



E-FAST

E-Fast is a limited trauma ultrasound that aims to detect:

1. Intra-abdominal free fluid
2. Pericardial effusion
3. Major haemothorax
4. Pneumothorax

A normal E-FAST does not exclude significant intra-abdominal injury (25% of intra-abdominal injuries in Children do not have haemoperitoneum)

Patient details

Mechanism of Trauma

Pulse

BP

RR

Sats

Examination Findings

Probe Position	Views	Notes	Findings				Notes
		1. RUQ Fluid collects in Morison's Pouch Look above diaphragm for HTX Head down tilt will increase RUQ fluid Sensitivity for haemoperitoneum is 88% for children requiring blood transfusion or operative intervention (much lower in less severely injured ~66%)	Right Upper Quadrant	Normal	Inadequate	Positive	
			Right Haemothorax	Normal	Inadequate	Positive	
		2. LUQ Fluid can collect around the entire spleen Look above the diaphragm for HTX Needs to be 200-250mL blood before eFAST +ve	Left Upper Quadrant	Normal	Inadequate	Positive	
			Left Haemothorax	Normal	Inadequate	Positive	
		3. Subcostal Tamponade is a clinical diagnosis. Look for fluid in the pericardial space. Pericardial fat pads may give the appearance of pericardial fluid. Fluid must have a depth of >5mm; traces of pericardial fluid are normal	Subcostal	Normal	Inadequate	Positive	
		4. Long. Pelvis Look for free fluid behind and above the bladder In the female, fluid collects initially in the Pouch of Douglas	Pelvis	Normal	Inadequate	Positive	
		5. Trans. Pelvis A small amount of pelvis free fluid is normal in children (4%)					
	6.&7. Long. Lung Sliding sign and comet tail artefact are normal; loss of these indicate PTX. Pleuradhesion, large bullae, COPD and non-ventilation (eg endobronchial intubation) can simulate PTX. Lung USS is more sensitive than CXR for detecting PTX (88% sens., 99% spec.).	Right Lung Pneumothorax	Normal	Inadequate	Positive	May need to switch to lung preset to see sliding	
		Left Lung Pneumothorax					

Preparation

1. **Patient data** entry, label images
2. **Probe:** curvilinear or phased array
3. **Pre-set:** abdominal or eFAST
4. **Position:** supine, Trendelenburg patient; right side if able; lights dim if possible
5. **Image optimisation:** depth, Res/Gen/Pen, gain, TGC

Conclusions (Note: E-FAST findings must be consistent with clinical suspicion: integrate history, examination, investigations and USS findings). Unlike adults there is no algorithm that necessitates CT scan or disposition to theatre if positive. Consult with Paediatric Surgical service.

Clinician

Signature

Date

Time

Resource adapted from Ultrasound Village

