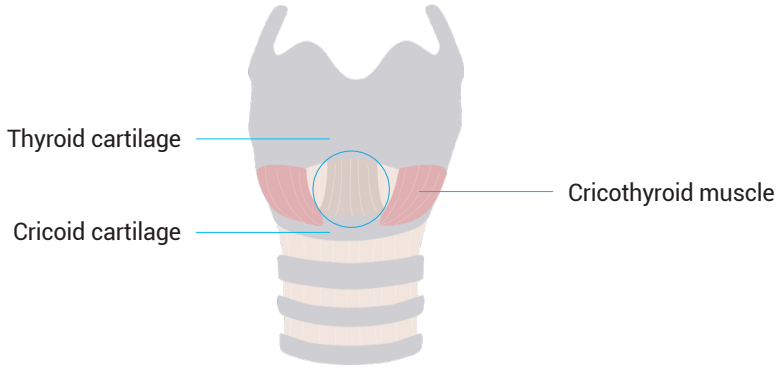
Airway ultrasound

IDENTIFYING THE CRICOTHYROID MEMBRANE

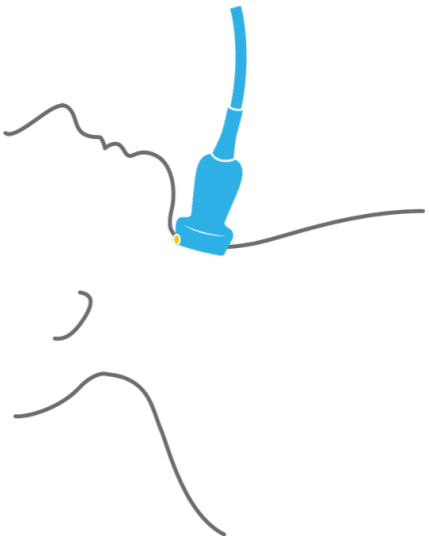
Why use ultrasound?

Identifying the cricothryoid membrane by palpating for landmarks can be time consuming and unreliable. A landmark-based approach may lead to injury or delay in establishing a surgical airway. Ultrasound allows accurate identification of the landmarks for cricothyrotomy, ensuring a safer procedure. It is important to remember that this technique should be used in preparation for a double setup for a predicted difficult intubation, and not for immediate cricothyrotomy for a failed airway.



Placement

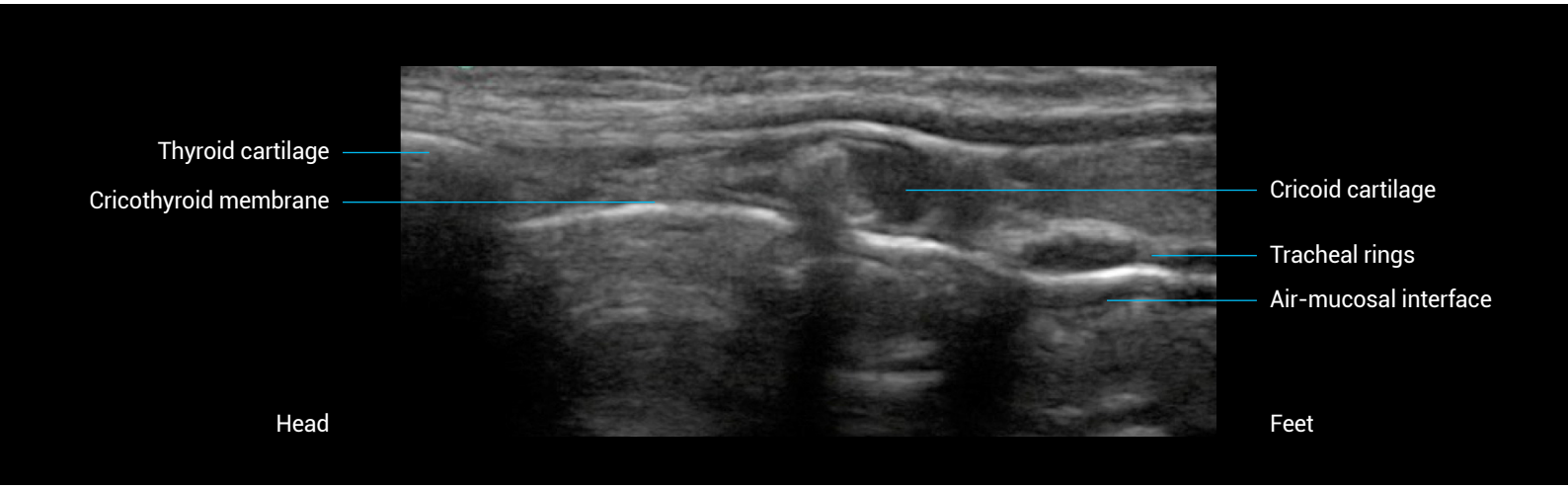
To identify the cricothyroid membrane, place a linear transducer in the midline of the neck in long-axis, with the probe marker pointing towards the patient's head.



Anatomy

Note the linear, hyperechoic line that represents the air-mucosal interface. Superficial to this line, the tracheal rings are seen as hypoechoic structures.

The cricothyroid membrane is seen in the gap between the thyroid and cricoid cartilages, the two larger hypoechoic structures nearest the head.



NOTE:
Use a marking pen to locate the membrane as a target for a cricothyrotomy incision.