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In Brawl For Seau Brain, a Proxy War Over Concussion Science

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ESPN reporters Mark Fainaru-Wada and Steve Fainaru are writing a book about football and brain injuries, to be published in 2013 by Crown Books, a division of Random House. FRONTLINE, in partnership with ESPN's *Outside the Lines*, is producing a documentary based on the reporters' research. This article is a product of these partnerships.

Inside the autopsy room of the San Diego County medical examiner's office, Bennet Omalu, a forensic pathologist, carefully sliced Junior Seau's brain with a long knife. It was late morning on May 3, 2012; Seau's autopsy, which began just after 9, was nearly over. Omalu wore dark blue scrubs, rubber gloves and a clear plastic face mask as he went about his work in the cool, windowless room, picking up half of Seau's brain and placing it in a small tub filled with formaldehyde and water.

Omalu, 44, was the first researcher to identify brain damage in a former NFL player. When he published his results, in July 2005, the NFL attacked him and insisted he was wrong. His research has since been vindicated many times over, with each new discovery of the crippling neurodegenerative disease in a dead football player. Omalu arrived at Seau's autopsy with a special "brain briefcase" he carries on such occasions. His intention was to fly Seau's brain back to San Francisco that night and share it with a Nobel Prize-winning researcher who also coveted the valuable specimen.

Just then, the medical examiner's chaplain, Joe Davis, walked into the room.

"Houston, we have a problem," Davis said.

Seau's son Tyler had just called, Davis told Omalu and Craig Nelson, the deputy medical examiner.

"I talked to the NFL," Tyler Seau, then 22, told the chaplain. The league, he said, informed him that Omalu's "research is bad and his ethics are bad." Tyler was in a rage. Omalu "is not to be in the same f—ing room as my dad!" he screamed. "He's not to f—ing touch my dad! He's not to have anything to do with my dad!"

Omalu left and returned home, his brain briefcase empty.

From that point on, the NFL played a powerful role in determining what happened to Junior Seau's brain — who studied it and where. In the hours, days and weeks after Seau shot himself in the chest with a .357 Magnum revolver — the shocking end to the life of one of the most admired players in history — the league muscled aside independent researchers, ignored a previous commitment to Boston University and directed Seau's brain to the National Institutes of Health — four months before the NFL donated \$30 million to that institution for concussion and other research.

The NFL's intervention in the fate of Seau's brain — the most prized specimen yet in the race to document the relationship between football and brain damage — was part of an aggressive strategy to dictate who leads the science of concussions. By shunting aside Omalu, whose discovery sparked the concussion crisis; Boston University researchers, the leading experts on football and brain damage; a Nobel laureate; and other suitors, the league directed Seau's brain away from scientists who have driven the national debate about the risks of playing football — the central issue to the NFL's future.

"Outside the Lines" and "Frontline" pieced together the odyssey of Seau's brain from interviews, documents and private emails.

What emerges is essentially a scientific backroom brawl in which the NFL prevailed over a half-dozen researchers vying for Seau's brain. To the league and the Seau family — and even some of the losers — this was the best possible outcome. The NFL ended an ugly free-for-all that brought added pain to Seau's relatives, who received unsolicited calls from brain researchers, including Omalu, within hours of his death. With researchers unwilling to share tissue and bad-mouthing one another to Seau's family, the intervention by league representatives led to a blind study by one of the most respected research institutions in the country. Five specialists consulted by the NIH found what Omalu himself suspected: Seau suffered from chronic traumatic encephalopathy, or CTE, the disease found in dozens of former players.

"Obviously, the NFL wants to be real careful as to not look as though they were inserting themselves in the middle of this, where they're trying to cover something up," said Kevin Guskiewicz, one of three members of the NFL's Head, Neck and Spine Committee who helped steer Seau's brain to the NIH. "I can assure you that is not the case right now."

But there's a déjà vu quality to the NFL's recent strategy. A federal lawsuit filed against the league by more than 4,000 retired players and their families (including Seau's) revolves around the NFL's previous scientific exploration. <u>The players charge</u> that the league's

original concussion committee, which was disbanded in 2009, conducted fraudulent research to hide the connection between football and brain damage. That 15 years of research has been largely discarded, even by the league. When Mitchel Berger, chairman of the department of neurological surgery at the University of California San Francisco, joined the NFL's new concussion committee in 2010, he and his colleagues "essentially started from zero," Berger said.

Faced with the threat of the lawsuit and mounting concerns about the long-term health effects of the sport, the NFL is again using its vast resources to insert itself in the science of head trauma.

"I guess the National Institute of Health is now involved; I guess they somehow got drafted by the NFL," said Bob Fitzsimmons, a Wheeling, W.Va., lawyer who represented Mike Webster, the first NFL player diagnosed with CTE, and co-founded the nonprofit Brain Injury Research Institute with Omalu and Dr. Julian Bailes, a prominent neurosurgeon. "They had an early draft, I think, and they drafted the NIH and paid them pretty good salary, too, from what I hear."

The NFL also recently announced a \$60 million research partnership with General Electric and Under Armour, and is working with the U.S. Army on concussion initiatives.

An NFL spokesman, Greg Aiello, said members of the Head, Neck and Spine Committee work independently and the league played no role in directing Seau's brain to the NIH. Guskiewicz said he acted on his own as a research scientist and not under the direction of the league. The NFL Head, Neck and Spine Committee is funded by the NFL, reports to the commissioner and filters communication through the NFL's media office, which sometimes monitors interviews and correspondence with committee members. None of the committee members is paid by the league, but they submit expenses through the league office.

According to Dr. Rich Ellenbogen, the committee's co-chairman, NFL Commissioner Roger Goodell sought guidance from the committee as far back as 2010 about where to direct the league's resources. The NIH was recommended. At the same time, Ellenbogen and other committee members discussed employing the NIH as a scientific clearinghouse for research into football and brain damage.

Seau's death became a catalyst for turning the NFL's vision into reality.

In the final months of his life, Seau had become unrecognizable to those closest to him. He rarely saw his four children and frequently disappeared on partying and gambling binges, spending tens of thousands of dollars at a time. His erratic moods, inattentiveness and inexplicable bursts of anger had caused his most trusted confidante, Bette Hoffman, the head of his charitable foundation whom Seau called "Mom," to quit and change her phone number to avoid his calls. In San Diego, Seau was still beloved as a great athlete and local ambassador who raised millions of dollars for disadvantaged kids through the Junior Seau Foundation. His smile and charisma, which lit up the entire city, seemed undiminished. But to those who loved him, he was obviously in trouble; many now believe his car crash off a cliff in 2010 was a suicide attempt.

As word spread on May 2 that Seau's girlfriend had found him shot in the chest on a queensized bed at his beachfront home in Oceanside, Calif., Seau's extended Samoan family, friends, neighbors and San Diego Chargers fans descended on the house.

" In San Diego, Seau was still beloved as a great athlete ... But to those who loved him, he was obviously in trouble; many now believe his car crash off a cliff in 2010 was a suicide attempt."

Nelson, the deputy medical examiner, arrived at 11:46 a.m. A medical examiner investigator's report described the scene: "There was bedding lying on the floor on the left side of the bed as I faced it. On top of the bed were pillows stained with blood. The fitted sheet on the bed was blood stained. A gray stocking cap and a Smith & Wesson Model 19-5 .357 magnum revolver ... lay on its left side with five live rounds in the cylinder and one spent round near the right-sided head of the bed as I faced it, and next to a pillow."

Seau was placed on a gurney in a body bag and brought down to the garage. Only his head was exposed. The house was warm and filled with police, medical personnel and family, and decorated with Seau's trophies and memorabilia: his Chargers MVP trophy, game photos, a New England Patriots helmet signed by the team. The crowd outside had swelled to some 400 people. Seau's family opened the garage for a spontaneous public viewing. One by one, for nearly an hour, the tearful crowd filed past; some bent over to kiss Seau's forehead or cheek. "It was a pretty intense moment," one witness said. "I looked down and I was like, 'Man, that's Junior Seau.' There's nobody that looks like him. It really affected me, the enormity of it."

As Tyler Seau looked down, he felt pain and regret. Like the rest of his siblings, he had been fighting for his father's attention, dealing with the absences and volcanic bursts of anger.

"I guess the hardest thing was just there was just no closure," he said, crying softly during an interview.

When the viewing ended, Seau's body was taken away. Tyler was still at the house when his cellphone rang. At first it was difficult to hear; reception at the beach house was spotty. But soon he could make out the thickly accented voice.

It was Bennet Omalu, introducing himself and expressing his condolences.

He had a request.

Omalu was a 36-year-old junior pathologist at the Allegheny County Coroner's Office in Pittsburgh <u>when he identified Webster</u>, the Hall of Fame Steelers center, with CTE. That discovery forever changed how people look at football and continues to haunt the NFL.

Omalu is now chief medical examiner in San Joaquin County, Calif. But in many ways, he is still a foreigner, especially in the closed world of concussion research, which is dominated by older, white men. A devout Catholic and native of Nigeria's Igbo tribe, he blends science

and mysticism and is prone to hyperbole and indiscretion. Omalu believes he can communicate with the spirits of the people he autopsies. In 2009, he displayed photos of Webster lying on the autopsy table during a meeting of the NFL Players Association in Palm Beach, Fla., stunning many of the players, scientists and widows in attendance.

No one has been able to discredit Omalu's research, however. When Bailes, the neurosurgeon who helped found the Brain Injury Research Institute with Omalu and Fitzsimmons, heard that Seau had killed himself, he phoned Omalu immediately.

"We need to secure this brain," said Bailes, the co-director of NorthShore Neurological Institute in Evanston, Ill.

To many, Seau's brain was the premier specimen in concussion research. At stake were research dollars and the prestige of diagnosing Seau, who was 43 at the time of his death and the most significant player thrust into the NFL's concussion crisis. Seau was a certain Hall of Famer who spent 20 years in the NFL. He combined strength and speed to become one of the game's most physical players. The fact that he never had a diagnosed concussion raised more questions for the NFL and scientists seeking to study his brain.

Omalu and Bailes called Tyler Seau together. "We introduced ourselves, explained what we were doing, about CTE, that we would like him to grant us consent to examine his father's brain," Omalu said. He described Tyler as "very polite" and receptive during the call.

But Tyler said he felt pressured by Omalu. "He was very pushy and he really wanted me to make a decision that night. He pretty much said that we have to do it now because if it's not done the right way we could lose a lot of the tissue and things like that."

Omalu faxed Tyler a consent form to harvest his father's brain. Emails obtained by "Outside the Lines" and "Frontline" show that Tyler initially was prepared to sign. At 8:38 that night, he informed Omalu: "my guy is on his way here right now so I can sign it and fax it back to you." An hour later, Tyler wrote that Omalu needed to talk to David Chao, the San Diego Chargers doctor, to "cross our Ts and dot our Is before proceeding."

Tyler said he called Chao for advice because "he was my dad's team doctor 13 years. They were pretty close." Chao has come under criticism in and out of the medical community for issues unrelated to Seau's care. DeMaurice Smith, the executive director of the NFL Players Association, called for Chao to be replaced as team doctor over allegations of malpractice and negligence. Earlier this year, a panel of independent doctors established under the collective bargaining agreement exonerated Chao.

The night of Seau's death, Omalu spoke with Chao. "That was one of the most arrogant phone calls I've ever been involved with in my life," Omalu said. "This guy was yelling, was extremely arrogant, pretty much questioning who I was."

Chao declined to comment for this story.

After emailing samples of his research to Chao, Omalu still believed he had "verbal consent" from Tyler to take Seau's brain. He packed for the flight from San Francisco to San Diego the following morning to do just that.

By the time Nelson, the deputy medical examiner, returned from Seau's home, a half-dozen phone messages were waiting for him from researchers hoping to study the brain.

One of the researchers in pursuit, emails show, was Stanley Prusiner, winner of the 1997 Nobel Prize in Physiology or Medicine. Prusiner, a 70-year-old neurologist who is director of the Institute for Neurodegenerative Diseases at the University of California San Francisco, won the award for his discovery of prions — a class of proteins that cause brain disease.

Prusiner joined Omalu in what became a tag-team approach to securing Seau's brain. Shortly after Seau's death, Prusiner, according to emails and interviews, placed calls to Davis, the chaplain at the medical examiner's office, to try to arrange a meeting with the Seau family. Prusiner's assistant also called and emailed Tyler Seau.

"Please it is vital you get to the Seau family," Omalu wrote Prusiner. "I think they will give

you/us the brain if you directly speak to them and play the nobel price (sic) card

Prusiner responded by email 12 minutes later that he planned to fly to San Diego to try to meet with the Seau family.

But others, too, had begun to make bids for the specimen. The day after Seau's death, Boston University's Center for the Study of Traumatic Encephalopathy reached out to representatives of the family. Chris Nowinski, a 34-year-old former professional wrestler and concussion activist, had once worked with Omalu. When the two split acrimoniously, Nowinski merged his own group, the Sports Legacy Institute, with BU. Working with another pathologist, Dr. Ann McKee, <u>the Boston group had diagnosed more CTE cases than</u> any other researchers in the world.

In 2010, the NFL gave Boston University \$1 million, designated the center as the "preferred" brain bank of the NFL and pledged to encourage retired players to donate their brains and participate in the center's research. The open-ended agreement, signed by Jeff Pash, the NFL's general counsel and No. 2 executive, was framed on the wall of the Boston center's main office. The agreement came with no strings attached, but some researchers questioned whether Boston University had sacrificed its independence by taking money from the NFL. As Omalu made his case to Tyler Seau, he pointed out that his group didn't take a dime from the league.

Nowinski, Boston University's brain chaser, contacted Chao, who was representing Seau's family. "The pitch is usually, 'We'd like to talk,'" Nowinski said. "We don't want people to make the ask for us." Before long, though, "there were multiple people calling" on BU's behalf, Nowinski acknowledged. "People who supported us, who had a relationship with them."

The BU group touted itself to the Seaus as the NFL's officially sanctioned brain bank.

The morning after Seau's death, at 5:55 a.m., Sports Illustrated NFL writer Peter King tweeted: "Dedicated researchers in Boston studying deceased players' brains for evidence of trauma attempting to obtain Junior Seau's. Hope they do."

King's tweet quickly became a national news story that appeared on NFL.com, ESPN.com and other websites. Seau's family was outraged. "I think that put added pressure on the Seau family," Nowinski said. "We heard back from Dr. Chao that they were upset that they were put under that pressure."

Nowinski and others at Boston University urged King to retract the tweet and apologize to the Seaus. Nowinski said the tweet was premature and was based on an earlier conversation in which he told King that BU sought all brains of deceased athletes involved in contact sports. But King, in fact, had confirmed BU's interest in Seau's brain. He refused to apologize or make a retraction. "I empathize with them and know how badly they wanted to see Seau's brain," King said in an interview. "I was sorry it put them in an awkward situation, because I believe in what they do."

King issued another tweet at 11:13 a.m.: "To clarify researchers seeking Seau's brain: Info not from them. They seek to examine all ex-players who played contact sports. Every one."

In some ways, the tension was understandable. If Seau's brain was to be studied, it had to be preserved. There were no immediate plans to do that. As he prepared for Seau's autopsy, Nelson tried to keep up with the calls.

Nelson and the Seaus found the competition bizarre and macabre. "It felt sometimes to me like buzzards were circling," Nelson said. "I have a scientific mind and a medical background, but when someone has just died, things are very fresh. I want to say, 'Listen, guys, somebody's dad just died, that's what my focus is.' Imagine that your parent dies and then hours later somebody is calling you and saying, 'Hey, would you consider donating this for research?' It can sit a little odd, and when it's such an unexpected death, it makes it harder."

When she heard about the requests, Seau's ex-wife, Gina, with whom Seau had remained close, was horrified. "It was the most foreign thing I'd ever heard of, quite honestly," she said. "And the fact that I had to have a conversation with the coroner and ask, 'If we decide to donate it, how do you take it out? And what do you do with it?' It was the most bizarre, horrible conversation, looking back."

On May 3, the day after Seau's death, Omalu arrived in San Diego around 7:30 a.m. and headed straight to the medical examiner's office. Nelson, believing Omalu had received consent from Seau's family, authorized him to participate in the autopsy. That morning, when the brain donation consent form still hadn't materialized, Nelson asked Davis, the chaplain, to call Tyler Seau and have him forward it. Before the autopsy began, Omalu chatted with Davis, recounting his early battles with the NFL. He then joined Nelson in the autopsy room, a large space with fluorescent lighting and 12 workstations equipped with stainless steel tables, oscillating saws and plastic cutting boards.

"...The fact that I had to have a conversation with the coroner and ask, 'If we decide to donate it, how do you take it out? And what do you do with it?' It was the most bizarre, horrible conversation, looking back.""

Nelson conducted the autopsy and removed most of Seau's vital organs. Omalu said he removed the brain and spinal cord and handled the preservation and cutting of the brain, which, when removed, has the consistency of Jell-O. Part of Seau's brain was placed in formalin (formaldehyde and water), a process known as fixing. The process hardens the brain until it can be sliced more easily and shaved into slivers viewable under a microscope. The rest of Seau's brain was to be frozen and overnighted to Prusiner the next day, according to Omalu.

As the autopsy was concluding, Davis received a call back from Tyler, who was angry and yelling, insisting that he didn't want Omalu near his father. Davis asked why. Tyler responded that he had "talked to the NFL" and specifically mentioned he had received advice from Chao, although it was unclear to Davis whether Tyler might have spoken with others affiliated with the league, too.

When Davis walked in and recounted to Omalu his conversation with Tyler, Omalu became upset. He felt like it was a replay of the earlier attempts to discredit him, a campaign that was led by three former researchers on the NFL's concussion committee: Elliot Pellman, Ira Casson and Dave Viano. "It reminded me of the way Casson, Pellman and Viano dismissed me, actually calling me a fraud as well," Omalu said. "It's the same pattern. To summarize it: a systematic effort to marginalize me, delegitimize me and dismiss me. To pretty much make me null and void, an outsider not to be trusted. Why? I don't know."

"Why do I deserve to be treated the way I'm being treated?" Omalu said, growing emotional. "For doing good work? Isn't that what America is about: doing good work, enhancing the lives of others?"

Tyler Seau said he was upset that Omalu assisted on the autopsy without his written consent to harvest his father's brain. When Tyler read the consent form, he said, he believed it would have forced him to give up all control of his father's brain. He declined to address his conversation with Davis but acknowledged in a statement that Chao, the Chargers doctor, had warned him away from Omalu.

Even after he was booted from the autopsy room and sent packing, Omalu held out hope that the combination of him, Prusiner and Bailes might still persuade Seau's family to let them study the brain.

Omalu returned home late that night to a congratulatory email from Prusiner. The Nobel laureate attached an article from ESPN.com, which had learned that Omalu participated in the autopsy.

"Your trip to San Diego was really important," Prusiner wrote. "Please see the wonderful attached write-up about you, the CTE identifier. I shall call Tyler and David Chao tomorrow and create a time to meet them in SD."

But Prusiner, who declined to be interviewed for this story, appears to have been unaware of the forces now working against them, and that Chao and others were steering the brain in a different direction.

Shortly after Seau's death, Chao called Guskiewicz, an influential member of the NFL's Head, Neck and Spine committee who is also director of the Matthew Gfeller Sport-Related Traumatic Brain Injury Research Center at The University of North Carolina in Chapel Hill. The two men knew each other through a trainer at UNC. In 2011, Guskiewicz, a former critic of the NFL, won a \$500,000 MacArthur "genius grant" for his concussion research.

Guskiewicz had been present for Omalu's graphic 2009 presentation of the Webster autopsy and had never forgotten it. He acknowledged to "Outside the Lines" and "Frontline" that he shared with Chao concerns "within the circles that I hang out in within the science community" that Omalu was prone to "sensationalizing at times" and "showing slides of the deceased person — their brain — and that sort of thing."

But Guskiewicz and some of his colleagues on the NFL committee also had concerns about Boston University, the league's preferred brain bank. Many researchers, including Guskiewicz, complained that BU refused to share brain tissue, making it difficult to validate its work. The issue had grown larger as BU diagnosed more and more CTE cases and asserted publicly that the connection between football and brain damage was indisputable.

Guskiewicz and other researchers associated with the NFL believed that the BU group had created unwarranted hysteria about the risks of playing football, even though the prevalence of CTE is unknown.

"And then, to know that there was all this knocking on the door, the calls, I just can't imagine going through it," Guskiewicz said. "It puts a bit of a black mark on the entire neuroscience community because some of us, I think, are perhaps guilty by association. So I think that's concerning."

Around the same time, Ellenbogen, the Head, Neck and Spine committee's co-chair, said he received a call from the league office in New York. Ellenbogen, in an interview, said he was told that Chao contacted the league seeking advice on behalf of Seau's family. The league wanted the committee to get involved, asking: "Is this something for NIH?"

Members of the NFL's concussion committee, including Ellenbogen and Guskiewicz, had pushed the idea of directing research to the NIH since the committee was reconstituted in 2010. In early 2011, despite the league's commitment to BU, members tried to direct the brain of former Chicago Bears safety Dave Duerson to the NIH. Unlike Seau, Duerson had left a suicide note in which he requested: "PLEASE, SEE THAT MY BRAIN IS GIVEN TO THE N.F.L.'S BRAIN BANK."

At the time, Duerson's family interpreted the note to mean the Boston University group, which emphasized its association with the NFL. BU diagnosed Duerson with CTE.

With Seau, the NFL did not honor its commitment to BU.

Guskiewicz said he was unaware that the league had pledged to direct brains to Boston University and got involved only because of his personal connection with Chao. He said he viewed the NIH as an ideal solution to end the "tug of war" over Seau's brain. He said he believed some of the tissue would "likely end up in the labs of some of these scientists" and the findings "could be corroborated using a more collaborative investigative model."

Asked in an interview why they suggested the NIH, Ellenbogen said, "We had been talking about it for a while. My point, for a long time I've been saying ... if you've got a problem you want to solve, do you put one university on it or have multiple studies done? The federal government is very good, in some ways, really good about doing this. They don't have an agenda."

Ellenbogen and Guskiewicz put Chao in touch with Dr. Russell Lonser, then an NIH brain researcher. "We hooked him up with Russ, and then Russ takes the story from there," Ellenbogen said.

Lonser had two official titles: chief of surgical neurology at the NIH and head of research for the NFL's concussion committee.

Lonser downplayed his connection with the league and said his most important role was overseeing the study of Seau's brain for NIH.

"NIH can be like Switzerland in a certain sense," he said.

Nowinski said he wasn't surprised by the snub of Boston University: "The family was upset with us. I didn't think we'd get it."

Robert Cantu, the chief of surgery at Emerson Hospital in Concord, Mass., and a co-founder of the Boston University center, described the move as "a personal insult" to McKee, the neuropathologist who diagnoses brains for the center. Except for that, said Cantu, a senior adviser to the NFL Head, Neck and Spine committee, he was "glad it went down the way it did" because the NIH's confirmation was ultimately stronger than if BU had diagnosed "one more brain." McKee did not respond to interview requests.

The NIH has not publicly identified the researchers who conducted the blind study of Seau's brain, but Aiello, the NFL spokesman, said he understood Boston University was one of the groups that received Seau's tissue to study. When asked how the NFL would know the identities of the organizations involved in a blind study, he said he "heard it second-hand around the office."

Four months after the Seau family donated Seau's brain to the NIH, the NFL gave \$30 million to the institution for concussion and other research. At the time, it was the largest philanthropic gift in the league's 92-year history. Goodell said the donation came with no strings attached — a pledge identical to one the NFL made three years earlier to Boston University.

"I don't think you tell the NIH what to expect," Goodell told ESPN's Darren Rovell. "We give them the money because they are the leading scientists in the world, and they make the determinations where that money goes, how it can be best spent and what kind of results can be expected."

Ellenbogen said it was important to find a more independent research model.

"You can't have the NFL doing studies," Ellenbogen said about the committee's reasoning. "You can't have the NFL paying Boston University to be doing studies. You gotta get people who don't owe us anything."

Members of Seau's family were unaware of the full extent of the NFL's role in steering Seau's brain to the NIH. Nor do they appear to care, only that the competition for the brain stopped and the study was of the highest quality. "I didn't care about what people and doctors were competing for," said Gina Seau, Seau's ex-wife. "I just cared about a high level of scientific study without bias."

The confirmation of CTE is, of course, no solace to Seau's relatives and friends. But it provides an explanation for why he became a different person.

Rather than providing the closure, Tyler Seau said the diagnosis in some ways made him feel worse. "It didn't take any of the pain away; I feel it almost brought more," he said. "Mainly because I feel bad that I didn't try harder. And just the pain that he was going through for how many years?"

Fitzsimmons, the lawyer who represented Webster, said it's too soon to know what to expect next from the NFL.

Fitzsimmons has been following the league's struggle to deal with concussions for nearly 20 years. He defeated the NFL in court to win \$1.8 million in disability benefits for Webster — three years after Webster's death. He watched the NFL try to discredit and marginalize Omalu. He watched the league embrace Boston University and now push its researchers aside for the NIH.

"If you can control facts," Fitzsimmons said, "that's probably beneficial to whatever side is controlling them."