Structural imaging in the form of CT and MRI are the core neuroimaging examinations that serve as the basis for the evaluation of TBI.

Detailed recommendations for standardization of imaging protocols and for the assessment of imaging studies have been presented by the Common Data Elements Neuroimaging Working Group:

Common Data Elements in Radiologic Imaging of Traumatic Brain Injury

Ann-Christine Duhaime, Alisa D. Gean, E. Mark Haacke, Ramona Hicks, Max Wintermark, Patrik Mukherjee, David Brody, Lawrence Latour, Gerard Riedy Archives of Physical Medicine and Rehabilitation 1 November 2010 (volume 91 issue 11 Pages

1661-1666 DOI; 10.116/j.apmr.2010.07.238).

Common data elements in radiologic imaging of traumatic brain injury Haacke, EM, Duhaime AC, Gean AD, et al. J. Magn. Reson. Imaging 2010;32:516-43.

Here we present a simplified approach to the assessment of CT examinations in TBI. Similar approaches have been employed in most TBI studies and trials conducted in the past decade.

Basic

ADMISSION CT SCAN

Date of CT:	Day Month	- Year	Time of CT: Hour Minute (use 24hr clock)
CT classificatio	on:		
Category:	Diffuse injury	, NVP	Intracranial pathology not visible on CT scan
(Diffuse injury		Cisterns present with shift 0-5 mm, lesions present, but no high or mixed density lesion >25 cc. May include bone fragments and foreign bodies.
(Diffuse injury	with swelling	Cisterns compressed or absent, shift 0-5 mm, no high or mixed density lesion >25 cc.
(Diffuse injury	with shift	Shift >5 mm, no high or mixed density lesion >25 cc.
() Mass lesions		High or mixed density lesion > 25cc.
			Extradural Subdural Contusion
Scheduled for	operation:	O No	◯ Yes
Depressed skull fracture: ONO		O No	Closed Open (compound)
Subarachnoid hemorrhage: ONO		O No	Basal O Cortical
Midline shift: O No		O No	Yes If yes, shift in mm:
Basal cisterns absent/compressed: ONO		ed: 🔿 No	⊖ Yes

Intermediate

ADMISSION CT SCAN

Date of CT: Day Month Year	Time of CT:
CT classification: Category: Diffuse injury, NVP Diffuse injury Diffuse injury with swelling Diffuse injury with shift Mass lesions Scheduled for operation: No Ye	Intracranial pathology not visible on CT scan Cisterns present with shift 0-5 mm, lesions present, but no high or mixed density lesion >25 cc. May include bone fragments and foreign bodies. Cisterns compressed or absent, shift 0-5 mm, no high or mixed density lesion >25 cc. Shift >5 mm, no high or mixed density lesion >25 cc. High or mixed density lesion > 25cc.
Focal Lesions & Hemorrhage	
R L Bil PF Est. vol 1. Subdural O O O 2. Extradural O O O 3. Contusion O O O Mainly high density O O O Mainly high density Mainly mixed O Mainly low attenuation 4. Parenchymal lesions (small, shearing) Supratentorial Infratentorial 5. Subarachnoid hemorrhage No Yes Basal Cortical Tentorial 6. Intraventricular hemorrhage	ume (ml.) Mass Effect/Pressure: 07. Midline shift No Yes If "Yes", shift in mm: 0 Yes 08. Basal cisterns Normal Compressed Absent 09. Third ventricle compressed 10. Contralateral ventricle dilated Other: 11. Depressed fracture No 11. Depressed fracture No Closed Open (Compound) 12. Hydrocephalus 13. Intracranial air 14. Ischemia Single arterial territory Multiple territories
No Yes	Hemisphere
If penetrating: Missile Tract: Bihemispheric lesions: No Yes Multilobar injuries: No Yes Ventricular involvement: No	Crossing major cerebral O No O Yes artery or venous sinus: Air Sinus involved: O No O Yes

Advanced

ADMISSION CT SCAN

Date of CT: Day Month Year	Time of CT: Hour Minute (use 24hr clock)				
CT classification: Category: Diffuse injury, NVP	Intracranial pathology not visible on CT scan				
Diffuse injury	Cisterns present with shift 0-5 mm, lesions present,				
	but no high or mixed density lesion >25 cc. May include bone fragments and foreign bodies.				
Diffuse injury with swelling	Cisterns compressed or absent, shift 0-5 mm, no high or mixed density lesion >25 cc.				
Diffuse injury with shift	Shift >5 mm, no high or mixed density lesion >25 cc.				
Mass lesions	High or mixed density lesion > 25cc.				
Scheduled for operation: ONO Yes					
Focal Lesions & Hemorrhage					
	volume (ml.) Mass Effect/Pressure:				
1. Subdural () () () () 2. Extradural () () () () ()	07. Midline shift () No () Yes If "Yes", shift in mm:				
3. Contusion O O O					
Mainly high density	08. Basal cisterns O Normal				
Mainly mixed					
Mainly low attenuation	09. O Third ventricle compressed				
4. Parenchymal lesions (small, shearing)					
Supratentorial	10. Contralateral ventricle dilated				
Infratentorial	Other:				
5. Subarachnoid hemorrhage	11. Depressed fracture O No				
No Trace Mod Full	Open (Compound)				
Basal () () () Cortical () () ()	12. Hydrocephalus				
Tentorial O O O	13. O Intracranial air				
Fisher grade (I-IV)	14. O Ischemia O Single arterial territory				
	Multiple territories				
6. Intraventricular hemorrhage					
If penetrating:					
Missile Tract:					
Bihemispheric lesions: O No O Yes	Crossing major cerebral O No O Yes artery or venous sinus:				
Multilobar injuries: O No O Yes	Air Sinus involved: ONO OYes				