

Sitting in with the Heart Valve Team: Mitral and Tricuspid Cases

Robert R Moss

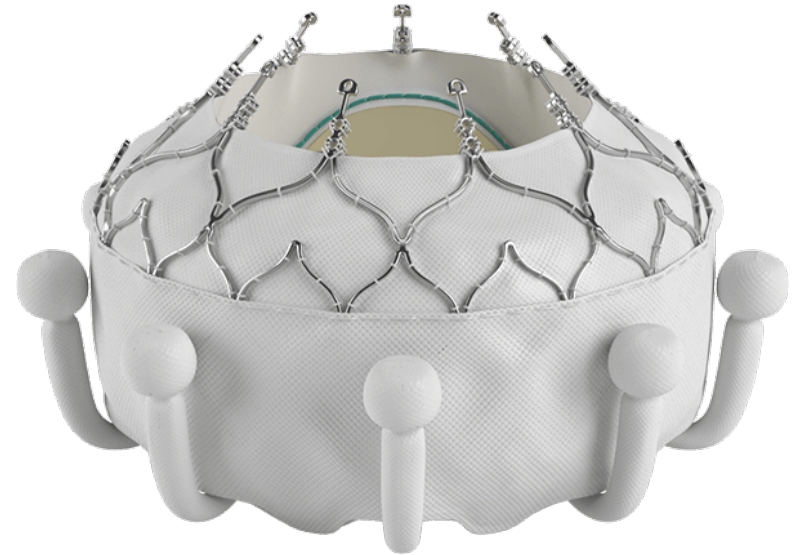
St. Paul's UBC BC Canada

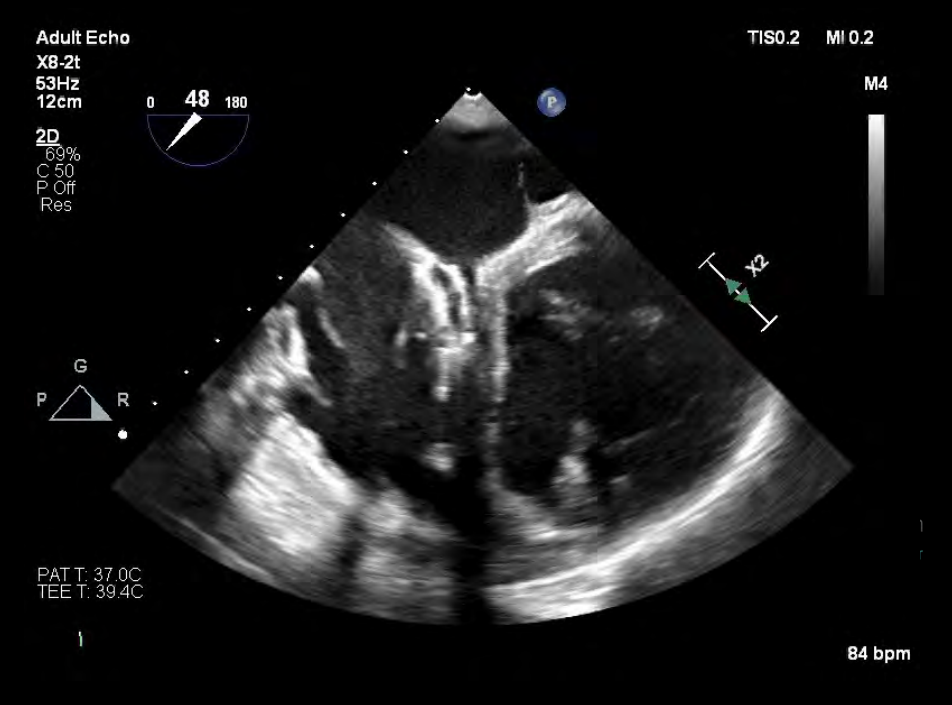
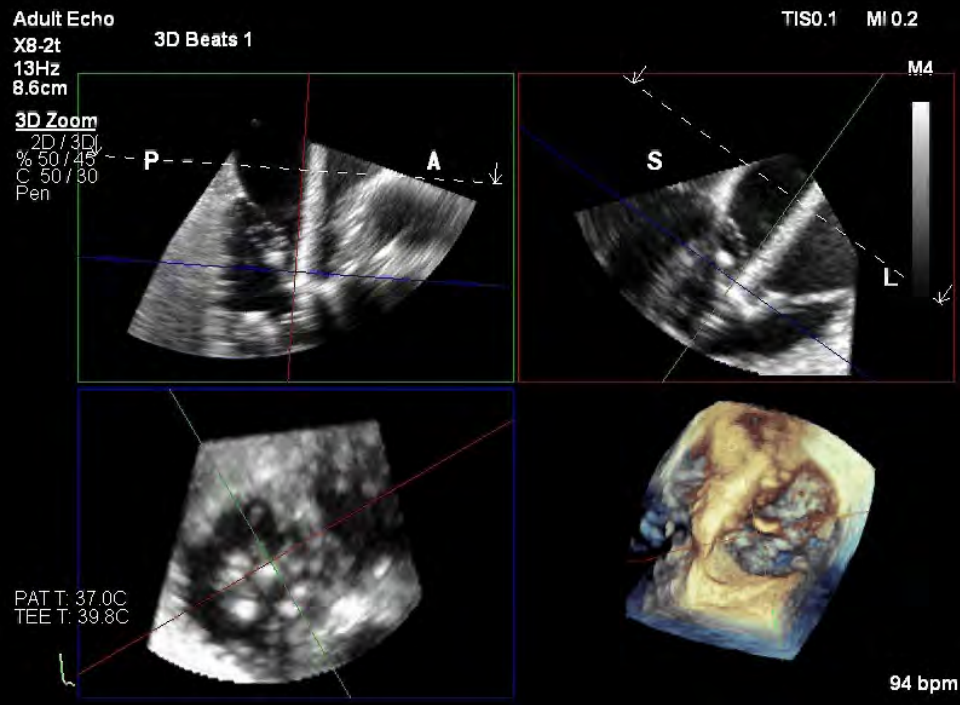
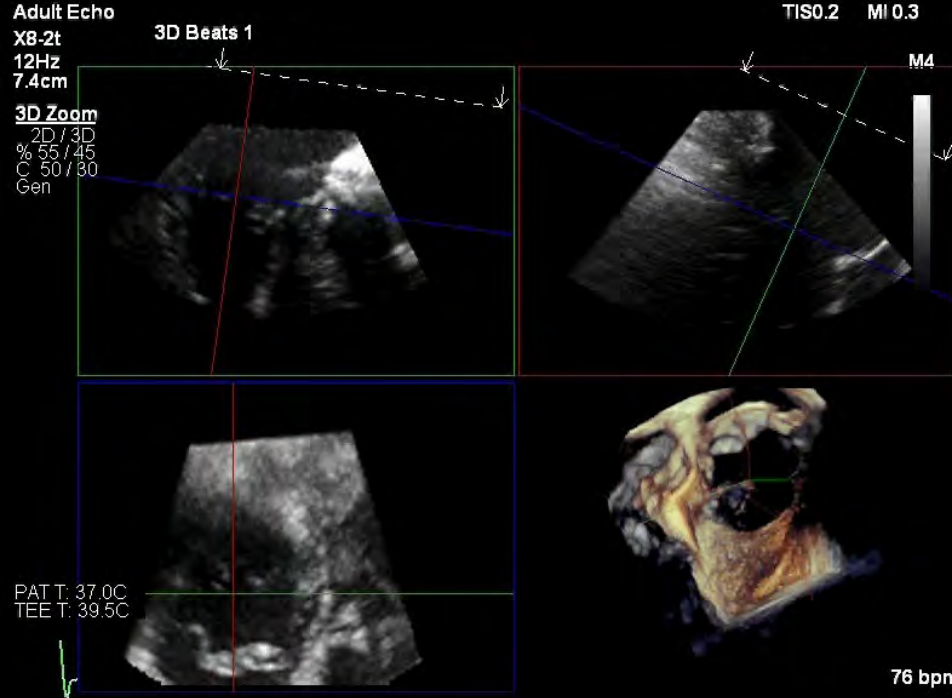
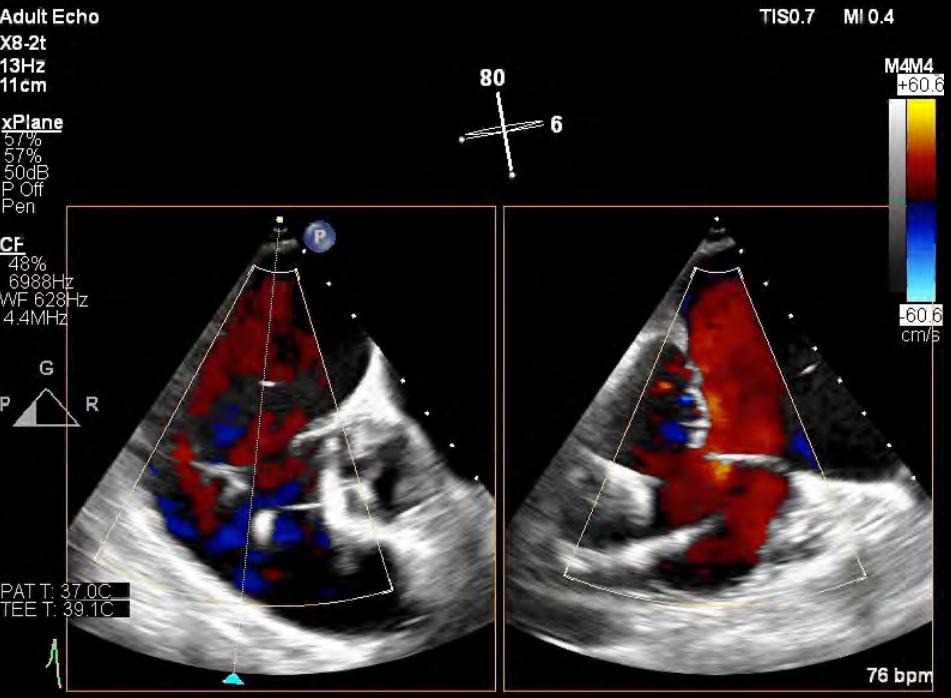
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Case

- **88 y.o. female**
- **Severe TR and CHF**
- **Multiple comorbidities. AF, CKD, breast cancer**
- **Non surgical**
- **Moderate MR, but TR judged to be most important target.**
- **Underwent EVOQUE 48 mm TVR in late 2019**



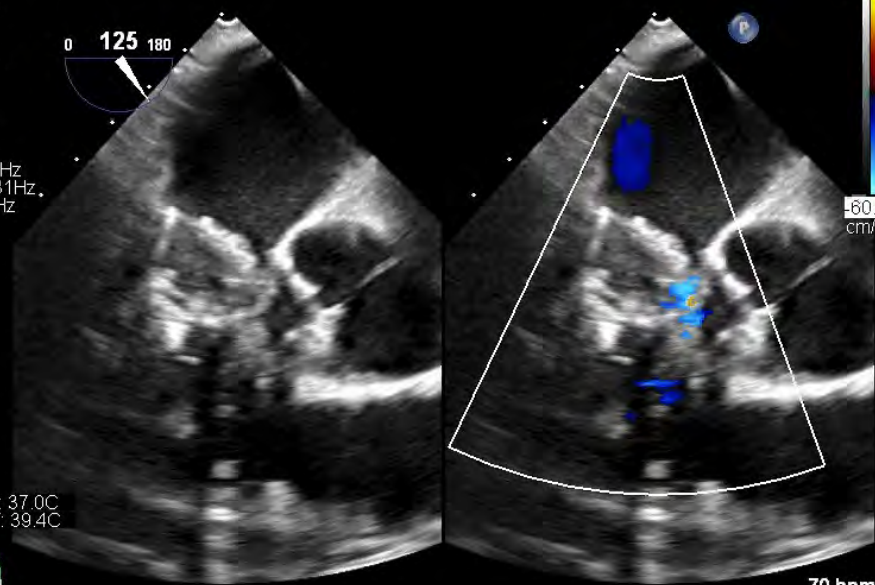


Adult Echo
X8-2t
20Hz
11cm

2D
70%
C 50
P Off
Res
CF
48%
7014Hz
WF 631Hz,
4.4MHz

TIS0.6 MI 0.3

M4
+60.8
-60.8
cm/s



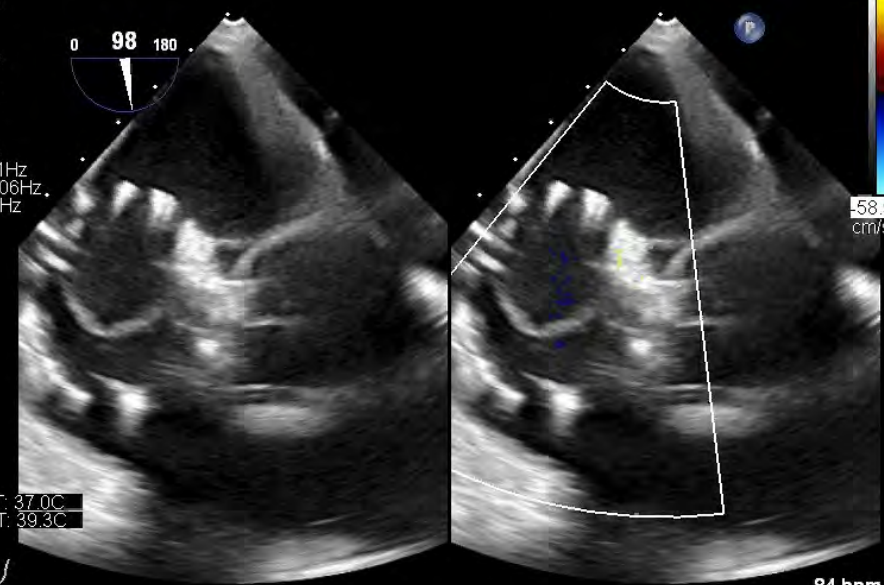
70 bpm

Adult Echo
X8-2t
20Hz
11cm

2D
70%
C 50
P Off
Res
CF
48%
6741Hz
WF 606Hz,
4.4MHz

TIS0.6 MI 0.3

M4
+58.8
-58.8
cm/s



84 bpm

PAT T: 37.0C
TEE T: 39.4C

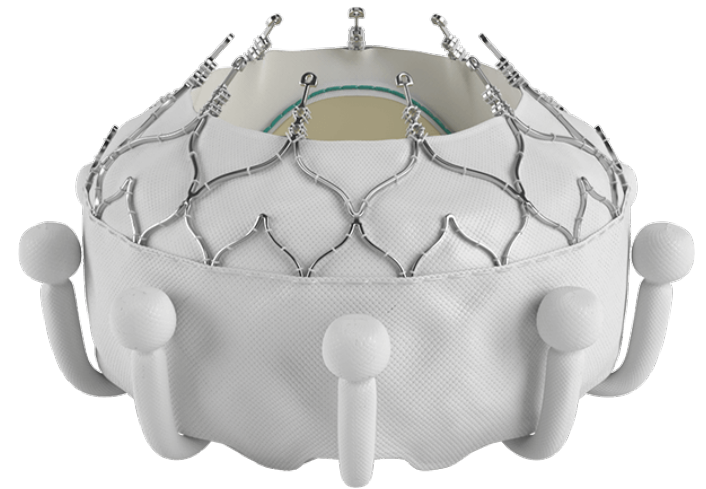
PAT T: 37.0C
TEE T: 39.3C

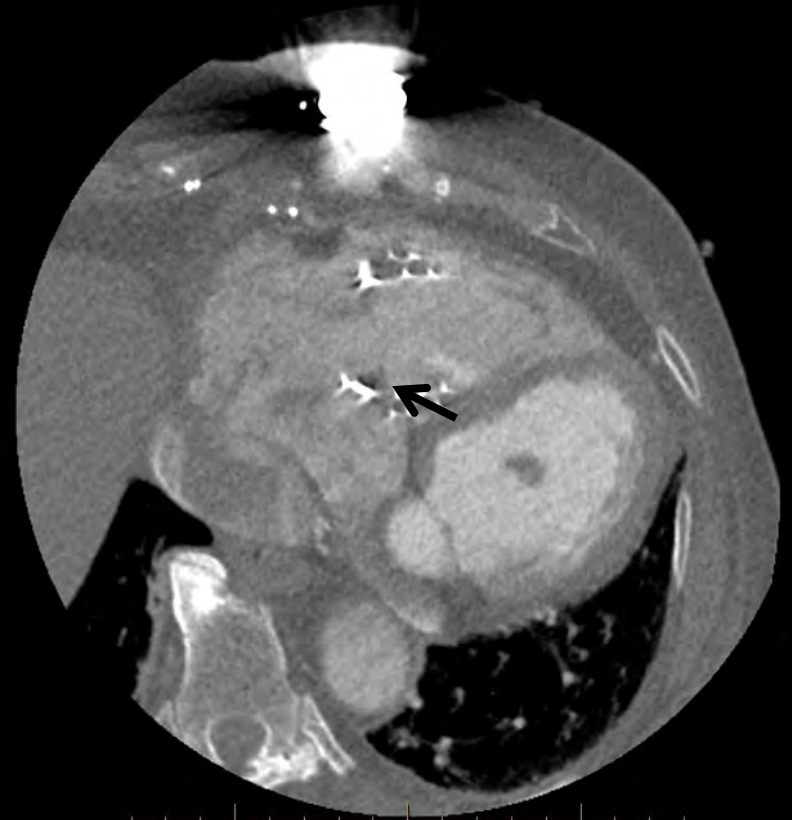
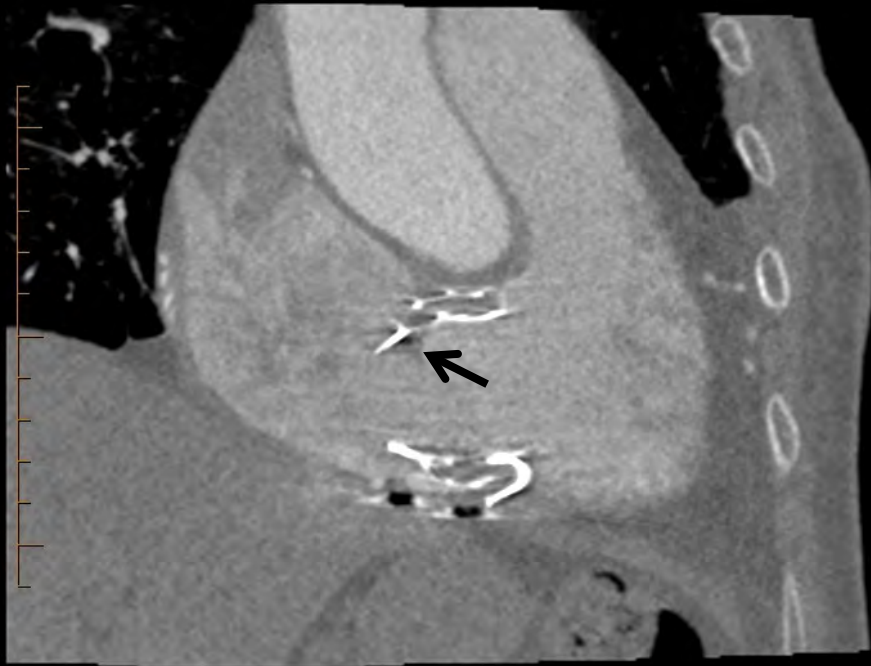


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One month Post Procedure

- Long and complex course including ongoing fluid retention and heart block with epicardial lead implanted.
- One month post procedure underwent Cardiac CT
- At the time of CT, ongoing RHF, elevated nt BNP 4709
- But standard part of implant protocol...

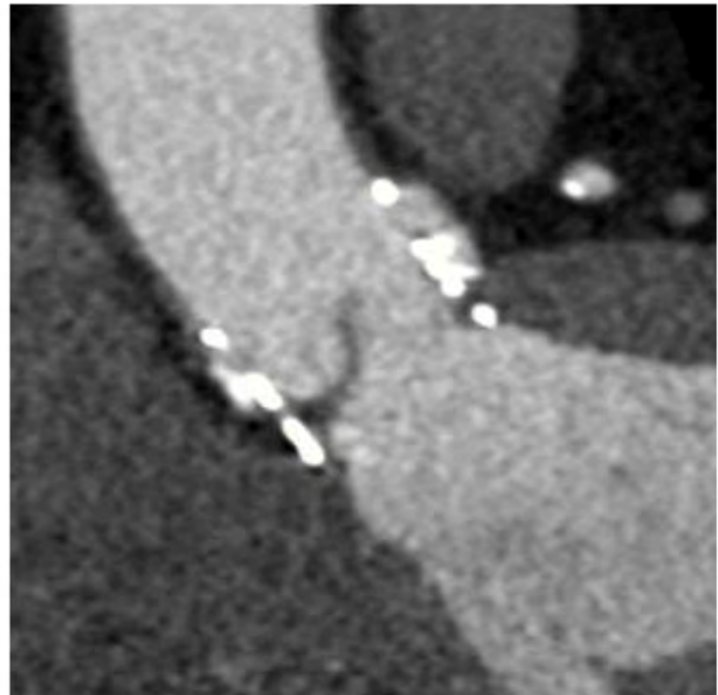
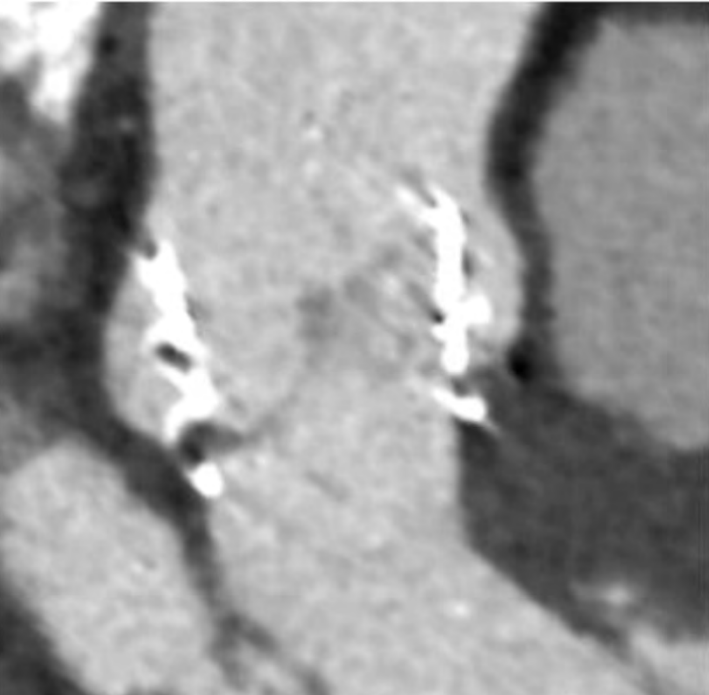
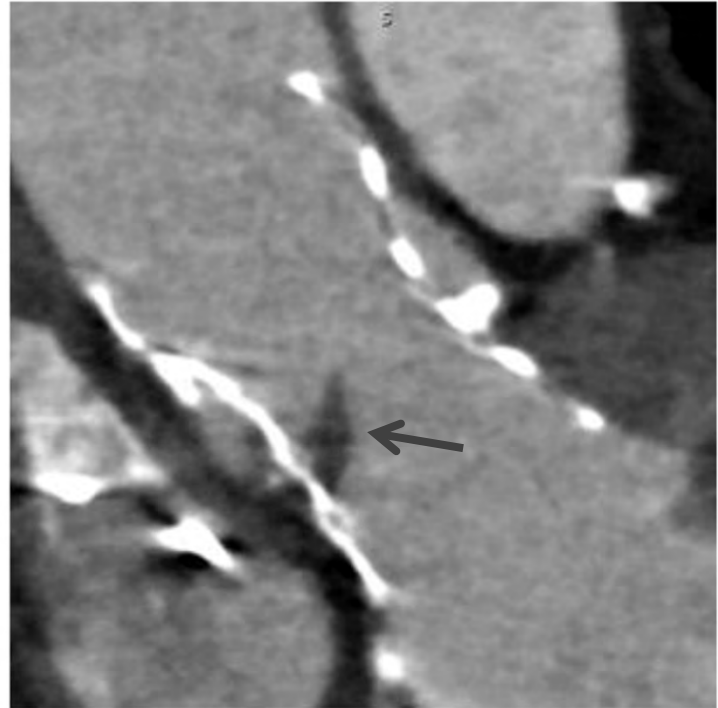
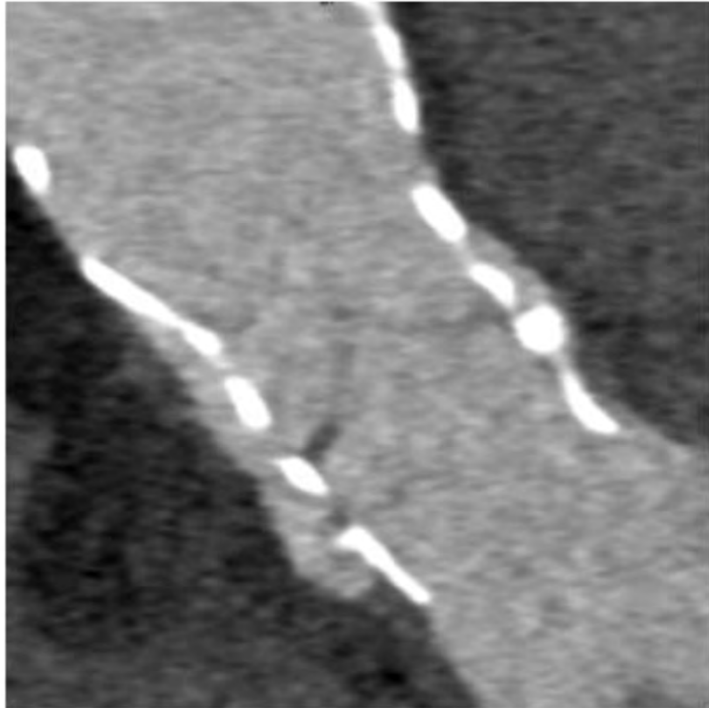




Hypo-attenuated leaflet thickening (HALT)



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SPH ECHO
X5-1
15Hz
12cm
Z 1.4
2D
72%
C 51
P Low
HPen
CF
50%
4000Hz
WF 399Hz
2.5MHz

TIS1.0 MI 0.9

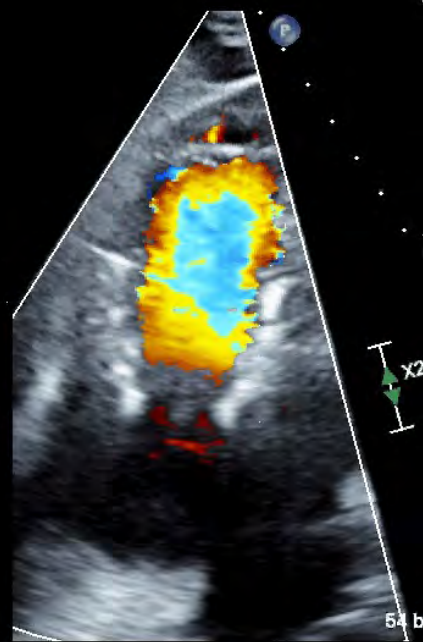
M4
+61.6
-61.6
cm/s

SPH ECHO
X5-1
15Hz
12cm
Z 1.4
2D
72%
C 51
P Low
HPen
CF
50%
4000Hz
WF 399Hz
2.5MHz



TIS0.3 MI 1.0

M3



54 bpm



1.2 2.4



69 bpm

SPH ECHO
X5-1
15Hz
12cm
Z 1.4
2D
72%
C 51
P Low
HPen
CF
50%
4000Hz
WF 399Hz
2.5MHz

TIS0.3 MI 1.0

M3



81 bpm

SPH ECHO
X5-1
15Hz
12cm
Z 1.4
2D
72%
C 51
P Low
HPen
CF
50%
4000Hz
WF 399Hz
2.5MHz

TIS1.1 MI 1.1

M4

+61.6
-61.6
cm/s



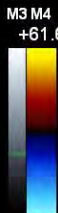
65 bpm



<temporary>
 1 TV VTI, Tips = 34.056 cm
 TV mean grad = 2 mmHg
 2 TV VTI, Tips = 21.999 cm
 TV mean grad = 2 mmHg

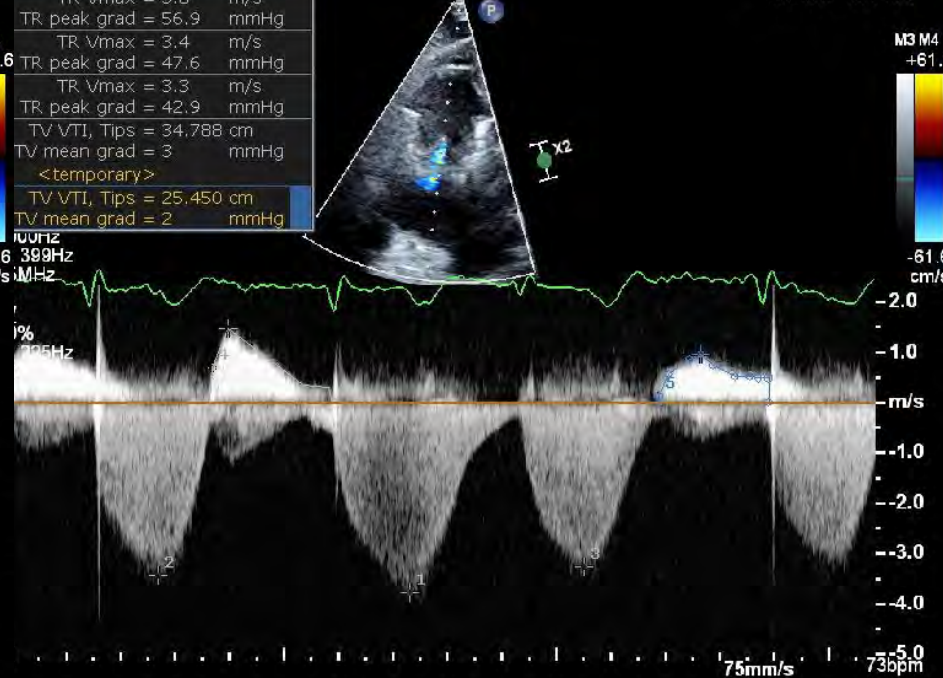
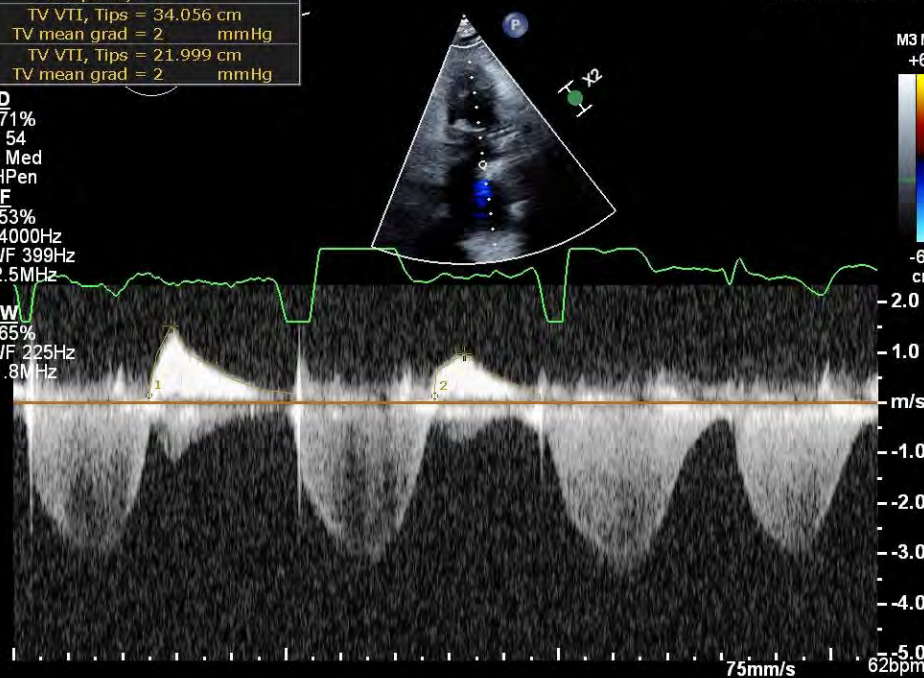
2D
 71%
 C 54
 P Med
 HPen
 CF
 53%
 4000Hz
 WF 399Hz
 2.5MHz
 CW
 65%
 WF 225Hz
 1.8MHz

TIS0.6 MI 0.1



TR Vmax = 3.8 m/s
 TR peak grad = 56.9 mmHg
 TR Vmax = 3.4 m/s
 TR peak grad = 47.6 mmHg
 TR Vmax = 3.3 m/s
 TR peak grad = 42.9 mmHg
 TV VTI, Tips = 34.788 cm
 TV mean grad = 3 mmHg
 <temporary>
 TV VTI, Tips = 25.450 cm
 TV mean grad = 2 mmHg

TIS0.5 MI 0.1



TV MPG 2-3 mmHg.



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Take-homes...and learning points

- **HALT can be seen with implanted valves in the tricuspid position**
- **There's a lot we don't know about HALT**
- **Including time course and impact on prognosis.**
- **The TV is a large valve, leaflet restriction may not have a significant effect on valve gradient**
- **Hemodynamic values for these valves are uncharacterized.**
- **Echo changes subtle but present. Require careful sonography and interpretation**
- **We would treat with OAC, but**
- **OAC vs. NOAC, duration of therapy are evidence free zones.**

