

# TMVR: prevention of LVOT obstruction

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***Seoul***

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## *Disclosure Information*

The following relationships exist:

*Grant support: Abbott, BSC, Cardiokinetics, Corvia, Edwards, WL Gore*

*Consultant: Abbott, BSC, Edwards, WL Gore*

*Stock Options: Mitralign*

*Off label use of products and investigational devices  
will be discussed in this presentation*

80 year old female with dyspnea on exertion & mitral stenosis

**MVA 1.04 cm<sup>2</sup>**  
**Mean MVG 14.2 mmHg**

RA 10/12/7  
RV 55/10  
PA 51/21  
PCWP 29/40/27  
LV 169/14  
Ao 163/70

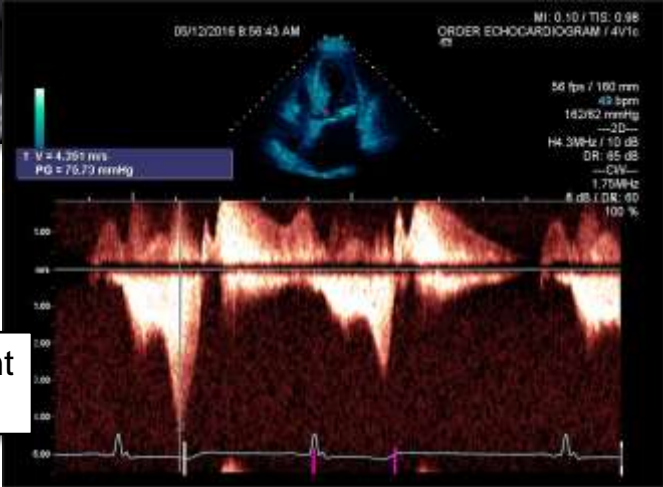
STS 5.3% for mitral replacement



# Baseline TEE



# Transthoracic Echo



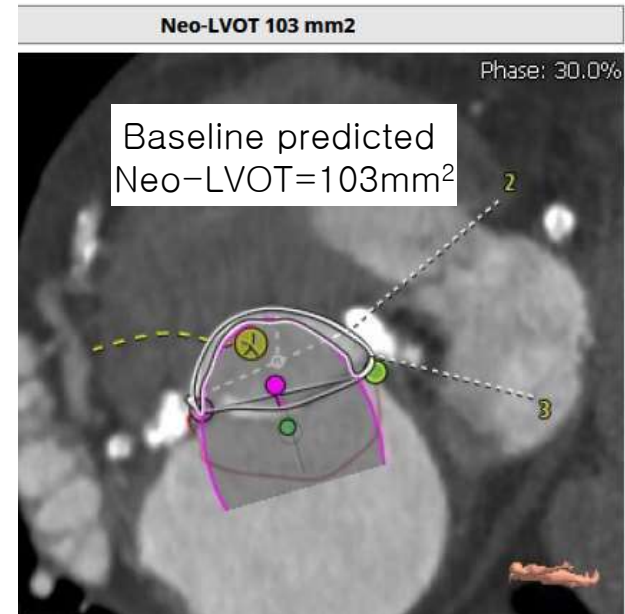
Peak Gradient  
89 mmHg



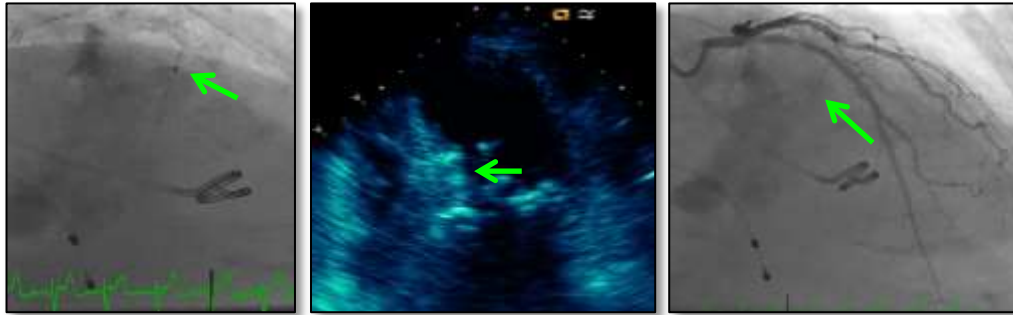
# Cardiac CT

Annulus by CT (Date)	Measure
<i>Min Diameter (mm)</i>	<b>23.1</b>
<i>Max Diameter (mm)</i>	<b>32.7</b>
<i>Annular Area (mm<sup>2</sup>)</i>	<b>620</b>

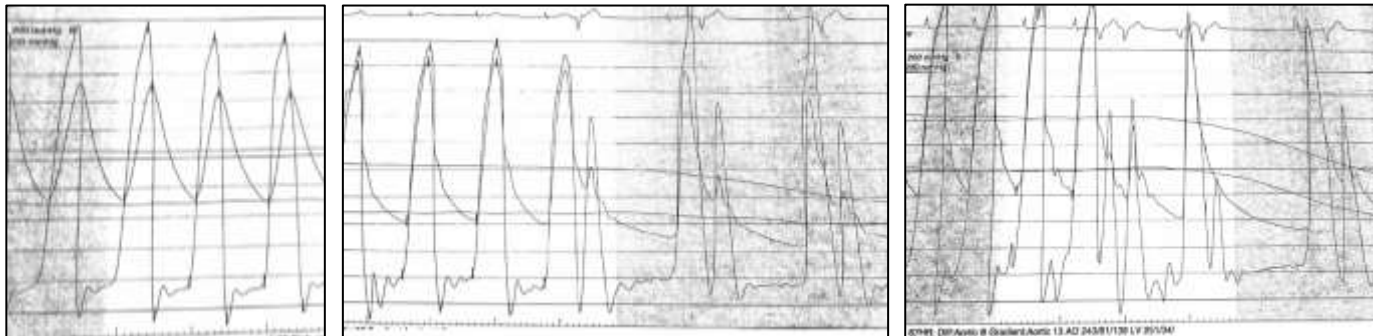
LVOT Analysis	Measure
<i>Aorto-Mitral Angle</i>	<b>66</b>
<i>Neo-LVOT area mm<sup>2</sup></i>	<b>103 mm<sup>2</sup></b>
<i>Percentage obstruction</i>	



# Alcohol Septal Ablation

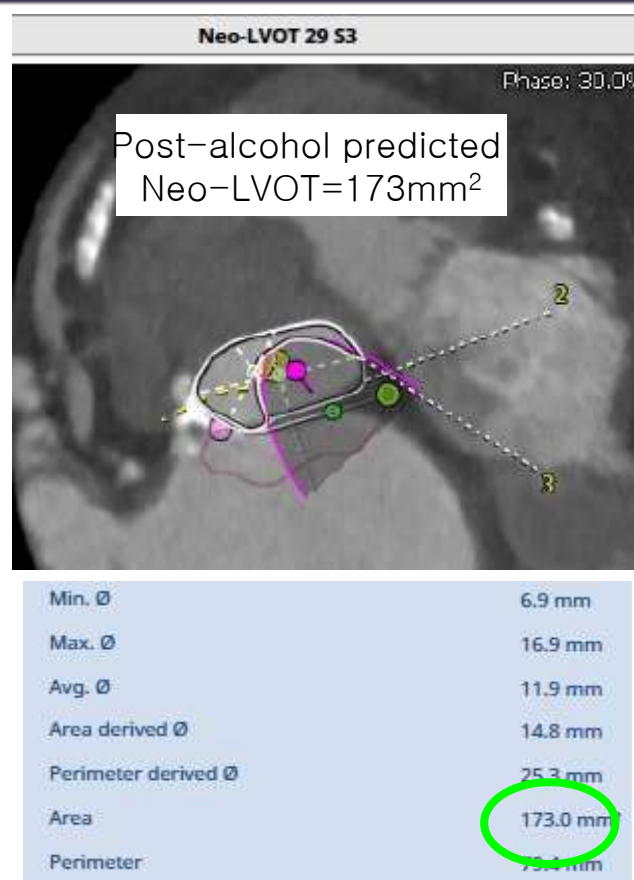
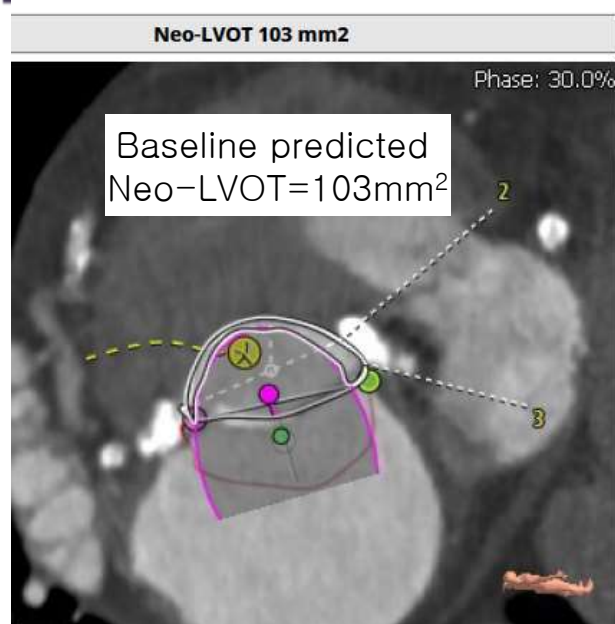


1.1 ml of 98% alcohol second septal branch



Resting LVOT 40 mmHg reduced to 5 mmHg; Post-PVC 100 mmHg reduced to 10 mmHg

# CT post-alcohol ablation





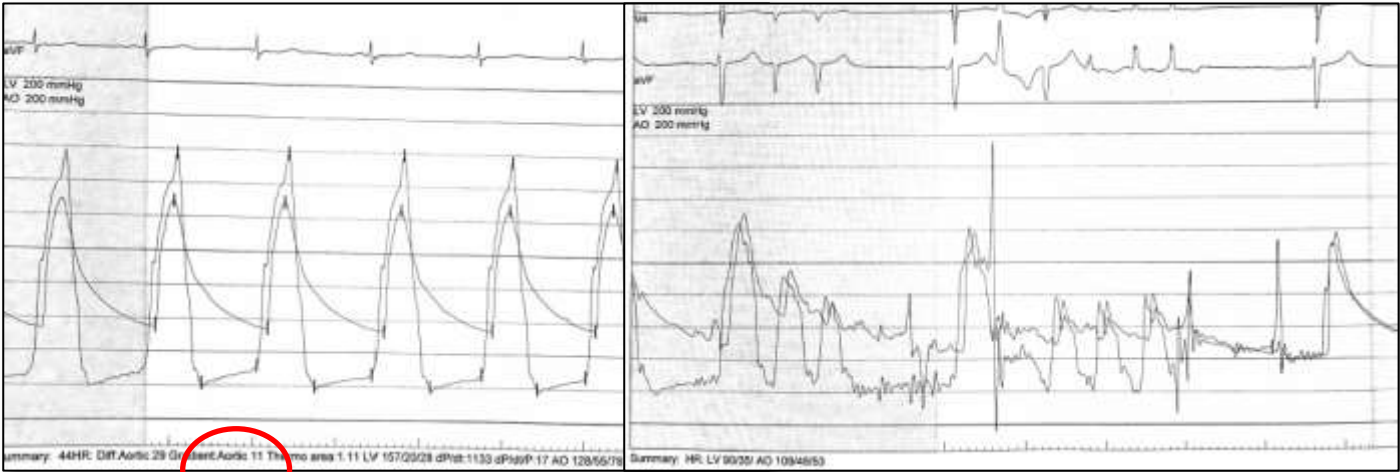
# Transatrial TMVR



# Transatrial TMVR 9-1-16

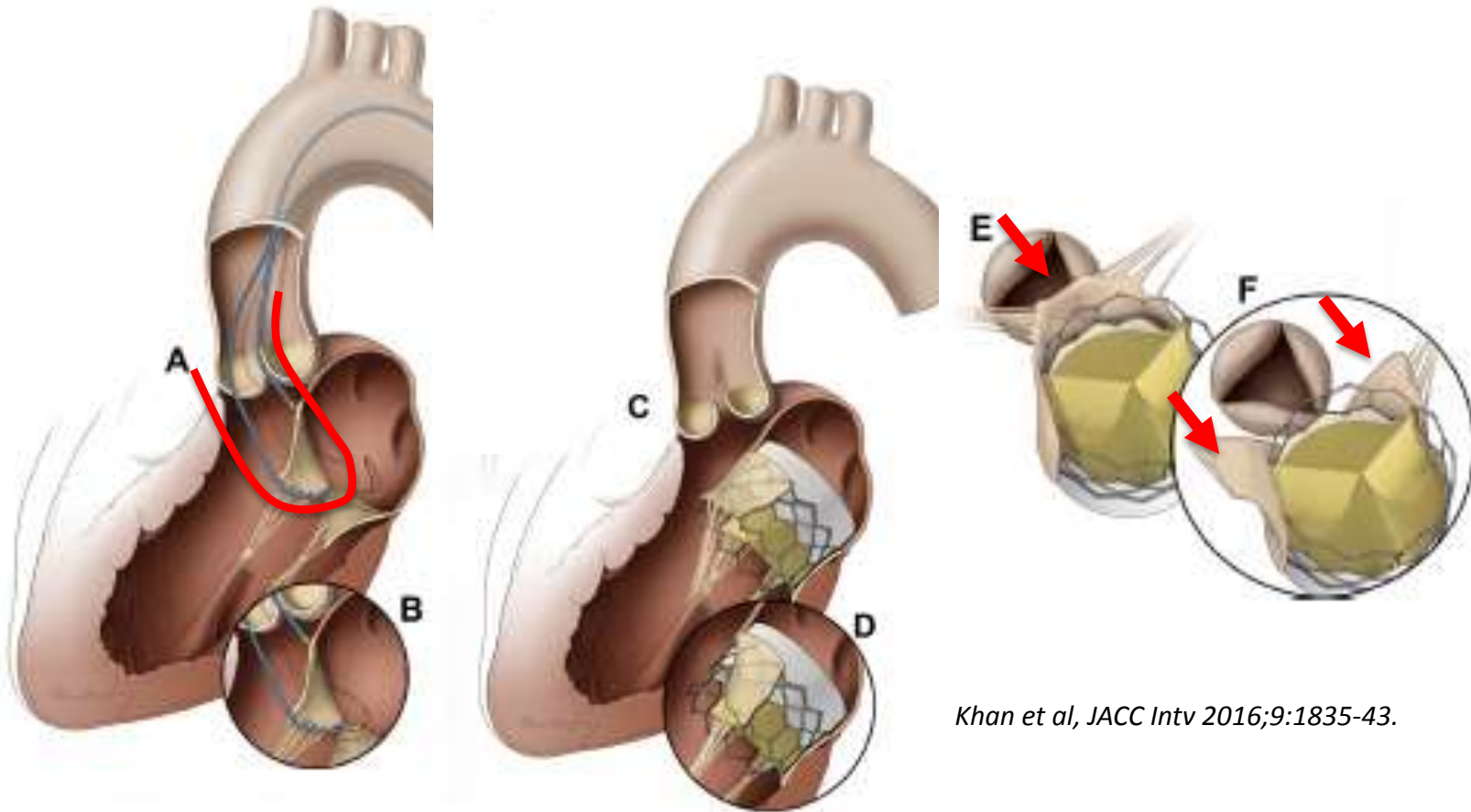


# Post Transatrial TMVR



# LAMPOON

## Laceration of the Anterior Mitral leaflet to Prevent LVOT Obstruction



*Khan et al, JACC Interv 2016;9:1835-43.*

**This study is not yet open for participant recruitment. (see Contacts and Locations)**

Verified January 3, 2017 by National Institutes of Health Clinical Center (CC)

**Sponsor:**

National Heart, Lung, and Blood Institute (NHLBI)

**Information provided by (Responsible Party):**

National Institutes of Health Clinical Center (CC) ( National Heart, Lung, and Blood Institute (NHLBI) )

ClinicalTrials.gov Identifier:

NCT03015194

First received: January 6, 2017

Last updated: January 24, 2017

Last verified: January 3, 2017

History of Changes

PI Robert Lederman, MD NHLBI

Locations:

Emory University

Henry Ford Hospital

Evanston Hospital

- 69 year old female
- HTN, HL, DM, biliary cirrhosis s/p liver transplant, thyroid CA, occluded RCA, PAF on NOAC
- Mitral Repair 2012 with a 26 mm Edwards Physio II annuloplasty ring
- Severe MR with moderate MS Mean
  - MVG 10 mmHg
- STS score: 15.2% for mitral replacement



# Transesophageal Echo: 9-27-16



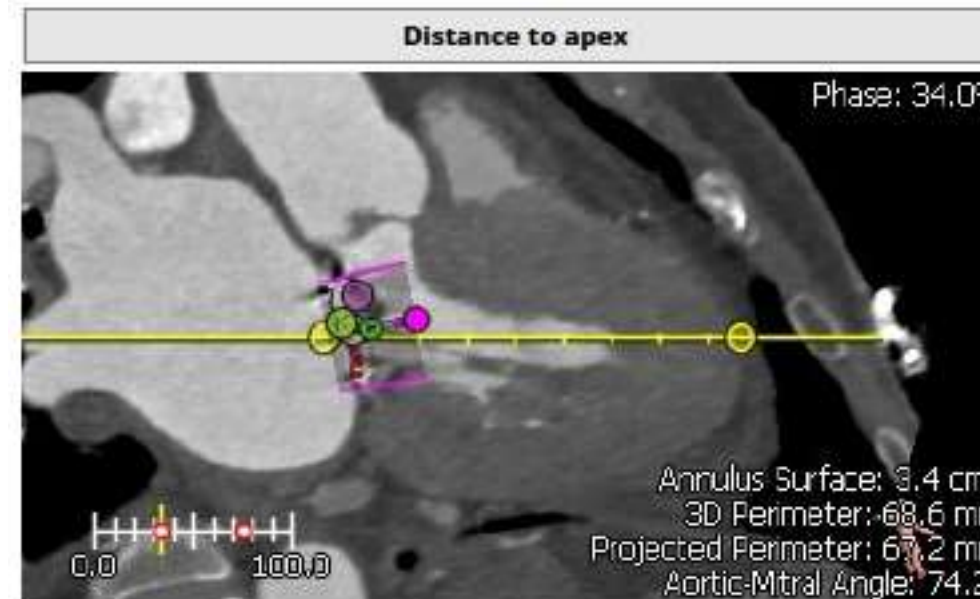


# Cardiac CT (site measurements): 10-7-16

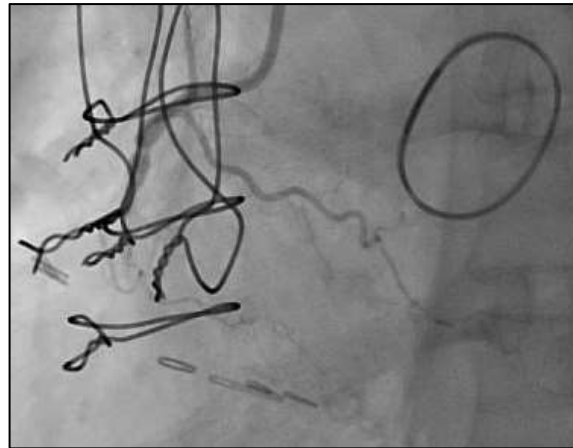
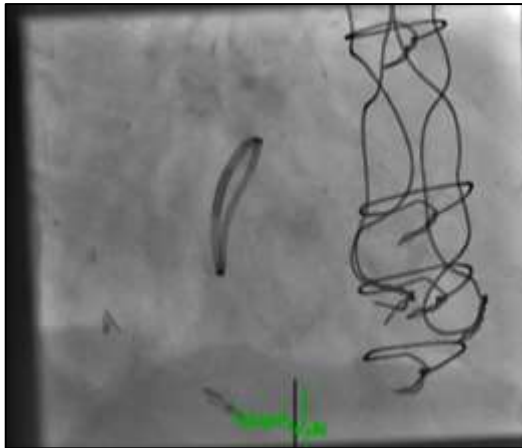
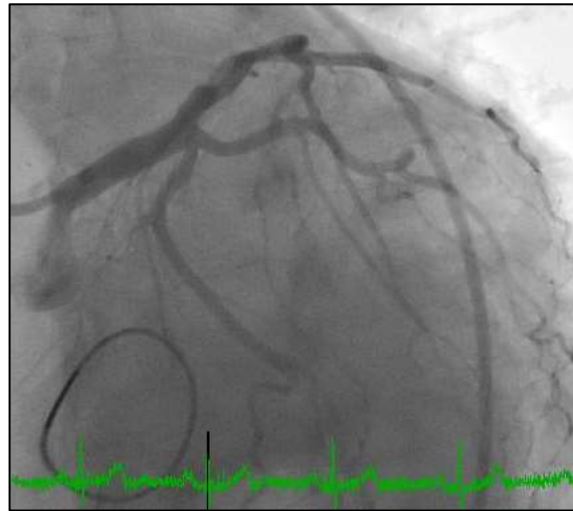
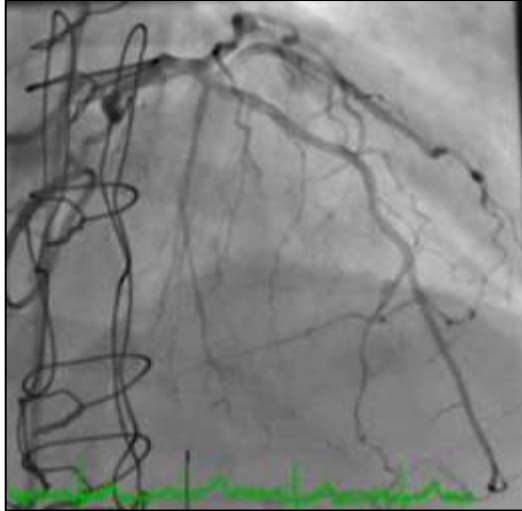
Annulus by CT (Date)	Measure
<i>Min Diameter (mm)</i>	<b>17.3</b>
<i>Max Diameter (mm)</i>	<b>24.5</b>
<i>Annular Area (mm<sup>2</sup>)</i>	<b>350</b>
<i>Comment:</i>	



LVOT Analysis	Measure
<i>Aorto-Mitral Angle</i>	<b>107</b>
<i>Neo-LVOT area mm<sup>2</sup></i>	<b>156.9</b>
<i>Percentage obstruction</i>	<b>35</b>

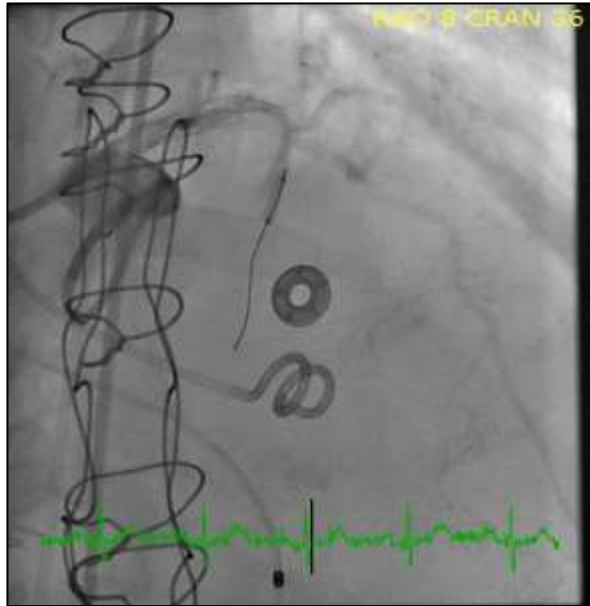


# Coronary Angiogram: 9-27-16

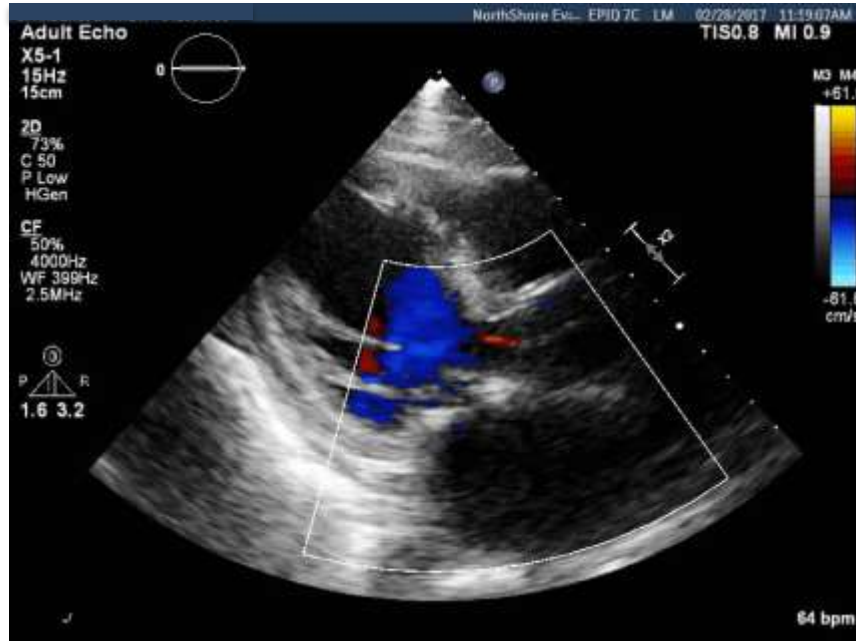




# Alcohol Ablation

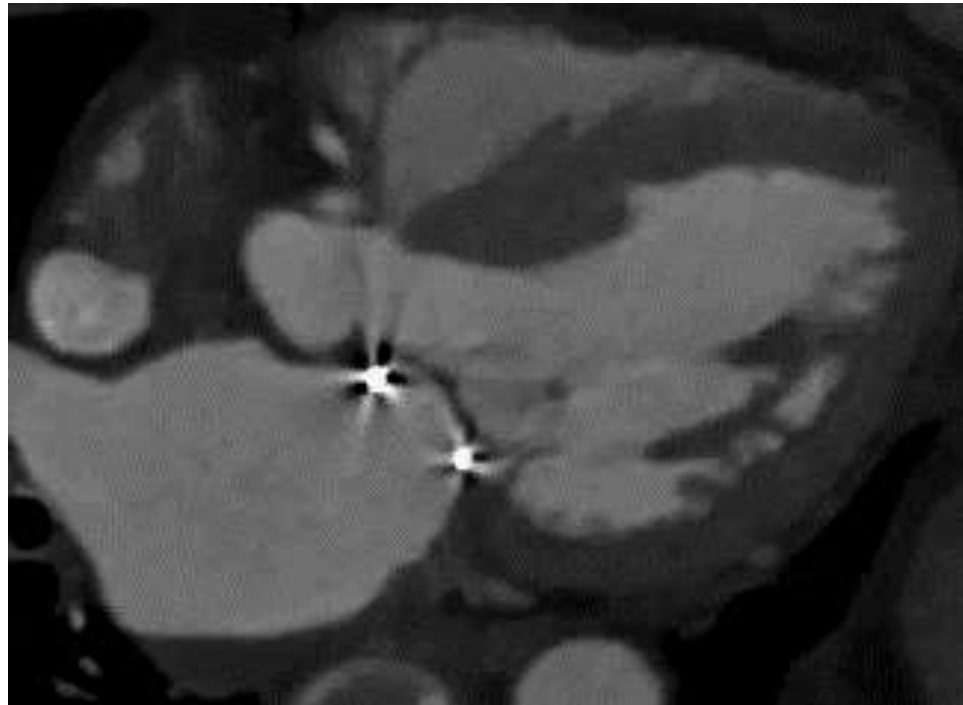


# TTE2 months post alcohol

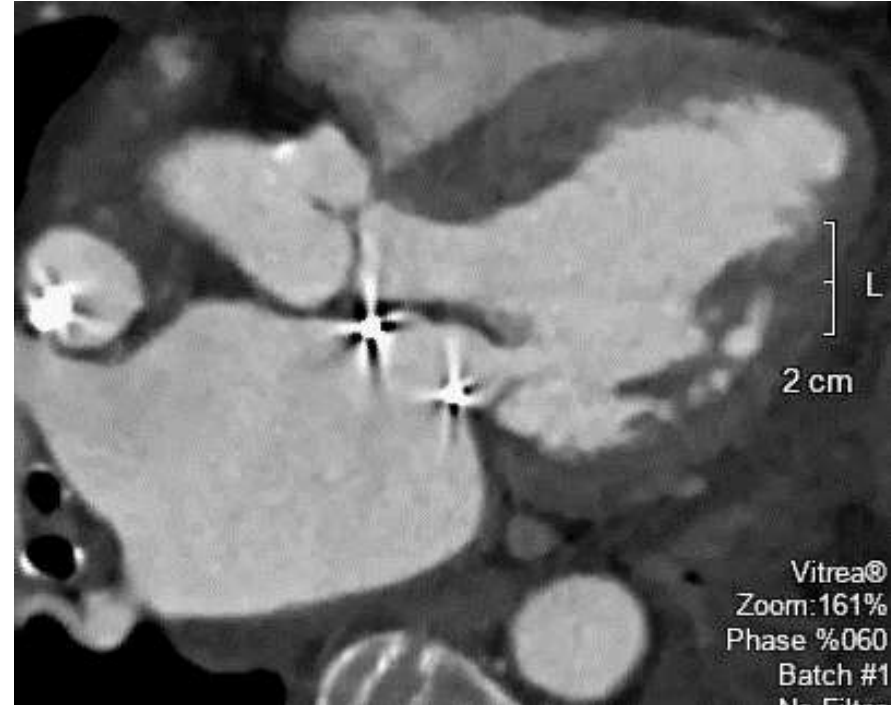


# 4D CT cine:

Pre Ablation



Post Ablation



# Cardiac CT (site measurements): 2-28-17



Neo-LVOT 156.9 mm<sup>2</sup>



Neo-LVOT 225.9 mm<sup>2</sup>

