



TBI PLAYING THE LONG GAME

Largest Football-Focused CTE Study to Date Finds Pathological Diagnosis in 110 out of 111 NFL Players

The already compelling evidence tying football to chronic traumatic encephalopathy (CTE) is now even stronger, with the publication of findings from the largest study yet to evaluate the brains of deceased football players. In the study, investigators neuropathologically diagnosed CTE in 177 of 202 brains of players who played football at various levels. A diagnosis of CTE was made in zero out of two pre-high school players, three of 14 high school players, 48 of 53 college players, nine of 14 semi-professional players, and 110 of 111 NFL players. Of note, the severity of CTE was associated with the level of play, with all three former high school players having mild pathology, compared to a majority of college, semi-professional, and professional players having severe pathology.

Behavioral or mood symptoms were found in 96 percent of mild cases versus 89 percent in severe cases, and cognitive symptoms were found in 85 percent of mild cases versus 95 percent of severe cases. The most significant difference between mild and severe pathologies was existence of signs of dementia, which were found in 33 percent of mild cases and 85 percent of severe cases.

Reported in the *Journal of the American Medical Association* (2017; 318(4): 360-370), the results were a continuation of a study that began eight years ago. ■

NOW PLAYING ON PRACTICALNEUROLOGY.COM



CTE and Concussion: New Pathways

"The media has portrayed CTE as a clinical disorder. CTE is a pathological disorder and nothing more at this time. There is no evidence that a clinical syndrome exists."

In the newest edition of the video series *Conversations in Neurology*, Francis X. Conidi, DO discusses recent developments in concussion research and education. He also shares insights about the future of management and prevention.

To watch the video, visit [PracticalNeurology.com/series/conversations-in-neurology](https://www.practicalneurology.com/series/conversations-in-neurology)