Imaging AUC for patients with Traumatic Brain Injury (moderate to severe)

Non-contrast head CT is indicated for adult and pediatric patients with moderate to severe traumatic brain injury (GCS < = 12)

Brain MRI is considered when head CT does not demonstrate injury to explain neurological findings – such as diffuse axonal injury

Imaging AUC for patients with Traumatic Brain Injury (mild)

Non-contrast head CT is recommended for adult patients with mild traumatic brain injury, if any of the following is present.

GCS <= 13
Multi-system trauma
Altered mental status or unconsciousness
Skull fracture
Abnormal neurological examination
Progressive worsening symptoms
Intoxication (Drug or alcohol)
Seizure
Patients with shunt

Head CT is CONSIDERED for adult patients with concussion/mild TBI (GCS>=14) if any of these conditions below are present.

- Post traumatic headache
- Nausea
- Vomiting
- Amnesia
- Dizziness
- Vertigo
- Age > 60
- Anticoagulants/Antiplatelet medication
- Dangerous Mechanism (Fall from > 3 feet, pedestrian versus car, unrestrained driver/passenger, ejected from car)

If none of the above symptoms/findings are present, Head CT is NOT RECOMMENDED.

Brain MRI is not considered in the setting of Acute Concussion. Brain MR is considered for patients with persistent symptoms in the subacute to chronic phase of concussion.
Pediatric TBI
PECARN guidelines – Children younger than 2 years

Pediatric TBI
PECARN guidelines – Children younger at or older than 2 years
References:


Comparison of the Canadian CT Head Rule and the New Orleans Criteria in Patients With Minor Head Injury. Ian G. Stiell, MD, MSc, FRCPC; Catherine M. Clement, RN; Brian H. Rowe, MD, MSc; et al JAMA. 2005;294(12):1511-1518.


Imaging AUC for TBI
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