



# How to Improve Outcomes in Distal LMCA Interventions

ULVİ MIRZOYEV

MD, PhD, MBA, MSc

FESC, FSCAI



Azərbaycan  
Kardiologiya  
Cəmiyyəti

# Understanding the Complexity of Distal LMCA Disease

Characteristic	Primary Function	Key Feature	Significance
Anatomy & Hemodynamics	Supplies 75% LV myocardium	Bifurcation into LAD & LCx	Sudden occlusion = catastrophic
Key Challenges in PCI	Influenced by bifurcation angle	Plaque shift & carina dynamics	Calcification & ostial involvement complicate PCI
Imaging-Based Assessment	Plaque burden, reference sizing, optimization	Stent expansion, apposition, and edge dissection	Class I A
Decision-Making: PCI vs. CABG	Patient selection based on Syntax Score, comorbidities	EXCEL & NOBLE trials: Controversies & takeaways	

## Which treatment option is best for the patient?

### Indications for PCI vs. CABG

- **Heart Team Approach:**

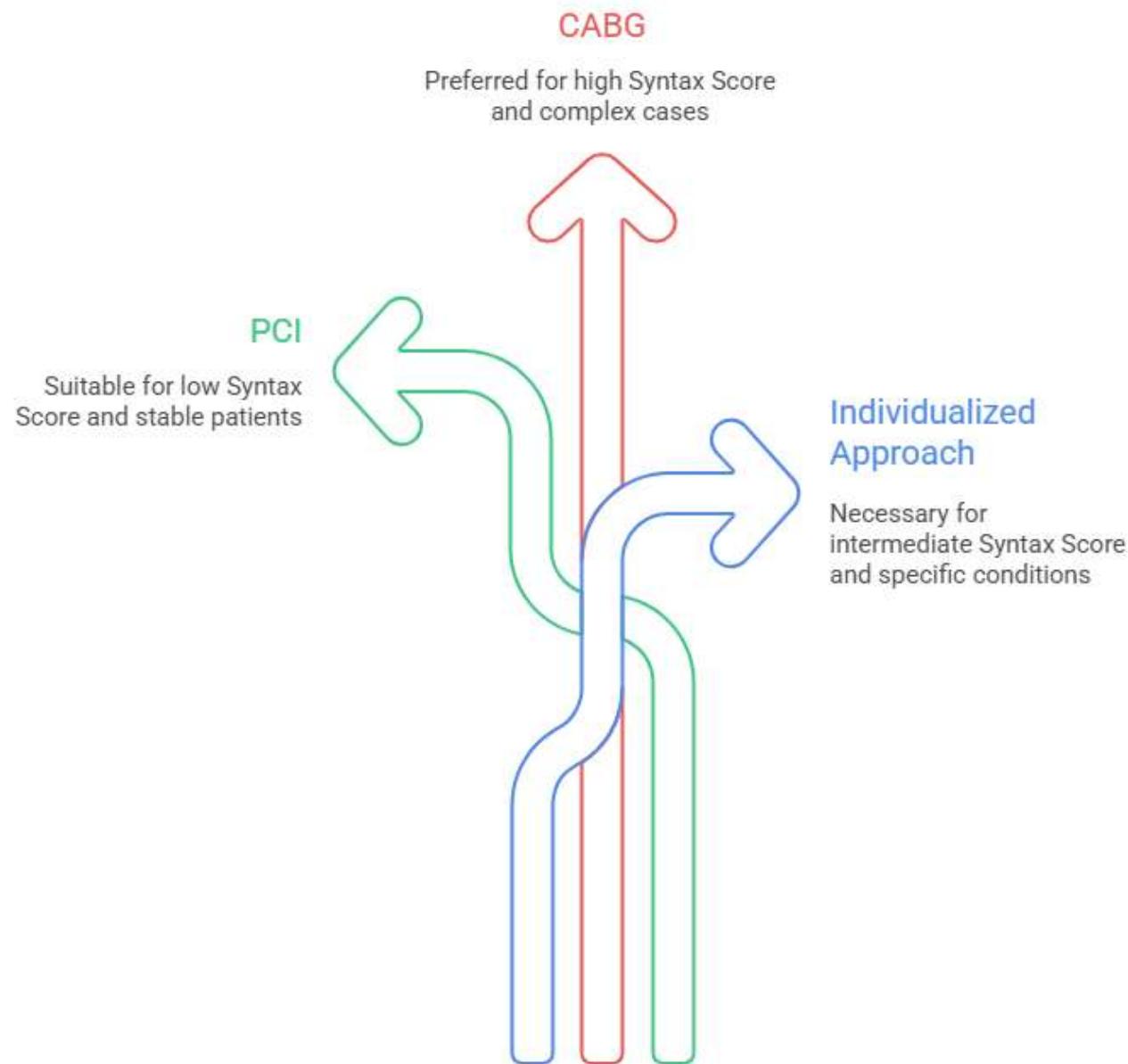
Multidisciplinary decision-making

- **Syntax Score:**

- **Low (<22):** PCI is a reasonable option
- **Intermediate (22-32):** Individualized approach
- **High (>32):** CABG preferred

- **Other considerations:**

Diabetes, LVEF, prior CABG



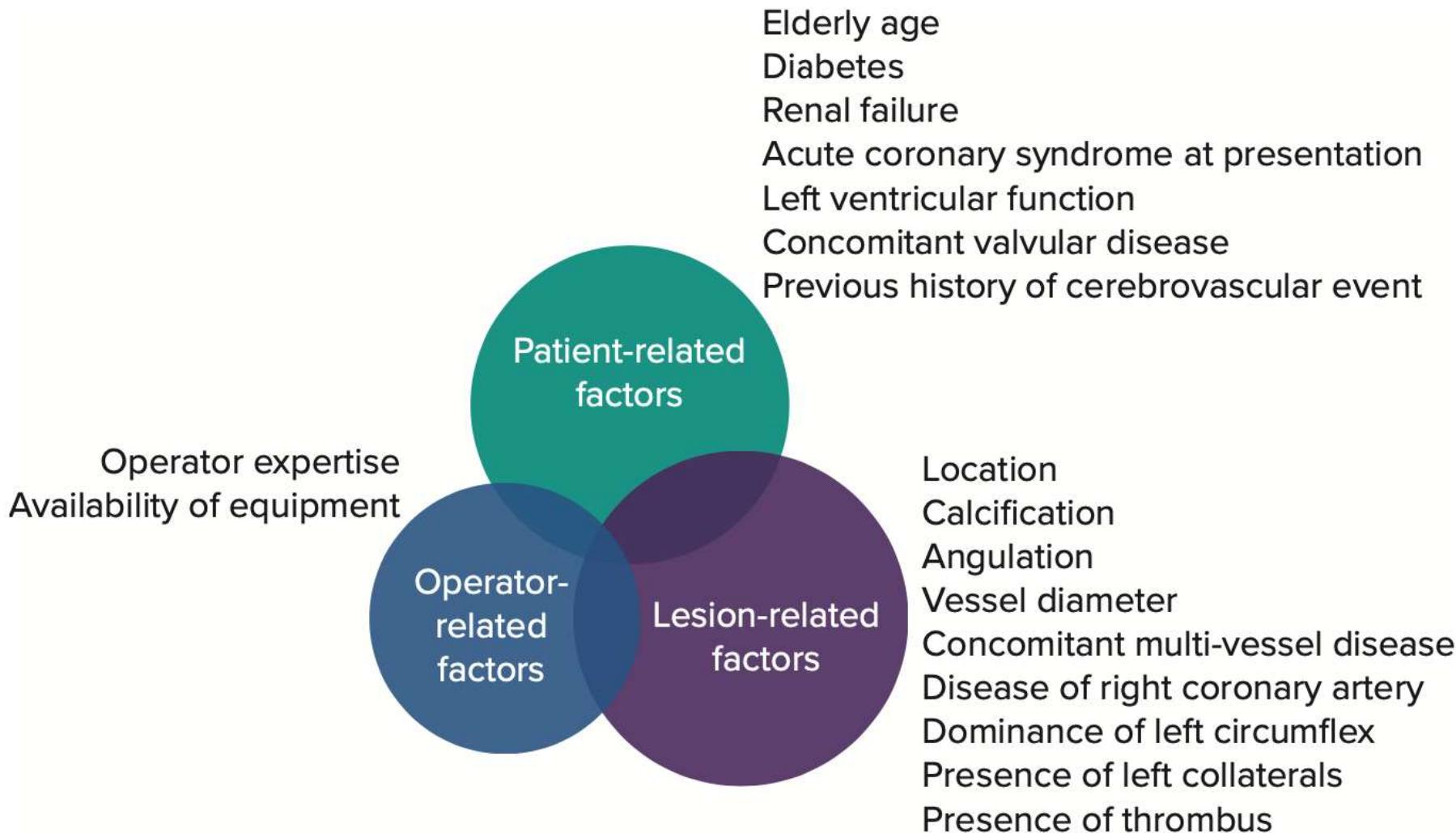
### Clinical Risk Stratification

- **EuroSCORE / STS Risk Calculator**

- **Hemodynamic stability:** Shock vs. stable presentation

- **LV Function:** LVEF <35% increases PCI risk

# Factors Involved in Decision Making in Left Main Coronary Artery Management



# Heart Team Approach to LMCA Revascularization



## Favors CABG

### Clinical characteristics

- Low LVEF
- Concomitant cardiac surgery
- Doubtful DAPT adherence including high bleeding risk
- Diabetes with multivessel disease

### Anatomical aspects

- Left main plus 3-vessel disease
- Combined complex anatomy not suitable for PCI

## Heart Team Approach

## Favors PCI

### Clinical characteristics

- Urgent revascularization
- Serious comorbidity, high surgical risk, and frailty
- Reduced life expectancy

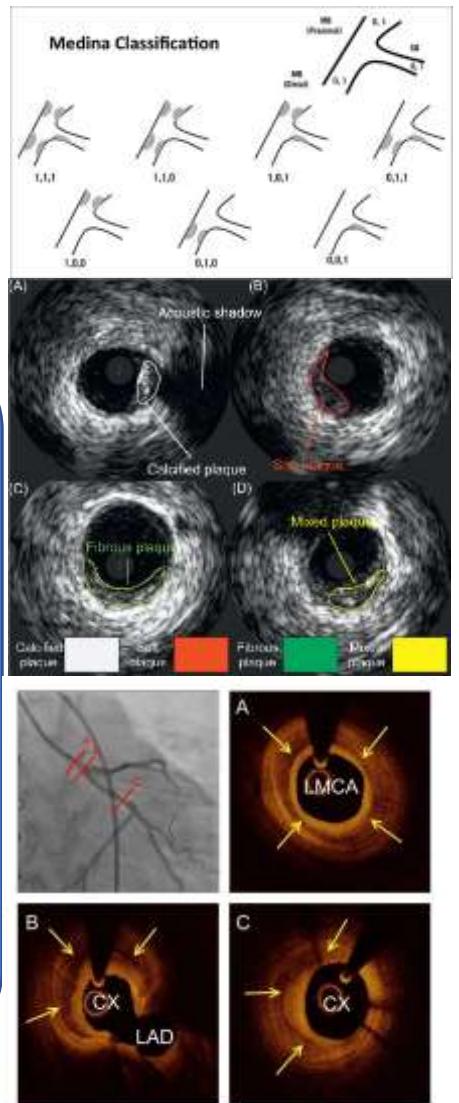
### Anatomical aspects

- Ostial or shaft LMCA disease
- Left main plus 1-vessel disease

# Patient and Lesion Assessment: Who is the Right Candidate for PCI?

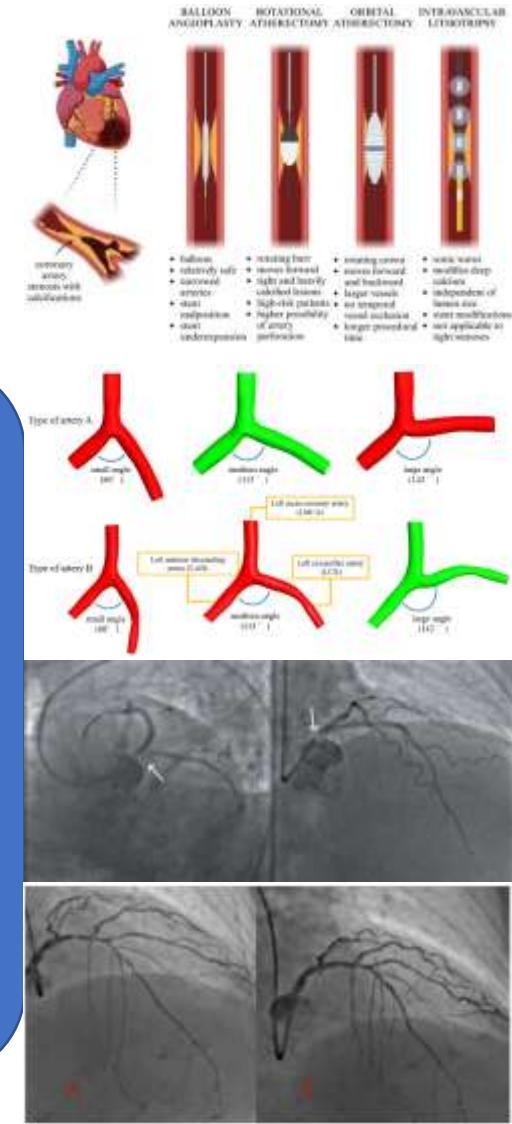
## Anatomic Complexity

- **Medina Classification:** Identifying true vs. false bifurcation
- **Plaque burden & distribution:**
  - Ostial LAD vs. LCx involvement
  - Calcification & lesion length
- IVUS/OCT for precise lesion assessment



## Lesion-Specific Challenges

- **Calcified lesions →** Need for IVL, Rotablation, or cutting balloons
- **Bifurcation angle:** Wide angles increase side branch compromise
- **Presence of thrombus or diffuse disease**



# IVUS and FFR Roles in Left Main PCI

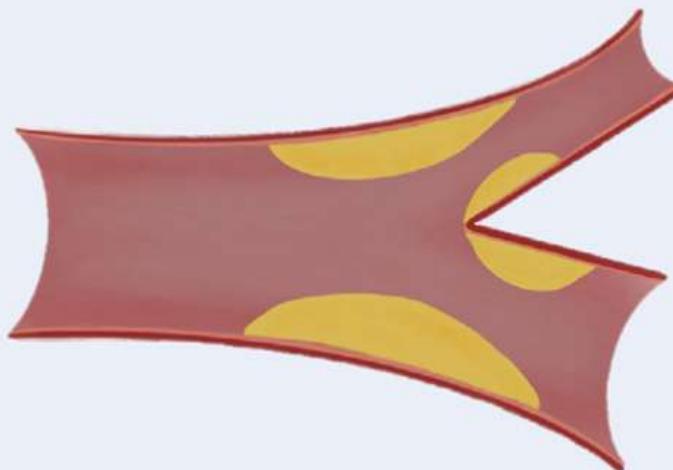
## Role of IVUS

### Pre-PCI

- Can provide additional information on the ischemic burden of LMCA lesion
- Provide more reliable information on lesion characteristics than angiography
- Helpful in planning PCI strategy (especially for distal LMCA bifurcation lesion)

### Post-PCI

- Ensure stent optimization with subsequent postdilatation
- Identify procedural complications



## Role of FFR

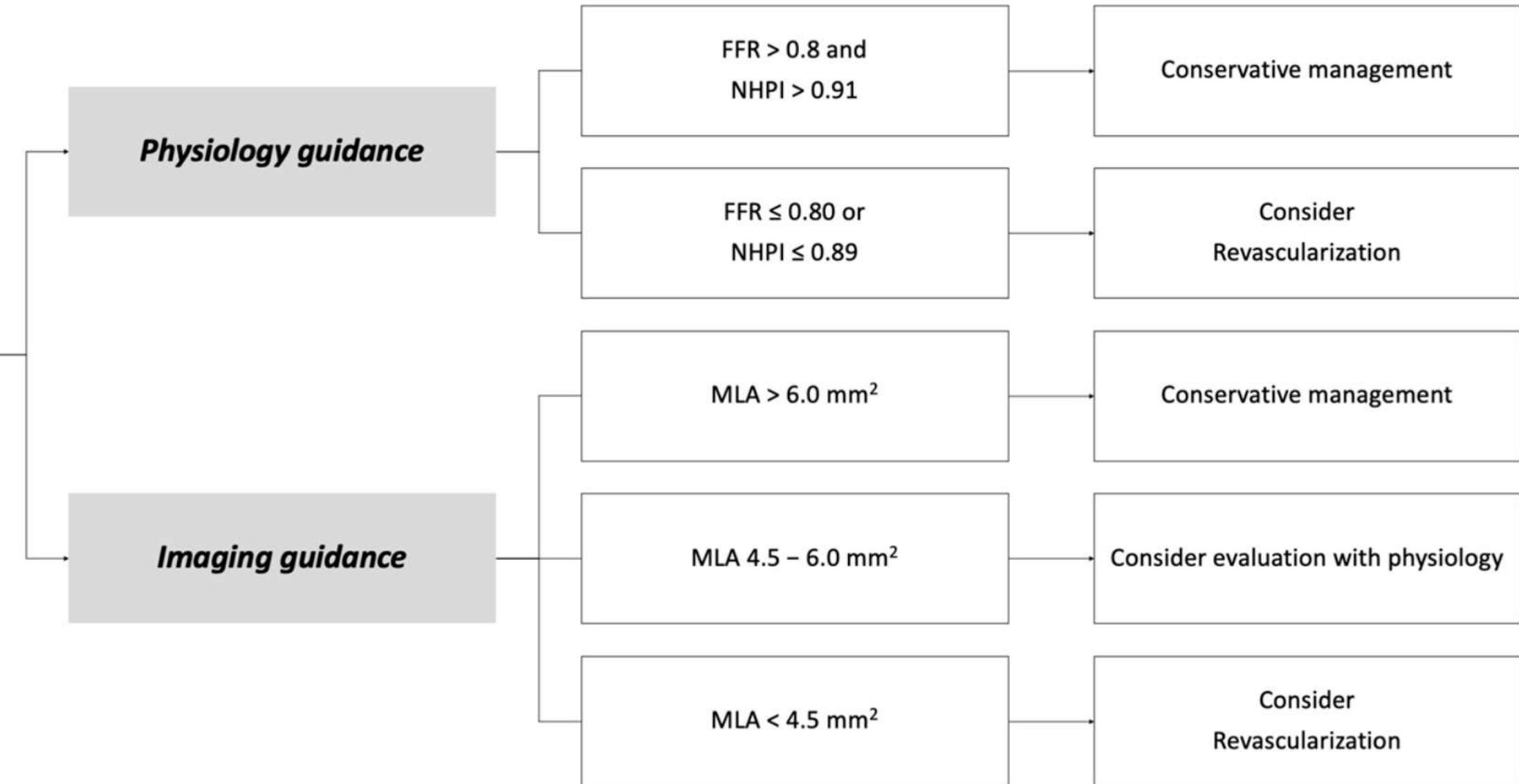
### Pre-PCI

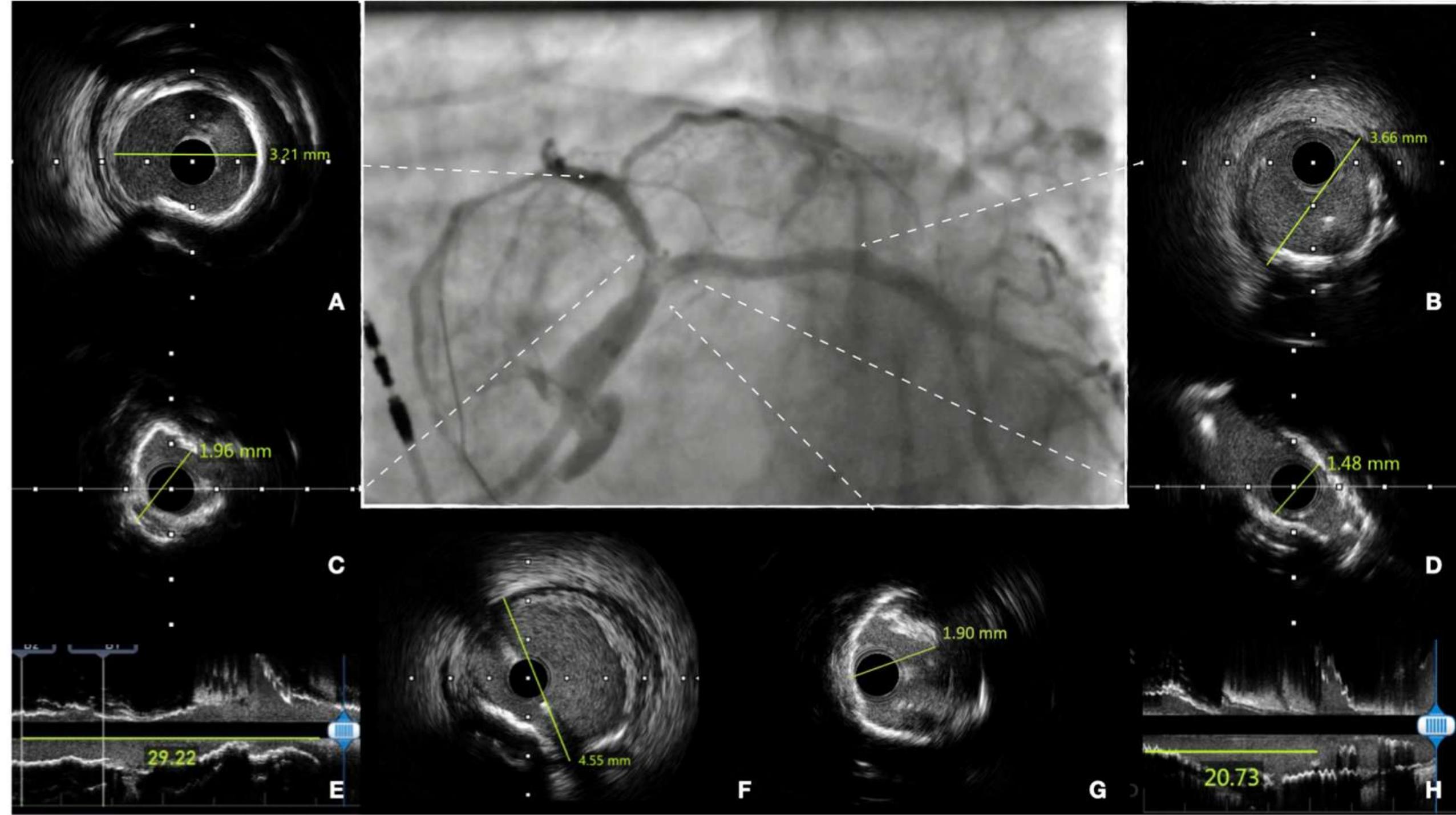
- Provide accurate information on the functional status of angiographic intermediate or ambiguous LMCA lesion

### Post-PCI

- Assessment for jailed branches after left main PCI

# Intermediate stenosis of ULM





# Stent Strategy: Provisional or Two-Stent Approach?

## Choosing the Right Approach

- **Provisional Stenting (Preferred Approach)**

- Single stent in the **main vessel (LAD or LCx)**
- **Side branch intervention only if needed** (based on flow, ostial disease, or ischemia)
- **Advantages:** Simpler, lower risk of stent deformation

- **Two-Stent Approach (When Required)**

- **Indications:**

- **True bifurcation (1,1,1 Medina) with significant side branch involvement**
  - **Large side branch (>2.5 mm) with ostial disease**
  - **Complex plaque burden, high risk of compromise**

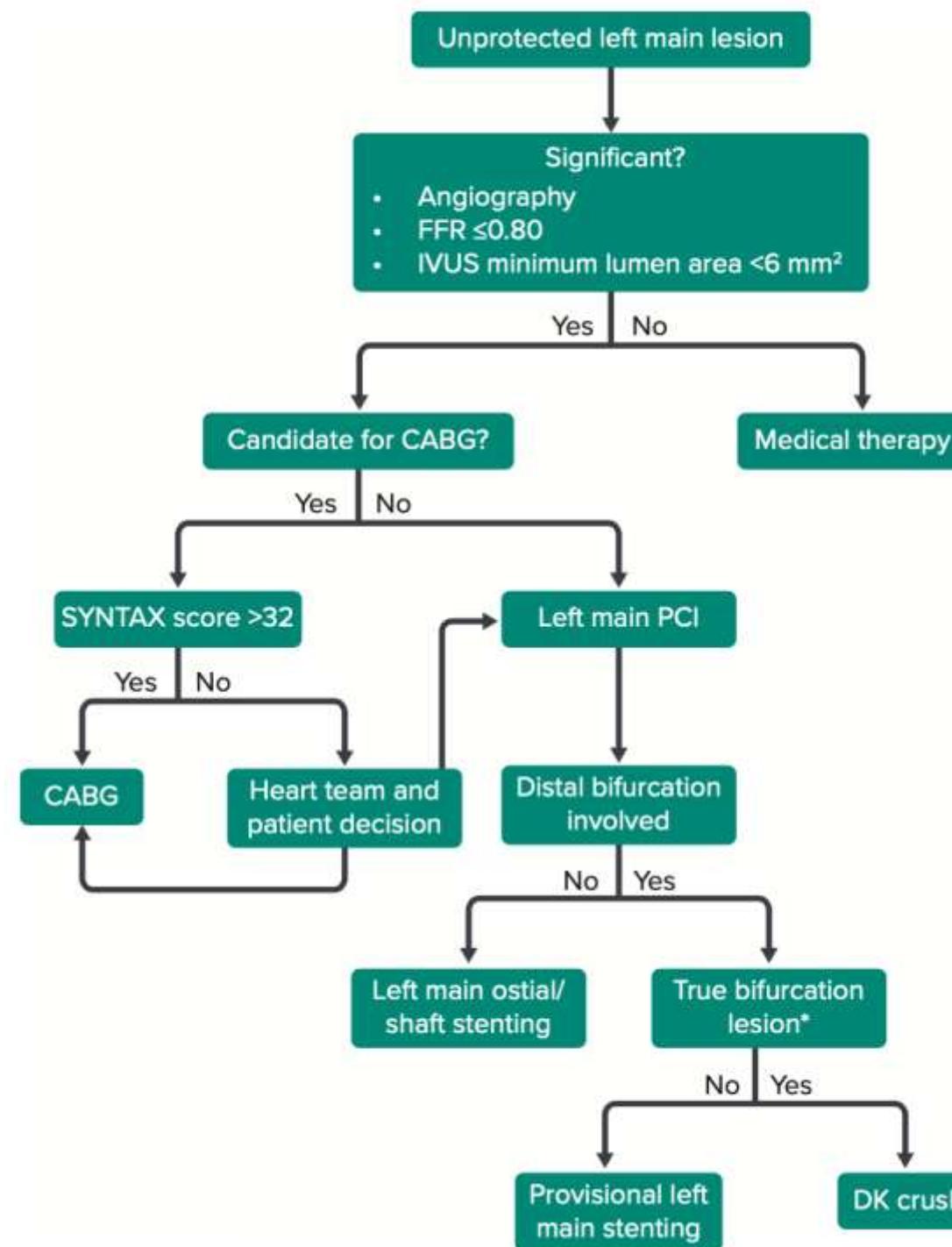
- **Techniques:**

- **DK-Crush:** Best long-term outcomes (DKCRUSH-V trial)
  - **Culotte:** Good for wide bifurcation angles
  - **TAP (T-and-Protrusion):** Simplest two-stent strategy

# Summary of Major Left Main Coronary Artery Trials

Study	Patients (n)	Mean SYNTAX Score	Follow Up (Years)	Stent Used	Distal LMCA Lesion	Main Outcome
LE MANS 2008 <sup>11</sup>	105	NA	2	BMS (65%), DES (35%)	58%	PCI group had improved LVEF
SYNTAX-LM 2010 <sup>3</sup>	705	30	1	PES	61%	MACCE 13.7%, similar to CABG patients
Boudriot et al. 2011 <sup>12</sup>	201	23	1	SES	72%	MACCE 19%, non-inferior to CABG
PRECOMBAT 2011 <sup>4</sup>	600	25	2	SES	64%	MACCE 8.7%, non-inferior to CABG
EXCEL 2017 <sup>5</sup>	1,905	21	3	EES	81%	Primary outcome 15.4%, non-inferior to CABG in terms of rate of composite outcome of death, stroke or MI at 3 years
NOBLE 2017 <sup>6</sup>	1,201	22	5	SES (18%), BES (88%)	81%	MACCE 28% for PCI, CABG is superior

# Management Flow Chart of Patients with Unprotected Left Main Coronary Artery Lesions



# Stent Strategy Selection for Distal LMCA PCI

## Key Steps for Both Strategies

- **Provisional Stenting:**
  - Main vessel stenting → Proximal Optimization (POT) → Evaluate side branch
  - If needed → Side branch dilation (Kissing Balloon) or bailout second stent

## • **Two-Stent Techniques:**

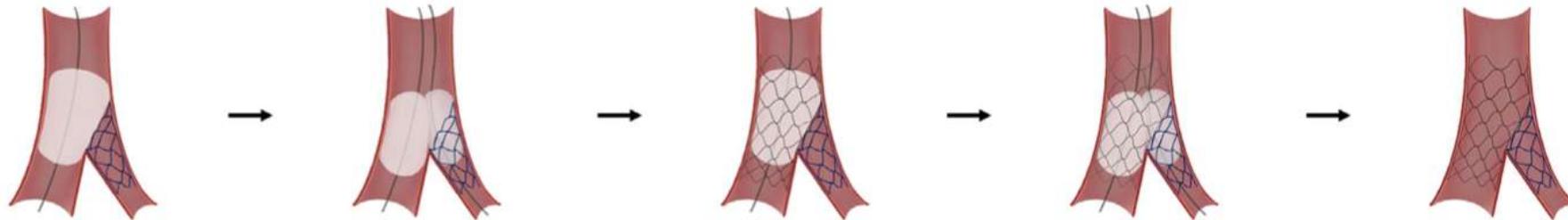
- First stent in a side branch (if needed) → Main vessel stenting
- Final Kissing Balloon + Proximal Optimization Technique (POT)

## Evidence-Based Approach

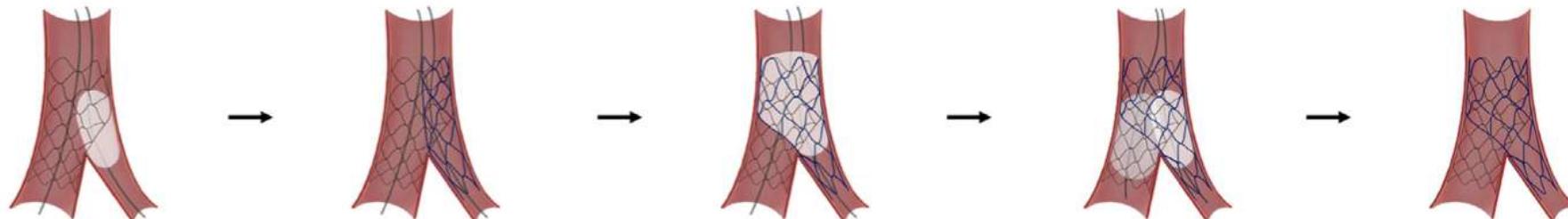
- **DKCRUSH-V Trial:** DK-Crush superior to provisional in complex lesions
- **EBC Main Trial:** Supports Provisional Stenting as default strategy
- **Real-world practice:** Tailor approach based on anatomy & patient factors

# Contemporary Complex Bifurcation Stenting Techniques for Left Main Bifurcation Lesions

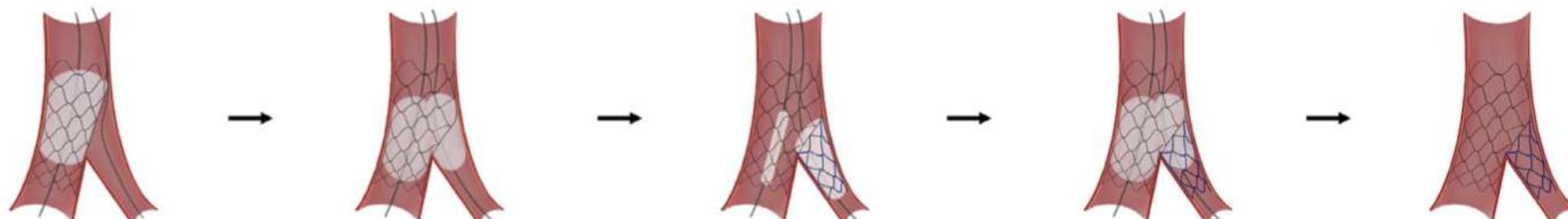
## DK Crush



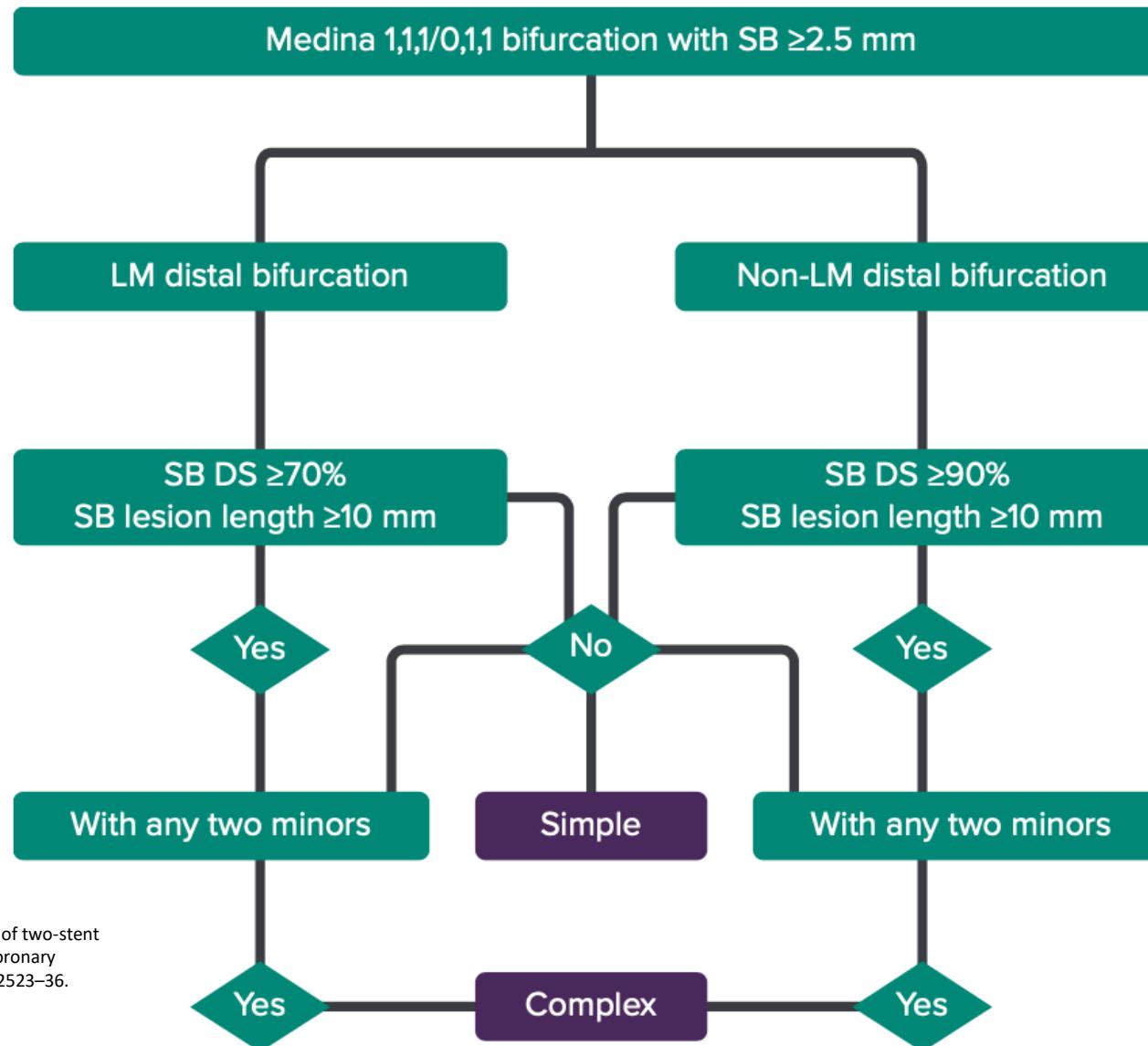
## Culotte



## TAP (T and Protrusion)



## DEFINITION Criteria for Differentiating Simple and Complex Bifurcation



Zhang JJ, Ye F, Xu K, et al. Multicenter, randomized comparison of two-stent and provisional stenting techniques in patients with complex coronary bifurcation lesions: the DEFINITION II trial. *Eur Heart J* 2020;41:2523–36.  
<https://doi.org/10.1093/eurheartj/ehaa543>; PMID: 32588060.

# Mastering Complex Distal LMCA PCI: Techniques for Optimal Outcomes

## **Bailout Strategies for Complications**

- **Plaque shift & side branch occlusion:**
  - **Solution:** Kissing balloon inflation, side branch stenting if necessary
- **Stent under-expansion:**
  - **Solution:** Intravascular lithotripsy (IVL), high-pressure NC balloon dilation
- **Carina shift leading to malapposition:**
  - **Solution:** Proximal Optimization Technique (POT)

## **Calcium Modification Strategies**

- **IVUS/OCT to assess calcium depth & distribution**
- **Techniques to optimize stent expansion:**
  - **Rotational Atherectomy** – For superficial calcium
  - **Intravascular Lithotripsy (IVL)** – For deep calcium
  - **Cutting/Scoring Balloons** – Controlled plaque modification

# Mastering Complex Distal LMCA PCI: Techniques for Optimal Outcomes

## Guide Support & Access Considerations

- Radial vs. Femoral Access:
  - Radial: Reduced bleeding risk, but limited guiding catheter support
  - Femoral: Preferred for complex cases requiring **7F or 8F guide catheters**
- Guide Catheter Selection:
  - Extra support catheters (EBU, XB, AL 0.75-1.0) for better stability

## Hemodynamic Support: When to Use It?

- Impella or IABP in cases of:
  - Severely reduced LVEF (<35%)
  - Unprotected LMCA with hemodynamic instability
  - Multivessel disease requiring prolonged PCI time

# Ensuring Long-Term Success: Post-PCI Optimization Strategies



## Intravascular Imaging for Stent Optimization

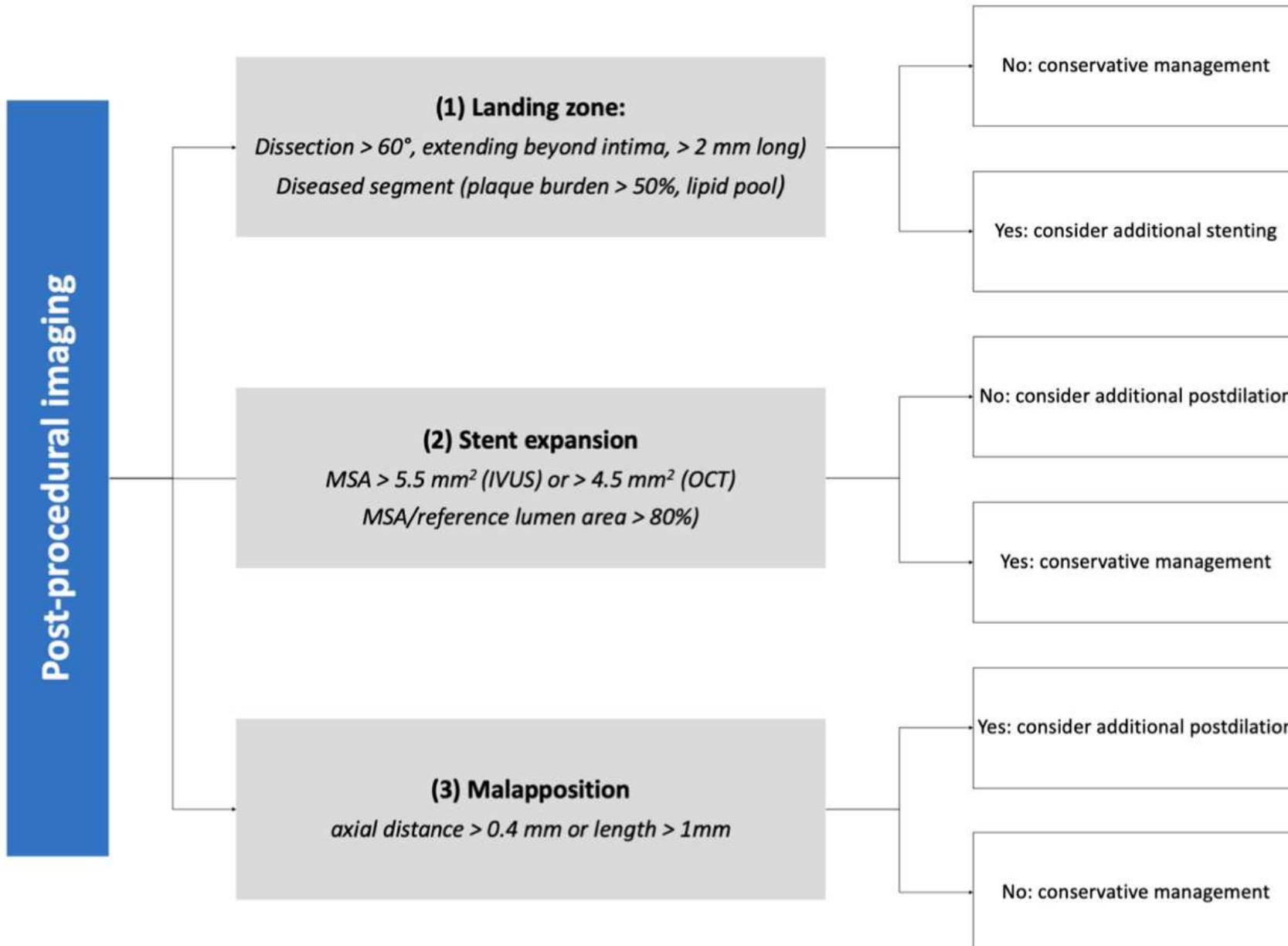
- **Why it's crucial:** Angiography alone may miss malapposition or under-expansion.
- **IVUS Optimization Criteria:**
  - Minimal Stent Area (MSA)  $\geq 8-10 \text{ mm}^2$  for LMCA
  - No significant edge dissection or malapposition
  - Adequate stent expansion ( $>90\%$  of reference vessel diameter)
- **OCT for fine-tuning:** Detecting thrombus, tissue prolapse, and under-expansion.

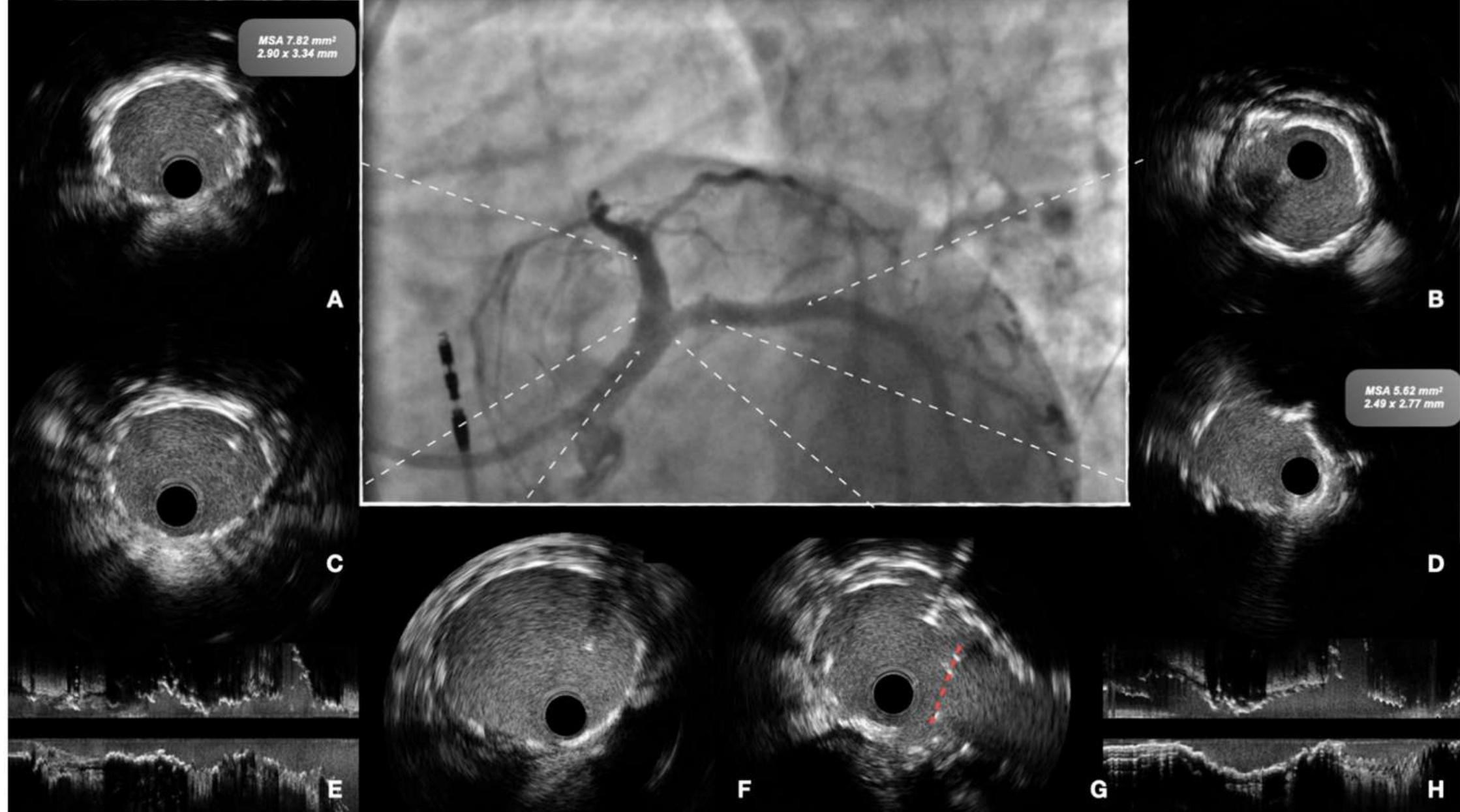


## Final Kissing Balloon and Proximal Optimization (POT)

- Ensures optimal carina reconstruction and side branch flow
- Reduces risk of late malapposition and restenosis
- Final IVUS/OCT check post-POT recommended

# Algorithm for stent optimization based on post-procedural imaging





Intravascular ultrasound shows good expansion and apposition of the lithotripsy and implantation of two stents, with a T-and protrusion (TAP) technique

# Post-PCI Optimization for Distal LMCA Interventions

## Dual Antiplatelet Therapy (DAPT) Strategy

- Standard LMCA PCI (Low Bleeding Risk):
  - Aspirin + Ticagrelor (or Prasugrel) for 12 months
- High Bleeding Risk (HBR) Patients:
  - Shortened DAPT (3-6 months) + lifelong aspirin or clopidogrel
- Tailoring therapy based on:
  - DAPT Score, patient ischemic vs. bleeding risk

## Long-Term Follow-Up and Restenosis Management

- Clinical monitoring at 1, 6, and 12 months post-PCI
- Stress testing or FFR-CT for symptoms recurrence
- IVUS-guided re-intervention for in-stent restenosis (ISR)



**64-YEAR-OLD MALE**

### MEDICAL HISTORY

-  Hypertension
-  Type 2 diabetes
-  Hyperlipidemia

### CURRENT PRESENTATION

-  Unstable angina (UAP)

### CHALLENGES

-  COPD
-  Poor medication adherence

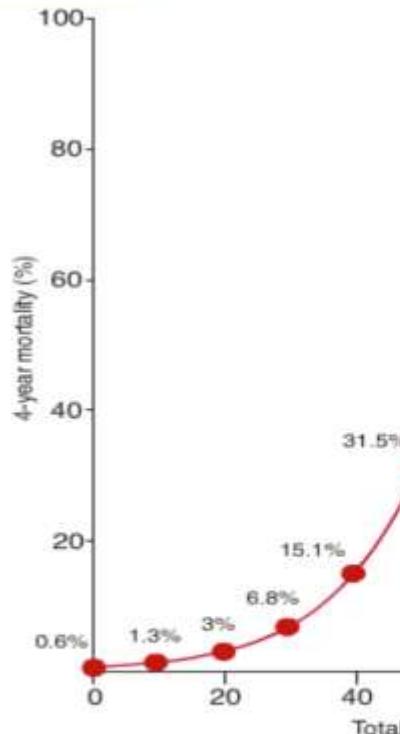


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Se: 1

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Ege Hospital  
R201912231735417  
Cardiac  
Left Coronary 15 fps

WL: 138 WW: 190 [D]  
LAO: 2 CAU: 4

23.12.2019 17:35:43



SYNTAX Score I [i](#)

27

Age (years) [i](#)

CrCl [i](#)

mL/min

LVEF (%) [i](#)

Left Main [i](#)

no  yes

Gender

male  female

COPD [i](#)

no  yes

PVD [i](#)

no  yes

SYNTAX Score II

[Calculate](#)

Nomogram depicting predicted 4-year mortality as a function of the SYNTAX II Score for patients proposed to undergo myocardial revascularization (CABG or PCI).

Adapted from Farooq et al., *The Lancet*, 2013 Feb 23;381(9867):639-50

## **SYNTAX Score II**

# **SYNTAX II**

*Decision making -between CABG and PCI- guided by the SYNTAX Score II to be endorsed by the Heart Team.*

### **PCI**

SYNTAX Score II: 32.6  
PCI 4 Year Mortality: 8.4 %

### **CABG**

SYNTAX Score II: 42.8  
CABG 4 Year Mortality: 18.7 %

*Treatment  
recommendation* : PCI

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Se: 8

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LAO: 33 CRA: 32

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Im: 1/20  
Se: 9

WL: 138 WW: 190 [D]  
LAO: 33 CRA: 32

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Cardiac  
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WL: 138 WW: 190 [D]  
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Im: 1/53  
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Im: 1/11  
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WL: 138 WW: 190 [D]  
LAO: 30 CAU: 39

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WL: 138 WW: 190 [D]  
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LAO: 3 CAU: 39

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WL: 138 WW: 190 [D]  
LAO: 30 CAU: 39

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LAO: 30 CAU: 39

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Im: 1/56  
Se: 28

WL: 138 WW: 190 [D]  
RAO: 35 CRA: 21

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**77-YEAR-OLD  
MALE**

**TYPE 2 DM, HT**

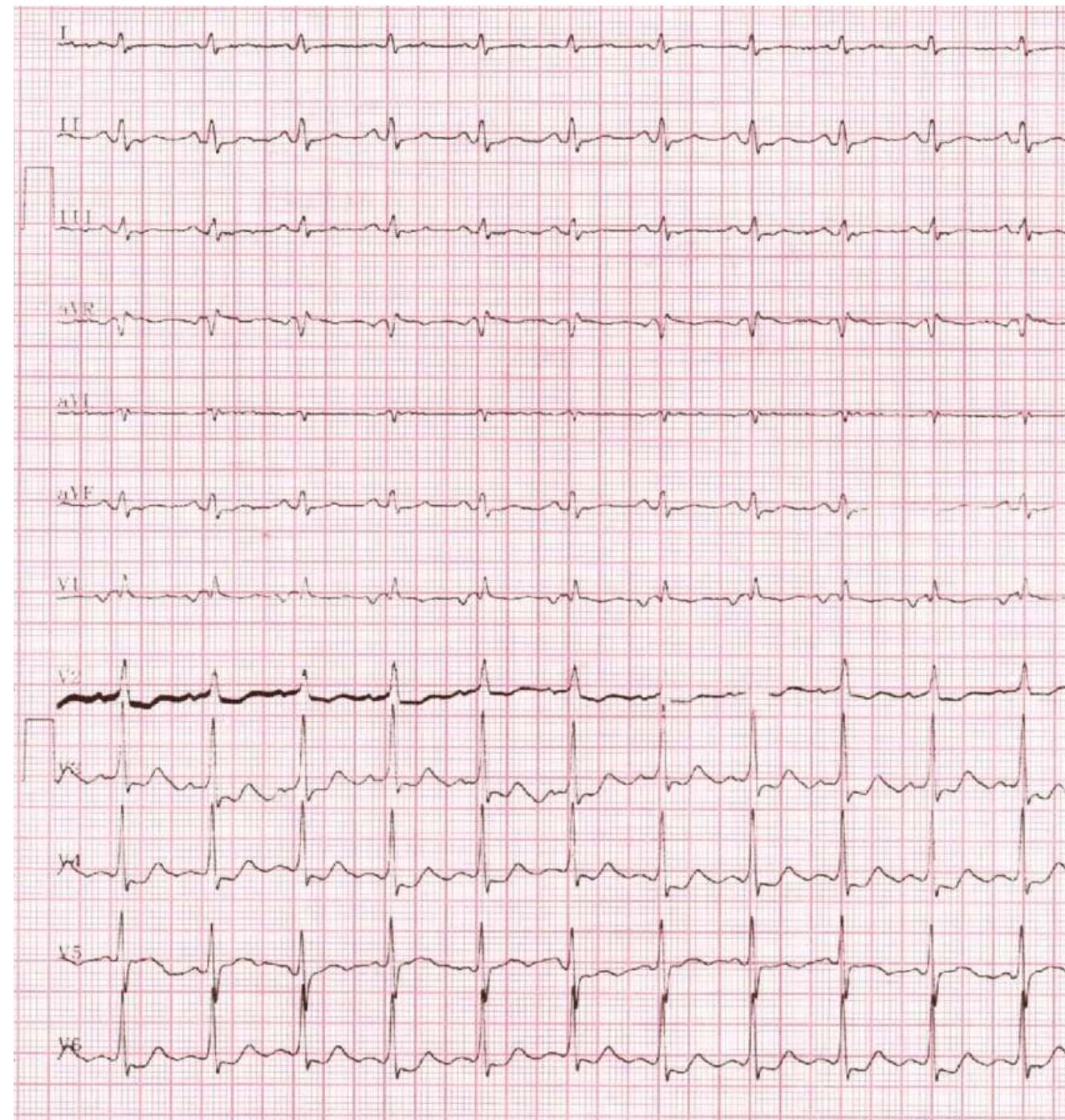
 **Type 2 diabetes**  
 **Hypertension**

**NSTEMI**

 **NSTEMI**

**PREVIOUS CVA**

 **Previous  
CVA**



Im: 1/42  
Se: 2

[Red vertical scale bar]

WL: 138 WW: 190 [D]  
RAO: 33 CAU: 30

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Cardiac  
Left Coronary 15 fps

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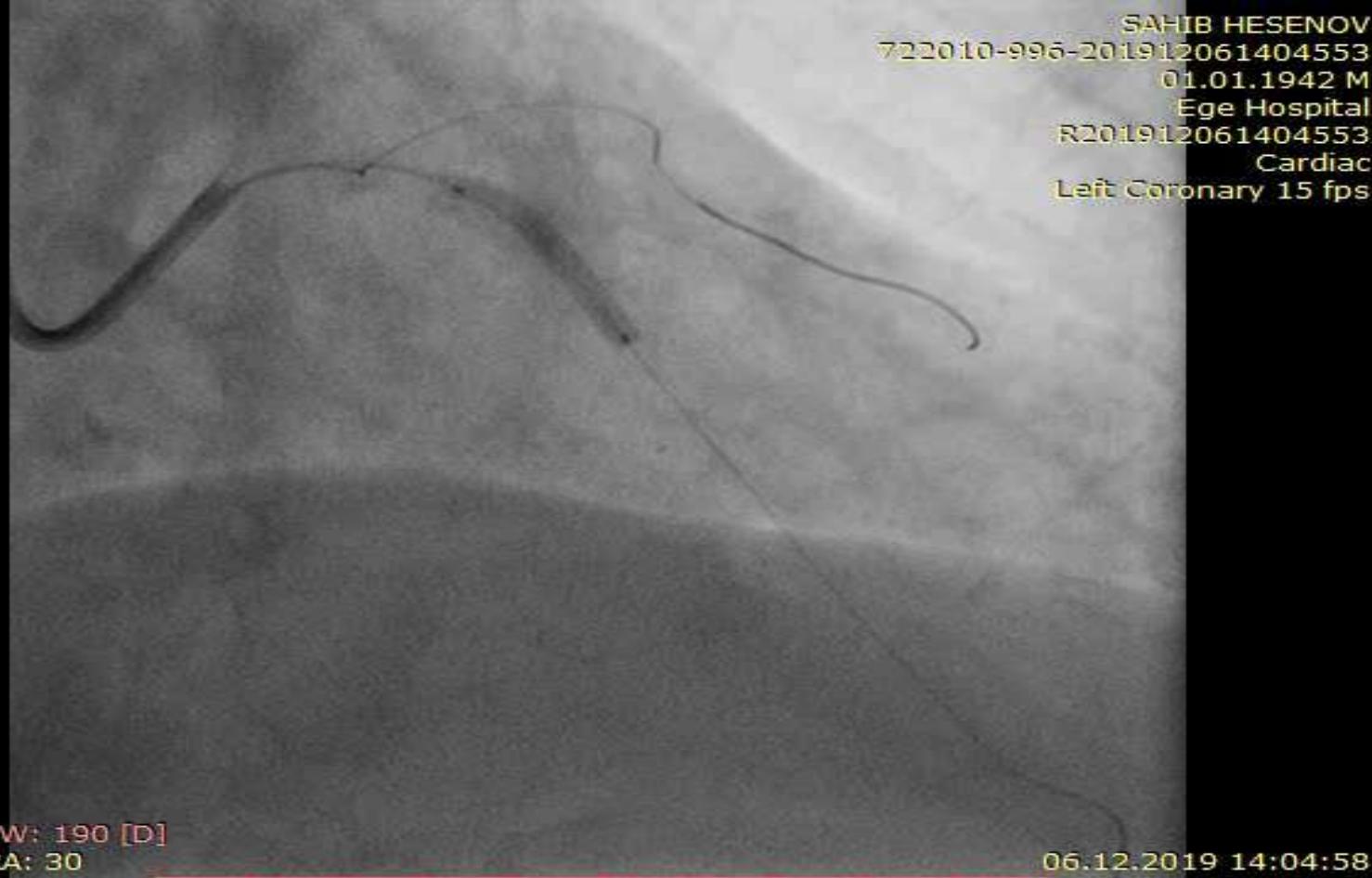
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Im: 1/20  
Se: 4

WL: 138 WW: 190 [D]  
RAO: 35 CRA: 30



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Im: 1/51  
Se: 7

WL: 138 WW: 190 [D]  
RAO: 26 CRA: 39

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RAO: 37 CAU: 28

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Im: 1/20  
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WL: 138 WW: 190 [D]  
RAO: 37 CAU: 28

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RAO: 31 CAU: 27



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LAO: 32 CAU: 35

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RAO: 1 CAU: 42

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Left Coronary 15 fps

WL: 138 WW: 190 [D]  
RAO: 1 CAU: 42

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WL: 138 WW: 190 [D]  
LAO: 29 CAU: 36

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Im: 1/60  
Se: 24

WL: 138 WW: 190 [D]  
RAO: 1 CRA: 1

SAHIB HESENOV  
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01.01.1942 M  
Ege Hospital  
R201912061404553  
Cardiac  
Left Coronary 15 fps

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 **67-Year-Old Male**

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 **MEDICAL HISTORY**

- Hypertension
- Type 2 Diabetes Mellitus

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 **CURRENT PRESENTATION**

- NST-ACS
- Unstable Angina

---

 **CHALLENGES**

- Surgical turndown (not suitable for CABG)
- Increased procedural risk due to comorbidities

---

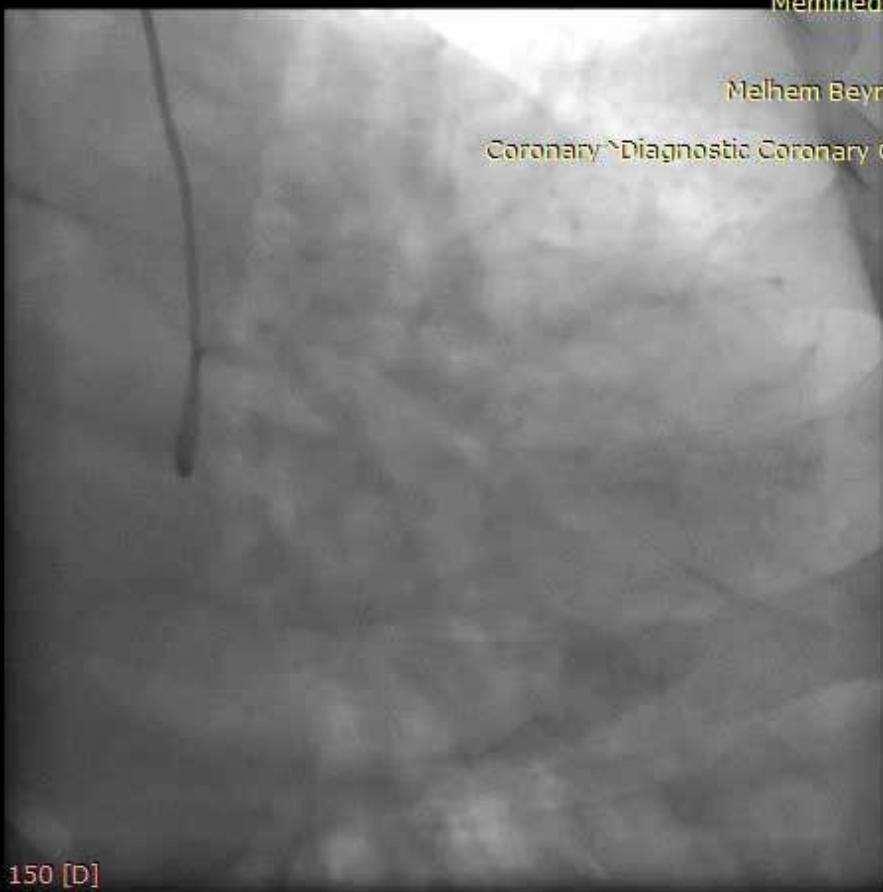
 **DECISION & PLAN**

- Focus on percutaneous revascularization strategy
- Optimize medical therapy and hemodynamic support

---

Im: 1/83  
Se: 2

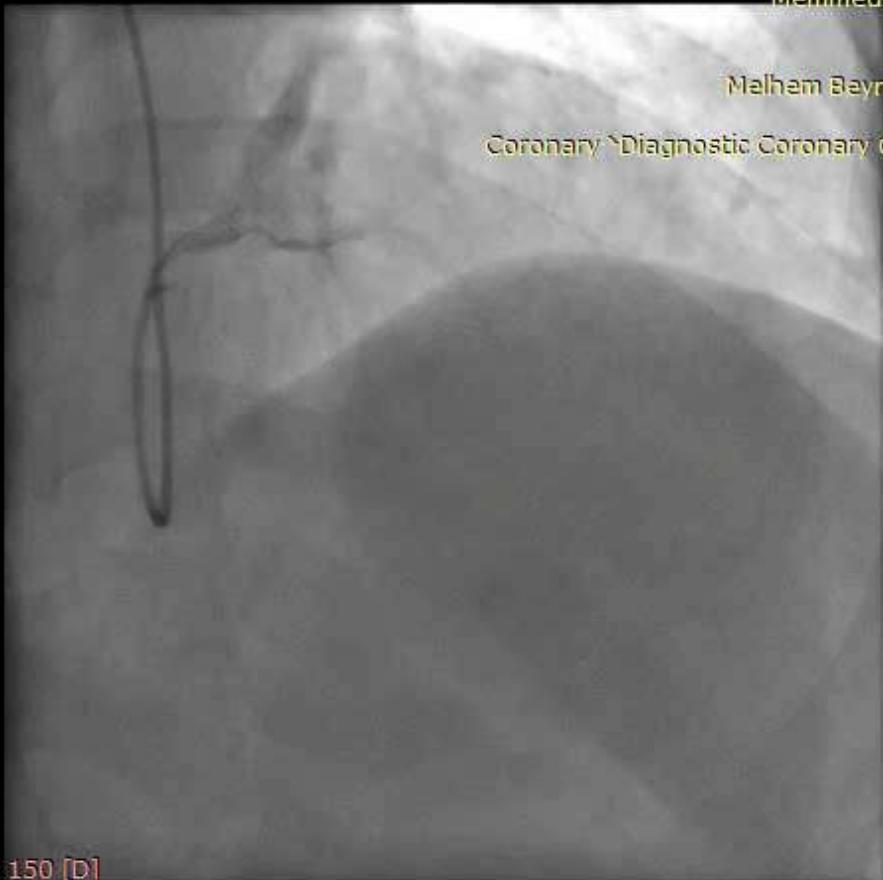
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94683  
29.04.1958 M  
Melhem Beynalxalq Hospital  
1  
Coronary ^ Diagnostic Coronary Catheterization  
Coro 3040



WL: 119 WW: 150 [D]  
CAU: 39

12.09.2025 14:58:12

Im: 1/52  
Se: 5



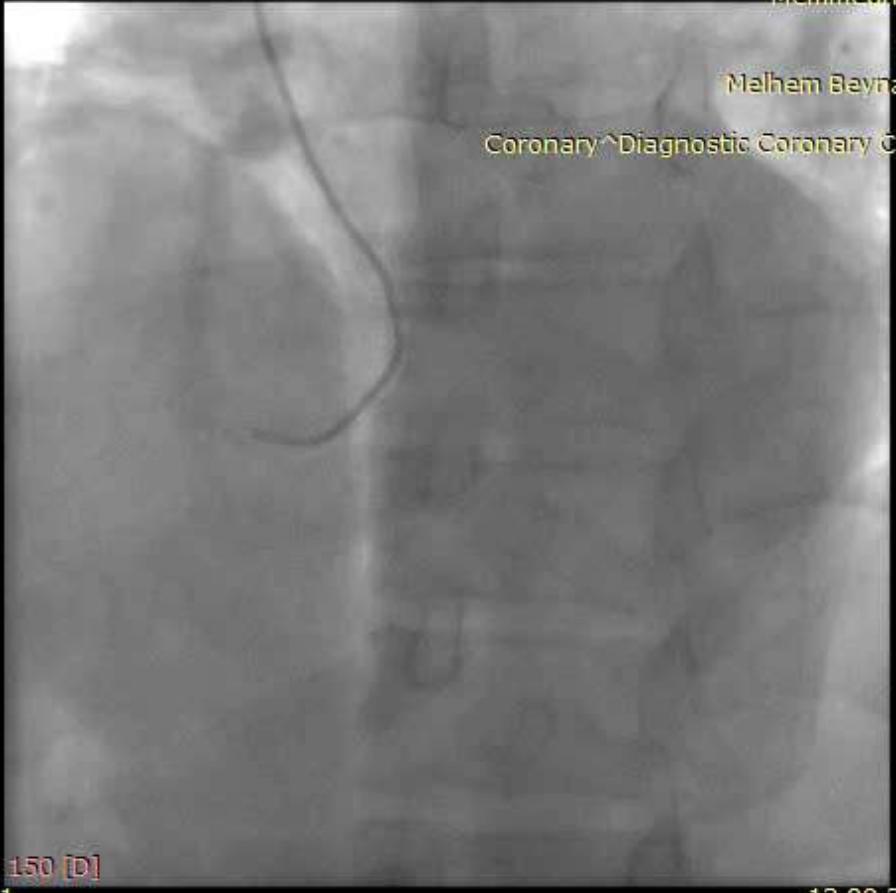
Memmedhuseynov Rafiq  
94683  
29.04.1958 M  
Malhem Beynalxalq Hospital  
1  
Coronary ^ Diagnostic Coronary Catheterization  
Coro 3040

WL: 119 WW: 150 [D]  
LAO: 2 CRA: 37

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Im: 1/57  
Se: 6

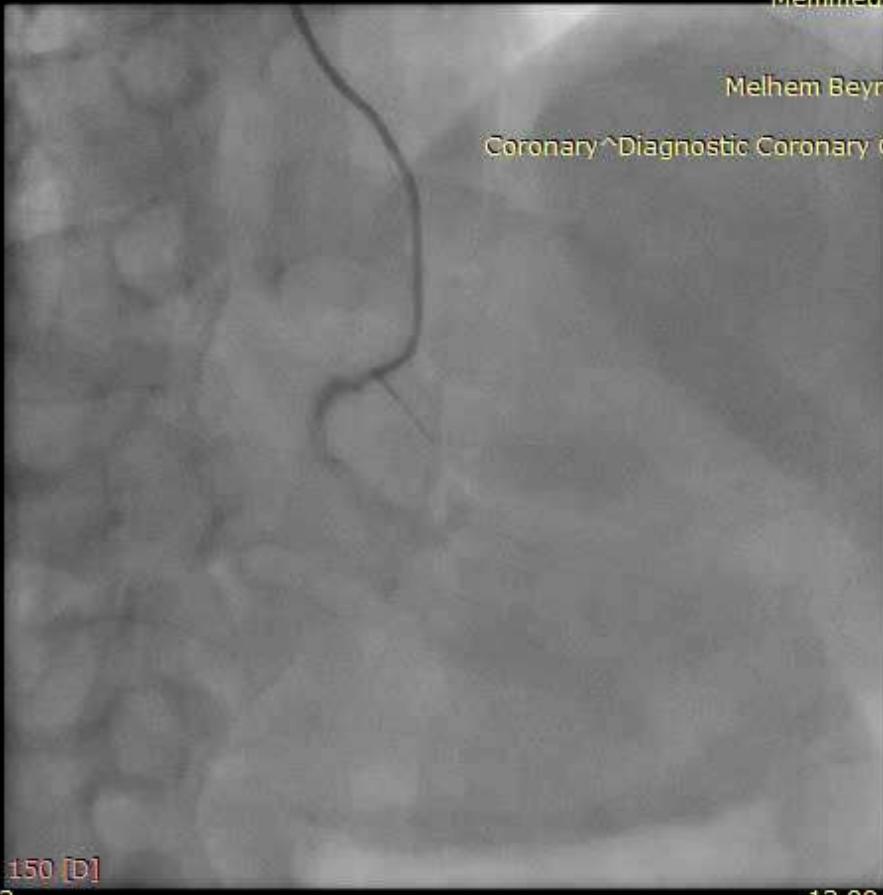
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94683  
29.04.1958 M  
Melhem Bevhakalq Hospital  
1  
Coronary^Diagnostic Coronary Catheterization  
Coro 3040



WL: 119 WW: 150 [D]  
LAO: 40 CRA: 1

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Im: 1/47  
Se: 7



Memmedhuseynov Rafiq  
94683  
29.04.1958 M  
Melhem Beynalxalq Hospital  
1  
Coronary^Diagnostic Coronary Catheterization  
Coro 3040

WL: 119 WW: 150 [D]  
LAO: 2 CRA: 32

12.09.2025 15:00:06

Im: 1/56  
Se: 9

Memmedhuseynov Rafiq  
94683  
29.04.1958 M  
Melhem Beynalxalq Hospital  
1  
Coronary Diagnostic Coronary Catheterization  
Coro 3040

WL: 119 WW: 150 [D]  
LAO: 1 CAU: 36

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Se: 10

Memmedhuseynov Rafiq  
94683  
29.04.1958 M  
Malhem Beynalxalq Hospital  
1  
Coronary Diagnostic Coronary Catheterization  
Coro 3040

WL: 119 WW: 150 [D]  
LAO: 2 CRA: 26

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Im: 1/12  
Se: 12

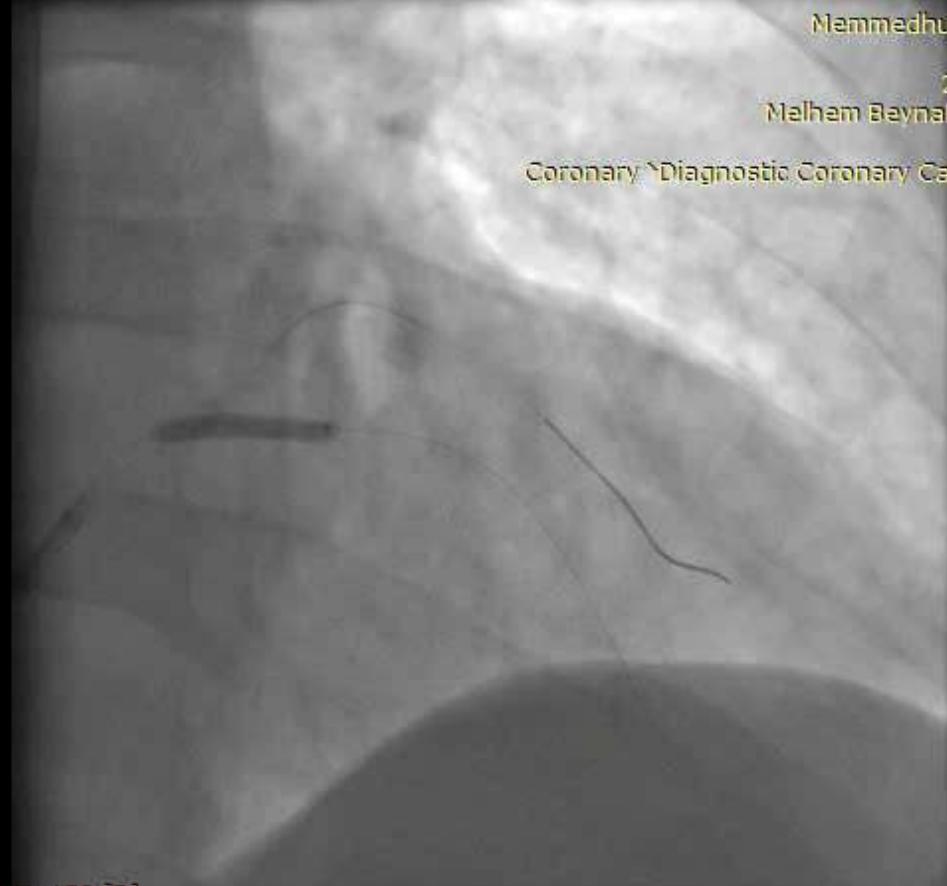
Memmedhuseynov Rafiq  
94683

29.04.1958 M

Malhem Beynalxalq Hospital

1

Coronary Diagnostic Coronary Catheterization  
Coro 3040



WL: 119 WW: 150 [D]  
LAO: 2 CRA: 26

12.09.2025 15:16:51

Im: 1/46  
Se: 13

Mammedhuseynov Rafiq  
94683

29.04.1958 M

Melhem Beyhalkalq Hospital

1

Coronary ^ Diagnostic Coronary Catheterization  
Coro 3040

WL: 119 WW: 150 [D]  
LAO: 2 CRA: 26

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Im: 1/51  
Se: 14

Memmedhuseynov Rafiq  
94683  
29.04.1958 M  
Malhem Beyhalkalq Hospital  
1  
Coronary ^ Diagnostic Coronary Catheterization  
Coro 3040

WL: 119 WW: 150 [D]  
LAO: 1 CAU: 37

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Se: 15

Memmedhuseynov Rafiq  
94683  
29.04.1958 M  
Melhem Beynalxalq Hospital  
1  
Coronary Diagnostic Coronary Catheterization  
Coro 3040

WL: 119 WW: 150 [D]  
LAO: 1 CAU: 37

12.09.2025 15:19:23

Im: 1/14  
Se: 18

Memmedhuseynov Rafiq  
94683

29.04.1958 M

Melhem Beynalkalq Hospital

1

Coronary ^ Diagnostic Coronary Catheterization  
Coro 3040

WL: 119 WW: 150 [D]  
LAO: 24 CAU: 29

12.09.2025 15:22:27

Im: 1/46  
Se: 19

Memmedhuseynov Rafiq  
94683  
29.04.1958 M  
Melhem Beynalkalq Hospital  
1  
Coronary ^ Diagnostic Coronary Catheterization  
Coro 3040

WL: 119 WW: 150 [D]  
LAO: 24 CAU: 29

12.09.2025 15:23:30

Im: 1/14  
Se: 20

Memmedhuseynov Rafiq  
94683

29.04.1958 M

Melhem Beynalkalq Hospital

1

Coronary Diagnostic Coronary Catheterization  
Coro 3040

WL: 119 WW: 150 [D]  
LAO: 24 CAU: 29

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Se: 25

Memmedhuseynov Rafiq  
94683  
29.04.1958 M  
Melhem Beynalxalq Hospital  
1  
Coronary ^ Diagnostic Coronary Catheterization  
Coro 3040

WL: 119 WW: 150 [D]  
LAO: 3 CAU: 37

12.09.2025 15:31:58

Im: 1/52  
Se: 26

Memmedhuseynov Rafiq  
94683  
29.04.1958 M  
Melhem Beyhalxalq Hospital  
1  
Coronary Diagnostic Coronary Catheterization  
Coro 3040

WL: 119 WW: 150 [D]  
LAO: 3 CAU: 37

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Im: 1/18  
Se: 27

Memmedhuseynov Rafiq  
94683  
29.04.1958 M  
Malhem Beynalqalq Hospital  
1  
Coronary ^ Diagnostic Coronary Catheterization  
Coro 3040

WL: 119 WW: 150 [D]  
LAO: 29 CRA: 28

12.09.2025 15:36:13

Im: 1/61  
Se: 28

Memmedhuseynov Rafiq  
94683  
29.04.1958 M  
Melhem Beynalvalq Hospital  
1  
Coronary ^ Diagnostic Coronary Catheterization  
Coro 3040

WL: 119 WW: 150 [D]  
LAO: 1 CAU: 39

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Im: 1/22  
Se: 30

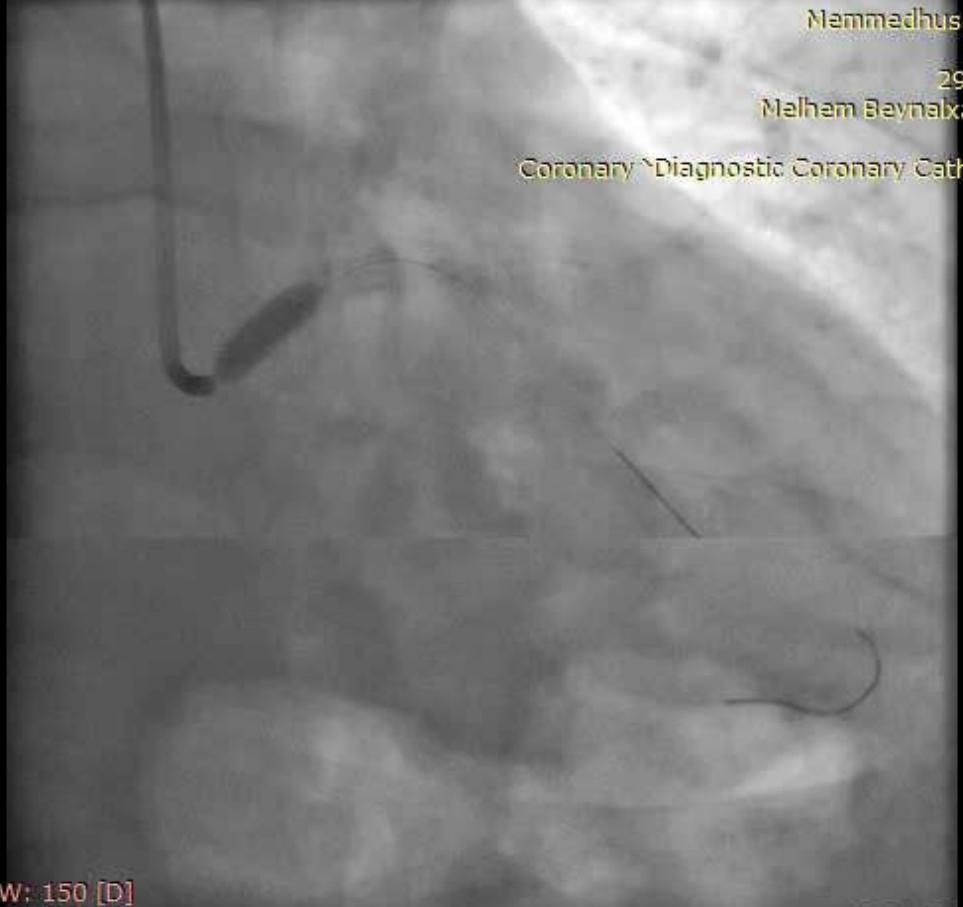
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94683  
29.04.1958 M  
Melhem Beynalkalq Hospital  
1  
Coronary Diagnostic Coronary Catheterization  
Coro 3040

WL: 119 WW: 150 [D]  
LAO: 1 CAU: 39

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Im: 1/14  
Se: 31

Mammedhuseynov Rafiq  
94683  
29.04.1958 M  
Malhem Beynalxalq Hospital  
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Coronary Diagnostic Coronary Catheterization  
Coro 3040

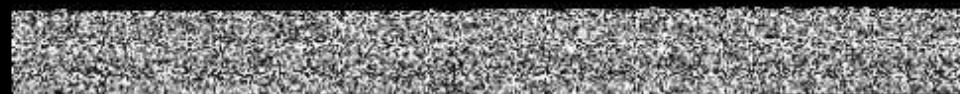


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LAO: 2 CAU: 1

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Memmedhuseynov Rafiq  
94683  
29.04.1958 M  
Melhem Beynalxalq Hospital  
1  
Coronary^Diagnostic Coronary Catheterization  
Coro 3040



WL: 119 WW: 150 [D]  
LAO: 2 CRA: 26

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Im: 1/16  
Se: 36

Mammedhuseynov Rafiq  
94683  
29.04.1958 M  
Malhem Beynalxalq Hospital  
1  
Coronary ^ Diagnostic Coronary Catheterization  
Coro 3040

WL: 119 WW: 150 [D]  
LAO: 2 CRA: 20

12.09.2025 15:54:06

Im: 1/13  
Se: 37

Memmedhuseynov Rafiq  
94683  
29.04.1958 M  
Melhem Beynalqalq Hospital  
1  
Coronary ^ Diagnostic Coronary Catheterization  
Coro 3040

WL: 119 WW: 150 [D]  
LAO: 2 CAU: 37

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Se: 40

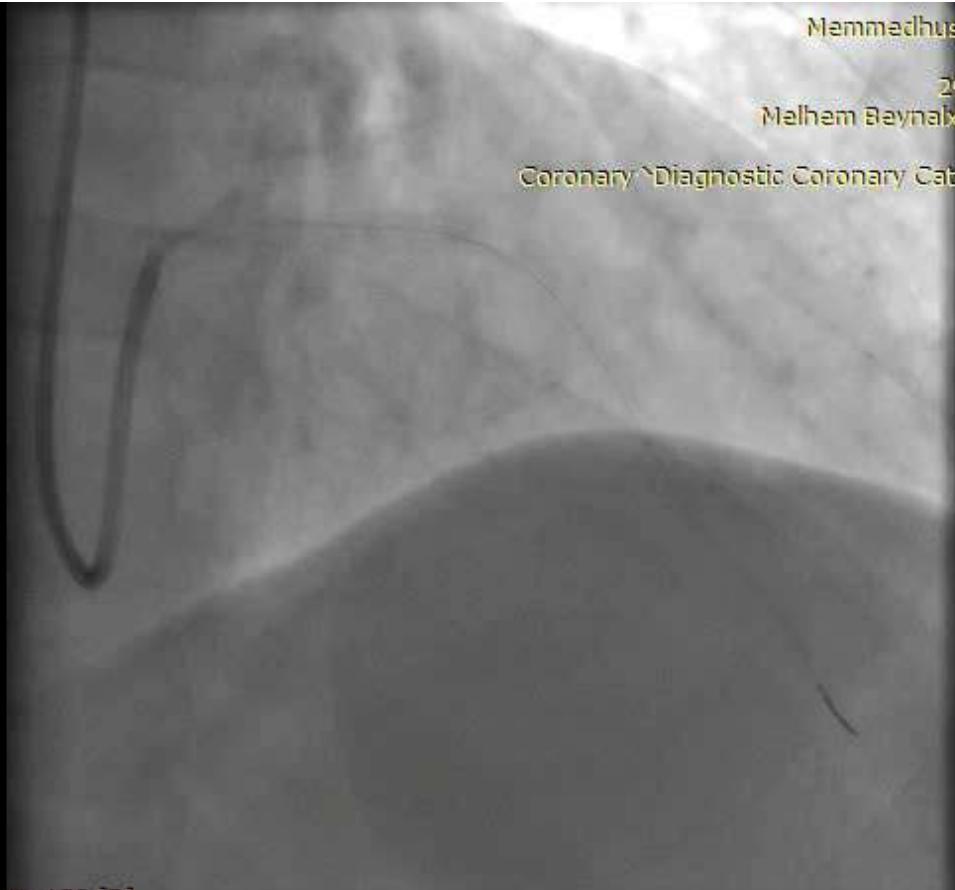
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29.04.1958 M  
Melhem Beynamalq Hospital  
1  
Coronary Diagnostic Coronary Catheterization  
Coro 3040

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LAO: 2 CAU: 37

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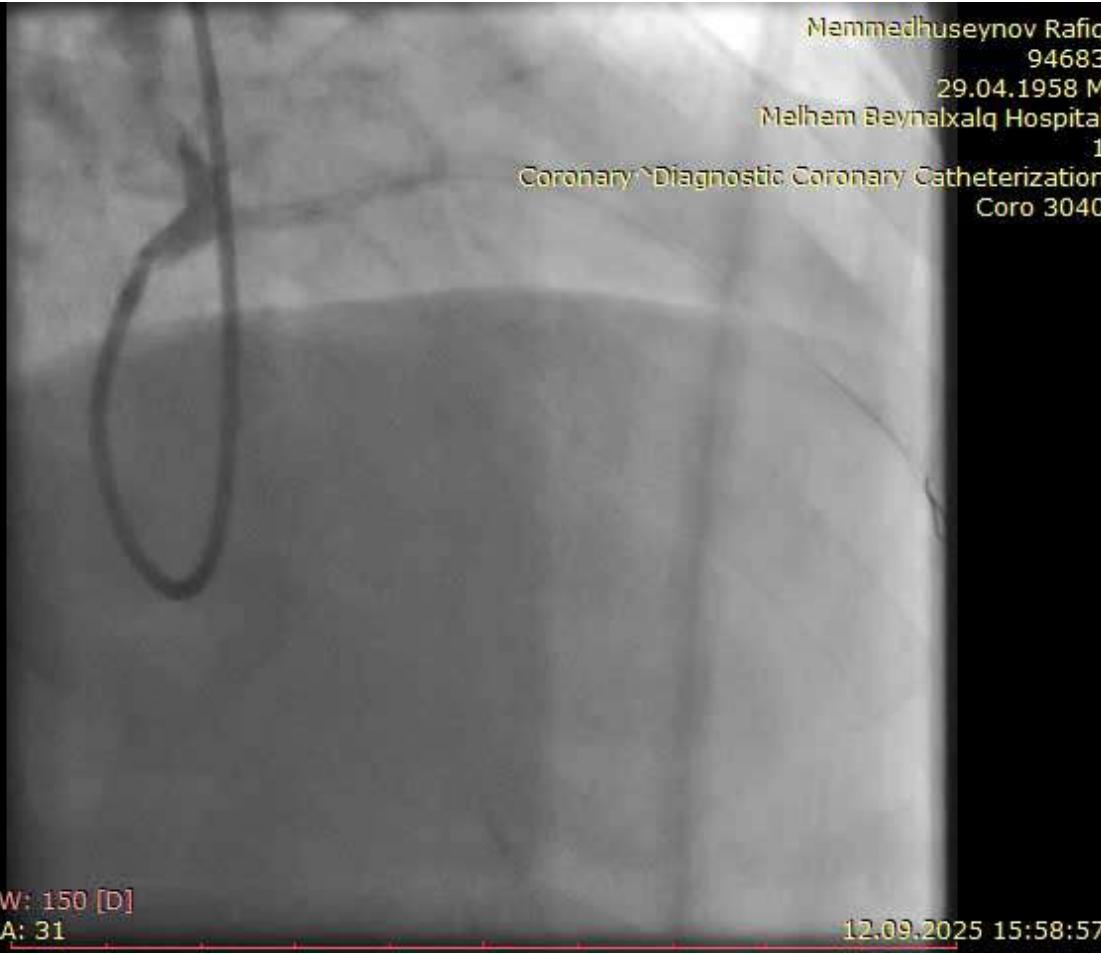
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29.04.1958 M  
Melhem Beynalkalq Hospital  
1  
Coronary ^ Diagnostic Coronary Catheterization  
Coro 3040



WL: 119 WW: 150 [D]  
LAO: 2 CRA: 31

12.09.2025 15:58:38

Im: 1/54  
Se: 44



Memmedhuseynov Rafiq  
94683  
29.04.1958 M  
Melhem Beyhalxalq Hospital  
1  
Coronary Diagnostic Coronary Catheterization  
Coro 3040

WL: 119 WW: 150 [D]  
RAO: 30 CRA: 31

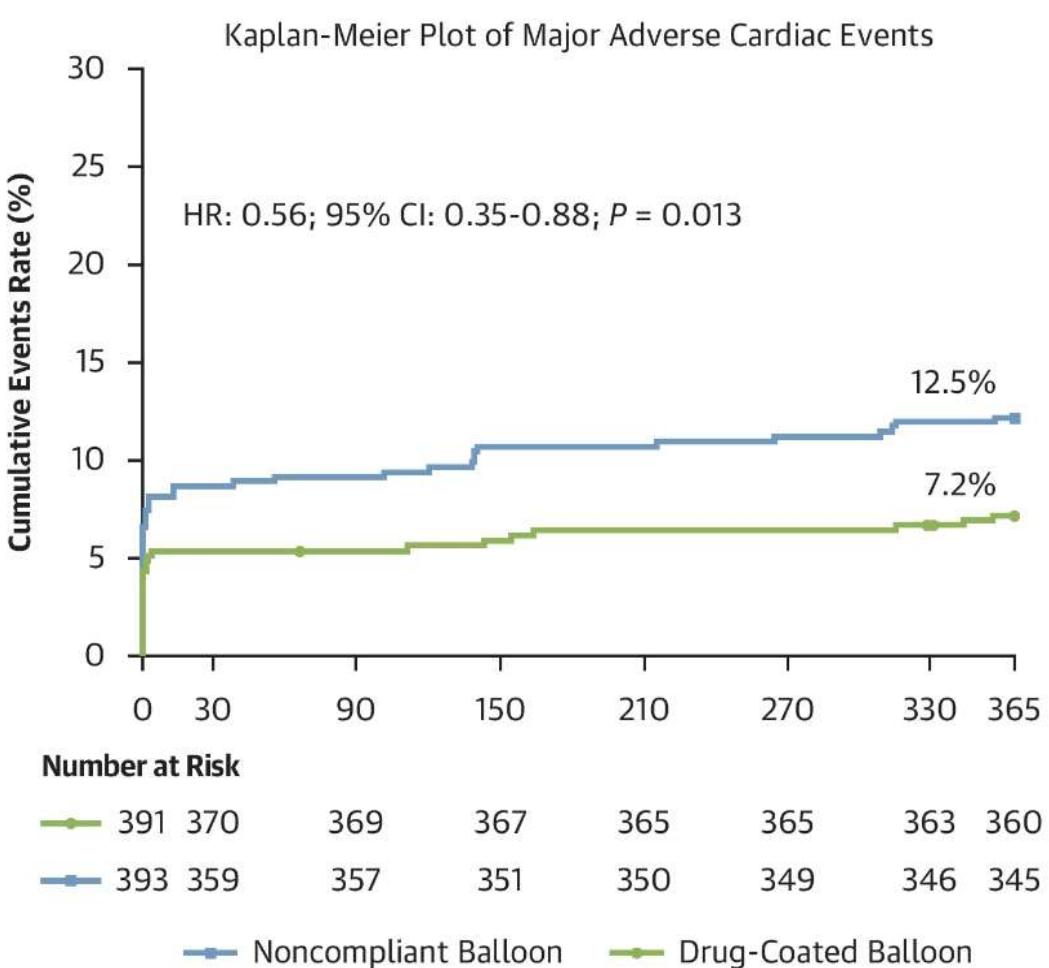
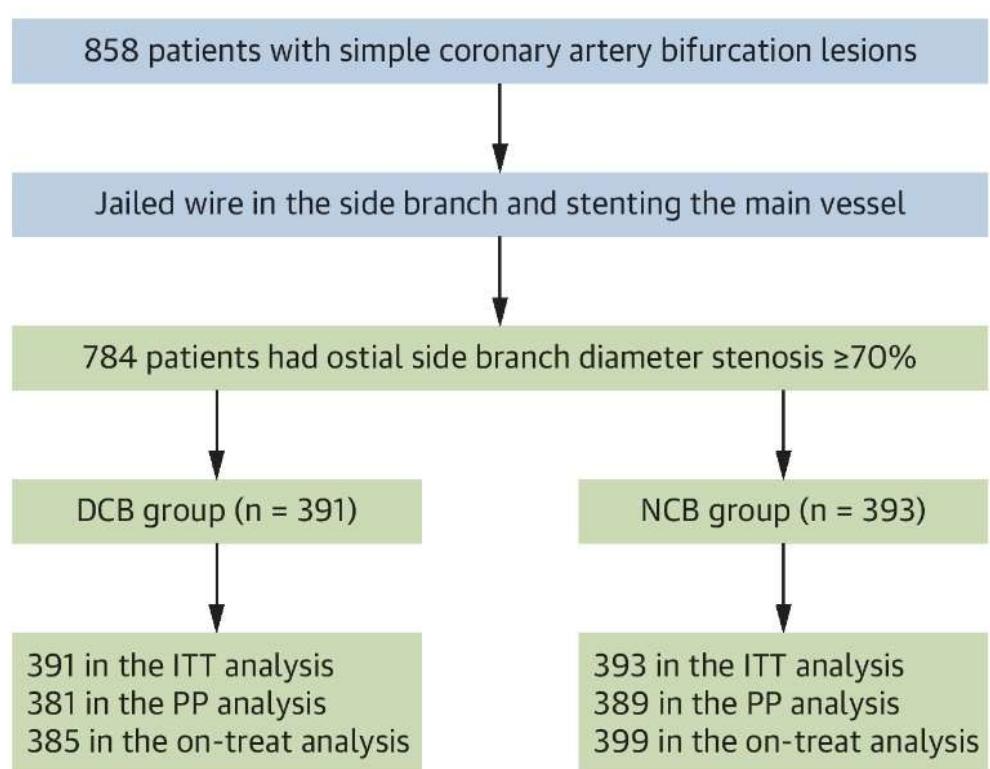
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DEB as a SB Balloon

# CENTRAL ILLUSTRATION: Key Results From the DCB-BIF Trial

**Key question:** A second side branch stent is commonly required during provisional stenting procedures, which leads to high rates of restenosis, stent thrombosis, and revascularization.

**Key finding:** Stenting the main vessel using a drug-eluting stent and side branch intervention using a drug-coated balloon is associated with a significant reduction in major adverse cardiac event.





**80 years  
Male**

### MEDICAL HISTORY

 Porcelain aorta  
eGFR 45 ml/min/1.73m<sup>2</sup>

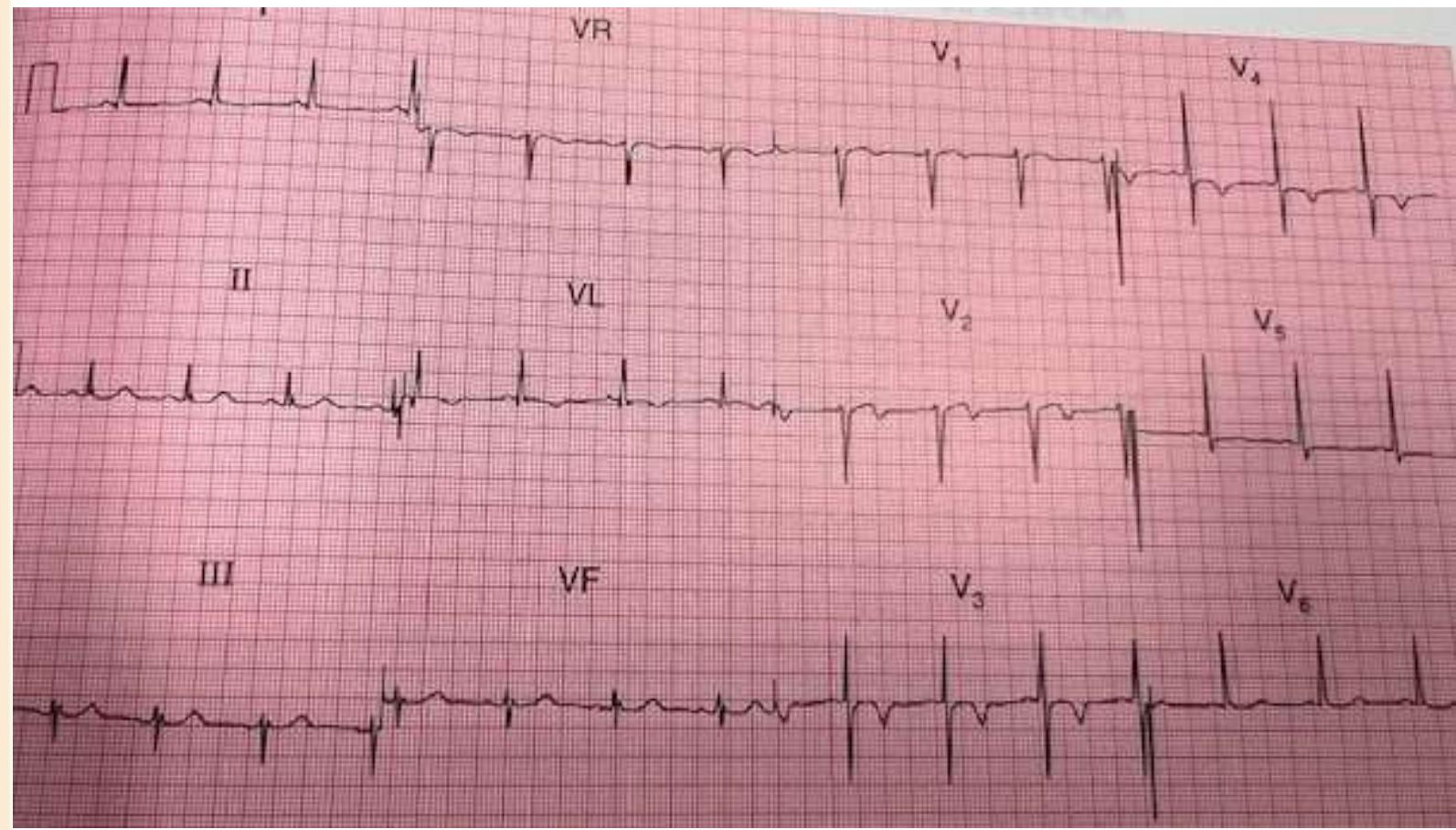
 HFmrEF

### CURRENT PRESENTATION

 NSTE-ACS  
Cx osteal total occlusion

### CHALLENGES

 Previous PCI to LMCA  
bif + Cx



Im: 1/32  
Se: 8

Nemmedov Zakir  
24.12.17-14:54:30-STD-1.3.12.2.1107.5.13.2.106066  
01.01.1946 M  
FHN Tibb Nidmeti Tibb Merkezi  
1  
Coronary ^ Diagnostic Coronary Catheterization  
Coro

WL: 127 WW: 125 [D]  
LAO: 1 CAU: 33

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Im: 1/17  
Se: 9

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01.01.1946 M  
FHN Tibb Nidmeti Tibb Merkezi  
1  
Coronary ^ Diagnostic Coronary Catheterization  
Coro

WL: 127 WW: 125 [D]  
LAO: 1 CAU: 33

17.12.2024 16:03:46

Im: 1/41  
Se: 10

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1  
Coronary ^Diagnostic Coronary Catheterization  
Coro

WL: 127 WW: 125 [D]  
LAO: 1 CAU: 33

17.12.2024 16:04:11

Im: 1/19  
Se: 12

Nemmedov Zakir  
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01.01.1946 M  
FHN Tibb Xidmeti Tibb Merkezi  
1  
Coronary ^ Diagnostic Coronary Catheterization  
Coro

WL: 127 WW: 125 [D]  
LAO: 1 CAU: 33

17.12.2024 16:06:58

Im: 1/43  
Se: 15

Memmedov Zakir  
24.12.17-14:54:30-STD-1.3.12.2.1107.5.13.2.106066  
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FHN Tibb Xidmeti Tibb Merkezi  
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Coronary Diagnostic Coronary Catheterization  
Coro

WL: 127 WW: 125 [D]  
LAO: 1 CRA: 1

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Im: 1/50  
Se: 16

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Coronary ^Diagnostic Coronary Catheterization  
Coro

WL: 127 WW: 125 [D]  
LAO: 1 CRA: 1

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Se: 17

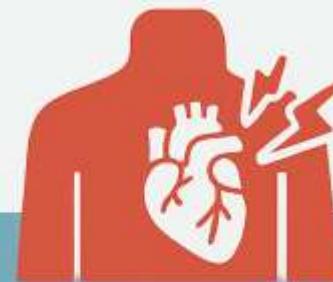
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Coronary Diagnostic Coronary Catheterization  
Coro

WL: 127 WW: 125 [D]  
LAO: 24 CAU: 21

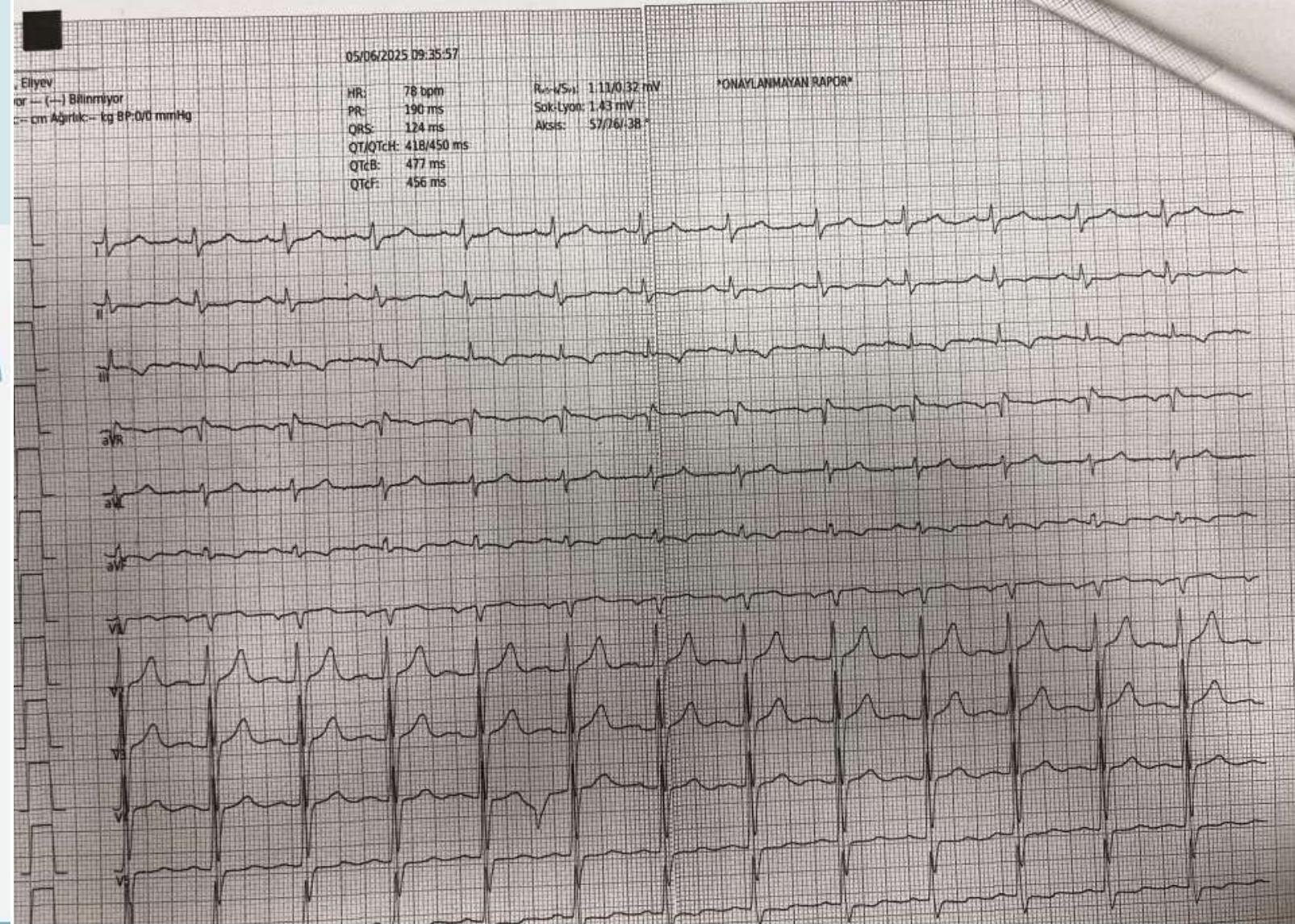
17.12.2024 16:12:13

# 65-Year-Old Male

- Hypertension
- Type 2 diabetes
- Hyperlipidemia
- Post-myocardial infarction (MI) with moderate left ventricular dysfunction – EF 45%
- History of multiple percutaneous coronary intervention (PCI) episodes
- Poor medication adherence



PRESENTATION WITH  
UNSTABLE ANGINA (NSTE-ACS)



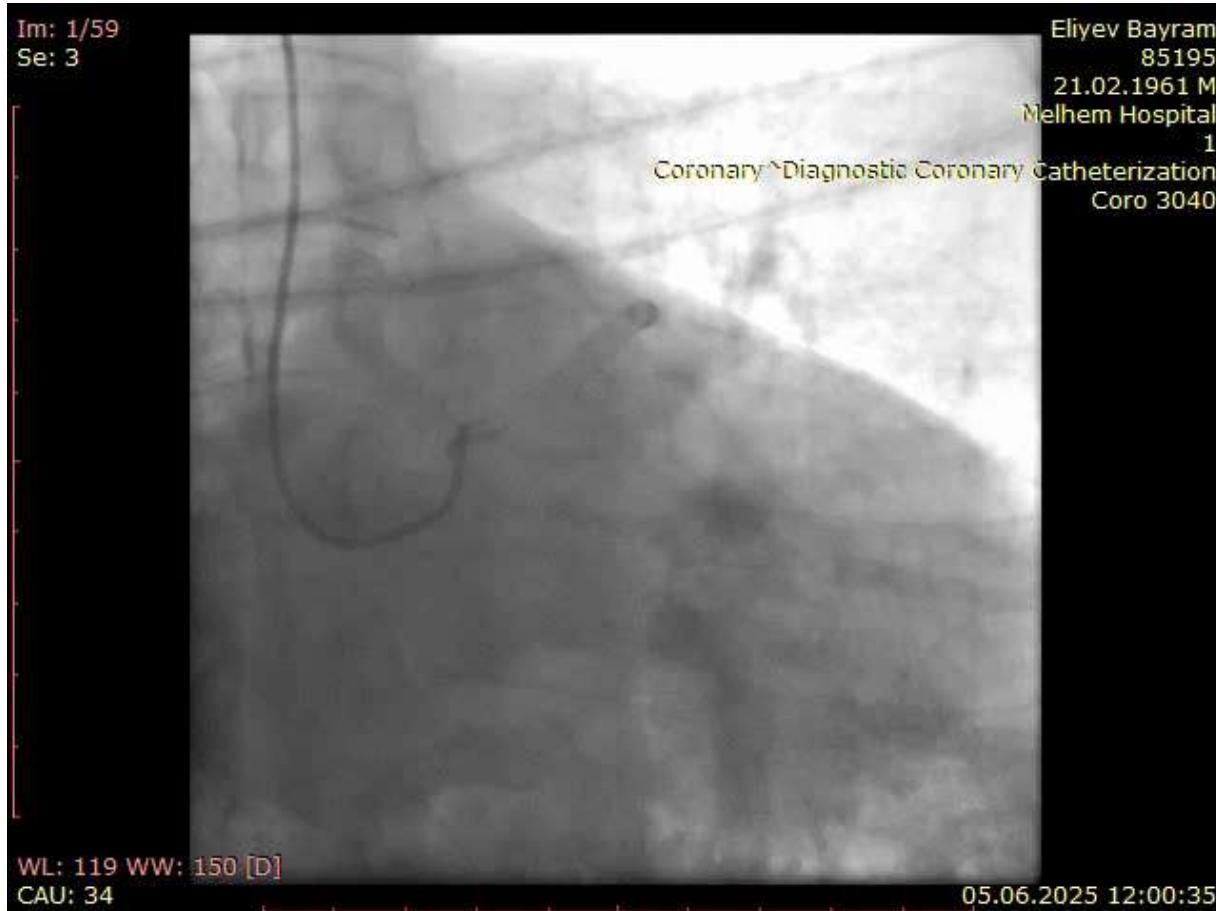
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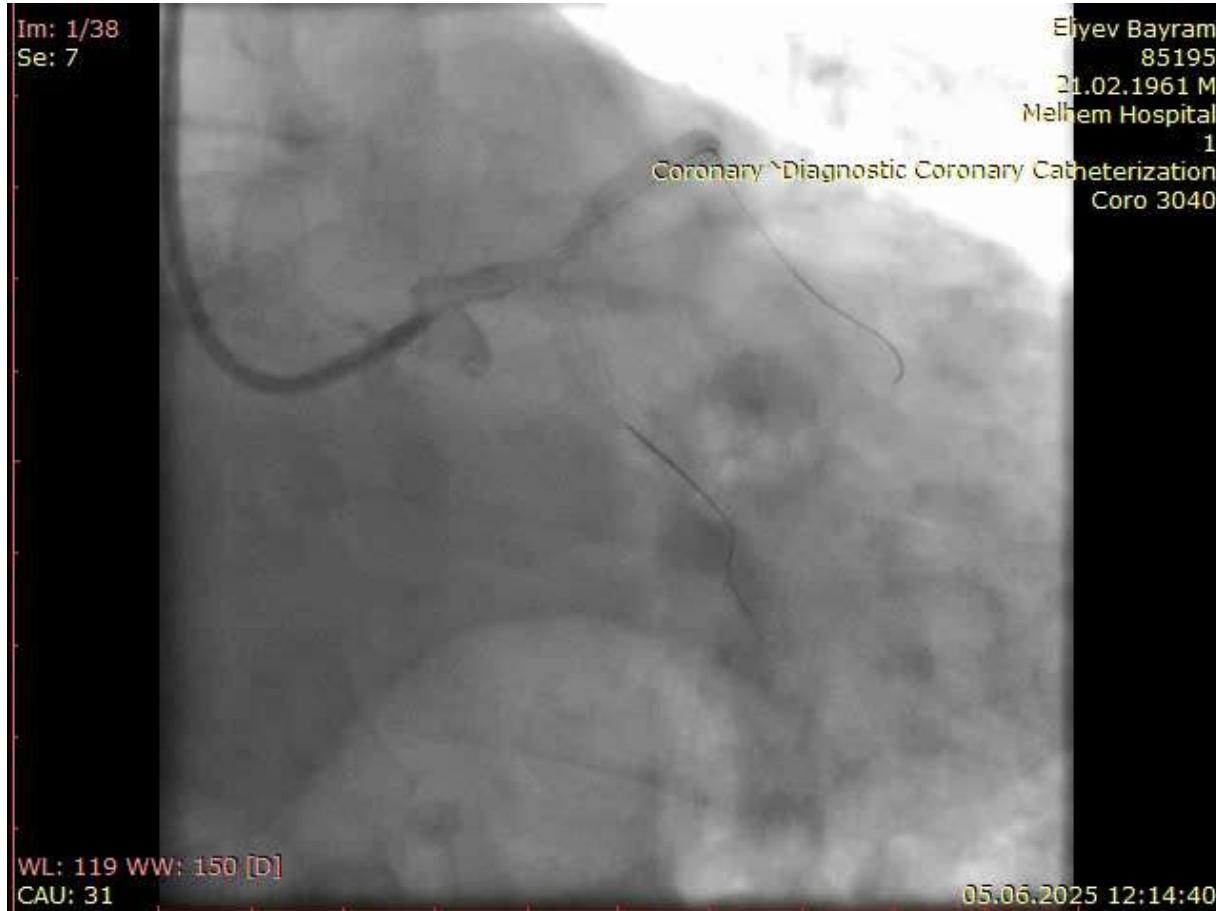
Eliyev Bayram  
85195  
21.02.1961 M  
Melhem Hospital  
1  
Coronary Diagnostic Coronary Catheterization  
Coro 3040

WL: 119 WW: 150 [D]  
AP

05.06.2025 11:59:52







Im: 1/38  
Se: 7

Eliyev Bayram  
85195  
21.02.1961 M  
Nelhem Hospital  
1  
Coronary Diagnostic Coronary Catheterization  
Coro 3040

WL: 119 WW: 150 [D]  
CAU: 31

05.06.2025 12:14:40

Im: 1/23  
Se: 8

Eliyev Bayram  
85195  
21.02.1961 M  
Nelhem Hospital  
1  
Coronary Diagnostic Coronary Catheterization  
Coro 3040

WL: 119 WW: 150 [D]  
CAU: 31

05.06.2025 12:16:05







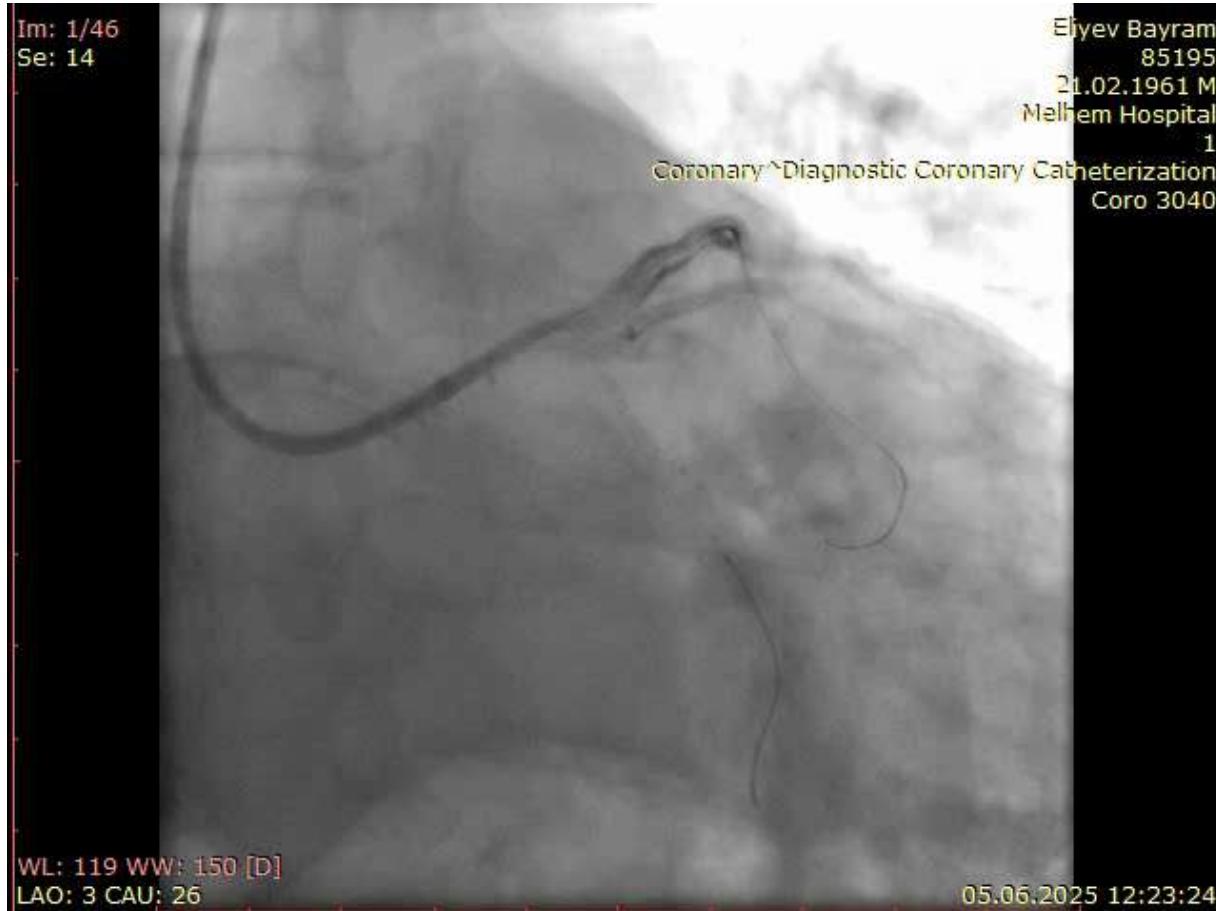
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Se: 12

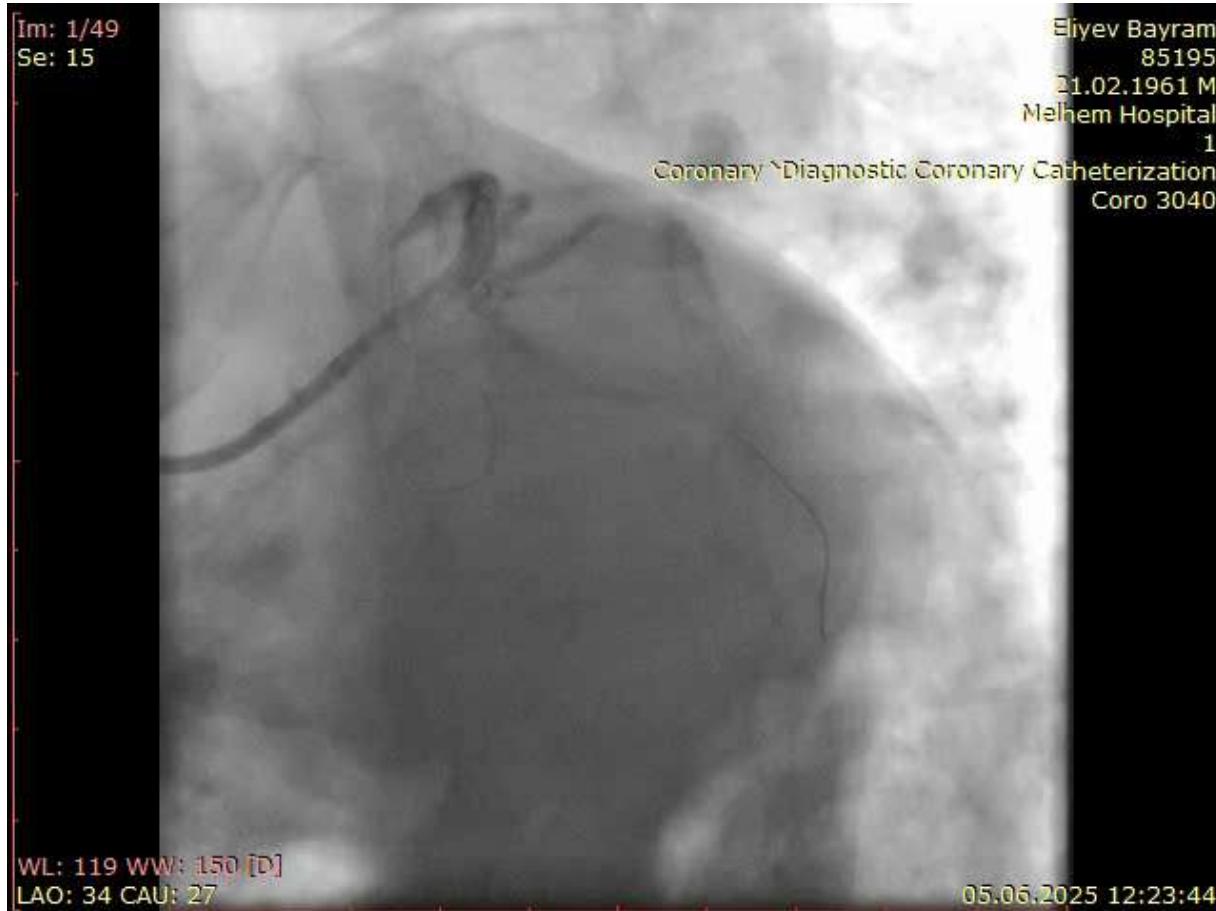
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21.02.1961 M  
Nelhem Hospital  
1  
Coronary ^ Diagnostic Coronary Catheterization  
Coro 3040

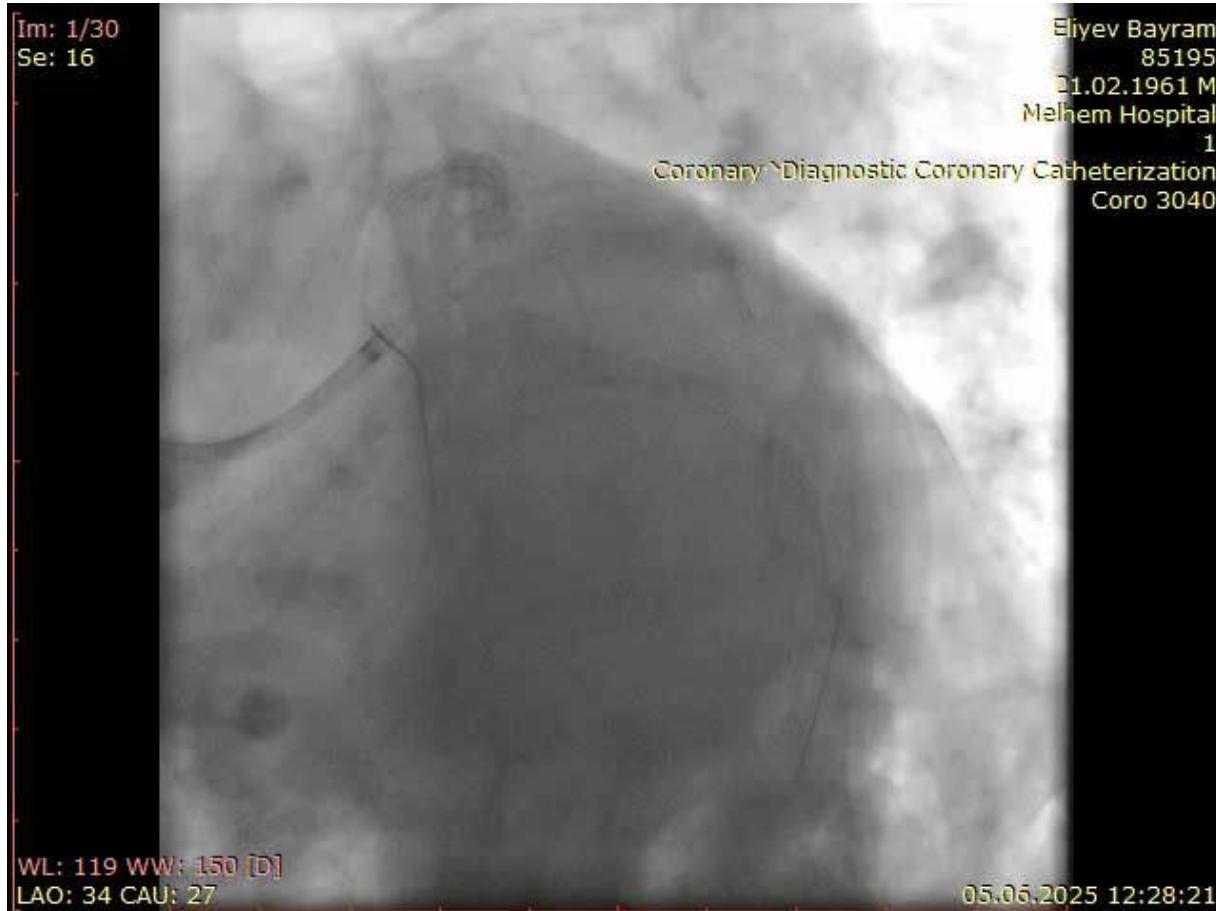
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LAO: 3 CAU: 26

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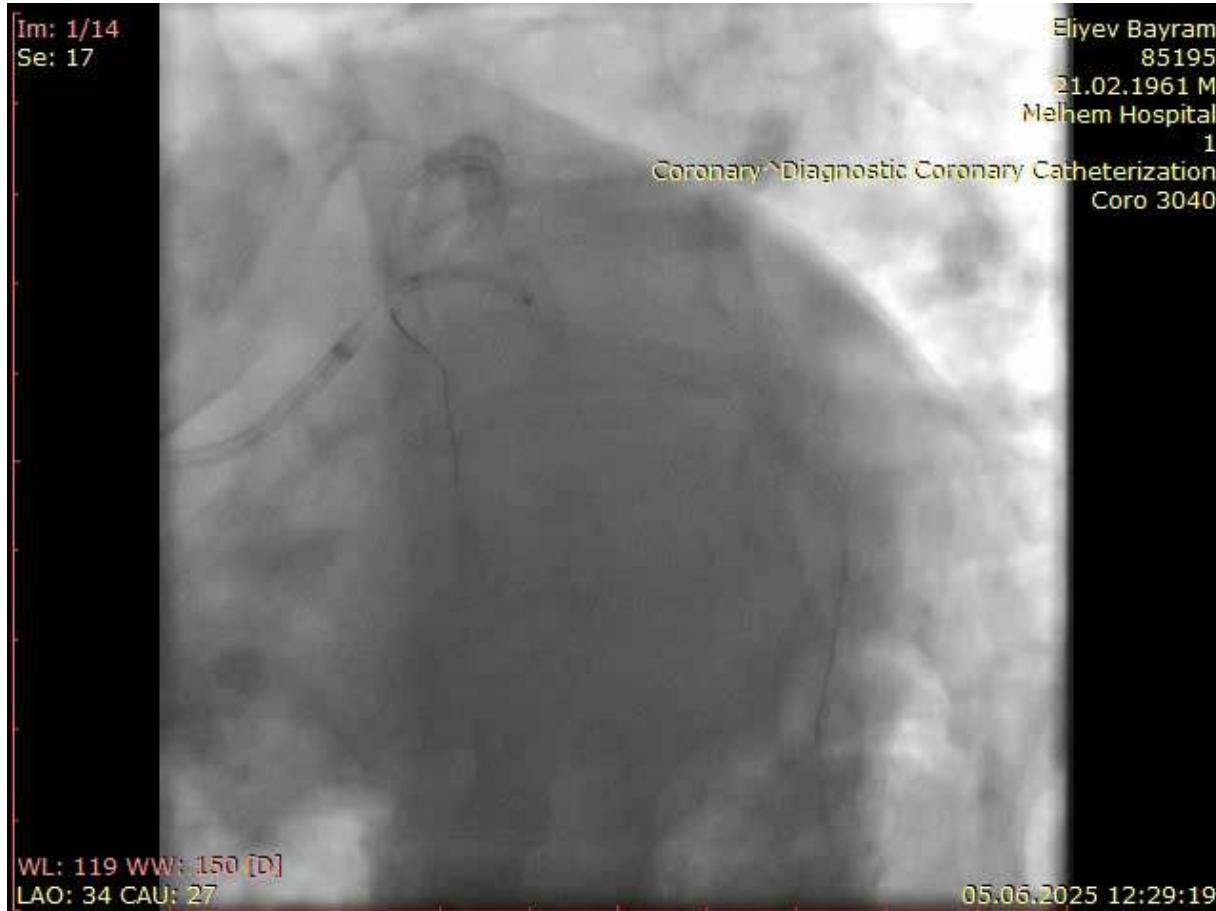


Im: 1/30  
Se: 16

Eliyev Bayram  
85195  
01.02.1961 M  
Nelhem Hospital  
1  
Coronary ^ Diagnostic Coronary Catheterization  
Coro 3040

WL: 119 WW: 150 [D]  
LAO: 34 CAU: 27

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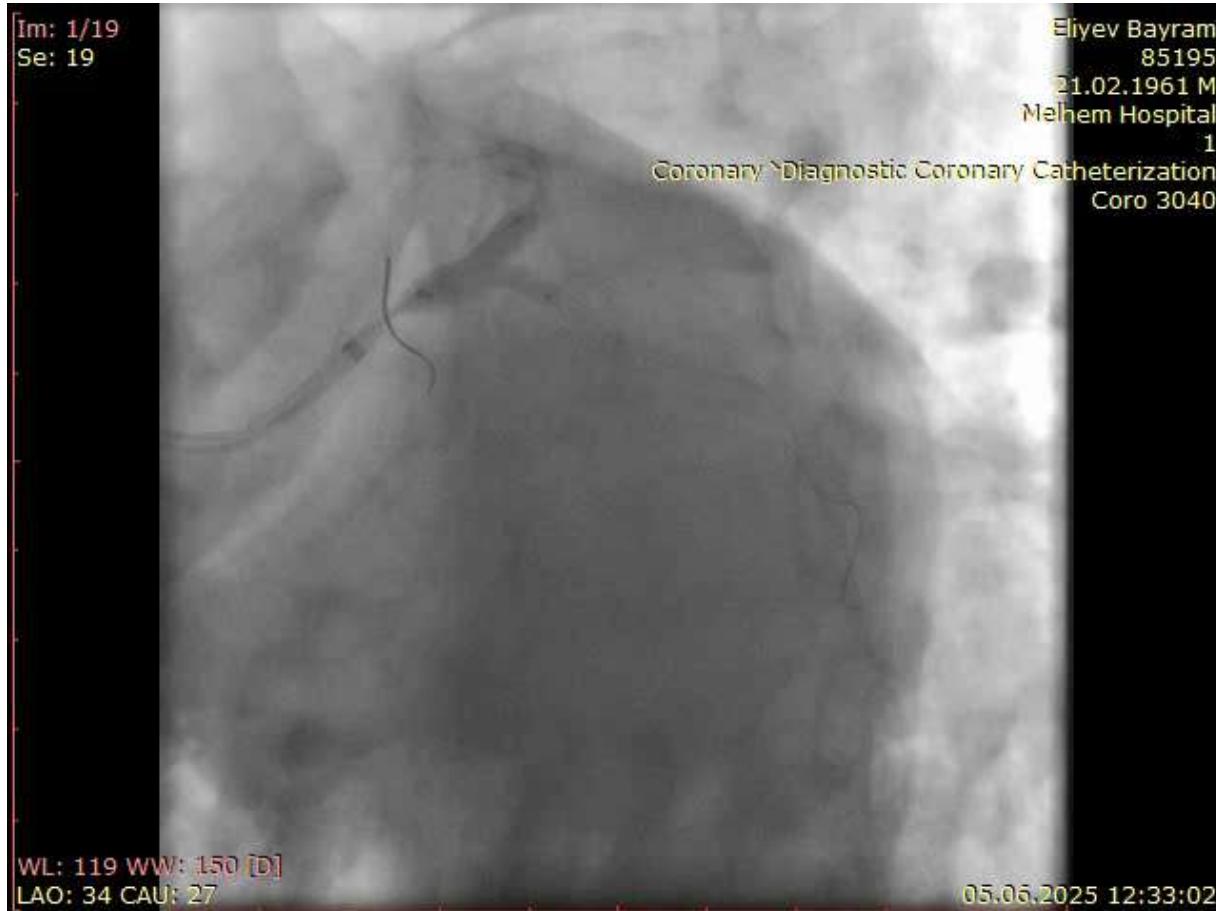


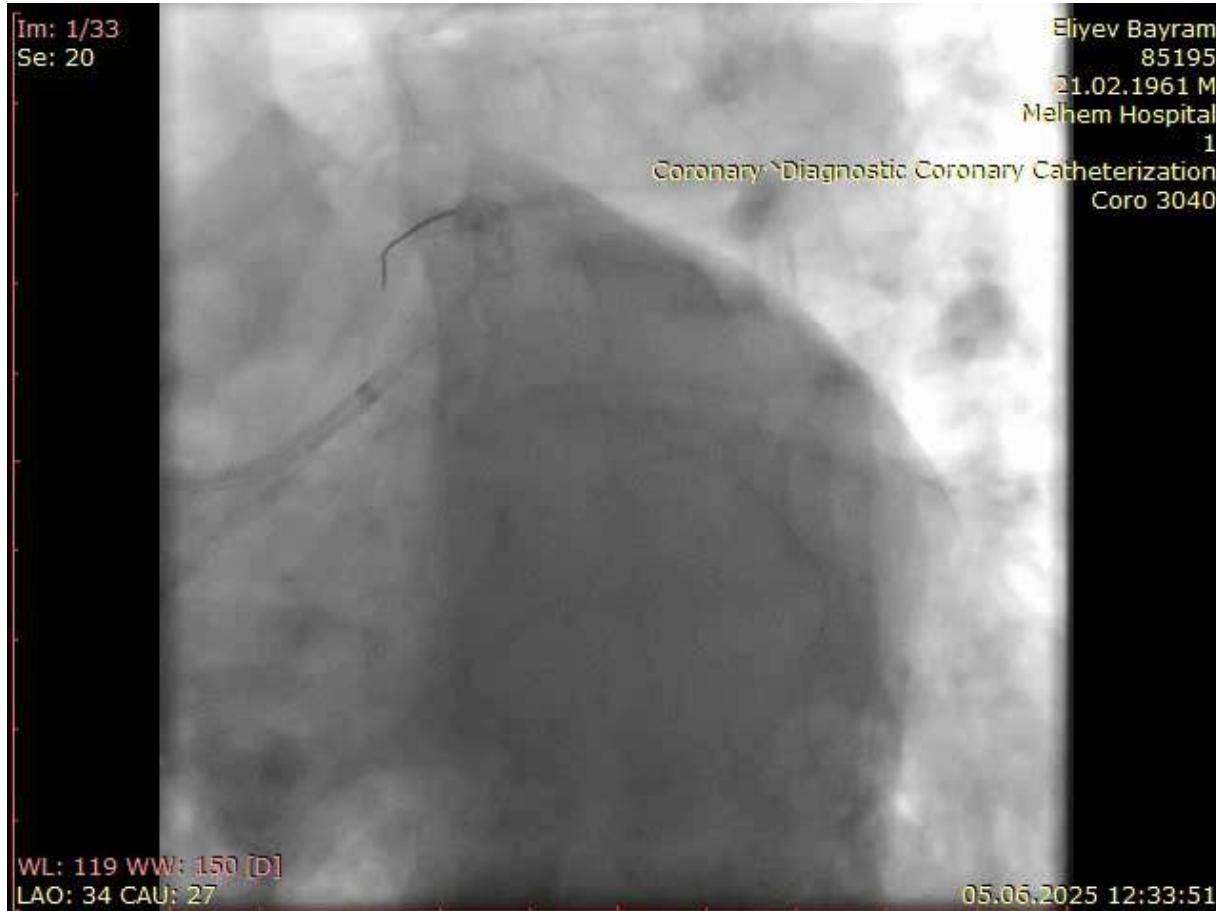
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Se: 17

Eliyev Bayram  
85195  
21.02.1961 M  
Nelhem Hospital  
1  
Coronary ^ Diagnostic Coronary Catheterization  
Coro 3040

WL: 119 WW: 150 [D]  
LAO: 34 CAU: 27

05.06.2025 12:29:19



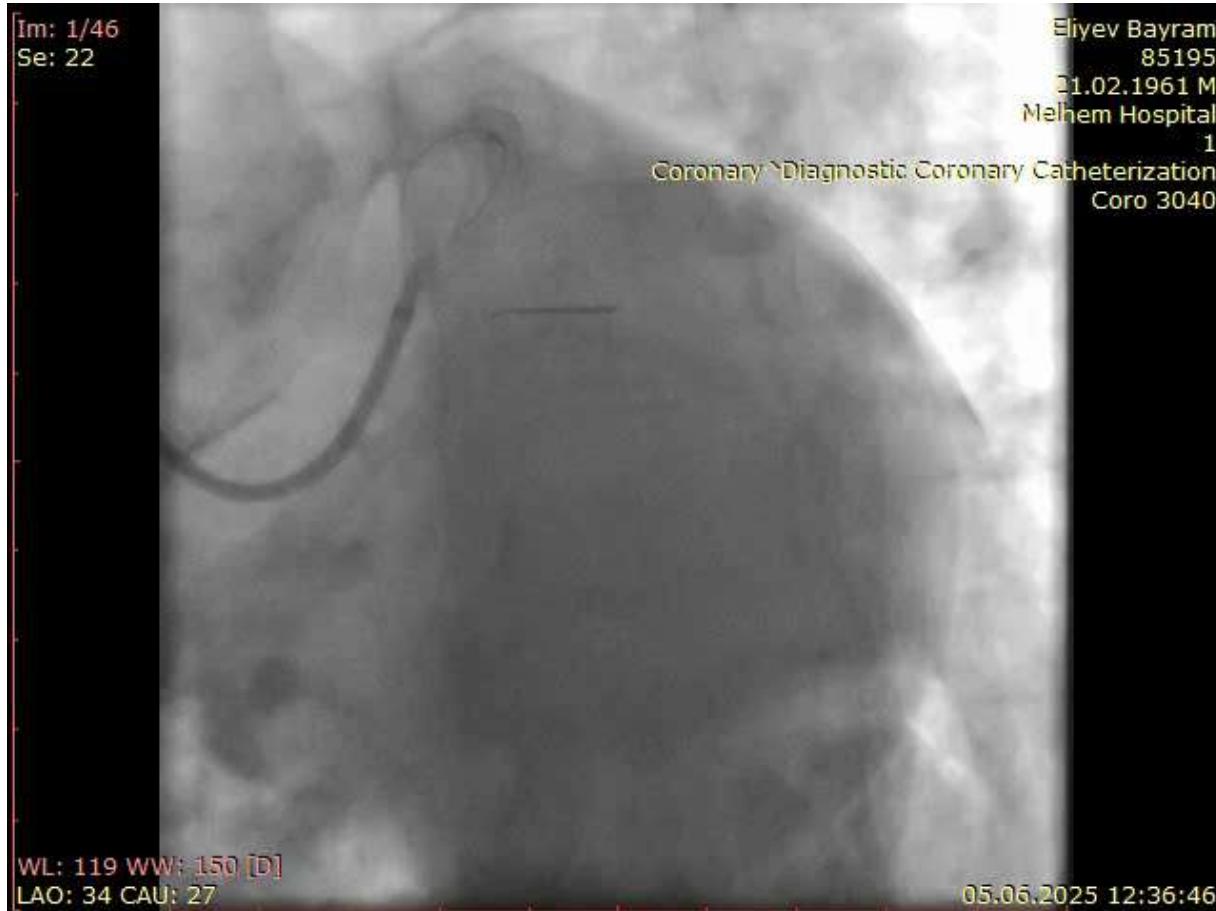


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Eliyev Bayram  
85195  
21.02.1961 M  
Nelhem Hospital  
1  
Coronary ^ Diagnostic Coronary Catheterization  
Coro 3040

WL: 119 WW: 150 [D]  
LAO: 34 CAU: 27

05.06.2025 12:35:38



Im: 1/46  
Se: 22

Eliyev Bayram  
85195  
01.02.1961 M  
Nelhem Hospital  
1  
Coronary ^ Diagnostic Coronary Catheterization  
Coro 3040

WL: 119 WW: 150 [D]  
LAO: 34 CAU: 27

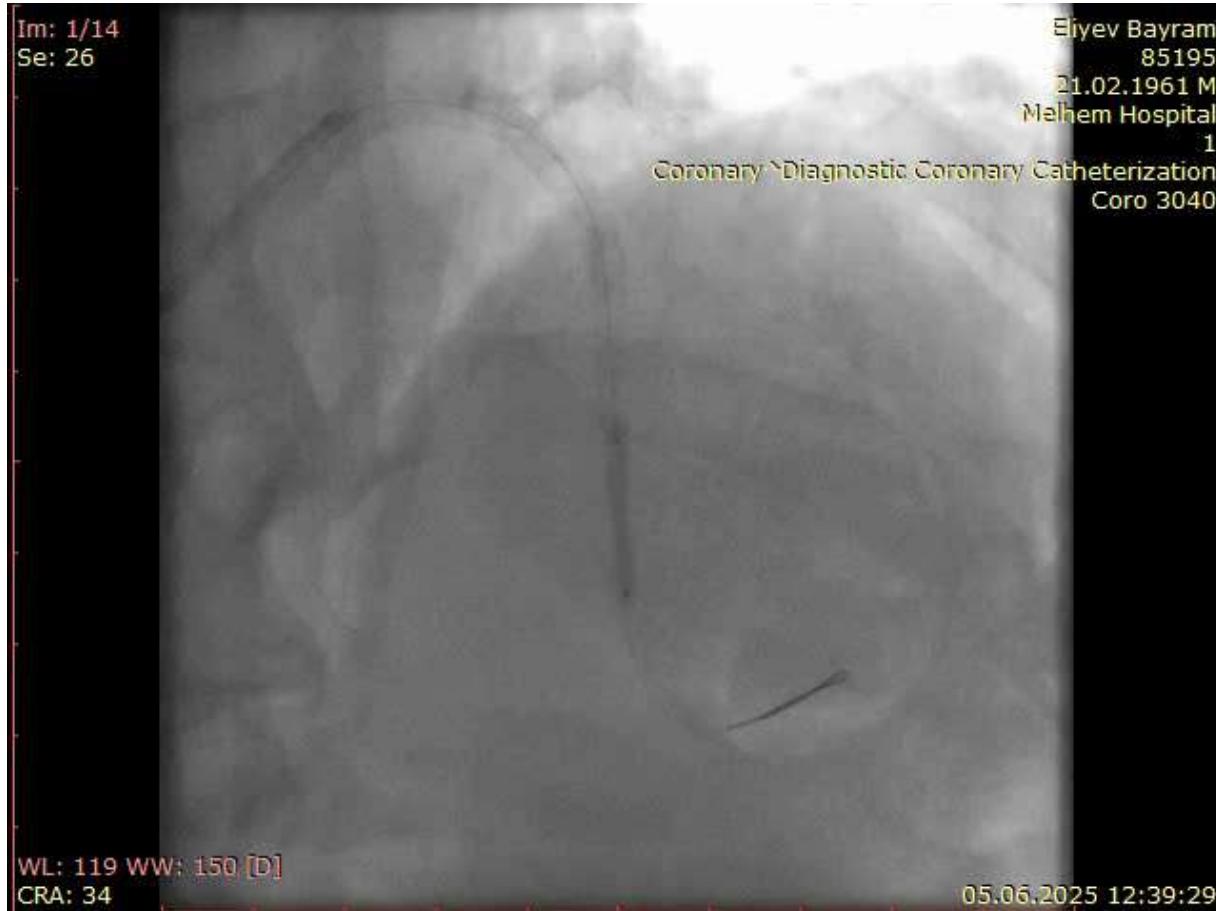
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Eliyev Bayram  
85195  
21.02.1961 M  
Mehmet Hospital  
1  
Coronary Diagnostic Coronary Catheterization  
Coro 3040

WL: 119 WW: 150 [D]  
CRA: 34

05.06.2025 12:37:20





Im: 1/54  
Se: 27

Eliyev Bayram  
85195  
01.02.1961 M  
Nelhem Hospital  
1  
Coronary Diagnostic Coronary Catheterization  
Coro 3040

WL: 119 WW: 150 [D]  
CRA: 34

05.06.2025 12:39:46

Im: 1/36  
Se: 28

Eliyev Bayram  
85195  
21.02.1961 M  
Melhem Hospital  
1  
Coronary^Diagnostic Coronary Catheterization  
Coro 3040

WL: 119 WW: 150 [D]  
CRA: 34

05.06.2025 12:41:28

Im: 1/49  
Se: 29

Eliyev Bayram  
85195  
21.02.1961 M  
Nelhem Hospital  
1  
Coronary ^ Diagnostic Coronary Catheterization  
Coro 3040

WL: 119 WW: 150 [D]  
CRA: 34

05.06.2025 12:42:25



Im: 1/33  
Se: 33

Eliyev Bayram  
85195  
21.02.1961 M  
Nelhem Hospital  
1  
Coronary ~ Diagnostic Coronary Catheterization  
Coro 3040

WL: 119 WW: 150 [D]  
LAO: 44 CAU: 37

05.06.2025 12:47:13

Im: 1/30  
Se: 34

Eliyev Bayram  
85195  
21.02.1961 M  
Nelhem Hospital  
1  
Coronary ^ Diagnostic Coronary Catheterization  
Coro 3040

WL: 119 WW: 150 [D]  
LAO: 44 CAU: 37

05.06.2025 12:48:53

Im: 1/41  
Se: 35

Eliyev Bayram  
85195  
21.02.1961 M  
Nelhem Hospital  
1  
Coronary ^ Diagnostic Coronary Catheterization  
Coro 3040

WL: 119 WW: 150 [D]  
LAO: 44 CAU: 37

05.06.2025 12:49:42

Im: 1/13  
Se: 36

Eliyev Bayram  
85195  
21.02.1961 M  
Melhem Hospital  
1  
Coronary Diagnostic Coronary Catheterization  
Coro 3040

WL: 119 WW: 150 [D]  
LAO: 44 CAU: 37

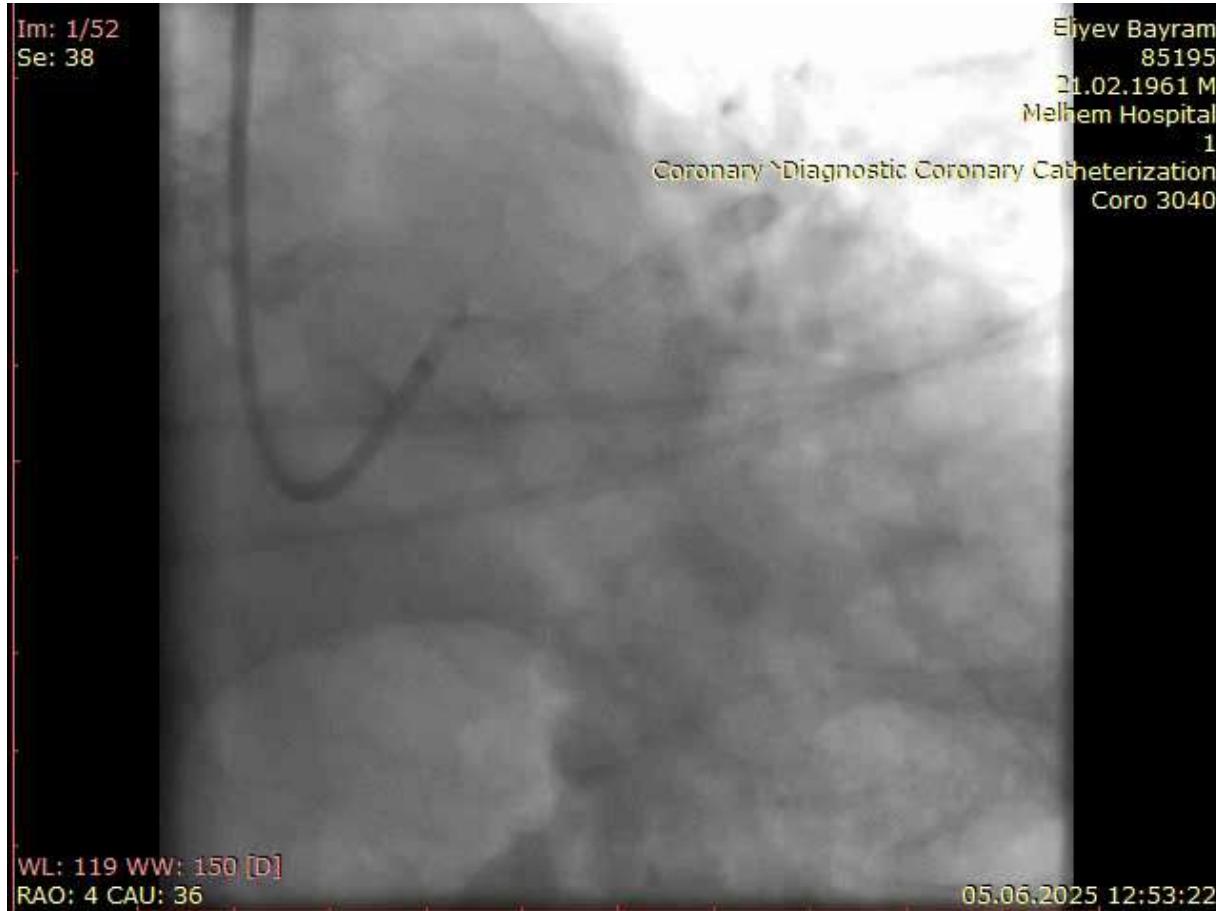
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Eliyev Bayram  
85195  
21.02.1961 M  
Melhem Hospital  
1  
Coronary ^ Diagnostic Coronary Catheterization  
Coro 3040

WL: 119 WW: 150 [D]  
LAO: 44 CAU: 37

05.06.2025 12:52:58



Im: 1/52  
Se: 38

Eliyev Bayram  
85195  
21.02.1961 M  
Melhem Hospital  
1  
Coronary Diagnostic Coronary Catheterization  
Coro 3040

WL: 119 WW: 150 [D]  
RAO: 4 CAU: 36

05.06.2025 12:53:22

Im: 1/51  
Se: 39

Eliyev Bayram  
85195  
21.02.1961 M  
Nelhem Hospital  
1  
Coronary Diagnostic Coronary Catheterization  
Coro 3040

WL: 119 WW: 150 [D]  
RAO: 3 CRA: 38

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Im: 1/61  
Se: 40

Eliyev Bayram  
85195  
21.02.1961 M  
Melhem Hospital  
1  
Coronary ^Diagnostic Coronary Catheterization  
Coro 3040

WL: 119 WW: 150 [D]  
RAO: 30 CRA: 31

05.06.2025 12:54:01



**49 years**  
**Male**

## MEDICAL HISTORY

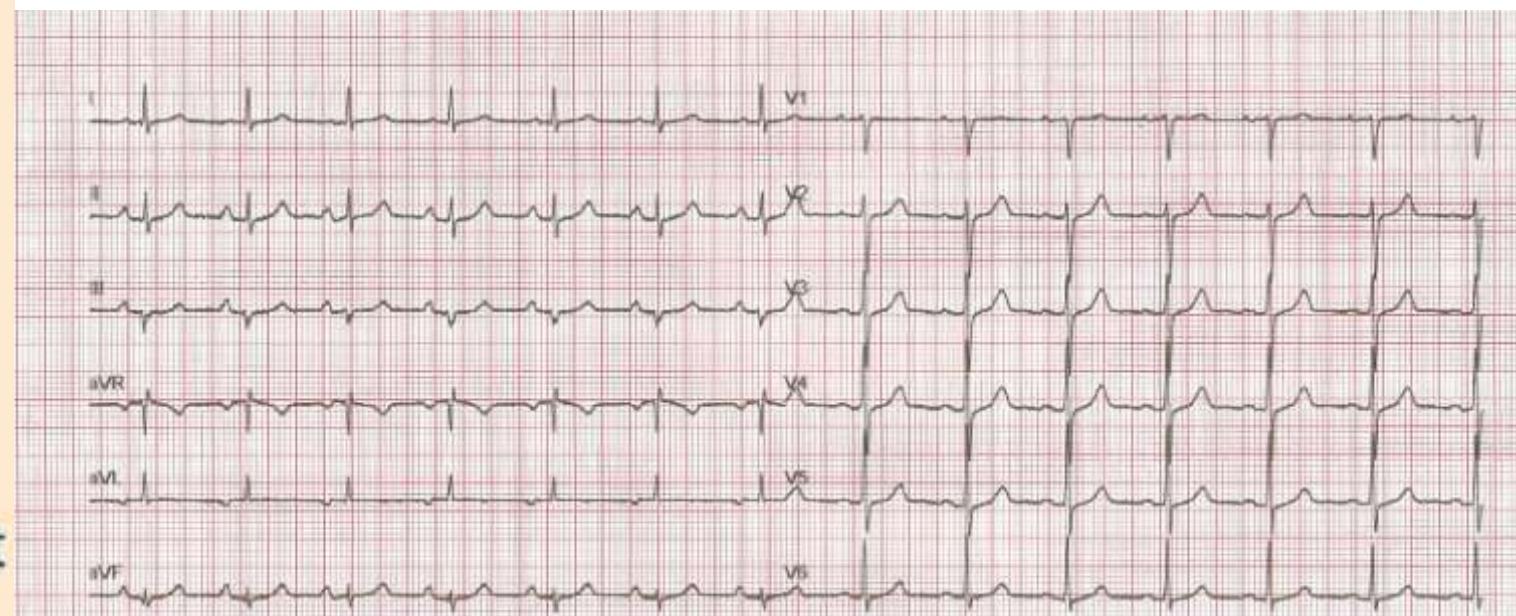
-  Previous PCI on prox Cx
- Growing LMCA plaque on FU

## CURRENT PRESENTATION

-  CTCA performed- significant "vulnerable" plaque

## DECISION

-  PCI



Im: 1/58  
Se: 1

Shixeliyev Sarvan  
24.10.15-13:15:40-STD-1.3.12.2.1107.5.13.2.106066  
01.01.1976 M  
FHN Tibb Xidmeti Tibb Merkezi  
1  
Coronary ^ Diagnostic Coronary Catheterization  
Coro

WL: 127 WW: 125 [D]  
AP

15.10.2024 14:48:49

Im: 1/18  
Se: 12

Shixeliyev Sarvan  
24.10.15-13:15:40-STD-1.3.12.2.1107.5.13.2.106066  
01.01.1976 M  
FHN Tibb Xidmeti Tibb Merkezi  
1  
Coronary ^ Diagnostic Coronary Catheterization  
Coro

WL: 127 WW: 125 [D]  
LAO: 33 CRA: 29

15.10.2024 15:02:51

Im: 1/47  
Se: 15

Shixeliyev Sarvan  
24.10.15-13:15:40-STD-1.3.12.2.1107.5.13.2.106066  
01.01.1976 M  
FHN Tibb Xidmeti Tibb Merkezi  
1  
Coronary ^ Diagnostic Coronary Catheterization  
Coro

WL: 127 WW: 125 [D]  
RAO: 2 CAU: 41

15.10.2024 15:04:11

Im: 1/22  
Se: 16

Shikeliyev Sarvan  
24.10.15-13:15:40-STD-1.3.12.2.1107.5.13.2.106066  
01.01.1976 M  
FHN Tibb Xidmeti Tibb Merkezi  
1  
Coronary ^ Diagnostic Coronary Catheterization  
Coro

WL: 127 WW: 125 [D]  
RAO: 2 CAU: 41

15.10.2024 15:05:37

Im: 1/49  
Se: 19

Shixeliyev Sarvan  
24.10.15-13:15:40-STD-1.3.12.2.1107.5.13.2.106066  
01.01.1976 M  
FHN Tibb Nidmet Tibb Merkezi  
1  
Coronary Diagnostic Coronary Catheterization  
Coro

WL: 127 WW: 120 [D]  
LAO: 35 CAU: 41

15.10.2024 15:06:47

Im: 1/20  
Se: 21

Shixeliyev Sarvan  
24.10.15-13:15:40-STD-1.3.12.2.1107.5.13.2.106066  
01.01.1976 M  
FHN Tibb Nidmeti Tibb Merkezi  
1  
Coronary ^ Diagnostic Coronary Catheterization  
Coro

WL: 127 WW: 112 [D]  
LAO: 35 CAU: 41

15.10.2024 15:10:02

Im: 1/11  
Se: 24

Shixeliyev Sarvan  
24.10.15-13:15:40-STD-1.3.12.2.1107.5.13.2.106066  
01.01.1976 M  
FHN Tibb Xidmeti Tibb Merkezi  
1  
Coronary Diagnostic Coronary Catheterization  
Coro

WL: 127 WW: 119 [D]  
LAO: 35 CAU: 41

15.10.2024 15:16:37

Im: 1/54  
Se: 25

Shixeliyev Sarvan  
24.10.15-13:15:40-STD-1.3.12.2.1107.5.13.2.106066  
01.01.1976 M  
FHN Tibb Xidmeti Tibb Merkezi  
1  
Coronary ^ Diagnostic Coronary Catheterization  
Coro

WL: 127 WW: 115 [D]  
LAO: 35 CAU: 41

15.10.2024 15:17:34

Im: 1/14  
Se: 26

Shixeliyev Sarvan  
24.10.15-13:15:40-STD-1.3.12.2.1107.5.13.2.106066  
01.01.1976 M  
FHN Tibb Xidmet Tibb Merkezi  
1  
Coronary ^ Diagnostic Coronary Catheterization  
Coro

WL: 127 WW: 115 [D]  
LAO: 35 CAU: 41

15.10.2024 15:20:44

Im: 1/39  
Se: 27

Shixeliyev Sarvan  
24.10.15-13:15:40-STD-1.3.12.2.1107.5.13.2.106066  
01.01.1976 M  
FHN Tibb Xidmeti Tibb Merkezi  
1  
Coronary ^ Diagnostic Coronary Catheterization  
Coro

WL: 127 WW: 112 [D]  
LAO: 35 CAU: 41

15.10.2024 15:21:03

# HIGHLIGHTS



**With advancements in PCI, clinical outcomes after left main PCI have progressively improved.**



**Unmet needs still exist between clinical practice and the current evidence for left main PCI.**



**Better decision making of revascularization choice and PCI optimization should be emphasized to improve outcomes of LMCA disease.**



**Further research will provide evidence to resolve conflicting issues on left main PCI**