

AAST
Abdominal Organ CT Injury
Scales

AAST Splenic CT Injury Scale

TABLE 1
AAST Splenic Injury Scale (1994 Revision)

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

Note.—AAST = American Association for the Surgery of Trauma.

* From reference 34. Advance one grade for multiple injuries up to grade III.

*Easy way to remember:

- Grade 1 is < 1 cm
- Grade 2 is about 2 cm
- Grade 3 is > 3 cm
- Grade 4 is more than 10 cm
- Grade 5 is total devascularization or maceration

AAST Liver CT Injury Scale

AAST Liver Injury Grading System

Grade	Description
I	Hematoma: subcapsular, <10% surface area Laceration: capsular tear, <1 cm in parenchymal depth
II	Hematoma: subcapsular, 10%–50% surface area; intraparenchymal, <10 cm in diameter Laceration: 1–3 cm in parenchymal depth, <10 cm in length
III	Hematoma: subcapsular, >50% surface area or expanding or ruptured subcapsular hematoma with active bleeding; intraparenchymal, >10 cm or expanding or ruptured Laceration: >3 cm in parenchymal depth
IV	Hematoma: ruptured intraparenchymal hematoma with active bleeding Laceration: parenchymal disruption involving 25%–75% of a hepatic lobe or one to three Couinaud segments within a single lobe
V	Laceration: parenchymal disruption involving >75% of a hepatic lobe or more than three Couinaud segments within a single lobe Vascular: juxtahepatic venous injuries (ie, retrohepatic vena cava or central major hepatic veins)
VI	Vascular: hepatic avulsion

Source.—Reference 32.

*Easy way to remember:

- Grade 1 is < 1 cm
- Grade 2 is about 2 cm
- Grade 3 is > 3 cm
- Grade 4 is more than 10 cm, or unilobar maceration
- Grade 5 is bilobar maceration, venous injury
- Grade 6 is avulsion

AAST Renal CT Injury Scale

Renal Injury Scale of the American Association of Surgeons in Trauma

Grade	Injury Description
1	Microscopic or gross hematuria with normal findings of imaging studies; renal contusion; nonexpanding subcapsular hematoma without parenchymal laceration
2	Nonexpanding perirenal hematoma confined to the retroperitoneum; superficial lacerations (<1 cm depth) in the renal cortex
3	Lacerations >1 cm depth in the renal cortex without extension into the collecting system or urinary extravasation
4	Lacerations extending through the renal cortex, medulla, and collecting system; injuries to the main renal artery or vein with contained hemorrhage; thrombosis of a segmental renal artery without parenchymal laceration
5	Lacerations that completely shatter the kidney; injuries to the renal hilum with devascularization of the kidney: traumatic renal arterial disruption, traumatic renal arterial occlusion

*Brief summary:

- Grade 1 is contusion or subcapsular hematoma only
- Grade 2 is laceration < 1 cm without injury to collecting system
- Grade 3 is laceration > 1 cm without injury to collecting system
- Grade 4 is injury to collecting system or large lac
- Grade 5 is shattered or devascularized kidney