
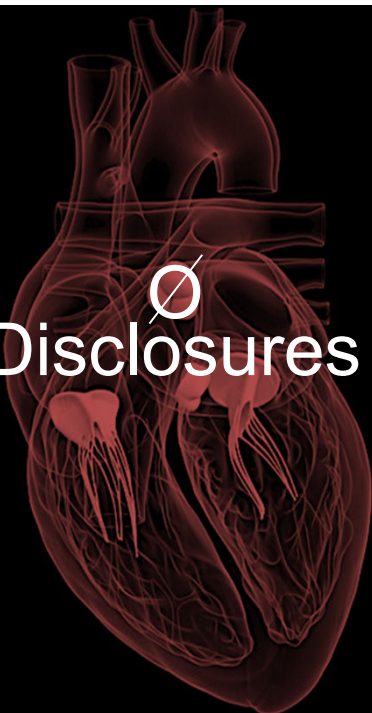


# From Failure to Success Critical Considerations in SCAPE

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1

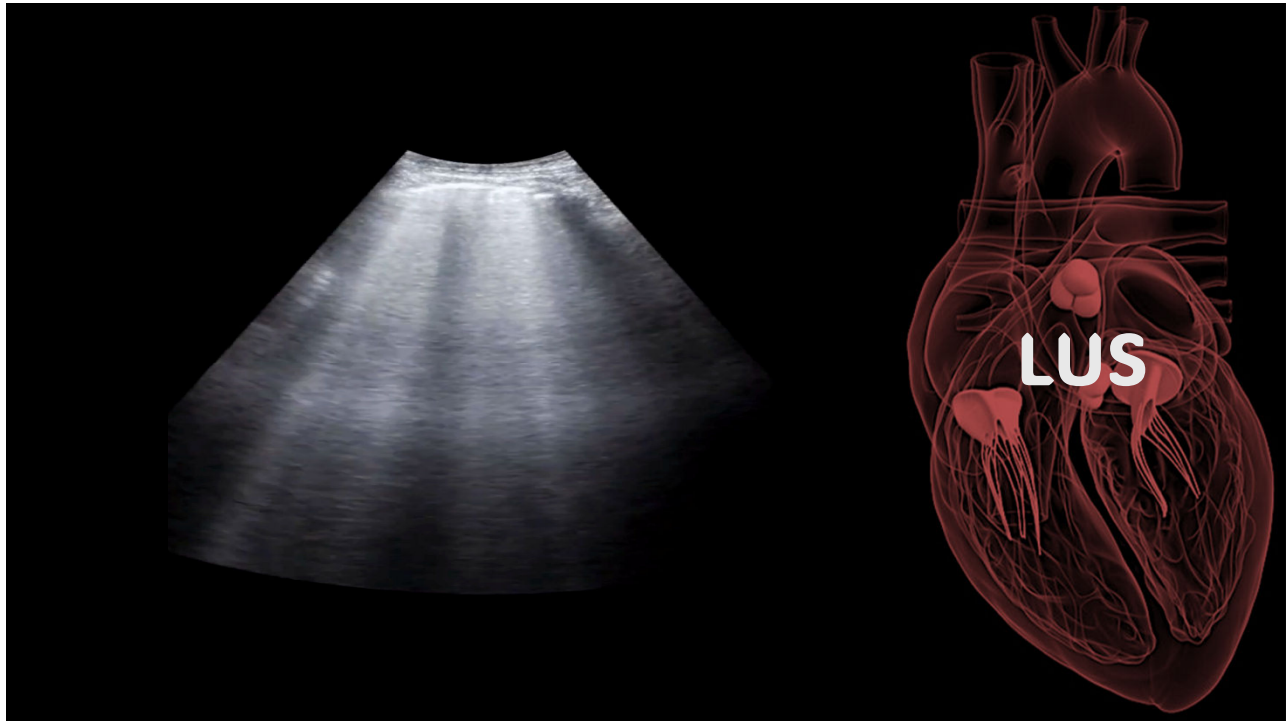


Disclosures

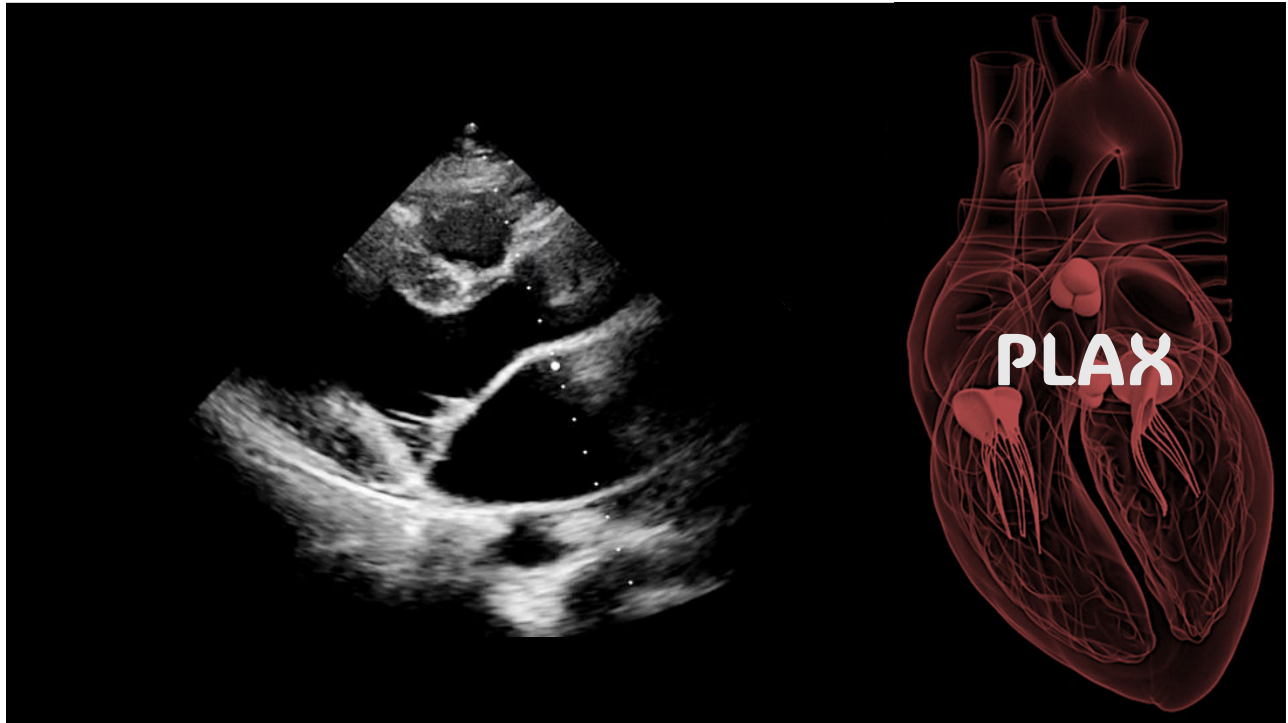
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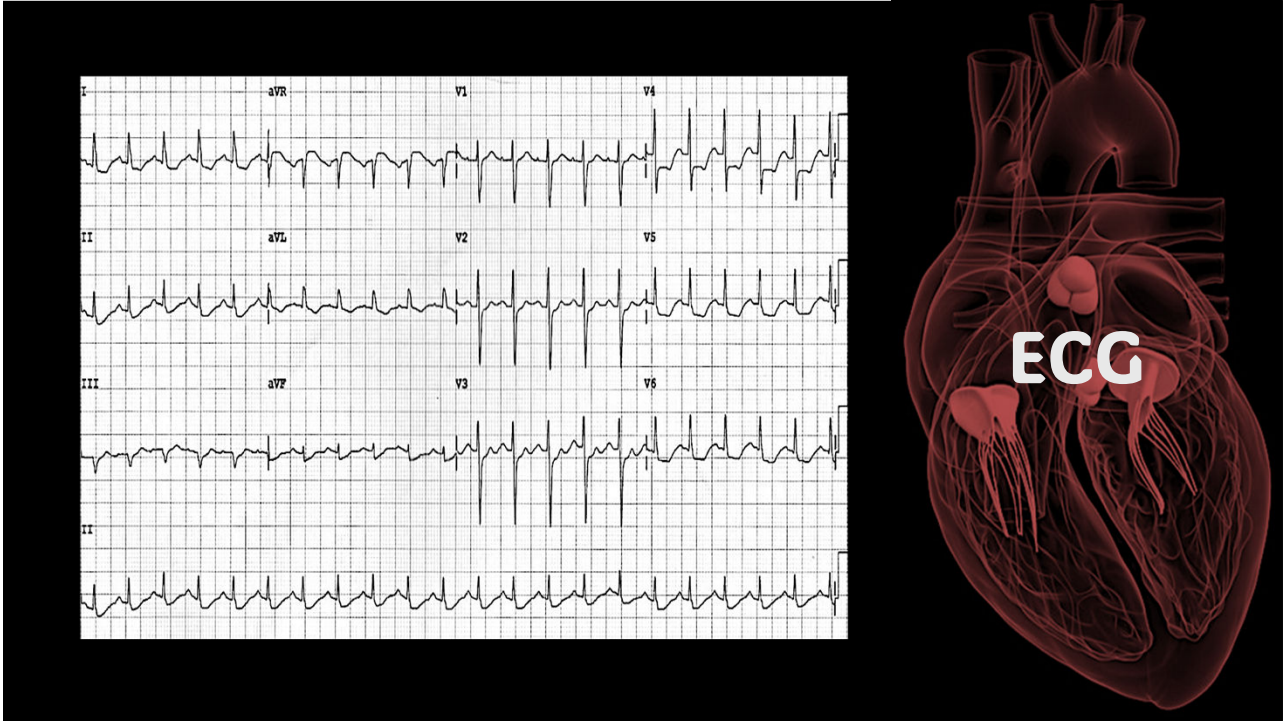


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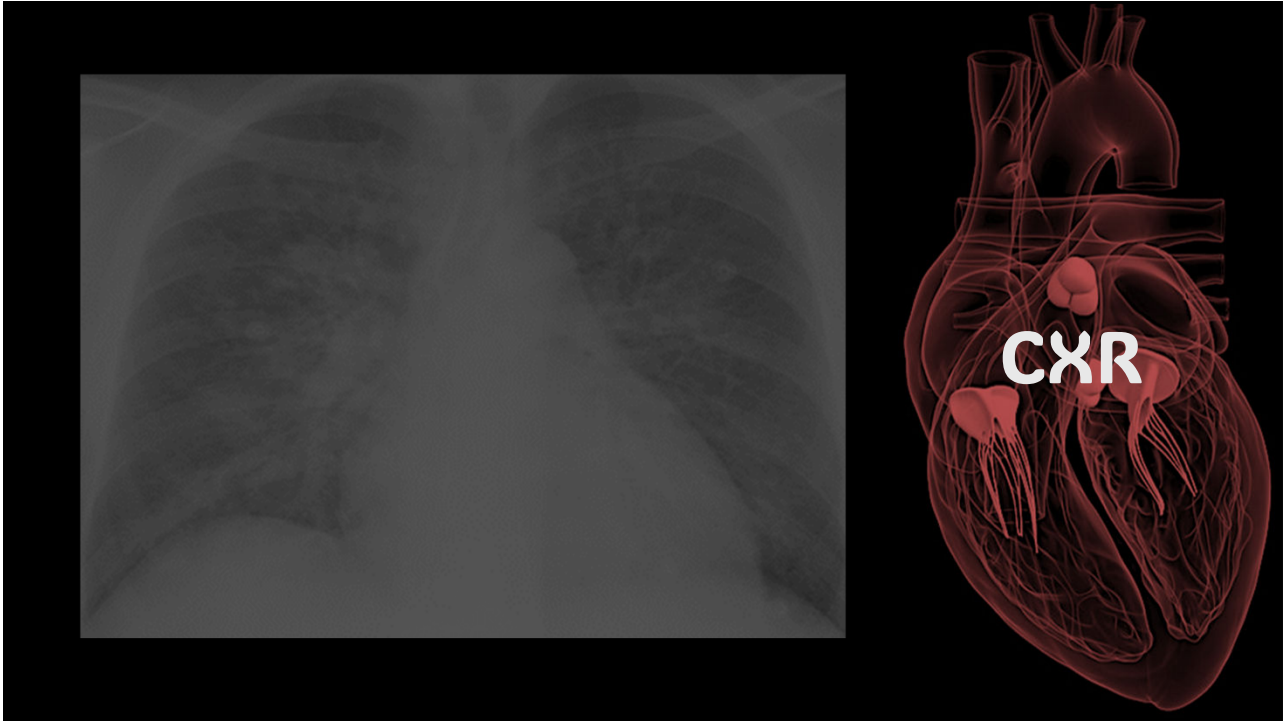


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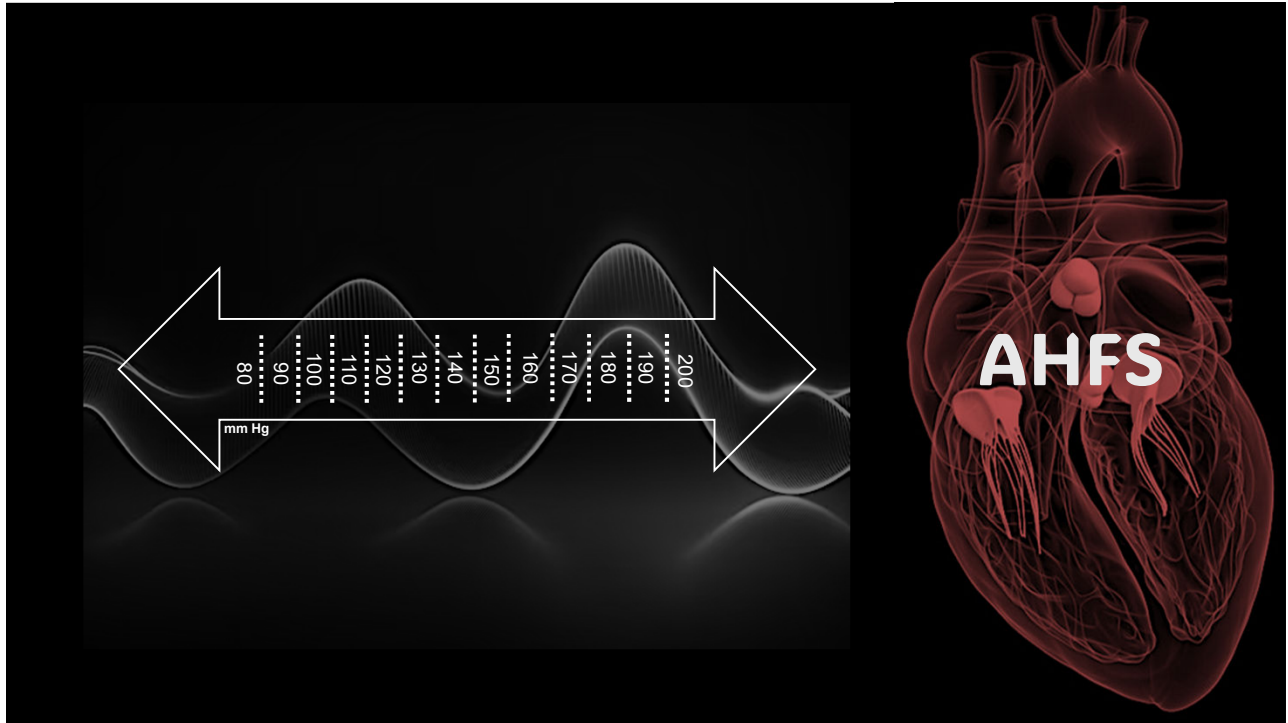




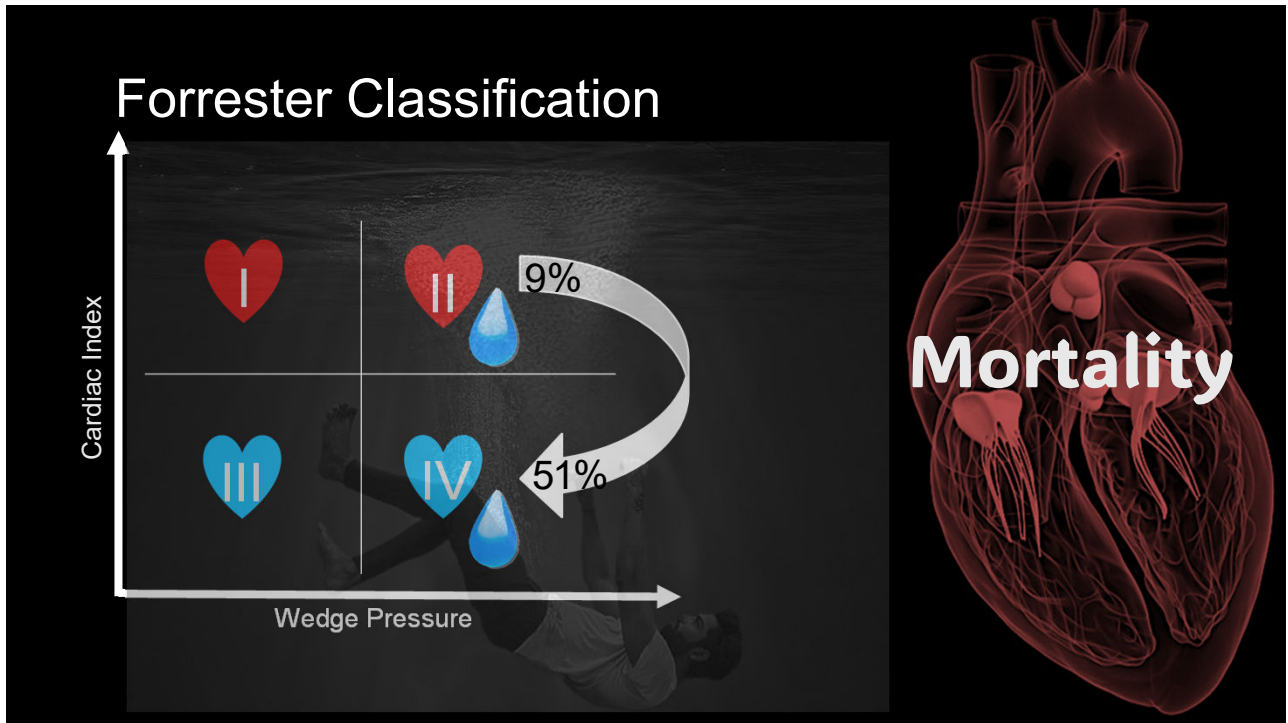
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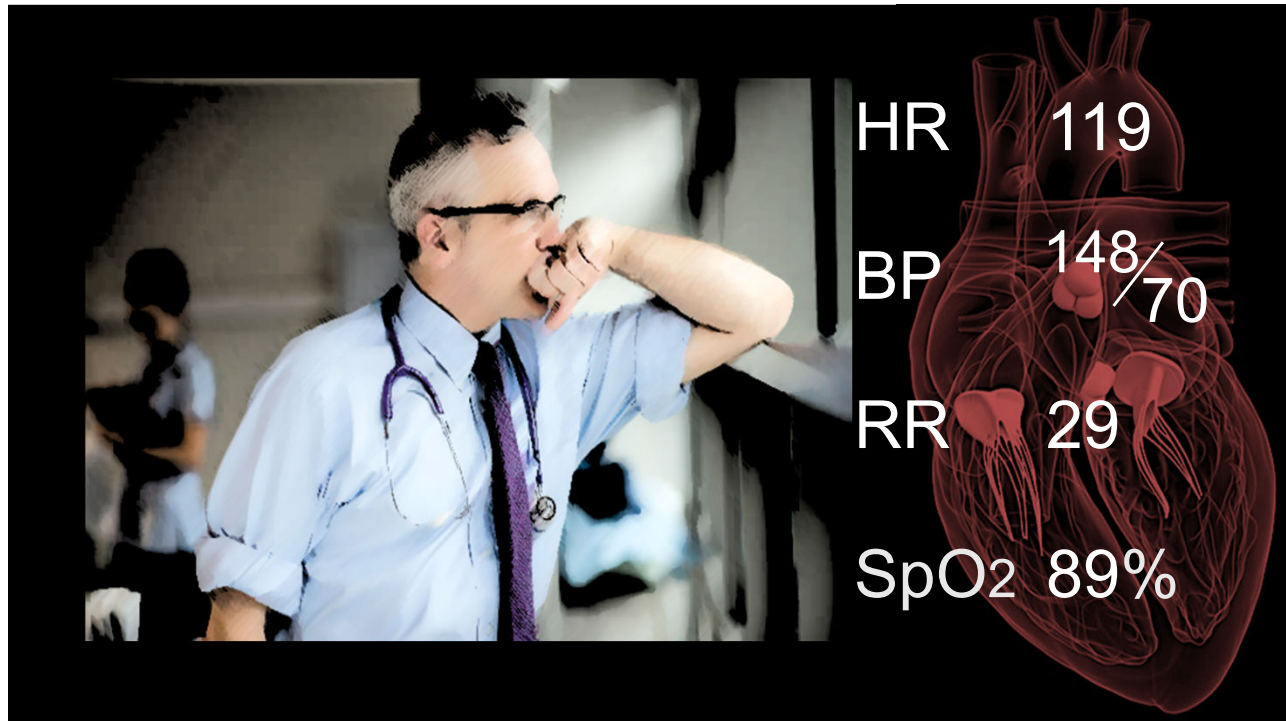
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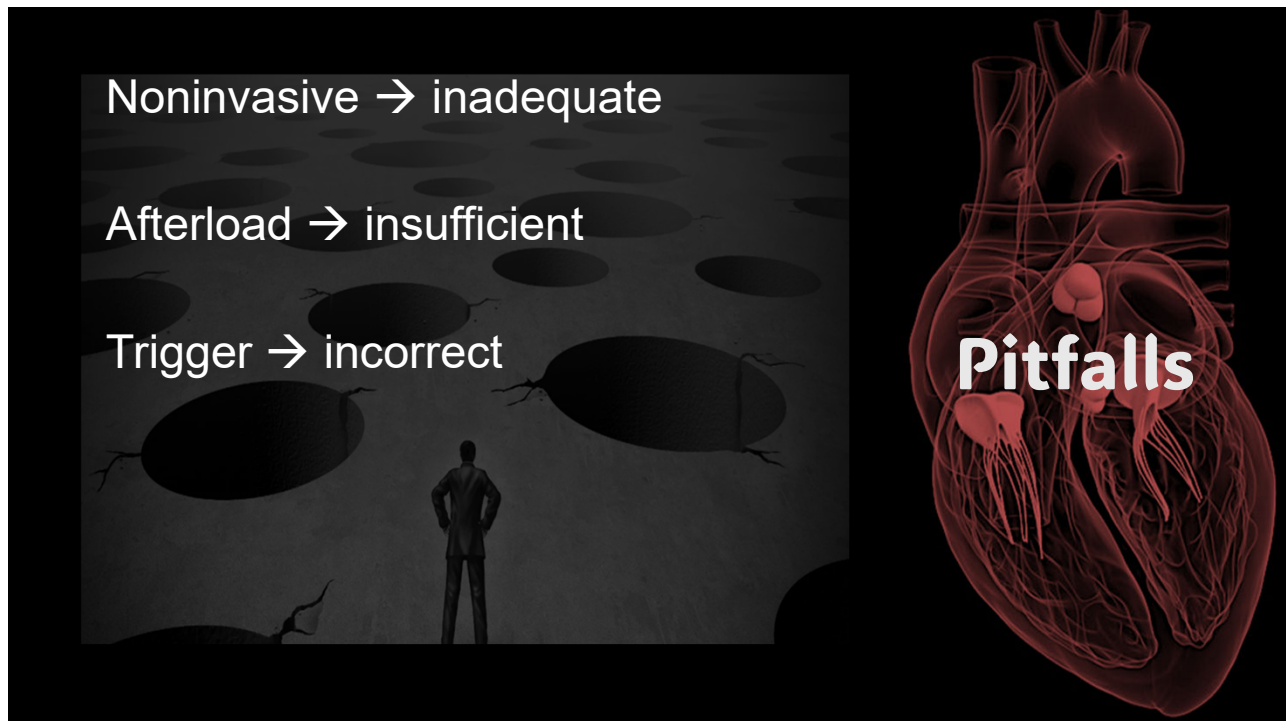
9



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Medication nonadherence

Volume overload\*

Intoxication/withdrawal

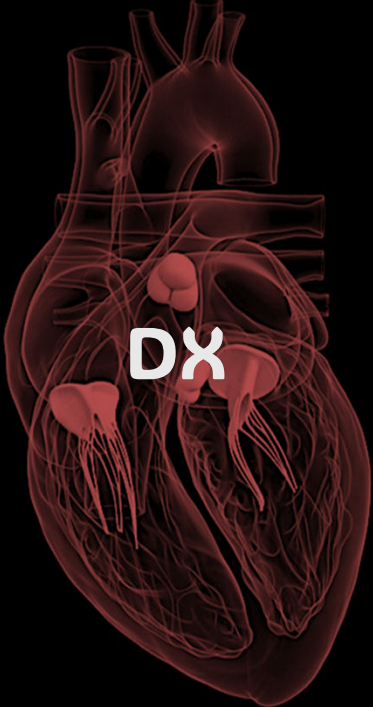
Acute myocardial injury



**Triggers**

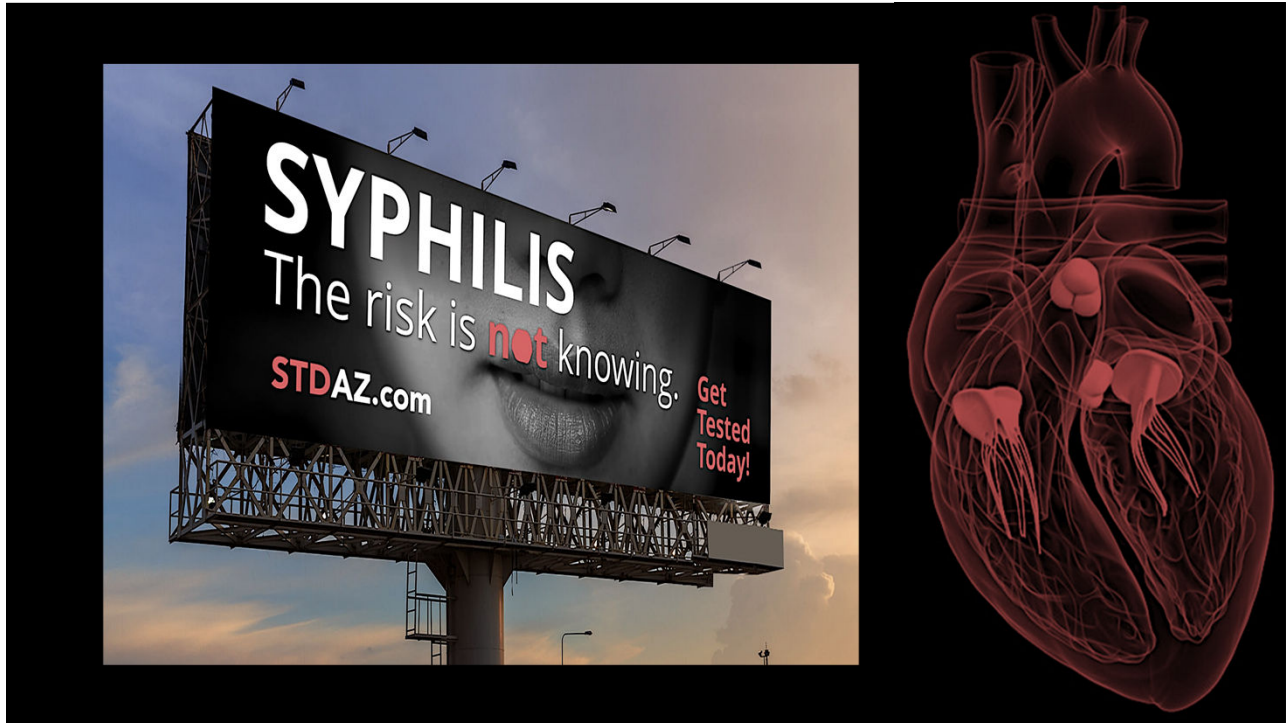
13

The risk is **not** knowing.

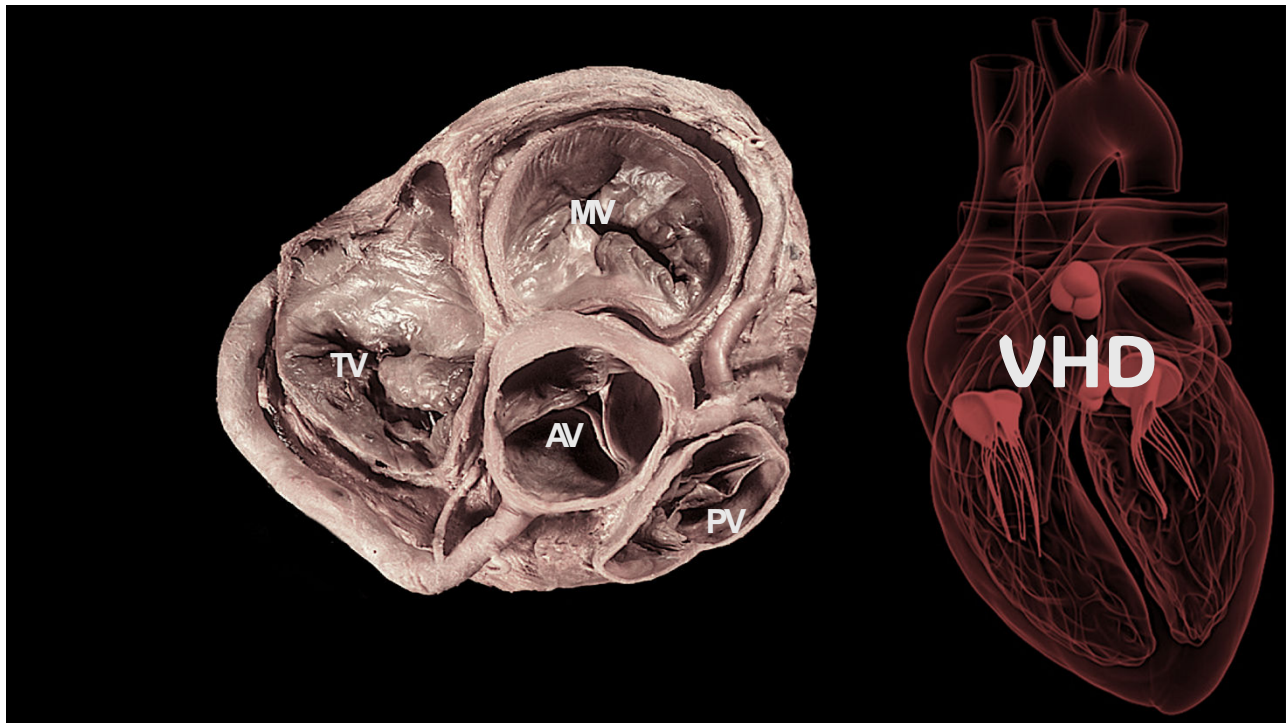


**DX**

14



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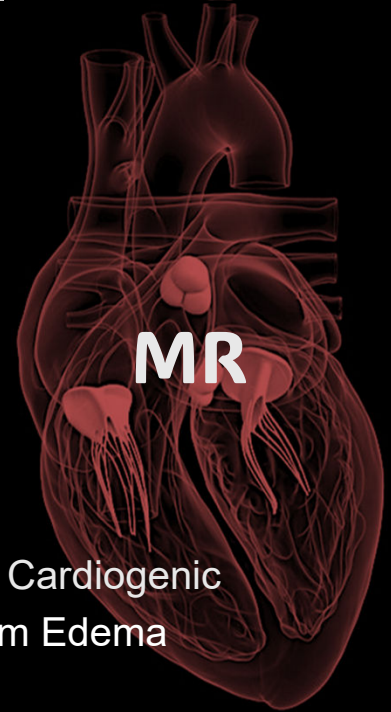


Most common VHD

Insufficient valvular coaptation

Ventricle → Volume →  Forward SV

Atrium → Volume → Pressure → Acute Cardiogenic Pulm Edema



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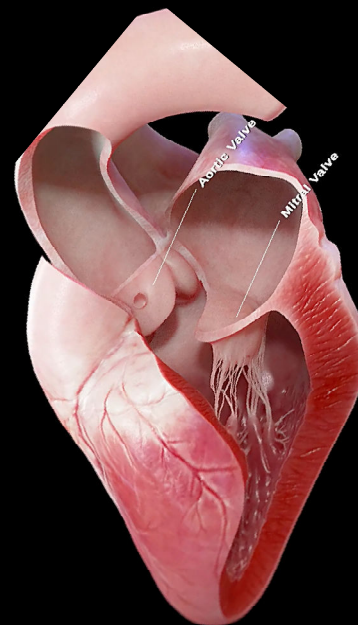
Annulus

Commissure

Leaflets

Chordae

Papillary



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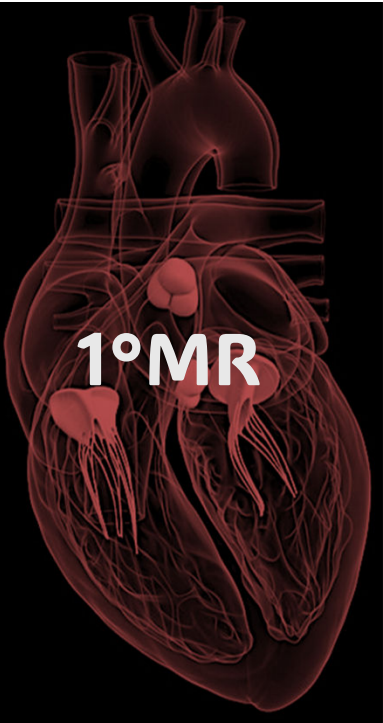
Ischemic

Infectious

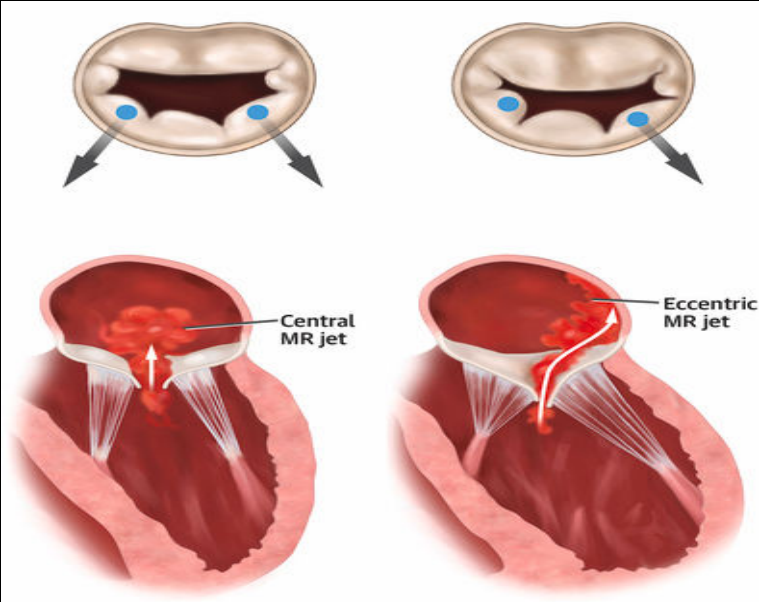
Inflammatory

Degenerative

**1°MR**

An anatomical illustration of the heart in a reddish-brown color scheme, showing the four chambers and major vessels. The text "1°MR" is overlaid in white on the right side of the heart.


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Central MR jet

Eccentric MR jet

**Tethering**

A diagram illustrating two types of mitral regurgitation (MR) jets. The top row shows two cross-sectional views of the mitral valve with blue dots indicating the regurgitant jets. The bottom row shows corresponding cross-sections of the heart with red jets. The left diagram is labeled "Central MR jet" and shows a red jet directed centrally. The right diagram is labeled "Eccentric MR jet" and shows a red jet directed towards the left ventricular wall. To the right of these diagrams is a large anatomical illustration of the heart with the word "Tethering" overlaid in white.

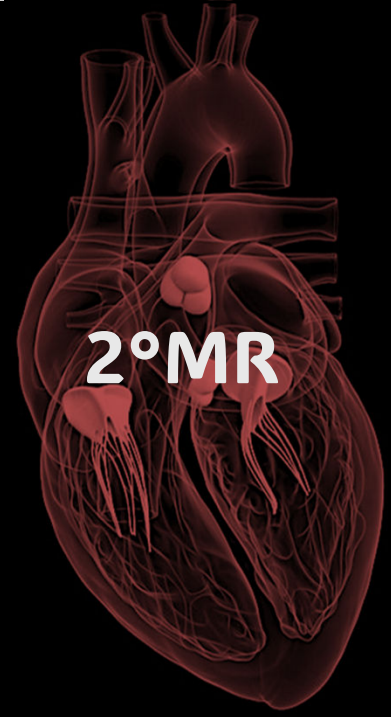
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## Cardiomyopathy

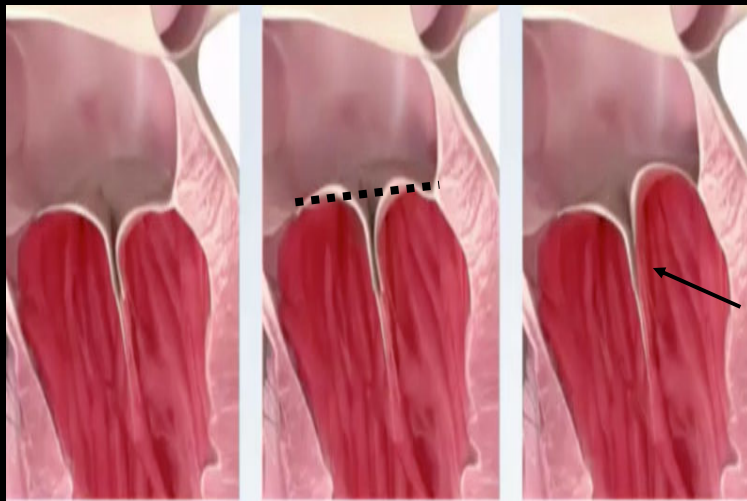
ischemic (regional dilation)  
 non-ischemic (global dilation)  
 restrictive (annular dilation)

## Dynamic LVOTO\*

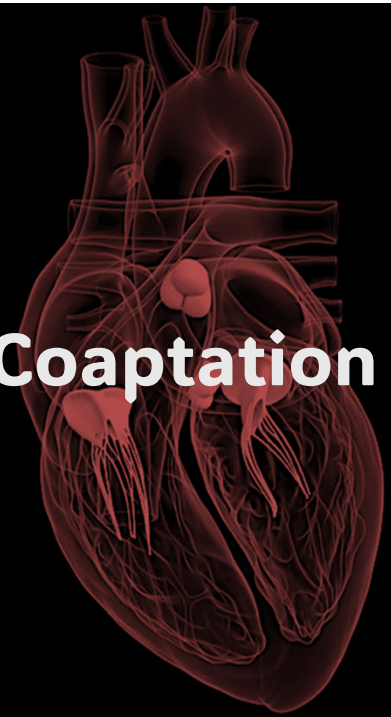
takotsubo  
 hypertrophic



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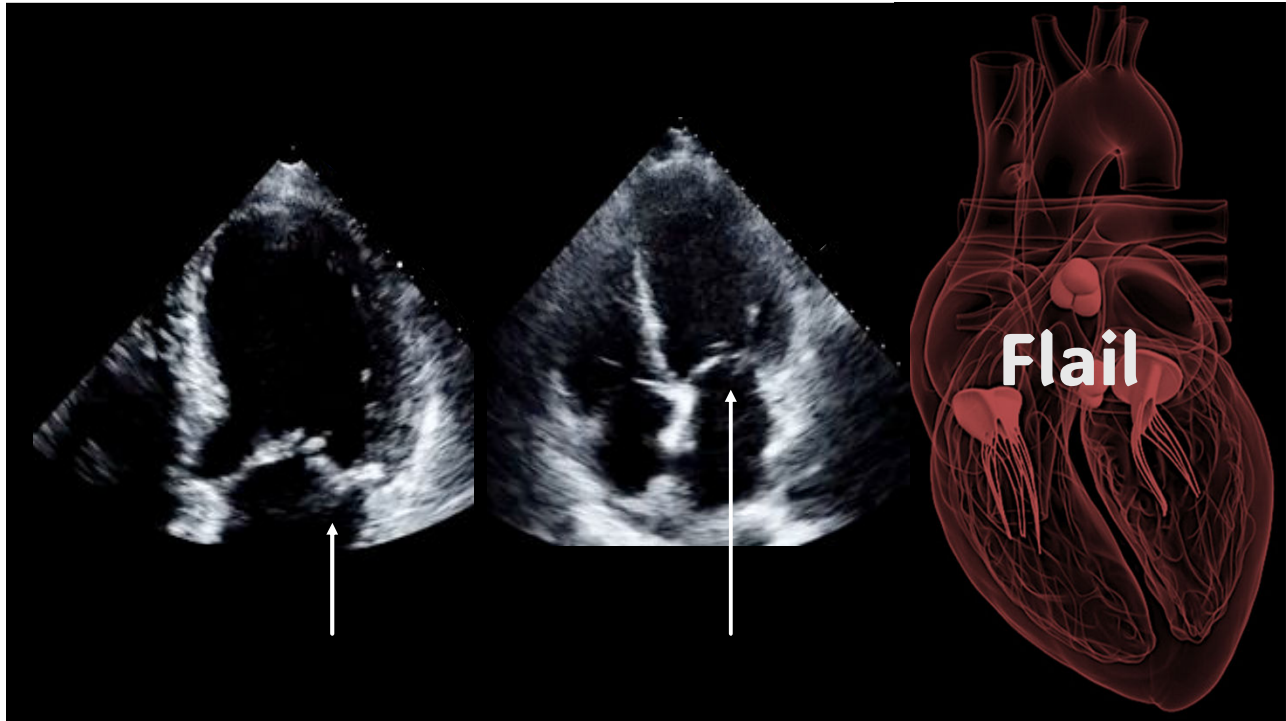


## Coaptation



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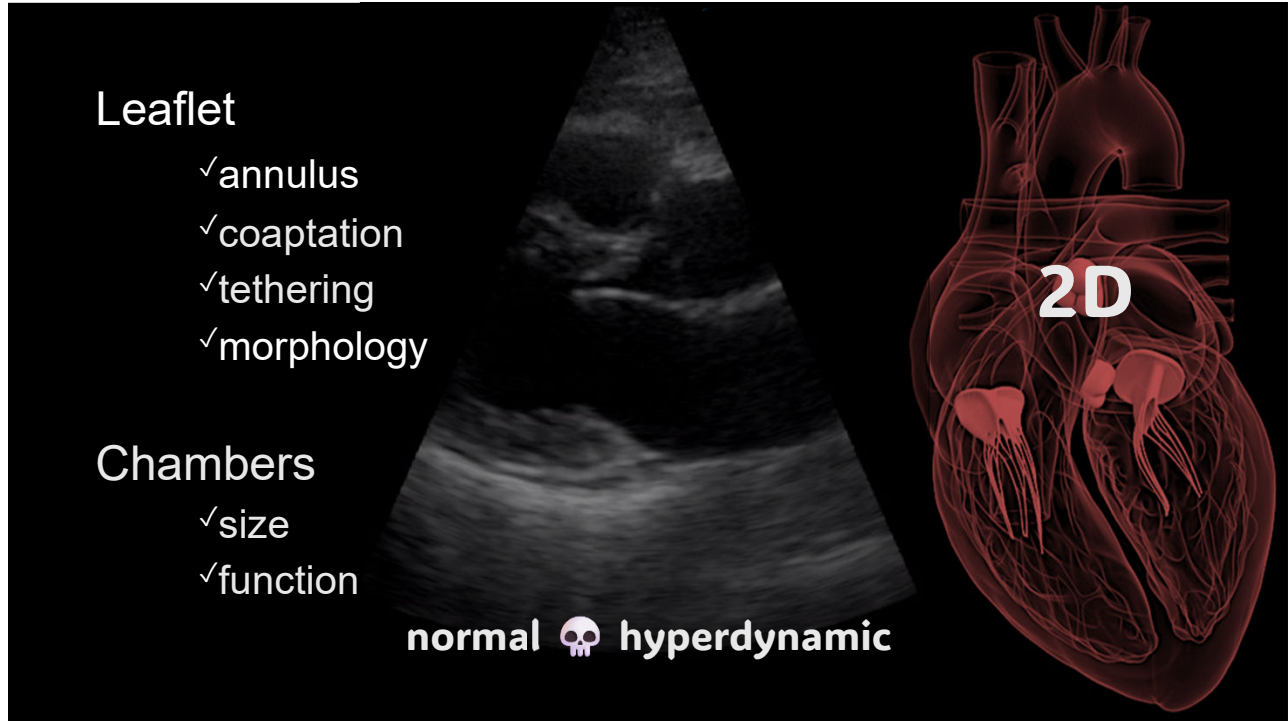
High index of suspicion

SCAPE + clinical stagnation or deterioration

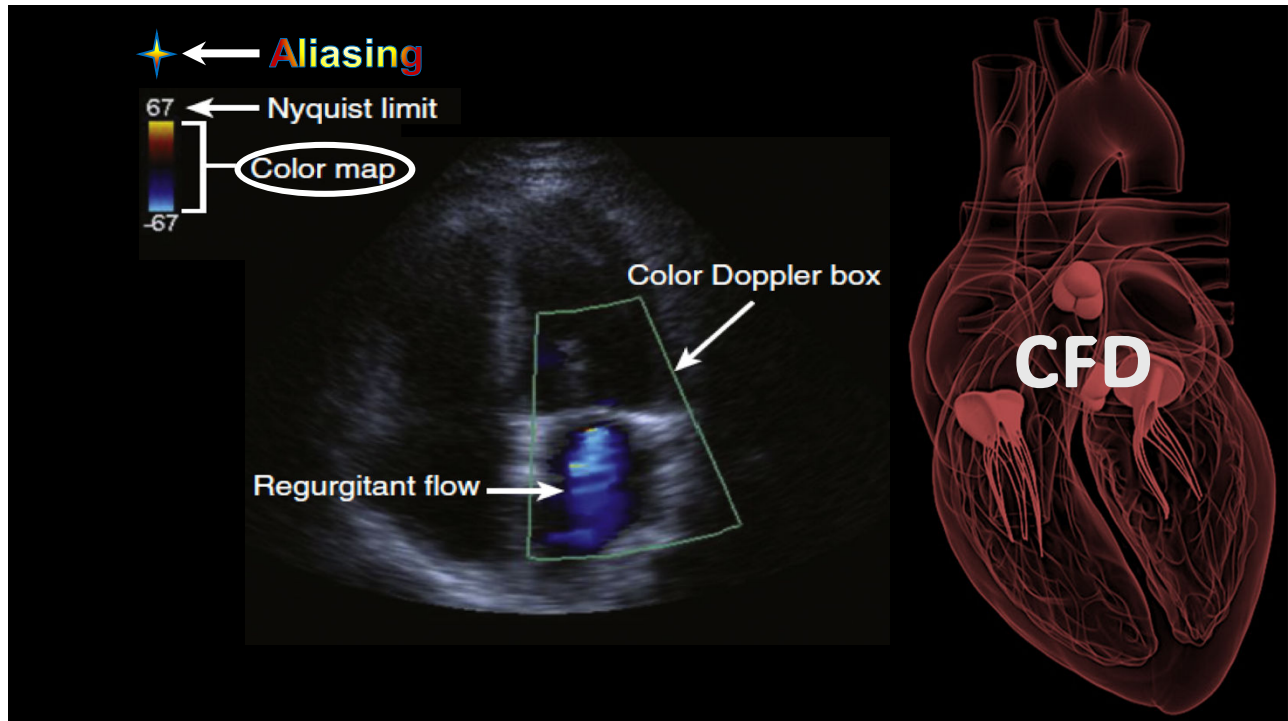
POCUS is paramount  
not intended to be comprehensive  
focused approach to acute severe disease

**ED DX**

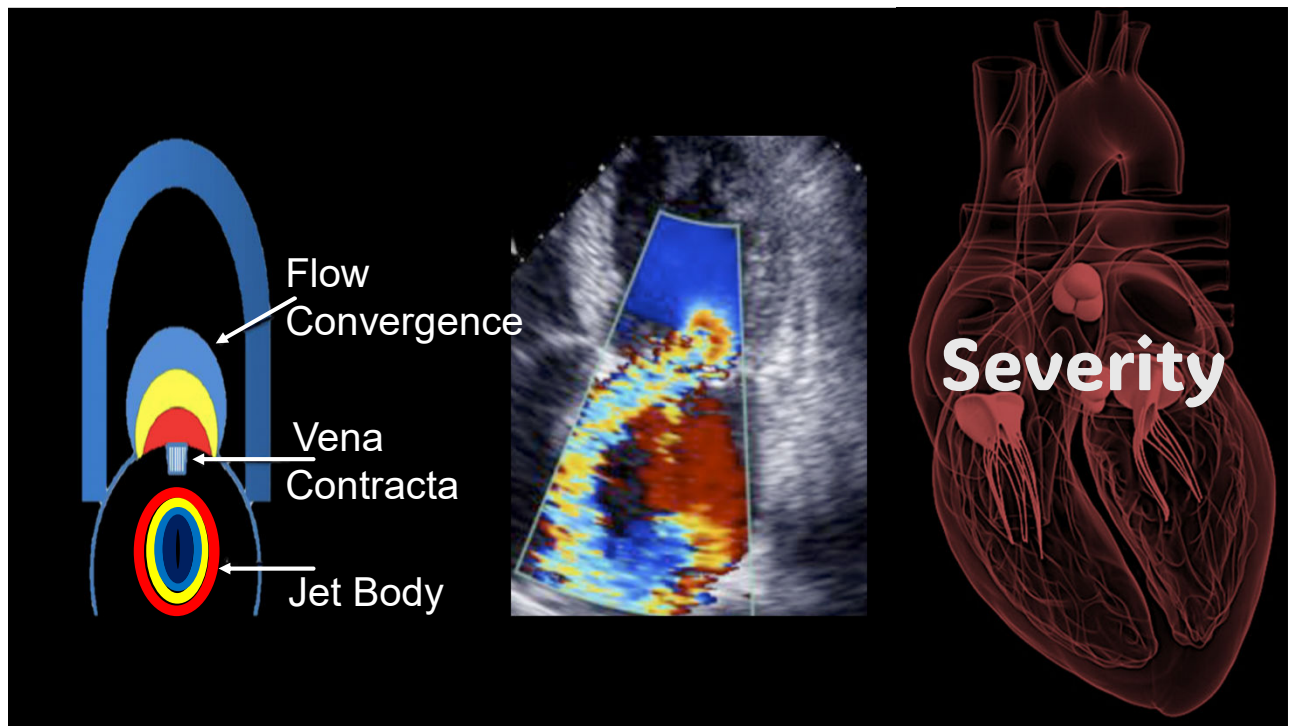
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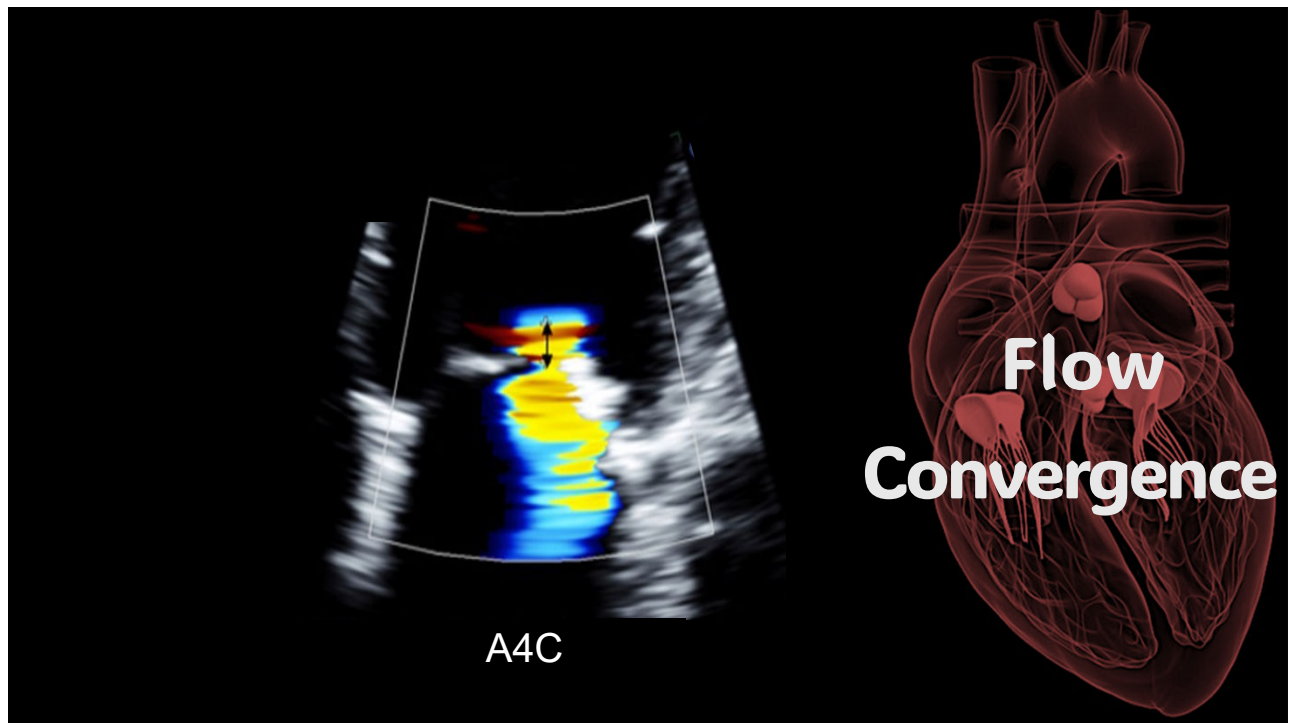
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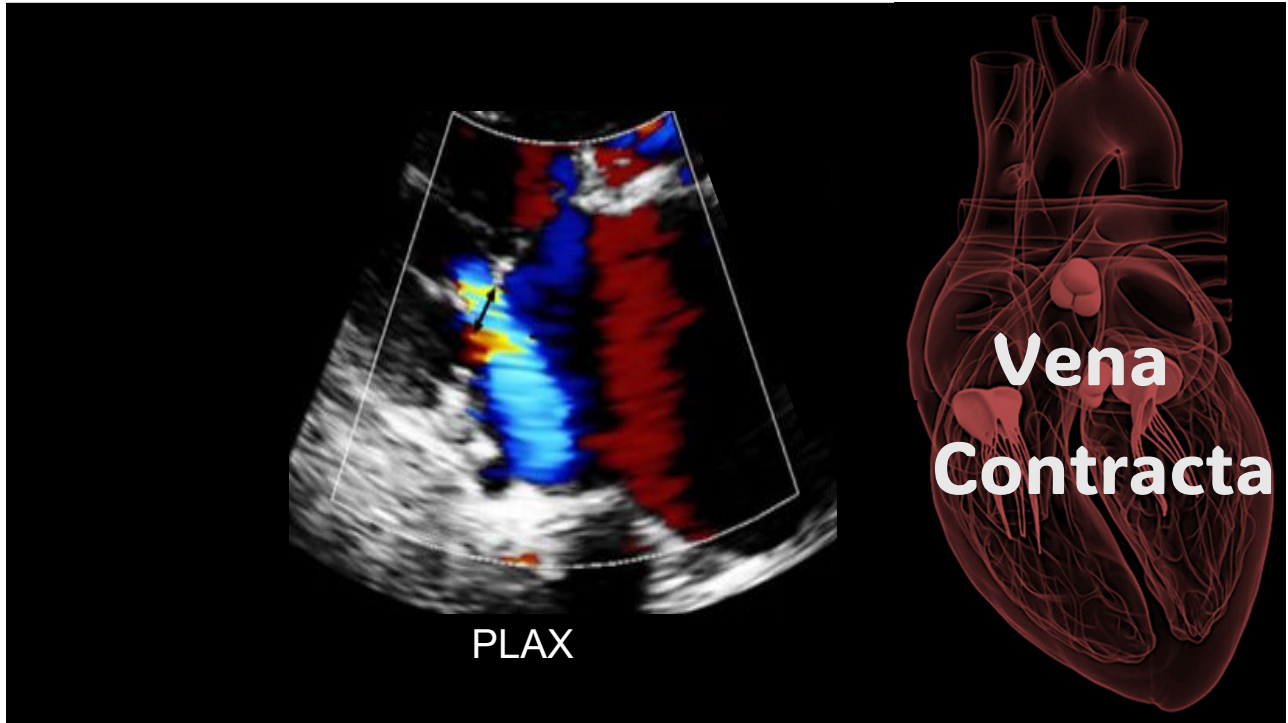


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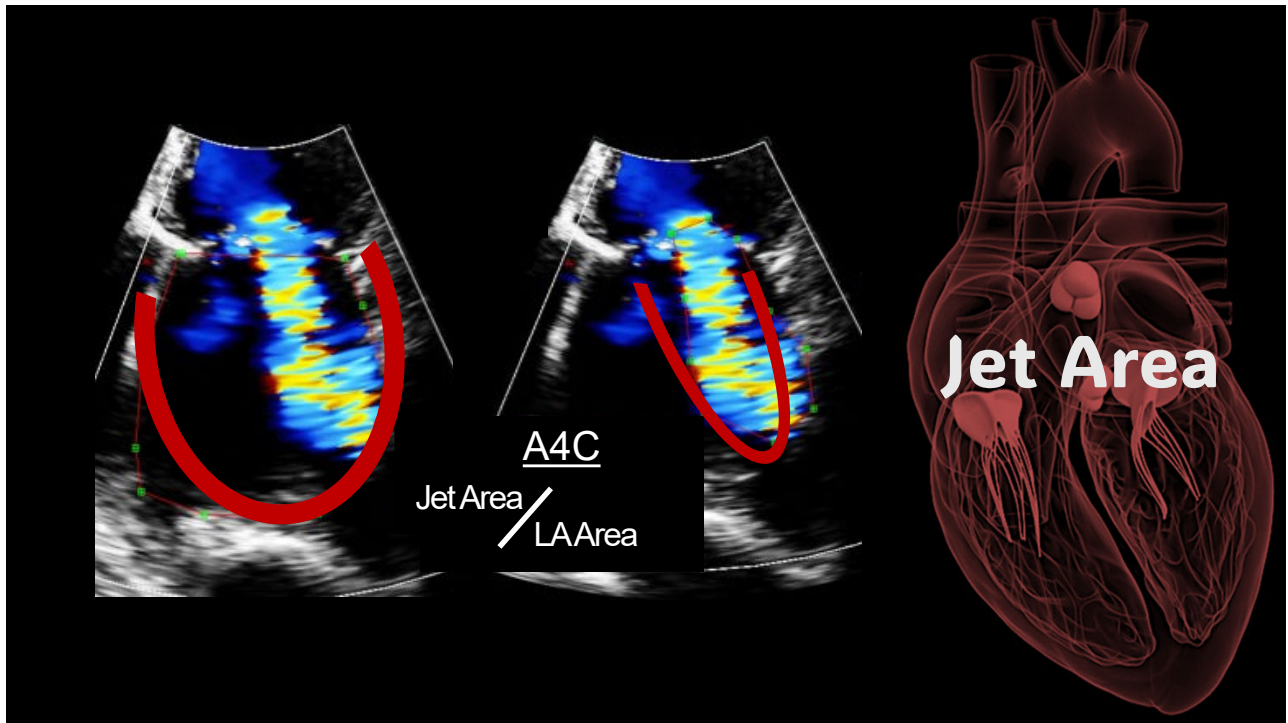


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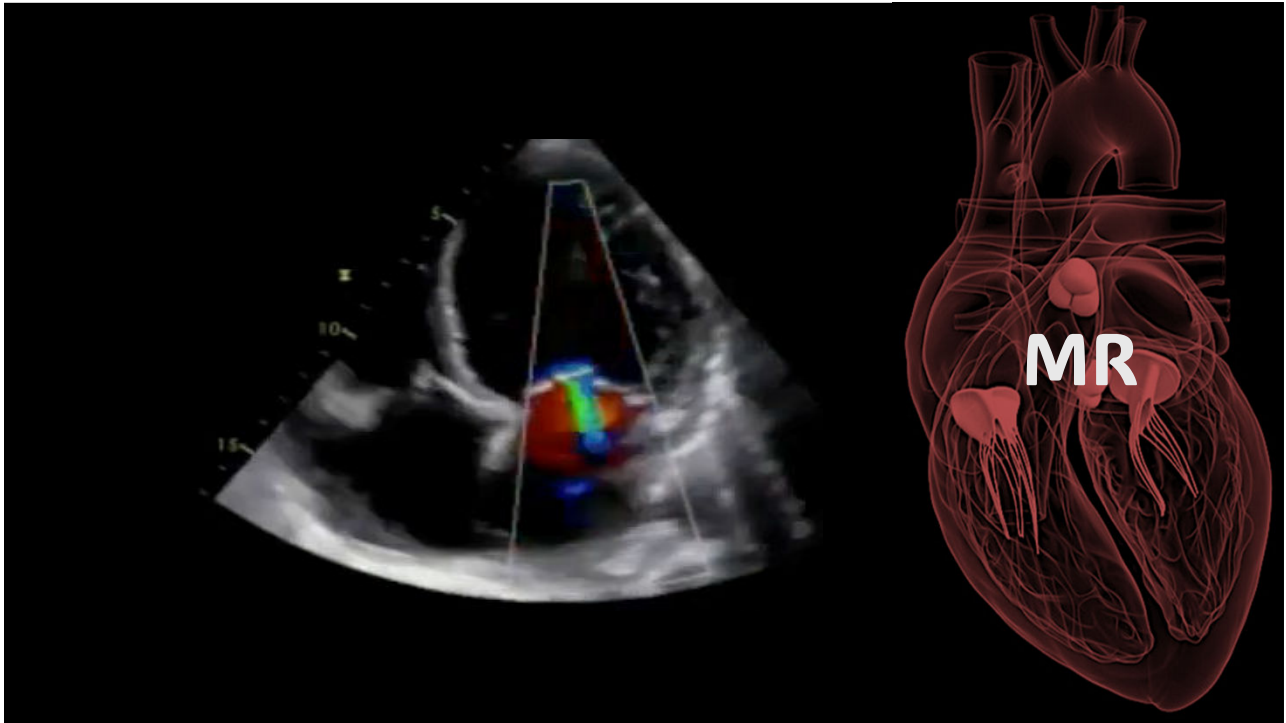




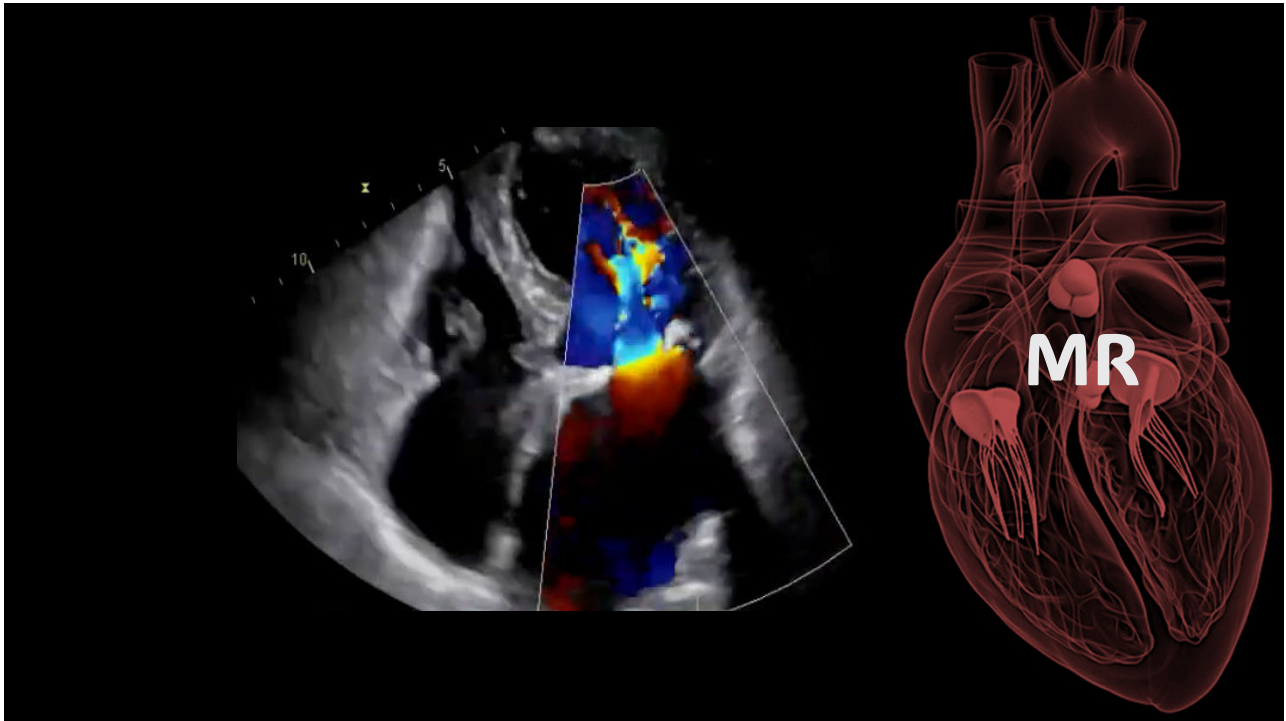
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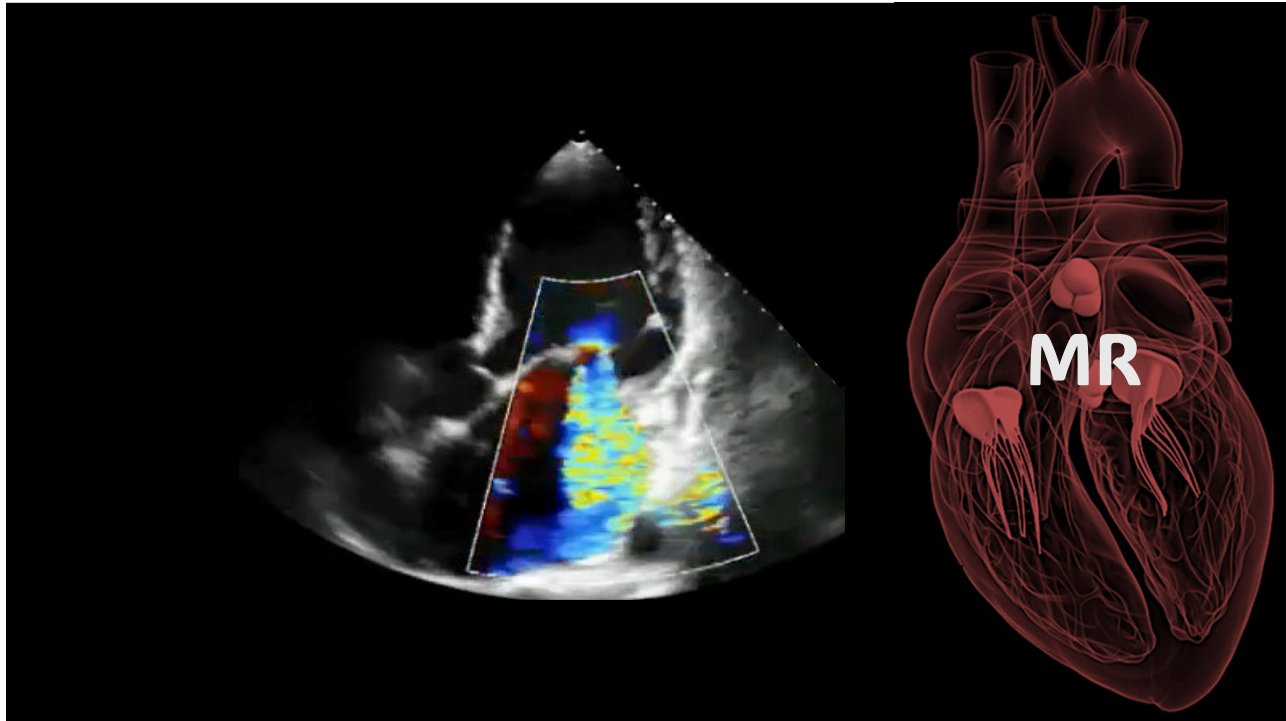
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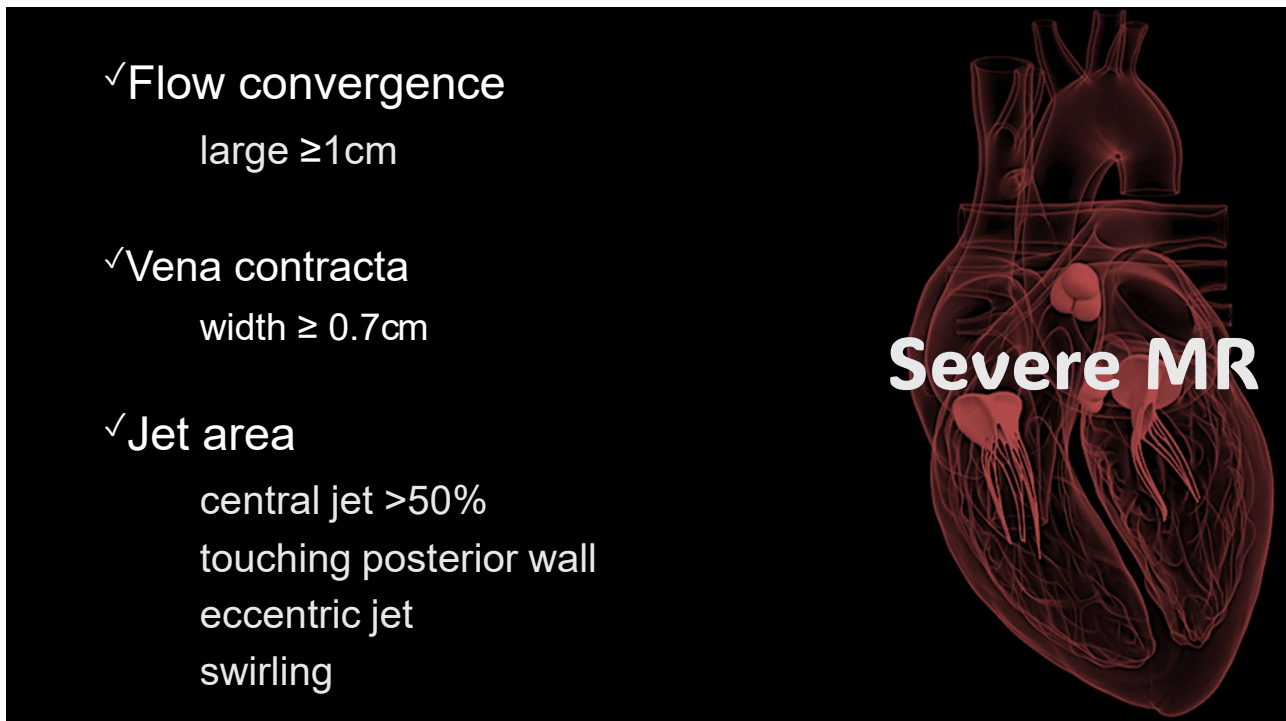
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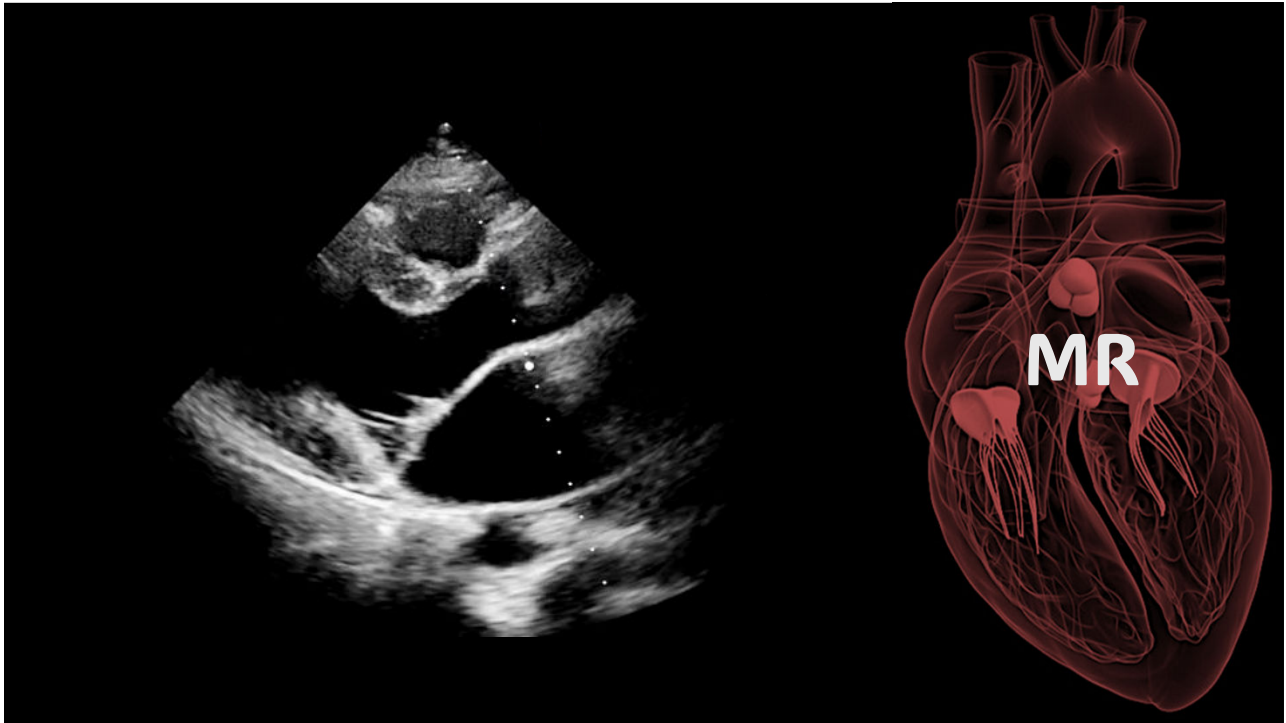


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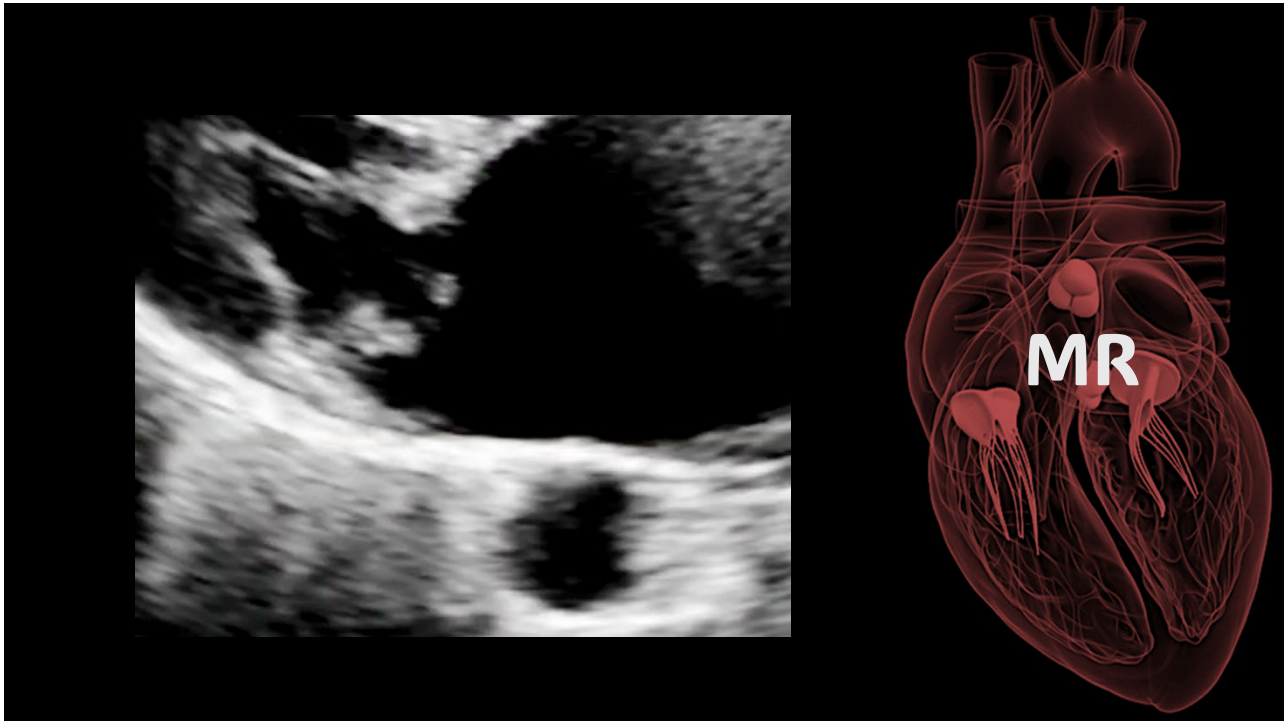


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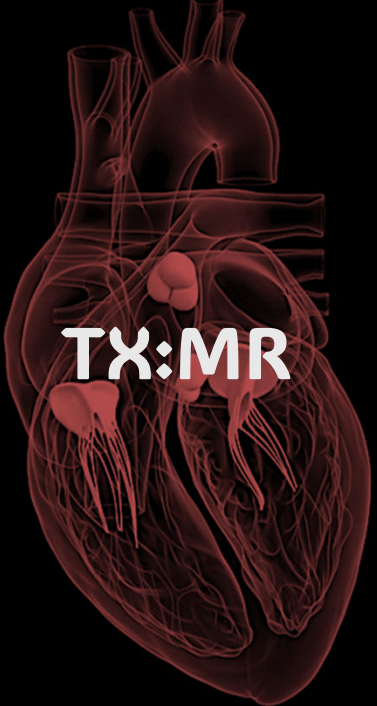




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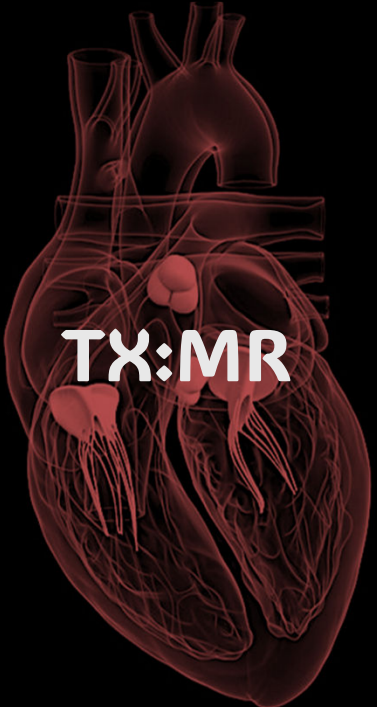


**Afterload**  
noninvasive  
vasodilation

**Preload**  
diuresis

**Chronotropy**  
mild-moderate sinus tach

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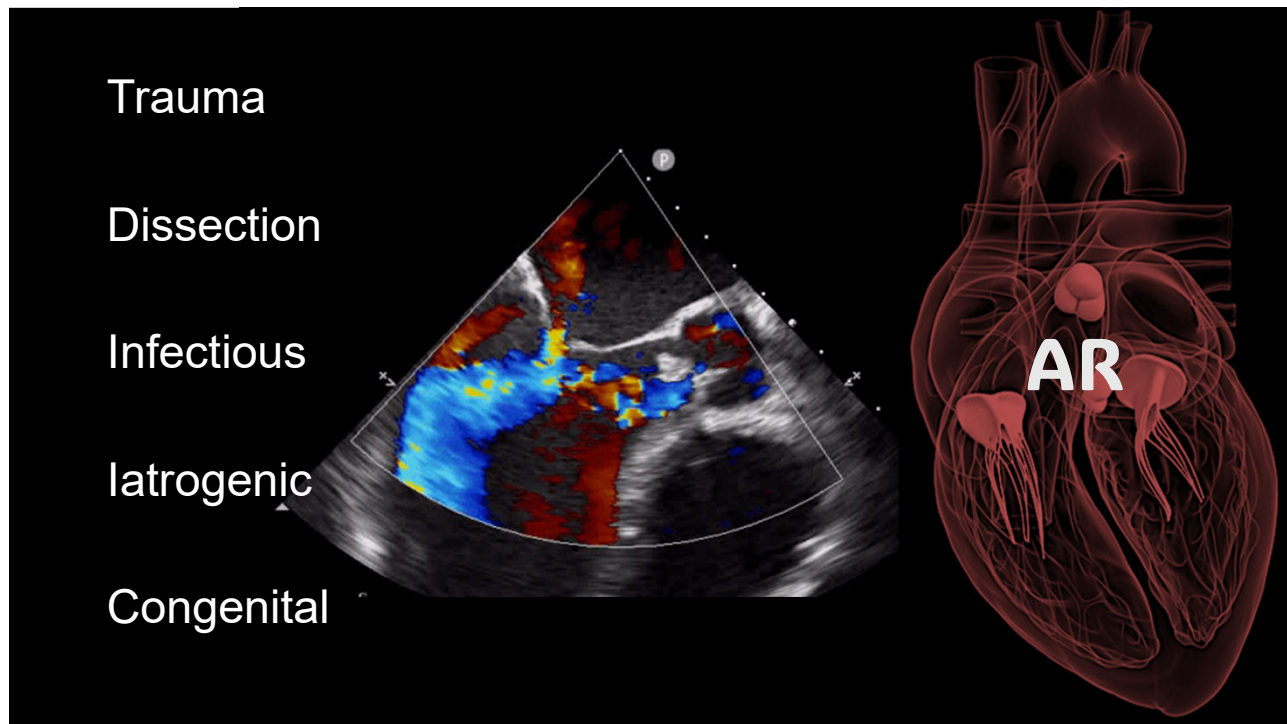


**Inotropy**  
epinephrine  
norepinephrine

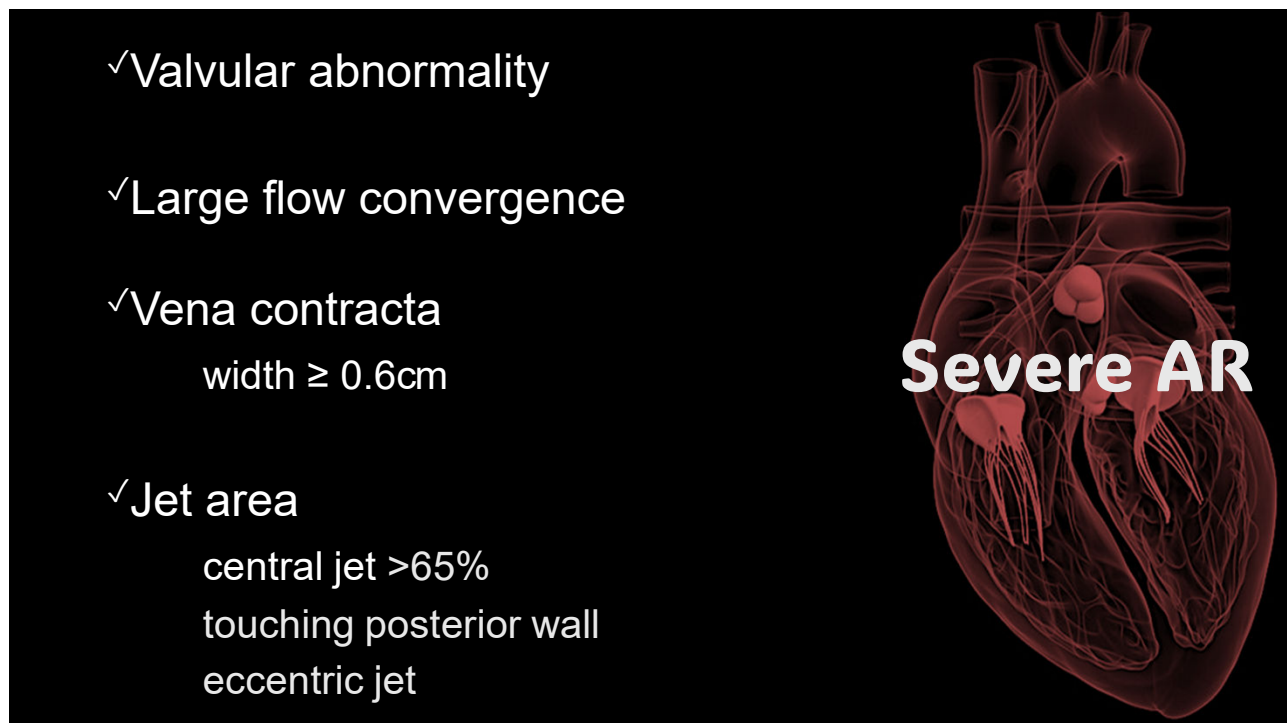
**MCS**  
IABP

**Consultation**  
TMVr

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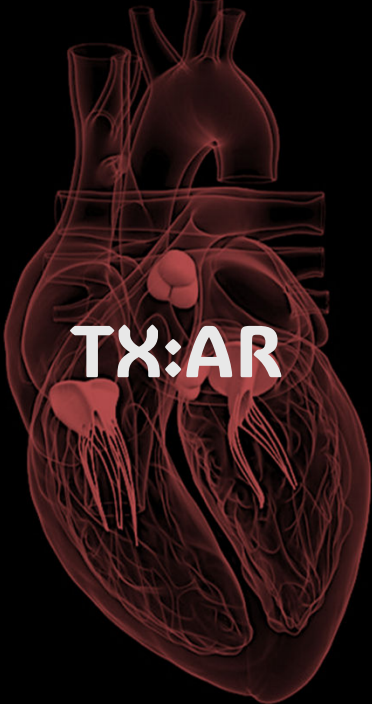
40



Afterload  
vasodilation

Preload  
diuresis

Chronotropy  
caution w/ $\beta$ -blockade



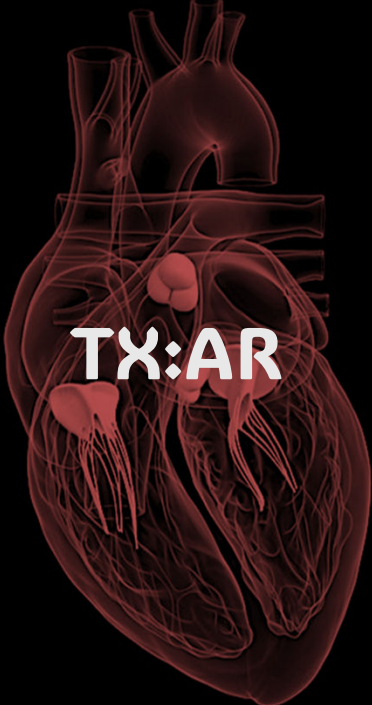
The image shows a semi-transparent anatomical illustration of a human heart, viewed from the front. The heart is rendered in a reddish-brown color. The text 'TX:AR' is overlaid in white, bold, sans-serif font across the middle of the heart.

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Inotropy  
epinephrine  
norepinephrine

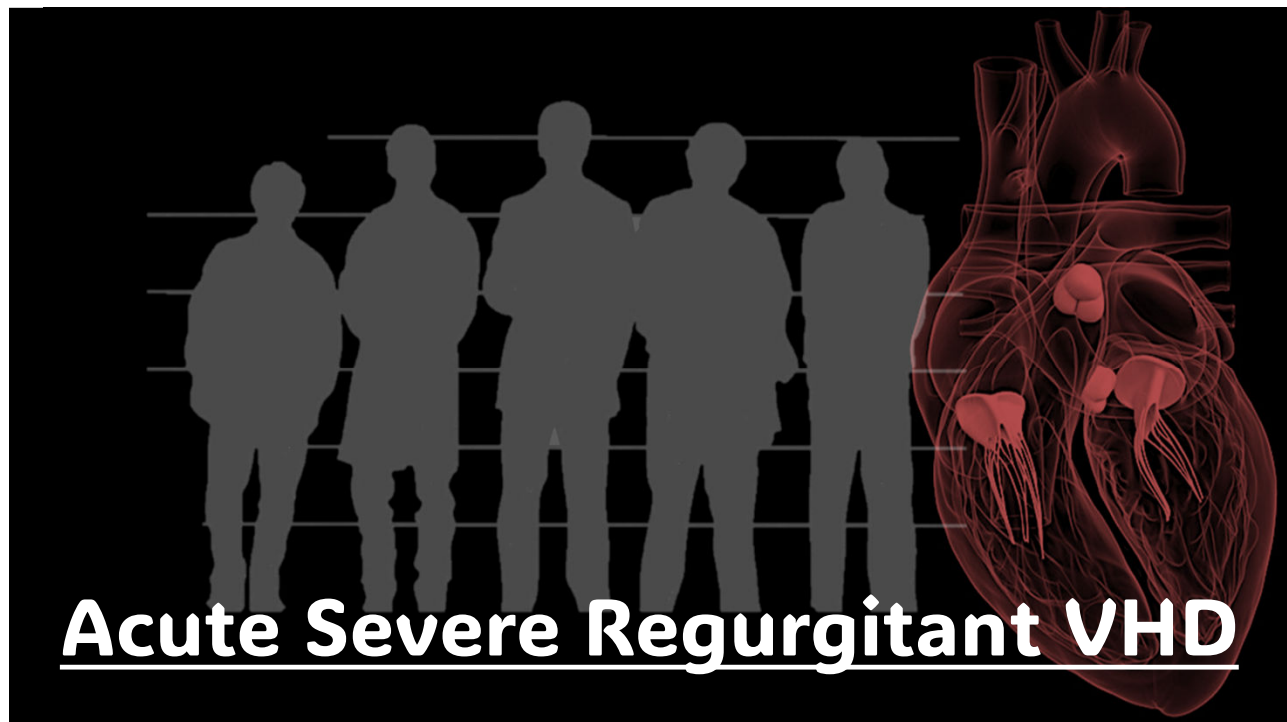
MCS  
suboptimal

Consultation  
TAVR

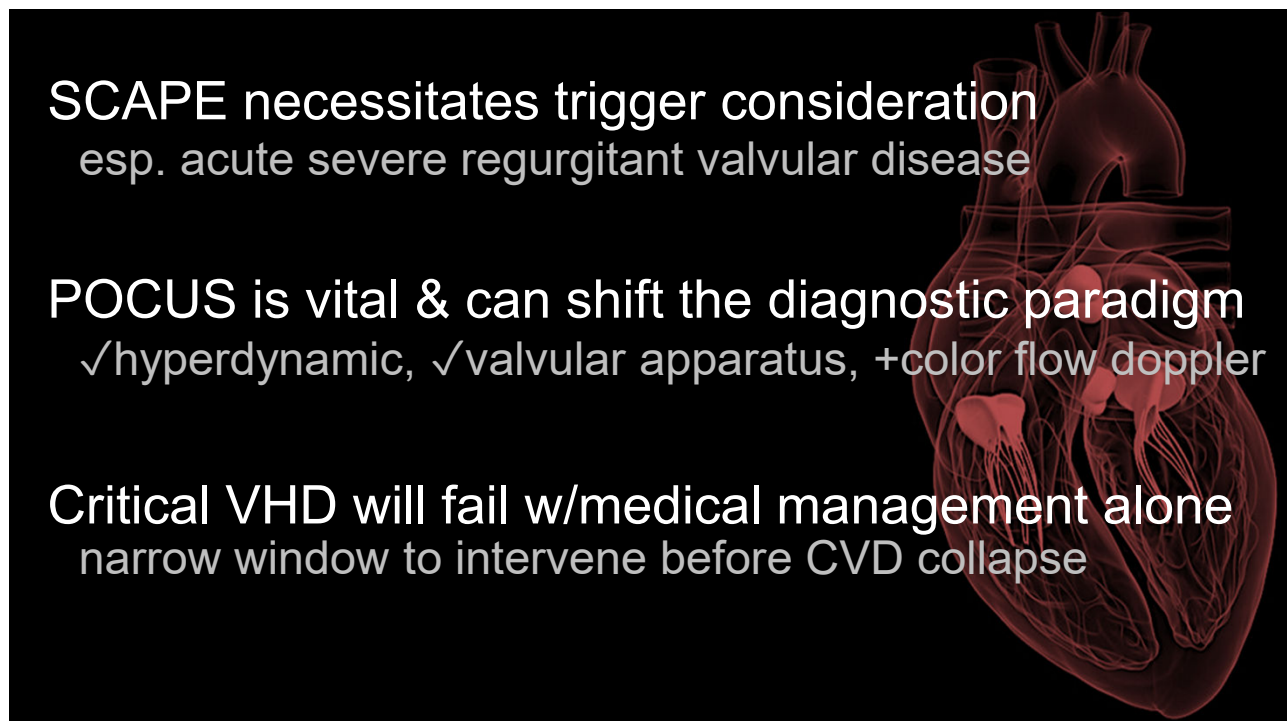


The image shows a semi-transparent anatomical illustration of a human heart, viewed from the front. The heart is rendered in a reddish-brown color. The text 'TX:AR' is overlaid in white, bold, sans-serif font across the middle of the heart.

42



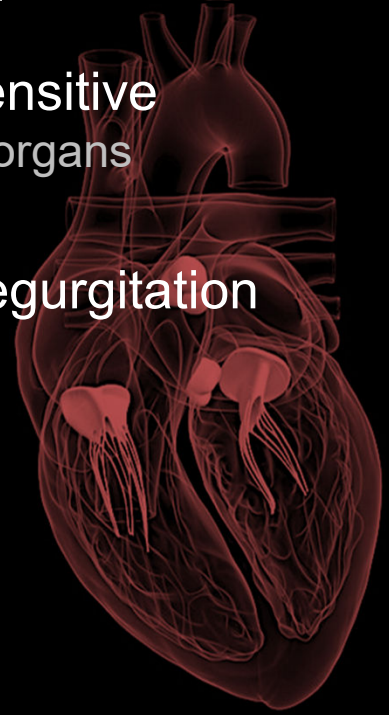
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Regurgitant lesions are afterload sensitive  
target the lowest MAP to perfuse end-organs

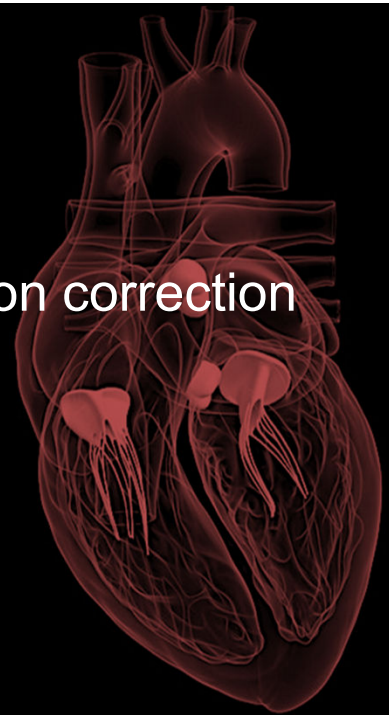
Volume overload hugely worsens regurgitation  
diuresis is beneficial



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Sinus tachycardia is compensatory  
caution with reducing chronotropy

MCS is suboptimal to definitive lesion correction  
early consultation is imperative




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# From Failure to Success Critical Considerations in SCAPE

Sincere Thanks

[stewelde@som.umaryland.edu](mailto:stewelde@som.umaryland.edu) 

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Afterload reduction is harmful

Diuresis is recommended

Ideal HR lower,  $\beta B$  may be required

Vasopressors, *if required*

phenylephrine

vasopressin

MCS (ECMO) is an effective temporizer



**Stenosis**

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