

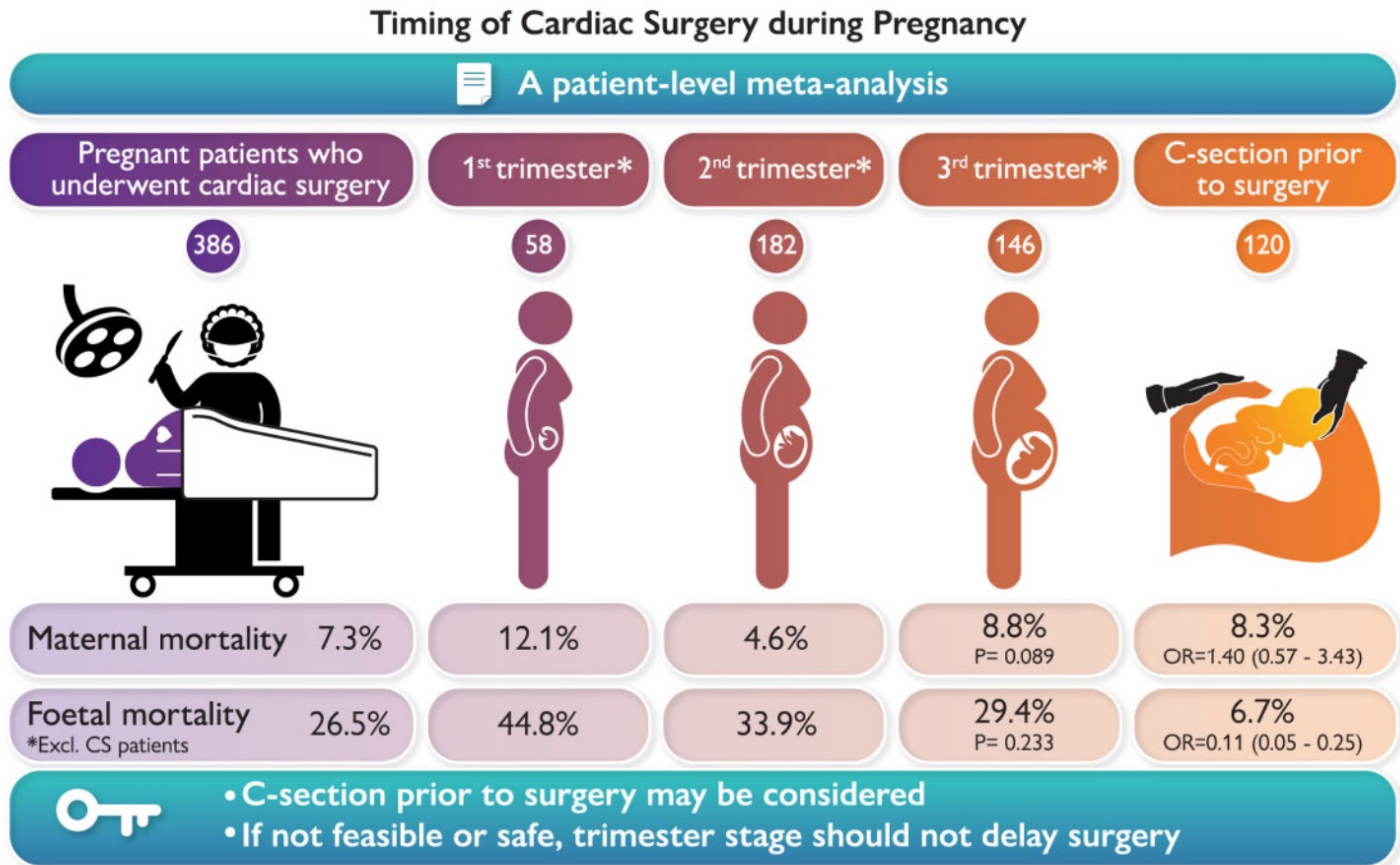
Anesthetic Considerations for Mitral Valve Replacement During Pregnancy

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Cardiac disease is a leading cause of maternal mortality.

Medical advancements have improved maternal mortality but fetal mortality remains as high as 27% to 34%.

Maternal safety often necessitates urgent intervention, and postponing for fetal viability is not possible.



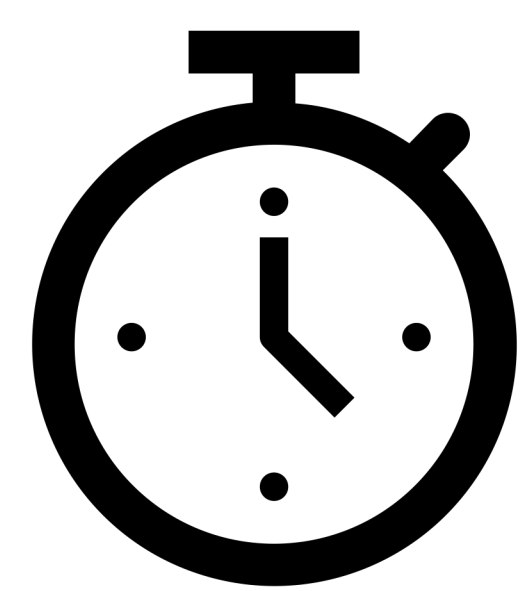
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1. Dong Z, et al. Management of cardiopulmonary bypass in pregnancy: challenges and progress in maternal-fetal protection. Front Cardiovasc Med. 2025;12:1637826.
2. van Steenberg GJ, et al. Timing of cardiac surgery during pregnancy: a patient-level meta-analysis. Eur Heart J. 2022;43(29):2801-2811.
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The Case

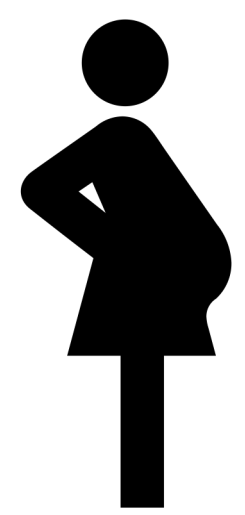
25 y.o. F at 15 weeks pregnant with Staphylococcal endocarditis complicated by mobile vegetation and posterior leaflet perforation leading to severe mitral regurgitation.

Preoperatively, she was maintained on clevidipine to decrease afterload and improve forward flow.



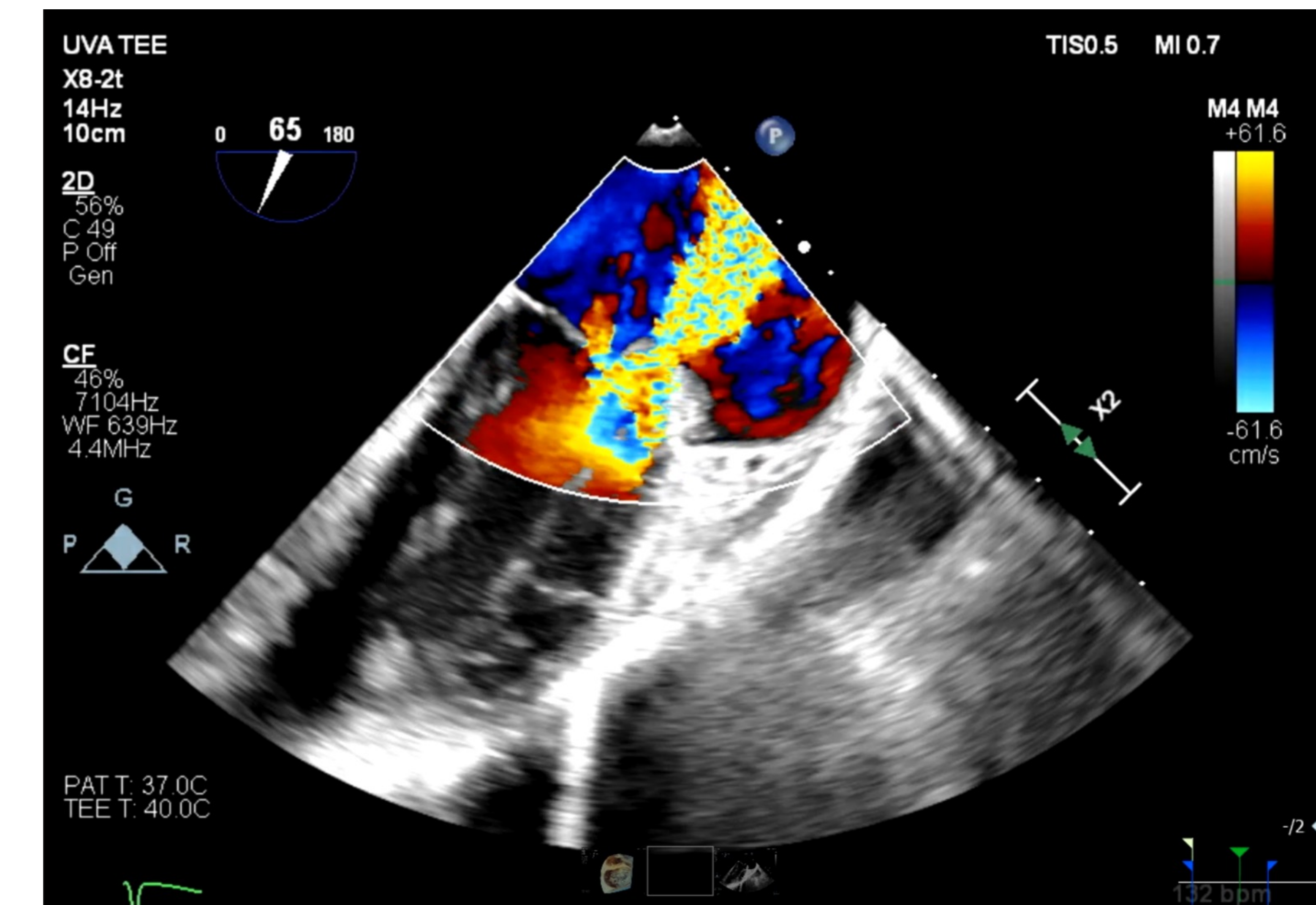
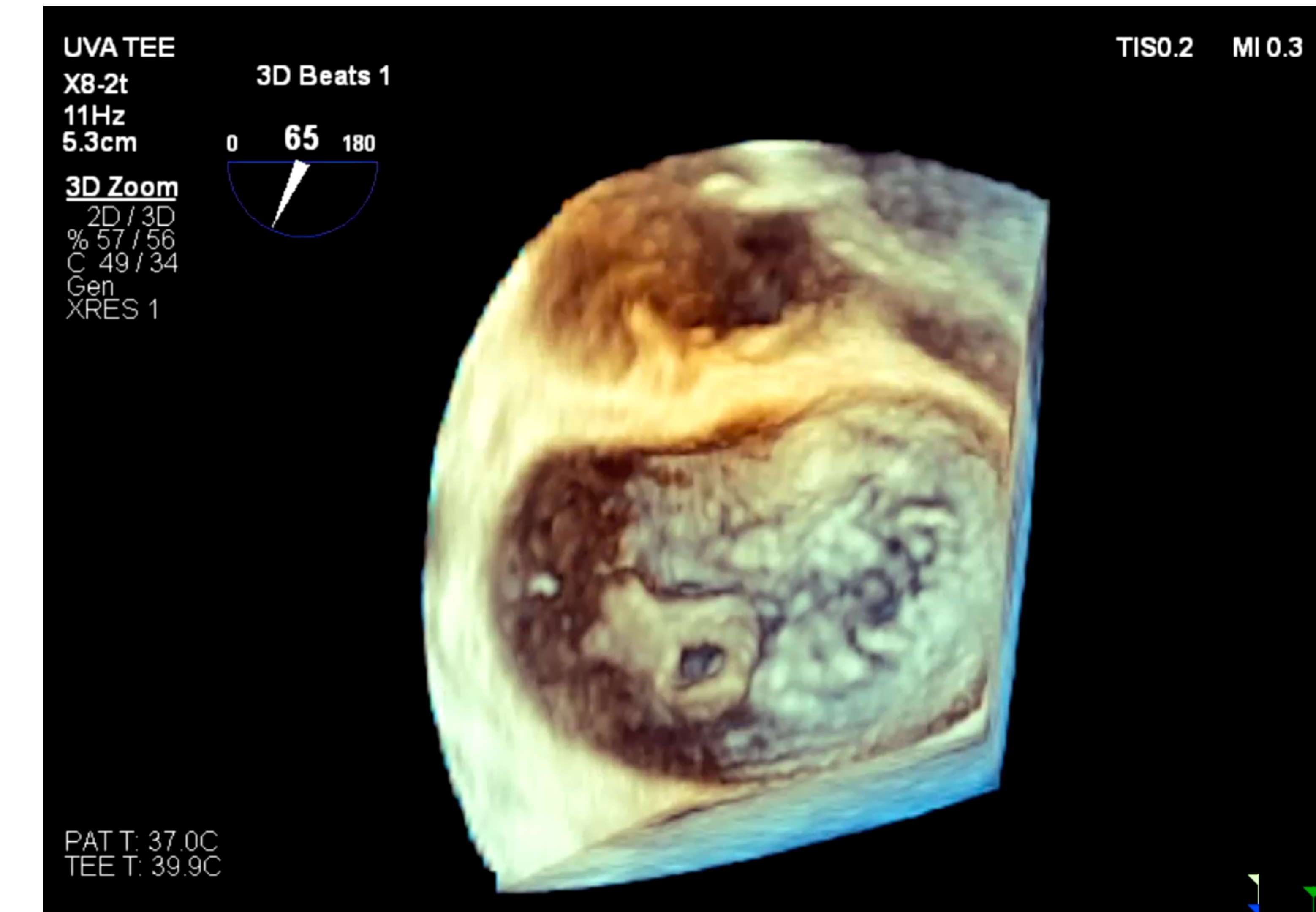
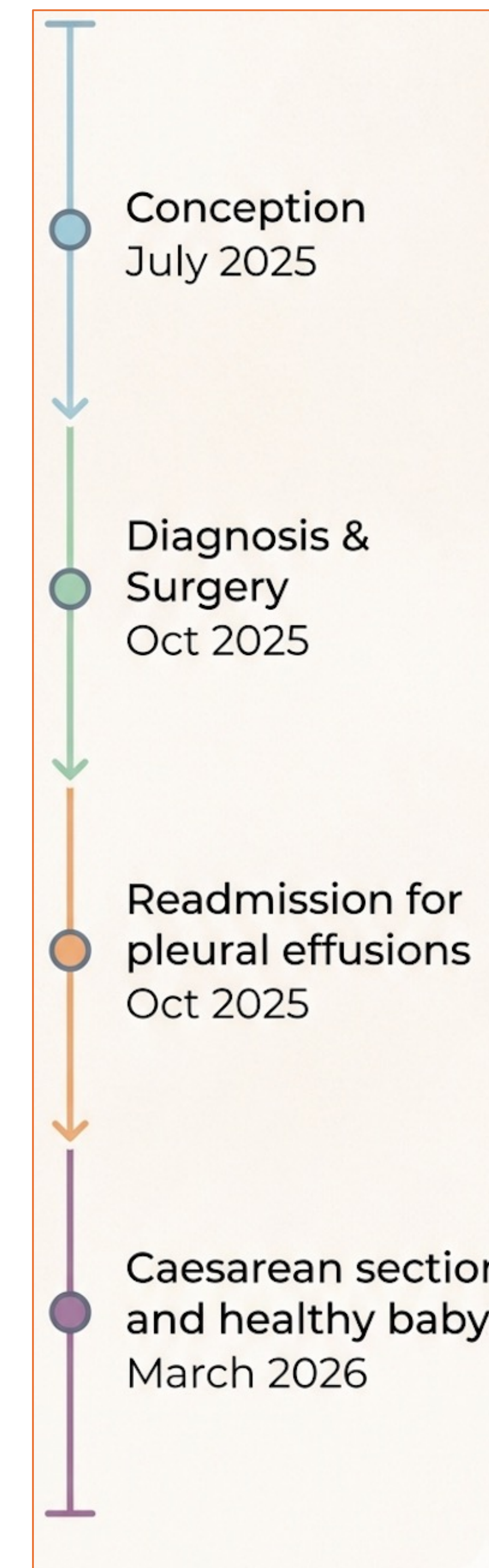
Mitral Valve Replacement

Cardiopulmonary bypass time: 77 minutes
Aortic cross-clamp time: 58 minutes



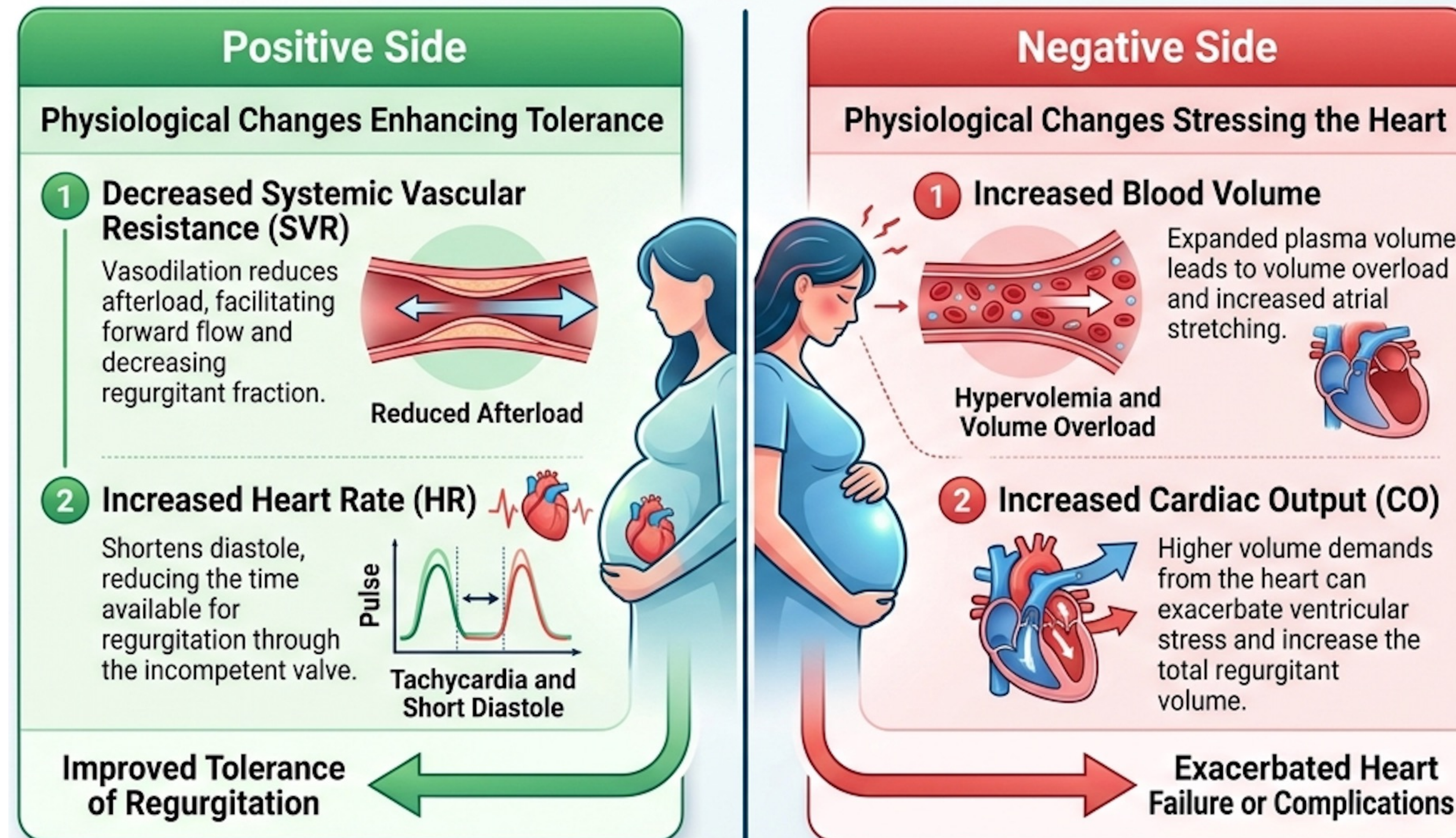
Fetal heart tones checked before and after surgery.

She was extubated without complication and discharged home on post-operative day 5 with IV antibiotics.



Multidisciplinary teamwork is required to care for an expectant mother with a cardiac emergency while also supporting the pregnancy.

Tolerance for Regurgitant Lesions in Pregnancy



The overall tolerance depends on the individual's baseline function and ability to adapt to these competing physiological forces.

Fetal protective strategies during cardiopulmonary bypass

