

# Co se může stát během PCI

MUDr. Vladimír Kaučák

kardiologické oddělení MNO - Ostrava

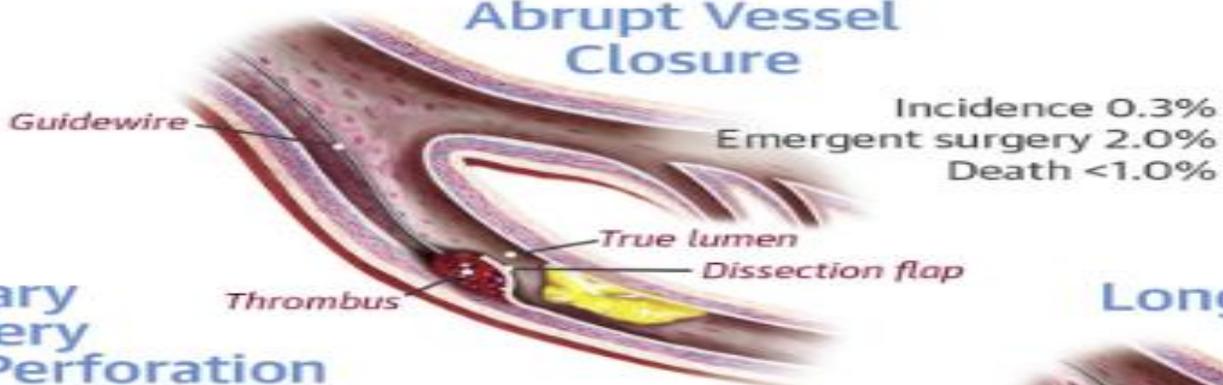
**NEMOCNICE!!!**

**MĚSTSKÁ NEMOCNICE OSTRAVA**

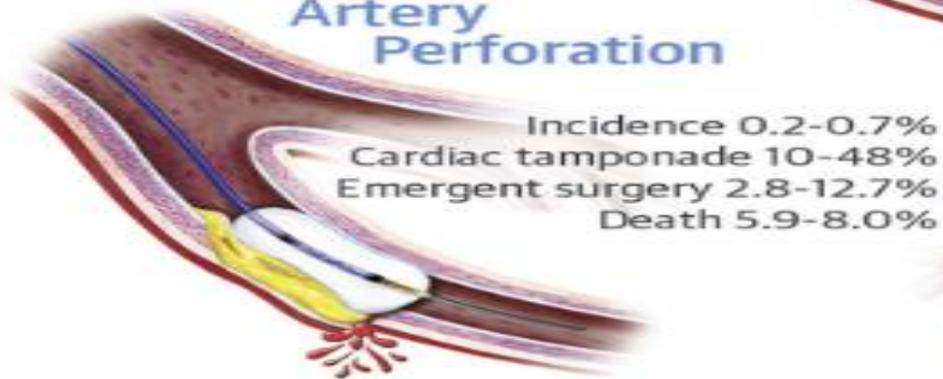
- ▶ disekce
- ▶ perforace
- ▶ uvíznutý materialu  
(entrapment)
- ▶ no - flow



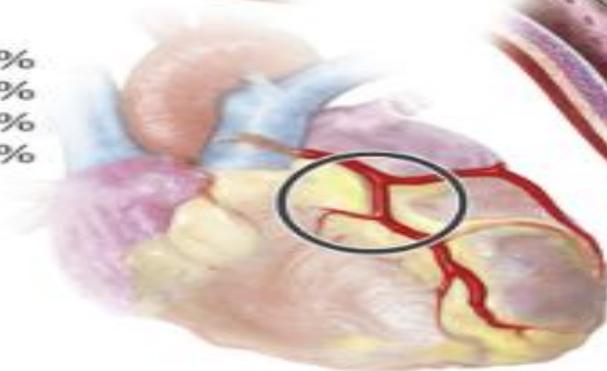
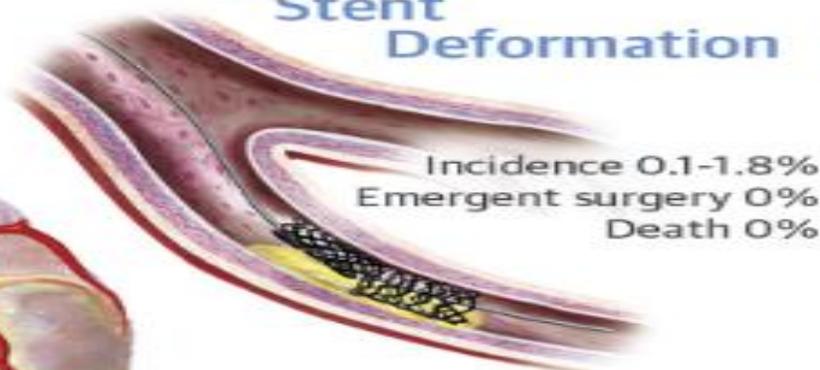
### Abrupt Vessel Closure



### Coronary Artery Perforation



### Longitudinal Stent Deformation



### Burr Entrapment

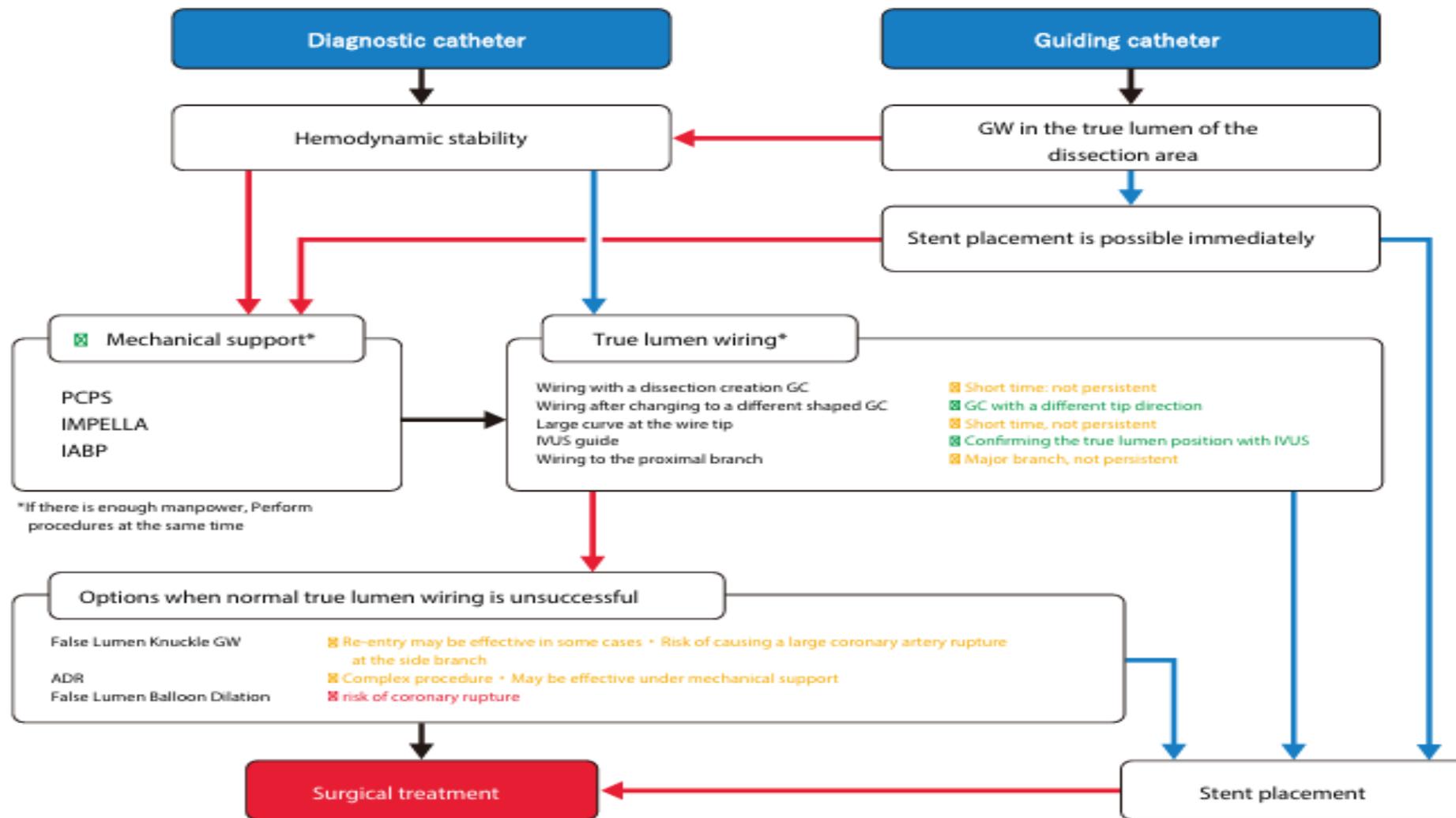


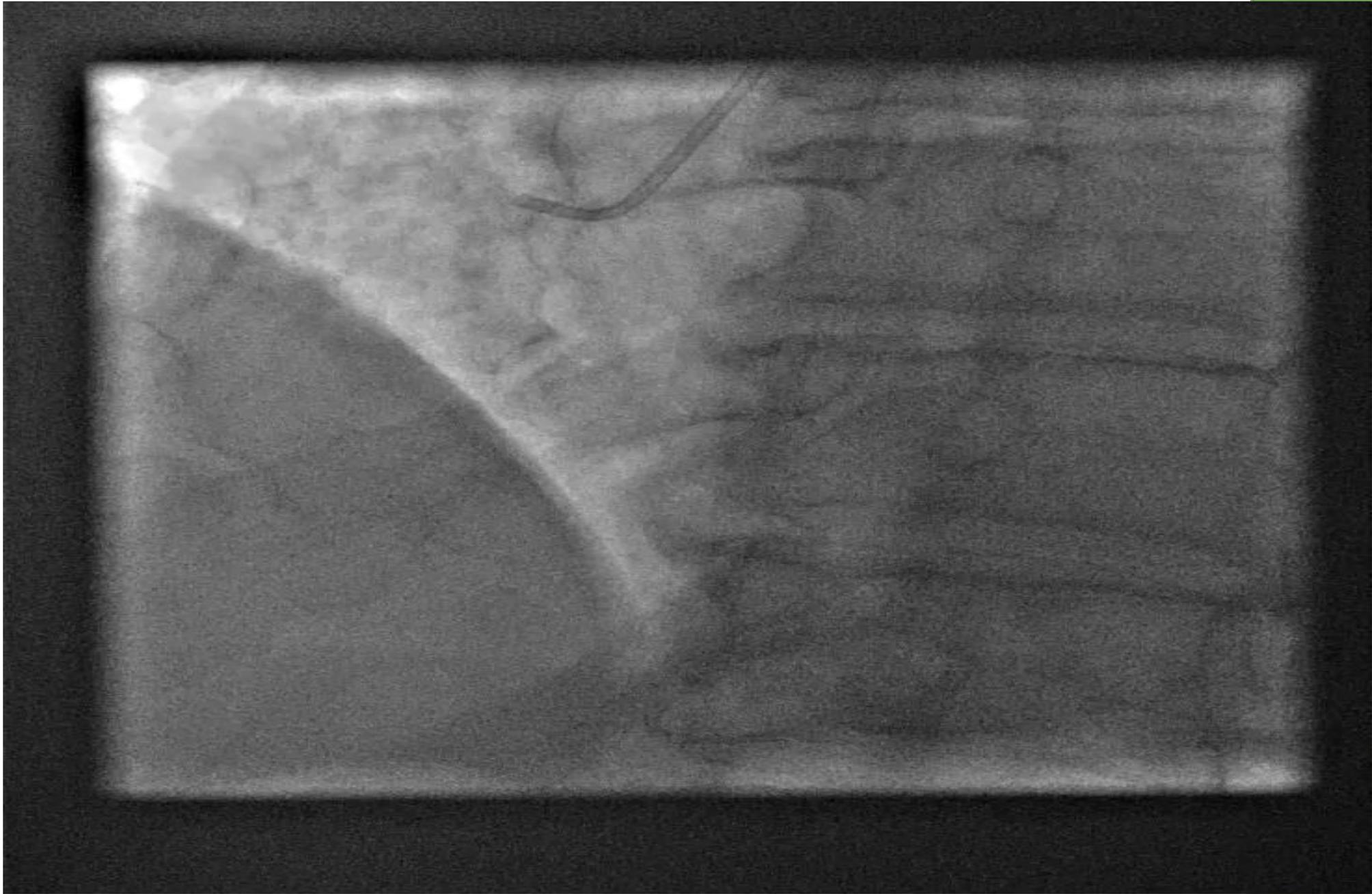
### Device Embolization

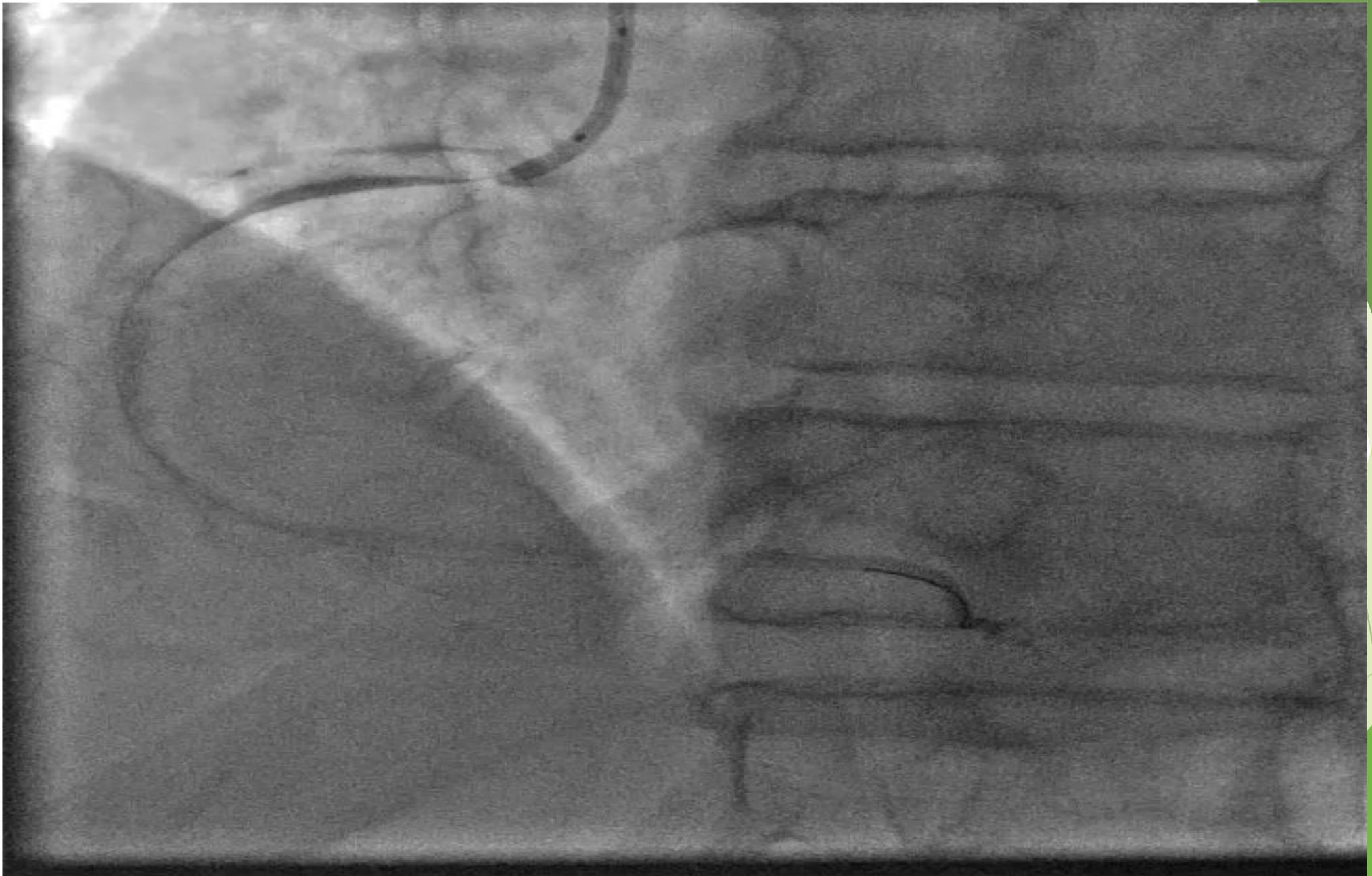


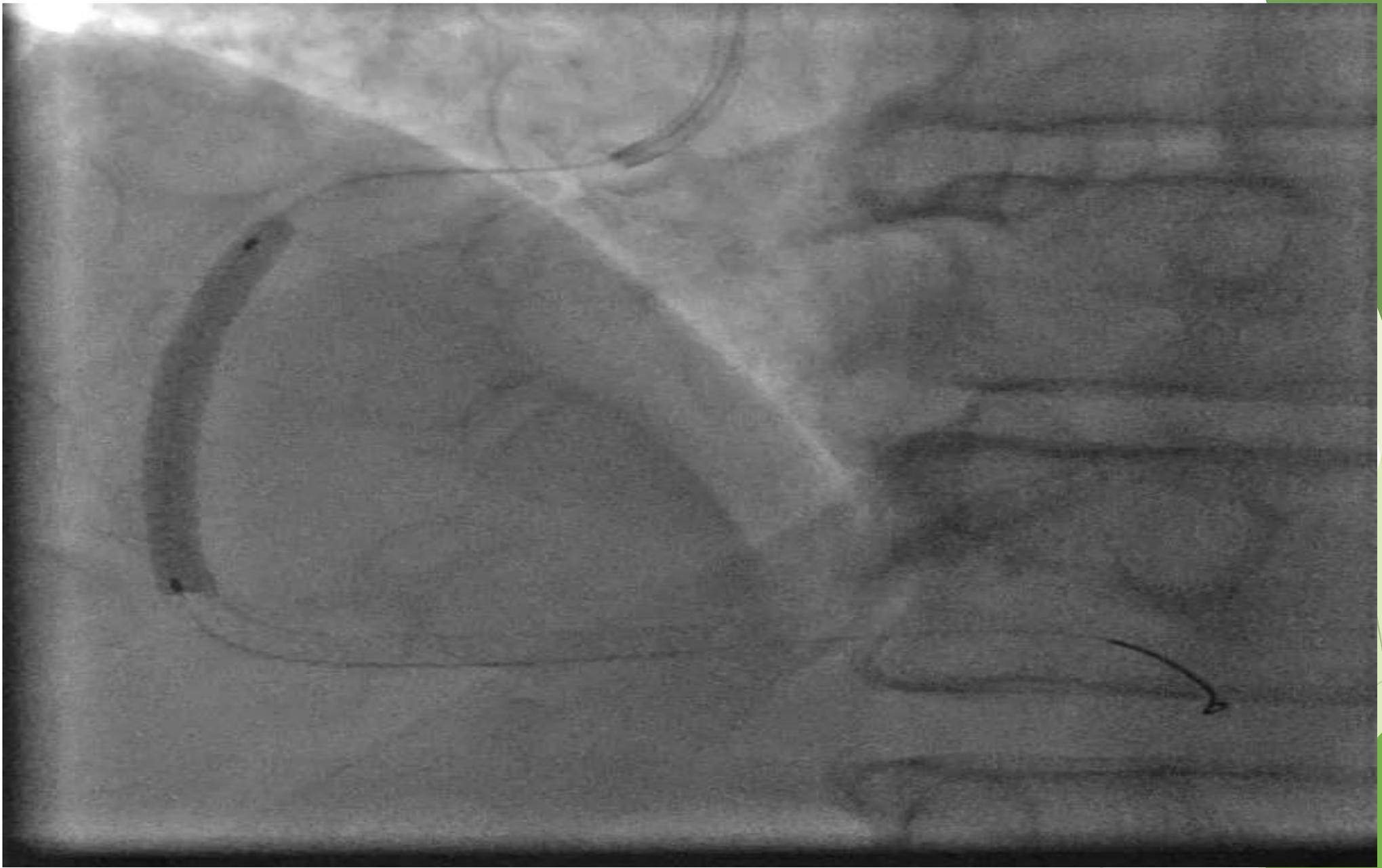
# Disekce

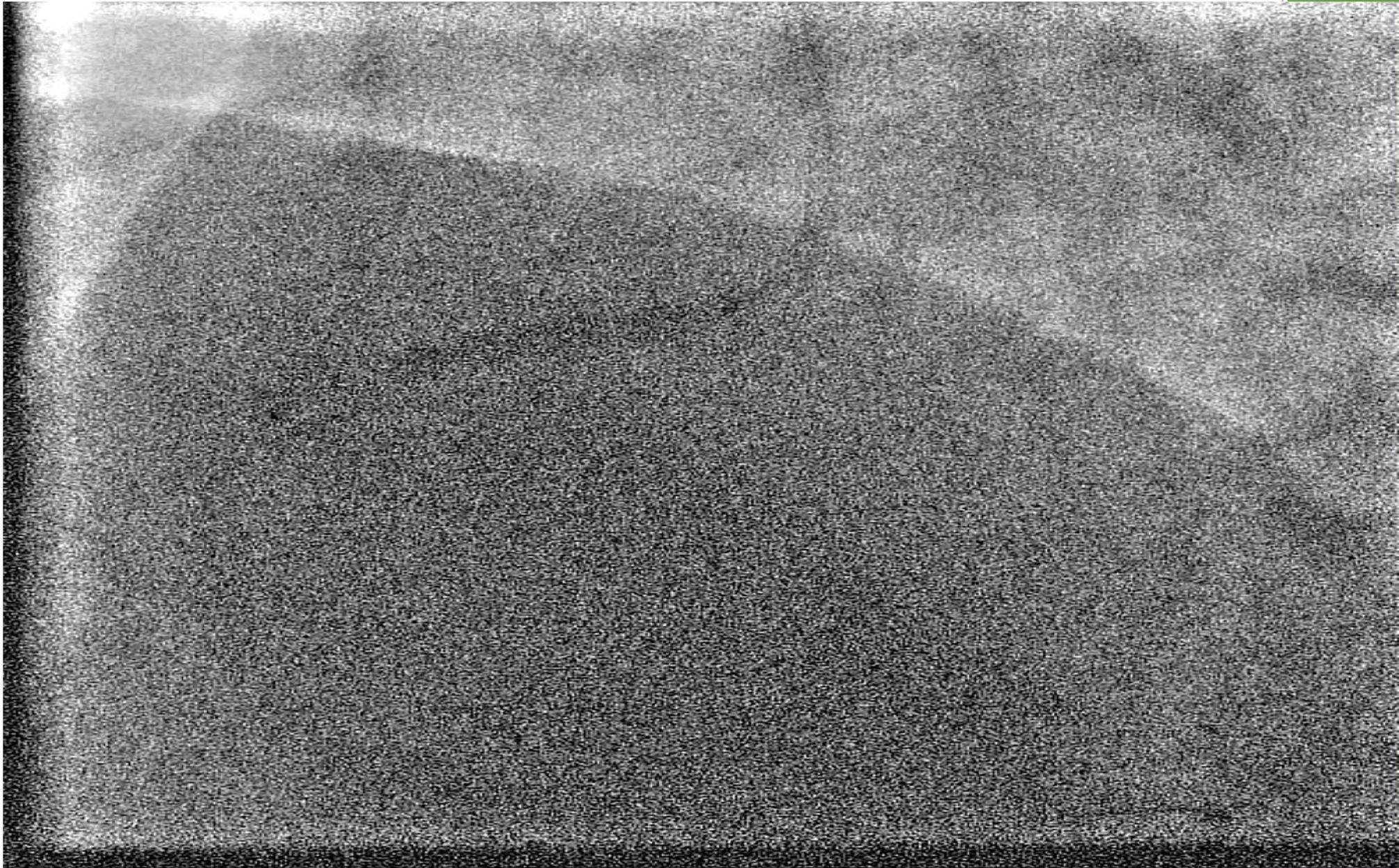
- ▶ běžná a nejčastější komplikace
- ▶ disekce kmene/Ao-koronární junkce a disekce Valsal. sinu /stráta vodiče

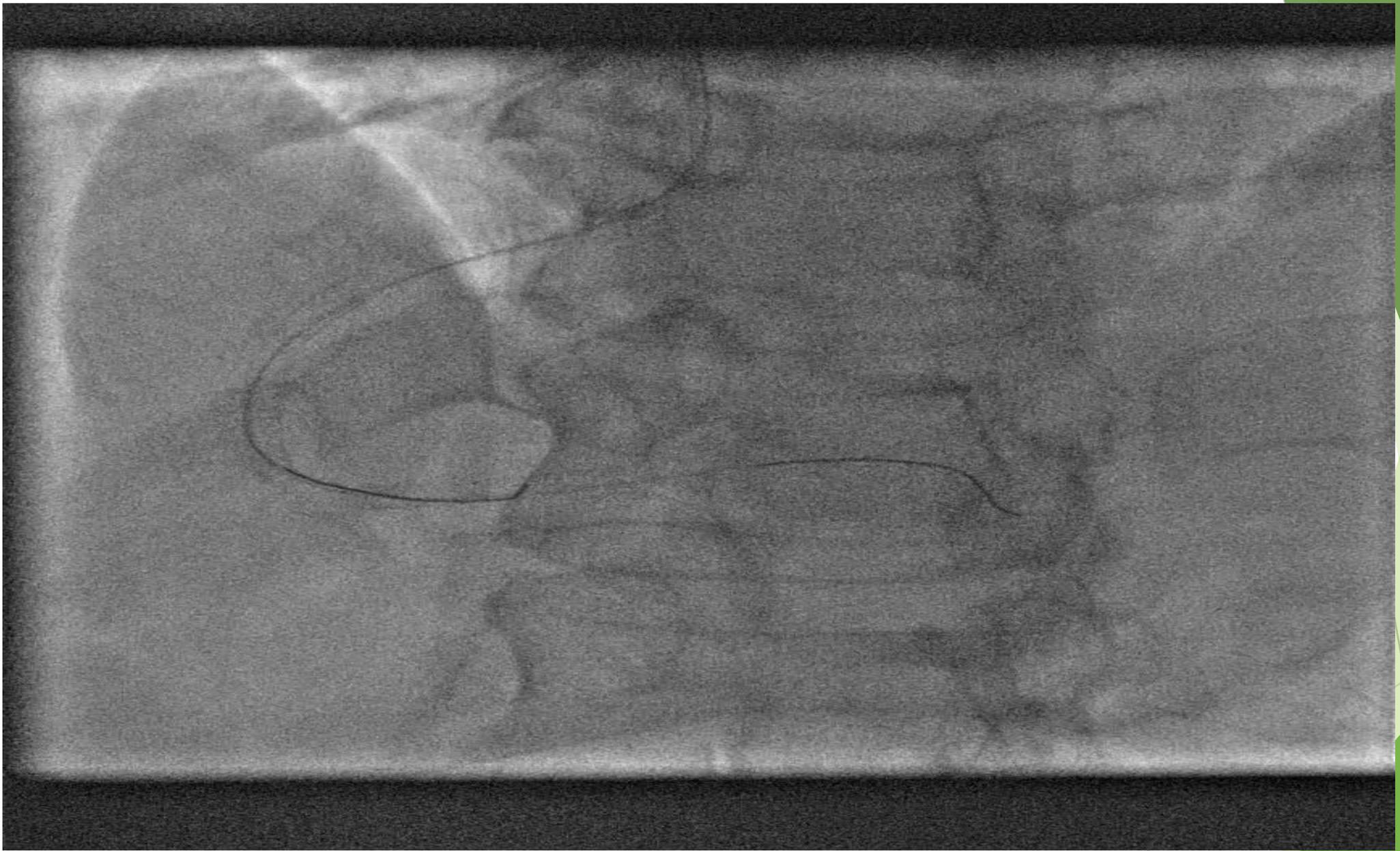




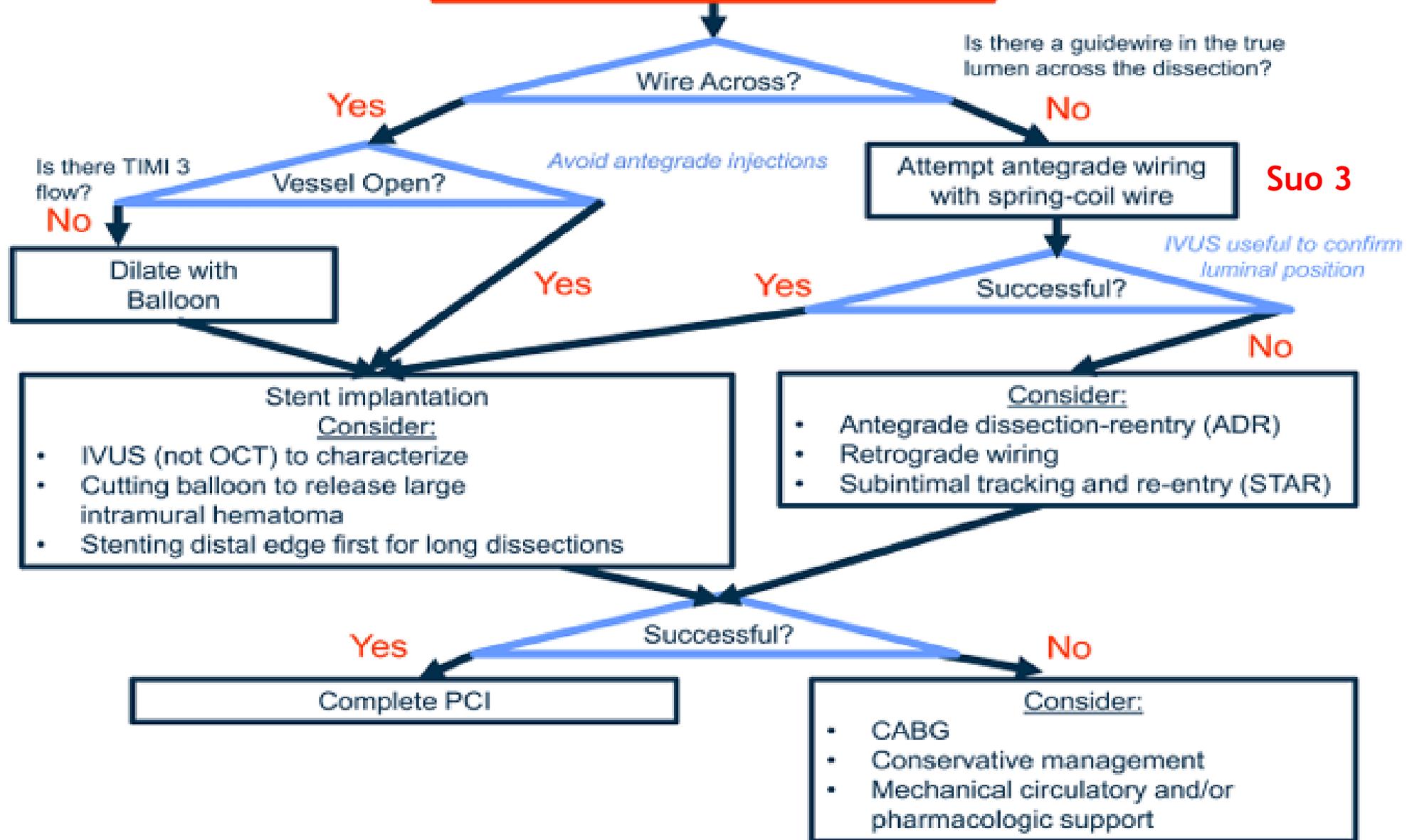


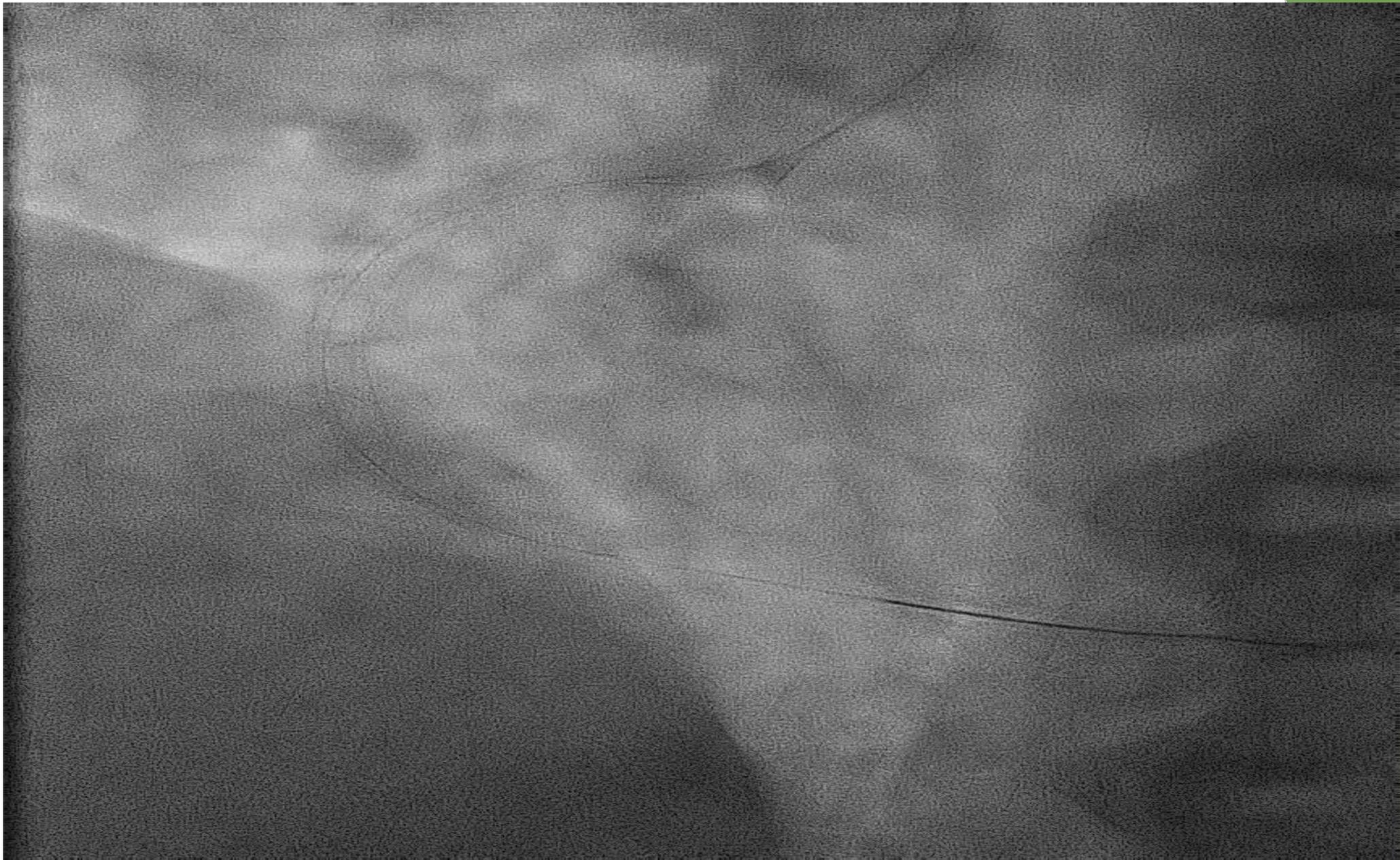


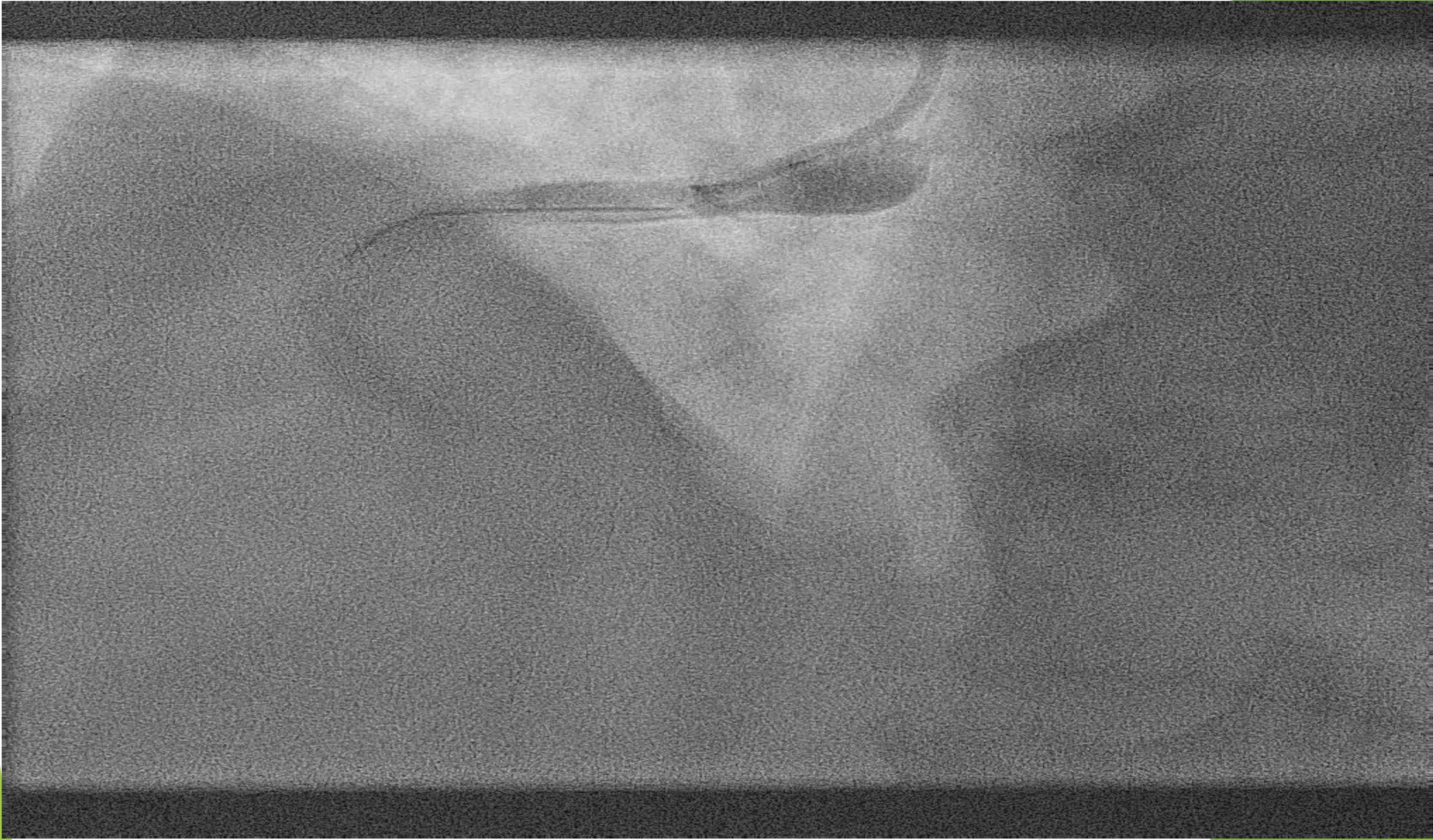


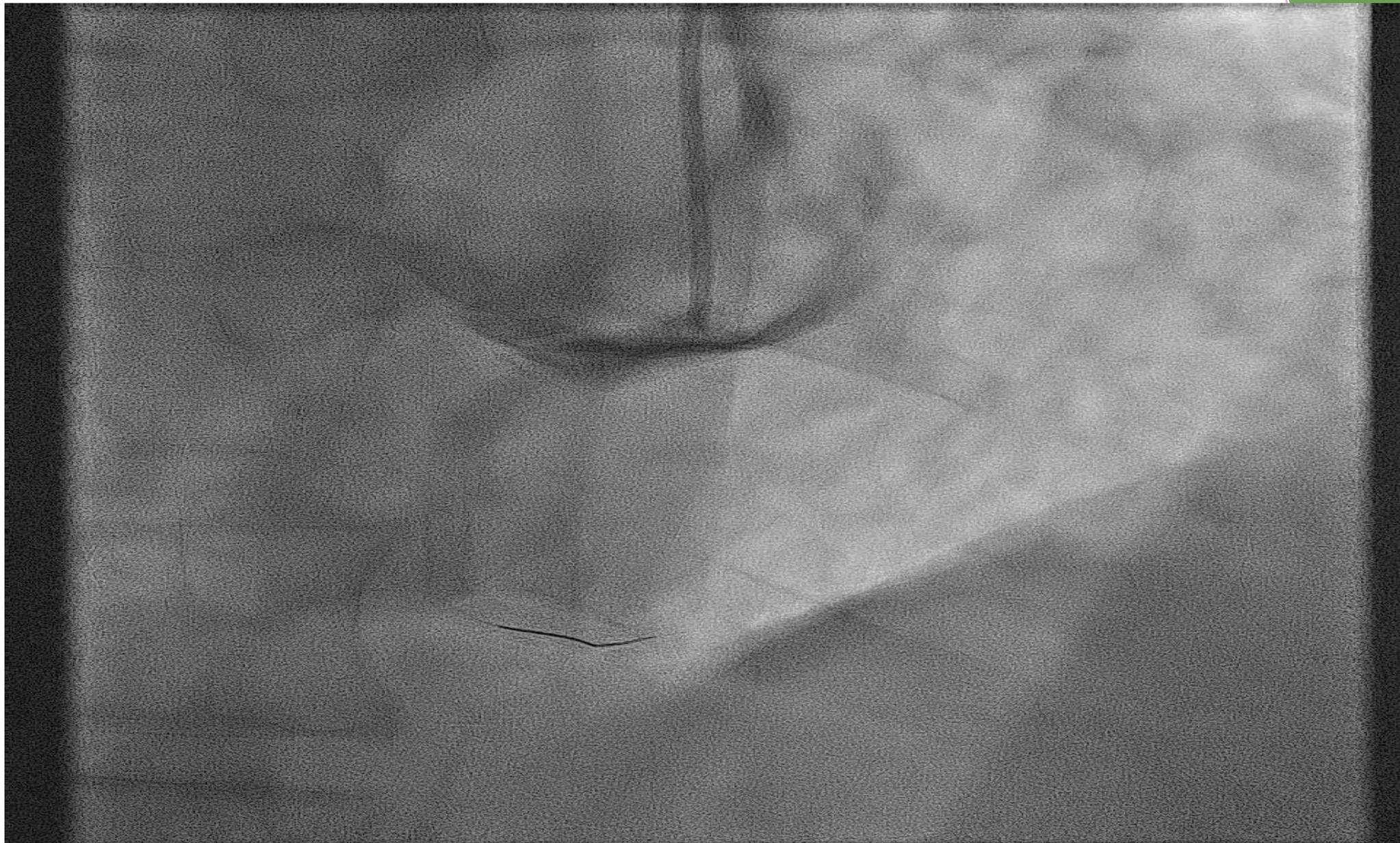


# Dissection

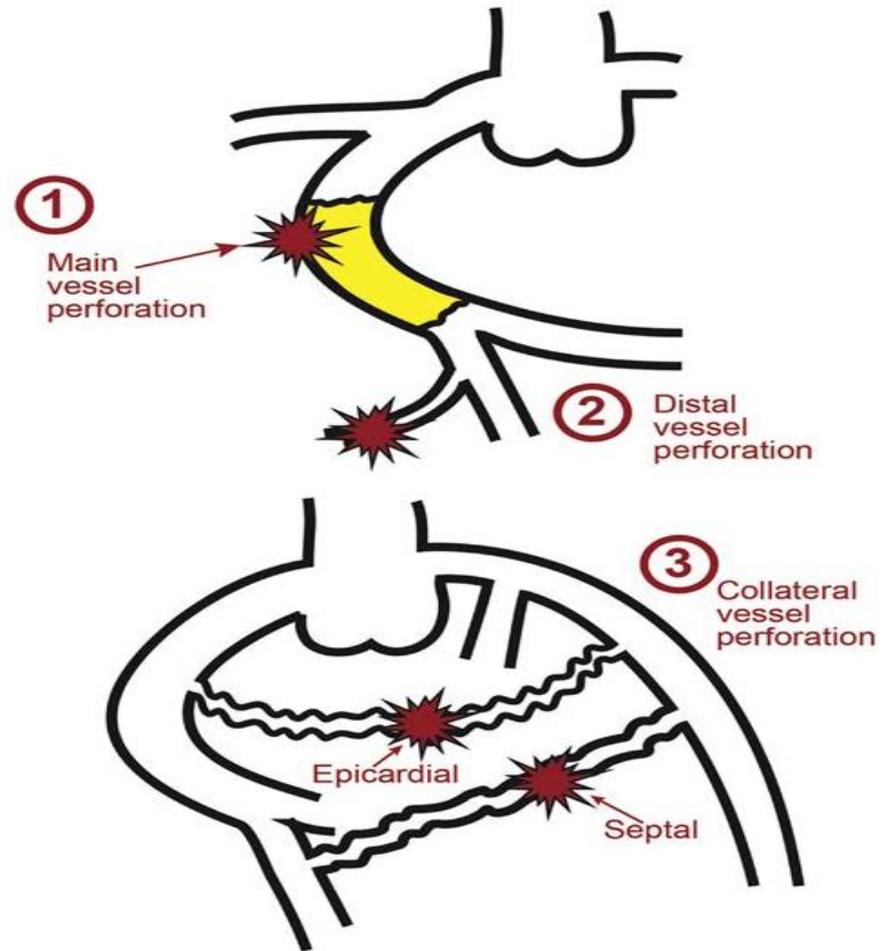








# Koronární perforace



**FIGURE 12.15** Types of coronary perforation.

# Ellis klasifikácia:

Type I	Extraluminal crater without extravasation	
Type II	Pericardial or myocardial blush without contrast jet extravasation	
Type III	Extravasation through frank (>1 mm) perforation	
*Type III cavity spilling (CS)	Perforation into an anatomic cavity, chamber, coronary sinus, etc.	

\*Sometimes referred to as Type IV

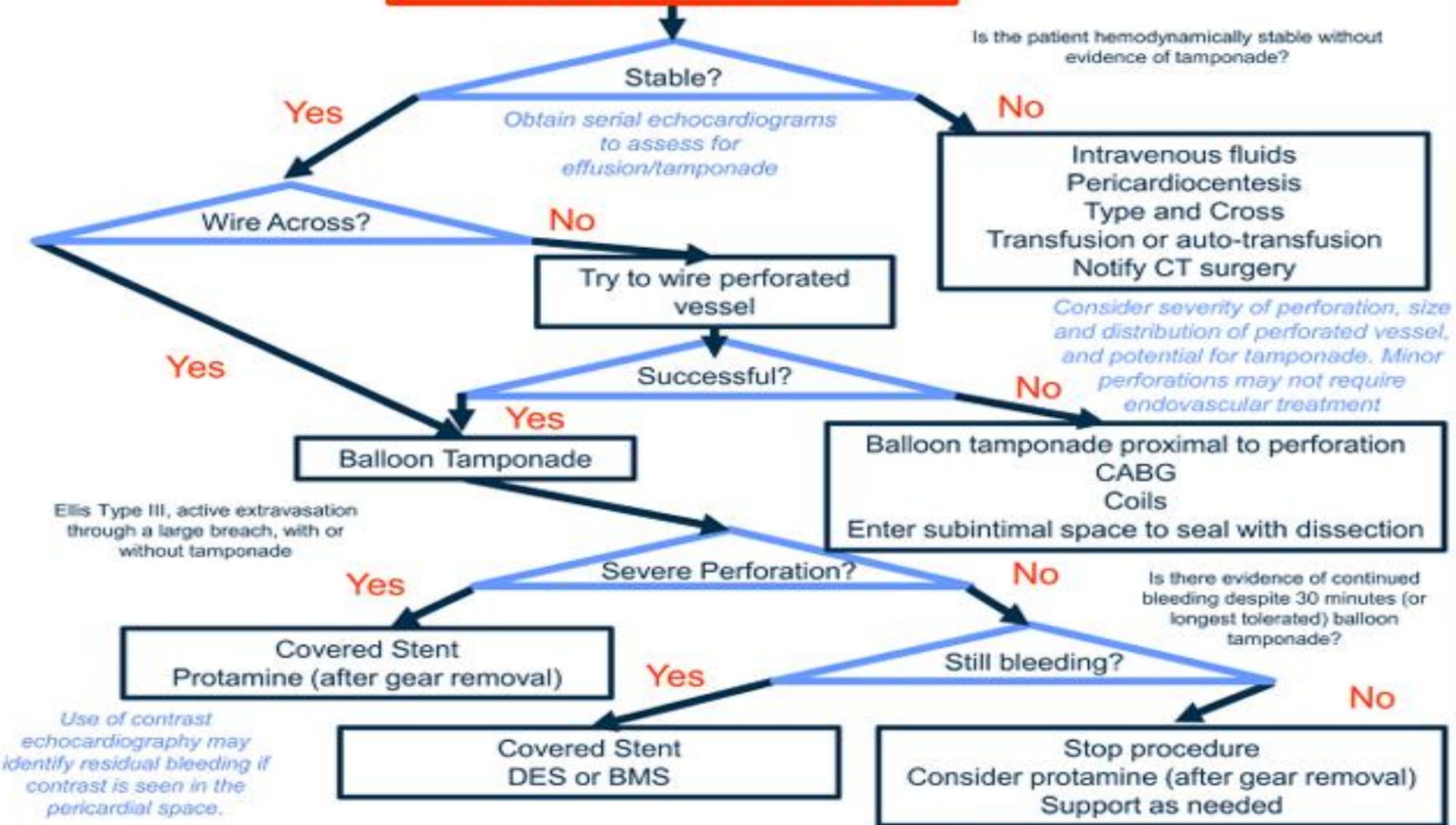
## Coronary perforation: Ellis classification

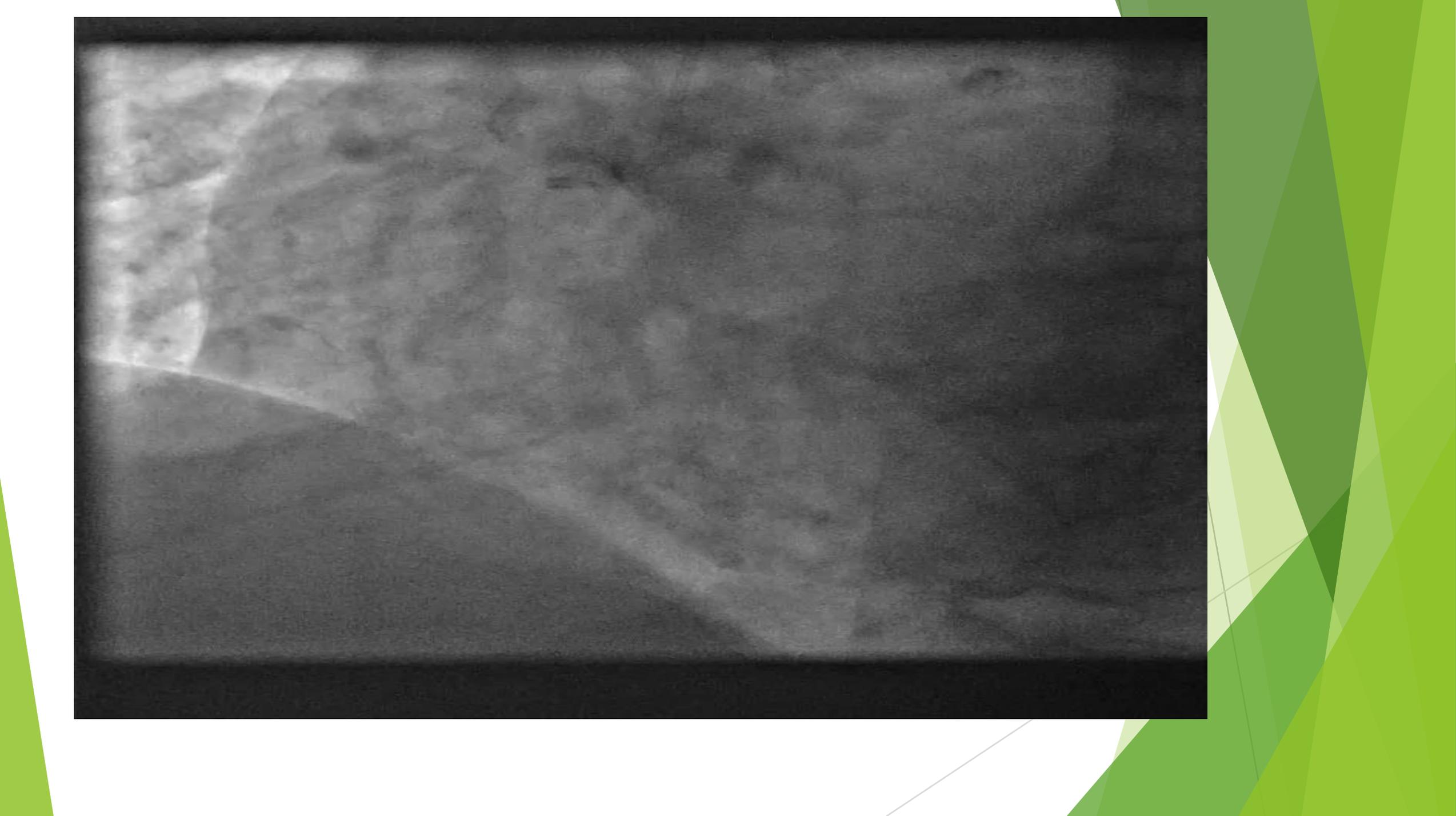
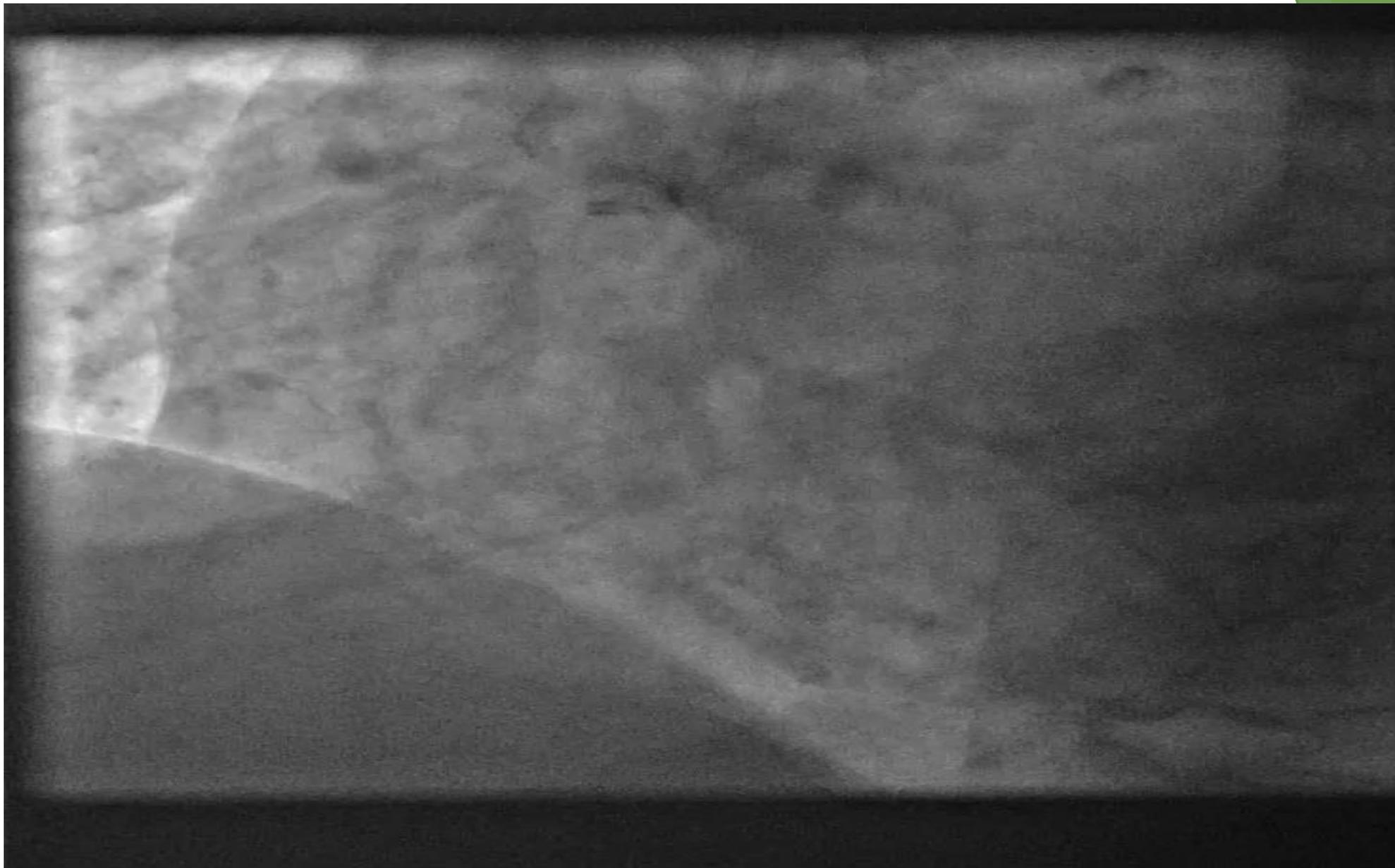
Severity

Class I	Crater extending outside lumen only	I	
Class II	Pericardial or myocardial blush with < 1 mm exit hole	II	
Class III	Contrast jet through > 1 mm exit hole		
Class III cavity spilling	Perforation into anatomic cavity	III	

Ellis et al. *Circulation* 1994;90:2725

# Main Vessel Perforation



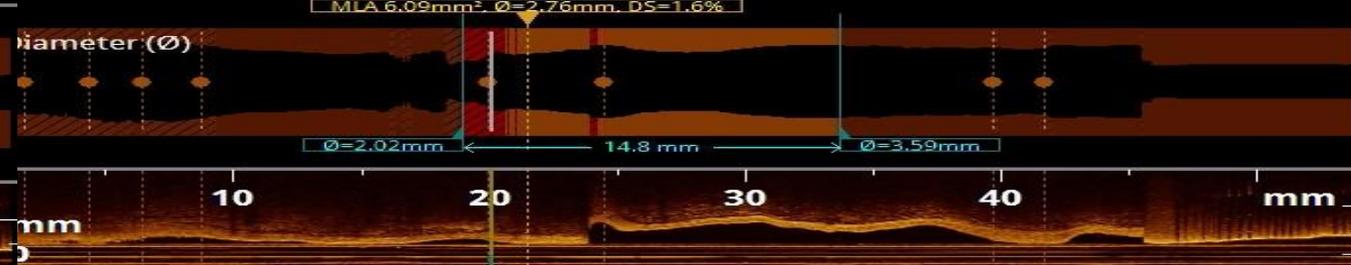
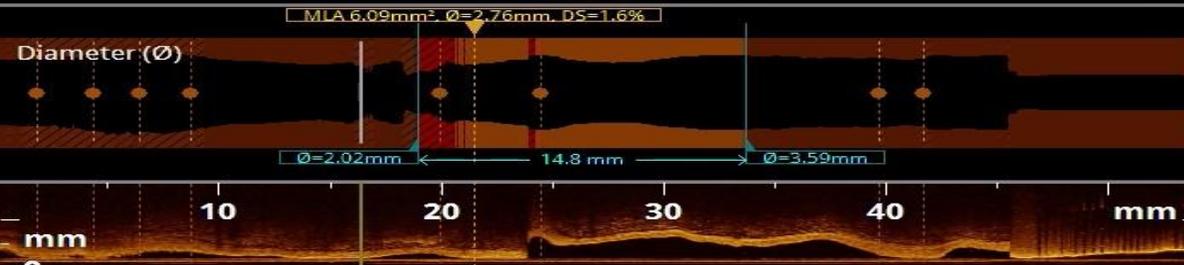
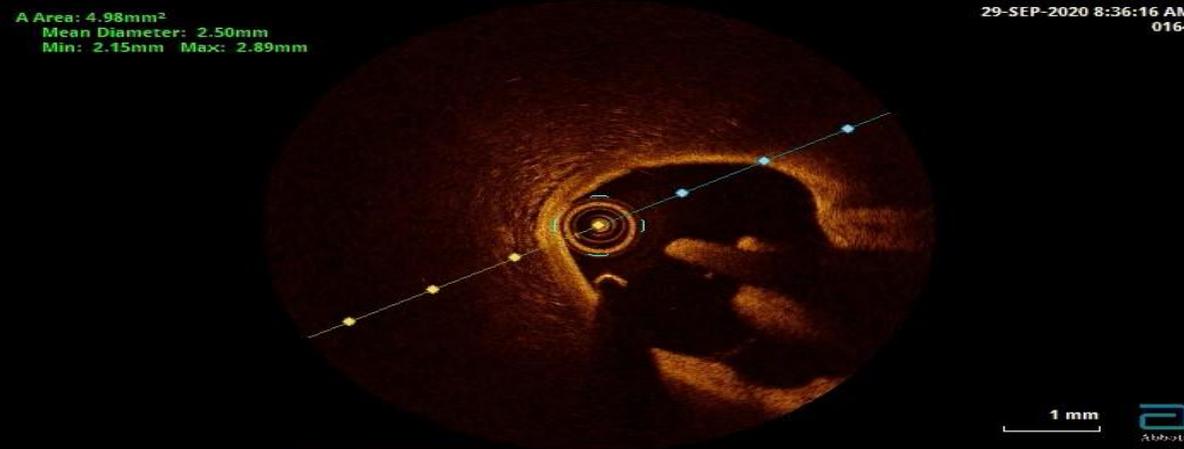


A Area: 4.98mm<sup>2</sup>  
Mean Diameter: 2.50mm  
Min: 2.15mm Max: 2.89mm

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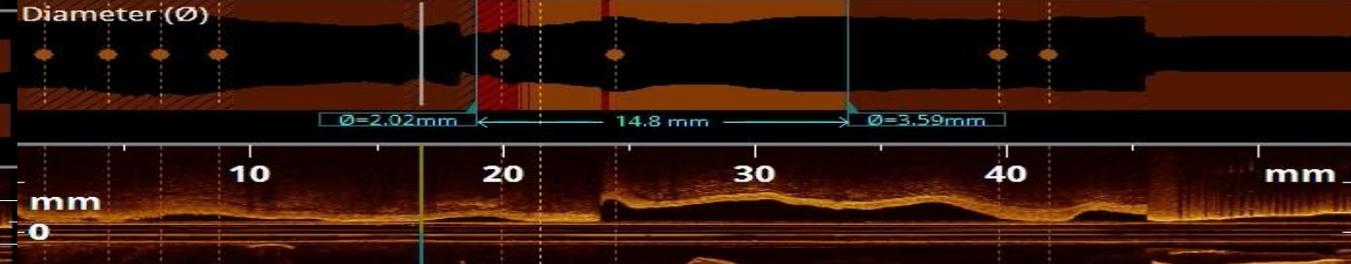
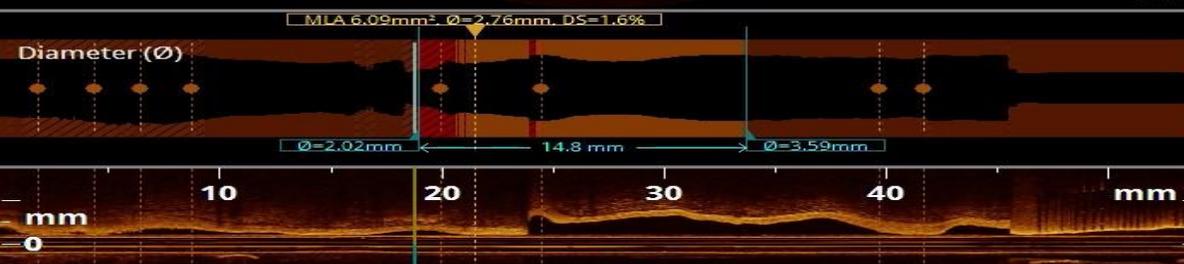
Area: 5.67mm<sup>2</sup>  
Mean Diameter: 2.65mm  
Min: 2.15mm Max: 3.34mm

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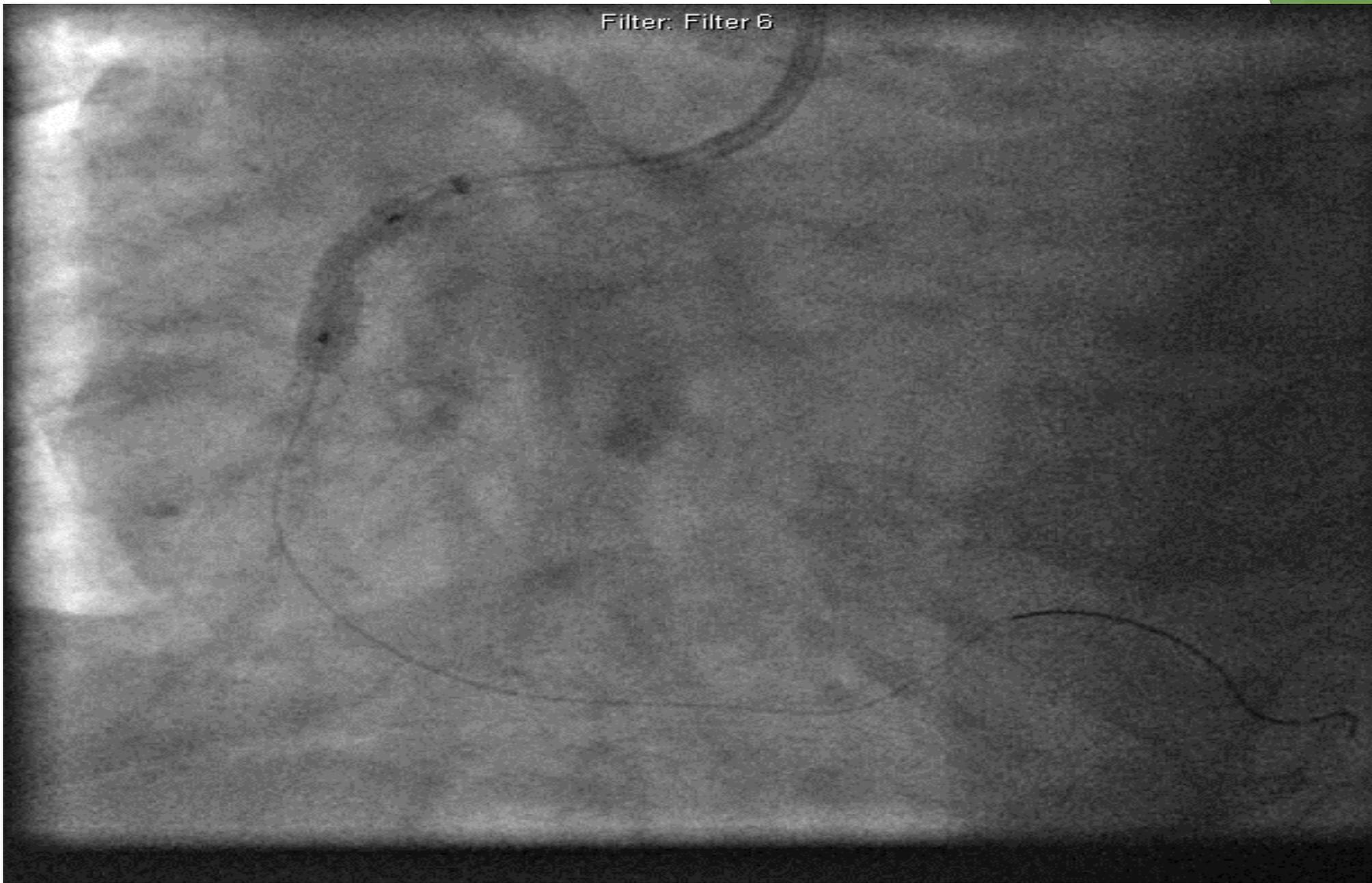


A Area: 3.24mm<sup>2</sup>  
Mean Diameter: 1.96mm  
Min: 1.52mm Max: 2.95mm

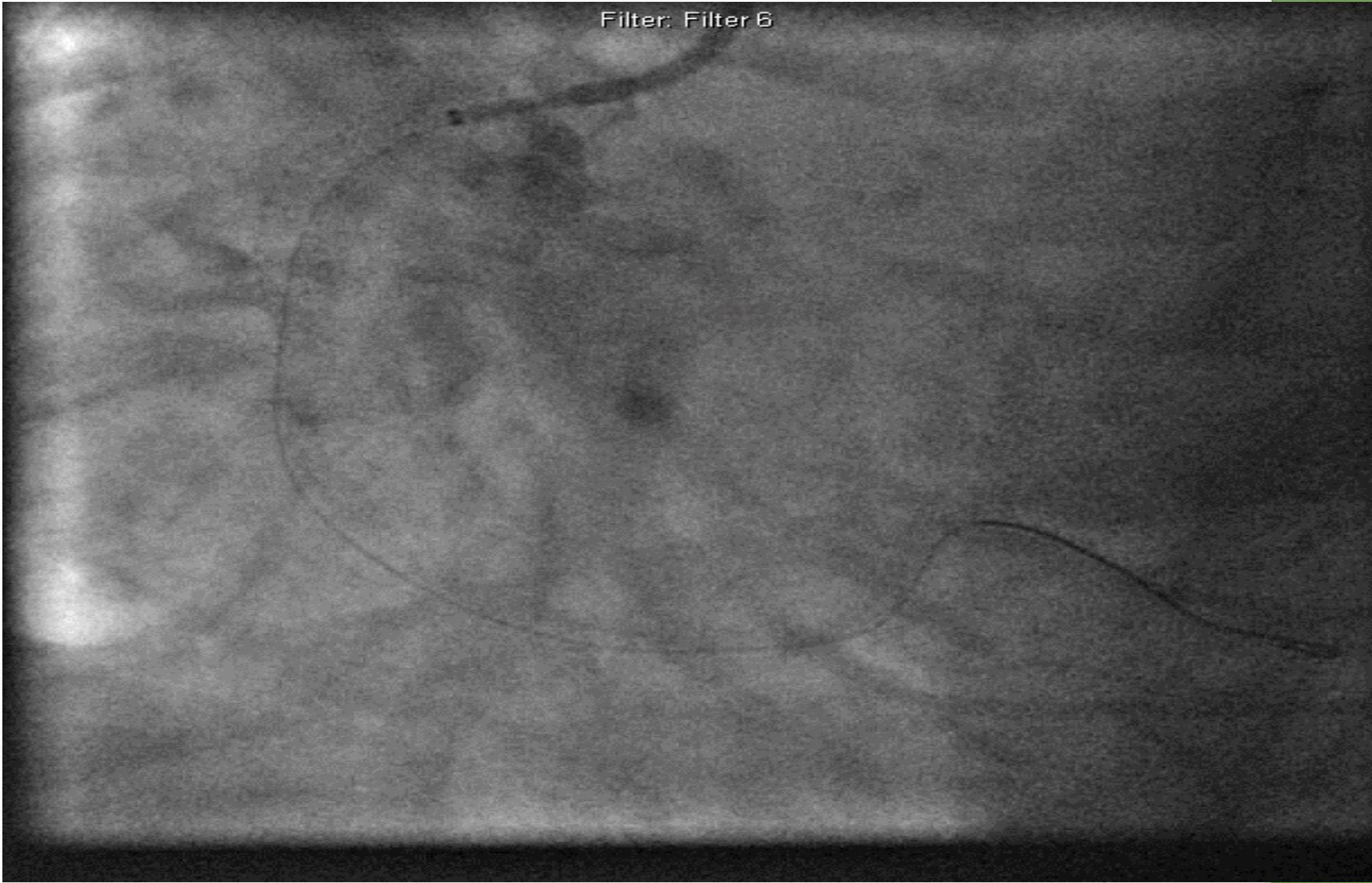
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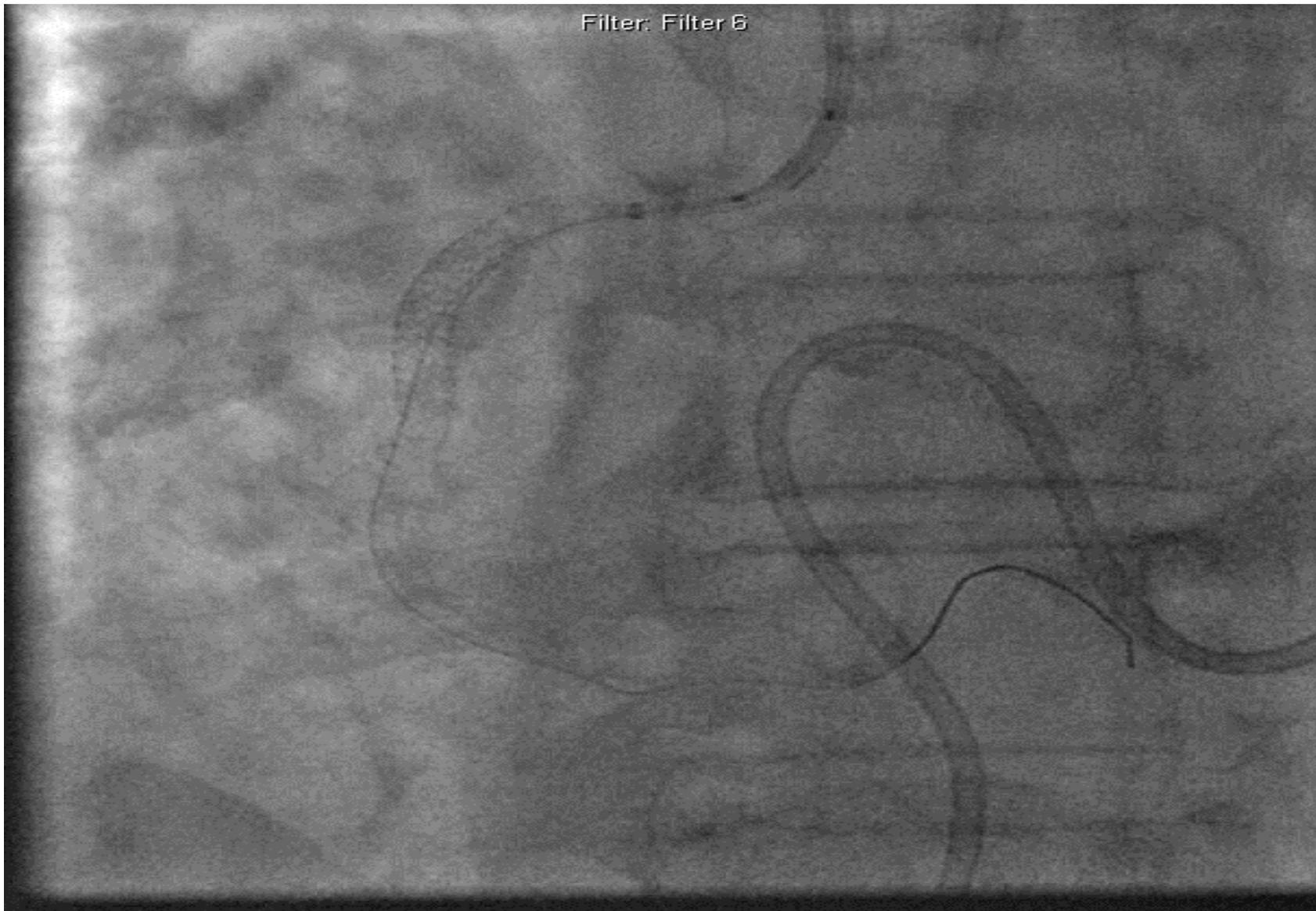
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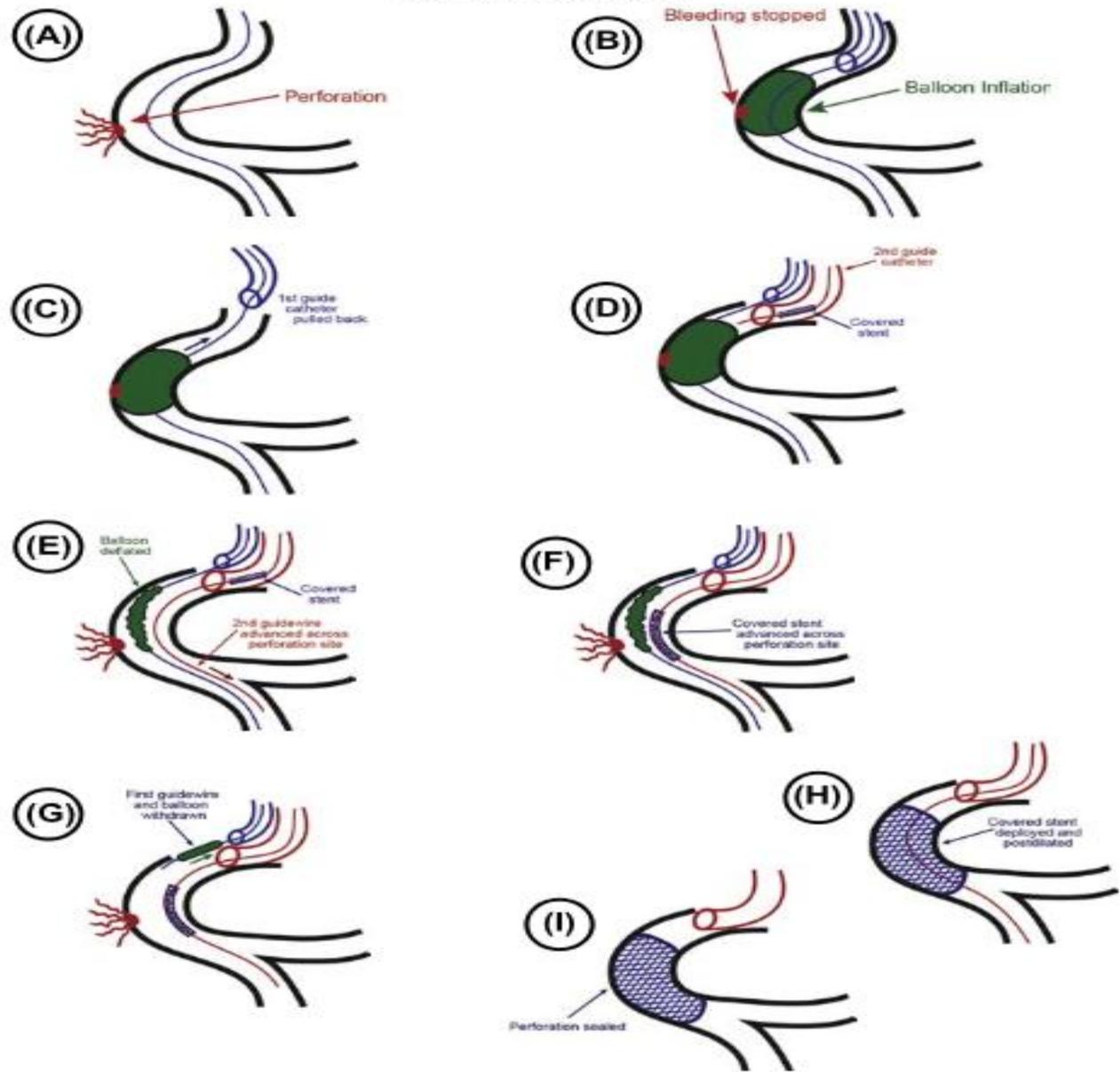
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# Dual guide technique for covered stent



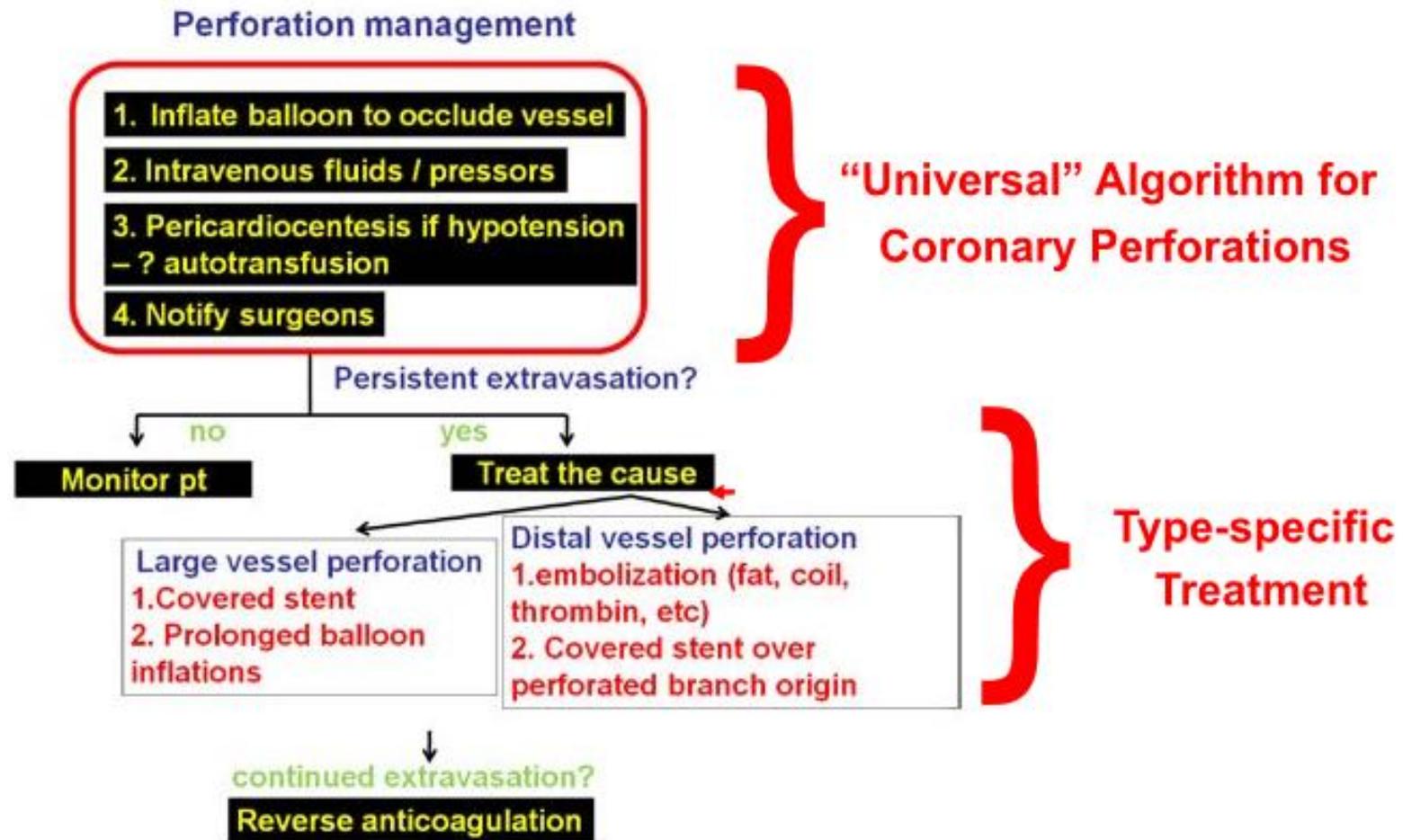
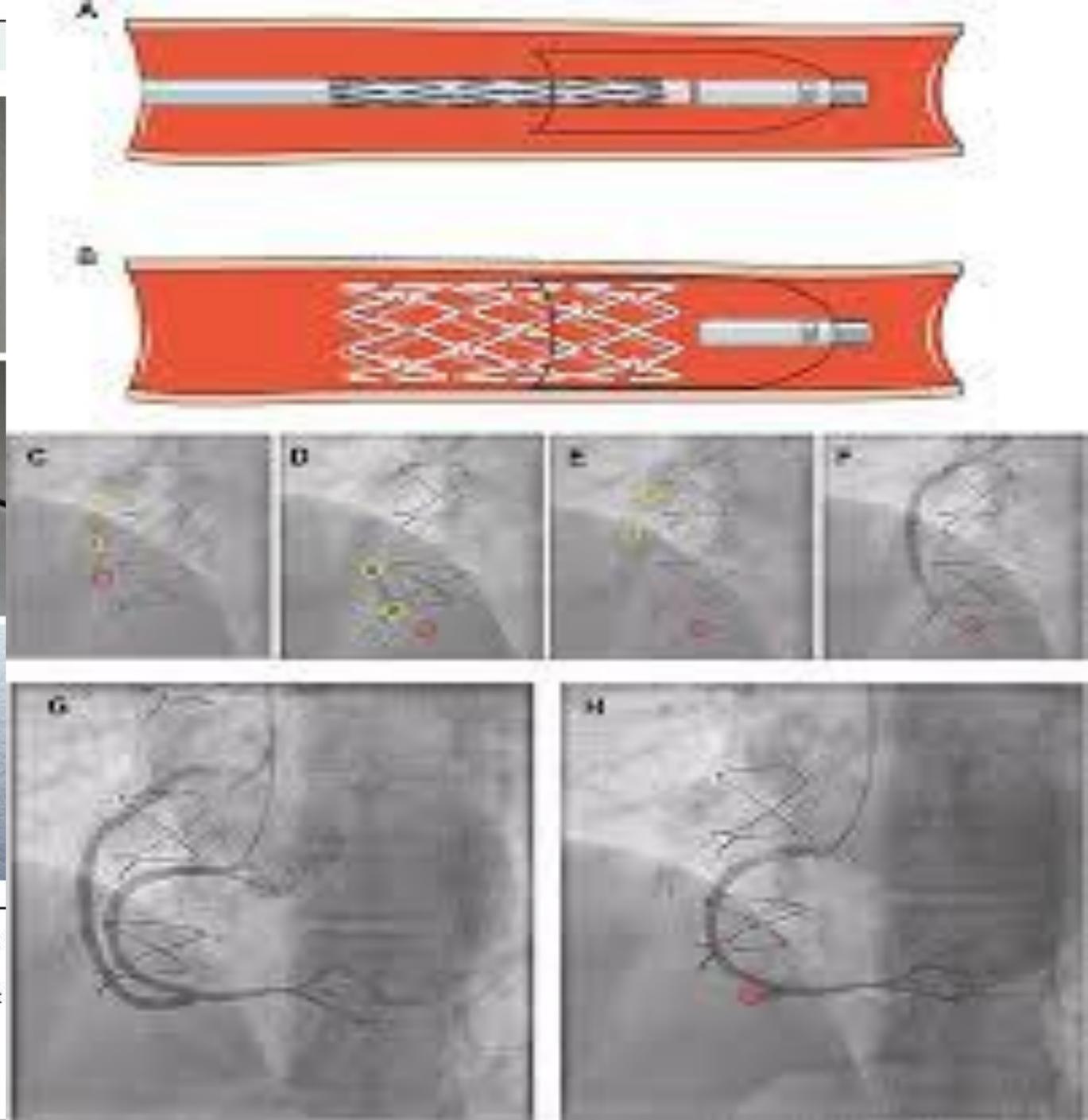
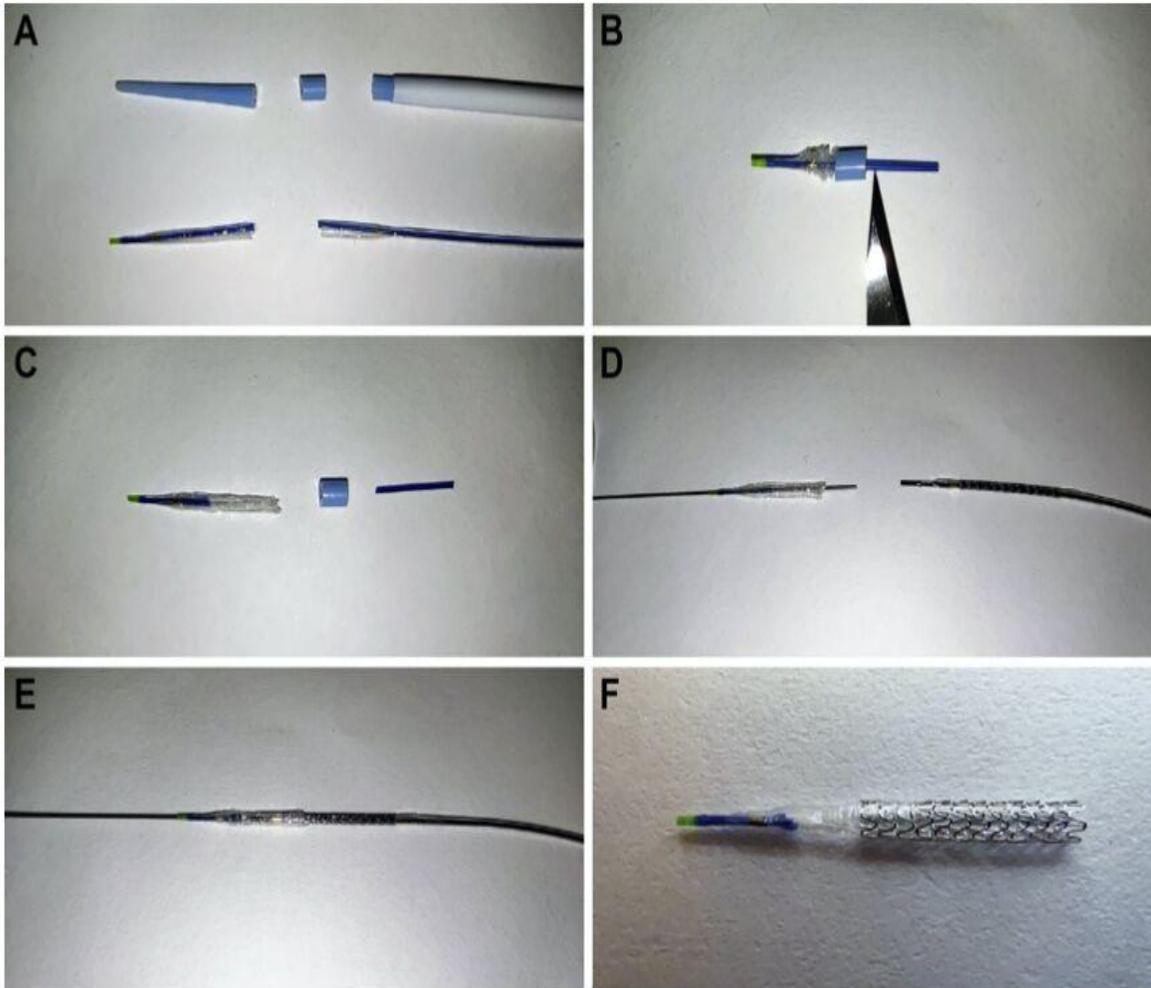


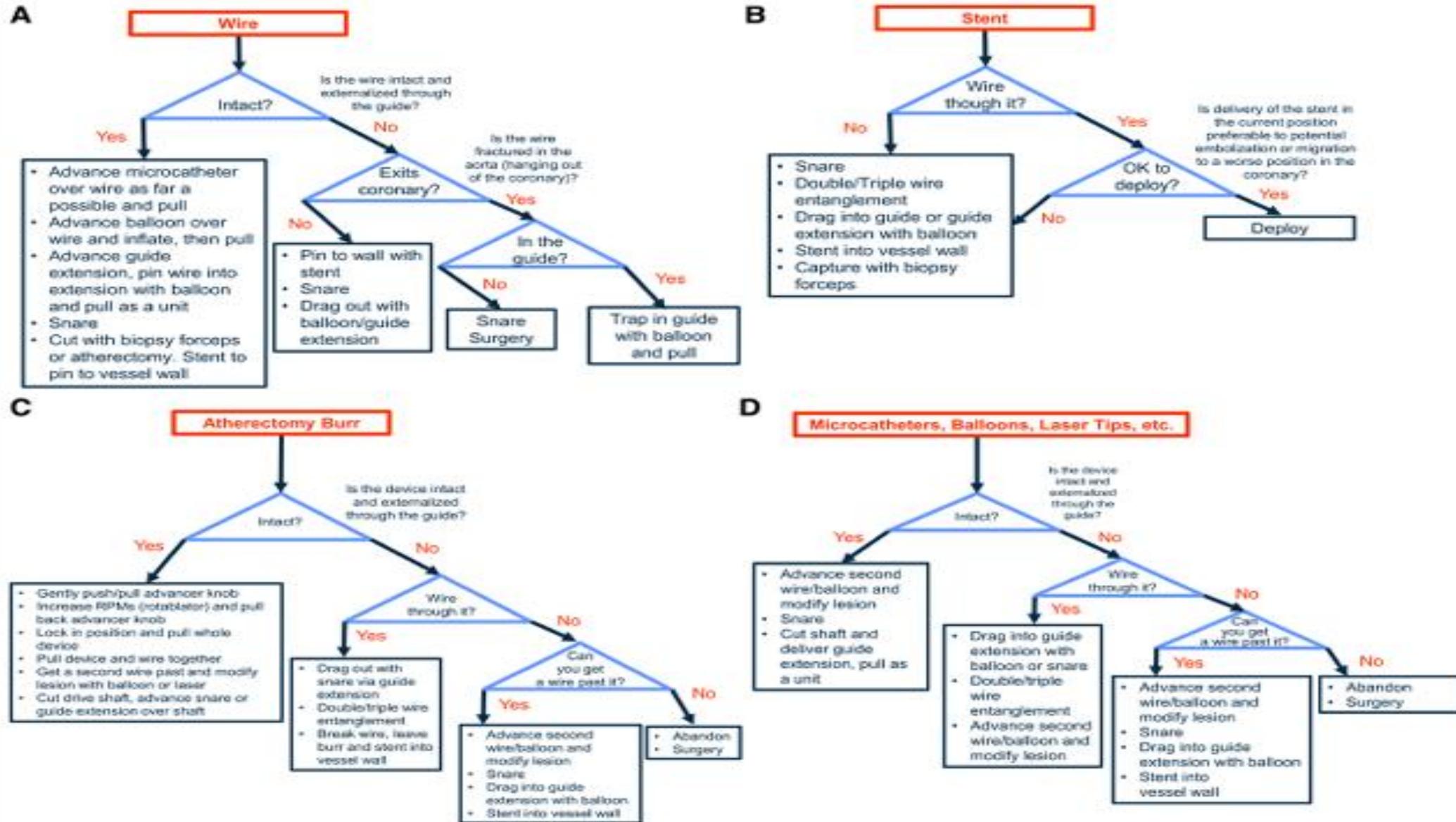
FIGURE 12.17 Overview of the management of coronary perforations.

**FIGURE 2** Steps for Preparation of Closed-Loop Balloon-Stent Closure Device



**(A)** An inflated and deflated coronary angioplasty balloon catheter is cut into 2 pieces with sparing distal half. **(B)** With the help of a plastic ring cut from the dilator of a 6-F sheath, the balloon membrane is squeezed longitudinally, and the shaft of the cut balloon is exposed. **(C)** The shaft of the balloon is cut near the distal balloon marker, and the balloon membrane is released. **(D)** The half balloon with shortened shaft is loaded over a 0.014-inch coronary wire. **(E)** A short coronary stent catheter is introduced over the 0.014-inch coronary angioplasty wire just behind the closed-loop balloon piece to form a closed-loop balloon-stent catheter. **(F)** After deployment of the coronary stent, the balloon membrane wraps around the proximal piece of the expanded stent, forming a closed loop.

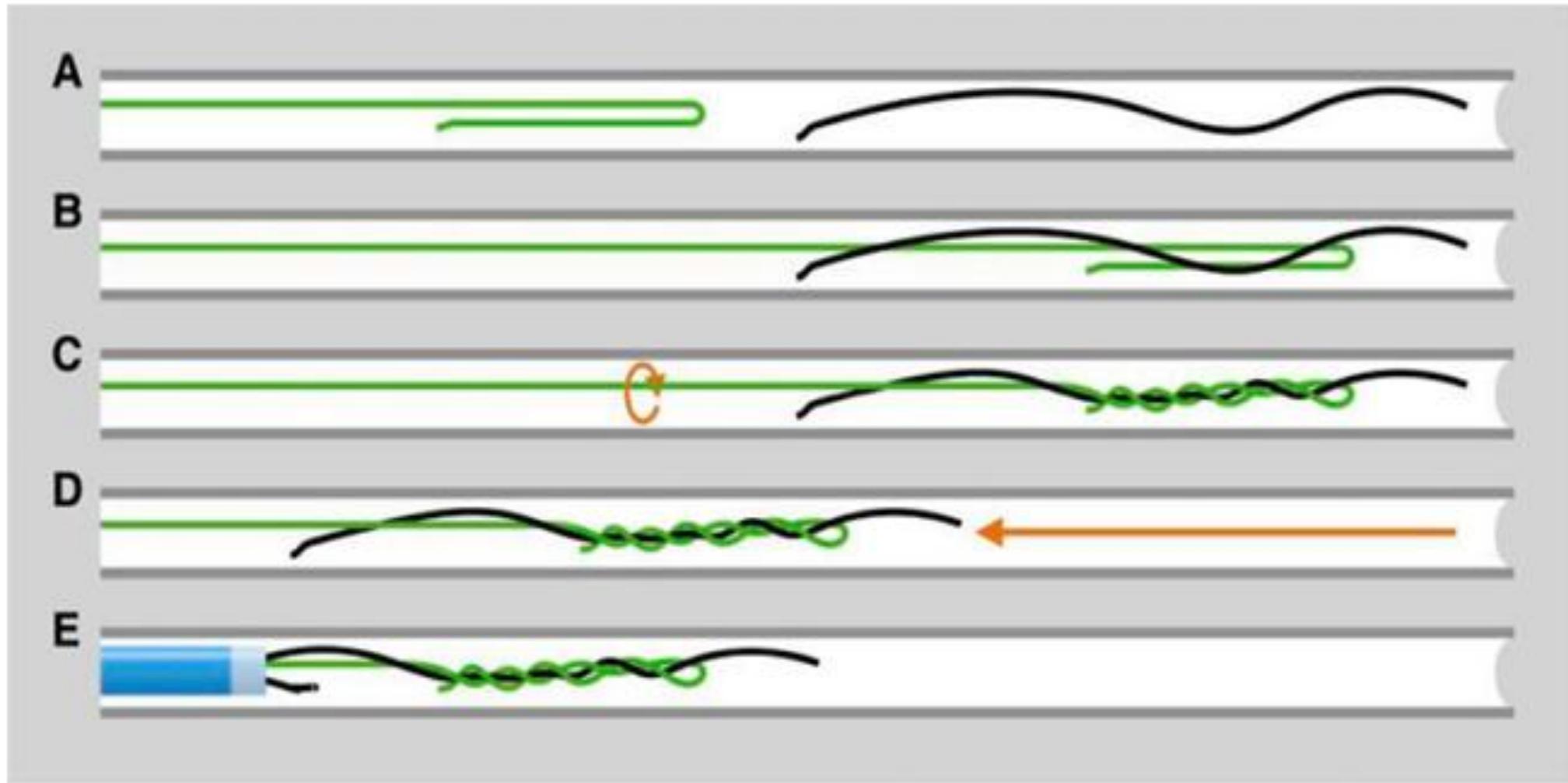
# Uváznutý materiál(entrapment)

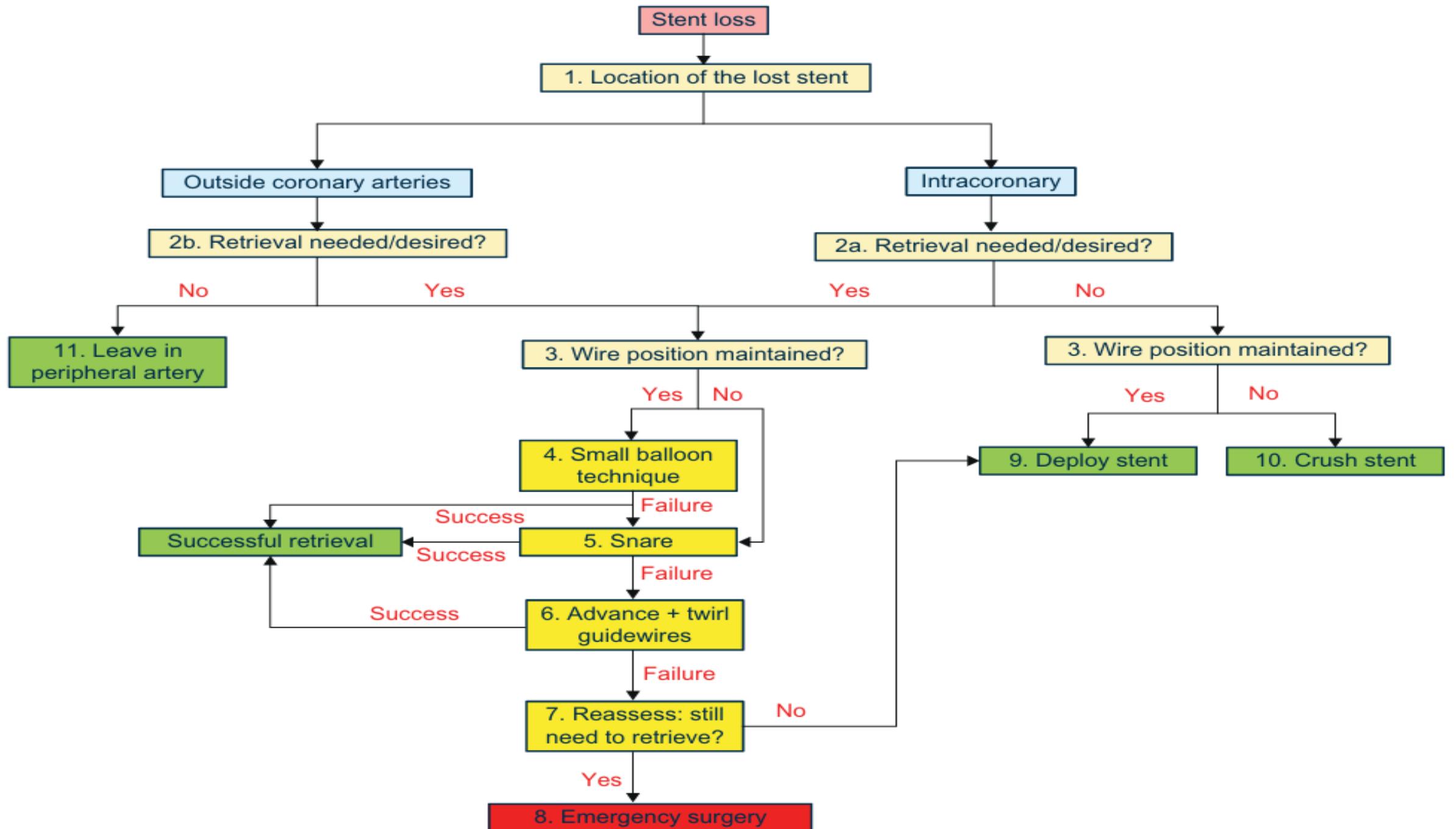




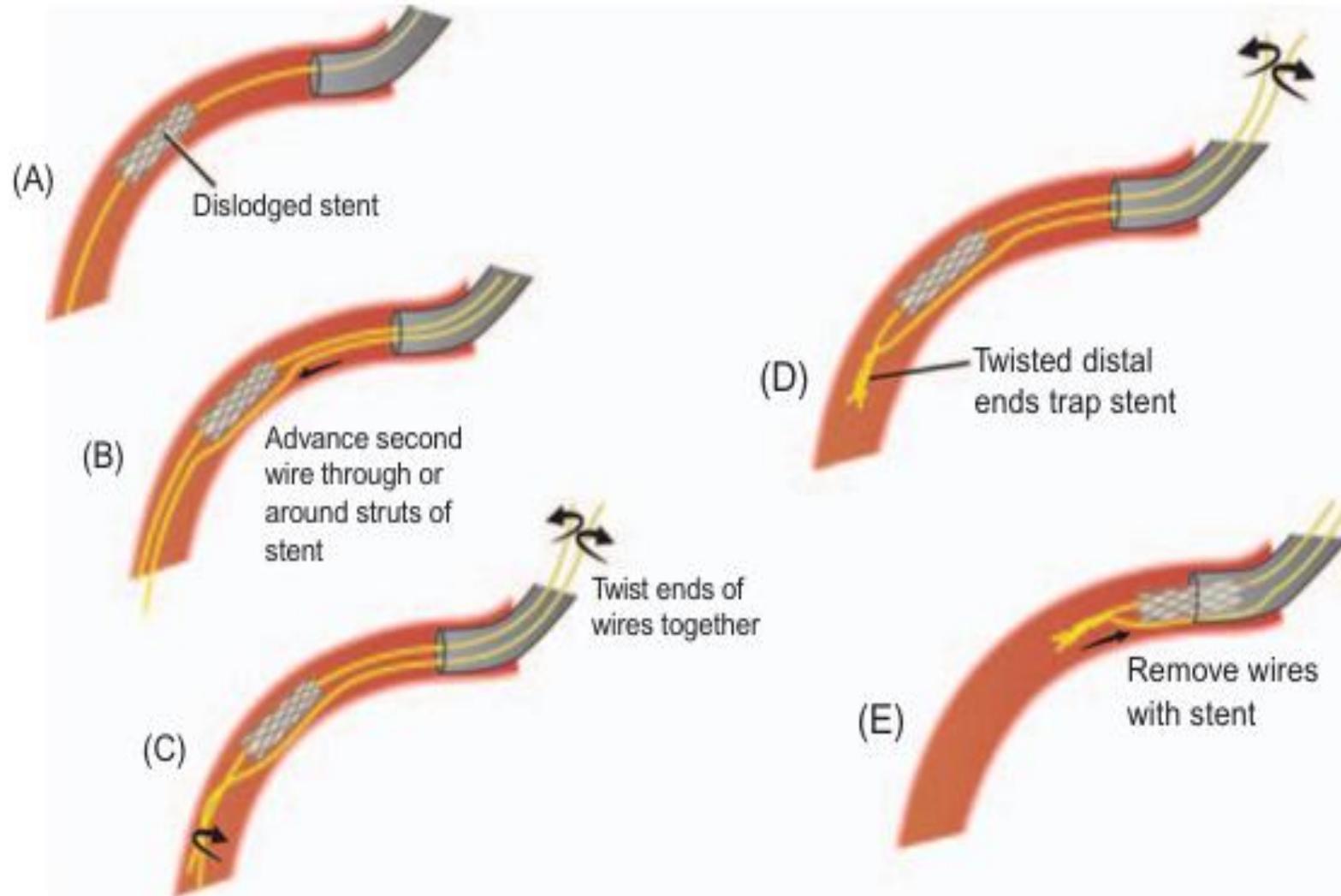
# guidewire

'Knuckle-twister' technique

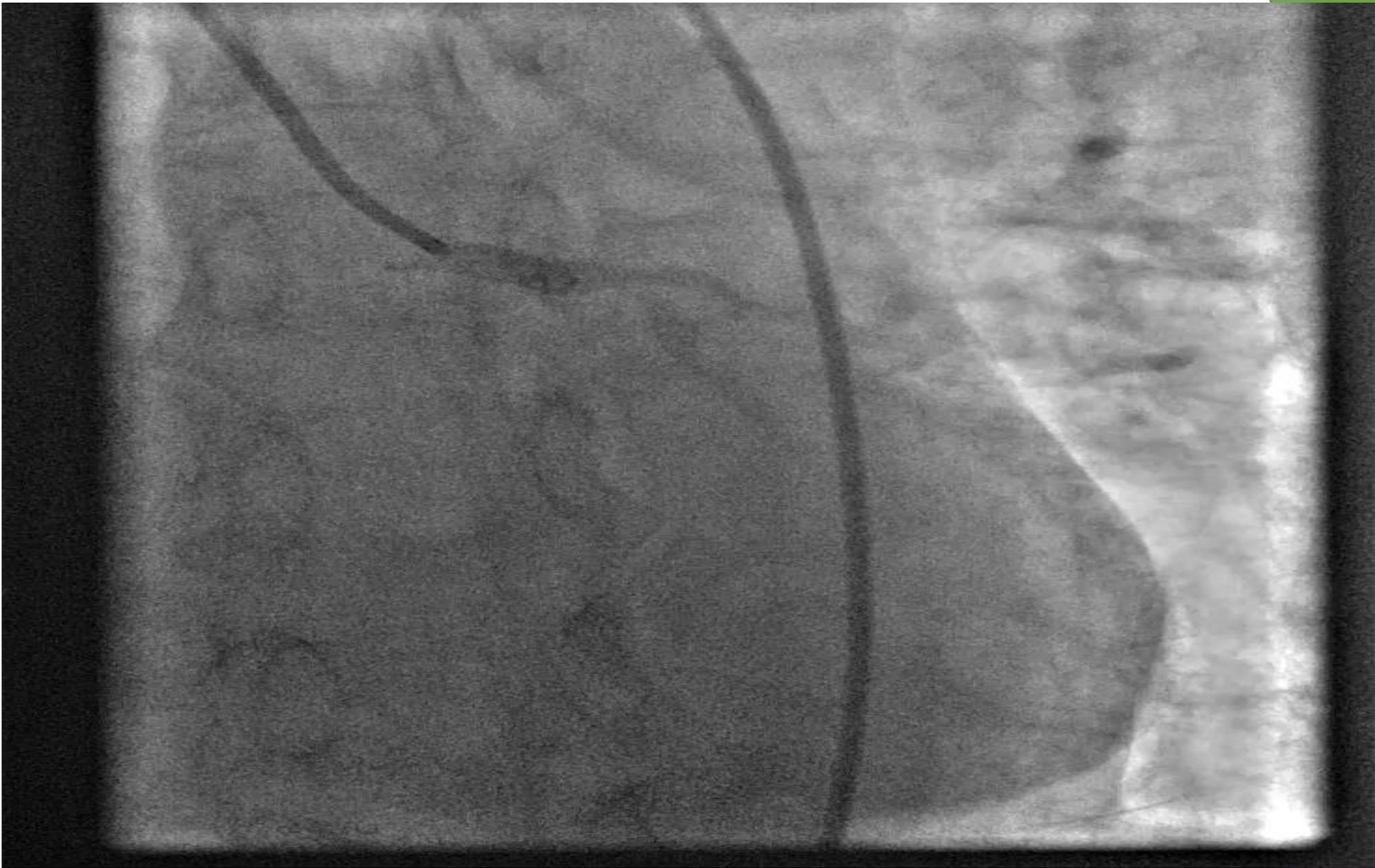




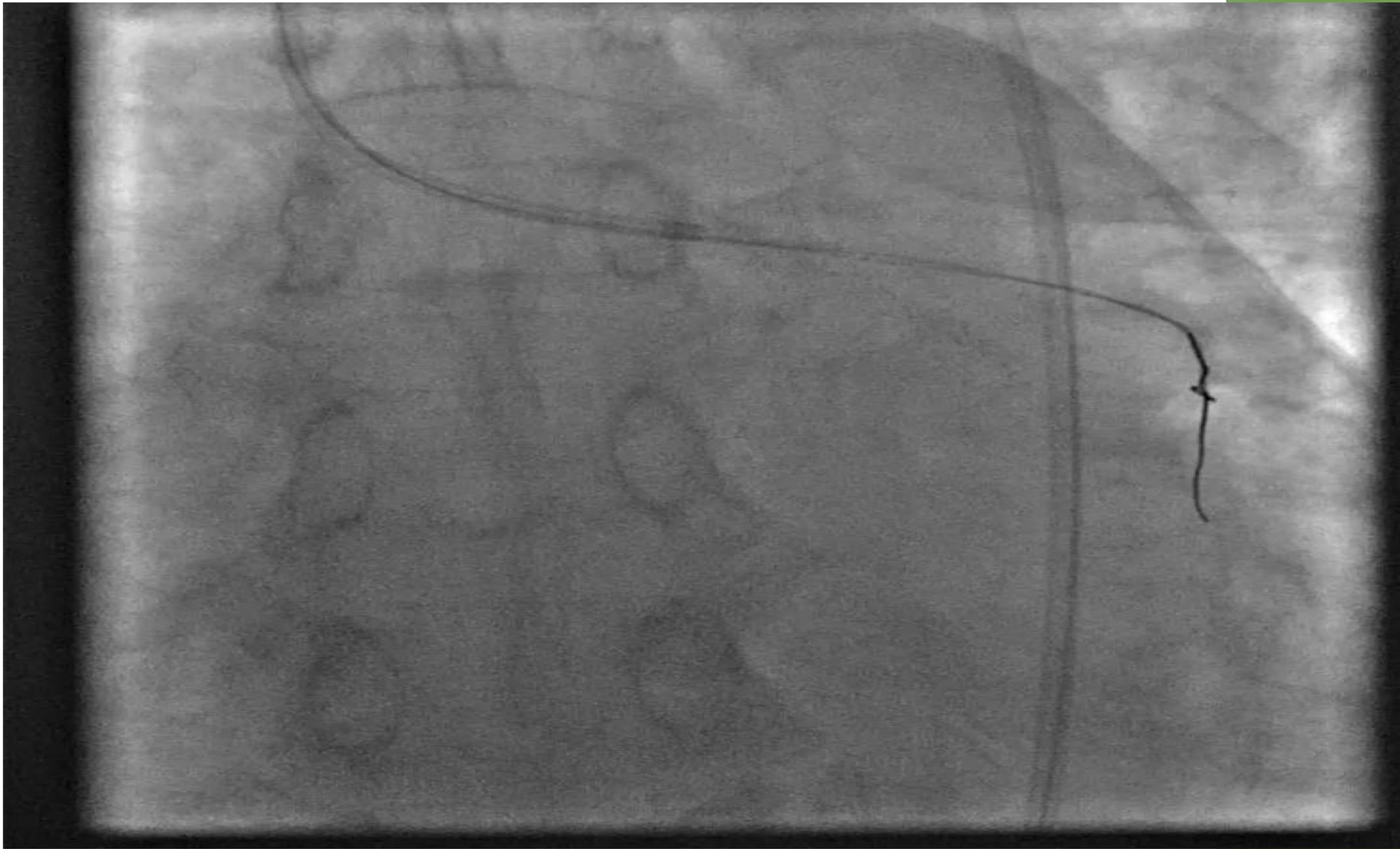
## Guidewire twirling technique

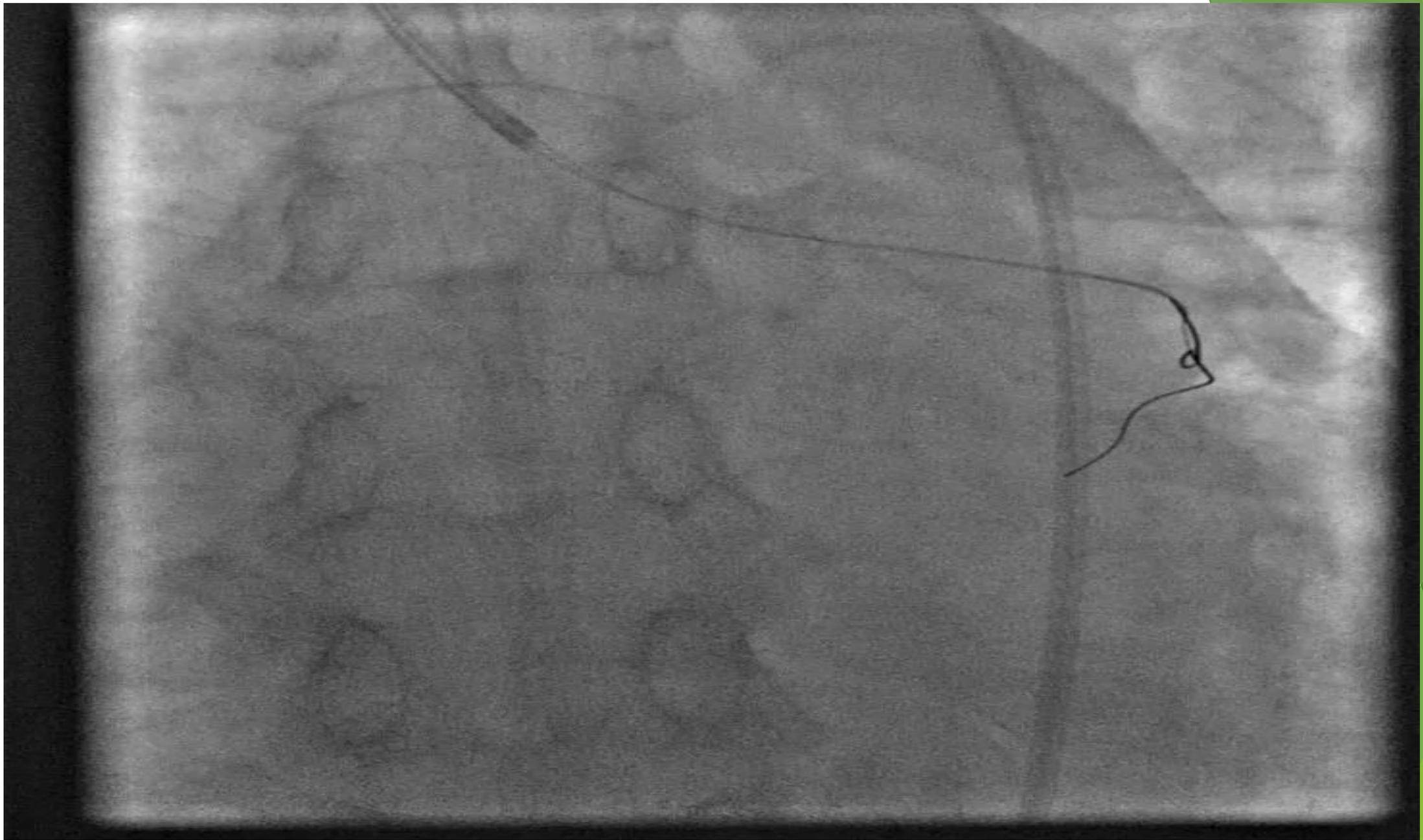


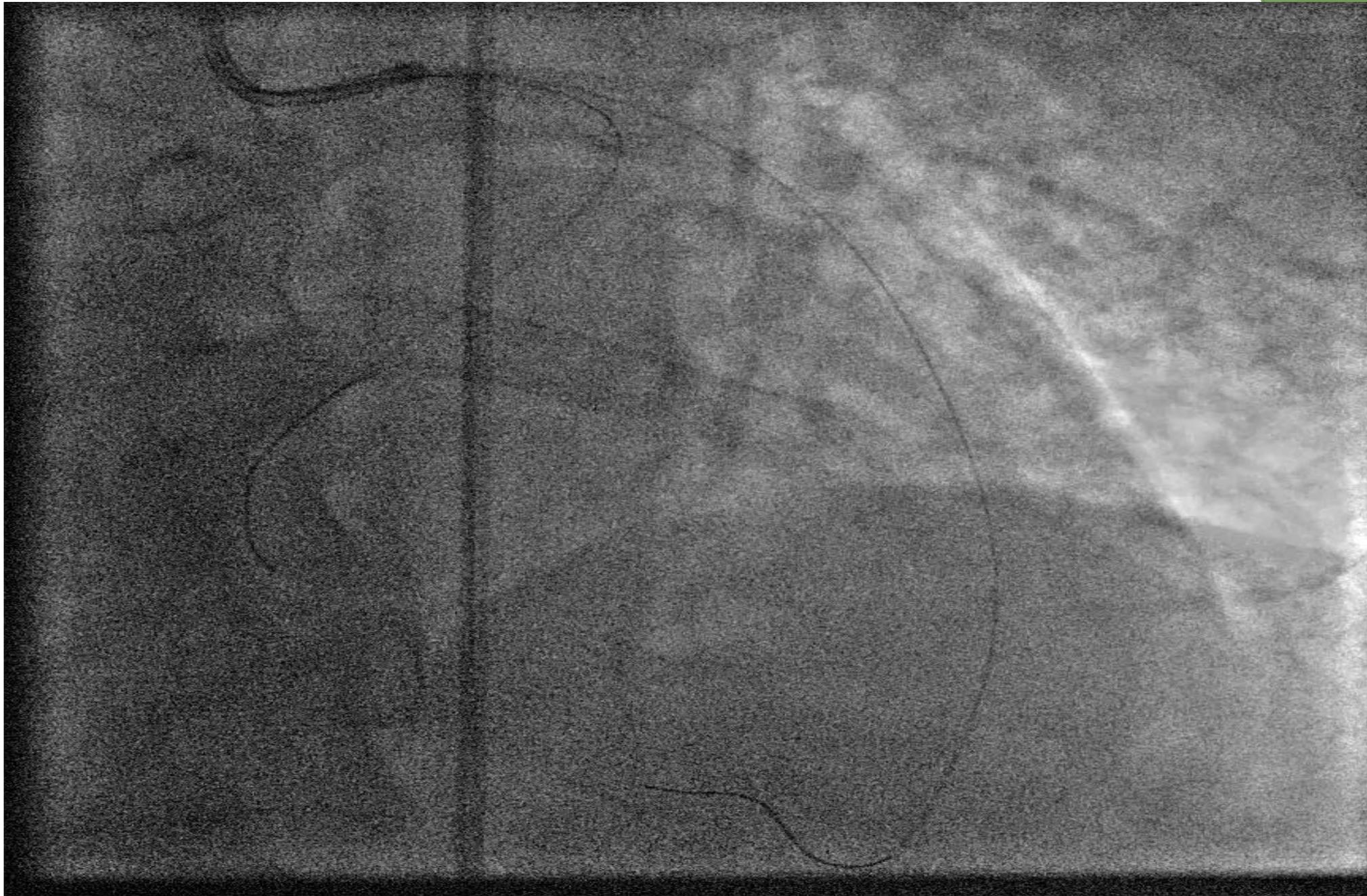
**FIGURE 27.6** Illustration of the guidewire “twirling” technique.



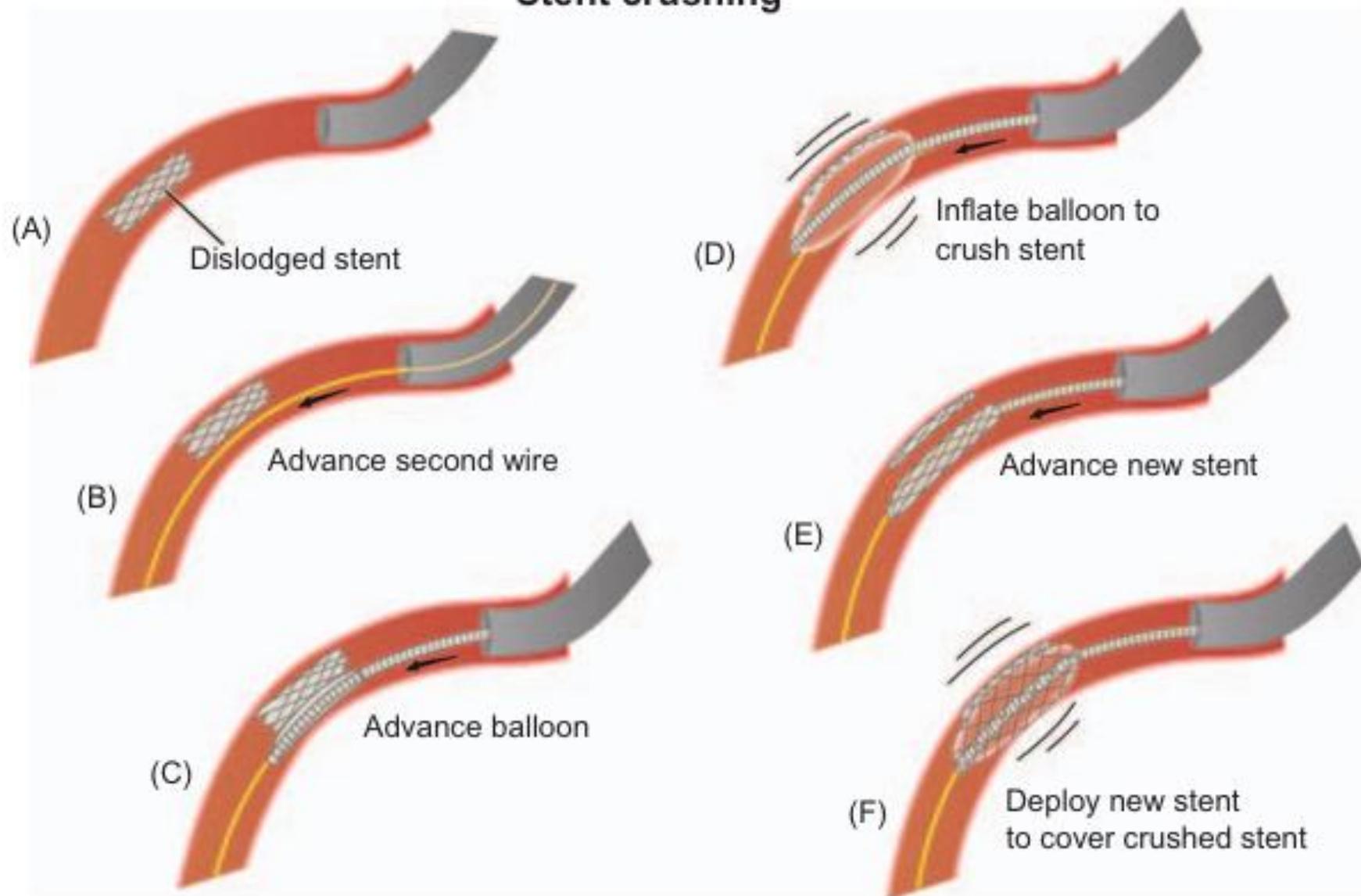




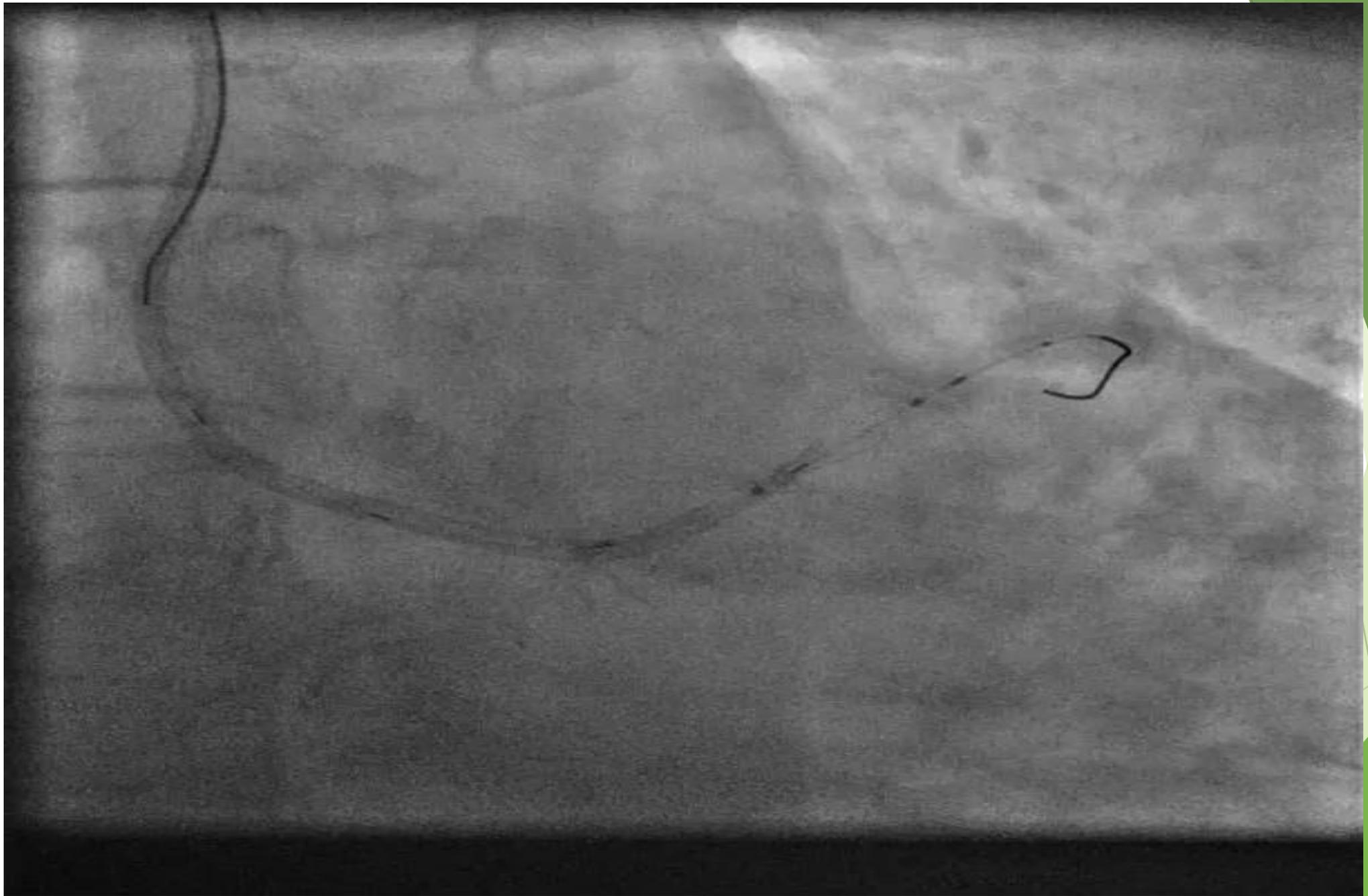


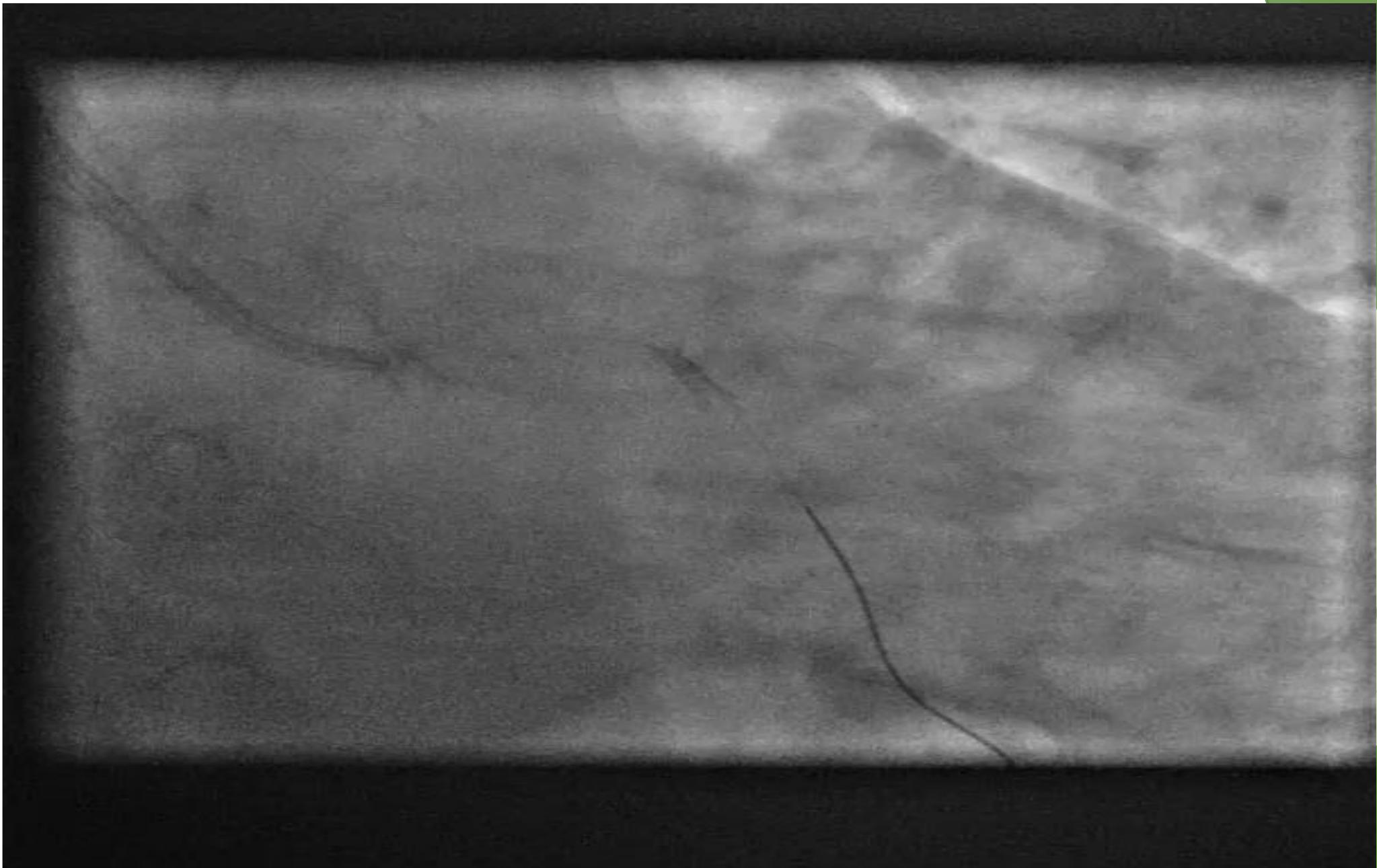


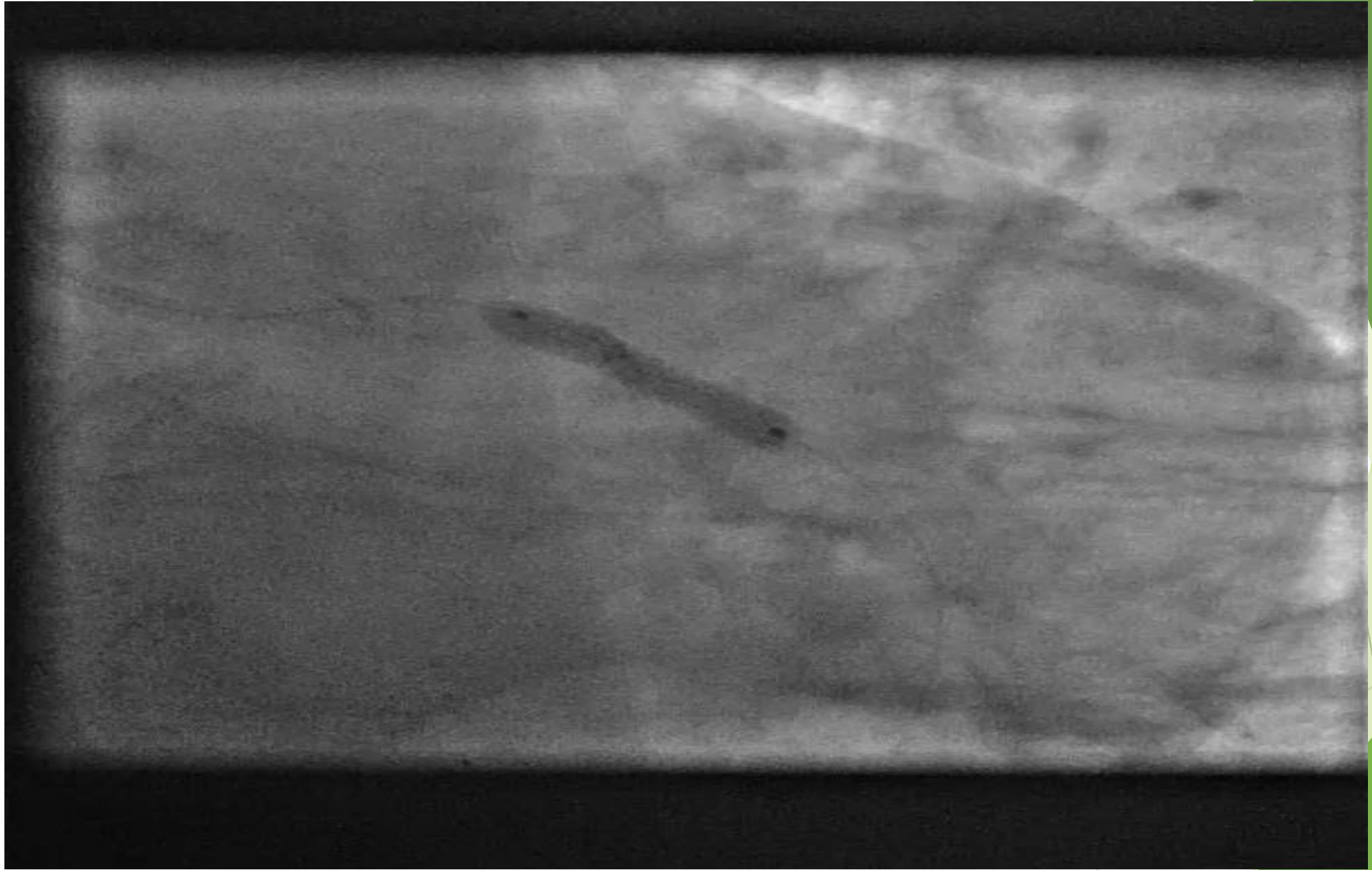
### Stent crushing

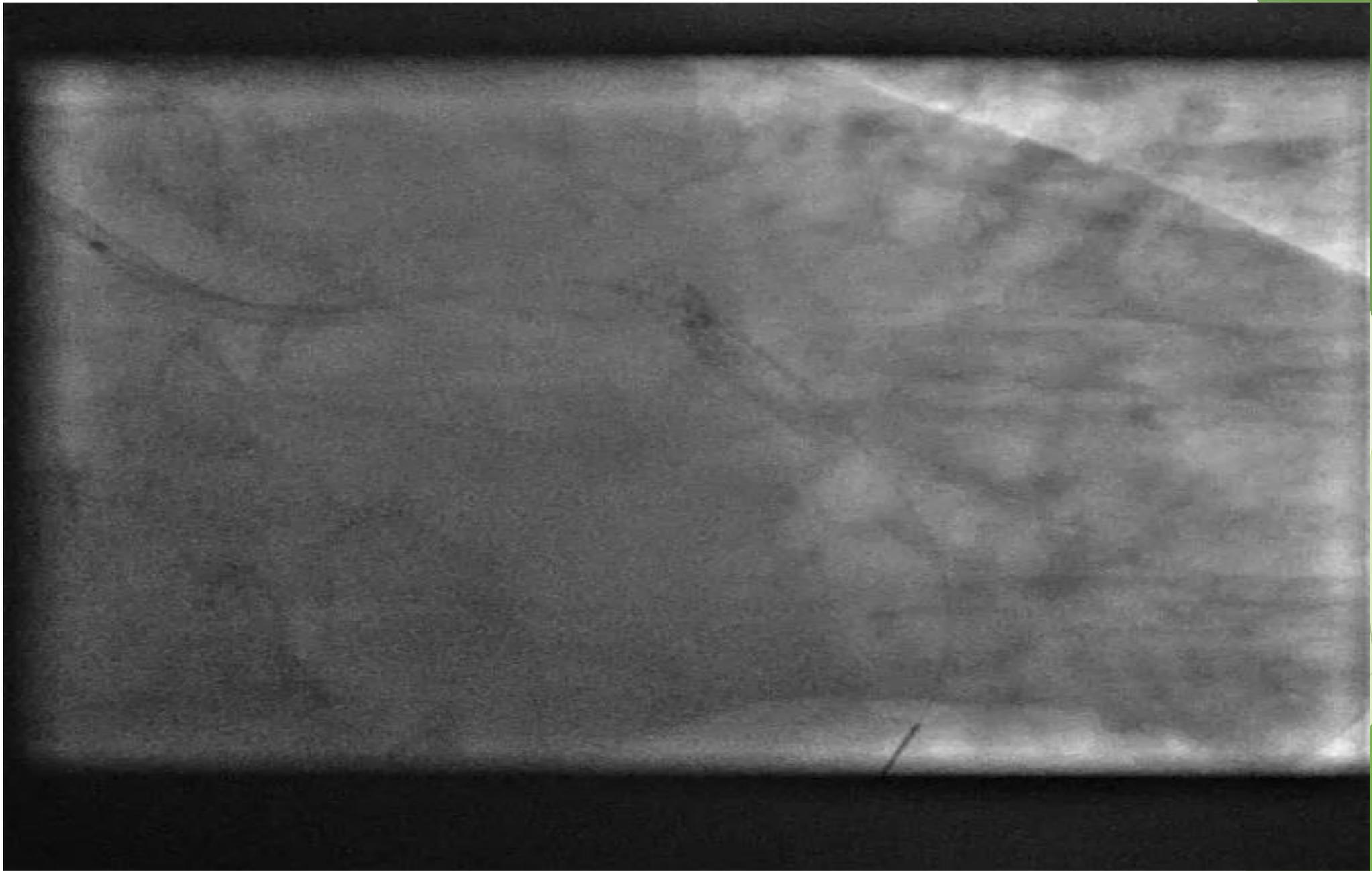


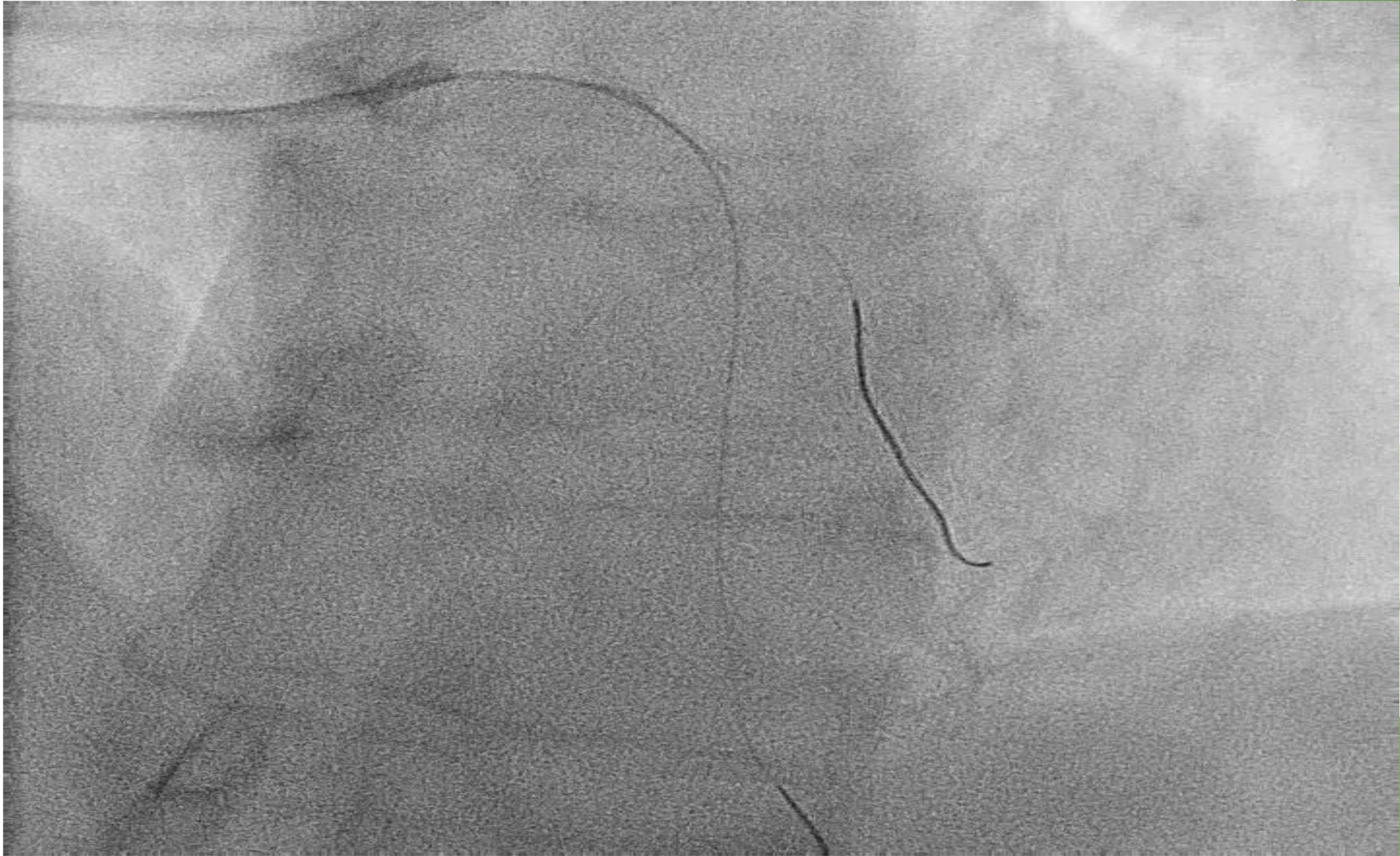
**FIGURE 27.7** Crushing of a dislodged stent.

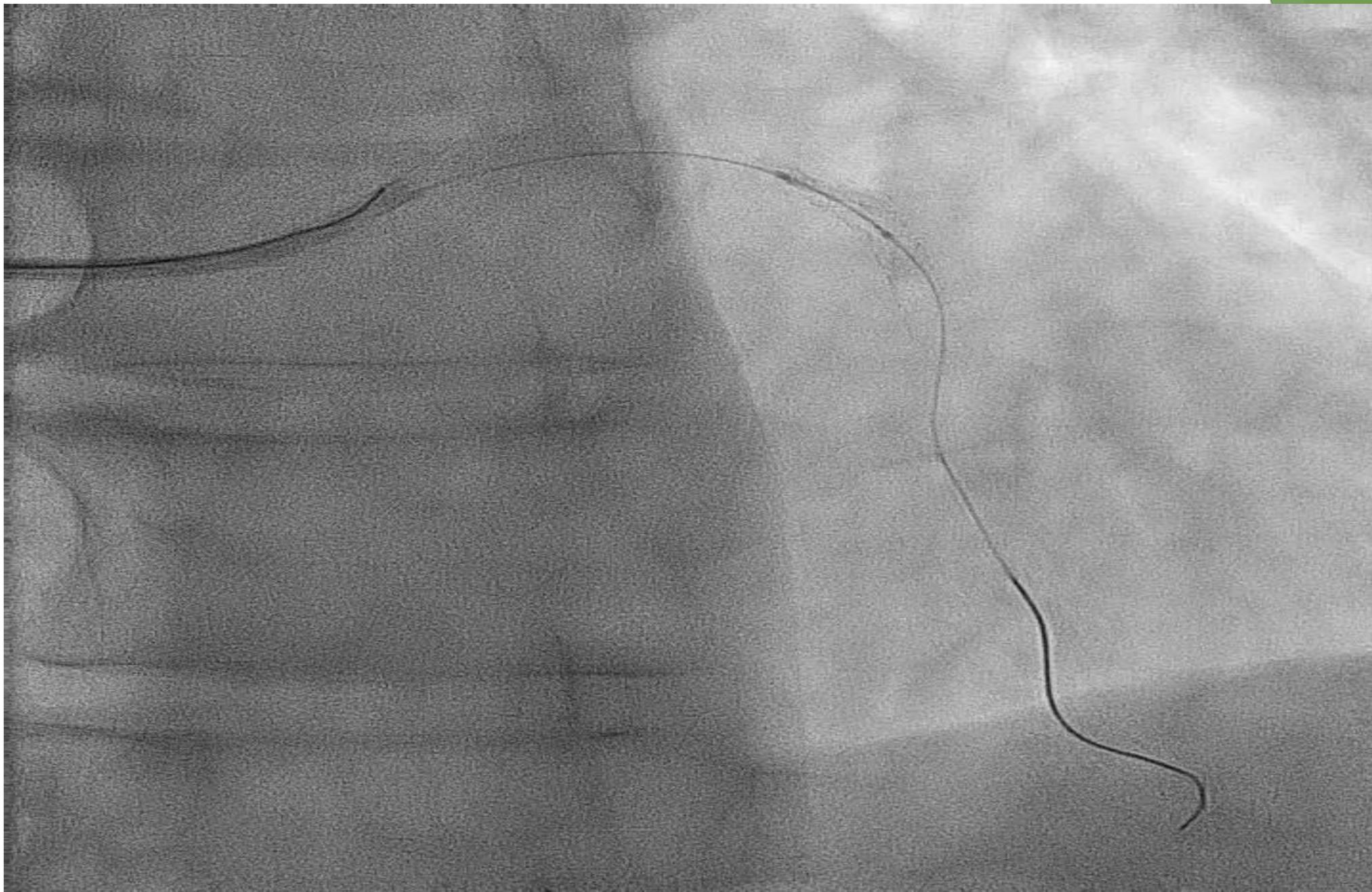


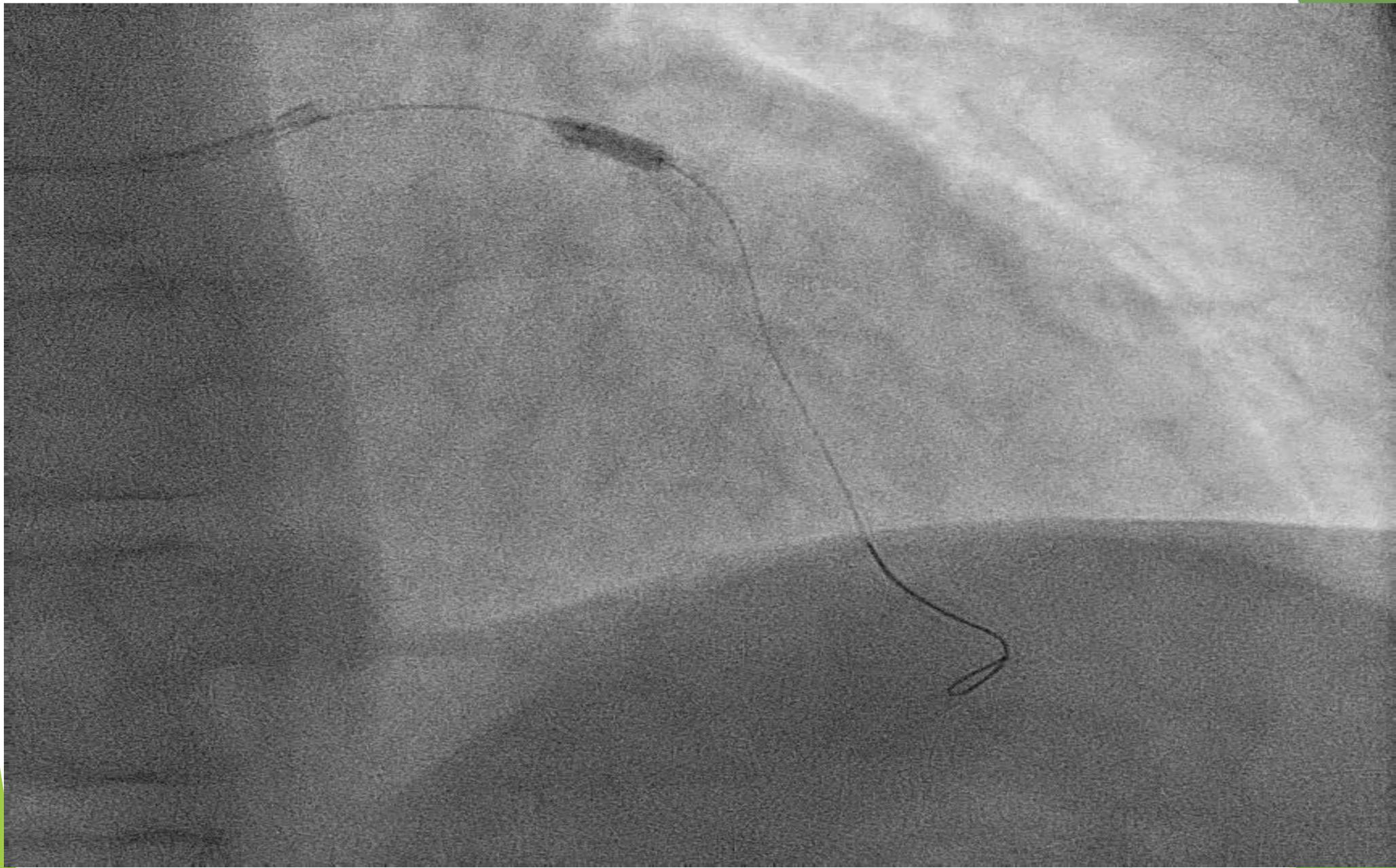


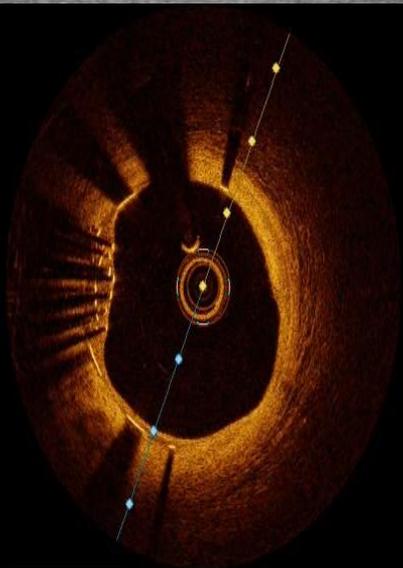




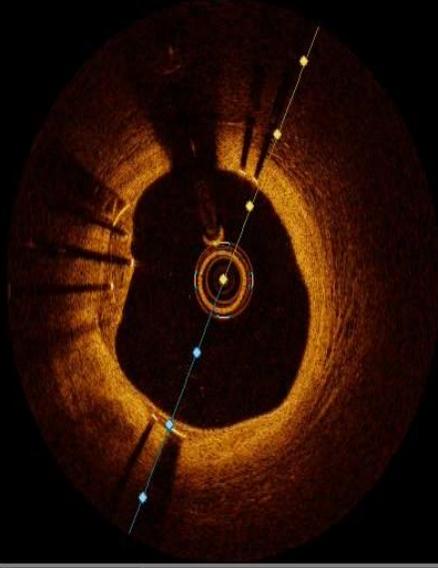




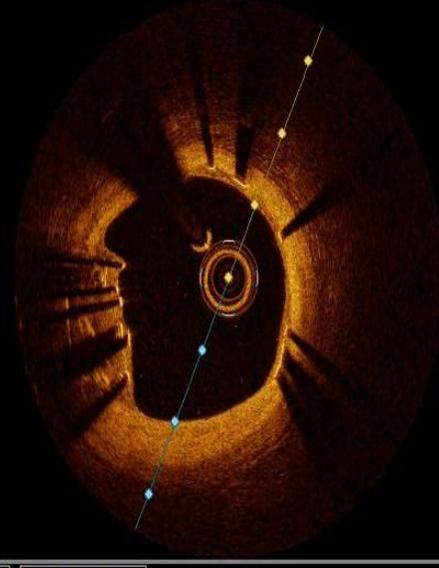




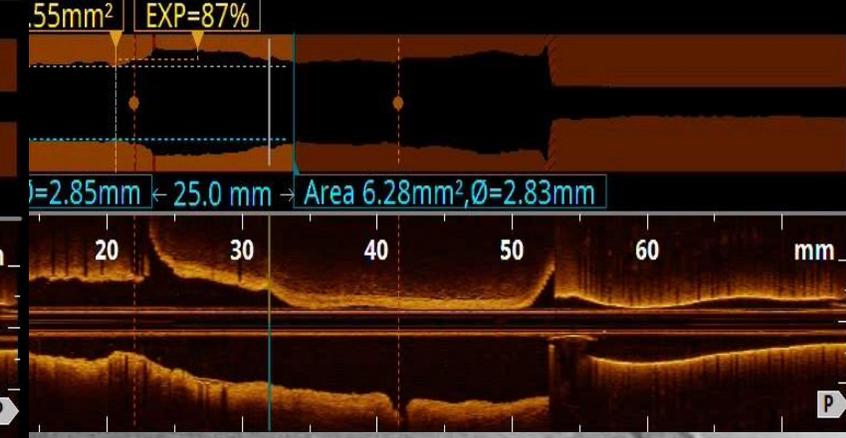
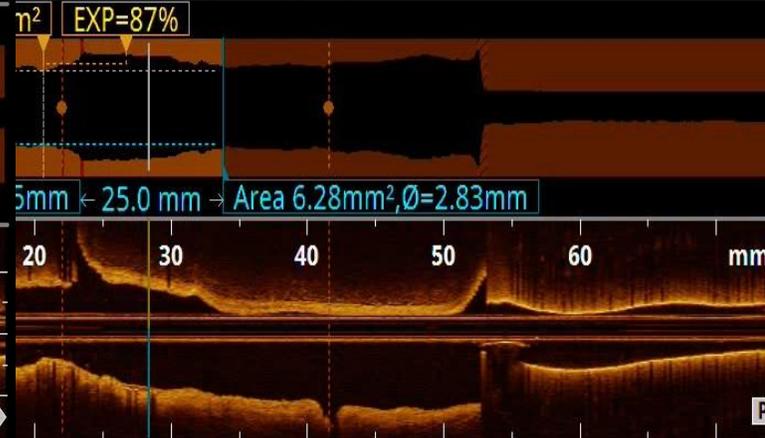
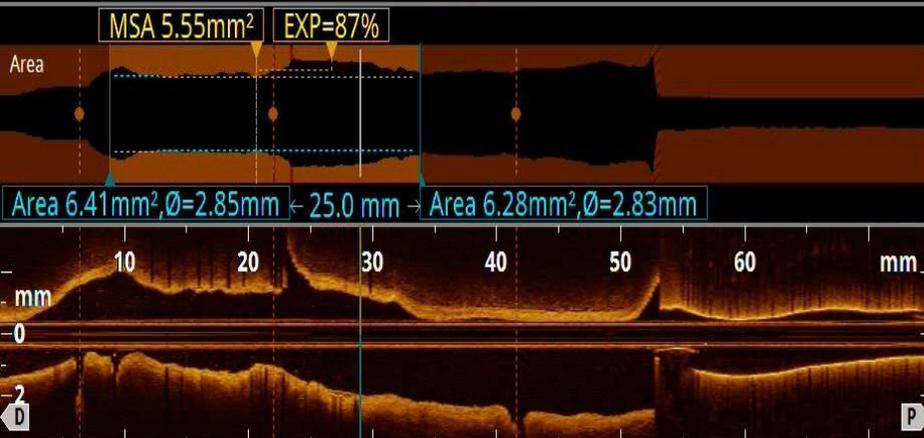
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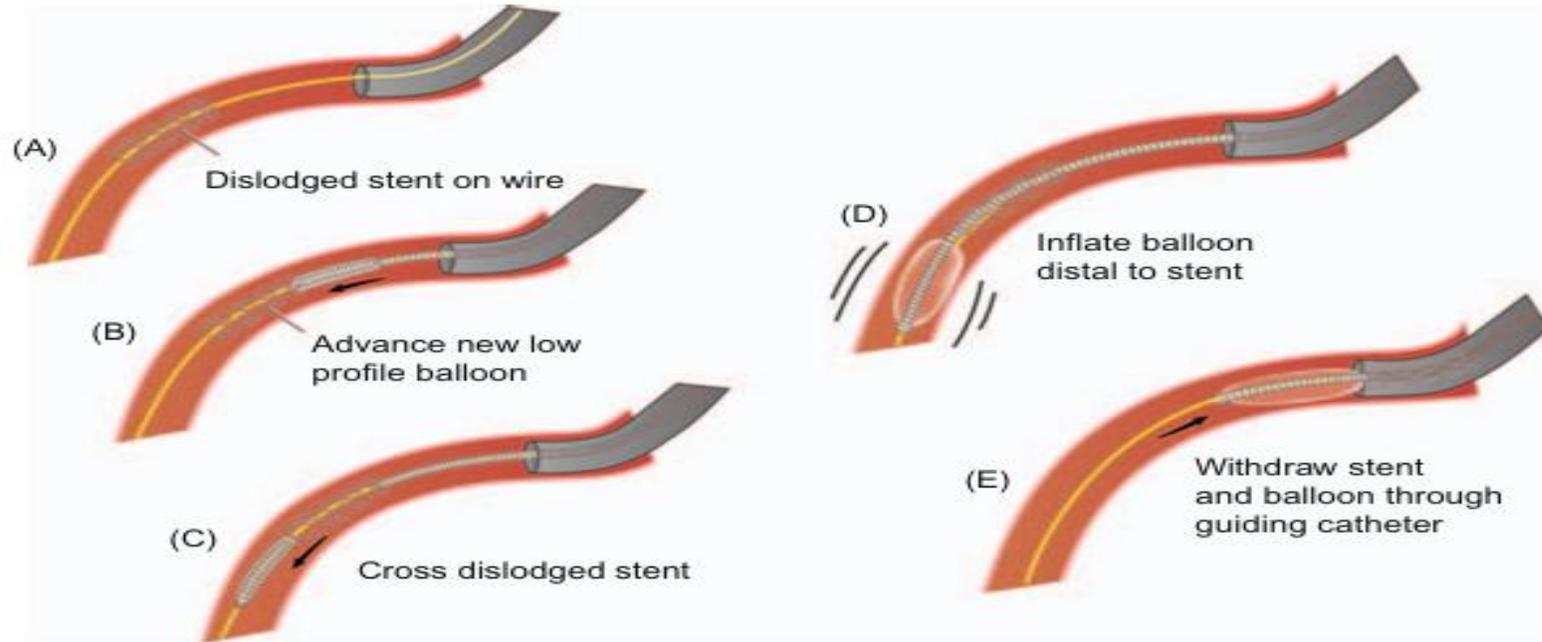
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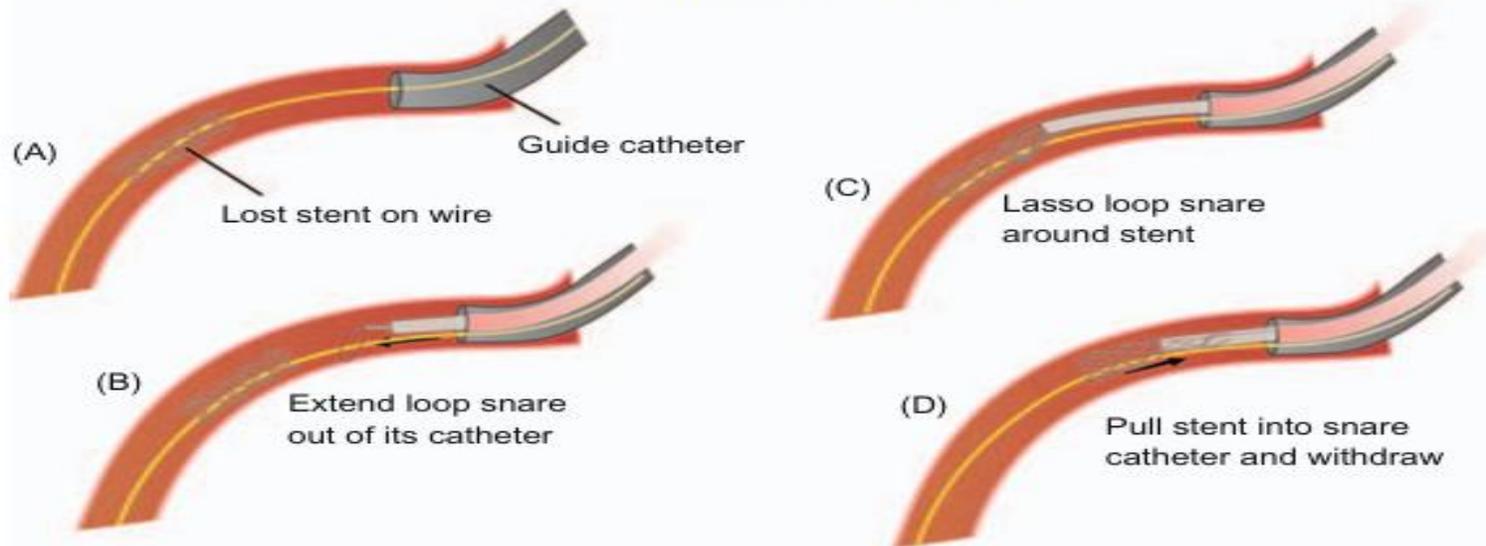


### Stent retrieval: small balloon technique



**FIGURE 27.3** Illustration of the small-balloon technique.

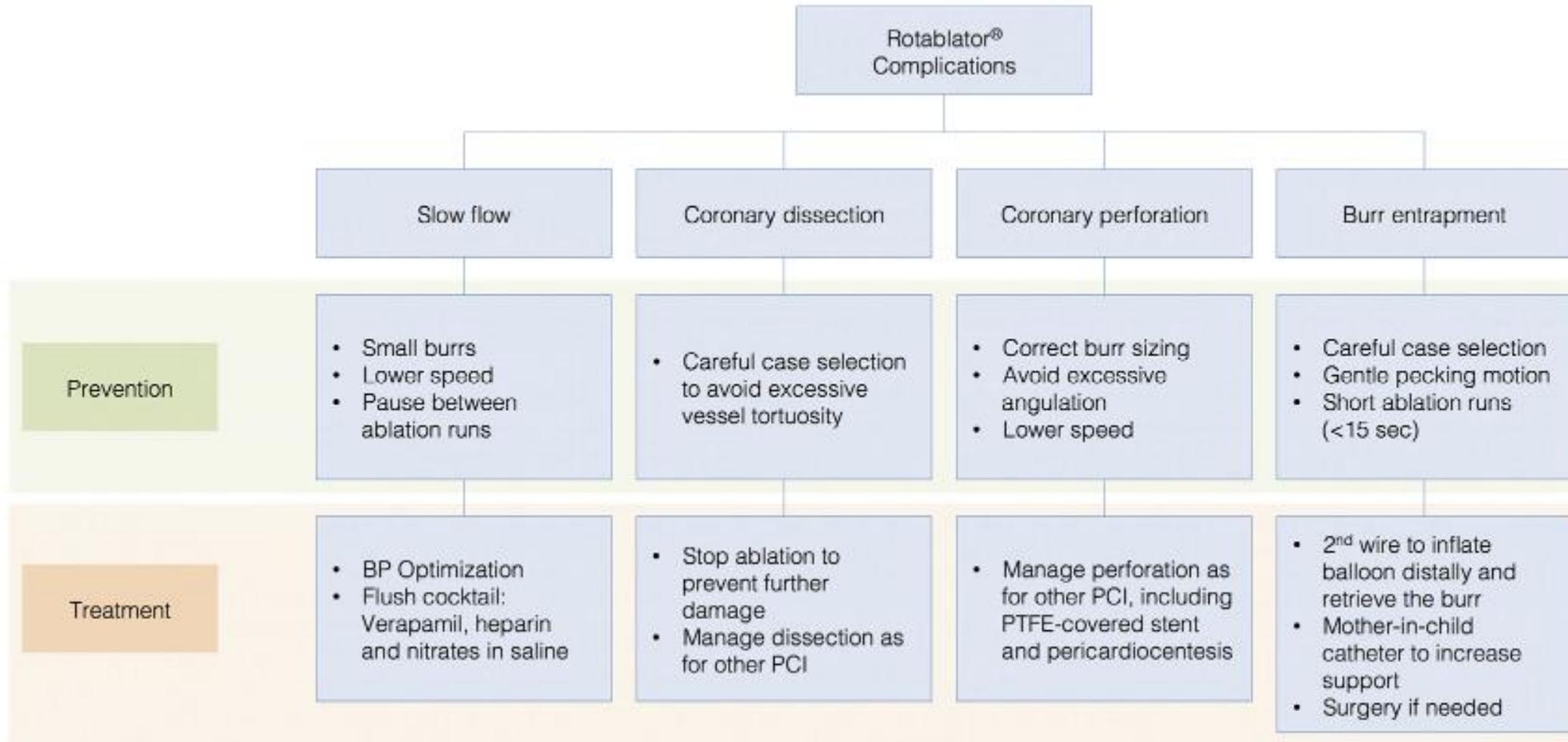
### Stent retrieval: loop snare



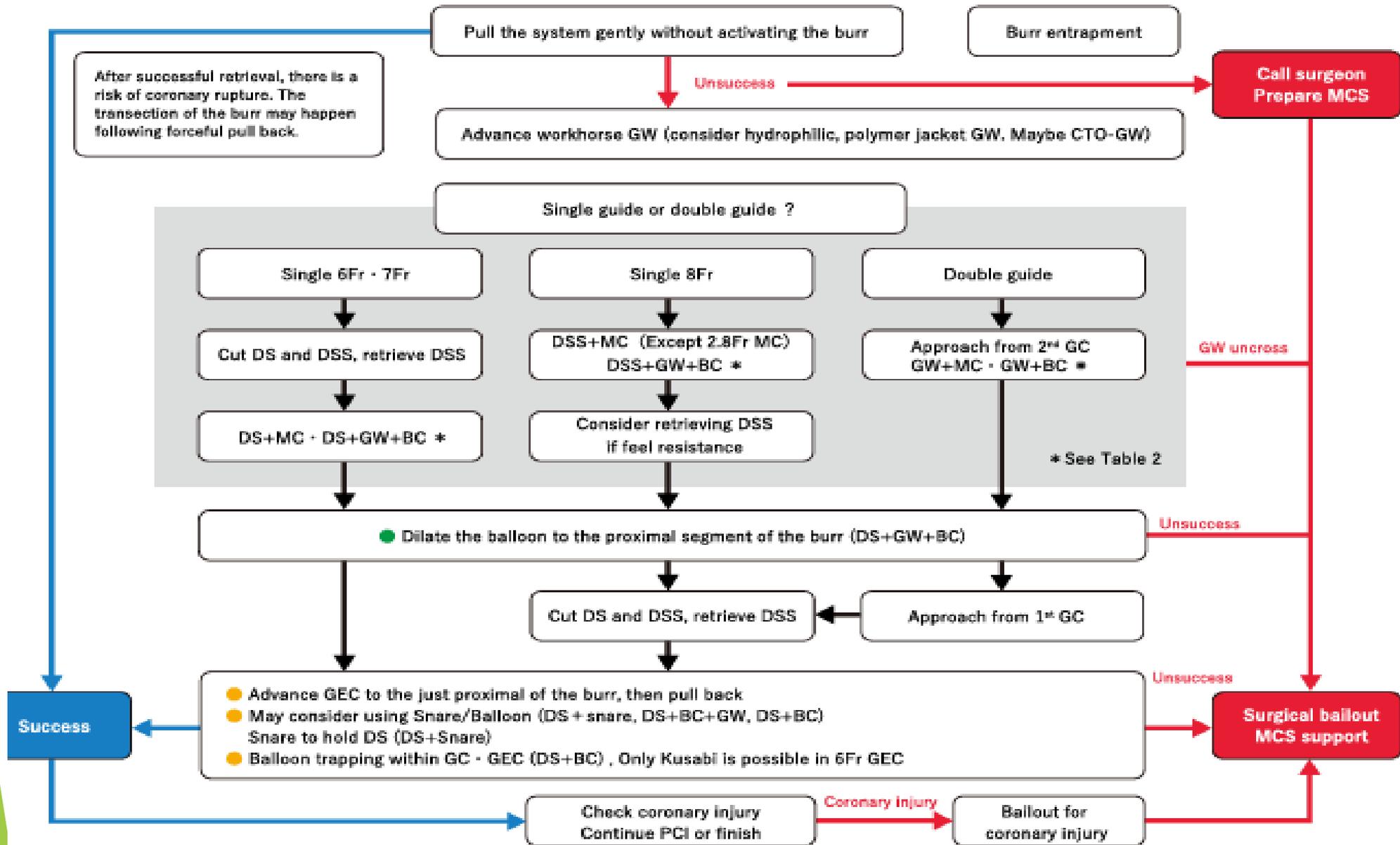
**FIGURE 27.4** Retrieval of a lost stent in the coronary circulation using a snare.

# Rotablace

**FIGURE 7** Complications Associated With Use of Rotational Atherectomy

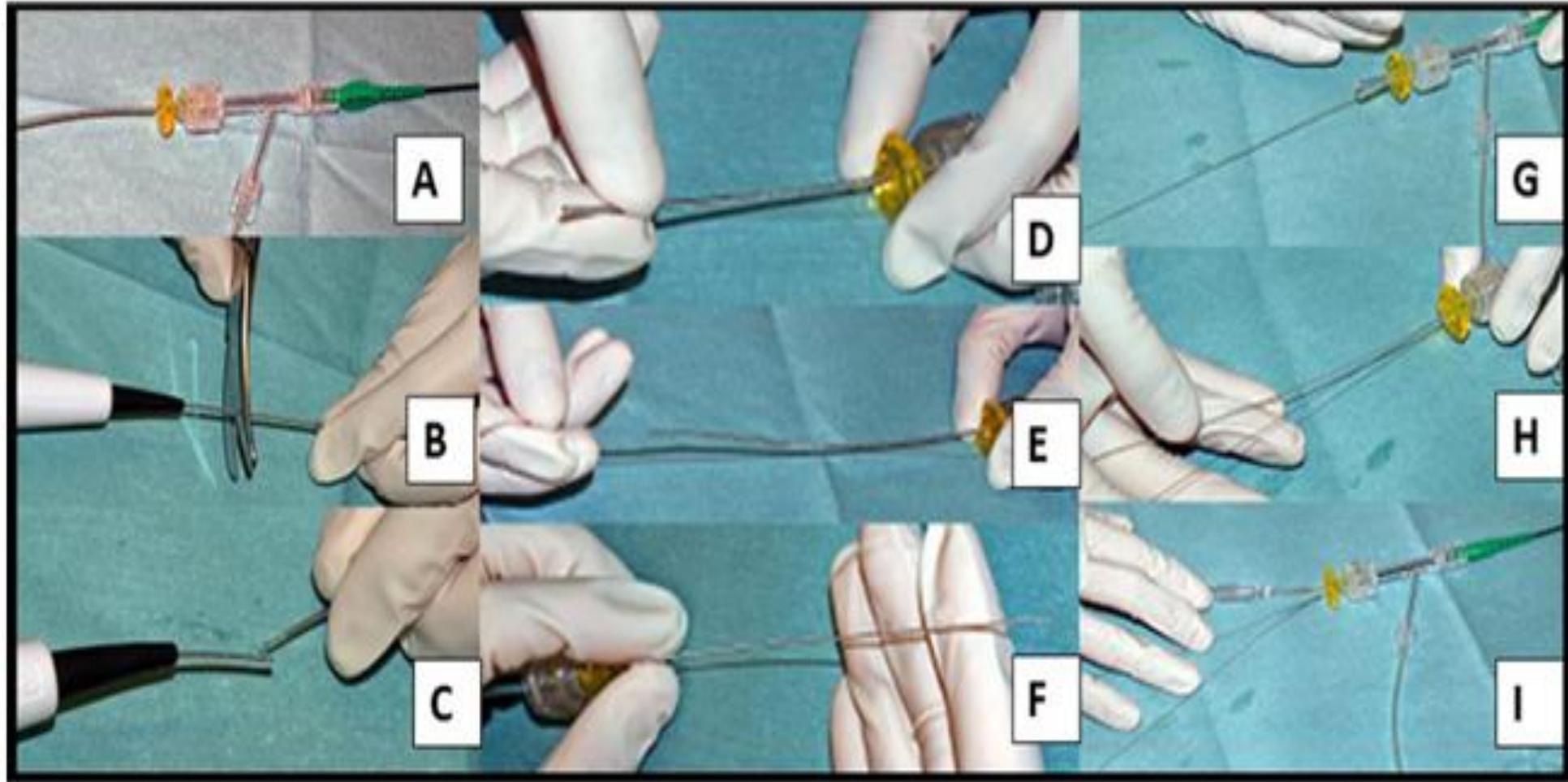


# rotablance - oliva / bur /



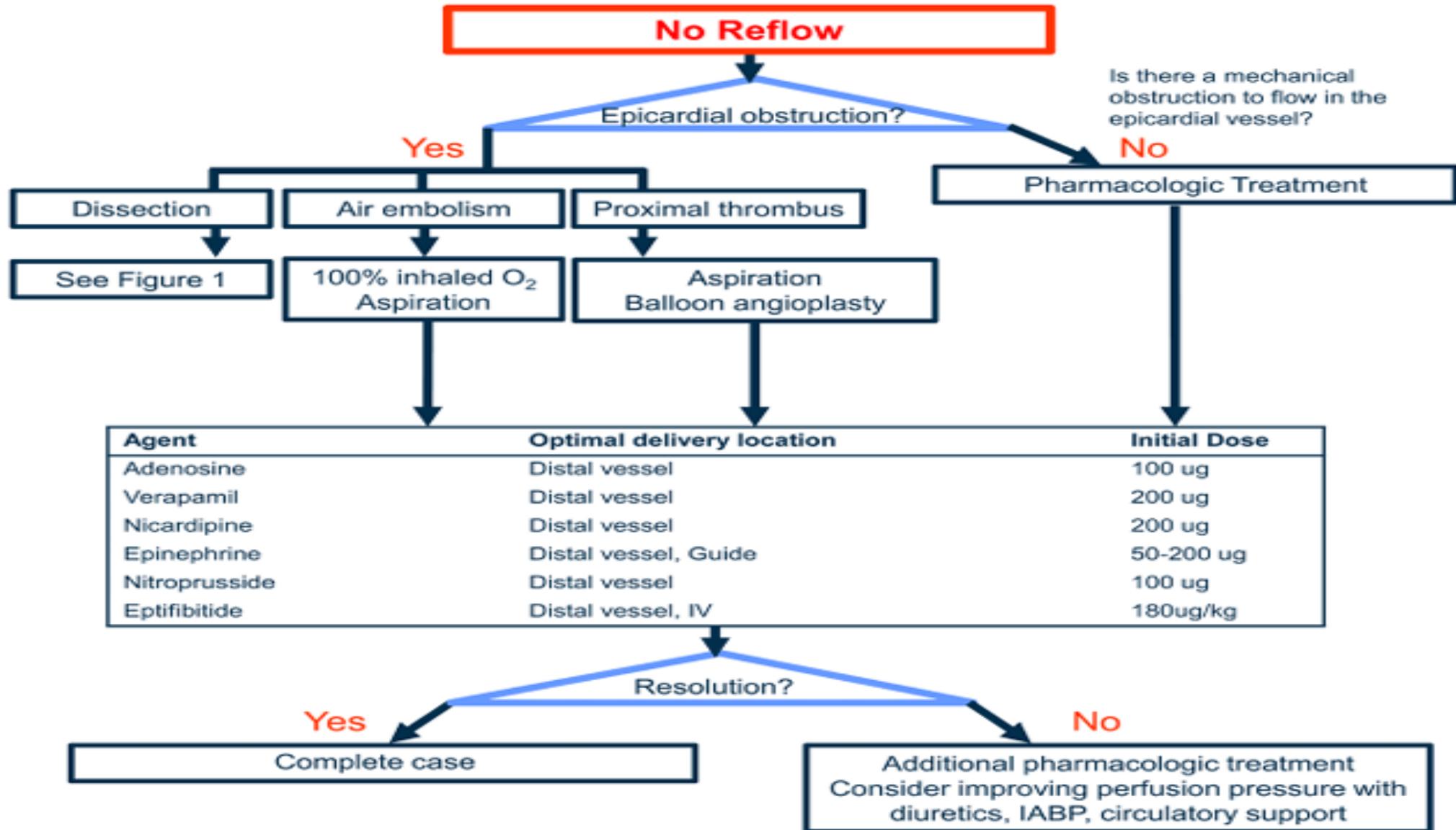
# rotablance - oliva / bur /

How to cut and pull the drive shaft sheath



cave 1.25mm

# No - flow



**Děkuji za pozornost**

