

Double outlet right ventricle



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October 11th, 2022



LOVE WILL.

 **Children's Mercy**

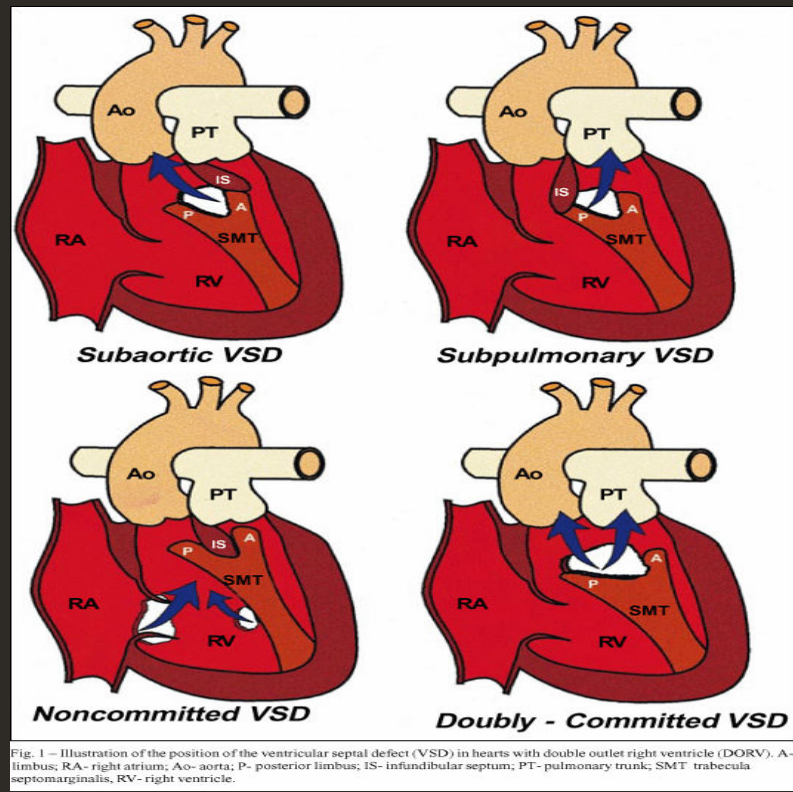
Objectives

- Double outlet right ventricle (DORV) definition
- Classification of DORV
- Imaging goals in DORV
- Case discussion for different types of DORV

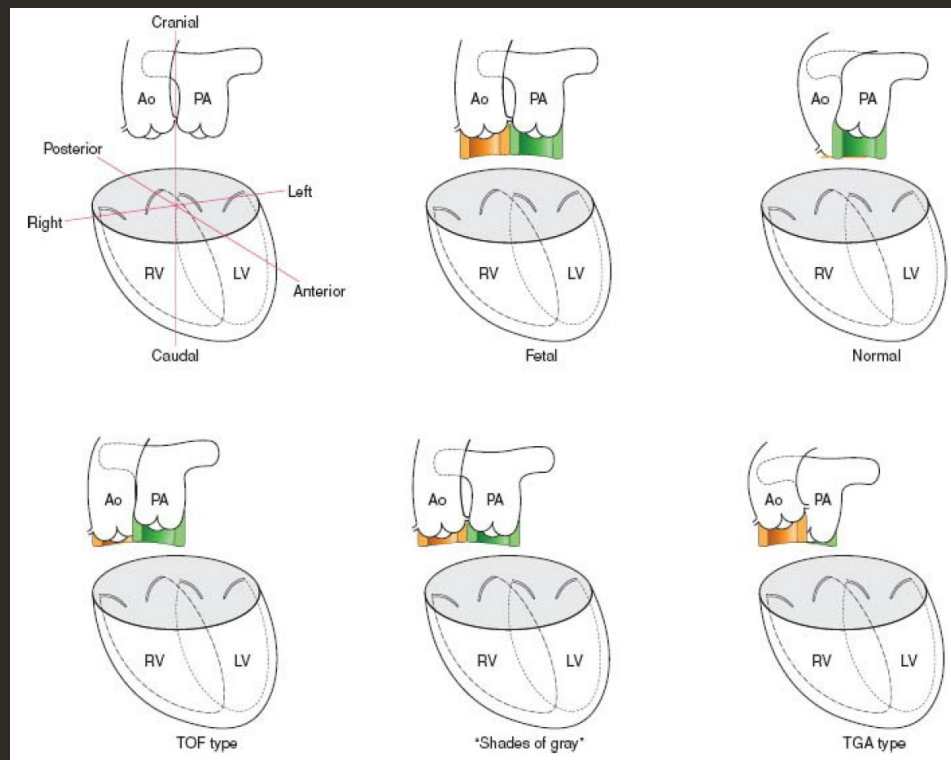
Double outlet right ventricle (DORV)

- Both great arteries are completely or near completely aligned with the right ventricle
- Ventricular septal defect is almost always present and is the only path out of the left ventricle
- Key anatomic features to understand and define by imaging:
 - VSD location
 - Conal morphology
 - Spatial relationship of the great arteries to each other
 - Associated cardiac lesions: Outflow tract obstruction, AV valve anomalies such as straddling and ventricular hypoplasia

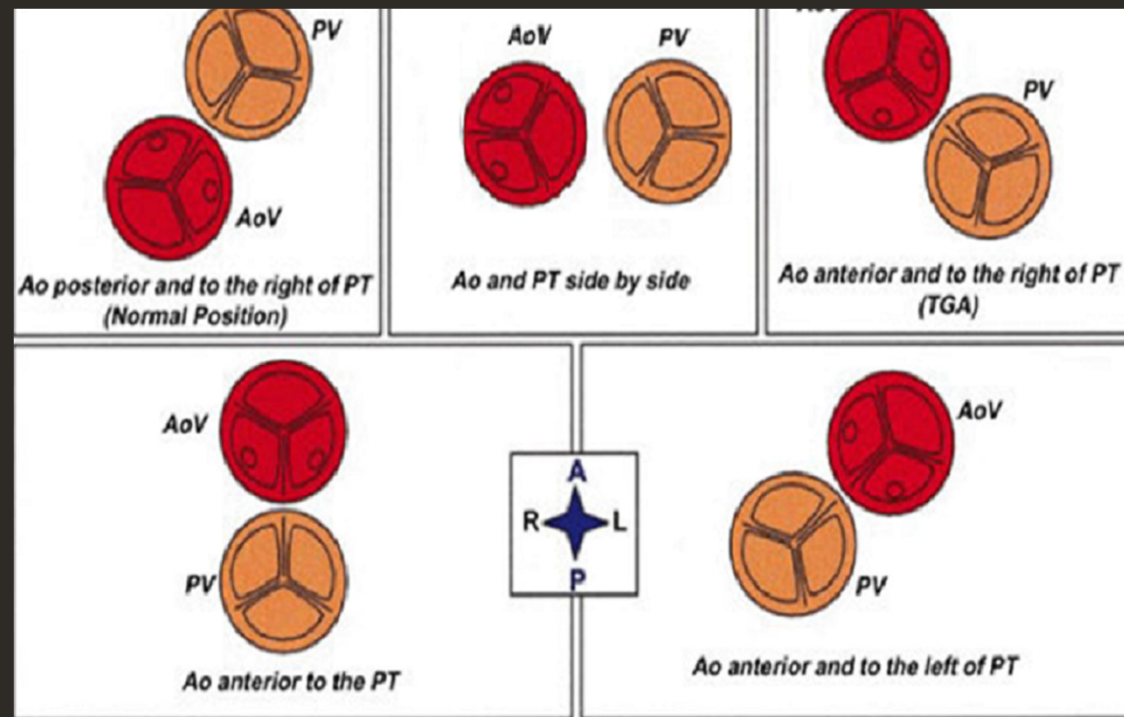
DORV Classification



Conal Morphology



Great artery relationship



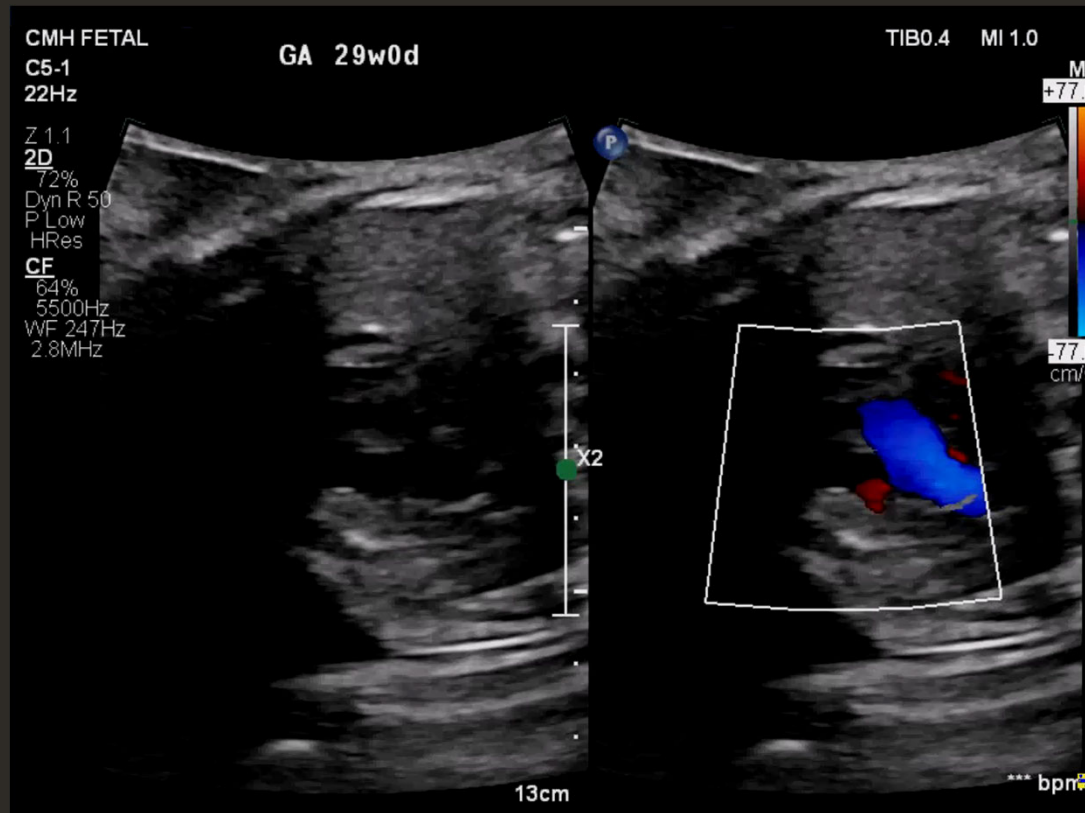
Case 1 4Ch/First outflow



Case 1 2nd outflow



Case 1 VSD



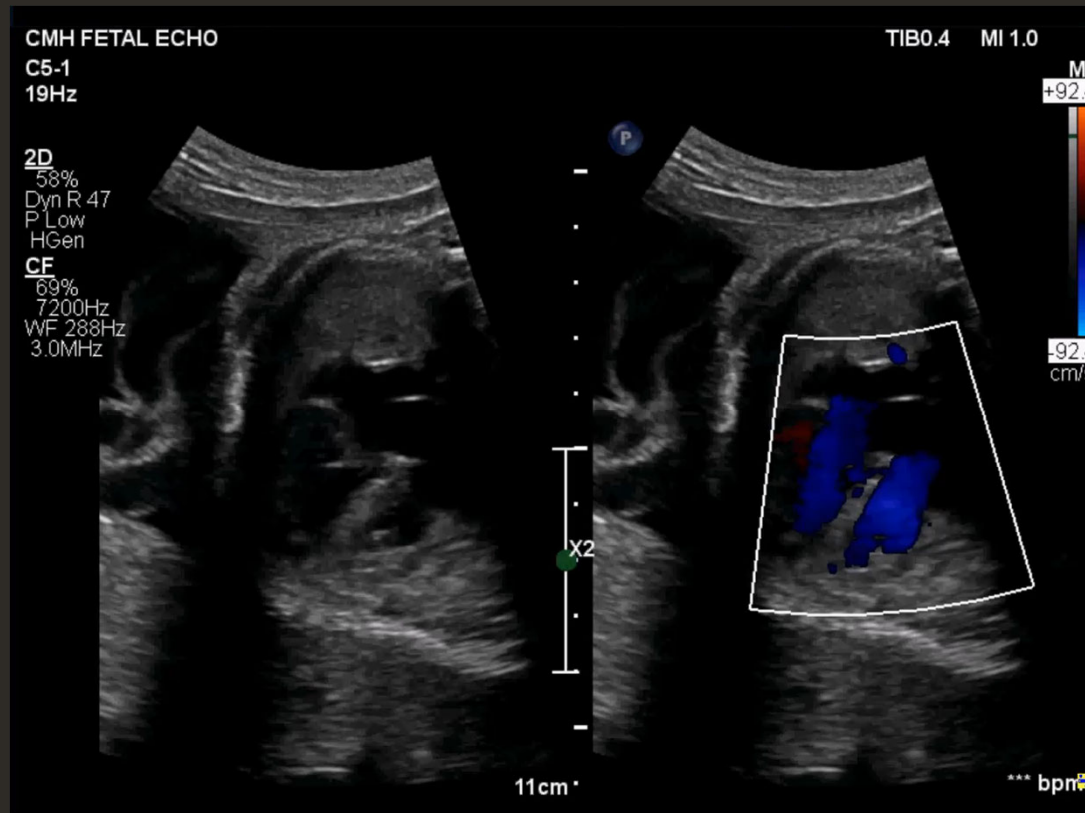
Case 1 Short axis



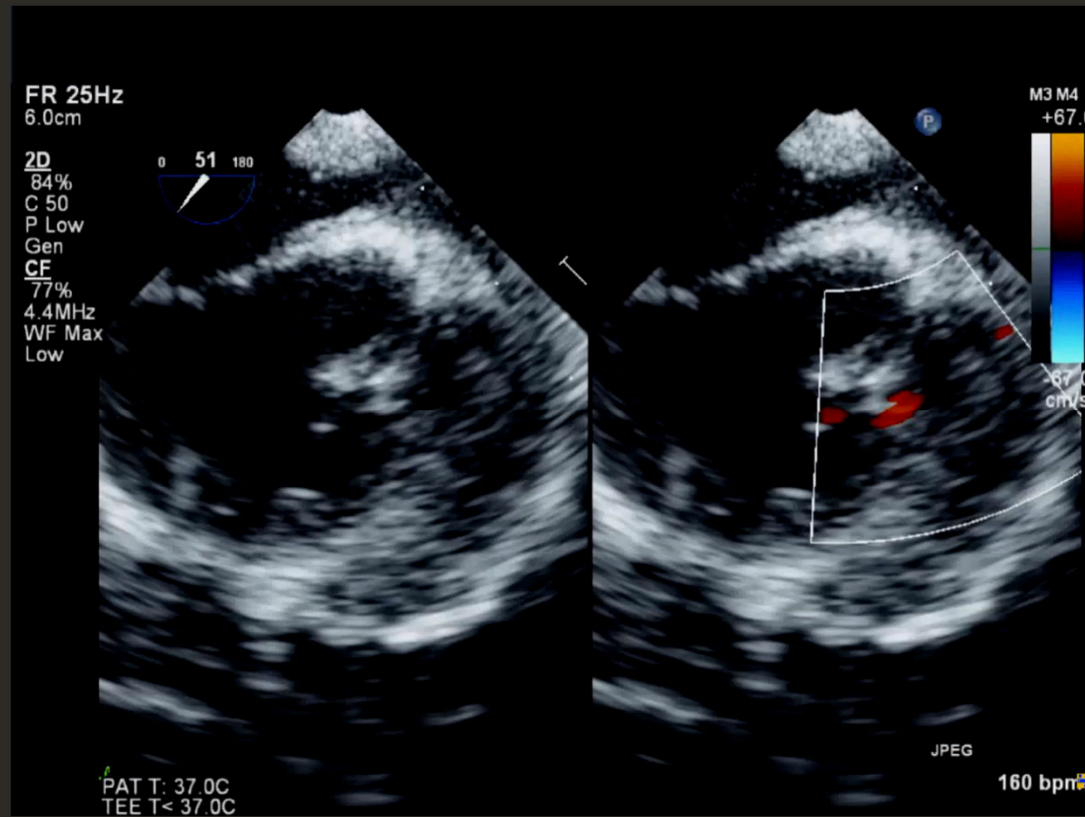
Case 2 4Ch to outflows



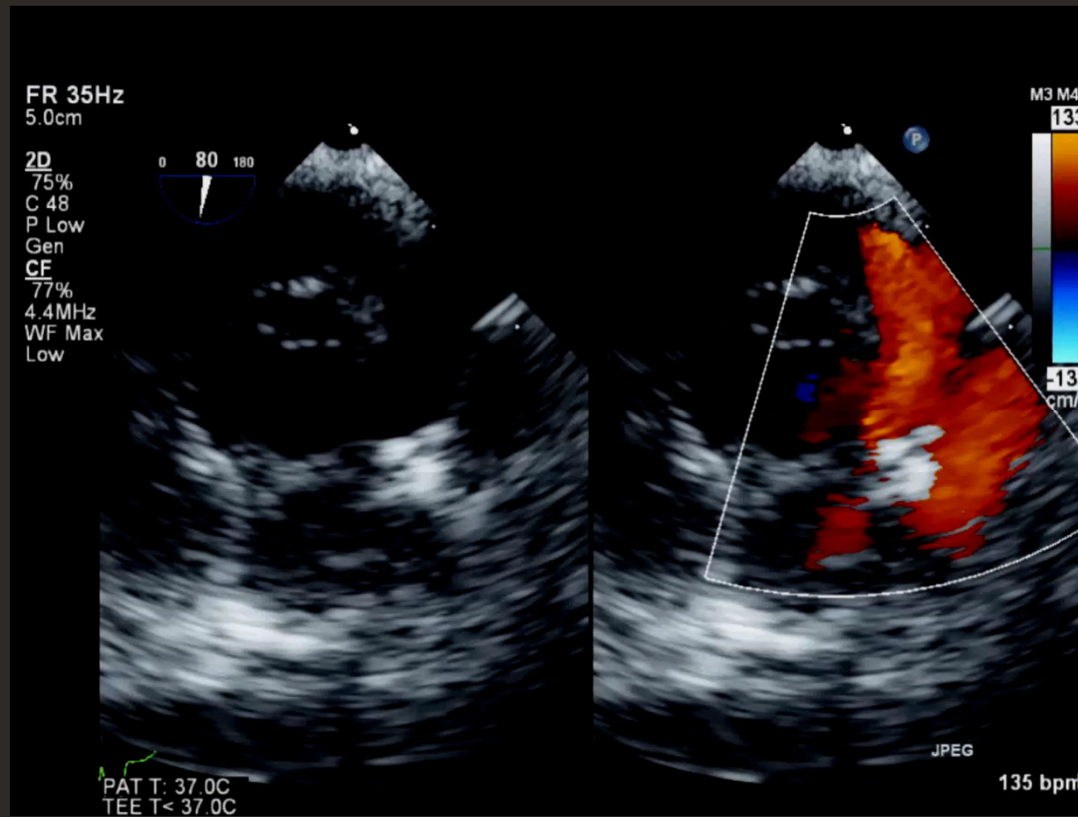
Case 2 VSD



Case 2 TEE



Case 2 Post TEE



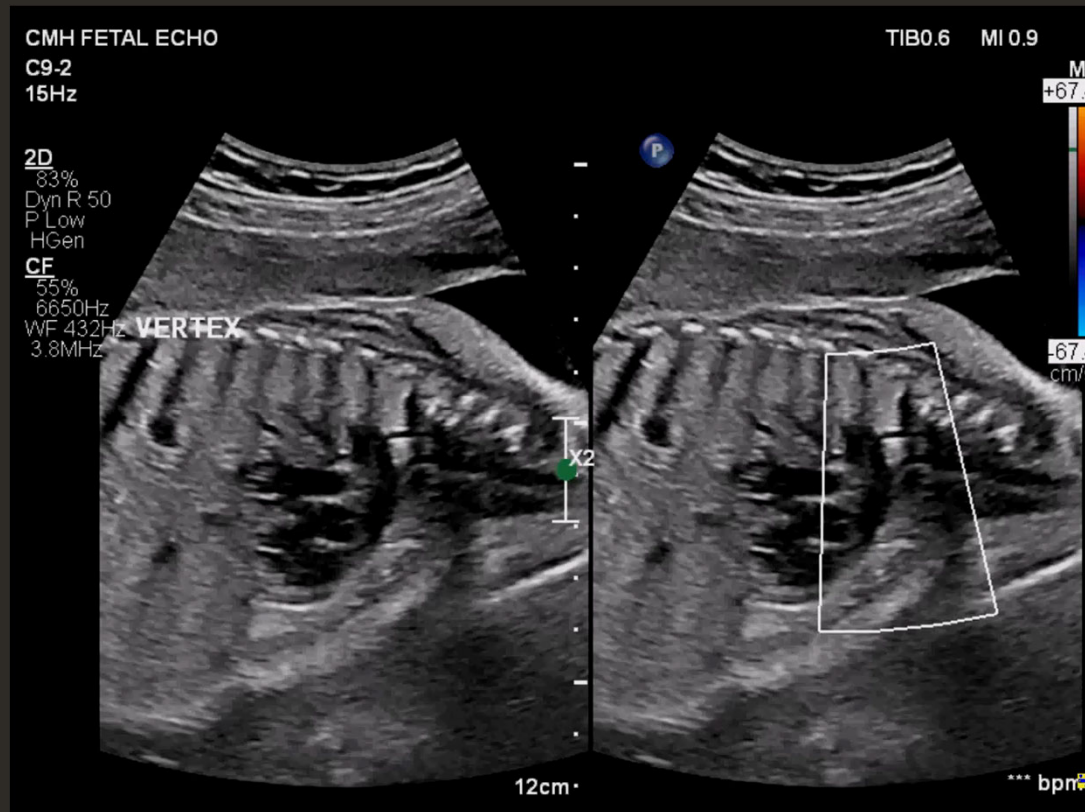
Case 3 4ch to outflow sweep



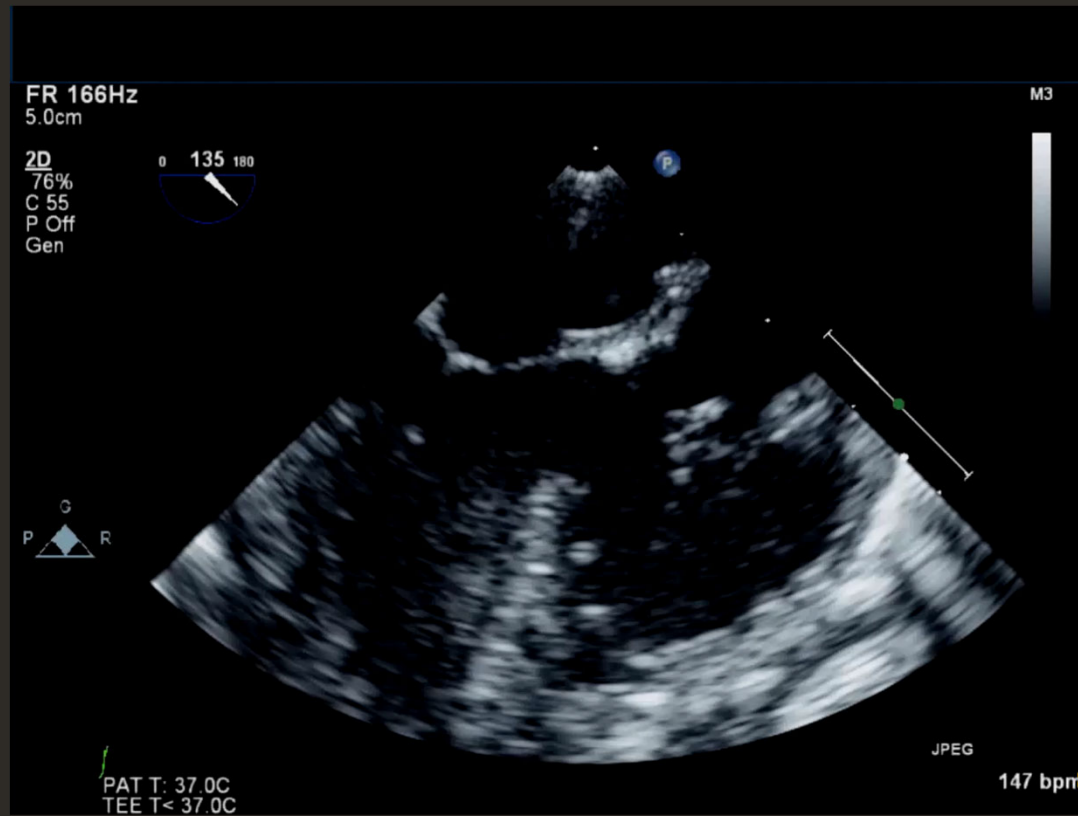
Case 3 VSD location



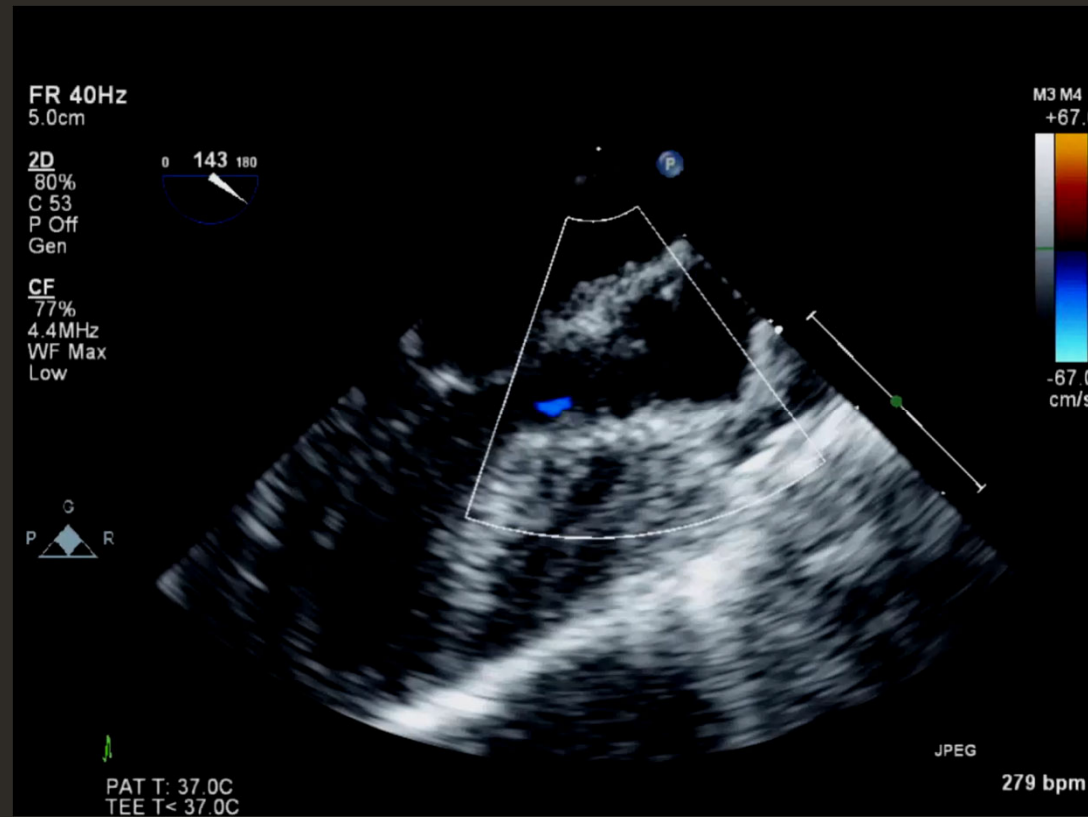
Case 3 Arches



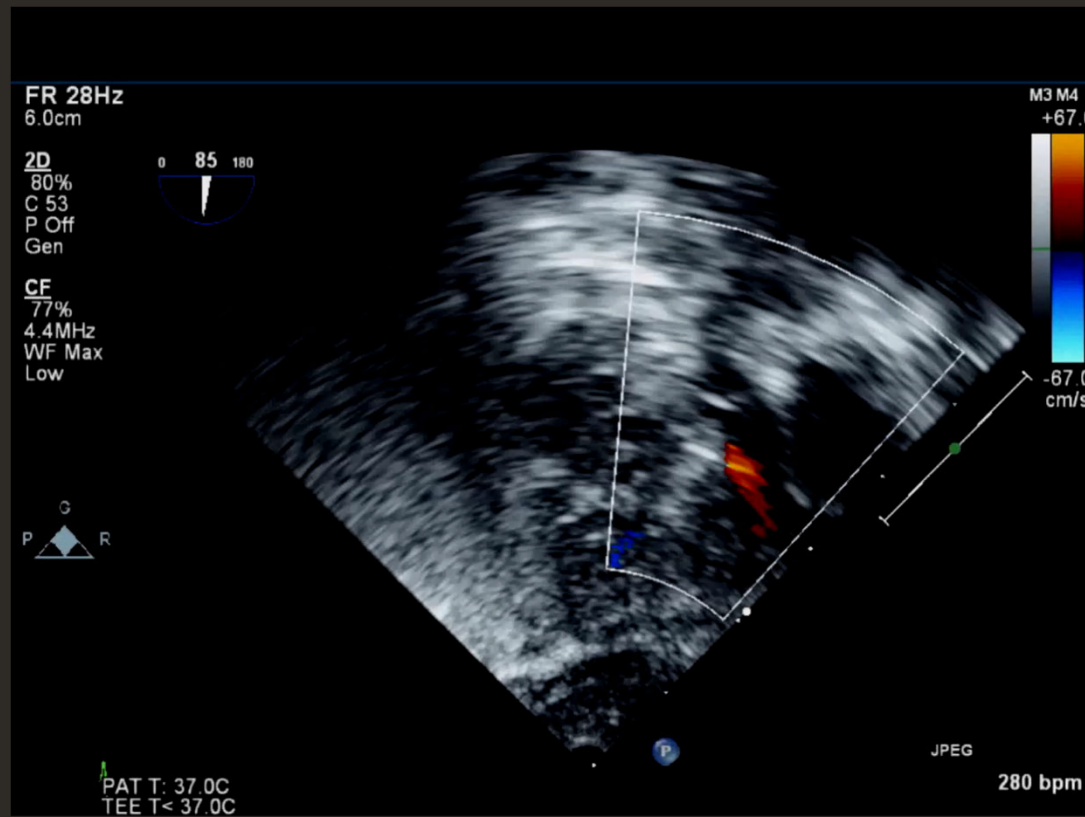
Case 3 TEE



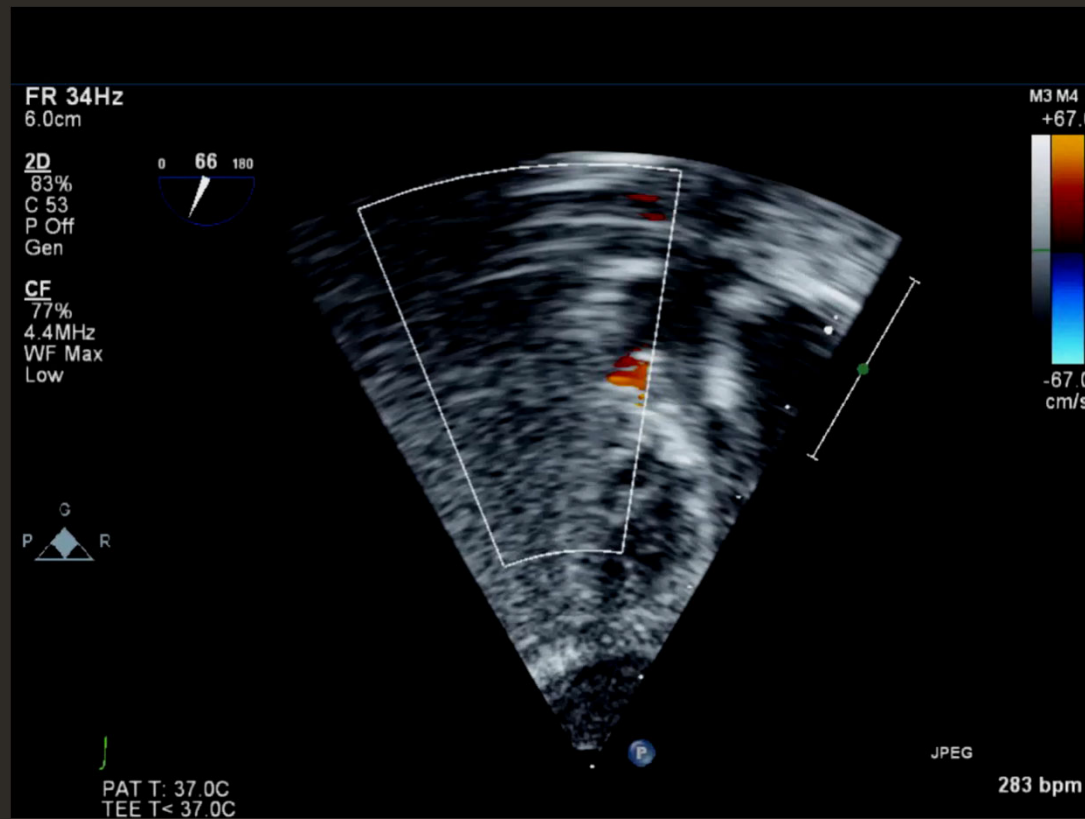
Case 3 Post TEE



Case 3 Post TEE



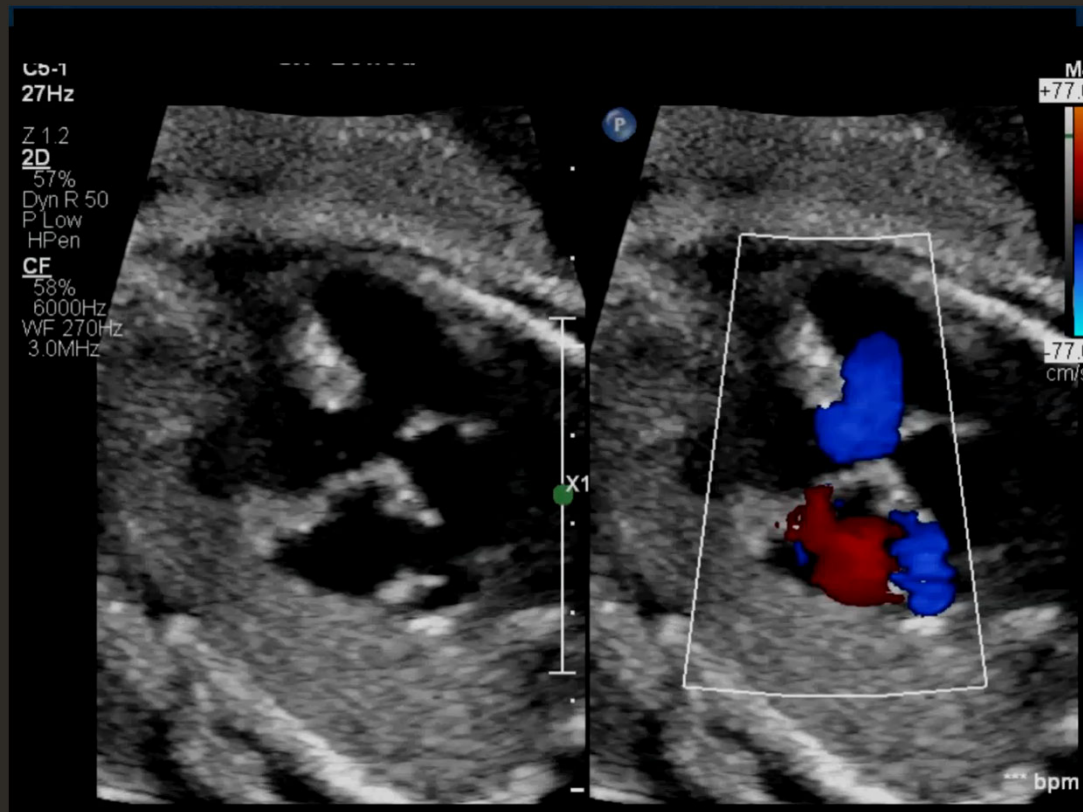
Case 3 Post TEE



Case 4 4Ch to outflows



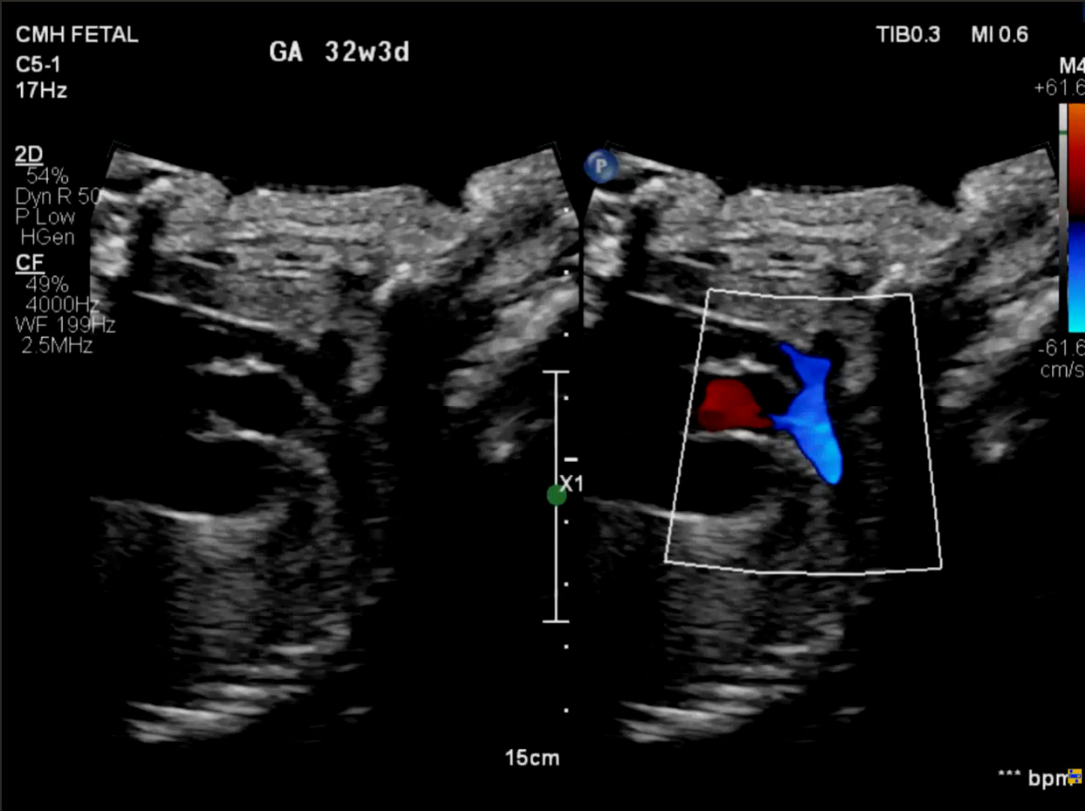
Case 4 2D/Color sweep



Case 4 What is this mitral valve doing



Case 4 Arch



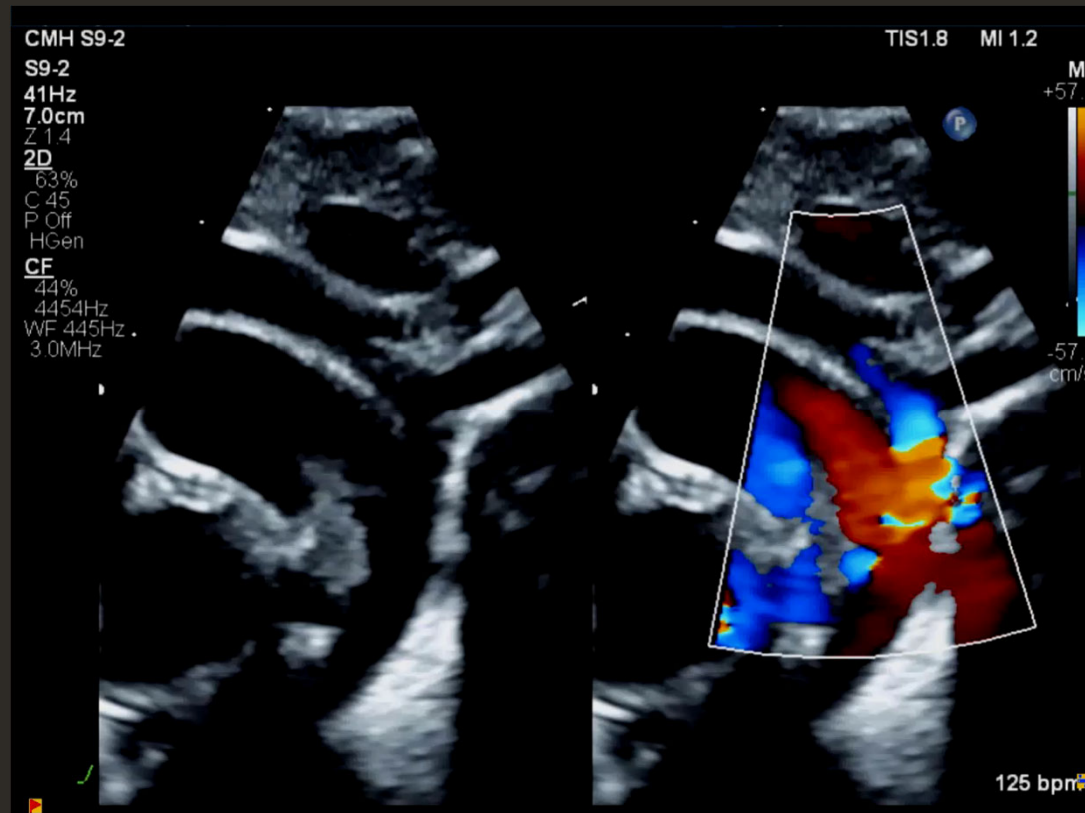
Case 4 Postnatal Subxiphoid long



Case 4 Postnatal Apical view



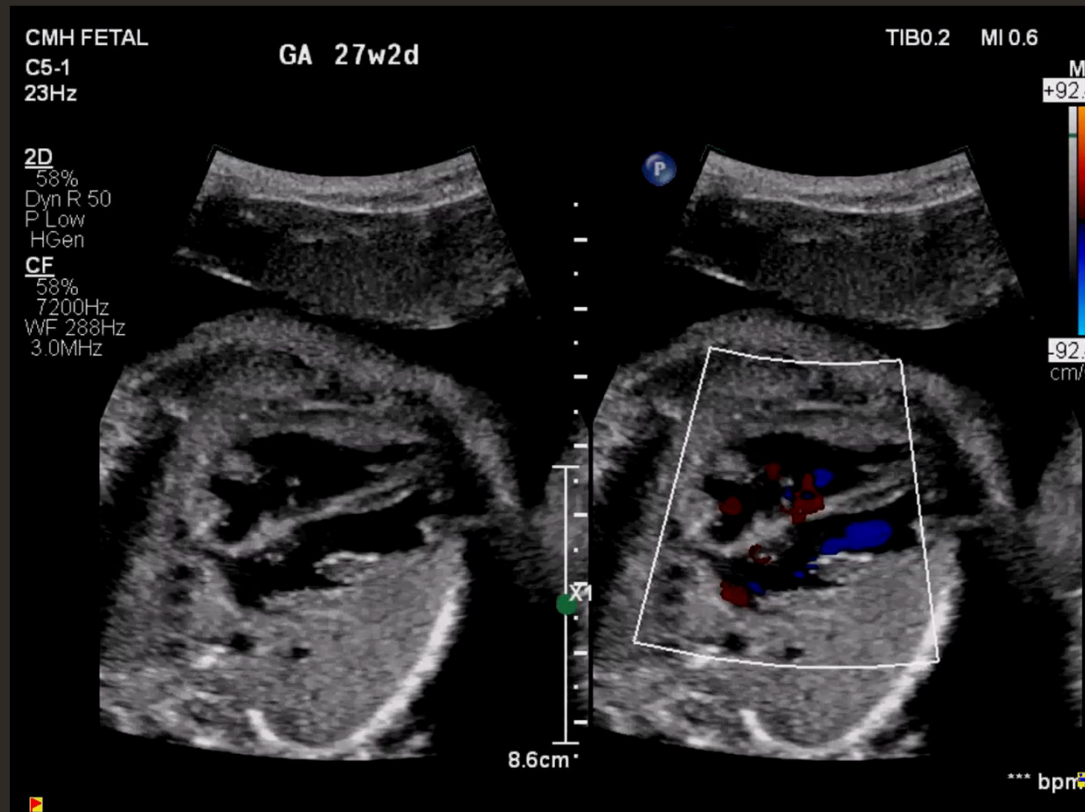
Case 4 Postnatal



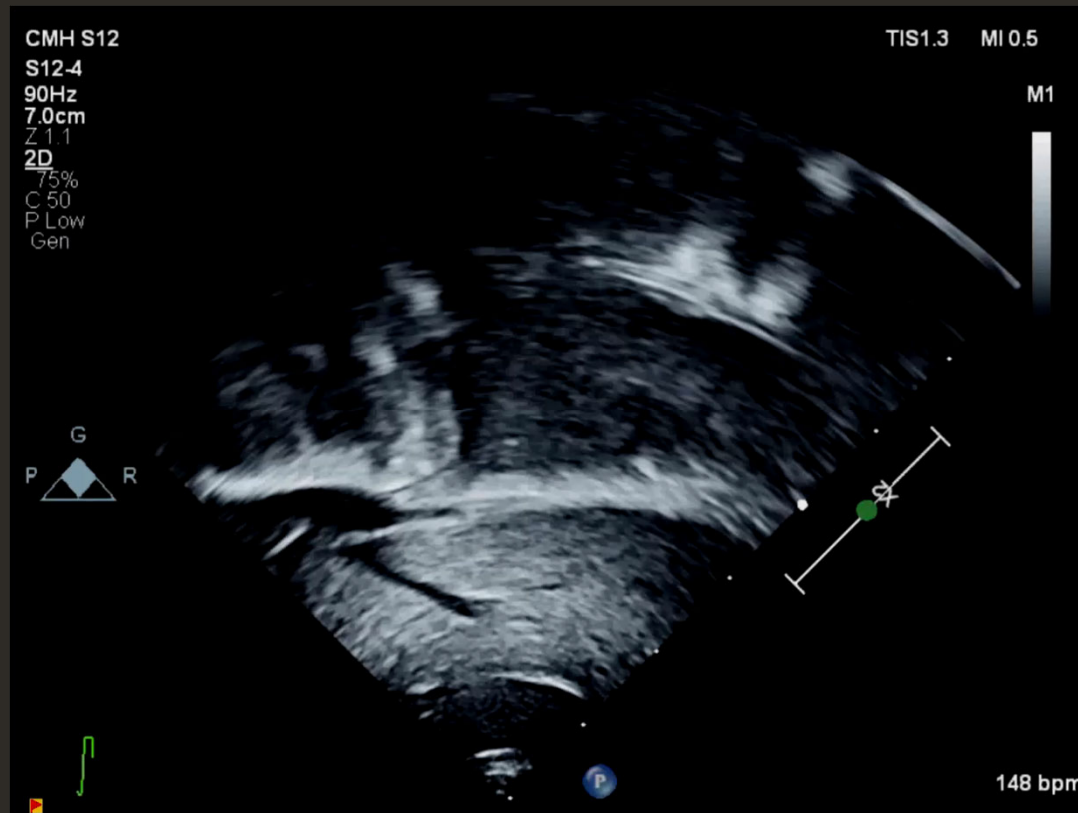
Case 5 4Ch to outflow sweep



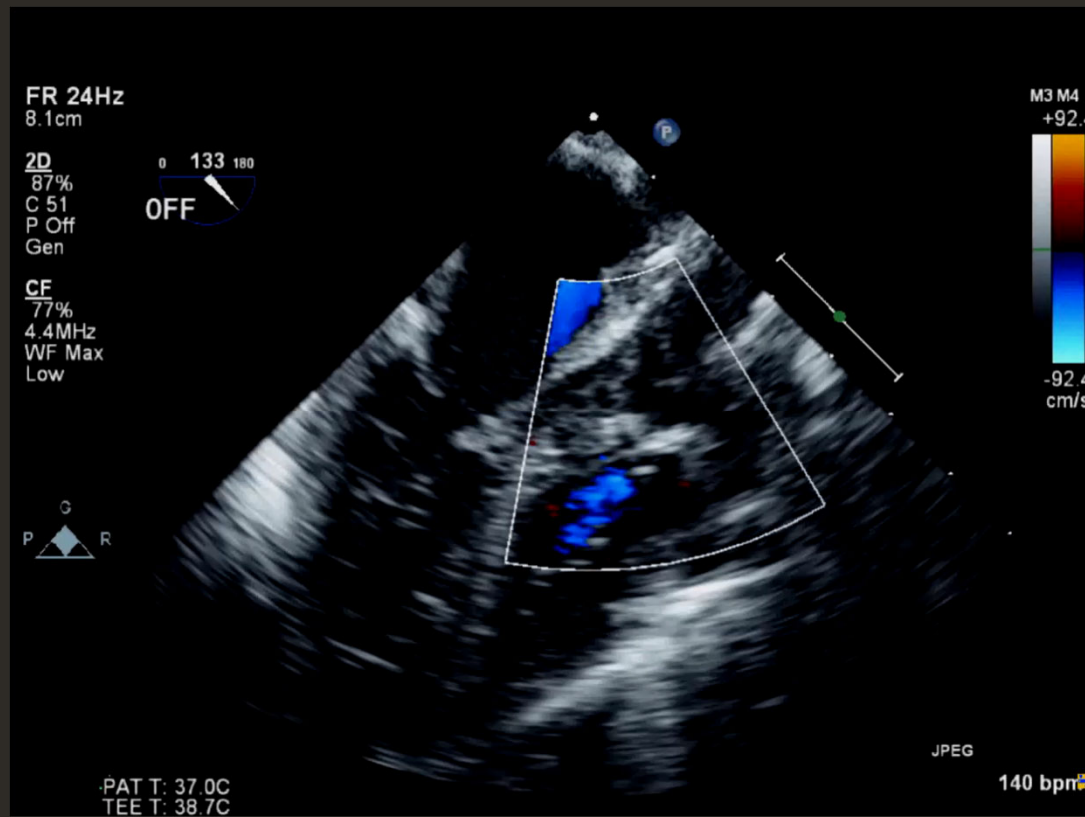
Case 5 VSD



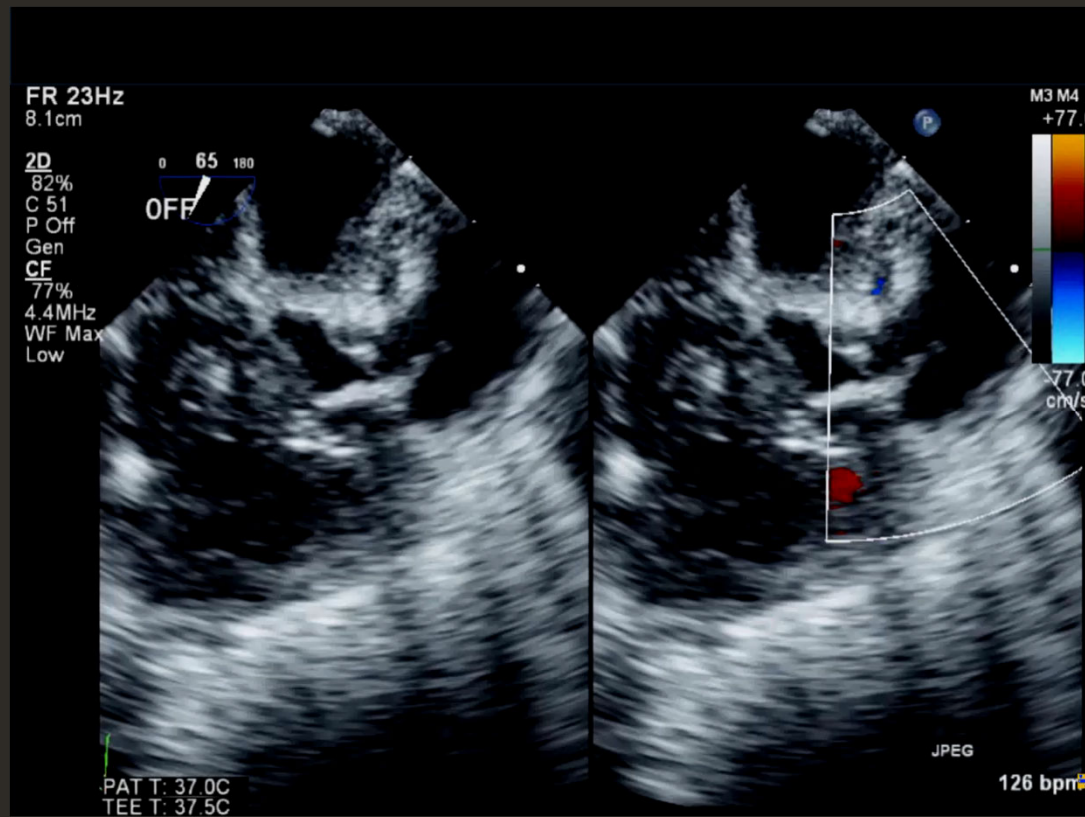
Case 5 Postnatal Subxiphoid sweep



Case 5 Postop TEE



Case 5 Post op TEE



Summary

| Location of VSD | Associated lesions | Physiology (like) | Intervention |
|-----------------------------|-----------------------|--------------------------------|--|
| Subaortic | | VSD | Tunnel repair |
| | Subpulmonary stenosis | Tetralogy of Fallot (TOF) | TOF type repair |
| Subpulmonary | | Transposition | Arterial switch operation (ASO) with VSD closure |
| | Coarctation | Transposition with coarctation | ASO, VSD closure, Arch repair |
| Doubly committed | | VSD | Tunnel repair ASO, VSD closure |
| Remote/Additional Anomalies | | Variable | Fontan route or occasionally two ventricle |
| | | | |

Thank you!

Acknowledgements

Rita France
Melanie Kathol
Alison Samrany
Ashley Warta
Bryan Beaven
Kelsey Brattrud

