

# A Practical Guide to FAST and eFAST With Handheld Ultrasound

Audience: Emergency, trauma, rural and acute care teams | Educational resource for focused bedside ultrasound practice

A compact guide to the standard FAST windows, eFAST lung extensions, interpretation limits and practical decision points when using handheld ultrasound.

**Important:** These guides are educational summaries. Clinical use should follow local scope of practice, credentialing, infection-control policies, image archiving rules and escalation pathways.

## Purpose of the exam

- FAST is a focused trauma screen for free intraperitoneal or pericardial fluid. eFAST extends the exam to the pleural spaces to look for pneumothorax and haemothorax.
- The examination is rapid, repeatable and best interpreted in the context of the patient's physiology, mechanism of injury and serial reassessment.

## Standard windows

- Right upper quadrant - Morrison's pouch and caudal tip of the liver.
- Left upper quadrant - splenorenal recess and caudal splenic tip.
- Pelvis - pouch of Douglas in females or rectovesical pouch in males.
- Subxiphoid or parasternal view - pericardial fluid.
- eFAST chest views - bilateral anterior pleural sliding plus dependent pleural collections when feasible.

## How to use the result

- A positive exam in an unstable trauma patient may accelerate operative or procedural decision-making.
- A negative exam does not exclude injury. Repeat scanning is appropriate when suspicion remains high, especially early after blunt trauma.
- Handheld systems are useful for triage and repeat bedside scans, but image quality, depth and ergonomics may still limit some views.

## Common pitfalls

- Mistaking fluid in the stomach, bowel, gallbladder or physiologic pelvic fluid for haemoperitoneum.
- Missing small or early volumes of fluid; FAST is a rule-in test more than a rule-out test in many settings.
- Overcalling absent lung sliding when motion is limited, there is apnoea, pleurodesis or severe bullous disease.

## FAST/eFAST quick reference

Window	Look for	Common pitfall
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RUQ	Anechoic fluid in Morrison's pouch	Confusing colon or renal cortex with free fluid
LUQ	Fluid around spleen or diaphragm	Limited view due to rib shadowing
Pelvis	Dependent free fluid	Physiologic pelvic fluid
Cardiac	Pericardial fluid	Poor subxiphoid window
Anterior chest	Pleural sliding / lung point	Absent sliding is not always pneumothorax

## Selected references

- American College of Emergency Physicians. Ultrasound Guidelines: Emergency, Point-of-care, and Clinical Ultrasound Guidelines in Medicine. 2023/2026 posting.
- Savatmongkornkul S, Wongwaisayawan S, Kaewlai R. Focused assessment with sonography for trauma. J Med Assoc Thai. 2017; review article.
- Kirkpatrick AW, et al. Clinically relevant outcomes of focused assessment with sonography for trauma and eFAST literature (classic trauma ultrasound literature).
- Hernandez-Torres SI, et al. An extended focused assessment with sonography in trauma simulation and training paper. 2023.