UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA

In the Matter of the Federal Bureau of Prisons' Execution Protocol Cases,	)	
LEAD CASE: *Roane, et al. v. Barr*	)	Case No. 19-mc-145 (TSC)
THIS DOCUMENT RELATES TO:	)	
Roane v. Barr, 05-cv-2337	)	

MEMORANDUM OPINION

With over 376,000 Americans dead and more than twenty-one million infected, the COVID-19 pandemic "need[s] no elaboration." *Merrill v. People First of Ala.*, 141 S. Ct. 25, 26 (2020) (Sotomayor, J., dissenting). And with each day bringing a new record number of infections, "the COVID-19 pandemic remains extraordinarily serious and deadly." *Roman Cath. Diocese of Brooklyn v. Cuomo*, 141 S. Ct. 63, 73 (2020) (Kavanaugh, J., concurring).

Among the most susceptible to the spread of COVID-19 is the prison inmate population. As several outbreaks have shown, "COVID-19 can overtake a prison in a matter of weeks." *Valentine v. Collier*, 141 S. Ct. 57, 62 (2020) (Sotomayor, J., dissenting) (discussing one facility which recorded over 200 cases, 5 deaths, and 12 hospitalizations in less than three weeks). This is unsurprising given that most inmates are unable to socially distance, have limited access to adequate testing, and are often housed in buildings with poor circulation.

Despite the pandemic, and the current record high rates of infections and fatalities, Defendants intend to go forward with the scheduled executions of Plaintiffs Cory Johnson and Dustin Higgs on January 14 and 15, 2021, although both men have been diagnosed with COVID-

19. Higgs and Johnson are housed at the Federal Correctional Institution in Terre Haute, Indiana, a facility experiencing its own "massive COVID-19 outbreak." Michael Balsamo & Michael R. Sisak, *Execution staff have COVID-19 after inmate put to death*, AP News (Dec. 8, 2020), https://apnews.com/article/prisons-coronavirus-pandemic-executions-terre-haute-indiana-e80af6a566bbff50ed5e9a097c305dbb.

Defendants intend to carry out the executions according to the procedures set forth in the Federal Bureau of Prisons 2019 Execution Protocol (the 2019 Protocol), which includes a lethal injection of five grams of pentobarbital. Plaintiffs received notice of their diagnoses less than a month before their executions—after Defendants assured the court that "allegations regarding the prevalence of COVID-19 at [] Terre Haute . . . are dated" and that adequate procedures were in place to protect the inmate population. (ECF No. 306-1 at 10 n.3.) Plaintiffs have asked the court to enjoin their executions, arguing that injection of a lethal dose of pentobarbital given their COVID-19 infections will cause them to suffer an excruciating death. Specifically, they argue that damage to their lungs and other organs will cause them to experience the sensation of drowning caused by flash pulmonary edema almost immediately after injection but before they are rendered unconscious.

Defendants argue that Plaintiffs' claims here are the same as those previously rejected by the Supreme Court. (*See* ECF No. 380, Defs. Opp'n at 17.)[1] The court disagrees. Plaintiffs have

[1] Citing Sixth Circuit precedent, Defendants also argue that "even if any of the inmates did briefly experience the effects of 'flash' pulmonary edema prior to becoming insensate, it would not suffice to establish a violation of the Eighth Amendment." (Def. Opp'n at 16 (citing *In re Ohio Execution Protocol Litig.*, 946 F.3d 287, 298 (6th Cir. 2019) (holding that pulmonary edema does not "qualify as the type of serious pain prohibited by the Eighth Amendment.")).) This is at odds with D.C. Circuit precedent, which found that flash pulmonary edema could indeed give rise to an Eighth Amendment violation. *See Execution Protocol Cases*, 980 F.3d at 132. Defendants similarly contend that in *Bucklew*, the Supreme Court "rejected an Eighth Amendment challenge to a single-drug pentobarbital protocol "as applied to a prisoner with a

pleaded as-applied Eighth Amendment challenges based on their specific health conditions. Moreover, they allege that their health has been worsened by their infection with COVID-19, an illness which has resulted in a global pandemic for the better part of a year. Given these unique circumstances, the court held an evidentiary hearing to assess the credibility of the parties' expert opinions.

Having heard and reviewed the expert testimony, the court finds that Plaintiffs are likely to succeed on the merits of their as-applied Eighth Amendment challenge. Specifically, they have demonstrated that as a result of their COVID-19 infection, they have suffered significant lung damage such that they will experience the effects of flash pulmonary edema one to two seconds after injection and before the pentobarbital has the opportunity to reach the brain. This will subject Plaintiffs to a sensation of drowning akin to waterboarding, a side effect that could be avoided were Defendants to implement certain precautions, such as administering a pre-dose analgesic or carrying out the execution by firing squad.

For the reasons set forth below, and in light of these unprecedented circumstances, the court will grant a *limited* injunction to allow Plaintiffs the opportunity to adequately recover from COVID-19, at which point it will evaluate whether to extend the injunction in light of any new medical evidence submitted by the parties.

I. BACKGROUND

After a hiatus of more than fifteen years, on July 25, 2019, the Department of Justice announced plans to resume federal executions. *See* Press Release, Dep't of Justice, Federal

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unique medical condition that could only have increased the baseline risk of pain associated with pentobarbital." (Defs. Opp'n at 17 (discussing *Bucklew*, 140 S. Ct. at 2159).) The D.C. Circuit disagrees. "Allegations regarding flash pulmonary edema were not [] before the Supreme Court in *Bucklew*." *Execution Protocol Cases*, 980 F.3d at 131.

Government to Resume Capital Punishment After Nearly Two Decade Lapse (July 25, 2019), https://www.justice.gov/opa/pr/federal-government-resume-capital-punishment-after-nearly-two-decade-lapse. To implement these executions, the Federal Bureau of Prisons (BOP) adopted a new execution protocol: the 2019 Protocol. (ECF No. 39-1, Admin. R. at 1021–75.)

On September 1, 2020, the court granted Higgs' unopposed motion to intervene in *Roane v. Gonzales*, No. 05-2337, a case brought by several death row inmates (including Plaintiff Cory Johnson) challenging the legality of the 2019 Protocol. (ECF Nos. 229, 229-1.)[2] Higgs' claims were largely the same as those asserted by the other Plaintiffs, with one exception: he brought an as-applied challenge under the Eighth Amendment, alleging that because of his asthma and because he believed that had contracted COVID-19 in February 2020, he faced a unique and individualized risk of serious harm if executed using pentobarbital. (ECF No. 229-1 ¶¶ 166–72.)

Defendants moved to dismiss Higgs's as-applied claim, (*see* ECF No. 306), arguing that the claim was speculative because Higgs did not allege that he had tested positive for COVID-19, nor had he actually suffered lung damage from the disease. The court agreed and granted the motion on December 9, 2020. (ECF Nos. 354–55.)

During a status conference on December 17, 2020, Higgs' counsel reported that Higgs had tested positive for COVID-19. Higgs was granted leave to file a Second Amended and Supplemental Complaint, (ECF No. 370), in which he alleges that his heart condition, combined with his asthma, puts him at a greater risk of pulmonary edema, which is further aggravated by

[2] The case originated as a challenge to the federal government's death penalty procedures in 2005 but was subsequently amended to challenge the 2019 Protocol.

his COVID-19 diagnosis.[3] Higgs also filed a second motion for a preliminary injunction. (ECF No. 371, Higgs Mot.)

On December 16, 2020, Johnson also tested positive for COVID-19 and was also permitted to file a supplemental complaint and motion for a preliminary injunction. (*See* ECF No. 372; ECF No. 373.) Johnson's allegations are similar to Higgs' except Johnson does not allege any underlying medical conditions, and he has experienced slightly different symptoms. (*See generally* ECF No. 375, Johnson Mot.)

Defendants argue that Plaintiffs have shown only that there is competing testimony between credible experts, which is insufficient to succeed on a method-of-execution Eighth Amendment claim.

On January 4 and 5, the court held an evidentiary hearing to assess the expert testimony proffered on Plaintiffs' COVID-19 related claims. Drs. Kendall von Crowns and Todd Locher testified for Defendants and Drs. Gail Van Norman and Michael Stephen testified for Plaintiffs.[4]

II. ANALYSIS

A preliminary injunction is an "extraordinary remedy" requiring courts to assess four factors: (1) the likelihood of the plaintiff's success on the merits, (2) the threat of irreparable harm to the plaintiff absent an injunction, (3) the balance of equities, and (4) the public interest. *Winter v. Nat. Res. Def. Council, Inc.*, 555 U.S. 7, 20, 24 (2008) (citations omitted); *John Doe Co. v. Consumer Fin. Prot. Bureau,* 849 F.3d 1129, 1131 (D.C. Cir. 2017). The D.C. Circuit has traditionally evaluated claims for injunctive relief on a sliding scale, such that "a strong showing

[3] Higgs has another Amended and Supplemental Complaint and accompanying motion for a preliminary injunction pending before the court. (*See* ECF Nos. 343–44.) The court will address that motion for a preliminary injunction in a separate opinion.

[4] The court also briefly heard from Dr. Mitchell Glass, who was slated to testify in favor of Plaintiffs, but his testimony was stricken on Defendants' unopposed motion.

on one factor could make up for a weaker showing on another." *Sherley v. Sebelius,* 644 F.3d 388, 392 (D.C. Cir. 2011). It has been suggested, however, that a movant's showing regarding success on the merits "is an independent, free-standing requirement for a preliminary injunction." *Id.* at 393 (quoting *Davis v. Pension Benefit Guar. Corp.*, 571 F.3d 1288, 1296 (D.C. Cir. 2009) (Kavanaugh, J., concurring)).

A. Likelihood of Success on the Merits

Plaintiffs bringing an Eighth Amendment challenge to a method of execution face a high bar. They must demonstrate that the 2019 Protocol presents a "substantial risk of serious harm," and they must identify an alternative method of execution that will significantly reduce the risk of serious pain and that is feasible and readily implemented. *Glossip v. Gross*, 576 U.S. 863, 877 (2015) (quoting *Baze v. Rees*, 553 U.S. 35, 50 (2008)); *see also Bucklew v. Precythe*, 139 S. Ct. 1112, 1129 (2019) (confirming that "anyone bringing a method of execution claim alleging the infliction of unconstitutionally cruel pain must meet the *Baze-Glossip* test."). Indeed, the Supreme Court "has yet to hold that a State's method of execution qualifies as cruel and unusual." *Bucklew*, 139 S. Ct. at 1124.

The court has been down this road before. In July, it enjoined four executions on the basis that the use of pentobarbital would subject Plaintiffs to suffer a cruel and unusual death in violation of the Eighth Amendment. In so ruling, the court found that Plaintiffs had provided scientific evidence that "overwhelmingly" indicated they would suffer the effects of flash pulmonary edema, including a sensation of drowning, while they were still conscious. (ECF No. 135 at 9.) The court weighed the declarations of several experts, including Drs. Gail Van Norman and Joseph Antognini.

On appeal, the Supreme Court vacated this court's injunction, concluding that Plaintiffs were unlikely to succeed on the merits of their Eighth Amendment claim. *See Barr v. Lee*, 140 S. Ct. 2590, 2591 (2020). The Court noted that pentobarbital "has become a mainstay of state executions . . . [h]as been used to carry out over 100 executions, without incident," and was upheld "as applied to a prisoner with a unique medical condition that could only have increased any baseline risk of pain associated with pentobarbital as a general matter." *Id.* The Court acknowledged Plaintiffs' expert declarations regarding flash pulmonary edema but noted that "the government has produced competing evidence of its own, indicating that any pulmonary edema occurs only *after* the prisoner had died or been rendered fully insensate." *Id.* In light of the competing evidence—and despite this court's assessment that Plaintiffs' evidence was more credible—the Supreme Court found that Plaintiffs had "not made the showing required to justify last-minute relief." *Id.* It further emphasized that "[l]ast-minute stays" must be "the extreme exception, not the norm." *Id.* (quoting *Bucklew*, 139 S. Ct. at 1134).

Given the Supreme Court's decision in *Lee*, this court subsequently dismissed Plaintiffs' general Eighth Amendment claim, finding that "no amount of new evidence will suffice to prove that the pain pentobarbital causes reaches unconstitutional levels." (ECF No. 193 at 4.) The D.C. Circuit reversed. "By pleading that the federal government's execution protocol involves a 'virtual medical certainty' of severe and torturous pain that is unnecessary to the death process and could readily be avoided by administering a widely available analgesic first, the Plaintiffs' complaint properly and plausibly states an Eighth Amendment claim." *In Re Fed. Bureau of Prisons Execution Protocol Cases*, 980 F.3d 123, 133 (D.C. Cir. 2020). However, the Court of Appeals noted that Plaintiffs had a "difficult task ahead [] on the merits" and that if all they could produce was a "'scientific controvers[y]' between credible experts battling between 'marginally

safer alternative[s],' their claim is likely to fail on the merits." *Id.* at 135 (quoting *Baze v. Rees*, 553 U.S. 35, 51 (2008)).

1. Substantial Risk of Serious Harm

In order to succeed on their Eighth Amendment claim, Plaintiffs must show that execution under the 2019 Protocol presents a risk of severe pain that is "sure or very likely to cause serious illness and needless suffering" and gives rise to "sufficiently imminent dangers," such that prison officials cannot later plead "that they were subjectively blameless." *Baze*, 553 U.S. at 49–50 (citations omitted). Although the Supreme Court has cautioned against federal courts becoming "boards of inquiry charged with determining 'best practices' for executions," *id.* at 51, this question necessarily requires some weighing of scientific evidence. *See, e.g.*, *Glossip*, 576 U.S. at 881 (affirming district court's findings that midazolam was "highly likely" to render inmates unable to feel pain during execution).

It is undisputed that both Higgs and Johnson have been diagnosed with COVID-19 and have been exhibiting symptoms consistent with that diagnosis, including shortness of breath, an unproductive cough, headaches, chills, fatigue, etc. To date, neither has been hospitalized or required treatment in an intensive care unit.

It is further undisputed that Plaintiffs will suffer flash pulmonary edema as a result of the 2019 Protocol, "a medical condition in which fluid rapidly accumulates in the lungs causing respiratory distress and sensation of drowning and asphyxiation." *See Execution Protocol Cases*, 980 F.3d at 131. Thus, the question is whether these two Plaintiffs will experience the symptoms of flash pulmonary edema while they are still conscious, an issue that has been the subject of much debate amongst the experts in this case. After the Supreme Court's decision in *Lee*, this court has found that the question of whether an inmate, *absent aggravating factors*, will suffer

flash pulmonary edema while sensate is one on which reasonable minds can differ. (*See* ECF No. 261 at 38.)[5]

But the issue presently before the court is whether Plaintiffs will suffer flash pulmonary edema while sensate given the extensive lung damage they have suffered from COVID-19. The court had not previously received expert testimony on this issue. And having no meaningful way to resolve the dispute on the expert declarations alone, it exercised its discretion and held an evidentiary hearing.

"A preliminary injunction may be granted on less formal procedures and on less extensive evidence than a trial on the merits, but if there are genuine issues of material fact raised . . . an evidentiary hearing is required." *Cobell v. Norton*, 391 F.3d 251, 261 (D.C. Cir. 2004) (internal citations omitted); *but see* LCvR 65.1(d) ("The practice in this jurisdiction is to decide preliminary injunction motions without live testimony *where possible*." (emphasis supplied)). And where "a court must make credibility determinations to resolve key factual disputes in favor of the moving party, it is an abuse of discretion for the court to settle the question on the basis of documents alone, without an evidentiary hearing." *Cobell*, 391 F.3d at 262 (citing *Prakash v. Am. Univ.*, 727 F.2d 1174, 1181 (D.C. Cir. 1984)); *see also* Alan Wright & Arthur R. Miller, 11A Fed. Prac. & Proc. Civ. § 2949 (3d ed. 1998) (explaining that when a motion for a preliminary injunction "depends on resolving a factual conflict by assessing the

[5] In denying injunctive relief for Plaintiffs' Food, Drug, and Cosmetic Act claim, the court previously found that they had failed to demonstrate that they were sure to suffer flash pulmonary edema while they were sensate. (*See* ECF No. 261 at 40.) But in doing so, the court did not find that Defendants' experts had definitively answered the question. Rather, the court found that given the expert testimony—which did not involve individual medical records—Plaintiffs had failed to meet their burden. Furthermore, that dispute centered on the question of whether *every* plaintiff executed with pentobarbital would suffer flash pulmonary edema before being rendered insensate. The dispute here involves aggravating factors not previously before the court.

credibility of opposing witnesses, it seems desirable to require that the determination be made on the basis of their demeanor during direct and cross-examination, rather than on the respective plausibility of their affidavits.").

i. COVID-19 Lung Damage – Higgs

Dr. Gail Van Norman, an anesthesiologist and professor in the Department of Anesthesiology and Pain Medicine at the University of Washington in Seattle, opined that "the COVID-19 virus leads to significant lung damage" and that "[f]or prisoners experiencing COVID-related lung damage at the time of their execution, flash pulmonary edema will occur even earlier in the execution process, and before brain levels of pentobarbital have peaked." (ECF No. 374-1, Van Norman Supp. Decl. at 1.) "To a reasonable degree of medical certainty, these prisoners will experience sensations of drowning and suffocation sooner than a person without COVID-related lung damage and, therefore, their conscious experience of the symptoms of pulmonary edema will be prolonged." (*Id.*) She explained that COVID-19 causes "severe damage to many areas in the airways and lungs, but most specifically to the alveolar-capillary membrane, which is also the site of damage of massive barbiturate overdose." (*Id.* at 2.) These effects "can be seen by radiography in . . . at least 79% of patients who have symptomatic COVID-19 infection, even when such infections are mild." (*Id.*) Damage to the lungs may eventually resolve, though studies indicate that "severe pulmonary functional changes have been demonstrated for more than 90 days after infection." (*Id.*; *see also id.* at 5 (listing studies).) She reiterated these points during her direct examination.

The court found Dr. Van Norman highly credible. She testified that she has personally tended to patients hospitalized with COVID-19 who needed airway management, which included administering anesthesia. (*See* ECF No. 389, H'rg Tr. at 145.) She also testified that when

pentobarbital is injected, it flows first to the heart and is then pumped to the lungs before going to the rest of the body. (*Id.* at 147.) Because pentobarbital is caustic, a high concentration dose will burn the alveoli-capillary membrane in the lungs within a second or two of injection. (*Id.* at 192.) A person with COVID-19 related lung damage will experience flash pulmonary edema before the pentobarbital reaches the brain. (*Id.* at 147–48.) Dr. Van Norman also explained that while pentobarbital's anesthetic effect can take anywhere from thirty seconds to two-and-a-half minutes, it takes longer to reach peak effectiveness. (*Id.* at 150.) Thus, Plaintiffs will suffer the effects of flash pulmonary edema anywhere from thirty seconds to two-and-a-half minutes after injection.

Dr. Van Norman provided credible and persuasive responses to criticism of her opinions. In his fifth amended declaration, Defendants' expert, Dr. Joseph Antognini criticized Dr. Van Norman for not: 1) providing published evidence that asymptomatic or mildly symptomatic patients have increased propensity for pulmonary edema when administered lethal doses of pentobarbital; 2) providing published evidence that pulmonary damage increases the risk of pulmonary edema from pentobarbital; and 3) specifying when the onset of the pulmonary edema might occur in someone who has suffered COVID-19 lung damage. (ECF No. 380-2, Antognini 5th Supp. Decl. ¶¶ 3–5.) As to the first two criticisms, Dr. Van Norman explained that there are no such studies because no physician or scientist has administered massive overdoes of intravenous pentobarbital to COVID-19 patients. (*Id.* at 153.) Dr. Van Norman also stated that, in her opinion, inmates with lung damage from COVID-19 will experience flash pulmonary edema within a second or two after injection, before pentobarbital has reached the brain. (*Id.* at

192 (explaining that pentobarbital is "a caustic chemical" which is "going to attack an already leaky membrane").)[6]

The court found Dr. Antognini's opinions less helpful.[7] Although he faulted Dr. Van Norman for not providing support for her conclusions, Dr. Antognini's opinions regarding the effect of a pentobarbital injection on a person with COVID-19 symptoms were themselves conclusory. In fact, Dr. Antognini cited two studies in his entire declaration, neither of which involved COVID-19. His declaration did not indicate whether he even treats COVID-19 patients. (Antognini Fifth Supp. Decl. ¶ 5.) Relying in large part on his prior testimony, he stated that "unconsciousness occurs when a clinical dose of pentobarbital is administered (around 500 mg—a tenth of the execution dose)." (*Id.*) This statement does not address Dr. Van Norman's explanation that injected pentobarbital will begin to attack damaged lungs before it reaches the brain, and Dr. Antognini did not proffer how long it would take for an inmate to be rendered unconscious. Thus, his declaration did not adequately refute Dr. Van Norman's opinions.

Dr. Michael Stephen corroborated Dr. Van Norman's theory regarding lung damage. During his testimony, Dr. Stephen, an associate professor in the Department of Medicine and Division of Pulmonary and Critical Care at Thomas Jefferson University, who actively treats and reviews x-rays of COVID-19 patients, interpreted x-rays of Higgs' lungs taken in October 2018 and December 2020. Dr. Stephen testified that Higgs' lungs were severely hyperinflated, as

[6] On cross examination, Dr. Van Norman admitted that she was opposed to the death penalty, but the court has no reason to believe her opposition has biased her scientific assessments, particularly in light of other evidence in the record.

[7] Defendants did not call Dr. Antognini as a witness and Plaintiffs declined to call him for cross-examination.

shown by the fact that on the x-ray, his lungs could not fit on one lung plate. (H'rg Tr. at 99.) Consequently, he explained, the radiologist had to take three views, which in Dr. Stephen's experience was very rare absent a very serious obstructive lung disease such as asthma. (*Id.*) Dr. Stephen also explained that chest x-rays typically only show seven to nine ribs, but Higgs' x-ray films showed eleven ribs, which indicated that Higgs has so much air in his lungs from poorly controlled asthma that his diaphragm is being pushed down, causing the x-ray to capture more ribs than it normally would. (*Id.*) Dr. Stephen also noted evidence of a tabletop (or flat) diaphragm that has become exaggerated between 2018 and 2020, suggesting severely poorly controlled asthma. (*Id.* at 99–100.)

Dr. Stephen's testimony was particularly persuasive and helpful, as he walked the court through a comparison of Higgs' lung images to show the extensive damage caused by COVID-19. As was readily apparent, the right lung exhibited more opacity in certain areas in 2020 than in 2018. (*Id.* at 95.) Dr. Stephen described these opacities as interstitial markings, which are more visible as a result of inflammation caused by "viral pneumonia from COVID-19." (*Id.* at 97.) Because of this inflammation, he concluded that Higgs' alveoli-capillary membrane has already been breached by COVID-19 particles, and white blood cells are flooding into his lungs to combat them. (*Id.* at 97.) Thus, he concluded, Higgs' heart will be pumping very hard to supply blood to the inflamed parts of the lung, a condition that places Higgs at high risk for pulmonary edema. (*Id.* at 98.)

To rebut Drs. Van Norman and Stephen's testimony, Defendants submitted a declaration from Dr. Todd Locher. Interpreting studies relied upon by Drs. Van Norman and Stephen, Dr. Locher opined that "asymptomatic and mildly symptomatic cases [of COVID-19] have a lower percentage of lung involvement." (ECF No. 381-1, Locher Decl. ¶ 11.) After reviewing both

Higgs' and Johnson's medical records, Dr. Locher concluded that both men were experiencing "minimal symptoms." (*Id.* ¶ 12.) With regard to Higgs' x-rays, Dr. Locher agreed with Dr. Justin Yoon, the interpreting radiologist proffered by the government, that there was no "acute cardiopulmonary process" and that Higgs had clear lungs "except for an unchanged right apical reticular nodular density." (*Id.*) He concluded that there was "no evidence [] of lung involvement due to COVID-19." (*Id.*)

Dr. Locher further noted that "there is no evidence in the medical literature suggesting an injection with pentobarbital would somehow exacerbate symptoms or physiologic abnormalities in patients with COVID-19." (*Id.* ¶ 14.) Thus, he concluded, "if pulmonary edema were to occur upon the injection of 5 g of pentobarbital, it is not likely that these inmates would experience pulmonary edema more quickly or severely than inmates who have been diagnosed with COVID-19." (*Id.*)

The court is unpersuaded by this testimony. For one, as Dr. Van Norman explained, there have been no studies involving the injection of large doses of pentobarbital in COVID-19 patients, nor would one expect any. Dr. Locher also stated that a chest x-ray is not as sensitive as a CT scan in detecting lung involvement for COVID-19, but nevertheless concluded that "any findings on a CT scan would likely be minor in view of a normal chest x-ray." (*Id.* ¶ 13.) He appeared to be relying on a less accurate measurement to postulate that a more accurate one would be less useful.

Dr. Locher's live testimony cast further doubt on his credibility. On cross-examination, it was unclear how closely he had reviewed the relevant medical records. For instance, his declaration stated that Higgs was not experiencing any symptoms on December 29, 2020, despite the fact that Higgs' medical records indicates he had a persistent cough. (*Compare* Locher Decl.

¶ 12 ("On 12/29/2020, the medical record reports no shortness of breath, sore throat or other symptoms"), *with* ECF No. 380-4, Smilege Decl. at 58 ("Cough (Duration/Describe: persistent").) Similarly, Dr. Locher's declaration states that Johnson exhibited no symptoms of COVID-19 on December 22 and 23, whereas the records clearly indicate Johnson reported a headache on December 22. (*Compare* Locher Decl. ¶ 12, *with* Smiledge Decl. at 138.) Dr. Locher confirmed during cross-examination that a headache is indeed a common symptom of COVID-19. (H'rg Tr. at 65.) These inaccuracies alone do not cast Dr. Locher's entire testimony in doubt, but they do call into question the amount of time he spent reviewing the evidence, particularly in light of his conclusion that Higgs and Johnson have had mild cases of COVID-19, and the implication that their cases have mostly resolved. (*See* Locher Decl. ¶ 12.) Indeed, Dr. Locher stated that it would not surprise him if either Higgs or Johnson reported persistent shortness of breath into January. (Hr'g Tr. at 72.)

More concerning was Dr. Locher's interpretation of Higgs' x-rays. In his declaration, Dr. Locher agreed with Dr. Yoon, the reviewing radiologist that Higgs' 2020 x-ray indicated a "stable chest examination without acute cardiopulmonary process" and that Higgs has "[c]lear lungs except for unchanged right apical reticular density" when compared to the 2018 x-rays. (Locher Decl. ¶ 12.) He reiterated his opinion that Higgs' 2020 x-ray was "unchanged compared to the previous file dated in October 2018" aside from a small upper right lobe shadow. (H'rg Tr. at 60.) Comparing the two images, one does not have to be an expert to see that this statement is inaccurate. As Dr. Stephen pointed out, the right lung in the 2020 image has more prevalent cloudier streaks when compared to the same lung in 2018. The opacity is present in the left lung, but not to the same extent, which suggests that this is not merely an imaging error. It is troubling that Dr. Locher did not account for these obvious differences between the two

scans, even when asked about Dr. Stephen's assessment by Defendants' counsel during direct examination. Instead, he merely stated his disagreement with Dr. Stephen. (*See id.*)

And while Dr. Locher reached the same conclusion as Dr. Yoon, the court has little information on Yoon, who was not called to testify and who did not submit a declaration in support of his conclusions.[8] The court does not know if Dr. Yoon routinely reviews x-rays of COVID-19 patients.

Based on the declarations and live testimony, the court finds that Higgs has shown that if his execution proceeds as scheduled—less than a month after his COVID-19 diagnosis—he will suffer flash pulmonary edema within one or two seconds of injection but before the pentobarbital reaches the brain and renders him unconscious. Though the Eighth Amendment does not guarantee a painless death, it does prohibit needless suffering. *See Baze*, 553 U.S. at 49–50. The pulmonary edema that Higgs will endure while he is still conscious would not occur were his execution to be delayed. A *brief* injunction will allow Higgs' lungs to sufficiently recover so that he may be executed in a humane manner. Thus, Higgs has successfully demonstrated a substantial risk of serious harm.[9]

ii. COVID-19 Lung Damage – Johnson

Despite the lack of x-ray evidence in Johnson's case, the court reaches the same conclusion for Johnson for several reasons. The assessment of the live testimony above applies

[8] Dr. Yoon's interpretation of Higgs' 2020 x-ray is included in Higgs' BOP medical record. (*See* Smiledge Decl. at 107.)

[9] Higgs also alleges that his COVID-19 diagnosis, given his severe asthma, makes it more likely that he will experience flash pulmonary edema while still conscious. Higgs does not allege that his asthma alone will cause him to suffer these effects. Having already found that Higgs' COVID-19 symptoms will cause him to suffer from flash pulmonary edema while sensate, the court need not determine whether and to what effect asthma has damaged his lungs.

with equal force to Johnson's COVID-19 as-applied claim. It is undisputed that Johnson is suffering from symptoms of COVID-19, which, as Drs. Van Norman and Stephen have shown, means he has suffered damage to his alveoli-capillary membrane. Were he to be injected with pentobarbital in his current state, the drug would travel first to his heart and then to his lungs. As the drug courses through his lungs, it will burn the alveoli-capillary membrane which has already been damaged from COVID-19, triggering flash pulmonary edema, all before the pentobarbital even reaches his brain and begins to have an anesthetizing effect.

And though Johnson's lungs have not been x-rayed (despite a request by Plaintiffs, *see* ECF No. 386), the court can infer from the expert testimony that Johnson has suffered COVID-19 related lung damage. Here again, Dr. Antognini's declaration failed to adequately account for the biological sequence of events that occurs after injection, particularly given COVID-19 symptoms. And Dr. Locher's failure to account for obvious changes in Higgs' x-ray undermines his opinion that patients with mild COVID-19 symptoms are unlikely to suffer extensive lung damage.

The record contains several pulse oximetry readings taken from Johnson over the course of his illness, the interpretation of which was also debated amongst the experts. But the court found this evidence less helpful. As Dr. Van Norman explained in a supplemental declaration she prepared for Johnson, "[a] clear change from 99% to 97%, as Mr. Johnson's pulse oximetry results show, is clinically significant and indicates significant changes have occurred in gas exchange in the lungs, particularly in the setting of early COVID-19 infection." (ECF No. 374-3, Van Norman Decl. Re Johnson ¶ 11.) She explained that "pulse oximetry is both a late and relatively crude method of examining impairments in oxygen exchange in the lungs." (*Id.* ¶ 9.)

Thus, "a person's oxygen level can fall by 80% and still show 100% SaO_2 [(the reading captured by a pulse oximetry test)]." (*Id.* ¶ 10.)

Dr. Antognini disputed this characterization. In his view, "[i]t is misleading to state that going from 99% to 97% is a trend," a change which is "clinically insignificant" because Johnson's pulse oximetry readings have been in the normal range. (Antognini 5th Supp. Decl. ¶ 7.) Dr. Antognini also explained that "[p]ulse oximetry readings are subject to variation and depend considerably on the placement of the probe, the amount of circulation to the finger, motion artifact, etc." (*Id.*)

Dr. Van Norman did not address this critique and did not appear to account for the fact that pulse oximetry readings are subject to variation or that, despite a drop in his pulse oximetry readings, Johnson's oxygen saturation level have remained in the normal range. In fact, even if the court accepts Dr. Van Norman's assertion that a decrease in pulse oximetry *could* signal a steep deprivation of oxygen, it is unclear whether that has occurred in Johnson's case and to what extent. (*See* Van Norman Decl. Re Johnson ¶ 9.) In any event, Dr. Van Norman confirmed that *"[e]ven if [Johnson's] pulse oximetry readings had not decreased* at this point in his infection, the studies I previously cited indicate that he is experiencing ongoing damage to the alveolar capillary membrane that will persist for a prolonged period of time after symptoms resolve." (*Id.* ¶ 12.) The court further notes that Johnson received a 98% reading in a pulse oximetry test performed on January 2, 2021. (*See* ECF No. 387-1 at 3.) Because the interpretation of these results is unclear, the court will accord them minimal weight.

Nevertheless, given the testimony proffered for Higgs and the relative weight the court has afforded the experts, Johnson has demonstrated a substantial risk of serious harm.

iii. Heart Issues – Higgs

Higgs' claim based on his heart conditions was less compelling and, standing alone, would not be enough to show a likelihood of success on an as-applied challenge. Ultimately, Higgs has not convincingly shown that his heart conditions make him more likely to suffer the effects of flash pulmonary edema before he is rendered insensate.

Higgs suffers from various heart conditions, including structural heart disease (by virtue of left atrial enlargement) and mitral valve disease (with moderate mitral valve regurgitation and anterior leaflet dysfunction). (Stephen Decl. ¶ 12.) Dr. Stephen explained that Higgs' enlarged left atrium ineffectively pumps blood to the left ventricle, putting Higgs at risk for fluid backup in his lungs (pulmonary edema). (*Id.* ¶ 13.) An injection of pentobarbital, a cardiac depressant, will induce a sudden onset of congestive heart failure and flash pulmonary edema. (*Id.* ¶ 14.) Dr. Joel Zivot offered similar opinions in his declaration. (*See generally* ECF No. 374-6 ¶¶ 7–9, 19.)

Again, Dr. Locher's declaration was of little value to the court. Dr. Locher confirmed that studies show that "COVID-19 can affect cardiac structure and function which may lead to pulmonary edema." (Locher Decl. ¶ 8.) He qualified his statement by noting that such studies were only performed on symptomatic and hospitalized patients, although he also acknowledges that Higgs is symptomatic. Dr. Locher's other opinions on the issue exhibited the same inconsistencies as his assessment of COVID-19 related lung damage. For instance, Dr. Locher stated that "there is no way for anyone to know if Mr. Higgs has any cardiac decompensation without performing a physical exam, laboratory studies such as serum troponin level . . .[or] a current EKG and echocardiogram." (*Id.* ¶ 8). He then went on to say that such an evaluation would not be helpful for a patient with minimal or no symptoms. (*Id.*) Dr. Locher also

contended that there is no evidence in the medical literature to suggest mitral regurgitation would lead to earlier or more severe pulmonary edema after an injection of five grams of pentobarbital. (*Id.* ¶ 8). The court does not find this argument persuasive—it is not surprising that there is a lack of evidence in the medical literature, given that individuals with mitral regurgitation (or any individuals) are not routinely injected with a lethal dose of pentobarbital.

Dr. Crowns' declaration was more persuasive.[10] He opined that Higgs' mitral valve prolapse/regurgitation is a common condition that presents no symptoms in most people. (ECF No. 380-5, Crowns Decl. ¶ 4.) He further stated that Higgs has not shown signs that he is progressing to heart failure. (*Id.* ¶ 5.) A May 2019 echocardiogram revealed a preserved left ventricular ejection fraction well within a "normal" range. (*Id.*) And during a cardiac consultation in November 2020, Higgs denied any chest pain, palpitations or shortness of breath, and confirmed that he can participate in vigorous exercise. (*Id.*) Thus, Crowns opined that Higgs is not suffering from heart failure and his heart condition would not cause him to experience flash pulmonary edema while sensate. (*Id.* ¶ 6.)[11]

The court has no meaningful way of resolving this dispute. Unlike the expert testimony regarding his lung damage, Higgs' cardiac history indicates that he has a heart abnormality that has not materially impacted his overall health. And despite the abnormality, Higgs' cardiac

[10] Plaintiffs point out that in an earlier evidentiary hearing, Dr. Crowns described "a case report of an individual who developed flash pulmonary edema [upon administration of pentobarbital], but he had underlying heart issues, specifically mitral valve issues . . . So, in his situation, his flash pulmonary edema was the result of a compromised heart." (Higgs Mot. at 9 (quoting ECF No. 271 at 18).) Dr. Crowns asserted that this statement was taken out of context, noting that the study to which he was referring included one patient who had clear symptoms of heart failure. (Crowns Decl. ¶¶ 3–4.)

[11] Though Plaintiffs established that Crowns is not an expert in anesthesiology, the court finds his assessment of Higgs' cardiac health credible.

measurements fall within a normal range. Higgs' experts opine that his heart conditions weaken his heart and are therefore highly likely to cause him to suffer flash pulmonary edema while sensate. But given credible expert testimony on both sides, and absent abnormal measurements showing deteriorating cardiac health, the court cannot find that Higgs has a *substantial* risk of suffering flash pulmonary edema during his execution because of his heart condition.

Higgs also theorizes that his COVID-19 diagnosis will further aggravate his heart condition. However, there is no evidence showing that Higgs has suffered cardiac damage as a result of his COVID-19 diagnosis. Indeed, none of the experts raised any flags about Higgs' cardiac measurements. And while the court accepts the scientific conclusion—proffered by both sides—"that COVID-19 can affect cardiac structure and function which may lead to pulmonary edema" (Locher Decl. ¶ 8), Higgs' own expert testified that COVID-19 impacts patients in different ways, (*see* Stephen Decl. ¶ 11). Based on the evidence before it, the court cannot conclude that Higgs will succeed on this as-applied challenge.

2. Known and Available Alternatives

i. Pre-dose of opioid pain or anti-anxiety medication

Plaintiffs proffer evidence that a pre-dose of certain opioid pain medications, such as morphine or fentanyl, will significantly reduce the risk of severe pain during the execution. (Higgs Mot. at 11–12 (quoting ECF No. 25, Decl. of Craig Stevens, ¶¶ 15–16).) Defendants argue that no state currently uses analgesics in its execution procedures, that pentobarbital alone is sufficiently painless, and that BOP has concluded that a one-drug protocol is preferable, because it will reduce "the risk of errors during administration" and "avoid the complications inherent in obtaining multiple lethal injection drugs and in navigating the expiration dates of multiple drugs." (Defs. Opp'n at 29–30 (citation omitted).)

The court finds Defendants' positions unavailing. While they contend that "no State adds an opioid to an execution protocol using pentobarbital," and the government is therefore not required to do so, (*Id.* at 30 (citing *Bucklew*, 139 S. Ct. at 1130)), this argument misses the mark. As this court has previously noted, Nebraska recently used a pre-dose of fentanyl to reduce the risk of serious pain during an execution (ECF No. 135 at 15), whereas in *Bucklew*, the plaintiff presented only "reports from correctional authorities in other States indicating that additional study [was] needed to develop a protocol" for the proposed execution mechanism. *Bucklew*, 139 S. Ct. at 1129. Even if Defendants were correct, however, the fact that other states do not use pain medication would not be dispositive. *See Bucklew*, 139 S. Ct. at 1136 (Kavanaugh, J., concurring) ("I write to underscore the Court's additional holding that the alternative method of execution need not be authorized under current state law. . . . Importantly, all nine Justices today agree on that point.").

Finally, Defendants contend that BOP has "legitimate reasons" for choosing not to use a pre-dose of an opioid because it has concluded that a one-drug protocol will reduce "the risk of errors during administration" and "avoid the complications inherent in obtaining multiple lethal injection drugs and in navigating the expiration dates of multiple drugs." (Defs. Opp'n at 30 (citations to Admin. R. omitted).) The court does not question BOP's conclusions regarding the administrative efficiency of a one-drug protocol. It does, however, question Defendants' conclusion that the administrative ease of administering and procuring a single drug over two drugs—apparently without having made a good faith attempt at the latter, *cf. Glossip*, 576 U.S. at 878–79—is a "legitimate penological reason" to select a particular method of execution despite evidence that the risk of pain associated with that method is "substantial when compared to a known and available alternative." *Bucklew*, 139 S. Ct. at 1125 (quoting *Glossip*, 576 U.S. at

878); *see also Henness v. DeWine*, 141 S. Ct. 7, 9 (2020) (Sotomayor, J., statement on denial of certiorari).

The Supreme Court has previously found a "legitimate penological reason" where a particular drug "hasten[ed] death," *Baze*, 553 U.S. at 57–58 (plurality op.); where a state chose "not to be the first to experiment with a new method of execution" that had "no track record of successful use," *Bucklew*, 139 S. Ct. at 1130 (citation omitted); and where a state was unable to procure particular drugs "despite a good-faith effort to do so," *Glossip*, 576 U.S. at 868–79 (detailing state's efforts and implying without stating that this reason was "legitimate"). Defendants have presented no evidence that they have tried to either procure or administer the two-drug protocol proffered by Plaintiffs, or that any such efforts were unsuccessful. *Cf.* Admin. R. at 869 (asserting that manufacturers would "most likely" resist efforts to use fentanyl in executions); *Execution Protocol Cases*, 980 F.3d at 133 ("The combination of drugs as part of lethal injection protocols has been used by both states and the federal government, and is still used in a number of jurisdictions. The two-drug protocol also fits squarely within the plain text of the federal execution protocol." (citations omitted)). Nor have Defendants provided this court with any authority to support their contention that administrative concerns are a sufficient "legitimate penological reason" under the Supreme Court's Eighth Amendment jurisprudence.

In sum, Plaintiffs have proposed a simple addition to the execution procedure that is likely to be as effective as it is easily and quickly administered. *See Bucklew*, 139 S. Ct. at 1129.

ii. Firing squad.

Alternatively, Plaintiffs proffer execution by firing squad. (Higgs Mot. at 12–13; ECF No. 92 ¶ 114(c).) Because that method of execution is feasible, readily implemented, and would significantly reduce the risk of severe pain, it satisfies the *Blaze*-*Glossip* requirements for

proposed alternatives. Execution by firing squad is currently legal in three states, Utah, Oklahoma, and Mississippi, and can hardly be described as "untried" or "untested" given its historical use as a "traditionally accepted method of execution." *Bucklew*, 139 S. Ct. at 1125, 1130. Moreover, the last execution by firing squad in the United States occurred just over a decade ago, on June 18, 2010, in Utah.

Both the historical use of firing squads in executions and more recent evidence suggest that, in comparison to the 2019 Protocol, execution by firing squad would significantly reduce the risk of severe pain. *See, e.g.*, Deborah Denno, *Is Electrocution an Unconstitutional Method of Execution? The Engineering of Death Over the Century*, 35 Wm. & Mary L. Rev. 551, 688 (1994) ("A competently performed shooting may cause nearly instant death"); Austin Sarat, *Gruesome Spectacles: Botched Executions and America's Death Penalty* app. A at 177 (2014) (calculating that while 7.12% of the 1,054 executions by lethal injection between 1900 and 2010 were "botched," none of the 34 executions by firing squad had been, the lowest rate of any method).[12]

Defendants point to two cases from other Circuits in which courts appeared skeptical of these conclusions. (Defs. Opp'n at 30–31.) But again, they overlook the Supreme Court's

[12] Defendants contend that Sarat "does not discuss execution by firing squad" and that "there is insufficient data in the cited appendix to draw any statistically significant conclusions," given that there "were only two executions by firing squad" since 1980. Setting aside the inconsistency of Defendants' arguments—first claiming that Sarat does not discuss firing squads, and then critiquing the data Sarat provides on that precise subject—Defendants simply misrepresent the facts. Although Sarat's work does not contain a specific chapter devoted to execution by firing squad, it does contain specific mentions of firing squads throughout the main text and associated footnotes, *see* Sarat, *supra* at 4, 10–11, 167, 219 n.131, and the referenced appendix provides data on all executions performed in the United States from 1900 through 2010, including the rate of botched executions separated by execution method. *Id.* app. A at 177. While only two executions by firing squad have been performed since 1980, Defendants inexplicably choose to ignore the first statistics provided in the Appendix, which note that there were 34 executions by firing squad between 1900 and 2010, none of which were botched. *Id.*

guidance in *Bucklew* that a plaintiff's burden in identifying an alternative method of execution "can be overstated" and that there is "little likelihood that an inmate facing a serious risk of pain will be unable to identify an available alternative." 139 S. Ct. at 1128–29. Indeed, members of the Court, including at least one Justice in the *Bucklew* majority, have opined that the firing squad may be an immediate and sufficiently painless method of execution. *See, e.g.*, *id.* at 1136 (Kavanaugh, J., concurring); *Arthur v. Dunn*, 137 S. Ct. 725, 733–34 (2017) (Sotomayor, J., dissenting from denial of cert.) ("In addition to being near instant, death by shooting may also be comparatively painless."). Moreover, given that use of the firing squad is "well established in military practice," *Baze*, 553 U.S. at 102 (Thomas, J., concurring in the judgment), Defendants are, if anything, more capable than state governments of finding "trained marksmen who are willing to participate," and who possess the skill necessary to ensure death is near-instant and comparatively painless. *Cf. McGehee v. Hutchinson*, 854 F.3d 488, 494 (8th Cir. 2017).

Defendants also argue that the court should defer to the government's "legitimate reason[]" for choosing not to adopt the firing squad as a method of execution—that legitimate reason being the government's interest in "preserving the dignity of the procedure" in light of what they deem the "'consensus' among the States that lethal injection is more dignified and humane." (Defs. Opp'n at 32–33 (quoting *Baze*, 553 U.S. at 57, 62 (plurality op.).) Yet in *Baze,* the plurality opinion, joined by three Justices, found that the "consensus" to which Defendants refer went "not just to the method of execution, but also to the specific three-drug combination" at issue in that case. *Baze*, 553 U.S. at 53. The same plurality also found that the state's decision to administer a paralytic agent as part of its execution protocol did not offend the Eighth Amendment where the state's interest in "preserving the dignity of the procedure" by preventing convulsions that "could be misperceived as signs of consciousness or distress" was coupled with

the "the States' legitimate interest in providing for a quick, certain death," and the paralytic had the effect of "hastening death." *Id.* at 57–58.

In his opinion concurring in the judgment in *Baze*, Justice Stevens noted that concern with the "dignity of the procedure" alone constituted a "woefully inadequate justification." "Whatever minimal interest there may be in ensuring that a condemned inmate dies a dignified death, and that witnesses to the execution are not made uncomfortable . . . is vastly outweighed by the risk that the inmate is actually experiencing excruciating pain." *Id.* at 73 (Stevens, J., concurring in the judgment); *cf. Bucklew*, 139 S. Ct. at 1130 (finding that "choosing not to be the first to experiment with a new method of execution" that had "no track record of successful use" constituted a "legitimate reason." (citation omitted)). Defendants' argument that the *perception* of a method of execution as less dignified or "more primitive" is a "legitimate penological reason" for declining to adopt a different protocol thus misconstrues the standard set by the Supreme Court's precedent on this issue.

The court does not find that execution by firing squad would be an acceptable alternative in every case. In this case, however, Defendants could readily adopt Plaintiffs' proposal.

Finally, Defendants argue that Plaintiffs' stated preference for execution by firing squad is disingenuous. But Plaintiffs have argued for it at length throughout this litigation, (*see, e.g.*, ECF No. 92), and have shown that it is readily implemented, available, and would significantly reduce the risk of severe pain. *Cf. Bucklew*, 139 S. Ct. at 1136 (Kavanaugh, J., concurring) (rejecting possibility of execution by firing squad where the plaintiff had chosen not to plead it as an alternative).

iii. Postponement

Plaintiffs have alternatively proffered the option of delaying their execution until they have recovered from COVID-19. (Higgs Mot. at 13–14.) This is not, as precedent requires, "a known and available alternative method of execution," *see Glossip*, 576 U.S. at 864, but rather an alternative *date* of execution. Even so, the court is likewise unpersuaded by Defendants' contention that postponing the executions "directly contradicts [Plaintiffs'] general Eighth Amendment claim and belies every argument they have made in support of that claim over the last 15 months." (Defs. Opp'n at 34.) If lethal injection of pentobarbital will create a significant risk of suffering even in otherwise healthy persons, as Plaintiffs have long attested, then the risk to an individual with severe respiratory illness, such COVID-19, would only be heightened. This proposal therefore does not contradict Plaintiff's other arguments.

Plaintiffs have identified two available and readily implementable alternative methods of execution that would significantly reduce the risk of serious pain: a pre-dose of opioid pain or anti-anxiety medication, or execution by firing squad. Thus, they have established a likelihood of success on the merits of their claims that the 2019 Protocol's method of execution constitutes cruel and unusual punishment in violation of the Eighth Amendment.

B. Irreparable Harm

In order to prevail on a request for preliminary injunction, irreparable harm "must be certain and great, actual and not theoretical, and so imminent that there is a clear and present need for equitable relief to prevent irreparable harm," and it "must be beyond remediation." *League of Women Voters of U.S. v. Newby,* 838 F.3d 1, 7–8 (D.C. Cir. 2016) (citing *Chaplaincy of Full Gospel Churches v. England*, 454 F.3d 290, 297 (D.C. Cir. 2006)) (internal quotation marks and brackets omitted). Here, without injunctive relief, Plaintiffs would be subjected to an

excruciating death in a manner that is likely unconstitutional. This harm is manifestly irreparable. *See Karem v. Trump*, 960 F.3d 656, 667 (D.C. Cir. 2020) (explaining that "prospective violation[s] of . . . constitutional right[s] constitute[] irreparable injury for [equitable-relief] purposes" (internal quotation marks omitted)).

Other courts in this Circuit have found irreparable harm in similar, but less dire circumstances. *See, e.g.*, *Damus v. Nielsen*, 313 F. Supp. 3d 317, 342 (D.D.C. 2018) (finding irreparable injury where plaintiffs faced detention under challenged regulations); *Stellar IT Sols., Inc. v. USCIS*, No. 18-2015, 2018553 U.S. at 49 WL 6047413, at *11 (D.D.C. Nov. 19, 2018) (finding irreparable injury where plaintiff would be forced to leave the country under challenged regulations); *FBME Bank Ltd. v. Lew*, 125 F. Supp. 3d 109, 126–27 (D.D.C. 2015) (finding irreparable injury where challenged regulations would threaten company's existence); *N. Mariana Islands v. United States*, 686 F. Supp. 2d 7, 19 (D.D.C. 2009) (finding irreparable injury where challenged regulations would limit guest workers).

Defendants argue that Plaintiffs have failed to demonstrate irreparable harm given "the absence of any evidence that [Plaintiffs], as a result of contracting COVID-19, will experience pulmonary edema prior to falling insensate." (Defs. Opp'n at 36.) But, for the reasons discussed above, the court has found otherwise. Furthermore, Defendants appear to imply that if Plaintiffs experience flash pulmonary edema for thirty seconds, at most, that would not constitute irreparable harm. (*See id.* at 35–36.) The court has already addressed this argument. *See* supra n.1. The Eighth Amendment does not permit "substantial" and "needless" suffering so long as it will only be experienced for a short time. *See Baze*, 553 U.S. at 49–50. Here, the risk of substantial suffering can be avoided by using one of Plaintiffs' proffered alternatives or by waiting several weeks to allow Plaintiffs to recover from a novel disease before executing them.

Thus, Plaintiffs have sufficiently shown they will suffer irreparable harm if their executions proceed as planned.

C. Balance of Equities

The need for closure in this case—particularly for the victims' families—is significant. *See Calderon v. Thompson*, 523 U.S. 538, 556 (1998) ("Only with an assurance of real finality can the [government] execute its moral judgment in a case . . . [and] the victims of crime move forward knowing the moral judgment will be carried out."). And this court is mindful of the Supreme Court's caution against last minute stays of execution. *See Bucklew*, 139 S. Ct. at 1134. But the government's ability to enact moral judgment is a great responsibility and, in the case of a death sentence, cannot be reversed. After suspending federal executions for over seventeen years, the government announced a new Execution Protocol and a resumption of executions in July 2019, and since July of this year has executed eleven inmates. Any potential harm to the government caused by a brief stay is not substantial. Indeed, the government has not shown that it would be significantly burdened by staying these two executions for several more weeks until Plaintiffs have recovered from COVID-19. Accordingly, the court sees no reason why this execution *must* proceed this week. Thus, the balance of the equities favors a stay.

D. Public Interest

The court is deeply concerned that the government intends to execute two prisoners who are suffering from COVID-19 infection, particularly given that the disease impacts individuals in drastically different ways and can have particularly devastating long-term effects, even for those with mild symptoms. This is to say nothing of the fact that executing inmates who are positive for COVID-19 in a facility with an active COVID-19 outbreak will endanger the lives of those performing the executions and those witnessing it. This is irresponsible at best, particularly

when a temporary injunction will reduce these risks. The public interest is not served by executing individuals in this manner. *See Harris v. Johnson*, 323 F. Supp. 2d 797, 810 (S.D. Tex. 2004) ("Confidence in the humane application of the governing laws . . . must be in the public's interest.").

Thus, the court finds that all four factors weigh in favor of injunctive relief, and once again finds itself in the unenviable position of having to issue yet another last-minute stay of execution. Nonetheless, this is the nature of death penalty litigation, and this court has had a disproportionate number of such claims given the nature of the case. Moreover, this result could not have been avoided given that Plaintiffs were diagnosed with COVID-19 in late December, at which point Plaintiffs filed amended complaints. The court held an evidentiary hearing to assess the likelihood of success on the merits of these claims and scheduled that hearing at the earliest possible date.

III. CONCLUSION

The court finds that Plaintiffs have demonstrated a likelihood of success on the merits and that absent a preliminary injunction, Plaintiffs will suffer irreparable harm. It further finds that the likely harm that Plaintiffs would suffer if the court does not grant injunctive relief far outweighs any potential harm to Defendants. Finally, because the public is greatly served by attempting to ensure that the most serious punishment is imposed in a manner consistent with our Constitution, the court finds that it is in the public interest to issue a preliminary injunction.

Accordingly, for the reasons set forth above, the court will GRANT Plaintiffs' motions for a preliminary injunction. The injunction will remain in effect until March 16, 2021.[13] A corresponding order will be issued simultaneously.

Date: January 12, 2021

Tanya S. Chutkan
TANYA S. CHUTKAN
United States District Judge

[13] The court calculated this date based on Dr. Van Norman's assessment that COVID-19-related lung damage can persist for as long as ninety days after infection. (*See* Van Norman Decl. at 6.) Both Plaintiffs tested positive for COVID-19 on December 16, 2020. The court will not enjoin these executions indefinitely, however. Accordingly, it will consider extending the injunction only if Plaintiffs can provide *demonstrated* evidence of continued lung damage from COVID-19. And the court expects that Defendants will, in good faith, comply with reasonable requests for follow-up medical assessment which, at the bare minimum, should include an x-ray for each Plaintiff in several weeks.