the use of its products in lethal injections. The policy restricted the sale of its drugs to wholesalers who would not supply its drugs to prisons:

> Akorn strongly objects to the use of its products to conduct or support capital punishment through lethal injection or other means. To prevent the use of our products in capital punishment, Akorn will not sell any product directly to any prison or other correctional institution and we will restrict the sale of known components of lethal injection protocols to a select group of wholesalers who agree to use their best efforts to keep these products out of correctional institutions. *See id.*

Akorn also sent letters "to the attorneys general and heads of departments of correction of the states that currently execute inmates or have prisoners on death row along with the United States Attorney General, the United States Secretary of Defense, the Director of the Federal Bureau of Prisons and the Chairman of the Department of Defense Corrections Council reiterating the company's policy on the appropriate use of its products;" in addition, Akorn stated it "is seeking the return of any the company's products that may have been inappropriately purchased to aid in the execution process." *See id; see also* Drug-Maker Akorn Bans Sedative Midazolam For Executions, NBC News (Feb 20, 2015), https://www.nbcnews.com/storyline/lethal-injection/drug-maker-akorn-bans-sedative-midazolam-executions-n309191 (last visited Jan. 15, 2018).

In addition, the Akorn midazolam label that the defendants provided as Exhibit H also states clearly that "Intravenous midazolam should be used only in hospital or ambulatory care settings, including physicians' and dental offices, that provide for continuous monitoring of respiratory and cardiac function." *See* Doc. 12 Ex. H p. 1. So it is clear that defendants do not follow the regulations and obtain and use drugs as they wish.

In 2016, Anne Hill, a lawyer for the Alabama Department of Corrections, stated in a deposition that Alabama last bought midazolam in 2015.[8] Since 2015, Akorn's policies prohibit its drugs to be sold to entities that would use the drugs or sell the drugs for use in lethal injections. However, the shelf-life of midazolam is 24 months. *See* Exhibit V (Public Assessment Report of the Medicines Evaluation Board in the Netherlands, https://db.cbg-meb.nl/Pars/h100485.pdf p. 4 (last visited Jan. 15, 2018)). Clearly, the state of Alabama has been able to access midazolam, despite nearly every pharmaceutical company's decision to ban the use of its products in lethal injection.[9] There is no doubt that the defendants have ways to obtain the drugs they use in their lethal injection protocol, and neither secobarbital nor any of the components of the DDMP II cocktail are subject to restricted sale by any of the pharmaceutical companies.

All of the components of Doyle Hamm's second alternative proposed method, the DDMP II cocktail, are available in pharmacies in Alabama. In fact, all of the components of the DDMP II cocktail are even covered by the Alabama Blue Cross Blue Shield insurance policy.[10]

d) *Conclusion*

As demonstrated by the affidavit of Dr. Blanke and the numerous studies cited, the oral

[8] *See* Chelsea Jarvis & Tim Lockette, Alabama's execution drugs may be close to expiring, *The Anniston Star* (June 24, 2017), https://www.annistonstar.com/free/alabama-s-execution-drugs-may-be-close-to-expiring/article_db530a64-5920-11e7-9999-8ba8c52a886b.html.

[9] *See, e.g.,* Pfizer Inc., Policy Paper: Pfizer's Position on Use of Our Products in Lethal Injections for Capital Punishment (Sept. 2017), available at https://www.pfizer.com/files/b2b/Global_Policy_Paper_Lethal_Injection_Sept_2017.pdf. For a full list of policy statements by pharmaceutical companies that ban the use of their drugs in lethal injections, *see* Industry Statements and Action on Execution Drugs, Reprieve US (Feb. 9, 2017), http://reprieve.org/2017/02/09/industry-statements-and-action-on-execution-drugs/.

[10] *See* Blue Cross and Blue Shield of Alabama Generics Plus Drug Guide, Oct 2017, https://www.myprime.com/content/dam/prime/memberportal/forms/2017/FullyQualified/Other/ALL/BCBSAL/COMMERCIAL/ALGENPLDRG/ALGP_Prescription_Drug_Guide.pdf; diazepam on p. 34, digoxin on p. 26, morphine sulfate on p. 43, and propranolol on p. 22. Relevant pages attached as Exhibit W.

injection of MAID medication would be a feasible, readily available alternative to lethal injection that would *significantly* reduce the risk of serious harm to Doyle Hamm. "If a State refuses to adopt such an alternative in the face of those documented advantages, without a legitimate penological justification for adhering to its current method of execution, then a State's refusal to change its method can be viewed as 'cruel and unusual' under the Eighth Amendment." *Baze v. Rees,* 553 U.S. at p. 52.

Doyle Hamm has satisfied the *Glossip/Baze* standard that requires him to prove that his proposed alternative is "'feasible, readily implemented, and in fact significantly reduce[s] a substantial risk of severe pain.'" *Glossip*, 135 S.Ct. at 2737 (quoting Baze, 553 U.S. at p. 52). Doyle Hamm has met his burden.

III. THE NEW EVIDENCE SUBMITTED BY DEFENDANTS RAISES ANOTHER EIGHTH AMENDMENT CLAIM.

Doyle Hamm is also today amending his complaint to allege that defendants' current conduct and planned execution by lethal injection amount to cruel and unusual punishment in violation of the Eighth Amendment.[11]

Since about October 2017, defendants have engaged in a practice of constantly trying to prick Doyle Hamm with needles, under the pretext of drawing blood. As noted earlier, the newly submitted affidavits by the nurse practitioners at Donaldson Correctional Facility reveal that Doyle Hamm has been subjected to needles on the following times:

1/ On October 3, 2017, Ms. McDonald stuck Doyle Hamm with needles two times. Doc.

[11] Mr. Hamm's first amended complaint also removes Attorney General Steve Marshall as a defendant in the lawsuit; it adds instead Warden Leon Bolling because Doyle Hamm remains incarcerated at Donaldson Correctional Facility.

12 Ex. F at ¶5.

2/ On October 31, 2017, Ms. McDonald stuck Doyle Hamm with needles two times. Doc. 12 Ex. F at ¶6.

3/ On November 7, 2017, Ms. McDonald again stuck Doyle Hamm with a needle. Doc. 12 Ex. F at ¶6.

4/ That same day, November 7, 2017, Ms. Wood stuck Doyle Hamm with a needle. Doc. 12 Ex. F ¶6; Doc. 12 Ex. G ¶4.

5/ On November 14, 2017, Ms. McDonald stuck Doyle Hamm with a needle. Doc. 12 Ex. F at ¶6.

6/ On December 18, 2017, Ms. McDonald stuck Doyle Hamm with a needle. Doc. 12 Ex. F at ¶4.

According to Doyle Hamm, "Lately, since a few months now, the nurses seem to be trying to stick needles in me to draw blood much more often than they were before. They seem to be doing this almost every other week." Exhibit F at ¶6.

This appears to be a new development and it represents, for purposes of cruel and unusual punishment, the straw that broke the camel's back. The accumulation of this new technique of punishment, in combination with the fact that Doyle Hamm has been in isolation on death row for thirty (30) years awaiting his execution, that he is threatened with execution at a time when he is struggling against cancer, that the defendants are not properly treating his cancer so that he is in constant pain, and that he is threatened with lethal injection even though he does not have venous access, all together amount to cruel and unusual punishment.

In effect, the combination of the following five factors renders the planned execution of Doyle Hamm by lethal injection violative of the Eighth Amendment: (1) first, that Doyle Hamm

has been on death row awaiting execution now for over thirty years; (2) second, that the state intends to execute him despite the fact that he has been battling cancer since at least February 2014 and despite the fact that he does not have that long to live; (3) third, that the state has not been properly treating his cancer and as a result that he is suffering pain from his untreated cancer; (4) fourth, that the state is persisting in moving forward with a lethal injection that will be excessively painful and cause unnecessary suffering because he does not have readily accessible veins for the catheter that would be needed to introduce the lethal drugs into his veins; and now, (5) fifth, that the state is trying to prick him with needles all the time, in a manner that constantly reminds him of his looming excessively painful lethal injection. The combination of all these five elements constitute a "great increase" of Doyle Hamm's punishment—his sentence of death—in violation of his Eighth Amendment rights. *In re Medley*, 134 U.S. at 171.

The Eighth Amendment prohibits "cruel and unusual punishments" and "the imposition of inherently barbaric punishments under all circumstances." *Graham v. Florida*, 560 U.S. 48, 58-59 (2010). The Eighth Amendment forbids punishments that are "totally without penological justification." *Rhodes v. Chapman*, 452 U.S. 337, 346 (1981) (quoting *Gregg v. Georgia*, 428 U.S. 153, 183 (1976)) (citing *Estelle v. Gamble*, 429 U.S. 97, 103 (1976)). Accordingly, "punishments of torture . . . and all others in the same line of unnecessary cruelty . . . are forbidden." *Wilkerson v. State of Utah*, 99 U.S. 130, 136 (1878); *see also Graham*, 560 U.S. at 58 ("[P]unishments of torture, for example, are forbidden."). In addition, the Eighth Amendment "proscribes more than physically barbarous punishments." *Gamble*, 429 U.S. at 102. It also outlaws punishments that "involve the unnecessary and wanton infliction of pain," *Gregg*, 428 U.S. at 173 (1976).

The Eighth Amendment therefore forbids both subjecting a person to "circumstance[s] of

degradation," *Weems v. United States*, 217 U.S. 349, 366 (1910), and "circumstances of terror, pain, or disgrace superadded" to a sentence of death, *id.* at 370. As Justice Blackmun has articulated:

> As the Court makes clear, the Eighth Amendment prohibits the unnecessary and wanton infliction of "pain," rather than "injury." "Pain" in its ordinary meaning surely includes a notion of psychological harm. . . . . I have no doubt that to read a "physical pain" or "physical injury" requirement into the Eighth Amendment would be . . . pernicious and without foundation . . . .

Hudson v. McMillan, 503 U.S. 1, 16-17 (1992) (Blackmun, J., concurring) (citations omitted).

Accordingly, a "fate of ever-increasing fear and distress" offends the Eighth Amendment. *Trop v. Dulles*, 356 U.S. 86, 101-102 (1958) (condemning punitive denationalization); *see also Hudson v. McMillian*, 503 U.S. 1, 26 (1992) ("That is not to say that the injury [violating the Eighth Amendment] must be, or always will be, physical.") (Thomas, J., dissenting); *Weems*, 217 U.S. at 372 ("[I]t must have come to [framers of the Eighth Amendment] that there could be exercises of cruelty by laws other than those which inflicted bodily pain or mutilation.").

Inasmuch as the Supreme Court's analyses of cruel and unusual punishment have repeatedly endorsed a cumulative approach—an accumulation of the excessively painful and degrading elements—there is strong doctrinal support for this legal claim. *Weems*'s focus on the "accessories" in its "graphic description of Weems's sentence" is instructive, as is its language about "circumstance[s] of degradation" and its suggestion that a prototypical case of cruel and unusual punishment would be present if "circumstances of terror, pain, or disgrace" were "superadded" to a "sentence of death." *Weems*, 217 U.S. at 366, 370. The Supreme Court also emphasized in *Medley* the same *accessories* theme—namely, that seclusion in solitary confinement and a prohibition against telling a condemned prisoner the date and time of his execution are increased punishments, in violation of the *ex post facto* clause, because seclusion

induces "further terror," while "secrecy [about the time of execution] must be accompanied by an immense mental anxiety amounting to a great increase in punishment." *In re Medley*, 134 U.S. at 172. In addition, in *Trop*, the Supreme Court held that a punishment entailing a "fate of ever-increasing fear and distress" offends the Eighth Amendment. *Trop,* 356 U.S. at 101. It is also clear that the Eighth Amendment precludes deliberate indifference to a prisoner's medical condition. *See Gamble*, 429 U.S. at 104 ("We therefore conclude that deliberate indifference to serious medical needs of prisoners constitutes the 'unnecessary and wanton infliction of pain' proscribed by the Eighth Amendment.").

It is important here to emphasize the psychological and traumatic aspect of Doyle Hamm's situation. It might be worth considering how we each would feel if we were being periodically needle-probed to prepare and remind us of a looming lethal injection. Mr. Hamm's psychological plight must be understood against the background of the social science evidence suggesting how people cope with the prospect of various kinds of approaching deaths. What this evidence and these studies show is that Alabama's repeated probing to try out whether it can find a vein when the time comes is about as torturous a run-up to death as a government could conceivably devise.

Psychological science seconds the commonsense human intuition that the anticipation of pain can exacerbate the suffering of pain;[12] and that "dread increases exponentially as pain is

[12] A. Ploughaus et al., *Dissociating Pain from its Anticipation in the Human Brain*, 284 Science 1979 (1999). As one researcher has noted: "Even the suffering associated with losses from past events [emphasizes its anticipatory nature]. . . because the suffering person is forced to anticipate the effects of the losses on his or her present and future." W. Fordyce, *Pain and Suffering: A Reappraisal*, 43 Amer. Psychologist 276, 278 (1988).

approached in time."[13] Psychological understanding of the mechanisms people use to cope with the anticipation of death from illness is instructive with respect to the experience of persons waiting to be executed by the state.[14] It teaches us that condemned inmates like Doyle Hamm will attempt to prepare psychologically for their executions. They will attempt to make sense of their impending deaths; they will spend time contemplating what is about to happen, harnessing whatever psychological and emotional resources they have available to withstand the fate they know awaits them. Like others for whom death is imminent,[15] condemned inmates experience anticipatory fear of dying, and this is an emotion that they struggle to overcome and manage.[16]

But Doyle Hamm faces more than simple pain and the loss of his life. He is now being pricked and prodded every two weeks to remind him of his impending execution. These aspects of the process by which they will die make their ability to cope with death overwhelmingly difficult—beyond the ordinary difficulty of facing death.

When one sits in a cell for thirty years with little to occupy one's thoughts except to ready oneself for death, the manner of one's dying comes to have a special place in one's

---

[13] G. Story et al., Dread and the Disvalue of Future Pain, 10 PLOS COMPUTATIONAL BIOLOGY 10 (2014). Regarding this research, George Loewenstein, a professor of economics and psychology at Carnegie-Mellon University, concluded: "This study demonstrates that the fear of anticipation is so strong it can reverse the usual pattern of time discounting . . . . It's probably not an exaggeration to say that as much, or more, of the pains of life come from anticipation and memory than from actual experience." *See* S. Makin, *Waiting for Pain Can Cause More Dread than Pain Itself*, New Scientist (2013), http://www.newscientist.com/article/dn24642-waiting-for-pain-can-cause-more-dread-than-pain-itself.html#.

[14] *See, e.g.,* E. Kubler-Ross, *On Death and Dying* (Macmillan 1969); E. Kubler-Ross, *The Languages of Dying Patients*, 10 Humanitas 5 (1974).

[15] *See*, *e.g.*, J. Arndt et al., *Suppression, Accessibility of Death-Related Thoughts, and Cultural Worldview Defense: Exploring the Psychodynamics of Terror Management*, 73 J. of Personality and Social Psychology 5 (1997); T. Pyszczynski et al., *A Dual Process Model of Defense Against Conscious and Unconscious Death-Related Thoughts: An Extension of Terror Management Theory*, 106 Psych. Rev. 835 (1999).

[16] *See* C. Haney, *Psychological Secrecy and the Death Penalty: Observations on "The Mere Extinguishment of Life,"* 16 Studies in Law, Politics and Society 3 (1996).

imagination. The essence of Alabama's supplemental method of constant pricking, on top of his 30 years on death row, his cancer and non-treatment, and the prospect of a botched execution, is to deprive him of the capacity to hope that he can face what is to come with any solace of acceptance or redeeming courage.[17] Like raw physical pain, whose greatest horror is that it is mentally ungraspable, this agonizing pricking death is a prospect that cannot be made intelligible by the person who will suffer it. Demeaning and repulsive, gratuitously hideous, it defies assimilation in any of the ways through which the human mind and will can make destruction bearable—by explaining it, or alleviating it, or dignifying it, or otherwise putting it into a coherent frame of reference that allows something of worth and value and *sense* to coexist with death and to survive despite it.

Reliability or predictability is an important dimension of humane treatment. Knowledge about the nature of the process by which death will come has been found to assist what therapists have described as the "death anxiety"[18] or "terror management" that surrounds death by decreasing the profound fear that people associate with their impending demise.[19] Conversely, unpredictability and unreliability are hallmarks of cruel punishment. Introducing unpredictability into the process of administering pain is a favored practice of torturers who, by doing so, seek to intensify the fear their actions generate and the suffering it inflicts.[20] Thus, the unpredictability of

[17] As Ernest Becker observed in his classic work: "We admire the courage to face death; we give such valor our highest and most constant adoration; it moves us deeply in our hearts because we have doubts about how brave we ourselves would be." E. Becker, *The Denial of Death* 11-12 (Free Press paperback ed. 1997)

[18] R.A. Neimeyer & D. Van Brunt, Death Anxiety, *in* H. Wass, et al., *Dying: Facing the Facts* 49-88 (Taylor and Francis, 3d ed. 1995); R. Neimeyer, ed., *Death Anxiety Handbook: Research, Instrumentation, and Application* (Taylor and Francis 1994).

[19] C. Abengozar, B. Bueno & J. Vega, *Intervention on Attitudes toward Death along the Life Span*, 25 Educational Gerontology 435 (1999).

[20] *See, e.g.*, M. Basoglu & S. Mineka, "The Role of Uncontrollable and Unpredictable Stress in Post-traumatic Stress Responses in Torture Survivors," in *Torture and Its Consequences:*

events clearly adds to their painful quality.[21]

As the Supreme Court recognized more than a hundred years ago, uncertainty about the time of one's execution "must be accompanied by an immense mental anxiety amounting to a great increase in punishment." *In re Medley*, 134 U.S. 160, 171, 172 (1890). The constant remainder of that uncertainty through pricking and poking only aggravates the torture.

Physical mutilation is cited among the atrocities forbidden in the Supreme Court's early cases. *See, e.g., Weems v. United States*, 217 U.S.at 372 ("[T]here could be exercises of cruelty by laws other than those which inflicted bodily pain *or mutilation*."); *Wilkerson v. Utah*, 99 U.S. at 135 (citing drawing, beheading, quartering and public dissection as punishments forbidden by the Eighth Amendment). Indeed, some states and courts recognize that death by guillotine, for instance, would violate the Eighth Amendment, even though probably instantaneous and painless, because of its disfiguring of the executed person. *See Provenzano v. Moore*, 744 So. 2d 413 (Fla. 1999). Yet here, Doyle Hamm, with his lymphoma, is being constantly reminded of the pricking and prodding and disfigurement he is going to experience.

Disfigurement and degradation are abhorred, moreover, because they represent ancient forms of power in which one's body was not one's own, but belonged to the sovereign to dispose

---

Current Treatment Approaches 182-225 (Cambridge University Press 1992); *see also* A. Koestler, *Darkness at Noon* (Macmillan 1941).

[21] *See e.g.*, T. Pyszczynski, J. Greenberg, & S. Solomon, "A Terror Management Perspective on the Psychology of Control: Controlling the Uncontrollable," in M. Kofta, G. Weary, *et al*., eds., *Personal Control in Action: Cognitive and Motivational Mechanisms* 85-108 (Plenum Press 1998); V. Florian & M. Mikulincer, *Fear of Death and the Judgment of Social Transgressions: A Multidimensional Test of Terror Management Theory*, 73 Journal of Personality and Social Psychology 369 (1997). Terror management is facilitated by the belief that future death-related events will be orderly and predictable. J. Lieberman, *Terror Management, Illusory Correlation, and Perceptions of Minority Groups*, 21 Basic and Applied Social Psychology 13 (1999).

of at his whim.[22] It was in part in reaction to this limitless power of the sovereign to trespass on an individual's right to his or her own bodily integrity that prohibitions against cruel and unusual punishment were erected. These prohibitions stand to limit not only government's power to inflict pain, but government's power to deform the very physical being of its citizens. That is why, among the "rules of government which . . . have [been] found to be essential to the preservation of those great principles of liberty and law . . . was that which prohibited the infliction of cruel and unusual punishment." *Weems*, 217 U.S. at 367-368.

In sum, the compounded punishment being administered on Doyle Hamm is a clear violation of Eighth Amendment. So practiced, it is a gratuitous affront to universal standards of contemporary decency and violates the Eighth Amendment. "A penalty . . . must accord with 'the dignity of man,' which is the 'basic concept underlying the Eighth Amendment.'" *Gregg v. Georgia*, 428 U.S. 153, 173 (1976), quoting *Trop v. Dulles*, 356 U.S. at 100 (plurality opinion). These cases underscore the essential principle that, under the Eighth Amendment, the State must respect the human attributes even of those who have committed serious crimes." *Graham v. Florida*, 560 U.S. 48, 58-59 (2010). Indeed, by protecting such persons, "the Eighth Amendment reaffirms the duty of the government to respect the dignity of all persons." *Hall v. Florida*, 134 S.Ct. 1986, 1992 (2014).

This does raise a number of genuine issues of material fact—beyond the central question of how painful this combination of punishments is to Doyle Hamm. For instance, the legal argument raises the broad factual question: (a) *whether the defendants' overall treatment of Doyle Hamm and constant pricking amount to cruel and unusual punishment.* It also raises a number of related, subsidiary factual disputes that are material, such as (b) *whether defendants'*

[22] Michel Foucault, *Discipline and Punish: The Birth of the Prison* (New York: Vintage, 1979), at pp. 3-6 and 32-69.

overall treatment and medical treatment (and non-treatment) of Doyle Hamm's cancer amount to cruel and unusual punishment.

A genuine issue of material fact here is whether defendants have properly treated Doyle Hamm's cancer or whether they are allowing him do suffer and die from untreated cancer. As noted above, Doyle Hamm was diagnosed with lymphatic cancer in 2014, with evidence of possible abnormal nodes in his abdomen and chest, and his doctors recommended chemotherapy in addition to radiation. Despite that, Doyle Hamm has never received any treatment beyond the radiation for the cancerous mass behind his left eye and in his skull. In other words, defendants have never treated any of his other lymphatic cancer condition.

Moreover, the medical records indicate that Doyle Hamm has had a cancerous lesion under his left eye since February 2014, and that, although his doctors have recommended that he receive surgery for that lesion since February 2014, he has remained untreated. The cancerous lesion was biopsied in February 2014, April 2017, and November 2017 and found to be cancerous. *See* Exhibit X (medical records obtained from Dr. John P. Donahue). Each time, the pathology report indicated cancer. Each time, Doyle Hamm was recommended for surgery. To date, he has still not been operated on.

The question of adequate medical care has plagued ADOC and is currently in active litigation in the Middle District of Alabama. The district court in Montgomery issued a searing 302-page opinion finding that ADOC did not provide adequate medical care to inmates on the mental health claims which were severed and litigated first. *See Braggs v. Dunn*, 257 F. Supp. 3d 1171 (M.D. Ala. 2017). That case has now moved on to address the medical claims. There are therefore significant questions overshadowing Doyle Hamm's situation about the medical care he is receiving. On this particular aspect, it is troubling that the lesion underneath his eye is

specifically located in front of where he was later found to have ocular and cranial lymphoma. This may indicate that the lesion on his face is more closely connected to his lymphatic cancer than is currently believed.

Today, Doyle Hamm's untreated lesion is getting deeper and bigger and, in his words, "is now stinging and burning all the time." Exhibit F at ¶7. During the medical examination of Mr. Hamm on September 23, 2017, Dr. Heath observed a quarter-sized, deep, and growing lesion on Mr. Hamm's left cheek that has literally gnawed a 4 to 5 millimeter deep hole into his left cheek. Dr. Heath described this lesion in his report as "a discolored lesion with diffuse margins, approximately 2-3 cm in diameter," and concluded that "there is likely a bone defect in the infraorbital margin (the bone under the eye), in the region of the junction of the zygoma and maxilla. This region of his face (in lay terms, his left cheek) is partially collapsed, resulting in prominent facial asymmetry." *See* Doc. 1 at 27 (Appendix A, ¶10). The lesion is visible on Doyle Hamm's face in the undated photograph of him on the ADOC website. *See* Exhibit Y (counsel believes the photograph would have been taken in 2016 or 2017). Dr. Heath was prevented from bringing a digital camera or a film camera into the prison for his medical examination on September 23, 2017, so undersigned counsel drew a diagram of the lesion on Doyle Hamm's face. *See* Exhibit Z. Allowing Doyle Hamm to suffer in this way is now just part of a combined administration of cruel punishment that violates the Eighth Amendment.

CONCLUSION

For all the foregoing genuine issues of material fact in dispute, this Court should deny the defendants' motion for summary judgment and allow this case to move forward to a full evidentiary trial. This case is now properly before this Court both as an equitable matter and under the statute of limitations. As an equitable matter, under principles of comity and

federalism, the question presented in this case became equitably ripe for federal court review only on December 13, 2017. As a statutory matter, the legal question arose during Spring 2017 in light of Doyle Hamm's materially deteriorating medical condition.

Accordingly, this Court should hear evidence on the merits, first on the risk of harm associated with the first prong of the *Glossip/Baze* standard. If the planned execution is unconstitutional, defendants cannot move forward with it. As the Eleventh Circuit stated in *Frazier*, on a different but for present purposes applicable type of challenge to lethal injection, "the District Court must first determine what risk the current three-drug protocol—with midazolam as the first drug—presents before considering the adequacy of Appellants' proposed alternatives." *Frazier,* Slip. Op. at p. 75.

Doyle Hamm's situation is on all fours with the case of David Nelson, an Alabama death row inmate who had compromised veins in 2006. David Nelson brought a §1983 lawsuit challenging venous access in his case, and the federal court appointed a Special Master to oversee the medical examination and lethal injection protocol, who retained an independent medical expert, Dr. Bagley, to conduct an examination of Mr. Nelson's veins. *See* Exhibit O at pages 45 to 59 (Expert Report of the Court's Independent Medical Expert, Dr. Warren Bagley). That is the proper way to address a complex factual dispute like this one, and Doyle Hamm respectfully urges this Court to appoint an independent medical expert to conduct a medical examination and properly guide the Court in its weighty decision in this death penalty case.

Respectfully submitted,

Bernard E. Harcourt

Bar Number: ASB-4316-A31B
Attorney for Plaintiff Doyle Hamm
COLUMBIA LAW SCHOOL
435 West 116th Street
New York, New York 10027
Telephone: (212) 854-1997
Fax: (212) 854-7946
Email: beh2139@columbia.edu

Dated: January 16, 2018

CERTIFICATE OF SERVICE

I hereby certify that on January 16, 2018, I served a copy of the attached pleading by electronic mail to opposing counsel, Assistant Attorneys General Thomas Govan and Beth Jackson Hughes at tgovan@ago.state.al.us and bhughes@ago.state.al.us, as well as to the Docket Clerk of the Capital Litigation Division of the Office of the Alabama Attorney General, Courtney Cramer at ccramer@ago.state.al.us.

BERNARD E. HARCOURT
Counsel of Record

Exhibit A

IN THE DISTRICT COURT OF THE UNITED STATES FOR THE MIDDLE DISTRICT OF ALABAMA, NORTHERN DIVISION

DAVID LARRY NELSON,	)	
	)	
Plaintiff,	)	
	)	
v.	)	**CIVIL ACTION NO.**
	)	**2:03cv1008-MHT**
	)	
RICHARD F. ALLEN and GRANTT CULLIVER,	)	
	)	
	)	
Defendants.	)	

ORDER

Based upon the order of the Court accepting the report and recommendation by Special Master Boyd, and thereby designating Warren Bagley, M.D. as the Court's independent medical expert, it is ORDERED that Dr. Bagley assist the Court in understanding outstanding issues of fact including, but not limited to the following:

1. Whether Plaintiff David Nelson's veins are accessible though the "traditional" procedure, called by the parties "peripheral vein access."

2. If Plaintiff's veins are not accessible through the peripheral vein access procedure, whether a

"percutaneous central line procedure" is appropriate.

3. If a percutanous central line procedure is appropriate, through which of Plaintiff's veins may such access may be obtained, including but not limited to the subclavian vein, the internal jugular vein, the external jugular vein, and the femoral vein, and what advantages and/or complications may accompany the process of access though each type of vein.

4. What protocol(s) will be required for obtaining access to Plaintiff's veins through the percutaneous central line procedure(s).

5. What facilities and equipment will be required for obtaining access to Plaintiff's veins through the percutaneous central line procedure(s).

6. What types of professionals and personnel will be required for obtaining access to Plaintiff's veins through the percutaneous central line procedure(s).

7. Other means, if any, that may exist by which venous access may be gained on Plaintiff, and what

protocols, facilities, equipment, professionals, and personnel would generally be required for each.

Candidly, the Court acknowledges that it lacks the medical training to appreciate the nuances in nomenclature that this case presents. For example, the Court does not understand what a "percutaneous central line procedure" is, and more importantly, whether both parties' understanding of such procedure(s) is actually the same. Plaintiff has said that such a procedure requires surgery and is a "specialty" that not even every physician is trained to perform.

Plaintiff's argument appears to be, essentially, that if performed in the right setting, a percutaneous central line procedure does not violate the Constitution. But if not properly performed in the right setting, it could, like the "cut down" procedure that is no longer at issue here, be gratuitous and wholly unnecessary because there are other, safer, more appropriate means to gain venous access and still carry out the death penalty in this

case.

In contrast, defendants say that the percutaneous central line procedure is not a "specialty," but rather is a "common" or routine procedure that may be performed by any person experienced at performing procedures of intravenous access.

Thus, because all parties agree to the percutaneous central line procedure as a general concept only, the initial factual questions for the Court appear at this time to be: (1) what the process for gaining venous access through a percutaneous central line procedure actually entails, (2) whether Plaintiff David Nelson's veins are accessible through a percutaneous central line procedure, and (3) what protocol(s), facilities, equipment, professionals, and personnel are required to conduct such a procedure properly, safely, and in keeping with generally accepted medical practice. Dr. Bagley's report should address these questions.

Dr. Bagley may obtain information from the Warden at

Holman Prison, other prison personnel, and/or medical personnel who may be involved in the contemplated execution of Plaintiff David Nelson. Due to ethical considerations, however, Dr. Bagley is not expected to advise the Court and/or any other person regarding the specifics of the contemplated execution itself, the suitability of any specific facilities and/or equipment proposed to be used in the execution, or the specific personnel proposed to carry out venous access for the execution.

Therefore, it is further ORDERED that Warren Bagley, M.D., as the Court's independent medical expert, will do a physical examination of Plaintiff David Nelson and produce a written report to the Court in order to assist it in understanding the questions and issues raised in this case as specified in this order. The Special Master will remain available to consult with and assist Dr. Bagley with his report as appropriate. Counsel for the parties and the physician consultants retained by them

may attend the physical examination, but are not to interfere or attempt to participate in any manner, verbally, physically, or otherwise.

Counsel for the parties may provide the Special Master with documentation for Dr. Bagley to review prior to his physical examination of David Nelson.

DONE, this the 28th day of July, 2006.

/s/ Myron H. Thompson
UNITED STATES DISTRICT JUDGE

Exhibit B

IN THE UNITED STATES DISTRICT COURT
FOR THE MIDDLE DISTRICT OF ALABAMA
NORTHERN DIVISION

DAVID LARRY NELSON,	)	
	)	
Plaintiff,	)	
	)	
v.	)	**CIVIL ACTION NO. 2:03CV1008-T**
	)	
DONAL CAMPBELL and GRANT CULLIVER,	)	
	)	
	)	
Defendants.	)	

REPORT OF SPECIAL MASTER ON MEDICAL EXPERT

By order of October 15, 2004, the Court appointed the undersigned as Special Master for the purpose of identifying and recommending to the Court an independent medical expert to assist the Court in understanding and dealing with certain medical issues raised by the parties. The Special Master recommends that Warren Bagley, M.D. be designated as the Court's independent medical expert.[1]

Qualifications of the Independent Medical Expert

The parties appear to be in agreement, and the Special Master concurs, that the Court's independent medical expert should be intimately familiar by education, training and experience with the procedures which are at issue here, namely the various procedures available for obtaining veinous access. It was suggested by counsel for Mr. Nelson that a physician who is board certified in Anesthesiology and who is familiar with and practicing in Cardiovascular Anesthesiology would be desirable because such an individual would likely be more familiar with these procedures and important surrounding issues than would other physicians. The

[1] On March 17, 2005, the Special Master submitted a Report recommending that Dr. Vance Nielsen be designated as the Court's independent medical expert. The Special Master subsequently submitted a Report informing the Court that Dr. Nielsen had requested to be removed from consideration as the Court's independent medical expert, and the Special Master proceeded with identifying another independent medical expert.

Special Master's research and investigation lead him to concur with Mr. Nelson's counsel in this regard. For the Court's reference, attached to this report are information pieces from the American Society of Anesthesiologists (Exhibit A) and the Society of Cardiovascular Anesthesiologists (Exhibit B), both of which Dr. Bagley is a member, describing the general nature of the specialty of Anesthesiology and its sub-specialty, Cardiovascular Anesthesiology.

Qualifications of Dr. Bagley

Before pursuing the specialty of Anesthesiology, Dr. Bagley gained broad experience in the practice of medicine in the United States Army Medical Corps where he served as a Flight Surgeon and practiced in Otolaryngology, eventually becoming Chief of Otolaryngology Services at the U.S. Army Aeromedical Center at Ft. Rucker, Alabama. After completing a residency in Anesthesiology at Walter Reed Army Medical Center in Washington D.C., Dr. Bagley received his board certification in Anesthesiology and served as the Chief of Anesthesia and Operative Services at Ft. Meade, Maryland. He was a Clinical Instructor in Anesthesiology at the Uniformed Services University of the Health Sciences (USUHS) in Bethesda, Maryland and an Instructor in Advanced Trauma Life Support for the American College of Surgeons. Since 1989, Dr. Bagley has worked and taught as an Assistant Professor in the Department of Anesthesiology at the University of Tennessee Graduate School of Medicine and has practiced Anesthesiology and Cardiovascular Anesthesiology at the University of Tennessee Medical Center. His faculty curriculum vitae is appended to this report (Exhibit C). Dr. Bagley also sits on the Cardiac Anesthesia Panel at the University of Tennessee Medical Center. He is a member of the American Society of Anesthesiologists, the Society of Cardiovascular Anesthesiologists, and the International Anesthesia Research Society. The Special Master believes that Dr. Bagley

is clearly a highly qualified physician in the specialty of Anesthesiology who has also practiced extensively in Cardiovascular Anesthesiology.

The Special Master's interview with Dr. Bagley convinces the Special Master that Dr. Bagley is very well-suited for the assignment at hand. He has extensive direct experience with the medical procedures at issue and is willing to assist the Court in its understanding of them and any related matters. Dr. Bagley is independent, in that he has no extra-judicial knowledge of this case, has not previously been involved in any similar matter, and understands that his role would be to assist the Court by providing independent and unbiased information and opinions to the Court. Dr. Bagley is willing to undertake this assignment and can make available the time needed to perform it.

Recommendations for Further Proceedings

The Special Master recommends that the Court appoint Dr. Bagley as its independent medical expert, instruct Dr. Bagley to conduct a physical examination of Mr. Nelson for the purpose of evaluating whether, and if so through what procedures, veinous access may be obtained on Mr. Nelson, and instruct Dr. Bagley to prepare a written report of his findings, along with a report or discussion on any other matters the Court deems appropriate.[2] The Court may wish to invite the parties to suggest issues that they would like to see addressed in Dr. Bagley's report as well. After the report is submitted to the Court and the parties, the Court can determine whether Dr. Bagley should be made available for testimony and cross-examination either by deposition or live. The Special Master will remain available, subject to the Court's direction, to assist in the submission of the report and with any other ancillary matters.

[2] Due to medical ethics considerations, the Special Master recommends that Dr. Bagley be instructed not to give advice or opinions on the proposed execution itself, not to consult with the warden or other prison personnel regarding the proposed execution itself, and not to give advice or opinions regarding the specific execution facilities located at Holman Correctional Facility.

s/David R. Boyd
David R. Boyd
Special Master

OF COUNSEL:
Balch & Bingham LLP
P.O. Box 306
Birmingham, AL 35201-0306
(205) 226-3485
(866) 783-2739 fax

CERTIFICATE OF SERVICE

I hereby certify that I electronically filed the foregoing with the Clerk of the Court using the CM/ECF system and service will be perfected upon the following this the 16th day of June, 2005, to:

Joe W. Morgan, III
Suite B
600 Robert Jemison Road
Birmingham, Alabama 35209

Michael Kennedy McIntyre
H. Victoria Smith
507 The Grant Building
44 Broad Street, N.W.
Atlanta, Georgia 30303

J. Clayton Crenshaw
Assistant Attorney General
Office of the Attorney General of Alabama
11 South Union Street
Montgomery, Alabama 36130

s/David R. Boyd
OF COUNSEL

Exhibit C

7/14/2014

TREATMENT SUMMARY: DOYLE L HAMM , 001329103

DIAGNOSIS: 200.70 - Large cell lymphoma unspecified site, Diagnosed 2014 (Active) ,

Patient has completed IMRT to 40Gy over 20 fractions for orbital lymphoma completed on July 11, 2014.

Radiation was well tolerated and with good results.

He will RTC in 4 weeks to see Dr. Dumas.

Electronically Signed By:
Sandra Tincher, M.D.
7/14/2014 9:42:45 AM

CC: Brian Adler

,

Hugh Hood

,

6/6/2014

Follow Up : DOYLE L HAMM 001329103 DOB: 2/14/1957

Diagnosis: Primary 200.70 - Large cell lymphoma unspecified site, Diagnosed 2014 (Active)

Interval History: Patient returns for reevaluation. Since his last visit he has undergone an MRI scan of the head and face area. This confirms the presence of a tumor extending through the foramina into the pterygoid space and into the middle cranial fossa. There is involvement of the cavernous sinus as well as extension into the left side of the nasopharynx.

Pain is well controlled with his current medications. He tells me that his pain medicine with increased yesterday. We obtained a copy of his current medications and he is no longer on steroids. I have asked that he be placed on dexamethasone.

Review of Systems:

ROS Constitutional	**Complains of poor appetite, major fatigue and change in weight. Denies fever.**
ROS Eyes	**Complains of blurred vision, double vision and visual difficulties.**
ROS Cardiovascular	**Denies chest pain, dyspnea and palpitations.**
ROS Respiratory	**Denies cough, dyspnea and hemoptysis.**

Family History: Unchanged unless mentioned above

Social History: Unchanged unless mentioned above

Vital Signs: Performed on 6/6/2014 8:21 AM
- **Pulse - 60 /min -**
- **Respiration - 20 /min -**
- **Systolic - 100 mm(hg) -**
- **Diastolic - 60 mm(hg) (LOW) -**
- **BP - 100/ 60 - ;**

KPS: 60% - Able to care for most needs, requires occasional help. (Karnofsky)

Physical Examination:

Constitutional	**The patient appears chronically ill.**

Eyes	There is massive proptosis and redness of the left eye. There is proptosis on the left. The conjunctiva is extremely reddened. There is no drainage or exudate. The eyelid is able to cover the eye completely when he closes. Examination of the globe reveals restricted range of motion. There is minimal movement medially there is only a trace of movement superiorly and laterally on the left side. The right eye moves normally. Patient is able to discern shapes faces and light but cannot read with the left eye
ENMT	Fullness in the left cheek
Neck	The neck is supple without thyromegaly or palpable nodes.
Chest	the chest is normal in appearance with normal respiratory excursion.
Cardiovascular	the heart sounds show a regular rhythm with no murmur, rub, or gallop..
Respiratory	the lungs are clear to auscultation and percussion bilaterally..
Abdomen	the abdomen is soft, nontender with no organomegaly..
Neurologic	See above

Impression and Plan: I have reviewed the patient's current findings with Dr. Adler. There is some risk of involvement of the spinal fluid. We are going to request approval from the prison medical clinic for the patient to have a lumbar puncture with cytology. In the interval I recommended that we proceed with radiation therapy as he is going to require some form of local treatment even if he takes systemic chemotherapy.

I discussed with the patient the rationale, side effects, and potential benefits of radiation to this area. We have discussed all of the above with him as well. He states his understanding and willingness to proceed.

CT simulation was performed today after intravenous contrast was administered. His creatinine when last checked was in the normal limits. He will return next week for institution of treatment and hopefully we will gain approval for his lumbar puncture.

R. Fred Dumas, Jr., M.D.

6/6/2014 10:35:34 AM

CC:Brian Adler
Hugh Hood

5/16/2014

NEW PATIENT CONSULTATION: DOYLE L HAMM MR# 001329103

PRIMARY SITE: Primary 200.70 - Large cell lymphoma unspecified site, Diagnosed 2014 (Active)

PREVIOUS TREATMENT:

HISTORY: 57-year-old incarcerated white male. Patient presents with a several month history of progressively severe bulging and pain in the left eye. Patient has some blurry vision remaining but the patient is not usable for reading or watching television.

Patient had been referred to the Eye foundation where a biopsy was performed. By report this shows a B-cell lymphoma. We have requested a copy of the pathology report but have been unable to obtain one thus far.

The patient was seen in consultation by Dr. Adler. CT scans were performed including noncontrast CT scans of the head chest and abdomen. Scans demonstrated a large mass in the retro-orbital area on the left extending into the masseter space. There was a suggestion of widening of the neural foramen. In the chest were noted numerous abnormal lymph nodes most of which were associated with calcifications. Calcified granulomata were noted within the lung as well. A few small nodes were seen in the abdomen. The pelvis was not imaged.

Patient has been treated with a single large dose of steroids. The patient states that he is bulging of the eye improved temporarily but the pain if anything was magnified.

The patient is referred at this time to discuss radiation therapy. He has not noted any particular change in his vision over the past few weeks but the vision has not markedly improved either.

PAST MEDICAL HISTORY:
cancer, hepatitis c and hypercholesterolemia.

PAST SURGICAL HISTORY:
biopsy (of the left eye).

GYN:

FAMILY HISTORY:
history of unknown cancers in three sisters and father

SOCIAL HISTORY:
Active smoker 0.5 packs/day for 40 years (20.0 pack years). Adequate transportation available for expected visits. Regular meals. Daily activities.

MEDICATIONS:

Medication	Course	Start Date
morphine	TABLET ORAL Take as Directed	5/16/2014

ALLERGIES: No Known Allergies

REVIEW OF SYSTEMS: Review of systems is documented on the radiation therapy chart and normal except as mentioned below.

ROS Constitutional	Complains of poor appetite and major fatigue. Denies night sweats.
ROS Eyes	Complains of blurred vision and visual difficulties. in the left eye
ROS Neurologic	Complains of headaches.

VITAL SIGNS:

Performed on 5/16/2014, 11:17			
Height	5.8 ft/in	Weight	139 lbs
Pulse	56 /min (LOW)	Respiration	20 /min
BP	120/74 mm(hg)	Pain	5
Fatigue	5		

KPS: 70% - Unable to do active work, but able to care for self. (Karnofsky)

PHYSICAL EXAMINATION:

Constitutional	The patient is a well developed, well nourished individual of stated age.
Head	The patient is normocephalic without sign of trauma and scars.
Eyes	Severe proptosis of the left lobe with very erythematous conjunctiva; no particular drainage; restricted range of motion of the globe. The eyelid is able to close completely.
Neck	The neck is supple without thyromegaly or palpable nodes.
skin	No evidence of dry skin, erythema, altered pigmentation and rash.
Cardiovascular	the heart sounds show a regular rhythm with no murmur, rub, or gallop..
Respiratory	the lungs are clear to auscultation and percussion bilaterally..
Abdomen	the abdomen is soft, nontender with no organomegaly..
Neurologic	The neuro exam shows the patient to be alert and oriented. There are no focal deficits noted.. Diminished vision on the left side otherwise no focal neurologic deficit
Psychiatric	No evidence of altered affect, lack of comprehension and disorientation.
Hematologic/Lymphatic	There are no palpable nodes in the cervical, supraclavicular, axillary, or inguinal areas.

IMPRESSION / PLAN: I have reviewed the current x-rays. We asked the patient to sign a release of information form so that we can obtain his pathology report. I have discussed the patient's care with the prison medical director. I have requested an MRI scan with contrast be obtained. Depending on these findings it may be recommended that the patient have a lumbar puncture for cytology or other additional imaging. I discussed with the patient the rationale, side effects, and potential benefits of local radiation. We discussed the sensitive nature of structures in the orbit including the lacrimal gland. We have discussed long-term side effects that can occur. The patient states his understanding and bleeding is to be treated. Once the patient's MRI scans have been performed and we will ask him to return for treatment planning and simulation.

Electronically Signed By:
R. Fred Dumas, Jr., M.D.
5/16/2014 2:10:43 PM

CC:
Brian Adler

,

Hugh Hood

,

UAB MEDICINE

Department of Pathology
University of Alabama Hospital
The University of Alabama at Birmingham
619 South 19th Street
Birmingham, AL 35233-1924

PATIENT: HAMM, DOYLE L
MRN: 000002875582
LOCATION: Eye Foundation Hospital
AGE: 56 years DOB: 2/14/1957
SEX: M RACE: White
ADMIT DATE: 2/6/2014
ACCESSION: S-14-0003616
ATTENDING MD: Long,John A MD
ADDL COPIES TO:
EXTERNAL IDENTIFIER:

3/13 JAL SDC

Surgical Pathology Report - Contact #: (205) 934-4977

ACCESSION: S-14-0003616
Received Date/Time: 2/6/2014 14:02 CST
Collected Date/Time: 2/6/2014 14:02 CST

Surgical Pathology Final Report – 2/11/2014 09:29 CST – Auth (Verified)

Diagnosis
Orbit, left mass, biopsy:
- **Low grade, small-sized B-cell lymphoma (see Comment).**
- **Immunohistochemistry reveals the tumor stains positively for CD20 with a proliferation rate of 10 to 15% by Ki67.**

Vishnu V.B. Reddy MD
(Electronically signed by)
Verified: 02/11/14 09:29
VVR/JW

Reviewed by Resident: Anderson, Frank Lawrence MD, MD

Pathologist Comment
The orbital tissue reveals a small-sized lymphocytic infiltrate invading into fibroadipose tissue and skeletal muscle. Immunohistochemistry stains were performed. The lymphoid cells stain positively for CD20 with about 10 to 15% proliferation rate by Ki67. These cells stain negatively for CD10, CD5, CD3, BCL-6, and BCL-1. Controls reacted appropriately. These findings are consistent with a low grade, small-sized B-cell lymphoma.

These results were reported to Dr. John Long at about 1730 hours on February 10, 2014.

Clinical Information
This is a 56 year old male with a history of left orbit mass. Per the history provided per Horizon states that a CT of the skull reveals a history of Grave's ophthalmology vs extra orbital neoplasm vs pseudotumor left eye (performed on February 3, 2014).

Frozen Section Diagnosis
AFS1, Orbit, left mass, biopsy:
- Atypical lymphoid proliferation.(per Dr. Shi Wei)

Gross Description
This case is received in a single container labeled with the patient's name, medical record number and "1 - orbit mass left orbit". The container is filled with formalin and contains a single orange cassette consistent of frozen section. The specimen now measures 2.1 x 2.0 x 0.1 cm in greatest dimension. The specimen is placed in a biopsy bag and completely submitted. No tissue was submitted for flow cytometry.
Dr. Anderson/Dr. Reddy/sd LYMPH
02/06/2014 16:16:39 CST

FLA/SOD

UAB MEDICINE

Department of Pathology
University of Alabama Hospital
The University of Alabama at Birmingham
619 South 19th Street
Birmingham, AL 35233-1924

PATIENT: HAMM, DOYLE L
MRN: 000002975582
LOCATION: Eye Foundation Hospital
AGE: 56 years DOB: 2/14/1957
SEX: M RACE: White
ADMIT DATE: 2/6/2014
ACCESSION: S-14-0003616
ATTENDING MD: Long,John A MD
ADDL COPIES TO:
EXTERNAL IDENTIFIER:

Surgical Pathology Report - Contact #: (205) 934-4977

ACCESSION: S-14-0003616
Received Date/Time: 2/6/2014 14:02 CST
Collected Date/Time: 2/6/2014 14:02 CST

Block Summary
A1- Left orbital mass (frozen section and remainder of specimen)

Microscopic Description
A microscopic examination has been performed.
Dr. Anderson/jdw
02/10/2014 19:53:57 CST

Exhibit D

FILED
2018 Jan-16 PM 03:39
U.S. DISTRICT COURT
N.D. OF ALABAMA

AFFIDAVIT

I, Cheryl Prestley, hereby certify and affirm that I am a Medical Records Clerk, employed with Corizon, at William E. Donaldson Correctional Facility; that I am the custodian of records at this institution; that the attached documents are true and correct photocopies of certain documents maintained in the file of Inmate **Doyle Hamm (AIS# Z-479)** at William E. Donaldson Correctional Facility

This, I do hereby certify and affirm to on this 30th day of June, 2017

Cheryl Prestley
CHERYL PRESTLEY
MEDICAL RECORDS CLERK

STATE OF ALABAMA)

JEFFERSON COUNTY)

SWORN TO AND SUBSCRIBED BEFORE ME AND GIVEN UNDER MY HAND

AND OFFICIAL SEAL, THIS 30th DAY OF June, 2017.

Taylor A. Rutley
NOTARY PUBLIC

10-31-20
MY COMMISSION EXPIRES

6/6/2014

Follow Up : DOYLE L HAMM 001329103 DOB: 2/14/1957

Diagnosis: Primary 200.70 - Large cell lymphoma unspecified site, Diagnosed 2014 (Active)

Interval History: Patient returns for reevaluation. Since his last visit he has undergone an MRI scan of the head and face area. This confirms the presence of a tumor extending through the foramina into the pterygoid space and into the middle cranial fossa. There is involvement of the cavernous sinus as well as extension into the left side of the nasopharynx.

Pain is well controlled with his current medications. He tells me that his pain medicine with increased yesterday. We obtained a copy of his current medications and he is no longer on steroids. I have asked that he be placed on dexamethasone.

Review of Systems:

ROS Constitutional	**Complains of poor appetite, major fatigue and change in weight. Denies fever.**
ROS Eyes	**Complains of blurred vision, double vision and visual difficulties.**
ROS Cardiovascular	**Denies chest pain, dyspnea and palpitations.**
ROS Respiratory	**Denies cough, dyspnea and hemoptysis.**

Family History: Unchanged unless mentioned above

Social History: Unchanged unless mentioned above

Vital Signs: Performed on 6/6/2014 8:21 AM
- **Pulse - 60 /min -**
- **Respiration - 20 /min -**
- **Systolic - 100 mm(hg) -**
- **Diastolic - 60 mm(hg) (LOW) -**
- **BP - 100/ 60 - ;**

KPS: 60% - Able to care for most needs, requires occasional help. (Karnofsky)

Physical Examination:

Constitutional	**The patient appears chronically ill.**

Eyes	There is massive proptosis and redness of the left eye. There is proptosis on the left. The conjunctiva is extremely reddened. There is no drainage or exudate. The eyelid is able to cover the eye completely when he closes. Examination of the globe reveals restricted range of motion. There is minimal movement medially there is only a trace of movement superiorly and laterally on the left side. The right eye moves normally. Patient is able to discern shapes faces and light but cannot read with the left eye
ENMT	Fullness in the left cheek
Neck	The neck is supple without thyromegaly or palpable nodes.
Chest	the chest is normal in appearance with normal respiratory excursion.
Cardiovascular	the heart sounds show a regular rhythm with no murmur, rub, or gallop..
Respiratory	the lungs are clear to auscultation and percussion bilaterally..
Abdomen	the abdomen is soft, nontender with no organomegaly..
Neurologic	See above

Please schedule

Impression and Plan: I have reviewed the patient's current findings with Dr. Adler. There is some risk of involvement of the spinal fluid. We are going to request approval from the prison medical clinic for the patient to have a lumbar puncture with cytology. In the interval I recommended that we proceed with radiation therapy as he is going to require some form of local treatment even if he takes systemic chemotherapy.

I discussed with the patient the rationale, side effects, and potential benefits of radiation to this area. We have discussed all of the above with him as well. He states his understanding and willingness to proceed.

CT simulation was performed today after intravenous contrast was administered. His creatinine when last checked was in the normal limits. He will return next week for institution of treatment and hopefully we will gain approval for his lumbar puncture.

R. Fred Dumas, Jr., M.D.

6/6/2014 10:35:34 AM

CC:Brian Adler
Hugh Hood

ALABAMA ONCOLOGY

Brookwood (P) 205 870-4783 (F) 205 879-7043

March 26, 2014

TO: Donaldson Correctional Facility
Via Fax 436-4579

FROM: Brian Adler, M.D. Brian Adler

RE: Doyle Hamm (DOB: 14 Feb 1957)

Thank you for the consult request regarding Mr. Hamm's newly diagnosed orbital lymphoma. The full consult will follow. Unfortunately, I cannot give a treatment plan until I have been able to review the exact pathology, lymphoma type, and know the extent of disease. If the lymphoma is confined to the orbit, radiation only might be the best option. The type of lymphoma, follicular or diffuse and small or large cell, can change the best chemotherapy option, if chemotherapy is required. The pathology report contains this information.

Hopefully, the pathology report and head CT can be sent to me in the near future, and the PET or CT scans of the chest, abdomen and pelvis can be done relatively soon.

Please let me know if you have any questions.

Please sch for Rad/onc consult
Dumas or Tincher

HAMM, DOYLE
DOB: 02/14/1957
03/26/2014

HISTORY OF PRESENT ILLNESS: This is a 57 year old gentleman who is seen in consultation at the request of Donaldson Correctional Facility for further treatment of a newly diagnosed B cell lymphoma. The patient states approximately a month ago he started to develop symptoms with some pain in the left eye as well as bulging. The sclerae also became red and injected. He was subsequently seen at UAB and had a biopsy done. There is a note in the chart indicating that this found a B cell lymphoma that was CD20 positive. The patient states he had a CT scan of the head prior to the biopsy. No other imaging studies have been done. His vision from the left eye has decreased markedly. He indicates that during the eye exam at the Eye Foundation he was having difficulty reading anything. He had significant blurring of his vision in the left eye. The pain seems to come and go to some extent. He has not had problems with high sweats. He has lost approximately 11 lbs. in the past few months. He notes slight decrease in his appetite. He denies shortness of breath or bleeding.

PAST MEDICAL HISTORY:
1. Hepatitis C.
2. Elevated cholesterol.

MEDICATIONS: Niacin, aspirin and Lortab.

ALLERGIES: NKDA.

FAMILY HISTORY: The patient's father died in his 50s of cancer of unknown type. His mother died in her 60s and had underlying lung disease. He has eight brothers and three sisters. One of his brothers died at age 65 of cancer of unknown type. Multiple other siblings have died. He has one brother and one sister who are currently alive.

SOCIAL HISTORY: The patient is an inmate at Donaldson Prison. He smokes a pack of cigarettes per day and has done so for 40 years. He does not drink alcohol.

REVIEW OF SYSTEMS: A 12 system review is negative as noted above in the HPI.

PHYSICAL EXAM: Thin gentleman in no distress. Eyes are without scleral icterus. Left eye shows proptosis with injection of the sclerae. Mouth has normal mucosa. Neck is supple without masses. There is no cervical, supraclavicular, or axillary adenopathy. Lungs have decreased breath sounds with normal effort. Heart has a regular rate and rhythm with no edema. Abdomen is soft and nontender without masses. Skin has no rash. Gait and station are normal.

HAMM, DOYLE
DOB: 02/14/1957
03/26/2014
Page Two

ASSESSMENT AND PLAN:

1. History of lymphoma. The pathology report was available at the time of visit. The patient has only one site of lymphoma. Based on his history it seems quite possible this is a MALT lymphoma or marginal zone lymphoma. If it is localized the best treatment may well be radiation therapy. If there is evidence of systemic disease, he should receive most likely a Rituxan based regimen that will probably include some cytotoxic chemotherapy. However the best regimen cannot be defined until we know the extent of disease and have the pathology report to know the lymphoma type. It would be best to have a PET scan but if this cannot be done CT scans of the chest, abdomen and pelvis are reasonable. If there is no evidence of disease outside the eye, he will not need a bone marrow biopsy.

Thank you for the opportunity to participate in the care of Mr. Hamm. Please let me know if you have questions.

Brian Adler, MD

BA/gt

cc: Donald Correctional Facility 205-436-4579

Diagnostic Imaging Department **Brookwood Medical Center**
Telephone: 205-877-2156 2010 Brookwood Medical Center Drive
Birmingham, AL 35209

Patient: **HAMM, DOYLE L**
MRN: 01329103
Acct #: 36387702
Encounter Type: 0 - Preadmit

Imaging

Procedure	Accession	Ordering	Date of Examination
CT Soft Tissue Neck w/o Contrast	368-CT-14-006944	HOOD MD, HUGH M	04/18/2014 14:15:00 CDT

Report

CT scan of the neck:

HISTORY: Lymphoma

FINDINGS: As requested, nonenhanced series was obtained.

Left orbit is abnormal large soft tissue masses seen in the left orbit resulting in expansion of the bony orbit. Proptosis seen. This mass is surrounding the left optic nerve complex. Posteriorly, the mass extends up to the orbital apex. There is also extension through the inferior orbital fissure into the pterygopalatine fossa, masticator space and the buccal space. There is also suggestion of extension to the left vidian canal.

Parapharyngeal space is normal.

This mass is not arising from the left lacrimal gland.

Given though this is a nonspecific soft tissue mass with extension through the orbital fissure, pterygopalatine fossa, given the history of lymphoma, findings here are consistent with orbital lymphoma.

The lack of intravenous contrast limits this examination.

Enlarged lymph nodes consistent with reactive lymph nodes is seen.

Nasal cavity and the paranasal sinuses are normal.

MRI scan would be of further help.

Finalized by B Chandar Sekar, MD
4/18/2014 8:01 PM

Final Report
Dictated: 04/18/2014 8:01 Dictated By: SEKAR MD, B C
Electronic Signature: 04/18/2014 8:01 pm Signed By: SEKAR MD, B C

Ordering: HOOD MD, HUGH M
Admitting: HOOD MD, HUGH M
Consulting:

Chart Type: N/A
Chart Request ID: 46875250
Printed: 04/22/2014 10:13:25 CDT

Patient Name: **HAMM, DOYLE L**
MRN: 01329103
Acct #: 36387702
DOB: 02/14/1957 Age: 57 years Sex: Male
Location: BMC - RD Radiology/
Admitted: 04/18/2014
Discharge:

Diagnostic Imaging Department **Brookwood Medical Center**
Telephone: 205-877-2156
2010 Brookwood Medical Center Drive
Birmingham, AL 35209

Patient: **HAMM, DOYLE L**
MRN: 01329103
Acct #: 36387702
Encounter Type: 0 - Preadmit

Imaging

Procedure	Accession	Ordering	Date of Examination
CT Chest w/o Contrast	368-CT-14-006945	HOOD MD, HUGH M	04/18/2014 14:15:00 CDT

Report

CT chest noncontrast.

INDICATION: Orbital lymphoma.

I have no prior chest x-rays or chest CTs to compare.

Lung windows reveal calcified granuloma in the right lung and areas of atelectasis in lung bases.

No definite areas of bone destruction are identified on bone windows.

Mediastinal windows reveal adenopathy in the mediastinum and hilar areas bilaterally. Most of these areas exhibit calcification and there are splenic granuloma which are calcified as well. These changes may simply represent granulomatous disease. Not all of the nodes are calcified and certainly any of these areas could be due to lymphoma given the history supplied. A PET study may be of benefit for further evaluation depending on the clinical situation.

The visualized liver reveals no focal abnormality. Atherosclerosis of aorta is present.

OPINION: Mediastinal and hilar adenopathy with areas of calcification. See above discussion and recommendations.

Finalized by V C Scott, MD
4/18/2014 4:05 PM

Final Report
Dictated: 04/18/2014 2:57 Dictated By: SCOTT III MD, VARIAN C
Electronic Signature: 04/18/2014 4:05 pm Signed By: SCOTT III MD, VARIAN C

Ordering: HOOD MD, HUGH M
Admitting: HOOD MD, HUGH M
Consulting:

Chart Type: N/A
Chart Request ID: 46875246
Printed: 04/22/2014 10:13:23 CDT

Patient Name: **HAMM, DOYLE L**
MRN: 01329103
Acct #: 36387702
DOB: 02/14/1957 Age: 57 years Sex: Male
Location: BMC - RD Radiology/
Admitted: 04/18/2014
Discharge:

0600
1000
1800

CORIZON HEALTH

Progress Note

Name: Last Hamm First VISAL MI

Date of Birth: 2/14/1957 ID #: Z-4

R 20/40 L 20/50 BOTH 20/50

Date	Time	Description
9/20/16	7:30	HT: 5'9 BP: 120/84 Temp WT: 140/65 PR: 68 O2: S – I have been have O – Pain. Inmate has sy involving OS & a Assumption he comple in his eye c mov requests pain medica be continued. Exam – Perrl. Bilateral uveal sensiti EOM intact. A – Continued pain OS c lymphoma P – Medication renewed. R/T: Rodd
7 MARCH 2017		WT: 142 BP 134/80 P 97 R 18 T 98 OCSAT 98 Skin S – "lumps" on my chest – x 3 weeks are mildly tender. O – Subcutaneous nodules x 2 cm in diameter – one x 6 cm below R clavicle, one periareolar area & one R post chest. A – Hard feel like lymph nodes but could be lipomas or skin lesions against hyperkeratosis. P – Chest X-ray normal – will F/U in 1 month. May need biopsy if continues to enlarge. (Next page) R/T: Rodd, MD

COMPLETE BOTH SIDES BEFORE USING ANOTHER SHEET

CS1104

CORIZON HEALTH

Nursing Encounter Tool

Skin

(Abrasions & Lacerations; Abscess, Amputation, Boils or Cellulitis; Jock Itch; Skin/Nail Problems; Lice/Scabies, Foot Fungus)

Demographics/Vital Signs

Facility Name: WEDCF | Location Seen: HU | Date Seen: 3/8/17 | Time Seen: 1:10AM

Patient Name: Last Hamm | First Doyle | MI | ID # Z479 | DOB: 2/14/57 | Age: 60

Vital Signs: *T>100 T 97.4 | *P>100 P 75 | R: 18 | *SBP<100 BP: 140/96 | Pulse Ox: 98 % ☐ RA ☐ O_2: /lpm | Wt: 141 ☒ Actual ☐ Reported

*Call Practitioner

Allergies: NKA

Chronic care clinic: ☒ Y ☐ N What Clinic(s):

Subjective

Chief Complaint: c/o lumps in chest

Onset Date: 4 wks. ago Location

Have you had this problem before: ☐ Y ☒ N

Describe:

Associated Factors:

☐ Pain scale is now 7 /10 at worst 9 /10

What makes it better nothing

What makes it worse: lying down on side

☐ Redness ☐ Fever

☐ Itching ☐ Burning

☐ Tingling ☐ Swelling

☐ Tenderness ☐ Rash

☐ Shave bumps

☐ Open or draining

Describe: 0

☐ Recent injury to area Date: 0

Describe:

☐ Recent exposure to allergens/irritants Date: 0

Describe:

Current Medications: (mark all that apply)

☐ Anticoagulants ☐ Steroids

☐ Other:

☐ Recent vaccination within last 7 days

What vaccination?

☐ New medication within past 30 days? NA

What medication?

Pertinent Medical Conditions:

☐ Eczema ☐ Shingles

☐ Diabetes ☐ MRSA ☐ Scabies NA

☐ Jock itch ☐ Immunocompromised ☐ Athlete's foot

☐ Decreased circulation ☐ IV drug use

Objective

Location of skin condition:

☐ Head ☐ Trunk ☐ Back ☐ Genitals

☐ R arm ☐ L arm ☐ R hand ☐ L hand

☐ R leg ☐ L leg ☐ R foot ☐ L foot

Describe: (R) clavicle above (R) nipple, (R) side above navel to (R), (L) arm pit

Skin:

☒ Warm ☒ Dry ☐ Pale ☐ Yellow

☐ Cool ☐ Cold ☐ Hot ☐ Red streak

☐ Clammy ☐ Scaly ☐ Red ☐ Cracking

☐ Blisters ☐ Tender to touch

☐ Lice or nits seen

☐ Mite tunnels

☐ Fresh needle tracks

☐ Bleeding

Describe: 0

☐ Swelling

Describe:

☐ Open area: Size: 0 mm

Describe:

☐ Drainage: Amount: 0

Describe:

☐ Odor

Describe: 0

☐ Embedded foreign object

Describe:

☐ Rash Size: 0

Describe:

☐ Nail involvement

Describe: 0

Tests:

☐ Fingerstick result NA (Diabetics)

Comments:

c/o 4 knots to chest

Nurse signature

Print/stamp

CORIZON HEALTH

Alabama Department of Corrections
Sick Call Request

Reason for Sick Call Request: Need to see the doctor I have lumps in my chest and to have my pain medicine renew.

Name (print): Doyle Hamm AIS # 7-479 Date of Birth 2-14-57

Institution: Donaldson Housing Area: H-10 Date: 3/4/17

Sick Call Form Collected by Health Staff: SH (initials) Title: LPN Date: 3/5/17 Time: 1:10 PM

Request Triaged (check as appropriate):

A. ____ Sick Call Nurse Encounter Not Required
- (1) ____ Referring to Chronic Care Manager
- (2) ____ Written Response/Instruction Being Provided

B. ✓ Nurse Sick Call Encounter Required
- (1) ____ Bring to HCU at this time for further evaluation
- (2) ✓ **Evaluate** in next scheduled Nurse Sick Call Clinic

Signature/Title: [signature] LPN Date: 3/5/17

Sick Call Encounter (Nurse Evaluation Tool Completed):

1 ____ Resolved by Nurse Encounter

Co-Pay Fee Incurred:

X $4.00 - Nurse

____ $4.00 – OTC(s); **If Restrictive Housing**-no OTC charge

____ $4.00 – **Scheduled but Refused Encounter**

2 Y Referral for follow up required; to be scheduled
- (a) Y Medical Provider
- (b) ____ Dental Clinic
- (c) ____ Mental Health Services
- (d) ____ Other:_____

Inmate Name AIS#

Distribution: Original (page 1)-Inmate Health Record
Copy (page 3)-retained by inmate
Copy (page 2)-inmate post health review

Brookwood Medical Center
2010 Brookwood Medical Center Drive
Birmingham, AL 35209-6804
Diagnostic Imaging Department
Phone (205) 877-1990 Fax (205) 877-2153

Encounter Type: 2 - Outpatient
Location: BMC - MI

Patient Name: HAMM, DOYLE L
DOB/Age/Sex: 2/14/1957 58 years Male
MRN: 01329103
Acct #: 38321188

Magnetic Resonance Imaging

Accession #: 368-MR-15-006346
Exam Date/Time: 9/16/2015 08:22 CDT
Procedure: MRI Face Neck Orbit w/ + w/o Contrast
Ordering Physician: RODDAM MD,ROY F

Report

MRI facial region

HISTORY: 58-year-old male with left orbital lymphoma

TECHNIQUE: Pre-and postcontrast MRI of the facial region.

FINDINGS: Prior MRI-3/10/2015 and 9/29/2014.

Abnormal enhancement is seen in the left orbit with involvement in the left pterygopalatine fossa and left infratemporal fossa/masticator space region. Abnormal enhancement is also seen in the inferior orbital fissure and in foramen ovale, and along foramen rotundum on the left. Overall, these areas of abnormal enhancement are improved in appearance when compared with 3/10/2015 and markedly improved from 9/29/2014. No definitive signs of bulky mass seen on the current stu involvement of the left cavernous sinus region cannot be excluded.

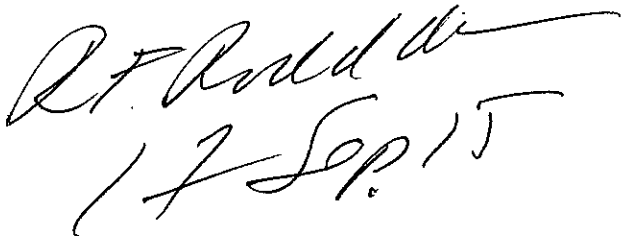
Remainder of the surrounding soft tissues are grossly normal. The nasopharynx and oropharynx are within normal limits. N definitive signs of adenopathy.

Visualized intracranial structures are grossly normal.

IMPRESSION: Overall, there are areas of abnormal enhancement as described above. However, I do not appreciate any detrimental change from prior exams.

Finalized by Harry Rosenthal, MD
9/16/2015 6:06 PM

Final Report
Dictated: 09/16/2015 12:09 Dictated By: ROSENTHAL III MD, HARRY B
Electronic Signature: 09/16/2015 6:06 pm Signed By: ROSENTHAL III MD, HARRY B



Admitting: RODDAM MD,ROY F
Consulting:

Report Request ID: 77302783
Printed: 9/17/2015 06:48 CDT

John P. Donahue, M.D., F.R.C.P.(C)

4330 HIGHWAY 78 E, SUITE 105
JASPER, AL 35501
1-877-785-3002
205-295-9415

DATE: APRIL 19, 2017

DEAR DOYLE HAMM

RE: Results of your biopsy(s) / test(s) performed on APRIL 4, 2017

NON-CANCER
DIAGNOSIS: RIGHT ANTERIOR TEMPLE - SEBORRHEIC KERATOSIS

CANCER
DIAGNOSIS: LEFT INFERIOR ORBITAL RIM - BASAL CELL CARCINOMA WITH SCLEROSIS

_____ Please keep your previously arranged follow-up visit.
_____ No follow up appointment is necessary.
_____ Continue the treatment(s) or prescription(s) originally recommended.

_____ An appointment for surgery is required.
_____ Your surgery has been scheduled for _____
_____ Please call our office to arrange an appointment for your surgery.

_____ Please call our office to schedule an appointment for
☐ Medical Treatment ☐ Re-evaluation of Skin

For questions concerning your biopsy or test results, to make a surgical appointment or to arrange a follow-up appointment, please contact our office at 1-877-785-3002 (toll free).

PT LETTER 8/12

John P. Donahue, M.D., F.R.C.P. (C)
Diplomat of American Boards of Dermatology and Dermatopathology

4330 Highway 78 East
Suite 105
Jasper, AL 35501
Phone: 1-877-785-3002

DERMATOPATHOLOGY REPORT

Patient: HAMM, DOYLE
DOB: 02/14/57
Chart #:

Biopsy Date: 04/04/17
Report Date: 04/07/17
Surgeon: J.P. Donahue, M.D.

Specimen A:
Biopsy: ___x___
Surgical Site: Excision: _____ left inf. orbital rim
Clinical Data: nodule, tumor
Provisional Diagnosis: BCC
Gross Description: Skin: 0.5 x 0.4 x 0.2 cm

Accession #: 17-1041
Previous Surgical:

Specimen B:
Biopsy: ___x___
Surgical Site: Excision: _____ right temple
Clinical Data: papule
Provisional Diagnosis: LM?
Gross Description: Skin: 0.6 x 0.5 x 0.3 cm

Accession #: 17-1042
Previous Surgical:

Microscopic Examination:
A: The epidermis is thin but otherwise unremarkable. Budding from the dermal epidermal junction are geometrically shaped tumor islands consisting of basaloid cells. The tumor islands are mitotically active and demonstrate peripheral palisading. There is peritumoral reactive fibroplasia and cellularity. Many tumor islands are linear, and percolate through a reactive and fibrous stroma.

B: The epidermis is irregularly acanthotic. The rete ridges are thickened and fused and darkly pigmented at their lowermost border. The dermis is elastotic.

Diagnosis:

Specimen A: basal cell carcinoma [sclerosing]

Specimen B: seborrheic keratosis, pigmented

John P. Donahue, M.D., F.R.C.P. (C)
Dermatopathologist
JPD:rk

18 May, 17

608

Diagnostic Imaging Department
Telephone: 205-877-2156

Brookwood Medical Center
2010 Brookwood Medical Center Drive
Birmingham, AL 35209

Patient Name: HAMM, NO. 1033L
MRN: 01334304
Acct #: 36537033
Encounter Type: 2 - Outpatient

Imaging

Procedure	Accession	Ordering	Date of Examination
MRI Brain w/ + w/o Contrast	368-MR-14-003975	HOOD MD, HUGH M	05/23/2014 15:51:00 CDT

Report

MRI brain

HISTORY: 57-year-old male with left orbital tumor

TECHNIQUE: Pre-and postcontrast MRI of the brain.

FINDINGS: No priors.

Please see report from MRI of the facial region concerning the left orbital tumor. Concerning this finding, there is extension into the cavernous sinus region and because of this, there may be extension into the medial aspect of the middle cranial fossa. The left cavernous sinus region is expanded and there is mild mass effect on the medial temporal lobe. There is asymmetrically prominent dural enhancement in this region as well, which may be reactive, although local spread cannot entirely be occluded. Note, no signs of reactive vasogenic edema in the adjacent left temporal lobe.

Otherwise, there is no midline shift or mass effect. No signs of hemorrhage, hydrocephalus, or ischemia. No other signs of abnormal enhancement seen following contrast administration. Mild, nonspecific white matter disease noted.

Mild mucosal thickening seen in the ethmoids.

Vascular flow-voids are grossly normal on T1 and T2-weighted sequences.

IMPRESSION:
1. Please see report from MRI facial region concerning left orbital tumor. There is some component of extension into the left cavernous sinus region and possibly the left middle cranial fossa.
2. Otherwise, no focal mass, hemorrhage, hydrocephalus, or ischemia seen.

Finalized by Harry Rosenthal, MD
5/25/2014 4:50 PM

R T Rosenthal

Final Report
Dictated: 05/25/2014 4:32 Dictated By: ROSENTHAL III MD, HARRY B
Electronic Signature: 05/25/2014 4:50 pm Signed By: ROSENTHAL III MD, HARRY B

Ordering: HOOD MD, HUGH M
Admitting: HOOD MD, HUGH M
Consulting:

Chart Type: Cumulative
Chart Request ID: 48212872
Printed: 05/26/2014 06:47:06 CDT

Patient Name: HAMM, DOYLE L
MRN: 01334304
Acct #: 36537033
DOB: 02/14/1957 Age: 57 years Sex: Male
Location: BMC - RD Radiology/
Admitted: 05/23/2014
Discharge: 05/23/2014

Diagnostic Imaging Department
Telephone: 205-877-2156

Brookwood Medical Center
2010 Brookwood Medical Center Drive
Birmingham, AL 35209

Patient Name: HAMM, DOYLE L
MRN: 01334304
Acct #: 36537033
Encounter Type: 2 - Outpatient

Imaging

Procedure	Accession	Ordering	Date of Examination
MRI Face Neck Orbit w/ + w/o Contrast	368-MR-14-003976	HOOD MD, HUGH M	05/23/2014 15:51:00 CDT

Report

MRI facial region

HISTORY: 57-year-old male with orbital cancer

TECHNIQUE: Pre-and postcontrast MRI of the facial region.

FINDINGS: No priors.

Exophthalmus is noted on the left. There is a soft tissue lesion filling most of the retro-orbital region on the left. There is extension posteriorly through the orbital fissures to involve the pterygopalatine fossa and cavernous sinus regions. From the cavernous sinus region, there may be extension into the middle cranial fossa with some degree of asymmetric dural enhancement noted. There is mass effect on the left temporal lobe, although no reactive vasogenic edema is seen.

There is also extension of tumor laterally into the infratemporal fossa and masticator space region on the left. Enhancing tumor surrounds portions of the pterygoid musculature, as well as the inferior aspect of the temporalis muscle. There is also tumor surrounding the gasserian ganglion and extending inferiorly along the foramen ovale into the masticator space. Some component of tumor near foramen lacerum portion of the carotid canal cannot be excluded.

I see no evidence of tumor spread through the sphenopalatine foramen. There may be some degree of tumor in the leftward aspect of the nasopharyngeal region and perhaps in the region of the fossa Rosenmüller which is asymmetrically prominent on the left when compared with the right.

The oropharynx and posterior nasal regions are grossly normal in appearance. Some component of the tumor involving the pterygoid plate region and extending into the posterior, inferior maxillary antrum cannot be excluded.

There is mucosal thickening in the ethmoids. Right orbit and right facial regions are grossly normal.

Left mastoid disease noted. This may be related to eustachian tube dysfunction.

IMPRESSION: Extensive left facial tumor as described above in detail.

Finalized by Harry Rosenthal, MD
5/25/2014 4:52 PM

Final Report

Dictated: 05/25/2014 4:29 Dictated By: ROSENTHAL III MD, HARRY B
Electronic Signature: 05/25/2014 4:52 pm Signed By: ROSENTHAL III MD, HARRY B

Ordering: HOOD MD, HUGH M
Admitting: HOOD MD, HUGH M
Consulting:

Chart Type: Cumulative
Chart Request ID: 48212873
Printed: 05/26/2014 06:47:08 CDT

Patient Name: HAMM, DOYLE L
MRN: 01334304
Acct #: 36537033
DOB: 02/14/1957 Age: 57 years Sex: Male
Location: BMC - RD Radiology/
Admitted: 05/23/2014
Discharge: 05/23/2014

Diagnostic Imaging Department
Telephone: 205-877-2156

Brookwood Medical Center
2010 Brookwood Medical Center Drive
Birmingham, AL 35209

MR# 01329103
Acct #: 36405173
Encounter Type: 2 - Outpatient

Imaging

Procedure	Accession	Ordering	Date of Examination
CT Abdomen w/o Contrast	368-CT-14-007413	HOOD MD, HUGH M	04/25/2014 10:18:33 CDT

Report

CT of the abdomen without intravenous contrast

Indication: History of orbital lymphoma

Findings: Oral contrast was administered. There are numerous small calcified granulomata throughout the spleen. There are a couple of small calcified hepatic granulomata. There are also faintly calcified lymph nodes in the porta hepatis. The gallbladder, bile ducts, pancreas, adrenal glands and kidneys demonstrate no significant abnormality. No pathologically enlarged lymph nodes are seen. There is a mild to moderate amount of stool in the colon. I see no evidence of bowel obstruction and or bowel wall thickening. There are atherosclerotic calcifications involving abdominal aorta without aneurysm. No osseous abnormality is seen. The pelvis was not scanned because it was not ordered.

Impression:
1. No CT evidence of lymphoma in the abdomen.
2. Mild constipation.
3. Old calcified granulomatous disease.

Finalized by Robert Thomas, MD
4/25/2014 11:03 AM

RF Read

Final Report
Dictated: 04/25/2014 11:03 Dictated By: THOMAS MD, ROBERT H
Electronic Signature: 04/25/2014 11:03 am Signed By: THOMAS MD, ROBERT H

Ordering: HOOD MD, HUGH M
Admitting: DOCTOR, NOTONSTAFF
Consulting:

Chart Type: Cumulative
Chart Request ID: 47098255
Printed: 04/28/2014 06:47:14 CDT

Patient Name: HAMM, DOYLE L
MRN: 01329103
Acct #: 36405173
DOB: 02/14/1957 Age: 57 years Sex: Male
Location: BMC - CT Cat Scan/
Admitted: 04/25/2014
Discharge: 04/25/2014

John P. Donahue, M.D., F.R.C.P. (C)
Diplomat of American Boards of Dermatology and Dermatopathology

4330 Highway 78 East
Suite 105
Jasper, AL 35501
Phone: 1-877-785-3002

DERMATOPATHOLOGY REPORT

Patient: HAMM, DOYLE L.
DOB: 02/14/57
Chart #:

Biopsy Date: 02/21/14
Report Date: 02/28/14
Surgeon: J.P. Donahue, M.D.

Specimen A:
Biopsy: ___x___ Excision: _____
Surgical Site: left inf. orbital rim
Clinical Data: tumor
Provisional Diagnosis: BCC?
Gross Description: Skin: 0.5 x 0.4 x 0.2 cm

Accession #: 14-0826
Previous Surgical:

Microscopic Examination:
A: The epidermis is ulcerated. Budding from the dermal epidermal junction are geometrically shaped tumor islands consisting of basaloid cells. The tumor islands are mitotically active and demonstrate peripheral palisading. There is peritumoral reactive fibroplasia and cellularity.

Diagnosis:

Specimen A: basal cell carcinoma

John P. Donahue, M.D., F.R.C.P. (C)
Dermatopathologist
JPD:rk

John P. Donahue, M.D., F.R.C.P. (C)
Diplomat of American Boards of
Dermatology and Dermatopathology

4330 Highway 78 E, Suite 105
Jasper, AL 35501
Phone: 1-877-785-3002

Consultation Report

February 21, 2014

Dr. Lovely
Donaldson Correctional Facility
Prison Health Services
100 Warrior Lane
Bessemer, AL 35023

Dear Dr. Lovely: Re: Doyle Hamm

Thank you for referring this patient to me for evaluation, treatment and consultation.

This fifty-six year old male presents for the evaluation of an indurated plaque that is present on the inferior aspect of the left orbital rim. The lesion has been evolving for some while. The patient is unaware as to the duration of this lesion. There had been no trauma to the site.

The patient's medical history, which is well known to you, is reviewed and documented. There is a sutured incision on the orbital rim at the right, the site of an ophthalmologic biopsy.

There is mild dyschromia on sun exposed surfaces. There are several pink papules scattered about the torso consisting of benign nevi, for which no treatment is deemed necessary.

The index lesion, which consists of a slightly ulcerated, indurated plaque is consistent with the clinical appearance of a sclerosing basal cell carcinoma. A biopsy is undertaken and excision is planned in the near future on a p.r.n. basis.

Should you have any questions concerning the patient's management, please do not hesitate to call.

Sincerely,

John P. Donahue, M.D.
JPD:rk

UAB MEDICINE
CALLAHAN EYE HOSPITAL

NAME: HAMM, DOYLE DOB: 02/14/1957 MRN: M0311244
DATE OF SERVICE: 02/06/2014 ACCT #: V001395820

Is this first surgical procedure for patient during this hospitalization?

Was this treatment due to an accident?

If yes, date of accident:

Type and location of accident:

IS THIS A RESULT OF A COMPLICATION OF A PREVIOUS PROCEDURE:

PREOPERATIVE PRINCIPAL DIAGNOSES: Left orbital neoplasm

COMPLICATIONS:

POSTOPERATIVE PRINCIPAL DIAGNOSES: Left orbital neoplasm

SURGEON: John Long, MD

ASSISTANT: Shannon Cox, MD

SUPERVISOR:

ANESTHETIST/ANESTHESIOLOGIST:

TYPE OF ANESTHESIA: General

NAME OF EVERY PROCEDURE PERFORMED: Left anterior orbitotomy with frozen section biopsy of left orbital neoplasm

ESTIMATED BLOOD LOSS:

SPECIMEN REMOVED:

SUMMARY OF THE OPERATION: The patient arrived in the operating room in stable condition. General anesthesia was achieved with no difficulty. Two percent lidocaine with 1:100,000 epinephrine and Vitrase was injected into the left medial orbit along the left medial canthal area. The face was prepped and draped in usual sterile fashion. A marking pen was used to outline a superior medial orbitotomy in the "Lynch" manner. A #15 Bard-Parker blade was used to incise the skin of the orbicularis muscle and needlepoint Bovie cautery set on the cutting mode was used to cut down to the bones of the medial orbit. The Freer elevator was used to elevate the periorbita back into the orbit behind the equator of the globe. A #12 Bard-Parker blade was used to make an incision in the periorbita beneath the inferior rectus muscle. A combination of yellow appearing fat and abnormal white appearing tumor was seen. Westcott scissors were used to harvest some of the abnormal appearing tissue. This was submitted to

UAB MEDICINE
CALLAHAN EYE HOSPITAL

Operative Note

pathology for frozen section analysis. Minimal bleeding was encountered. Minimal cautery was needed. Thrombin and Gelfoam were placed into the orbit in an attempt to stem non-existing bleeding. This was removed and the skin was closed with interrupted mild chromic suture. Marcaine was injected into the patient prior to closure. The patient left the operating room with a patch on his eyelids. There were no complications.

ELECTRONICALLY - 02/18/2014 01:19 PM
John Long, MD

JL/MH Job #: 2271040 D: 2/6/2014 12:47 P.M. T: 2/7/2014 03:37 P.M.

M311244

25 APR 14
1st PET
scan would be
RFR

Patient: HAMM, DOYLE L
MRN: 2875582
Case: S-14-0003616

Collected date: 06 FEB 2014 14:02
Result type: SPF
Result date: 11 FEB 2014 09:29
Result status: Auth (Verified)
Result title: Surgical Pathology Final Report
Performed by: on
Electronically Signed by: Reddy, Vishnu V.B. MD on 11 FEB 2014 09:29
Encounter info: EYE FOUNDATION HOSPITAL, 1 Time OP, 02/20/2014

Diagnosis
Orbit, left mass, biopsy:
- Low grade, small-sized B-cell lymphoma (see Comment).
- Immunohistochemistry reveals the tumor stains positively for CD20 with a proliferation rate of 10 to 15% by Ki67.

Vishnu V.B. Reddy MD
(Electronically signed by)
Verified: 02/11/14 09:29
VVR/JW

Reviewed by Resident: Anderson, Frank Lawrence MD, MD

Pathologist Comment
The orbital tissue reveals a small-sized lymphocytic infiltrate invading into fibroadipose tissue and skeletal muscle. Immunohistochemistry stains were performed. The lymphoid cells stain positively for CD20 with about 10 to 15% proliferation rate by Ki67. These cells stain negatively for CD10, CD5, CD3, BCL-6, and BCL-1. Controls reacted appropriately. These findings are consistent with a low grade, small-sized B-cell lymphoma.

These results were reported to Dr. John Long at about 1730 hours on February 10, 2014.

Clinical Information
This is a 56 year old male with a history of left orbit mass. Per the history provided per Horizon states that a CT of the skull reveals a history of Grave's ophthalmology vs extra orbital neoplasm vs pseudotumor left eye (performed on February 3, 2014).

Frozen Section Diagnosis
AFS1, Orbit, left mass, biopsy:
- Atypical lymphoid proliferation.(per Dr. Shi Wei)

Gross Description
This case is received in a single container labeled with the patient?s name, medical record number and "1 - orbit mass left orbit". The container is filled with formalin and contains a single orange cassette consistent of frozen section. The specimen now measures 2.1 x 2.0 x 0.1 cm in greatest dimension. The specimen is placed in a biopsy bag and completely submitted. No tissue was submitted for flow cytometry.
Dr. Anderson/Dr. Reddy/sd LYMPH
02/06/2014 18:16:39 CST

FLA/SOD

Block Summary
A1- Left orbital mass (frozen section and remainder of specimen)

Microscopic Description
A microscopic examination has been performed.
Dr. Anderson/jdw
02/10/2014 19:53:57 CST

Printed by Ination on 02/24/2014 08:43

CT Maxillofacial wo contrast

HAMM, DOYLE - 000002875582

* Final Report *

Document type:	CT Maxillofacial wo contrast
Result date:	03 February 2014 20:33
Result status:	Auth (Verified)
Document title:	CT Maxillofacial wo contrast
Performed by:	Franklin, Terri L on 03 February 2014 20:33
Electronically Signed By:	Cure, Joel K MD on 03 February 2014 20:45
Encounter info:	649876794034, UAB HIGHLANDS, 1 Time OP, 02/03/2014 -

* Final Report *

Reason For Exam
graves opthalmopathy vs extraorbital neoplasm vs pseudotumor left eye

RESULTS
Orbit CT without contrast 02/03/2014 20:33:40

Indication: Redness, swelling, blurry vision left eye.

Technique: Axial helical CT images were obtained through the maxillofacial region. 2-D coronal reconstructions were generated from the axial data. DLP: 1357.50 mGy cm. Scan field of view: 200 mm.

Findings: There is a poorly marginated mass within the left orbit with both intraconal and extraconal components. This appears to extend through the orbital apex via the superior and inferior orbital fissures both of which appear enlarged. The left foramen rotundum is asymmetrically enlarged. The cortex along the lateral aspect of the left vidian canal appears mildly slightly eroded. The lesion probably extends into the left cavernous sinus. There is mild left proptosis.

There is loss of fat planes within the left masticator space and the left masticator (especially the left lateral pterygoid muscle) space is probably diffusely involved by tumor.
Impression: Left orbital neoplasm with possible perineural tumor spread to the left cavernous sinus and left masticator space. This may represent an adenoid cystic carcinoma, given this

Printed by: Parker Jr, John Steven MD
Printed on: 02/03/2014 21:31

CT Maxillofacial wo contrast HAMM, DOYLE - 000002875582

* Final Report *

pattern. Further evaluation with contrast-enhanced MRI is strongly recommended.

Signature Line
Final Report
Interpreted by: Cure, Joel K MD
Title: MD
Signed Date/Time: 02/03/14 20:45

Completed Action List:
* Order by Yee, Jeffrey L MD on 03 February 2014 19:41
* Perform by Franklin, Terri L on 03 February 2014 20:33
* VERIFY by Cure, Joel K MD on 03 February 2014 20:45

Printed by: Parker Jr, John Steven MD
Printed on: 02/03/2014 21:31

Exhibit E

FILED
2018 Jan-16 PM 03:39
U.S. DISTRICT COURT
N.D. OF ALABAMA

Report of Mark. J. S. Heath, M.D.

1. My name is Mark J. S. Heath. On October 1st, 2017 I provided Mr. Bernard Harcourt, counsel for Mr. Doyle Hamm, with an affidavit related to my evaluation of Mr. Hamm's intravenous access. Information about my professional background, and my study of lethal injection, is presented in that affidavit.

2. In this present affidavit I am commenting on two developments that are relevant to Mr. Hamm's scheduled execution. The first is the provision of affidavits by medical staff from the Donaldson Correctional Facility. The second is the aborted execution of Mr. Alva Campbell in Ohio on November 15th, 2017 due to difficulty obtaining intravenous access.

3. I have reviewed the affidavits of Dr. Roy F. Roddam (Exhibit D), James Dennis Butler, CRNP (Exhibit E), Kelley McDonald, LPN (Exhibit F), Elisabeth Wood, LPN (Exhibit G), and Doyle Hamm.

4. Dr. Roddam (in Exhibit D) states that in his "opinion, Mr. Hamm has two superficial veins in his right wrist that would be available for venous access." Dr. Roddam does not mention the presence or absence of any other veins.

5. RN Butler (Exhibit E) performed two separate examinations of Mr. Hamm. He states that his first examination revealed veins that could accommodate catheters in the areas of the wrists and the backs of both hands. He states that his second examination revealed large veins in Mr. Hamm's feet that would accommodate large bore

catheters. It is not clear why the examinations of the upper and lower extremities were undertaken on different days.

6. LPN McDonald (in Exhibit F) details five clinical encounters in which she drew blood, or attempted to draw blood. Two occasions required only one attempt to draw blood from the right hand, one occasion required two attempts, and on two occasions she was not able to draw blood. In one of the failed episodes she only made one attempt and then abandoned the procedure, it is not clear why. In the other failed episode another LPN, Elisabeth Wood, was called to assist and was able to draw blood with one attempt. LPN McDonald does not mention the presence or accessibility of the veins described by Dr. Roddam or James Butler.

7. LPN Wood (Exhibit F) states that she has successfully drawn blood from Mr. Hamm on numerous occasions. She used the back of Mr. Hamm's right hand on at least two occasions, and the antecubital vein in his right arm on at least one unspecified occasion. She successfully assisted LPN McDonald on one occasion, drawing blood from the right hand on the first attempt.

8. My evaluation of Mr. Hamm did not reveal the veins described by Dr. Roddam and RN Butler, and thus there is an inconsistency in the findings of our examinations. My evaluation did identify a narrow tortuous vein on the back of his right hand. This is very likely the same vein that was used by LPN McDonald and LPN Wood, with varying degrees of success and difficulty, to draw blood.

9. It is very important to understand that it is easier and simpler to insert a needle to draw blood than it is to insert an intravenous catheter. This is because a blood draw needle is thinner and sharper than an intravenous catheter, which consists of a needle

surrounded by a plastic tube. Further, only the tip of a needle needs to enter the vein to draw blood, whereas the entire length of a catheter needs to be threaded into a vein to secure access for injecting drugs. Threading a catheter all the way into a vein is more challenging when the vein is tortuous, as is the case with the vein in the back of Mr. Hamm's right hand. Also, there is a higher chance of rupturing the vein when threading a catheter into a thin-walled vein, as is the case with the vein in the back of Mr. Hamm's right hand. The difficulties encountered in drawing blood from the vein in the back of Mr. Hamm's right hand is fully consistent with, and supportive of, my opinion that it would be extremely challenging or impossible to use it to obtain secure IV access suitable for injecting fluid or drugs.

10. On November 15th of last year, after I had submitted my previous report, Ohio attempted and failed to obtain IV access for executing Mr. Alva Campbell. Mr. Campbell was reported in advance to have difficult intravenous access. The Ohio lethal injection protocol includes contingency planning for situations in which IV access is difficult to achieve, and the plans were followed, resulting in the abandonment of the attempt. Similar contingency plans were followed when Ohio execution staff were unable to obtain IV access in Mr. Rommel Broom in 2009. I have not had the opportunity to review Alabama's current lethal injection protocol and do not know whether it includes a contingency plan for abandoning IV access attempts. Based on my study of lethal injection protocols and practice throughout the United States, the inclusion of such contingency planning has become a widely-followed standard.

11. In summary, the newly provided affidavits and information about the Campbell execution attempt in Ohio do not cause me to change my opinion that peripheral intravenous access in Mr. Hamm would be extremely difficult or impossible. Indeed, the focus by LPN McDonald on the vein in the back of the right hand, and the difficulties she encountered, bolster my opinion about the challenging nature of Mr. Hamm's IV access. I do not have an explanation for the discrepancy between my assessment and the assessments of Dr. Roddam and RN Butler. The visibility and palpability of veins can vary over time depending on multiple factors such as hydration status, temperature, tissue edema, and medications.

12. Based on my evaluation of Mr. Hamm and my knowledge about the conduct of lethal injection in Alabama and elsewhere, I continue to hold the opinion that the state of Alabama is not equipped to secure intravenous access in Mr. Hamm.

13. I also continue to hold the opinion that it would be beneficial to all if an evaluation were conducted by an independent and properly-equipped medical professional such as the examination performed by Dr. Bagley in the case of David Nelson.

14. This report represents my updated opinions resulting from my review of the newly obtained information. I reserve the right to amend my opinions should the advent of additional information so warrant.

Mark J. S. Heath, M.D.
January 16, 2018

Exhibit F

IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF ALABAMA

DOYLE LEE HAMM,	)	
	)	
Plaintiff,	)	
	)	
-against-	)	Case No. 2:17-cv-02083-KOB
	)	
JEFFERSON S. DUNN, Commissioner of the Alabama Department of Corrections, et al.,	)	
	)	
Defendants.	)	

AFFIDAVIT OF DOYLE LEE HAMM

Before me, the undersigned notary public, personally appeared Doyle Hamm who, after being duly sworn by oath, did depose and say as follows:

1. My name is Doyle Hamm. I am currently incarcerated on death row at the Donaldson Correctional Facility in Bessemer, Alabama. I was sentenced to death in 1987. On December 13, 2017, the State of Alabama set an execution date for February 22, 2018.
2. I am sixty years old and I give this statement based on my personal knowledge of the facts and information contained herein.
3. Since about March or April 2017, the nurses at Donaldson Correctional Facility's infirmary have only been able to locate a vein on my right hand to draw blood with little needles that have a little butterfly on them. Since about that time, the nurses have only tried to draw blood from my right hand because that is the only place they have been able to locate a vein. They continue to go back to the same

place on my right hand, even though they have had problems drawing blood from there.

4. Sometimes the nurses haven't been able to get their needle into that vein in my right hand and draw blood, even after multiple tries. Around late October 2017 and then again in November 2017, the nurses were not even able to get blood from that spot on my right hand. They tried on about three different occasions, each time pricking me about 4 or 6 times, and did not succeed in finding a vein and drawing blood. They always look around my arms and legs too, but they always seem to be trying to get the needle in my right hand.
5. Recently, I tried to explain to the nurses that the only place that they have been able to draw blood from me, when they did succeed, was from this one vein on my right hand. I was just trying to help then, not telling them not to try elsewhere. I don't like getting pricked so I was just trying to help them.
6. Lately, for a few months now, the nurses seem to be trying to stick needles in me to draw blood much more often than they were before. They seem to be doing this almost every other week.
7. Back in 2014, when I had a biopsy done of a lesion under my left eye, the doctors said that I needed surgery because it was cancerous. The doctors have done a few more biopsies of the same lesion under my left eye, and each time they tell me that I need surgery, but I have not had any surgery to remove that lesion under my left eye. The lesion is getting bigger and deeper in the last month and it is now stinging and burning all the time.

8. I take a painkiller called Norco on a daily basis, 10mgs three times a day, because of the pain that I have in my left eye and behind my left eye. It is prescribed by Dr. Roddam for the pain in the back of my left eye.

Further affiant sayeth not.

I, Doyle Hamm, declare under penalty of perjury that the foregoing is true and correct and is based on my own personal knowledge.

Doyle Hamm

Doyle Hamm

Sworn to and subscribed before me on this 11th day of January, 2018.

Taylor A. Rutley

Notary Public

My Commission Expires: 10-31-20

Exhibit G

AFFIDAVIT OF EGON VON CONWAY

Before me, the undersigned notary public, personally appeared Egon Von Conway, who, after being duly sworn by oath, did depose and say as follows:

1. My name is Egon Von Conway. I am 22 years old. I am a graduate of Columbia College at Columbia University. I just graduated in May of 2016. I am a former research assistant of Bernard Harcourt.

2. While I was studying for my undergraduate degree at Columbia College, I applied for a position as research assistant with Professor Harcourt and he hired me to do research. As one of the projects I worked on, I reviewed all of the medical records of Doyle Lee Hamm.

3. In the course of reviewing Doyle Hamm's medical history, I discovered an extensive history regarding head injuries and seizures, intellectual disabilities, intravenous drug use, and cancer.

4. I will summarize here what I found in Doyle Hamm's medical records.

A. Early Head Injuries and Seizure Disorders

5. Gaye Nease, an expert who worked on Doyle Hamm's case in the early 1990s, reported that on "10.11.58 [...] Jimmy [Hamm] remembers that when 'Doyle was just starting to walk. [...] a rooster flew up and spurred Doyle on the sides of the head 4 or 5 times. Doyle fell out of the door way and down the steps that were about 3 feet high. I ran and

picked Doyle up, there was blood everywhere coming from the sides of Doyle's head.'" This was in Volume 11 of the Federal District Court record on Doyle Hamm's federal habeas corpus petition from the Post-Conviction Record in state post-conviction proceedings in state court (hereinafter referred to as "PCR"), at p. 136.

6. Gaye Nease also reported that on "09.25.64 [...] Doyle and Jimmy were walking around the top of the second story. Doyle fell off and landed on the sidewalk. When Doyle fell, Jimmy decided to jump off the roof and help him. When Jimmy jumped he landed right on Doyle's nose because Doyle had moved from where he first landed. Doyle's nose was broken when Jimmy landed on his face. Jimmy thought that Doyle would bleed to death." Vol. 11 - PCR – 139.

7. Gaye Nease also noted that Doyle Hamm reported that in 1973, "he cracked his head on a beam at the park in Sheffield." Vol. 11 - PCR – 142.

8. In an Affidavit submitted to the court on July 19, 1999, Dr. Dale Watson stated that Doyle Hamm "has a significant history of head injuries. At 4-5 years of age he was knocked unconscious and hospitalized after a fall from a two-story building. He fell out of a tree at age 6 and was unconscious for an uncertain period of time. At 7-8 he hit a tree stump on his bicycle and was knocked unconscious. At 11 he was dazed from a fall off of a horse. At 14-15 he stumbled and hit a steel beam which knocked him unconscious." Vol. 11 - PCR – 163.

9. Gaye Nease reported that on "10.11.58 [...] Geneva reports that 'Doyle had seizures real bad when he was little. He would be playing in the yard and Mama would find him in the yard jerking. Doyle would just be playing and then he would start jerking. [...] Doyle would black out. Mama would use a spoon to keep Doyle from swallowing his tongue. [...] When he was little Doyle would have 2 or 3 seizures a week.'" Vol. 11 - PCR – 136.

10. In ¶ 22 of his affidavit, Dr. Dale Watson reports that Doyle Hamm "has a history of seizures. The first such event occurred in 1977 and was not related to substance withdrawal inasmuch as he had been incarcerated for 5-6 months. He subsequently had two seizure-like episodes in 1980. He also experienced withdrawal seizures in 1987. He has taken Dilantin, an anti-seizure medication, at times." Vol. 11 - PCR – 163.

11. In a physical examination, a Parchman Prison doctor in Mississippi diagnosed Doyle Hamm with "Chronic Seizure Disorder [...]" and prescribed "Dilantin BID for Chronic Seizure Disorder" (Parchman Medical Records - Initial Physical Examination 3.7.81) Vol. 17 - PCR - 1331. There are a number of other records indicating, for instance in a record from 2/23/1981, that Doyle Hamm was "Epileptic since 1977 [...] having on + off seizures [...] Dilantin 100mg t tab B.I.D. #60"(Parchman Medical Records - Progress Notes from 2/23/1981) Vol. 17 - PCR – 1328; "Refill: Dilantin 100mg tab B.I.D #60" (Parchman Medical Records - Progress Notes from 3/25/1981) Vol. 17 - PCR – 1328; and "Refill: Dilantin 100mg tab + B.i.D #60" (Parchman Medical Records - Progress Notes from 4/28/1981) Vol. 17 - PCR – 1327.

12. From the Discharge Summary of the North Mississippi Medical Center, it is noted that "This 23 year old white male was admitted on 11-20-80, with a seizure disorder, possibly, or a nervous tic. Neurological examination was normal and the routine laboratory work was normal. The chest x-ray and the skull x-rays were negative. He was placed on Dilantin and he had an EEG, which the results are not back at this time." (North Mississippi Medical Center - Discharge Summary) Vol. 17 - PCR – 1264.

13. In the Tailor Hardin Report from the original mental health evaluation of Doyle Hamm after his arrest in Alabama, Dr. Kamal A. Nagi records that "The patient did report a seizure history dating back to 1980." Dr. Kamal A. Nagi - Lunacy Commission Evaluation Summary Report in the Tailor-Hardin Report - 1.

B. Intellectual Disability

14. When Doyle Hamm entered the 8th grade, the Tennessee Reception and Diagnostic Center recorded these tests: "Test Results: IQ 96; C.A.T. Grade Placement: Read: 3.5; Arith.: 5.3; Lang.: 3.4; Aver.: 3.6" (State of Tennessee Reception and Diagnostic Center Admission Summary 5-9-78 page 3) Vol. 14 - PCR – 721, also Vol. 17 - PCR – 1368.

15. Gaye Nease reports that when Doyle Hamm was in 4th grade, his reading level was measured at a 1st grade level, relying on this educational record: "09/25/68 Doyle enrolled in Reading Lab. attended 140 days of lab reading level end of year 1.5 May 27, 1969" Vol. 11 - PCR – 140.

16. From the State of Tennessee Reception and Diagnostic Center, it is noted of Doyle Hamm that "The Revised Beta suggests that the resident is capable of functioning within the lower limits of normal intellectual ability and such is consistent with the interview impression. There is some discrepancy between this and the lower general knowledge sub-test score on the GATB which can perhaps be attributed to the verbal aptitude and resident's impoverished academic abilities. Most of the GATB scores were considered relatively low although resident did achieve a few medium scores suggesting that he could participate in some vocational training in the event he were adequately motivated to do so. While he reports to have completed the eighth grade he currently has a CAT average of only 3.6 recorded certainly indicative of some academic deficiency of which this individual appears keenly aware. The validity of the MMPI profile is highly questionable as is demonstrated by the elevated F scale. It does; however, seem to confirm his rather poor self-concept and would also suggest a degree of restlessness and impulsivity." State of Tennessee Reception and Diagnostic Center Admission Summary 5-9-78 page 3 in Vol. 14 - PCR – 721.

17. From that same report from the State of Tennessee Reception and Diagnostic Center, it is noted that Doyle Hamm "had to repeat the first grade and was suspended once for smoking. In the eighth grade at the age of sixteen he terminated his formal education because he did not enjoy going to school and he had a learning problem." State of Tennessee Reception and Diagnostic Center Admission Summary 5-9-78 page 4 in Vol. 14 - PCR – 722.

18. In sixth grade Mr. Hamm's report card stated: "Chron. Age: 12-08; M.A.. 6-11; I.Q.: 66; Grade Placement: 3.6." Not that M.A. stands for 'Mental Age.' *See* Elementary Pupil Cumulative Record Card, 6th grade - October 1969 in Vol. 14 - PCR – 679.

19. In Colbert County, Mr. Hamm's IQ test results were: "L I.Q. 67, ML I.Q. 57, T I.Q. 59." *See* Colbert County Pupil Test Record - October, 1969 in Vol. 17 - PCR – 1299.

20. In his report, Dr. Dale Watson diagnosed Doyle Hamm as suffering from brain impairments: "Summary indices from the Halstead-Reitan Battery are indicative of neuropyschological deficits and/or brain dysfunction. Mr. Hamm's Neuropsychological Deficit Scale (NDS) (Reitan, 1993) score of 54 falls within the Moderate Neuropsychological Impairment range. In addition, his Halstead Impairment Index (HII), a measure of consistency of findings of brain impairment, was 0.9 and falls clearly within the brain-damaged range. Further, his Average Impairment Rating (AIR), a measure of the consistency and severity of brain damage, was 2.00 which also falls within the brain impaired range." Vol. 11 - PCR - 164-5.

21. In his report, Dr. Dale Watson adds that "In summary, Doyle Lee Hamm has significant impairment of intellectual, academic, language, motor, problem solving and executive functions associated with moderate levels of neuropsychological impairment and presumptively brain damage. Most notably, there are significant limitations in his verbal intellectual abilities, indications of impaired 'executive functions,' academic deficits likely due to learning disabilities and motor impairments. These impairments are sufficient to have a significant impact on his daily functioning." Vol. 11 - PCR – 168.

22. Dr. Dale Watson defined executive functions as "those brain-related abilities associated with planning, problem solving and controlling behavior. Duffy and Campbell (1994) note that executive functions 'are necessary to produce context-appropriate, goal-oriented behavior, including motivation, planning, self-regulation, and self-monitoring. A deficit in any of these supervisory mental processes will result in a breakdown in autonomous behavior and render the individual incapable of generating self-determined rather than environmentally determined (stimulus bound) behavior.'" Vol. 11 - PCR – 167.

23. Dr. Watson also reported that "It is probable that these deficits are the result of a long history of head trauma and extensive polysubstance abuse. He has clearly been dependent on a number of substances including alcohol, inhalants and narcotics. It is likely that these substances have had a neurotoxic impact upon his nueropsychological functioning and brain status" Vol. 11 - PCR - 168-9.

24. Dr. Watson reported on Mr. Hamm's I.Q., noting that "On the Wechsler Adult Intelligence Scale-Revised (WAIS-R) Mr. Hamm obtained a Verbal Intelligence Quotient (VIQ) of 74 (Borderline), a Performance IQ (PIQ) of 93 (average) and an overall Full Scale IQ (FSIQ) of 82, which places him in the borderline range of measured intellectual ability overall. His verbal intellectual abilities are at only the 4th percentile (meaning that 96% of the normative sample scored higher) and his nonverbal abilities are at the 32nd percentile). The difference of 19 points between VIQ and PIQ is significant; he has significantly stronger skills in nonverbal areas than in verbal abilities. Such a discrepancy is not necessarily diagnostic of brain damage though it increases the probability of left

hemisphere brain dysfunction. Such a difference occurs in only 5 percent of 'normals' within his IQ range." Vol. 11 - PCR - 165-6.

25. *Overall, Dr. Dale Watson found that "The results of this comprehensive* neuropsychological evaluation provided evidence of intellectual, academic, language, motor, problem solving and executive deficits associated with moderate levels of neuropsycholgical impairment. The evidence for this dysfunction was seen in a deficient 'level of performance' across a number of tests as well as in deficits associated with unusual performance differences seen in comparisons of the right and left sides of the body and pathognomonic signs of brain dysfunction. The test results suggest a degree of lateralization of impairment to the left hemisphere of the brain - though there are also signs of right hemisphere involvement as well." Vol. 11 - PCR - 163-4

C. Intravenous Drug Use

26. The Donaldson Prison Medical Records reports Mr. Hamm's history of IV drug use: "*Substance Abuse Hx: IV 1st 1974 Last 1987.*" *See Donaldson Medical Records* 6/30/2017, p. 606.

27. The Donaldson Prison Medical Records record that Doyle Hamm "complains of pain in *R foot 'shooting up' in 1981. Has recently become worse.*" Donaldson Medical Records 6/30/2017, p. 087.

28. Dr. Dale Watson stated that "Mr. Hamm has been a severe polydrug abuser for much of his life... Between 1980 and his incarceration in 1987 he was using marijuana and narcotics extensively. He used such drugs as morphine, Demerol, Valium, Percocet, Quaaludes, and Dilaudid. He experienced withdrawal symptoms including headache, nose bleeds, sweats, chills and pain each time he was incarcerated...He has also experimented with a plethora of other drugs including LSD, PCP, Jimson seeds, and psychedelic mushrooms." Vol. 11 - PCR - 162-3.

29. Gaye Nease notes that in 1980, "Cammie Crab reports that she started dating Doyle when *he got out of prison. 'The whole time she knew Doyle his whole existence was hustling* for drugs. He did whatever was necessary to obtain the drugs he needed. He used darvon, percadan, mepragan and Dilaudid that she knew of. He would try any kind of drug that anyone suggested or had access too." Vol. 11 - PCR – 151.

30. During trial, counsel for Doyle Hamm, Mr. Harris, questioned Doyle's sister Ruthie *Murphy, and she indicated that he was using "Dilaudid." (Trial Record Vol. 7 - Ruthie* Murphy Direct Examination - R-1232)

31. In the Tailor-Hardin Report, Dr. Kamal A. Nagi reports of Doyle Hamm: "The history he relates includes school truancy, substance abuse, and various arrests." Dr. Kamal A. Nagi - Lunacy Commission Evaluation Summary Report , Tailor-Hardin Report - 1. Dr. Bernard Bryant records a "history of alcohol and drug abuse, trouble with school authorities, and subsequent arrests and convictions in the criminal justice system." Dr. Bernard Bryant - Lunacy Commission Evaluation Summary Report, Tailor Hardin Report

- 2. Dr. Alexander Salillas writes, "Again, the history of drug and alcohol abuse and difficulty with authorities in the criminal justice system was noted." Dr. Alexander Salillas - Lunacy Commission Evaluation Summary Report // Tailor Hardin Report - 3.

D. Cancer

32. On February 3, 2014, Mr. Hamm received a preliminary diagnosis, "There is a poorly marginated mass within the left orbit with both intraconal and extraconal components. This appears to extend through the orbital apex via the superior and inferior orbital fissures both of which appear enlarged. The left foramen rotundum is asymmetrically enlarged. The cortex along the lateral aspect of the left vidian canal appears mildly slightly eroded. The lesion probably extends into the left cavernous sinus. There is mild left proptosis." Donaldson Medical Records 6/30/2017, p. 189.

33. On 2/3/14, Mr. Hamm received a preliminary diagnosis, "Impression: Left orbital neoplasm with possible perineural tumor spread to the left cavernous sinus and left masticator space. This may represent an adenoid cystic carcinoma, given this pattern" Donaldson Medical Records 6/30/2017, p. 189-190

34. On 2/11/14, an examination of biopsy tissue was completed, "Pathologist Comment: The orbital tissue reveals a small-sized lymphocytic infiltrate invading into libroadipose tissue [fatty tissue] and skeletal muscle. Immunohistochemistry stains were performed. The lymphoid cells stain positively for CD20 with about 10 to 15% proliferation rate by

K[illegible]7. These cells stain negatively for CD10, CD5, CD3, BCL-6, and BCL-1. Controls [illegible] appropriately. These findings are consistent with a low grade, small-sized B-cell lymphoma." Donaldson Medical Records 6/30/2017, p. 165.

35. On 2/28/14, Mr. Hamm visited Dr. John P. Donahue, who noted, "The epidermis is ulcerated. Budding from the dermal epidermal junction are geometrically shaped tumor islands consisting of basaloid cells. The tumor islands are mitotically active and demonstrate peripheral palisading. There is peritumoral reactive fibroplasia and cellularity. [...] Specimen A.: basal cell carcinoma" Donaldson Medical Records 6/30/2017, p. 174.

36. On 4/18/14, Mr. Hamm received three CT scans. The report from the scan of the neck follows, "CT scan of the neck ... Left orbit is abnormal large soft tissue masses seen in the left orbit resulting in expansion of the bony orbit. Proptosis seen. This mass is surrounding the left optic nerve complex. Posteriorly, the mass extends up to the orbital apex. There is also extension through the inferior orbital fissure into the pterygopalatine fossa, masticator space and the buccal space. There is also suggestion of extension to the left vidian canal." Donaldson Medical Records 6/30/2017, p. 151.

37. On 4/18/14, Mr. Hamm received three CT scans. The report from the scan of the abdomen states "CT of the abdomen without intravenous contrast ... numerous small calcified granulomata throughout the spleen. There are a couple of small calcified hepatic granulomata. There are also faintly calcified lymph nodes in the porta hepatis ... There

are atherosclerotic calcifications involving abdominal aorta without aneurysm" Donaldson Medical Records 6/30/2017, p. 140.

38. *On 4/23/14, Dr. Brian Adler examined Doyle Hamm and found that "Quite possible this* is a MALT lymphoma or marginal zone lymphoma. If it is localized the best treatment may well be radiation therapy. If there is evidence of systemic disease, he should receive most likely a Rituxan based regimen that will probably include some cytotoxic chemotherapy." Donaldson Medical Records 6/30/2017, p. 135.

39. *On 5/27/14, Mr. Hamm received an MRI and the following indication: "Report from MRI* [...] there is extension into the cavernous sinus region and because of this, there may be extension into the medial aspect of the middle cranial fossa. The left cavernous sinus region is expanded and there is mild mass effect on the medial temporal lobe. There is asymmetrically prominent dural enhancement in this region as well, which may be reactive, although local spread cannot entirely be occluded." Donaldson Medical Records 6/30/2017, p. 128.

40. On 5/27/14, Mr. Hamm received an MRI and the following indication: "Pre- and postcontrast MRI of the facial region [...] Exophthalmos is noted on the left. There is a soft tissue lesion filling most of the retro-orbital region on the left. There is extension posteriorly through the orbital fissures to involve the pterygopalatine fossa and cavernous sinus regions. From the cavernous sinus region, there may be extension into the middle cranial fossa with some degree of asymmetrical dural enhancement noted. There is mass effect on the left temporal lobe, although no reactive vasogenic edema is seen.

There is also extension of tumor laterally into the infratemporal fossa and masticator space region on the left. Enhancing tumor surrounds portions of the pterygoid musculature, as well as the inferior aspect of the temporalis muscle. There is also tumor surrounding the gasserian ganglion and extending inferiorly along the foramen ovale into the masticator space. Some component of tumor near foramen laccrum portion of the carotid canal cannot be excluded." Donaldson Medical Records 6/30/2017, p. 129.

41. On 6/6/14, Dr. Fred Dumas examined Mr. Hamm and noted: "Since his last visit he has undergone an MRI scan of the head and face area. This confirms the presence of a tumor extending through the foramina into the pterygoid space and into the middle cranial fossa. There is involvement of the cavernous sinus as well as extension into the left side of the nasopharynx. [...] I have asked that he be placed on dexamethasone." Donaldson Medical Records 6/30/2017, p. 111.

42. On 6/6/14, Dr. Fred Dumas examined Mr. Hamm and noted that "The patient appears chronically ill. There is massive proptosis and redness of the left eye. There is proptosis on the left. The conjunctiva is extremely reddened. There is no drainage or exudate [...] There is minimal movement medially here is only a trace of movement superiorly and laterally on the left side. The right eye moves normally. Patient is able to discern shapes faces and light but cannot read with the left eye." Donaldson Medical Records 6/30/2017, p. 111.

43. On 6/6/14, Dr. Fred Dumas recommended radiation therapy and chemotherapy: "There is *some risk of involvement of the spinal fluid. We are going to request approval from the*

prison medical clinic for the patient to have a lumbar puncture with cytology. In the interval I recommended that we proceed with radiation therapy as he is going to require some form of local treatment even if he takes systemic chemotherapy." Donaldson Medical Records 6/30/2017, p. 111.

44. On 9/16/15, Mr. Hamm was examined at the Brookwood Medical Center which reported: "Abnormal enhancement is seen in the left orbit with involvement in the left pterygopalatine fossa and left infratemporal fossa/masticator space region. Abnormal enhancement is also seen in the inferior orbital fissure and in foramen ovale, and along foramen rotundum on the left. [...] Overall, these areas of abnormal enhancement are improved in appearance when compared with 3/10/2015 and markedly improved from 9/29/2014. No definitive signs of bulky mass seen on the current stu[illegible] involvement of the left cavernous sinus region cannot be excluded" Donaldson Medical Records 6/30/2017, p. 629.

45. *In March of 2017, Mr. Hamm was examined by the Alabama Department of Corrections,* "Chief Complaint: [illegible] lumps in chest. Onset Date: 4 wks. ago" Donaldson Medical Records 6/30/2017, p. 470.

46. On 3/4/17, Mr. Hamm asked to see the Alabama Department of Corrections doctor, stating "Need to see the doctor I have lumps in my chest." Donaldson Medical Records 6/30/2017, p. 472.

47. In a 3/7/17 examination, a nurse recorded Mr. Hamm's complaint and reported as follows: "S- 'knots' on my chest - in 3 [illegible] are mildly tender. ... A- These feel like lymph nodes but could be [illegible] but could be [illegible] as their [illegible] against [illegible]" Donaldson Medical Records 6/30/2017, p. 453.

48. In a report comparing an MRI from 9/16/2015 with an MRI from 3/10/2015, Dr. Arthur D Sandy reported that the earlier 3/10 MRI showed, "There is extension of disease into the superior orbital fissure and cavernous sinus and through the inferior orbital fissure and into the region of the left pterygoid palatine fossa and the masticator space. There was interval of improvement between 3/10/2015 and 9/16/2015." Donaldson Medical Records 6/30/2017, p. 616.

Further affiant sayeth not.

I, Egon Von Conway, declare under penalty of perjury that the foregoing is true and correct and is based on my own personal knowledge.

Egon Von Conway

Sworn to and subscribed before me on this 15TH day of January, 2018.

Anthony Montano
NOTARY PUBLIC
My Commission Expires: 3/2/2019

ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California
County of SAN FRANCISCO)

On JANUARY 15, 2017 before me, ANTHONY MONTERO, NOTARY PUBLIC
(insert name and title of the officer)

personally appeared EGON VON CONWAY **********,
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

ANTHONY MONTERO
COMM. # 2119757
NOTARY PUBLIC - CALIFORNIA
SAN FRANCISCO COUNTY
My Comm. Expires Aug. 13, 2019

Signature Anthony Montero (Seal)

Exhibit H

IN THE SUPREME COURT OF ALABAMA

August 25, 2017

1881555

Ex parte Doyle Lee Hamm. PETITION FOR WRIT OF CERTIORARI TO THE COURT OF CRIMINAL APPEALS (In re: Doyle Lee Hamm v. State of Alabama) (Cullman Circuit Court: CC-87-121F; Criminal Appeals: 6 Div. 563).

ORDER

Doyle Hamm's Answer to this Court's Order filed on August 8, 2017, having been submitted to this Court,

IT IS ORDERED that the Answer be treated as a Second Motion to Extend Time to Respond to State of Alabama's Motion to Set an Execution Date, which is hereby GRANTED.

IT IS FURTHER ORDERED that Doyle Hamm be allowed to undergo his requested medical examination no later than September 30, 2017.

IT IS FURTHER ORDERED that Hamm give a status update regarding this issue to this Court every seven (7) days from the date of this Order.

IT IS FURTHER ORDERED that Hamm's response to the State's Motion to Set an Execution Date be filed with this Court within seven (7) days from the date of the medical examination.

Stuart, C.J., and, Parker, Murdock, Shaw, Main, Wise, and Bryan, JJ., concur.

Bolin and Sellers, JJ., dissent.

IN THE SUPREME COURT OF ALABAMA

August 25, 2017

I, Julia Jordan Weller, as Clerk of the Supreme Court of Alabama, do hereby certify that the foregoing is a full, true, and correct copy of the instrument(s) herewith set out as same appear(s) of record in said Court.

Witness my hand this 25th day of August, 2017.

Clerk, Supreme Court of Alabama

cc:
D. Scott Mitchell
Bernard Edouard Harcourt
Steven Marshall
Beth Jackson Hughes

Exhibit I

No. 1881555

IN THE SUPREME COURT OF ALABAMA

Ex parte Doyle Lee Hamm,	*	
	*	
In re. State of Alabama	*	
Petitioner,	*	Status Update in response to
	*	the Court's Order dated
v.	*	August 25, 2017
	*	
Doyle Lee Hamm,	*	
Respondent.	*	

DOYLE HAMM'S STATUS UPDATE OF SEPTEMBER 1, 2017

Pursuant to this Court's order dated August 25, 2017, Doyle Lee Hamm respectfully submits the following status update:

1. Undersigned counsel has been working diligently with the warden's assistant at Donaldson Correctional Facility, Ms. Johnnie Luster, to schedule a medical visit for Dr. Mark Heath in September. Warden Leon Bolling at Donaldson and counsel are currently working on a visit with Dr. Heath on Saturday, September 24, 2017. Undersign counsel will ensure that the visit happen within the timeframe set by this Court in its Order dated August 25, 2017.

2. At the request of Dr. Mark Heath, undersigned counsel respectfully requested from the Attorney General on Monday, August 28, 2017, by e-mail and by letter, a copy of the State of Alabama's official written protocol for lethal injection. This protocol is essential to determine whether Mr. Hamm's late-stage cranial and lymphatic cancer would interfere with a lethal injection. To date, undersigned counsel has not heard back from the Attorney General.

3. In the Attorney General's reply brief dated August 15, 2017, the Attorney General remarked in footnote 1 on page 2 that "Dr. Heath is an anesthesiologist, not an oncologist." This is indeed true. An anesthesiologist is the proper expert to assess questions of venous access and whether Mr. Hamm's late-stage cancer will interfere with a lethal injection, and for that reason undersigned counsel is organizing a medical visit by Dr. Heath. However, the Attorney General raises a good point, which is the necessity of properly assessing the cranial and lymphatic cancer as well, and undersigned counsel will locate an oncologist to conduct a medical visit with Mr. Hamm within the timeframe set by this Court in its Order dated August 25, 2017.

4. Undersigned counsel also sent a law associate (third-year Columbia Law School student Nicola Cohen, CLS '18) to Donaldson Correctional Facility to meet with Mr. Hamm in August 2017, to conduct a lay visual inspection to determine whether

Mr. Hamm's cancer has progressed, and apparently, it has. Ms. Cohen reported that Mr. Hamm has a visible lesion on his left cheek right under his left eye. The lesion is about the size of a quarter and is not perfectly circular. The area goes inwards into his cheek and is purple or blue with, within the area, black dots. Under the lesion, Mr. Hamm's left cheek is visibly swollen, and Mr. Hamm said it was sensitive to touch. According to Mr. Hamm, the lesion has grown and its color has gotten darker since the last biopsy conducted on his eye in March 2017. This is consistent with a worsening cancer situation in the left side of his cranium. The medical records confirm that his cancer was most prominent on the left side, and previously was not visible but only within the cranium, as reflected in the following excerpts from the MRI Imaging Report dated May 27, 2014, in the Donaldson medical records:

> "Exophthalmos is noted on the left. There is a soft tissue lesion filling most of the retro-orbital region on the left. There is extension posteriorly through the orbital fissures to involve the pterygopalatine fossa and cavernous sinus regions. From the cavernous sinus region, there may be extension into the middle cranial fossa with some degree of asymmetrical dural enhancement noted. There is mass effect on the left temporal lobe, although no reactive vasogenic edema is seen.

There is also extension of tumor laterally into the infratemporal fossa and masticator space region on the left. Enhancing tumor surrounds portions of the pterygoid musculature, as well as the inferior aspect of the temporalis muscle. There is also tumor surrounding the gasserian ganglion and extending inferiorly along the foramen ovale into the masticator space. Some component of tumor near foramen laccrum portion of the carotid canal cannot be excluded […]

IMPRESSION: Extensive left facial tumor as described above in detail." *See* Appendix A.

5. Ms. Cohen also identified two abnormal lumps on Mr. Hamm, one under his chin on the left side that is visible to someone looking at him, as the area appears swollen; and one on the back right of his neck below his right ear. Mr. Hamm indicated that both are sore to touch. Ms. Cohen reported that Mr. Hamm can barely see out of his left eye now and is taking Norco, a strong pain medicine, three times a day.

5. Undersigned counsel is continuing to review the 777 pages of Doyle Hamm's medical records, mostly concerning his cancer, that were obtained from Donaldson Correctional Facility.

Respectfully submitted,

BERNARD E. HARCOURT
Counsel of Record
COLUMBIA LAW SCHOOL
435 West 116th Street
New York, NY 10027
Phone: (212) 854-1997
E-mail:beh2139@columbia.edu

Diagnostic Imaging Department **Brookwood Medical Center**
Telephone: 205-877-2156
2010 Brookwood Medical Center Drive
Birmingham, AL 35209

Patient Name: HAMM
MRN: 01334304
Acct #: 36537033
Encounter Type: 2 - Outpatient

Imaging

Procedure	Accession	Ordering	Date of Examination
MRI Face Neck Orbit w/ + w/o Contrast	368-MR-14-003976	HOOD MD, HUGH M	05/23/2014 15:51:00 CDT

Report

MRI facial region

HISTORY: 57-year-old male with orbital cancer

TECHNIQUE: Pre-and postcontrast MRI of the facial region.

FINDINGS: No priors.

Exophthalmus is noted on the left. There is a soft tissue lesion filling most of the retro-orbital region on the left. There is extension posteriorly through the orbital fissures to involve the pterygopalatine fossa and cavernous sinus regions. From the cavernous sinus region, there may be extension into the middle cranial fossa with some degree of asymmetric dural enhancement noted. There is mass effect on the left temporal lobe, although no reactive vasogenic edema is seen.

There is also extension of tumor laterally into the infratemporal fossa and masticator space region on the left. Enhancing tumor surrounds portions of the pterygoid musculature, as well as the inferior aspect of the temporalis muscle. There is also tumor surrounding the gasserian ganglion and extending inferiorly along the foramen ovale into the masticator space. Some component of tumor near foramen lacerum portion of the carotid canal cannot be excluded.

I see no evidence of tumor spread through the sphenopalatine foramen. There may be some degree of tumor in the leftward aspect of the nasopharyngeal region and perhaps in the region of the fossa Rosenmüller which is asymmetrically prominent on the left when compared with the right.

The oropharynx and posterior nasal regions are grossly normal in appearance. Some component of the tumor involving the pterygoid plate region and extending into the posterior, inferior maxillary antrum cannot be excluded.

There is mucosal thickening in the ethmoids. Right orbit and right facial regions are grossly normal.

Left mastoid disease noted. This may be related to eustachian tube dysfunction.

IMPRESSION: Extensive left facial tumor as described above in detail.

Finalized by Harry Rosenthal, MD
5/25/2014 4:52 PM

Final Report
Dictated: 05/25/2014 4:29 Dictated By: ROSENTHAL III MD, HARRY B
Electronic Signature: 05/25/2014 4:52 pm Signed By: ROSENTHAL III MD, HARRY B

Ordering: HOOD MD, HUGH M
Admitting: HOOD MD, HUGH M
Consulting:

Chart Type: Cumulative
Chart Request ID: 48212873
Printed: 05/26/2014 06:47:08 CDT

Patient Name: HAMM, DOYLE L
MRN: 01334304
Acct #: 36537033
DOB: 02/14/1957 Age: 57 years Sex: Male
Location: BMC - RD Radiology/
Admitted: 05/23/2014
Discharge: 05/23/2014

CERTIFICATE OF SERVICE

I hereby certify that on September 1, 2017, I served a copy of the attached pleading by electronic mail to Assistant Attorney General Beth Jackson Hughes at bhughes@ago.state.al.us.

BERNARD E. HARCOURT
Counsel of Record

Exhibit J

No. 1881555

IN THE SUPREME COURT OF ALABAMA

Ex parte Doyle Lee Hamm,	*	
	*	
In re. State of Alabama	*	
Petitioner,	*	Second Status Update in
	*	response to the Court's Order
v.	*	dated August 25, 2017
	*	
Doyle Lee Hamm,	*	
Respondent.	*	

DOYLE HAMM'S STATUS UPDATE OF SEPTEMBER 8, 2017

Pursuant to this Court's order dated August 25, 2017, Doyle Lee Hamm respectfully submits the following status update:

1. Undersigned counsel has secured a medical visit for Dr. Mark Heath with Doyle Hamm at Donaldson Correctional Facility on Saturday, September 23, 2017, at 1:30pm. Warden Bolling at Donaldson approved the visit on Tuesday, September 5, 2017, subject to confirmation by general counsel at the Alabama Department of Corrections ("ADOC"). Undersigned counsel spoke with the office of general counsel on Thursday, September 7,

2017, and was told that ADOC has no objection to the visit. Undersigned counsel is accordingly arranging from travel and transport for Dr. Heath for a medical visit on September 23rd.

2. By letter dated Thursday, September 7, 2017, responding to undersigned counsel's request dated August 28, 2017, the Alabama Attorney General refused to provide undersigned counsel with a copy of the State of Alabama's official written protocol for lethal injection, claiming that the protocol is "privileged and confidential." *Letter to Bernard E. Harcourt from Assistant Attorney General Beth Jackson Hughes dated September 7, 2017.* The Attorney General contends that "the drugs and dosage amounts administered in the ADOC's lethal injection protocol are publicly available in various legal opinions. See e.g. *Grayson v. Warden*, 672 Fed. App'x 956, 959 (11th Cir. 2016)." Ibid. The Attorney General is indeed correct that the 2016 opinion of the Eleventh Circuit spells out the drugs and dosage amounts, specifically stating that "currently" [in 2016] the protocol "calls for the administration of: (1) a 500-mg dose of midazolam, (2) followed by a 600-mg dose of rocuronium bromide, and (3) finally, 240 milliequivalents of potassium choloride," *see Grayson v. Warden*, 672 Fed. App'x 956, 959 (11th Cir. 2016). But these generalities about drugs and dosage do not begin to describe the official protocol regarding venous access which is of central importance here because of Mr. Hamm's lymphatic

cancer.

3. Undersigned counsel will assuredly maintain the privileged and confidential nature of the Alabama execution protocol, especially since he is a sworn member of the Alabama State Bar. There is no reasonable explanation why the State of Alabama would not provide undersigned counsel with the full official protocol including information about venous access, given that the State is seeking to execute Doyle Hamm by lethal injection. Undersigned counsel will renew his request with the Alabama Attorney General, and, if unsuccessful, will respectfully seek an order from this Court.

4. Undersigned counsel is continuing to review the 777 pages of Doyle Hamm's medical records from Donaldson Correctional Facility. What is clear from the records is that Mr. Hamm's cancer and medical condition took a turn for the worse beginning in March 2017. The medical records reflect that, back in 2014, Doyle Hamm suffered from a very serious cancer in the skull and lymph nodes. At the time, on June 6, 2014, for instance, it was determined that Mr. Hamm suffered from "the presence of a tumor extending through the foramina into the pterygoid space and into the middle cranial fossa. There is involvement of the cavernous sinus as well as extension into the left side of the nasopharynx." *See* Donaldson Correctional Facility Medical Records, p. 111. At that time in 2014, there

were indications that there was a risk of "involvement of the spinal fluid," which was why the doctors requested and received "approval from the prison medical clinic for the patient to have a lumbar puncture with cytology" and recommended that the doctors "proceed with radiation therapy as [Mr. Hamm] is going to require some form of local treatment even if he takes systemic chemotherapy." Ibid. After severe radiation therapy to Mr. Hamm's skull in 2014 and an apparent improvement of his cancer, however, his medical condition began to deteriorate in March 2017. It is around that time, for instance on March 7, 2017, that Mr. Hamm began to complain about "'knots' on my chest," with the doctors reporting that "these feel like lymph nodes." *See* Donaldson Correctional Facility Medical Records, p. 453; *see also* ibid., p. 472 ("Need to see the doctor I have lumps in my chest and to have my pain medicine renew"); ibid., p. 470 ("lumps in chest"). In March 2017, the doctors began to mention in the medical records the possibility of "lymphadenopathy," *see* ibid., p. 453. Undersigned counsel will continue to review and summarize these extensive medical records and has shared them with his medical expert, Dr. Heath.

Respectfully submitted,

BERNARD E. HARCOURT
Counsel of Record
COLUMBIA LAW SCHOOL
435 West 116th Street
New York, NY 10027
Phone: (212) 854-1997
E-mail:beh2139@columbia.edu

CERTIFICATE OF SERVICE

I hereby certify that on September 8, 2017, I served a copy of the attached pleading by electronic mail to Assistant Attorney General Beth Jackson Hughes at bhughes@ago.state.al.us.

BERNARD E. HARCOURT
Counsel of Record

Exhibit K

No. 1881555

IN THE SUPREME COURT OF ALABAMA

Ex parte Doyle Lee Hamm,	*	
	*	
In re. State of Alabama	*	
Petitioner,	*	Third Status Update in
	*	Response to the Court's Order
v.	*	Dated August 25, 2017
	*	
Doyle Lee Hamm,	*	
Respondent.	*	

DOYLE HAMM'S THIRD STATUS UPDATE

Pursuant to this Court's order dated August 25, 2017, Doyle Lee Hamm respectfully submits the following status update:

1. On Thursday, September 14, 2015, undersigned counsel received official confirmation from Donaldson Correctional Facility of the medical visit of Dr. Mark Heath with Doyle Hamm at Donaldson scheduled for Saturday, September 23, 2017, at 1:30pm. *See* Exhibit A.

2. By letter dated and e-mailed Monday, September 11, 2017, undersigned counsel made a follow up request with the Alabama Attorney General for a confidential copy of the State of

Alabama's official written protocol for lethal injection, promising as a member of the Alabama State Bar and officer of this Court to keep the protocol "privileged and confidential." *Letter from Bernard E. Harcourt to Assistant Attorney General Beth Jackson Hughes dated September 11, 2017.* To date, undersigned counsel has received no response.

3. The extensive medical records in Mr. Hamm's case underscore the need for counsel to consult the official protocol for venous access for lethal injection. Because of his lengthy medical history and his more recent cranial and lymphatic cancer, cancer treatment, and ongoing lymphadenopathy, there is a significant risk of difficulty achieving venous access. The medical records contain, for instance, the following kind of medical indications: "S[ubject]: 'Got blood vessels bursting in R[ight] foot and ankle. Been like this for a while but now it's getting worse.' D[octor]: Small broken vessels noted on top and side of R[ight] foot. Also ankle area." *See* Wm. Donaldson Correctional Facility Patient Notes - 10.10.1991. This prior medical condition, in conjunction with his current cancer, may present significant barriers to humane venous access. For instance, the medical records reveal that Mr. Hamm's "epidermis is ulcerated. Budding from the dermal epidermal junction are geometrically shaped tumor islands consisting of basaloid cells. The tumor islands are mitotically active and demonstrate

peripheral palisading. There is peritumoral reactive fibroplasia and cellularity." *See* Wm. Donaldson Prison Medical Records - 2.28.14. In combination with the indications of "lymphadenopathy," *see* Wm. Donaldson Correctional Facility Medical Records – 3.7.17, these medical conditions suggest that it may be exceedingly difficult, if not impossible, for prison personnel to establish reliable intravenous access during the lethal injection procedure. This raises the unacceptable risk that he will experience significant pain constituting cruel and unusual punishment in violation of the Eighth Amendment. See *Baze v. Rees*, 128 S. Ct. 1520, 1531 (2008); *Nelson v. Campbell*, 124 S.Ct. 2117 (2004). Whether the state of Alabama would proceed to central venous cannulation, or a "central line," as the state of Georgia has done, therefore becomes a critical question and demands that the State provide undersigned counsel with a confidential copy of the official protocol for venous access. Cf. *Gissendaner v. Comm'r, Georgia Dept' of Corr.* (*Gissendaner I*), 779 F.3d 1275, 1278 (11th Cir. 2015) ("If the IV nurse is unable to identify a suitable vein in the prisoner's legs or arms, the physician on hand 'will provide access by central venous cannulation or other medically approved alternative.'"). In order for Dr. Mark Heath to render an informed medical opinion, Dr. Heath will need to be informed, confidentially and under privilege, of the protocol for venous access.

Respectfully submitted,

BERNARD E. HARCOURT
Counsel of Record
COLUMBIA LAW SCHOOL
435 West 116th Street
New York, NY 10027
Phone: (212) 854-1997
E-mail:beh2139@columbia.edu

CERTIFICATE OF SERVICE

I hereby certify that on September 15, 2017, I served a copy of the attached pleading by electronic mail to Assistant Attorney General Beth Jackson Hughes at bhughes@ago.state.al.us.

BERNARD E. HARCOURT
Counsel of Record

KAY IVEY
GOVERNOR

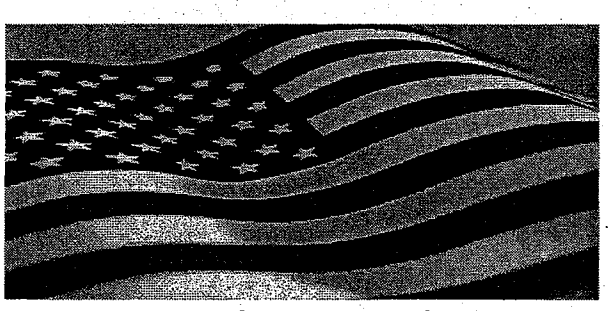
LEON BOLLING
WARDEN III

Donaldson Correctional Facility

100 Warrior Lane
Bessemer, AL 35023
Telephone (205) 436-3681 Fax (205) 436-3399

ANGELA MIREE
WARDEN II

ERROL PICKENS
WARDEN I



United We Stand

DATE: 9-14-17

TO: Bernard Harcourt

FROM: Angela Miree, WARDEN II and/or Errol Pickens, Warden I

REF: Inmate Attorney Visitation

NOTE: In reference to your request for a legal visit, please read and sign the attached orientation sheet & return (via fax). The Orientation sheet as well as the confirmation sheet will list the expectations for entry into this facility. **Please bring the Confirmation sheet with you** (it has the name of the inmate , date and time of your visit). You will have to clear a metal detector and a pat search.

Number of Pages Faxed: 4 (including this cover sheet)

APPENDIX A

State of Alabama
Alabama Department of Corrections

Donaldson Correctional Facility
100 Warrior Lane
Bessemer, AL 35023
Telephone (205) 436-3681 *Fax (205) 436-3399*

KAY IVEY
GOVERNOR

LEON BOLLING
WARDEN III

JEFFERSON DUNN
COMMISSIONER

ANGELA MIREE
WARDEN II

ERROL PICKENS
WARDEN I

THIS FORM MUST BE SHOWN TO BE ADMITTED TO FACILITY

Confirmation Sheet

9-14-17
Date

MEMORANDUM

FROM: Angela Miree, Correctional Warden II

TO: Bernard Harcourt & Dr. Mark Heath
Attorney / Paralegal / Psychologist

REF: Confirmation of Visit with Inmate Doyle Hamm
AIS # Z-479

This memorandum is to confirm your scheduled visit on, Saturday
September 23, 2017 @ 1:30 p.m. until 3:30 p.m.

At the time of your scheduled visit, this confirmation must be presented to the Communications Operator to verify that your Interview/Visit has been scheduled by the Administrative Office.

The following will be **required prior to entering William E. Donaldson Correctional Facility:**

1) Present valid picture identification (i.e. driver's license).
2) Clear metal detector and pat search.
3) Wear professional attire (***No solid whites, no see-through clothing, no shorts, and no short dresses/skirts, if dress/skirts must have on slip, proper underwear , no open- toe shoes, no light colored clothing i.e. beige, Khaki, and no low top blouse/dress).***
4) *Search or x-ray of materials.*

If for some reason you cannot keep your scheduled appointment, you must call the Administrative Office at (205) 436-3681, Ext. 106, and cancel your appointment and rescheduled your attorney visit and retain another confirmation.

Your cooperation in this matter is greatly appreciated.

State of Alabama
Alabama Department of Corrections

Donaldson Correctional Facility
100 Warrior Lane
Bessemer, AL 35023
Telephone (205) 436-3681 Fax (205) 436-3399

KAY IVEY
GOVERNOR

CHERYL PRICE
INSTITUTIONAL
COORDINATOR

JEFFERSON DUNN
COMMISSIONER

LEON BOLLING
WARDEN III

ANGELA MIREE
WARDEN I

MEMORANDUM

TO: Attorney, paralegals, psychologist

FROM: Leon Bolling, Warden III

RE: Your visit

In an effort to allow each attorney to see their inmate the time allotted, it has become necessary to ask you to please honor the time that you request. Often times we have several attorney/paralegal visits scheduled on the same date and time. We try to accommodate as many requests as soon as you request it and try to allow you to see the inmate as quickly as possible even during our count and/or bed roster. Please be mindful that your arrival time is important and your allotted request times will be honored by our shift commander. Thank you for your consideration in this matter.

Alabama Department of Corrections

ATTORNEY/LEGAL VISIT ORIENTATION FORM

A. General Rules for Visitation:

1. Visitor(s) must have a photo identification card.
2. Visitor(s) and all item(s) will be searched.
3. Visitor(s) are required to return all unapproved personal item(s) to their vehicle. Staff will not be responsible for any personal item(s).
4. Visitor(s) providing false name(s) or introducing or attempting to introduce contraband may be committing a criminal offense and face possible felony prosecution.
5. Visiting schedule is subject to change without prior notice due to security reasons.
6. Visitor(s) may be asked to leave the institution if they, or an inmate they are visiting, fail to abide by the established visitation rules.
7. Visitor(s) shall be dressed in business or business casual attire.
8. All dresses, skirts, and pants shall extend below the knee (females only).
9. All blouses and shirts must be long enough to cover the waist and chest area.
10. Visitor(s) must wear a complete set of undergarments.
    Visitor(s) are permitted to bring in a no more than $5.00 in coins for soft drinks, coffee, and or snacks.
11. Prior to the visit, the attorney may request, with approval of the Warden, to leave legal documents with an inmate.
12. An inmate may refuse to meet with the attorney or legal assistant; an inmate can not be forced to meet with an attorney or legal assistant.
13. Visitor(s) may bring two (2) writing instruments and current legal documents to the visit.

B. Prohibited Items:

1. Sunglasses, except prescribed by a doctor. (Identify in Section C. Comments/Requests.)
2. Electronic equipment to include, but not be limited to, cell phones, video games, radios, MP3 players, laptops, etc. unless prior approval of the Warden and ADOC General Counsel.
3. Jewelry, except wedding set/band.
4. Medication, except prescribed by a doctor and unless prior approval of the Warden. (Identify in Section C. Comments/Requests.)
5. Tobacco products, matches or lighters.
6. Firearms/Weapons.
7. Purses, briefcases, or duffel bags.
8. Hats, caps, scarves, or headbands.
9. White or any light colored clothing that appears white.
10. Wigs, except prescribed by a doctor and with the prior approval of the Warden.

C. Comment(s)/Request(s): _____

_____

I have read and understand the above listed guidelines. I will abide by these guidelines or my visit may be denied or terminated. You must submit a letter on your firm's letterhead identifying any member of the defense team requesting approval to visit. The letter shall contain:

1. That they have been retained in the scope of representation or potential representation of an inmate.
2. The name and AIS# of an inmate to visit.
3. The name(s) of the attorney or legal assistant(s) and the last four digits of their social security number (SSN).
4. The attorney or legal assistant(s) current valid driver's license number and state of issuance; the bar identification number; and/or, the professional organization license number.
5. The date and time of the proposed visit.
6. Any other pertinent identification information.

_____ _____

(Date) (Attorney's Signature)

Distribution: Inmate Database

ADOC Form 303-E – August 1, 2012

Exhibit L

No. 1881555

IN THE SUPREME COURT OF ALABAMA

Ex parte Doyle Lee Hamm,	*	
	*	
In re. State of Alabama	*	
Petitioner,	*	Fourth Status Update in
	*	Response to the Court's Order
v.	*	Dated August 25, 2017
	*	
Doyle Lee Hamm,	*	
Respondent.	*	

DOYLE HAMM'S FOURTH STATUS UPDATE OF SEPTEMBER 22, 2017

Pursuant to this Court's order dated August 25, 2017, Doyle Lee Hamm respectfully submits the following status update:

1. Undersigned counsel and Dr. Mark Heath are on their way to Birmingham, Alabama, for the medical visit of Dr. Heath with Doyle Hamm at Donaldson Correctional Facility scheduled for tomorrow, Saturday, September 23, 2017, at 1:30pm.

2. To date, undersigned counsel has still not received any information from the State of Alabama about the Alabama protocol for venous access for purposes of lethal injection. Undersigned

counsel renewed his request for the protocol by letter dated Monday, September 11, 2017; but has received no response. Given Mr. Hamm's complicated medical history, cranial and lymphatic cancer, and ongoing lymphadenopathy, there is a significant risk of difficulty achieving venous access, and therefore it will be necessary to discuss these issues with the Court, under seal if necessary.

3. Having now had more time to review the extensive, 777 pages of medical records obtained from the Donaldson Correctional Facility, counsel is in a better position to explain Mr. Hamm's cancer illness.

4. Mr. Hamm's cancer was originally identified in February 2014, when a pathology report diagnosed "a poorly marginated mass within the left orbit [of the skull] with both intraconal and extraconal components. This appears to extend through the orbital apex via the superior and inferior orbital fissures both of which appear enlarged. The left foramen rotundum is asymmetrically enlarged. The cortex along the lateral aspect of the left vidian canal appears mildly slightly eroded. The lesion probably extends into the left cavernous sinus. There is mild left proptosis" (Hamm Donaldson Prison Medical, p. 189). The doctors reported their "Impression: Left orbital neoplasm with possible perineural tumor spread to the left cavernous sinus and left masticator space [of the skull]. This may represent an

adenoid cystic carcinoma, given this pattern" (Hamm Donaldson Prison Medical, p. 189-190). The pathological reports indicated that these findings are consistent with a "B-cell lymphome" (Hamm Donaldson Prison Medical, p. 165). Another report at the time determined that "The epidermis is ulcerated. Budding from the dermal epidermal junction are geometrically shaped tumor islands consisting of basaloid cells. The tumor islands are mitotically active and demonstrate peripheral palisading. There is peritumoral reactive fibroplasia and cellularity" (Hamm Donaldson Prison Medical, p. 174)

5. In April 2014, a CT scan confirmed that the "Left orbit [of the skull] is abnormal, large soft tissue masses seen in the left orbit resulting in expansion of the bony orbit. Proptosis seen. This mass is surrounding the left optic nerve complex. Posteriorly, the mass extends up to the orbital apex. There is also extension through the inferior orbital fissure into the pterygopalatine fossa, masticator space and the buccal space. There is also suggestion of extension to the left vidian canal" (Hamm Donaldson Prison Medical, p. 151). This led to a preliminary diagnosis by Dr. Brian Adler of the Brookwood Cancer Center of a "MALT lymphoma or marginal zone lymphoma" and the recommendation for immediate radiation therapy and the possibility of "a Rituxan based regimen that will probably include some cytotoxic chemotherapy" (Hamm Donaldson Prison

Medical, p. 135). The doctors also found at that time, on examination of his abdomen, numerous "granulomata throughout the spleen" and abnormal lymph nodes in the abdomen (Hamm Donaldson Prison Medical, p. 140).

6. In May 2014, the doctors at Brookwood confirmed a primary diagnosis of "Large cell lymphoma unspecified site, Diagnosed 2014 (Active)" (Brookwood Hamm 2014 - 10). They reported that the "scans demonstrated a large mass in the retro-orbital area on the left extending into the masseter space [cavity in face above jaw, under temple]. There was a suggestion of widening of the neural foramen [space in spine through which the spinal cord runs]. In the chest were noted numerous abnormal lymph nodes most of which were associated with calcifications. Calcified granulomata [scar tissue] were noted within the lung as well. A few small nodes were seen in the abdomen. The pelvis was not imaged" (Brookwood Hamm 2014 - 10). More specifically, the MRI revealed that "there is a soft tissue lesion filling most of the retro-orbital region on the left. There is extension posteriorly through the orbital fissures to involve the pterygopalatine fossa and cavernous sinus regions. From the cavernous sinus region, there may be extension into the middle cranial fossa with some degree of asymmetrical dural enhancement noted" and that "there is also extension of tumor laterally into the infratemporal fossa and masticator space region on the left.

Enhancing tumor surrounds portions of the pterygoid musculature, as well as the inferior aspect of the temporalis muscle. There is also tumor surrounding the gasserian ganglion and extending inferiorly along the foramen ovale into the masticator space. Some component of tumor near foramen laccrum portion of the carotid canal cannot be excluded" (Hamm Donaldson Prison Medical, p. 129).

7. In June 2014, the doctors confirmed "the presence of a tumor extending through the foramina into the pterygoid space and into the middle cranial fossa. There is involvement of the cavernous sinus as well as extension into the left side of the nasopharynx." (Hamm Donaldson Prison Medical, p. 111). Note that the "nasopharynx" is the back of the throat and the "foramina" is the spinal cord. The pterygoid space is the space where the head and spine meet. The middle cranial fossa is the space in the skull above where the spine meets the head. The doctors reported that "The patient appears chronically ill." (Hamm Donaldson Prison Medical, p. 111). They also indicated that "There is some risk of involvement of the spinal fluid." Ibid. The treating physician at Brookwood said he would "request approval from the prison medical clinic for the patient to have a lumbar puncture with cytology. In the interval I recommended that we proceed with radiation therapy as he is going to require some form of local treatment even if he takes systemic

chemotherapy." Ibid.

8. In July 2014, Mr. Hamm underwent radiation therapy, specifically "IMRT to 40Gy over 20 fractions for orbital lymphoma completed on July 11, 2014." (Brookwood Hamm 2014 - 6)

9. By September 2014, the doctors felt that there had been improvement. They reported that Mr. Hamm had "completed 40 gray for a lymphoma involving the left orbit and skull base. He is feeling better at this time…. Constitutional: Complains of poor appetite and major fatigue. Eyes: Complains of double vision with the left eye and visual difficulties of the left eye that is also dry and red. Complains of some pain in the left eye but has gotten better" (Brookwood Hamm 2014 - 3).

10. Again in September 2015, Mr. Hamm showed some improvement, even though there was evidence from the tests of "Abnormal enhancement is seen in the left orbit with involvement in the left pterygopalatine fossa and left infratemporal fossa/masticator space region. Abnormal enhancement is also seen in the inferior orbital fissure and in foramen ovale, and along foramen rotundum on the left." (Hamm Donaldson Prison Medical, p. 629). But these "areas of abnormal enhancement are improved in appearance when compared with 3/10/2015 and markedly improved from 9/29/2014." Ibid.

11. However, beginning in March 2017, the cancer has come back and Mr. Hamm is suffering increasingly from

lymphadenopathy. In March or April 2017, Mr. Hamm was seen by a doctor in Jasper, Alabama, who identified on the basis of a biopsy a new cancer in his eye. Mr. Hamm apparently also has a new lesion on his face that is the size of a quarter. On March 7, 2017, Mr. Hamm was complaining of "'knots' on my chest" and the medical team was reporting that "These feel like lymph nodes." (Hamm Donaldson Prison Medical, p. 453.) On March 2017, Mr. Hamm reported that he "Need[s] to see the doctor I have lumps in my chest." (Hamm Donaldson Prison Medical, p. 472; see also "lumps in chest," ibid., p. 470). A recent visual examination of Mr. Hamm revealed two abnormal lumps on Mr. Hamm, one under his chin on the left side; and one on the back right of his neck below his right ear.

12. Undersigned counsel will confirm the medical condition of Mr. Hamm during the medical visit at Donaldson Correctional Facility tomorrow.

Respectfully submitted,

BERNARD E. HARCOURT
Counsel of Record
COLUMBIA LAW SCHOOL
435 West 116th Street
New York, NY 10027
Phone: (212) 854-1997
E-mail:beh2139@columbia.edu

CERTIFICATE OF SERVICE

I hereby certify that on September 22, 2017, I served a copy of the attached pleading by electronic mail to Assistant Attorney General Beth Jackson Hughes at bhughes@ago.state.al.us.

BERNARD E. HARCOURT
Counsel of Record

Exhibit M

No. 1881555

IN THE SUPREME COURT OF ALABAMA

Ex parte Doyle Lee Hamm,	*	
	*	
In re. State of Alabama	*	
Petitioner,	*	Fifth Status Update in
	*	response to the Court's Order
v.	*	dated August 25, 2017
	*	
Doyle Lee Hamm,	*	
Respondent.	*	

DOYLE HAMM'S FIFTH STATUS UPDATE OF SEPTEMBER 29, 2017

Pursuant to this Court's order dated August 25, 2017, Doyle Lee Hamm respectfully submits the following status update:

1. Dr. Mark Heath conducted a medical examination of Doyle Hamm at Donaldson Correctional Facility on Saturday, September 23, 2017, and is currently writing his medical findings.

2. Undersigned counsel will file an answer to this Court's order as soon as he receives the medical report or within seven days of the date of the medical visit, whichever is first, so on Monday, October 2, 2017 at the latest, pursuant to Alabama Rule of Appellate Procedure 26.

Respectfully submitted,

BERNARD E. HARCOURT
Counsel of Record
COLUMBIA LAW SCHOOL
435 West 116th Street
New York, NY 10027
Phone: (212) 854-1997
E-mail:beh2139@columbia.edu

CERTIFICATE OF SERVICE

I hereby certify that on September 29, 2017, I served a copy of the attached pleading by electronic mail to Assistant Attorney General Beth Jackson Hughes at bhughes@ago.state.al.us.

BERNARD E. HARCOURT
Counsel of Record

Exhibit N

No. 1881555

IN THE SUPREME COURT OF ALABAMA

Ex parte Doyle Lee Hamm,	*	
	*	
In re. State of Alabama	*	
Petitioner,	*	Sixth Status Update in
	*	Response to the Court's Order
v.	*	dated August 25, 2017
	*	
Doyle Lee Hamm,	*	
Respondent.	*	

DOYLE HAMM'S SIXTH STATUS UPDATE OF OCTOBER 2, 2017

Pursuant to this Court's order dated August 25, 2017, Doyle Lee Hamm respectfully submits the following status update. Dr. Mark Heath conducted a medical examination of Doyle Hamm at Donaldson Correctional Facility on Saturday, September 23, 2017. Dr. Heath's report is attached as Appendix A.

Respectfully submitted,

BERNARD E. HARCOURT
Counsel of Record
COLUMBIA LAW SCHOOL
435 West 116th Street
New York, NY 10027
Phone: (212) 854-1997
E-mail:beh2139@columbia.edu

CERTIFICATE OF SERVICE

I hereby certify that on October 2, 2017, I served a copy of the attached pleading by electronic mail to Assistant Attorney General Beth Jackson Hughes at bhughes@ago.state.al.us.

BERNARD E. HARCOURT
Counsel of Record

APPENDIX A

Preliminary Report of Mark. J. S. Heath, M.D.

1. My name is Mark J. S. Heath. I am a medical doctor with an active, licensed, full-time medical practice in New York State. I am board certified in anesthesiology. I practice daily at the New York-Presbyterian/Columbia Hospital in New York City, where I provide anesthesia for open-heart surgeries. Core features of my daily practice include obtaining both peripheral and central intravenous (IV) access, the administration of large doses of anesthetic agents, and intensive monitoring to ensure that my patients are both safe and fully anesthetized. On average, I conduct these activities on more than one open-heart surgery every working day. I am board certified in anesthesiology, and have been practicing within this specialty for 29 years (3 years of residency, 1.5 years of fellowship in cardiothoracic anesthesiology and research, and 24.5 years as an attending physician). I hold an appointment as an Assistant Professor of Clinical Anesthesiology at Columbia University in New York City, where I teach medical students, residents, and fellows, primarily regarding the practice of anesthesiology in cardiothoracic cases.

2. Because of my extensive experience in anesthesiology, I have been called upon to give expert medical opinion in a number of cases involving the use of lethal injection at both the federal and state level, including with the Federal Bureau of Prisons and in the correctional systems of California, Florida, Ohio, and Texas, among others. I have previously been involved in the federal litigation surrounding the lethal injection of inmate David Nelson in the state of Alabama, as well as in the cases of other Alabama inmates.

3. At the request of counsel Bernard Harcourt I examined Mr. Doyle Hamm on Saturday, September 23, 2017, in the William E. Donaldson Correctional Facility in Bessemer, Alabama.

4. Prior to the medical examination, Mr. Harcourt provided me with a copy of the medical records that he had received from Donaldson Correctional Facility that included diagnoses and descriptions of the care Mr. Hamm has received for his lymphatic cancer; as well as other medical reports Mr. Harcourt had obtained, including a report by Dr. Fred Dumas dated May 16, 2014; a follow up report by Dr. Dumas dated June 6, 2014; a report by Dr. Sandra Tincher dated July 14, 2014; and an affidavit by Dale G. Watson, PhD, dated July 19, 1999.

5. I brought medical equipment to assist in the medical examination. Unfortunately, because of prison security at the front gate, I was courteously but insistently prevented from bringing the equipment into the prison. This limited my ability to perform a complete examination.

6. I began my examination at approximately 1:45 pm on Saturday, September 23, 2017. Mr. Hamm was cooperative, although somewhat subdued in affect. He appears gaunt and frail, and had a prominent facial lesion and deformity that was causing him pain, but he was not in acute distress. He was breathing comfortably and able to converse and ambulate. Because of equipment limitations, I was not able to measure vital signs. The medical examination was politely but firmly ended at 3:30pm by the correctional staff.

7. I first obtained a medical history from Mr. Hamm. I then assessed Mr. Hamm's peripheral veins, with and without a tourniquet. I used Mr. Harcourt's necktie because I was not

permitted to bring a medical tourniquet into the prison. Mr. Hamm has extremely poor peripheral venous access. There are no accessible veins on his left upper extremity (arm/hand) or either of his lower extremities (legs/feet). He related that all of the veins on these extremities were "used up" by chronic intravenous drug use. There are no accessible peripheral veins on his right arm. On the dorsum of the right hand there is a small, tortuous vein that is potentially accessible with a butterfly needle. Insertion of an intravenous catheter into this vein would be challenging and would have a high chance of rupturing the vein and being unsuccessful. Mr. Hamm related that this vein was previously accessed with a butterfly needle in order to inject contrast dye for a CT scan to assess his facial/intracranial malignancy in 2014, prior to his cancer treatments. A butterfly needle is significantly easier to insert than an intravenous catheter because it is thinner and sharper. The nurse/technician failed to access the vein during the first several attempts, but was ultimately able to access it with that butterfly needle. The access was "positional", meaning that the ability to infuse fluid through the needle was intermittent and depended on the precise depth and angle of the needle. The nurse/technician injected the contrast into this vein while standing right next to his hand and slowly and carefully infused the contrast at a slow and cautious rate. This is the appropriate and necessary practice when injecting fluid into a tenuous vein. Mr. Hamm also related that this vein was accessed with great difficulty in 2014 when he underwent a surgical procedure to biopsy the malignancy behind his left eye. One practitioner (perhaps a CRNA (Certified Registered Nurse Anesthetist)) was unable to access the vein. She called for assistance from a middle-aged man (perhaps a senior anesthesiologist) who was, with difficulty, able to insert a very small intravenous catheter. Based on my knowledge of previous Alabama lethal injection procedures and protocols, this small, torturous vein on his right hand would not provide reliable peripheral venous access.

8. Mr. Hamm relates that he has intermittent waxing and waning tumors on his chest, neck, and groins. This likely represents lymphadenopathy (swollen lymph nodes) related to his lymphatic malignancy. There are many other possible causes of lymphadenopathy, and the only way to determine the actual cause would be to biopsy one or more of these lesions. The extent of these lesions could be assessed with diagnostic studies such as a CT scan, an MRI, or a PET scan.

9. Because of equipment limitations it was not possible to assess the accessibility of the deep veins in Mr. Hamm's neck (internal jugular vein), chest (subclavian vein (behind the collar bone)), or groin (femoral veins).

10. Mr. Hamm has a facial defect under his left eye. There is a discolored lesion with diffuse margins, approximately 2-3 cm in diameter. The lesion is tender, limiting my ability to palpate the underlying bone. There is likely a bone defect in the infraorbital margin (the bone under the eye), in the region of the junction of the zygoma and maxilla. This region of his face (in lay terms, his left cheek) is partially collapsed, resulting in prominent facial asymmetry. As with the lymphadenopathy described above, a biopsy and imaging diagnostic study would be needed in order to assess the cause and extent of this lesion.

11. In October 2006, I was present at Holman Prison when Mr. David Nelson was examined by a cardiac anesthesiologist. Mr. Nelson's situation was very similar to Mr. Hamm's, in that his peripheral venous access was compromised by prior intravenous drug abuse. In Mr. Nelson's

case, a special master was appointed to supervise the litigation. The magistrate approved an examination by an Alabama-licensed board certified practicing cardiothoracic anesthesiologist, Dr. Warren Bagley, to assess Mr. Nelson's veins. I was present during that examination. Dr. Bagley inspected Mr. Nelson's peripheral veins and central veins using physical exam and ultrasonography. Based on my examination and finding of very poor venous access in Mr. Hamm, my opinion is that lethal injection should not be attempted without first obtaining an examination such as that performed by Dr. Bagley on Mr. Nelson.

12. Based on my examination of Mr. Hamm on September 23, 2017, and review of his medical records, I am of the opinion that there are two significant medical problems that require further review before attempting a lethal injection.

13. First, my examination revealed that Mr. Hamm has extremely poor peripheral vein access and that it very likely that the prison will need to resort to obtaining central venous access. It is extremely doubtful, given the way that the correctional staff in Alabama administers the anesthetic agents from another room at distance from the inmate rather than at his bedside, that they will be able to achieve peripheral IV access. To the best of my knowledge, Alabama has limited experience with obtaining central vein access for lethal injection procedures.

14. Second, Mr. Hamm has active B-cell lymphoma, a form of cancer that involves the lymph nodes. A large tumor was diagnosed in 2014 and extended from his left eye into multiple areas of the skull behind the face, and through the skull into the middle cranial fossa (the area surrounding the temporal lobe of the brain). In 2014 he also had enlarged lymph nodes in his

chest, and it is unclear whether these nodes were or are involved in the malignant process. The lymphoma was treated with radiation and medication, with some improvement; however, recent reported symptoms indicate that the malignancy has returned. There appears to have been no follow-up evaluation to determine whether the cancer has spread into lymph nodes beyond his face and skull. Lymphoma, like other cancers, is a progressive disease if not cured. At this point, there may be significant involvement and enlargement of lymph nodes in other areas of his body, including his neck, chest, and groin. If there are enlarged lymph nodes surrounding the veins in his neck, chest, or groin, it would likely complicate or thwart attempts to obtain central venous access.

15. In addition to the pain that would be caused by repeated futile attempts to obtain IV access, there is the risk that the execution team might inadvertently inject the execution drugs into a catheter that is not properly situated in the lumen of the intended vein. If this occurs the execution drugs will infiltrate in the tissue around the vein, and it will not exert its full anesthetic effect. The paralytic drug will very likely be absorbed from the tissue into the circulation more rapidly than the anesthetic drug, which will cause Mr. Hamm to become paralyzed and consciously suffocate. This would be an agonizing death.

16. In summary, the progressive nature of Mr. Hamm's cancer warrants that a contemporary evaluation of any cancer spread be undertaken before execution is contemplated. In particular, no execution should be contemplated without imaging the central veins to determine whether lymph nodes surrounding these veins are enlarged from the lymphoma. Mr. Hamm's difficult peripheral venous access makes it highly likely that an execution by lethal injection cannot

proceed without obtaining central venous access. It is not clear whether the Alabama prison is prepared to perform central venous cannulation, particularly in light of the possibility of malignant (cancerous) lymph nodes impeding the procedure. I have not seen the exact protocol for venous access for lethal injection from the state of Alabama, but based on what I know from the David Nelson case, it is my opinion that the state is not equipped to achieve venous access in Mr. Hamm's case. Mr. Hamm's difficult IV access greatly increases the likelihood of an inhumane execution due to infiltration of the execution drugs, with the onset of paralysis preceding the attainment of adequate anesthesia.

17. This report represents the chief findings and opinions resulting from my examination of Mr. Hamm. I reserve the right to amend my opinions should the advent of additional information so warrant.

Mark J. S. Heath, M.D.
October 1, 2017

Exhibit O

No. 1881555

IN THE SUPREME COURT OF ALABAMA

Ex parte Doyle Lee Hamm,	*	
	*	
In re. State of Alabama	*	October 2, 2017, Answer
Petitioner,	*	to this Court's Order
	*	Dated August 25, 2017
v.	*	
	*	
Doyle Lee Hamm,	*	
Respondent.	*	

DOYLE HAMM'S ANSWER DATED OCTOBER 2, 2017,
TO THIS COURT'S ORDER DATED AUGUST 25, 2017

Pursuant to this Court's order dated August 25, 2017, Doyle Lee Hamm respectfully submits the following answer to the Court:

1. Dr. Mark Heath conducted a medical examination of Doyle Hamm at Donaldson Correctional Facility on Saturday, September 23, 2017, and found that, as a result of Mr. Hamm's extensive cranial and lymphatic cancer, cancer treatments, and severely compromised veins, venous access is extremely difficult and it is unlikely that an execution can be accomplished without cruel and needless pain. *See* Preliminary Report of Mark. J. S. Heath, M.D., attached as Appendix A.

2. Based on Dr. Heath's medical findings and conclusions, and given Mr. Hamm's cranial and lymphatic cancer, there is a substantial likelihood that the Alabama Department of Corrections will not be able to accomplish a successful execution in compliance with the Eighth Amendment. It would also be extremely dangerous for the prison personnel because Mr. Hamm has Hepatitis C.

3. Given Mr. Hamm's cancer, and the high likelihood of an unsuccessful execution, undersigned counsel, who is representing Mr. Hamm *pro bono*, respectfully urges this Court to deny the Attorney General's motion to set an execution date. Alternatively, undersigned counsel respectfully urges the Court, prior to setting an execution date, to: (1) order the Attorney General to confidentially disclose to counsel the exact protocol for venous access for lethal injection, along with the complete list of medical equipment that would be used; (2) appoint a Special Master to oversee a proper medical examination (as in the case of Alabama death row inmate David Nelson in 2006) and to reach agreement on a proper protocol for venous access to avoid an unnecessarily cruel and painful execution; and (3) hold a hearing, *in camera* if necessary, to review and approve an agreed-upon protocol for venous access, which would be necessary to humanely achieve lethal injection and prevent an unsuccessful execution. Counsel urges this Court to not set a date for

execution until such an agreement on a protocol for venous access is securely in place.

4. Doyle Lee Hamm is suffering from a serious cranial and lymphatic cancer. Mr. Hamm's case is really not the kind of capital case that should proceed to lethal injection for two interrelated reasons.

I. Mr. Hamm Is Suffering from Cancer

5. First, Mr. Hamm is suffering from a serious cranial and lymphatic cancer. He is not malingering. During the medical examination of Mr. Hamm on September 23, 2017, Dr. Heath observed a quarter-sized, deep, and growing lesion on Mr. Hamm's left cheek that has literally gnawed a 4 to 5 millimeter deep hole into his left cheek. Dr. Heath described this lesion in his report as "a discolored lesion with diffuse margins, approximately 2-3 cm in diameter," and concluded that "there is likely a bone defect in the infraorbital margin (the bone under the eye), in the region of the junction of the zygoma and maxilla. This region of his face (in lay terms, his left cheek) is partially collapsed, resulting in prominent facial asymmetry." *See* Preliminary Report of Mark. J. S. Heath, M.D., ¶10, attached as Appendix A. Dr. Heath was prevented from bringing a digital camera or a film camera into the prison for the medical examination, so undersigned counsel drew a diagram of the lesion on Mr. Hamm's face. *See* Diagram of Lesion on Mr.

Hamm's Face, attached as Appendix B.

6. Dr. Heath found that Mr. Hamm is "gaunt and frail, and had a prominent facial lesion and deformity that was causing him pain." *See* Preliminary Report of Mark. J. S. Heath, M.D., ¶6, attached as Appendix A. The medical records also indicate that Mr. Hamm is in pain and takes heavy doses of prescribed narcotics every day (10 mgs of "Norco" three times a day). Mr. Hamm has been recently treated with serious amounts of radiation and medications.

7. A review of Mr. Hamm's extensive medical records obtained from Donaldson Correctional Facility, which total 777 pages, reveals that Mr. Hamm's lymphatic cancer has recurred and is getting worse. Specifically, the extensive cancer records indicate the following cancer etiology and progression.

8. Mr. Hamm's cancer was originally identified in February 2014, when a pathology report diagnosed "a poorly marginated mass within the left orbit [of the skull] with both intraconal and extraconal components. This appears to extend through the orbital apex via the superior and inferior orbital fissures both of which appear enlarged. The left foramen rotundum is asymmetrically enlarged. The cortex along the lateral aspect of the left vidian canal appears mildly slightly eroded. The lesion probably extends into the left cavernous sinus. There is mild left proptosis." *See* Doyle Hamm Donaldson Medical Records, p.

189, included in Appendix C. In other words, the doctors found that Doyle Hamm had a large tumor in the back of the left eye socket, where the nerves from the brain go to the eye; and that this tumor protruded through the holes (superior and inferior orbital fissures) on both the brain and eye side. The doctors reported their preliminary impression: "Left orbital neoplasm with possible perineural tumor spread to the left cavernous sinus and left masticator space [of the skull]." *See* Doyle Hamm Donaldson Medical Records, p. 189-190, in Appendix C. The pathology reports indicated that these findings were consistent with a "B-cell lymphoma," a type of blood cancer in the lymph nodes. *See* Doyle Hamm Donaldson Medical Records, p. 165, in Appendix C. Another report at the time determined that "The epidermis is ulcerated. Budding from the dermal epidermal junction [where the outer (epidermal) and inner (dermal) sections of the skin meet] are geometrically shaped tumor islands consisting of basaloid cells [this suggests it is a lymphoma]. The tumor islands are mitotically active and demonstrate peripheral palisading. There is peritumoral reactive fibroplasia and cellularity." *See* Doyle Hamm Donaldson Medical Records, p. 174.

9. In April 2014, a CT scan confirmed that the "Left orbit [of the skull] is abnormal, large soft tissue masses seen in the left orbit resulting in expansion of the bony orbit. Proptosis

seen. This mass is surrounding the left optic nerve complex. Posteriorly, the mass extends up to the orbital apex. There is also extension through the inferior orbital fissure into the pterygopalatine fossa, masticator space and the buccal space. There is also suggestion of extension to the left vidian canal" *See* Doyle Hamm Donaldson Medical Records, p. 151. In other words, the cancer extended into the eye through the holes where the nerves go through, and down into the spaces near the cheek bone, the masticator space and the buccal space. This led to a preliminary diagnosis by Dr. Brian Adler of the Brookwood Cancer Center in Birmingham, Alabama, of a "MALT lymphoma or marginal zone lymphoma," and the recommendation for immediate radiation therapy and the possibility of "a Rituxan based regimen that will probably include some cytotoxic chemotherapy." *See* Doyle Hamm Donaldson Medical Records, p. 135. The doctors also found at that time, on examination of Mr. Hamm's abdomen, numerous "granulomata throughout the spleen" and abnormal lymph nodes in the abdomen. *See* Doyle Hamm Donaldson Medical Records, p. 140.

10. In May 2014, the doctors at Brookwood Cancer Center confirmed a primary diagnosis of "Large cell lymphoma unspecified site, Diagnosed 2014 (Active)" and indicated that it was aggressive and fast growing. *See* Brookwood Hamm Report from 2014, p. 10, included in Appendix C. The doctors reported that the "scans demonstrated a large mass in the retro-orbital area

on the left extending into the masseter space [cavity in face above jaw, under temple]. There was a suggestion of widening of the neural foramen [space in spine through which the spinal cord runs]. In the chest were noted numerous abnormal lymph nodes [and] a few small nodes were seen in the abdomen." *See* Brookwood Hamm Report from 2014, p. 10, included in Appendix C. More specifically, the MRI revealed that "there is a soft tissue lesion filling most of the retro-orbital region on the left. There is extension posteriorly through the orbital fissures to involve the pterygopalatine fossa and cavernous sinus regions. From the cavernous sinus region, there may be extension into the middle cranial fossa with some degree of asymmetrical dural enhancement noted" and that "there is also extension of tumor laterally into the infratemporal fossa and masticator space region on the left. Enhancing tumor surrounds portions of the pterygoid musculature, as well as the inferior aspect of the temporalis muscle. There is also tumor surrounding the gasserian ganglion and extending inferiorly along the foramen ovale into the masticator space. Some component of tumor near foramen laccrum portion of the carotid canal cannot be excluded." *See* Doyle Hamm Donaldson Medical Records, p. 129.

11. In June 2014, the doctors confirmed "the presence of a tumor extending through the foramina into the pterygoid space and into the middle cranial fossa. There is involvement of the

cavernous sinus as well as extension into the left side of the nasopharynx." *See* Doyle Hamm Donaldson Medical Records, p. 111. Note that the "nasopharynx" is the back of the throat and the "foramina" is plural of foramen, which means a cavity in the bone; the spinal cord goes through a foramen in this area, so the cancer was right next to the spinal cord. The fact that the cancer was nearing the middle cranial fossa suggests that it was entering the cranial cavity. The pterygoid space is the space where the head and spine meet. The middle cranial fossa is the space in the skull above where the spine meets the head. The doctors reported that "The patient appears chronically ill." *See* Doyle Hamm Donaldson Medical Records, p. 111. The doctors also indicated that "There is some risk of involvement of the spinal fluid." *Ibid.* The treating physician at Brookwood said he would "request approval from the prison medical clinic for the patient to have a lumbar puncture with cytology. In the interval I recommended that we proceed with radiation therapy as he is going to require some form of local treatment even if he takes systemic chemotherapy." *Ibid.*

12. The different diagnoses all concur that the cancer spread from inside the left eye socket (the "left orbit"), through the holes where the optic nerves travel and back into the cavities under the cheek bone and towards the spot where the spinal cord meets the skull.

13. In July 2014, Mr. Hamm underwent radiation therapy, specifically "IMRT to 40Gy over 20 fractions for orbital lymphoma completed on July 11, 2014." *See* Brookwood Hamm Report from 2014, p. 6.

14. By September 2014, the doctors at Brookwood felt that there had been some improvement. They reported that Mr. Hamm had "completed 40 gray for a lymphoma involving the left orbit and skull base. He is feeling better at this time…. Constitutional: Complains of poor appetite and major fatigue. Eyes: Complains of double vision with the left eye and visual difficulties of the left eye that is also dry and red. Complains of some pain in the left eye but has gotten better." *See* Brookwood Hamm Report from 2014, p. 3.

15. One year later, in September 2015, Mr. Hamm showed some improvement, even though there was evidence from the tests of "Abnormal enhancement […] in the left orbit with involvement in the left pterygopalatine fossa and left infratemporal fossa/masticator space region. Abnormal enhancement is also seen in the inferior orbital fissure and in foramen ovale, and along foramen rotundum on the left." *See* Doyle Hamm Donaldson Medical Records, p. 629, in Appendix C. But these "areas of abnormal enhancement are improved in appearance when compared with 3/10/2015 and markedly improved from 9/29/2014." *Ibid*.

16. However, beginning in March 2017, the cancer has come

back and Mr. Hamm has been experiencing lymphadenopathy associated with his earlier diagnosed and treated skull-orbital cancer. In March or April 2017, Mr. Hamm was seen by a doctor in Jasper, Alabama, who conducted a biopsy of eye tissue and found that it was cancerous. The doctor ordered surgery, but Mr. Hamm has not yet been allowed to return for surgery. Mr. Hamm apparently also now has a lesion on his face that is the size of a quarter. *See* Preliminary Report of Mark. J. S. Heath, M.D., ¶10, attached as Appendix A; and Appendix B. On March 7, 2017, Mr. Hamm was complaining of "'knots' on my chest" and the medical team was reporting that "These feel like lymph nodes." *See* Doyle Hamm Donaldson Medical Records, p. 453, in Appendix C. On March 2017, Mr. Hamm reported that he "Need[s] to see the doctor I have lumps in my chest." *See* Doyle Hamm Donaldson Medical Records, p. 472; see also "lumps in chest," *ibid*., p. 470.

17. A recent visual examination of Mr. Hamm revealed two abnormal lumps on Mr. Hamm, one under his chin on the left side and one on the back right of his neck below his right ear. *See* Report by Nicola Cohen in Update No. 1 filed with this Court on September 1, 2017. Mr. Hamm currently is experiencing lymphadenopathy in his neck, chest and abdomen, which is likely associated with worsening lymphoma cancer. He is in pain and is taking a massive amount of prescribed pain relievers. Mr. Hamm

is not malingering his condition.

II. Mr. Hamm's Veins Are Damaged and Venous Access Would Be Extremely Difficult

18. Second, as a result of a long and complicated medical history made worse by cranial and lymphatic cancer and serious cancer treatments, Mr. Hamm's veins are impaired. It will be extremely difficult to achieve venous access and remotely administer the anesthetic drugs at Holman Prison. Moreover, because of his lymphatic cancer, which causes inflamed abnormal lymph nodes around arteries and veins, it will be anatomically difficult to perform a cut-down or central-line procedure. As a result, there is a substantial likelihood that the Alabama Department of Corrections will not be able to accomplish a successful execution in compliance with the Eighth Amendment.

19. Dr. Mark Heath is a leading anesthesiologist in this country. He has almost 30 years of experience, and practices at one of the leading hospitals in the country, performing on a daily basis anesthesia for open-heart surgeries. Dr. Heath practices at the New York-Presbyterian/Columbia Hospital in New York City, where his duties include, on a daily basis, "obtaining both peripheral and central intravenous (IV) access, the administration of large doses of anesthetic agents, and intensive monitoring to ensure that [his] patients are both safe and fully anesthetized." *See* Preliminary Report of Mark. J. S.

Heath, M.D., ¶1, attached as Appendix A. Dr. Heath has practiced anesthesiology for 29 years and is a professor of clinical anesthesiology at Columbia University in New York City. *See ibid.*, ¶1.

20. Dr. Heath also has experience with lethal injection procedures. Because of his expertise as an anesthesiologist, Dr. Heath has been "called upon to give expert medical opinion in a number of cases involving the use of lethal injection at both the federal and state level, including with the Federal Bureau of Prisons and in the correctional systems of California, Florida, Ohio, and Texas, among others." *Ibid.*, ¶2. Specifically, Dr. Heath was an expert in the Federal District Court litigation surrounding the lethal injection of inmate David Nelson in the State of Alabama, and was present when Mr. Nelson was examined by a cardiac anesthesiologist at Holman Prison in 2006.

21. On Saturday, September 23, 2017, Dr. Heath conducted an extensive medical examination, including a lengthy medical history interview and a substantial physical exam of Mr. Hamm. Dr. Heath concluded, based on his extensive experience obtaining venous access at one of the top-ranked hospitals in the country, that (1) Mr. Hamm's peripheral veins are damaged and will be extremely difficult to access for lethal injection; and (2) access to his central veins through his groin or neck is equally

problematic because of Mr. Hamm's cancerous lymphadenopathy.

22. Dr. Heath found no usable veins on Mr. Hamm's left arm and hand, left leg and foot, right leg and foot, and right arm. Dr. Heath found one "small, tortuous vein" on his right hand "that is potentially accessible with a butterfly needle"; however, lethal injection requires a larger intravenous catheter, much larger than a butterfly needle. Dr. Heath concluded that, "Based on my knowledge of previous Alabama lethal injection procedures and protocols, this small, tortuous vein on his right hand would not provide reliable peripheral venous access." *Ibid.*, ¶7. In lay terms, Dr. Heath found no usable veins for lethal injection.

23. Dr. Heath also found that Mr. Hamm's lymphatic cancer would likely interfere with any attempt to access his central veins. As Dr. Heath explained, Mr. Hamm has "intermittent waxing and waning tumors on his chest, neck, and groins. This likely represents lymphadenopathy (swollen lymph nodes) related to his lymphatic malignancy." *Ibid.*, ¶8. This condition would likely interfere with accessing his central veins. Dr. Heath noted that "Lymphoma, like other cancers, is a progressive disease if not cured. At this point, there may be significant involvement and enlargement of lymph nodes in other areas of his body, including his neck, chest, and groin. If there are enlarged lymph nodes surrounding the veins in his neck, chest, or groin, it would

likely complicate or thwart attempts to obtain central venous access." *Ibid.*, ¶14. As noted earlier in paragraphs 16 and 17, Mr. Hamm's medical records from Donaldson report a nurse or doctor finding knots that "feel like lymph nodes" and a visual inspection also observed lumps on Mr. Hamm's chin and neck. In addition, Dr. Heath reported, from his prior experiences in Alabama, that "To the best of my knowledge, Alabama has limited experience with obtaining central vein access for lethal injection procedures." *Ibid.*, ¶13. In lay terms, central venous access for Mr. Hamm is likely extremely difficult because of the combination of Mr. Hamm's lymphatic cancer and the lack of a fully equipped hospital operation-room set up at Holman Prison.

24. Dr. Heath gave his expert opinion in conclusion: "I have not seen the exact protocol for venous access for lethal injection from the state of Alabama, but based on what I know from the David Nelson case, it is my opinion that the state is not equipped to achieve venous access in Mr. Hamm's case." *Ibid.*, ¶16.

25. Mr. Hamm's case is additionally complicated by the fact that he has Hepatitis C, which is easily transmitted by blood. A messy and potentially bloody attempt at peripheral or central venous access puts the ADOC staff at great risk of contracting Hepatitis C.

26. Dr. Heath's report is attached as Appendix A.

27. In sum, venous access for Mr. Hamm, both peripheral and central, appears extremely difficult, and the attempt would likely be arduous, excessively painful, and likely in violation of the Eighth Amendment. Mr. Hamm does not have accessible peripheral veins and his lymphadenopathy means that his abnormal lymph nodes will likely present obstacles to access and severe complications. All of this would present a serious medical challenge even in a fully functional hospital operating room with a senior anesthesiologist and a team of different specialists and full medical equipment. At Holman Prison, the attempt would likely result in cruel and needless pain in violation of the Eighth Amendment. *Estelle v. Gamble*, 492 U.S. 97 (1976); *Baze v. Rees*, 553 U.S. 35 (2008); *Glossip v. Gross*, 135 S. Ct. 2726 (2015). This Court should not grant the Attorney General's motion to set an execution date.

III. Further Procedures Are Required Prior To Setting an Execution Date

28. If this Court nevertheless decides to move forward, then there are a number of antecedent measures that the Court respectfully should put in place before setting an execution date to ensure that proper procedures and protocols for venous access are agreed upon before execution.

29. First, the Court should order the Attorney General to confidentially disclose to undersigned counsel the exact

protocol for venous access and the list of medical equipment that would be used for venous access in Doyle Hamm's case, including for instance the gauge and length of catheters and/or needles. To date, counsel has still not received any information from the Attorney General about the Alabama protocol for venous access. Counsel renewed his request for the protocol for venous access by letter dated Monday, September 11, 2017, but has received no response. In order to assess the risks of cruel and needless pain, the exact protocol for venous access must be disclosed to counsel, under seal or *in camera* if necessary.

30. Second, the Court should appoint a Special Master to ensure that a proper protocol for venous access is agreed upon prior to setting an execution date. This is precisely the kind of process that the Federal District Court ordered in *Nelson v. Campbell*, Civil Action No. 2:03CV1008-T (M.D. Ala. 2006). David Nelson had severely compromised veins due to years of intravenous drug use. To assist the court in understanding the medical complications present in Mr. Nelson's case, the Federal District Court appointed a Special Master to recommend an independent medical expert, before allowing a date to be set. The Special Master appointed an independent medical expert, Warren Bagley, M.D., an anesthesiologist, to conduct a thorough physical examination of Mr. Nelson's veins for the purpose of evaluating whether venous access would be possible. *See* Report

of Special Master on Medical Expert at 1, attached as Appendix D. On October 11, 2006, Dr. Bagley "examined Mr. Nelson with regards to obtaining venous access, visually and with palpitation, and sonographically," and produced a lengthy medical report in which he described the results of his physical examination and analyzed the accessibility of each of Mr. Nelson's veins. *See* Expert Report of the Court's Independent Medical Expert, Dr. Warren Bagley, attached as Appendix E. The purpose of this examination was for the state of Alabama and counsel to agree on a protocol for venous access. Such an agreement would similarly be necessary in Mr. Hamm's case before this Court sets a date, given the complicated medical issues involved in Mr. Hamm's case and the need to avoid cruel and needless pain.

31. Third, this Court should afford undersigned counsel an opportunity to be heard at a hearing before this Court prior to setting an execution date, *in camera* if necessary, in order for this Court to approve any agreement reached with the Attorney General over a detailed protocol for venous access. This Court should review and approve the protocol necessary to humanely achieve venous access and prevent cruel and unusual punishment in Mr. Hamm's case, given his cranial and lymphatic cancer.

32. This Court should not set a date for execution before an agreement on such a protocol for venous access is securely in

place, otherwise it is, realistically, unlikely that a proper protocol will be agreed to before execution, resulting in the substantial likelihood that the Alabama Department of Corrections will not be able to accomplish a successful execution in compliance with the Eighth Amendment.

Respectfully submitted,

BERNARD E. HARCOURT
Counsel of Record
COLUMBIA LAW SCHOOL
435 West 116th Street
New York, NY 10027
Phone: (212) 854-1997
E-mail:beh2139@columbia.edu

October 2, 2017

CERTIFICATE OF SERVICE

I hereby certify that on October 2, 2017, I served a copy of the attached pleading by electronic mail to Assistant Attorney General Beth Jackson Hughes at bhughes@ago.state.al.us.

BERNARD E. HARCOURT
Counsel of Record

APPENDIX A

Preliminary Report of Mark. J. S. Heath, M.D.

1. My name is Mark J. S. Heath. I am a medical doctor with an active, licensed, full-time medical practice in New York State. I am board certified in anesthesiology. I practice daily at the New York-Presbyterian/Columbia Hospital in New York City, where I provide anesthesia for open-heart surgeries. Core features of my daily practice include obtaining both peripheral and central intravenous (IV) access, the administration of large doses of anesthetic agents, and intensive monitoring to ensure that my patients are both safe and fully anesthetized. On average, I conduct these activities on more than one open-heart surgery every working day. I am board certified in anesthesiology, and have been practicing within this specialty for 29 years (3 years of residency, 1.5 years of fellowship in cardiothoracic anesthesiology and research, and 24.5 years as an attending physician). I hold an appointment as an Assistant Professor of Clinical Anesthesiology at Columbia University in New York City, where I teach medical students, residents, and fellows, primarily regarding the practice of anesthesiology in cardiothoracic cases.

2. Because of my extensive experience in anesthesiology, I have been called upon to give expert medical opinion in a number of cases involving the use of lethal injection at both the federal and state level, including with the Federal Bureau of Prisons and in the correctional systems of California, Florida, Ohio, and Texas, among others. I have previously been involved in the federal litigation surrounding the lethal injection of inmate David Nelson in the state of Alabama, as well as in the cases of other Alabama inmates.

3. At the request of counsel Bernard Harcourt I examined Mr. Doyle Hamm on Saturday, September 23, 2017, in the William E. Donaldson Correctional Facility in Bessemer, Alabama.

4. Prior to the medical examination, Mr. Harcourt provided me with a copy of the medical records that he had received from Donaldson Correctional Facility that included diagnoses and descriptions of the care Mr. Hamm has received for his lymphatic cancer; as well as other medical reports Mr. Harcourt had obtained, including a report by Dr. Fred Dumas dated May 16, 2014; a follow up report by Dr. Dumas dated June 6, 2014; a report by Dr. Sandra Tincher dated July 14, 2014; and an affidavit by Dale G. Watson, PhD, dated July 19, 1999.

5. I brought medical equipment to assist in the medical examination. Unfortunately, because of prison security at the front gate, I was courteously but insistently prevented from bringing the equipment into the prison. This limited my ability to perform a complete examination.

6. I began my examination at approximately 1:45 pm on Saturday, September 23, 2017. Mr. Hamm was cooperative, although somewhat subdued in affect. He appears gaunt and frail, and had a prominent facial lesion and deformity that was causing him pain, but he was not in acute distress. He was breathing comfortably and able to converse and ambulate. Because of equipment limitations, I was not able to measure vital signs. The medical examination was politely but firmly ended at 3:30pm by the correctional staff.

7. I first obtained a medical history from Mr. Hamm. I then assessed Mr. Hamm's peripheral veins, with and without a tourniquet. I used Mr. Harcourt's necktie because I was not

permitted to bring a medical tourniquet into the prison. Mr. Hamm has extremely poor peripheral venous access. There are no accessible veins on his left upper extremity (arm/hand) or either of his lower extremities (legs/feet). He related that all of the veins on these extremities were "used up" by chronic intravenous drug use. There are no accessible peripheral veins on his right arm. On the dorsum of the right hand there is a small, tortuous vein that is potentially accessible with a butterfly needle. Insertion of an intravenous catheter into this vein would be challenging and would have a high chance of rupturing the vein and being unsuccessful. Mr. Hamm related that this vein was previously accessed with a butterfly needle in order to inject contrast dye for a CT scan to assess his facial/intracranial malignancy in 2014, prior to his cancer treatments. A butterfly needle is significantly easier to insert than an intravenous catheter because it is thinner and sharper. The nurse/technician failed to access the vein during the first several attempts, but was ultimately able to access it with that butterfly needle. The access was "positional", meaning that the ability to infuse fluid through the needle was intermittent and depended on the precise depth and angle of the needle. The nurse/technician injected the contrast into this vein while standing right next to his hand and slowly and carefully infused the contrast at a slow and cautious rate. This is the appropriate and necessary practice when injecting fluid into a tenuous vein. Mr. Hamm also related that this vein was accessed with great difficulty in 2014 when he underwent a surgical procedure to biopsy the malignancy behind his left eye. One practitioner (perhaps a CRNA (Certified Registered Nurse Anesthetist)) was unable to access the vein. She called for assistance from a middle-aged man (perhaps a senior anesthesiologist) who was, with difficulty, able to insert a very small intravenous catheter. Based on my knowledge of previous Alabama lethal injection procedures and protocols, this small, torturous vein on his right hand would not provide reliable peripheral venous access.

8. Mr. Hamm relates that he has intermittent waxing and waning tumors on his chest, neck, and groins. This likely represents lymphadenopathy (swollen lymph nodes) related to his lymphatic malignancy. There are many other possible causes of lymphadenopathy, and the only way to determine the actual cause would be to biopsy one or more of these lesions. The extent of these lesions could be assessed with diagnostic studies such as a CT scan, an MRI, or a PET scan.

9. Because of equipment limitations it was not possible to assess the accessibility of the deep veins in Mr. Hamm's neck (internal jugular vein), chest (subclavian vein (behind the collar bone)), or groin (femoral veins).

10. Mr. Hamm has a facial defect under his left eye. There is a discolored lesion with diffuse margins, approximately 2-3 cm in diameter. The lesion is tender, limiting my ability to palpate the underlying bone. There is likely a bone defect in the infraorbital margin (the bone under the eye), in the region of the junction of the zygoma and maxilla. This region of his face (in lay terms, his left cheek) is partially collapsed, resulting in prominent facial asymmetry. As with the lymphadenopathy described above, a biopsy and imaging diagnostic study would be needed in order to assess the cause and extent of this lesion.

11. In October 2006, I was present at Holman Prison when Mr. David Nelson was examined by a cardiac anesthesiologist. Mr. Nelson's situation was very similar to Mr. Hamm's, in that his peripheral venous access was compromised by prior intravenous drug abuse. In Mr. Nelson's

case, a special master was appointed to supervise the litigation. The magistrate approved an examination by an Alabama-licensed board certified practicing cardiothoracic anesthesiologist, Dr. Warren Bagley, to assess Mr. Nelson's veins. I was present during that examination. Dr. Bagley inspected Mr. Nelson's peripheral veins and central veins using physical exam and ultrasonography. Based on my examination and finding of very poor venous access in Mr. Hamm, my opinion is that lethal injection should not be attempted without first obtaining an examination such as that performed by Dr. Bagley on Mr. Nelson.

12. Based on my examination of Mr. Hamm on September 23, 2017, and review of his medical records, I am of the opinion that there are two significant medical problems that require further review before attempting a lethal injection.

13. First, my examination revealed that Mr. Hamm has extremely poor peripheral vein access and that it very likely that the prison will need to resort to obtaining central venous access. It is extremely doubtful, given the way that the correctional staff in Alabama administers the anesthetic agents from another room at distance from the inmate rather than at his bedside, that they will be able to achieve peripheral IV access. To the best of my knowledge, Alabama has limited experience with obtaining central vein access for lethal injection procedures.

14. Second, Mr. Hamm has active B-cell lymphoma, a form of cancer that involves the lymph nodes. A large tumor was diagnosed in 2014 and extended from his left eye into multiple areas of the skull behind the face, and through the skull into the middle cranial fossa (the area surrounding the temporal lobe of the brain). In 2014 he also had enlarged lymph nodes in his

chest, and it is unclear whether these nodes were or are involved in the malignant process. The lymphoma was treated with radiation and medication, with some improvement; however, recent reported symptoms indicate that the malignancy has returned. There appears to have been no follow-up evaluation to determine whether the cancer has spread into lymph nodes beyond his face and skull. Lymphoma, like other cancers, is a progressive disease if not cured. At this point, there may be significant involvement and enlargement of lymph nodes in other areas of his body, including his neck, chest, and groin. If there are enlarged lymph nodes surrounding the veins in his neck, chest, or groin, it would likely complicate or thwart attempts to obtain central venous access.

15. In addition to the pain that would be caused by repeated futile attempts to obtain IV access, there is the risk that the execution team might inadvertently inject the execution drugs into a catheter that is not properly situated in the lumen of the intended vein. If this occurs the execution drugs will infiltrate in the tissue around the vein, and it will not exert its full anesthetic effect. The paralytic drug will very likely be absorbed from the tissue into the circulation more rapidly than the anesthetic drug, which will cause Mr. Hamm to become paralyzed and consciously suffocate. This would be an agonizing death.

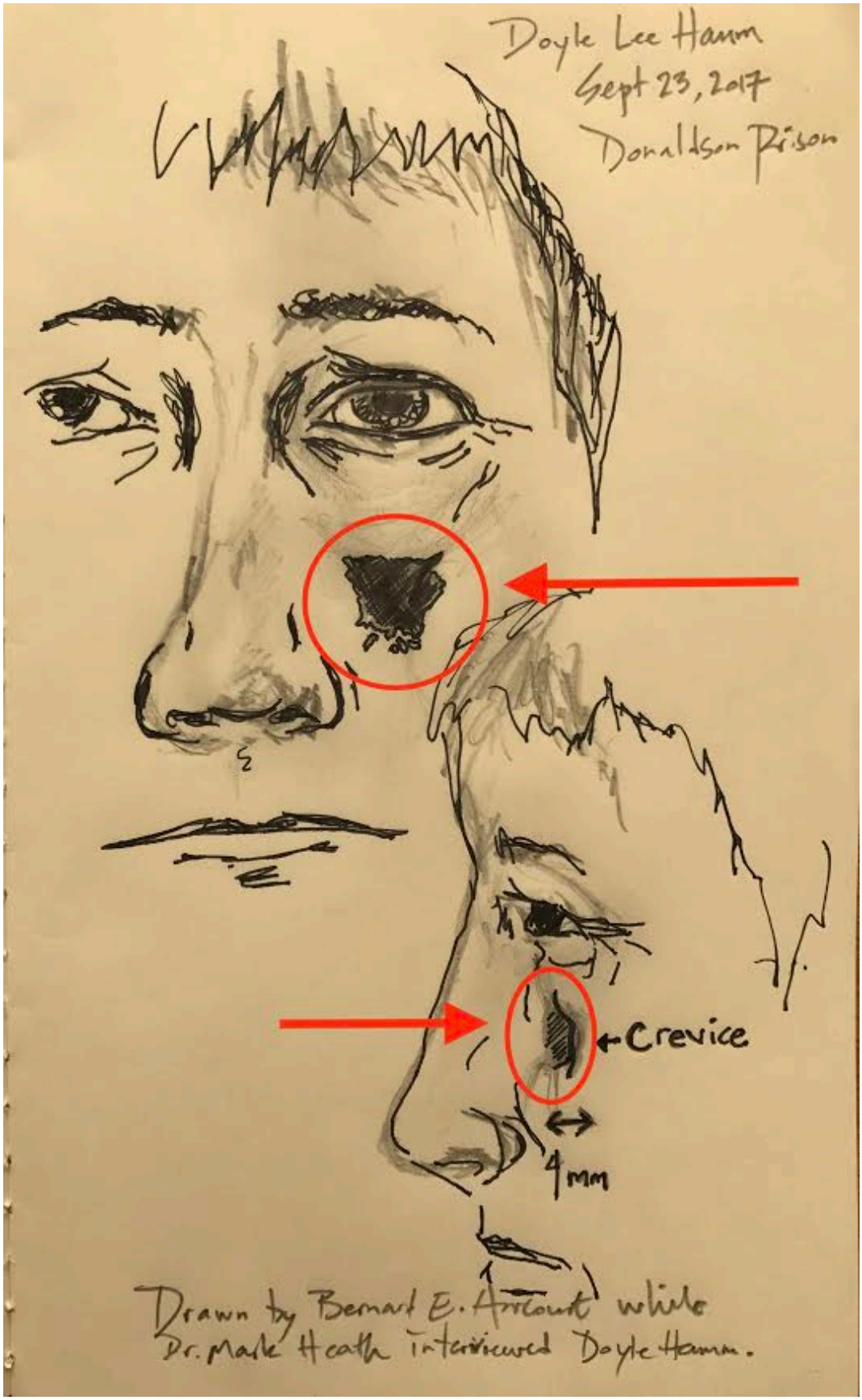
16. In summary, the progressive nature of Mr. Hamm's cancer warrants that a contemporary evaluation of any cancer spread be undertaken before execution is contemplated. In particular, no execution should be contemplated without imaging the central veins to determine whether lymph nodes surrounding these veins are enlarged from the lymphoma. Mr. Hamm's difficult peripheral venous access makes it highly likely that an execution by lethal injection cannot

proceed without obtaining central venous access. It is not clear whether the Alabama prison is prepared to perform central venous cannulation, particularly in light of the possibility of malignant (cancerous) lymph nodes impeding the procedure. I have not seen the exact protocol for venous access for lethal injection from the state of Alabama, but based on what I know from the David Nelson case, it is my opinion that the state is not equipped to achieve venous access in Mr. Hamm's case. Mr. Hamm's difficult IV access greatly increases the likelihood of an inhumane execution due to infiltration of the execution drugs, with the onset of paralysis preceding the attainment of adequate anesthesia.

17. This report represents the chief findings and opinions resulting from my examination of Mr. Hamm. I reserve the right to amend my opinions should the advent of additional information so warrant.

Mark J. S. Heath, M.D.
October 1, 2017

APPENDIX B


Doyle Lee Hamm
Sept 23, 2017
Donaldson Prison
Crevice
4mm
Drawn by Bernard E. Harcourt while
Dr. Mark Heath interviewed Doyle Hamm.

APPENDIX C

CT Maxillofacial wo contrast

HAMM, DOYLE - 000002875582

* Final Report *

Document type: CT Maxillofacial wo contrast
Result date: 03 February 2014 20:33
Result status: Auth (Verified)
Document title: CT Maxillofacial wo contrast
Performed by: Franklin, Terri L on 03 February 2014 20:33
Electronically Signed By: Cure, Joel K MD on 03 February 2014 20:45
Encounter info: 649876794034, UAB HIGHLANDS, 1 Time OP, 02/03/2014 -

* Final Report *

Reason For Exam
graves opthalmopathy vs extraorbital neoplasm vs pseudotumor left eye

RESULTS
Orbit CT without contrast 02/03/2014 20:33:40

Indication: Redness, swelling, blurry vision left eye.

Technique: Axial helical CT images were obtained through the maxillofacial region. 2-D coronal reconstructions were generated from the axial data. DLP: 1357.50 mGy cm. Scan field of view: 200 mm.

Findings: There is a poorly marginated mass within the left orbit with both intraconal and extraconal components. This appears to extend through the orbital apex via the superior and inferior orbital fissures both of which appear enlarged. The left foramen rotundum is asymmetrically enlarged. The cortex along the lateral aspect of the left vidian canal appears mildly slightly eroded. The lesion probably extends into the left cavernous sinus. There is mild left proptosis.

There is loss of fat planes within the left masticator space and the left masticator (especially the left lateral pterygoid muscle) space is probably diffusely involved by tumor.
Impression: Left orbital neoplasm with possible perineural tumor spread to the left cavernous sinus and left masticator space. This may represent an adenoid cystic carcinoma, given this

Printed by: Parker Jr, John Steven MD
Printed on: 02/03/2014 21:31

CT Maxillofacial wo contrast

HAMM, DOYLE - 000002875582

* Final Report *

pattern. Further evaluation with contrast-enhanced MRI is strongly recommended.

Signature Line
Final Report
Interpreted by: Cure, Joel K MD
Title: MD
Signed Date/Time: 02/03/14 20:45

Completed Action List:
* Order by Yee, Jeffrey L MD on 03 February 2014 19:41
* Perform by Franklin, Terri L on 03 February 2014 20:33
* VERIFY by Cure, Joel K MD on 03 February 2014 20:45

Printed by: Parker Jr, John Steven MD
Printed on: 02/03/2014 21:31

M311244

Patient: HAMM, DOYLE L
MRN: 2875582
Case: S-14-0003616

25 a M 14
1st PET
scan with
RFR.

Collected date: 06 FEB 2014 14:02
Result type: SPF
Result date: 11 FEB 2014 09:29
Result status: Auth (Verified)
Result title: Surgical Pathology Final Report
Performed by: on
Electronically Signed by: Reddy, Vishnu V.B. MD on 11 FEB 2014 09:29
Encounter info: EYE FOUNDATION HOSPITAL, 1 Time OP, 02/20/2014

Diagnosis
Orbit, left mass, biopsy:
- Low grade, small-sized B-cell lymphoma (see Comment).
- Immunohistochemistry reveals the tumor stains positively for CD20 with a proliferation rate of 10 to 15% by KI67.

Vishnu V.B. Reddy MD
(Electronically signed by)
Verified: 02/11/14 09:29
VVR/JW

Reviewed by Resident: Anderson, Frank Lawrence MD, MD

Pathologist Comment
The orbital tissue reveals a small-sized lymphocytic infiltrate invading into fibroadipose tissue and skeletal muscle. Immunohistochemistry stains were performed. The lymphoid cells stain positively for CD20 with about 10 to 15% proliferation rate by KI67. These cells stain negatively for CD10, CD5, CD3, BCL-6, and BCL-1. Controls reacted appropriately. These findings are consistent with a low grade, small-sized B-cell lymphoma.

These results were reported to Dr. John Long at about 1730 hours on February 10, 2014.

Clinical Information
This is a 56 year old male with a history of left orbit mass. Per the history provided per Horizon states that a CT of the skull reveals a history of Grave's ophthalmology vs extra orbital neoplasm vs pseudotumor left eye (performed on February 3, 2014).

Frozen Section Diagnosis
AFS1, Orbit, left mass, biopsy:
- Atypical lymphoid proliferation.(per Dr. Shi Wei)

Gross Description
This case is received in a single container labeled with the patient?s name, medical record number and "1 - orbit mass left orbit". The container is filled with formalin and contains a single orange cassette consistent of frozen section. The specimen now measures 2.1 x 2.0 x 0.1 cm in greatest dimension. The specimen is placed in a biopsy bag and completely submitted. No tissue was submitted for flow cytometry.
Dr. Anderson/Dr. Reddy/sd LYMPH
02/06/2014 18:16:39 CST

5/16/2014

NEW PATIENT CONSULTATION: DOYLE L HAMM MR# 001329103

PRIMARY SITE: Primary 200.70 - Large cell lymphoma unspecified site, Diagnosed 2014 (Active)

PREVIOUS TREATMENT:

HISTORY: 57-year-old incarcerated white male. Patient presents with a several month history of progressively severe bulging and pain in the left eye. Patient has some blurry vision remaining but the patient is not usable for reading or watching television.

Patient had been referred to the Eye foundation where a biopsy was performed. By report this shows a B-cell lymphoma. We have requested a copy of the pathology report but have been unable to obtain one thus far.

The patient was seen in consultation by Dr. Adler. CT scans were performed including noncontrast CT scans of the head chest and abdomen. Scans demonstrated a large mass in the retro-orbital area on the left extending into the masseter space. There was a suggestion of widening of the neural foramen. In the chest were noted numerous abnormal lymph nodes most of which were associated with calcifications. Calcified granulomata were noted within the lung as well. A few small nodes were seen in the abdomen. The pelvis was not imaged.

Patient has been treated with a single large dose of steroids. The patient states that he is bulging of the eye improved temporarily but the pain if anything was magnified.

The patient is referred at this time to discuss radiation therapy. He has not noted any particular change in his vision over the past few weeks but the vision has not markedly improved either.

PAST MEDICAL HISTORY:
cancer, hepatitis c and hypercholesterolemia.

PAST SURGICAL HISTORY:
biopsy (of the left eye).

Brookwood Medical Center
2010 Brookwood Medical Center Drive
Birmingham, AL 35209-6804
Diagnostic Imaging Department
Phone (205) 877-1990 Fax (205) 877-2153

Patient Name:	HAMM, DOYLE L	Encounter Type:	2 - Outpatient
DOB/Age/Sex:	2/14/1957 58 years Male	Location:	BMC - MI
MRN:	01329103		
Acct #:	38321188		

Magnetic Resonance Imaging

Accession #: 368-MR-15-006346	Exam Date/Time: 9/16/2015 08:22 CDT	Procedure: MRI Face Neck Orbit w/ + w/o Contrast	Ordering Physician: RODDAM MD,ROY F

Report

MRI facial region

HISTORY: 58-year-old male with left orbital lymphoma

TECHNIQUE: Pre-and postcontrast MRI of the facial region.

FINDINGS: Prior MRI-3/10/2015 and 9/29/2014.

Abnormal enhancement is seen in the left orbit with involvement in the left pterygopalatine fossa and left infratemporal fossa/masticator space region. Abnormal enhancement is also seen in the inferior orbital fissure and in foramen ovale, and along foramen rotundum on the left. Overall, these areas of abnormal enhancement are improved in appearance when compared with 3/10/2015 and markedly improved from 9/29/2014. No definitive signs of bulky mass seen on the current stu Involvement of the left cavernous sinus region cannot be excluded.

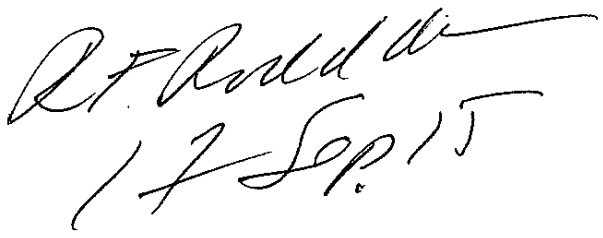
Remainder of the surrounding soft tissues are grossly normal. The nasopharynx and oropharynx are within normal limits. N definitive signs of adenopathy.

Visualized intracranial structures are grossly normal.

IMPRESSION: Overall, there are areas of abnormal enhancement as described above. However, I do not appreciate any detrimental change from prior exams.

Finalized by Harry Rosenthal, MD
9/16/2015 6:06 PM

Final Report
Dictated: 09/16/2015 12:09 Dictated By: ROSENTHAL III MD, HARRY B
Electronic Signature: 09/16/2015 6:06 pm Signed By: ROSENTHAL III MD, HARRY B



Admitting: RODDAM MD,ROY F
Consulting:

Report Request ID: 77302783
Printed: 9/17/2015 06:48 CDT

OGOV
1000
1800

CORIZON HEALTH

Progress Note

Name: Last Hamm First VISAL MI

Date of Birth: 2/14/1957 ID #: Z-4

R 20/40 L 20/50 BOTH 20/50

Date	Time	Description
9/20/16	7:30	HT: 5'9 BP: 120/84 Temp WT: 140/65 PR: 68 O2: S – I have been have pain. O – Inmate has hyp involving OS & a remission he compl in his eye c more requests pain medica to be continued - Exam – Periorb. Bilateral orbits sensiti EOMs intact. A – Continued pain OS c chemo lymphoma P – Medication renewed. R.T. Riddle
3/MARCH/2017		WT: 142 BP 130/80 P 97 R 18 T 98 OXSAT 98 Skin S – "knots" on my chest – x 3 weeks are really tender. O – Subcutaneous nodules x 2 cm in diameter – one x 6 cm below (R) clavicle, one peri areolar area & one (R) post chest. A – Pt feel like lymph nodes but could be lipomas as pt has hx of cancer lymphadenopathy. P – Chest X-ray ordered – will F/U in 1 month R. may need biopsy if continues to enlarge. (Next page) R.T. Riddle CMA

COMPLETE BOTH SIDES BEFORE USING ANOTHER SHEET

CS1104

APPENDIX D

IN THE UNITED STATES DISTRICT COURT
FOR THE MIDDLE DISTRICT OF ALABAMA
NORTHERN DIVISION

DAVID LARRY NELSON,	)	
	)	
Plaintiff,	)	
	)	
v.	)	**CIVIL ACTION NO. 2:03CV1008-T**
	)	
DONAL CAMPBELL and GRANT CULLIVER,	)	
	)	
	)	
Defendants.	)	

REPORT OF SPECIAL MASTER ON MEDICAL EXPERT

By order of October 15, 2004, the Court appointed the undersigned as Special Master for the purpose of identifying and recommending to the Court an independent medical expert to assist the Court in understanding and dealing with certain medical issues raised by the parties. The Special Master recommends that Warren Bagley, M.D. be designated as the Court's independent medical expert.[1]

Qualifications of the Independent Medical Expert

The parties appear to be in agreement, and the Special Master concurs, that the Court's independent medical expert should be intimately familiar by education, training and experience with the procedures which are at issue here, namely the various procedures available for obtaining veinous access. It was suggested by counsel for Mr. Nelson that a physician who is board certified in Anesthesiology and who is familiar with and practicing in Cardiovascular Anesthesiology would be desirable because such an individual would likely be more familiar with these procedures and important surrounding issues than would other physicians. The

[1] On March 17, 2005, the Special Master submitted a Report recommending that Dr. Vance Nielsen be designated as the Court's independent medical expert. The Special Master subsequently submitted a Report informing the Court that Dr. Nielsen had requested to be removed from consideration as the Court's independent medical expert, and the Special Master proceeded with identifying another independent medical expert.

Special Master's research and investigation lead him to concur with Mr. Nelson's counsel in this regard. For the Court's reference, attached to this report are information pieces from the American Society of Anesthesiologists (Exhibit A) and the Society of Cardiovascular Anesthesiologists (Exhibit B), both of which Dr. Bagley is a member, describing the general nature of the specialty of Anesthesiology and its sub-specialty, Cardiovascular Anesthesiology.

Qualifications of Dr. Bagley

Before pursuing the specialty of Anesthesiology, Dr. Bagley gained broad experience in the practice of medicine in the United States Army Medical Corps where he served as a Flight Surgeon and practiced in Otolaryngology, eventually becoming Chief of Otolaryngology Services at the U.S. Army Aeromedical Center at Ft. Rucker, Alabama. After completing a residency in Anesthesiology at Walter Reed Army Medical Center in Washington D.C., Dr. Bagley received his board certification in Anesthesiology and served as the Chief of Anesthesia and Operative Services at Ft. Meade, Maryland. He was a Clinical Instructor in Anesthesiology at the Uniformed Services University of the Health Sciences (USUHS) in Bethesda, Maryland and an Instructor in Advanced Trauma Life Support for the American College of Surgeons. Since 1989, Dr. Bagley has worked and taught as an Assistant Professor in the Department of Anesthesiology at the University of Tennessee Graduate School of Medicine and has practiced Anesthesiology and Cardiovascular Anesthesiology at the University of Tennessee Medical Center. His faculty curriculum vitae is appended to this report (Exhibit C). Dr. Bagley also sits on the Cardiac Anesthesia Panel at the University of Tennessee Medical Center. He is a member of the American Society of Anesthesiologists, the Society of Cardiovascular Anesthesiologists, and the International Anesthesia Research Society. The Special Master believes that Dr. Bagley

is clearly a highly qualified physician in the specialty of Anesthesiology who has also practiced extensively in Cardiovascular Anesthesiology.

The Special Master's interview with Dr. Bagley convinces the Special Master that Dr. Bagley is very well-suited for the assignment at hand. He has extensive direct experience with the medical procedures at issue and is willing to assist the Court in its understanding of them and any related matters. Dr. Bagley is independent, in that he has no extra-judicial knowledge of this case, has not previously been involved in any similar matter, and understands that his role would be to assist the Court by providing independent and unbiased information and opinions to the Court. Dr. Bagley is willing to undertake this assignment and can make available the time needed to perform it.

Recommendations for Further Proceedings

The Special Master recommends that the Court appoint Dr. Bagley as its independent medical expert, instruct Dr. Bagley to conduct a physical examination of Mr. Nelson for the purpose of evaluating whether, and if so through what procedures, veinous access may be obtained on Mr. Nelson, and instruct Dr. Bagley to prepare a written report of his findings, along with a report or discussion on any other matters the Court deems appropriate.[2] The Court may wish to invite the parties to suggest issues that they would like to see addressed in Dr. Bagley's report as well. After the report is submitted to the Court and the parties, the Court can determine whether Dr. Bagley should be made available for testimony and cross-examination either by deposition or live. The Special Master will remain available, subject to the Court's direction, to assist in the submission of the report and with any other ancillary matters.

[2] Due to medical ethics considerations, the Special Master recommends that Dr. Bagley be instructed not to give advice or opinions on the proposed execution itself, not to consult with the warden or other prison personnel regarding the proposed execution itself, and not to give advice or opinions regarding the specific execution facilities located at Holman Correctional Facility.

s/David R. Boyd
David R. Boyd
Special Master

OF COUNSEL:
Balch & Bingham LLP
P.O. Box 306
Birmingham, AL 35201-0306
(205) 226-3485
(866) 783-2739 fax

CERTIFICATE OF SERVICE

I hereby certify that I electronically filed the foregoing with the Clerk of the Court using the CM/ECF system and service will be perfected upon the following this the 16th day of June, 2005, to:

Joe W. Morgan, III
Suite B
600 Robert Jemison Road
Birmingham, Alabama 35209

Michael Kennedy McIntyre
H. Victoria Smith
507 The Grant Building
44 Broad Street, N.W.
Atlanta, Georgia 30303

J. Clayton Crenshaw
Assistant Attorney General
Office of the Attorney General of Alabama
11 South Union Street
Montgomery, Alabama 36130

s/David R. Boyd
OF COUNSEL

APPENDIX E

IN THE UNITED STATES DISTRICT COURT
FOR THE MIDDLE DISTRICT OF ALABAMA
NORTHERN DIVISION

DAVID LARRY NELSON,	)	
	)	
Plaintiff,	)	
	)	
v.	)	**CIVIL ACTION NO.**
	)	**2:03CV1008-T**
DONAL CAMPBELL and GRANT CULLIVER,	)	
	)	
	)	
Defendants.	)	

NOTICE OF SUBMISSION OF EXPERT REPORT
OF INDEPENDENT MEDICAL EXPERT

Pursuant to the Order of the Court issued on July 28, 2006, the Special Master hereby submits, as Attachment A, the Expert Report of the Court's Independent Medical Expert, Dr. Warren Bagley.

Should the Court need further information, Dr. Bagley is ready and willing to provide such information through a supplemental report and/or personal appearance before the Court.

David R. Boyd
Special Master

OF COUNSEL:
Balch & Bingham LLP
P.O. Box 306
Birmingham, AL 35201-0306
(205) 226-3485
(866) 783-2739 fax

CERTIFICATE OF SERVICE

I hereby certify that a copy of the foregoing has been served upon the following by Via U.S. Mail, properly addressed and postage prepaid, on this the 31st day of October, 2006:

Joe W. Morgan, III
Suite B
600 Robert Jemison Road
Birmingham, Alabama 35209

Michael Kennedy McIntyre
H. Victoria Smith
507 The Grant Building
44 Broad Street, N.W.
Atlanta, Georgia 30303

J. Clayton Crenshaw
Assistant Attorney General
Office of the Attorney General of Alabama
11 South Union Street
Montgomery, Alabama 36130

David R. Boyd
Special Master

Attachment A

Expert Report of the Court's Independent Medical Expert Dr. Warren Bagley

Report Based upon Dr. Bagley's Physical Examination of David Larry Nelson Conducted at Holman Prison on October 11, 2006

This examination took place in the infirmary area of Holman State Prison on Wednesday 11 October 2006 from 1420-1500 hrs. Present were the examiner (Warren Bagley, MD), Attorney Chris Heinss (Balch, Bingham Special Master), Prisoner's Attorney Victoria Smith, Attorney General's Representative Clay Crenshaw, Prison Warden Grantt Culliver, Prisoner's Expert Witness Mark Heath, MD, and two guards.

I examined Mr. Nelson with regards to obtaining venous access, visually and with palpation, and sonographically. The results of both exams are documented both in writing and with supporting photographs.

Mr. Nelson was asked to lie supine on a gurney. The first examination was visual and with palpation. A tourniquet was applied to the left upper arm, the arm was extended towards the floor from the gurney, and I knelt by the gurney to perform the exam. The reason for this somewhat awkward position is that gravity assists with helping the veins stand out; blood tends to pool in the lowest part of the body.

As can be seen from photos A and B, there are no prominent superficial veins on the forearm which would support an IV of sufficient size (see Glossary) to administer the volume of solution at the necessary rate to perform an anesthetic, administer fluids for resuscitation, etc. The examination included the palmar and volar (see Glossary) aspects of the hand, wrist, and forearm, and the antecubital fossa (see Glossary). The line on Photo B represents the level at which ultrasonic examination of the antecubital fossa occurred.

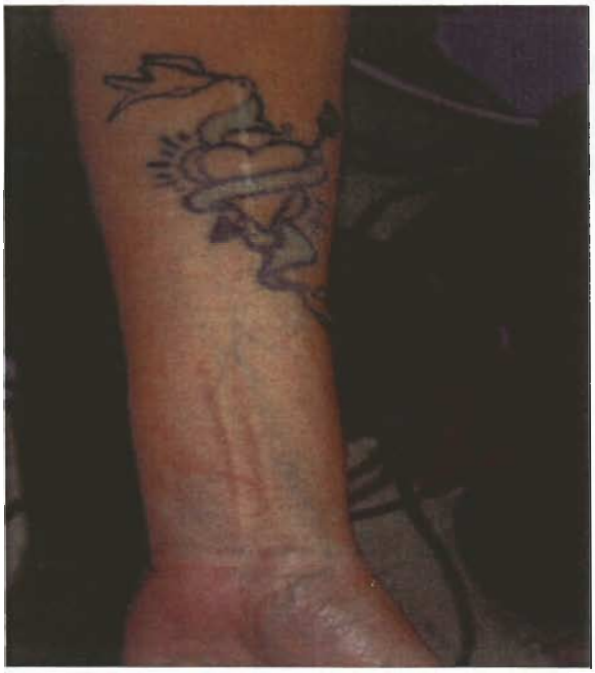


Photo A

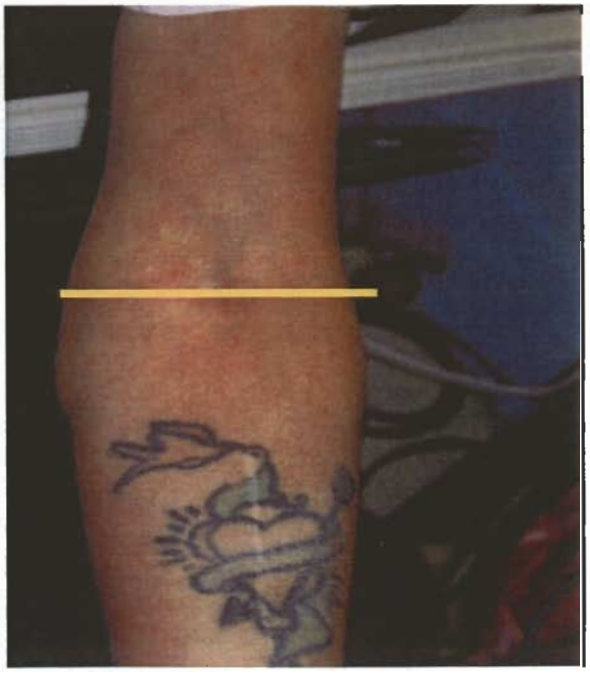
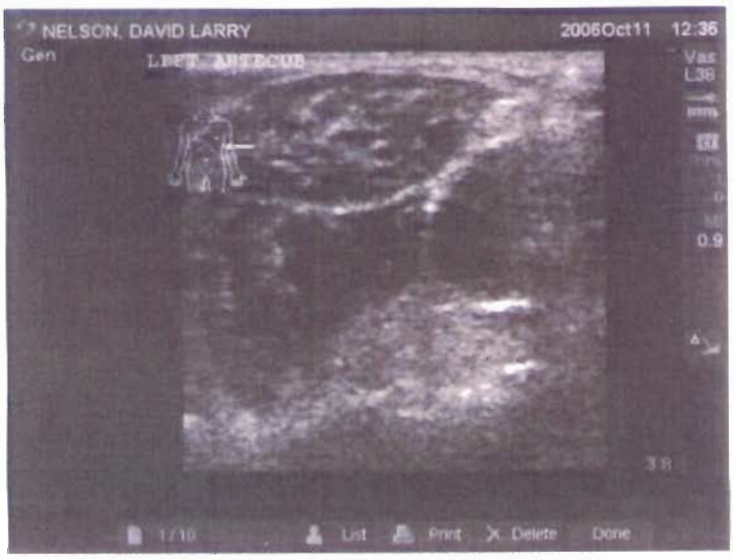


Photo B

The ultrasonic examination (see Glossary) of the left antecubital fossa did not reveal any veins. See Ultrasound 1.



Ultrasound 1.

Note: although the ultrasound exam was performed after the visual/palpatory exam, I present them simultaneously for the sake of clarity.

The second area of examination was the left lower extremity. A tourniquet was applied to the mid-calf and examination of the foot and ankle was carried out, again with the extremity dangling off the gurney and the examiner kneeling.

It should be noted that Mr. Nelson's skin on the lower extremities has hyperpigmented and pitting edema changes consistent with venous stasis (see Glossary) and congestive heart failure. He also has a history of congestive heart failure, and of upper thigh varicosities (see Glossary). Although it is technically possible to insert an IV into a varicosity, it is generally quite painful and not always successful, as varicosities are often tortuous.

The largest and most commonly cannulated (see Glossary) peripheral vein in the leg is the saphenous vein, which courses up the medial (inside) portion of the ankle and leg. While I was not able to see this vein on the left ankle, it was distinctly palpable and clearly visible on ultrasound. See Photos C and D, and Ultrasound 2. Again, yellow line indicates level of ultrasound exam. The white donut-shaped device is the tourniquet.

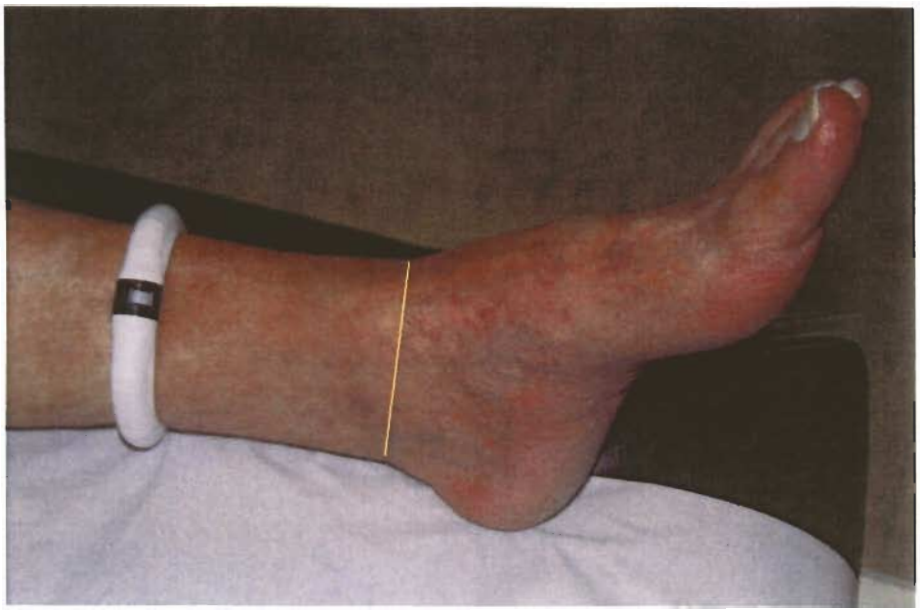


Photo C

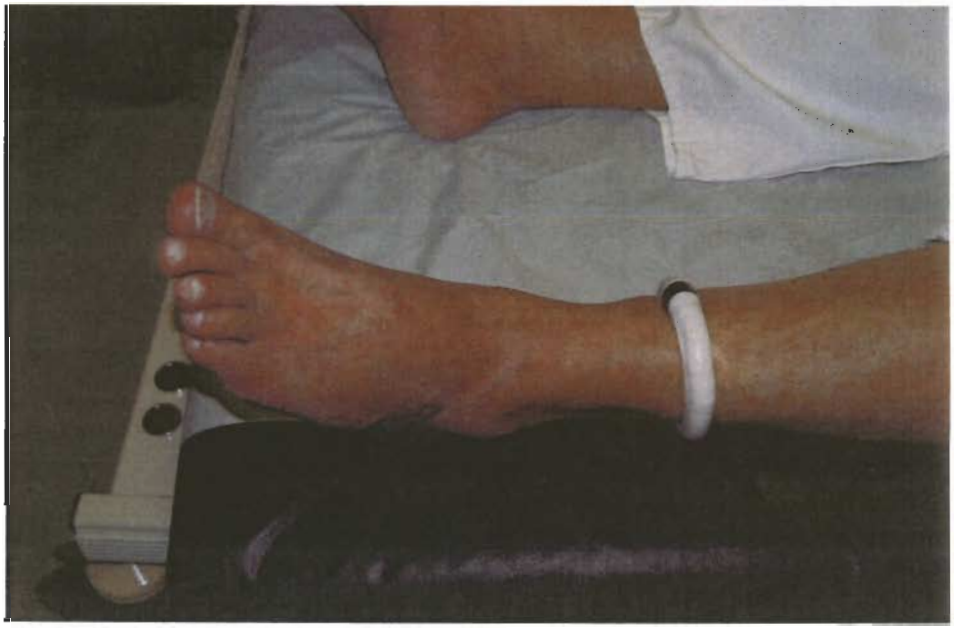
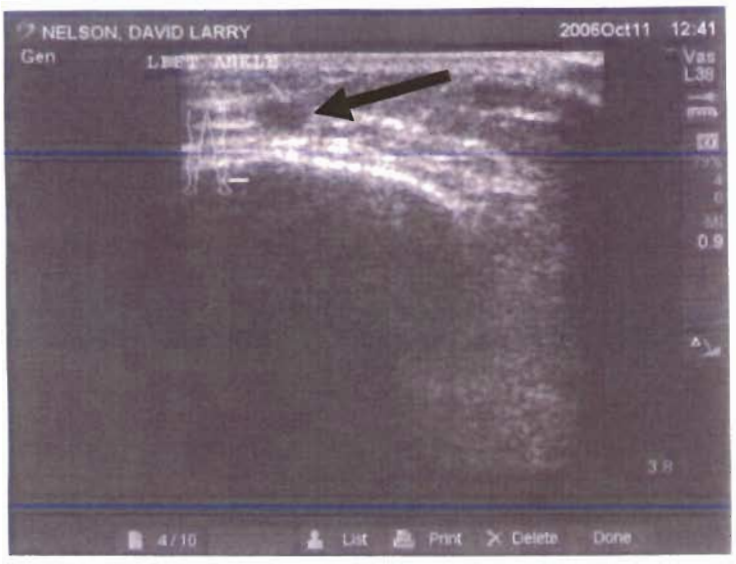


Photo D



Ultrasound 2

The saphenous vein is clearly visible in cross-section as the dark round structure at the end of the arrow. This vein is readily able to be cannulated by persons who are certified to initiate IV therapy, i.e. emergency medical technicians/paramedics who are so certified, military combat medics, nurses, CRNAs (certified registered nurse anesthetists), PAs (physician's assistants) and physicians.

The next area examined was the right ankle, which followed the same protocol as for the left. See Photos E and F, and Ultrasound 3. The saphenous vein in this leg was visible, palpable, and readily visualized on ultrasound.

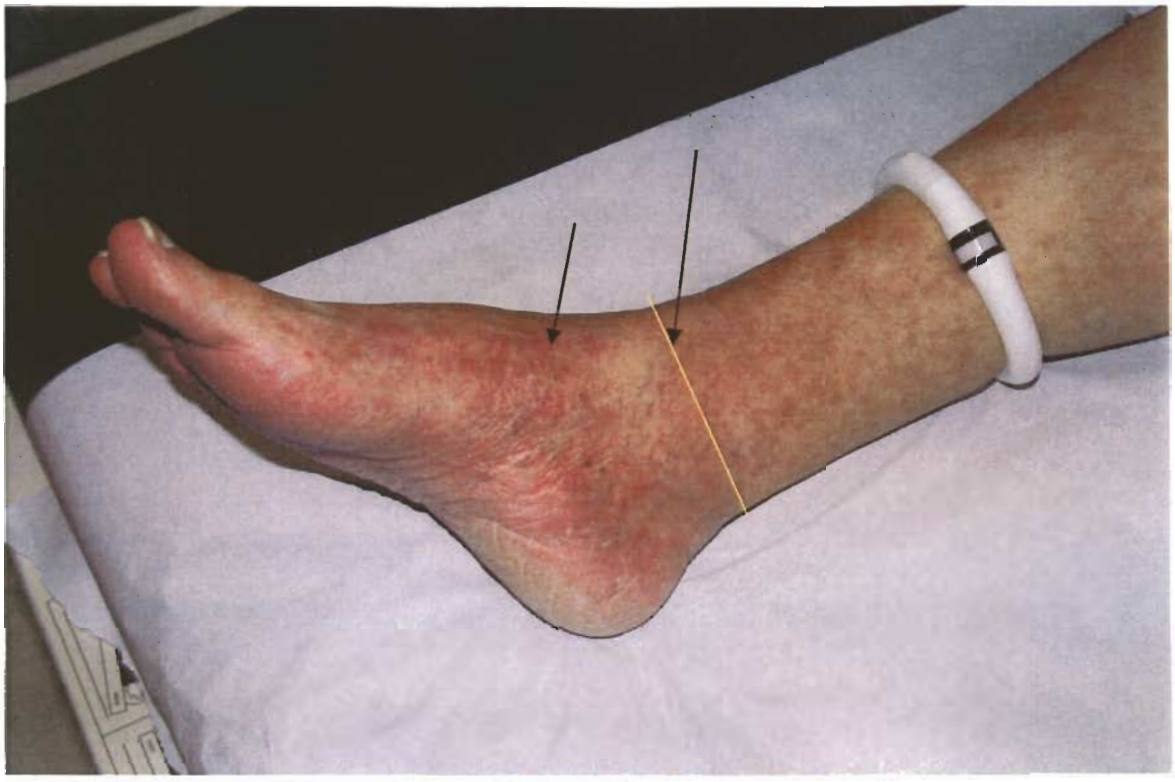


Photo E

The dark arrows point to the saphenous vein. The yellow line is the level at which ultrasound examination occurred.

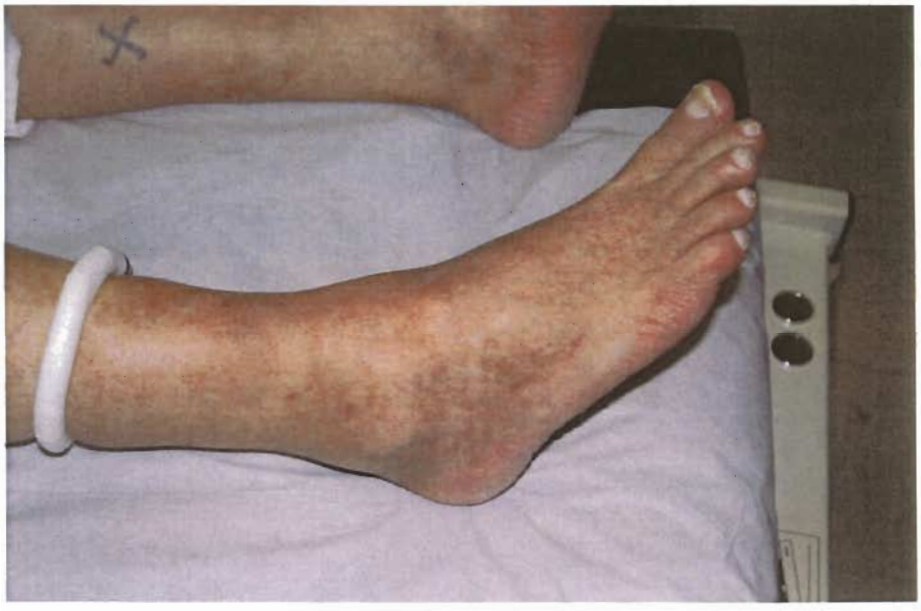
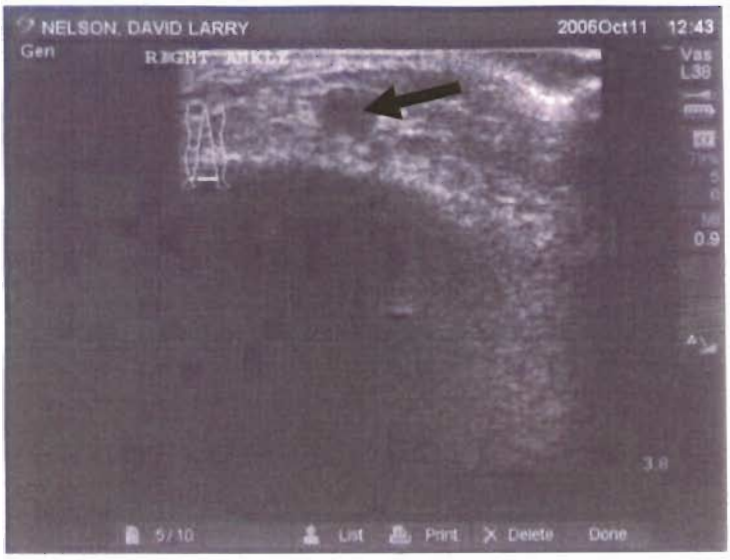


Photo F



Ultrasound 3

The dark arrow points to the lumen (see Glossary) of the saphenous vein. This vein is equally accessible as was the left, by the same level of personnel.

The next area examined was the right arm, performed in a manner similar to the left, with the tourniquet in place and the arm extended down towards the floor. The distal forearm and hand were again devoid of visible or palpable veins. The antecubital fossa contained a large vein (the basilic vein) which was visible, palpable, and readily visualized with ultrasound. See Photo G and Ultrasound 4.

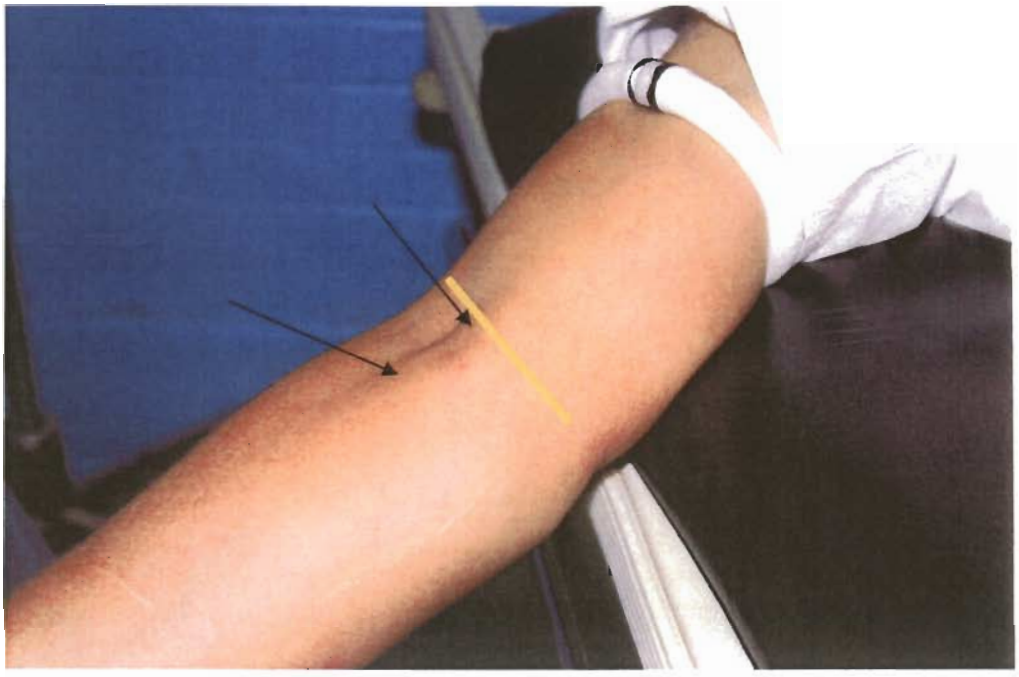
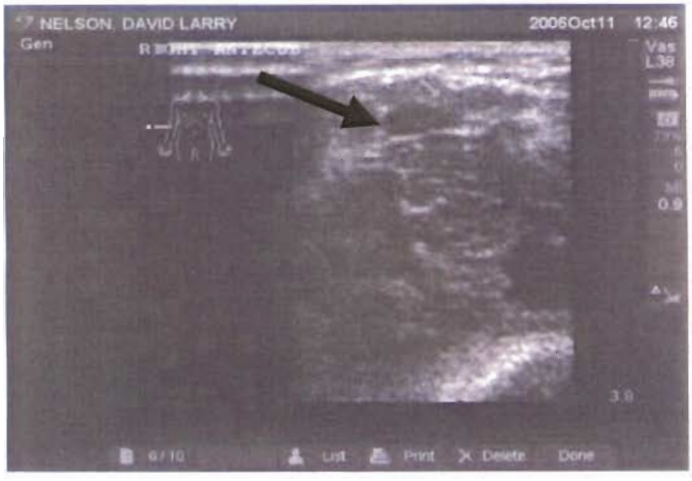


Photo G

The dark arrows point to the basilic vein.



Ultrasound 4

The dark arrow points to the basilic vein. This vein is readily cannulated by anyone trained/certified to start basic intravenous lines, even more easily than the saphenous veins listed above, and is one of the veins commonly used when blood is drawn for laboratory tests or for blood donation.

The next area examined was the right side of the neck, specifically the area known as the anterior cervical triangle (see Glossary). In this area lie the internal and external jugular veins. In the supine position Mr. Nelson's

external jugular vein was readily visible (see Photo H), and easily seen with ultrasound (see Ultrasound 5).

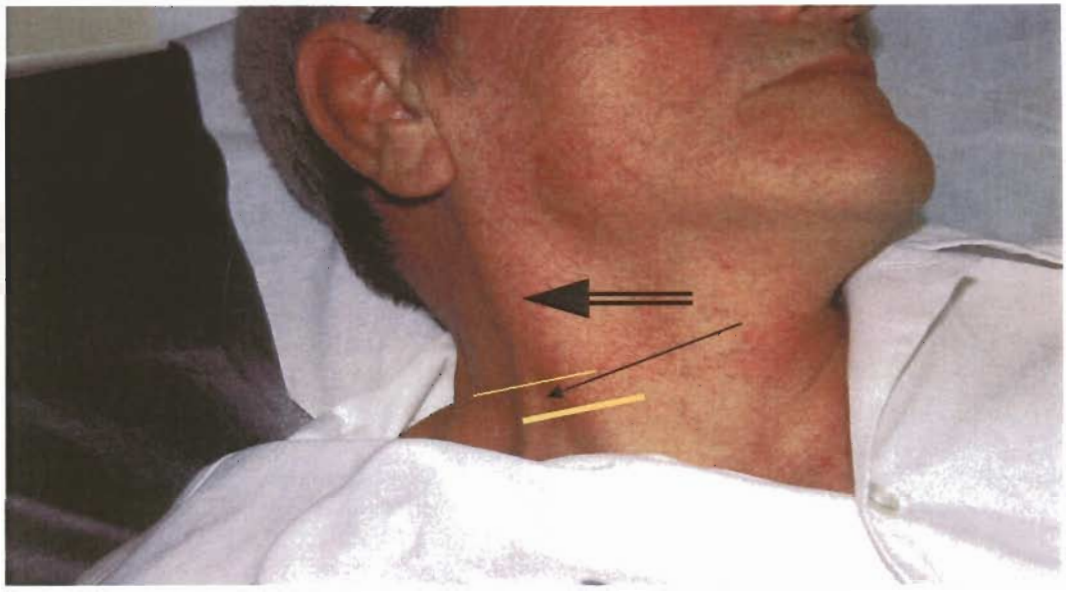
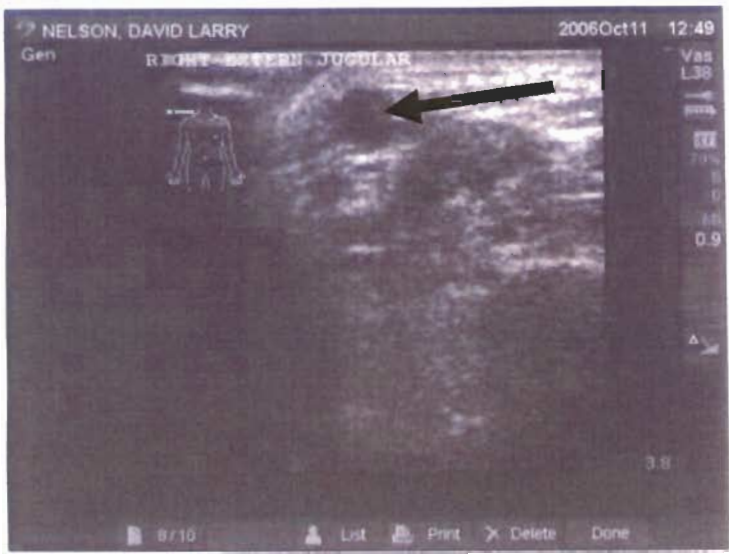


Photo H

Once again, the thin dark arrow points to the external jugular vein. The upper yellow line is where the ultrasound probe was placed to examine the external jugular vein, and the heavier lower yellow line indicates probe placement for examination of the right internal jugular vein. The large double black arrow points to the sternocleidomastoid muscle (see below).

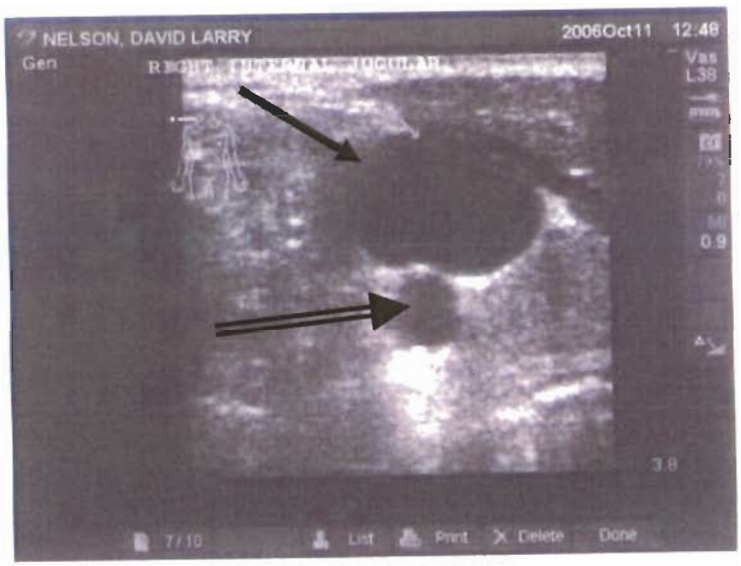
This vein (the external jugular) is easy to see, and yet moderately difficult to cannulate unless the operator has had some experience in cannulating it specifically, as it is very easy to go through the vein instead of into it. Mostly one finds MDs and military combat medics accessing this vein, but some EMT/paramedics may have had experience with it. Nurses usually do not use veins in the neck.



Ultrasound 5

The dark arrow points to the right external jugular vein.

The largest vein in the neck is the internal jugular. It courses through the neck deep to the sternocleidomastoid muscle (indicated by the large black double arrow in Photo H; see Glossary) and generally shallow and lateral to the carotid artery. See Ultrasound 6. The single arrow points to the right internal jugular vein, and the double arrow to the right carotid artery.



Ultrasound 6

The internal jugular vein is generally restricted to access by physicians, some advanced nurse practitioners (such as CRNAs) and perhaps some PAs (physicians' assistants) who have had specialized training in central venous

line placement (see Glossary). Once one has performed some 40-50 of these procedures they become quite straightforward. This vein is generally used for major resuscitative infusions (large volume, rapid administration), for monitoring of central venous pressure, or as an access for pacemaker wires or Swann-Ganz catheters commonly used during heart surgery. The catheters needed to access this vein are of necessity longer and larger in diameter than most peripheral intravenous catheters. Because of the size of catheter usually placed, a local anesthetic is commonly injected at the insertion site. Entering the central venous circulation is inherently more dangerous than peripheral vein cannulation, as the surrounding structures are more vital and less accessible if damaged (carotid artery, lungs, thoracic duct, etc). Mr. Nelson's internal jugular veins are large and (with the above limitations in mind) would not be terribly challenging to cannulate.

The last part of the exam involved the left internal and external jugular veins. See Photo I, and Ultrasounds 7 and 8.

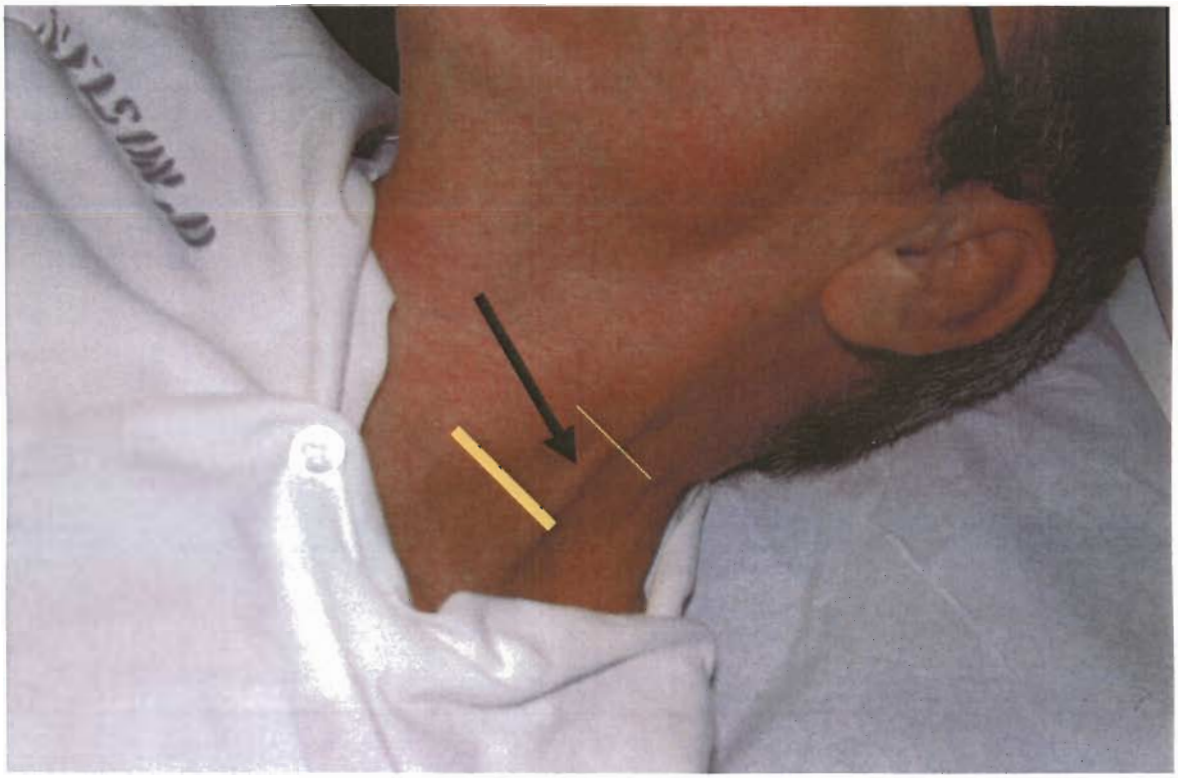
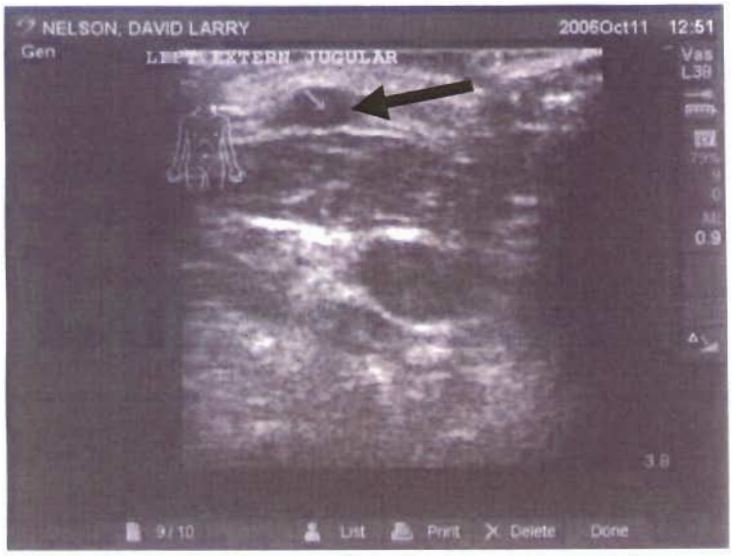


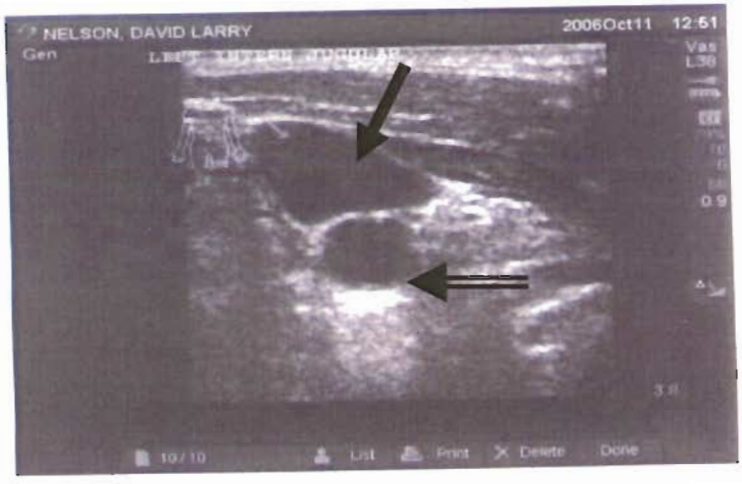
Photo I

The dark arrow points to the left external jugular vein. The thin yellow line is the site of the ultrasound probe for the external jugular examination, and the heavier yellow line that for the internal jugular. The same constraints and considerations as mentioned above apply for this side as well.



Ultrasound 7

The arrow points to the left external jugular vein.



Ultrasound 8

The upper arrow points to the left internal jugular vein, and the lower double arrow to the left carotid artery.

It is not generally possible to image the subclavian veins with ultrasound, and this was not attempted.

In summary, Mr. Nelson has readily accessible peripheral veins in the following regions. They are listed in order of ease of access and therefore preference.

1. Right basilic vein in right antecubital fossa (a peripheral vein; see Glossary). This vein is easily cannulated by most persons with basic intravenous skills (i.e. emergency medical technicians/paramedics who are so certified, military combat medics, nurses, CRNAs (certified registered nurse anesthetists), PAs (physician's assistants) and physicians).
2. Right saphenous vein at the right medial malleolus (a peripheral vein). This vein is easily cannulated by most persons with basic intravenous skills.
3. Left saphenous vein at the left medial malleolus (a peripheral vein). This vein is easily cannulated by most persons with basic intravenous skills.
4. Right external jugular vein, just posterior to the midpoint of the sternocleidomastoid muscle (a peripheral vein). Cannulating this vein is a little harder, and requires a bit more experience.
5. Left external jugular vein, just posterior to the midpoint of the sternocleidomastoid muscle (a peripheral vein). Same as for right external jugular.

In addition to the peripheral veins listed above, the internal jugular veins (central veins) are also accessible, but gaining such access requires an advanced-level practitioner (CRNA, MD, PA). However, given the accessibility of the peripheral veins listed above, it is my medical opinion that cannulation of central veins will not be necessary to obtain venous access on David Larry Nelson.

GLOSSARY

(listed in order of text appearance)

IV of sufficient size: intravenous catheters are sized in gauges, with larger numbers representing smaller diameters. Although the Warden did not know the size IV generally placed for lethal injection, I would suspect that it would be 18ga (ideal in terms of ability to inject the volume required in the time allotted, as well as not being as uncomfortable as a larger 16 or 14ga catheter) or possibly a 20ga (not as much flow). Anything smaller would be essentially worthless.

Palmar and Volar: the palmar surface of the arm is that which is contiguous with the palm of the hand; the volar surface represents the back of the hand.

Most experienced IV personnel like to use the volar surface of the hand or forearm.

Antecubital Fossa: that part of the arm at the elbow where, with the palm up, the skin creases when the elbow is bent.

Ultrasonic examination: carried out using a state of the art Sonosite MicroMaxx ultrasound machine equipped with a linear vascular probe. It is becoming standard of care to use this device when performing central venous access, as it increases the level of safety considerably. This device emits sound waves into the tissues and then constructs a cross sectional image based upon the sound as it is reflected back. In the images in this document the surface of the skin is at the top of each image. On the right margin there is a depth scale which allows one to know the exact depth and size of a given structure. Typically, veins are seen in cross section as dark circles while the surrounding tissues are lighter.

Venous Stasis: poor circulation of the blood as it is returned to the heart from the legs. This is usually manifested by varicose veins, which are segmental enlargements of the veins in the leg caused by failure of the venous valve system, due to the increase of hydrostatic (fluid) pressure in the leg when a person is upright. This fluid pressure amounts to a sizeable figure, commonly 180 cm of water, or about one-half atmosphere pressure. This considerable load is dealt with via the pumping action of the leg muscles coupled with valves that do not permit reverse flow. Varicosities are most commonly hereditary, and may cause pain and localized swelling. In later stages of the disease, fluid leaks out of the vessels and ulcers form as the skin breaks down. Mr. Nelson has the varicose veins (varicosities) and early skin changes.

Varicosities: varicose veins. See above **Venous Stasis**.

Cannulation: refers to the act of inserting a plastic catheter into a vein or other structure. Also commonly referred to as "starting an IV." The technique requires locating the vein, usually by placing a tourniquet on the extremity between the heart and the desired site of placement and locating the vein by visual and palpatory methods. A catheter-over-needle device is then inserted into the vein through the skin; when blood returns through the needle the catheter is slid into the vein over the needle. The needle is then removed, leaving a plastic flexible pathway into the vein (also known as percutaneous placement). Neck veins (internal and external jugular) and subclavian veins do not allow the use of tourniquets; the patient is usually supine, in a head-down position on a stretcher to allow gravity to assist in blood pooling and dilation of the these veins.

Lumen: the space inside the vein where blood is carried.

Anterior cervical triangle: an area in the neck bordered by the sternal and clavicular heads of the sternocleidomastoid muscle, and the upper border of the clavicle. This is readily demonstrated by turning the head to one side and then attempting to turn it the other way while holding the chin and resisting the movement.

Sternocleidomastoid muscle: The prominent strap muscle of the neck which attaches to the mastoid process (the bump on the skull immediately behind the ear) and to both the top of the sternum (breastbone) and the clavicle (collarbone) approximately an inch lateral to the sternal insertion.

Central venous access: in this document is the same as ***percutaneous*** (literally means through the skin) central venous access, and refers to the act of inserting a catheter-over-needle device into a central vein (see below). This may be achieved in three commonly used places: the internal jugular vein, the femoral vein, or the subclavian vein. The subclavian route has the greatest associated discomfort and risk, that being pneumothorax or puncturing of the lung. The femoral route is questionably the most difficult, as it is buried deep in the groin and its landmarks are not as reliable. The internal jugular is probably the easiest, as it is usually not more than a centimeter or two deep, with fairly reliable landmarks. Its main complication is cannulation of the carotid artery.

A note about "peripheral" and "central" veins is in order at this point. A ***peripheral*** vein is one in the extremities or neck which is separated from the great veins (inferior or superior vena cavae) leading to the heart by two or more divisions. Peripheral veins are frequently visually identified or palpable. In this particular instance, the external jugular would be considered a peripheral vein, since it is easily visualized, palpable, and empties into the subclavian veins on each side, which then empty into the superior vena cava via a short trunk named the brachiocephalic vein. The vena cava leads directly to the heart.

A ***central*** vein leads (via no more than one other named structure, usually a short trunk) to the vena cava (either inferior or superior), which then empties directly into the heart (right atrium).

Exhibit P

IN THE SUPREME COURT OF ALABAMA

October 4, 2017

1881555

Ex parte Doyle Lee Hamm. PETITION FOR WRIT OF CERTIORARI TO THE COURT OF CRIMINAL APPEALS (In re: Doyle Lee Hamm v. State of Alabama) (Cullman Circuit Court: CC-87-121F; Criminal Appeals: 6 Div. 563).

ORDER

This Court having received the Answer filed by Doyle Lee Hamm on October 2, 2017,

IT IS ORDERED that any response the State of Alabama wishes to file in regard to the same shall be filed with this Court within fourteen (14) days from the date of this order, and no later than October 18, 2017.

I, Julia Jordan Weller, as Clerk of the Supreme Court of Alabama, do hereby certify that the foregoing is a full, true, and correct copy of the instrument(s) herewith set out as same appear(s) of record in said Court.

Witness my hand this 4th day of October, 2017.

Julia Jordan Weller

Clerk, Supreme Court of Alabama

cc:
Bernard Edouard Harcourt
Steven Marshall
Beth Jackson Hughes

Exhibit Q

No. 1881555

IN THE SUPREME COURT OF ALABAMA

Ex parte Doyle Lee Hamm,	*	
	*	
In re. State of Alabama	*	Response to Attorney General's
Petitioner,	*	Reply Dated October 10, 2017,
	*	to this Court's Order Dated
v.	*	August 25, 2017
	*	
Doyle Lee Hamm,	*	
Respondent.	*	

DOYLE HAMM'S RESPONSE TO THE ATTORNEY GENERAL'S REPLY DATED OCTOBER 10, 2017, TO THIS COURT'S ORDER DATED AUGUST 25, 2017

Pursuant to this Court's order dated August 25, 2017, Doyle Hamm respectfully submits the following response to the Attorney General's reply dated October 10, 2017:

1. The Attorney General has just disclosed, for the first time, a new medical report dated August 2, 2017, by a "Corizon Practioner" at Donaldson Correctional Facility named Le Honguan that states that there is "No evidence of ocular lymphoma." *See* Appendix A to Attorney General's Reply. The Attorney General never previously shared this "Corizon Medical Consultation

Report" with undersigned counsel, who has been filing detailed weekly updates with this Court. With all due respect, the report does not say what qualifications the practitioner, Le Honguan, has, whether he or she is a nurse, intern, resident, or correctional officer. The field "Practitioner Type" at the top of the report is empty, as is the field "Practitioner."[1]

2. The newly disclosed "Corizon Practitioner Consultation Report" is also not reliable because the practitioner apparently found a "visually significant cataract [in the] left eye" that requires immediate cataract surgery, and, as a medical matter, such a significant cataract in his left eye, where he had cancer, would prevent an ophthalmologist from seeing inside the eye to determine whether there is any cancer in the eye, according to the ophthalmologist at the UAB School of Medicine who has been treating Mr. Hamm (as per conversation with undersigned counsel).[2]

3. As evidenced by the newly disclosed "Corizon Practitioner

[1] The Attorney General is misleading this Court when it writes that "On August 4, 2017, a *physician* for the Department of Corrections indicated that there is no evidence of ocular lymphoma. Appendix A, Corizon Practitioner Consultation Report." *See* State's Reply dated October 10, 2017, page 2, note 1. With all due respect to Mr. or Ms. Honguan, there is no indication or reason to believe that he or she is a physician.

[2] Undersigned counsel has consistently stated that Mr. Hamm's medical condition involves *lymphatic cancer*. It is misleading for the Attorney General to suggest that counsel has been wrongly claiming that the medical problem has been "ocular lymphoma." *See* State's Reply dated October 10, 2017, page 2, note 1.

Consultation Report," the Attorney General is using, for litigation purposes, ongoing medical examinations of Mr. Hamm without notifying undersigned counsel or this Court, or giving counsel an opportunity to know or confront the evidence or have an independent medical expert present. The failure to turn over all medical records and the way in which the Attorney General is proceeding undermines everyone's ability to make a fair assessment of the issues presented in this case.

4. Counsel respectfully urges this Court to order the Attorney General to turn over all their medical reports to counsel, so that counsel can adequately respond to them, and so that we all can adequately assess the medical situation. Only at that point would it be possible to properly respond to the Attorney General.

5. The medical reports that the Attorney General appended to its reply make clear that Mr. Hamm needs to be properly evaluated by an independent doctor, under the supervision of a Special Master, and with the opportunity to have his own medical expert present, in order for this Court to know whether his lymphatic cancer is going to interfere with the lethal injection protocol—which the Attorney General still will not disclose. The medical reports in the Attorney General's Appendices A, B, and C confirm or otherwise indicate that Mr. Hamm has a basal cell carcinoma that is sclerosing on his left inferior orbital rim, a

carcinoma that is characterized as having "geometrically shaped tumor islands" that are "mitotically active and demonstrate peripheral palisading." *See* Attorney General's Appendix C. This "BASAL CELL CARCINOMA WITH SCLEROSIS" is located precisely outside the exact area in his cranium where he had cranial cancer, i.e. on the "LEFT INFERIOR ORBITAL RIM." *See* Attorney General's Appendix C. Mr. Hamm now reportedly has a "visually significant cataract [in] left eye" that is so significant that the practitioner is recommending Mr. Hamm for cataract surgery, *see See* Attorney General's Appendix A. The medical report of the MRI in September 2016 reveals that they conducted an MRI of his face and orbits, but not of the cranial areas where his cancer had extended. *See* Attorney General's Appendix B. In any event, the medical reports all confirm that Mr. Hamm is being observed for "Left orbital lymphoma" and that he is categorized as "LYMPHOMA / C83.39." *See* Attorney General's Appendix B. The 2017/18 ICD-10-CM Diagnosis Code for C83.39 is "Diffuse large B-cell lymphoma, extranodal and solid organ sites." *See* ICD List at http://icdlist.com/icd-10/C83.39. In other words, Mr. Hamm is indeed being treated for lymphatic cancer.

5. None of these newly appended reports in any way contradict or undermine Dr. Mark Heath's medical assessment from September 23, 2017, that, as a result of Mr. Hamm's extensive cranial and lymphatic cancer, cancer treatments, and severely

compromised veins, venous access is extremely difficult and it is unlikely that an execution can be accomplished without cruel and needless pain. *See* Preliminary Report of Mark. J. S. Heath, M.D., attached as Appendix A to Mr. Hamm's October 2, 2017, answer.

6. Nothing in these reports contradicts Dr. Heath's conclusion that "based on what I know from the David Nelson case, it is my opinion that the state is not equipped to achieve venous access in Mr. Hamm's case." *Ibid.*, ¶16.

7. What the reports do indicate, though, is that the Attorney General has not fully disclosed the evidentiary basis on which this Court should assess Mr. Hamm's situation, and has raised factual allegations that are in dispute and require a proper evidentiary determination.

8. Undersigned counsel respectfully urges this Court to order the Attorney General and the Department of Corrections to turn over all medical reports in their possession to undersigned counsel so that he can evaluate the entirety of his medical records; and also enter an order directing the Attorney General to confidentially disclose to counsel the exact protocol for venous access for lethal injection, along with the complete list of medical equipment that would be used for lethal injection.

9. The Attorney General's reply and disclosure of medical records, including a newly divulged medical report, make clear

that this Court should appoint a Special Master to oversee a proper medical review and examination (as in the case of Alabama death row inmate David Nelson in 2006, *see Nelson v. Campbell*, Civil Action No. 2:03CV1008-T (M.D. Ala. 2006), Appendix D to Mr. Hamm's Answer Dated October 2, 2017) in order to reach agreement on a proper protocol for venous access to avoid an unnecessarily cruel and painful execution. Counsel respectfully requests that the Court enter an order directing a Special Master to appoint an independent doctor to evaluate Mr. Hamm and allow Mr. Hamm to have a medical expert present for the evaluation (as in the case of David Nelson, *see* Appendix E to Mr. Hamm's Answer Dated October 2, 2017); and schedule a hearing, *in camera* if necessary, to review and approve an agreed-upon protocol for venous access, which would be necessary to humanely achieve lethal injection and prevent an unsuccessful execution.

10. The Attorney General repeatedly states, in its pleadings, that this Court should go ahead and set a date, and let the Federal Courts deal with the matter, almost as if the Attorney General is inviting this Court to make an error that the Federal Courts would then have to rectify. In its most recent submission, the Attorney General again emphasizes that "As the State noted in its August 15, 2017, pleading, should Hamm file a lawsuit challenging his execution, the court where

the lawsuit is filed would be in the best position to litigate whatever challenge he brings. This Court should not defer its decision-making authority to set an execution date simply because such litigation is a possibility." *See* State's Reply dated October 10, 2017, at page 3 note 3; *see also* State's Reply dated August 15, 2017, page 3, note 2 ("Should Hamm file a lawsuit challenging his execution, the court where the lawsuit is filed would be in the best position to litigate whatever challenge he brings"). With all due respect to the Attorney General, this seems backwards. This Court has full jurisdiction and competency, and is properly evaluating the question of whether, given Mr. Hamm's complicated medical condition, cancer, and cancer treatment, moving forward with a lethal injection at this point, without further agreement on a venous protocol, would likely result in cruel and needless pain in violation of the Alabama Constitution and the Eighth Amendment. Undersigned counsel has no reason to go to Federal Court, because this Court is the highest authority in the State and is actively reviewing this matter.

11. Should this Court agree with the Attorney General's somewhat puzzling logic, undersigned counsel would respectfully urge this Court to hold these proceedings in abeyance so that counsel can file in Federal Court.

12. This is not the case of a malingering respondent. The

medical evidence is clear that Mr. Hamm has been struggling against a serious lymphatic cancer, has received and continues to receive very serious medical treatment, and has very compromised veins. This is not the right case for the Attorney General to be pressing this Court for a swift execution because, based on the available medical records and findings, and given Mr. Hamm's cranial and lymphatic cancer, there is a substantial likelihood that the Alabama Department of Corrections will not be able to accomplish a successful execution without cruel and needless pain.

13. Counsel respectfully urges the Court to deny the Attorney General's motion or, in the alternative, if it agrees with the Attorney General's logic, to hold these proceedings in abeyance to allow Mr. Hamm to seek review in the Federal Courts.

Respectfully submitted,

BERNARD E. HARCOURT
Counsel of Record
COLUMBIA LAW SCHOOL
435 West 116th Street
New York, NY 10027
Phone: (212) 854-1997
E-mail:beh2139@columbia.edu

October 11, 2017

CERTIFICATE OF SERVICE

I hereby certify that on October 11, 2017, I served a copy of the attached pleading by electronic mail to Assistant Attorney General Beth Jackson Hughes at bhughes@ago.state.al.us.

BERNARD E. HARCOURT
Counsel of Record

Exhibit R

IN THE SUPREME COURT OF ALABAMA
December 13, 2017

1881555

Ex parte Doyle Lee Hamm. PETITION FOR WRIT OF CERTIORARI TO THE COURT OF CRIMINAL APPEALS (In re: Doyle Lee Hamm v. State of Alabama) (Cullman Circuit Court: CC-87-121F; Criminal Appeals: 6 Div. 563).

ORDER

The State of Alabama having filed a motion to set an execution date, and the same having been submitted and duly considered by the Court, it is considered that the motion to set an execution date is due to be granted.

IT IS NOW ORDERED that Thursday, February 22, 2018, be fixed as the date for the execution of the convict, Doyle Lee Hamm who is now confined in the William C. Holman Unit of the prison system at Atmore, Alabama.

IT IS, THEREFORE, ORDERED that the Warden of the William C. Holman Unit of the prison system at Atmore in Escambia County, Alabama, execute the order, judgment and sentence of law on February 22, 2018, in the William C. Holman Unit of the prison system, by the means provided by law, causing the death of such convict.

IT IS FURTHER ORDERED that the Marshal of this Court shall deliver, within five (5) days from this date, a certified copy of this order to the Warden of the William C. Holman Unit of the prison system at Atmore, in Escambia County, Alabama, and make due return thereon to this Court.

IT IS FURTHER ORDERED that the Clerk of this Court shall transmit forthwith a certified copy of this order to the following: the Governor of Alabama, the Clerk of the Court of Criminal Appeals, the Attorney General of Alabama, the Commissioner of the Alabama Department of Corrections, the attorney of record for Doyle Lee Hamm, the Clerk of the United States District Court for the Northern District of Alabama, the Clerk of the United States Court of Appeals for the Eleventh Circuit, the Clerk of the United States Supreme

Court, and the Clerk of the Circuit Court of Cullman County, Alabama, electronically or by United States mail, postage prepaid.

Stuart, C.J., and Bolin, Parker, Shaw, Main, Wise, and Sellers, JJ., concur.

* * * * * * * * * *

I, Julia Jordan Weller, Clerk of the Supreme Court of Alabama, do hereby certify the foregoing is a full, true and correct copy of the judgment and order of the Supreme Court of Alabama directing the execution of the death sentence of Doyle Lee Hamm as the same appears of record in this Court.

Given under my hand and the seal of this Court on this date, December 13, 2017.

Julia Jordan Weller
Clerk
Supreme Court of Alabama

Exhibit S

Division of Hematology &
Medical Oncology

Mail code: L586
3181 S.W. Sam Jackson Park Road
Portland, Oregon 97239-3098
tel 503 494-8534
fax 503 494-4285

www.ohsu.edu/cancer

AFFIDAVIT OF DR. CHARLES DAVID BLANKE

Before me, the undersigned notary public, personally appeared Charles David Blanke, who, after being duly sworn by oath, did depose and say as follows:

1. My name is Charles David Blanke. I am a licensed physician in the State of Oregon, a Professor of Medicine in the Division of Hematology and Medical Oncology at Oregon Health and Science University's Knight Cancer Institute, and current Chair of SWOG, a publically-funded cancer research network.
2. I specialize in end-of-life care, specifically in medical-aid-in-dying (MAID).
3. The standard MAID medication used in Oregon, and which I do regularly prescribe, is known as secobarbital.
4. Secobarbital is in production and available in the United States.
5. The dosage used is 10 grams of secobarbital.
6. The medication is taken by mouth, in 4 ounces of liquid.
7. The median time to coma is 5 minutes.
8. The median time to death is 25 minutes.
9. MAID medication, when administered as detailed above, causes death in more than 99% of cases.
10. Complications are extremely rare.

11. I have also regularly prescribed an alternative drug cocktail, usually referred to by prescribers as "DDMP II," which consists of 1 gram of diazepam, 50 milligrams of digoxin, 15 grams of morphine sulfate, and 2 grams of propranolol. I have prescribed this regularly in situations involving patients who wanted a lower-cost prescription.
12. In my experience, the drug cocktail has been equally reliable in causing death.
13. In my 19 years of experience with MAID, I have had no complications with the above procedures.

Further affiant sayeth not.

I, Charles David Blanke, declare under penalty of perjury that the foregoing is true and correct and is based on my own personal knowledge.

Dr. Charles David Blanke

Sworn to and subscribed before me on this __16th__ day of January, 2018.

OFFICIAL STAMP
PATRICK JAMES CONNELL
NOTARY PUBLIC - OREGON
COMMISSION NO. 957219
MY COMMISSION EXPIRES DECEMBER 11, 2020

NOTARY PUBLIC
My Commission Expires: 12/11/2020

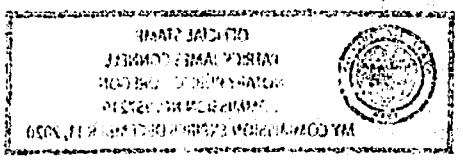


Exhibit T

Oregon Death with Dignity Act

Data summary 2016

Oregon Health Authority
PUBLIC HEALTH DIVISION

Acknowledgments

Report written by: Public Health Division, Center for Health Statistics

Date: February 10, 2017

For more information, see:
http://public.health.oregon.gov/ProviderPartnerResources/Evaluationresearch/deathwithdignityact/Pages/index.aspx

Contact: DWDA.INFO@state.or.us

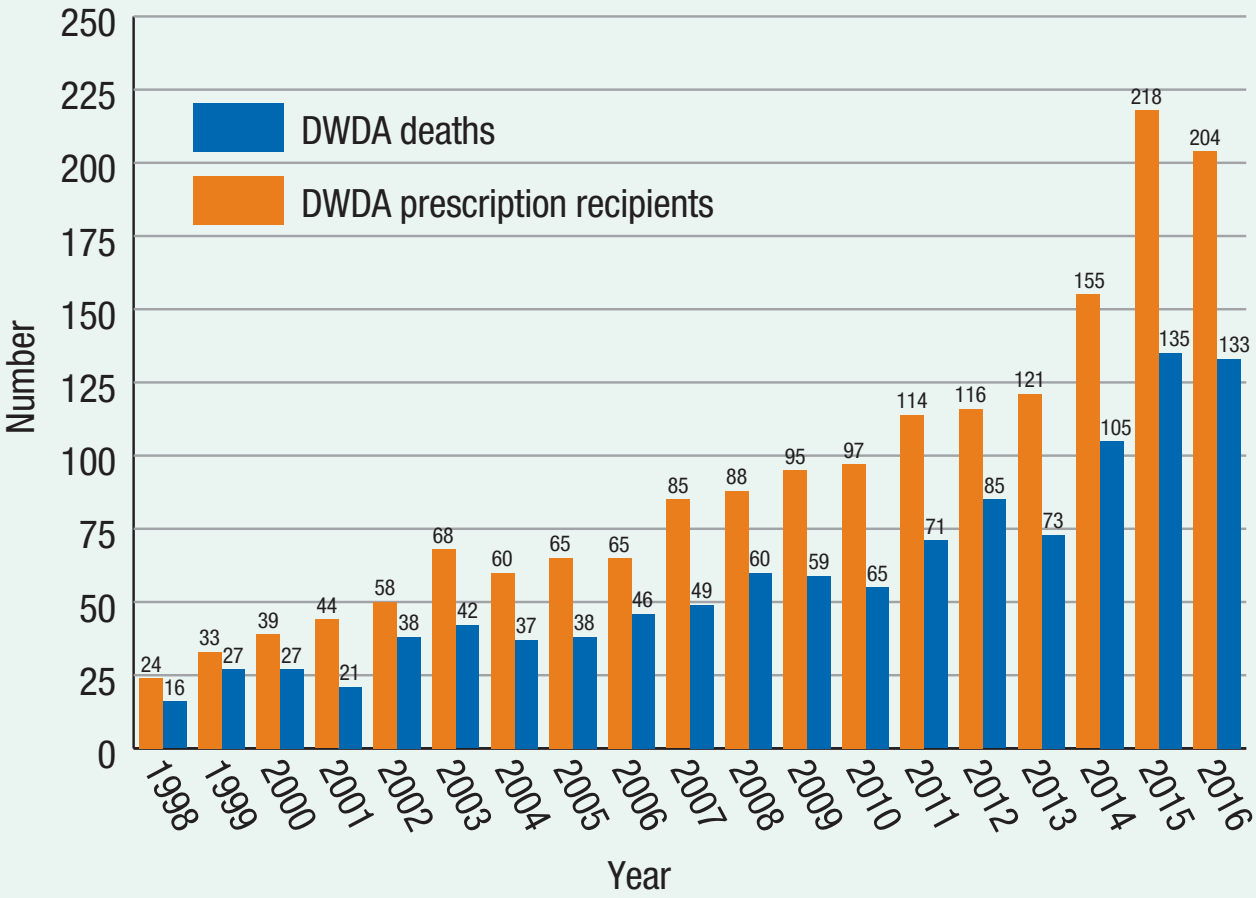
Executive summary

Oregon's Death with Dignity Act (DWDA) allows terminally-ill adult Oregonians to obtain and use prescriptions from their physicians for self-administered, lethal doses of medications. The Oregon Public Health Division is required by the DWDA to collect compliance information and to issue an annual report. In 2016, 204 people received prescriptions under the DWDA. As of January 23, 2017, 133 people had died in 2016 from ingesting the prescribed medications, including 19 prescription recipients from prior years. Characteristics of DWDA patients were similar to previous years: most patients were aged 65 years or older (80.5%) and had cancer (78.9%). During 2016, no referrals were made to the Oregon Medical Board for failure to comply with DWDA requirements.

Introduction

Oregon's Death with Dignity Act (DWDA), enacted in late 1997, allows terminally-ill adult Oregonians to obtain and use prescriptions from their physicians for self-administered, lethal doses of medications. The Oregon Public Health Division is required by the DWDA to collect compliance information and to issue an annual report. Data presented in this summary, including the number of people for whom DWDA prescriptions were written (DWDA prescription recipients) and the resulting deaths from the ingestion of the medications (DWDA deaths), are based on required reporting forms and death certificates received by the Oregon Public Health Division as of January 23, 2017. More information on the reporting process, required forms, and annual reports is available at: http://www.healthoregon.org/dwd.

Figure 1: DWDA prescription recipients and deaths*, by year, Oregon, 1998–2016



*As of January 23, 2017

Participation summary and trends

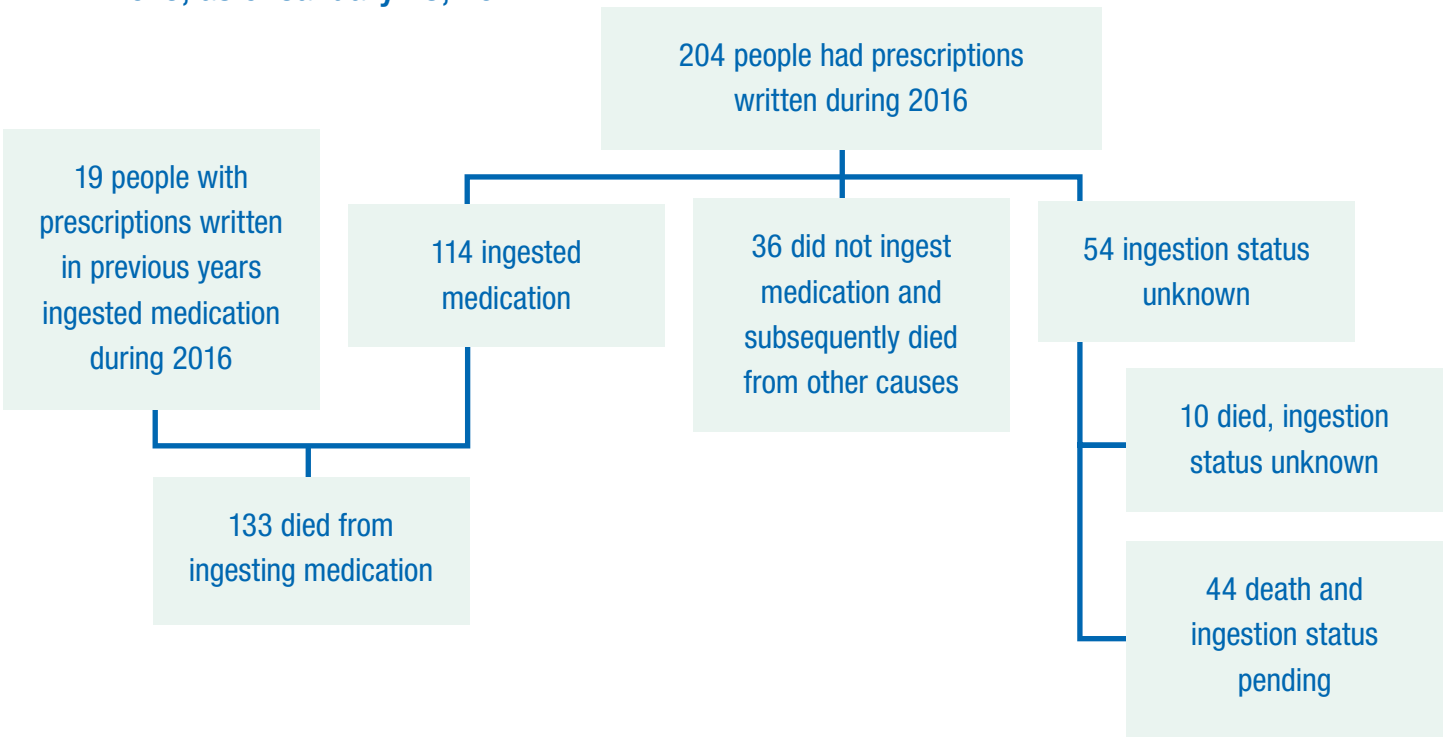
During 2016, 204 people received prescriptions for lethal medications under the provisions of the Oregon DWDA, compared to 218 during 2015 (see Figure 1). As of January 23, 2017, the Oregon Public Health Division had received reports of 133 people who had died during 2016 from ingesting the medications prescribed under DWDA, compared to 135 during 2015.

Since the law was passed in 1997, a total of 1,749 people have had prescriptions written under the DWDA, and 1,127 patients have died from ingesting the medications. During 2016, the rate of DWDA deaths was 37.2 per 10,000 total deaths.[1]

A summary of DWDA prescriptions written and medications ingested is shown in Figure 2. Of the 204 patients for whom prescriptions were written during 2016, 114 (55.9%) ingested the medication and died without regaining consciousness while 36 (17.6%) did not take the medications and subsequently died of other causes.

Ingestion status is unknown for 54 patients prescribed DWDA medications in 2016. Ten of these patients died, but follow up information is not available. For the remaining 44 patients, both death and ingestion status are pending (Figure 2).

Figure 2: Summary of DWDA prescriptions written and medications ingested in 2016, as of January 23, 2017



1 Rate per 10,000 deaths calculated using the total number of Oregon resident deaths in 2015 (35,709), the most recent year for which final death data are available.

Patient characteristics

Of the 133 DWDA deaths during 2016, most patients (80.5%) were aged 65 years or older. The median age at death was 73 years. As in previous years, decedents were commonly white (96.2%) and well-educated (50.0% had a least a baccalaureate degree).

Patients' underlying illnesses were similar to those of previous years. Most patients had cancer (78.9%), followed by amyotrophic lateral sclerosis (ALS) (6.8%). Of note, 6.8% of patients had heart disease as their underlying illness, an increase from 2.0% during prior years.

Most (88.6%) patients died at home, and most (88.7%) were enrolled in hospice care. Excluding unknown cases, most (99.2%) had some form of health care insurance, although the percent of patients who had private insurance (29.7%) was lower in 2016 than in previous years (57.1%). The number of patients who had Medicare or Medicaid insurance was higher than in previous years (69.5% compared to 41.5%).

Similar to previous years, the three most frequently mentioned end-of-life concerns were loss of autonomy (89.5%), decreasing ability to participate in activities that made life enjoyable (89.5%), and loss of dignity (65.4%).

DWDA processs

A total of 102 physicians wrote 204 prescriptions during 2016 (1-25 prescriptions per physician). During 2016, no referrals were made to the Oregon Medical Board for failure to comply with DWDA requirements. During 2016, five patients were referred for psychological/psychiatric evaluation.

A procedure revision was made in 2010 to standardize reporting on the follow-up questionnaire. The new procedure accepts information about the time of death and circumstances surrounding death only when the physician or another health care provider was present at the time of death. For 27 patients, either the prescribing physician or another healthcare provider was present at the time of death. Prescribing physicians were present at time of death for 13 patients (10.1%); 14 additional cases had other health care providers present (e.g. hospice nurse). Data on time from ingestion to death are available for only 25 DWDA deaths during 2016. Among those 25 patients, time from ingestion until death ranged from seven minutes to nine hours. For the remaining two patients, the length of time between ingestion and death was unknown.

Table 1. Characteristics and end-of-life care of 1,127 DWDA patients who have died from ingesting a lethal dose of medication as of January 23, 2016, by year, Oregon, 1998–2016

Characteristics	2016 (N=133)		1998–2015 (N=994)		Total (N=1,127)	
Sex	**N (%)[1]**		**N (%)[1]**		**N (%)[1]**	
Male (%)	72	(54.1)	510	(51.3)	582	(51.6)
Female (%)	61	(45.9)	484	(48.7)	545	(48.4)
Age						
18-34 (%)	1	(0.8)	8	(0.8)	9	(0.8)
35-44 (%)	1	(0.8)	23	(2.3)	24	(2.1)
45-54 (%)	6	(4.5)	64	(6.4)	70	(6.2)
55-64 (%)	18	(13.5)	206	(20.7)	224	(19.9)
65-74 (%)	52	(39.1)	289	(29.1)	341	(30.3)
75-84 (%)	31	(23.3)	259	(26.1)	290	(25.7)
85+ (%)	24	(18.0)	145	(14.6)	169	(15.0)
Median years (range)	73	(32–97)	71	(25–102)	71	(25–102)
Race						
White (%)	127	(96.2)	956	(96.6)	1,083	(96.5)
African American (%)	0	(0.0)	1	(0.1)	1	(0.1)
American Indian (%)	0	(0.0)	2	(0.2)	2	(0.2)
Asian (%)	2	(1.5)	13	(1.3)	15	(1.3)
Pacific Islander (%)	0	(0.0)	1	(0.1)	1	(0.1)
Other (%)	0	(0.0)	3	(0.3)	3	(0.3)
Two or more races (%)	1	(0.8)	4	(0.4)	5	(0.4)
Hispanic (%)	2	(1.5)	10	(1.0)	12	(1.1)
Unknown	*1*		*4*		*5*	
Marital status						
Married (including Registered Domestic Partner) (%)	62	(47.0)	449	(45.4)	511	(45.5)
Widowed (%)	26	(19.7)	232	(23.4)	258	(23.0)
Never married (%)	8	(6.1)	78	(7.9)	86	(7.7)
Divorced (%)	36	(27.3)	231	(23.3)	267	(23.8)
Unknown	*1*		*4*		*5*	
Education						
Less than high school (%)	5	(3.8)	58	(5.9)	63	(5.6)
High school graduate (%)	23	(17.4)	218	(22.1)	241	(21.5)
Some college (%)	38	(28.8)	261	(26.4)	299	(26.7)
Baccalaureate or higher (%)	66	(50.0)	450	(45.6)	516	(46.1)
Unknown	*1*		*7*		*8*	

Characteristics	2016 (N=133)		1998–2015 (N=994)		Total (N=1,127)	
Residence						
Metro counties (Clackamas, Multnomah, Washington) (%)	54	(40.9)	427	(43.3)	481	(43.0)
Coastal counties (%)	10	(7.6)	70	(7.1)	80	(7.1)
Other western counties (%)	57	(43.2)	413	(41.8)	470	(42.0)
East of the Cascades (%)	11	(8.3)	77	(7.8)	88	(7.9)
Unknown	*1*		*7*		*8*	
End of life care						
Hospice						
Enrolled (%)	118	(88.7)	868	(90.4)	986	(90.2)
Not enrolled (%)	15	(11.3)	92	(9.6)	107	(9.8)
Unknown	*0*		*34*		*34*	
Insurance						
Private (%)	35	(29.7)	534	(57.1)	569	(54.0)
Medicare, Medicaid or other governmental (%)	82	(69.5)	388	(41.5)	470	(44.6)
None (%)	1	(0.8)	13	(1.4)	14	(1.3)
Unknown	15		59		74	
Underlying illness						
Malignant neoplasms (%)	**105**	**(78.9)**	**767**	**(77.2)**	**872**	**(77.4)**
Lung and bronchus (%)	16	(12.0)	177	(17.8)	193	(17.1)
Breast (%)	12	(9.0)	74	(7.4)	86	(7.6)
Colon (%)	12	(9.0)	61	(6.1)	73	(6.5)
Pancreas (%)	9	(6.8)	64	(6.4)	73	(6.5)
Prostate (%)	6	(4.5)	41	(4.1)	47	(4.2)
Ovary (%)	3	(2.3)	37	(3.7)	40	(3.5)
Other (%)	47	(35.3)	313	(31.5)	360	(31.9)
Amyotrophic lateral sclerosis (%)	**9**	**(6.8)**	**80**	**(8.0)**	**89**	**(7.9)**
Chronic lower respiratory disease (%)	**2**	**(1.5)**	**44**	**(4.4)**	**46**	**(4.1)**
Heart disease (%)	**9**	**(6.8)**	**26**	**(2.6)**	**35**	**(3.1)**
HIV/AIDS (%)	**0**	**(0.0)**	**10**	**(1.0)**	**10**	**(0.9)**
Other illnesses (%)[2]	**8**	**(6.0)**	**67**	**(6.7)**	**75**	**(6.7)**
DWDA process						
Referred for psychiatric evaluation (%)	5	(3.8)	52	(5.3)	57	(5.1)
Patient informed family of decision (%)[3]	119	(89.5)	858	(93.6)	977	(93.0)
Patient died at						
Home (patient, family or friend) (%)	117	(88.6)	931	(94.0)	1,048	(93.4)
Long term care, assisted living or foster care facility (%)	9	(6.8)	46	(4.6)	55	(4.9)
Hospital (%)	3	(2.3)	1	(0.1)	4	(0.4)
Other (%)	3	(2.3)	12	(1.2)	15	(1.3)
Unknown	*1*		*4*		*5*	

Characteristics	2016 (N=133)		1998–2015 (N=994)		Total (N=1,127)	
Lethal medication						
Secobarbital (%)	86	(64.7)	582	(58.6)	668	(59.3)
Pentobarbital (%)	0	(0.0)	386	(38.8)	386	(34.3)
Phenobarbital (%)	39	(29.3)	17	(1.7)	56	(5.0)
Other (combination of above and/or morphine) (%)	8	(6.0)	9	(0.9)	17	(1.5)
End of life concerns[4]	**(N=133)**		**(N=994)**		**(N=991)**	
Losing autonomy (%)	119	(89.5)	906	(91.6)	1,025	(91.4)
Less able to engage in activities making life enjoyable (%)	119	(89.5)	888	(89.7)	1,007	(89.7)
Loss of dignity (%)[5]	87	(65.4)	680	(78.8)	767	(77.0)
Losing control of bodily functions (%)	49	(36.8)	475	(48.1)	524	(46.8)
Burden on family, friends/caregivers (%)	65	(48.9)	408	(41.3)	473	(42.2)
Inadequate pain control or concern about it (%)	47	(35.3)	249	(25.2)	296	(26.4)
Financial implications of treatment (%)	7	(5.3)	31	(3.1)	38	(3.4)
Health-care provider present (collected since 2001)	**(N=133)**		**(N=924)**		**(N=1,057)**	
When medication was ingested[6]						
Prescribing physician	14		149		163	
Other provider, prescribing physician not present	14		256		270	
No provider	5		86		91	
Unknown	*100*		*433*		*533*	
At time of death						
Prescribing physician (%)	13	(10.1)	136	(15.0)	149	(14.4)
Other provider, prescribing physician not present (%)	14	(10.9)	281	(31.0)	295	(28.5)
No provider (%)	102	(79.1)	489	(54.0)	591	(57.1)
Unknown	*4*		*18*		*22*	
Complications[6]	**(N=133)**		**(N=994)**		**(N=1,127)**	
Difficulty ingesting/regurgitated	3		27		30	
None	24		530		554	
Unknown	*106*		*437*		*543*	
Other outcomes						
Regained consciousness after ingesting DWDA medications[7]	0		6		6	

Characteristics	2016 (N=133)	1998–2015 (N=994)	Total (N=1,127)
Timing of DWDA event			
Duration (weeks) of patient-physician relationship			
Median	18	12	13
Range	1–1,484	0–1,905	0–1,905
Number of patients with information available	*132*	*992*	*1,124*
Number of patients with information unknown	*1*	*2*	*3*
Duration (days) between first request and death			
Median	56	46	48
Range	15–539	14–1,009	14–1,009
Number of patients with information available	*133*	*994*	*1,127*
Number of patients with information unknown	*0*	*0*	*0*
Minutes between ingestion and unconsciousness			
Median	4	5	5
Range	1–60	1–38	1–60
Number of patients with information available	*24*	*532*	*556*
Number of patients with information unknown	*109*	*462*	*571*
Minutes between ingestion and death			
Median	27	25	25
Range	7min–9hrs	1min–104hrs	1min–104hrs
Number of patients with information available	*25*	*537*	*562*
Number of patients with information unknown	*108*	*457*	*565*

1 Unknowns are excluded when calculating percentages.

2 Includes deaths due to benign and uncertain neoplasms, other respiratory diseases, diseases of the nervous system (including multiple sclerosis, Parkinson's disease and Huntington's disease), musculoskeletal and connective tissue diseases, viral hepatitis, diabetes mellitus, cerebrovascular disease, and alcoholic liver disease.

3 First recorded beginning in 2001. Since then, 52 patients (4.9%) have chosen not to inform their families, and 21 patients (2.0%) have had no family to inform. There was one unknown case in 2002, two in 2005, one in 2009, and three in 2013.

4 Affirmative answers only ("Don't know" included in negative answers). Categories are not mutually exclusive. Data unavailable for four patients in 2001.

5 First asked in 2003. Data available for 133 patients in 2016, 863 patients between 1998–2015, and 996 patients for all years.

6 A procedure revision was made mid-year in 2010 to standardize reporting on the follow-up questionnaire. The new procedure accepts information about time of death and circumstances surrounding death only when the physician or another health care provider is present at the time of death. This resulted in a larger number of unknowns beginning in 2010.

7 There have been a total of six patients who regained consciousness after ingesting prescribed lethal medications. These patients are not included in the total number of DWDA deaths. These deaths occurred in 2005 (1 death), 2010 (2 deaths), 2011 (2 deaths) and 2012 (1 death). Please refer to the appropriate years' annual reports on our website (http://www.healthoregon.org/dwd) for more detail on these deaths.

Oregon Health Authority
PUBLIC HEALTH DIVISION

For more information:
http://www.healthoregon.org/dwd
Contact: DWDA.info@state.or.us

This document can be provided upon request in an alternate format for individuals with disabilities or in a language other than English for people with limited English skills. To request this publication in another format or language, contact the Publications and Design Section at 503-378-3486, 711 for TTY, or email dhs-oha.publicationrequest@state.or.us

OHA 8579 (02/17)

Exhibit U

Printvriendelijke versie

KNMG/KNMP

Guidelines for the Practice of Euthanasia and Physician-Assisted Suicide

knmg voor verantwoorde medische zorg

KNMP

AUGUST 2012

KNMG/KNMP

Guidelines for the Practice of Euthanasia and Physician-Assisted Suicide

knmg voor verantwoorde medische zorg

KNMP

AUGUST 2012

PUBLICATION DETAILS

KNMG/KNMP Guidelines for the Practice of Euthanasia and Physician-Assisted Suicide

This publication supersedes the 2007 edition of the KNMP Standards for Euthanasia. The recommendations from the 2007 edition and all earlier editions therefore no longer apply. We kindly request that you delete/destroy any earlier editions.

1st edition: 1987

2nd edition:1994

3rd edition: 1998

4th edition: 2007

Online

You will find this publication and more English information about euthanasia in the Netherlands at www.knmg.nl/english

P.O. Box 20051 - 3502 LB Utrecht - tel 0031 -30 - 282 38 00 - www.knmg.nl

As the umbrella organisation for the professional and sector organisation of pharmacists, the Royal Dutch Pharmacists Association (KNMP) represents the interests of both its members and the pharmacy.

P.O. Box 30460 - 2500 GL The Hague – tel 0031 -70- 373 73 73 - www.knmp.nl

The doctor's federation KNMG *(Royal Dutch Medical Association)* represents over 53,000 doctors and medical students. KNMG member organisations include Koepel Artsen Maatschappij en Gezondheid *(Umbrella Organisation for Physicians and Health – KAMG)*, Landelijke vereniging van Artsen in Dienstverband *(National Society of Employee Physicians – LAD)*, Landelijke Huisartsen Vereniging *(National Society of General Practitioners – LHV)*, Nederlandse Vereniging voor Arbeids- en Bedrijfsgeneeskunde *(Netherlands Society of Occupational Medicine – NVAB)*, Nederlandse Vereniging voor Verzekeringsgeneeskunde *(Netherlands Society of Insurance Medicine – NVVG)*, Federatie van Medisch Specialisten *(Federation of Medical Specialists – FMS)*, Verenso *(the Dutch Association of Elderly Care Physicians and Social Geriatricians)* and De Geneeskundestudent *(the Medical Student)*.

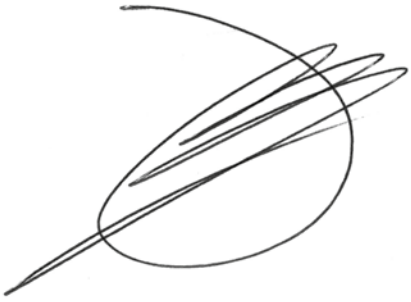
Contents

Foreword

You have in your hands the 'Guidelines for the Practice of Euthanasia and Assisted Suicide'. These guidelines support doctors and pharmacists in the effective and safe practice of euthanasia.

The guidelines were compiled following a collaboration of both doctors and pharmacists. This is a very important factor. First and foremost, the practice of euthanasia and assisted suicide is an extremely serious and emotional event in the lives of the patient and his/her loved ones. However, it also has a significant effect on the doctor and pharmacist. Euthanasia or assisted suicide is not a practice that doctors and pharmacists encounter on a daily basis. Both parties have individual responsibilities in addition to joint responsibilities. It is therefore helpful for the doctor and pharmacist to support each other in this process and to prepare and evaluate the procedure for euthanasia or assisted suicide together.

The guidelines can be effectively applied in practice and offer reference points to doctors and pharmacists during the conduct of their professional duties. The Royal Dutch Medical Association (KNMG) and the Royal Dutch Pharmacists Association (KNMP) are satisfied with these completed collective guidelines, which are available and accessible to all.



Prof. dr. A.C. Nieuwenhuijzen Kruseman, *internist*
Chair, KNMG

J. A. Smits, *Pharmacist*
Chair, KNMP

1 Introduction

DUTIES AND COMPOSITION OF THE EXPERT GROUP

In 2010, the KNMG and the KNMP set up an expert group for the purposes of creating a set of guidelines for the effective and safe practice of euthanasia or assisted suicide from the provision request sent to the pharmacy to the return of empty ampoules and/or vials in addition to unused medication. The guidelines encompass the following:

- Choice of medication and dosages.
- Description of the procedure for the doctors and the required resources.
- Description of criteria of due care for pharmacists.
- Evaluation opportunities for doctors and pharmacists.
- Recording of help desks and vade mecums for doctors and pharmacists.
- Agreements regarding possible future adjustments of the guidelines based on the aforementioned evaluations or other developments.
- Recommendations for promoting the distribution and application of the guidelines.

EXPERT GROUP: BASIC PRINCIPLES AND WORKING METHODS

The expert group adopted the KNMP Standards for Euthanasia (Standaard Euthanatica) 2007 as their point of departure. The expert group met on six occasions between November 2010 and August 2011. Discussions were also conducted via e-mail. A draft text was discussed, commented on and determined by the expert group. The draft guidelines were discussed and commented on during an invitational conference by representatives of the KNMG, the KNMP, the NHG (Dutch College of General Practitioners), the NIV (Netherlands Association of Internal Medicine), the NVA (Netherlands Society of Anaesthesiologists), the NVIC (Netherlands Intensive Care Association), the NVVE (Right to Die-NL), the NVZA (Dutch Hospital Pharmacists' Association), Regional Euthanasia Review Committees and Verenso. Subsequently, the expert group discussed the comments and incorporated them into the guidelines wherever necessary. The draft guidelines were then made available on the KNMG and KNMP websites to be viewed and commented on by doctors and pharmacists. The comments from the professional field were then incorporated into the guidelines wherever necessary. Finally, the Federation Board of the KNMG and the Executive Committee of the KNMP adopted the guidelines.

EXPLANATION

The KNMP Standards for Euthanasia (Standaard Euthanatica) 2007, the evaluation forms received by the KNMP between 1998 and mid-2010 and the inventory of problems and suggestions compiled by the KNMG in 2008 following consultation with doctors affiliated with the SCEN (Euthanasia in the Netherlands Support and Assessment) programme were used during

the composition of these guidelines. Furthermore, comments obtained from the institutions and scientific associations consulted during an invitational conference have been incorporated and the reactions from the future users of these guidelines (doctors and pharmacists) have been included in the final version. National and international literature has been consulted in a search for relevant scientific research in this area. However, none was found. These guidelines are therefore expert-based and experience-based.

SIGNIFICANCE OF THE GUIDELINES

The guidelines describe a practically applicable, effective and safe method for the practice of euthanasia and physician-assisted suicide. Other medication, dosages and/or methods can also result in euthanasia or physician-assisted suicide in compliance with the requirements of due care. However, a number of medications, dosages and methods are mentioned explicitly, which should not be used. After all, circumstances in individual situations can make it desirable and/or necessary to deviate from these guidelines. However, any departure from these guidelines requires substantiation and documentation.
The guidelines do not make any judgements regarding the decision-making process prior to the conduct of euthanasia or physician-assisted suicide or regarding other ways to lessen the patient's suffering.

REVIEW PROCEDURE

Every three years, or more frequently if required, the Guidelines for the Practice of Euthanasia and Physician-assisted suicide will be assessed in line with scientific developments and collected evaluations. For this purpose, the expert group will function as the guideline committee.

RESPONSIBILITIES OF THE DOCTOR

The doctor bears final responsibility for the practice of euthanasia or physician-assisted suicide, including the selection of the medication used and the dosages administered. Only the doctor is permitted to administer the of euthanatic agents or assist the patient in taking them.
For information about the requirements of due care for doctors and the procedure prior to the administration of euthanasia, we refer you to the Termination of Life on Request and Physician-assisted suicide (Review Procedures) Act (Wet toetsing levensbeëindiging op verzoek en hulp bij zelfdoding), the Federation Board of KNMG's Position Paper on Euthanasia, and the Position Paper on the Role of the Doctor with regard to Elective Death. See also *www.knmg.nl*.

RESPONSIBILITIES OF THE PHARMACIST

The pharmacist monitors whether the pharmacological matters regarding the termination of life are conducted in a responsible manner using the correct medication and the correct dosages.
The pharmacist is – in the event that he or she prepares the syringes, elastomeric pump, infu-

sion bag or drink – responsible for the preparation and the labelling.
The criteria of due care for pharmacists are described in Appendix IX. Extensive explanation of these criteria can be found via *www.knmp.nl*.

READER'S GUIDE

These guidelines give doctors and pharmacists advice regarding a practically applicable and effective method for the practice of euthanasia and physician-assisted suicide. The guidelines describe the situation from the moment that the doctor submits a provision request for of euthanatic agents to the pharmacist, up to and including the arrival of the forensic pathologist. Furthermore, the guidelines provide background information regarding the methods and medication used.
For the sake of readability, the salt forms of the medications, if applicable, have not been included in the text. If applicable, the salt forms have been included in the dosage table (Appendix V).
In the advice, only the generic names are stated. The brand names can be found in the dosage table.

QUESTIONS ABOUT THE GUIDELINES

If doctors or pharmacists have any questions about the guidelines, they can consult their professional association.

For pharmacists, this is:
KNMP Drug Information Centre
P.O. Box 30460 - 2500 GL The Hague - 070 3737377 - gic@knmp.nl

For doctors:
KNMG Doctor Info Line
P.O. Box 20051 - 3502 LB Utrecht - 030 2823322 - artseninfolijn@fed.knmg.nl

2 The practice of euthanasia and physician-assisted suicide

The basic principle is that euthanasia must be conducted effectively and safely. The patient must die within a manageable period of time and must not be conscious of his or her death.

2.1 Preparation

TIMELY NOTIFICATION OF THE PHARMACIST

Doctors and pharmacists within a particular catchment area will agree a minimum amount of time between the submission of the provision request and the delivery of euthanatic agents. This period depends on the amount of time the doctor and pharmacist require to prepare the provision of the euthanatic agents. Preferably, the doctor will contact the pharmacist before the presentation or sending of the prescription. Before providing the euthanatic agents upon request from the doctor, the pharmacist will evaluate whether the prescribed method, medication and dosage can be used for the patient in question. Subsequently, the euthanatic agents will be prepared and/or the materials will be ordered and prepared for usage.

NON-PROVISION OF EUTHANATIC AGENTSFOR REASONS OF PRINCIPLE

If a pharmacist refuses any form of cooperation with euthanasia for reasons of principle, then the pharmacist must inform the doctors in his/her catchment area of this fact.

COOPERATIVE PREPARATION

Euthanasia is by no means an everyday occurrence for either doctors or pharmacists. For this reason, the doctor and the pharmacist must carefully examine the entire euthanasia procedure together.

PREPARATION OF EUTHANATIC AGENTS

Some doctors prefer to prepare the euthanatic agents themselves, others prefer for the pharmacist to do it. The preparation of the syringe can take approximately 20 minutes, depending on the doctor's level of experience. The pharmacist will offer to prepare the syringes or infusions for the doctor to use. If the doctor wishes to prepare the syringes him/herself, then the pharmacist will give the doctor preparation instructions.

For the practice of euthanasia, a number of syringes are required. In order to prevent mistakes, in addition to the name of the patient and the name and dosage of the medication

contained in each syringe, all syringes must be labelled with numbers denoting the order in which they must be administered. If the doctor has prepared the syringes him/herself, then he or she must number them at the very least.

EMERGENCY SET

Even for the most experienced doctors, things can sometimes go wrong. For this reason, the doctor must bring an extra set of intravenous euthanatic agents and materials for the preparation and administration of the agents.
In the event that thiopental is being used as a coma induction medication, this emergency set will consist of preparation materials and administration materials as described on page 17. If propofol is being used as a coma induction medication, then see page 23.

STORAGE OF EUTHANATIC AGENTS

The pharmacist will ensure that the doctor is provided with instructions regarding proper storage of euthanatic agents.
Following delivery of the euthanatic agents, the doctor must ensure they are properly stored in order to prevent any accidents at the patient's home or elsewhere.

STANDARD DOSAGE INSTEAD OF DOSAGE BASED ON BODY WEIGHT

In order to eliminate the risk of medication errors that could result in underdoses, the guidelines are based on standard dosages.
The reason for this is twofold. It is well-known that calculation errors are regularly made with regard to dosages of medication. Furthermore, using individual dosages can result in only part of the whole standard container being used rather than the whole container. This can also result in mistakes being made.
Furthermore, the dosage required in order to induce a coma is only dependent on body weight to a limited degree. The peak concentration of euthanatic agents in the bloodstream, and therefore also the peak concentration in the brain, is the decisive factor. In addition to the quantity of medication, this concentration is also dependent on the blood volume. The blood volume correlates to the normal body weight. The normal body weight is the ideal body weight of an individual patient with a normal state of health. The patient's actual body weight often differs from this weight.
In all cases, the dosages stated in these guidelines are safe to use for patients with a body weight of up to 150 kg. For patients with a body weight in excess of 150 kg, consultation with an anaesthesiologist is required.

DO NOT DISTURB

Any distraction during the preparation or practice of euthanasia or physician-assisted suicide is especially unpleasant for the patient and others present, and is inconvenient to the doctor. For this reason, it is advisable to turn off any telephones, ask others present to do the same and to inform fellow doctors that you will be unavailable for a particular period of time.

PRESENCE OF THE DOCTOR

During the practice of euthanasia or physician-assisted suicide, the doctor must remain present. For the oral method (physician-assisted suicide), this can take several hours.

PREMEDICATION

Intravenous premedication with midazolam can be administered if the patient does not wish to be aware of the moment of coma induction. The aim is to induce the patient into a light sleep and then induce a coma using thiopental or propofol. For premedication, 2.5 mg of midazolam is administered intravenously. Some patients can become restless following the injection of midazolam. In such cases, do not administer an extra dose of midazolam: immediately administer the coma induction medication.
It goes without saying that this form of premedication is only possible if the intravenous method is used.

2.2 Euthanasia

For the practice of euthanasia, the euthanatic agents are administered intravenously. Firstly, a coma is induced. Subsequently, once the patient is determined to be in a medically induced coma, a neuromuscular blocker is administered. This paralyses all striated muscles, with the exception of the heart. This will cause the patient to die.

THE MEDICATION MUST ONLY BE ADMINISTERED BY THE DOCTOR

Only a doctor is permitted to administer the euthanatic agents. The insertion of an infusion needle and (if applicable) the connection of a waking-state infusion are not defined as administration acts. All activities subsequent to these are defined as administration acts. Only the patient him/herself is permitted to play an active role (for example, opening the infusion stopcock), as long as this does not hinder administration in accordance with the requirements of due care.

DIFFICULTY FINDING VEINS

With some patients, it can be difficult to find an easily accessible vein. For this reason, one day before the administration, it is advisable to examine how easy it is to find a vein and insert an infusion needle. Do not insert the infusion needle more than one day in advance. Use a 20G infusion needle (pink) or even 18G (green).
Thinner needles have the disadvantage that the section of the needle that is inserted into the blood vessel is shorter. As a result, there is a real risk that any movement could result in the needle being dislodged from the vein, causing the euthanatic agents to be unintentionally administered subcutaneously. Furthermore, injection via thinner needles is more difficult due to the higher resistance. The coma induction medication and the neuromuscular blocker should

preferably be administered via a blood vessel that is not too small. Following insertion of the infusion needle, it must be rinsed once a day with 5 ml of sodium chloride solution 0.9% or a waking-state infusion must be attached. Before use, check that the infusion needle is not blocked. For extensive advice on the insertion of an infusion needle, see *Appendix III*.

INCORRECTLY INSERTED INFUSION NEEDLES CAN CAUSE A PAINFUL REACTION

If the infusion needle is incorrectly inserted and the wall of a blood vessel is damaged or pierced, then injection of the coma induction medication can be very painful for the patient. Furthermore, the euthanatic agents will not work properly. If the infusion needle has been inserted properly, blood will come out of the needle if the veins are congested by applying a band around the arm.

2.2.1 Coma induction

It is of the utmost importance that the patient is not conscious of the effects of the neuromuscular blockers administered. Therefore, the patient's consciousness must be diminished to an adequately low level. The previously used term 'coma' regularly caused confusion, mainly due to a lack of clarity regarding how to determine when a patient is in a coma. The expert group uses the term 'medically induced coma'.
The term 'medically induced coma' means that there is sufficient reduction of consciousness that can be determined without performing any major procedures on the patient.
Before the neuromuscular blocker is administered, it must be determined that the patient is in a medically induced coma. This prevents the patient from being conscious of the effects of the neuromuscular blocker. The medication and dosages included in these guidelines ensure that the risk of an insufficiently deep and insufficiently long-term reduction of consciousness is extremely low. However, the possibility exists that the coma induction medication has unknowingly been administered partly perivenously, which will result in a failure to achieve the desired effect.

The characteristics of a medically induced coma are as follows:
- The patient does not respond to verbal stimuli.
- Serious depression of circulation, evidenced by a slow and weak pulse.
- Serious depression of ventilation, evidenced by slow, shallow breathing.
- No protective reflexes, such as the eyelash reflex.

Only once the patient displays all of these characteristics – and is therefore determined to be in a medically induced coma – can the neuromuscular blocker be administered. For more information about the various levels of consciousness up to and including total lack of consciousness, see *Appendix IV*.
For the purposes of readability, these guidelines will regularly use the term 'coma' to refer to a 'medically induced coma'.

MEDICATION FOR COMA INDUCTION

Thiopental (2000 mg) or propofol (1000 mg) is used for the induction of the coma. Both medications can cause pain when injected intravenously. Due to this pain, 2 ml of lidocaine 1% is injected intravenously.
With thiopental, a lethal effect cannot be guaranteed, although it is suitable for inducing a deep coma.
Propofol, as well as respiratory depression and vasodilation, also causes cardiac depression. The deep coma results in respiratory depression, which causes respiratory acidosis. The vasodilation results in a drop in blood pressure, causing relative hypovolaemic shock coupled with metabolic acidosis. The cardiac depression causes a drop in cardiac output, which further increases the acidosis.

METHOD OF ADMINISTRATION

The coma induction medication can be administered by injection, elastomeric pump (not to be used for propofol) or by intravenous infusion. All of the aforementioned methods are equally effective.

ELASTOMERIC PUMP

In addition to injection or infusion, a third administration method is now possible. The elastomeric pump, like Easypump® and Intermate®, is a pump system with a self-draining reservoir. The elastomeric pump's pump action can administer a volume of 20 ml of thiopental in 5 minutes. Bear in mind that the draining of an elastomeric pump does not occur in a linear manner. The 5-minute period only applies to this particular volume (20 ml) and use of the specific elastomeric pump as stated in Appendix VII. A major advantage of the elastomeric pump is that it reduces the commotion of the euthanasia process, giving the patient greater peace and quiet. Another advantage is that it puts the patient in control, as he/she can turn on the pump him/herself.
The pharmacist will deliver a full elastomeric pump. The doctor must listen carefully to the pharmacist's instructions regarding the elastomeric pump.
The elastomeric pump CANNOT be used for propofol, as the large volume means that the elastomeric pump takes too long to drain. The elastomeric pump also cannot be used for the administration of the neuromuscular blocker.

SPEED OF ADMINISTRATION

It is important that the coma induction medication is administered within no more than 5 minutes. If the infusion is administered too slowly, then the coma induction medication can redistribute itself within the body – like into the fatty tissues – presenting a risk that the desired coma depth or coma duration will not be achieved.
The (high) standard dosage can result in an abrupt completion of the dying process, with the patient dying during the administration of the coma induction medication. In such cases, it is vital that you inform the persons present of the accelerated dying process. For a less abrupt completion of the dying process, the decision can be made to administer a premedication

and/or more gradual administration of the coma induction medication over a time period of 5 minutes at most.

2.2.2 Neuromuscular blocker

When administered intravenously, a sufficiently high dose of neuromuscular blocker will cause complete paralysis of all striated muscles with the exception of the heart. This will result in respiratory arrest and death by anoxaemia. Of course, the neuromuscular blocker must only be administered to the patient if he/she is in a coma. If there is even the slightest doubt regarding whether or not the patient is in a coma, then a coma must be induced by administering coma induction medication.
Rocuronium (150 mg) is the neuromuscular blocker of choice as it is the most commonly used medication in the Netherlands for this purpose, and hence it is the neuromuscular blocker that medical professionals are most experienced with. Atracurium (100 mg) or cisatracurium (30 mg) are good alternatives.
Due to its short duration of effect, we advise against using the neuromuscular blocker mivacurium.

METHOD AND SPEED OF ADMINISTRATION

Upon administration of the coma induction medication, 10 ml of Sodium chloride solution 0.9% is administered in order to ensure that the entire dose has been administered. If thiopental is used, then this will also prevent the formation of precipitation with the neuromuscular blocker. Immediately subsequent to this, the neuromuscular blocker will be administered as a bolus.

ALWAYS ADMINISTER THE NEUROMUSCULAR BLOCKER

The neuromuscular blocker is always administered, even if the patient appears to have died following administration of the coma induction medication. Following administration of the neuromuscular blocker, there can no longer be any doubt that the patient has died.

PROCESS AND DURATION UNTIL DEATH

In most cases, the time between the intravenous administration of the neuromuscular blocker and death is short. In a few cases, the administration of only thiopental or propofol leads directly to respiratory arrest and possible cardiac arrest. This is inherent to the method. In all other cases, the neuromuscular blocker will result in total respiratory arrest within a few minutes, followed by cardiac arrest. However, the heart can sometimes continue to beat for some time, extending the period between respiratory arrest and cardiac arrest by as much as 20 minutes. This can cause some patients to become cyanotic.
Prior to the practice of euthanasia, it must be clearly explained to those present that death may occur quickly, but that the heart can also continue to beat for a long time.

2.3 Physician-assisted suicide

With physician-assisted suicide, the patient takes the of euthanatic agents him/herself (orally). A sufficiently high dose of an orally administered barbiturate results in depression of the respiratory system, causing respiratory acidosis. This, coupled with vascular and or cardiogenic shock, results in death.
For oral administration, a lipophilic barbiturate is used such as pentobarbital or secobarbital. These barbiturates pass through the blood-brain barrier relatively quickly and therefore have a quick effect. If this method is used, the patient must be capable of swallowing the sufficient volume, and he/she must not be nauseous or dehydrated and/or have any gastrointestinal transit disorders. Patients that have been using opioids for a period of time have slower gastrointestinal transit, which lengthens the period of time required before the patient lapses into a coma and dies.
The patient must be sitting up and in bed when he/she takes the barbiturate – this prevents a situation in which he/she is unable to make it back to the bed in time.

ADMINISTRATION METHOD

Induction of a coma followed by death is conducted by taking 15 grams of barbiturate (pentobarbital or secobarbital) in the form of a drink (mixture of non-therapeutics, see Appendix VI for the formula).
The possibility that the drink tastes bad cannot be ruled out.

USING ANTI-EMETICS BEFOREHAND IS ESSENTIAL

It is essential that the administration of metoclopramide is started one day (twelve hours) in advance in order to minimise the likelihood of the patient vomiting up the of euthanatic agents. Metoclopramide is the anti-emetic of choice as in addition to its anti-emetic effect, it also speeds up gastrointestinal transit.

PROCESS AND DURATION UNTIL DEATH

Once the patient drinks the drink, the barbiturate is resorbed by the gastrointestinal tract. The faster the resorption, the higher the peak level. If the resorption rate is too slow, then a redistribution of the barbiturate will take place, resulting in an insufficient peak level. As a result, the patient fails to lapse into a coma or can come out of a deep coma.
Even when anti-emetics are administered, the foul taste of the drink can sometimes cause vomiting. As a result, the whole dose is not taken. Another possible problem is that many patients use opioids at the end of their lives. Opioids result in slower gastrointestinal transit, which can mean it takes the patient longer to lapse into a coma.
Due to the aforementioned unpredictability, this method is not the preferred method.
The period of time between administration and the time of death varies from person to person, but in the vast majority of cases, it takes less than 30 minutes. However, sometimes it can take longer (2-3 hours). Long periods such as these can result in uncomfortable situations.

It is advisable to agree a maximum period of 2 hours with the patient and any next of kin. If the patient has not died by this time, then euthanasia should be administered (intravenously). Beforehand, it is not possible to predict which patients will or will not die within 2 hours. An infusion needle should be inserted in advance as standard for every patient.

ADMINISTRATION VIA A TUBE

Some cases have been reported in which administration of the drink via a tube worked well. It is essential to thoroughly rinse out the tube to prevent it from becoming blocked before the barbiturate reaches the stomach or intestines.

ONLY THE DOCTOR IS PERMITTED TO HELP THE PATIENT

With the oral method, it is the patient him/herself that takes the euthanatic agents (possibly with the aid of a tube). The doctor is permitted to assist the patient. By law, no other people are permitted to do so. If the doctor administers the euthanatic agents via the tube, then legally, this is classed as euthanasia and not physician-assisted suicide.

2.4 After the procedure

STORAGE OF THE ORIGINAL PACKAGING AND/OR IN THE FORM OF ADMINISTRATION PROVIDED BY THE PHARMACIST

The municipal forensic pathologist must be able to verify how and using which medications the patient's life was ended. If the doctor prepared the euthanatic agents him/herself, then he/she must store the vials and/or ampoules. If the pharmacist prepared the of euthanatic agents, the doctor must store the labelled syringes.

RETURNING THE MATERIALS

The pharmacist and the doctor will arrange the return of all remaining materials in the euthanasia set and the emergency set to the pharmacist once the forensic pathologist has completed his/her visit. The return of the materials has two purposes: firstly the appropriate disposal of unused euthanatic agents, and secondly to prevent the euthanatic agents from being used for purposes other than the intended euthanasia.
Furthermore, this offers the doctor and pharmacist an opportunity to evaluate the euthanasia process. For example, unexpected problems may have occurred during the procedure. These problems can be taken into account in later euthanasia procedures.

QUESTIONNAIRE

Both the doctor and the pharmacist are asked to complete the questionnaire and return it to the KNMP Drug Information Centre. The questionnaire is only used to assess the advice in the guidelines in the light of practical experiences. The form is NOT used to check whether or not the procedure has been carried out properly. This task is performed by the Regional Euthanasia Review Committees.
The doctor fills in the doctor's form and the pharmacist fills in the pharmacist's form. These forms are included in Appendix XIII (doctor) and Appendix XIV (pharmacist).
The completed forms can be sent carriage forward to:

KNMP Drug Information Centre
Freepost Number 1774 - 2501 VB - The Hague

3 Administration

Based on the preceding information, a number of administration methods have been established.

A **Thiopental as coma induction medication** – injection via syringe

MEDICATION

- 1 ampoule of lidocaine (10 mg/ml, 10 ml)
- 4 vials of thiopental à 500 mg
- 2 ampoules of water for injections (à 10 ml) or 1 ampoule of water for injections (à 20 ml)
- 2 ampoules of sodium chloride solution 0.9% (à 10 ml)
- 3 vials of rocuronium 50 mg (10mg/ml, 5 ml)

PREPARATION MATERIALS

Injection materials, preferably a Luer lock (see Appendix VII for relevant needle sizes)

- 1 disposable syringe 2 ml or 5 ml (for lidocaine)
- 1 disposable syringe 20 ml or 2 disposable syringes 10 ml (for thiopental)
- 2 disposable syringes 10 ml (for sodium chloride solution 0.9%)
- 1 disposable syringe 20 ml (for rocuronium)
- 4 standard suction needles
- 1 infusion needle
- caps
- labels stating the name of the medication and numbered in the order in which they must be administered

ADMINISTRATION MATERIALS

- 1 three-way stopcock with tube (Luer lock)
- 2 pieces of gauze (10 x 10 cm)
- transparent dressing material/tape

EMERGENCY SET

Even for the most experienced doctors, things can sometimes go wrong. For this reason, the doctor must bring an extra set of intravenous euthanatic agents and materials for the preparation and administration of the agents, as stated above. This emergency set does not need to be ready for use straight away.

POINTS FOR ATTENTION

Precipitation

Thiopental forms precipitation in combination with rocuronium. You must therefore rinse the infusion system with 10 ml of sodium chloride solution 0.9% after administering thiopental.

Dissolution volume of thiopental solution for the injection method

Always dissolve thiopental in 20 ml of water for injections.

Volume of the syringes for the injection method

Using 20 ml syringes requires the necessary force to empty the syringe. It is possible to divide the thiopental between two 10 ml syringes.

Pain and foul tastes and/or odours upon administration

Intravenous administration of thiopental can cause pain. For this reason, before the thiopental is administered, 2 ml of lidocaine 1% is injected. However, administration of lidocaine beforehand does not guarantee pain-free administration of thiopental. It is therefore important that the patient and the other people present are informed that the patient may feel pain. Furthermore, the larger the selected blood vessel, the lower the chance of pain.

On a number of occasions, it has been reported that the patient experienced a strange taste or foul odour following administration.

Shelf life

For this application, thiopental solution and rocuronium can be stored in the syringe for 24 hours at room temperature.

ONE DAY IN ADVANCE

- If possible, insert an infusion needle one day beforehand. In appendix III, you can find advice on the insertion of an infusion needle.

PREPARATION

- Dissolve the thiopental by injecting 5 ml of water for injections into a 500 mg vial of thiopental.
- Dissolve by shaking the vial thoroughly.
- Repeat for the other three vials.
- Subsequently, draw the thiopental solution into one 20 ml syringe or two 10 ml syringes.
- Label the syringe(s).
- Prepare the lidocaine syringe and label it.
- Prepare two syringes with 10 ml of sodium chloride solution 0.9% for rinsing in between the administration of thiopental and rocuronium, and after the administration of rocuronium. If you do not rinse with sodium chloride solution 0.9% then you run the risk of precipitation forming. Label the syringes.
- Prepare the rocuronium syringe and label it.

ADMINISTRATION

- Warn the patient and the other people present that the administration can be painful.
- Inject 2 ml of lidocaine within 30 seconds.
- Inject thiopental solution within a maximum of 5 minutes.
- Rinse the infusion system with 10 ml of sodium chloride solution 0.9% (this ensures that the entire dose is administered and prevents precipitation with the neuromuscular blocker).
- Check whether the patient is in a medically induced coma.
- Subsequently, inject rocuronium as a bolus.
- Rinse the infusion system with 10 ml of sodium chloride solution 0.9% (this ensures that the entire dose is administered).

B Thiopental as coma induction medication – administered via elastomeric pump

MEDICATION

- 1 ampoule of lidocaine (10mg/ml, 10 ml)
- 4 vials of thiopental à 500 mg
- 2 ampoules of water for injections(à 10 ml)
- 2 ampoules of sodium chloride solution 0.9% (à 10 ml)
- 3 vials of rocuronium 50 mg (10mg/ml, 5 ml)

PREPARATION MATERIALS

Injection materials, preferably a Luer lock (see Appendix VII for relevant needle sizes).

- 1 disposable syringe 2 ml or 5 ml (for lidocaine)
- elastomeric pump (for thiopental)
- 2 disposable syringes 10 ml (for sodium chloride solution 0.9%)
- 1 disposable syringe 20 ml (for rocuronium)
- 3 standard suction needles
- 1 infusion needle
- caps
- labels stating the names of the medications and numbered in the order in which they must be administered

ADMINISTRATION MATERIALS

- 1 three-way stopcock with tube (Luer lock)
- 2 pieces of gauze (10 x 10 cm)
- transparent dressing material/tape

EMERGENCY SET

Even for the most experienced doctors, things can sometimes go wrong. For this reason, the doctor must bring an extra set of intravenous of euthanatic agents and materials for the preparation and administration of the agents. This emergency set does not need to be ready for use straight away. For the contents of the emergency set, see *page 14*.

POINTS FOR ATTENTION

Precipitation

thiopental forms precipitation in combination with rocuronium. You must therefore rinse the infusion system with 10 ml of sodium chloride solution 0.9% after administering thiopental.

Pain and foul tastes and/or odours upon administration

administration of thiopental can cause pain. For this reason, before the Thiopental is administered, 2ml of lidocaine 1% is injected. However, administration of lidocaine beforehand does not guarantee pain-free administration of thiopental. It is therefore important that the patient and the other people present are informed that the patient may feel pain. On a number of occasions, it has been reported that the patient experienced a strange taste or foul odour following administration.

Shelf life

for this application, thiopental solution in the elastomeric pump and rocuronium in the syringe can be stored for 24 hours at room temperature.

ONE DAY IN ADVANCE

- If possible, insert an infusion needle one day in advance. In appendix III you can find advice on the insertion of an infusion needle.

PREPARATION

- Allow the pharmacy to prepare and label the elastomeric pump containing thiopental (2000 mg of thiopental in 20 ml of water for injections).
- Prepare the lidocaine syringe and label it.
- Prepare two syringes with 10 ml of sodium chloride solution 0.9% for rinsing in between the administration of thiopental and rocuronium, and after the administration of rocuronium. If you do not rinse with sodium chloride solution 0.9% then you run the risk of precipitation forming. Label the syringes.
- Prepare the rocuronium syringe and label it.

ADMINISTRATION

- Warn the patient and the other people present that the administration can be painful.
- Inject 2 ml of lidocaine within 30 seconds.
- Connect the tube to the elastomeric pump.
- Adhere the limiter – not the filter – to the skin using tape.
- Begin the infusion by opening the elastomeric pump's tube clamp: the administration of thiopental will start immediately. The tube can also be opened by the patient. The stopcock on the three-way stopcock must also be turned open.

If the tube is bent, roll the bent section back and forth between your fingers until the tube returns to its original shape, improving the flow.

- The administration of thiopental is complete when the elastomer membrane is no longer round. For a volume of 20 ml, this takes about 5 minutes when using the recommended type of elastomeric pump (see Appendix VII).
- Close the clamp and disconnect the elastomeric pump.
- Rinse the infusion system with 10 ml of sodium chloride solution 0.9% (this ensures that the entire dose is administered and prevents precipitation with the neuromuscular blocker).
- Check whether the patient is in a medically induced coma.
- Subsequently, inject rocuronium as a bolus.
- Rinse the infusion system with 10 ml of sodium chloride solution 0.9% (this ensures that the entire dose is administered).

C Thiopental as coma induction medication – administered via infusion

MEDICATION

- 1 ampoule of lidocaine (10mg/ml, 10 ml)
- 4 vials of thiopental à 500 mg
- 2 ampoules of water for injections à 10 ml
- 1 infusion bag of sodium chloride solution 0.9% (à 100 ml)
- 2 ampoules of sodium chloride solution 0.9% (à 10 ml)
- 3 vials of rocuronium 50 mg (10mg/ml, 5 ml)

PREPARATION MATERIALS

Injection materials, preferably a Luer lock (see Appendix VII for relevant needle sizes).

- 1 disposable syringe 2 ml or 5 ml (for lidocaine)
- infusion bag (max. 100 ml) and infusion system (for thiopental)
- 2 disposable syringes 10 ml (for sodium chloride solution 0.9%)
- 1 disposable syringe 20 ml (for rocuronium)
- 3 standard suction needles
- 1 infusion needle
- caps
- labels stating the names of the medications and numbered in the order in which they must be administered

ADMINISTRATION MATERIALS

- 1 three-way stopcock with tube (Luer lock)
- 2 pieces of gauze (10 x 10 cm)
- transparent dressing material/tape

EMERGENCY SET

- Even for the most experienced doctors, things can sometimes go wrong. For this reason, the doctor must bring an extra set of intravenous of euthanatic agents and materials for the preparation and administration of the agents. This emergency set does not need to be ready for use straight away. For the contents of the emergency set, see *page 14*.

POINTS FOR ATTENTION

Precipitation

Thiopental forms precipitation in combination with rocuronium. You must therefore rinse the infusion system with 10 ml of sodium chloride solution 0.9% after administering thiopental.

Pain and foul tastes and/or odours upon administration

Administration of thiopental can cause pain. For this reason, before the thiopental is administered, 2 ml of lidocaine 1% is injected. However, administration of lidocaine beforehand does not guarantee pain-free administration of thiopental. It is therefore important that the patient and the other people present are informed that the patient may feel pain.

On a number of occasions, it has been reported that the patient experienced a strange taste or foul odour following administration.

Shelf life

For this application, thiopental solution can be stored in the infusion bag and rocuronium in the syringe for 24 hours at room temperature.

ONE DAY IN ADVANCE

- If possible, insert an infusion needle one day in advance. In appendix III you can find advice on the insertion of an infusion needle.

PREPARATION

- You should preferably ask the pharmacy to prepare and label the thiopental infusion bag.
- Prepare the lidocaine syringe and label it.
- Prepare two syringes with 10ml of sodium chloride solution 0.9% for rinsing in between the administration of thiopental and rocuronium, and after the administration of rocuronium. If you do not rinse with sodium chloride solution 0.9% then you run the risk of precipitation forming. Label the syringes.
- Prepare the rocuronium syringe. Label the syringe.

ADMINISTRATION

- Warn the patient and the other people present that the administration can be painful.
- Inject 2 ml of lidocaine within 30 seconds.
- Connect the infusion line to the infusion needle via the three-way stopcock.
- Open the clip at the bottom of the infusion bag and open the roller clamp on the infusion tube. If a stopcock has been placed in between these, then open it.
- Allow the thiopental solution to be administered to the patient within 5 minutes. If the infusion bag drains too slowly, squeeze it.
- Rinse the infusion system with 10 ml of sodium chloride solution 0.9% (this ensures that the entire dose is administered and prevents precipitation with the neuromuscular blocker).
- Check whether the patient is in a medically induced coma.
- Subsequently, inject rocuronium as a bolus.
- Rinse the infusion system with 10 ml of sodium chloride solution 0.9% (this ensures that the entire dose is administered).

D Propofol as coma induction medication – injection via syringe

MEDICATION

- 1 ampoule of lidocaine (10mg/ml, 10 ml)
- 1 vial of propofol emulsion (20mg/ml, 50 ml)
- 2 ampoules of sodium chloride solution 0.9% (à 10 ml)
- 3 vials of rocuronium 50 mg (10mg/ml, 5 ml)

PREPARATION MATERIALS

Injection materials, preferably a Luer lock (see Appendix VII for relevant needle sizes).

- 1 disposable syringe 2 ml or 5 ml (for lidocaine)
- 1 disposable syringe 60 ml or 3 disposable syringes 20ml (for propofol)
- 2 disposable syringes 10 ml (for sodium chloride solution 0.9%)
- 1 disposable syringe 20 ml (for rocuronium)
- 4 standard suction needles
- 1 infusion needle
- caps
- labels stating the names of the medications and numbered in the order in which they must be administered

ADMINISTRATION MATERIALS

- 1 three-way stopcock with tube (Luer lock)
- 2 pieces of gauze (10 x 10 cm)
- transparent dressing material/tape

EMERGENCY SET

Even for the most experienced doctors, things can sometimes go wrong. For this reason, the doctor must bring an extra set of intravenous of euthanatic agents and materials for the administration of the agents, as stated above. This emergency set does not need to be ready for use straight away.

POINTS FOR ATTENTION

Pain

In contrast to the other propofol preparations, Propofol-Lipuro emulsion and Propofol Fresenius emulsion contain medium-chain triglycerides. This causes less pain compared to other propofol preparations. For this reason, it has been decided to use propofol preparations with medium-chain triglycerides. Despite this, 10% of patients report pain during administration of these propofol emulsions. For this reason, before the propofol is administered, 2 ml of lidocaine is administered. However, administration of lidocaine beforehand does not guarantee pain-free administration of propofol. It is therefore important that the patient and the other people present are informed that the patient may feel pain during the administration of the propofol.

Allergies are not relevant

propofol is formulated in a soybean-oil emulsion. For this reason, propofol normally cannot be administered as an anaesthetic to people who are allergic to soy. However, for use as a coma induction medication during the practice of euthanasia, this allergy is not relevant.

Propofol vials

propofol vials are ready to use.

Shelf life

propofol emulsion contains no preservatives. For this application, propofol can be stored in the syringe(s) at room temperature for 24 hours following preparation. For this application, rocuronium can also be stored in a syringe for 24 hours at room temperature.

ONE DAY IN ADVANCE

- If possible, insert an infusion needle one day in advance. On page 28 (Appendix III), you can find advice on the insertion of an infusion needle.

PREPARATION

- Prepare the propofol syringe(s) and label it/them.
- Prepare the lidocaine syringe and label it.
- Prepare two syringes with 10 ml of sodium chloride solution 0.9% for rinsing in between the administration of propofol and rocuronium, and after the administration of rocuronium. Label the syringes.
- Prepare the rocuronium syringe and label it.

ADMINISTRATION

- Warn the patient and the other people present that the administration can be painful.
- Inject 2ml of lidocaine within 30 seconds.
- Inject the propofol solution within a maximum of 5 minutes.
- Rinse the infusion system with 10 ml of sodium chloride 0.9% (this ensures that the entire dose is administered).
- Check whether the patient is in a medically induced coma.
- Subsequently, inject rocuronium as a bolus.
- Rinse the infusion system with 10 ml of sodium chloride 0.9% (this ensures that the entire dose is administered).

E **Propofol as coma induction medication** – administered via infusion

MEDICATION

- 1 ampoule of lidocaine (10mg/ml, 10 ml)
- 1 vial of propofol emulsion (20mg/ml, 50 ml)
- 1 infusion bag of sodium chloride 0.9% (à 100 ml)
- 2 ampoules of sodium chloride 0.9% (à 10 ml)
- 3 vials of rocuronium 50 mg (10mg/ml, 5 ml)

PREPARATION MATERIALS

Injection materials, preferably a Luer lock (see Appendix VII for relevant needle sizes).

- 1 disposable syringe 2 ml or 5 ml (for lidocaine)
- infusion bag (max. 100 ml) and infusion system (for propofol)
- 2 disposable syringes 10 ml (for sodium chloride solution 0.9%)
- 1 disposable syringe 20 ml (for rocuronium)
- 3 standard suction needles
- 1 infusion needle
- caps
- labels stating the names of the medications and numbered in the order in which they must be administered

ADMINISTRATION MATERIALS

- 1 three-way stopcock with tube (Luer lock)
- 2 pieces of gauze (10 x 10 cm)
- transparent dressing material/tape

EMERGENCY SET

Even for the most experienced doctors, things can sometimes go wrong. For this reason, the doctor must bring an extra set of intravenous of euthanatic agents and materials for the administration of the agents. This emergency set does not need to be ready for use straight away. For the contents of the emergency set, see *page 20*.

POINTS FOR ATTENTION

Pain

in contrast to the other propofol preparations, Propofol-Lipuro emulsion and Propofol Fresenius emulsion contain medium-chain triglycerides. This causes less pain compared to other propofol preparations. For this reason, it has been decided to use propofol preparations with medium-chain triglycerides. Despite this, 10% of patients report pain during administration of these propofol emulsions. For this reason, before the propofol is administered, 2ml of lidocaine 1% is administered. However, administration of lidocaine beforehand does not guarantee pain-free administration. It is therefore important that the patient and the other people present are informed that the patient may feel pain during the administration of the propofol.

Allergies are not relevant

propofol is dissolved in a soybean-oil emulsion. For this reason, propofol normally cannot be administered as an anaesthetic to people who are allergic to soy. However, for use as a coma induction medication during the practice of euthanasia, this allergy is not relevant.

Propofol vials

propofol vials are ready to use.

Shelf life

propofol emulsion contains no preservatives. For this application, propofol can be stored in the infusion bag at room temperature for 24 hours following preparation. For this application, rocuronium can also be stored in a syringe for 24 hours at room temperature.

ONE DAY IN ADVANCE

- If possible, insert an infusion needle one day in advance. In appendix III you can find advice on the insertion of an infusion needle.

PREPARATION

- You should preferably ask the pharmacy to prepare and label the propofol infusion bag.
- Prepare the lidocaine syringe and label it.
- Prepare two syringes with 10 ml of sodium chloride solution 0.9% for rinsing in between the administration of the propofol and the rocuronium, and after the administration of the rocuronium. Label the syringes.
- Prepare the rocuronium syringe and label it.

ADMINISTRATION

- Connect the infusion line to the infusion needle via the three-way stopcock.
- Inject 2 ml of lidocaine within 30 seconds.
- Warn the patient and the other people present that the administration can be painful.
- Open the clip at the bottom of the infusion bag and open the roller clamp on the infusion tube. If a stopcock has been placed in between these, then open it.
- Allow propofol to be administered to the patient within 5 minutes. If the infusion bag drains too slowly, squeeze it.
- Rinse the line with 10 ml of sodium chloride 0.9% (this ensures that the entire dose is administered).
- Check whether the patient is in a medically induced coma.
- Subsequently, inject rocuronium as a bolus.
- Rinse the infusion needle with 10 ml of sodium chloride 0.9% (this ensures that the entire dose is administered).

F Oral consumption of a barbiturate drink

MEDICATION

- 3 suppositories of metoclopramide 20 mg or 3 tablets of metoclopramide 10 mg
- 100 ml mixtura nontherapeutica (for the formula, see Appendix VI)

PREPARATION

- Beforehand, discuss with the patient and possibly also his/her next of kin that if the patient has not died within 2 hours, the intravenous method will be applied.
- Begin administering metoclopramide one day (twelve hours) in advance. Preferably, it should be administered according to the following schedule: 12 hours, 6 hours and 1 hour before the euthanasia procedure.
- Insert an infusion needle, preferably one day in advance. For advice on this matter, see appendix III.
- Ensure that you have all the materials and medication required for intravenous administration. For information on this matter, see the emergency set on page 14 (thiopental) or page 20 (propofol).

ADMINISTRATION

- Prepare the patient for a foul taste.
- When drinking the drink, make sure the patient is sitting up straight in bed. The entire drink must be consumed.
- Don't allow the patient to consume the drink through a straw. With a straw, there is a risk that the medication will start to take effect before the patient has imbibed the whole dose.
- Some cases have been reported in which administration of the drink via a tube worked well. It is essential to thoroughly rinse out the tube to prevent it from becoming blocked before the barbiturate reaches the stomach or intestines.
- If the patient vomits up the drink, then the likelihood is high that any second dose will also be vomited up. In such cases, it is advisable to apply the intravenous method.
- Following consumption of the drink, the chances are very high that the patient will lapse into a deep coma and die.

If the patient does not die within the agreed time, then a coma induction medication must be administered intravenously followed by a neuromuscular blocker (euthanasia).

Appendices to the guidelines for the practice of euthanasia and physician-assisted suicide

Appendix I Routes of administration, not to be used

RECTAL ADMINISTRATION

The coma induction medication must not be administered rectally.
The availability of suppositories is heavily dependent on the patient's ability to keep the suppository in. Suppositories can have a laxative effect and there is also the risk that the active ingredient will only be released slowly. Furthermore, the lethal dose of barbiturates cannot be contained in a single suppository, so multiple suppositories are required. Furthermore, the patient's body temperature can drop, preventing the suppositories from melting.
When administering the medication in one go, the absorption rate is unpredictable and the large dose of medication causes extreme irritation, making it likely that the patient will not be able to keep in the suppository. Repeated administration has the psychological disadvantage of having to administer suppositories to an already comatose patient.
Due to the position the patient is required to adopt and maintain in order to administer it, an enema is not ethically acceptable.

INTRAMUSCULAR AND SUBCUTANEOUS ADMINISTRATION

Intramuscular and subcutaneous administration are very painful and unreliable methods of administering thiopental. These methods must therefore not be applied.
Intramuscular and subcutaneous administration of neuromuscular blocker must also not be applied.
Oral or rectal administration of neuromuscular blocker are also not suitable methods. Neuromuscular blockers are ionised molecules and are therefore scarcely absorbed when administered using these methods.
No data is known to exist on the intramuscular or subcutaneous administration of propofol. These methods must therefore not be applied.

Appendix II Medication not to be used

BENZODIAZEPINES

It is extremely difficult to induce an adequate reduction of consciousness via oral administration of a benzodiazepine.
Intravenous administration also offers no guarantees. Cases have been documented in which even a high dose of intravenous benzodiazepines proved insufficient. Benzodiazepines must therefore not be used as a coma induction medication.
Midazolam can be used as a premedication.

OPIOIDS

Terminal patients who have used opioids for a prolonged period are more tolerant of the respiratory depressant effect. Sometimes it is not possible to induce death in these patients using opioids, even if high doses are used. If a patient has not been treated with opioids beforehand, then intravenous administration of a high dose will cause a major depression of the respiratory centre and a period of Cheyne-Stokes respiration, which quickly result in death.
In addition, certain opiates such as buprenorphine and pentazocine can have antagonistic effects in addition to agonistic effects. Their use can induce acute abstinence symptoms.
The use of opioids is therefore unpredictable.

INSULIN

Parenteral administration of sufficiently high doses of insulin causes a hypoglycaemic coma, resulting in death. The speed at which this occurs depends on the patient's state of health. Whatever happens, death occurs within hours at the earliest and can sometimes take days. The depth of the coma varies and can even reduce over time, in which case it is necessary to administer an extra dose. During a shallow coma, the patient can become restless and suffer from cramp.

POTASSIUM CHLORIDE

Cardiac arrest can be induced by administering a high dose of potassium chloride (KCl). Injection of KCl is very painful. Furthermore, KCl also causes muscle spasms, even if a neuromuscular blocker has been administered.

Appendix III Advice regarding the insertion of an infusion needle

FOR THE INSERTION OF AN INFUSION NEEDLE, YOU REQUIRE:

- an infusion needle of at least 20G (pink) or even 18G (green)
- 10 ml of sodium chloride solution 0.9%
- 2 pieces of gauze (10 x 10 cm)
- a tourniquet
- a tube with a stopcock, and a Luer lock
- transparent dressing material (e.g. Tegaderm®) or dressing tape (e.g. Leukosilk®)

Ensure you have sufficient materials. Always bring extra materials.

INFUSION NEEDLES CAN BE INSERTED INTO A VEIN

- on the forearm
- on the hand
- in the cubital fossa
- near the ankle in the great saphenous vein, which runs along the ventral side of the medial malleolus
- on the foot

TECHNIQUE

- Ensure undisturbed surroundings.
- Take your time.
- Fill the tube with the stopcock on it with sodium chloride solution 0.9% using a 10 ml syringe. Leave the syringe connected to the tube and close the stopcock.
- Place the tourniquet on the forearm or calf and pull it tight, ensuring that the arterial circulation remains intact.
- The effect of the tourniquet is usually improved by letting the arm or leg hang loose.
- Look for a suitable blood vessel. Feeling a blood vessel is more reliable than seeing it.
- Feel whether the blood vessel is resilient, and therefore probably open.
- On the forearm and cubital fossa in particular, the blood vessels are sometimes easier to feel than to see.
- By rubbing or carefully tapping on blood vessels, they usually become easier to see and feel.
- Sometimes the blood vessels in one extremity are much easier to see and feel than in other extremities.
- Tell the patient when and where the venipuncture will be performed.
- Once the needle has been inserted into the vein, blood will be visible in the plastic section.
- The metal section of the needle protrudes slightly out of the plastic section that will ultimately remain in the blood vessel. For this reason, make sure that the needle is inserted 5-10 mm into the blood vessel.

- Then, pull the metal section of the needle out slightly and push the whole infusion needle further into the blood vessel.
- If this runs smoothly and the patient doesn't feel much pain, then the needle has probably been inserted correctly.
- Take off the tourniquet and lay the arm or leg in a horizontal position.
- Place a piece of gauze under the section of the infusion needle that is sticking out of the arm.
- Pull the metal section out whilst simultaneously using your other hand to fix the needle in place using the wings and to close the vein proximally from the needle. This prevents the infusion needle from being pulled out or blood leaking out of the needle.
- If you are not entirely sure whether the needle has been inserted correctly, then leave the tourniquet in place. Place a piece of gauze under the protruding section of the infusion needle and pull the metal section out in the manner described above. If the needle is correctly placed, then blood will run out of the infusion needle and leak onto the gauze. You can then remove the tourniquet.
- Connect the tube with the Luer lock on it to the infusion needle.
- Use the transparent dressing material to fix the needle in place such that the site of insertion remains visible. Fix the tube in place with the dressing material as well, in a location near the needle.
- Flush the needle. Subsequently, close the stopcock, remove the syringe and place the cap on the stopcock.
- Place the tube in a loop on the extremity, place a piece of gauze under the stopcock and fix everything in place.
- The same measures apply when inserting an infusion needle into the foot or ankle.

ADVICE IF IT IS DIFFICULT TO FIND A BLOOD VESSEL.

- Keep calm, as it is nearly always possible to insert an infusion needle.
- Take your time. Many of these patients have a poor filling capacity and it takes some time before the blood vessels become apparent. This can take up to several minutes.
- If applying a tourniquet, rubbing or tapping does not result in a vein being found, then leave the tourniquet in place and let the extremity hang.
- Wait patiently, rubbing the extremity a little or carefully tapping it.
- If this does not work, then look for alternative parts of the body, such as the other arm or the ankles or feet.
- If this is also unsuccessful, then you can often induce vasodilation by warming up the extremity.
- You can do this by wrapping a warm, moist towel around the extremity or by putting it in a bucket of warm water.
- Vasodilation can also be achieved using nitro spray or a nitro plaster.
- **Patience** is the most important tool for achieving the desired result.
- If the above measures are unsuccessful, request the assistance of a fellow GP, a nurse (e.g. a home-care medical action team), the ambulance service, a member of a palliative team or an anaesthesiologist.

Appendix IV Advice regarding determination of the level of consciousness

The following is a description of the various levels of consciousness up to and including lack of consciousness.
A patient is said to be in a medically induced coma if the patient satisfies all of the characteristics described in the section 'Medically induced coma'. A neuromuscular blocker can only be administered once the patient is in a medically induced coma.

CONSCIOUS

- Responds to verbal stimuli.
- Is breathing (spontaneously or after being ordered tot do so)
- Has protective reflexes.

SEDATED

- Diminished/no response to verbal stimuli.
- Is breathing.
- Responds to pain stimuli.
- Has protective reflexes.

DEEP SEDATION

- No response to verbal stimuli.
- Diminished/no breathing.
- Little to no response to pain stimuli.
- Diminished/no protective reflexes.

MEDICALLY INDUCED COMA

- No response to verbal stimuli.
- Serious depression of circulation, evidenced by a slow and weak pulse.
- Serious depression of ventilation, evidenced by slow, shallow breathing.
- No protective reflexes, such as the eyelash reflex.

Appendix V Dosage table for of euthanatic agents, local anaesthetics, anti-emetics and premedication

Generic	Trade name	Dose	Contents of pack*	Notes
PREMEDICATION (INTRAVENOUS)				
Midazolam HCl	Dormicum® and generic	2,5 mg (0,5 ml)	1 ampoule 5 mg (5mg/ml, 1 ml)	5 mg = 1 ml
LOCAL ANAESTHETIC (INTRAVENOUS)				
Lidocaine HCl		20 mg (2 ml)	1 ampoule 100 mg (10mg/ml, 10 ml)	10 mg = 1 ml
COMA INDUCTION MEDICATON (INTRAVENOUS)				
Thiopental sodium	Thiopental	2000 mg	4 vials 500 mg	Dissolve the vial of dry medication in water for injections
Propofol **	Propofol-Lipuro emulsion® Propofol Fresen MCT/LCT emulsion®	1000 mg (50 ml)	1 vial 1000 mg (20mg/ml, 50 ml)	1000 mg = 50 ml
NEUROMUSCULAR BLOCKER (INTRAVENOUS)				
Rocuronium bromide	Esmeron® and generic	150 mg (15 ml)	3 vials 50 mg (10mg/ml, 5ml)	50 mg = 5 ml
Atracurium besylate	Tracrium® and generic	100 mg (10 ml)	2 ampoules 50mg (10mg/ml, 5ml)	50 mg = 5 ml
Cisatracurium besylate	Nimbex®	30 mg (15 ml)	3 ampoules 10 mg (2mg/ml, 5ml)	10 mg = 5 ml

Generic	Trade name	Dose	Contents of pack*	Notes
ANTI-EMETICS				
Metoclopramide (rectal)	Primperan®	20 mg		Administer at intervals of 12 hours, 6 hours and 1 hour before the procedure
Metoclopramide HCl (oral)	Primperan® and generic	10 mg		Administer at intervals of 12 hours, 6 hours and 1 hour before the procedure
BARBITURATE (ORAL)				
Pentobarbital sodium - raw material		15 g	100 g	
Secobarbital sodium - raw material		15 g	100 g	

For the most up-to-date information, see the websites of the KNMG and KNMP.
All data is correct as of 1 aug 2012.

* The contents of a single pack are displayed. For the neuromuscular blockers and premedication, other pack sizes are available.

** Always use the emulsion form with medium-chain triglycerides. These are less painful to inject than the propofol, which contains no medium-chain triglycerides.

Appendix VI Preparation procedure for mixtura nontherapeutica

Instead of pentobarbital sodium, secobarbital sodium can be used.

MIXTURA NONTHERAPEUTICA PENTOBARBITAL (150MG/ML)

Formula - see also the 'Comments' section

pentobarbital sodium	15	g
alcohol 96% V/V	16.2	g (20 ml)
purified water	15	g
propylene glycol	10.4	g (10 ml)
saccharin sodium	250	mg
syrup simplex	65	g
star anise oil	1	drop
	121.85	**g (100 ml)**

Preparation - See LNA procedure 'Solution for oral use', preparation (F06-4) and the 'Comments' section.

- Mix the purified water, propylene glycol and the alcohol.
- Dissolve the pentobarbital sodium in this mixture whilst stirring.
- Dissolve the saccharin sodium in this mixture.
- Mix with the sugar syrup and the star anise oil.

Packaging

Bottle that protects the contents from the effects of light.

Storage

Unopened bottle:

- patient's bottle: 1 month: store under 25°C, but not in the refrigerator or freezer.

Labelling

Shelf life and storage temperature of an unopened bottle.

Comments

Pentobarbitone sodium dissolves effectively in water, although the large quantity can mean it takes some time to do so. The eventual solution has a pH of between 10.0 and 10.5. Under the influence of CO_2 in the air, the pH level can gradually reduce, which can result in crystallisation of free pentobarbital. This has been shown to be preventable by adding propylene glycol and alcohol in the stated quantities. These additives also work as preservatives.

Pentobarbital sodium is described in the literature as a substance with a bitter taste. Its concentration in this preparation results in a taste that is not only bitter, but also somewhat soapy due to the high pH level. As a result, a sweetener has been added to improve the taste as well as star anise oil to mask the alkalinity. However, despite this, the bitter after-taste is very persistent.

Appendix VII Materials: infusion needles and elastomeric pump

INFUSION NEEDLES

ZI number	Name of product	Number	Manufacturer
20G			
14880474	VENFLON IV CANNULA 1.0X32MM PINK PTFE + BYSP 391452 (20G)	50	BECTON-DICKINSON
15434524	B-D NEXIVA IV CLOSED CATHETER SYST+KR 20G 32MM Q-SYTE (383667)	20	BECTON-DICKINSON
18 G			
14880717	VENFLON IV CATHETER IN PTFE 18G 32MM	50	BECTON-DICKINSON
14880725	VENFLON IV CATHETER IN PTFE 18G 45MM	50	BECTON-DICKINSON
15434559	B-D NEXIVA IV CLOSED CATHETER SYST+KR 18G 45MM Q-SYTE	20	BECTON-DICKINSON

ELASTOMERIC PUMP

ZI number	Name of product	Number	Manufacturer
14282224	EASYPUMP ST 100-0.5 200ML/HOUR 100ML	10	BRAUN MEDICAL BV
15156583	INTERMATE SV 200 105 ml	1 ST	BAXTER
14685043	INTERMATE SV 200 105 ml	24 ST	BAXTER

For the most up-to-date information, see the websites of the KNMG and KNMP.
All data is correct as of 1 aug 2012.

Appendix VIII Most important differences with regard to the 2007 edition of the Standards for Euthanasia

1. Propofol added as a coma induction medication

For the intravenous method, propofol is also included as a possible coma induction medication in addition to thiopental. The reason for this is that in recent years, there have regularly been problems regarding the availability of thiopental.

2. No emergency solutions included

Preferably, the same coma induction medication and the same neuromuscular blocker should be used as much as possible. This enables experience to be gained in a more concentrated fashion. Propofol and thiopental are two effective types of medication. As a result, emergency solutions need no longer be included.

3. Amendment to the advice regarding neuromuscular blockers

In mid-2011, pancuronium was withdrawn from the market. Until that time, pancuronium was the most frequently used neuromuscular blocker. Rocuronium is now the medication of choice. Atracurium (100 mg) or cisatracurium (30 mg) are good alternatives. Due to its short duration of effect, we advise against using mivacurium.

4. Prior administration of lidocaine 1% for thiopental and propofol

Due to the pain associated with both coma induction medications, 2ml of lidocaine (1%) will be injected intravenously beforehand.

5. Solvent for thiopental

Water for injections is the only stated solvent for ampoules of thiopental.

6. Elastomeric pump

For the intravenous administration of thiopental an elastomeric pump is an alternative. Examples are Easypump® and Intermate®. For order, the pharmacist can find the ZI-numbers in appendix VII.

7. Oral method

The dose of pentobarbital or secobarbital has been increased from 9 grams to 15 grams. In Switzerland, experience shows that for doses of 15 grams, 98% of the patients die within 30 minutes (unpublished data). For doses of 9 grams, 70% die within 30 minutes and 87% within 60 minutes (unpublished data).

Due to the large quantity, 15 grams of pentobarbital or secobarbital cannot easily be mixed into a pot of yoghurt. For this reason, it is advised that pentobarbital or secobarbital powder is no longer mixed with yoghurt.

8. Intravenous premedication method

For the intravenous method, premedication with lorazepam has been removed. Experience tells that GPs have little to no experience with lorazepam. In addition, lorazepam is difficult to obtain and often forms precipitation. This means that only IV midazolam is included as a premedication.

9. Medically induced coma

When determining whether or not the patient's consciousness has been sufficiently reduced, the term 'medically induced coma' is used. These guidelines include a framework with which the patient's level of consciousness can be determined. See Appendix IV.

10. Advice regarding the insertion of an infusion needle

It is not always easy to insert an infusion needle. The guidelines include advice on inserting an infusion needle. See Appendix III.

11. Infusion needles

A number of infusion needles have been assigned ZI numbers to enable pharmacists to place orders. See Appendix VII.

12. Doctor's and pharmacist's questionnaires

A number of adjustments have been made and the questionnaires have been geared more closely toward professional practice.

Appendix IX Criteria of due care for pharmacists

DECISION REGARDING PROVISION

The decision to provide of euthanatic agents can only be taken following timely consultation between the doctor(s) and the pharmacist concerned. Preferably, this will take at least the necessary time period agreed by the doctor and pharmacist.
Pharmacists have the right to refuse to provide of euthanatic agents for reasons of their own. In such cases, the pharmacist must discuss this with the doctor. Upon request, the doctor must sufficiently inform the pharmacist of background information relevant to the pharmacist. This can be done verbally[1].
The pharmacist will check that the medication, the dosage and the route of administration are suitable for the patient in question. The pharmacist can consult a colleague about the pharmaceutical aspects without violating doctor-patient confidentiality.
Hospital pharmacists must also comply with the rules and regulations applicable at his/her institution. If a pharmacist refuses any form of cooperation with euthanasia for reasons of principle, then the pharmacist must inform the doctors in his/her catchment area of this fact in advance.

REQUEST FOR PROVISION OF EUTHANATIC AGENTS

Requests for the provision of euthanatic agents must be made in writing. The request must be clear and compliant with the requirements that also apply to medications governed by the Opium Act (Opiumwet).
The filing and storage of such request must be conducted by the pharmacist as if it were a medication covered by the Opium Act. A period of 15 years is advised for the storage of requests for of euthanatic agents, the same retention period as for medical records. The preparation protocols will be stored together with the request.

PREPARATION

If the syringes are prepared by the pharmacist, then he/she will record the name of the patient and the dosage of medication on each syringe. To prevent mistakes, the syringes or other administration materials will be numbered in the correct order of administration.

PROVISION

The pharmacist will give verbal instructions regarding the practical and technical conduct of euthanasia. If necessary, a manual for the administration of euthanatic agents can be provided together with the agents.
The of euthanatic agents must be provided directly from the pharmacist to the doctor. When doing so, the pharmacist will give instructions regarding storage of the agents.
The pharmacist and the doctor will agree that once the procedure has been conducted, any unused medication, materials and remnants will be handed over to the pharmacist and they will fill in the evaluation form together.

1 For example, the pharmacist can ask whether another independent doctor has been consulted.

Appendix X Composition of expert group

Dr. P.V. Admiraal, *anaesthesiologist (retired)*, chair, Rijswijk
Drs. R.S. van Coevorden, *GP, SCEN doctor,* Amsterdam
Drs. A. van Dijk, *hospital pharmacist,* Sint Antonius Hospital, Nieuwegein
Dr. J.J. Ennema, *intensive care anaesthesiologist, SCEN doctor*, Isala Clinics, Zwolle
Drs. I.E.J. Geerligs, *hospital pharmacist*, AMC, Amsterdam
Drs. W.G.H. van der Geest, *pharmacist*, Groesbeek Pharmacy, Groesbeek
Drs. W.P. Göttgens, *pharmacist*, Blanckenburgh Pharmacy, Beuningen
Drs. E.G.H. Kenter, *GP, SCEN doctor*, Aerdenhout
Drs. J.M.M. Verwiel, internist-intensivist, *SCEN doctor*, St Radboud UMC, Nijmegen

Composition and final editing
Drs. A. Horikx, *pharmacist*, KNMP Drug Information Centre, The Hague
Drs. R.H.J.M Sanders, *SCEN district coordinator*, KNMG, Utrecht.

Appendix XI Participants in the invitational conference

Regional Euthanasia Review Committees (RTE):
Drs. J.A. Schulkens-van der Pol
Drs. W.G.P. Mulder
Mr. W.J.C. Swildens
Mr. B.E. Liauw

The Royal Dutch Society for the Advancement of Pharmacy (KNMP):
Drs. P. Lebbink

The Dutch College of General Practitioners (NHG):
Dr. P. Janssen

Netherlands Association of Internal Medicine (NIV):
Dr. J.E. Portielje

Netherlands Society of Anaesthesiologists (NVA):
Dr. M.F.M. Wagemans

Netherlands Intensive Care Association (NVIC):
Drs. J.M.M. Verwiel

Right to Die-NL (NVVE):
Dr. P.M. de Jong

Dutch Hospital Pharmacists' Association (NVZA):
Drs. A. van Dijk

The Dutch Association of Elderly Care Physicians and Social Geriatricians (Verenso):
Drs. A.A. Weinberg

Appendix XII Literature consulted

- Horikx A, Admiraal P.V., Toepassingen van euthanatica; ervaringen van artsen bij 227 patiënten *(Utilization of euthanatic agents; experience of physicians with 227 patients, 1998–2000.)*, 1998-2000. Ned Tijdschr Geneeskd *(Netherlands Journal of Medicine)* 2000;144:497-500.
- Lalmohamed A, Horikx A., Ervaringen met euthanatica sinds 2007 *(Experience with euthanasia since 2007. Analysis of problems with execution)*. Ned Tijdschr Geneeskd *(Netherlands Journal of Medicine)* 2010;154:A1882.
- Regional Euthanasia Review Committees: Annual Report 2009. The Hague: Koninklijke De Swart, 2010.
- Sprij B., Mag het ietsje minder zijn? Laat dosis thiopental bij euthanasie afhangen van het lichaamsgewicht *(Could it be a little less? Let the dose of thiopental in euthanasia depend on the body weight)* Ned Tijdschr Geneeskd *(Netherlands Journal of Medicine)* 2010;154:A1983.
- Standaard Euthanatica: Toepassing en bereiding *(Standards for Euthanasia Drugs: Application and Preparation)* The Hague: The Royal Dutch Society for the Advancement of Pharmacy (KNMP), 2007.

Appendix XIII Doctor's questionnaire

Doctors are requested to complete and return a questionnaire. This enables the KNMP and KNMG to test the advice provided in the Guidelines for the Practice of Euthanasia and Physician-assisted suicide based on practical experiences, and to adjust them if required. This form can be filled in by the doctor anonymously and with no obligations whatsoever, and can be sent carriage forward to the following address:

KNMP Drug Information Centre
Freepost Number 1774, 2501 VB The Hague

The anonymity means that more detailed information cannot subsequently be requested, so the form must be completed as specifically as possible. For this reason, we kindly request that you give answers to the following questions at the very least:

PATIENT DETAILS

- Gender: ..... Age: ..... Weight: .....
- Illness and physical condition:

- Medication history: Which medications were used? (name and dosage)

  ☐ opioids (oral – pump – etc.):

  ☐ benzodiazepines:

  ☐ other medications:

PRACTICE OF EUTHANASIA OR PHYSICIAN-ASSISTED SUICIDE

- Which method was used?
  - ☐ oral method (pentobarbital/secobarbital drink)
  - ☐ thiopental injection via syringe + neuromuscular blocker
  - ☐ thiopental via elastomeric pump + neuromuscular blocker
  - ☐ thiopental via infusion + neuromuscular blocker
  - ☐ propofol injection via syringe + neuromuscular blocker
  - ☐ propofol via infusion + neuromuscular blocker
  - ☐ another method (please specify): .....
- What were your reasons for selecting the method used?
- Did you inject lidocaine beforehand, before using the intravenous method? ☐ Yes ☐ No
- If you used the intravenous method, what neuromuscular blocker did you use and in what dosage?

1PREMEDICATION

- If premedication was used, which medication did you use and in what dosage?
- How long before the euthanasia procedure did you administer the premedication?
- What effect did it have?

COURSE OF EUTHANASIA

- On what date was the euthanasia performed? .....
- How long after the administration of the coma induction medication did the patient lapse into a **coma**?
- How long after the administration of the coma induction medication did the patient **die**?

If you used the oral method and if it took longer than 2 hours for the patient to die, what action did you take?

- Did you experience problems or complications during the administration of the of euthanatic agents? (For example, vomiting, problems finding a blood vessel etc.) If so, can you give details?

- Did you notice anything out of the ordinary, e.g. strange reactions in the patient? If so, can you give details?

OTHER QUESTIONS

- Where did the euthanasia procedure take place?
  ☐ at the patient's home ☐ in a hospice or nursing home
  ☐ in hospital ☐ other (please specify): .....

- Did you go through the euthanasia protocol together with the pharmacist? ☐ Yes ☐ No

- Did you need to use the emergency set? ☐ Yes ☐ No

GENERAL COMMENTS

- Do you have any suggestions on how to improve the euthanasia advice?

- If you have any additional comments, please write them in the space below.

Appendix XIV Pharmacist's questionnaire

Pharmacists are requested to complete and return a questionnaire. This enables the KNMP and KNMG to test the advice provided in the Guidelines for the Practice of Euthanasia and Physician-assisted suicide based on practical experiences, and to examine how the process of requesting for and providing of euthanatic agents is conducted in practice.

This form can be filled in anonymously and with no obligations whatsoever, and can be sent carriage forward to the following address:

KNMP Drug Information Centre
Freepost Number 1774, 2501 VB The Hague

The anonymity means that more detailed information cannot subsequently be requested, so the form must be completed as specifically as possible. For this reason, we kindly request that you give answers to the following questions at the very least:

REQUEST FOR PROVISION OF EUTHANATIC AGENTS

- After the first (not necessarily the definitive) request for provision of the euthanatic agents, how much time elapsed before the euthanasia procedure was conducted?

  ☐ more than 1 week ☐ less than 1 week, or ..... days ☐ ..... hours

- Did you discuss the patient's pharmacotherapeutic treatment with the doctor? ☐ Yes ☐ No

- How did you receive the request and the prescription?
  ☐ provided by the doctor in person, on paper or by phone
  ☐ via e-mail/fax
  ☐ other (please specify): .....

- Did you ask the doctor whether he/she had consulted a 2nd doctor? ☐ Yes ☐ No

- Did the prescription comply with the requirements for requesting a medication governed by the Opium Act (Opiumwet)? ☐ Yes ☐ No

PREPARATION

- Did the preparation take place in your pharmacy?
  ☐ Yes
  ☐ No, the of euthanatic agents were supplied by another pharmacy.
  ☐ No, the doctor prepared the syringes or other administration materials him/herself.

- Were your pharmacy assistants involved?
  - ☐ Yes, this matter was discussed with the assistants, but they were not involved in the preparation or provision of the of euthanatic agents . This was done by the pharmacist(s).
  - ☐ Yes, this matter was discussed with the assistants and they were also involved in all/part of the preparation of the euthanasia prescription.
  - ☐ No, the assistants were not involved. The of euthanatic agents were prepared and provided by the pharmacist(s).
- Did you consult a fellow pharmacist about this euthanasia request?

  ☐ No ☐ Yes, I consulted them about: .....

PROVISION

- Did you give the of euthanatic agents to the doctor in person?

  ☐ Yes ☐ No, I gave them to: .....
- Which medications and for which methods have you delivered (other than for an emergency set)?
  - ☐ oral method (pentobarbital/secobarbital drink)
  - ☐ thiopental injection via syringe + neuromuscular blocker
  - ☐ thiopental via elastomeric pump + neuromuscular blocker
  - ☐ thiopental via infusion + neuromuscular blocker
  - ☐ propofol, injection via syringe + neuromuscular blocker
  - ☐ propofol via infusion + neuromuscular blocker
  - ☐ another method (please specify): .....
- If the intravenous method was used, what neuromuscular blocker did you provide and in what dosage?
- Did you provide a syringe of lidocaine? ☐ Yes ☐ No
- Did you give the doctor instructions regarding the preparation for administration, the application and the storage of the of euthanatic agents? ☐ Yes ☐ No
- Did you provide the doctor with an emergency set? ☐ Yes ☐ No
- Did you receive the unused or remaining of euthanatic agents from the doctor?

  ☐ Yes ☐ I don't know if any euthanatic agents were left over.
  ☐ No ☐ There were no euthanatic agents left over.

GENERAL

- Was there any deviation from the medications recommended by the guidelines?
  ☐ No
  ☐ Yes (please explain reasons why): .....

- Did the doctor inform you of how the procedure ran its course? ☐ Yes ☐ No

- Did the euthanasia take place at the patient's home, in hospital or at a hospice/nursing home?
  ☐ at the patient's home ☐ in a hospice or nursing home
  ☐ in hospital ☐ other (please specify): .....

- On what date was the euthanasia performed? .....

- Do you have any further comments or suggestions?

knmg voor verantwoorde medische zorg

Royal Dutch Medical Association (KNMG)
P.O. Box 20051 - 3502 LB Utrecht
tel 0031 -30 - 282 38 00 - www.knmg.nl

KNMP

Royal Dutch Society for the Advancement of Pharmacy (KNMP)
P.O. Box 30460 - 2500 GL The Hague
tel 0031 -70- 373 73 73 - www.knmp.nl

Download the document at www.knmg.nl/english or www.knmp.nl

Exhibit V

PUBLIC ASSESSMENT REPORT of the Medicines Evaluation Board in the Netherlands

Midazolam Accord 1 mg/mL, solution for injection or infusion
Midazolam Accord 5 mg/mL, solution for injection or infusion
Accord Healthcare Ltd, United Kingdom

midazolam hydrochloride

This assessment report is published by the MEB pursuant Article 21 (3) and (4) of Directive 2001/83/EC. The report comments on the registration dossier that was submitted to the MEB and its fellow –organisations in all concerned EU member states.
It reflects the scientific conclusion reached by the MEB and all concerned member states at the end of the evaluation process and provides a summary of the grounds for approval of a marketing authorisation.
This report is intended for all those involved with the safe and proper use of the medicinal product, i.e. healthcare professionals, patients and their family and carers. Some knowledge of medicines and diseases is expected of the latter category as the language in this report may be difficult for laymen to understand.

This assessment report shall be updated by a following addendum whenever new information becomes available.

General information on the Public Assessment Reports can be found on the website of the MEB.

To the best of the MEB's knowledge, this report does not contain any information that should not have been made available to the public. The MAH has checked this report for the absence of any confidential information.

EU-procedure number: NL/H/1077/001-002/DC
Registration number in the Netherlands: RVG 100470, 100485

22 December 2009

Pharmacotherapeutic group:	Benzodiazepine derivatives
ATC code:	N05CD08
Route of administration:	intravenous; intramuscular
Therapeutic indication:	conscious sedation, anaesthesia, sedation in intensive care units in adults and children
Prescription status:	prescription only
Date of authorisation in NL:	8 June 2009
Concerned Member States:	Decentralised procedure with AT, BE, CY, CZ, DE, DK, EE, EL, ES, FI, HU, IE, IT, LV, MT, NO, PL, PT, SE, SI, SK, UK
Application type/legal basis:	Directive 2001/83/EC, Article 10(1)

For product information for healthcare professionals and users, including information on pack sizes and presentations, see Summary of Product Characteristics (SPC), package leaflet and labelling.

I INTRODUCTION

Based on the review of the quality, safety and efficacy data, the member states have granted a marketing authorisation for Midazolam Accord 1 mg/mL and Midazolam Accord 5 mg/mL, solution for injection or infusion, from Accord Healthcare Ltd. The date of authorisation was on 8 June 2009 in the Netherlands.

The product is indicated for:

In both adults and children

- Conscious sedation before and during diagnostic or therapeutic procedures with or without local anaesthesia.
- Anaesthesia
  - Premedication before induction of anaesthesia
- Sedation in intensive care units

In adults only

- Anaesthesia
  - Induction of anaesthesia
  - As a sedative component in combined anaesthesia

A comprehensive description of the indications and posology is given in the SPC.

Midazolam is a derivative of the imidazobenzodiazepine group. The free base is a lipophilic substance with low solubility in water.
The basic nitrogen in position 2 of the imidazobenzodiazepine ring enables the active ingredient in midazolam to form water-soluble salts with acids. These produce a stable and well tolerated solution for injection or infusion.
The pharmacological effect of midazolam is characterised by short duration because of a rapid metabolic transformation over a short time. Midazolam has a potent sedative and sleep-inducing effect. Furthermore, it has the effect of relieving anxiety and convulsions and of relaxing muscles.
After intramuscular or intravenous administration, anterograde amnesia of short duration occurs; (the patient does not remember events occurring at the time of the substance's maximal activity).

This decentralised procedure concerns a generic application claiming essential similarity with the innovator product Dormicum 5 mg/ml solution for injection (NL RVG 10064) which has been registered in the Netherlands by Roche Nederland B.V. since 1984. In addition, reference is made to Dormicum 1 mg/ml and 5 mg/ml authorisations in the individual member states (reference product). Dormicum solution for injection is available on the European market in both 1 mg/ml and 5 mg/ml concentrations.

The marketing authorisation is granted based on article 10(1) of Directive 2001/83/EC.

This type of application refers to information that is contained in the pharmacological-toxicological and clinical part of the dossier of the authorisation of the reference product. A reference product is a medicinal product authorised and marketed on the basis of a full dossier, i.e. including chemical, biological, pharmaceutical, pharmacological-toxicological and clinical data. This information is not fully available in the public domain. Authorisations for generic products are therefore linked to the 'original' authorised medicinal product, which is legally allowed once the data protection time of the dossier of the reference product has expired. As Midazolam Accord 1 mg/mL and 5 mg/mL are products for parenteral use, these are exempted for biostudy (NfG CPMP/EWP/QWP 1401/98). The currents product can be used instead of their reference product.

No new pre-clinical and clinical studies were conducted, which is acceptable for this abridged application.

No scientific advice has been given to the MAH with respect to these products, and no paediatric development programme has been submitted, as this is not required for a generic application.

II SCIENTIFIC OVERVIEW AND DISCUSSION

II.1 Quality aspects

Compliance with Good Manufacturing Practice
The MEB has been assured that acceptable standards of GMP (see Directive 2003/94/EC) are in place for these product types at all sites responsible for the manufacturing of the active substance as well as for the manufacturing and assembly of this product prior to granting its national authorisation.

Active substance
The active substance is midazolam hydrochloride, an established active substance, described in the European Pharmacopoeia (Ph.Eur.*). The drug substance is a white or yellowish crystalline powder, practically insoluble in water, freely soluble in acetone and in ethanol and soluble in methanol.

The CEP procedure is used for the active substance. Under the official Certification Procedures of the EDQM of the Council of Europe, manufacturers or suppliers of substances for pharmaceutical use can apply for a certificate of suitability concerning the control of the chemical purity and microbiological quality of their substance according to the corresponding specific monograph, or the evaluation of reduction of Transmissible Spongiform Encephalopathy (TSE) risk, according to the new general monograph, or both. This procedure is meant to ensure that the quality of substances is guaranteed and that these substances comply with the European Pharmacopoeia.

Quality control of drug substance
The active substance specification is in accordance with the Ph.Eur. The MAH has set additional requirements for related substances and residual solvents. The drug substance specifications are in line with the CEP. The MAH has included batch analysis results of three batches, demonstrating compliance with the specifications.

Stability of drug substance
In accordance with the CEP, the re-test period for the drug substance is two years if stored in triple polyethylene bag placed in a polyethylene container. Assessment thereof was part of granting the CEP and has been granted by the EDQM.

** Ph.Eur. is an official handbook (pharmacopoeia) in which methods of analysis with specifications for substances are laid down by the authorities of the EU.*

Medicinal Product

Composition
Midazolam Accord 1 mg/mL contains as active substance 1 mg/ml of midazolam as midazolam hydrochloride, and is a clear, colorless to pale yellow solution with a pH in the range of 2.9-3.7 and 170 mOsm/kg to 230 mOsm/kg osmolality.

Midazolam Accord 5 mg/mL contains as active substance 5 mg/ml of midazolam as midazolam hydrochloride, and is a clear, colorless to pale yellow solution with a pH in the range of 2.9 - 3.7 and 270 mOsm/kg to 330 mOsm/kg osmolality.

The 1 mg/ml solution for injection or infusion is packed in 5 ml type I clear white snap off and blue band ampoules.
The 5 mg/ml solution for injection or infusion is packed in 1 ml, 3 ml and 10 ml type I clear white snap off ampoules with yellow, blue and red band, respectively.

For both strengths the excipients are: sodium chloride, concentrated hydrochloric acid (for pH-adjustment), sodium hydroxide (for pH-adjustment), water for injections.

The used excipients are well known and safe in the proposed concentrations. All excipients comply with the requirements in the relevant Ph.Eur. monographs.

Pharmaceutical development

All components of the drug product are simple and commonly used. The following aspects were studied in the pharmaceutical development: the stability of midazolam in solution, thermal stability, the stability of midazolam towards the lower and higher extreme of the pH range, the stability of midazolam Injection upon holding, compatibility with process steam components, photostability and stability in the presence of dissolved oxygen. The choice of the packaging material is justified. The development of the product has been satisfactorily performed and explained.

Manufacturing process

The manufacture of Midazolam Accord 1 mg/mL and 5 mg/mL is performed by dissolving the ingredient of sodium chloride in the solvent water for injections. Midazolam is added with constant stirring. Hydrochloric acid solution is added and stirred and the pH is checked and if necessary adjusted with sodium hydroxide or hydrochloric acid, with continuous stirring. The bulk solution is adjusted to 100% volume with water for injections. The bulk is then filtered and the solution is aseptically filled into clean, sterile ampoules. An inert gas (nitrogen) is used to displace oxygen from the solution during processing to reduce the possibility of oxidative changes in the formulation. The filled ampoules are steam sterilized. Three batches for each formulation (1 mg/ml; 5ml and 5 mg/ml; 1, 3 and 10 ml) were included in the process validation. All batches complied with the specifications. Given the relative simplicity of the manufacturing process, it has been sufficiently validated. No overages are used.

Quality control of drug product

The product specification includes tests for appearance, identification, acidity, extractable volume, subvisible particles, sterility, assay of midazolam, bacterial endotoxins and related substances. The release requirements are acceptable. The analytical methods have been adequately described and validated. Three pilot scale batches were included in the process validation. All batches complied with the specifications. The release and shelf-life specifications are identical with the exception of the specification for the related substances.

Compatibility

The innovator product claims compatibility with Normal Saline, Glucose 5% and 10 % in water, Fructose intravenous infusion (Levulose 5%), Potassium Chloride, Sodium Chloride, Calcium Chloride intravenous infusion (Ringer's solution) and Compound Sodium Lactate intravenous infusion (Hartmann's solution). Midazolam's compatibility with these infusion fluids was studied. After dilution, the solution was observed for signs of discoloration, precipitation or particulate matter for a period of 24 hours at room temperature. The compatibility of midazolam with the commonly used diluents has been satisfactorily established in the compatibility studies.

Stability tests on the finished product

Batch analyses results for 3 pilot scale batches for each formulation (1 mg/ml; 5ml and 5 mg/ml; 1, 3 and 10 ml) have been submitted in the stability study. The same analytical methods were used as described for the product specification. For none of the batches tested, a significant change is observed at both long term and accelerated conditions. The results of the continued studies, at least up to the proposed storage period are awaited. The MAH committed to provide stability results of three full-scale batches of 1 mg/ml (5 ml) and 5 mg/ml (1 ml, 3 ml and 10 ml). On the basis of the currently available data, a shelf-life of 24 months was granted.. Midazolam in solution was found to degrade highly in the presence of light. Therefore the labelled storage conditions are *Store in the original package in order to protect from light*.

Chemical and physical in-use stability of the dilutions has been demonstrated for 24 hours at room temperature (15 – 25°C) or for 3 days at +2 to +8 °C.

Specific measures concerning the prevention of the transmission of animal spongiform encephalopathies

There are no substances of ruminant animal origin present in the product nor have any been used in the manufacturing of this product, so a theoretical risk of transmitting TSE can be excluded.

II.2 Non clinical aspects

These products are generic formulations of Dormicum solution for injection, which is available on the European market. No new preclinical data have been submitted, and therefore the application has not undergone preclinical assessment. This is acceptable for this type of application.

Environmental risk assessment
These products are intended as a substitute for other identical products on the market. The approval of this product will not result in an increase in the total quantity of midazolam released into the environment. It does not contain any component, which results in an additional hazard to the environment during storage, distribution, use and disposal.

II.3 Clinical aspects

Midazolam is a well-known active substance with established efficacy and tolerability.

Midazolam Accord 1 mg/mL and Midazolam Accord 5 mg/mL, solution for injection or infusion are parenteral formulations and therefore fulfil the exemption mentioned in the Note for Guidance on bioequivalence "5.1.6 parenteral solutions", which states that a bioequivalence study is not required if the product is administered as an aqueous intravenous solution containing the same active substance in the same concentration as the currently authorized reference medicinal product (NfG CPMP/EWP/QWP 1401/98). The quantitative composition of Midazolam Accord 1 mg/mL and Midazolam Accord 5 mg/mL is entirely the same as the originator. Therefore, it may be considered as therapeutic equivalent, with the same efficacy/safety profile as known for the active substance of the reference medicinal product. Dormicum is available on the market in 1 mg/ml and 5 mg/ml concentration with filling volumes of 5 ml (1 mg/ml) and 1 ml, 3 ml and 10 ml (5 mg/ml). The current products can be used instead of their reference product.

Pharmacovigilance system
The MEB has been assured that the system of pharmacovigilance will be in place and functioning before the product is marketed. The MAH has made some post-approval commitments regarding pharmacovigilance; these can be found in the list of commitments on page 7 of this report.

Risk management plan
Midazolam was first approved in September 1982, and there is now more than 10 years post-authorisation experience with the active substance. The safety profile of midazolam can be considered to be well established and no product specific pharmacovigilance issues were identified pre- or postauthorisation which are not adequately covered by the current SPC. Additional risk minimisation activities have not been identified for the reference medicinal product. Routine pharmacovigilance activities are sufficient to identify actual or potential risks and a detailed European Risk Management Plan is not necessary for this product.

Product information

SPC
The content of the SPC approved during the decentralised procedure is in accordance with that accepted for the innovator product Dormicum 5 mg/ml (FR/H/0232/001-002).

Readability test
The package leaflet has been evaluated via a user consultation study in accordance with the requirements of Articles 59(3) and 61(1) of Directive 2001/83/EC. A test consisting of two rounds was carried out with 20 participants. As a result of the first round no changes to either the leaflet or the questionnaire were deemed necessary. This was also the case after the second round of testing. After two rounds of user testing, 99.2% of the subjects were able to locate the requested information and to answer correctly. The lay-out of the leaflet was scored acceptable for 70% of the lay-out items with the exception of type and

size of fonts used. As a result, no changes were deemed necessary to the content of the patient information leaflet of Midazolam Accord 1 and 5 mg/ml.
Overall, it can be concluded that there were sufficient questions about the critical sections. In the test it was easy to determine which results are linked to which conclusions. The conclusions are clear, concise and have been clearly presented. Furthermore, the following areas have been sufficiently covered: traceability, comprehensibility and applicability. The readability test has been sufficiently performed.

III OVERALL CONCLUSION AND BENEFIT-RISK ASSESSMENT

Midazolam Accord 1 mg/mL and Midazolam Accord 5 mg/mL, solution for injection or infusion have a proven chemical-pharmaceutical quality and are generic forms of Dormicum solution for injection. Dormicum is a well-known medicinal product with an established favourable efficacy and safety profile.

Since both the reference and current product are intended for parenteral use, no bioequivalence study is deemed necessary.

The MAH committed to have the pharmacovigilance system in place and functioning before the product is placed on the market.

The SPC is consistent with that of the reference product. The SPC, package leaflet and labelling are in the agreed templates and are in agreement with other midazolam containing products.

The Board followed the advice of the assessors.

There was no discussion in the CMD(h). Agreement between member states was reached during a written procedure. The concerned member states, on the basis of the data submitted, considered that essential similarity has been demonstrated for Midazolam Accord 1 mg/mL and 5 mg/mL with the reference product, and have therefore granted a marketing authorisation. The decentralised procedure was finished on 5 December 2008. Midazolam Accord 1 mg/mL and Midazolam Accord 5 mg/mL were authorised in the Netherlands on 8 June 2009.

A European harmonised birth date has been allocated (10 September 1982) and subsequently the first data lock point for midazolam is September 2009. The first PSUR will cover the period from December 2008 to September 2009, after which the PSUR submission cycle is 3 years.

The date for the first renewal will be: 1 June 2010.

The following post-approval commitments have been made during the procedure:

Quality - Medicinal product

- The MAH committed to provide stability results of three full-scale batches of 1 mg/ml (5 ml) and 5 mg/ml (1 ml, 3 ml and 10 ml).

Pharmacovigilance system

- The MAH committed to document the SOP ‘Interaction between safety issues and product defects’ and those SOPs which are in preparation, before the products are placed on the market, in the Pharmacovigilance system.
- The MAH committed to have a validated database in place before the product is placed on the market.
- The MAH committed to take appropriate measures to ensure that master copies of pharmacovigilance source documents are sufficiently protected and will be in place before the products are placed on the market.
- The MAH committed to take appropriate measures to ensure that the quality management system will be in place before the products are placed on the market.

List of abbreviations

ASMF	Active Substance Master File
ATC	Anatomical Therapeutic Chemical classification
AUC	Area Under the Curve
BP	British Pharmacopoeia
CEP	Certificate of Suitability to the monographs of the European Pharmacopoeia
CHMP	Committee for Medicinal Products for Human Use
CI	Confidence Interval
C_{max}	Maximum plasma concentration
CMD(h)	Coordination group for Mutual recognition and Decentralised procedure for human medicinal products
CV	Coefficient of Variation
EDMF	European Drug Master File
EDQM	European Directorate for the Quality of Medicines
EU	European Union
GCP	Good Clinical Practice
GLP	Good Laboratory Practice
GMP	Good Manufacturing Practice
ICH	International Conference of Harmonisation
MAH	Marketing Authorisation Holder
MEB	Medicines Evaluation Board in the Netherlands
OTC	Over The Counter (to be supplied without prescription)
PAR	Public Assessment Report
Ph.Eur.	European Pharmacopoeia
PIL	Package Leaflet
PSUR	Periodic Safety Update Report
SD	Standard Deviation
SPC	Summary of Product Characteristics
$t_{½}$	Half-life
t_{max}	Time for maximum concentration
TSE	Transmissible Spongiform Encephalopathy
USP	Pharmacopoeia in the United States

STEPS TAKEN AFTER THE FINALISATION OF THE INITIAL PROCEDURE - SUMMARY

Scope	Procedure number	Type of modification	Date of start of the procedure	Date of end of the procedure	Approval/ non approval	Assessment report attached

Exhibit W

BlueCross BlueShield of Alabama

October 2017

Blue Cross and Blue Shield of Alabama Generics Plus Drug Guide

Please consider talking to your doctor about prescribing preferred generic and brand medications, which may help reduce your out-of-pocket costs. This list may help guide you and your doctor in selecting an appropriate medication for you.

For questions about the Blue Cross and Blue Shield of Alabama 2017 Prescription Drug Guide, call the customer service number on the back of your Blue Cross ID card or visit **AlabamaBlue.com/pharmacy.**

The Prescription Drug Guide is regularly updated. Please visit **AlabamaBlue.com/pharmacy** for the most up-to-date information.

Contents

Therapeutic Class Drug List

To search for a drug name within this PDF document, use the Control and F keys on your keyboard, or go to Edit in the drop-down menu and select Find/Search. Type in the word or phrase you are looking for and click on Search.

Prime Therapeutics LLC®, an independent company, provides pharmacy benefit management services for Blue Cross and Blue Shield of Alabama, an independent licensee of the Blue Cross and Blue Shield Association.

Introduction

Blue Cross and Blue Shield of Alabama is pleased to present the January 2017 Generics Plus Drug Guide.

The Generics Plus Drug Guide includes all Preferred Brand and a partial listing of Generic drugs. Brand name drugs not listed in this Generics Plus Drug Guide are Non-Preferred Brands. Blue Cross may choose to not add a drug to the Preferred Brand tier for reasons including safety or effectiveness, or because a similar, more cost-effective drug is already available as a Preferred Brand or Generic drug. New brand drugs are Non-Preferred until reviewed and approved for inclusion by the Pharmacy and Therapeutics (P&T) Committee.

Physicians are encouraged to prescribe drugs listed in this Generics Plus Drug Guide. Members are encouraged to show this Generics Plus Drug Guide to their physician and pharmacist.

Member Prescription Benefit

The Blue Cross prescription benefit is multi-tiered, placing prescription drugs into one of the following copayment levels.

Tier 1 – Lowest copayment – Generic drugs and select Preferred Brand drugs– listed and unlisted generic drugs

Tier 2 – Middle copayment – Preferred Brand drugs – all shown in the Prescription Drug Guide

Tier 3 – Highest copayment – Non-Preferred Brand drugs – unlisted

Tier 4 – Specialty (if applicable)

Coverage is limited to prescription products approved by the Food and Drug Administration (FDA) as evidenced by a New Drug Application (NDA), Abbreviated New Drug Application (ANDA), or Biologics License Application (BLA) on file. Any legal requirements or group specific benefits for coverage will supersede this (e.g., preventive drugs per the Affordable Care Act).

In addition, some benefits (e.g., closed plan designs) do not provide coverage of the Non-Preferred Brand drugs (Tier 3). The drug benefit includes most prescription drug classes, although some restrictions and exclusions apply. For example, investigational drugs and drugs indicated for cosmetic purposes (e.g., Propecia for hair growth) are not covered. Coverage and copayment levels vary depending on the plan. Drugs that require Prior Authorization, Step Therapy, or that have Dispensing Limits are noted in the Generics Plus Drug Guide.

Pharmacy and Therapeutics (P&T) Committee

The P&T Committee is comprised of independent practicing physicians and pharmacists. The Committee meets at least quarterly. Decisions to add or remove drugs from the Generics Plus Drug Guide are based on the drug's safety, efficacy, uniqueness and cost.

Members and physicians can view the most up-to-date version of the Generics Plus Drug Guide at **AlabamaBlue.com/pharmacy.**

Brand Drugs and Generic Drugs

Classification

Prescription drugs are classified as either a Brand drug or a Generic drug. Blue Cross uses the Brand or Generic status provided by a nationally recognized company providing drug product information. The Brand/Generic status for a specific drug/specific marketer can sometimes change over the life of a product in the marketplace and change from Brand to Generic (or Generic to Brand). Such changes might change your copayment share. Brand drug or Generic drug status is never based upon a product having a trade name. Generic drugs often have trade names.

Generic Substitution

Blue Cross encourages generic utilization as a way to provide high quality drugs at a reduced cost. Generic drugs are as safe and effective as their brand counterparts, but are usually less expensive. Generic drugs are manufactured under the same strict requirements of FDA's current Good Manufacturing Practice regulations required for Brand drugs and cover the manufacturing, identity, strength, purity and quality.

An FDA-approved Generic drug may be substituted for the Brand counterpart when it:

- Contains the same active ingredient(s) as the brand drug
- Is identical in strength, dosage form, and route of administration
- Is therapeutically equivalent and can be expected to have the same clinical effect and safety profile

To encourage use of Generic drugs, Tier 2 Preferred Brand drugs typically move to Tier 3 after an equivalent generic version becomes available.

Specialty Drugs

Specialty drugs are used in the treatment of medical conditions such as hepatitis, multiple sclerosis and rheumatoid arthritis. Specialty drugs may be oral or injectable medications that can either be self-administered or administered by a health care professional.

Some Blue Cross members must obtain their specialty drugs from Prime Therapeutics Specialty Pharmacy Network as the preferred provider. If the preferred provider is not utilized you may be responsible for up to 100 percent of the drug cost. Your plan may have a different coverage level for self-administered specialty drugs. If you have questions about your coverage for specialty drugs or your prescription drug benefit, call the number on the back of your ID card. A complete listing of specialty drugs is also available at **AlabamaBlue.com/pharmacy**.

Compound Drugs

Compound drugs are defined as a drug product made or modified to have characteristics that are specifically prescribed for an individual patient when commercial drug products are not available or appropriate. To be eligible for coverage, compounded drugs must contain at least one FDA-approved prescription ingredient and must not be a copy of a commercially available product. All compounded drugs are subject to review and may require prior authorization. Drugs used in compounded drugs may be subject to additional coverage criteria and utilization management edits. Compounds are covered only when medically necessary. Compound drugs are always classified as the highest cost-sharing non-specialty drug Tier.

Contraceptives

Some or all of the contraceptive methods or prescription drugs listed in this Prescription Drug Guide may not be covered under your plan because of your employer's religious beliefs. To find out if contraceptive methods and prescription drugs are excluded, you may find this information in the exclusions section of your benefit booklet or you may contact your group administrator.

Utilization Management

Blue Cross is committed to supporting proper selection and use of drugs for its members. To help assure these goals are met, several programs have been developed to promote drug selection that encourages both effectiveness and safety. Detailed coverage criteria can be found at **AlabamaBlue.com/pharmacy**. Preferred generic or brand drugs requiring Prior Authorization or Step Therapy, or drugs with Dispensing Limits will be noted in the Therapeutic Class Drug List portion of the Generics Plus Drug Guide.

Prior Authorization

Some drugs require Prior Authorization (**PA**) because of their high potential for misuse or overuse. Drugs selected for Prior Authorization may require that specific clinical criteria are met before the drugs will be covered under a member's prescription benefit. Approval is required for claims to process at network pharmacies.

Dispensing Limits

Dispensing Limits (**DL**) identify gender or age restrictions, and/or the maximum quantity that can be dispensed over a specific period of time. Limits are in place to encourage appropriate drug utilization, enhance member outcomes, and reduce drug benefit costs. Limits are typically developed based upon FDA-approved drug labeling.

Step Therapy

Step Therapy (**ST**) programs help manage the cost of expensive drugs by redirecting members to safe, effective and less expensive alternatives. Drugs included in the Step Therapy program require a more cost-effective prerequisite drug be tried before the Step Therapy drug will be approved for coverage. If the member meets the prerequisite requirement, the requested drug will be covered automatically without requiring review. If prerequisite drugs are not found in the claims history, Prior Authorization may be required. Drugs and drug categories included in the Step Therapy program are subject to change.

Notice

The purpose of the Blue Cross Generics Plus Drug Guide is to provide a guide to coverage. The Generics Plus Drug Guide is not intended to dictate to physicians how to practice medicine. Physicians should exercise their medical judgment in providing the care they feel is most appropriate for their patients.

Neither this Generics Plus Drug Guide, nor the successful adjudication of a pharmacy claim, is guarantee of payment.

Key

cap ..... capsules
chew ..... chewable
conc ..... concentrate
cr ..... controlled release
dr ..... delayed release
ec ..... enteric coated
effe ..... effervescent
equiv ..... equivalent
er ..... extended release
inhal ..... inhalation
inj ..... injection
liq ..... liquid
lotn ..... lotion
nebu ..... nebulizer
odt. ..... orally disintegrating tabs
oint ..... ointment
ophth ..... ophthalmic
osm ..... osmotic release
powd ..... powder
sa ..... sustained action
sl ..... sublingual
soln ..... solution
sr ..... sustained release
suppos ..... suppositories
susp ..... suspension
tab ..... tablets
td ..... transdermal

Drug Name	Tier Designation	Specialty	Prior Authorization	Step Therapy	Dispensing Limits
bisoprolol & hydrochlorothiazide tab 10-6.25 mg (Ziac)	1				
bisoprolol fumarate tab 5 mg (Zebeta)	1				
bisoprolol fumarate tab 10 mg (Zebeta)	1				
carvedilol tab 3.125 mg (Coreg)	1				
carvedilol tab 6.25 mg (Coreg)	1				
carvedilol tab 12.5 mg (Coreg)	1				
carvedilol tab 25 mg (Coreg)	1				
labetalol hcl tab 100 mg (Trandate)	1				
labetalol hcl tab 200 mg (Trandate)	1				
labetalol hcl tab 300 mg (Trandate)	1				
metoprolol & hydrochlorothiazide tab 50-25 mg (Lopressor hct)	1				
metoprolol & hydrochlorothiazide tab 100-25 mg (Lopressor hct)	1				
metoprolol succinate tab er 24hr 25 mg (tartrate equiv) (Toprol xl)	1				
metoprolol succinate tab er 24hr 50 mg (tartrate equiv) (Toprol xl)	1				
metoprolol succinate tab er 24hr 100 mg (tartrate equiv) (Toprol xl)	1				
metoprolol succinate tab er 24hr 200 mg (tartrate equiv) (Toprol xl)	1				
metoprolol tartrate tab 25 mg	1				
metoprolol tartrate tab 50 mg (Lopressor)	1				
metoprolol tartrate tab 100 mg (Lopressor)	1				
nadolol tab 20 mg (Corgard)	1				
nadolol tab 40 mg (Corgard)	1				
nadolol tab 80 mg (Corgard)	1				
pindolol tab 5 mg	1				
pindolol tab 10 mg	1				
propranolol hcl cap er 24hr 60 mg (Inderal la)	1				
propranolol hcl cap er 24hr 80 mg (Inderal la)	1				
propranolol hcl cap er 24hr 120 mg (Inderal la)	1				
propranolol hcl cap er 24hr 160 mg (Inderal la)	1				
propranolol hcl tab 10 mg	1				
propranolol hcl tab 20 mg	1				
propranolol hcl tab 40 mg	1				
propranolol hcl tab 60 mg	1				
propranolol hcl tab 80 mg	1				
CALCIUM CHANNEL BLOCKERS AND COMBINATIONS					
amlodipine besylate tab 2.5 mg (Norvasc)	1				
amlodipine besylate tab 5 mg (Norvasc)	1				
amlodipine besylate tab 10 mg (Norvasc)	1				
amlodipine besylate-benazepril hcl cap 2.5-10 mg (Lotrel)	1				
amlodipine besylate-benazepril hcl cap 5-10 mg (Lotrel)	1				
amlodipine besylate-benazepril hcl cap 5-20 mg (Lotrel)	1				
amlodipine besylate-benazepril hcl cap 5-40 mg (Lotrel)	1				
amlodipine besylate-benazepril hcl cap 10-20 mg (Lotrel)	1				
amlodipine besylate-benazepril hcl cap 10-40 mg (Lotrel)	1				
diltiazem hcl cap er 24hr 120 mg	1				
diltiazem hcl cap er 24hr 180 mg	1				
diltiazem hcl cap er 24hr 240 mg	1				

Drug Name	Tier Designation	Specialty	Prior Authorization	Step Therapy	Dispensing Limits
flecainide acetate tab 150 mg	1				
mexiletine hcl cap 150 mg	1				
mexiletine hcl cap 200 mg	1				
mexiletine hcl cap 250 mg	1				
propafenone hcl cap er 12hr 225 mg (Rythmol sr)	1				
propafenone hcl cap er 12hr 325 mg (Rythmol sr)	1				
propafenone hcl cap er 12hr 425 mg (Rythmol sr)	1				
propafenone hcl tab 150 mg (Rythmol)	1				
propafenone hcl tab 225 mg (Rythmol)	1				
propafenone hcl tab 300 mg	1				
quinidine gluconate tab er 324 mg	1				
sotalol hcl (afib/afl) tab 80 mg (Betapace af)	1				
sotalol hcl (afib/afl) tab 120 mg (Betapace af)	1				
sotalol hcl (afib/afl) tab 160 mg (Betapace af)	1				
sotalol hcl tab 80 mg (Betapace)	1				
sotalol hcl tab 120 mg (Betapace)	1				
sotalol hcl tab 160 mg (Betapace)	1				
sotalol hcl tab 240 mg	1				
OTHER HEART RELATED DRUGS					
amlodipine besylate-atorvastatin calcium tab 2.5-10 mg (Caduet)	1				
amlodipine besylate-atorvastatin calcium tab 2.5-20 mg (Caduet)	1				
amlodipine besylate-atorvastatin calcium tab 2.5-40 mg (Caduet)	1				
amlodipine besylate-atorvastatin calcium tab 5-10 mg (Caduet)	1				
amlodipine besylate-atorvastatin calcium tab 5-20 mg (Caduet)	1				
amlodipine besylate-atorvastatin calcium tab 5-40 mg (Caduet)	1				
amlodipine besylate-atorvastatin calcium tab 5-80 mg (Caduet)	1				
amlodipine besylate-atorvastatin calcium tab 10-10 mg (Caduet)	1				
amlodipine besylate-atorvastatin calcium tab 10-20 mg (Caduet)	1				
amlodipine besylate-atorvastatin calcium tab 10-40 mg (Caduet)	1				
amlodipine besylate-atorvastatin calcium tab 10-80 mg (Caduet)	1				
clonidine hcl tab 0.1 mg (Catapres)	1				
clonidine hcl tab 0.2 mg (Catapres)	1				
clonidine hcl tab 0.3 mg (Catapres)	1				
clonidine hcl td patch weekly 0.1 mg/24hr (Catapres-tts-1)	1				
clonidine hcl td patch weekly 0.2 mg/24hr (Catapres-tts-2)	1				
clonidine hcl td patch weekly 0.3 mg/24hr (Catapres-tts-3)	1				
digoxin tab 125 mcg (0.125 mg) (Lanoxin)	1				
digoxin tab 250 mcg (0.25 mg) (Lanoxin)	1				
doxazosin mesylate tab 1 mg (Cardura)	1				
doxazosin mesylate tab 2 mg (Cardura)	1				
doxazosin mesylate tab 4 mg (Cardura)	1				
doxazosin mesylate tab 8 mg (Cardura)	1				
ENTRESTO – **sacubitril-valsartan tab 24-26 mg**	2			•	•
ENTRESTO – **sacubitril-valsartan tab 49-51 mg**	2			•	•

Drug Name	Tier Designation	Specialty	Prior Authorization	Step Therapy	Dispensing Limits
alprazolam tab er 24hr 0.5 mg (Xanax xr)	1				
alprazolam tab er 24hr 1 mg (Xanax xr)	1				
alprazolam tab er 24hr 2 mg (Xanax xr)	1				
alprazolam tab er 24hr 3 mg (Xanax xr)	1				
alprazolam tab 0.25 mg (Xanax)	1				
alprazolam tab 0.5 mg (Xanax)	1				
alprazolam tab 1 mg (Xanax)	1				
alprazolam tab 2 mg (Xanax)	1				
buspirone hcl tab 5 mg	1				
buspirone hcl tab 10 mg	1				
buspirone hcl tab 15 mg	1				
buspirone hcl tab 30 mg	1				
diazepam tab 2 mg (Valium)	1				
diazepam tab 5 mg (Valium)	1				
diazepam tab 10 mg (Valium)	1				
hydroxyzine hcl syrup 10 mg/5ml	1				
hydroxyzine hcl tab 10 mg	1				
hydroxyzine hcl tab 25 mg	1				
hydroxyzine hcl tab 50 mg	1				
hydroxyzine pamoate cap 25 mg (Vistaril)	1				
hydroxyzine pamoate cap 50 mg (Vistaril)	1				
lorazepam conc 2 mg/ml (Lorazepam intensol)	1				
lorazepam tab 0.5 mg (Ativan)	1				
lorazepam tab 1 mg (Ativan)	1				
lorazepam tab 2 mg (Ativan)	1				
DEPRESSION					
amitriptyline hcl tab 10 mg	1				
amitriptyline hcl tab 25 mg	1				
amitriptyline hcl tab 50 mg	1				
amitriptyline hcl tab 75 mg	1				
amitriptyline hcl tab 100 mg	1				
amitriptyline hcl tab 150 mg	1				
bupropion hcl tab er 12hr 100 mg (Wellbutrin sr)	1				•
bupropion hcl tab er 12hr 150 mg (Wellbutrin sr)	1				•
bupropion hcl tab er 12hr 200 mg (Wellbutrin sr)	1				•
bupropion hcl tab er 24hr 150 mg (Wellbutrin xl)	1				•
bupropion hcl tab er 24hr 300 mg (Wellbutrin xl)	1				•
bupropion hcl tab 75 mg (Wellbutrin)	1				•
bupropion hcl tab 100 mg (Wellbutrin)	1				•
citalopram hydrobromide oral soln 10 mg/5ml	1				•
citalopram hydrobromide tab 10 mg (base equiv) (Celexa)	1				•
citalopram hydrobromide tab 20 mg (base equiv) (Celexa)	1				•
citalopram hydrobromide tab 40 mg (base equiv) (Celexa)	1				•
clomipramine hcl cap 25 mg (Anafranil)	1				
clomipramine hcl cap 50 mg (Anafranil)	1				
clomipramine hcl cap 75 mg (Anafranil)	1				
desipramine hcl tab 10 mg (Norpramin)	1				
desipramine hcl tab 25 mg (Norpramin)	1				
desipramine hcl tab 50 mg (Norpramin)	1				
desipramine hcl tab 75 mg (Norpramin)	1				
desipramine hcl tab 100 mg (Norpramin)	1				

Drug Name	Tier Designation	Specialty	Prior Authorization	Step Therapy	Dispensing Limits
hydromorphone hcl tab 4 mg (Dilaudid)	1				•
hydromorphone hcl tab 8 mg (Dilaudid)	1				•
methadone hcl conc 10 mg/ml (Methadose)	1				•
methadone hcl soln 5 mg/5ml (Methadone hcl)	1				•
methadone hcl soln 10 mg/5ml (Methadone hcl)	1				•
methadone hcl tab for oral susp 40 mg	1				•
methadone hcl tab 5 mg (Dolophine hcl)	1				•
methadone hcl tab 10 mg (Dolophine)	1				•
MORPHINE SULFATE **– morphine sulfate tab 15 mg**	2				•
MORPHINE SULFATE **– morphine sulfate tab 30 mg**	2				•
morphine sulfate oral soln 10 mg/5ml	1				•
morphine sulfate oral soln 20 mg/5ml	1				•
morphine sulfate oral soln 100 mg/5ml (20 mg/ml)	1				•
morphine sulfate tab er 15 mg (Ms contin)	1				•
morphine sulfate tab er 30 mg (Ms contin)	1				•
morphine sulfate tab er 60 mg (Ms contin)	1				•
morphine sulfate tab er 100 mg (Ms contin)	1				•
morphine sulfate tab er 200 mg (Ms contin)	1				•
oxycodone hcl cap 5 mg	1				•
oxycodone hcl conc 100 mg/5ml (20 mg/ml) (Oxycodone hcl)	1				•
oxycodone hcl soln 5 mg/5ml (Oxycodone hcl)	1				•
oxycodone hcl tab 5 mg (Roxicodone)	1				•
oxycodone hcl tab 10 mg	1				•
oxycodone hcl tab 15 mg (Roxicodone)	1				•
oxycodone hcl tab 20 mg	1				•
oxycodone hcl tab 30 mg (Roxicodone)	1				•
oxycodone w/ acetaminophen tab 5-325 mg (Percocet)	1				•
oxycodone w/ acetaminophen tab 7.5-325 mg (Percocet)	1				•
oxycodone w/ acetaminophen tab 10-325 mg (Percocet)	1				•
oxycodone-aspirin tab 4.8355-325 mg (Percodan)	1				•
OXYCONTIN **– oxycodone hcl tab er 12hr deter 10 mg**	2				•
OXYCONTIN **– oxycodone hcl tab er 12hr deter 15 mg**	2				•
OXYCONTIN **– oxycodone hcl tab er 12hr deter 20 mg**	2				•
OXYCONTIN **– oxycodone hcl tab er 12hr deter 30 mg**	2				•
OXYCONTIN **– oxycodone hcl tab er 12hr deter 40 mg**	2				•
OXYCONTIN **– oxycodone hcl tab er 12hr deter 60 mg**	2				•
OXYCONTIN **– oxycodone hcl tab er 12hr deter 80 mg**	2				•
tramadol hcl tab er 24hr 100 mg	1				•
tramadol hcl tab er 24hr 200 mg	1				•
tramadol hcl tab er 24hr 300 mg	1				•
tramadol hcl tab 50 mg (Ultram)	1				•
tramadol-acetaminophen tab 37.5-325 mg (Ultracet)	1				•

RHEUMATOID AND OSTEOARTHRITIS

Exhibit X

JOHN P. DONAHUE, M.D., F.R.C.P.(C)
130 INVERNESS PLAZA, NUMBER 121
BIRMINGHAM, AL 35242
1-877-785-3002

FAX TRANSMITTAL

DATE: 12-27-17

TO: NAME: Bernard Harcourt

FIRM: _____

FAX NUMBER: 212-854-7946

PHONE NUMBER: _____

FROM: J. P. Donahue, M.D.
FAX: (205) 295-9418
PHONE: (205) 295-9415
Toll Free: 1-877-785-3002

TOTAL NUMBER OF PAGES, INCLUDING COVER SHEET 8

MESSAGE: Re: Doyle Hamm

Do not have typed notes for visit 11-21-17,
I have sent nurse's and doctor notes

IF THERE IS A PROBLEM WITH THIS TRANSACTION
PLEASE NOTIFY US AS SOON AS POSSIBLE

ATTENTION: This message is intended only for the individual to whom it is addressed. It contains information, which may be privileged and confidential by law. If you are not the intended recipient or agent responsible for delivering this message, you must not read, copy, or distribute this information. If you have received this message in error, please notify us immediately by collect phone call, and return the message to us by mail. Thank you.

John P. Donahue, M.D., F.R.C.P. (C)
Diplomat of American Boards of
Dermatology and Dermatopathology

4330 Highway 78 E, Suite 105
Jasper, AL 35501
Phone: 1-877-785-3002

Consultation Report

April 4, 2017

Roy Roddam, M.D.
Donaldson Correctional Facility
100 Warrior Lane
Bessemer, AL 35023

Dear Dr. Roddam:

Re: Doyle Hamm

Thank you for referring this patient to me for evaluation, treatment and consultation.

This sixty-year-old male presents for the evaluation of an indurated, eroded, ulcerated nodule present on the infraorbital rim on the left. The lesion has been evolving over the past several years. The patient's medical history, which is otherwise well known to you, is reviewed and documented. The patient has recently undergone radiation therapy for post orbital lymphoma. The index lesion had been present prior. The lesion has features suggestive of a basal cell carcinoma and is biopsied. Excision if indicated will be carried out in the near future on a p.r.n. basis.

Further clinical findings include a large, irregularly shaped, black patch present on the forehead at the right. This lesion could represent a lentigo maligna and is also biopsied at this same visit. Reevaluation and further treatment of this patient will be a function of the pathologic diagnosis

Should you have any questions concerning the patient's management, please do not hesitate to call.

Sincerely,

John P. Donahue, M.D.
JPD:rk

John P. Donahue, M.D., F.R.C.P. (C)
Diplomat of American Boards of
Dermatology and Dermatopathology

4330 Highway 78 E, Suite 105
Jasper, AL 35501
Phone: 1-877-785-3002

Consultation Report

February 21, 2014

Dr. Lovely
Donaldson Correctional Facility
Prison Health Services
100 Warrior Lane
Bessemer, AL 35023

Dear Dr. Lovely: Re: Doyle Hamm

Thank you for referring this patient to me for evaluation, treatment and consultation.

This fifty-six year old male presents for the evaluation of an indurated plaque that is present on the inferior aspect of the left orbital rim. The lesion has been evolving for some while. The patient is unaware as to the duration of this lesion. There had been no trauma to the site.

The patient's medical history, which is well known to you, is reviewed and documented. There is a sutured incision on the orbital rim at the right, the site of an ophthalmologic biopsy.

There is mild dyschromia on sun exposed surfaces. There are several pink papules scattered about the torso consisting of benign nevi, for which no treatment is deemed necessary.

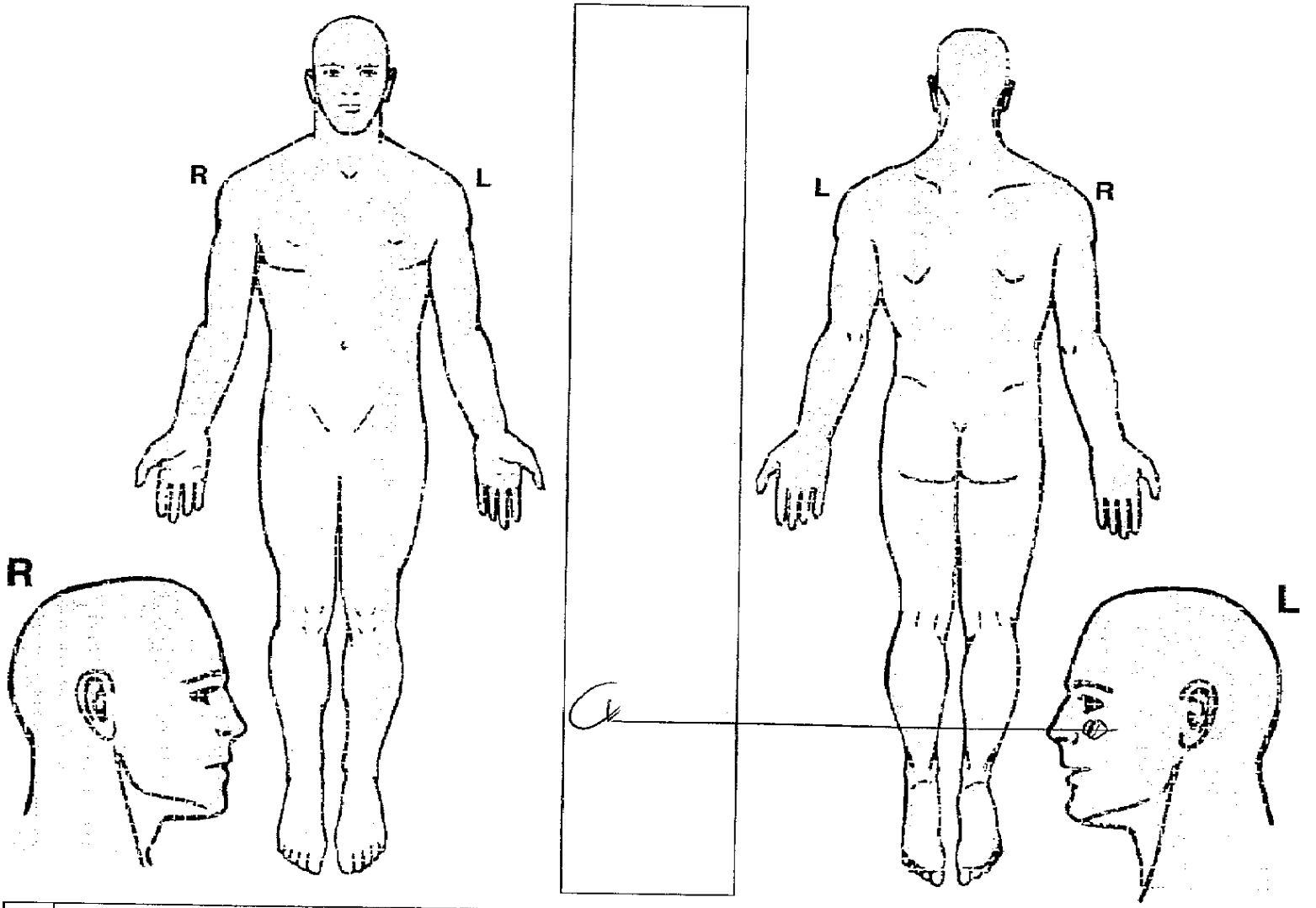
The index lesion, which consists of a slightly ulcerated, indurated plaque is consistent with the clinical appearance of a sclerosing basal cell carcinoma. A biopsy is undertaken and excision is planned in the near future on a p.r.n. basis.

Should you have any questions concerning the patient's management, please do not hesitate to call.

Sincerely,

John P. Donahue, M.D.
JPD:rk

NAME: Harris LAST Dayle FIRST



#		DESCRIPTIVE / CLINICAL		LEGEND / DIAGNOSIS	EDC	LN_2	Bx	SE
1.		2x2½cm Indurated Plaque		Keloid				
2.								
3.								
4.								
5.								
6.								
7.								
8.								
9.		Site, Area, Lesion Examined		WNL NAD CBE				

*Legend, Descriptive PTO ➡

J.P. DONAHUE, M.D.

11.21.17
DATE

3
VISIT #

PATIENT NAME: Hamm (Last) Doyle (First) C NP (FU) :VISIT 3

CONSULT REQUESTED: DR. _____

MEDICAL HISTORY: ☒ REVIEWED	CONDITIONS ☒ REVIEWED	MEDICATIONS ☐ REVIEWED	ALLERGIES ☐ REVIEWED
CHANGES: ☐ YES ☐ NO	cataract surgery		
	PROBLEM ❶ NEW ☐ OLD ☒	PROBLEM ❷ NEW ☐ OLD ☐	PROBLEM ❸ NEW ☐ OLD ☐
SYMPTOMS COMPLAINTS DURATION	assessment of bx. site - (L) infra orbital rim		
PRIOR TREATMENT, RESPONSE	☒ Y ☐ N bx. 4-4-17 dx. BCC & sclerosis	☐ Y ☐ N	☐ Y ☐ N
HISTORY	was to be referred out for surgery has not had surgery		
PHYSICAL EXAM	(1) 2 x 2.5 cm indurated plaque (L) infra orbital rim		
REFERENCES	☐	☐	☐
PERFORMED LAB	☐	☐	☐
ORDERED, LAB	☐	☐	☐
DISCUSSED LAB	☐	☐	☐
BIOPSY	☒ Y ☐ N A	☐ Y ☐ N	☐ Y ☐ N
DIAGNOSIS AND DIFFERENTIAL	BCC & sclerosing		
ICD-9	D48.5		
1. Rx	CHART COPY ☐	CHART COPY ☐	CHART COPY ☐
2. ADVICE 3. MEDICATIONS 4. PROCEDURE	xylocaine 2% & epi bacitracin & hypafix care instructions sent		
5. F/U appointment	PTR ☒ Y ☐ PRN ☐	PTR ☐ Y ☐ PRN ☐	PTR ☐ Y ☐ PRN ☐
6. INDICATION			

PHYSICIAN J.P. DONAHUE NURSE R. Wansant F/U PTR PAGE 1 DATE 11.21.17

FORM - NURSE 1 3/10

John P. Donahue, M.D., F.R.C.P. (C)
Diplomat of American Boards of Dermatology and Dermatopathology

4330 Highway 78 East
Suite 105
Jasper, AL 35501
Phone: 1-877-785-3002

DERMATOPATHOLOGY REPORT

Patient: HAMM, DOYLE
DOB: 02/14/57
Chart #:

Biopsy Date: 11/21/17
Report Date: 12/01/17
Surgeon: J.P. Donahue, M.D.

Specimen A:
Biopsy: ___x___ Excision: _____
Surgical Site: left orbital rim, inferior
Clinical Data: indurated plaque
Provisional Diagnosis: BCC
Gross Description: Skin: 0.5 x 0.4 x 0.2 cm

Accession #: 17-3319
Previous Surgical:

Microscopic Examination:
A: The epidermis is unremarkable. Budding from the dermal epidermal junction are geometrically shaped tumor islands consisting of basaloid cells. The tumor islands are mitotically active and demonstrate peripheral palisading. There is peritumoral reactive fibroplasia and cellularity. In foci some of the tumor islands demonstrate premature keratinization, and form confluent sheets.

Diagnosis:

Specimen A: basal cell carcinoma [keratinizing and sclerosing]

John P. Donahue, M.D., F.R.C.P. (C)
Dermatopathologist
JPD:rk

John P. Donahue, M.D., F.R.C.P. (C)
Diplomat of American Boards of Dermatology and Dermatopathology

4330 Highway 78 East
Suite 105
Jasper, AL 35501
Phone: 1-877-785-3002

DERMATOPATHOLOGY REPORT

Patient: HAMM, DOYLE
DOB: 02/14/57
Chart #:

Biopsy Date: 04/04/17
Report Date: 04/07/17
Surgeon: J.P. Donahue, M.D.

Specimen A:
Biopsy: ___x___
Surgical Site:
Clinical Data:
Provisional Diagnosis:
Gross Description:

Excision: _____
left inf. orbital rim
nodule, tumor
BCC
Skin: 0.5 x 0.4 x 0.2 cm

Accession #: 17-1041
Previous Surgical:

Specimen B:
Biopsy: ___x___
Surgical Site:
Clinical Data:
Provisional Diagnosis:
Gross Description:

Excision: _____
right temple
papule
LM?
Skin: 0.6 x 0.5 x 0.3 cm

Accession #: 17-1042
Previous Surgical:

Microscopic Examination:
A: The epidermis is thin but otherwise unremarkable. Budding from the dermal epidermal junction are geometrically shaped tumor islands consisting of basaloid cells. The tumor islands are mitotically active and demonstrate peripheral palisading. There is peritumoral reactive fibroplasia and cellularity. Many tumor islands are linear, and percolate through a reactive and fibrous stroma.

B: The epidermis is irregularly acanthotic. The rete ridges are thickened and fused and darkly pigmented at their lowermost border. The dermis is elastotic.

Diagnosis:

Specimen A: basal cell carcinoma [sclerosing]

Specimen B: seborrheic keratosis, pigmented

John P. Donahue, M.D., F.R.C.P. (C)
Dermatopathologist
JPD:rk

John P. Donahue, M.D., F.R.C.P. (C)
Diplomat of American Boards of Dermatology and Dermatopathology

4330 Highway 78 East
Suite 105
Jasper, AL 35501
Phone: 1-877-785-3002

DERMATOPATHOLOGY REPORT

Patient: HAMM, DOYLE L.
DOB: 02/14/57
Chart #:

Biopsy Date: 02/21/14
Report Date: 02/28/14
Surgeon: J.P. Donahue, M.D.

Specimen A:
Biopsy: ___x___
Surgical Site:
Clinical Data:
Provisional Diagnosis:
Gross Description:

Excision: _____
left inf. orbital rim
tumor
BCC?
Skin: 0.5 x 0.4 x 0.2 cm

Accession #: 14-0826
Previous Surgical:

Microscopic Examination:
A: The epidermis is ulcerated. Budding from the dermal epidermal junction are geometrically shaped tumor islands consisting of basaloid cells. The tumor islands are mitotically active and demonstrate peripheral palisading. There is peritumoral reactive fibroplasia and cellularity.

Diagnosis:

Specimen A: basal cell carcinoma

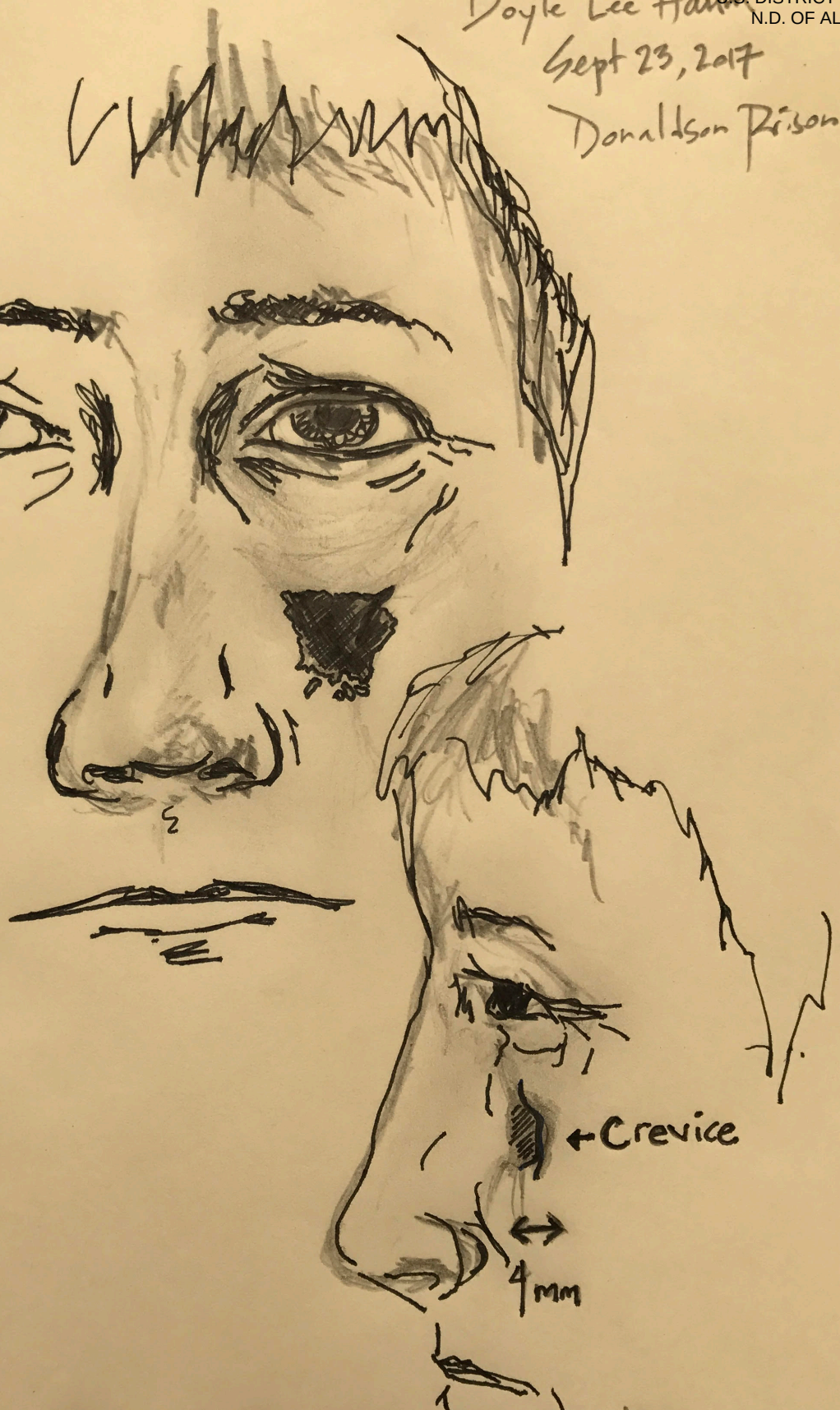
John P. Donahue, M.D., F.R.C.P. (C)
Dermatopathologist
JPD:rk

SPECIMEN A
SURGICAL DATE 4 4 14
SURGEON INITIAL
J.P. DONAHUE

Exhibit Y

Exhibit Z

Doyle Lee Hamm
Sept 23, 2017
Donaldson Prison



Drawn by Bernard E. Harcourt while Dr. Mark Heath interviewed Doyle Hamm.