United States Court of Appeals
Fifth Circuit
**F I L E D**
**December 9, 2004**
Charles R. Fulbruge III
Clerk

**IN THE UNITED STATES COURT OF APPEALS**

**FOR THE FIFTH CIRCUIT**

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No. 03-50650

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RAYMOND BURLESON,

Plaintiff-Appellant,

versus

TEXAS DEPARTMENT OF CRIMINAL JUSTICE; ET AL

Defendants

NOLAN GLASS, Plant Manager, Stainless Steel Plant,
Boyd Unit, Texas Department of Criminal Justice - ID;
BILLY WEST; JOE WHITE

Defendants-Appellees.

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Appeal from the United States District Court
for the Western District of Texas

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Before DeMOSS, STEWART, and CLEMENT, Circuit Judges.

CARL E. STEWART, Circuit Judge:

Raymond Burleson ("Burleson"), an inmate in the Texas Department of Criminal Justice, brought this 42 U.S.C. § 1983 action against prison officials, alleging they violated the Eighth Amendment's prohibition against cruel and unusual punishment by exposing him to hazardous conditions while he was working as a welder in the Boyd Unit Stainless Steel Plant. Burleson appeals

the magistrate judge's decision to grant the Defendants' Motion to Exclude Expert Testimony and Defendants' Second Motion for Summary Judgment. Burleson also appeals the court's decision to overrule his Objections to Defendants' Summary Judgment Evidence. For the reasons set forth below, we AFFIRM.

## FACTUAL AND PROCEDURAL BACKGROUND

Raymond Burleson, a Texas inmate, worked as a welder at the Boyd Unit's stainless steel plant in Teague, Texas, from May 1995 through May 1997. Burleson performed tungsten inert gas welding activities using 2% thoriated tungsten steel welding electrodes. His welding supervisors, Billy West and Joe White, gave the inmates unlabeled electrodes to work with, but the inmates never received the boxes in which the electrodes were packaged.

Burleson later learned that the warning labels on the boxes indicated that these 2% thoriated tungsten electrodes were radioactive and exposure to them may cause cancer. The thorium in the welding rods used by Burleson is present in the form of thorium dioxide. Thorium dioxide is a naturally occurring radioactive compound that is distributed in the air during the welding and grinding processes. The U.S. Department of Health and Human Services has determined that thorium dioxide is a carcinogen.

In May of 1997, Burleson was diagnosed with throat and lung cancer.[1] Four other individuals employed as welders at the Boyd stainless steel plant were also diagnosed with cancer around the

[1]Specifically, Burleson was diagnosed with two primary malignant tumors of the right respiratory system: squamous cell carcinoma of the right anterior tonsillar pillar in the throat and a right lung non-small cell of the lung.

same time.[2] However, Burleson also has a forty-five year, two-pack-per-day history of smoking, and both his parents and maternal grandparents died of cancer.

Proceeding pro se, Burleson filed a 42 U.S.C. § 1983 action on December 1, 1997, against the defendants the Texas Department of Criminal Justice ("TDCJ"), Texas Correctional Industries ("TCI"), Gary Johnson, John Benestante, former plant manager Nolan Glass, and welding supervisors West and White. Burleson's § 1983 claim asserted a violation of his Eighth Amendment right to be free from cruel and unusual punishment on the grounds that his conditions of confinement posed an unreasonable risk of damage to his health. Specifically, Burleson claims that the defendants were deliberately indifferent to his health when they allowed him to weld with 2% thoriated tungsten electrodes during the two years he worked as a welder at the Boyd Unit's plant, the exposure to which caused him to develop lung and throat cancer.

To support his causation claim, Burleson presented the expert witness testimony of Dr. Arch Carson, a well-credentialed[3] toxicologist and expert in occupational medicine. Dr. Carson opined that Burleson inhaled hazardous radioactive particles while engaging in welding operations at the Boyd

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[2] Ervin Blansit was diagnosed with throat cancer at age 45, Manuel Cerda was diagnosed with throat cancer at age 50, Danny Osbourne was diagnosed with lung cancer at age 47, and David Clemmer was diagnosed with multiple myeloma at age 45 and died two years later.

[3] Dr. Carson received his Ph.D in Environmental Health — Toxicology from the Kettering Laboratory, University of Cincinnati College of Medicine in 1987 and his medical degree from The Ohio State University College of Medicine in 1990. In 1991, Dr. Carson completed a postgraduate internship in Internal Medicine at New York University Medical Center and Bellevue Hospital Center. In 1992, he completed his residency in Occupational Medicine at the University of Texas Health Science Center. Dr. Carson has served as an instructor, lecturer and adjunct assistant professor of Industrial Toxicology at the University of Cincinnati College of Medicine, a clinical instructor, consultant physician, attending physician, and assistant professor in the area of occupational medicine and toxicology. He currently serves as the Corporate Medical Director for Chevron Phillips Chemical Company and as the Director of the Occupational and Environmental Medicine Residency at the University of Texas Health Science Center in Houston.

Unit, in turn exposing him to a significant risk for the development of respiratory tract cancers. Dr. Carson further opined that this risk exceeded other risk factors, including Burleson's significant smoking history, and led to the occurrence of his cancers.

Under Dr. Carson's so-called "radiation hot spot" theory or "microscopic flux" theory, the primary risk factor for cancer is the local microscopic dose of radiation that is received by the one cell that transforms into cancer, not the total dose of radiation to the body. In Dr. Carson's opinion, the thorium dust Burleson inhaled contained particles which lodged in his airways and damaged the surrounding cells. These particles were a continual radiation hazard to the few local cells near it. Dr. Carson concedes that he has never calculated an individual's radiation exposure from exposure to thoriated tungsten welding electrodes, nor does Dr. Carson have any specialties or medical certifications in any radiation related disciplines or medical physics. Instead, Dr. Carson states that his "radiation hot spot" theory has been proven in practice[4] and that published scientific and epidemiological studies show that patients who received Thorotrast — a form of thorium dioxide used as a medical imaging dye — during its thirty year use, developed multiple types of cancers. Dr. Carson ultimately concludes that because studies and practice show that Thorotrast resulted in tumors, this conclusively links thorium dioxide — the same substance allegedly inhaled by Burleson during the welding process — to cancer as a causative agent.

In June of 2000, Burleson's claims against defendants Benestante, TDCJ, and TCI were dismissed. On December 20, 2000, Magistrate Judge Dennis G. Green granted summary judgment in favor of defendants Glass, West, and White.

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[4] Specifically, Dr. Carson states that "if you implant a radioactive source in the location, you get local tumors at the site of implantation. That's well described. I didn't even think it was necessary to provide references."

On November 14, 2001, this Court reversed and remanded on the grounds that the summary judgment evidence before it at the time created a genuine issue of material fact as to whether the levels of the carcinogens Burleson was exposed to were sufficient to pose an unreasonable risk of serious damage to his future health. See Burleson v. TDCJ, 277 F.3d 1374 (5th Cir. 2001) (unpublished). Additionally, this Court also concluded that summary judgment was not appropriate on the subject of qualified immunity because there was a genuine issue of material fact as to whether the defendants acted with deliberate indifference to significant risks to Burleson's health, such that their conduct was not objectively reasonable in light of clearly established law at the time Burleson worked at the Boyd Unit. Id.

On remand, Burleson acquired counsel and the case was reassigned to Magistrate Judge Jeffrey C. Manske. On August 12, 2002, defendants Glass, West, and White moved to exclude the expert testimony of Dr. Carson. The defendants did not challenge Dr. Carson's qualifications or competency, rather the defendants contended "that Dr. Carson's opinion was not reliable because (1) it is not based upon any scientific or epidemiological studies showing any statistically significant link between exposure to thoriated tungsten electrodes and lung and throat cancer, and (2) that Dr. Carson's application of the 'radiation hot spot' theory is not grounded in established science." The defendants also asserted that Dr. Carson's opinion was not relevant "because his opinion is not based on any reliable data about the extent of Mr. Burleson's exposure, if any, to radiation from the thoriated tungsten welding rods during the relevant time period." Because the defendants sought to have Dr. Carson's testimony excluded, the defendants also moved for a second motion for summary judgment. The magistrate judge did not conduct a Daubert hearing because both parties declined the court's request to present oral argument or testimony on behalf of their respective positions.

On May 7, 2003, the magistrate judge granted both of the defendants' motions and entered a final judgment dismissing Burleson's claims. The court dismissed Dr. Carson's testimony as unreliable and irrelevant under the Daubert standards. Without Dr. Carson's testimony, the court found that there was no genuine issue of material fact as to whether Burleson's lung and throat cancers were caused by exposure to thoriated tungsten electrodes, rather than his extensive smoking history. Since Burleson did not establish thoriated tungsten welding electrodes caused cancer, the court concluded that Burleson was unable to make out a constitutional claim. The court therefore granted summary judgment in favor of Glass, West, and White. This appeal followed.

## DISCUSSION

On appeal, Burleson challenges the district court's decision to exclude the testimony of Dr. Carson under the standard set forth in Daubert v. Merrell Dow Pharm., Inc., 509 U.S. 579, 113 S. Ct. 2786, 125 L. Ed. 2d 469 (1993). Burleson also contends the court erred in overruling his Objections to Defendants' Summary Judgment Evidence and in granting the Defendant's Second Motion for Summary Judgment.

### I. Exclusion of Dr. Carson's Expert Testimony

#### A. Standard of Review

We review the trial court's determination of admissibility of expert evidence under Daubert for abuse of discretion. Pipitone v. Biomatrix, Inc., 288 F.3d 239, 243 (5th Cir. 2002) (citing Kumho Tire Co. v. Carmichael, 526 U.S. 137, 152, 119 S.Ct. 1167, 143 L.Ed.2d 238 (1999)). "A trial court abuses its discretion when its ruling is based on an erroneous view of the law or a clearly erroneous assessment of the evidence." Bocanegra v. Vicmar Servs., Inc., 320 F.3d 581, 584 (5th Cir. 2003). If this court finds an abuse of discretion in admitting or excluding evidence, we "review the error

under the harmless error doctrine, affirming the judgment, unless the ruling affected substantial rights of the complaining party." Id.

B. Applicable Law

Daubert "provides the analytical framework for determining whether expert testimony is admissible under Rule 702 of the Federal Rules of Evidence." Pipitone, 288 F.3d at 243. Under Daubert, trial courts act as gate-keepers overseeing the admission of scientific and non-scientific expert testimony. Kumho Tires Co. v. Carmichael, 526 U.S. 137, 147, 119 S.Ct. 1167, 143 L.Ed.2d 238 (1999). Trial courts must make "a preliminary assessment of whether the reasoning or methodology underlying the testimony is scientifically valid and of whether that reasoning or methodology properly can be applied to the facts in issue." Daubert, 509 U.S. at 592-93. Stated differently, the trial judge must determine whether the expert testimony is both reliable and relevant. Id. at 589.

Many factors bear on the inquiry into the reliability of scientific and other expert testimony, including, but not limited to, whether the expert's theory or technique: (1) can be or has been tested; (2) has been subjected to peer review and publication; (3) has a known or potential rate of error or standards controlling its operation; and (4) is generally accepted in the relevant scientific community. Id. at 593-94. The district court's responsibility "is to make certain that an expert, whether basing testimony upon professional studies or personal experience, employs in the courtroom the same level of intellectual rigor that characterizes the practice of an expert in the relevant field." Kumho, 526 U.S. at 152.

Burleson argues that the magistrate judge abused his discretion in excluding Dr. Carson's testimony as both irrelevant and unreliable. Burleson notes that the magistrate judge's memorandum

opinion relied exclusively on the four Daubert factors, particularly whether the theory was generally accepted in the scientific community, notwithstanding Daubert's proposition that those four factors do not constitute a definitive checklist. Burleson contends that Dr. Carson's affidavit presented sufficient evidence that thorium dioxide causes cancer because of the profusion of published epidemiological studies stating that patients who received Thorotrast, which also contained thorium dioxide, developed multiple types of cancers.

On the other hand, Glass, West, and White contend that the theory offered by Dr. Carson is unreliable because it is not grounded in established science and has not been subjected to peer review or scientific study. In short, the defendants argue that Dr. Carson's "radiation hot spot theory" is nothing more than litigation driven speculation, not science.

The four factors identified in Daubert form the starting point of the inquiry into the admissibility of expert testimony. Pipitone, 288 F.3d at 245 (quotation omitted). However, "the factors identified in Daubert may or may not be pertinent in assessing reliability, depending on the nature of the issue, the expert's particular expertise, and the subject of his testimony." Kumho, 526 U.S. at 150. Whether an expert's testimony is reliable is a fact-specific inquiry. Skidmore v. Precision Printing and Pkg., Inc.,188 F.3d 606, 618 (5th Cir. 1999).

C. The Reliability of Dr. Carson's Testimony

The magistrate judge found that Dr. Carson's testimony "has never been tested and never been submitted for peer review," "the potential rate of error for [Dr. Carson's] theory of liability is high," and "it is not generally accepted within the scientific community that exposure to thoriated tungsten welding rods causes lung and/or throat cancer." The magistrate judge also found Dr. Carson's opinion not relevant here because, "as in Allen, there is no direct evidence of the level of Mr.

Burleson's exposure, if any, to radiation from the thoriated tungsten welding rods." Accordingly, the magistrate judge excluded Dr. Carson's testimony consistent with Daubert.

Burleson asserts that it is inappropriate to apply the potential rate of error factor to Dr. Carson's hypothesis because there is no potential rate of error associated with the theory. Burleson also argues the magistrate judge erred in finding that Dr. Carson's conclusion was not submitted to peer review or scientific testing. Burleson contends that Dr. Carson offered epidemiological studies which link thorium dioxide with multiple cancers.

The magistrate judge relied on Allen v. Pennsylvania Eng'g Corp., 102 F.3d 194 (5th Cir. 1996), in support of its conclusion. In Allen, the deceased died of brain cancer after having been a maintenance worker at Baton Rouge General Hospital for over twenty years. Id. at 195. The deceased's widow and son brought a products liability action against the manufacturer of ethylene oxide ("EtO"), a chemical to which the deceased was exposed while working at the hospital. Id. On motions for judgment as a matter of law, the district court held both that two of the deceased's three expert witnesses were not qualified to render opinions that exposure to EtO caused the deceased's fatal cancer and that the opinions of all three experts were inadmissible for lack of sufficient grounding. Id. On appeal, this Court affirmed, finding the expert testimony unreliable under Daubert because, inter alia, "no epidemiological study has found a statistically significant link between EtO exposure and human brain cancer." Id. Specifically, the Court in Allen observed that the experts relied on certain epidemiological studies that "suggested" a correlation between EtO and certain cancers other than brain cancer, although the experts stated these studies were also "suggestive" of a correlation between EtO and brain cancer. In contrast, there was evidence of other studies indicating "there is not a correlation between EtO exposure and cancer of the human brain." Id. at

197. The Court found that while there may have been evidence suggesting a correlation between EtO and brain cancer, that evidence was not probative to the issue of causation of brain cancer. Id. at 198.

Burleson claims the case at hand can be distinguished from Allen because there are epidemiological studies that clearly link thorium dioxide, a known carcinogen, with cancer, and there are no such studies disproving the theory that welding with thoriated tungsten welding rods causes lung or throat cancer. Furt hermore, Burleson contends that there is no legal requirement that Burleson produce epidemiological studies concerning a specific use of the same known carcinogen in order to create a genuine issue of material fact concerning the causal relationship between lung and throat cancers and thorium dioxide in welding electrodes.[5] Burleson's arguments are unavailing.

Dr. Carson offers no studies which demonstrate a statistically significant link between thorium dioxide exposure in dust or fumes and Burleson's type of lung or throat cancer. The U.N. report relied upon by Dr. Carson only reports that liver, spleen and bone cancers were associated with Thorotrast. Although Dr. Carson presupposes that the thorium dioxide particles in the welding dust were inhaled by Burleson, lodged in his airways and caused a cancer risk, he could not cite any studies to confirm that this type of infection is possible.[6] Additionally, one of the few, if not the only,

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[5] Burleson also maintains that the magistrate judge erred in relying on the affidavit of the defendants' expert witness, Carol Berger, to defeat causation particularly considering that the magistrate judge sustained Burleson's objection to Berger's opinion on causal connection. However, we note that the magistrate judge did not have the benefit of the studies relied upon by the plaintiff in the record. Review of Carol Berger's affidavit demonstrates that she did have access to the scientific studies cited by Dr. Carson. In that the magistrate judge relied upon Carol Berger's affidavit to point out factual inaccuracies in the plaintiff's assertions about those studies and counter the plaintiff's contentions with alternative scientific studies, we find that the magistrate judge was not giving undue weight to Berger's opinion.

[6]

> Q: Can you tell us, from those publications -- and I can't remember the names of them -- give us any cases or examples out of those where that theory of radiation

epidemiology study which examined the cancer risk to welders from thoriated welding electrodes was a Danish study that showed no statistically significant link between the exposure to thoriated welding electrodes and cancer. Here, as in Allen, there are no epidemiological studies supporting a correlation between the suggested causative agent and the type of cancer experienced by the plaintiff. Allen, 102 F.3d at 197. Accordingly, we find Allen undistinguishable.

Burleson also argues that the magistrate judge erred in concluding that Dr. Carson's hypothesis is not generally accepted in the scientific community. Burleson contends that Dr. Carson presented rebuttal evidence that it is generally accepted that thorium dioxide causes lung or throat cancer. In support of his "radiation hot spot" theory, Dr. Carson relies primarily on two published studies that he maintains address the radiation hot spot theory as a cancer risk.[7] Those studies reference Thorotrast as a primary source for the epidemiological information. The studies also cite evidence from radiation exposure seen in Hiroshima and Nagasaki nuclear victims.

It is undisputed that Thorotrast patients and the Japanese nuclear victims had a higher level

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> lodging in a particular part of the body has resulted in an elevated risk?
> A: I can't specifically cite any cases from those references right now because it's - - although I've seen them in the past, it's been quite a while since I've reviewed them.
> . . .
> Q: Do you know of – in any other papers any examples where that has resulted in an elevated risk other than the papers that you've told us about and which we have the names recorded in the record?
> . . .
> A: Well, yes. There are dozens of them. I'm not sure I could cite any individually.

[7] Those two published studies are UNITED NATIONS SCIENTIFIC COMMITTEE ON THE EFFECTS OF ATOMIC RADIATION, SOURCES, EFFECTS AND RISKS OF IONIZING RADIATION (1993); COMMITTEE ON THE BIOLOGICAL EFFECTS OF IONIZING RADIATION, NATIONAL RESEARCH COUNCIL, HEALTH EFFECTS OF EXPOSURE TO LOW LEVELS OF IONIZING RADIATION (1990). Burleson cites another source, Access Science, which he claims specifically addresses thorium dioxide from thoriated tungsten welding electrodes.

of general radiation exposure than people exposed to thoriated tungsten welding electrodes. Thorotrast had a significantly higher concentration of thorium dioxide than the 2% thoriated welding electrodes at issue here, and, as the defendants observe, was injected directly into the body or administered orally. In fact, Dr. Carson concedes his theory assumes a high dose of radiation. In comparison, the defendants argue that the thoriated tungsten welding electrodes contain very low levels of radiation which could not have exposed Burleson to the dose of radiation necessary to cause his cancers. The defendants note that epidemiological studies have demonstrated no adverse health effects from exposure to small doses of radiation.

We have previously stated in toxic tort cases that scientific knowledge of the harmful level of exposure to a chemical, and knowledge that the plaintiff was exposed to such quantities "are minimal facts necessary to sustain the plaintiffs' burden." Allen, 102 F.3d at 199. Dr. Carson is even quoted affirming in his own scholarly papers that "an important step in studies relating to worker health and industrial exposure is the estimation of mean exposure level." Dr. Carson admits that the radiation dose a patient receives is critical to an evaluation of causation. He asserts that the lower the dose or exposure level, the lower the probability of causation. But even though Burleson's total dose potential or exposure level can be calculated, Dr. Carson has not determine the dose because he has "satisfied [him]self that it's sufficient."

Dr. Carson's hypothesis rests on a theory of localized exposure to radiation rather than a total dose of radiation to the body, hence, Burleson asserts, an assessment of total radiation dose is irrelevant. According to Burleson, the critical question regarding exposure "is not the total dose of radiation to the body, but the total dose of radiation to the one cell that was transformed into a cancer cell in two different locations in Mr. Burleson's body." Dr. Carson contends that the radiation dose

to that area cannot be calculated individually, although Dr. Carson assures us, "[i]t's just high."

The magistrate judge was not required "to admit opinion evidence that is connected to existing data only by the ipse dixit of the expert." Gen. Elec. Co. v. Joinder, 522 U.S. 136, 146, 118 S. Ct. 512, 139 L. Ed.2d. 508 (1997). A court may rightfully exclude expert testimony where a court finds that an expert has extrapolated data, and there is "too great an analytical gap between the data and the opinion proffered." Id.; see also Moore v. Ashland Chem., Inc., 151 F.3d 269, 279 (5th Cir. 1998) (en banc). Here, the magistrate judge found that Dr. Carson's opinion was based on speculation, guesswork, and conjecture to support his theory. The magistrate judge based his conclusion on the fact that Dr. Carson failed to conduct a dose assessment, there was no scientific evidence linking thoriated welding electrodes to lung or throat cancer, and the studies Dr. Carson did rely on concerned Thorotrast. The magistrate judge also noted Ms. Berger's contentions that the articles Dr. Carson relied on contain statements which either directly contradict his conclusion or don't concern thoriated tungsten. Based on the evidence in the record and the arguments before the court, we hold that the magistrate judge did not commit reversible error in finding Dr. Carson's testimony unreliable.

The magistrate judge also concluded that Dr. Carson's testimony was irrelevant in that he had not presented any reliable evidence regarding the extent of Burleson's level of harmful exposure. Additionally, the magistrate judge determined Dr. Carson's testimony would not assist the trier of fact in understanding the evidence because of Dr. Carson's inability to link Burleson's type of cancer to the 2% thoriated tungsten welding electrodes. Since Dr. Carson cannot show that the welding electrodes are more or less probable to be the cause of Burleson's cancers, the testimony is irrelevant under the Federal Rules of Evidence. FED. R. EVID. 701. Thus, it was not an abuse of discretion

for the magistrate judge to exclude Dr. Carson's testimony.

II. Burleson's Objections to Defendants' Exhibits A, B, & C

Next, Burleson challenges the magistrate judge's failure to sustain his objections to the defendants' exhibits. In their Second Motion for Summary Judgment, the defendants alleged that Burleson's cancers were not caused by exposure to thoriated tungsten electrodes, but rather, were caused by his extensive smoking history. In support of this contention, the defendants offered evidence of Burleson's total radiation exposure from thoriated tungsten electrodes and the effect of such exposure on Burleson's propensity to develop lung and throat cancer. Specifically, the defendants offered Exhibit A (Affidavit of Berger dated July 18, 2002), Exhibit B (Affidavit of Berger dated August 7, 2002), and Exhibit C (Affidavit of Dr. George L. Delclos). We review evidentiary issues for abuse of discretion. King v. Illinois Cent. R.R. Co., 337 F.3d 550, 555 (5th Cir. 2003).

With regard to Exhibits A and B, Burleson avowed that Berger's analysis of his total radiation dosage was inaccurate and unreliable because she ignored the amount of time Burleson claimed he spent grinding electrodes. However, Burleson misses the point. As a certified Health Physicist, with over 25 years of experience in nuclear and radiological activities, Berger is certainly qualified to testify as to the adverse health effects from exposure to radiation. Based upon her review of the materials, Berger concluded that given the small radiation dose Burleson potentially received, it is unlikely his cancers were caused from his two year exposure to thoriated tungsten welding electrodes at the stainless steel plant. It was not an abuse of discretion for the magistrate judge to admit Berger's affidavits because they are relevant to how much radiation Burleson was exposed to and the likely cause of his cancers.

Burleson also objects to Dr. Delclos's affidavit on the basis of his lack of experience, training,

and knowledge in diagnosing patients who have suffered radiation exposure, assessing potential exposure to carcinogens by welders, and calculating radiation exposure/industrial hygiene and its possible hazards. Further, Burleson objects on the basis that Dr. Delclos did not prove that he has a background in or is an expert in determining latency periods for radiation exposure victims.

Dr. Delclos is board certified in internal medicine, pulmonary disease, and occupational medicine. He concluded that the time lapse between Burleson's first exposure to thoriated tungsten electrodes at the stainless steel plant and the diagnosis of his lung and throat cancers "is simply an insufficient period of time for cancer to develop as a consequence of an occupational exposure to radiation." Developing lung and throat cancer is statistically elevated for people who start smoking at an early age and who continue smoking throughout their lives. Dr. Delclos, therefore, concluded that Burleson's cancer was more likely caused by his lengthy smoking history. Hence, like Berger, Dr. Delclos's testimony is relevant to determining causation. Accordingly, the magistrate judge did not abuse his discretion by failing to sustain Burleson's objections to Dr. Delclos's affidavit.

III. Defendants' Second Motion for Summary Judgment

Burleson also appeals from the magistrate judge's decision granting summary judgment for the defendants. The magistrate judge found that because there was no evidence that exposure to thoriated tungsten caused Burleson's cancers, Burleson failed to show that thoriated tungsten posed a substantial risk of harm and as a result that he was incarcerated under conditions which posed an unreasonable risk of damage to his health. Furthermore, the magistrate judge concluded that, based on the lack of causation evidence, the defendants could not have been aware of facts from which an inference of harm could be drawn. Thus, the magistrate judge held Burleson did not demonstrate that the defendants' were deliberately indifferent, which is a necessary mens rea for an Eighth Amendment

conditions of confinement claim.

Burleson asserts that the magistrate judge improperly applied Adickes v. S.H. Kress & Co., 398 U.S. 144, 90 S. Ct. 1598, 26 L. Ed.2d 142 (1970), in granting Defendants' Second Motion for Summary Judgment. Specifically, Burleson claims the magistrate judge erred in not viewing the evidence in the light most favorable to the party opposing summary judgment, namely Burleson.

We review a magistrate judge's ruling on summary judgment de novo applying the same criteria used by the magistrate judge. Daniels v. City of Arlington, 246 F.3d 500, 502 (5th Cir. 2001). Summary judgment is appropriate "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." FED. R. CIV. P. 56(c); see also Celotex Corp. v. Catrett, 477 U.S. 317, 322-23, 106 S. Ct. 2548, 91 L. Ed.2d 265 (1986). If the moving party meets the initial burden of showing there is no genuine issue of material fact, the burden shifts to the nonmoving party to produce evidence or designate specific facts showing the existence of a genuine issue for trial. Allen v. Rapides Parish Sch. Bd., 204 F.3d 619, 621 (5th Cir. 2000) (internal quotations and citations omitted). To support a motion for summary judgment, "the moving party . . . [has] the burden of showing the absence of a genuine issue as to any material fact, and for these purposes the material it lodged must be viewed in the light most favorable to the opposing party." Adickes, 398 U.S. at 157.

In order to establish an Eighth Amendment conditions of confinement claim, Burleson would have to establish "first, that the deprivation alleged was sufficiently serious (i.e., an official's act or omission must have resulted in the denial of 'the minimal civilized measure of life's necessities'); and second, that the prison official possessed a sufficiently culpable state of mind." Herman v. Holiday,

238 F.3d 660, 664 (5th Cir. 2001). The requisite state of mind is whether "the official acted with deliberate indifference to inmate health or safety." Id. To establish deliberate indifference the petitioner must show that the officials "(1) were aware of facts from which an inference of excessive risk to the prisoner's health or safety could be drawn and (2) that they actually drew an inference that such potential for harm existed." Id. (internal citations omitted). The crucial question in determining an Eighth Amendment claim "is whether the prison official, acting with deliberate indifference, exposed a prisoner to a sufficiently substantial risk of serious damage to his future health." Farmer v. Brennan, 511 U.S. 825, 843 114 S. Ct. 1970, 128 L. Ed.2d 811 (1994) (quoting Helling v. McKinney, 509 U.S. 25, 35 (1993)).

The magistrate judge held that in the absence of Dr. Carson's opinion, Burleson failed to provide competent summary judgment evidence that established a genuine issue of material fact that Burleson's exposure to thoriated tungsten electrodes caused his cancer. The studies Dr. Carson relied upon are not in the record, and the only causation evidence before the court was the excluded testimony. The magistrate judge also found that the mere fact that thorium dioxide has been classified by certain regulatory organizations as a carcinogen is not probative on whether Burleson's exposure to thoriated tungsten electrodes caused his lung and throat cancer.[8] Concomitantly, the magistrate judge concluded that the defendants presented competent summary judgment evidence of an alternative causation such that there was no material fact issues regarding Burleson's causation claim.

[8] The magistrate judge did not consider evidence that other welders who worked with Burleson were also stricken with cancer, however, it does not help Burleson meet his summary judgment burden because there is no information about their background, medical history or exposure to welding electrodes in the record.

Without proof of causation, Burleson could not demonstrate that exposure to thoriated tungsten electrodes posed a substantial risk of harm. Because there was no evidence that exposure to thoriated tungsten posed a substantial risk of harm, the magistrate judge found that Burleson failed to show that he was incarcerated under conditions which pose an unreasonable risk of damage to his health. The magistrate judge further held that the defendants could not have been aware of facts from which an inference of harm could be drawn because, based on the lack of causation evidence, these facts apparently do not exist. Therefore, the court held there was no deliberate indifference. On the record before us, we agree with the magistrate judge that Burleson has failed to produce any competent summary judgment evidence, sans Dr. Carson's testimony, that goes to the issue of causation. Without proof of causation, Burleson cannot meet his constitutional burden.[9]

CONCLUSION

For the foregoing reasons, we AFFIRM the court's rulings granting the Defendants' Motion to Exclude Expert Testimony, granting the Defendants' Second Motion for Summary Judgment, and overruling the Plaintiffs' Objections to Defendants' Summary Judgment Evidence.

AFFIRMED.

[9] Because we affirm the magistrate judge's summary judgment ruling, we find it unnecessary to reach the defendants' qualified immunity argument.