

# HOW TO ANALYSE LESIONS IN BIFURCARTIONS

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ICBA , INSTITUTO CARDIOVASCULAR DE BUENOS AIRES

PI LATAMBIF Registry

## Speaker's name : Lucio Padilla

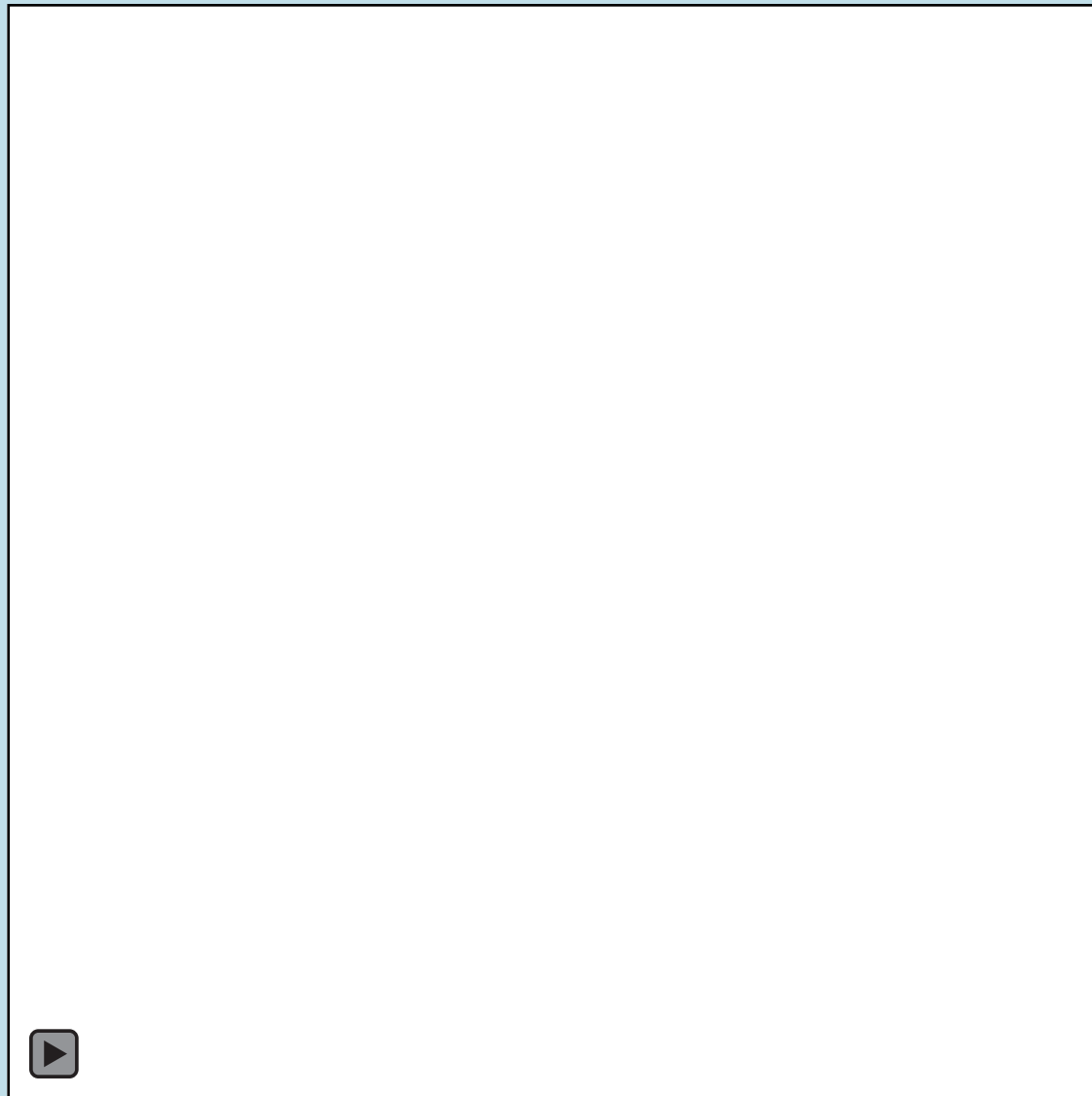
I do not have any potential conflict of interest to declare





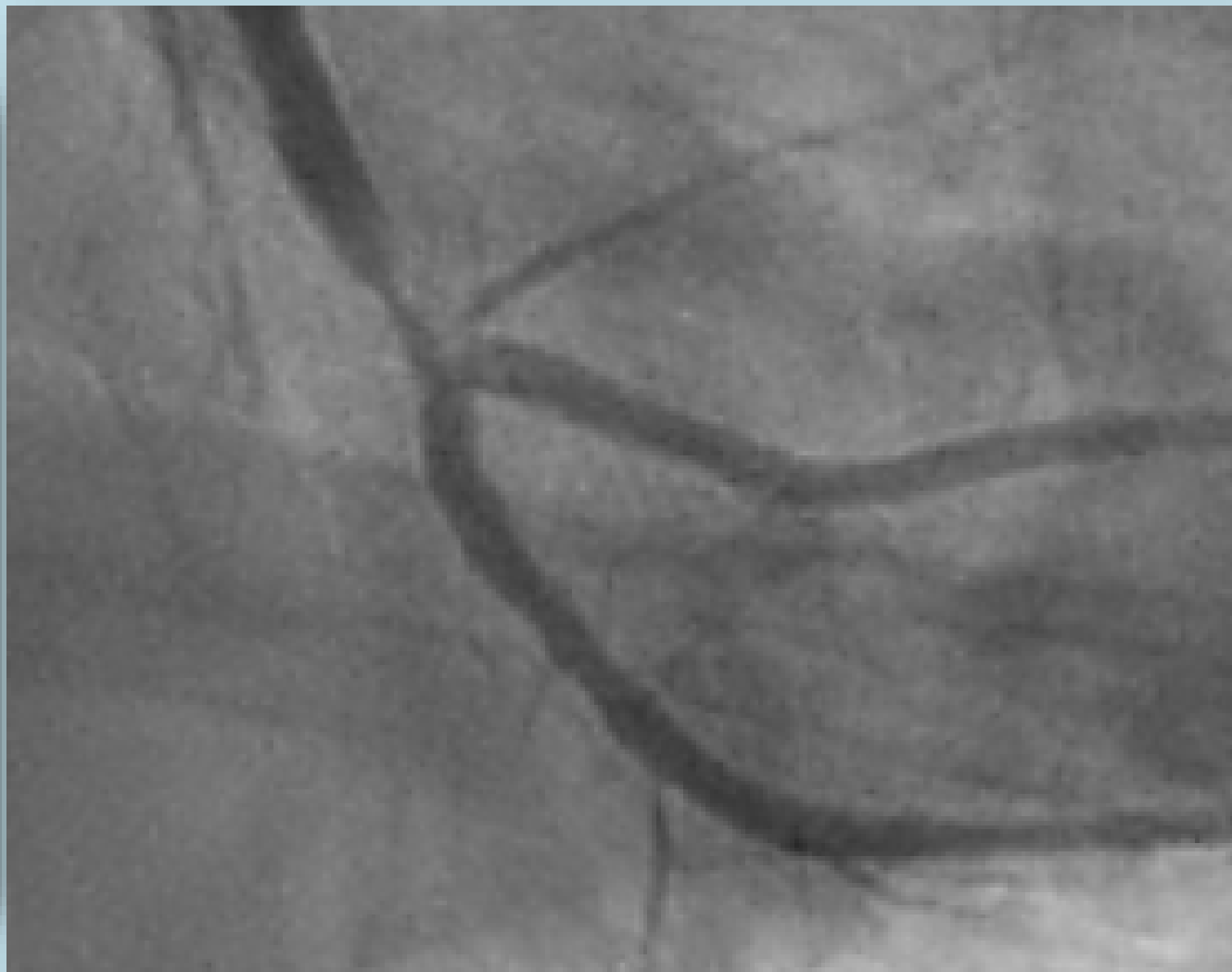
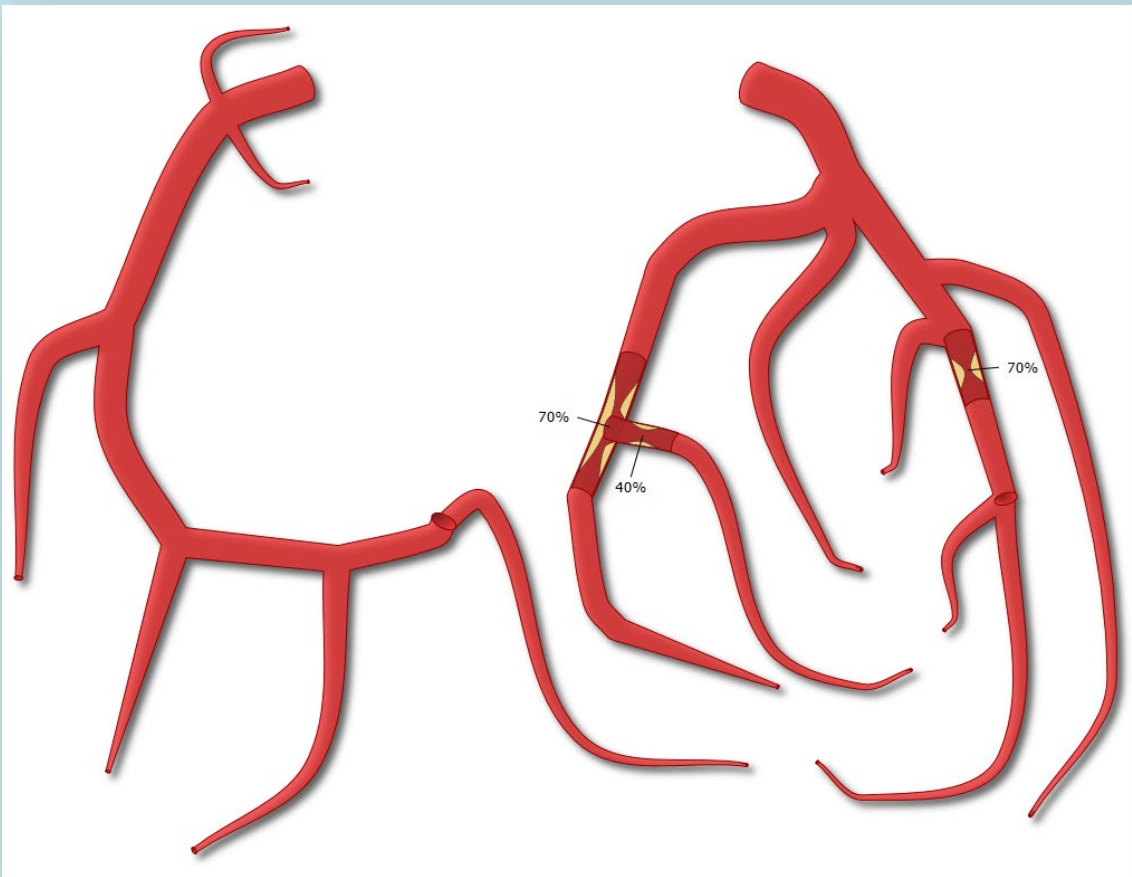
BUENOS AIRES HILTON  
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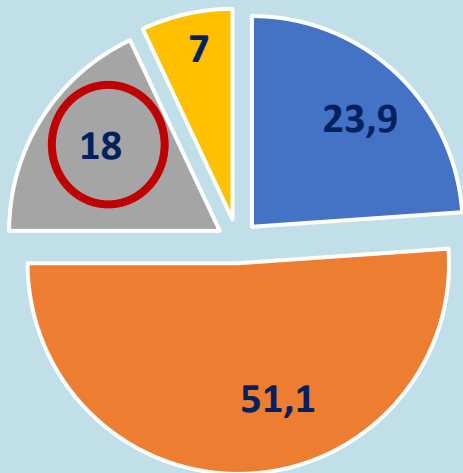
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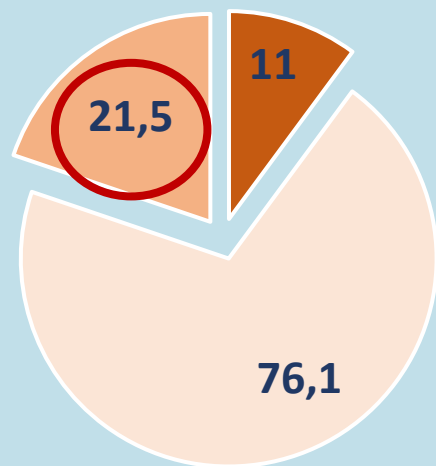
# Prevalence

## Location of bifurcation disease

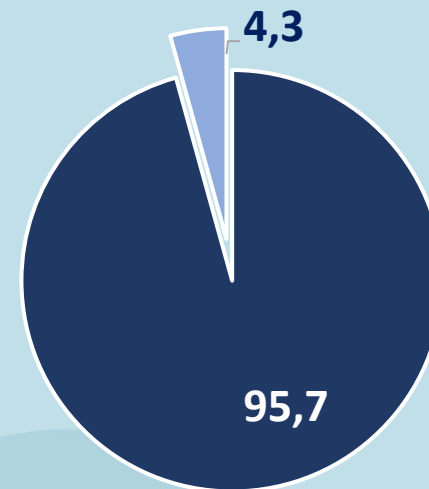
### LATAMBif registry



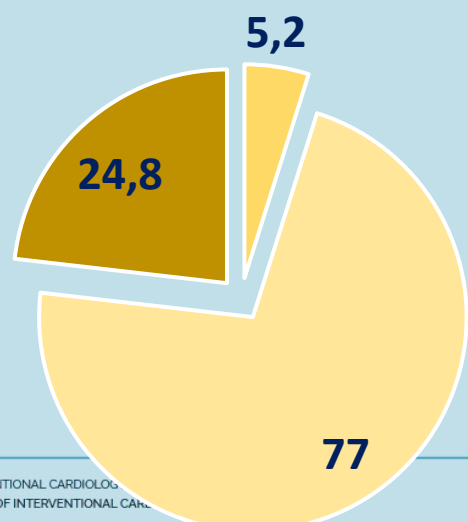
■ ULM ■ LAD ■ Cx ■ RCA



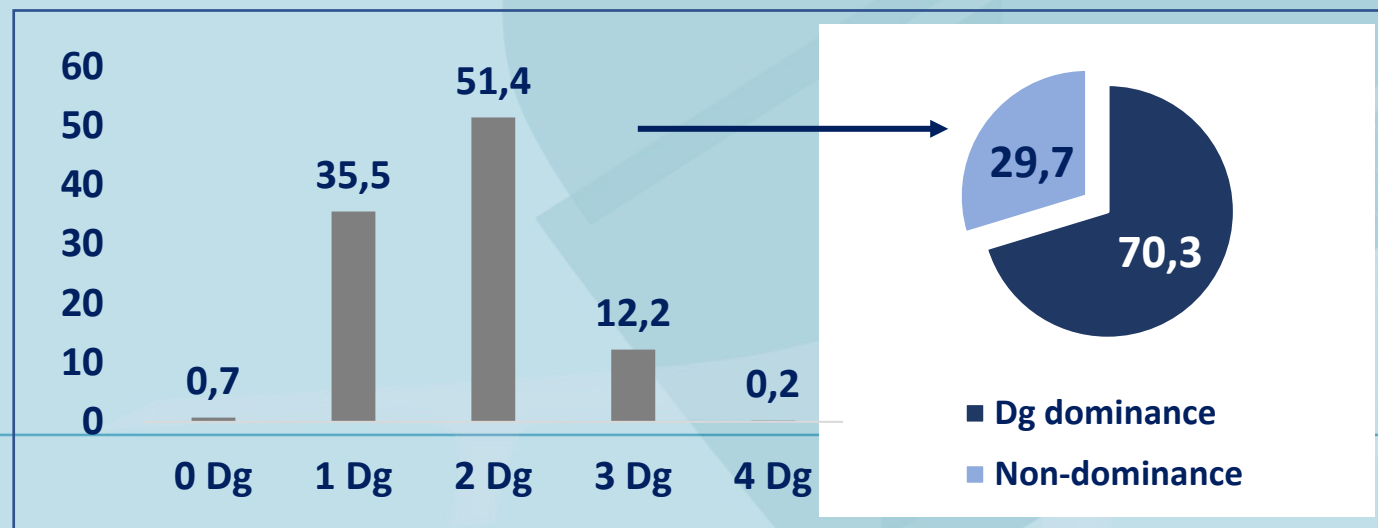
■ Ostial Cx ■ pCx ■ dCx



■ Distal LM ■ Ostial/Shaft



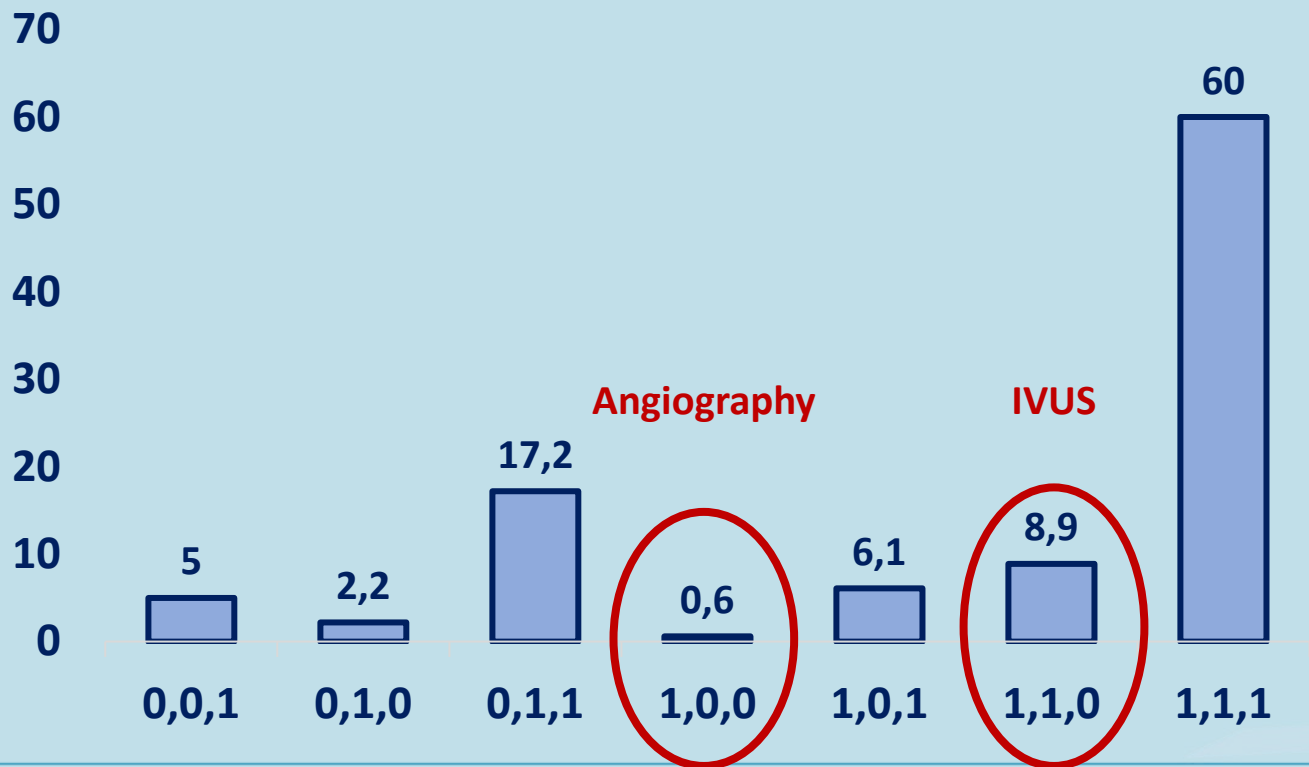
■ Ostial LAD ■ pLAD ■ mLAD



# LATAMBif registry

## Bifurcation lesion characteristics

**Medina Classification**  
**True bifurcations > 80%**

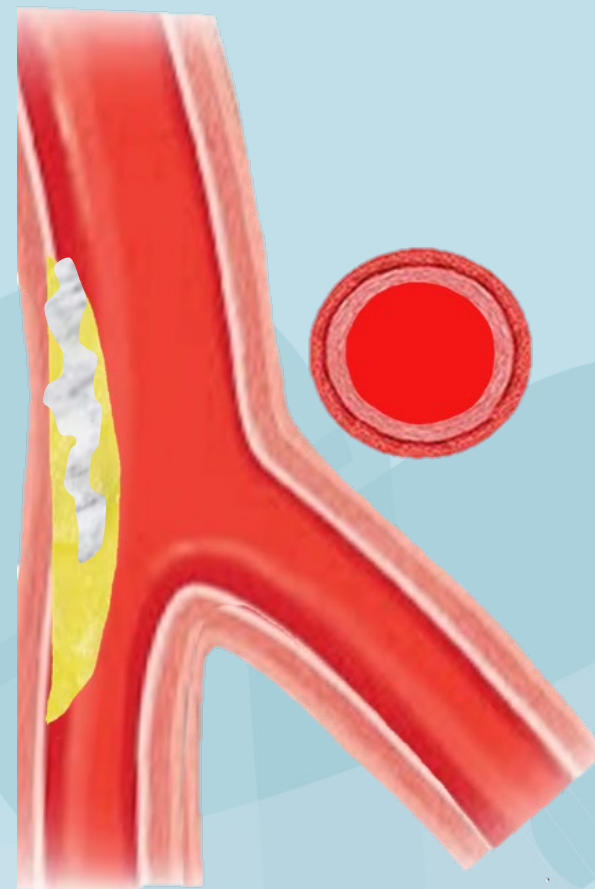


Main vessel	
pDiameter (mm, ±SD)	3,6 ± 0,7
dDiameter (mm, ±SD)	3,05 ± 0,49
Stenosis severity (%)	80,6 ± 19,5
Lesion length (mm, ±SD)	25,02 ± 16
Side Branch	
Diameter (mm, RIC)	2,5 (RIC 2,5 – 3)
Stenosis severity (%)	51,06 ± 36,16
Lesion length (mm, RIC)	10 (RIC 5 – 15)
SB length ≥ 73 mm (%)	84,7

## **Coronary Bifurcation Assessment** **Vessel Diameter (VD), Angulation SB (A SB), Type of Plaque (TP)**

- **To consider:**

1. **Vessel diameter.**
2. **Vessel angulation.**
3. **Plaque characterization.**
4. **SB Access difficulty.**



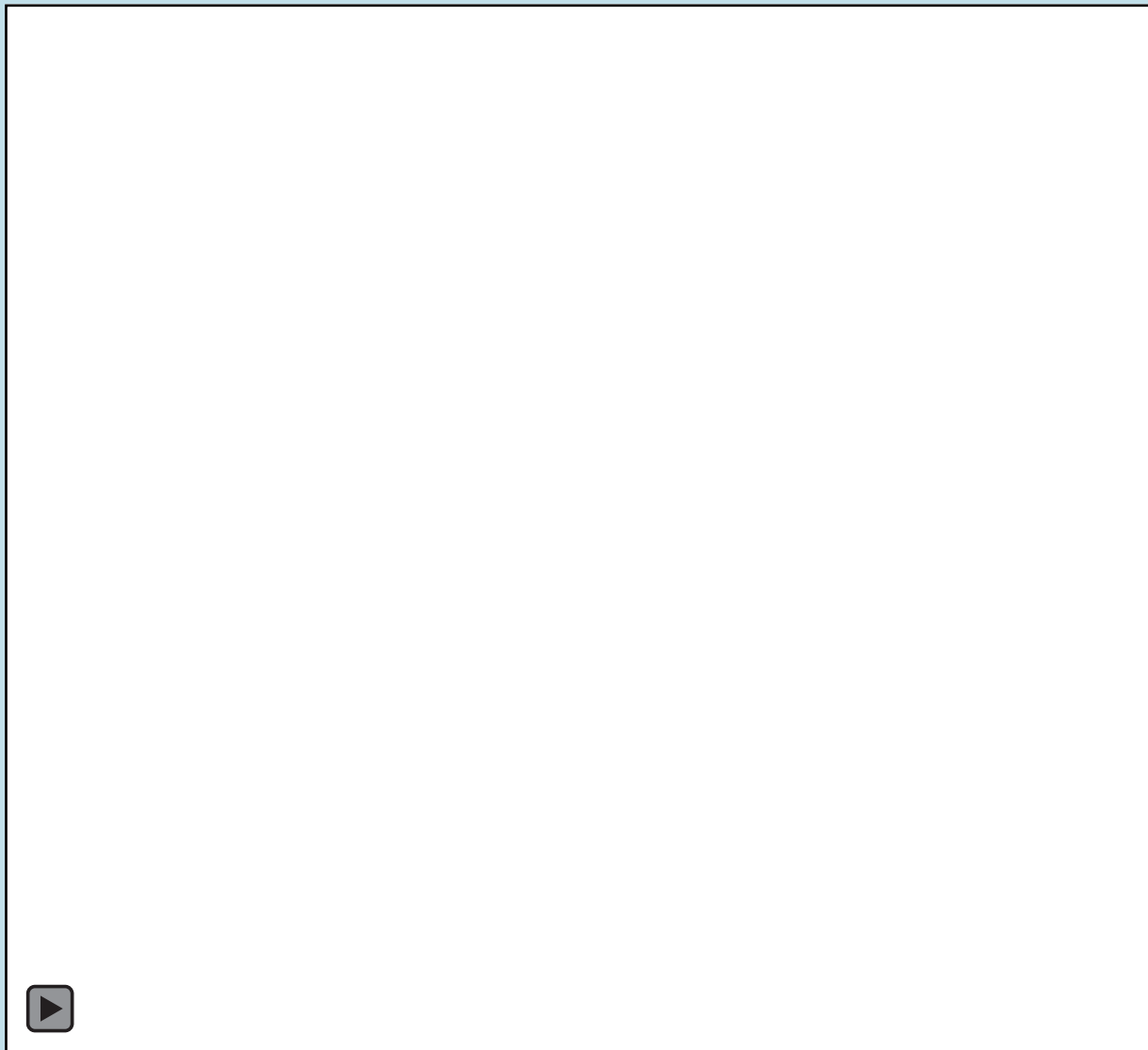
# Strategy

- 6 Fr XB 3.5
- Wiring to Circ and OM1 ( doble lumen catheter if necessary)
- IVUS assessment
- Plaque modification: NC balloon
- Provisional Stent Circ
- POT
- Rewiring to OM1
- KB: Ballon NC and DEB OM1
- Last manouver POT KISS POT



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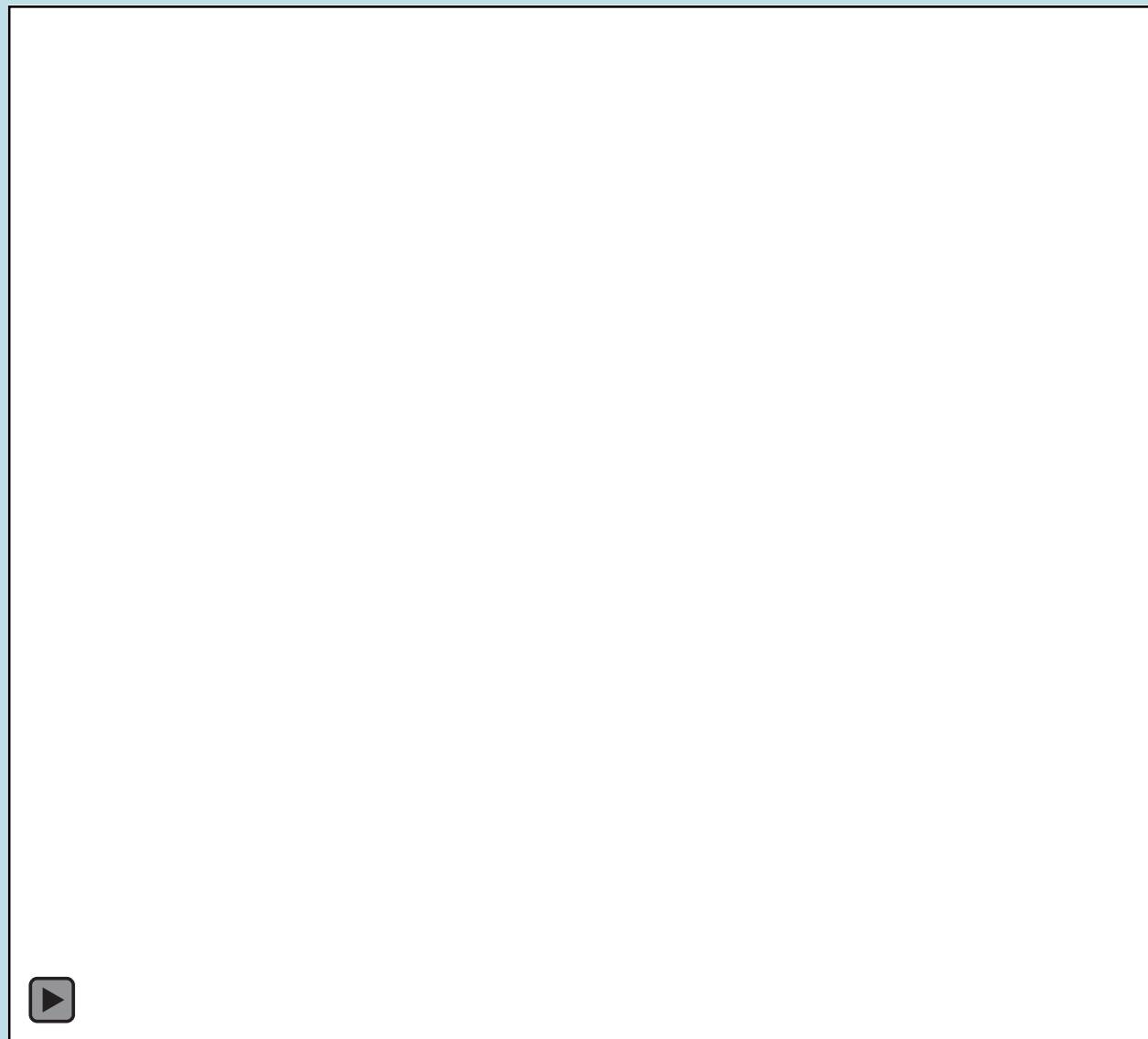
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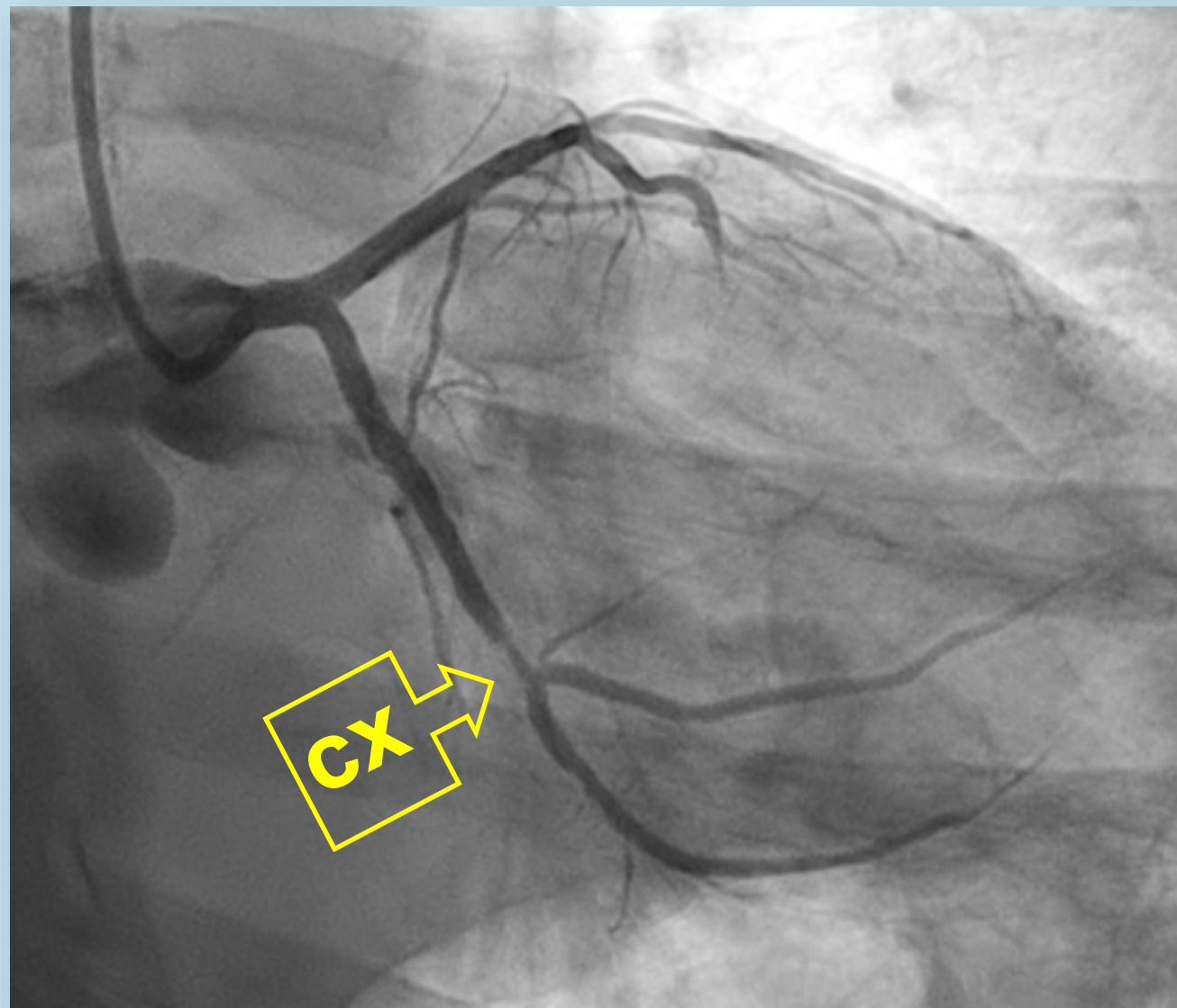
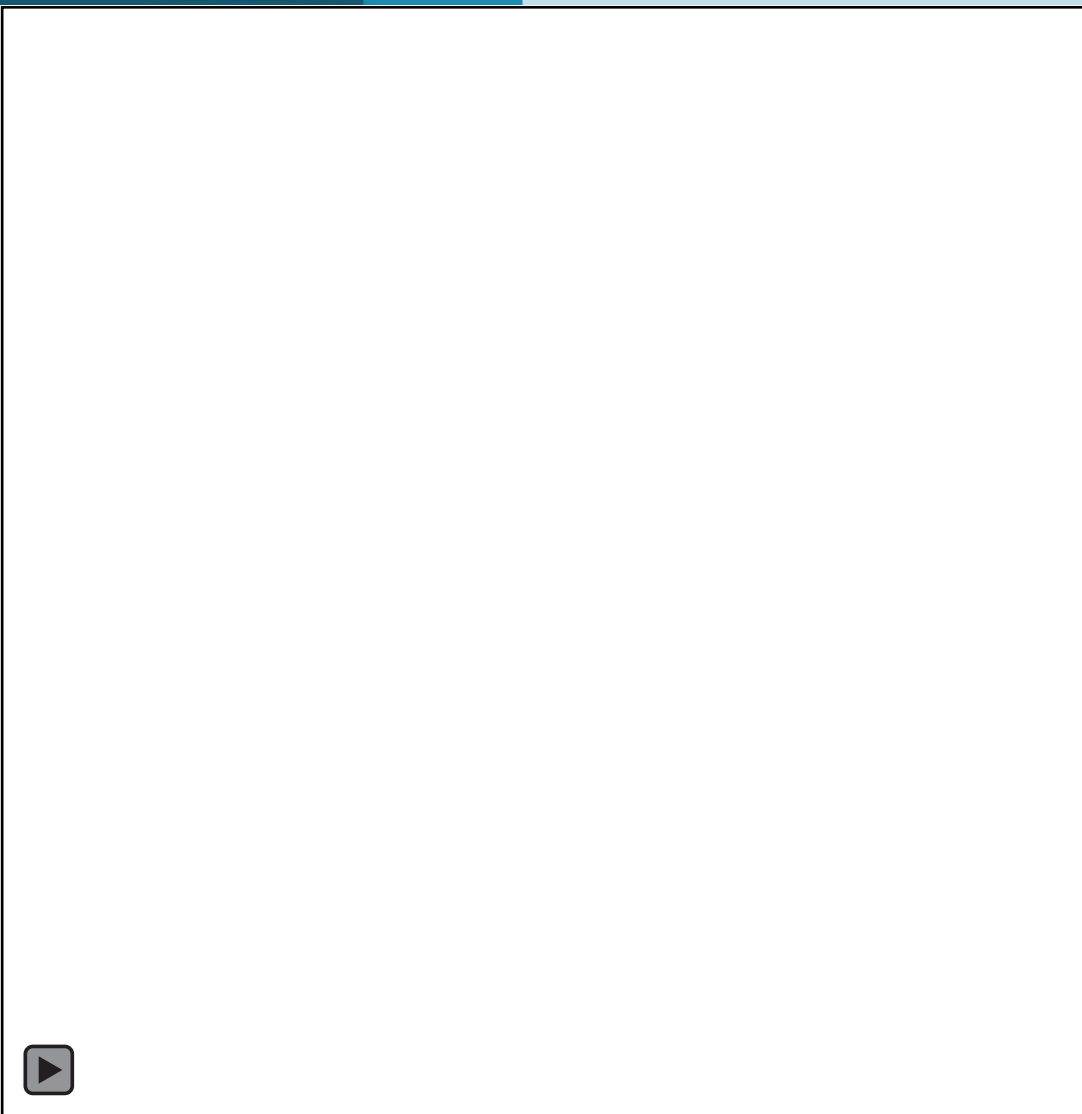
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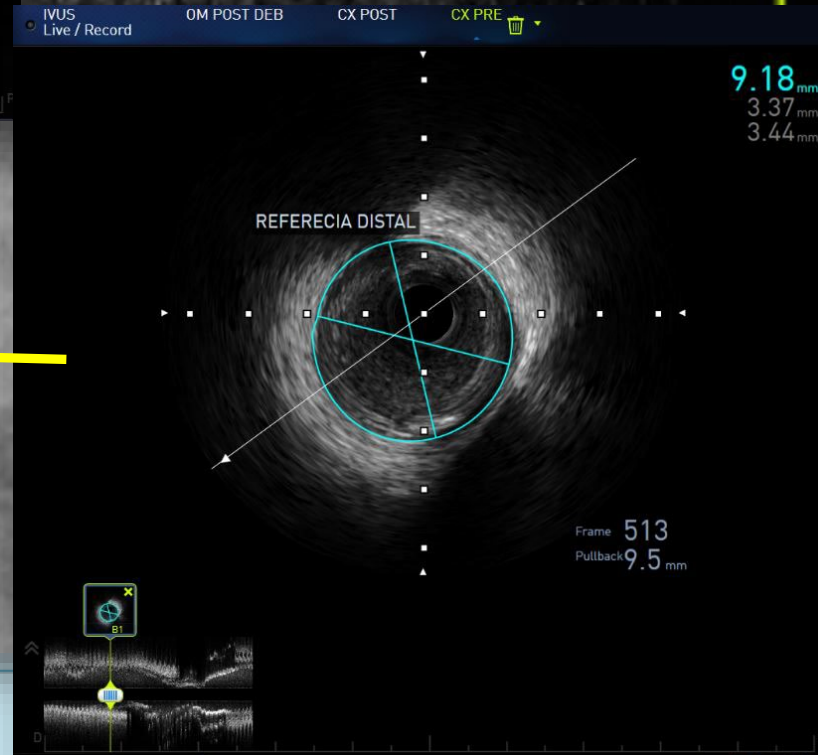
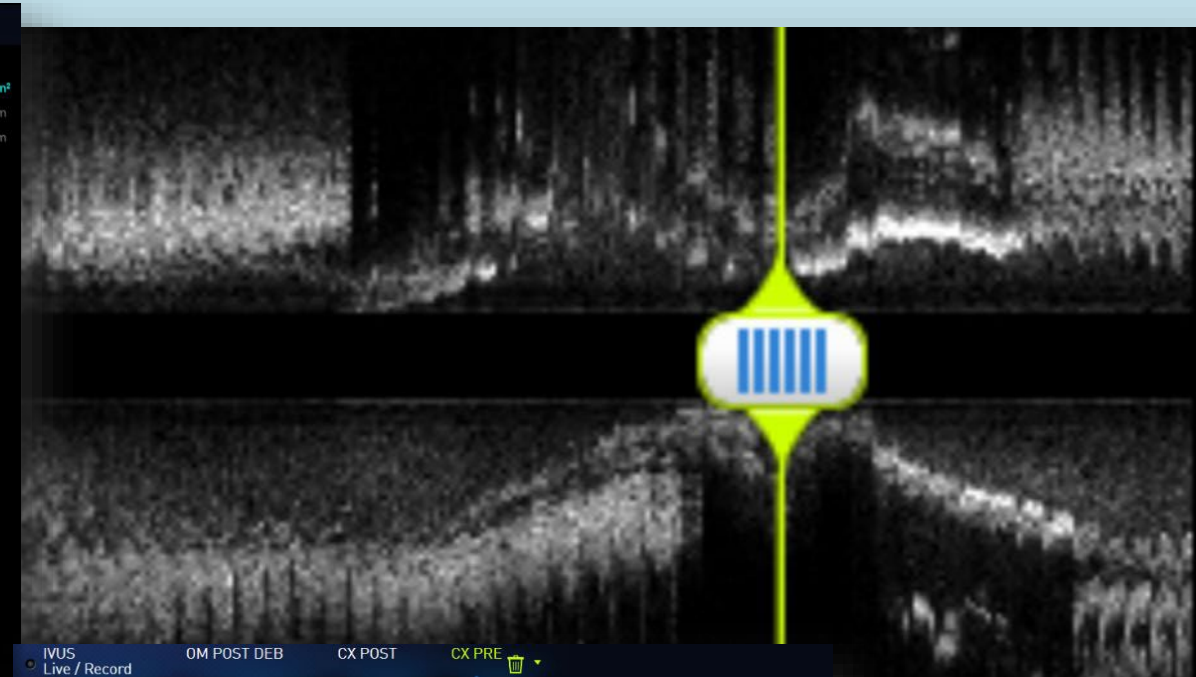
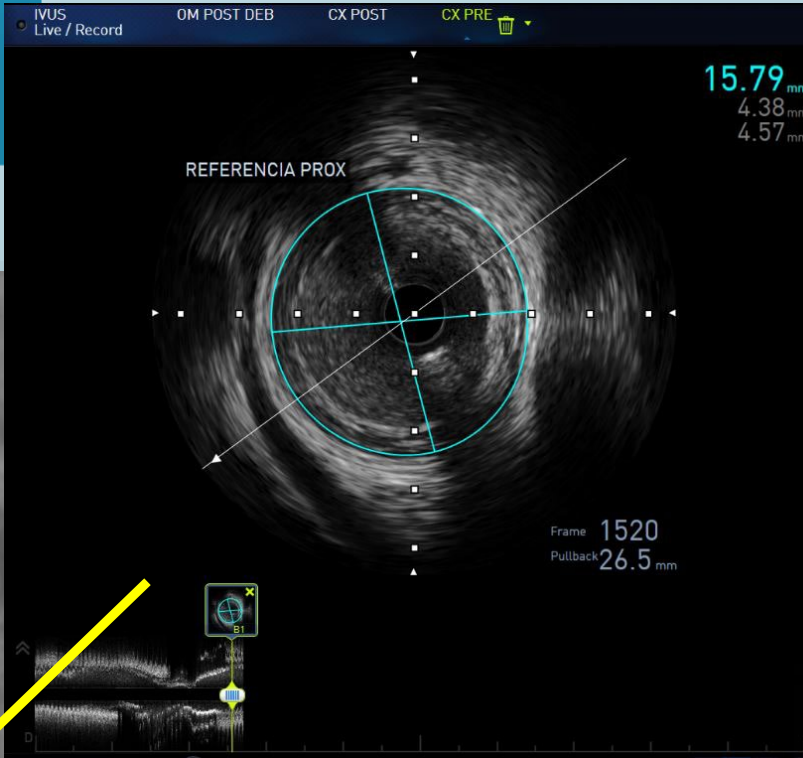
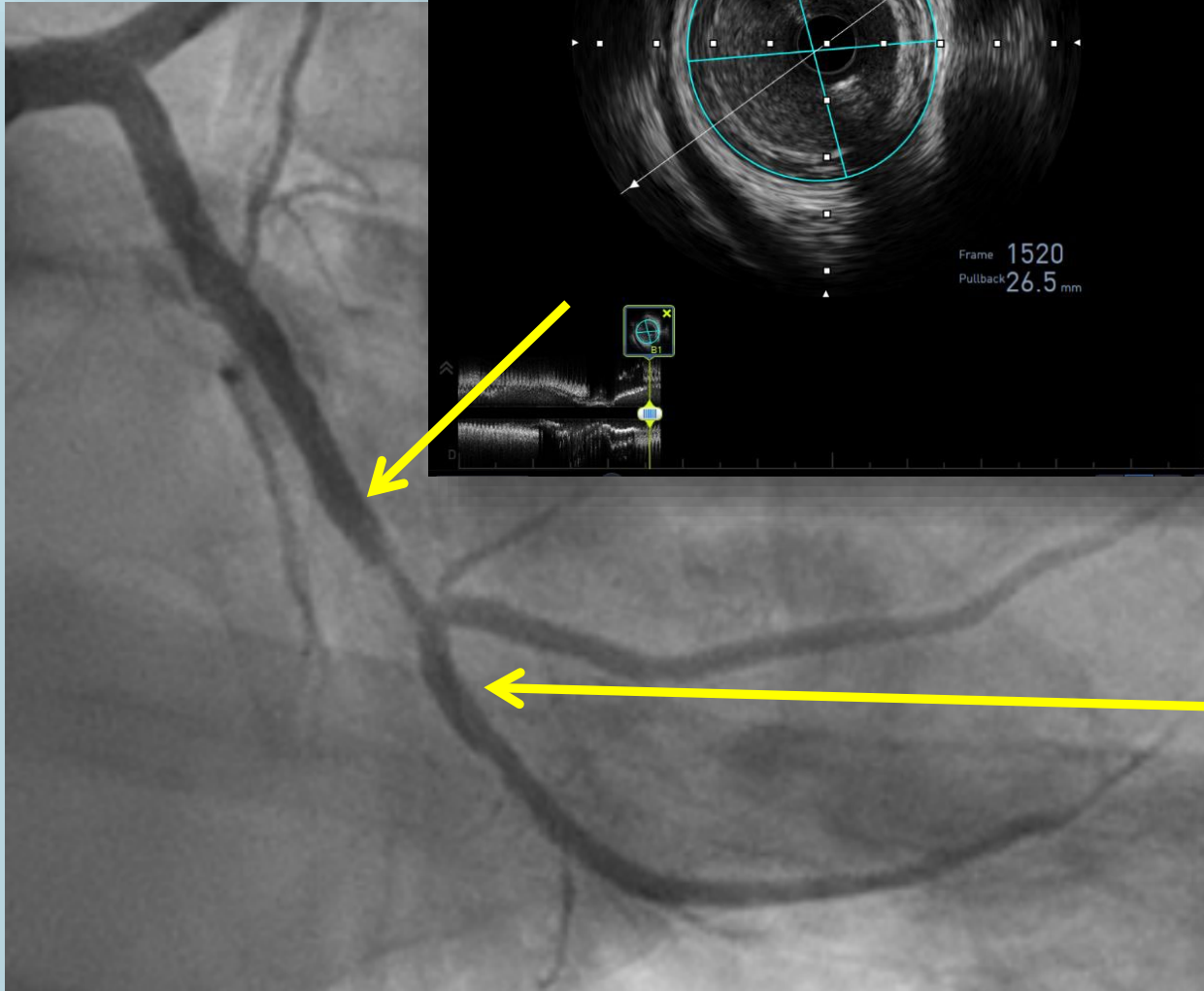
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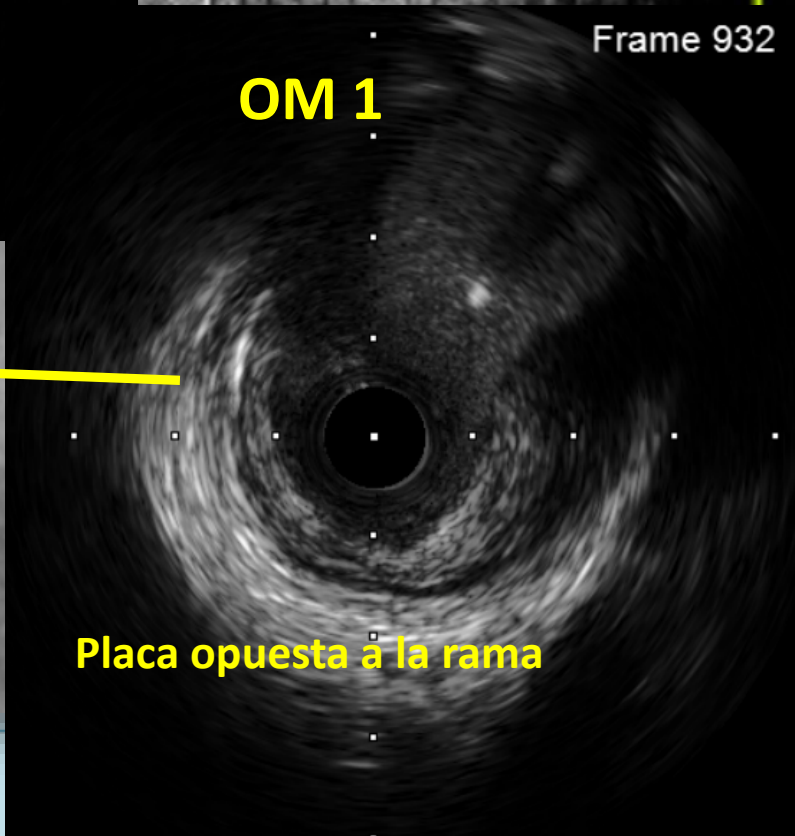
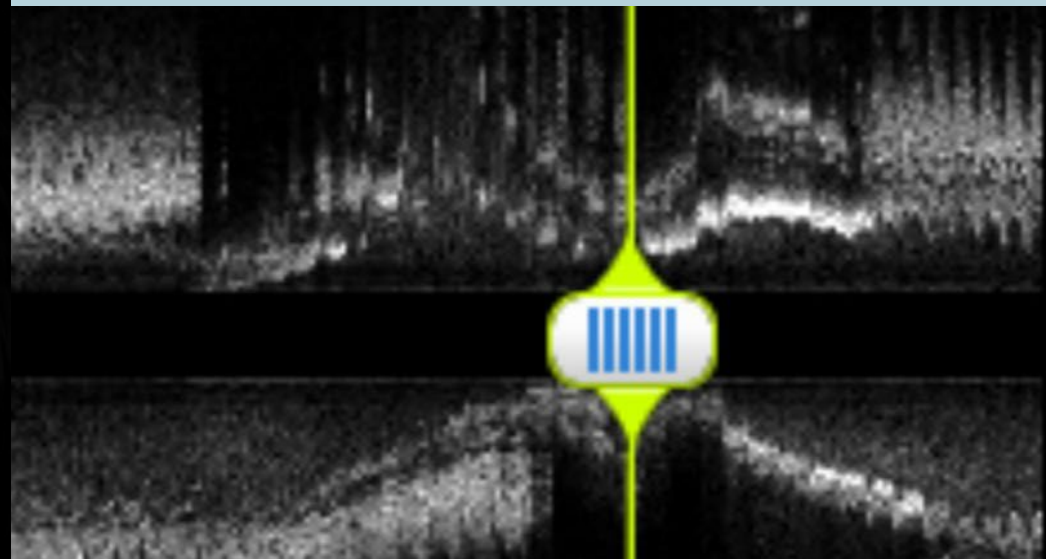
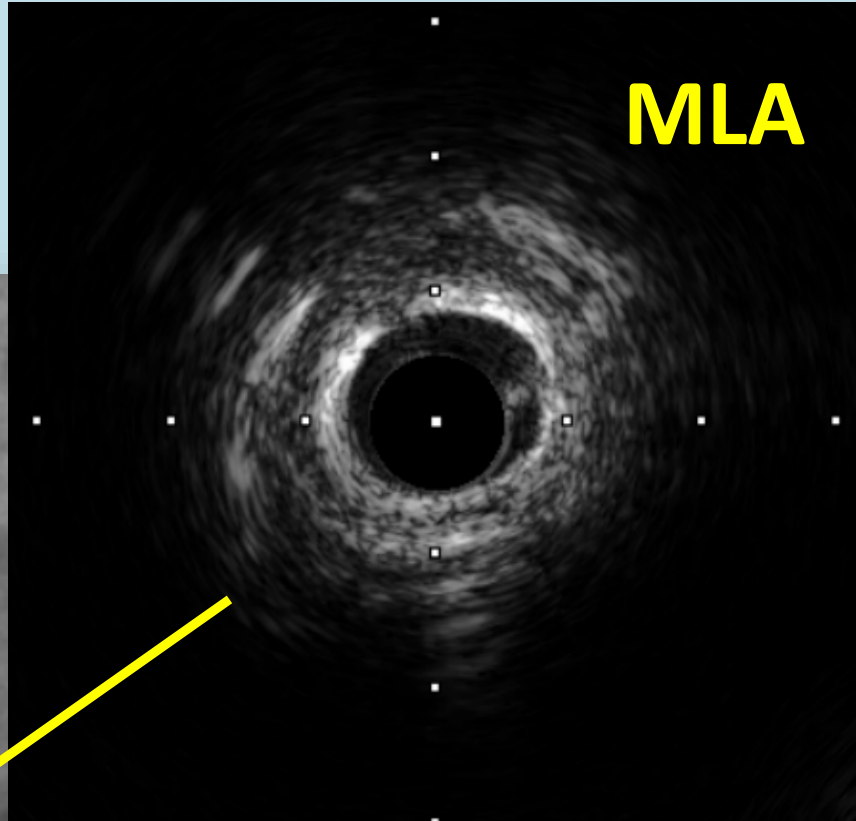
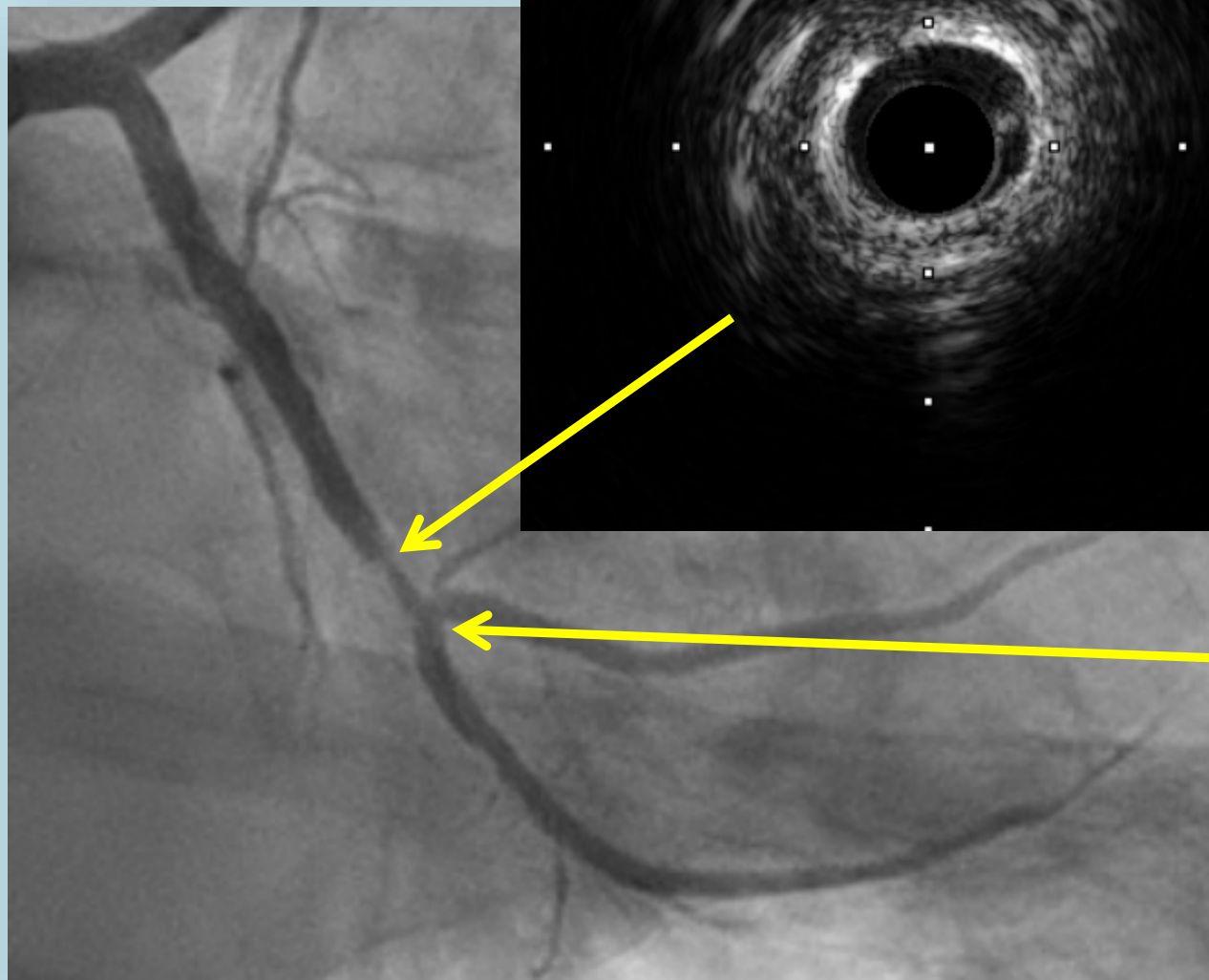
# Strategy

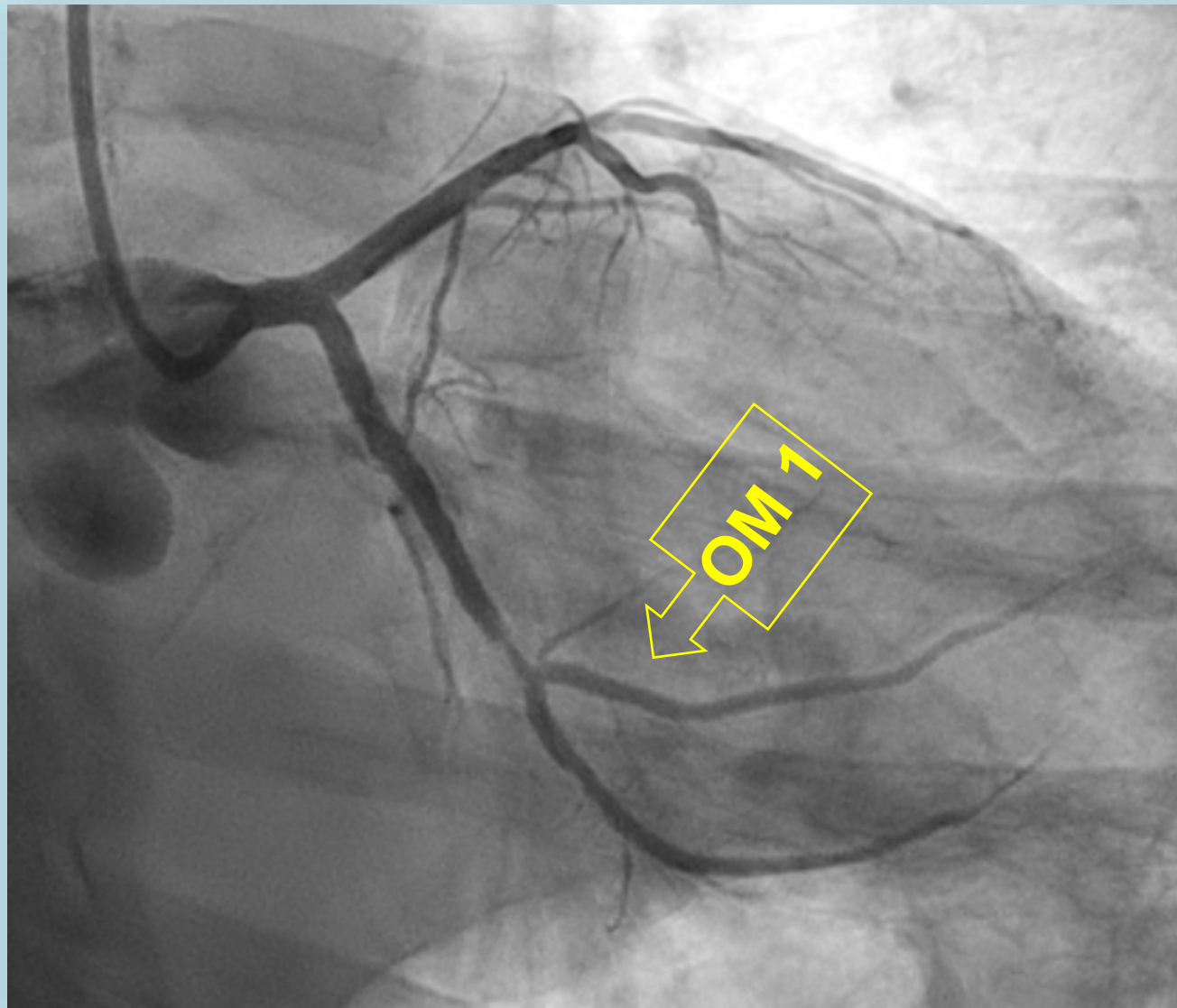
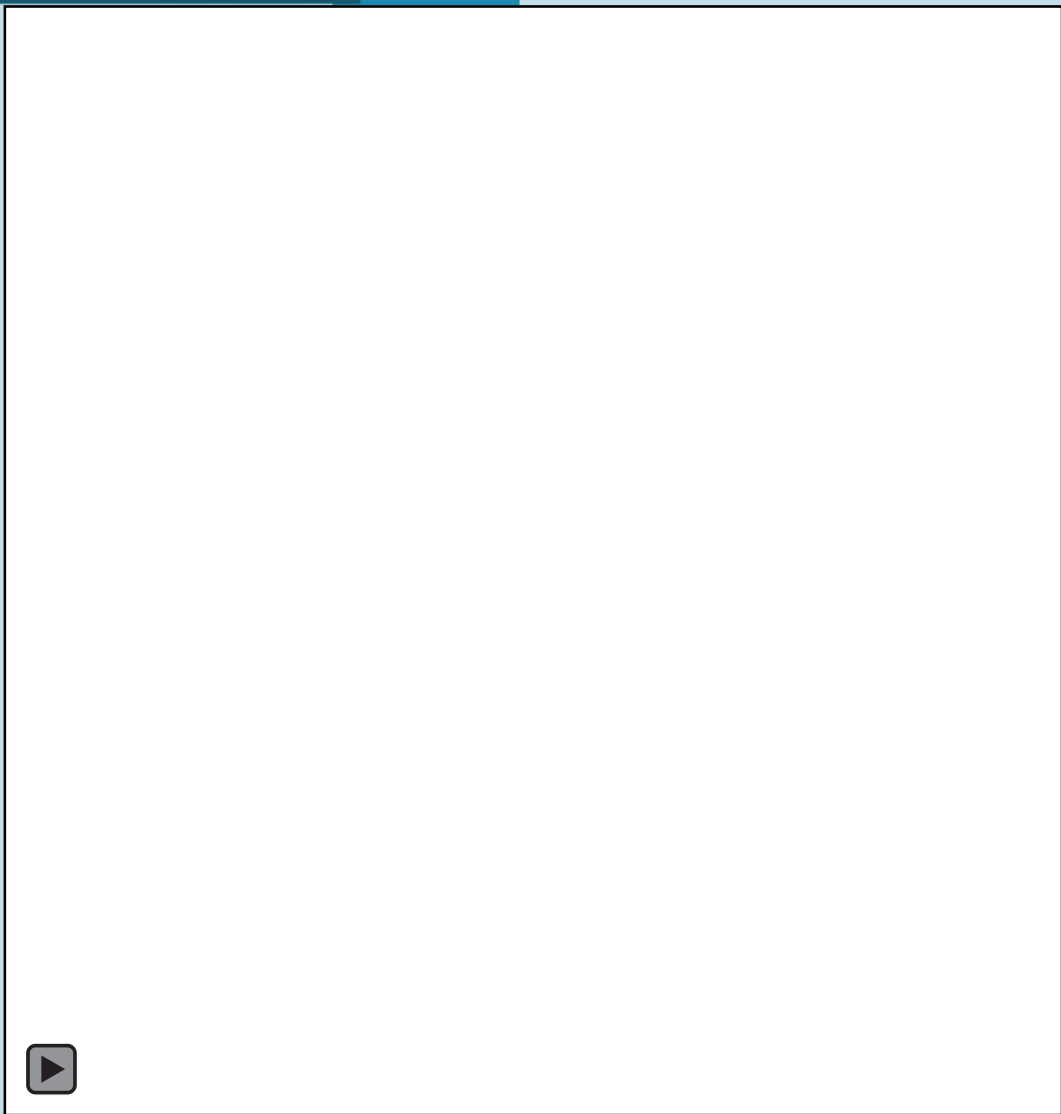
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# Summary IVUS assesment

- **IVUS FROM DISTAL CIRCUNFLEX:**

## Diameter

Distal diameter 3,3mm - Proximal diameter 4,3mm

## Type of plaque

Distal to LV1 excentric moderate mixed plaque

**In the Bifurcation Opposite mixed plaque to LV1**

**Pre LV1 CONCENTRIC CALCIFIED AND SEVERE STENOSIS ,MLA 2,3mm**

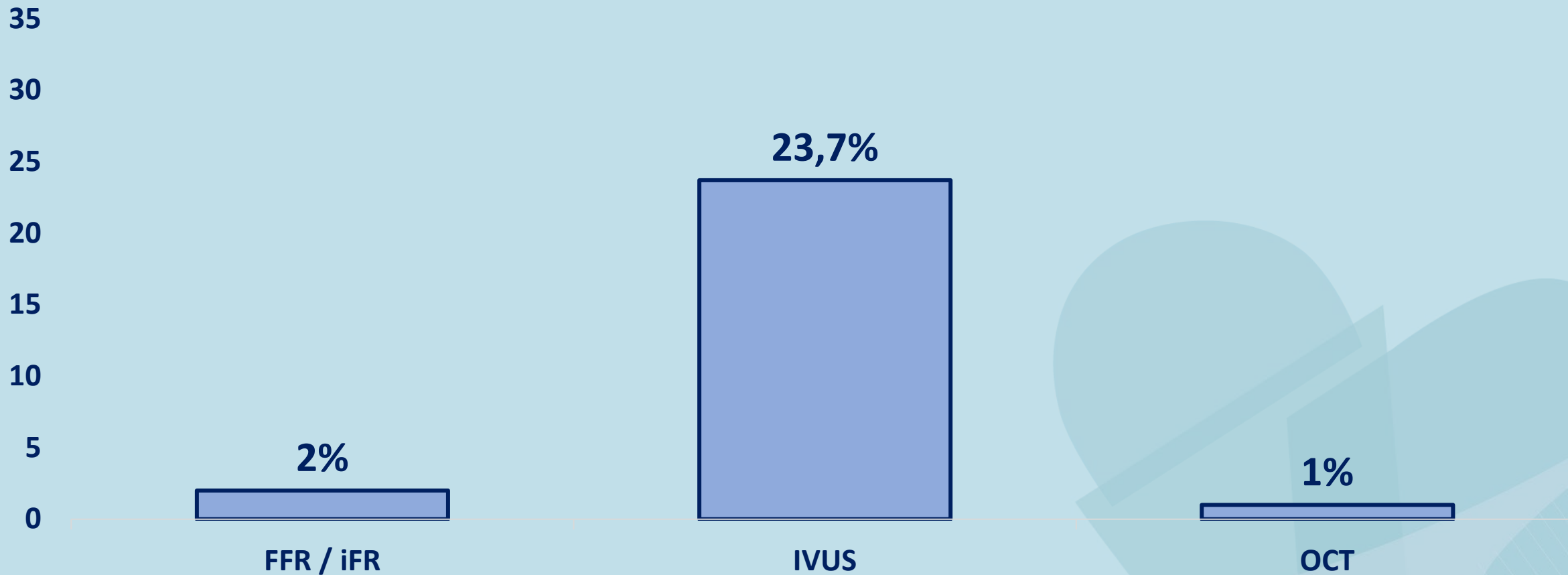
## **IVUS FROM LV1:**

**Diameter 3mm**

## Type of plaque

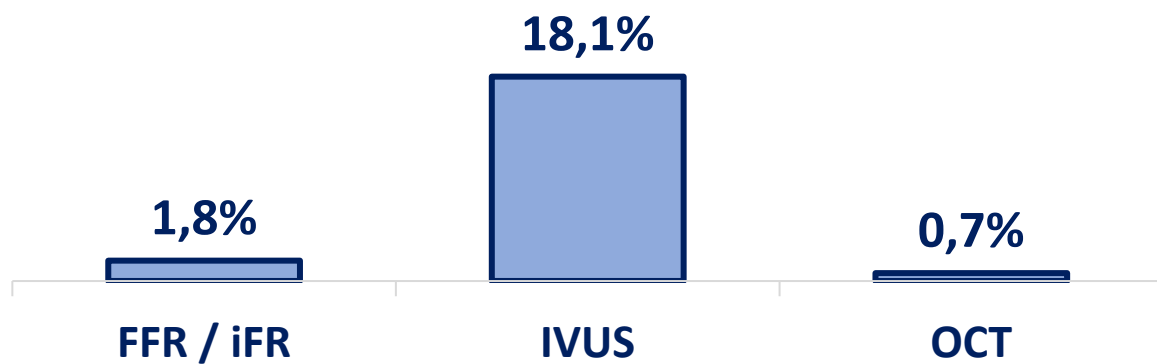
**Mild soft plaque , ostium free of plaque**

# Intracoronary imaging LATAMBif Registry(2030 pts)

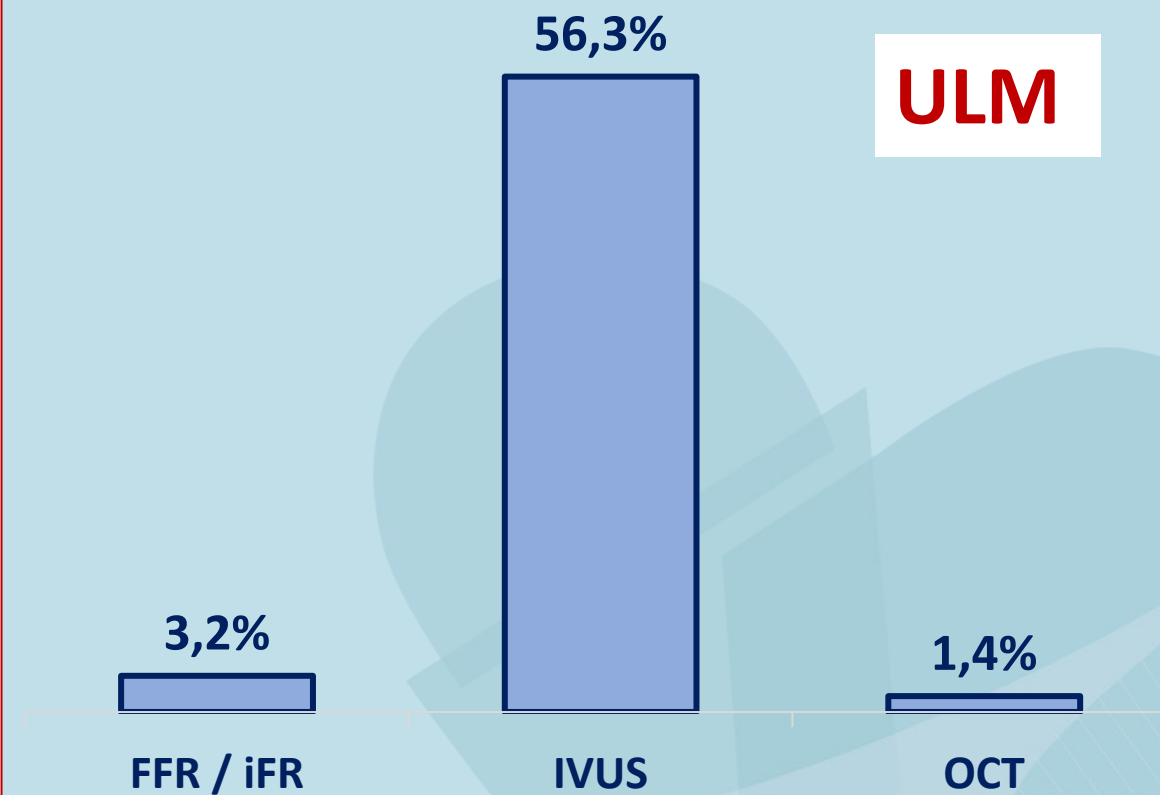


# Intracoronary imaging LATAMBif Registry (n 2030 pts)

## Non-ULM



## ULM





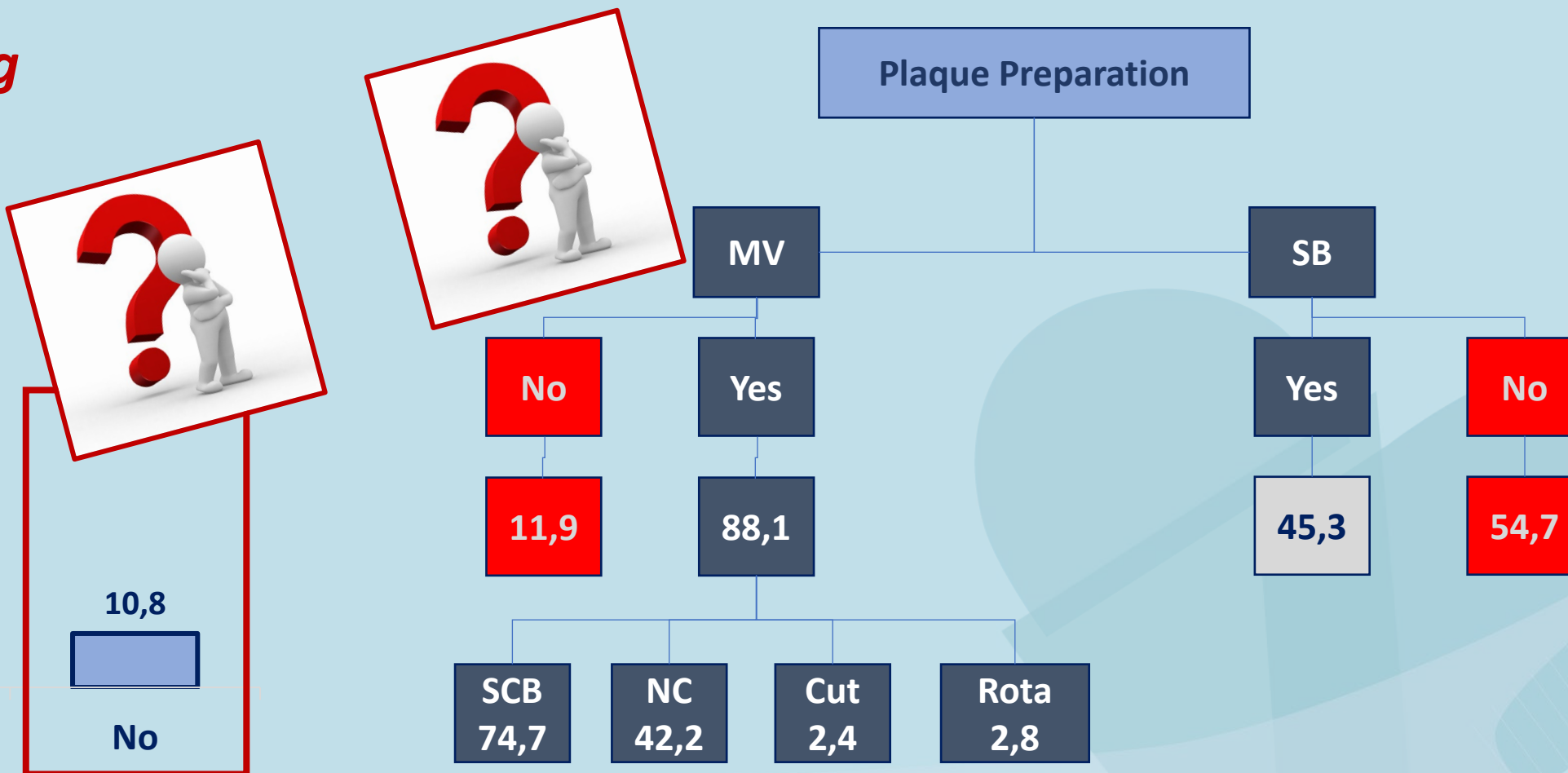
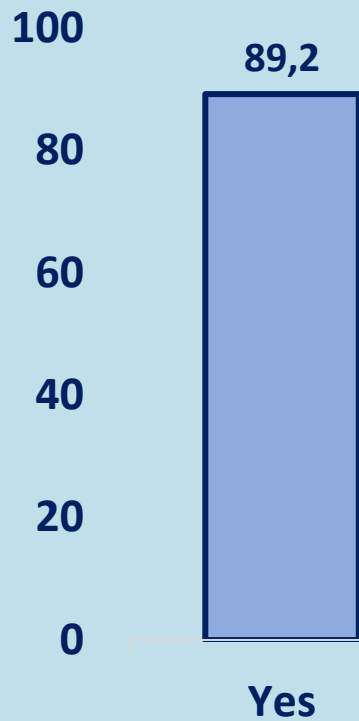
# How do we approach a bifurcation PCI in LATAM?

*Insights from LATAM**Bif** Registry*

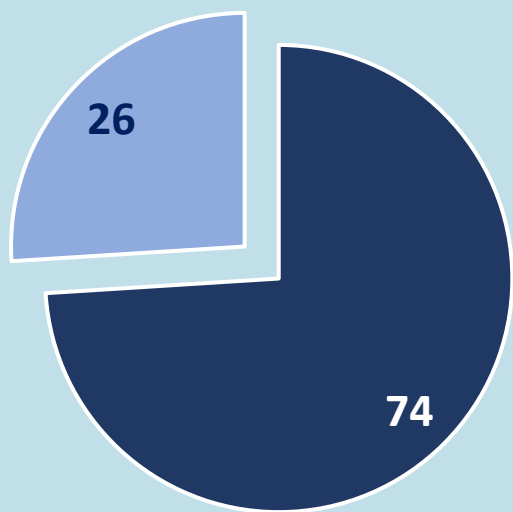
# Plaque preparation

## LATAMBif Registry (n 2030 pts)

### SB wiring



# Initial strategy – Provisional stent LATAMBif Registry (n 2030 pts)



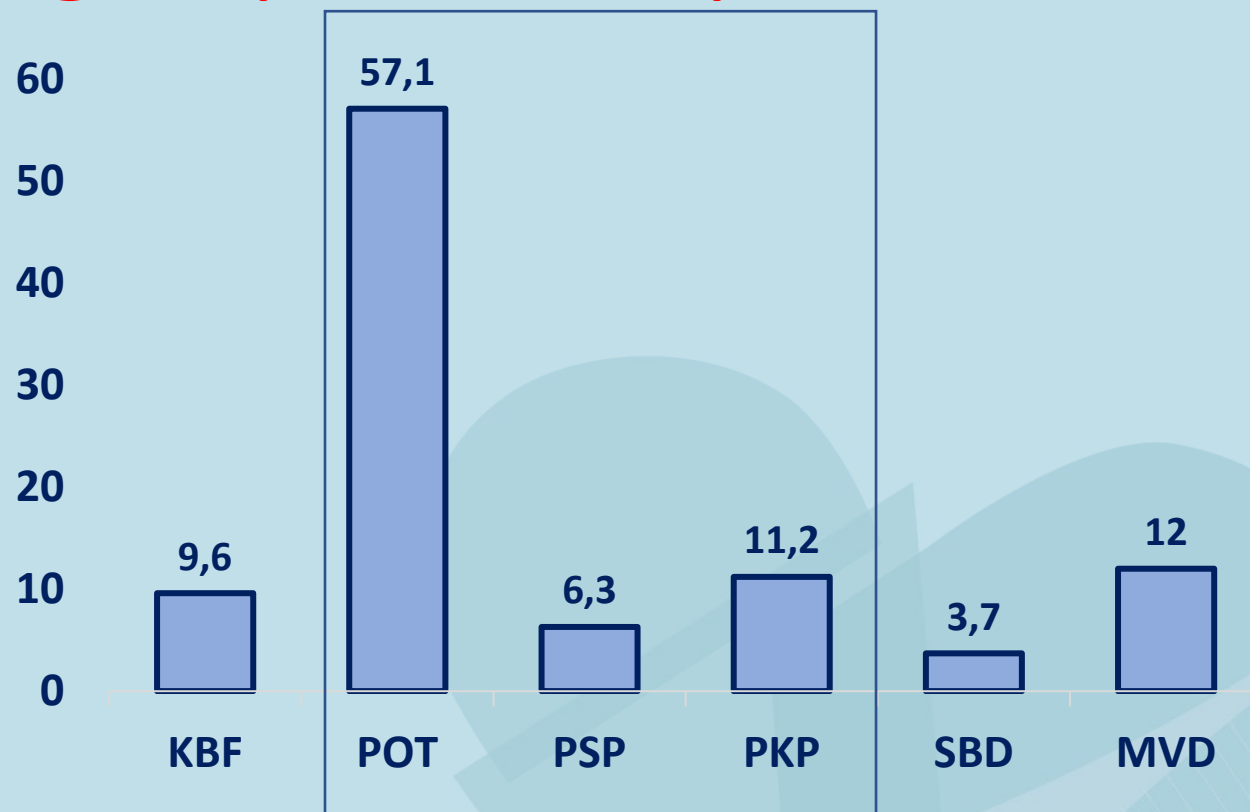
■ P.S ■ 2ST

*Bailout  
 stent*

No  
 91,7%

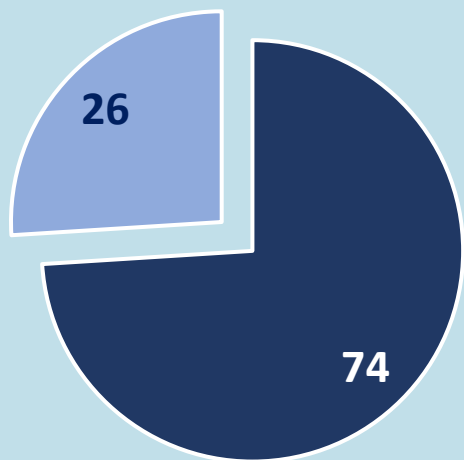
Yes

8,3%



***FINAL POT → ≈ 75%***

# Initial strategy – Provisional stent LATAMBif Registry (n= 2030 pts)



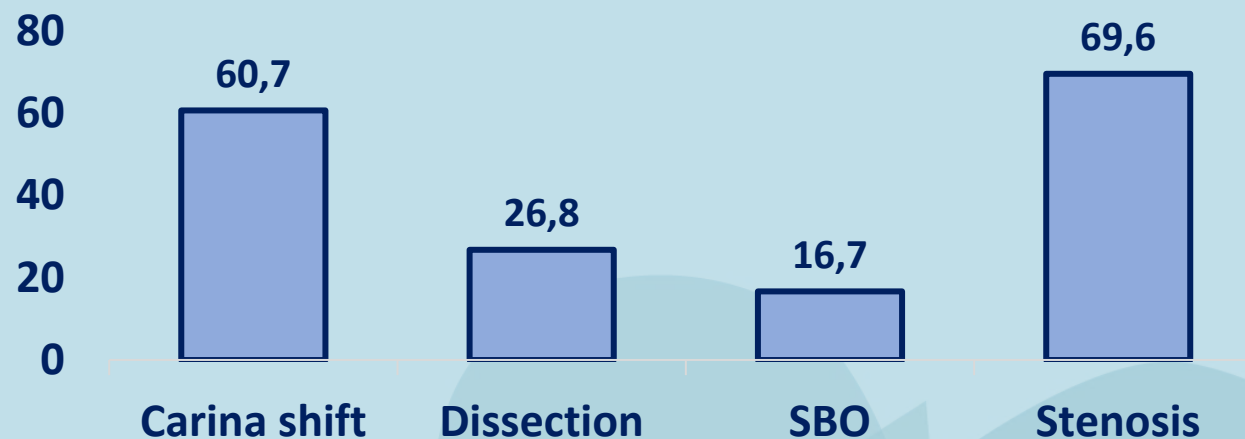
■ P.S □ 2ST

*Bailout stent*

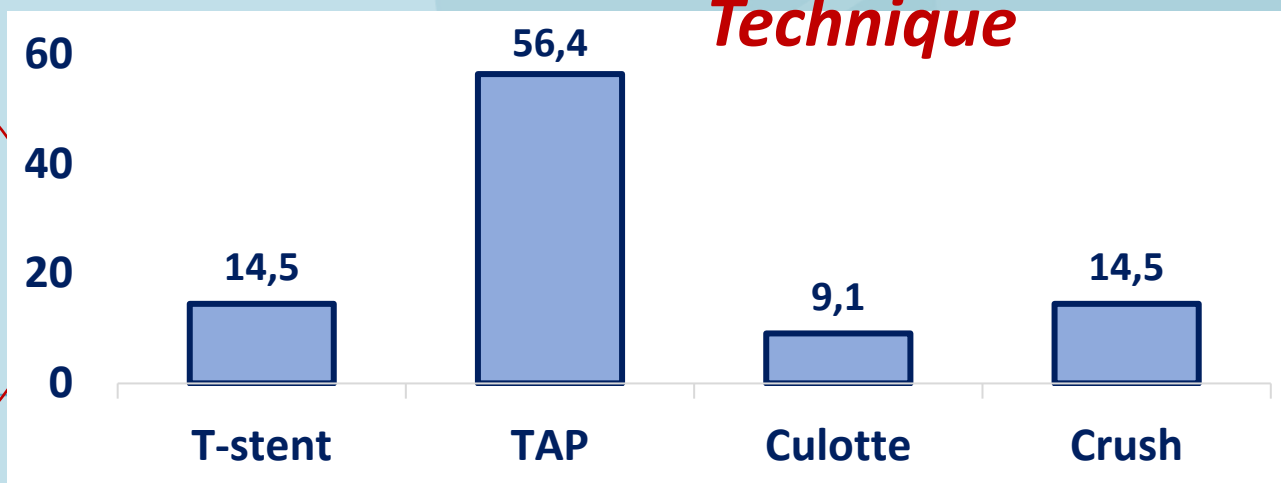
No  
91,7%

Yes  
8,3%

*Causes*



*Technique*



# Bifurcation Techniques

## Provisional Stenting Technique

**MV**  
Proximal



**MV**  
Distal

**SB**

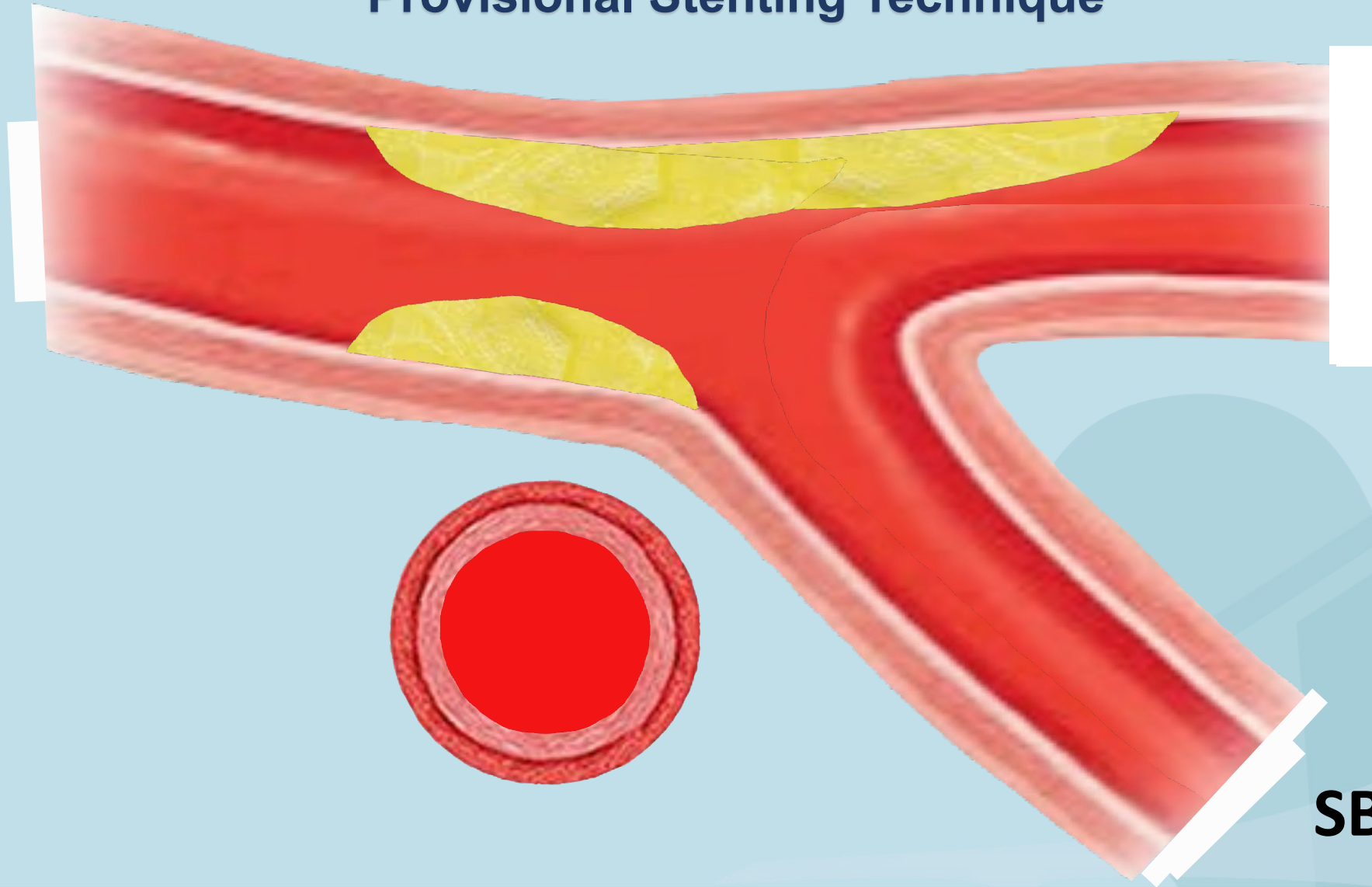
Gold standard para la mayoría de lesiones en Bifurcaciones



# Bifurcation Techniques

## Provisional Stenting Technique

**MV**  
Proximal



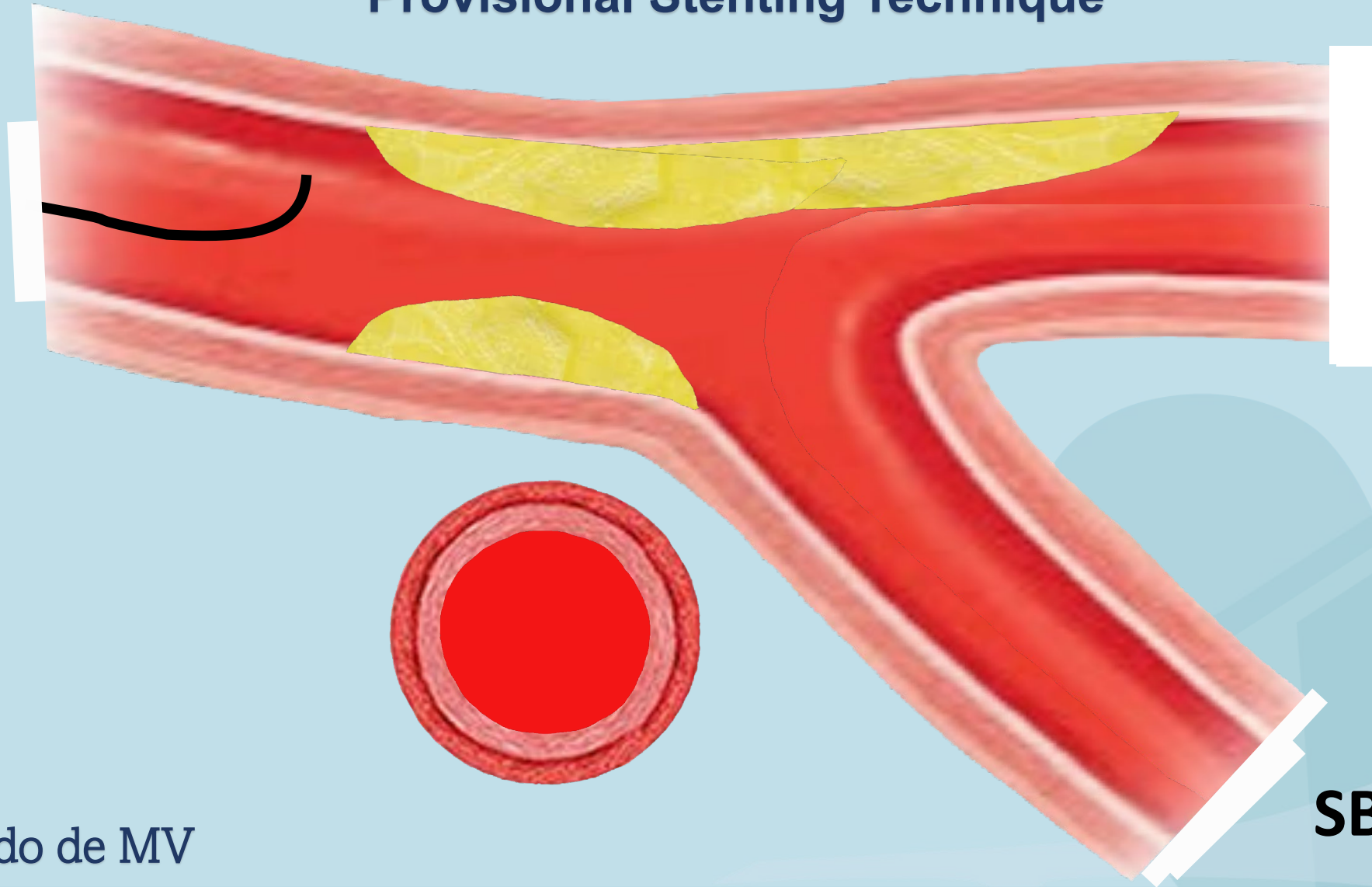
**MV**  
Distal

**SB**

# Bifurcation Techniques

## Provisional Stenting Technique

**MV**  
Proximal



**MV**  
Distal

**SB**

### 1.- Cableado de MV

# Bifurcation Techniques

## Provisional Stenting Technique

**MV**  
Proximal

**MV**  
Distal

**SB**



1.- Cableado de MV



# Bifurcation Techniques

## Provisional Stenting Technique

**MV**  
Proximal

**MV**  
Distal

**SB**



1.- Cableado de MV

# Bifurcation Techniques

## Provisional Stenting Technique

**MV**  
Proximal

**MV**  
Distal



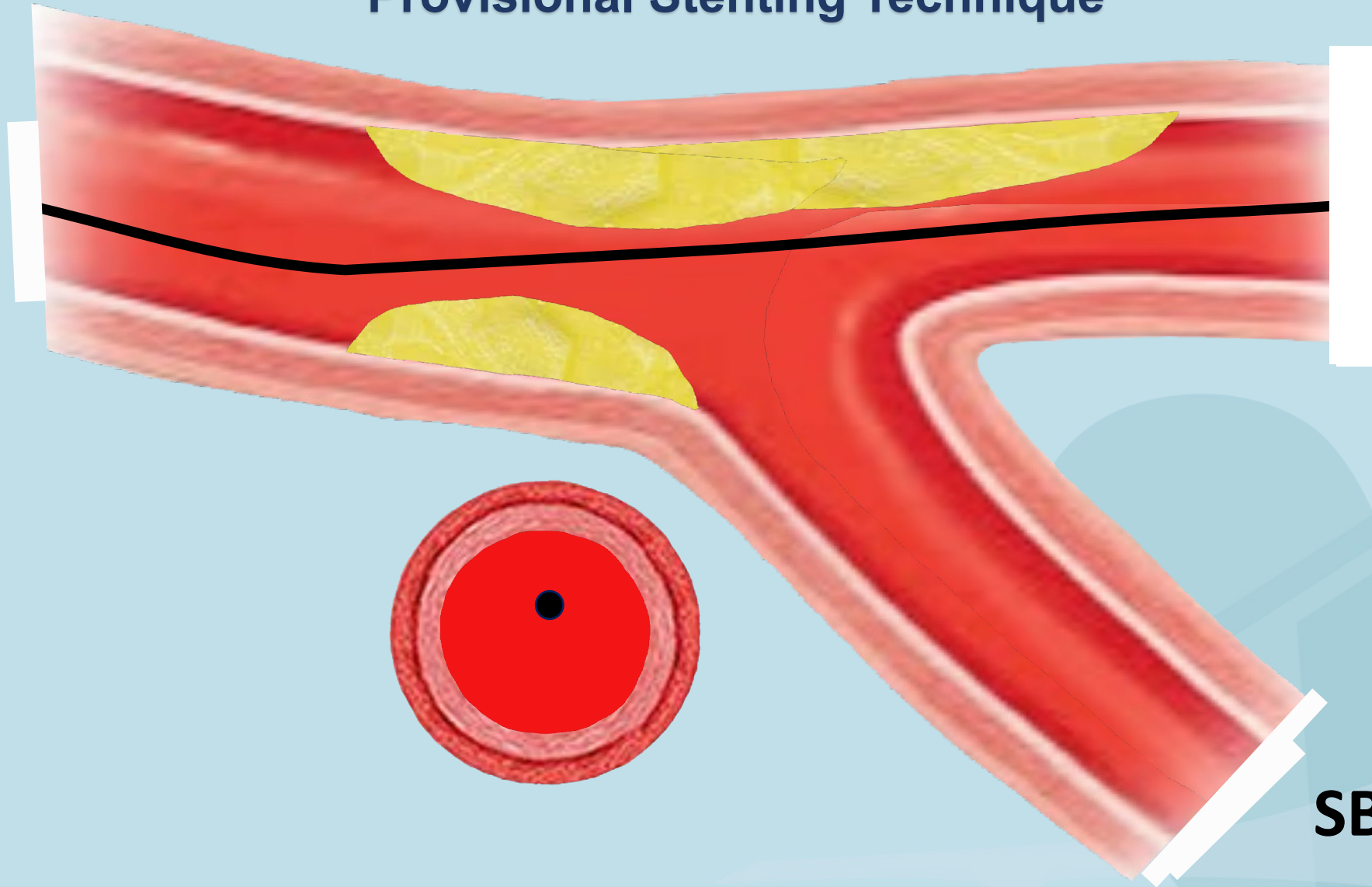
**SB**

1.- Cableado de MV

# Bifurcation Techniques

## Provisional Stenting Technique

**MV**  
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**MV**  
Distal

**SB**

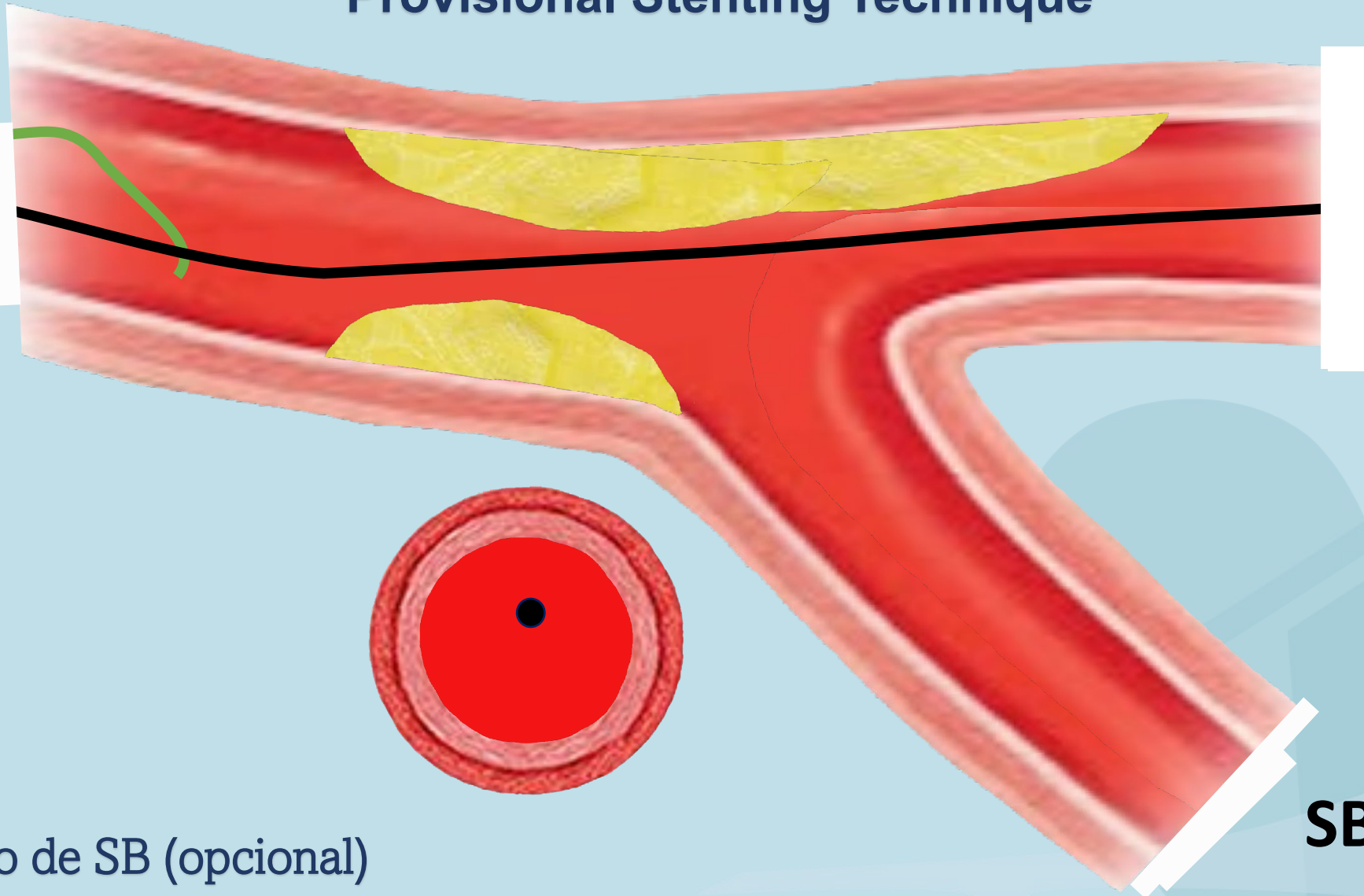


# Bifurcation Techniques

## Provisional Stenting Technique

**MV**  
Proximal

**MV**  
Distal



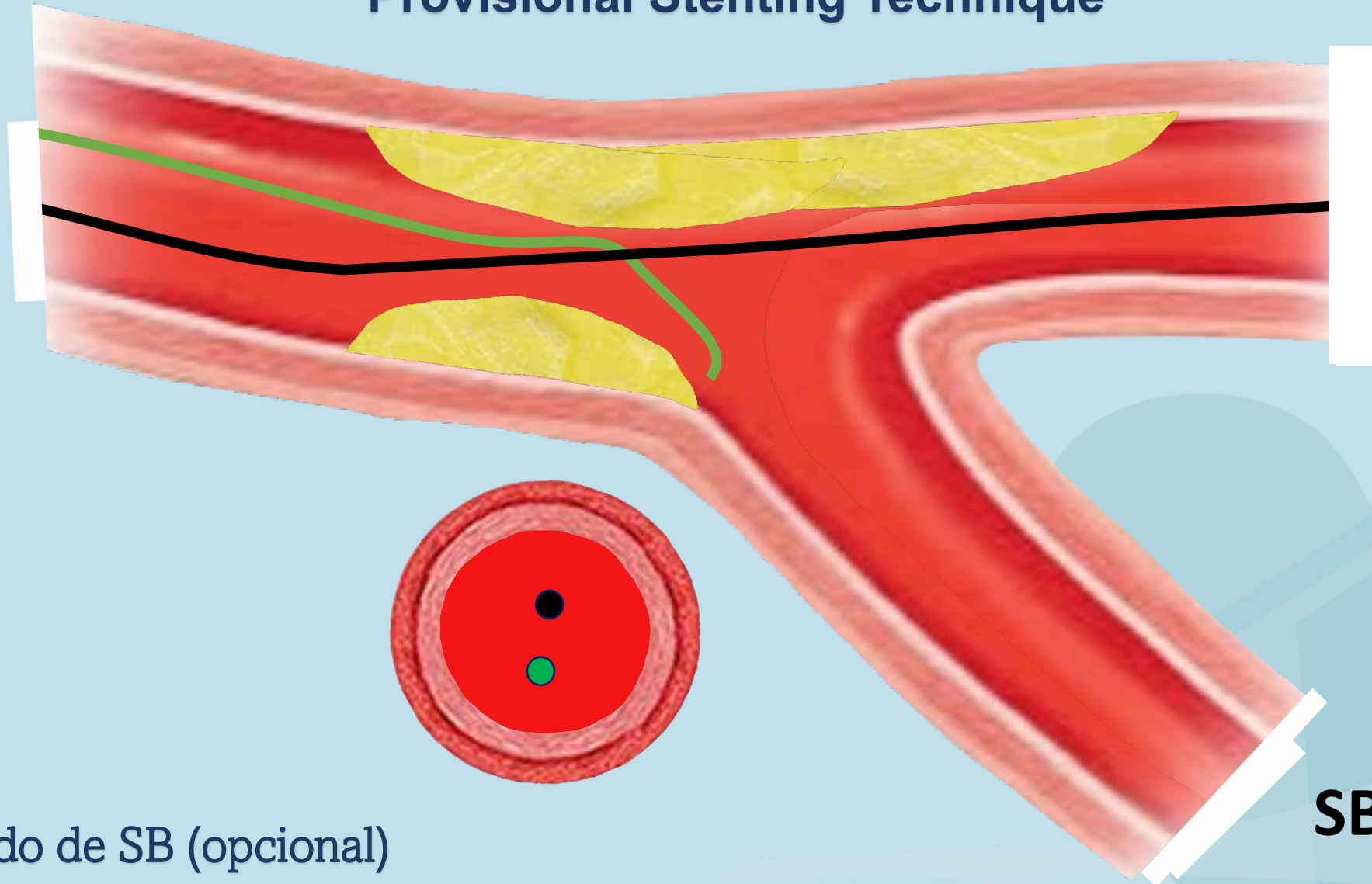
**SB**

2.- Cableado de SB (opcional)

# Bifurcation Techniques

## Provisional Stenting Technique

**MV**  
Proximal



**MV**  
Distal

**SB**

2.- Cableado de SB (opcional)

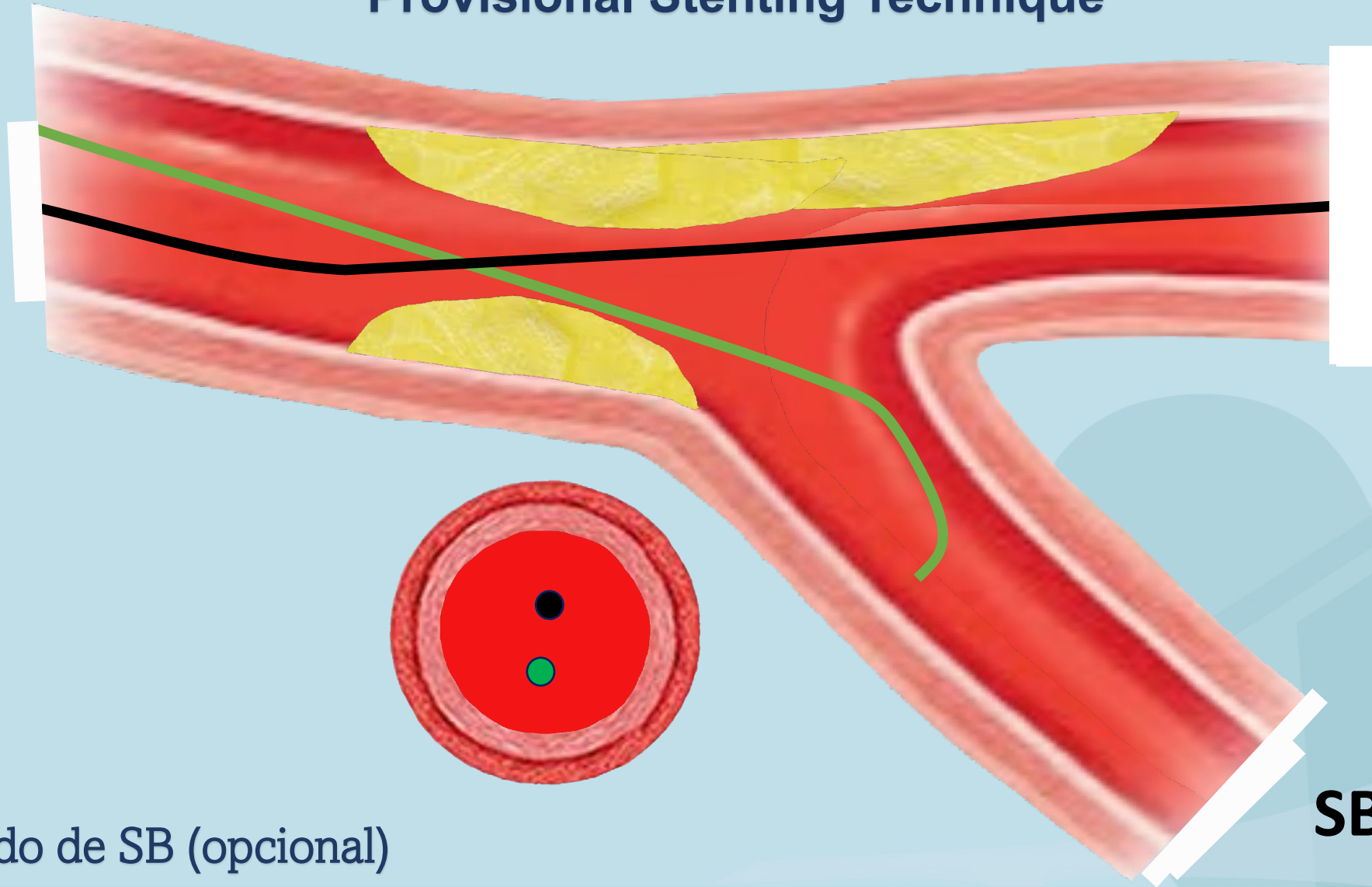


# Bifurcation Techniques

## Provisional Stenting Technique

**MV**  
Proximal

**MV**  
Distal



**SB**

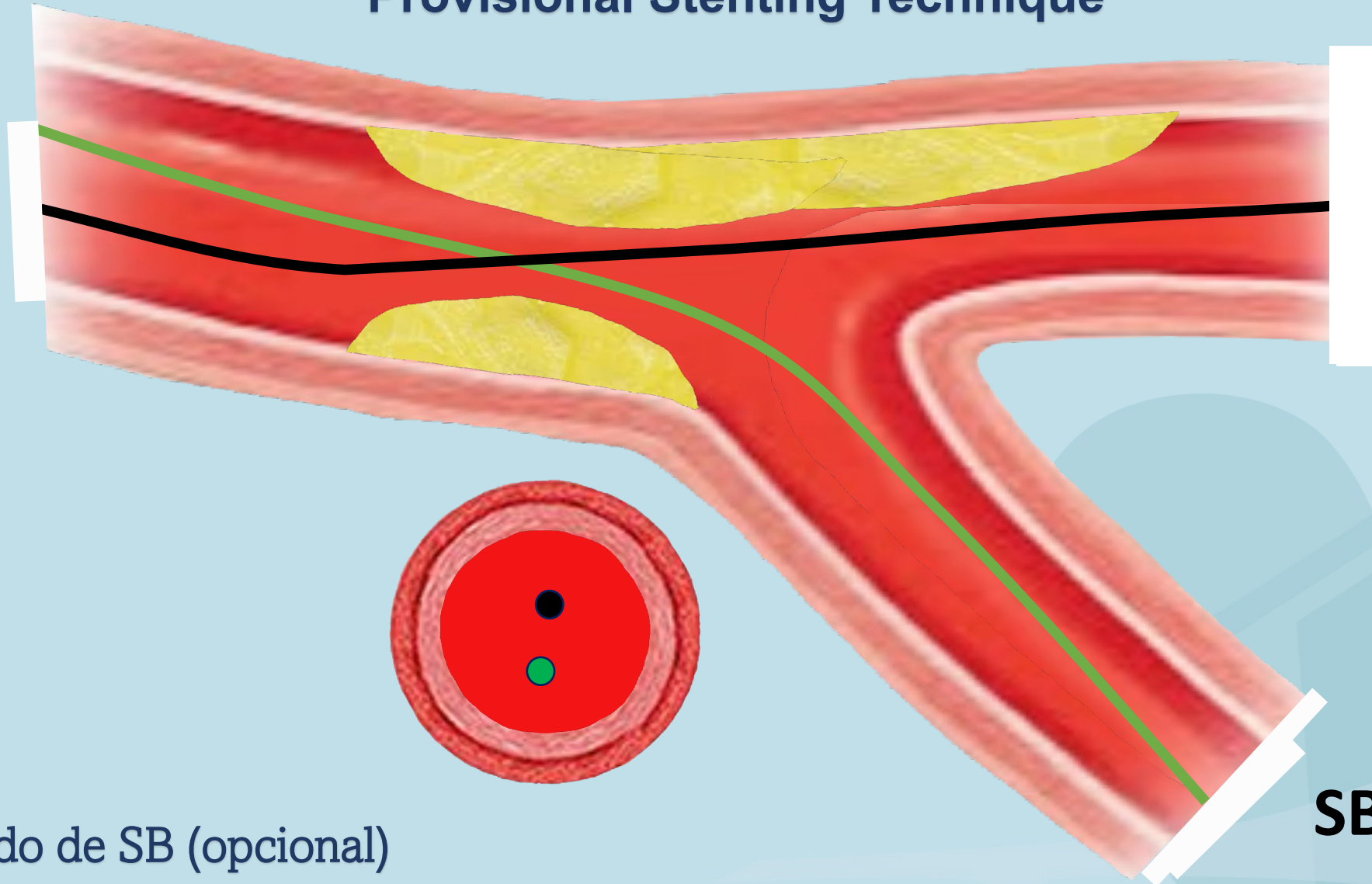
2.- Cableado de SB (opcional)

# Bifurcation Techniques

## Provisional Stenting Technique

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Proximal

**MV**  
Distal



2.- Cableado de SB (opcional)

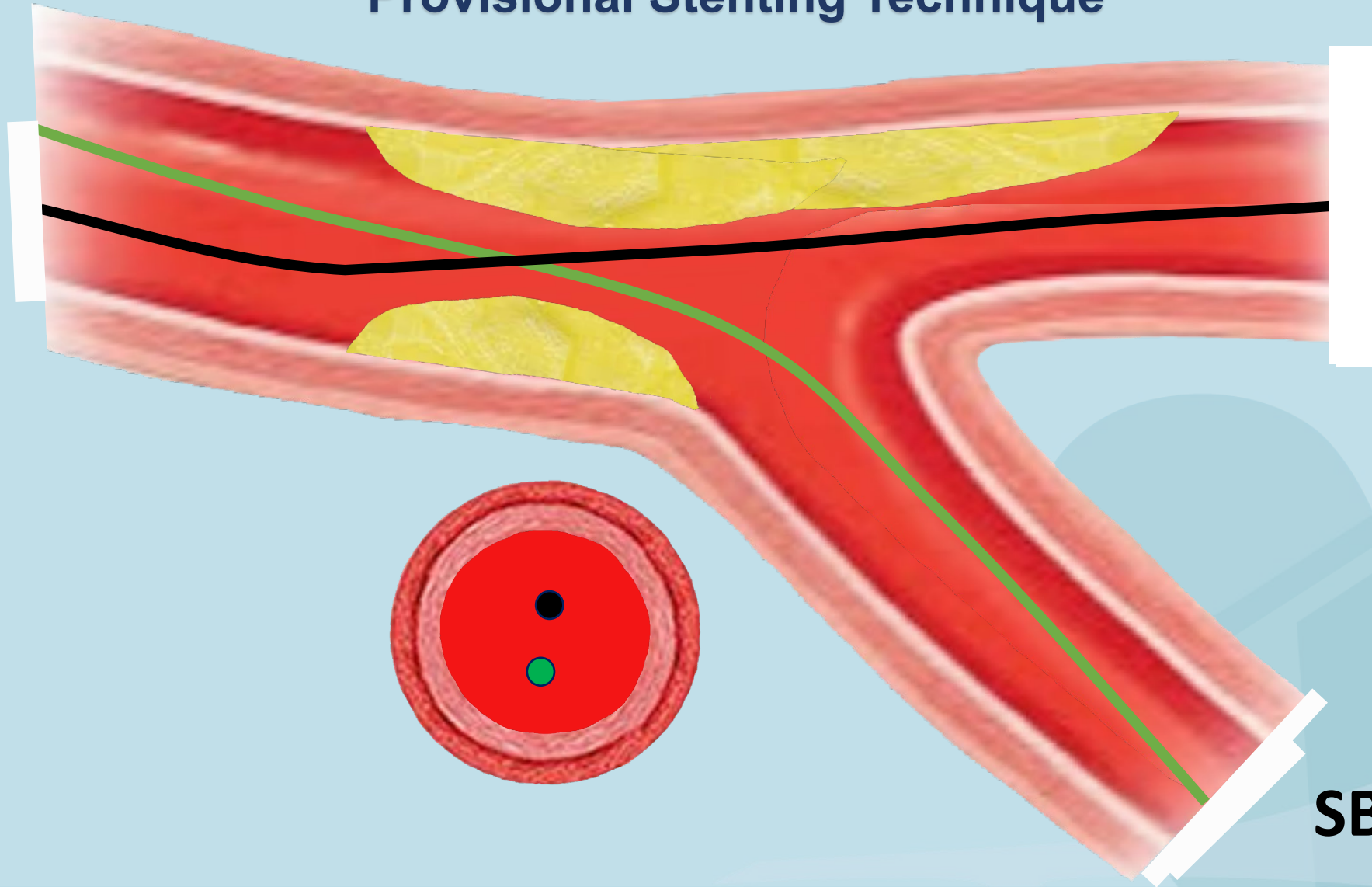
# Bifurcation Techniques

## Provisional Stenting Technique

**MV**  
Proximal

**MV**  
Distal

**SB**

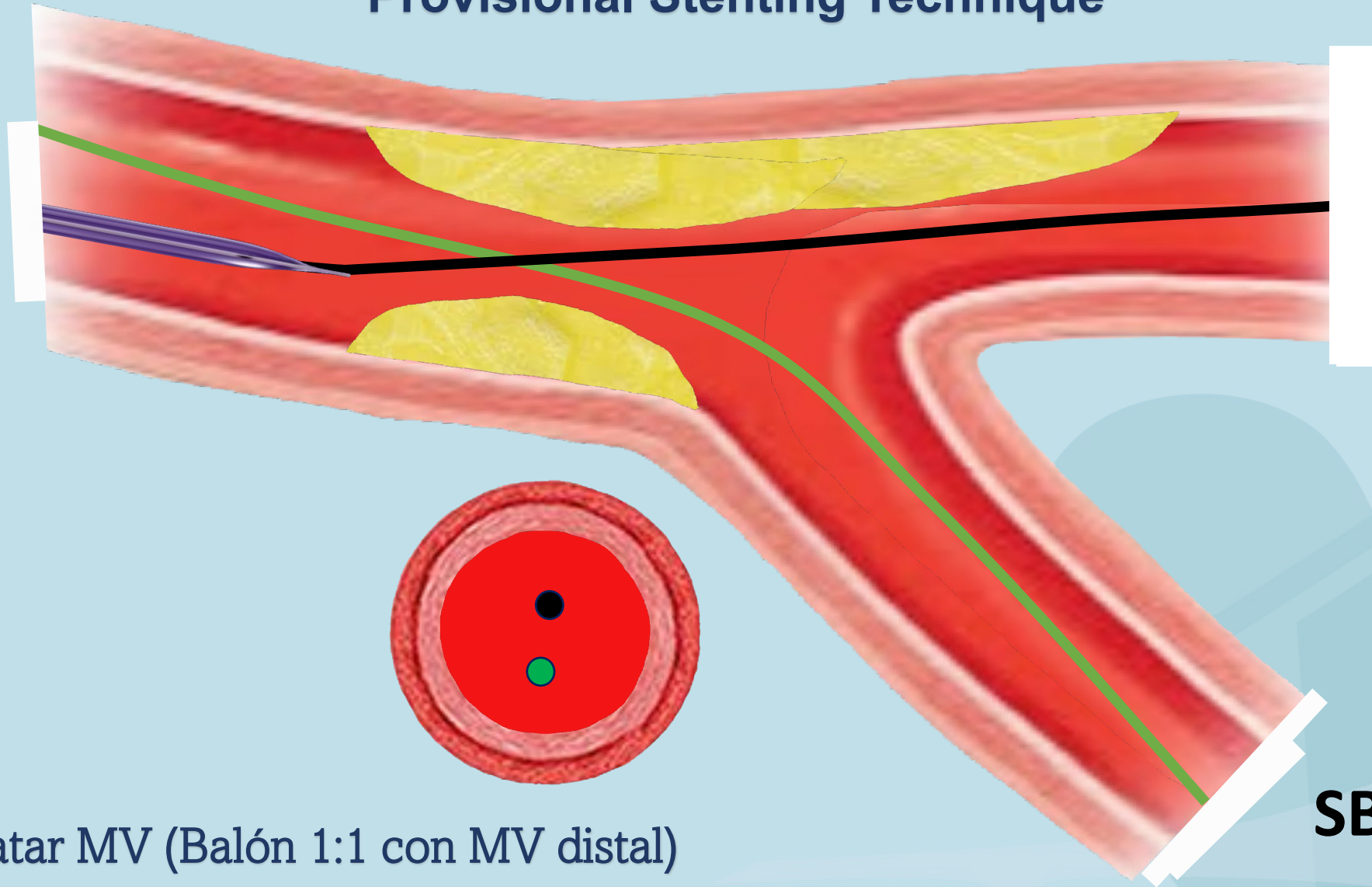




# Bifurcation Techniques

## Provisional Stenting Technique

**MV**  
Proximal



**MV**  
Distal

**SB**

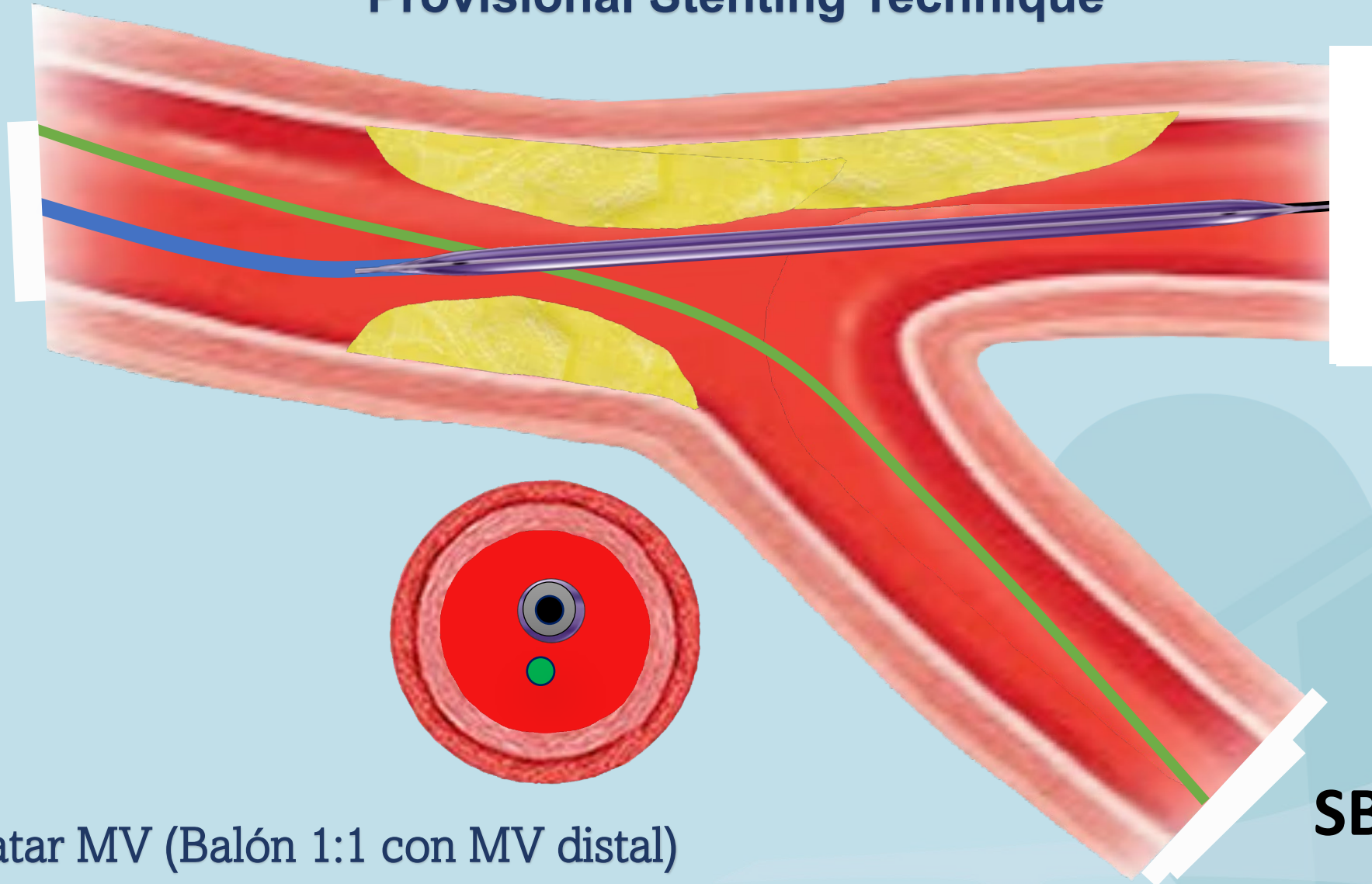
3.- Pre-dilatar MV (Balón 1:1 con MV distal)

# Bifurcation Techniques

## Provisional Stenting Technique

**MV**  
Proximal

**MV**  
Distal



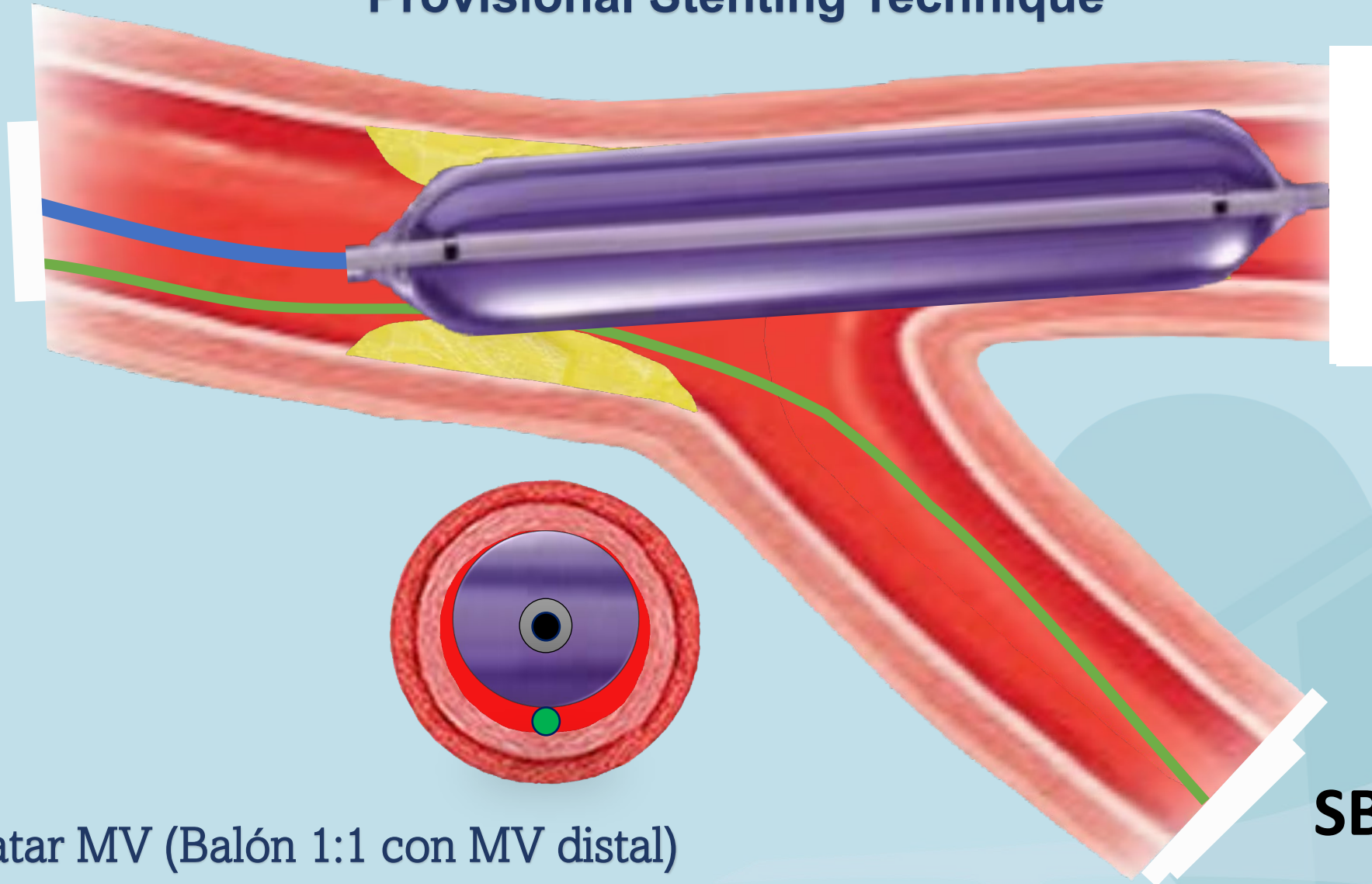
3.- Pre-dilatar MV (Balón 1:1 con MV distal)



# Bifurcation Techniques

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Distal

**SB**

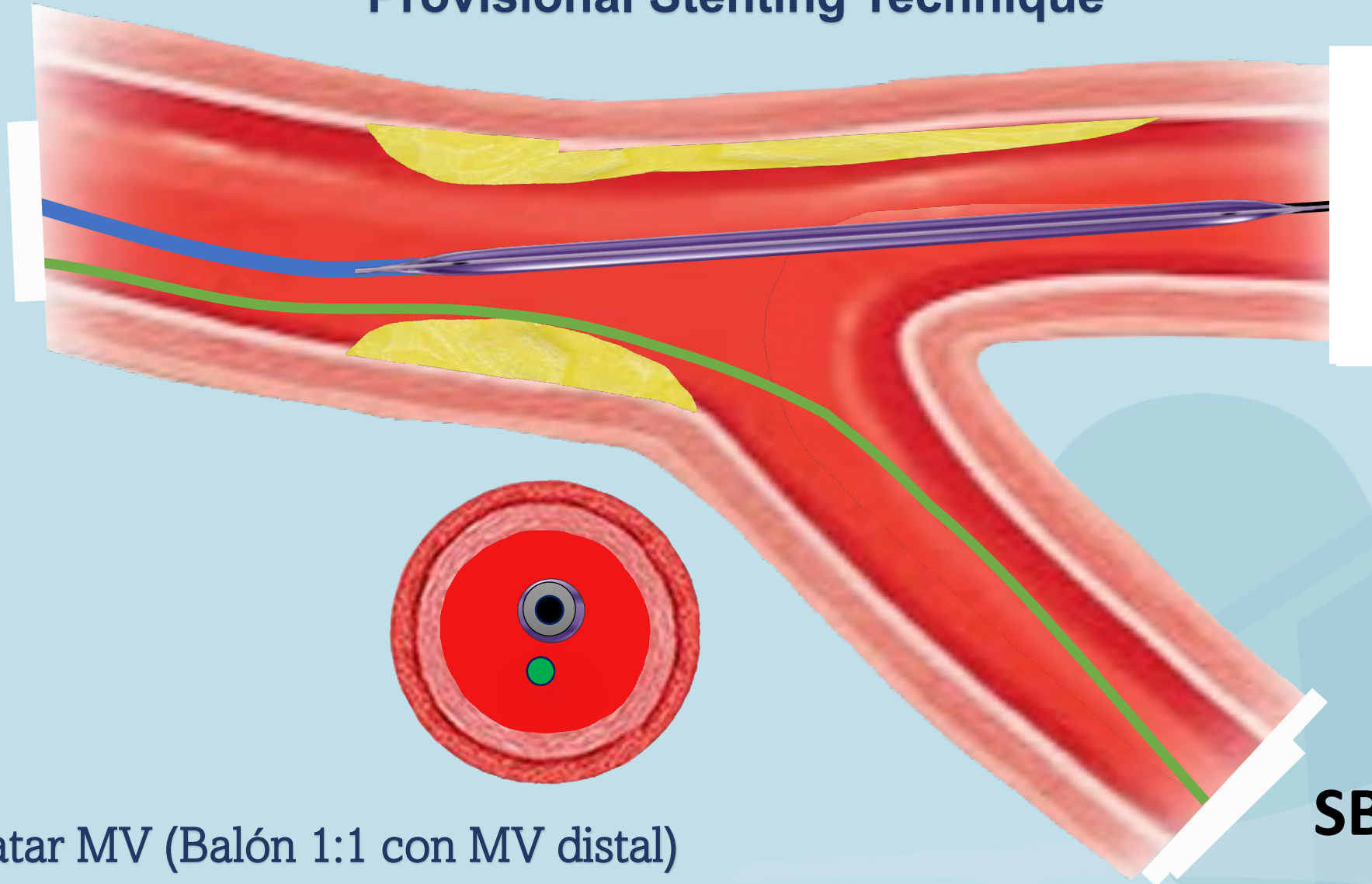
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# Bifurcation Techniques

## Provisional Stenting Technique

**MV**  
Proximal

**MV**  
Distal



3.- Pre-dilatar MV (Balón 1:1 con MV distal)

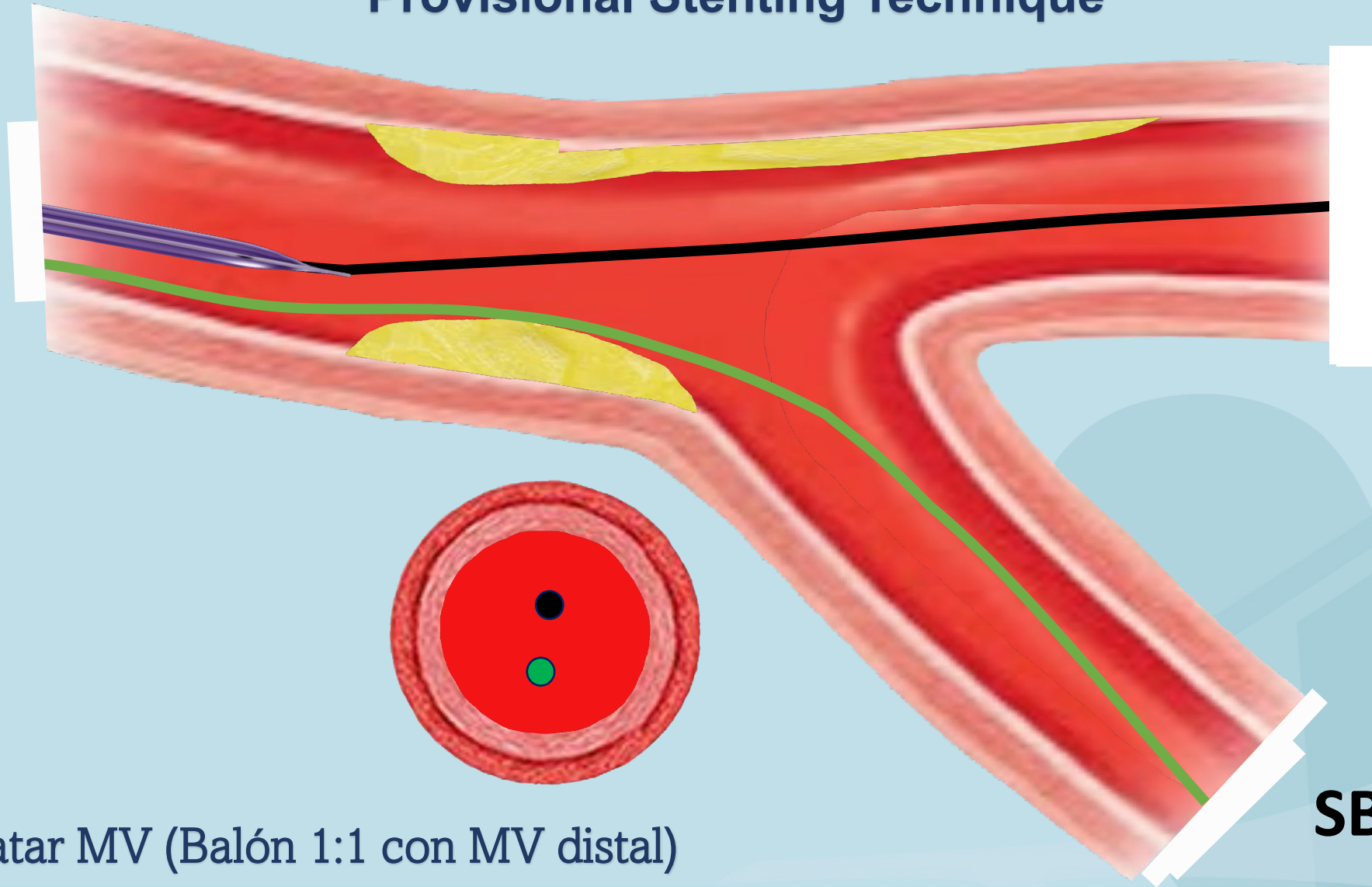


# Bifurcation Techniques

## Provisional Stenting Technique

**MV**  
Proximal

**MV**  
Distal



**SB**

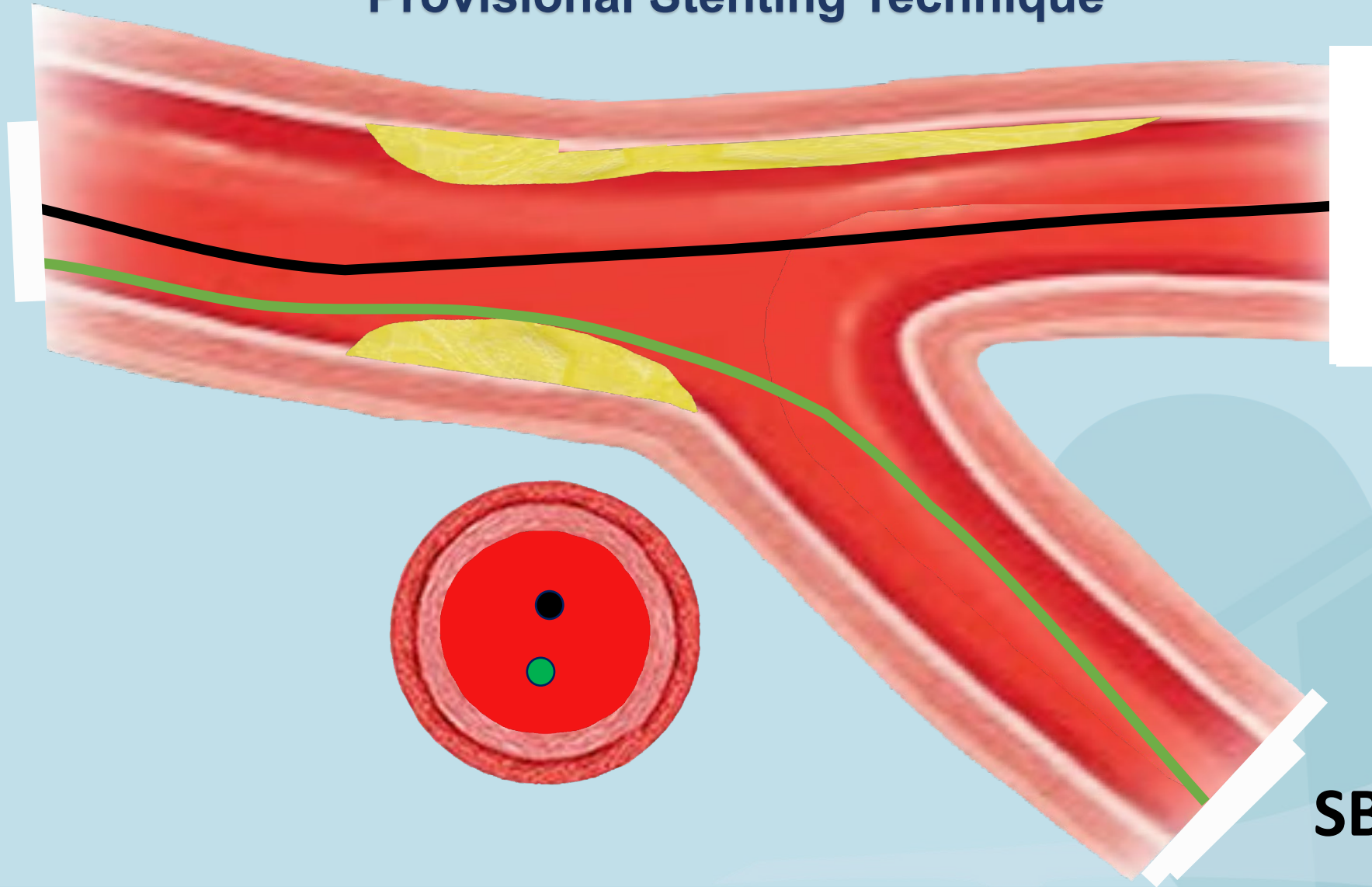
3.- Pre-dilatar MV (Balón 1:1 con MV distal)



# Bifurcation Techniques

## Provisional Stenting Technique

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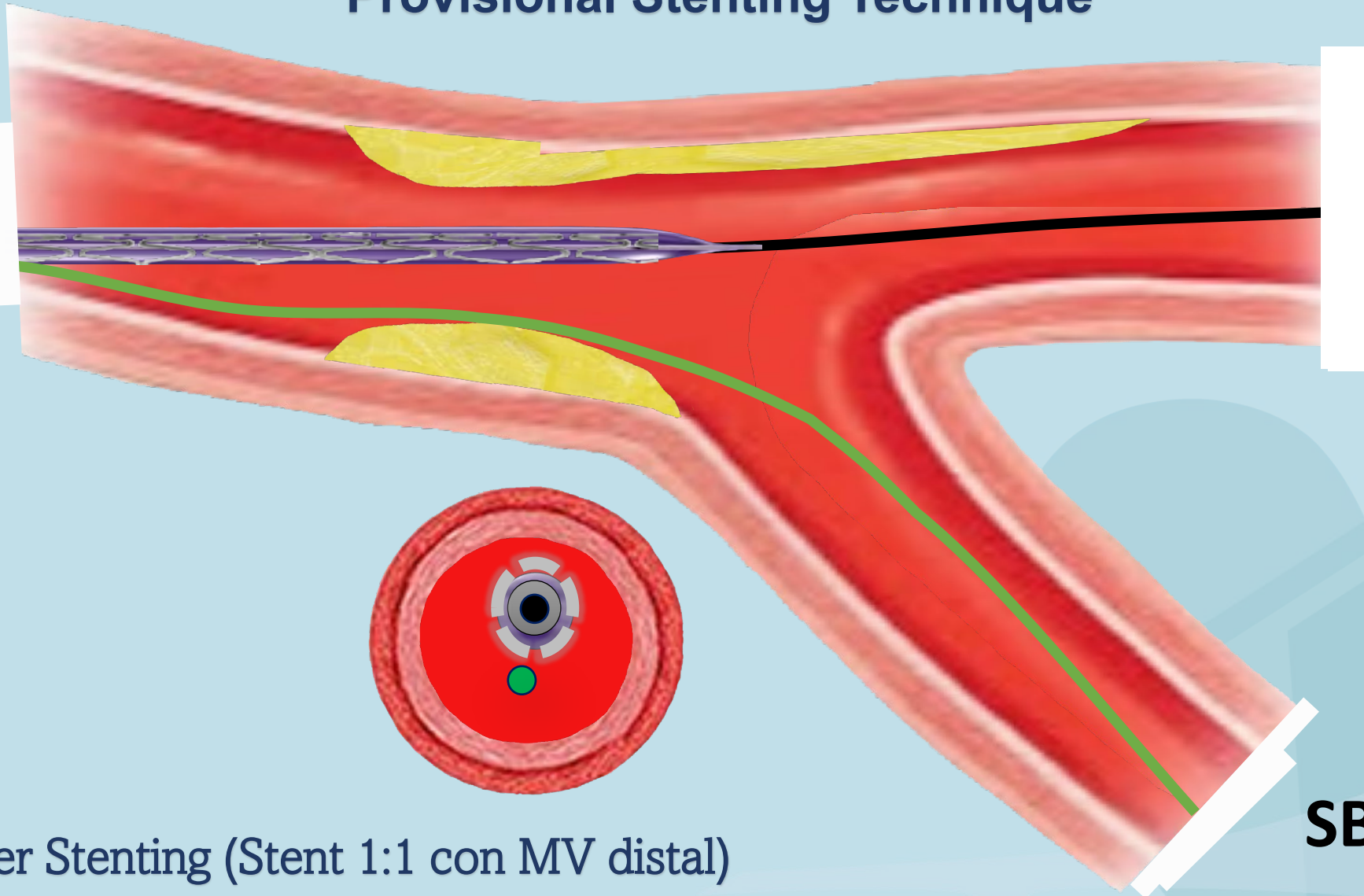
**MV**  
Distal

**SB**

# Bifurcation Techniques

## Provisional Stenting Technique

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**MV**  
Distal

**SB**

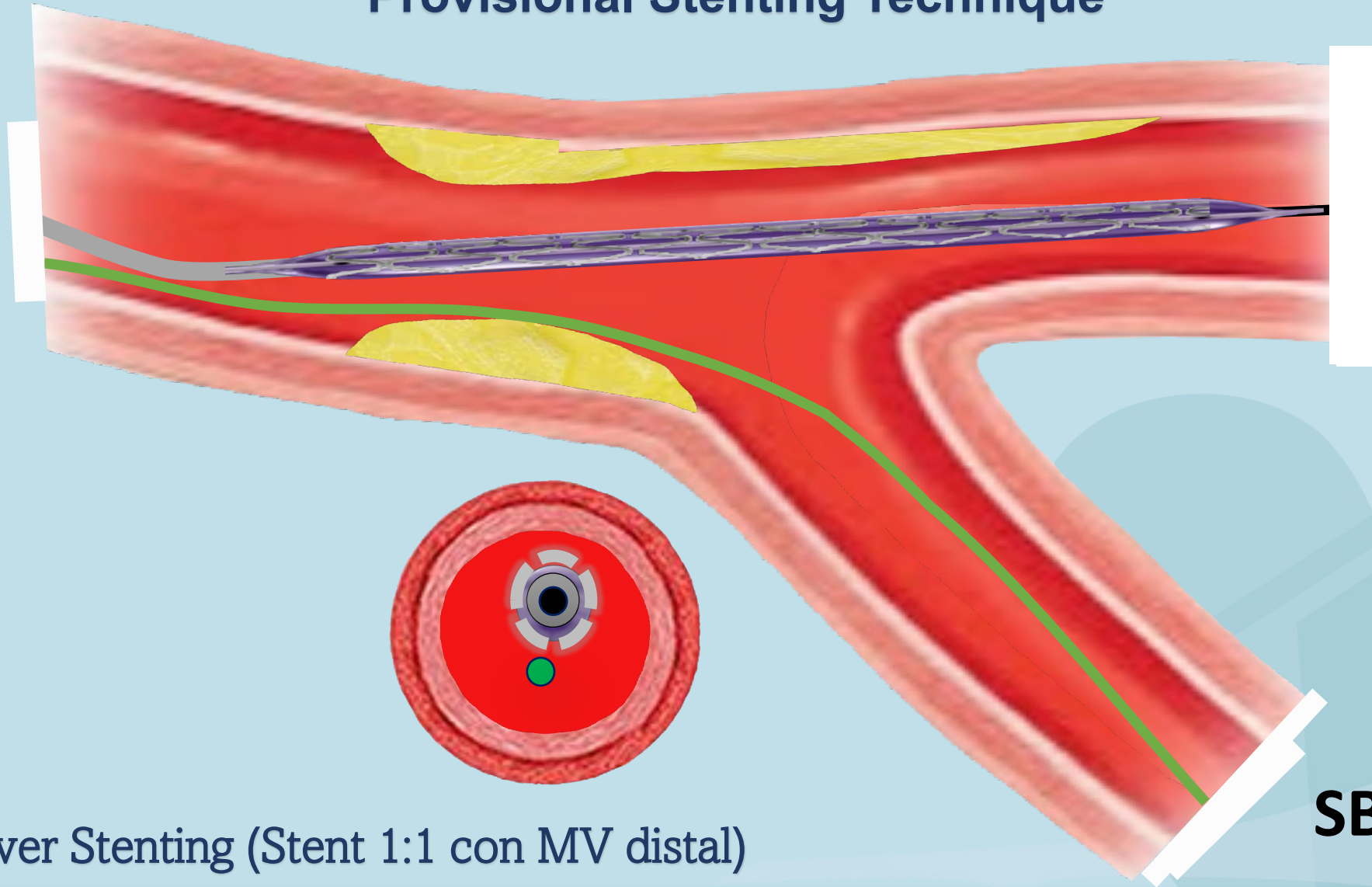
4.- Crossover Stenting (Stent 1:1 con MV distal)



# Bifurcation Techniques

## Provisional Stenting Technique

**MV**  
Proximal



**MV**  
Distal

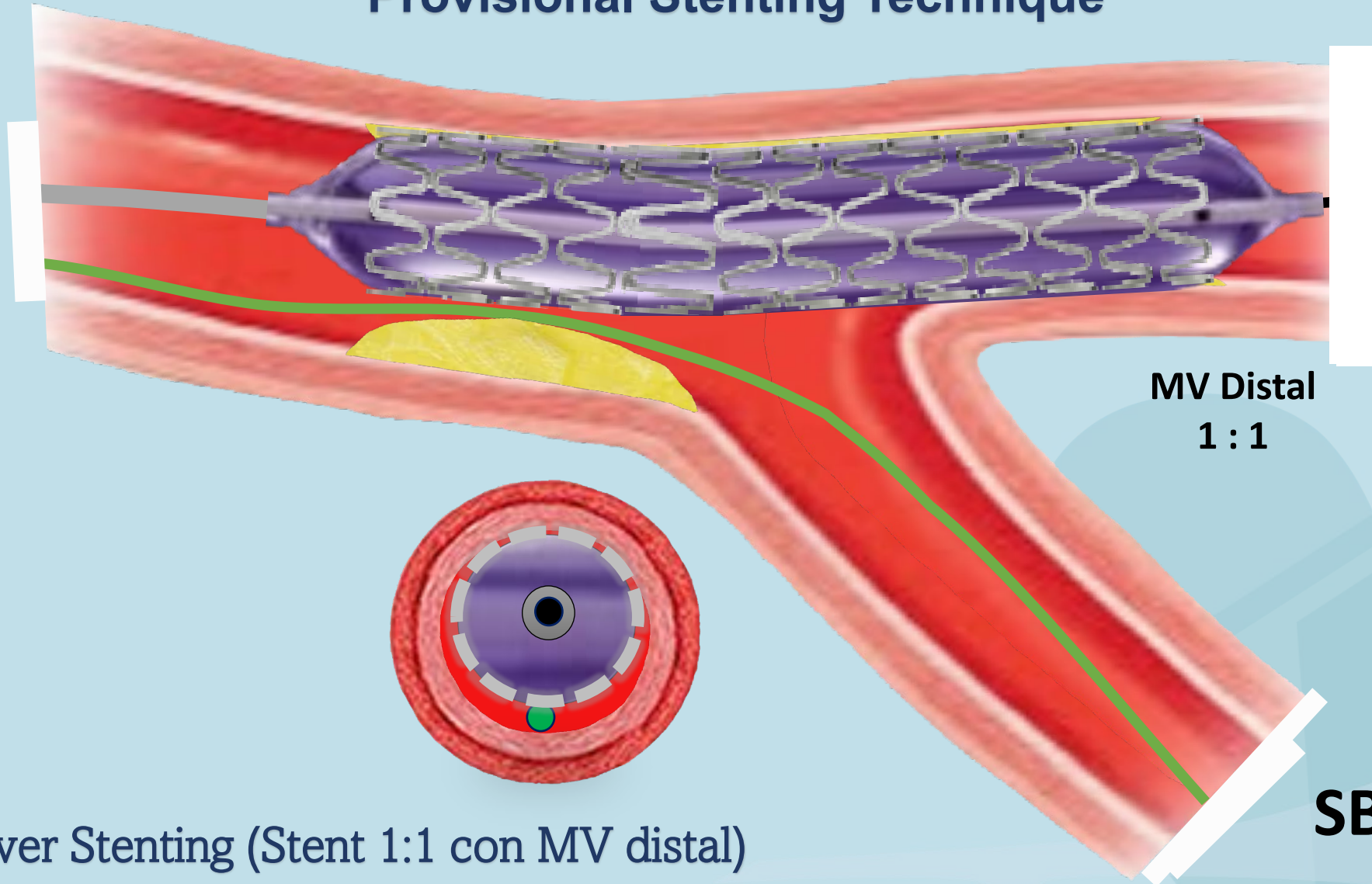
**SB**

4.- Crossover Stenting (Stent 1:1 con MV distal)

# Bifurcation Techniques

## Provisional Stenting Technique

**MV**  
Proximal



**MV**  
Distal

**MV Distal**  
**1 : 1**

**SB**

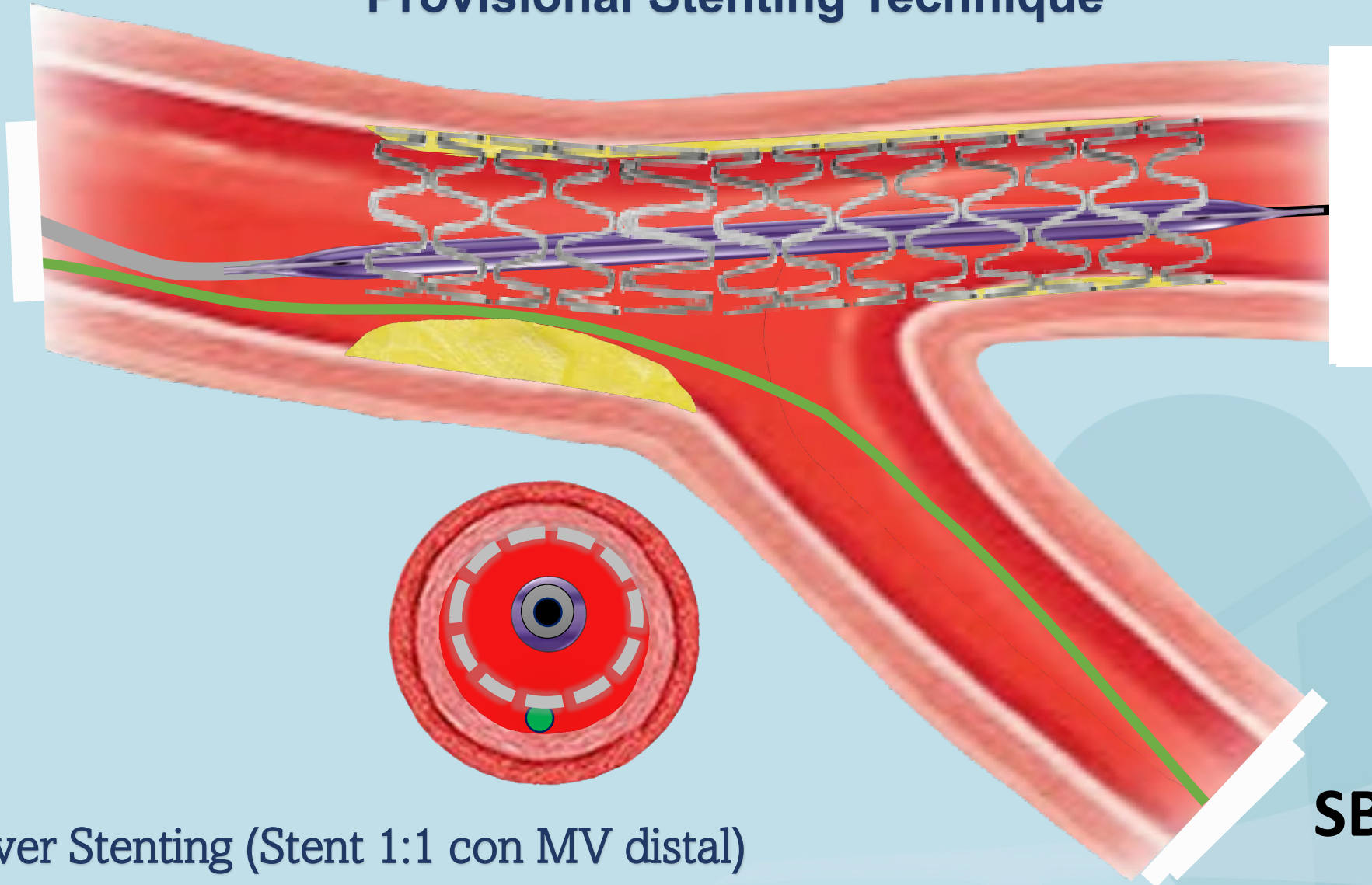
4.- Crossover Stenting (Stent 1:1 con MV distal)



# Bifurcation Techniques

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**MV**  
Distal

**SB**

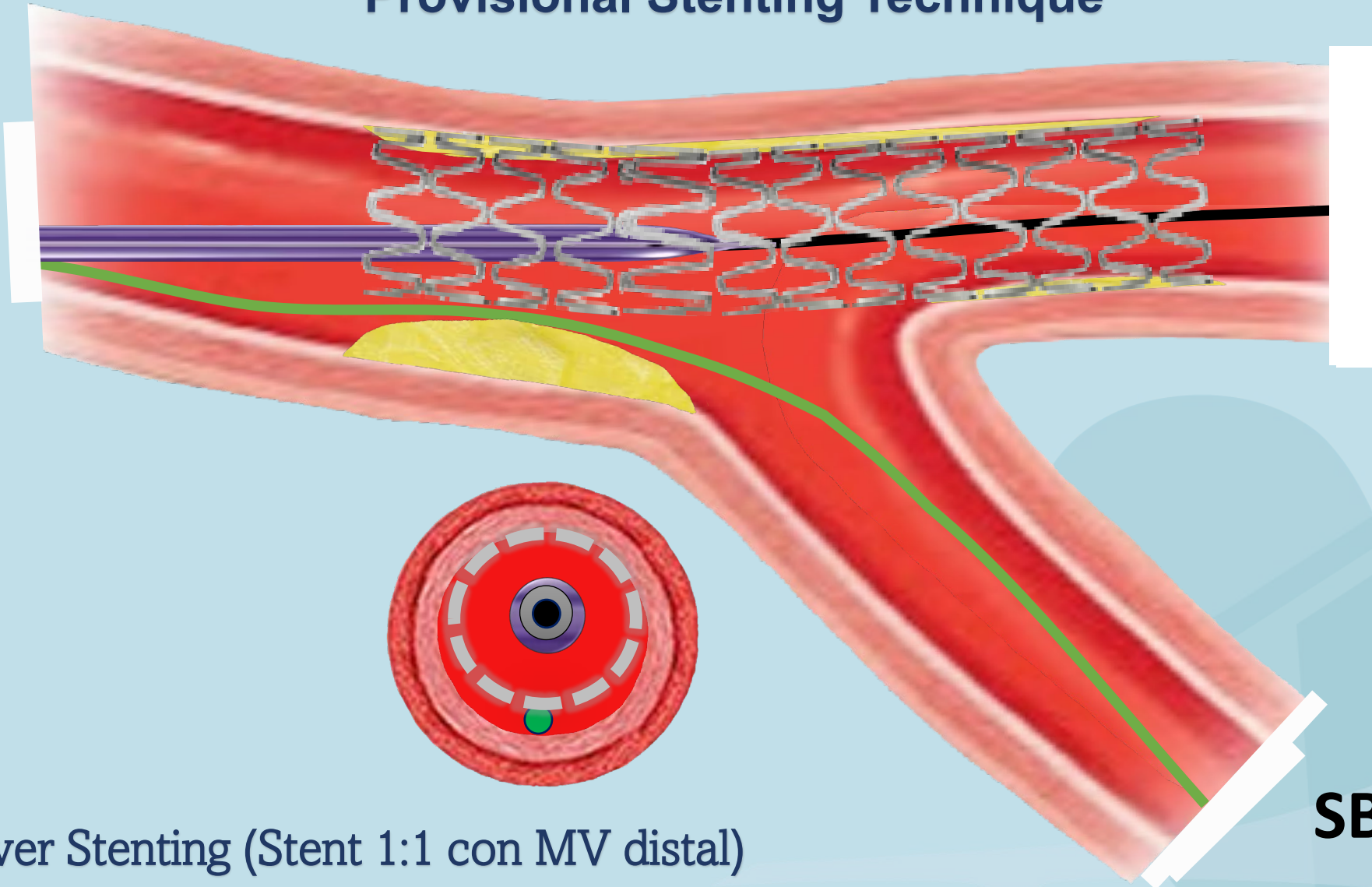
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# Bifurcation Techniques

## Provisional Stenting Technique

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Proximal



**MV**  
Distal

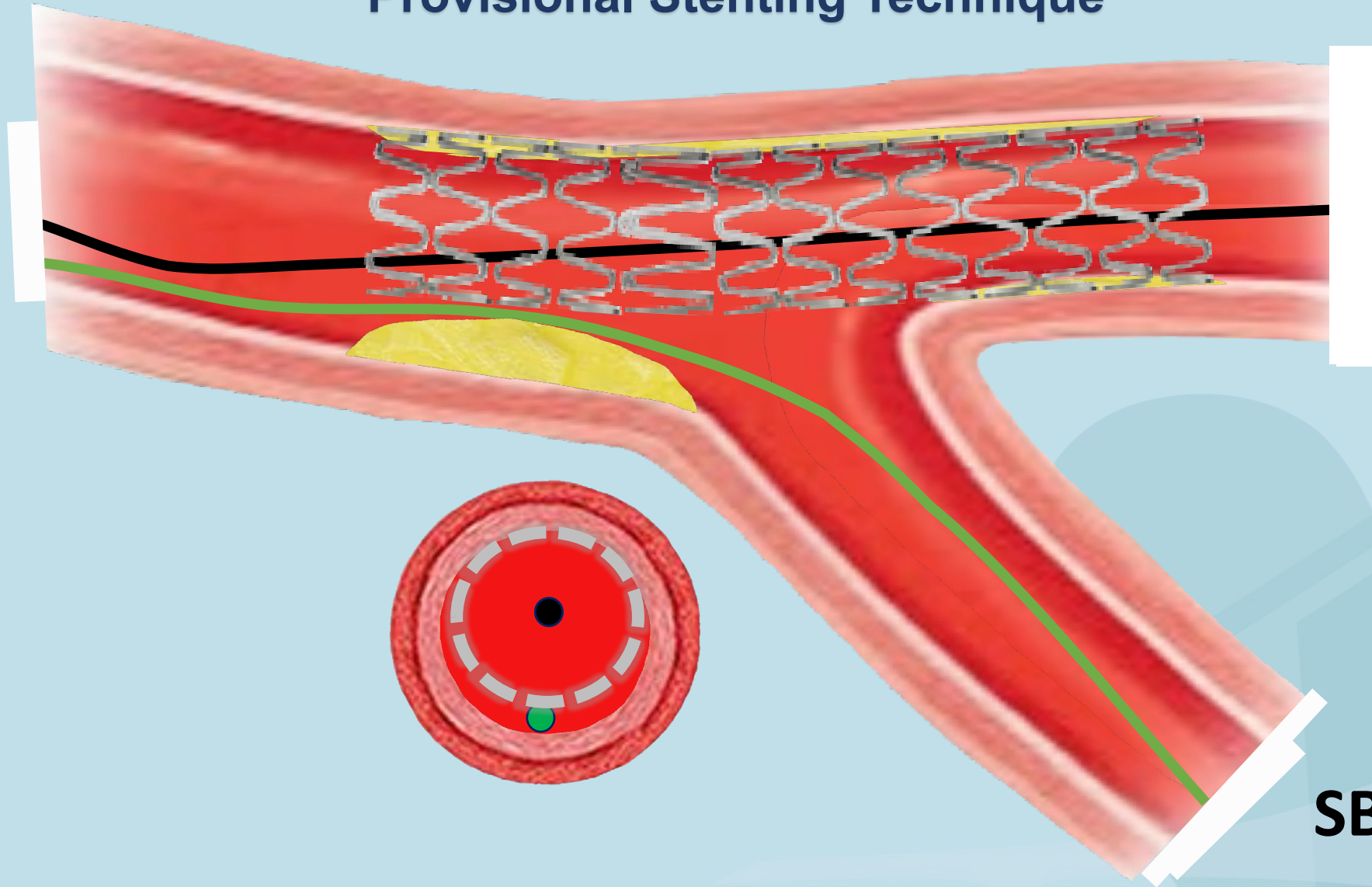
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4.- Crossover Stenting (Stent 1:1 con MV distal)

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## Provisional Stenting Technique

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**MV**  
Distal

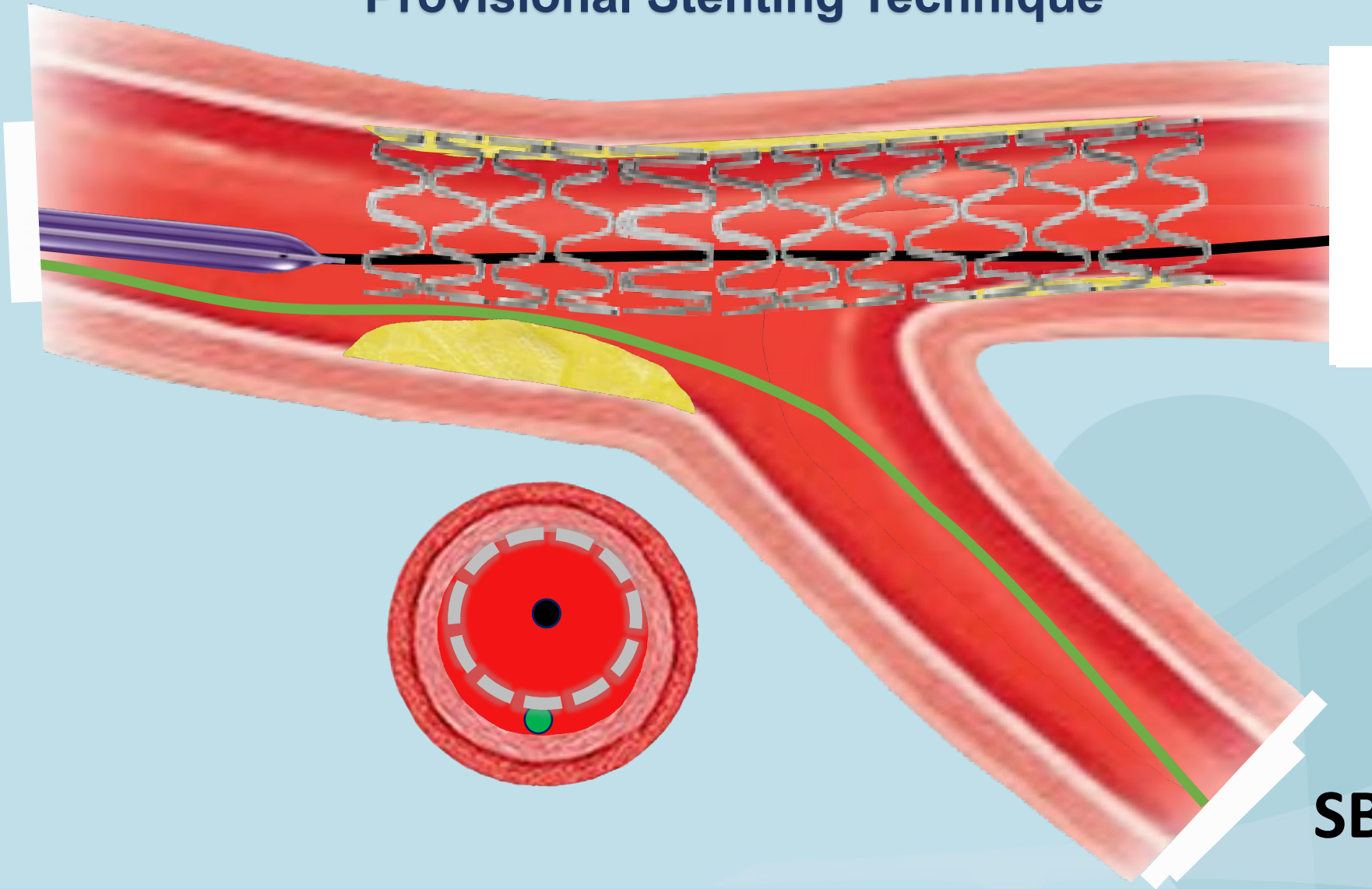
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# Bifurcation Techniques

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Proximal



**MV**  
Distal

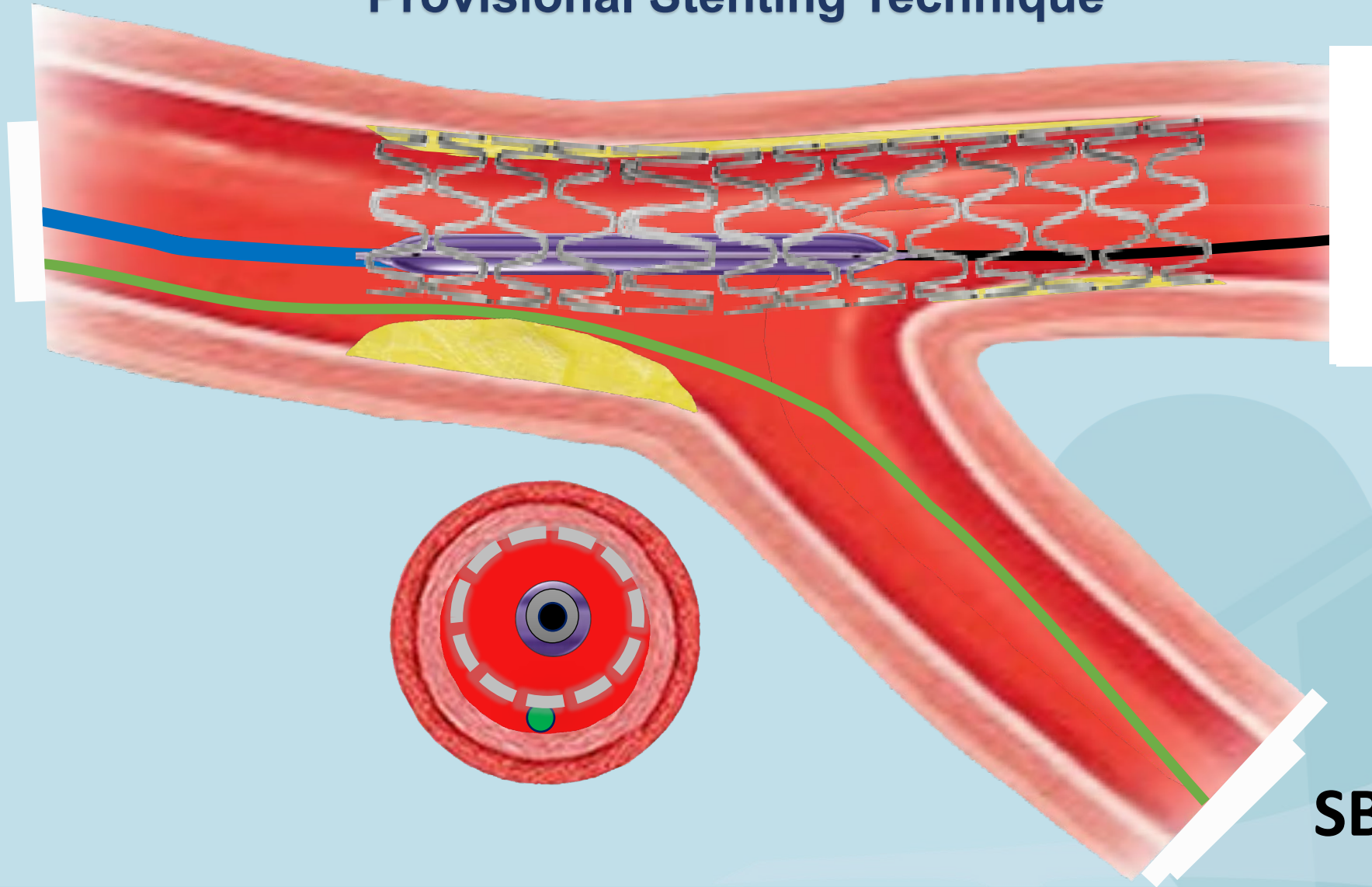
**SB**

5.- POT

# Bifurcation Techniques

## Provisional Stenting Technique

**MV**  
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**MV**  
Distal

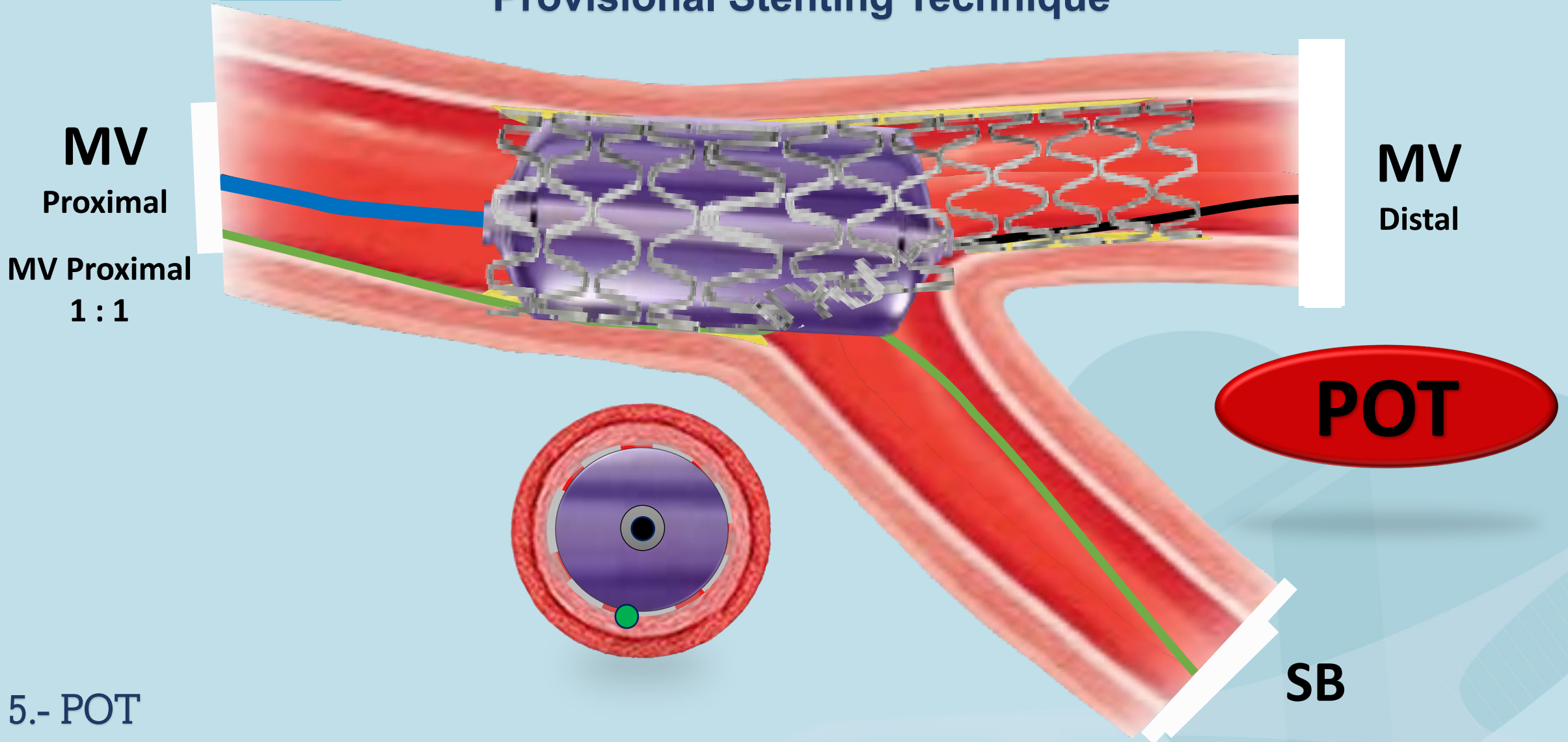
**SB**

5.- POT



# Bifurcation Techniques

## Provisional Stenting Technique



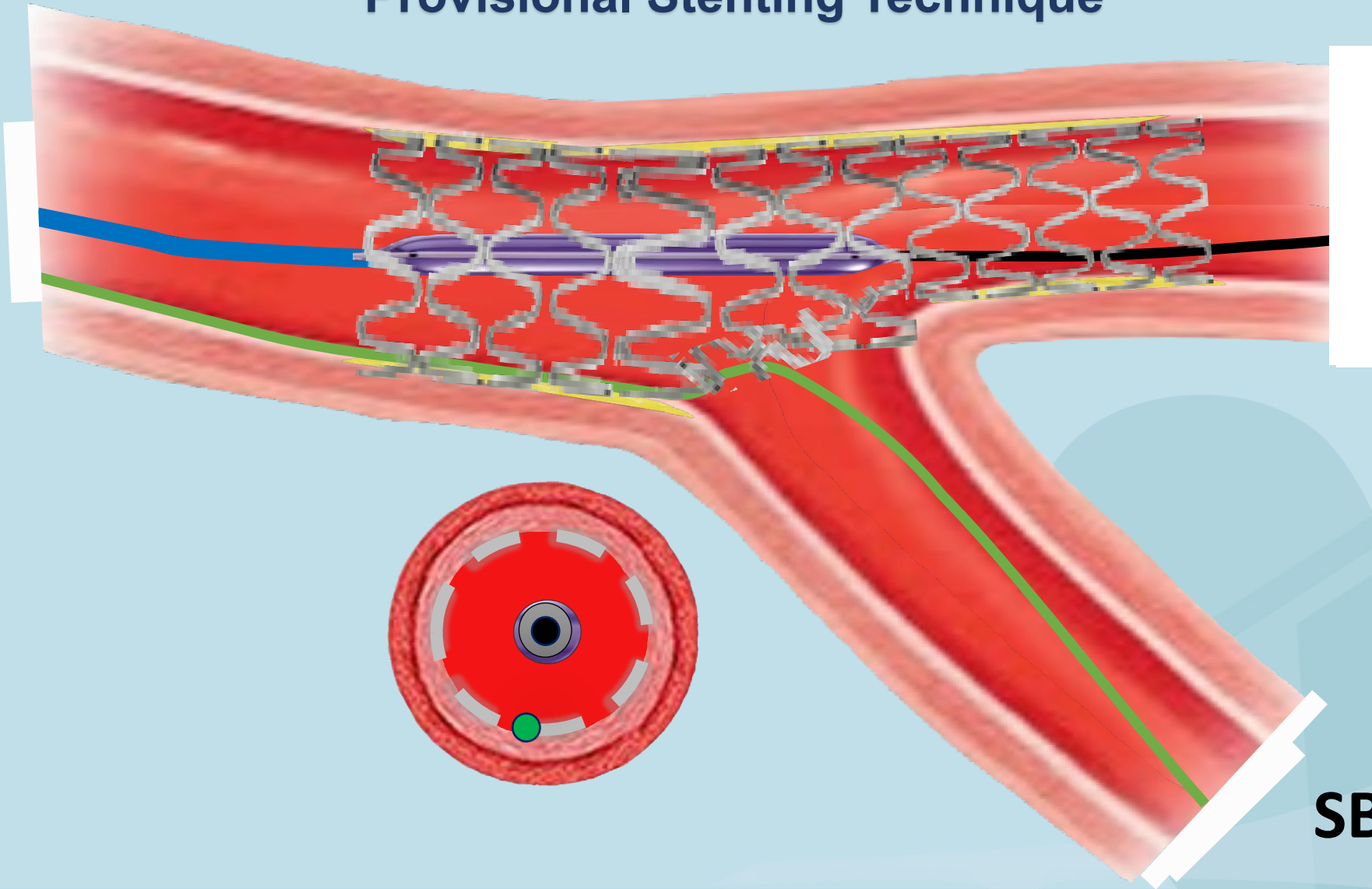
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Proximal



**MV**  
Distal

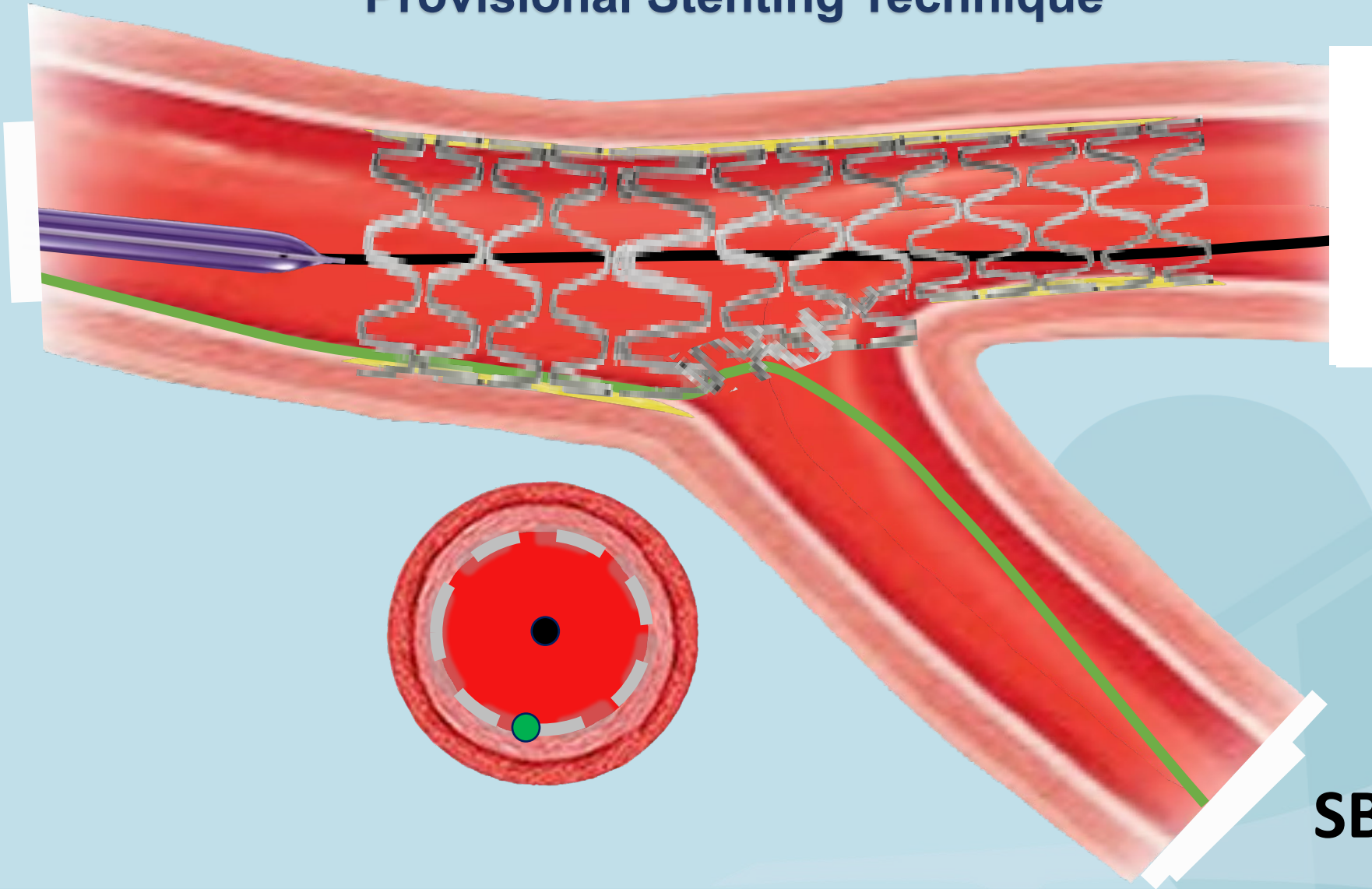
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5.- POT

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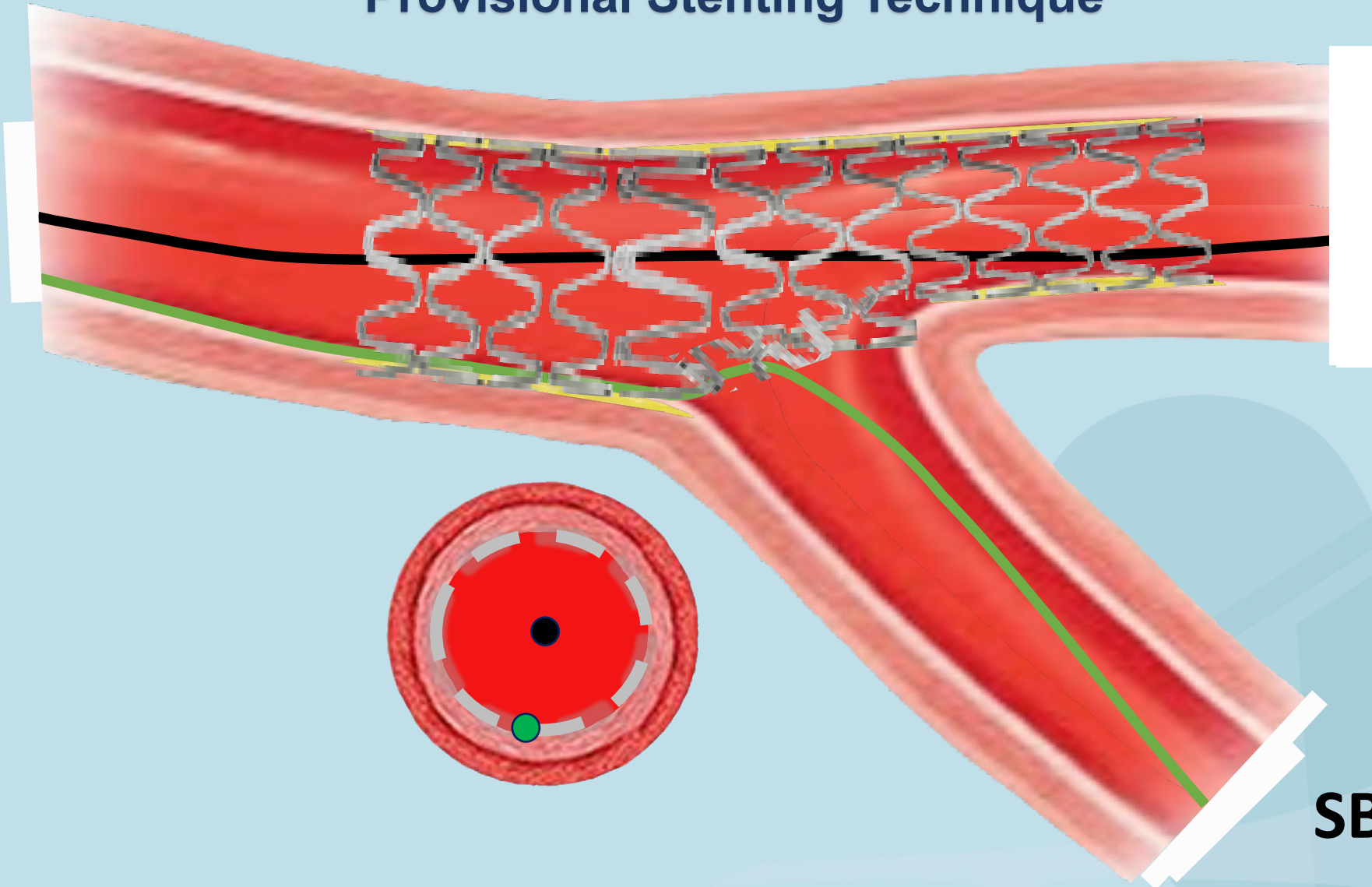
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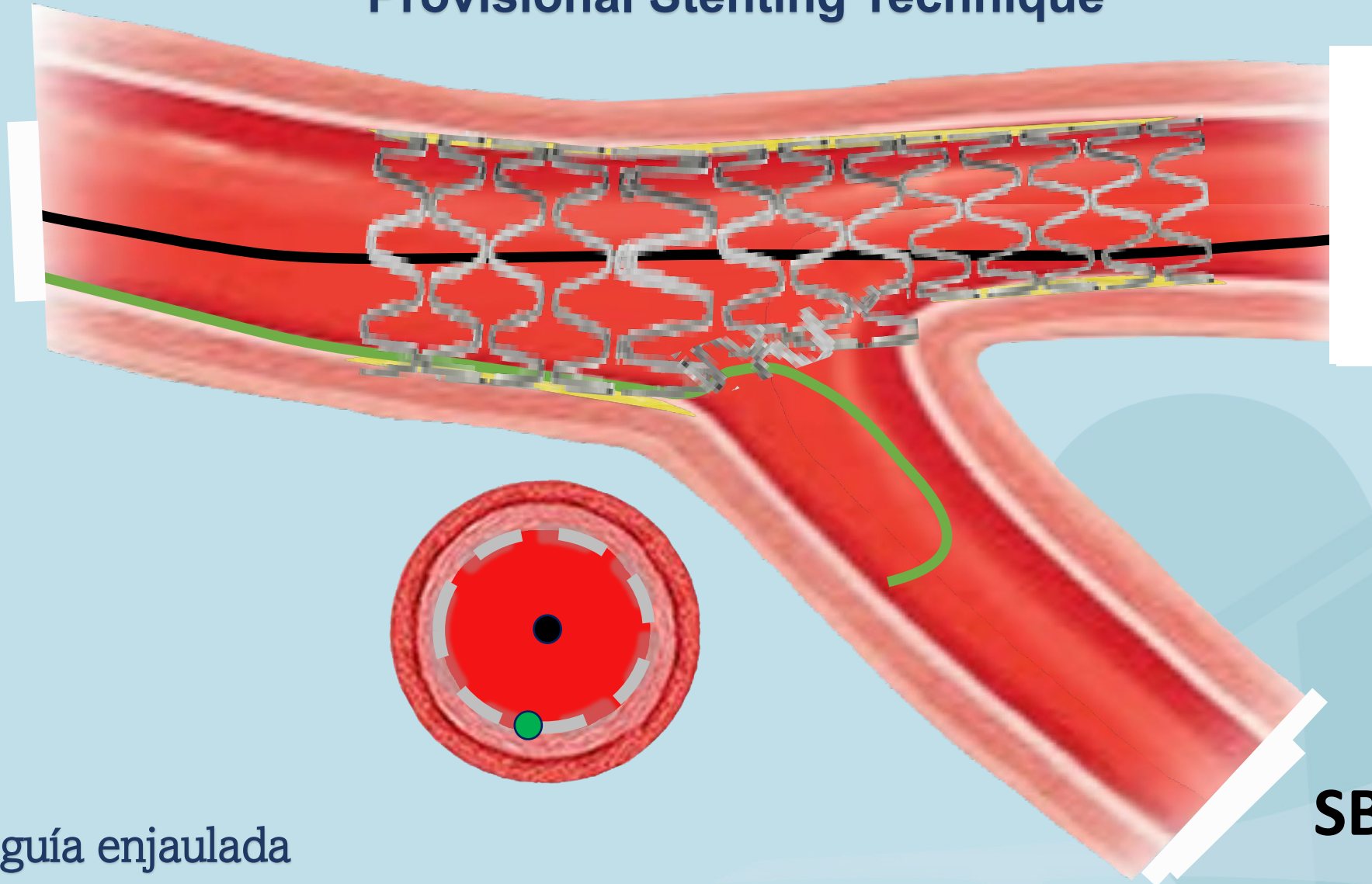
**MV**  
Distal

**SB**

# Bifurcation Techniques

## Provisional Stenting Technique

**MV**  
Proximal



**MV**  
Distal

**SB**

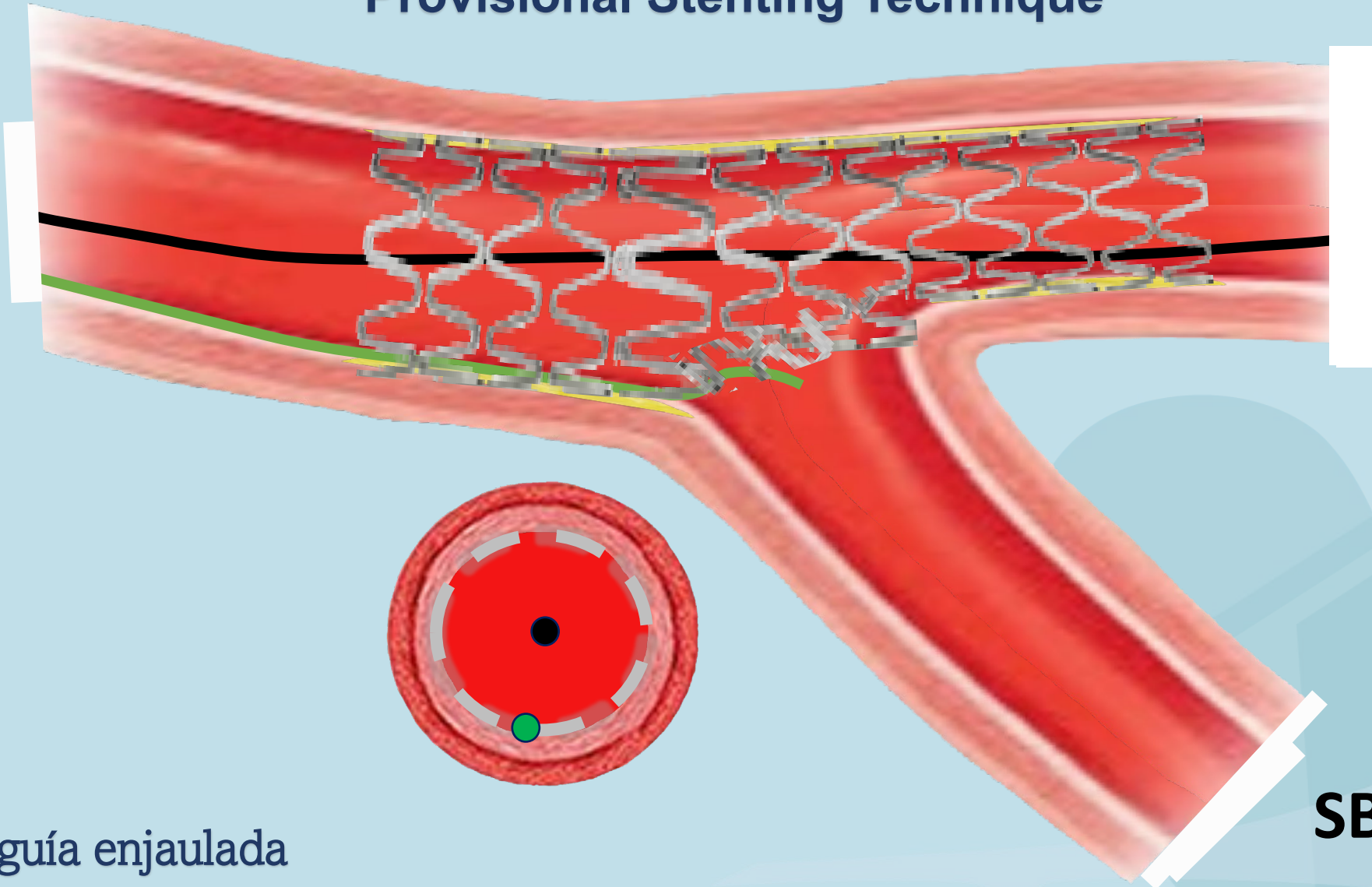
6.- Retirar guía enjaulada



# Bifurcation Techniques

## Provisional Stenting Technique

**MV**  
Proximal



**MV**  
Distal

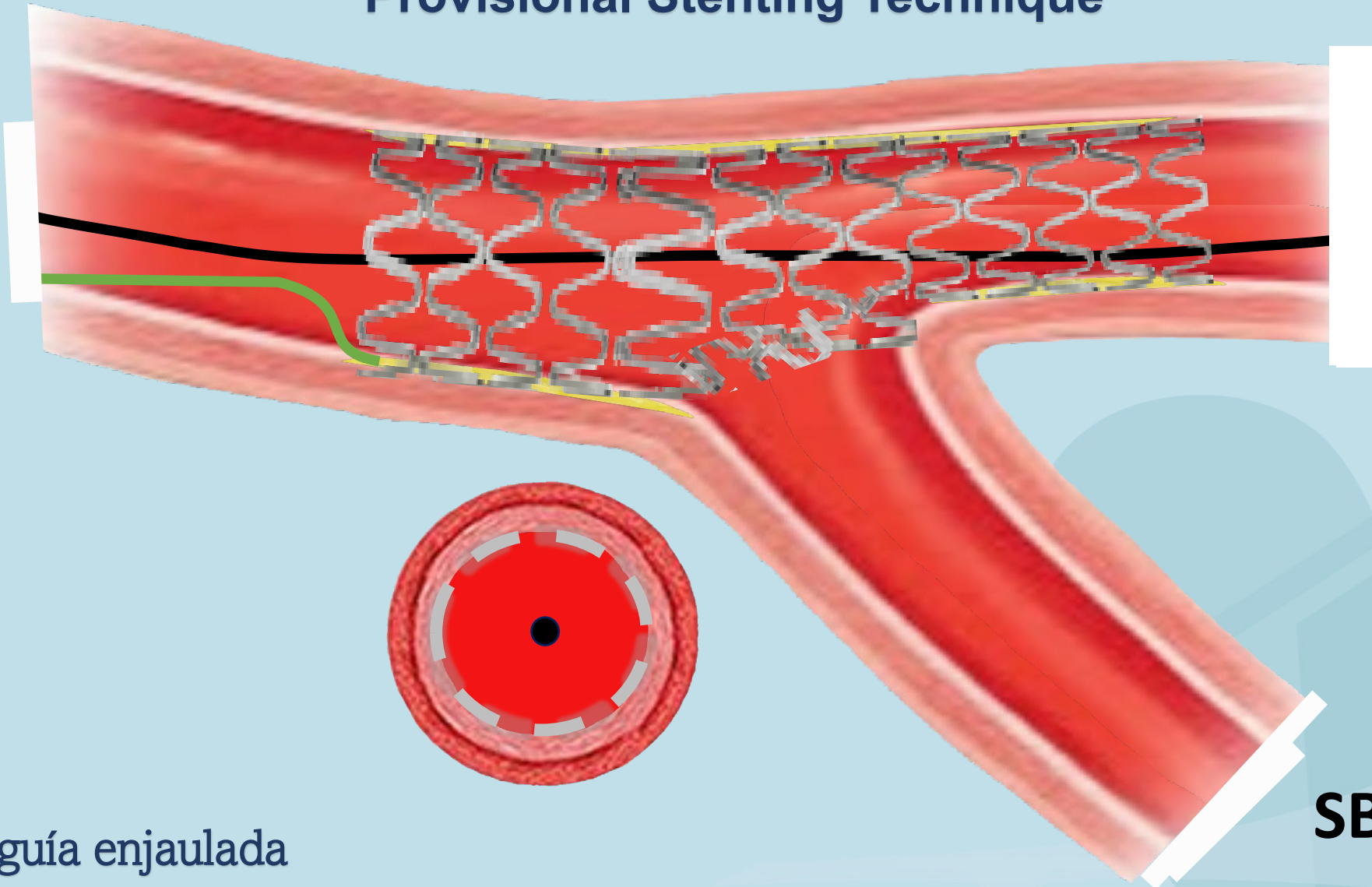
**SB**

6.- Retirar guía enjaulada

# Bifurcation Techniques

## Provisional Stenting Technique

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Proximal



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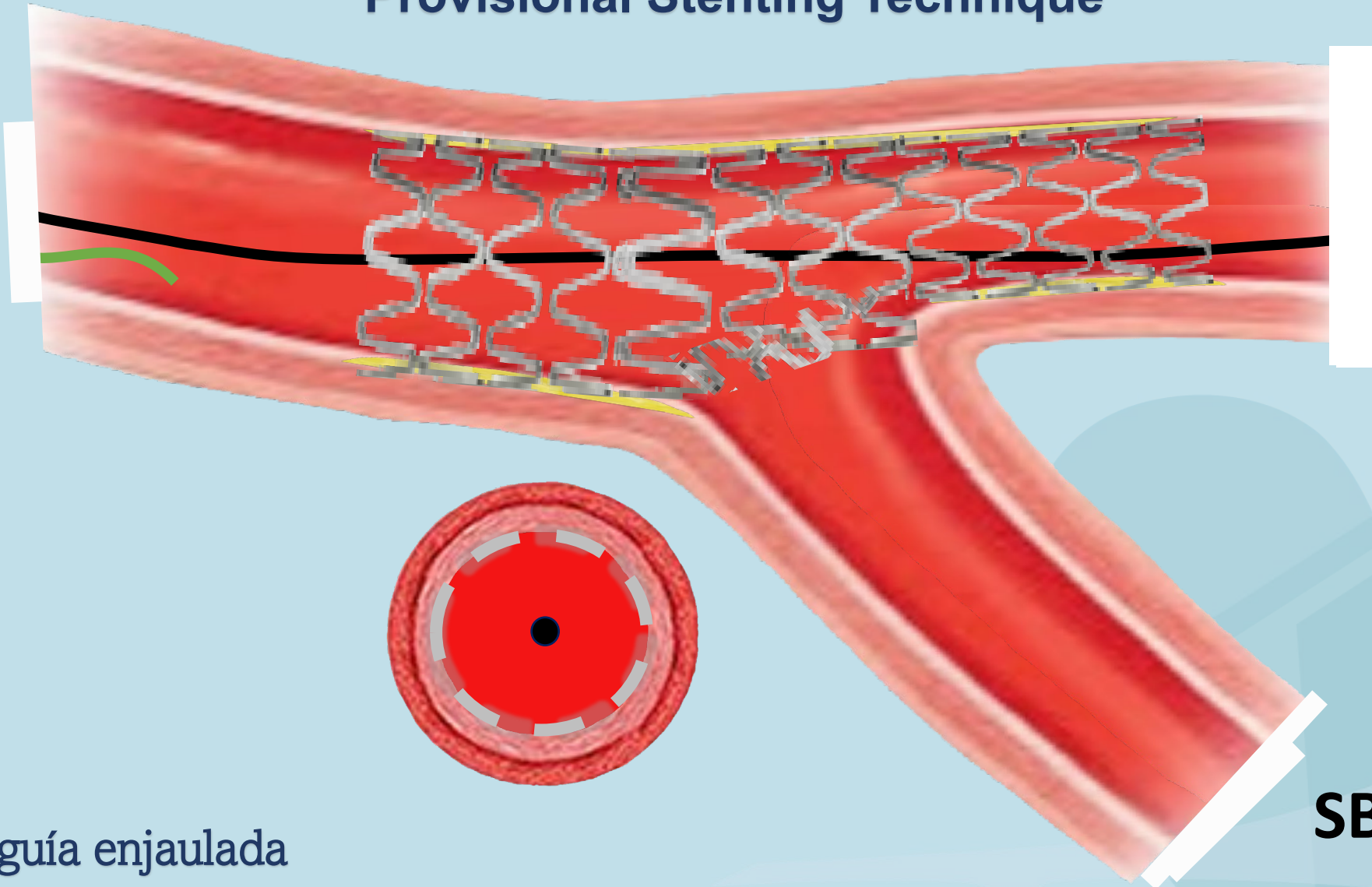
6.- Retirar guía enjaulada



# Bifurcation Techniques

## Provisional Stenting Technique

**MV**  
Proximal



**MV**  
Distal

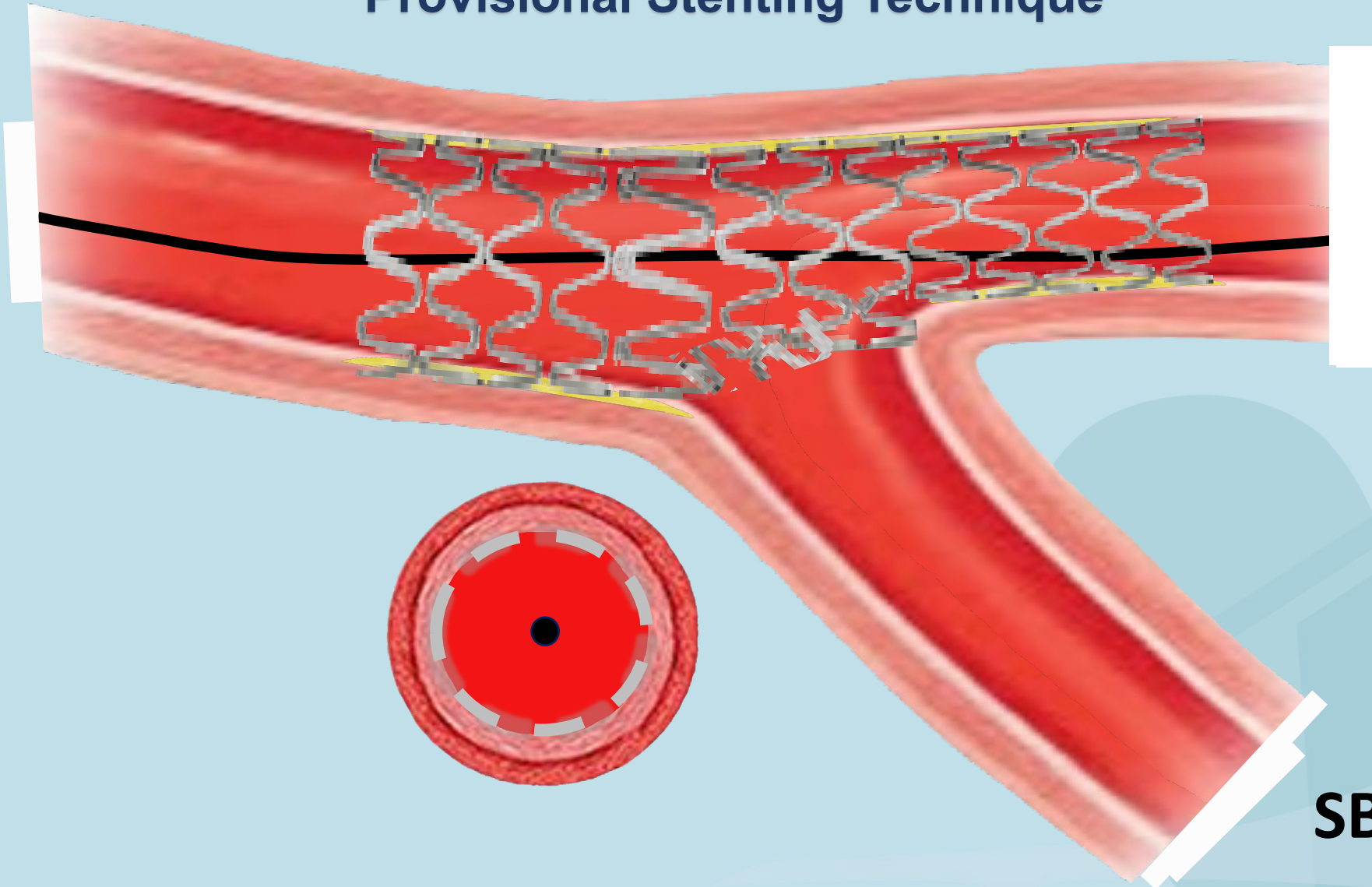
**SB**

6.- Retirar guía enjaulada

# Bifurcation Techniques

## Provisional Stenting Technique

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**MV**  
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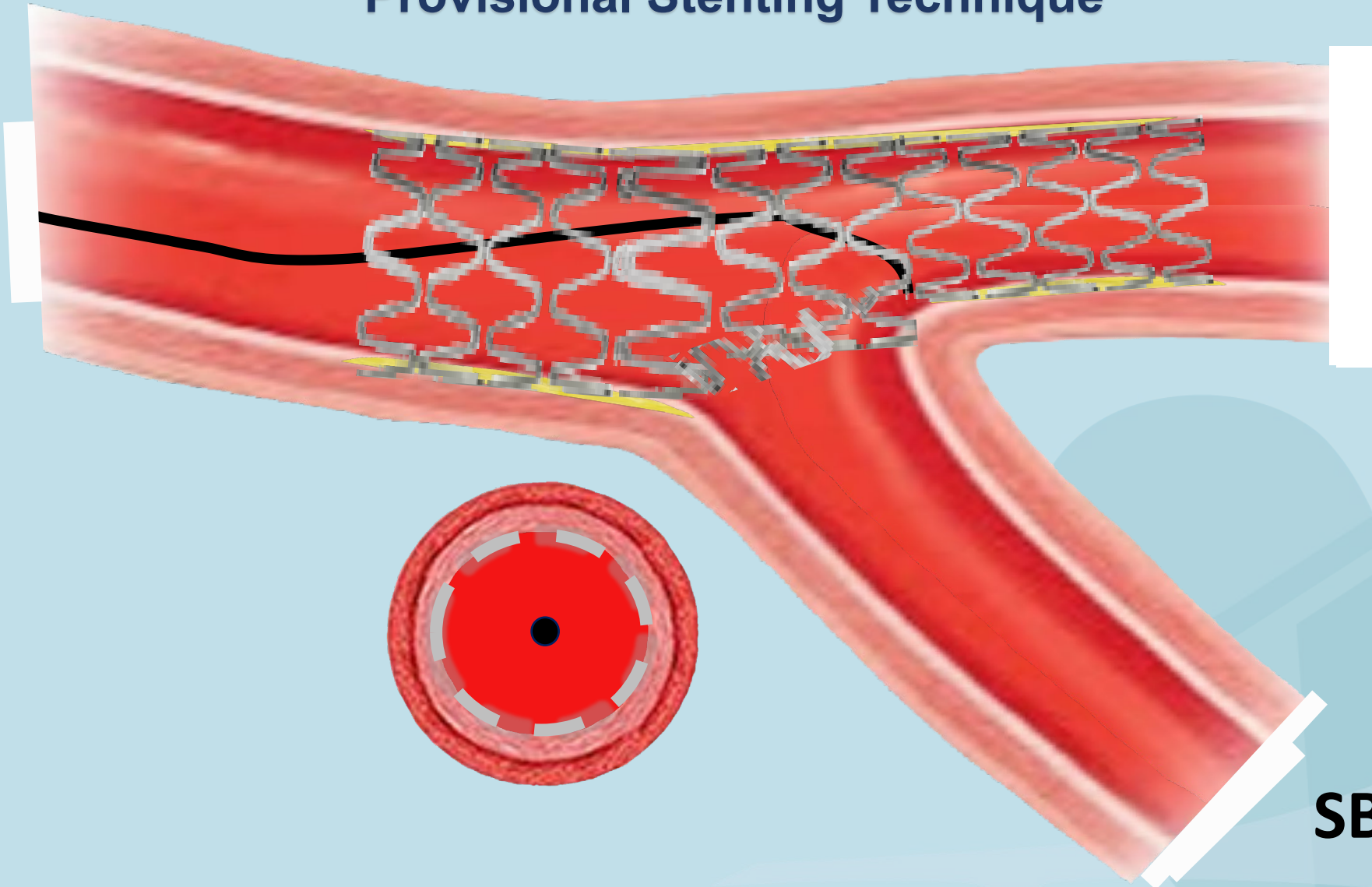
**SB**



# Bifurcation Techniques

## Provisional Stenting Technique

**MV**  
Proximal



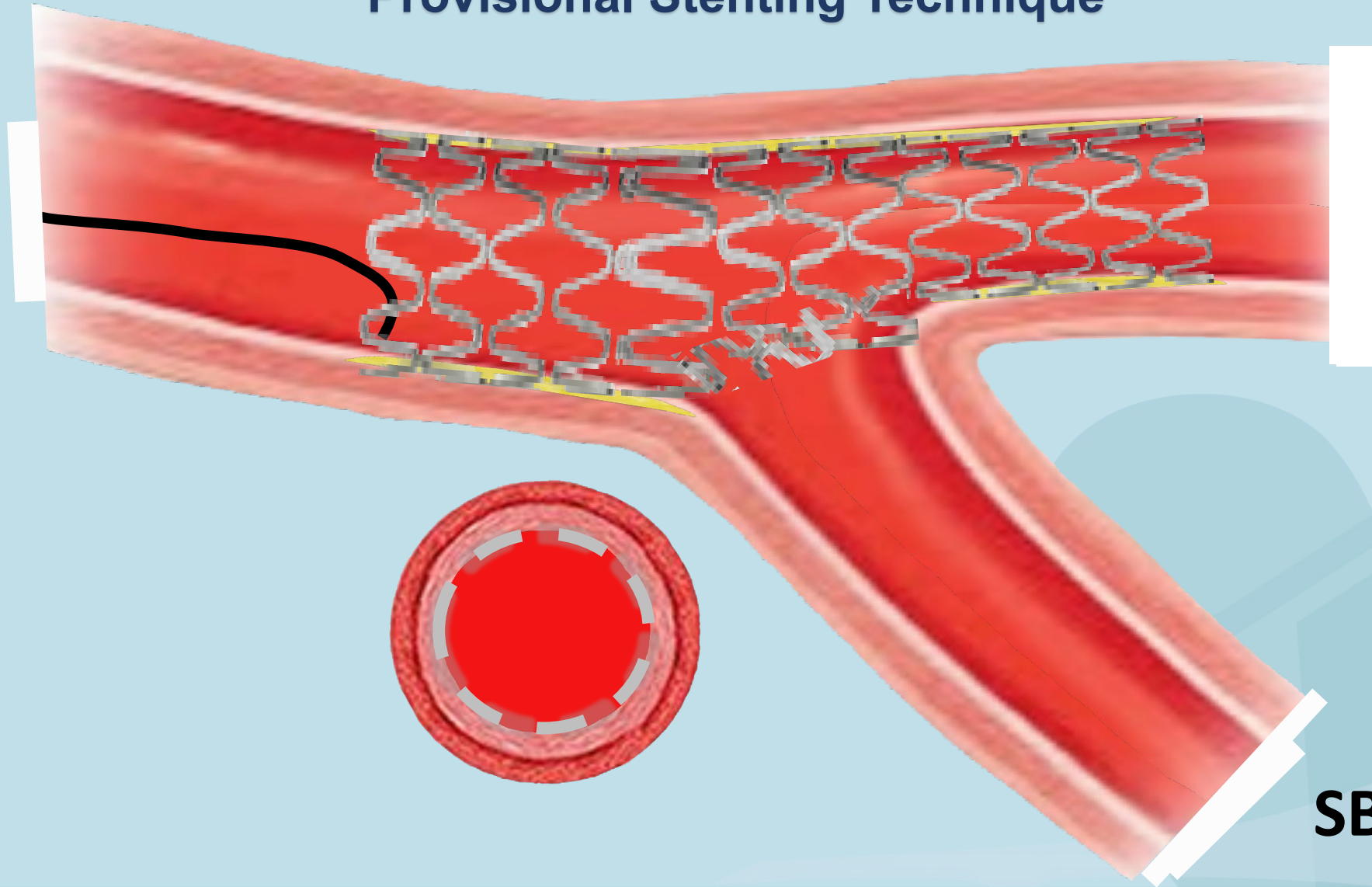
**MV**  
Distal

**SB**

# Bifurcation Techniques

## Provisional Stenting Technique

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**MV**  
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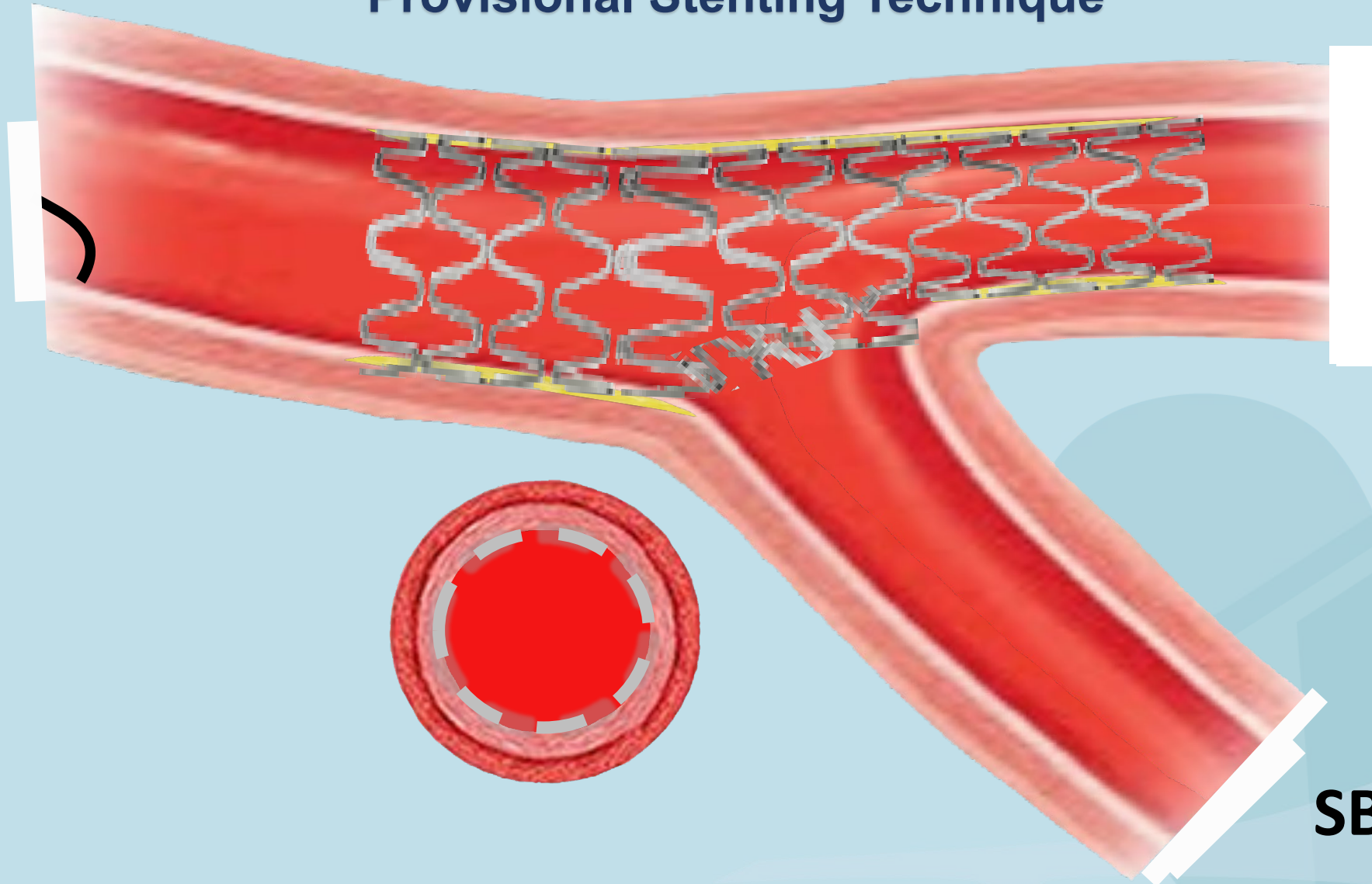
**SB**



# Bifurcation Techniques

## Provisional Stenting Technique

**MV**  
Proximal



**MV**  
Distal

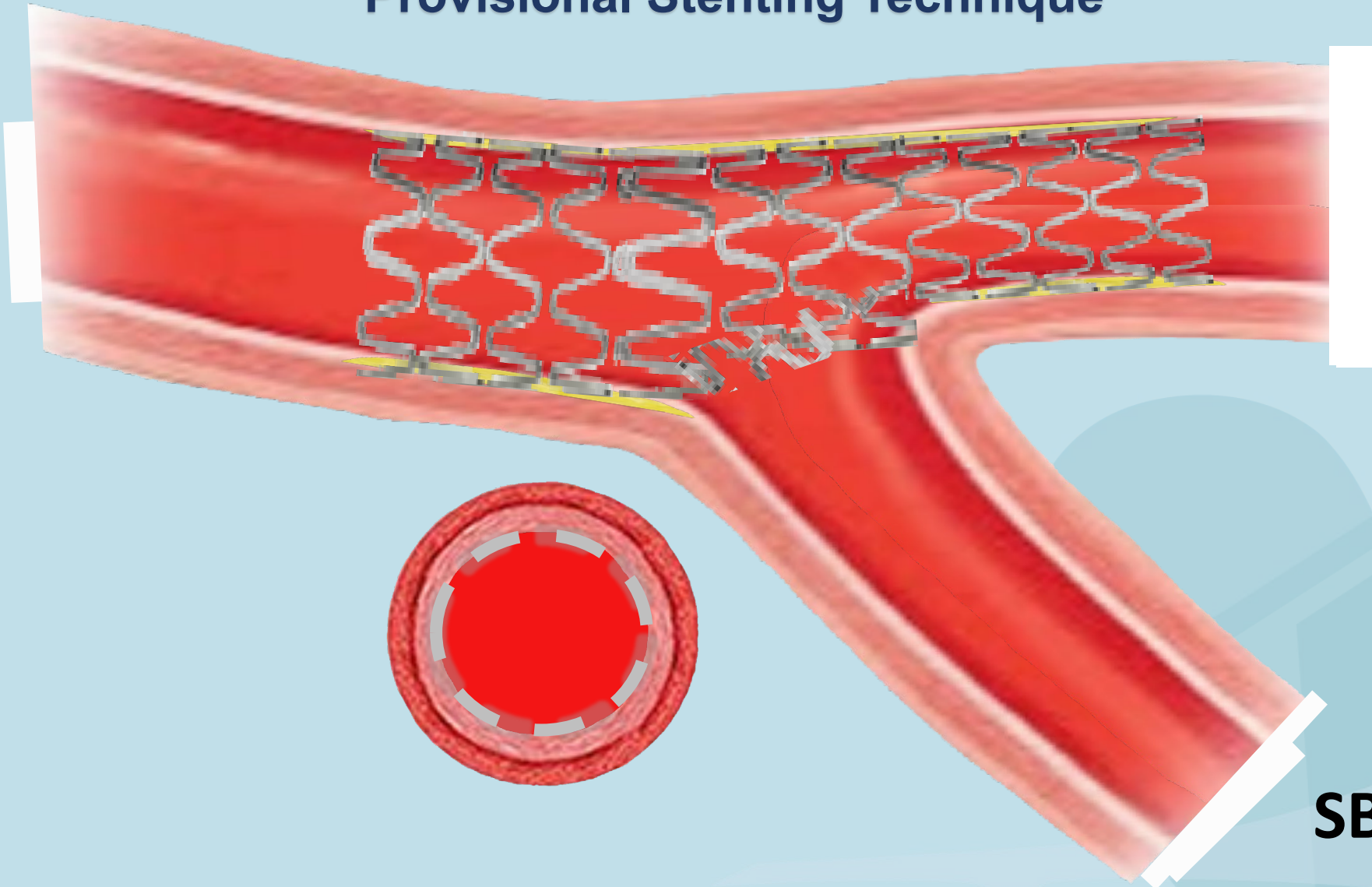
**SB**



# Bifurcation Techniques

## Provisional Stenting Technique

**MV**  
Proximal



**MV**  
Distal

**SB**

# Bifurcation Techniques

## Provisional Stenting Technique

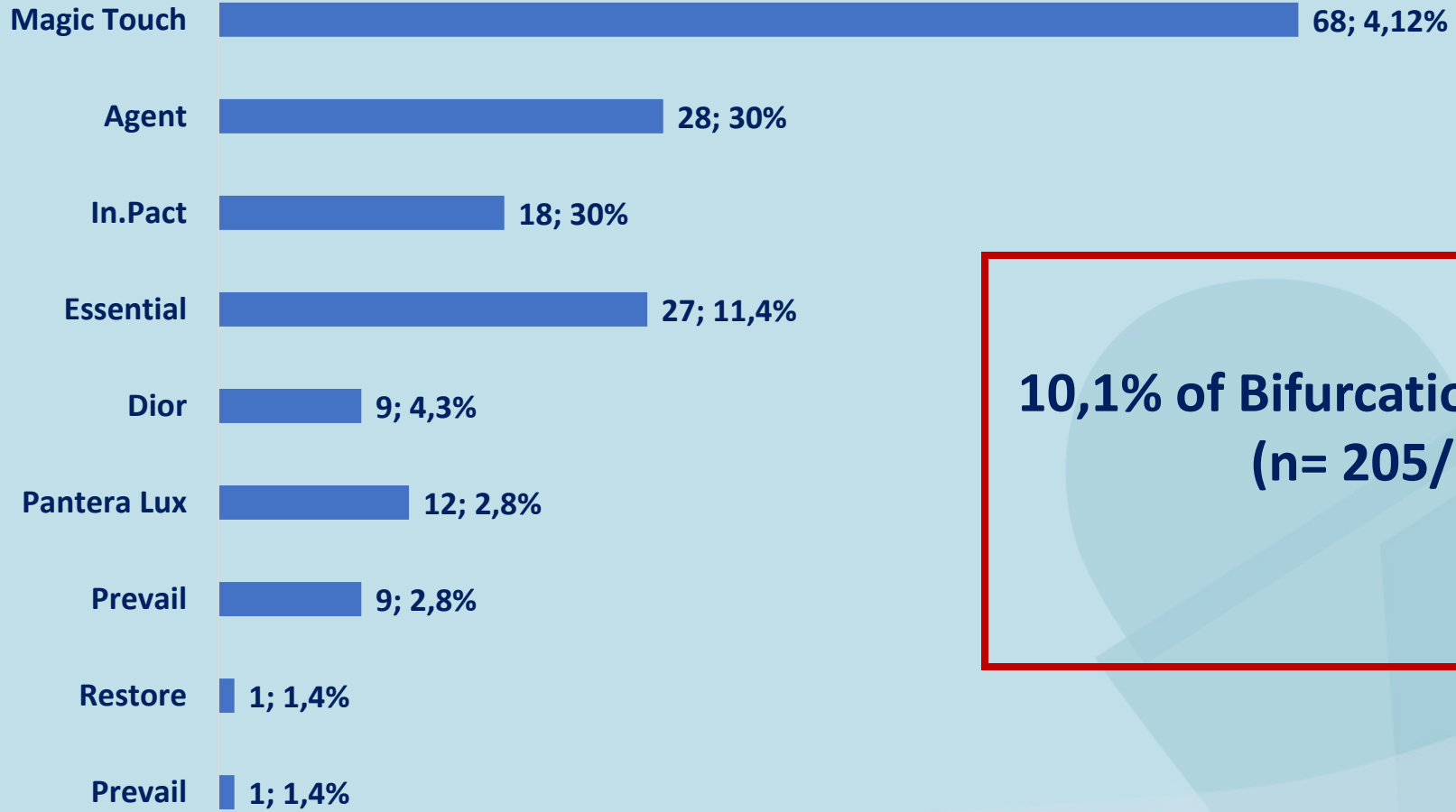
**MV**  
Proximal

**MV**  
Distal



**SB**

# Devices: DEB LATAMBif Registry (n 2030 pts)

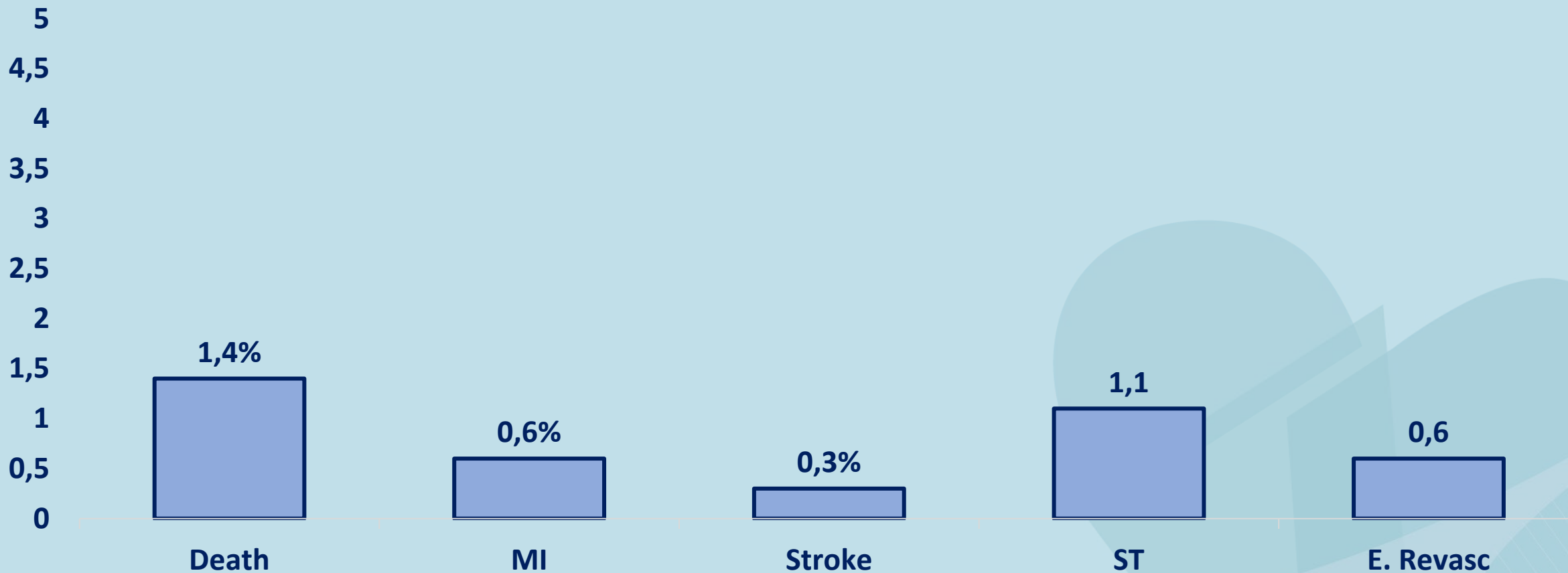


**10,1% of Bifurcation PCI with DEB  
(n= 205/2030)**



# In-hospital Events

## LATAMBif Registry (n= 2030 pts)



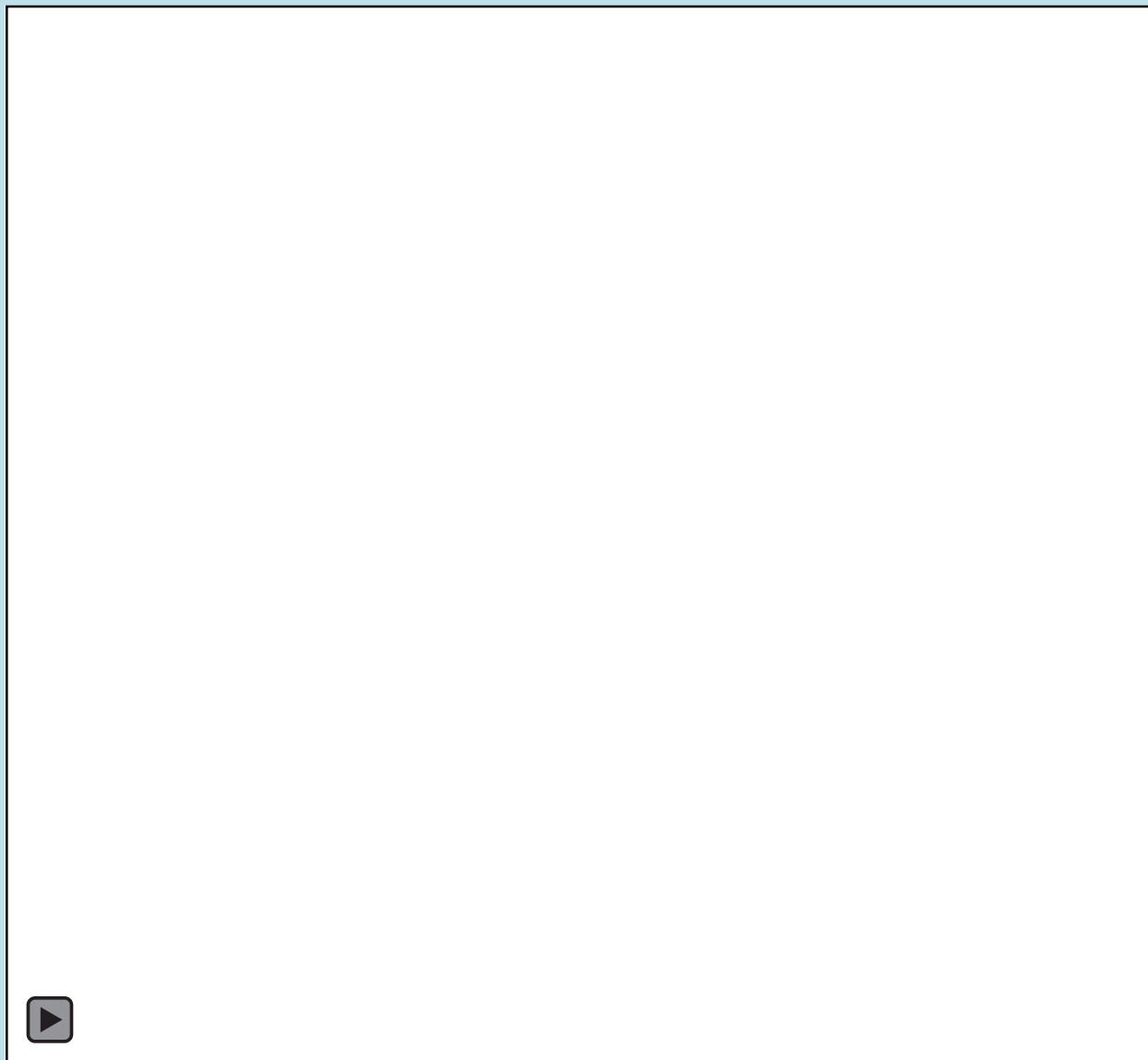
# Strategy

- 6 Fr XB 3.5
- Wiring to Circ and OM1 ( doble lumen catheter if necessary)
- IVUS assessment
- **Plaque modification: NC balloon**
- Provisional Stent Circ
- POT
- Rewiring to OM1
- KB: Ballon NC and DEB OM1
- Last manouver POT KISS POT



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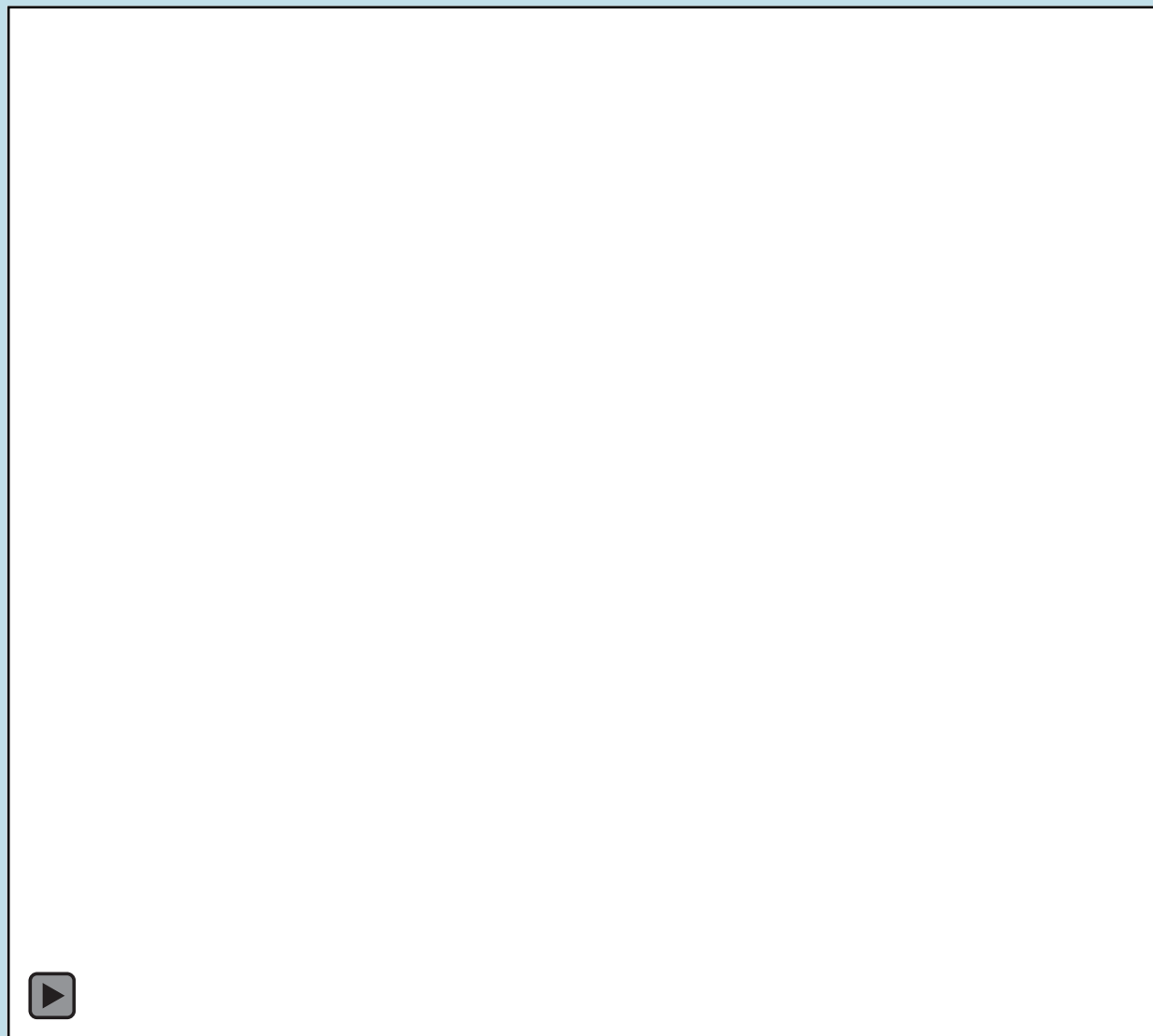
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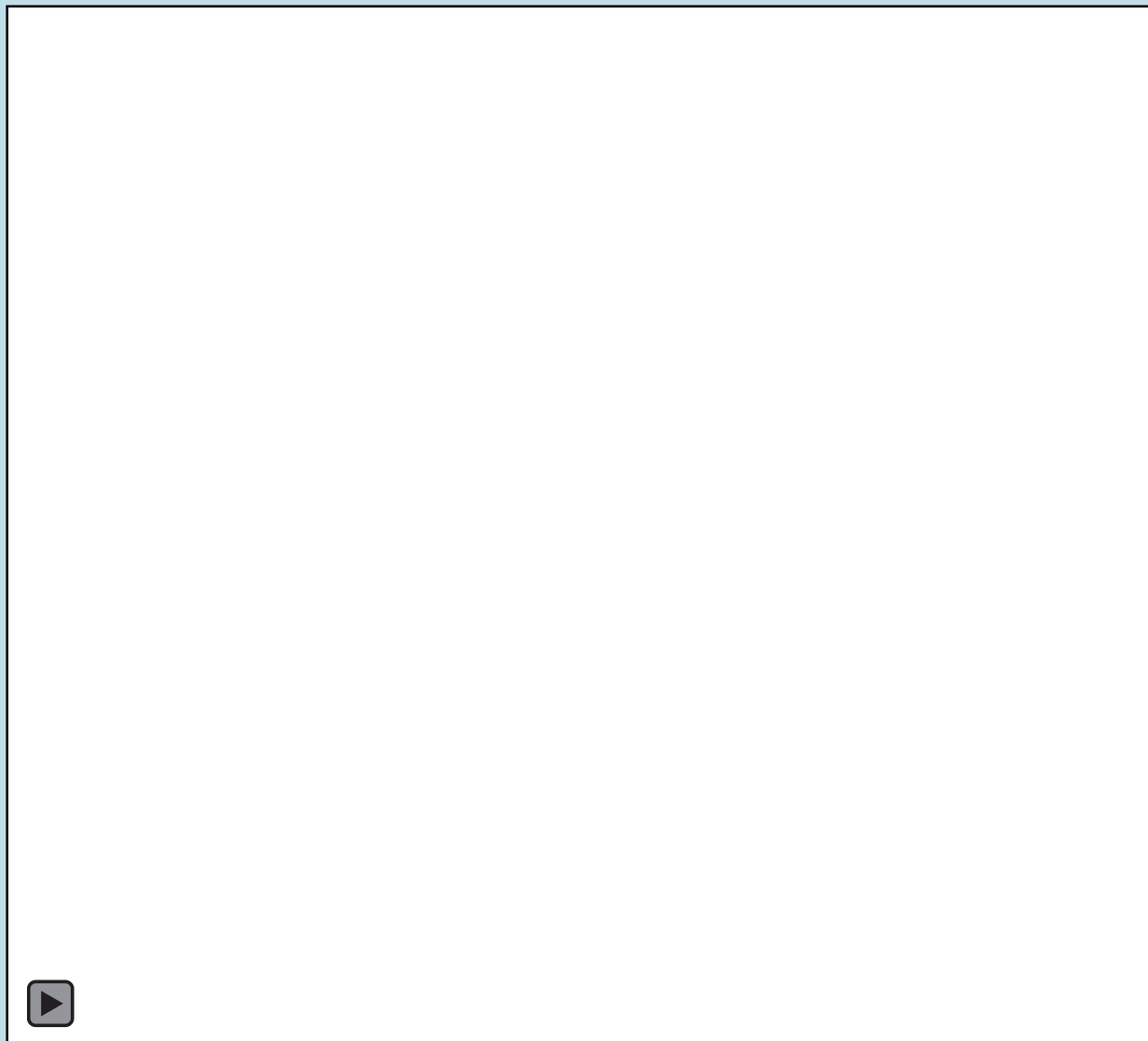
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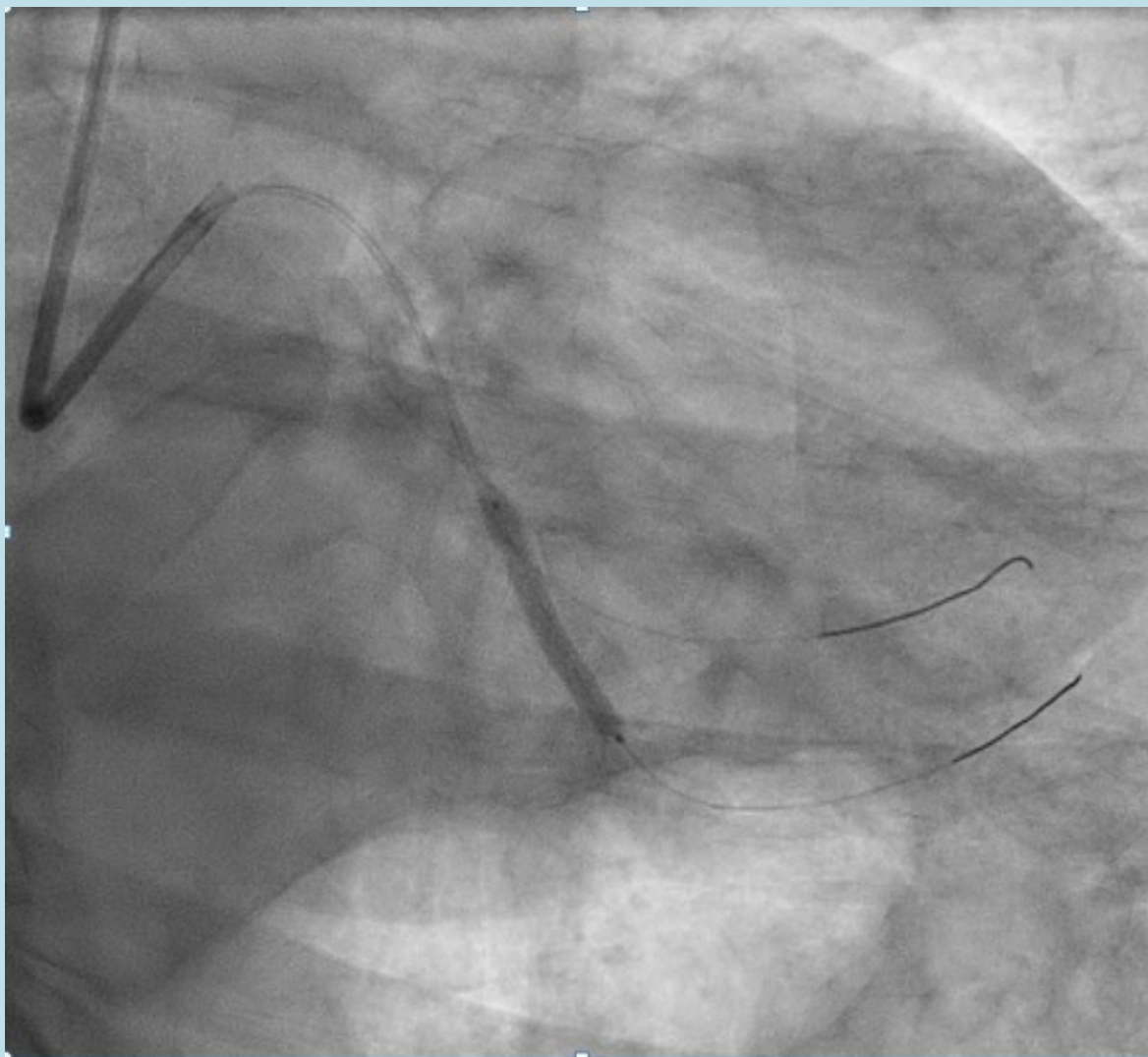
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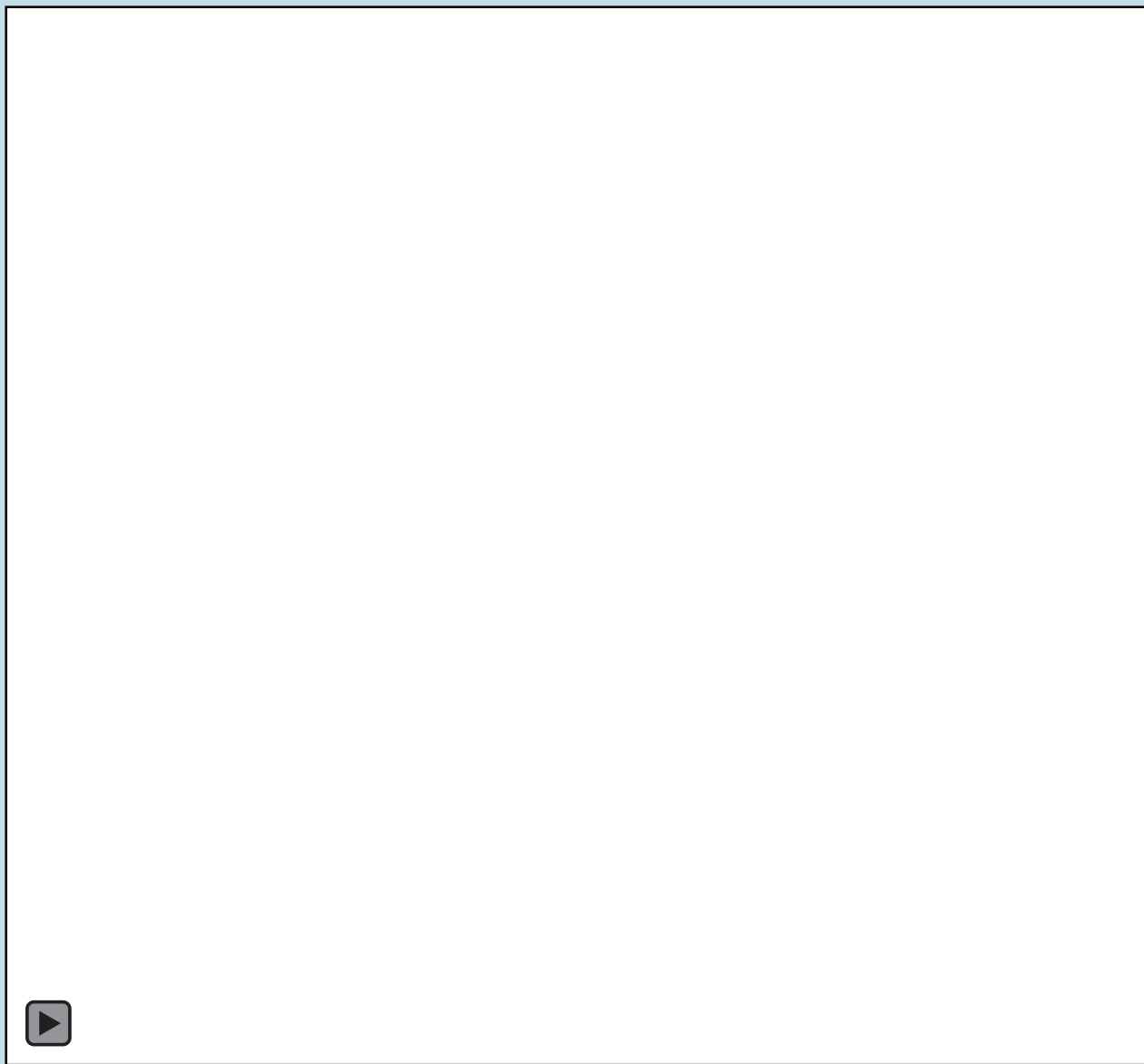






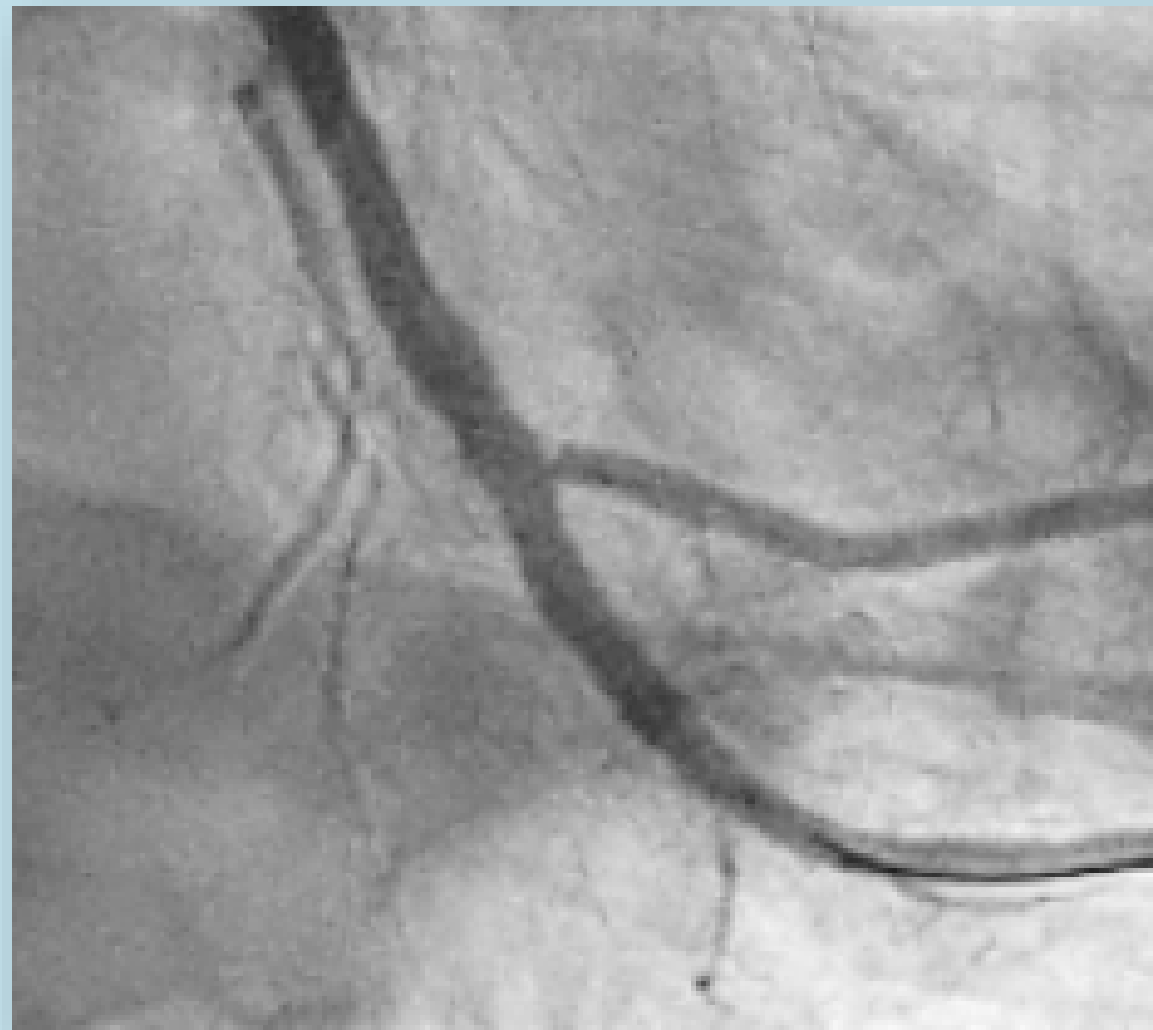
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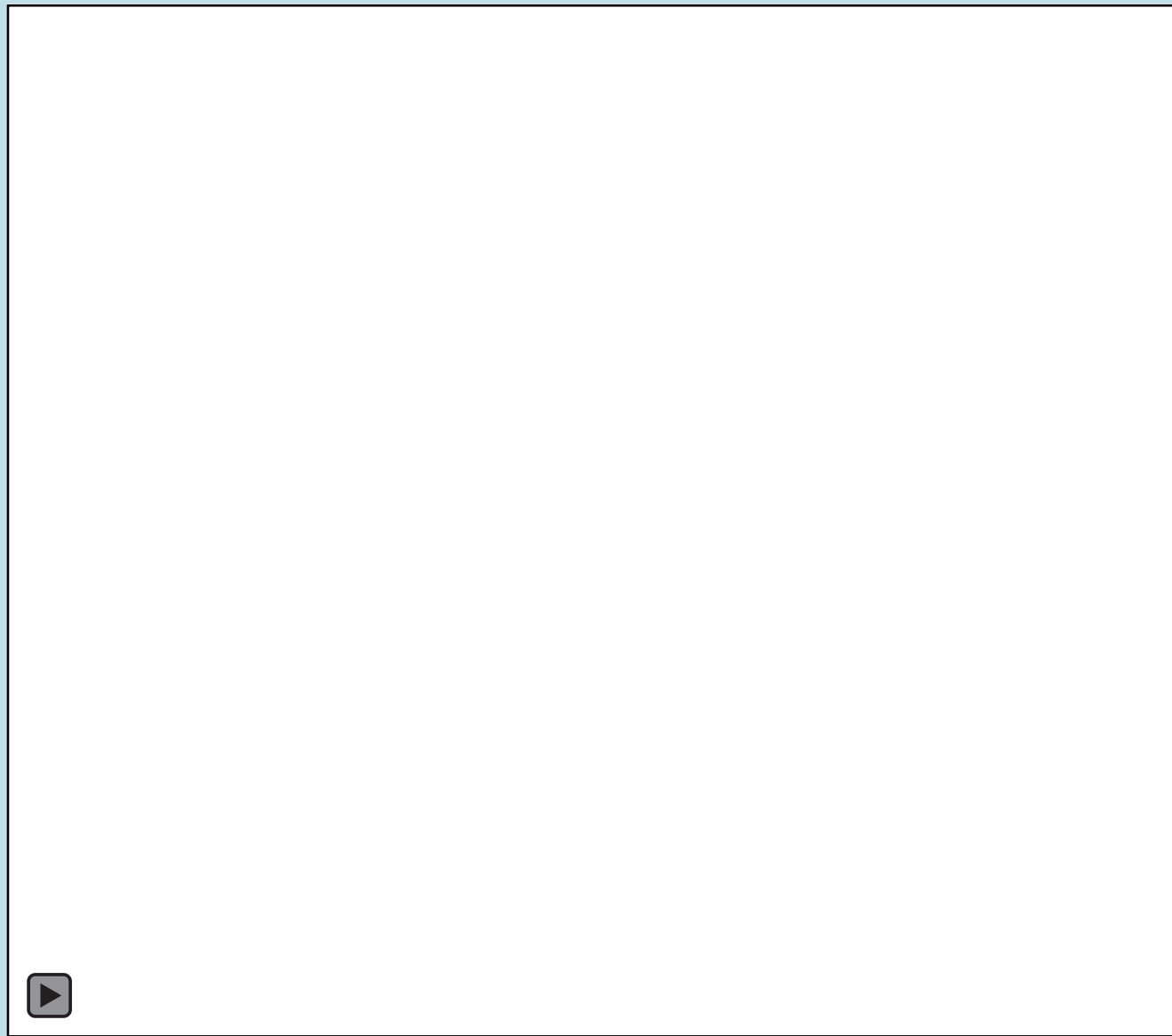
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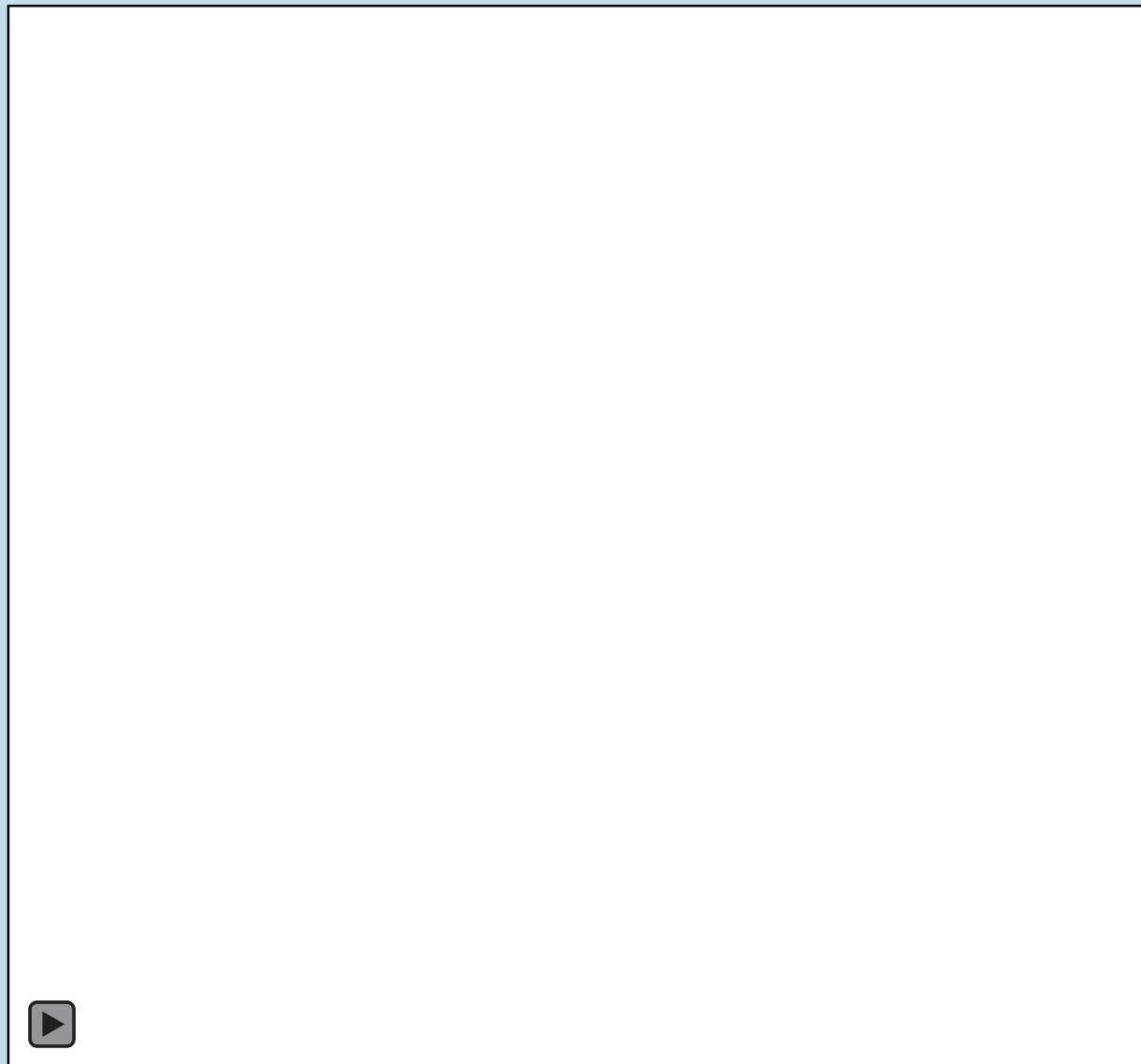
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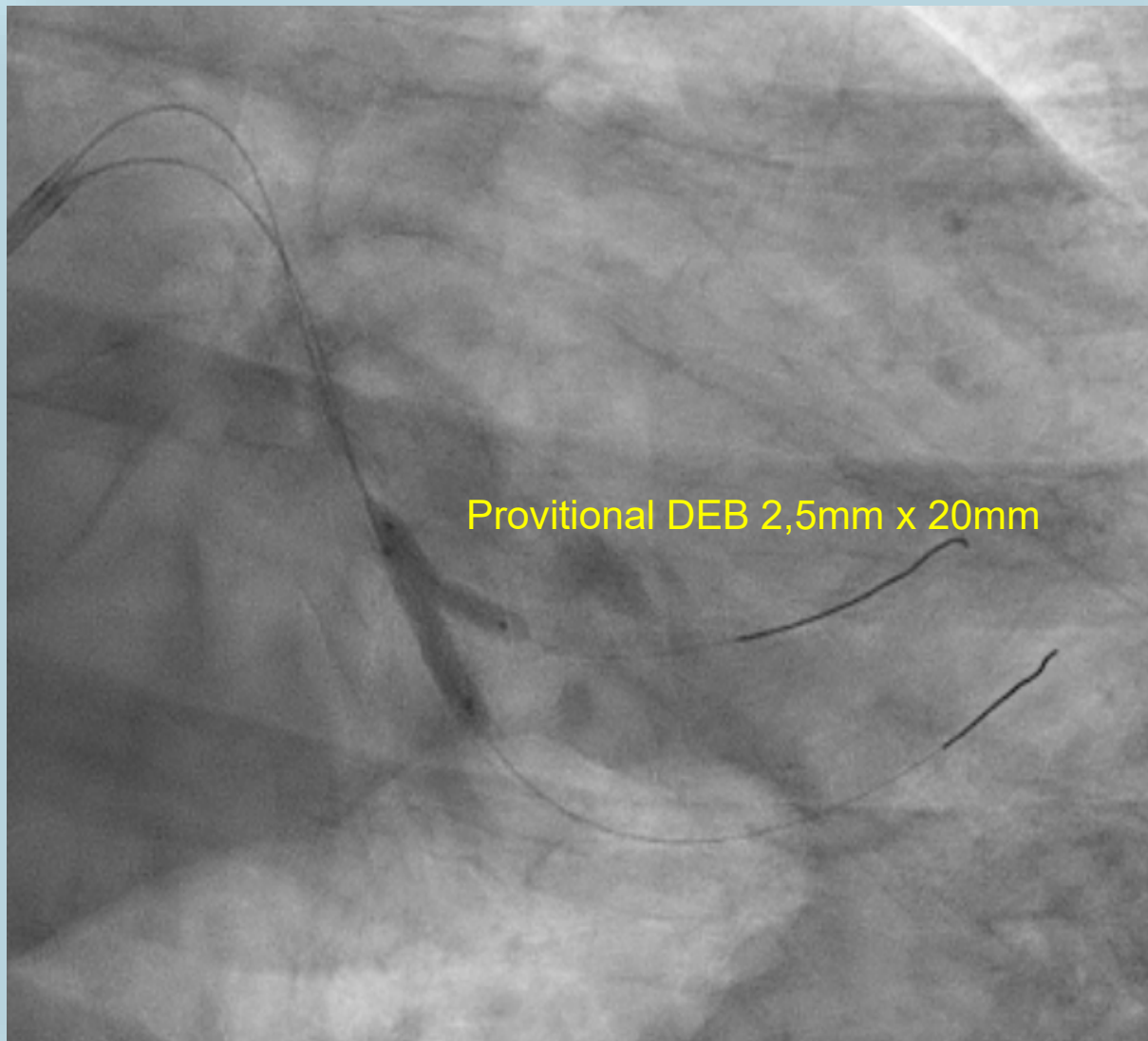


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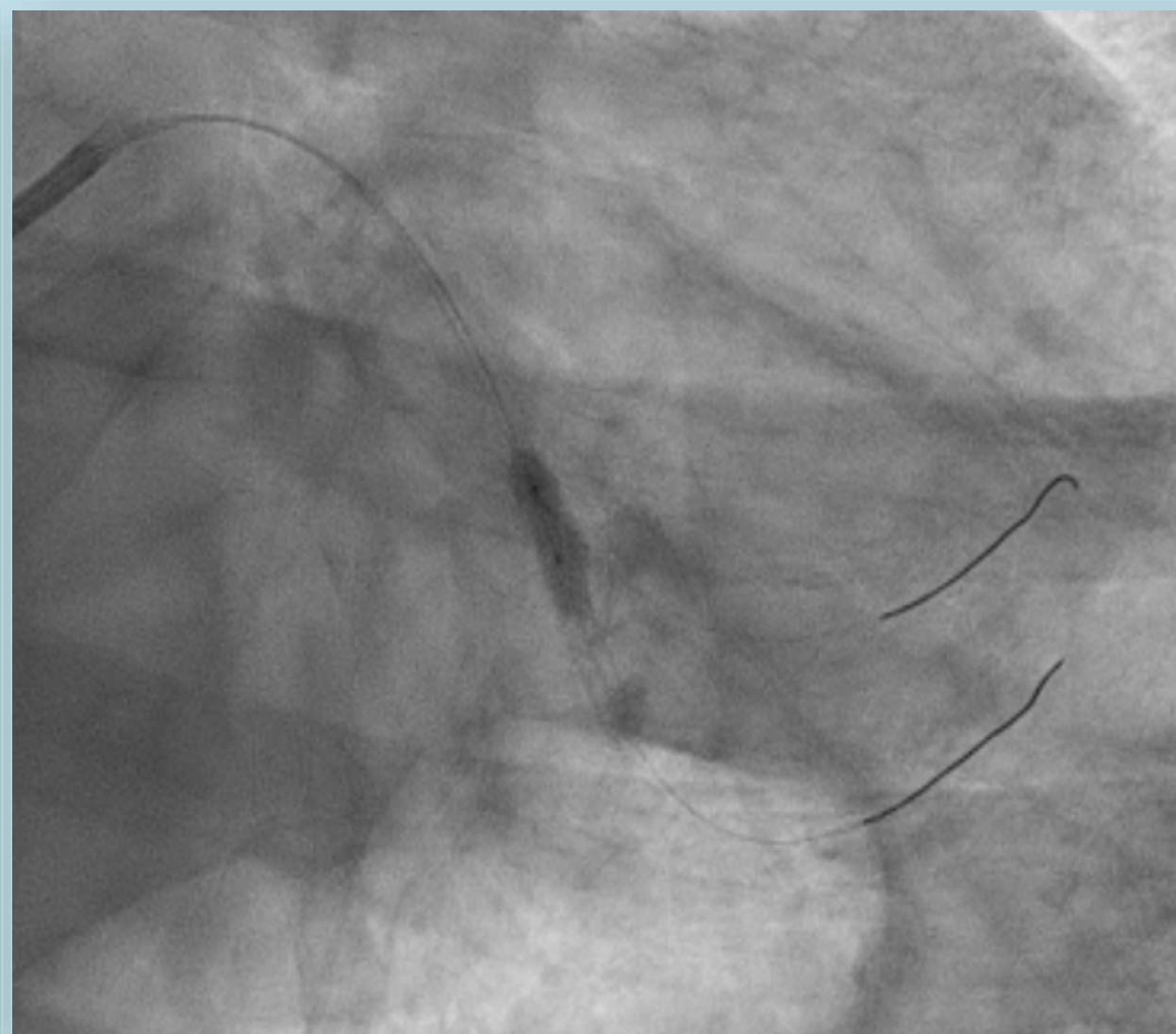
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# Strategy

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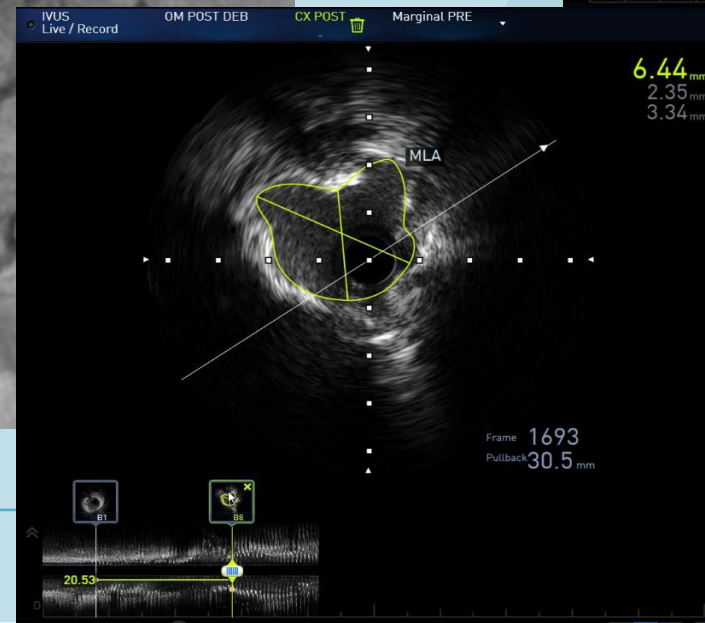
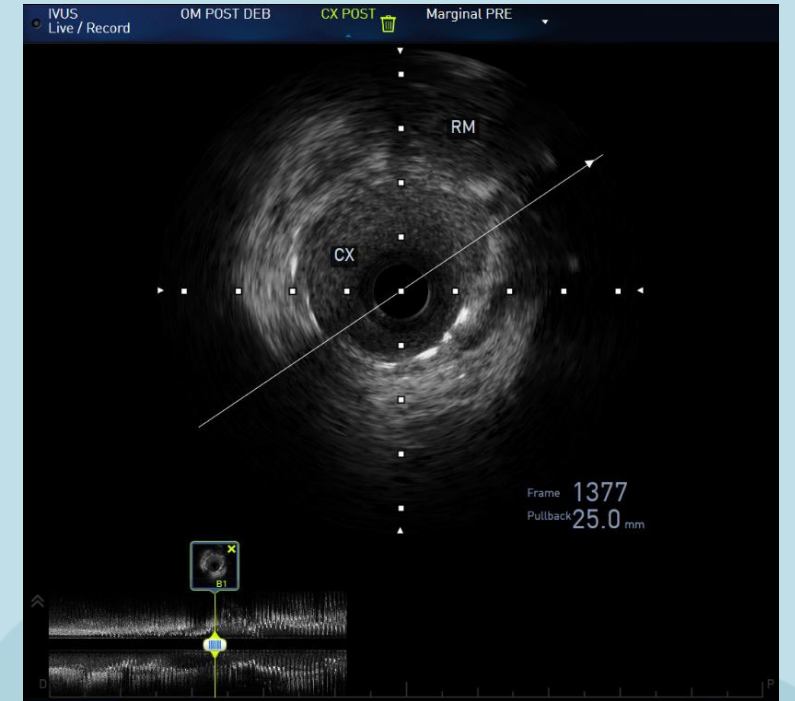
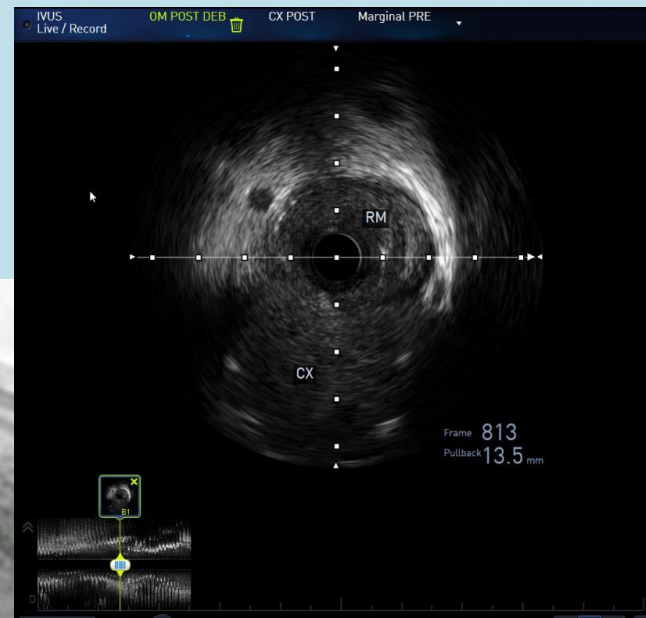
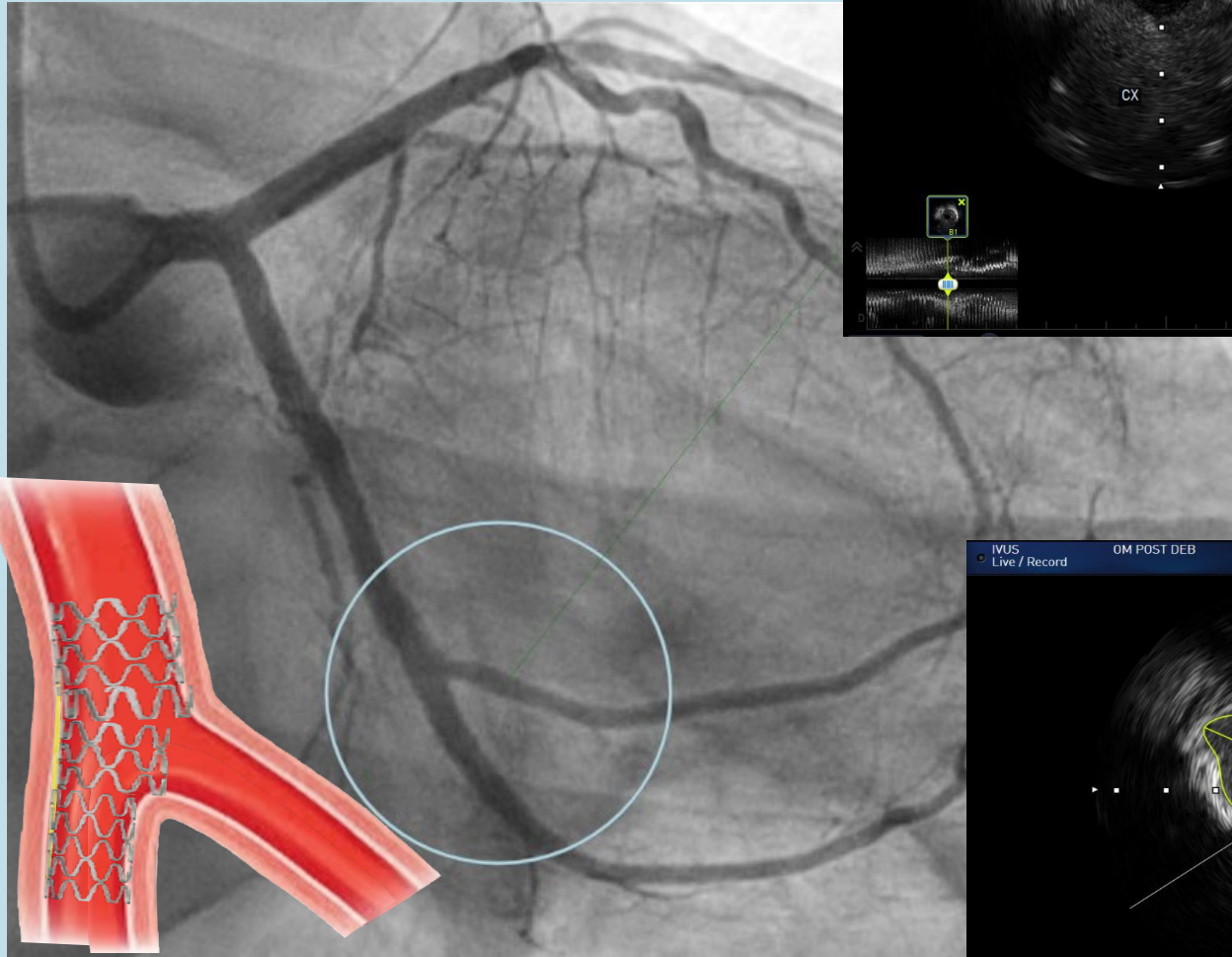
Provisional DEB 2,5mm x 20mm





# Strategy

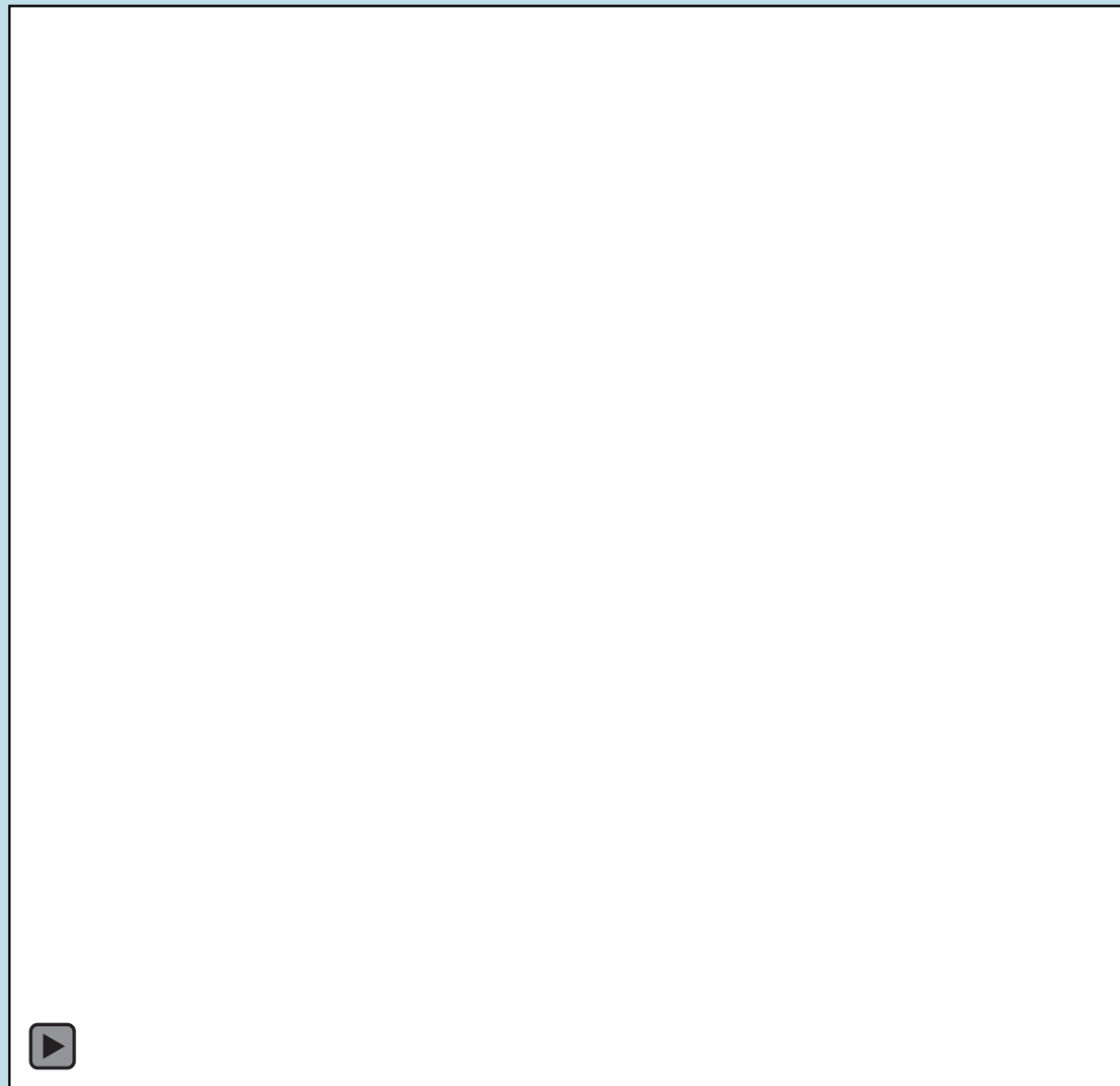
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- POT
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- KB: Ballon NC and DEB OM1
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- **FINAL IVUS**





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# Take home message

## 1. Renal-Radiation protection:

- 100ml contrast.
- Coronary road mapping.
- Rotational angiography
- Stent Boost.

## 2. PCI Guided strategy:

↓

IVUS assessment.  
Plaque modification  
Stent Boost Enhanced.  
Provisional stents technique.  
DEB –DCB as provisional

## 3. LATAM Bif Registry [latambif@gmail.com](mailto:latambif@gmail.com)



# SINERGY MEETING

## Thank you Goran!





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GRACIAS!!!!  
OBRIGADO !!!!  
THANK YOU !!!!



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