

ROLE OF IMAGING IN THE PROGNOSTICATION OF OUTCOME FOLLOWING TBI

- CT:

MARSHALL CLASSIFICATION
ROTTERDAM SCORE

- Basal cisterns
 - 0: normal
 - 1: compressed
 - 2: absent
- Midline shift
 - 0: no shift or ≤ 5 mm
 - 1: shift > 5 mm
- Epidural mass lesion
 - 0: present
 - 1: absent
- Intraventricular blood or traumatic SAH
 - 0: absent
 - 1: present

Mortality at six months increases with the score:

- score 1: 0%
- score 2: 7%
- score 3: 16%
- score 4: 26%
- score 5: 53%
- score 6: 61%

MRI:

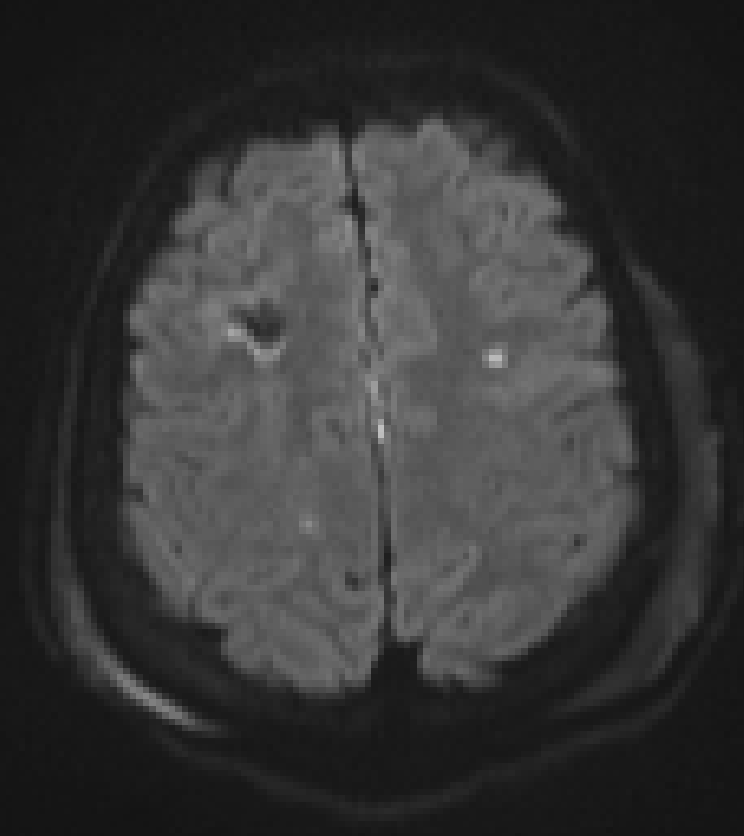
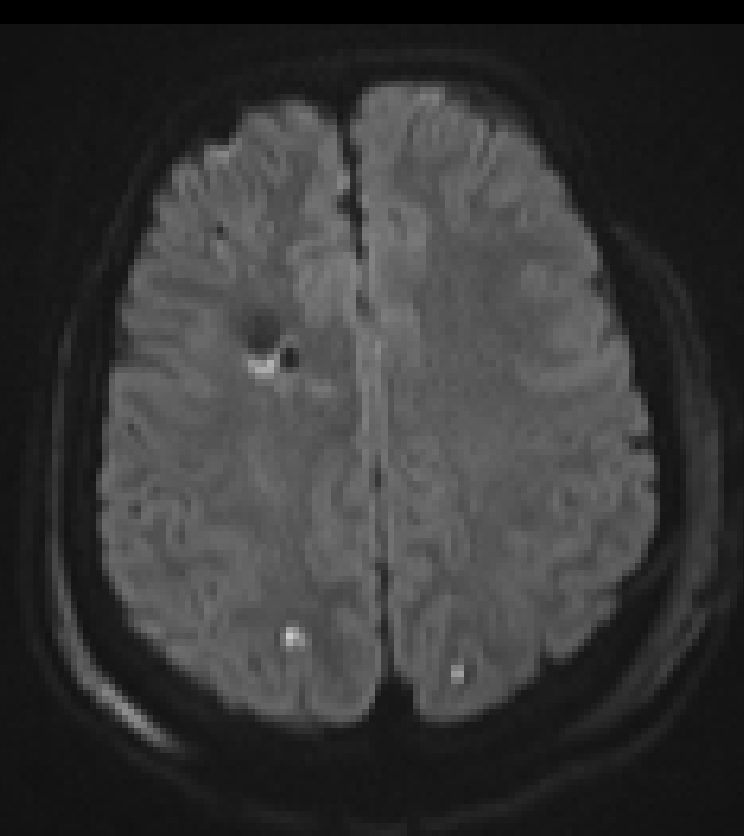
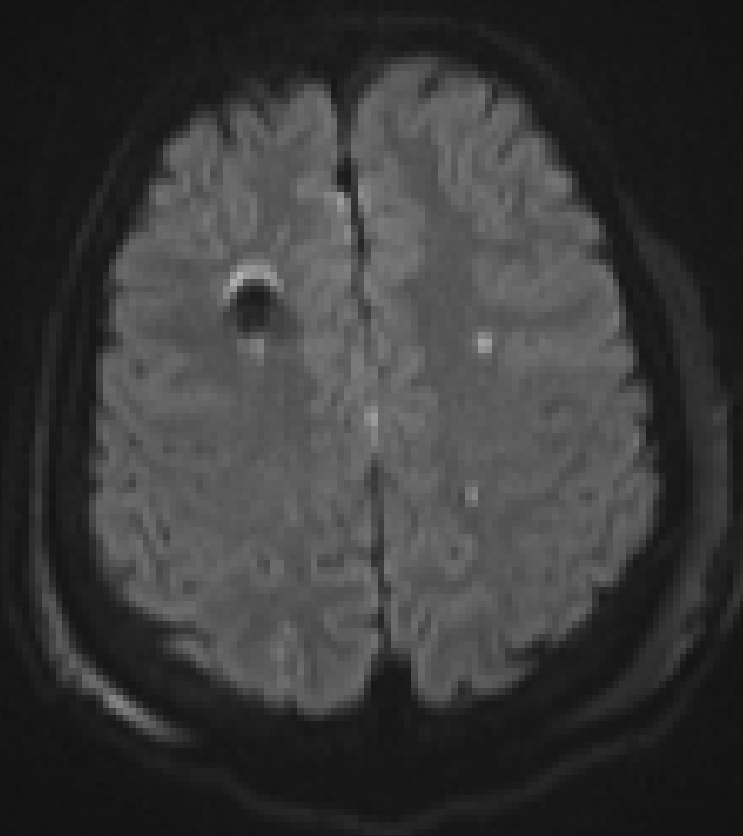
Detection of Traumatic Axonal injury (Diffuse Axonal Injury):

Shear injury ('stretching injury') resulting from rapid deceleration.

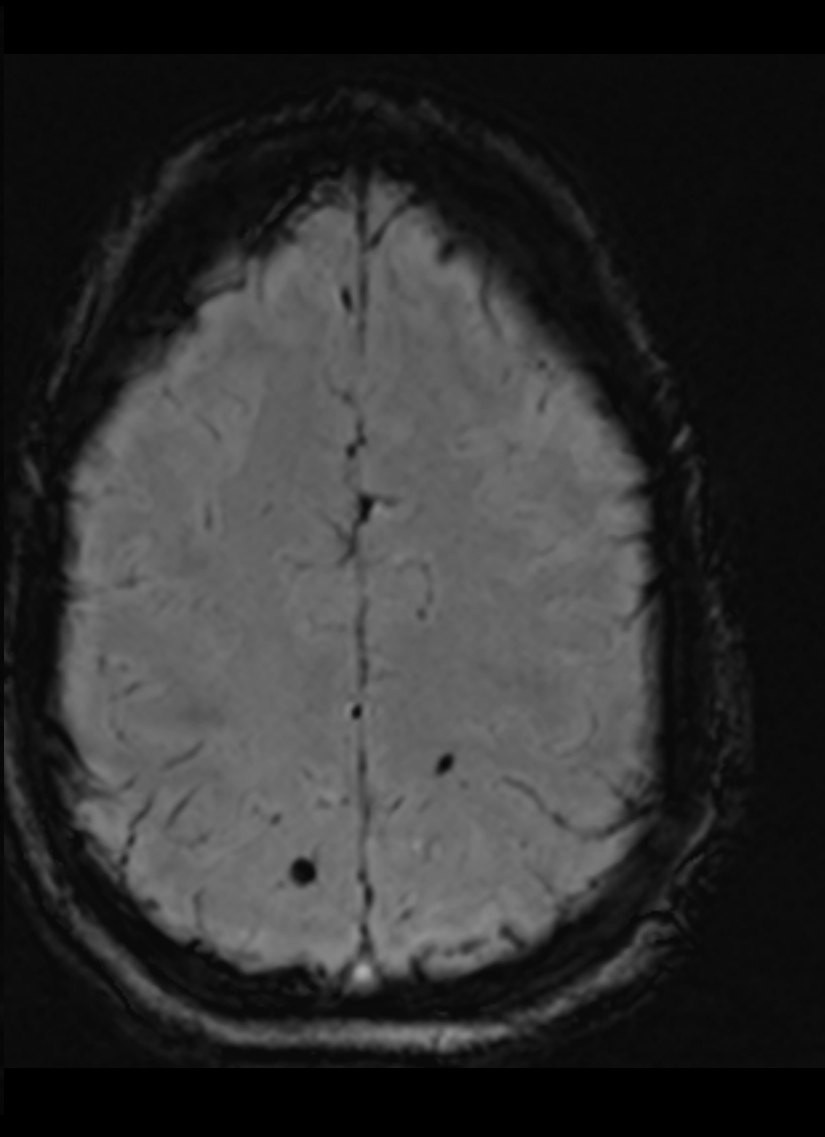
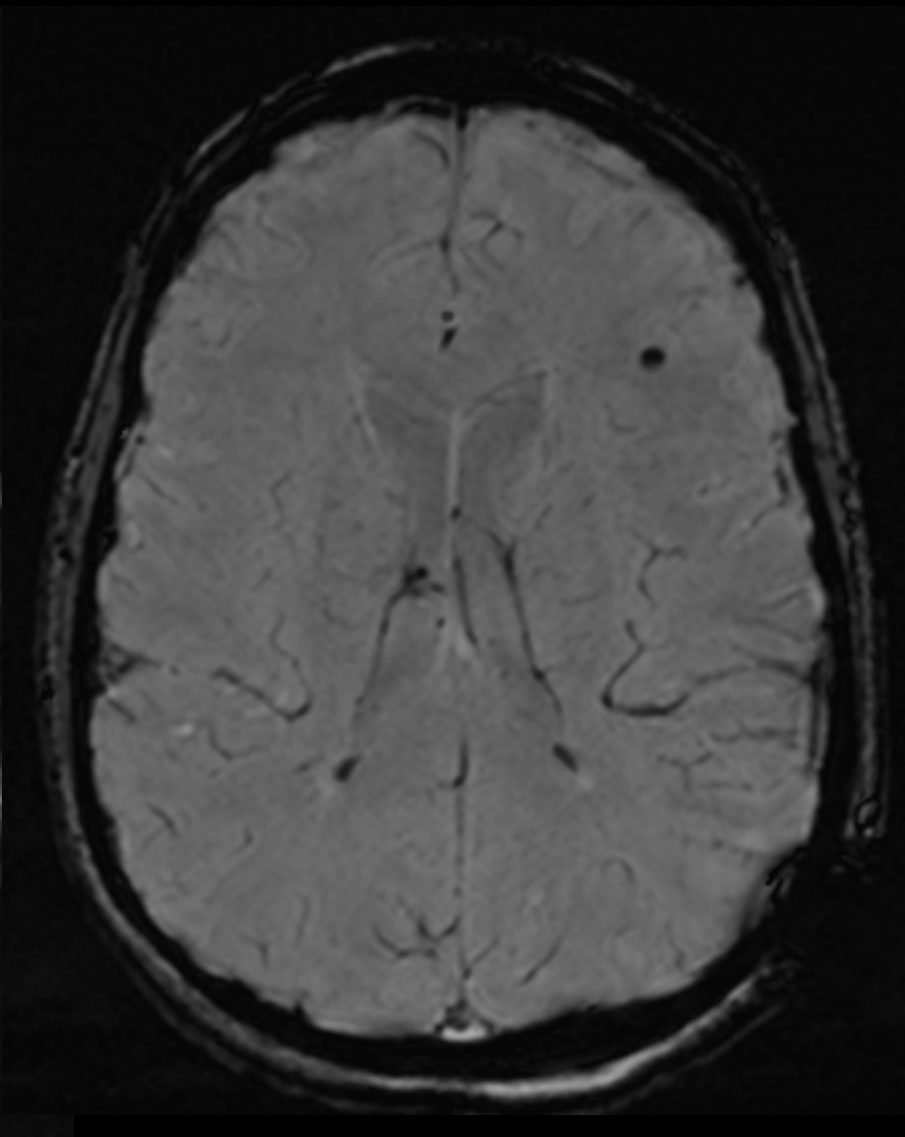
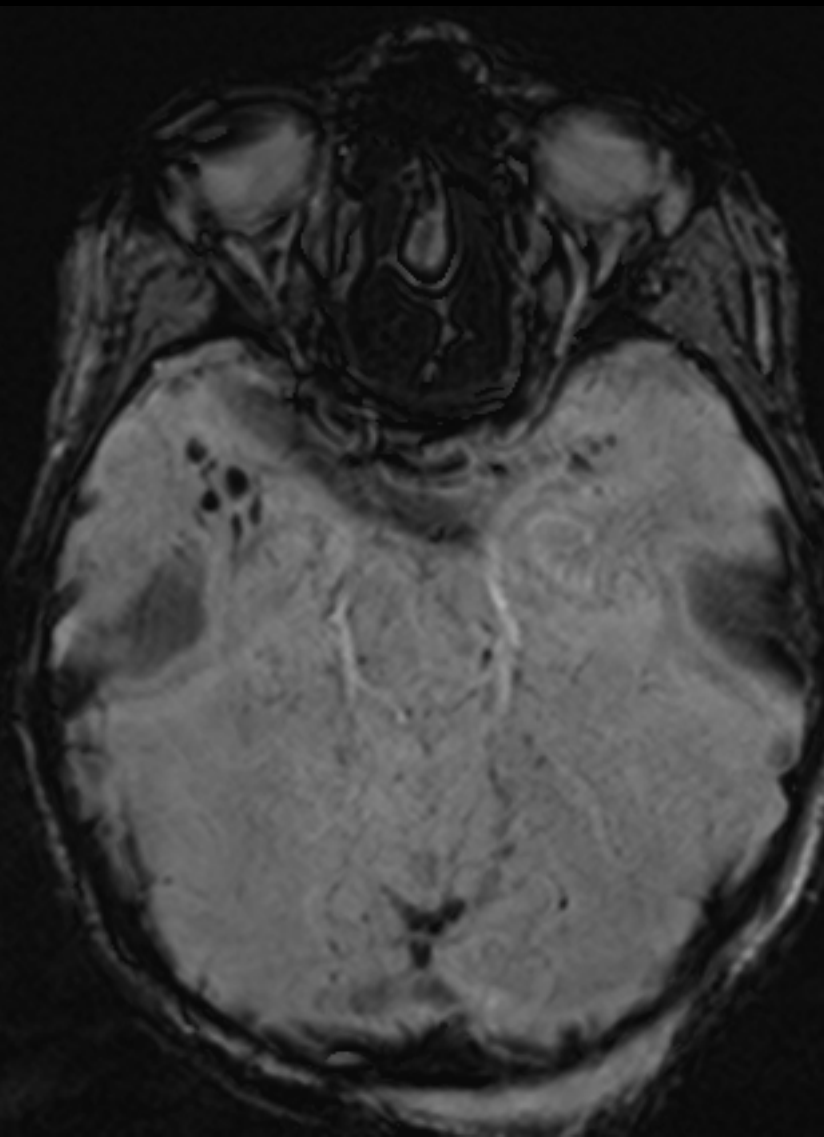
Classified:

- Stage 1: Superficial white matter. (Frontal and temporal lobe Grey white junction lesions)
- Stage 2: Lesions in deep white matter and corpus callosum (moderate TBI)
- Stage 3: Lesions in the brainstem (severe TBI)



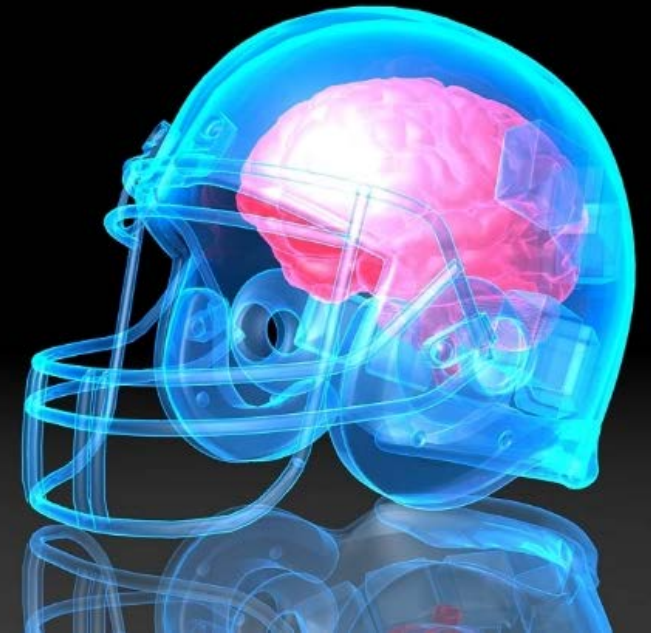






CHRONIC TRAUMATIC ENCEPHALOPATHY

- Neurodegenerative disease traditionally reported in boxers and football players who have sustained multiple episodes of *minor traumatic brain injury (mTBI)*
- mTBI ('**CONCUSSION**):
 - ❖ Glasgow Coma Scale score of 13 or higher at the time of injury.
 - ❖ Posttraumatic amnesia of less than 24 hours
 - ❖ Loss of consciousness for less than 30 minutes
 - ❖ Transient neurologic defects or disorientation at the time of injury



This Issue

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Original Investigation

July 25, 2017

Clinicopathological Evaluation of Chronic Traumatic Encephalopathy in Players of American Football

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JAMA. 2017;318(4):360-370. doi:10.1001/jama.2017.8334



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Key Points

Question What are the neuropathological and clinical features of a case series of deceased players of American football neuropathologically diagnosed as having chronic traumatic encephalopathy (CTE)?



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