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Applicability Erlanger Health -
Baroness

Radiology Practice Management Guideline for Solid Organ Injury Grading of Trauma Patients

1. Process/Procedure Description

To develop and provide a systematic and safe approach to the care of the adult trauma patient who requires CT scans for his/her injury.

2. Who Should Read This Process/Procedure?

Trauma Residents, Trauma Attending Physicians

3. Process/Procedure

Step:	Process Instructions/Description:
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Spleen Injury Scale

Grade*	Injury Type	Description of Injury
I	Hematoma	Subcapsular, <10% surface area
	Laceration	Capsular tear, <1cm parenchymal depth
II	Hematoma	Subcapsular, 10%-50% surface area intraparenchymal, <5 cm in diameter
	Laceration	Capsular tear, 1-3cm parenchymal depth that does not involve a trabecular vessel
III	Hematoma	Subcapsular, >50% surface area or expanding; ruptured subcapsular or parenchymal hematoma; intraparenchymal hematoma $\geq$ 5 cm or expanding
	Laceration	>3 cm parenchymal depth or involving trabecular vessels
IV	Laceration	Laceration involving segmental or hilar vessels producing major devascularization (>25% of spleen)
V	Laceration	Completely shattered spleen
	Vascular	Hilar vascular injury with devascularization of spleen

*Advance one grade for multiple injuries up to grade III.
From Moore et al. [4]; with permission

Liver injury scale

Grade*	Injury Type	Description of Injury
I	Hematoma	Subcapsular, <10% surface area
	Laceration	Capsular tear, <1cm parenchymal depth
II	Hematoma	Subcapsular, 10%-50% surface area intraparenchymal, <10 cm in diameter
	Laceration	Capsular tear, 1-3cm parenchymal depth, <10 cm in length
III	Hematoma	Subcapsular, >50% surface area of ruptured subcapsular or parenchymal hematoma; intraparenchymal hematoma > 10 cm or expanding
	Laceration	>3 cm parenchymal depth
IV	Laceration	Parenchymal disruption involving 25% to 75% hepatic lobe or 1-3 Couinaud's segments
V	Laceration	Parenchymal disruption involving >75% of hepatic lobe or >3 Couinaud's segments within a single lobe
	Vascular	Juxtahepatic venous injuries; ie, retrohepatic vena cava/ central major hepatic veins
VI	Vascular	Hepatic avulsion

*Advance one grade for multiple injuries up to grade III
From Moore et al. [4]; with permission

Kidney injury scale		
Grade*	Injury Type	Description of Injury
I	Contusion	Microscopic or gross hematuria, urologic studies normal
	Hematoma	Subcapsular, nonexpanding without parenchymal laceration
II	Hematoma	Nonexpanding perirenal hematoma confined to perirenal fascia
	Laceration	<1.0 cm parenchymal depth of renal cortex without urinary extravasation
III	Laceration	>1.0 cm parenchymal depth of renal cortex without collecting system rupture or urinary extravasation
IV	Laceration	Parenchymal laceration extending through renal cortex, medulla, and collecting system
	Vascular	Main renal artery or vein injury with contained hemorrhage
V	Laceration	Completely shattered kidney
	Vascular	-Avulsion of renal hilum which devascularizes kidney -Active bleeding beyond the perirenal fascia
*Advance one grade for bilateral injuries up to grade III From Moore et al. [7]; with permission		

References:

The American Association for the Surgery of Trauma. (n.d.). Injury Scoring Scale: A Resource for Trauma Care Professionals. Retrieved from <http://www.aast.org/Library/TraumaTools/InjuryScoringScales.aspx?spleen>

Approval Signatures

Step Description	Approver	Date
COO	John Winks: Executive Vice President-COO	02/2025
Trauma Services Committee Approval	Stephanie Spain: Trauma Prgm Mgr Adult	01/2025
	Stephanie Spain: Trauma Prgm Mgr Adult	01/2025

Applicability

Erlanger Health - Baroness

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