by Dr. Casson and, you know, is denied in the pamphlet that they hand out to NFL players?

Mr. GOODELL. Well, first let me say I do not, and I think you stated that he is the only one examining these patients and the findings. That is not correct.

Ms. SANCHEZ. He is not controlling the examinations or the findings?

Mr. GOODELL. I would not say he is controlling that at all, no.

Ms. SANCHEZ. He is participating in it, though.

Mr. GOODELL. I do not know if he is participating in the examinations. I can find that out.

Ms. SANCHEZ. And he has been a consultant to the NFL, is that correct?

Mr. GOODELL. He has been on our MTBI committee for several years, yes.

Ms. SANCHEZ. And some of the people who are participating in this study have other conflicts of interest. You know, one of the committee members on the concussion committee owns the company that makes and markets, mainly through its use by most of the NFL teams, the neuropsychological test that is used in the study. Isn't that true?

Mr. GOODELL. I don't know the answer to that question, but I will find out for you.

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Ms. SANCHEZ. My suggestion would be, and my time has expired, but my suggestion would be that instead of having NFL-connected consultants and doctors, that perhaps the true findings of a truly unbiased study would be better conducted by people who have not been on the payroll or not been retained by the NFL in any capacity. (Emphases added).

- 169. The NFL thereafter reacted to this barrage of criticism by having Casson and Viano, who had replaced Pellman as co-chairs of the MTBI Committee, resign, and suspending that Committee's research. The League also pledged to donate a paltry \$1 million to subsidize the CSTE's research on CTE.
- guidelines for the League's players. The statement outlined several changes. First, players who sustained a concussion should not return to practice or game play the same day if the following signs or symptoms are present: loss of consciousness, confusion, amnesia or other memory problems, abnormal neurological exam, new and persistent headache, or any other persistent concussion signs. Second, if a player is held from a game, clearance for return to play should be determined by both the team physician and an independent neurological consultant. Return to play should not be considered until the athlete is asymptomatic, both at rest and with exertion, has a normal neurological exam, and has normal neuropsychological testing. The NFL subsequently clarified that primary sports care physicians could be treated as independent neurological consultants.
- 171. Aiello, the League spokesperson who had made staunch denials of the link between concussions and brain injury as late as September of 2009, made the following admission in a December 20, 2009 interview with a reporter for the *New York Times*:

After weeks of transforming its approach to concussions and its research into their long-term effects among players, the N.F.L. not only announced Sunday that it would support research by its most vocal critics but also conceded publicly for the first time that concussions can have lasting consequences.

"It's quite obvious from the medical research that's been done that concussions can lead to long-term problems," the league spokesman Greg Aiello said in a telephone interview. He was discussing how the league could donate \$1 million or more to the Center for the Study of Traumatic Encephalopathy at Boston University, whose discoveries of brain damage commonly associated with boxers in the brains of deceased football players were regularly discredited by the N.F.L.

Told that his statement was the first time any league official had publicly acknowledged any long-term effects of concussions, and that it contradicted past statements made by the league, its doctors and literature currently given to players, Aiello said: "We all share the same interest. That's as much as I'm going to say."

Since an Oct. 28 hearing before the House Judiciary Committee, when the league's approach to science was compared to that of the tobacco industry, the N.F.L. has accepted the resignations of the co-chairmen of its concussion committee and overhauled its policies toward concussion management. Players now must be cleared by brain-injury experts unaffiliated with the team, and cannot return to a game or practice in which they have shown any significant sign of concussion.

The second rule has since been recommended by an N.C.A.A. committee as standard policy for athletes in all sports, and will be considered by several state legislatures that have bills governing high school athletics before them.

The recent changes by the N.F.L. had amounted to tacit acknowledgments that it was no longer able to defend a position that conflicted with nearly all scientific understanding of head trauma.

Until recently, the league and its committee on concussions had consistently minimized evidence testifying to the risks of repeated brain trauma in N.F.L. players — from researchers like those at Boston University, to phone surveys the league itself commissioned, to demographic analysis of players known to have early-onset dementia. While discrediting such evidence, a pamphlet on concussions currently given to players states, "Research is

currently underway to determine if there are any long-term effects of concussion in N.F.L. athletes."

That research study, conducted by the N.F.L.'s committee on concussions, was recently suspended amid strong criticism of its design and execution by outside experts, players and members of Congress.

"Mr. Aiello's statement is long overdue — it's a clear sign of how the culture of football has changed in recent months," Dr. Robert Stern, a co-director of the Boston University center and its Alzheimer's Disease Clinical and Research Program, said in a telephone interview.

"There is no doubt that repetitive blows to the head result in long-term problems in the brain, including progressive dementia. With the N.F.L. taking these recent actions, we are finally at a point to move forward in our research and ultimately solve this important problem — for professional athletes and collegiate and youth players." (Emphases added).

- 172. Despite these concessions, the problem continued unabated. Thirty of 160 NFL players surveyed by the Associated Press in November of 2009 stated that they either failed to report or underreported concussion symptoms. Players admitted that they returned to play after a concussion feeling dazed or woozy or suffering from blurred vision.
- 173. In March of 2010, the MTBI Committee got a new name and new cochairs. It was rechristened as the Head, Neck and Spine Medical Committee, and became jointly chaired by Dr. H. Hunt Batjer ("Batjer") of Northwestern Memorial Hospital, and Dr. Richard Ellenbogen ("Ellemborgen") of Harborview Medical Center in Seattle. Batjer and Ellenbogen replaced Casson and Viano, who in turn had replaced Pellman.
- 174. In a May 2010 Congressional hearing, Representative Anthony Weiner addressed Batjer and Ellenborgen as follows: "[y]ou have years of an infected system here, [and] your job is...to mop [it] up." (Emphases added).

175. Batjer and Ellenborgen conceded in June of 2010 that the League's efforts with respect to concussions and brain injury were riddled with duplicity, conflicts of interest and shocking ineptitude. As was reported in a June 1, 2010 New York Times article:

They accused a fellow doctor of minimizing solid evidence of the dangers of football concussions. They concurred that data collected by the N.F.L.'s former brain-injury leadership was "infected," said that their committee should be assembled anew, and formally requested that the group's former chairman, Dr. Elliot Pellman, not speak at a conference Wednesday.

For the first time these remarks came not from outside critics of N.F.L. research but from those now in charge of it — Dr. H. Hunt Batjer and Dr. Richard G. Ellenbogen, prominent neurosurgeons who became co-chairmen of a new league committee in March. One week after two members of Congress accused the doctors of sounding too much like their predecessors, and on the eve of a league-sponsored symposium in Washington held by Johns Hopkins Medicine, Batjer and Ellenbogen made clear they planned to chart a new course.

The two doctors criticized Johns Hopkins's promotional brochure for Wednesday's conference — which was open only to N.F.L. medical personnel, other doctors and members of the United States Department of Defense — for playing down existing evidence of brain damage in retired football players.

The opening paragraph described the disease chronic traumatic encephalopathy as "now being reported in football players, although with unknown frequency." It added that these and related matters had been reported by the news media "with considerable hype around assertions of long-term harm to players from head injuries."

Batjer and Ellenbogen said that the frequency of reports of C.T.E. in players is not unknown — a Boston University research group has diagnosed it in all 12 former college and N.F.L. players of various ages it had tested for the condition.