Pulmonary Artery Anastomosis Assessment
Take home message

- TEE is standard practice to identify pulmonary arterial anastomotic problems
  - 2D is great but 3D may reveal additional information
    - 3D imaging requires good 2D. Quality images are key to diagnosis, so optimize windows and physics
    - Be careful with inaccurate measurement
    - Remember that the vessel diameters and flow velocities may change once the chest is closed

- Always interpret the velocities in accordance with the flow rate
  - Remember the determinants of cardiac output and context of the case
    - Preload? Afterload? Contractility? Rate? Rhythm? Is the patient on VA ECMO? One lung or two?
    - Make final measurements off VA ECMO to ensure accuracy

- Left pulmonary artery is difficult to visualize because of the left main bronchus
  - Techniques to obtain challenging views (especially for the LPA) may be done by:
    - Epicardic echocardiography or direct pressure gradient measurement using a needle proximal and distal to anastomosis.

- A mismatch between left and right veins flow may reflect an impairment on PA flow

- Redoing the anastomosis is high risk because of the warm ischemia duration

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