



2021 CT IMAGING GUIDELINE

HEAD CT¹

- Altered mental status
- Scalp hematoma other than frontal and age <12 months
- Loss of consciousness > 5 seconds
- Severe injury mechanism
- Seizure
- Palpable skull fracture
- Signs of basilar skull fracture

CERVICAL SPINE CT²

- GCS ≤ 8
- GCS 9-13 and w/o potential to improve mental status to GCS 14 or 15
- Consult spine service, if imaging abnormal or exam abnormal

CHEST CT with IV contrast⁴

- Abnormal CXR (ie. widened mediastinum)
- High force mechanism
- External signs of chest trauma

ABDOMINAL CT with IV contrast³

- Abdominal wall bruising/seat belt sign
- GCS < 14 and high energy mechanism
- Abdominal tenderness
- Thoracic wall trauma
- Abdominal pain
- Decreased breath sounds
- Persistent vomiting and suspicion of abdominal injury

ALARA Principle

Minimize radiation exposure;
"as low as reasonably achievable"

This algorithm does not replace clinical judgment and is not intended to be prescriptive for all patients.

Do not delay transport of critically injured or unstable patient by obtaining CT.

1. Kupperman N, et al. Identification of Children at Very Low Risk of Clinically - Important Brain Injuries After Head Trauma: A Prospective Cohort Study. *Lancet* 2009 Oct 3;374(9696):1160-70.
2. Herman MJ, et al., Pediatric Cervical Spine Clearance: A Consensus Statement and Algorithm from the Pediatric Cervical Spine Clearance Working Group. *J Bone Joint Surg Am.* 2019 Jan 2;101(1)
3. Holmes JF, et al. Identifying Children at Very Low risk of Clinically Important Blunt Abdominal Injuries. *Ann Emerg Med.* 2013 Aug;62(2):107-116
4. Golden J, et al. Limiting Chest Computed Tomography in the Evaluation of Pediatric Thoracic Trauma. *J Trauma Acute Care Surg.* 2016 Aug;81(2):271-7.