Challenging the Experts (ESC Core Curriculum in VHD)

A SYMPTOMATIC PATIENT WITH PARAVALVULAR MITRAL REGURGITATION

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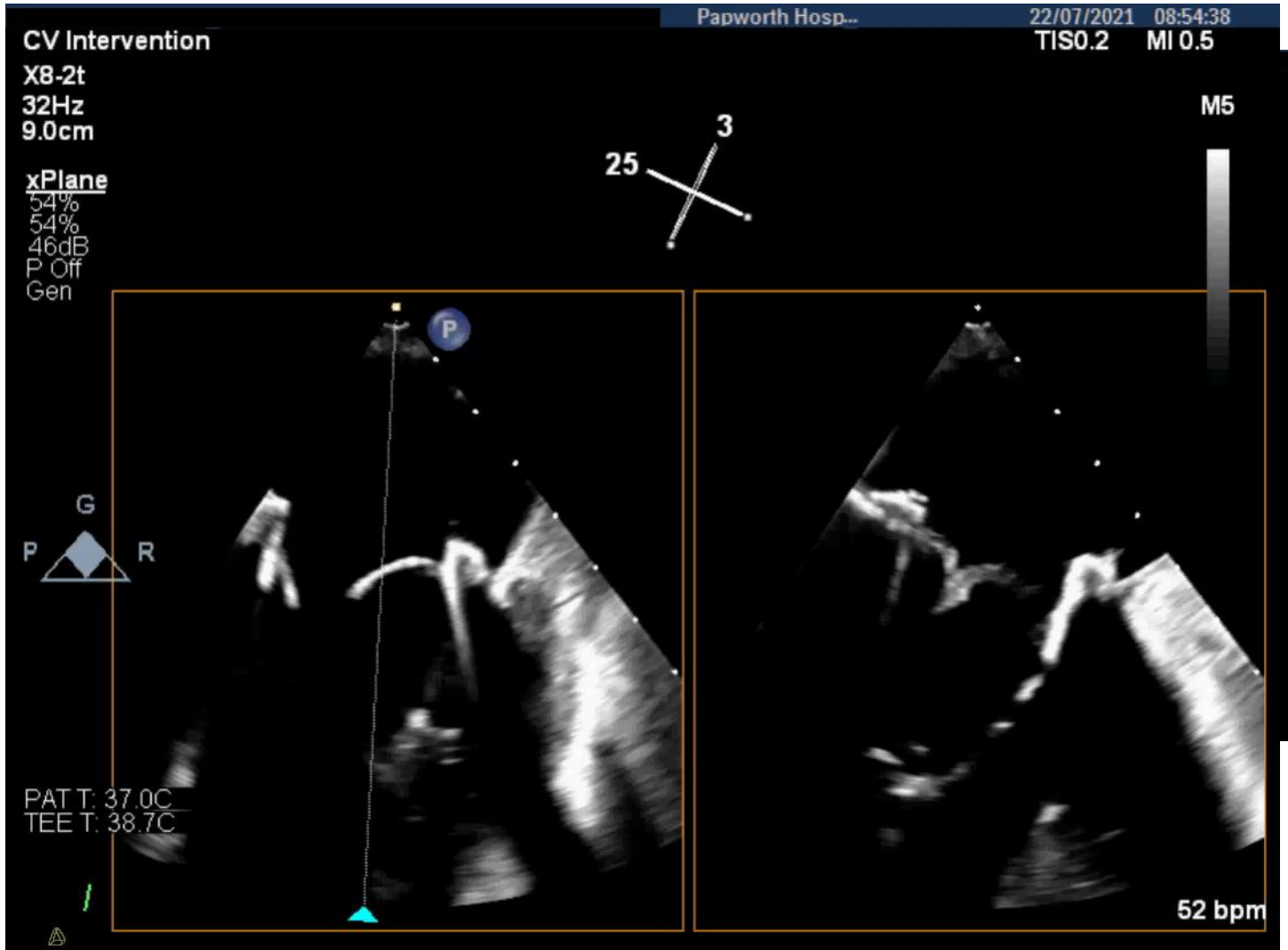
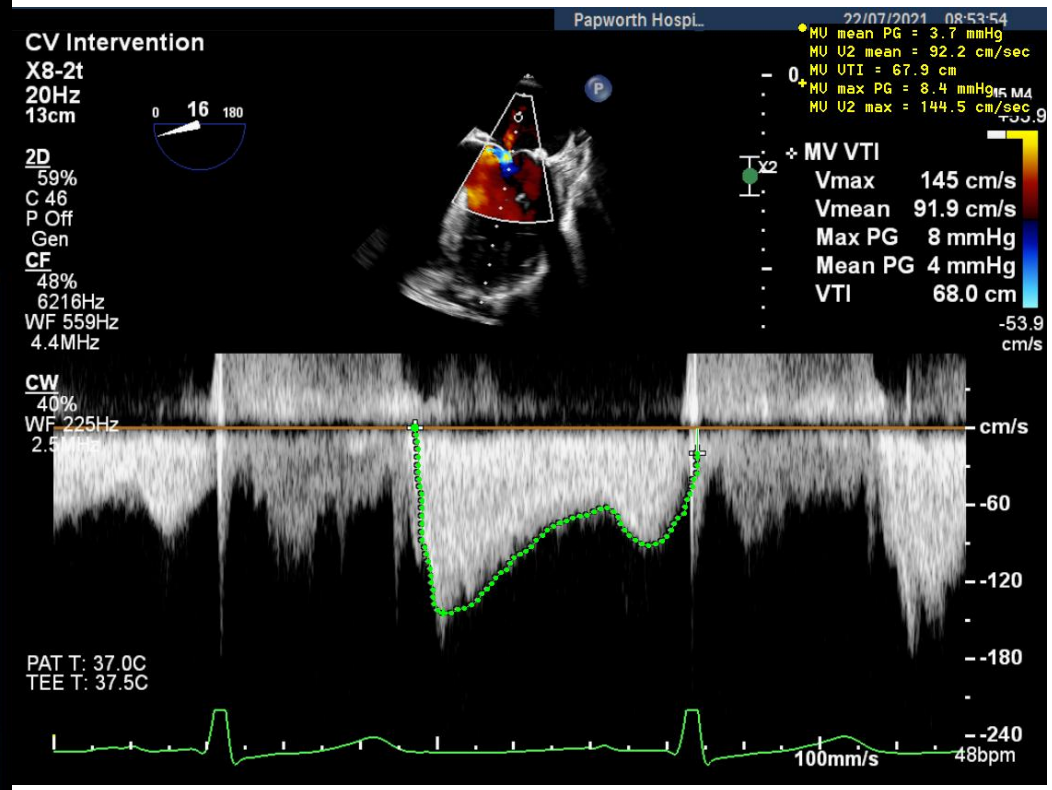
The NICE Topic Adviser on Heart Valve Disease

- 76 yo man
- 3 years post tissue MVR for severe calcific mixed mitral valve disease
- Previous sternotomy for mediastinal clearance of lymphoma followed by radiation and chemotherapy
- Admitted to referring hospital in congestive heart failure
- Found to have paravalvular MR and impaired LV
- Offloaded with diuretics and transferred to us for further management

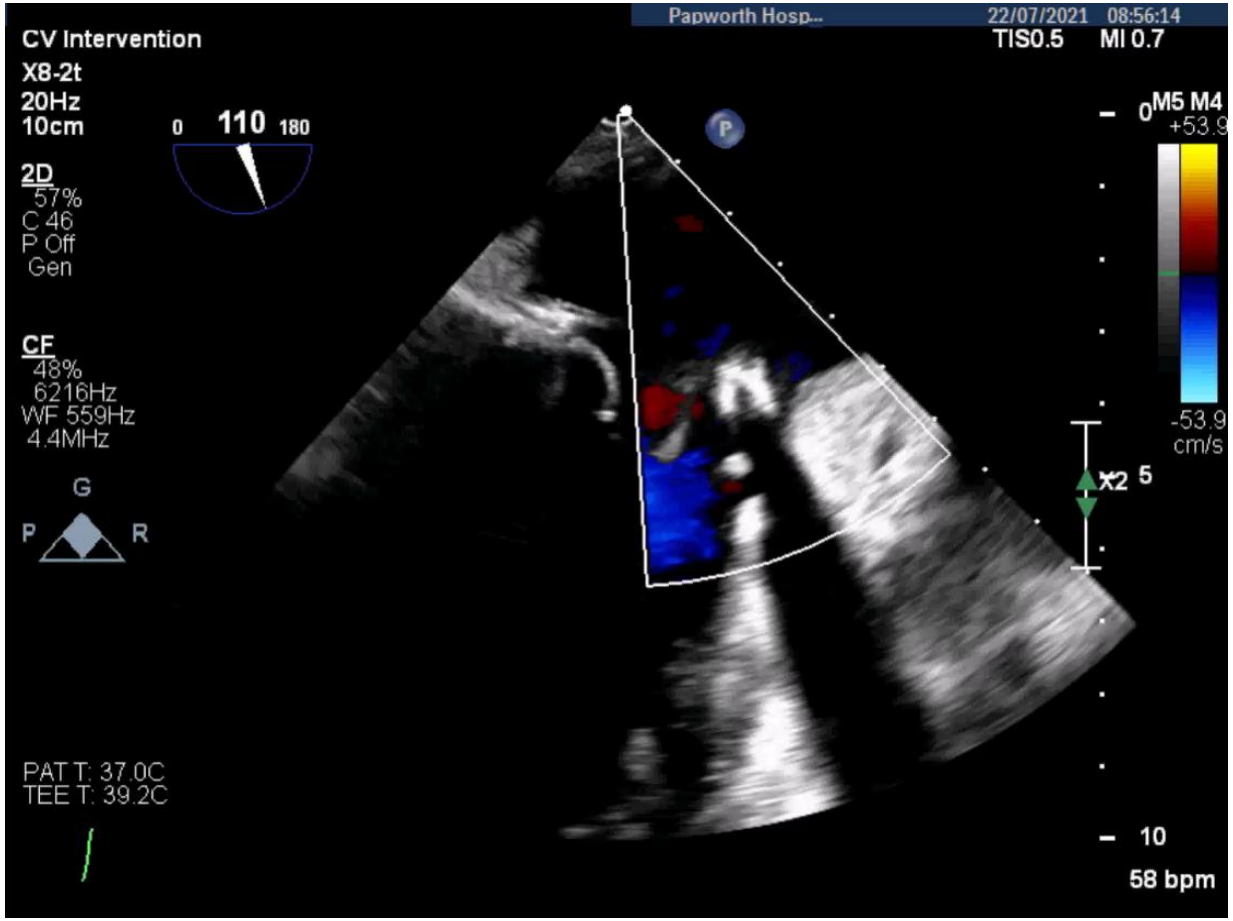
- Surgery report describes heavy calcification of the mitral valve annulus extending into the anterior leaflet, into the left atrium and into the left ventricular myocardium
- Decalcification was performed as much as thought to be safe – further decalcification could have resulted in atrio-ventricular dehiscence
- Most subvalvular apparatus was preserved
- 29mm Perimount tissue valve used

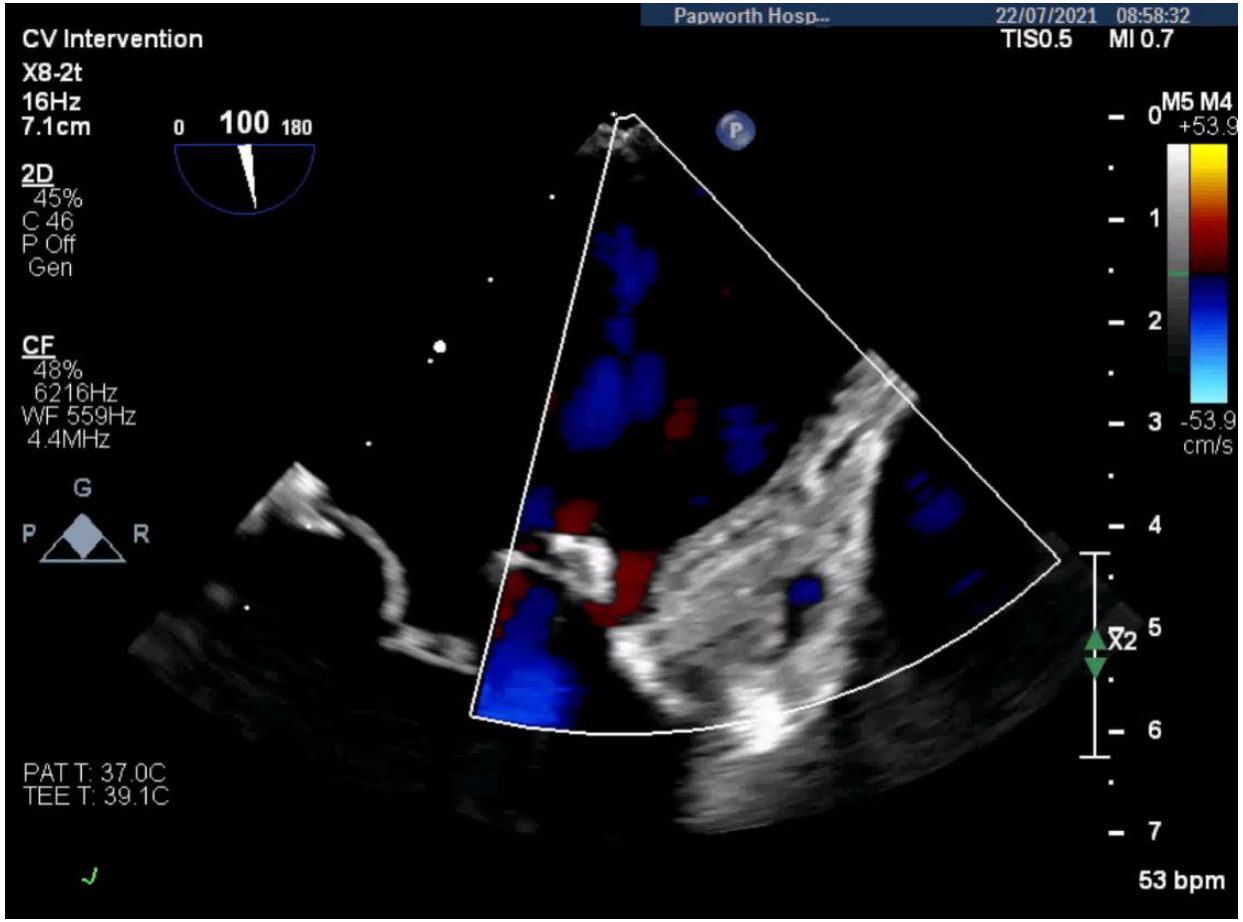
Bioprosthetic valve with relatively high mean gradient for size



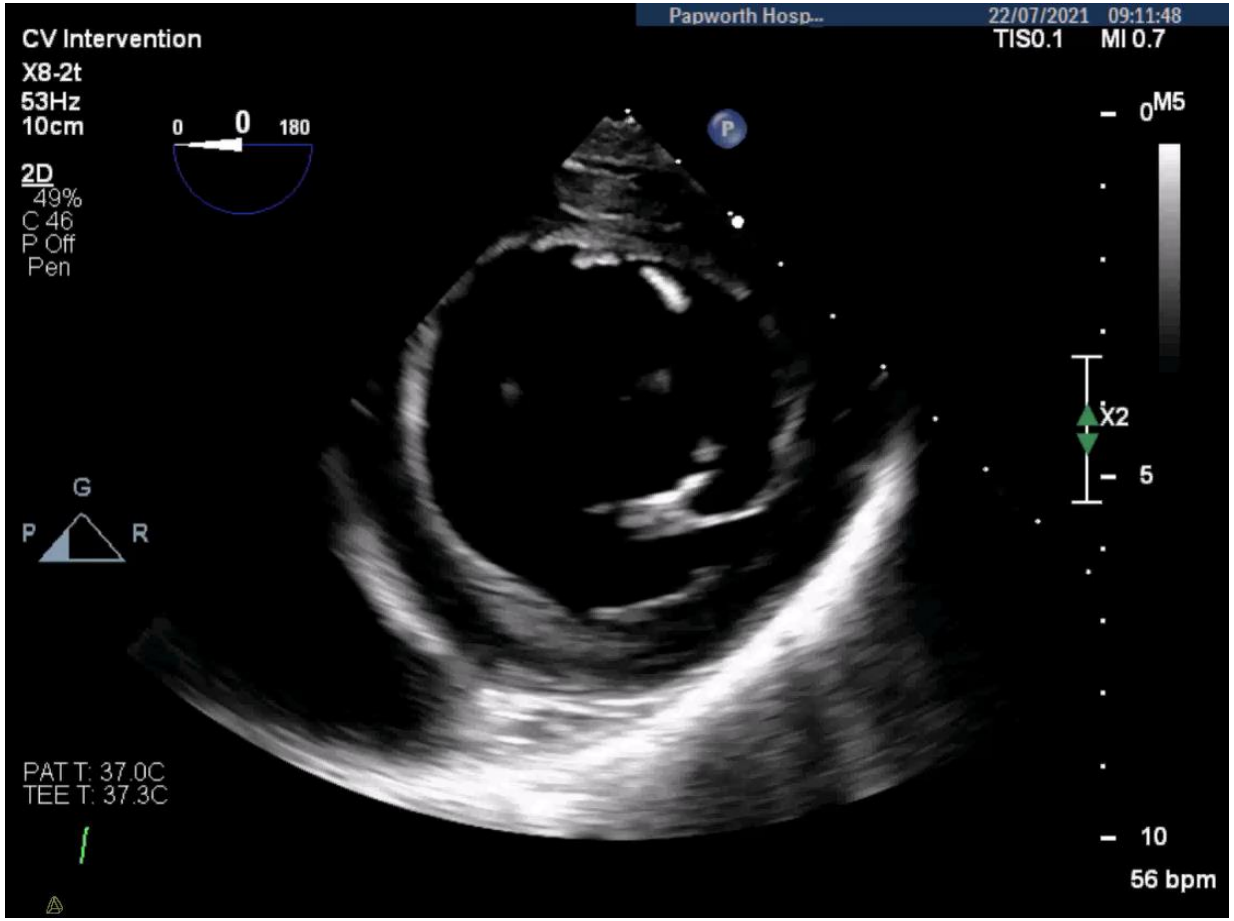


PVL with large flow convergence
Large antero-lateral paraprosthetic gap

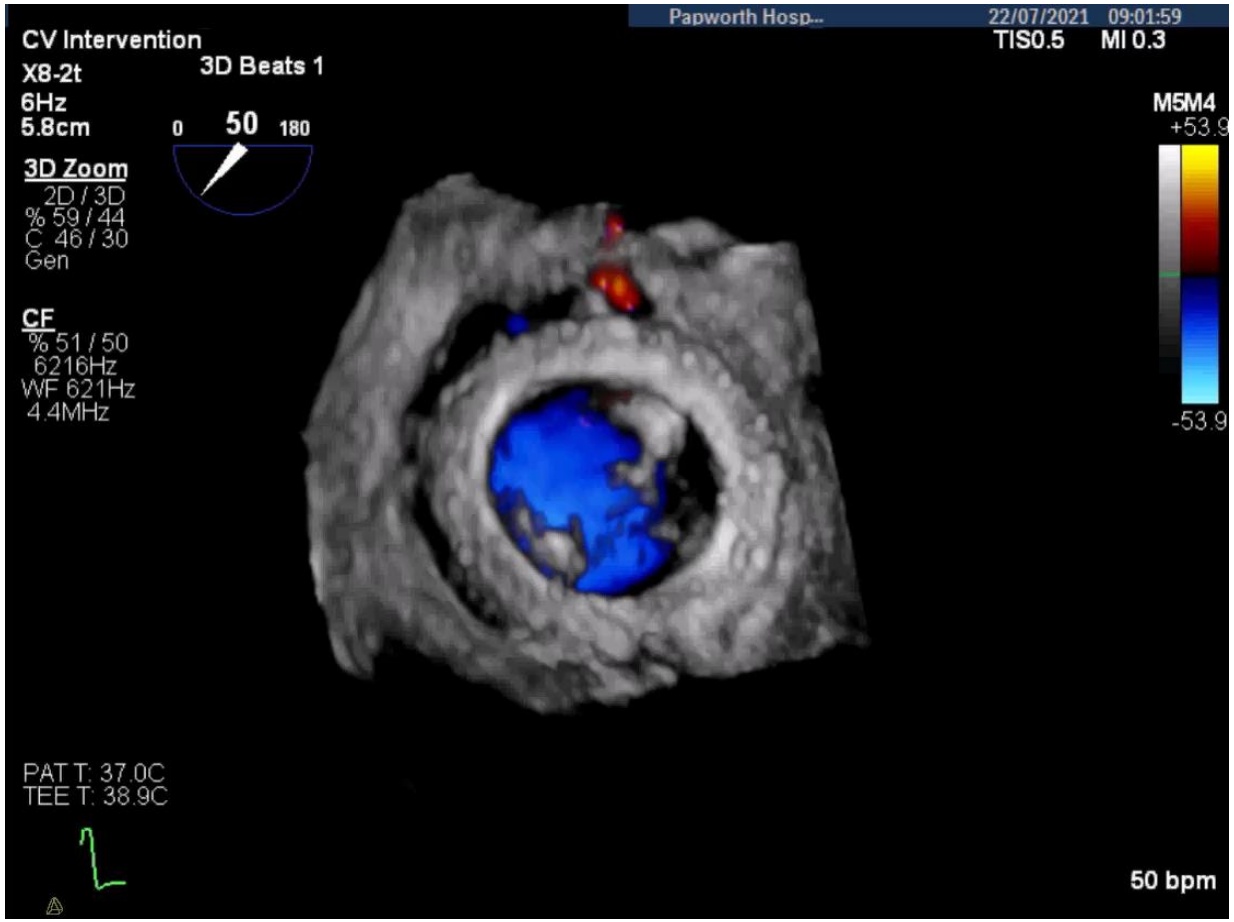


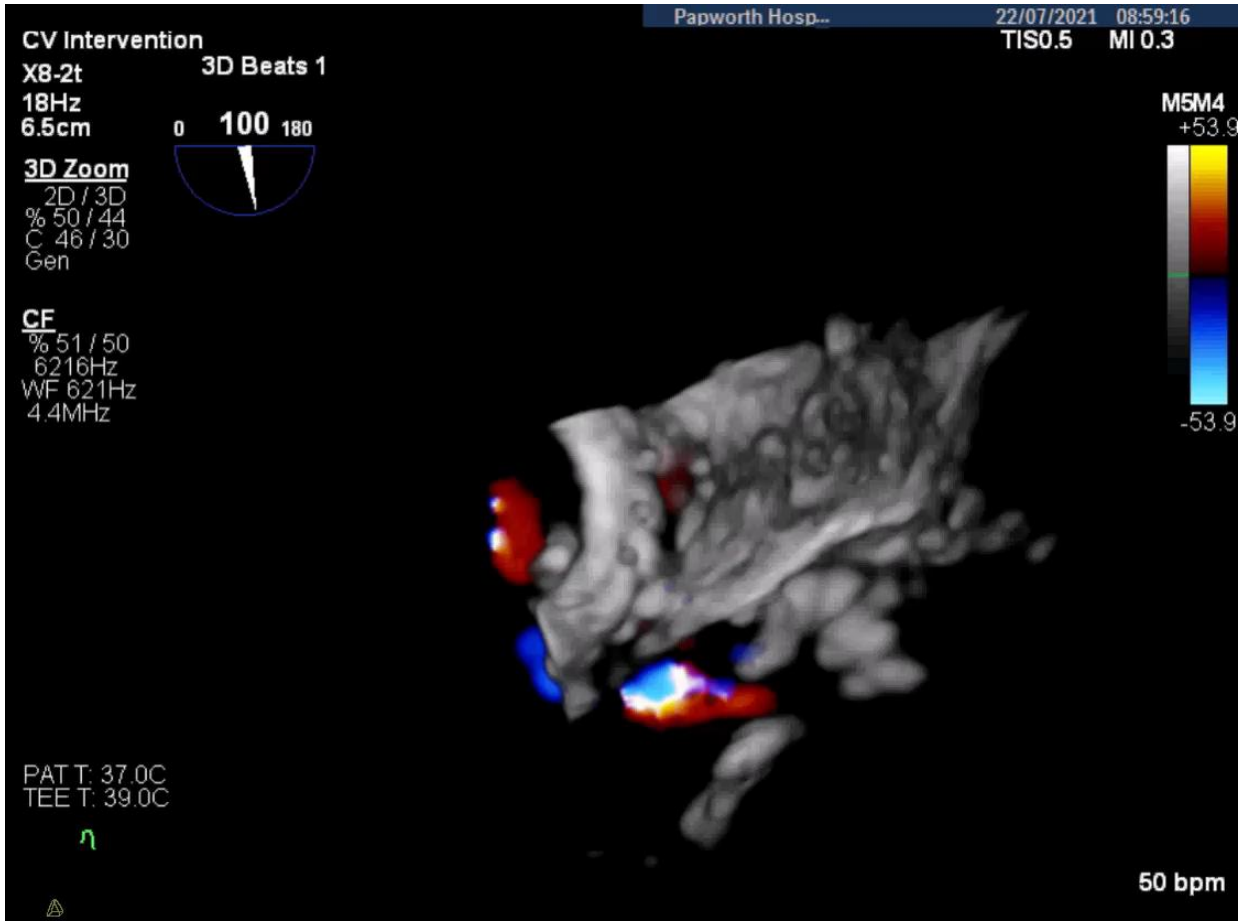


Impaired LV

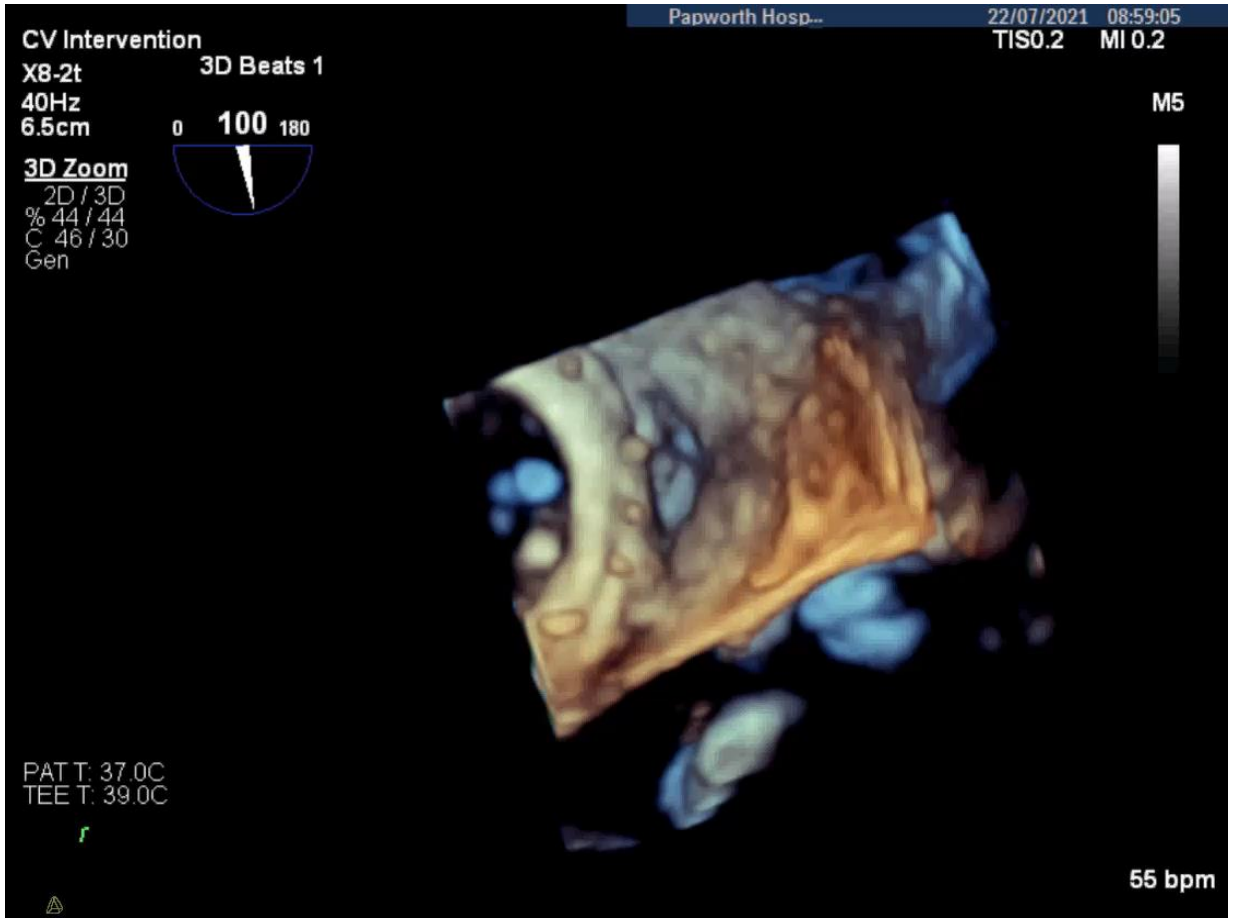

Papworth Hosp...
22/07/2021 09:11:48
CV Intervention
X8-2t
53Hz
10cm
TIS0.1 MI 0.7
2D
49%
C 46
P Off
Pen
0 0 180
M5
X2
5
10
56 bpm
G
P R
PAT T: 37.0C
TEE T: 37.3C

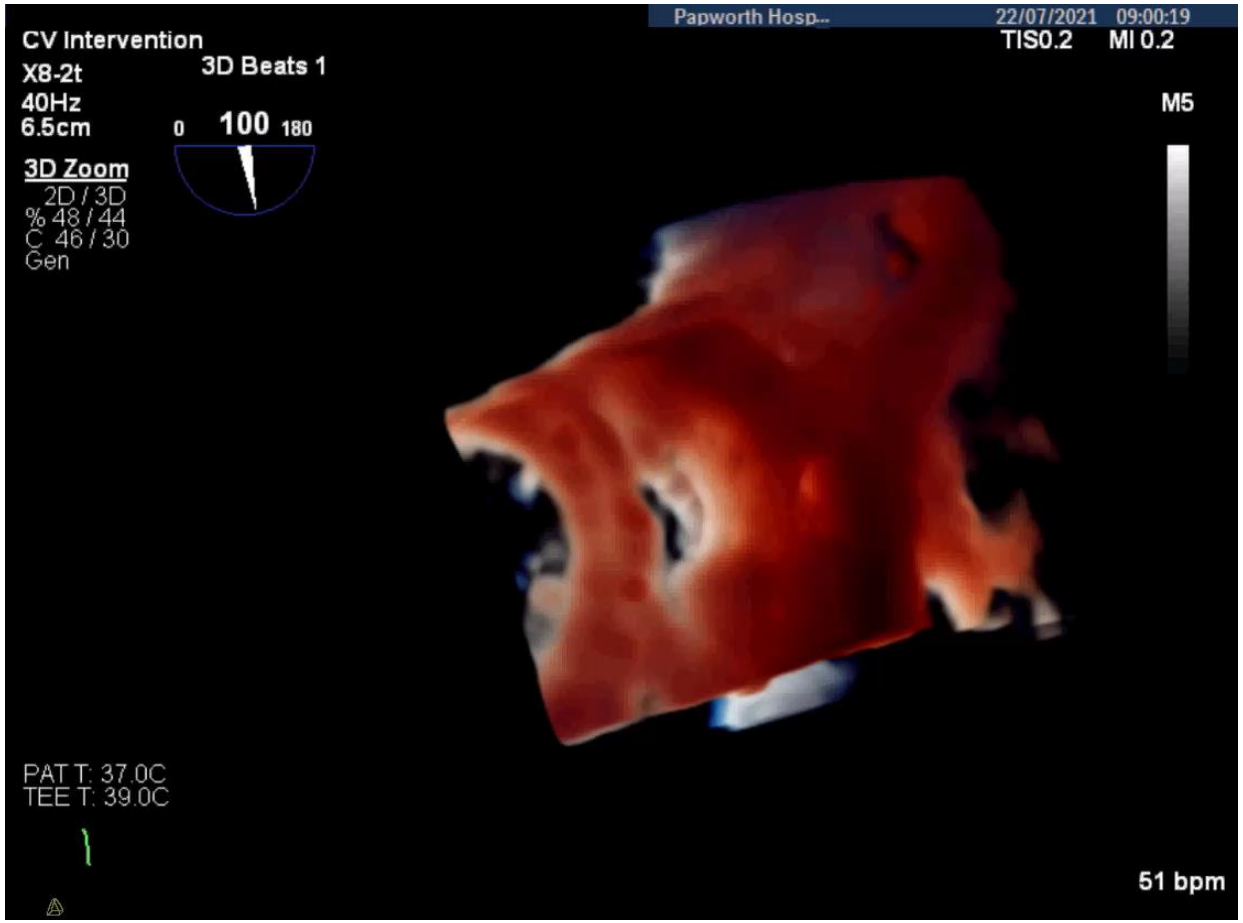
Wide PVL jet extending around anterolateral circumference
Retained stitch splits the jet



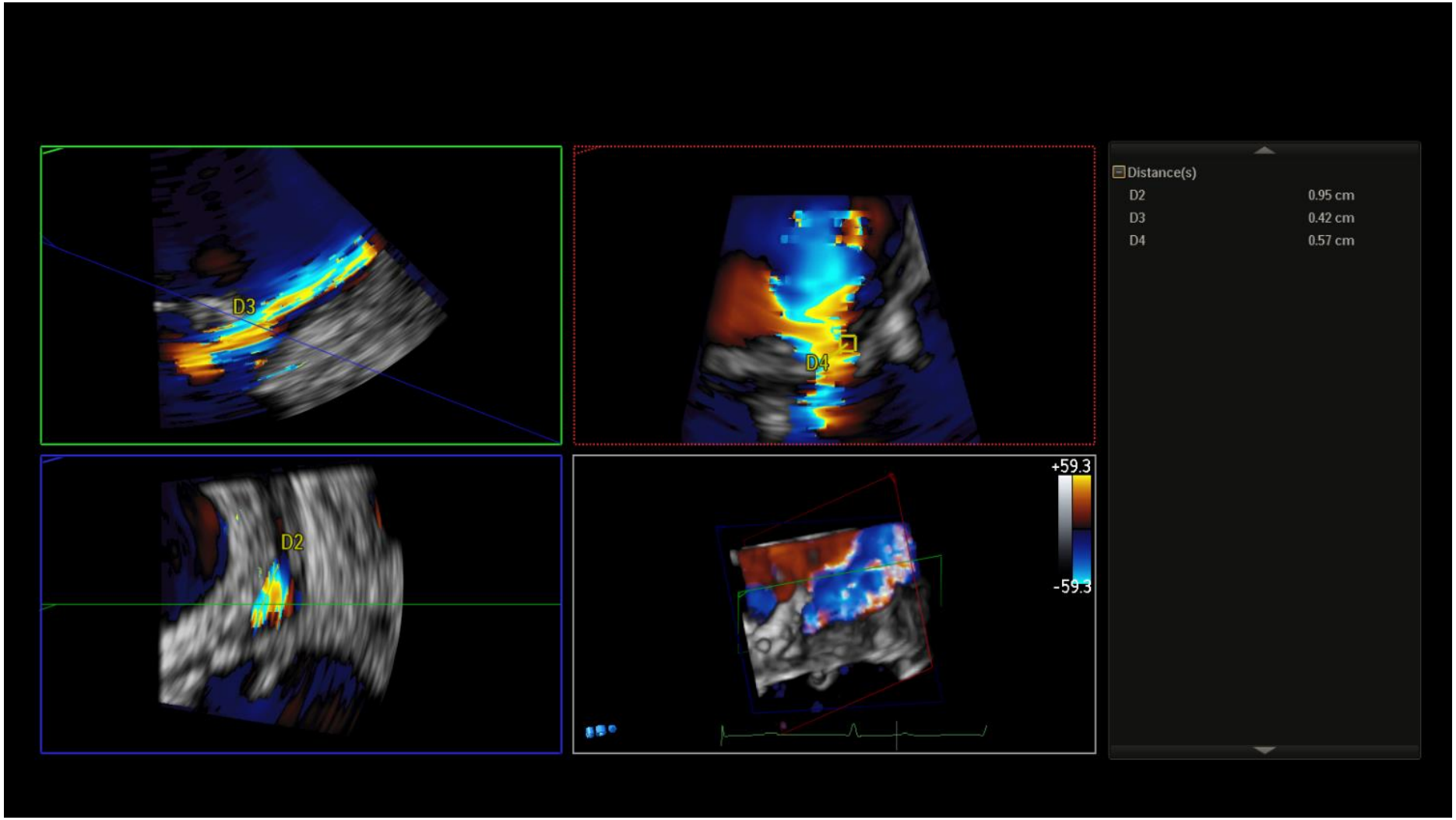


Gap clearly visible

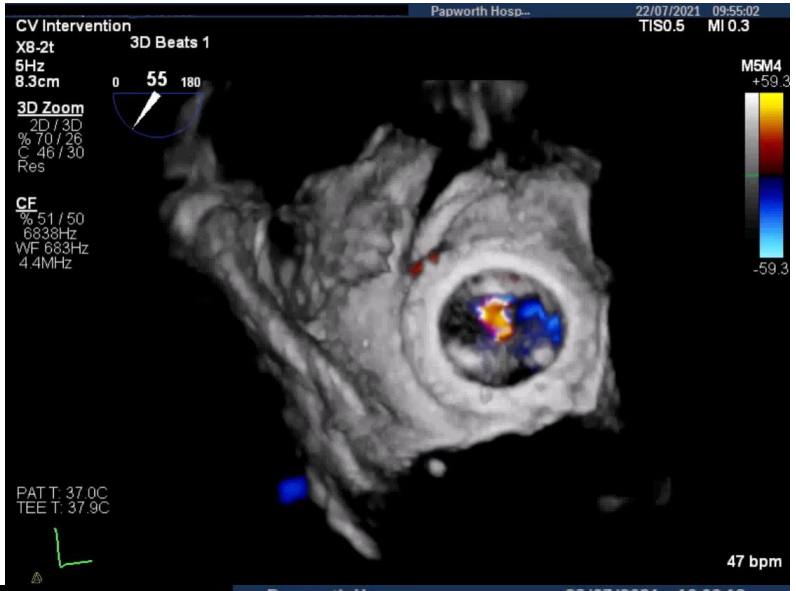


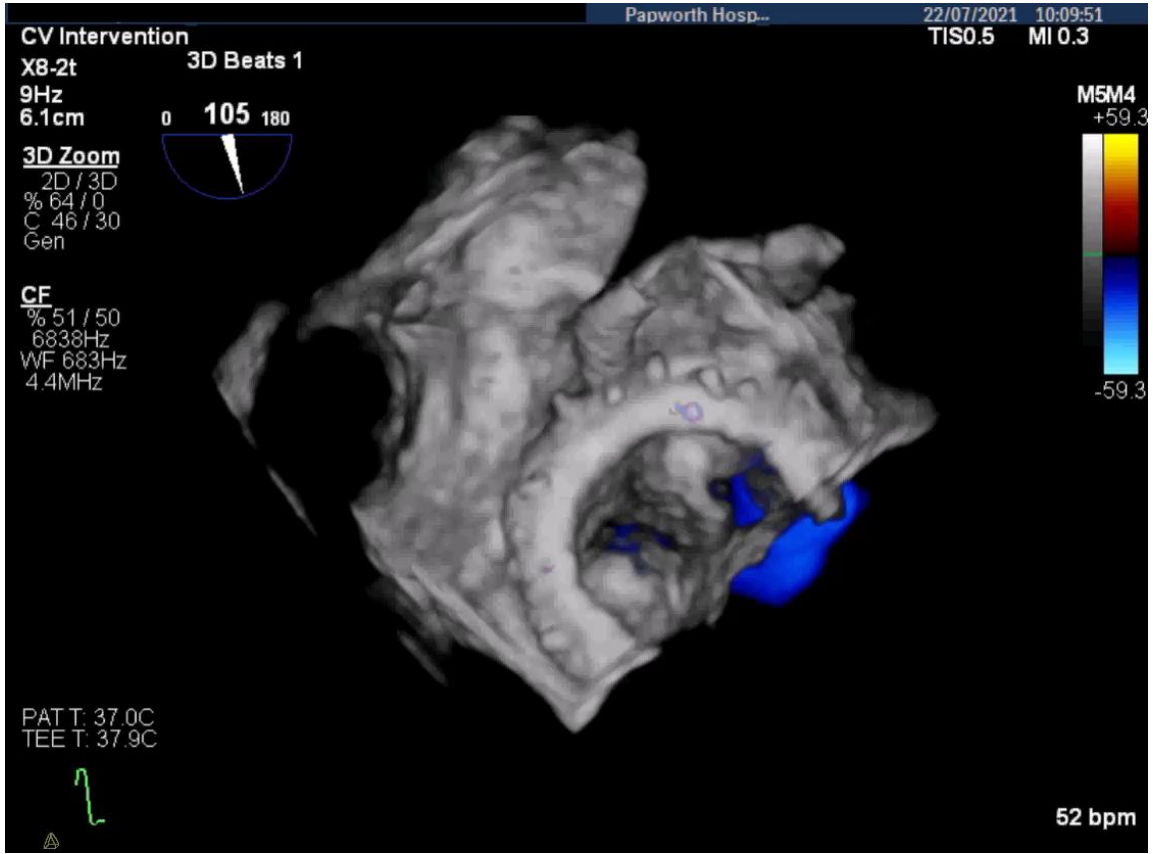


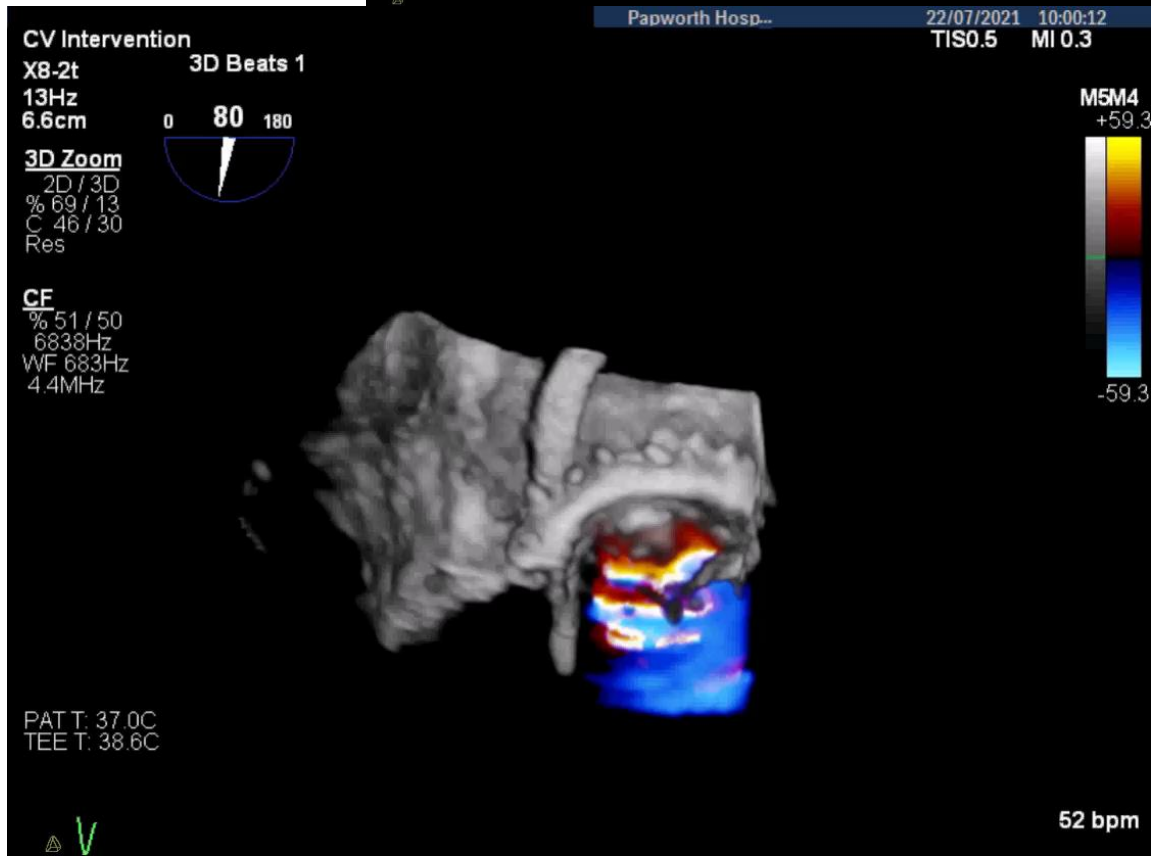
3D-guided 2D measurements

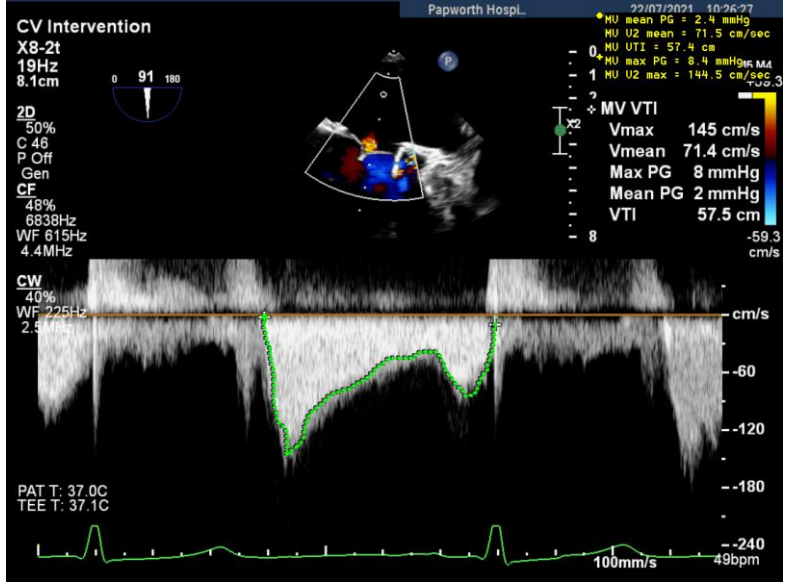


PVL closure guidance
Wide 3D datasets help orientation
Narrow ROI 3D improves resolution









Post-procedure

MR ↓ post delivery

device under tension

cannot change orientation

mean grd ↓↓