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HEART CARE CLINIC

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[INDO AMERICAN CARDIOLOGY UNIT]

Conflicts of Interest

- None

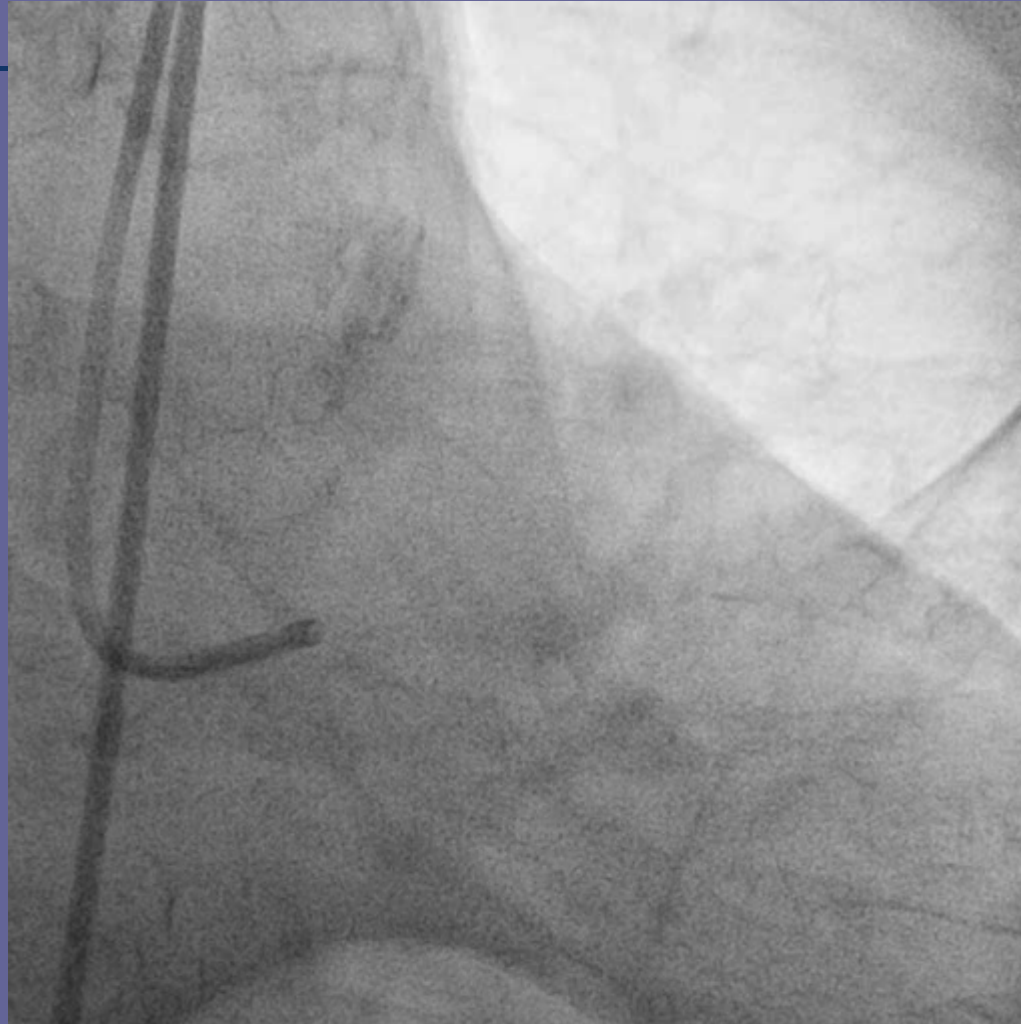
Treatment of Left main Bifurcation lesion using new NILE PAX[®] Drug eluted bifurcation stent system

BACKGROUND

- 84 years male gentleman who is having risk factor of HT, Age, Gender, Hypercholesteareamia, No DM admitted with Left ventricular failure. ECG revealed Significant ST depression in V1 – V6 & 'Q' in III avf, Echo showed LVEF = 35 % RWMA +, Grade I MR. Coronary Angiogram revealed Left main distal bifurcation lesion involving CAD & LCX origin. Patient was referred for CABGs.

LMCA BIFURCATION LESION

O1
AVI



The Ultimate Goal of the SYNTAX Score

- Create a prospective angiographic tool to grade complexity of coronary disease
 - A semi-quantitative, visual score will help interventional cardiologists and surgeons be aware of the anatomical complexity to anticipate procedural difficulties and eventually predict outcomes
- Obtain evidence-based guidelines for selecting revascularization technique (surgery or PCI)

The SYNTAX Score will be retroactively weighted based on MACCE at 1 and 5 years to optimize its prognostic value

SYNTAX Score Methodology

- Prior to treatment, at the local Heart Team conference (surgeon and interventional cardiologist), the SYNTAX Score was calculated for all significant lesions in vessels $\geq 1.5\text{mm}$
- In addition, the SYNTAX Score was calculated from the diagnostic angiogram by a core laboratory (Cardialysis)
- The core laboratory also compared inter-observer variability

Components of the SYNTAX Score

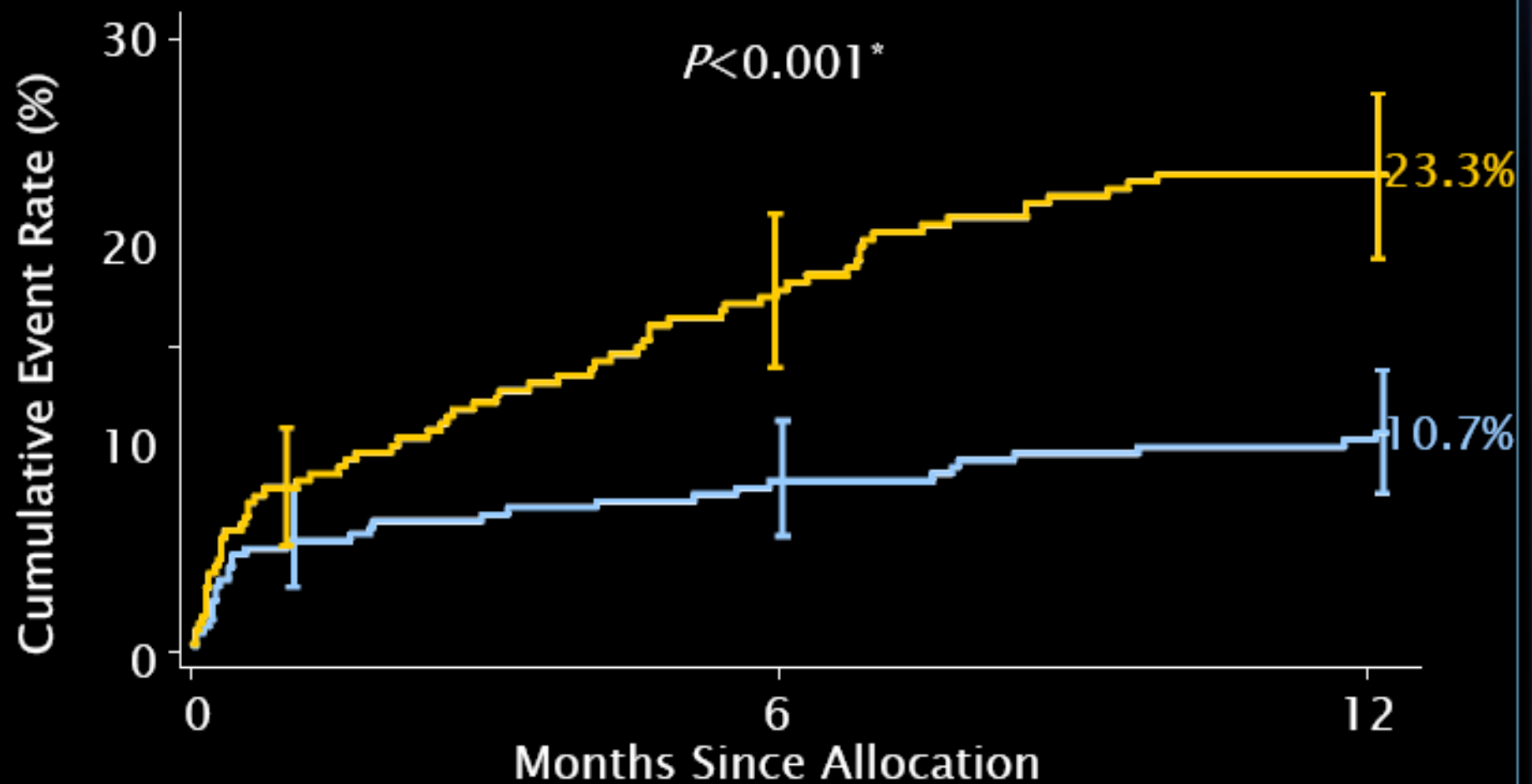


MACCE to 12 Months by SYNTAX Score Tercile

High Scores (≥ 33)

CABG (N=316)

TAXUS (N=290)



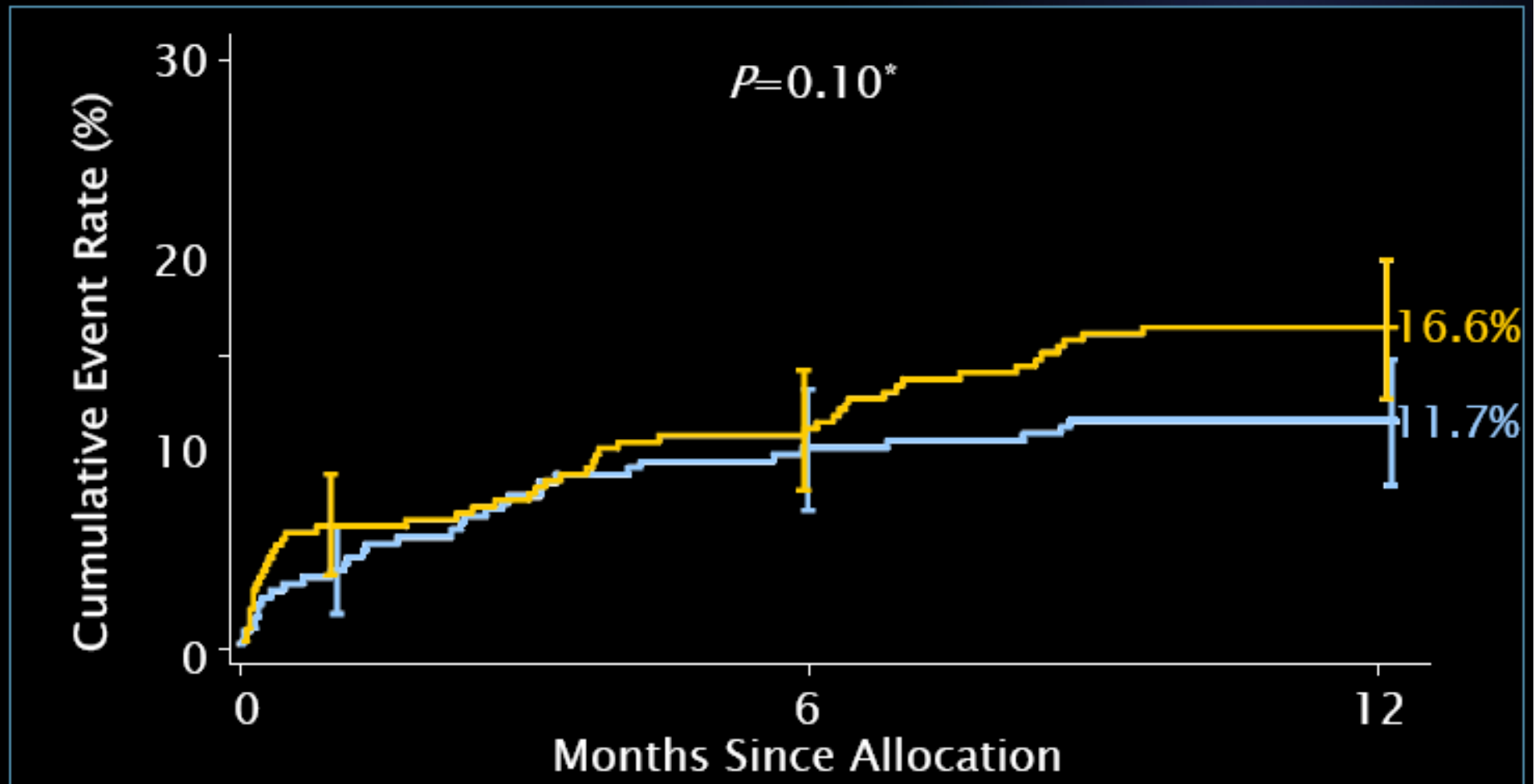
Event Rate \pm 1.5 SE; *chi square test; raw SYNTAX score for illustrative purposes only

MACCE to 12 Months by SYNTAX Score Tercile

Intermediate Scores (23–32)

■ CABG (N=300)

■ TAXUS (N=310)



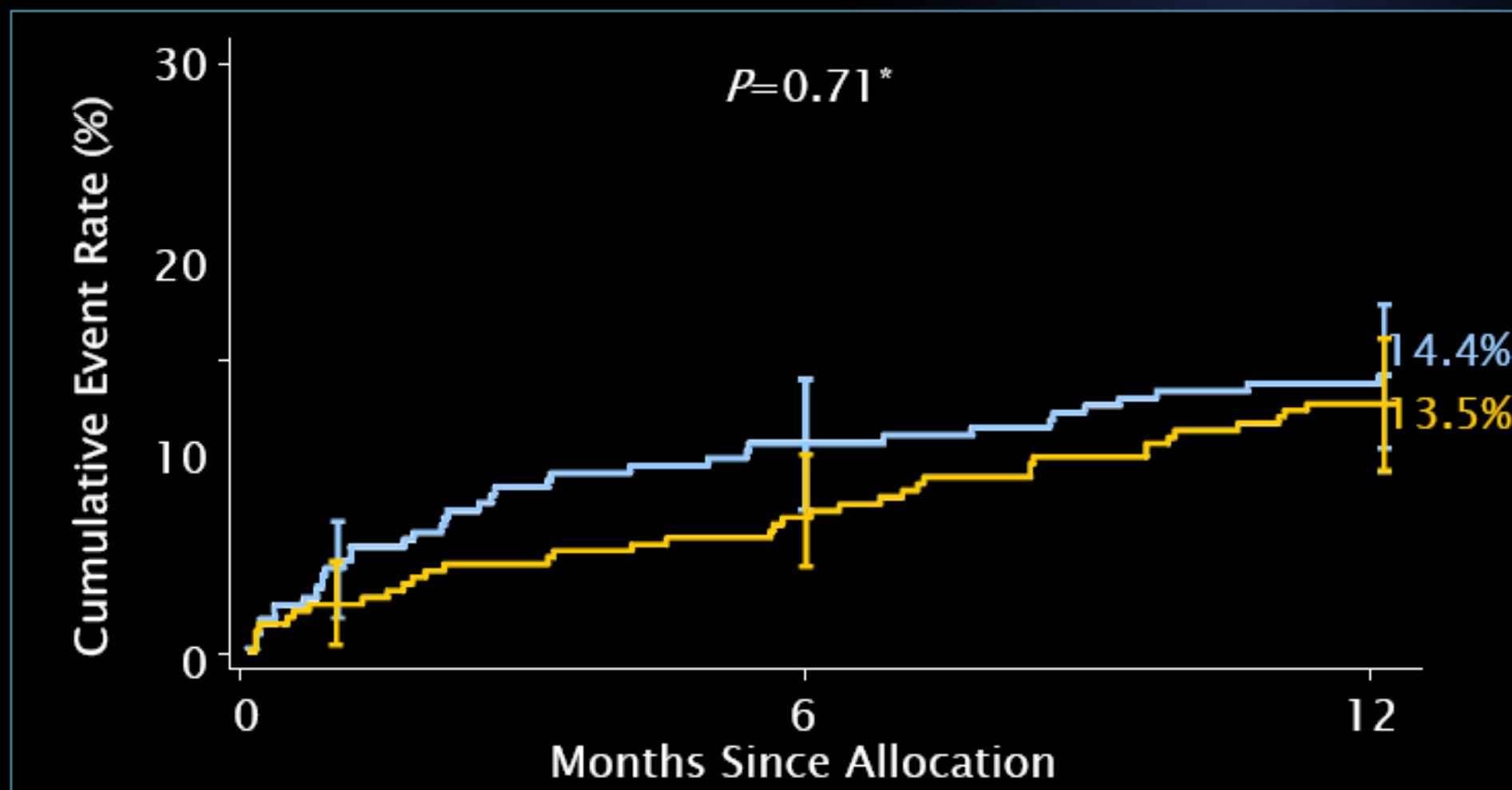
Event Rate \pm 1.5 SE; *chi square test; raw SYNTAX score for illustrative purposes only

MACCE to 12 Months by SYNTAX Score Tercile

Low Scores (0-22)

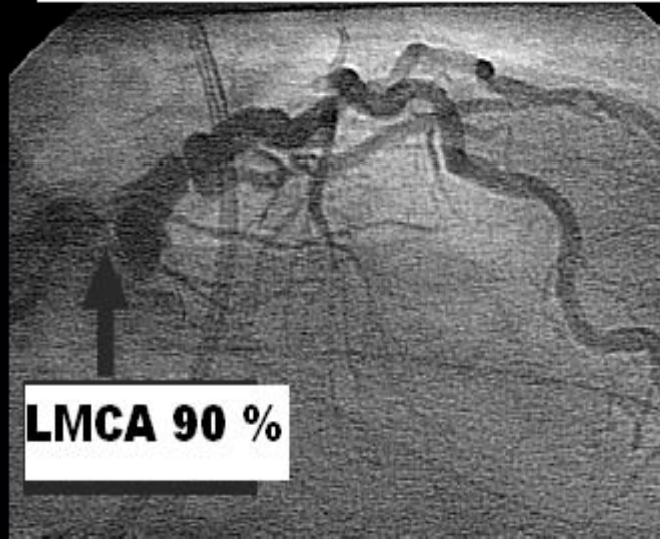
■ CABG (N=274)

■ TAXUS (N=299)



Event Rate \pm 1.5 SE; *chi square test; raw SYNTAX score for illustrative purposes only

SYNTAX SCORE OF PATIENT



Lesion 2

- Segment 5: 5x2
- + Bifurcation Type A
- + Heavy calcification

Lesion 2 Score:

10

1

2

13

LMCA bifurcation stenting

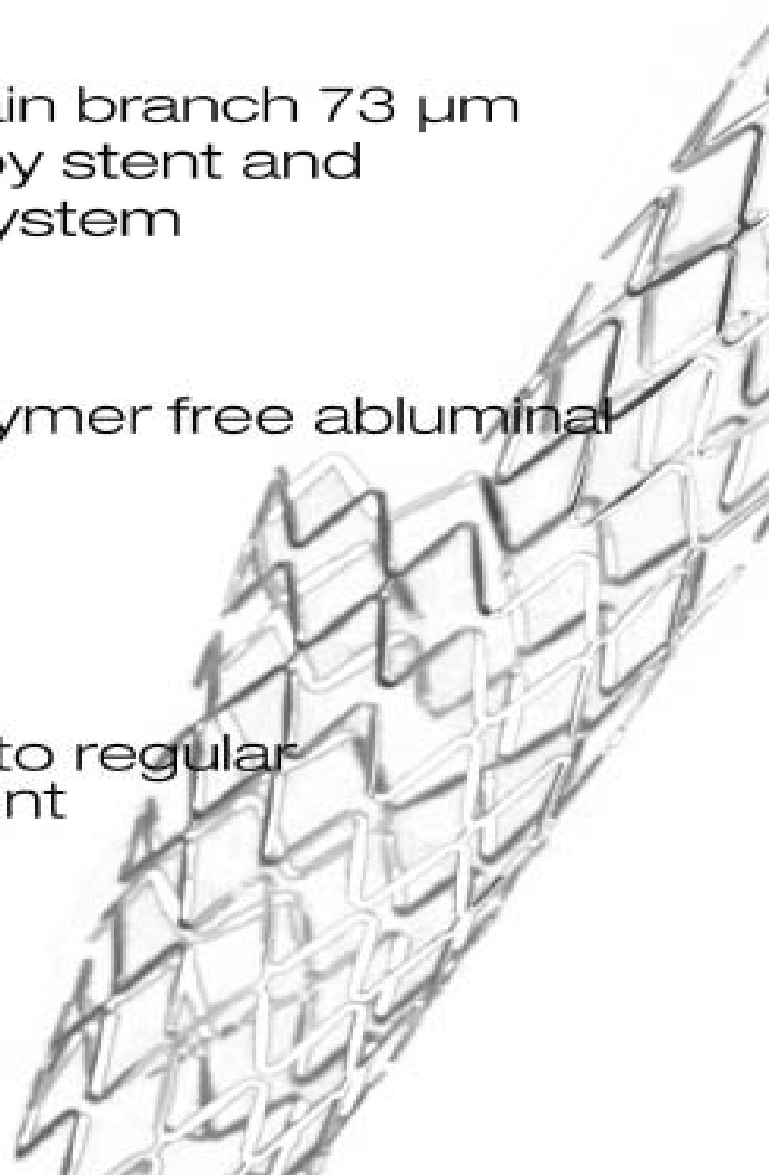
PLAN OF ACTION

- He was taken up for Rescue PTCA using new dedicated bifurcation device "NILE PAX"[®] Paclitaxel eluted bifurcation stent.
- Two wires of stent system to be crossed each in LAD & LCX. Balloon dilatation of LAD to be performed using 1.5 x 15 mm voyager balloon followed by 3.5 x 15 stent balloon at 6 – 8 atmosphere each.
- "NILE PAX"[®] stent [paclitaxel eluted] to be introduced over both wires such that stent remaining in distal LMCA – LAD across LAD origin.
- Gap in this stent faces LCX origin as this stent will be crossed over both wires simultaneously subsequently 3 x 15 mm proximal balloon [Proximal two markers] to be placed LCX origin. Between LMCA – LAD balloon and LCX balloon kissing balloon dilatation and expansion of stent was performed at 12 – 14 atmosphere pressure stent expanded in LMCA – LAD area and LCX origin simultaneously to be dilated with balloon.

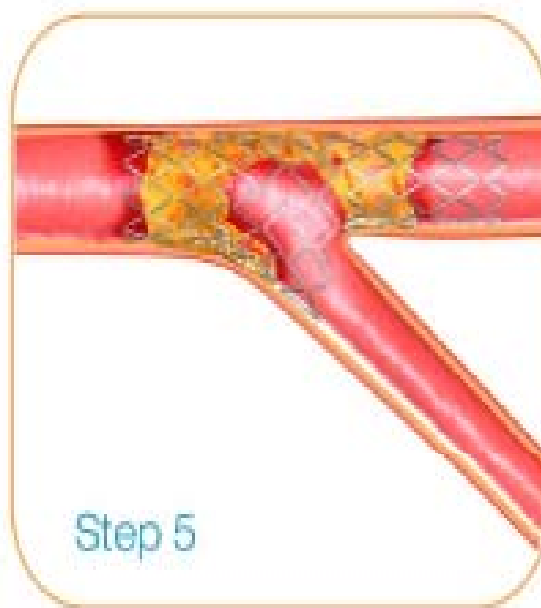
Breakthrough in Coronary Bifurcation Treatment

First Drug Eluting Stent dedicated to bifurcation treatment

- Unique designed main branch 73 μm chromium cobalt alloy stent and dedicated delivery system
- Consistent 5 μm polymer free abluminal Paclitaxel layer
- Complete reversion to regular chromium cobalt stent after 45 days



Instructions for use



- Step 1 - System positioning
- Step 2 - Main branch balloon inflation
- Step 3 - Side branch balloon positioning
- Step 4 - Balloon kissing inflation
- Step 5 - Final control

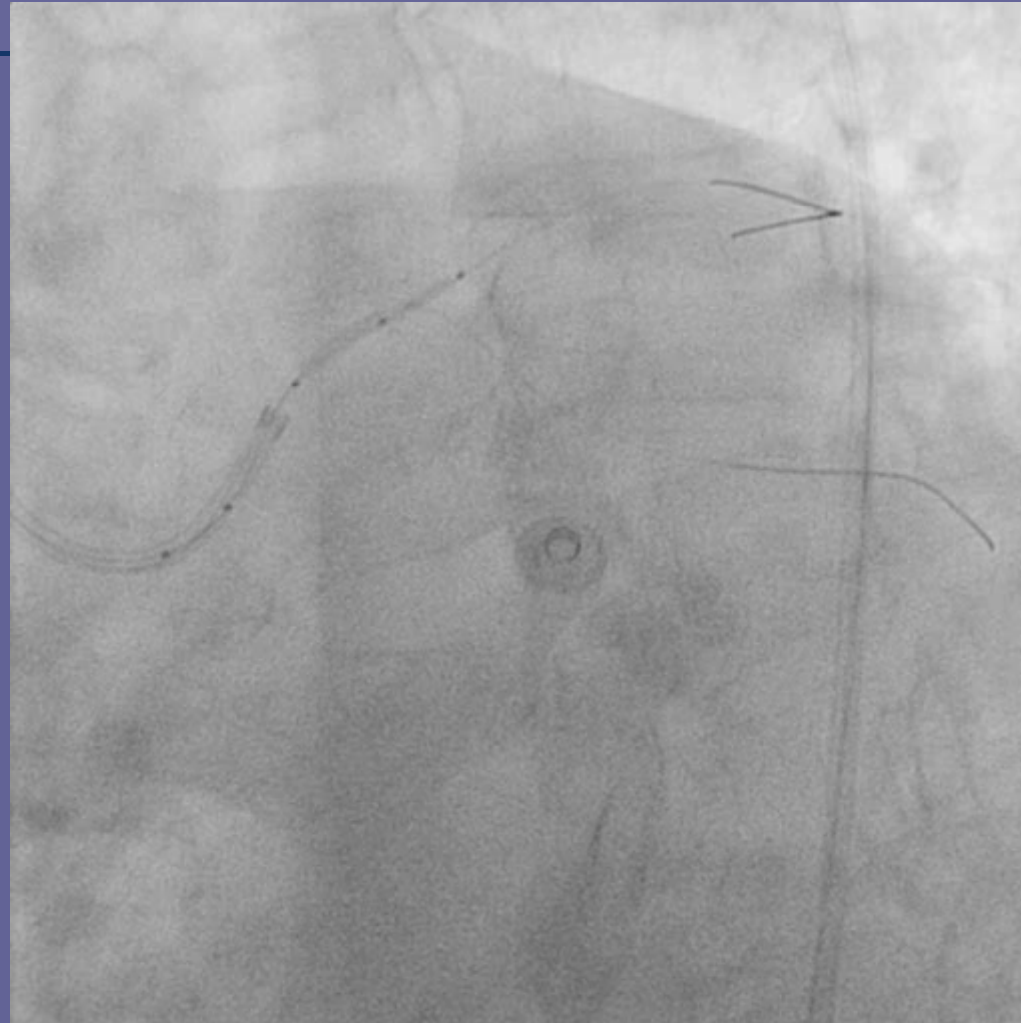
TWO WIRE CROSS ACROSS DISTAL LAD & LCX

02
AVI



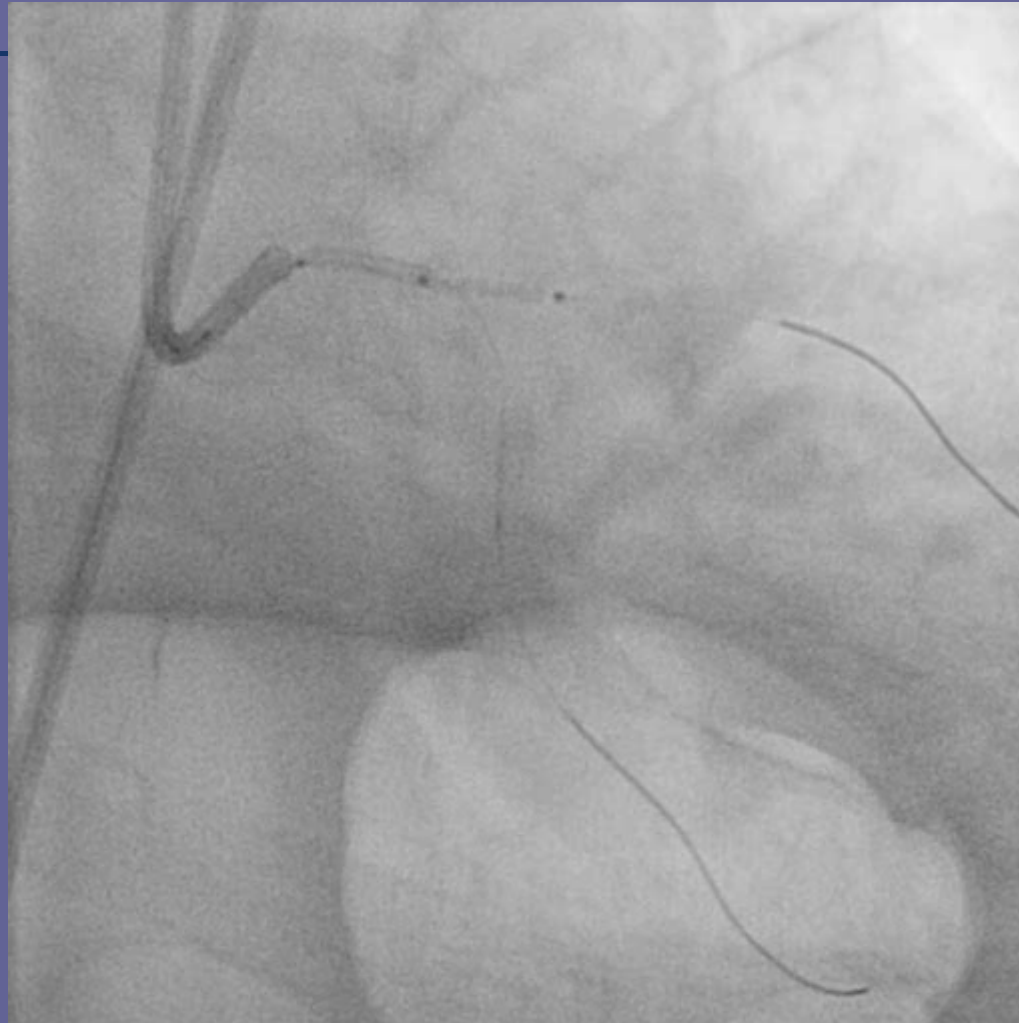
NILE PAX® STENT WITH 5 MARKERS CROSS ACROSS LMCA – LAD LESION

O3
AVI



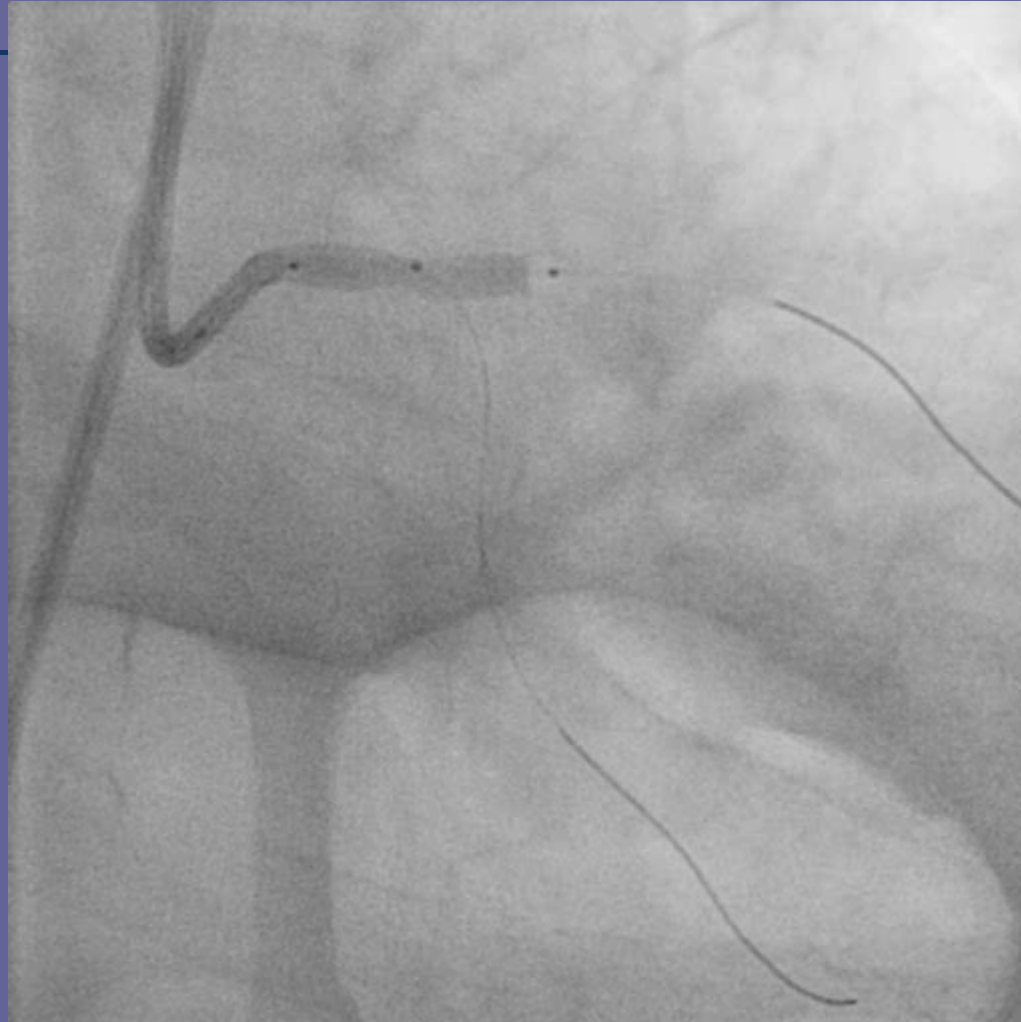
2ND MARKER WAS PLACED AT THE LCX ORIGIN

O4
AVI



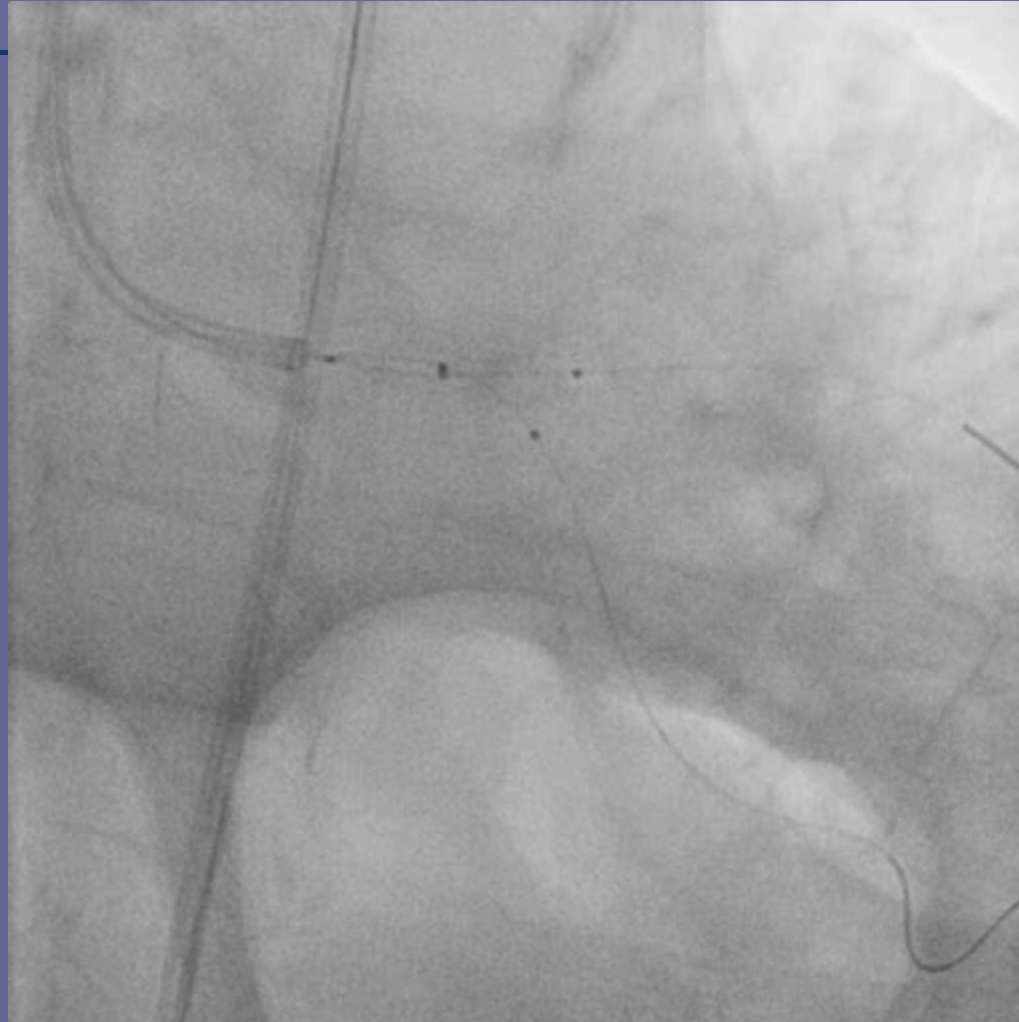
STENT DEPLOYED AT 15 ATMOSPHERE PRESSURE

O5
AVI



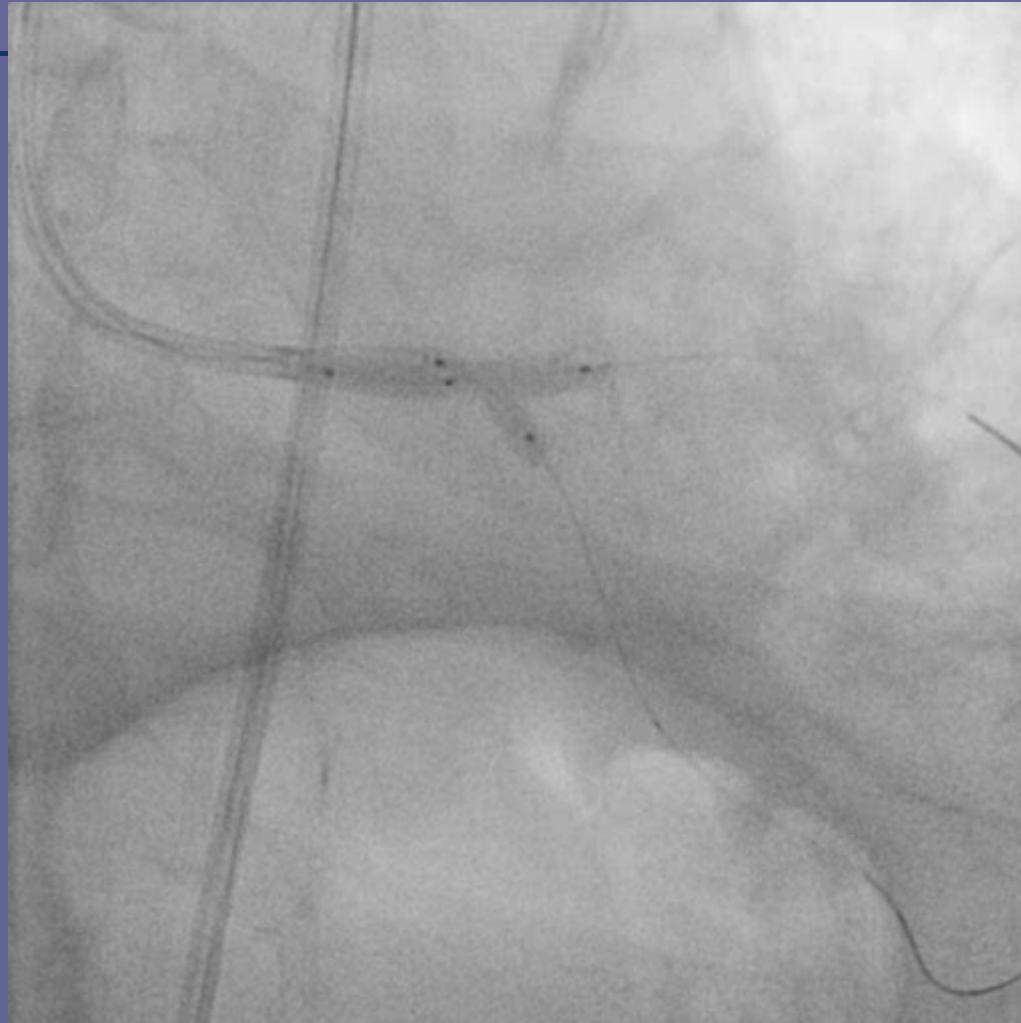
**3 X 15 MM PROXIMAL BALLOON WAS CROSSED
IN LCX SUCH A WAY THAT PROXIMAL MARKER
MATCHES 2ND MARKER OF LMCA – LAD BALLOON**

O6
AVI



KISSING BALLON DILATATION OF BOTH LAD & LCX ORIGIN

07
AVI



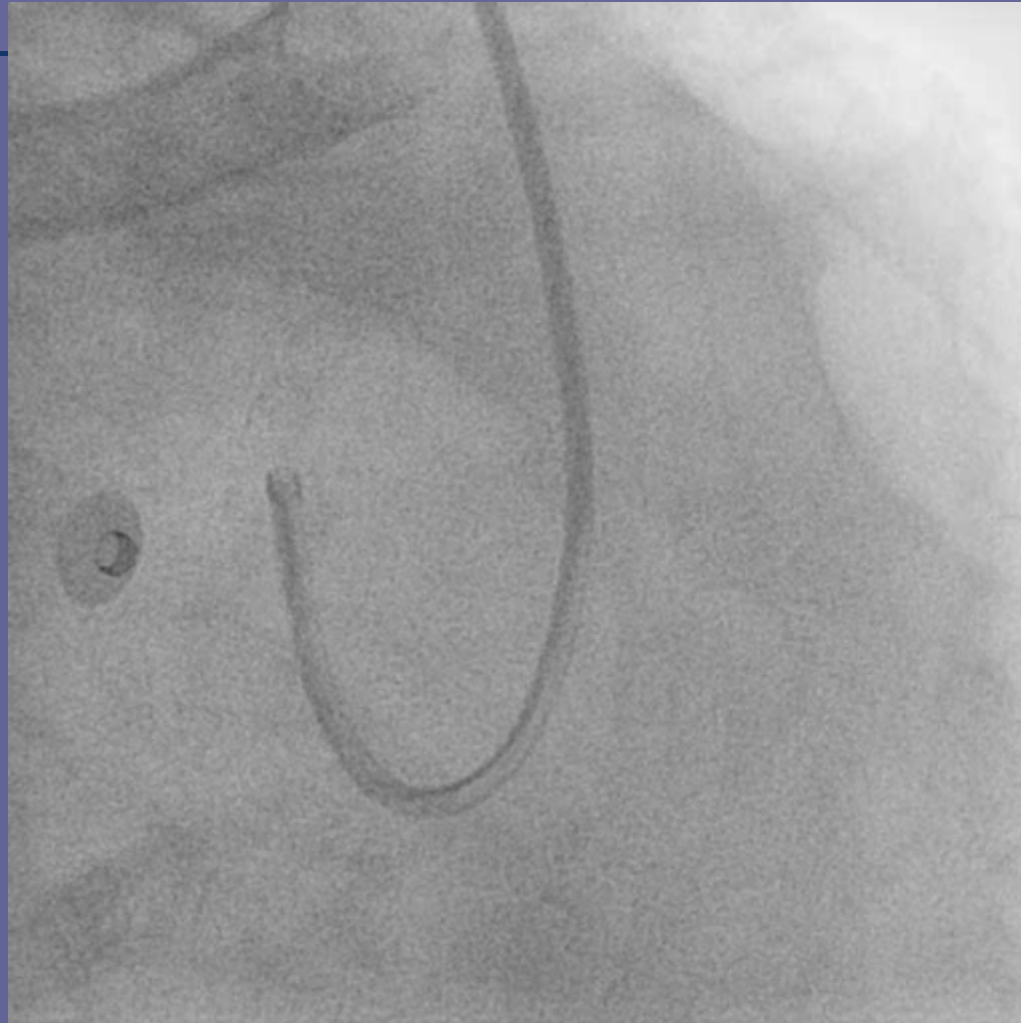
RESULT AFTER KISSING BALLOON

08
AVI



RESULT AFTER KISSING BALLOON

09
AVI



LMCA bifurcation stenting

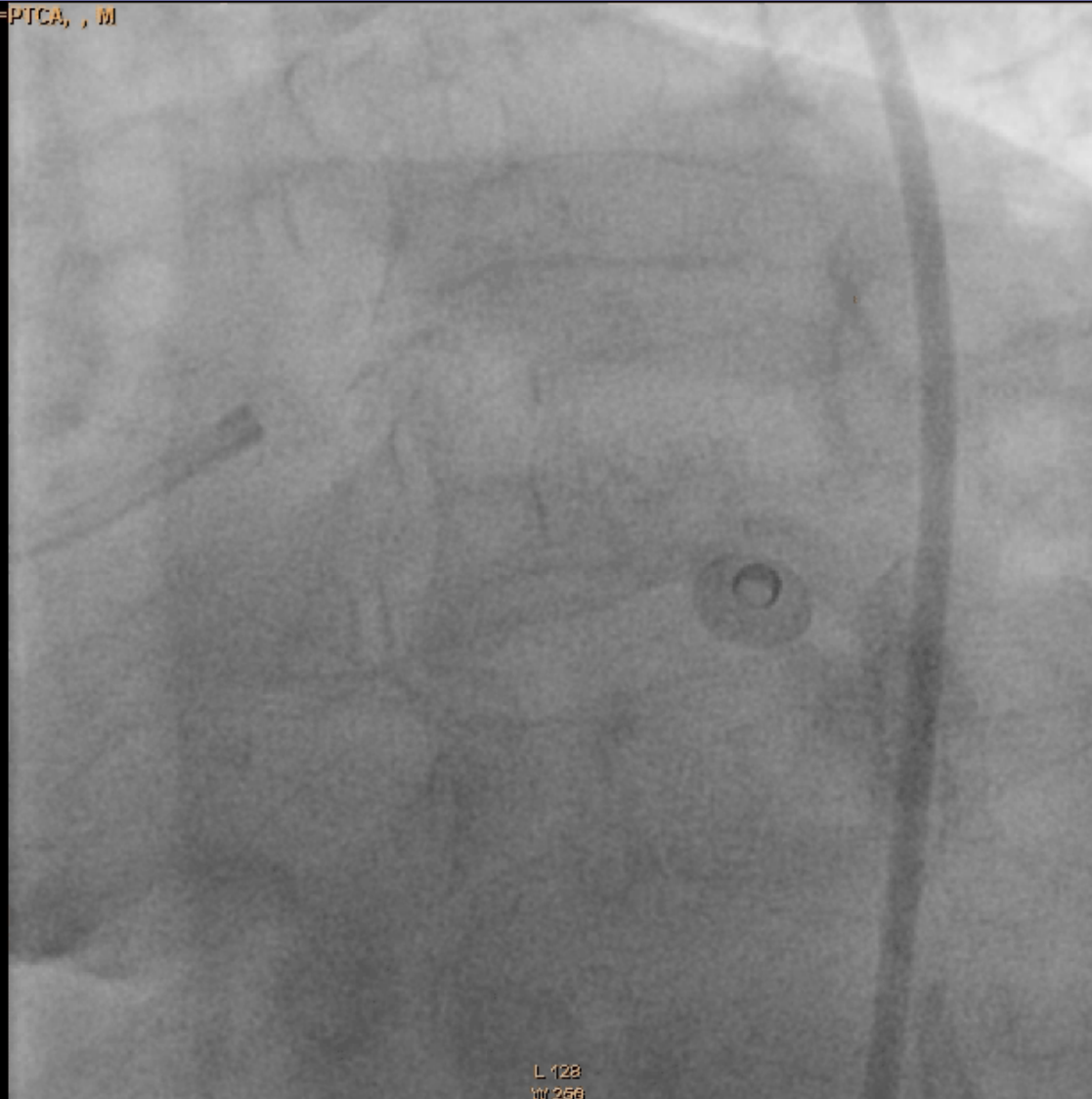
RESULTS

- NILE PAX[®] Paclitaxel eluted balloon with bifurcation stent system allowed Simultaneous balloon dilatation of side branch [LCX] without distortion of stent wire structure. This resulted in smooth result of kissing post stent balloon dilatation & TIMI 3 flow in both vessels.

FOLLOWUP ANGIO AFTER 6 MONTHS.

CHOKSI GUNVANTLAL P., 3641-84Y-PTCA, , M
Run 31 - Frame 1 / 36

Shree B.D. Mehta Mahavir Heart Institute, Surat
125kV, 571mA, 10s



RAO 40.8°
Cranial -39.5°

L 128
W 268

ADVANTAGES OF NILE PAX STENT [dedicated bifurcation Stenting]

- EASE of performance our procedure was completed in short period.
- No need to recrossed wire in bifurcation lesions
- Controlled kissing balloon dilatation of bifurcation lesion resulting in less and uniform metal structure at carina.
- This might reduce MACE after bifurcation stenting and improve results. Yet large randomised trials are required to prove this benefit.