

Pleural Procedures in Critical Care

In all but emergency scenarios, it is appropriate to wait for further imaging and review, and consultant input.

Pleural procedures should only be performed in critical care in the presence of real time bedside focused ultrasound to identify the position of the diaphragm. **In the absence of real time ultrasound, a blunt dissection technique should be used to insert a drain within the anatomical triangle of safety.**

For non-urgent procedures, If a practitioner with focused thoracic ultrasound skills is not available within critical care, either the on call radiologist or respiratory registrar should be asked to provide real time bedside focused ultrasound guidance.

Emergency indication for chest drain insertion

1. **Tension pneumothorax**– a tension pneumothorax must be decompressed immediately with a wide bore cannula before proceeding to chest drainage. ICU consultant must be called for all ventilated patients with proven or suspected tension pneumothorax.

Urgent indication for chest drain insertion

1. Pneumothorax with clinical compromise in unintubated patient.
2. Intubated patient with pneumothorax not under tension, with clinical compromise.

Non-urgent indications for chest drain insertion / pleural aspiration.

1. Pneumothorax in intubated or unintubated patient without signs of clinical compromise.
2. Pleural effusion – diagnostic aspiration / therapeutic drainage.

If there is extensive bullous lung disease, or where there is doubt about the presence of a pneumothorax, a radiological opinion should be sought.

For patients in whom the pneumothorax is loculated or is failing to expand after insertion of a chest drain, the on call radiologist must be contacted for consideration of a CT scan to localise the pneumothorax and assist with drain placement.