



# Do We Need 3DRA?



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*Interventional Cardiology Nurse Practitioner*

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# DISCLOSURES

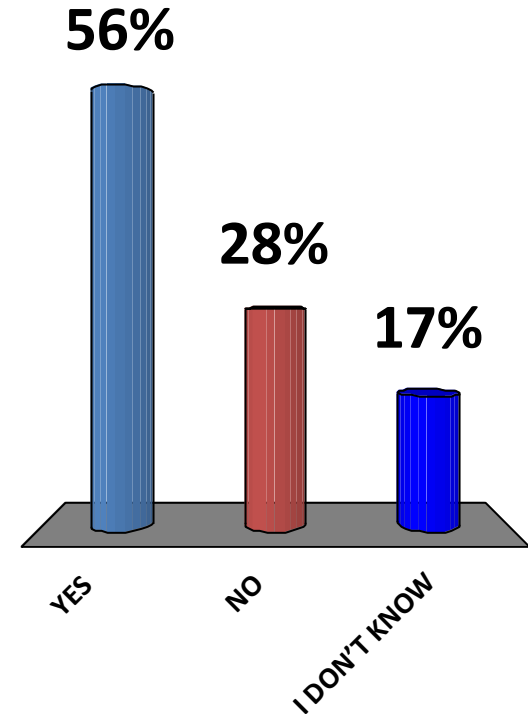
TOSHIBA MEDICAL SYSTEMS  
Consultant (spouse)

# Audience Response System: How many have the capability to do 3DRA?

A. YES

B. NO

C. I DON'T KNOW



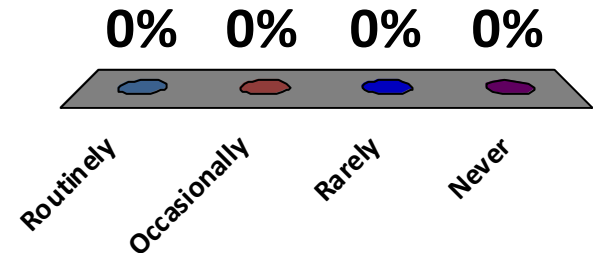
# Audience Response System: How often do you use 3DRA?

A. Routinely

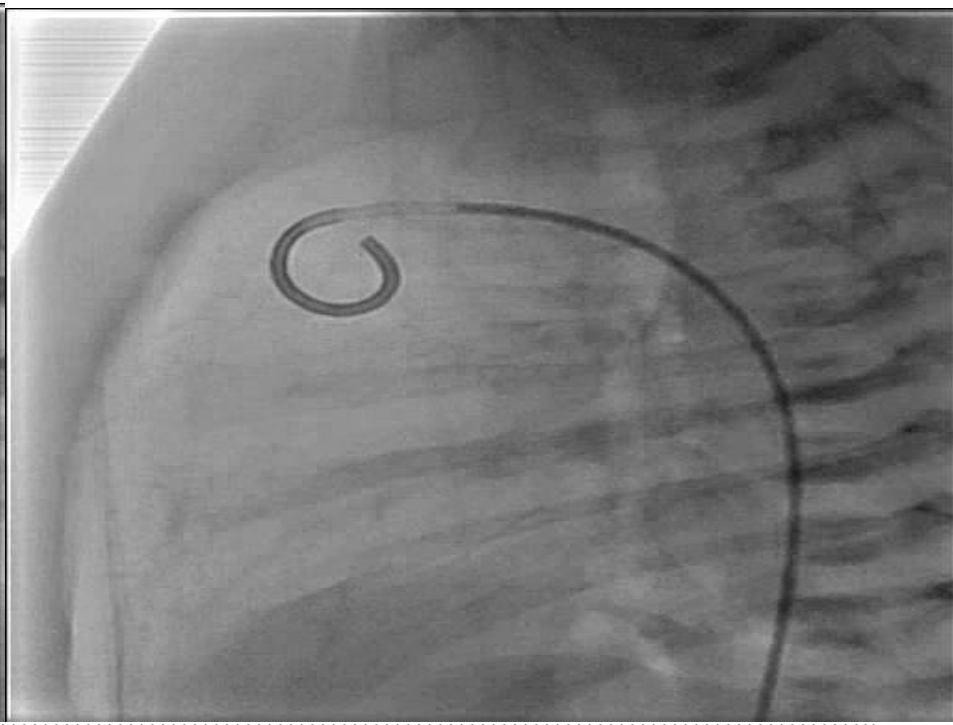
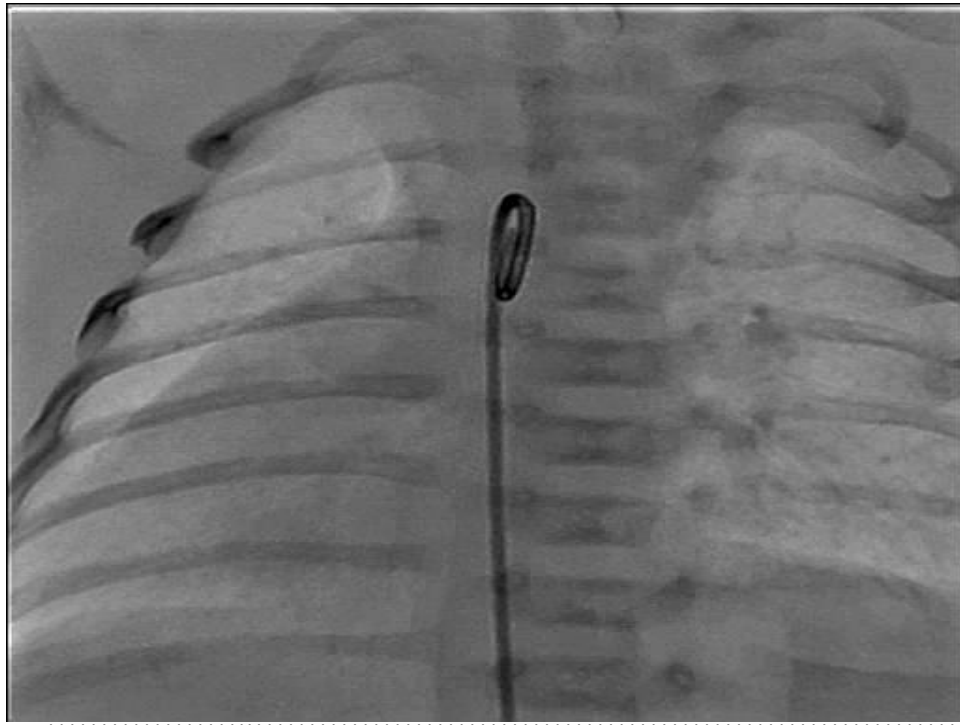
B. Occasionally

C. Rarely

D. Never



# 2.8 Kg JHW baby with heterotaxy syndrome: dextrocardia, PA with non-confluent PAs with bilateral PDAs, unbalanced CAVSD, bilateral SVCs, & TAPVR to RSVC



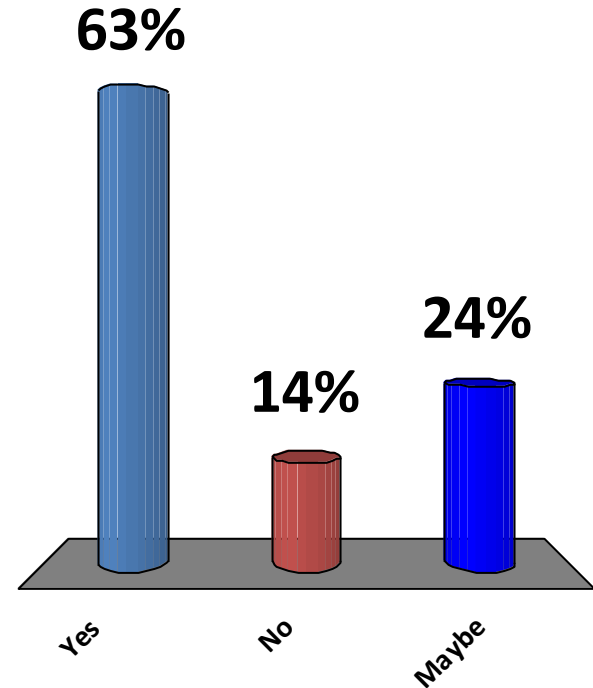
# Audience Response Question

## Would you do a 3DRA?

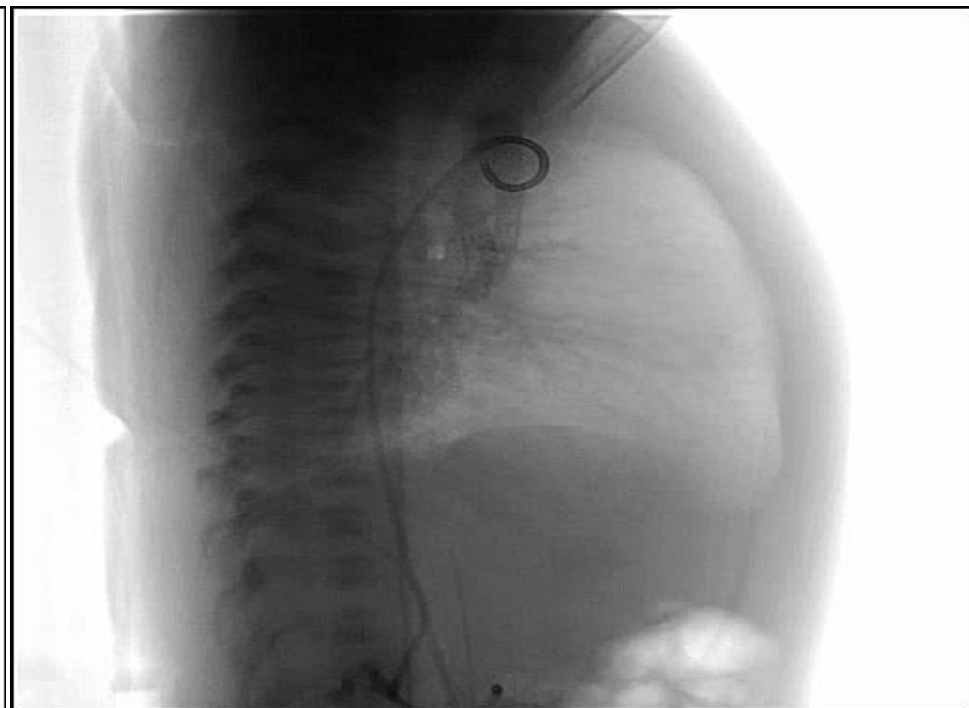
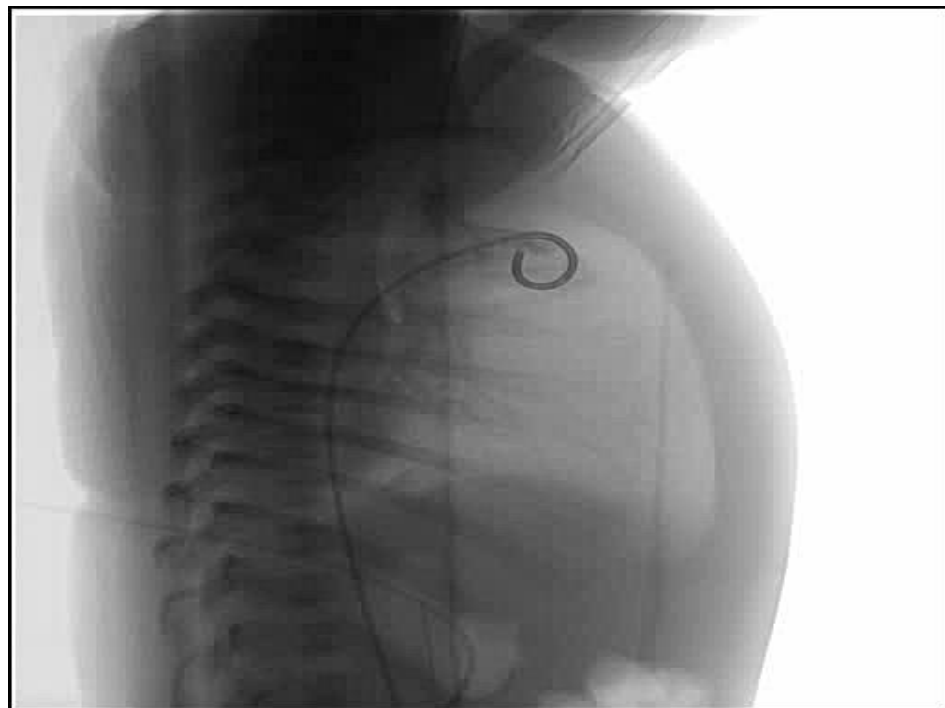
A. Yes

B. No

C. Maybe



# 3D ROTATIONAL ANGIOGRAPHY



# 3DRA Reconstruction



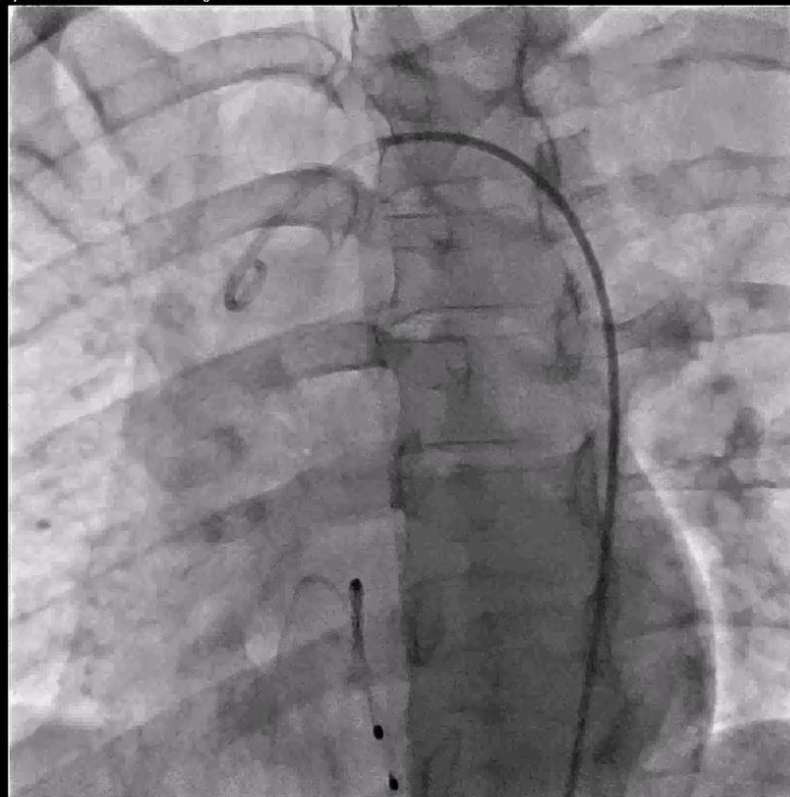


# S/P BILATERAL PDA STENTS 3DRA WITH RECONSTRUCTION



# 28 y.o. s/p Balloon Angioplasty for CoA

Lossy Compression - not intended for diagnosis

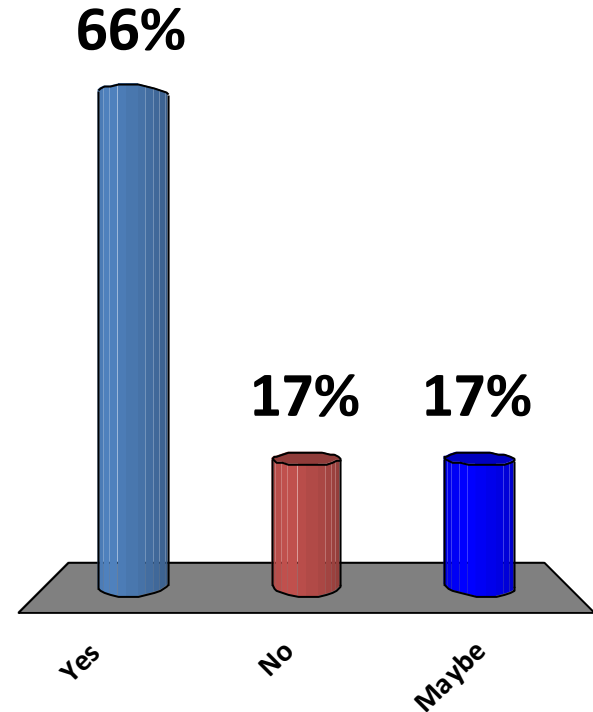


# Audience Response Question: Would you do a 3DRA?

A. Yes

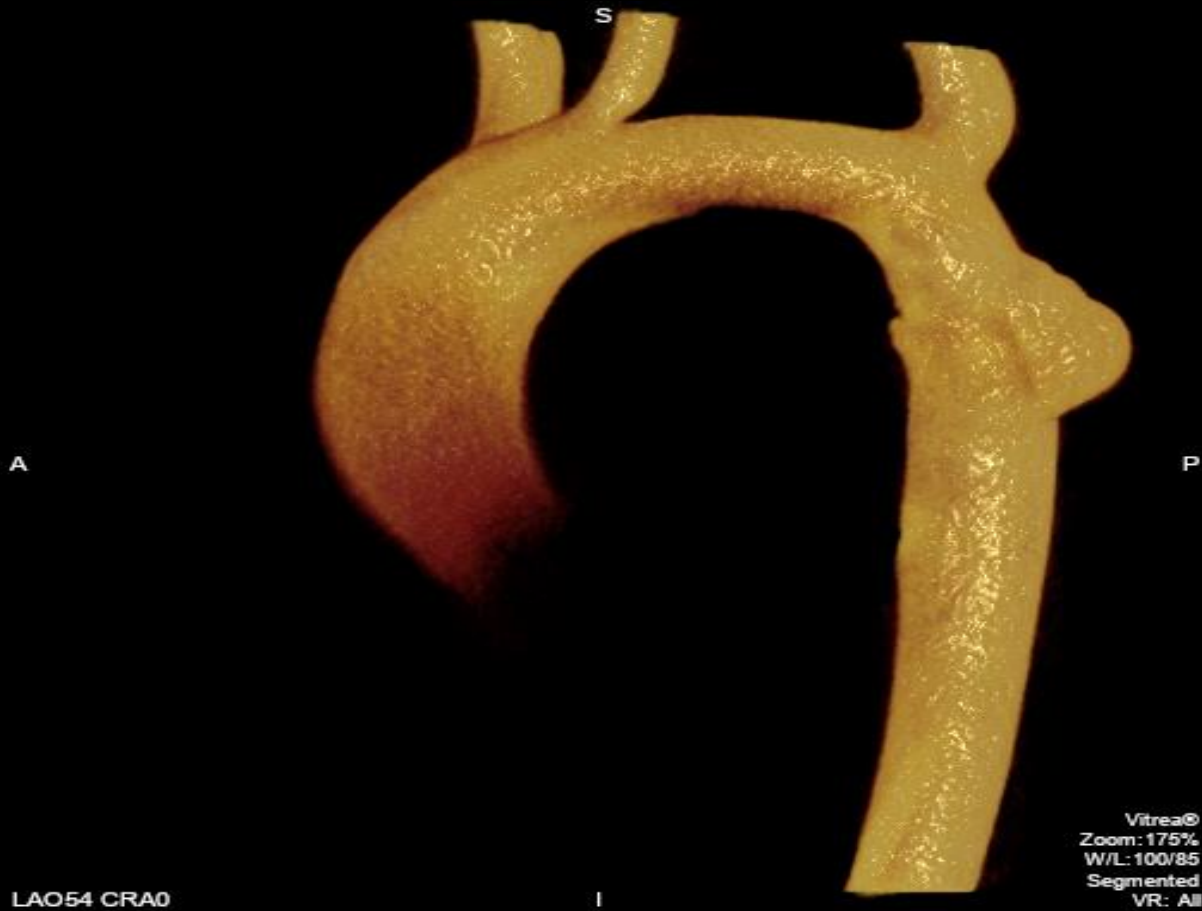
B. No

C. Maybe



# 3DRA

The Heart Center



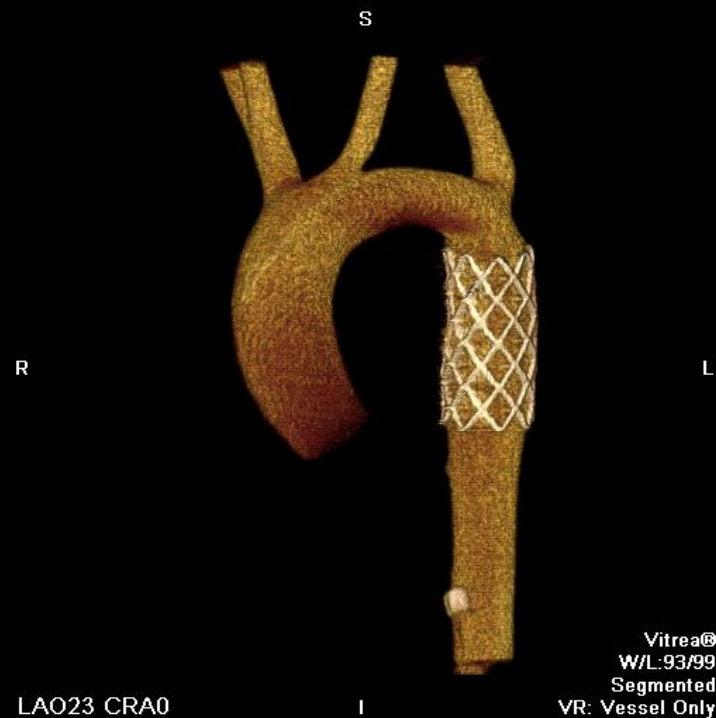
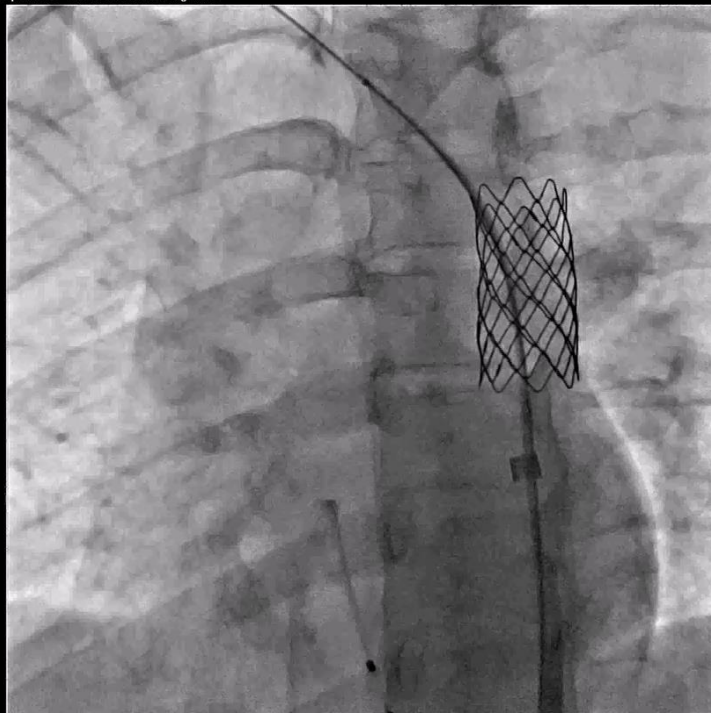
LAO54 CRAO

I

Vitrea©  
Zoom: 175%  
W/L: 100/85  
Segmented  
VR: All

# After 8Zig – 45mm CCPS

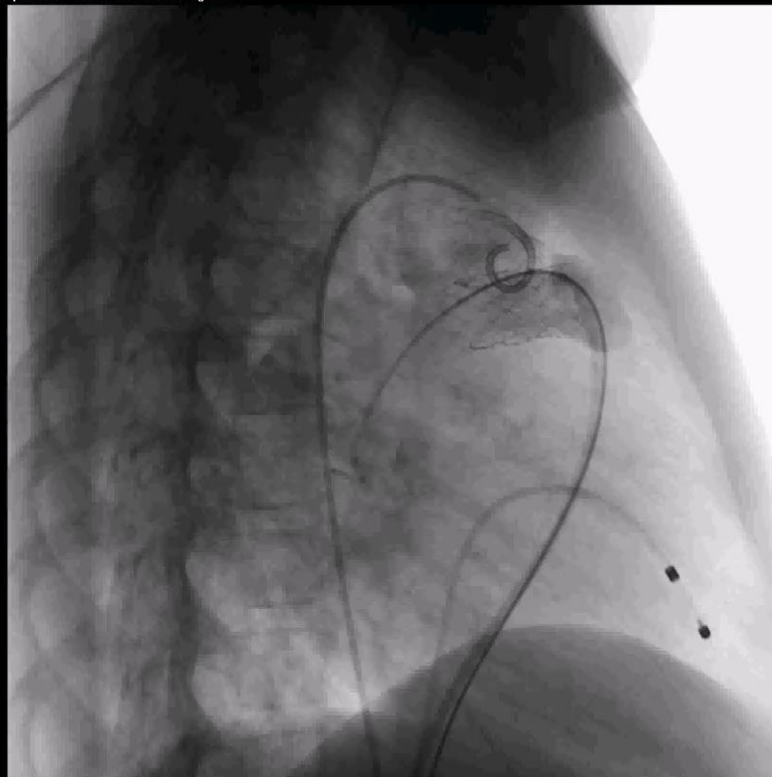
Lessy Compression - not intended for diagnosis



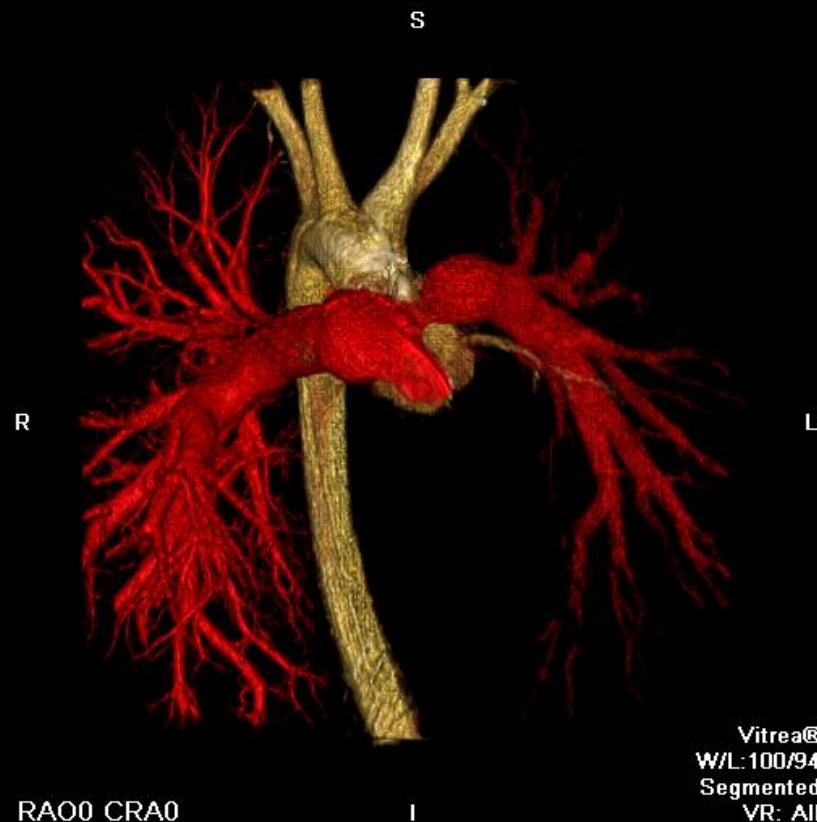
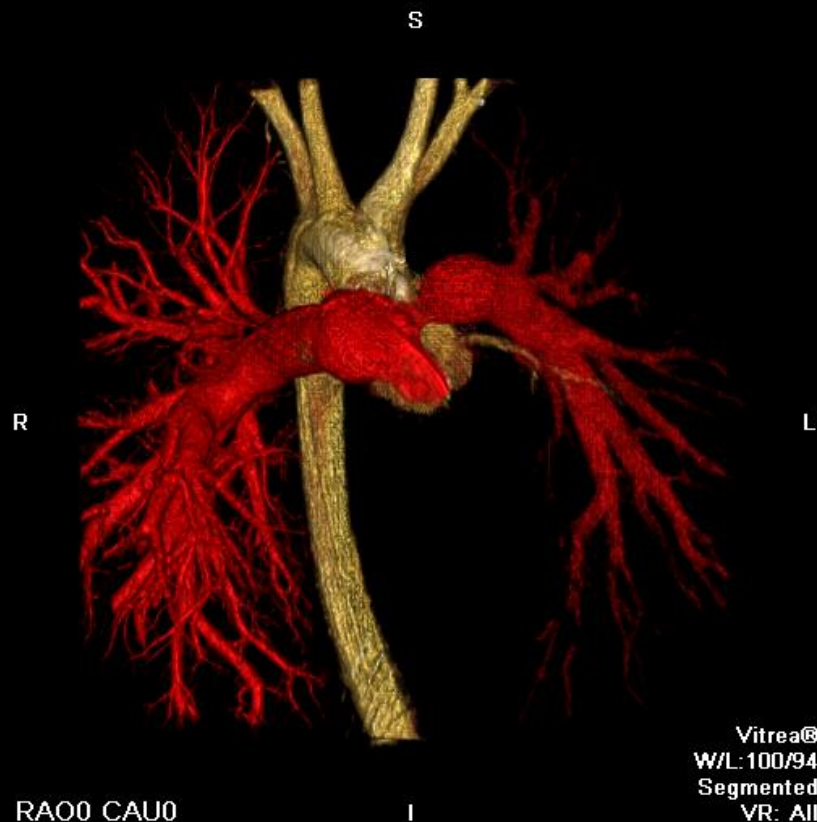
LAO23 CRA0

# 6 yo TGA DORV s/p ASO, Closure VSD & ASD, Dual Injections 3DRA PA & Aorta

Lossy Compression - not intended for diagnosis



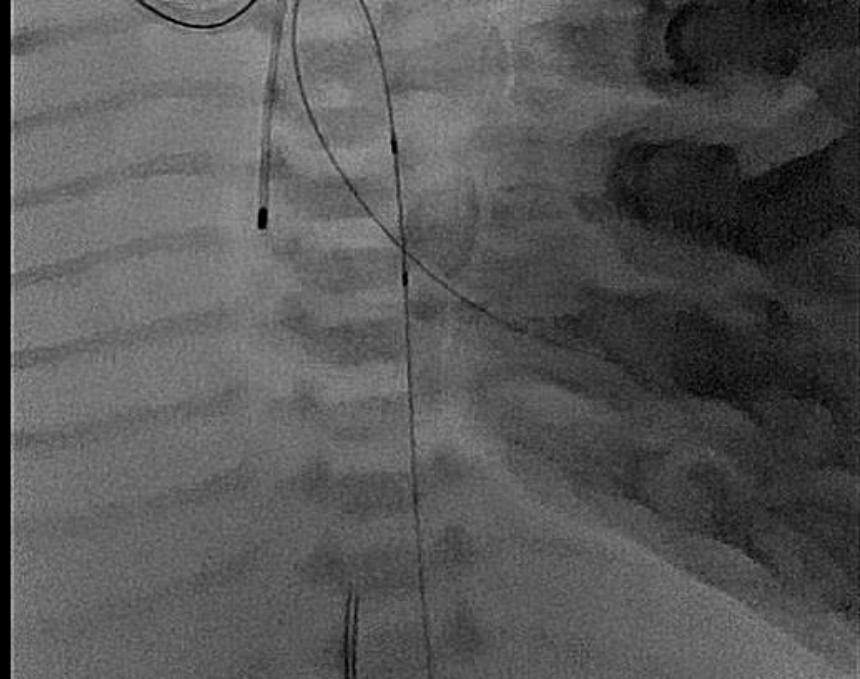
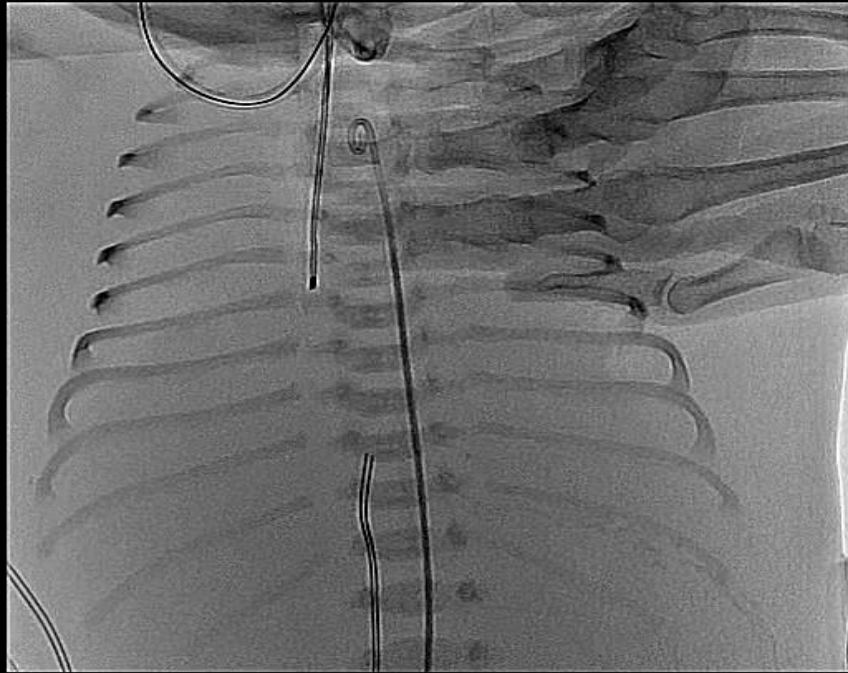
# Anatomical relationship: 3DRA





**4 day old 34 week gest. severe hydrops, renal failure, pulmonary edema, on oscillator, severe thoracic coarctation of Aorta: During CPR balloon angioplasty & coronary stent**

The Heart Center



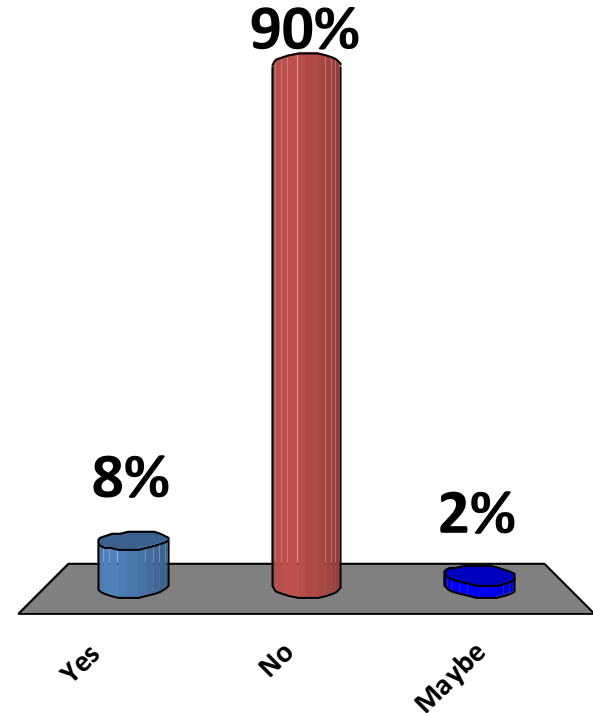


# Audience Response Question: Would you do a 3DRA?

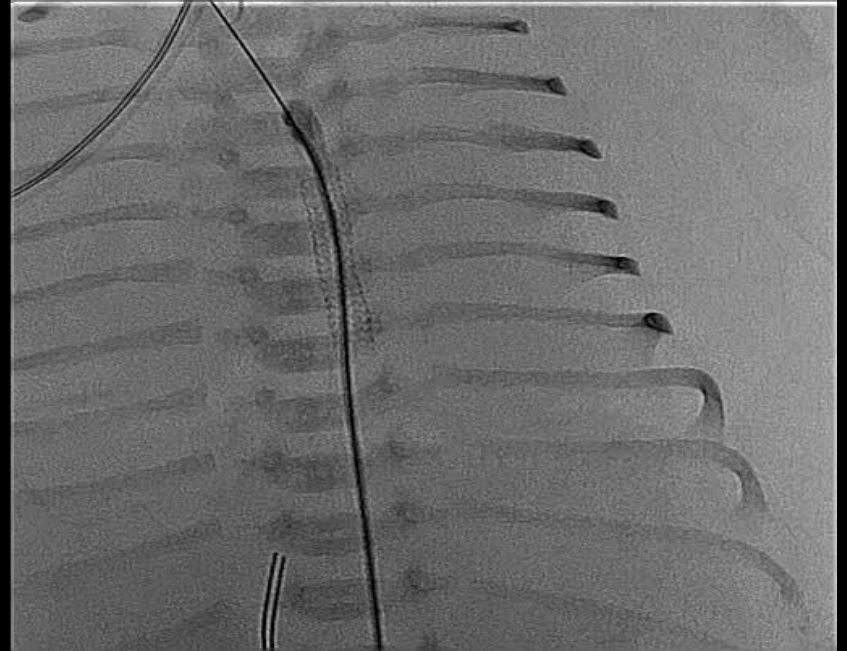
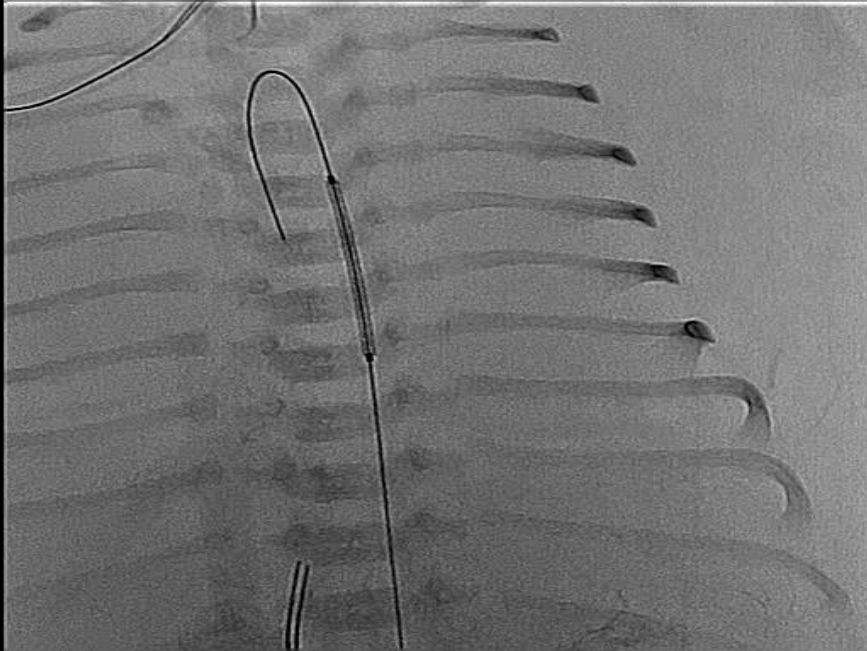
A. Yes

B. No

C. Maybe

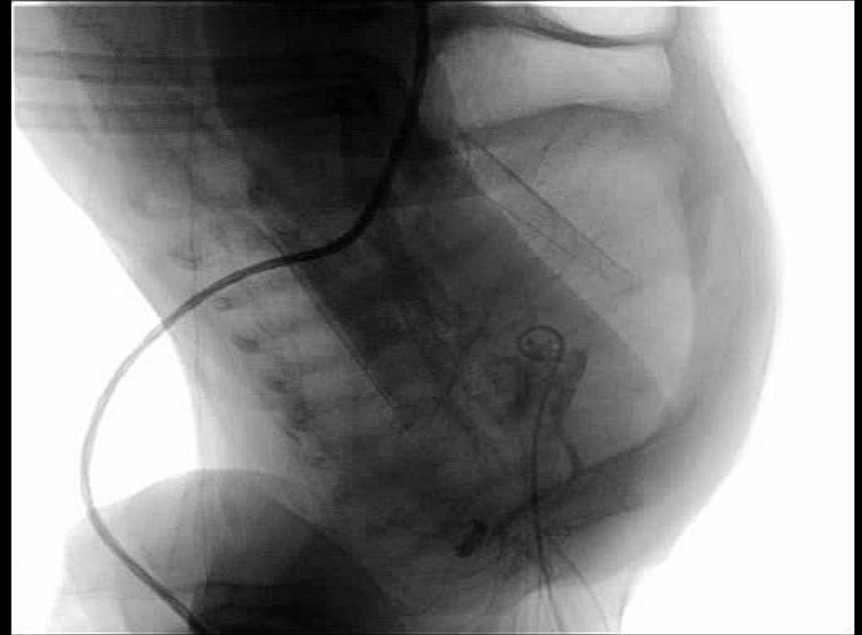
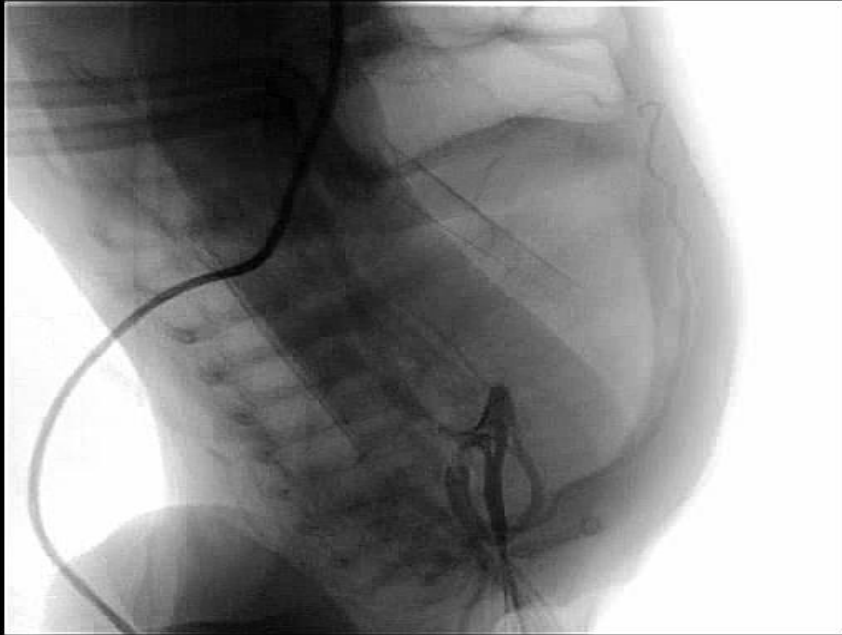


**4 day old 34 week gest. severe hydrops, renal failure, pulmonary edema, on oscillator, severe thoracic coarctation of Aorta: During CPR balloon angioplasty & coronary stent**



**2 months later via RCCA cutdown** The Heart Center

**3DRA Pre & Post Cutting Balloon and 4x22mm &  
4x15mm long coronary stents stents coaxially PSG  
decreased from 75 – 12mmHg**

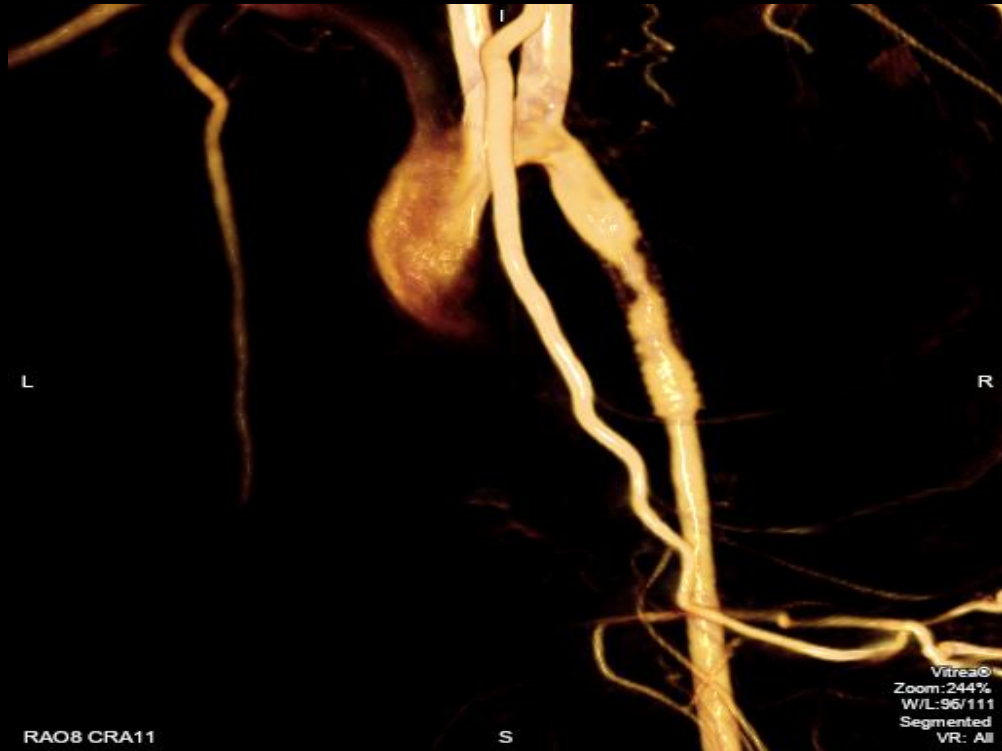


# 3DRA Reconstruction

The Heart Center

## Pre

## Post

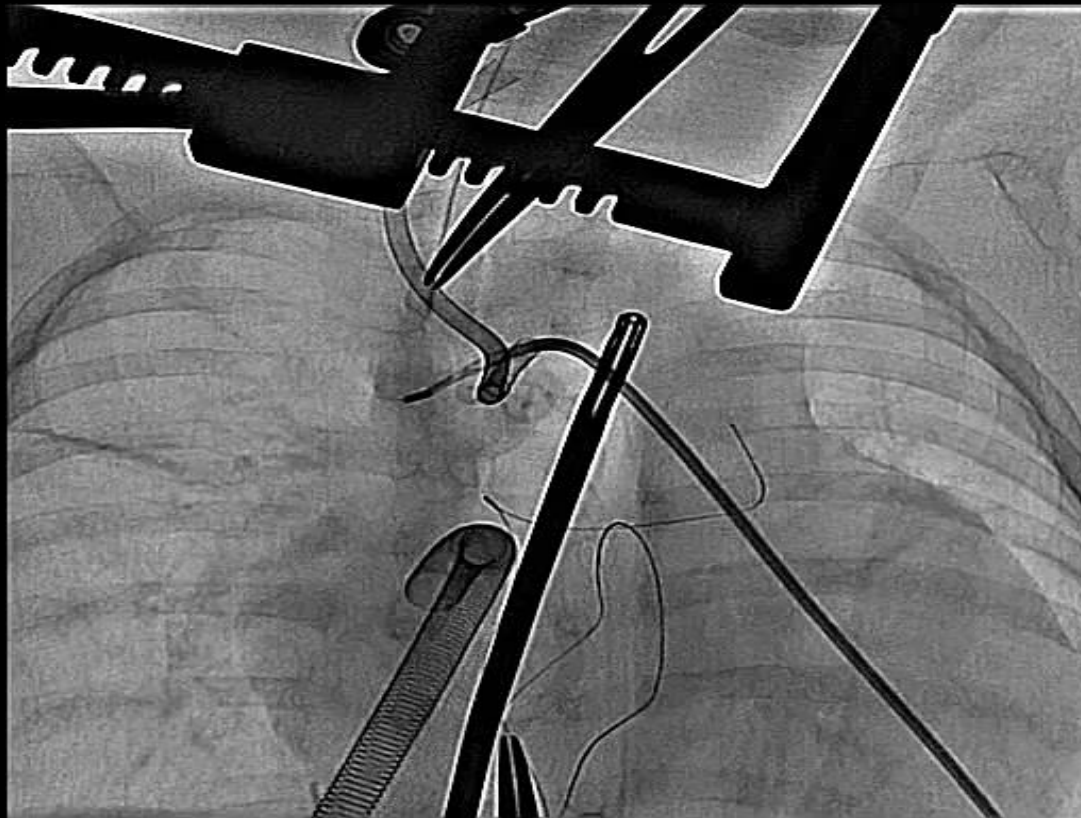


RAO8 CRA11



Vitrea©  
Zoom: 195%  
W/L: 97/119  
Segmented  
VR: All

# HLHS S/P HYBRID STAGE I: EXIT ANGIOGRAPHY AFTER COMPREHENSIVE STAGE 2

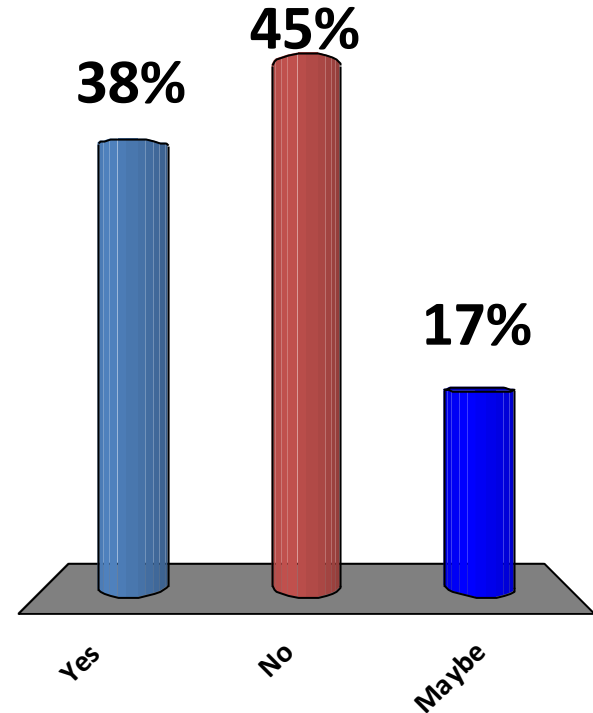


# Audience Response Question: Would you do a 3DRA?

A. Yes

B. No

C. Maybe

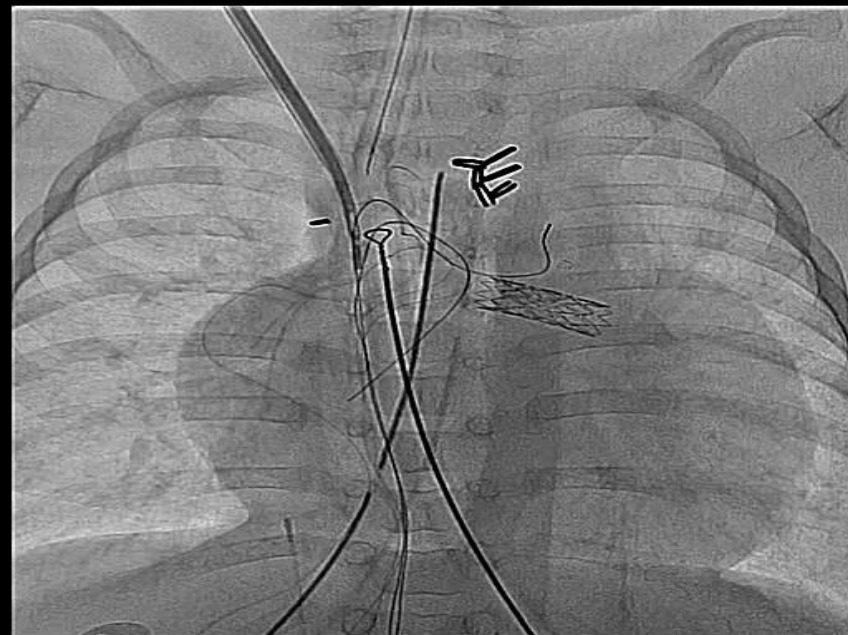
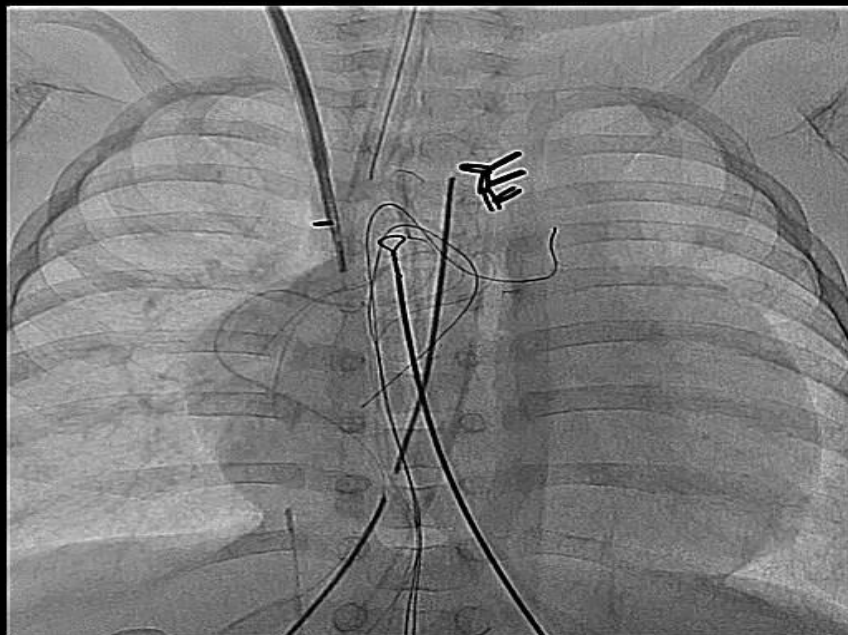


# HLHS S/P HYBRID STAGE I: 3DRA AFTER COMPREHENSIVE STAGE 2





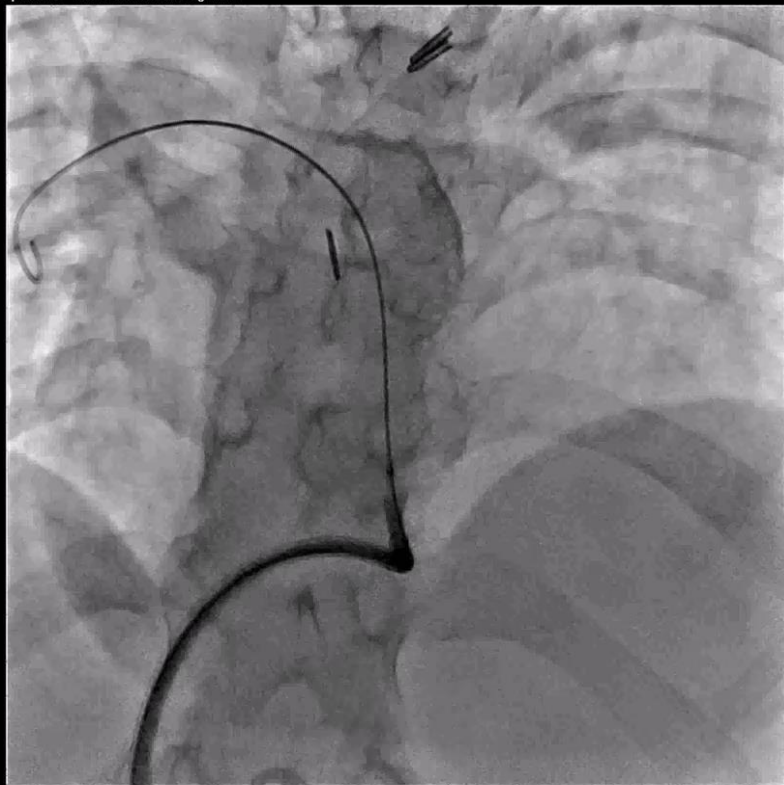
# P/O DAY 3: LPA STENT PLACED



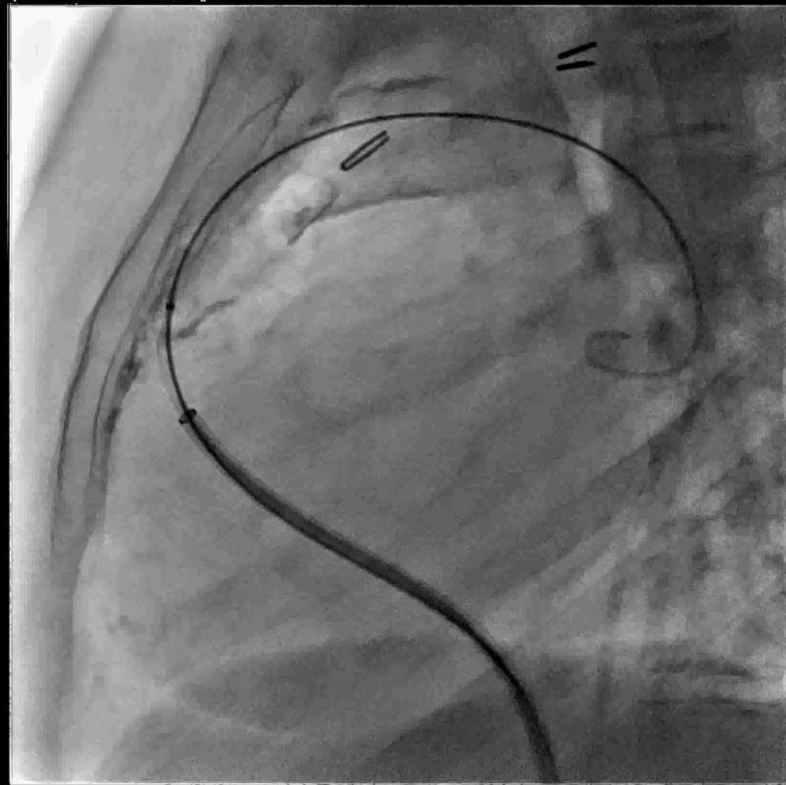


# Challenging Case: 12 y/o TOF 20mm homograft, SBE, and now...RVp > AOp with PR

Lossy Compression - not intended for diagnosis



Lossy Compression - not intended for diagnosis

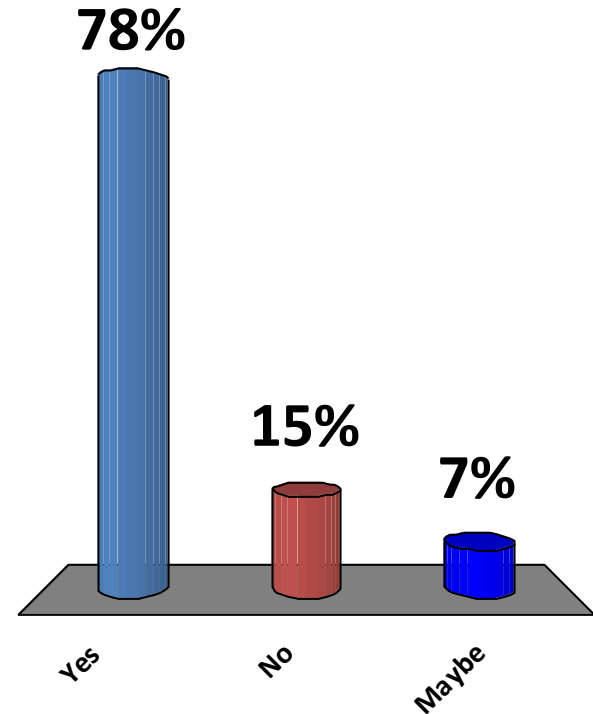


# Audience Response Question: Would you do a 3DRA?

A. Yes

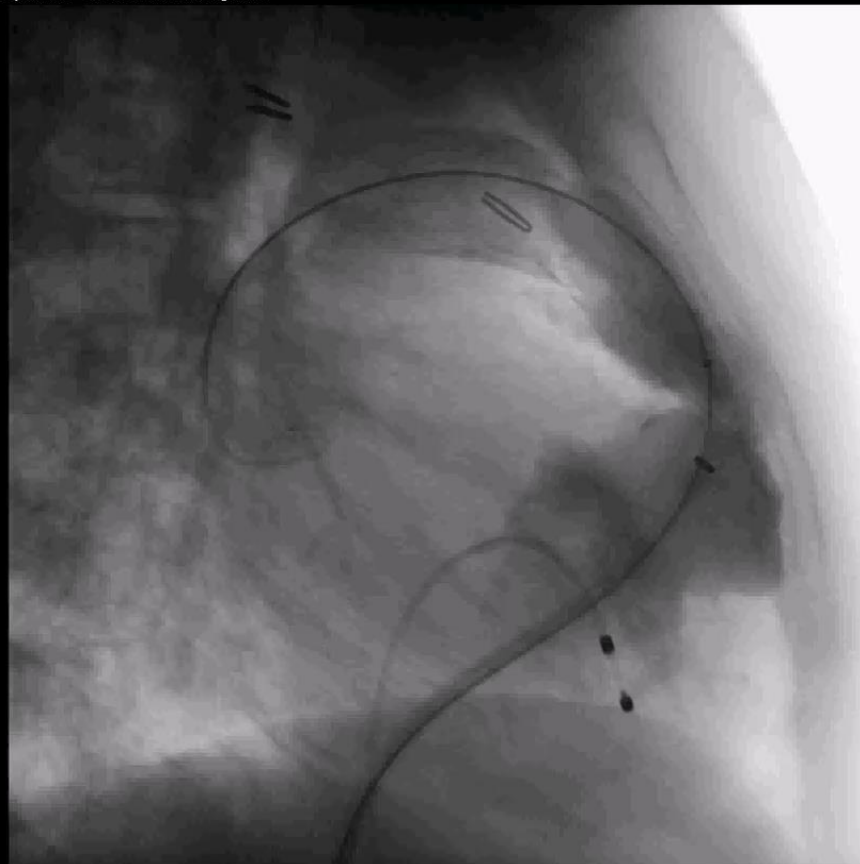
B. No

C. Maybe



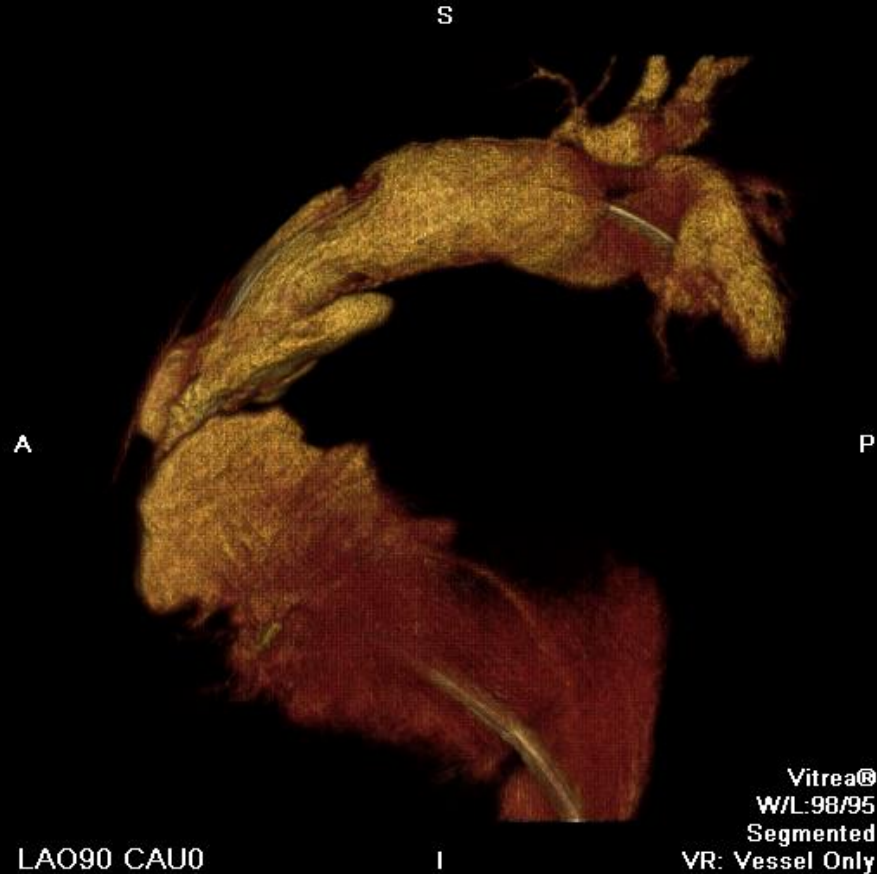
# 3DRA: RV Angio with RRVP

Lossy Compression - not intended for diagnosis



# 3D Reconstruction

The Heart Center

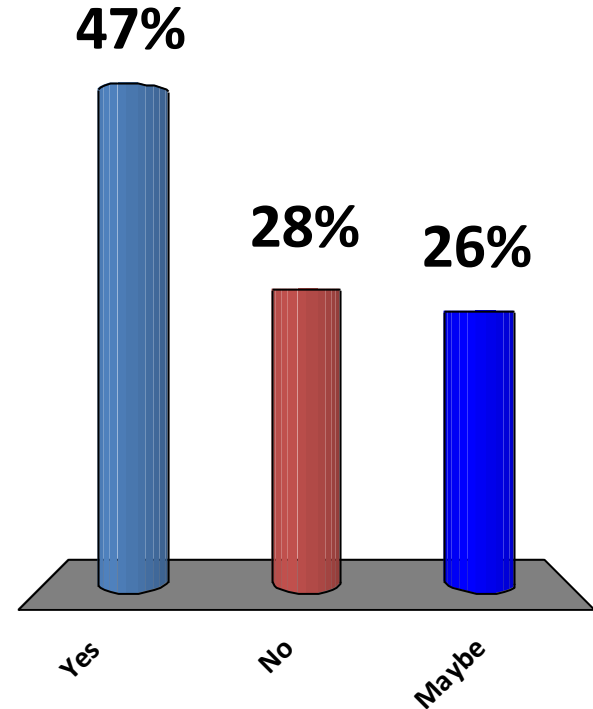


# Audience Response Question: Are you now scared? Would you refer to CT surgery?

A. Yes

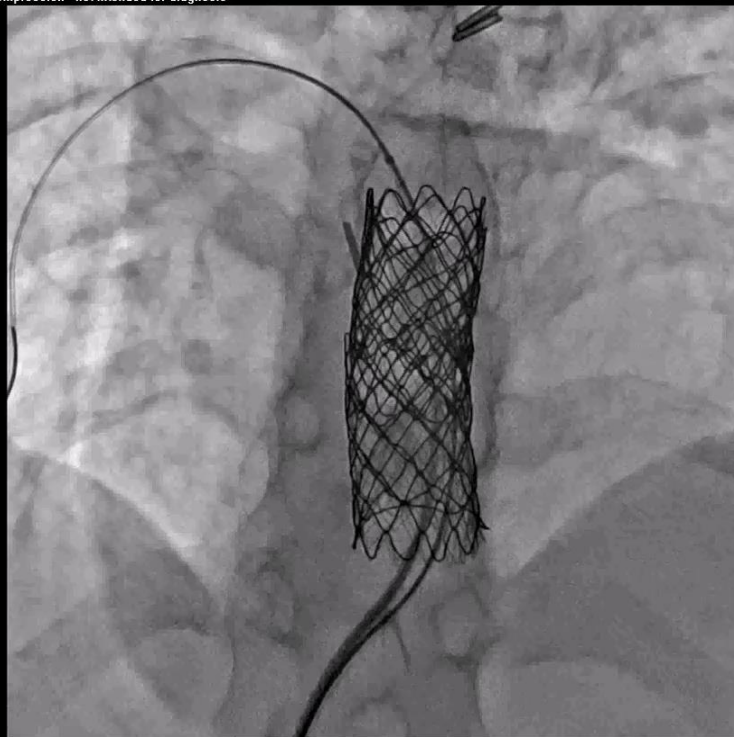
B. No

C. Maybe

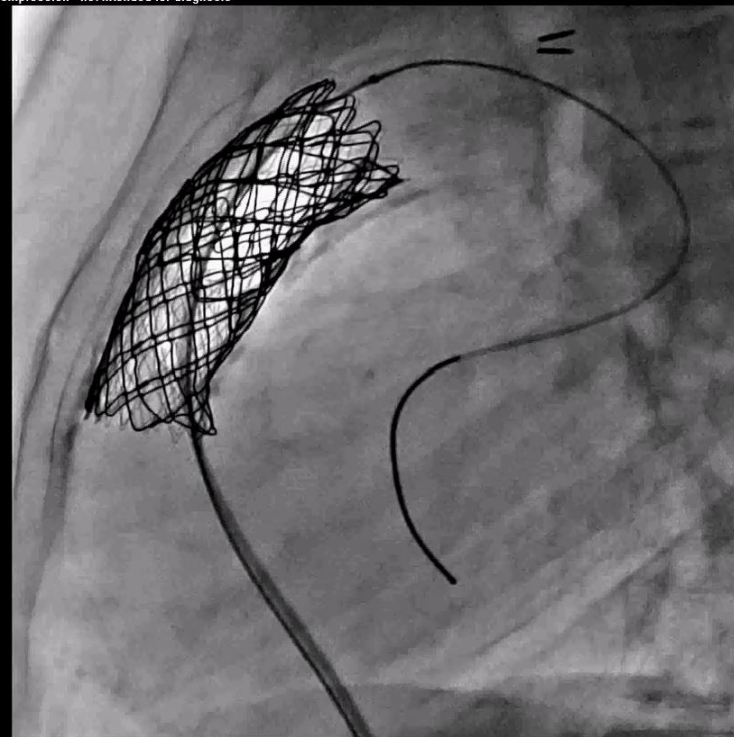


# After a Long Day in the Hybrid Cath Suite 2 CCPS, 3 Palmaz XL Stents & Melody TPV

Lossy Compression - not intended for diagnosis

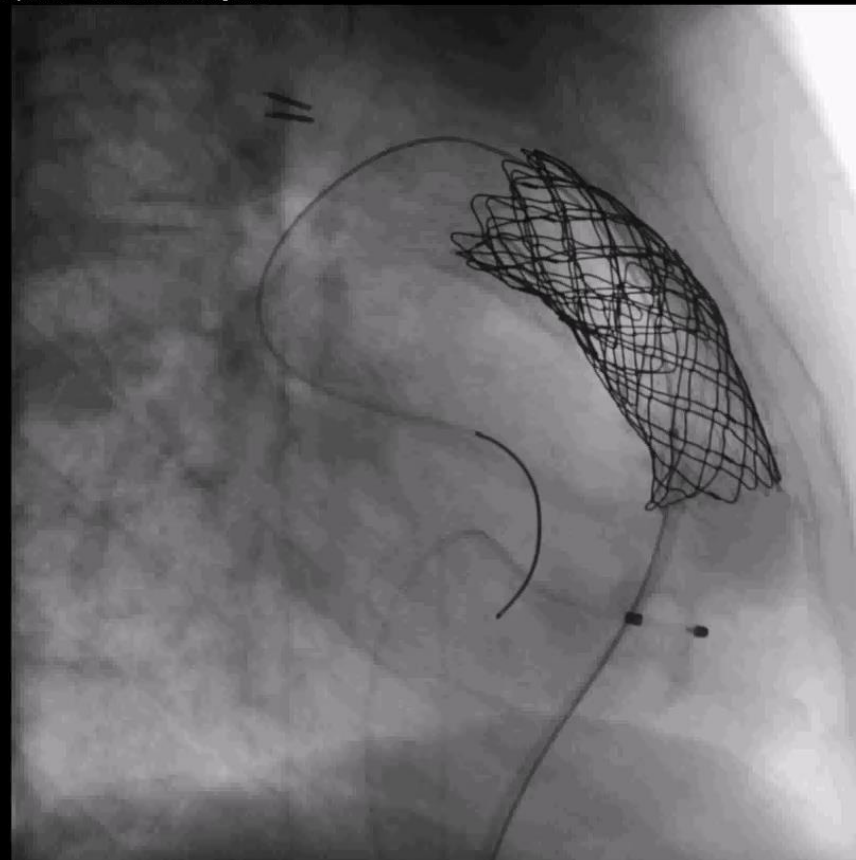


Lossy Compression - not intended for diagnosis



# 3DRA: Melody TPV, 2 CCPS, 3 Palmaz XL

Lossy Compression - not intended for diagnosis



# 3DRA: Melody TPV, 2 CCPS, 3 Palmaz XL



RAO26 CRA40

Vitrea®  
W/L: 107/84  
Segmented  
VR: Vessel Only



# 3D ROTATIONAL ANGIOGRAPHY

- Single injection
- Unlimited angles – identify angles for interventions
- May reduce radiation dose & number of angios
- Enhanced diagnosis
- Relationship with surrounding anatomical structures

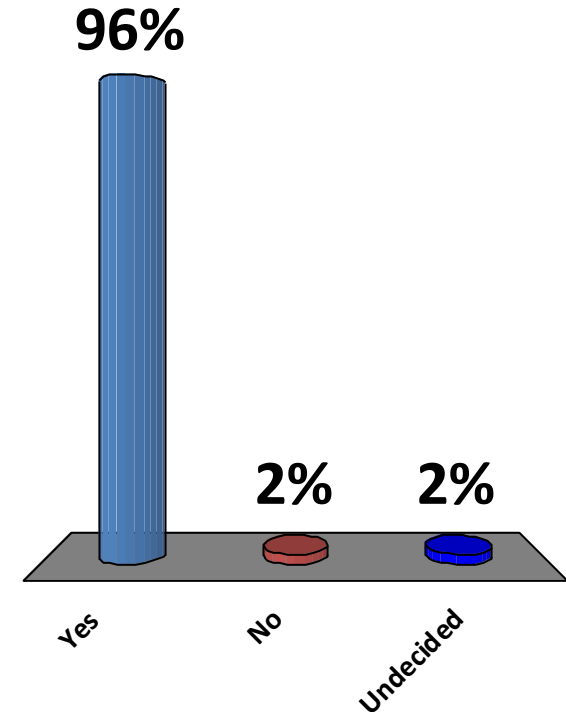


# Audience Response Question: Last Chance: WILL YOU USE 3DRA?

A. Yes

B. No

C. Undecided



# THANK YOU

The Heart Center

R

A



P

LAO19 CRA90

L

Vitrea®  
W/L:222/99  
Segmented  
VR: All

Acknowledgment:  
Paul Lawrence