

Guideline



CCHMC Trauma Service Guidelines

Title: Blunt Abdominal Trauma Evaluation

Effective Date: 2/7/2024

Number: TR-31

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1.0 SCOPE

- 1.1. Care of the Trauma Services Patient at CCHMC.
- 1.2. This guideline provides the minimum standard of care for any patient with a suspected blunt abdominal injury.

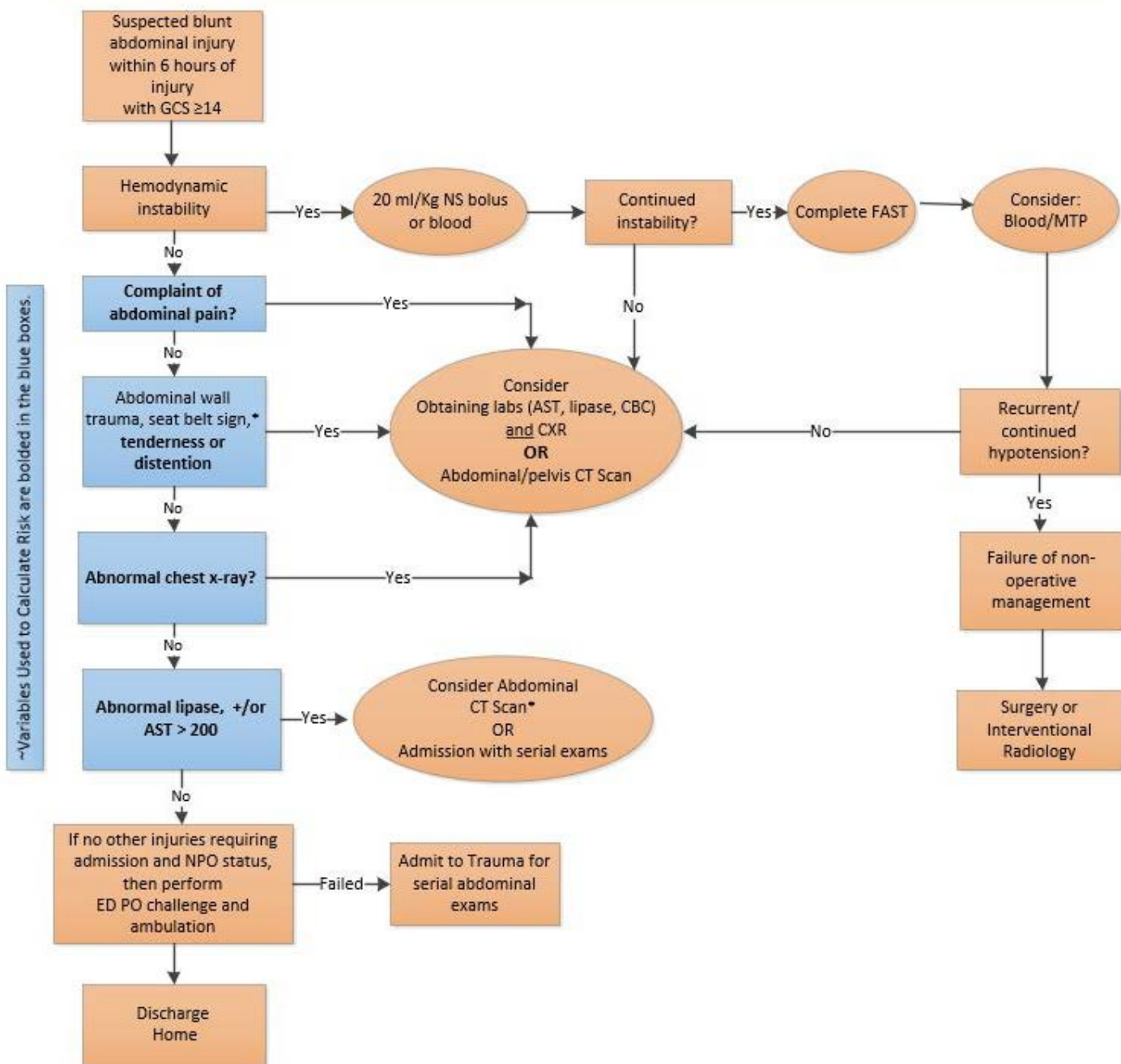
2.0 DEFINITIONS

- 2.1. **Blunt abdominal trauma (BAT):** Physical trauma to the abdomen by either impact or injury

3.0 GUIDELINE

- 3.1. See below algorithm

Blunt Abdominal Trauma (BAT) Evaluation



~Variables Used to Calculate Risk are bolded in the blue boxes.

Risk of Intra-Abdominal Injury and Patients with Intra-Abdominal Injuries Receiving Acute Intervention According to the Number of Prediction Rule Variables Present.

No. of Variables~ Present	Risk of Any IAI	Risk of IAI-I
0	0.7	0
1	4.5	0.6
2	16.8	4.8
3	37.8	8.9
4 or more	62.6	15.2

Source: Streck, et al. Children at low risk for blunt abdominal injury. *Journal American College of Surgeons*, Vol. 224, No. 4, April 2017, p. 451.

Key:
 IAI = intra-abdominal injury
 IAI-I = intra-abdominal injury patients receiving acute interventions

CT Results and Disposition Plan

- Negative CT and resolved abdominal pain and tenderness = DC Home
- Negative CT w/ ongoing pain and/or tenderness = Admit
- Positive CT = See Abdominal Solid Organ Guideline (TR10)
- Questionable CT Findings = Admit

*Minor abrasions or bruise attributed to seat belt with no tenderness does not mandate a CT scan, use clinical judgement

4.0 REFERENCES

- 4.1. Arbra, Chase A. MD; Vogel, Adam M. MD; Plumblee, Leah MD; Zhang, Jingwen MS; Mauldin, Patrick D. PhD; Dassinger, Melvin S. MD; Russell, Robert T. MD; Blakely, Martin L. MD; Streck, Christian J. MD. External validation of a five-variable clinical prediction rule for identifying children at very low risk for intra-abdominal injury after blunt abdominal trauma. *Journal of Trauma and Acute Care Surgery* 85(1):p 71-77, July 2018. | DOI: 10.1097/TA.0000000000001933
- 4.2. Kornblith AE, Singh C, Devlin G, Addo N, Streck CJ, Holmes JF, Kuppermann N, Grupp-Phelan J, Fineman J, Butte AJ, Yu B. Predictability and stability testing to assess clinical decision instrument performance for children after blunt torso trauma. *PLOS Digit Health*. 2022 Aug 8;1(8):e0000076. doi: 10.1371/journal.pdig.0000076. PMID: 36812570; PMCID: PMC9931266.
- 4.3. Springer E, Frazier SB, Arnold DH, Vukovic AA. External validation of a clinical prediction rule for very low risk pediatric blunt abdominal trauma. *Am J Emerg Med*. 2019 Sep;37(9):1643-1648. doi: 10.1016/j.ajem.2018.11.031. Epub 2018 Nov 23. PMID: 30502218.
- 4.4. Streck, C. J., Vogel, A. M., Zhang, J., Huang, E. Y., Santore, M. T., Tsao, K., ... & Collaborative, P. S. R. (2017). Identifying children at very low risk for blunt intra-abdominal injury in whom CT of the abdomen can be avoided safely. *Journal of the American College of Surgeons*, 224(4), 449-458.

5.0 APPROVALS

All revisions of this guideline are approved by the Trauma Service Department. This guideline is reviewed every three years or sooner if deemed necessary. Authority for this document resides with the Trauma Service Department. This guideline is approved by the Trauma Services Manager and the Director of Trauma Services.

HISTORY	
Original Date	01/2018
Revision Date	6/19, 5/20, 12/20; 3/21, 2/24
Review Date	06/18