Putting together a structural heart program from the imagers perspective

Stephen H. Little, MD
John S. Dunn Chair in Cardiovascular Research and Education, Associate professor, Weill Cornell Medicine

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Structural Interventions

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The Heart Valve Clinic: *A prerequisite for a SHD program*

Dedicated Space

- Many valve centers have a dedicated physical space.

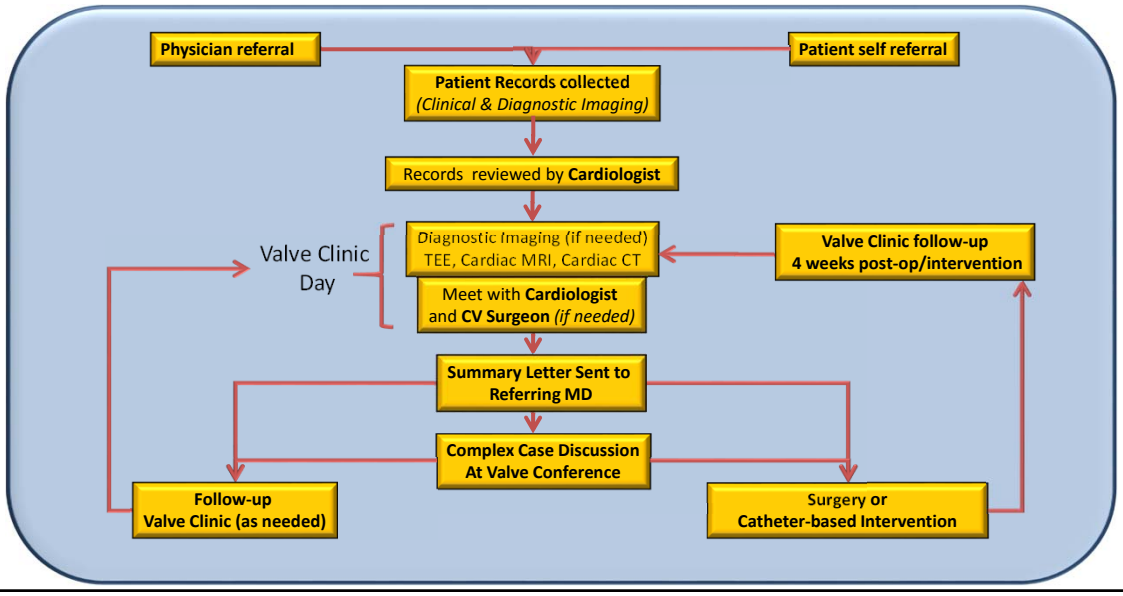
Dedicated Clinic Time

- 15-20 patients/clinic
- Advantages of dedicated clinic day:
  - Coordinated approach to staffing, diagnostics, and physician consultations (from multiple specialties);
  - "One-stop" patient care day;
  - Clarity in describing the valve program to multiple stakeholders. "*Tuesday is Valve Clinic Day*."

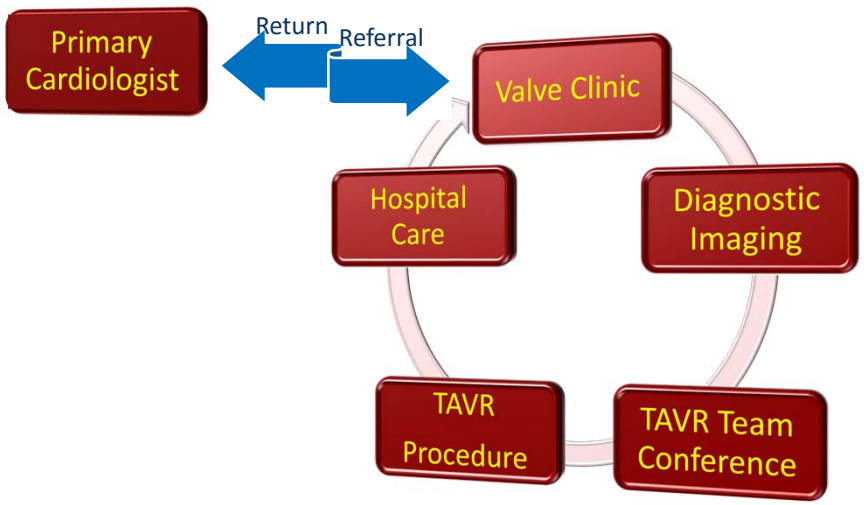
Dedicated Valve Center/Clinic Staff

- Typically run by a single cardiologist and/or cardiac surgeon, however all specialties must be readily accessible.

Defined Patient Flow: At multiple care points



The TAVR Process



ARS Question # 1

Audience poll

The most important role for the imager on a structural heart team is:

1. To evaluate for PVL after TAVR.
2. To recognize low flow low gradient severe AS.
3. To ensure echo reports contain the data necessary for complete NCDR STS/ACC TVT registry reporting.
4. To adjudicate all things:
   - E.g. Mild vs moderate MR; EF 45 vs 50%; Margarita vs Mai Tai

The Heart Valve Team Imager
Defining the challenges

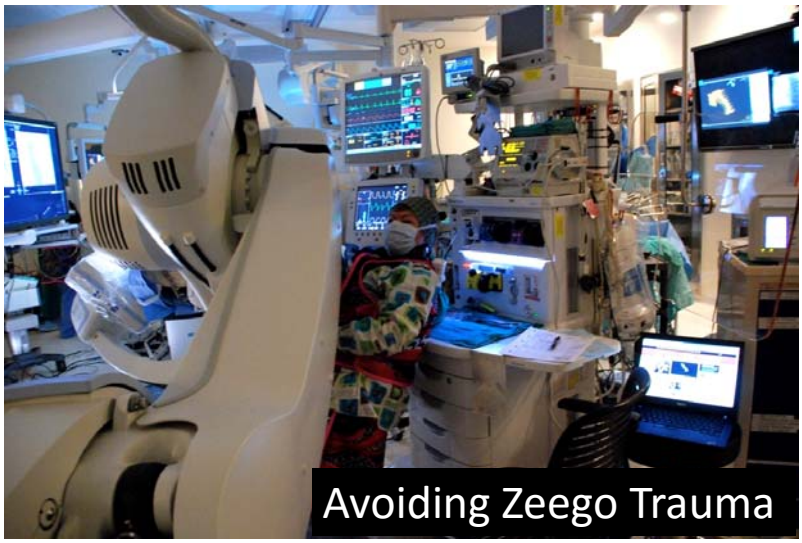
Operator Characteristics

Hybrid OR Dialog:
Interventionalist to Echocardiographer

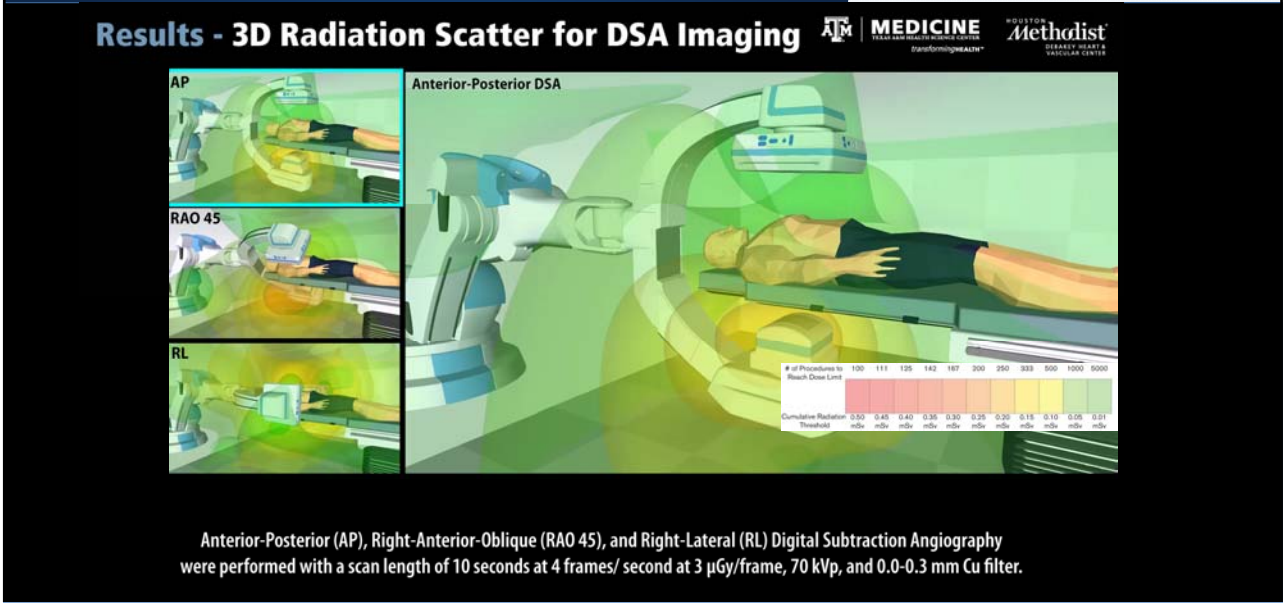
Time	
9:04:00	"AV Gradients good?"
9:04:01	"Is the LV function ok?"
9:04:10	"Mitral valve ok?"
9:04:30	"Show me the PVR"
9:04:32	"Why is the BP down?"
9:04:50	"Please pull back the probe"
9:04:50	"So, what do you think?"

An accelerated and flexible TEE protocol (and personality) is required

Bravery – see the risks



Beware – the unseen risks



The Heart Valve Team Imager
Defining the challenges

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Recruitment & Funding

Trans-septal Mitral V-in-V

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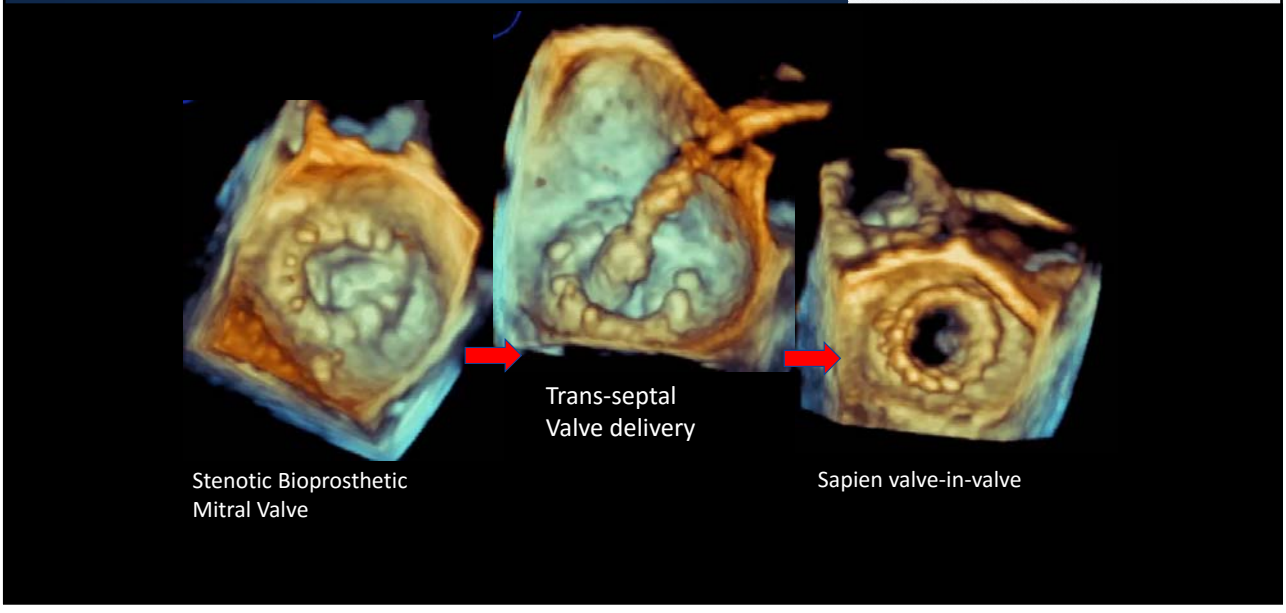
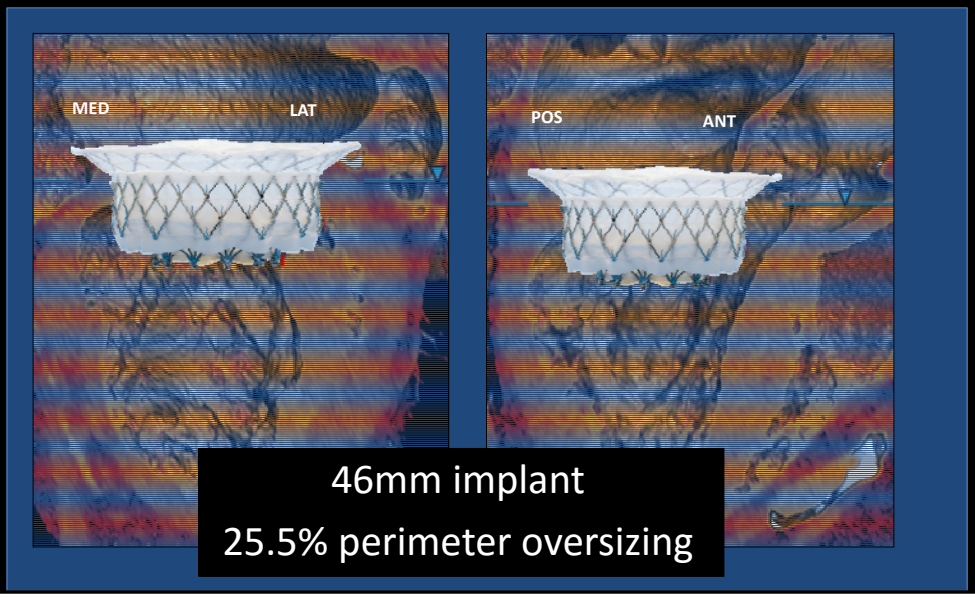


One Foxhole

No longer an imaging non-combatant !

Procedure planning

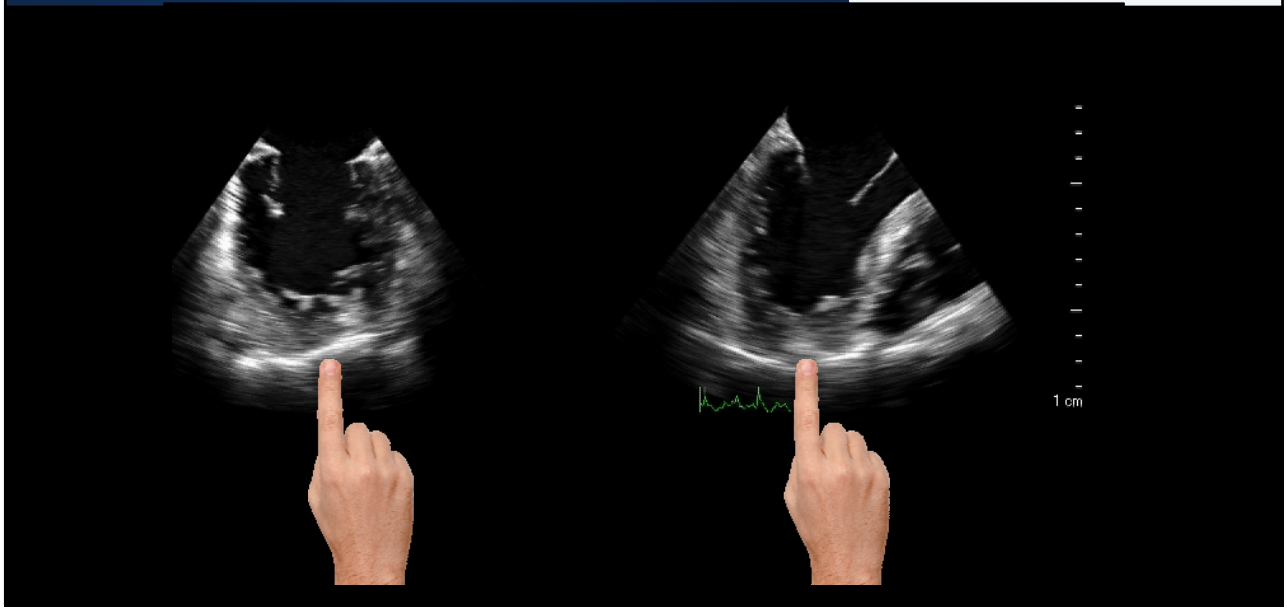
TMVR Sizing



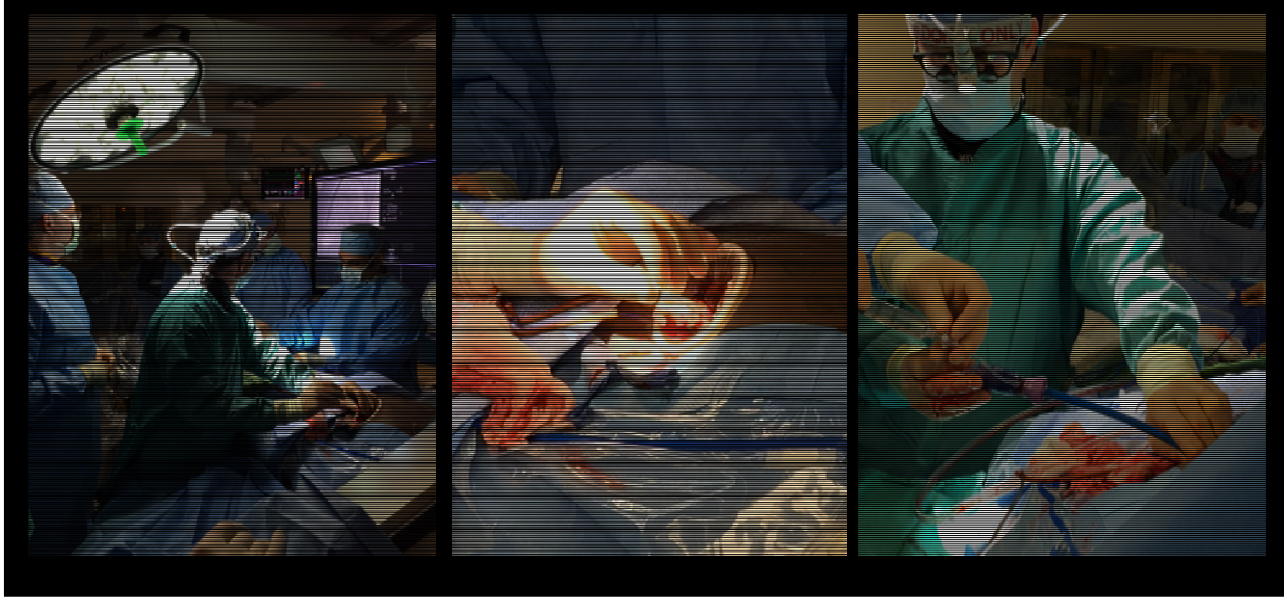
46mm implant

25.5% perimeter oversizing

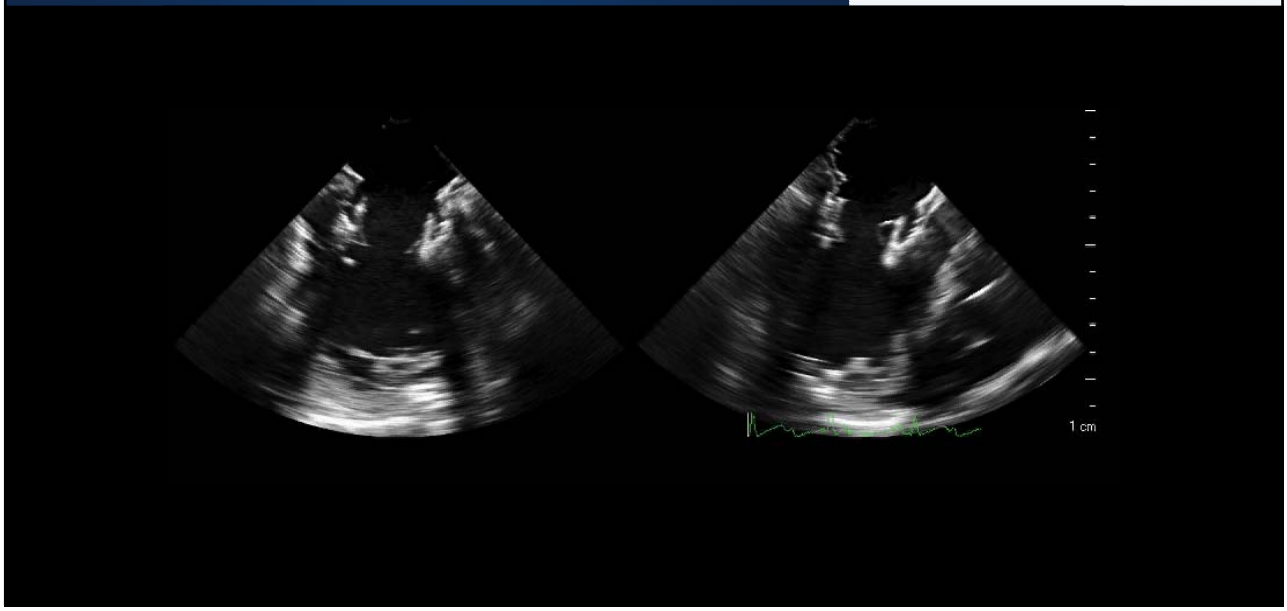
Apical Finger Poke



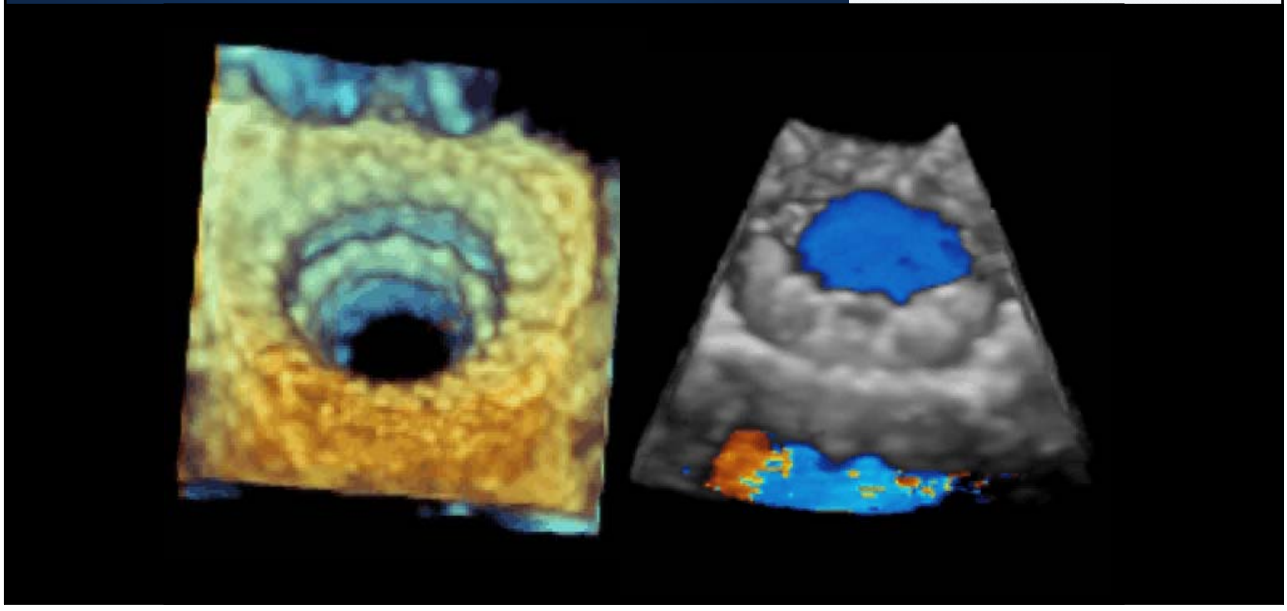
Hybrid OR: Transapical Access



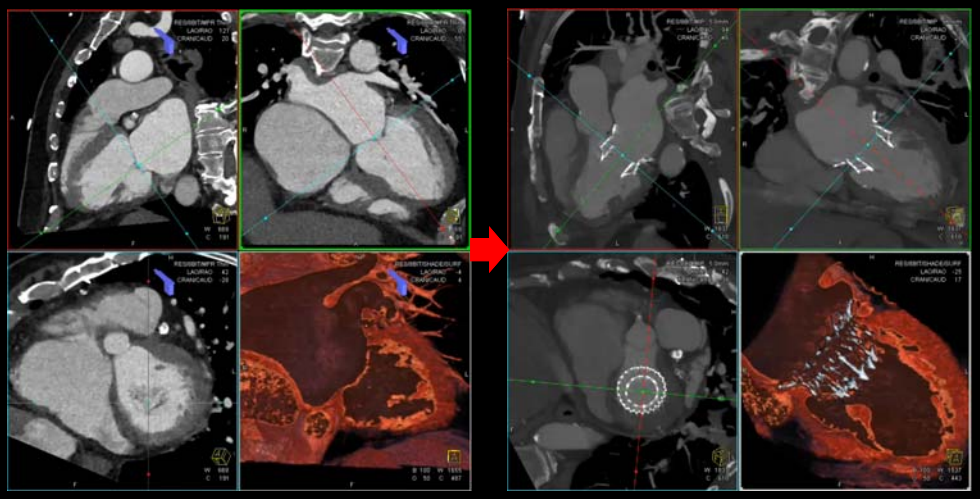
Final Position & Function



3D Intrepid Function



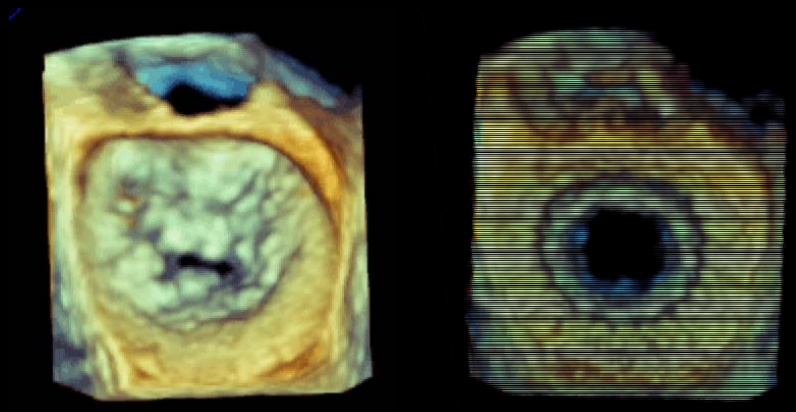
CT before & after TMVR



Pre-TMVR CT scan

Post-TMVR CT Scan

Trans-Apical TMVR



Before

After

Interventional Echo

MAX

Added Value

Tricuspid Repair; TMVR;
MitraClip; PVL repair
Mitral V-in-V

TAVR

Recruitment is easy if...
the imager likes innovation, challenge, and a steep learning curve.

ARS Question # 2

Audience poll

At my institution, the funding for our interventional imaging program is:

1. Resolved since they are paid from the cath lab/OR budget.
2. Resolved since the effort is shared amongst many different faculty.
3. Resolved since the introduction of the interventional echo fee code.
4. An ongoing concern.

Interventional TEE

The Echo

American Society of Echocardiography Newsletter — September 3, 2014

One major step towards a new Interventional TEE code

ASE is pleased to announce the creation of a much needed new interventional transesophageal echocardiography code for use beginning in 2015! This code, 93355, is intended to be used to report TEE services during an interventional procedure. This code includes guidance, real-time image acquisition, documentation, and interpretation during transcatheter intracardic procedures.

For well over a year, ASE has dedicated significant resources including numerous volunteers who have worked to establish this essential new interventional TEE code. This code more accurately reflects the time and effort of the echocardiographer during these procedures. By working with several other societies, ASE was able to collect and present compelling evidence that the existing codes do not actually reflect the physician work, time, and intensity required during an interventional procedure and show that a new code was needed.

Funding Challenges

Procedure	CPT code	Payment	Work RVU
Complete TEE	93312	$ 124.91	2.6
Interventional TEE	93355	$ 233.19	4.6
MitraClip	33418	$ 1884.75	32.25
• Additional Clip		$ 441.00	7.93

- Large and persistent discrepancy in payments and wRVU's (~ 10 X difference).
- Structural procedures are entirely or increasing dependent on echocardiography.

Funding "Models"

The Heart Valve Team Imager

Defining the challenges

Job description

- Before; during; after intervention

Characteristics

- Cautious, flexible, detailed, selective leader

Recruitment

- Innovation and challenge driven individuals

Funding

- Many models shift funds between cost centers
- Few models directly fund heart team imaging
- *Solutions*: Team payment / Reimbursement for quality

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1. Selection
- Severity
- Best procedure
- Device size

2. Guidance
- Safety
- Efficiency
- Efficacy

3. Evaluation
- Device function
- Cardiac response

Job Description:
Fully imbedded in the SHD team

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Stephen H. Little, MD
shlittle@houstonmethodist.org