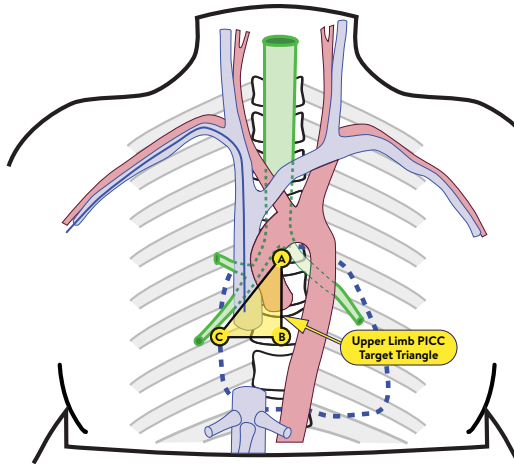
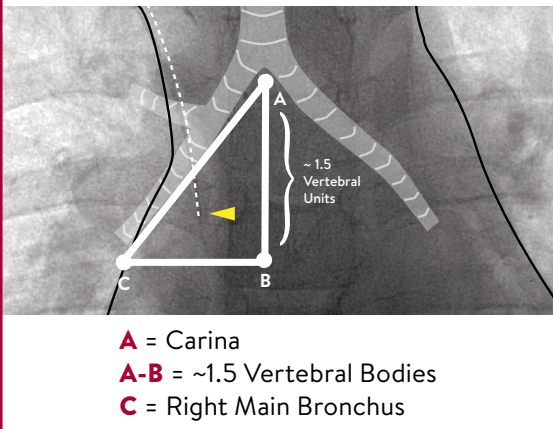


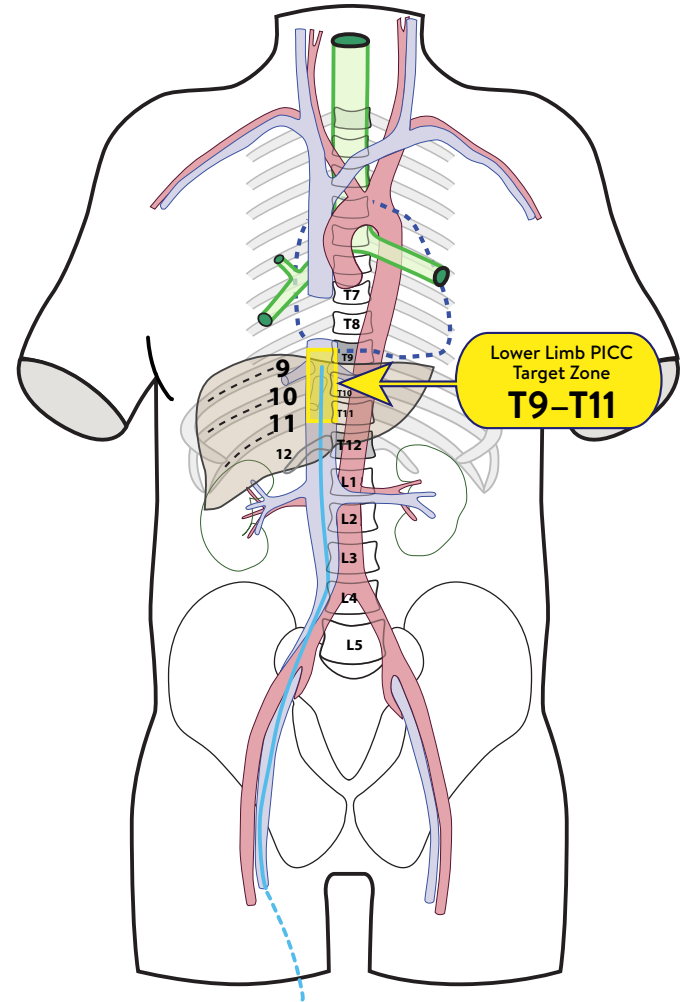
## Upper Limb



### Constructing the Target Triangle



## Lower Limb



### CV considerations

- For upper limb placements, if concern for arrhythmia, target zone is at right main bronchus.
- If patient has a potential need for future single ventricle palliation, lower extremity access is preferred.
- L sided SVC placement will be dependent on pre-procedural imaging and will be handled on a case by case with goal of avoiding cardiac margin.
- Any uncertainty or situations of unusual anatomy require discussion with the primary team and it is recommended to confirm placement through ultra sound study with patient in resting position.

*Lines may migrate 0.5-1.0 cm. In absence of clinical findings, it is recommended to reposition based on trends over several films.*

**References:** 1. Connolly, B., et al. "Fluoroscopic landmark for SVC-RA junction for central venous catheter placement in children." *Pediatric Radiology*. 2000 Oct; 30(10): 692-5. 2. Kevin M. Baskin, et al, Cavoatrial Junction and Central Venous Anatomy: Implications for Central Venous Access Tip Position. *Journal of Vascular and Interventional Radiology*, Vol 19/3, March 2008, 359-365