יום עיון בנושא חסימות כרוניות(CTO)

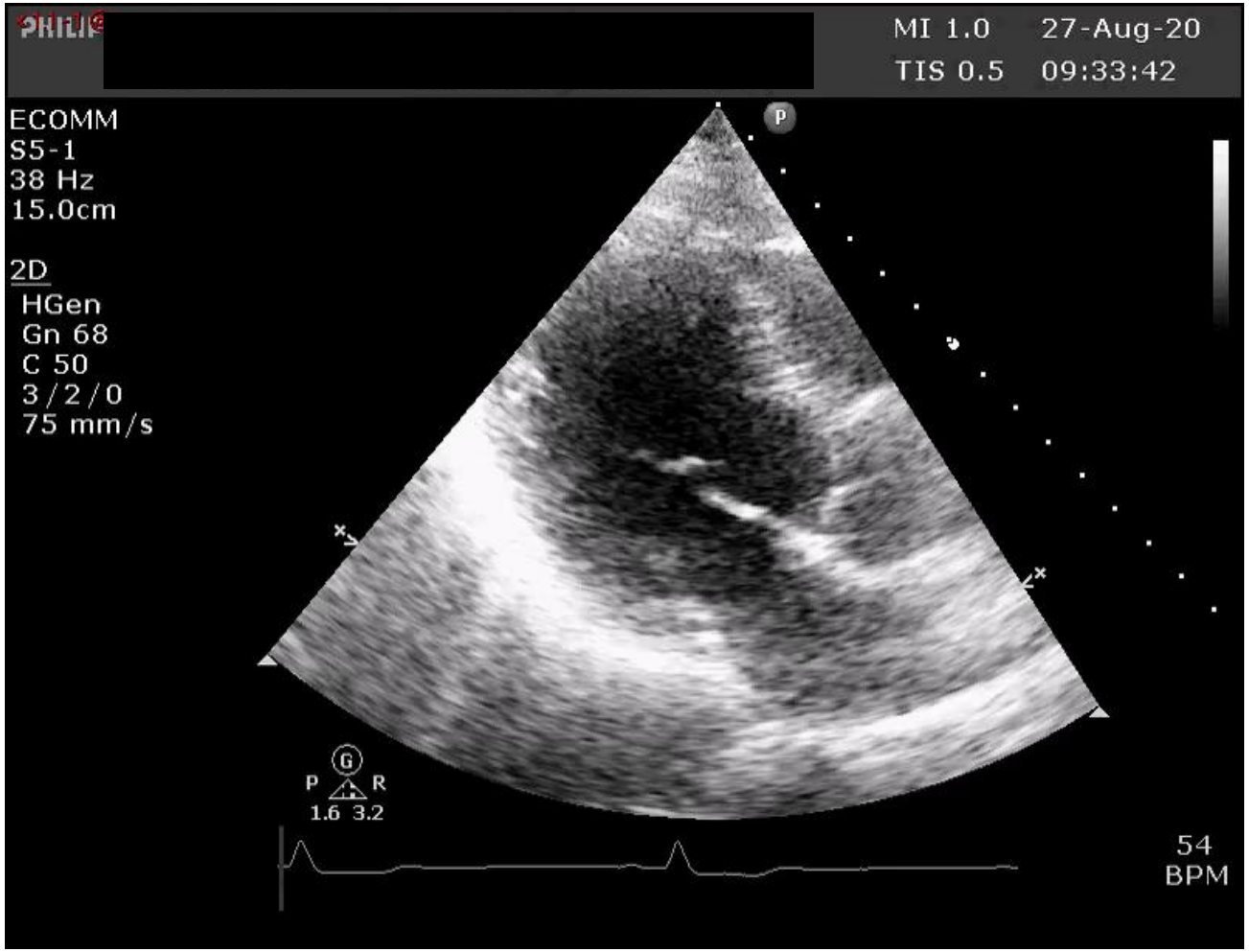
30.09.2022

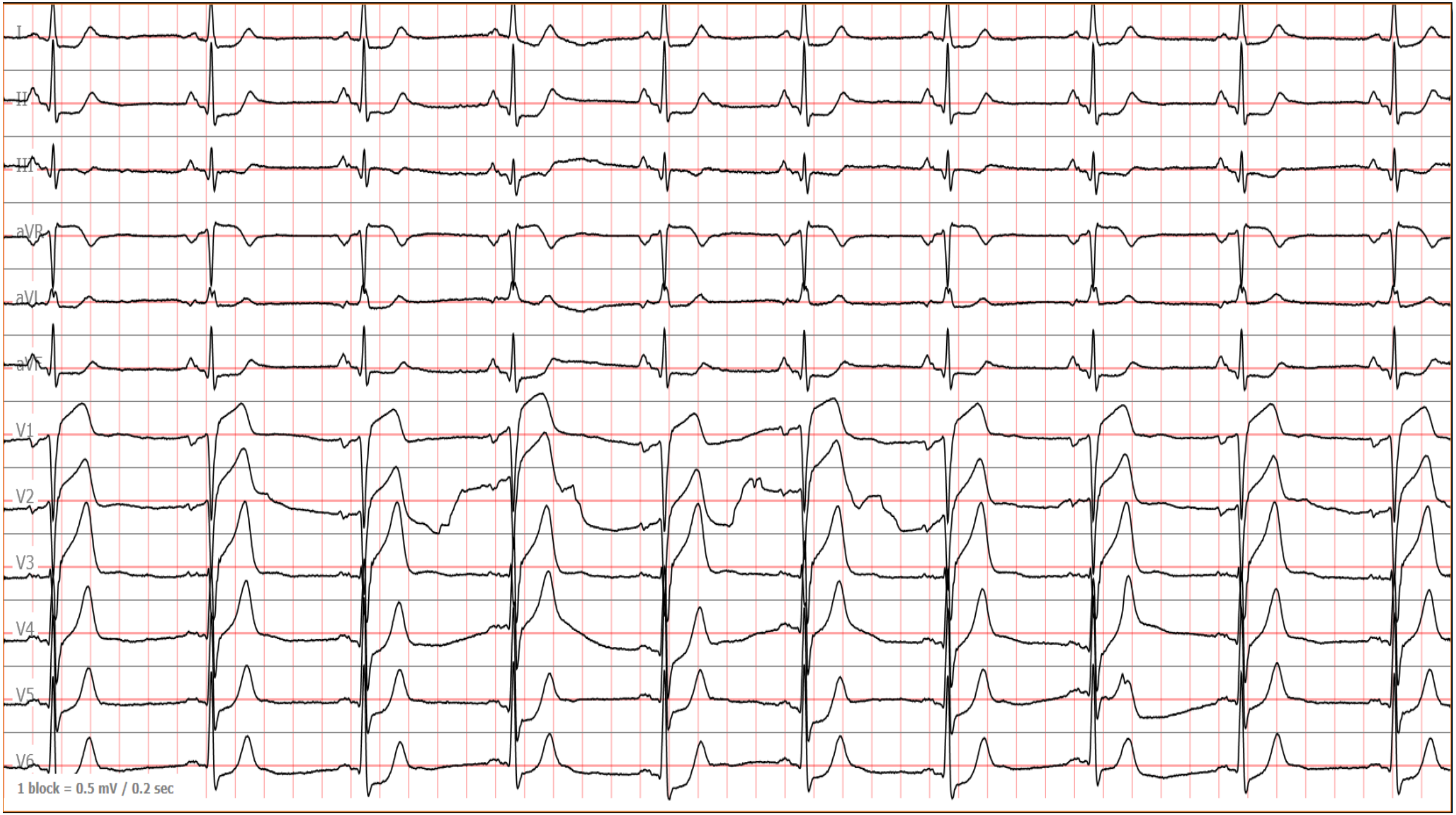
ד"ר גבי גרינברג

מרכז רפואי רבין- קמפוס השרון

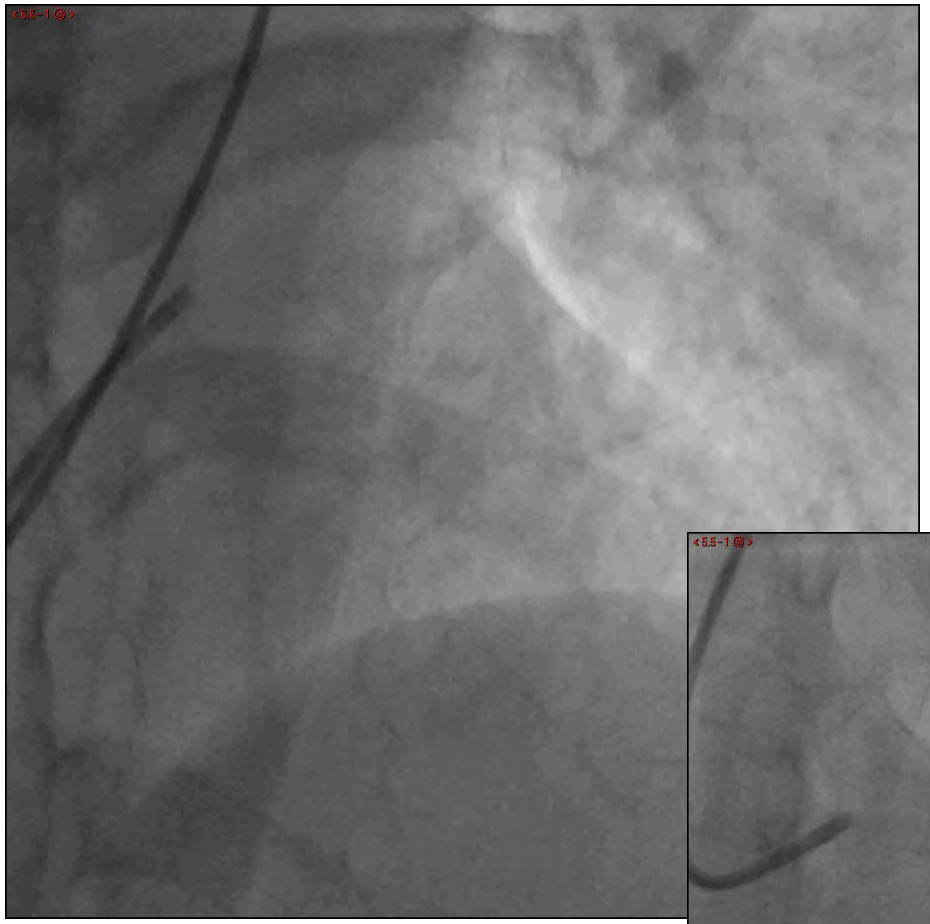
T.M.

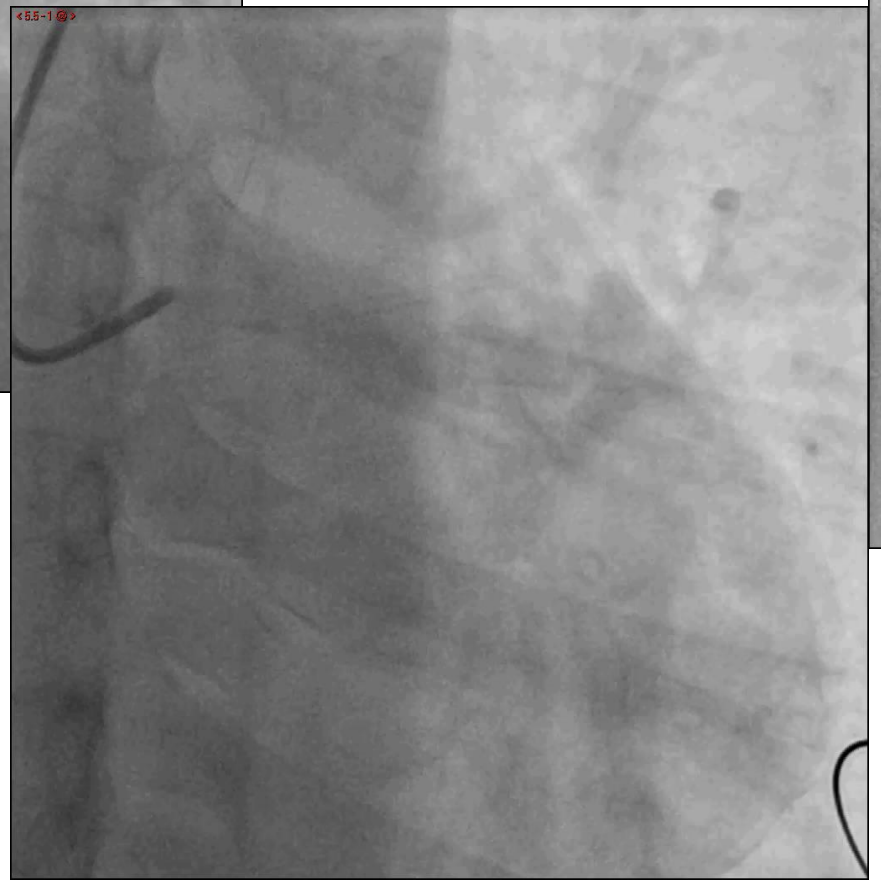
- 49 y/o
- IFG- HbA1C- 6.1%
- Dyslipidemia- LDL-C-200 mg%
- Heavy Smoker
- SCD- Father at 59 y/a
- Presented with Anterior wall STEMI
- Troponin T 1,900 ng/dL (<14ng/dL)

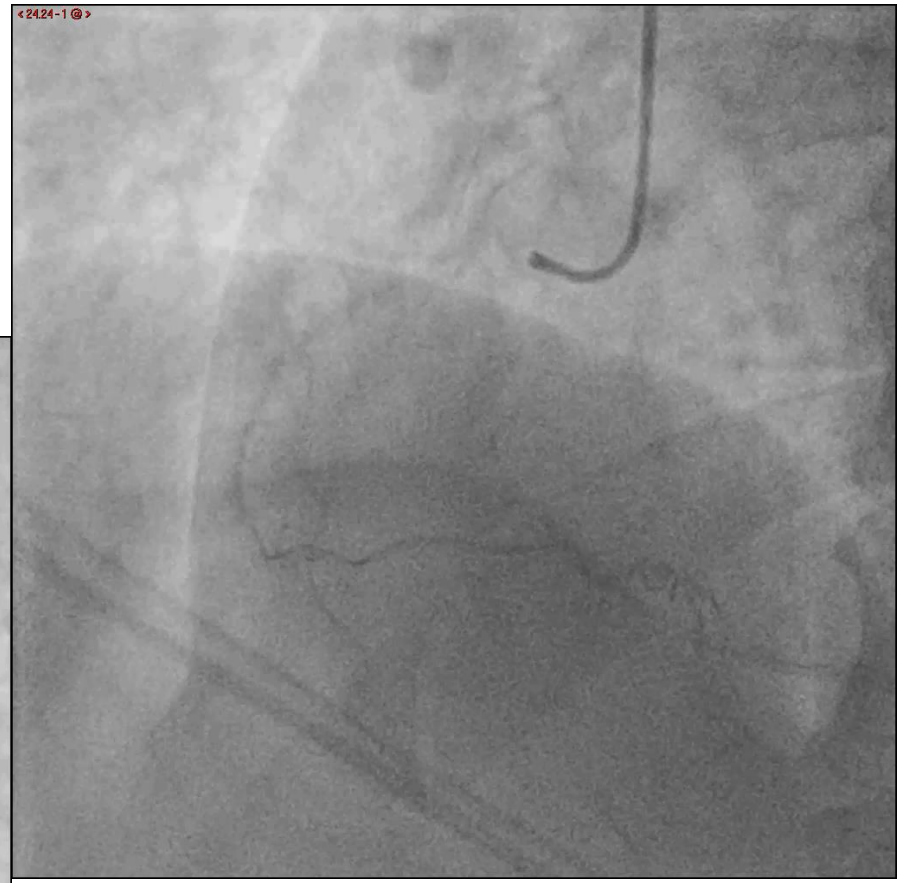


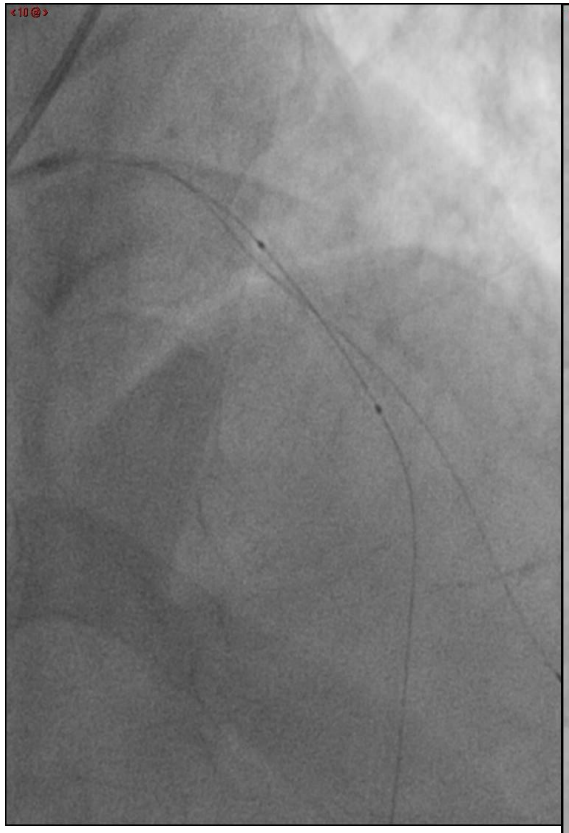
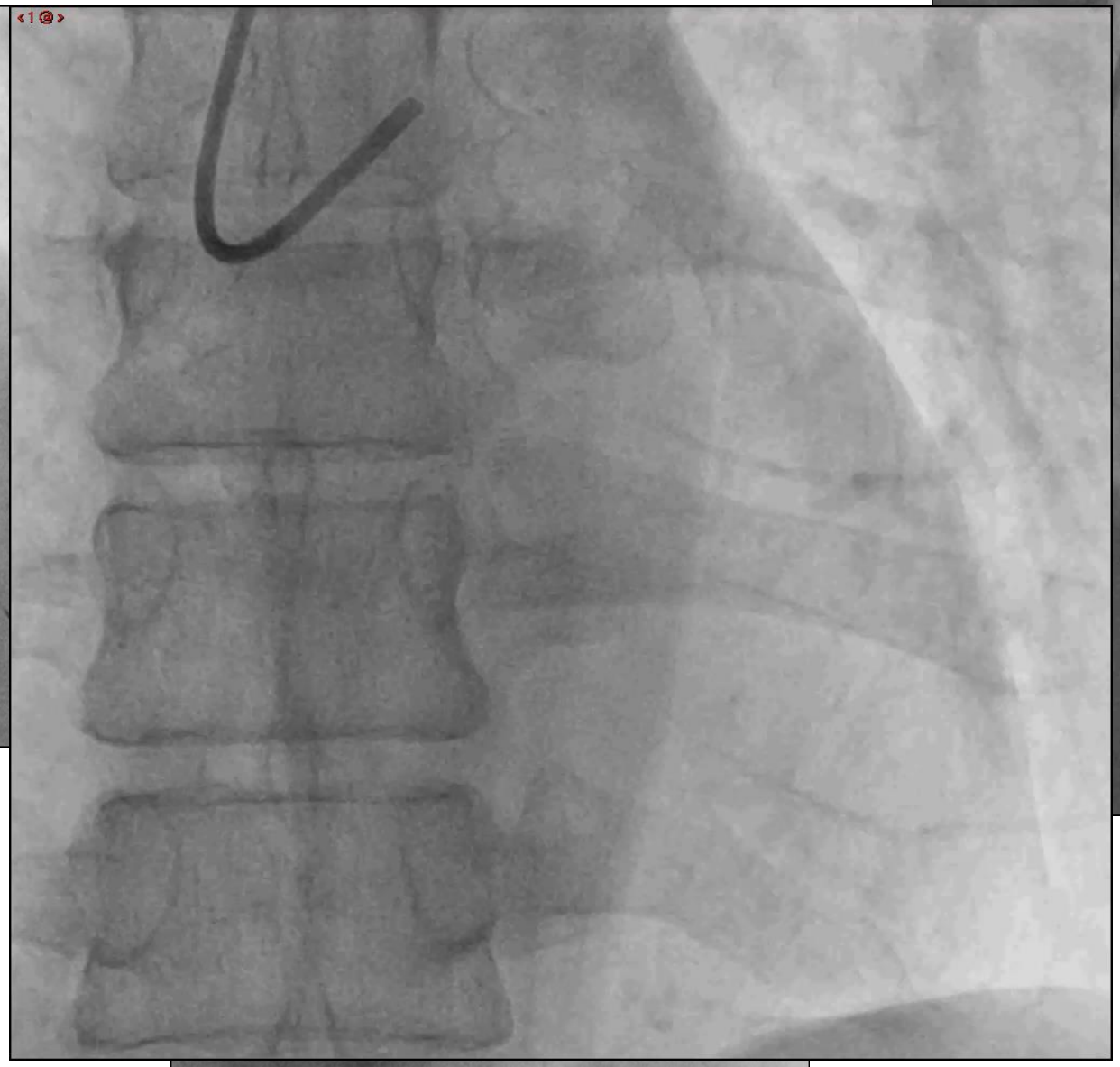
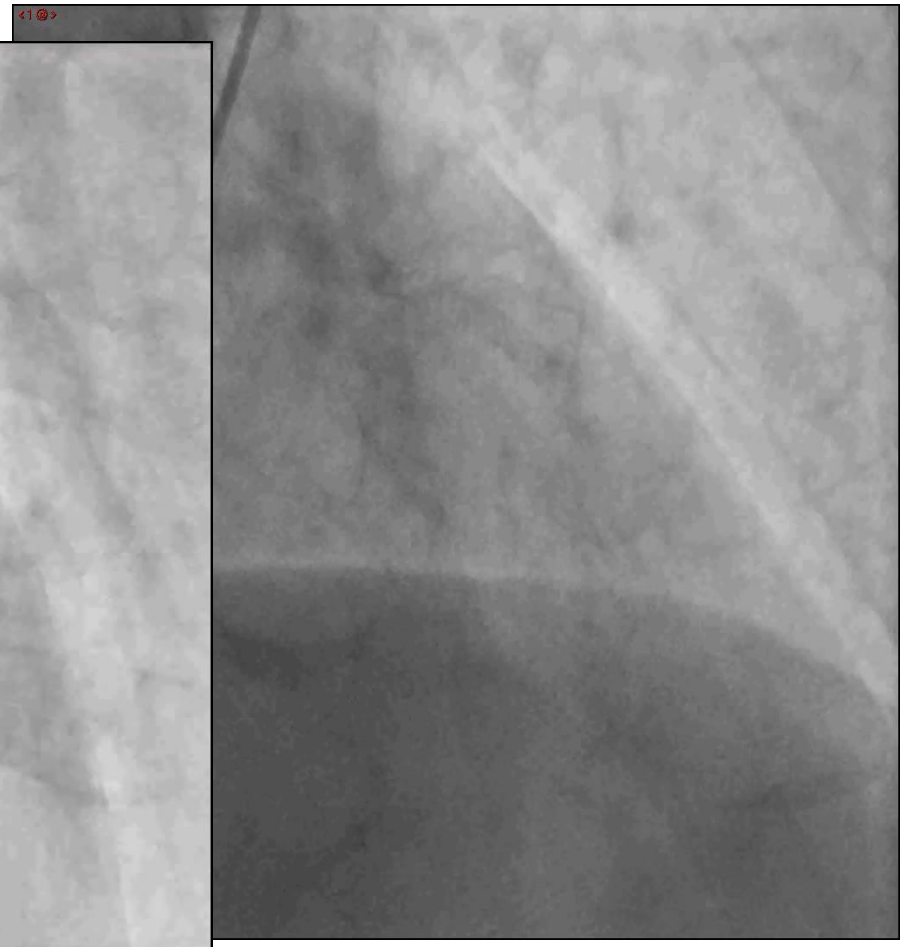
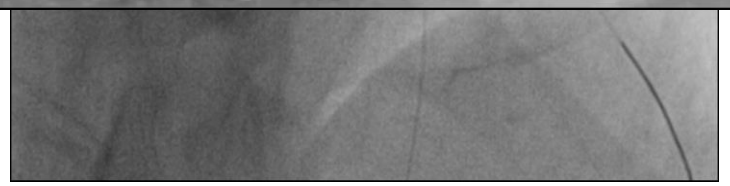

I
II
III
aVR
aVL
aVF
V1
V2
V3
V4
V5
V6
1 block = 0.5 mV / 0.2 sec

27.08.2020





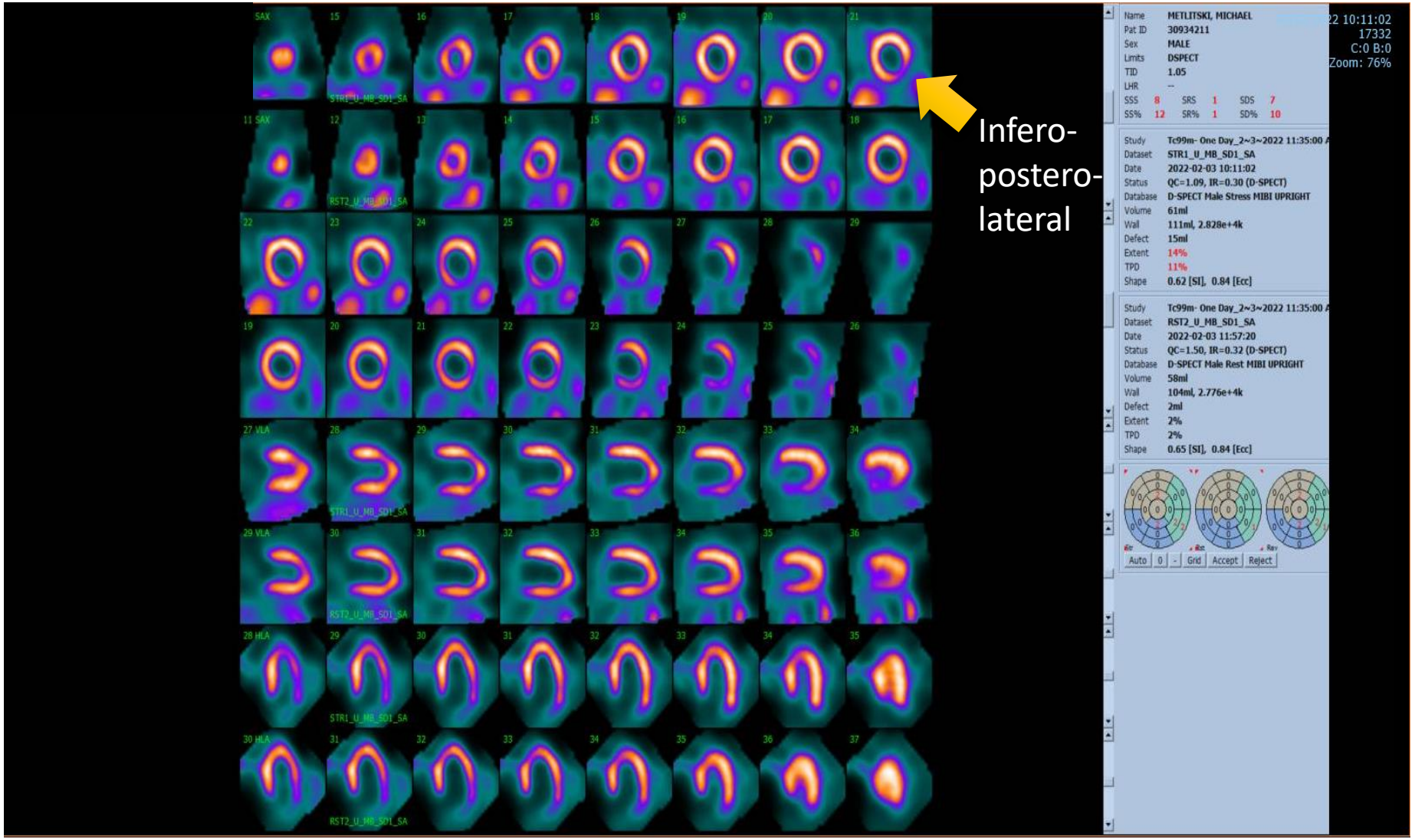


Admission d/t Rec. Angina~ 1Y after PPCI

מתאשפז עם תעוקת חזה 1.5 חוד' אחרי ההתערבות ל-OM2

Tc-Sestamibi- Dipyridamole



LVEF-Rest-56%
LVEF- Stress- 70%
TPD - Rest-2%
TPD – Stress – 11%
Mild to moderate ischemia in Cx/RCA

Outpatient Clinic

Sx: Effort Angina at 150 m

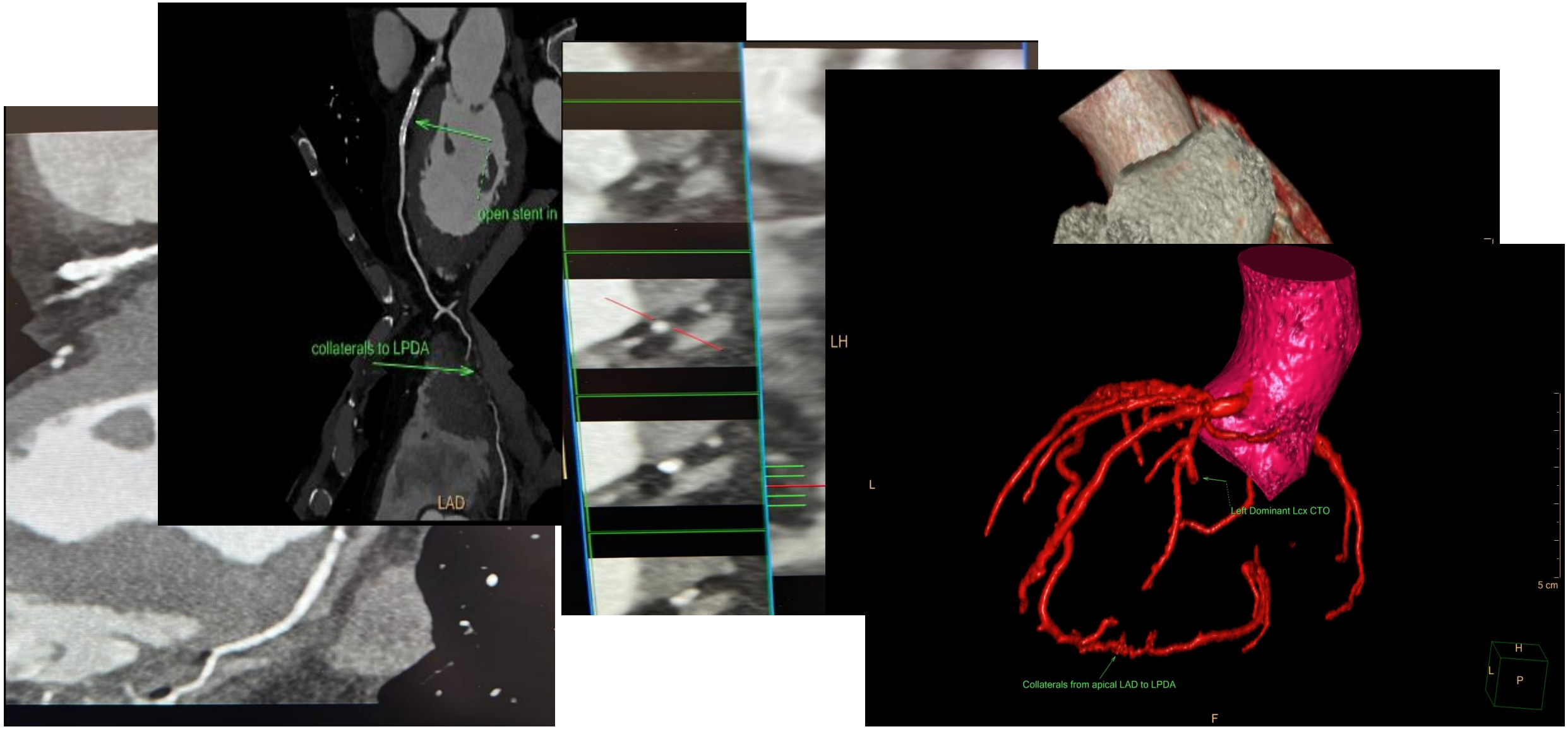
Medications:

- DAPT
- Cardiloc 2.5mgx1/d – HR- 60bpm
- Lotan 12.5mgx1/d
- Atozet 10/80mgx1/d
- NTG P.O.- Headaches
- BP- 110/70 mmHg

Lab:

- HbA1C- 6%
- Glc-97mg/dl
- Cr-1.08 mg/dl
- TC- 134mg/dl
- TG- 137mg/dl
- LDL-C- 98mg/dl

MSCT for Procedure Planning



Prediction Score

J-CTO SCORE SHEET

Version 1.0

Variables and definitions

Tapered **Blunt**

Entry with any tapered tip or dimple indicating direction of true lumen is categorized as "tapered".

Entry shape
- ☐ Tapered (0)
- ☒ Blunt (1)

point

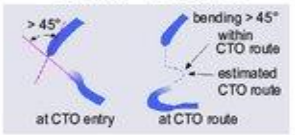
Calcification

Regardless of severity, 1 point is assigned if any evident calcification is detected within the CTO segment.

Calcification
- ☒ Absence (0)
- ☐ Presence (1)

point

Bending > 45 degrees

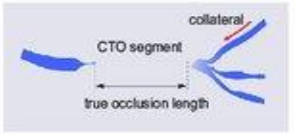


One point is assigned if bending > 45 degrees is detected within the CTO segment. Any tortuosity separated from the CTO segment is excluded from this assessment.

Bending > 45°
- ☐ Absence (0)
- ☒ Presence (1)

point

Occlusion length



Using good collateral images, try to measure "true" distance of occulusion, which tends to be shorter than the first impression.

Occl.Length
- ☐ < 20 mm (0)
- ☒ ≥ 20 mm (1)

point

Re-try lesion

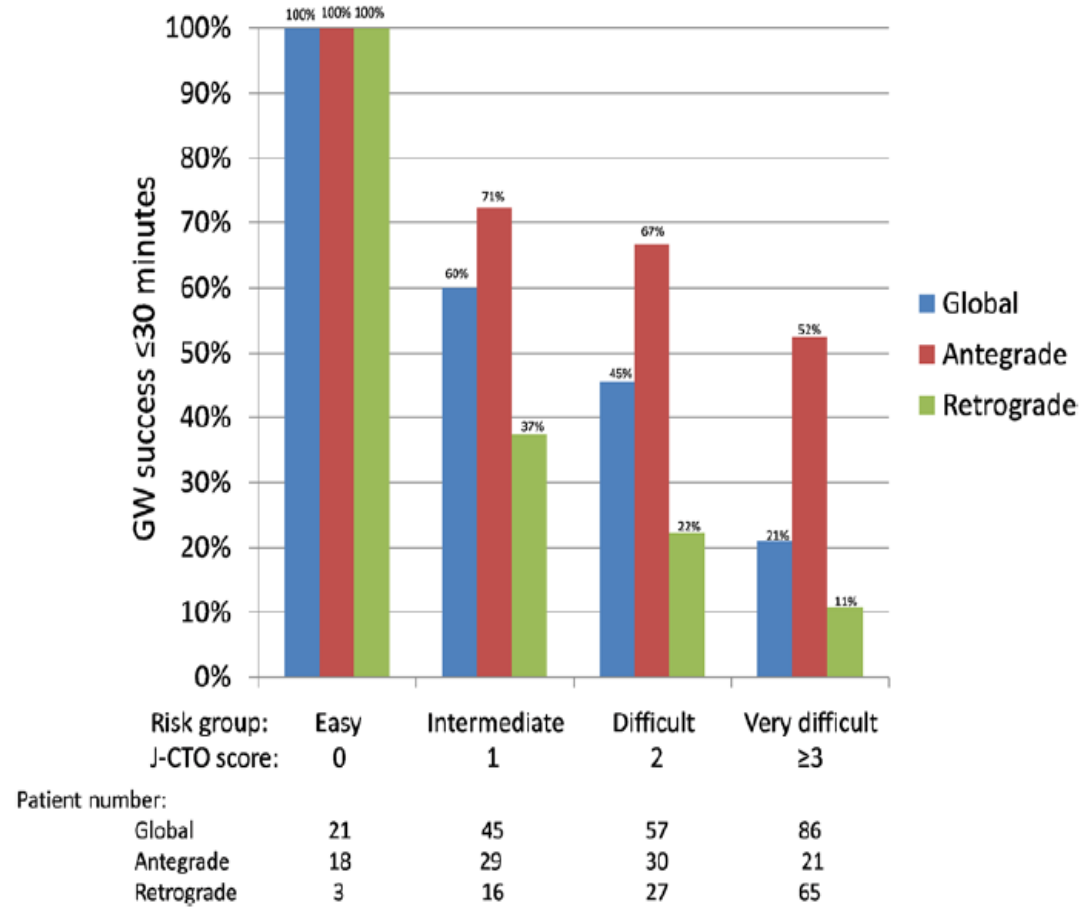
Is this Re-try (2nd attempt) lesion> (previously attempted but failed)

Re-try lesion
- ☒ No (0)
- ☐ Yes (1)

point

Category of difficulty (total point)
- ☐ easy (0)
- ☐ Intermediate (1)
- ☐ difficult (2)
- ☐ very difficult (≥ 3)

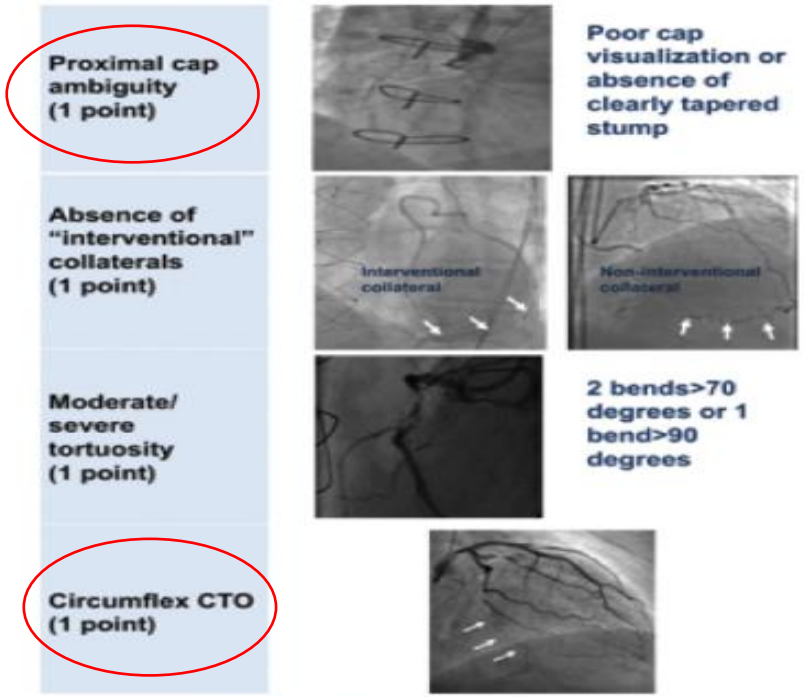
Total **3** points



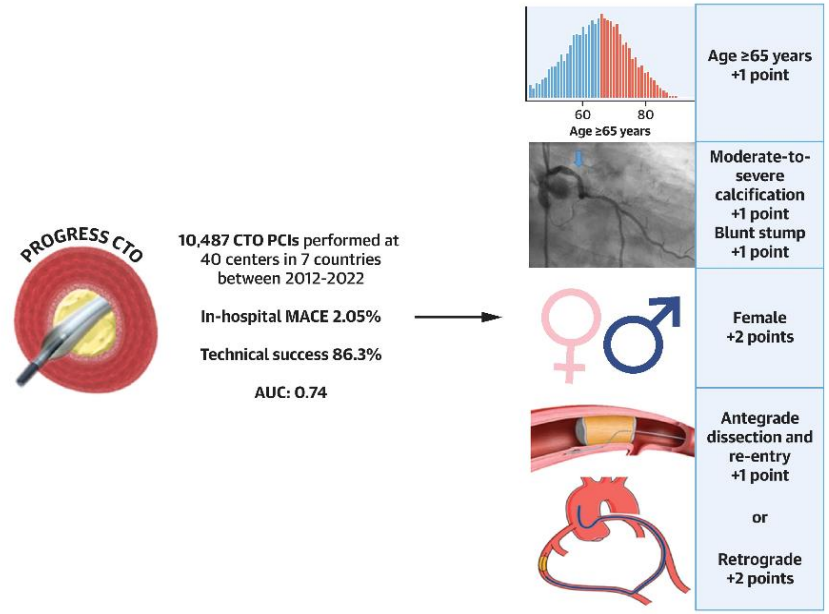
Validation of J-CTO score for CTO PCI in an independent contemporary cohort. Luis Nombela Franco et al. ***Circ Cardiovasc Interv*. 2013;6:635-643**

Likelihood of Technical Success

PROGRESS-CTO Score

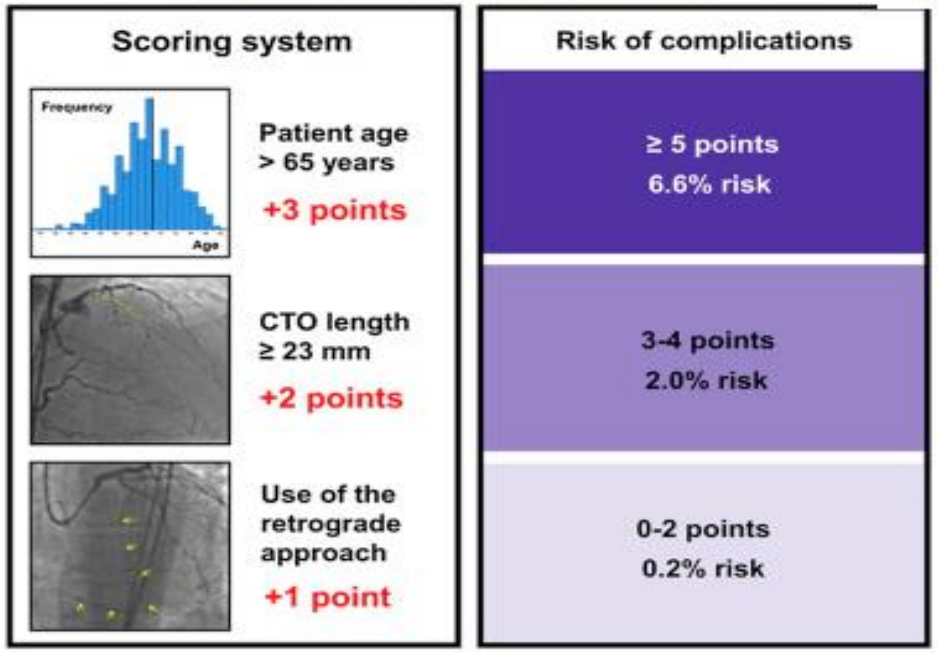


CENTRAL ILLUSTRATION: The PROGRESS-CTO In-Hospital MACE Risk Score

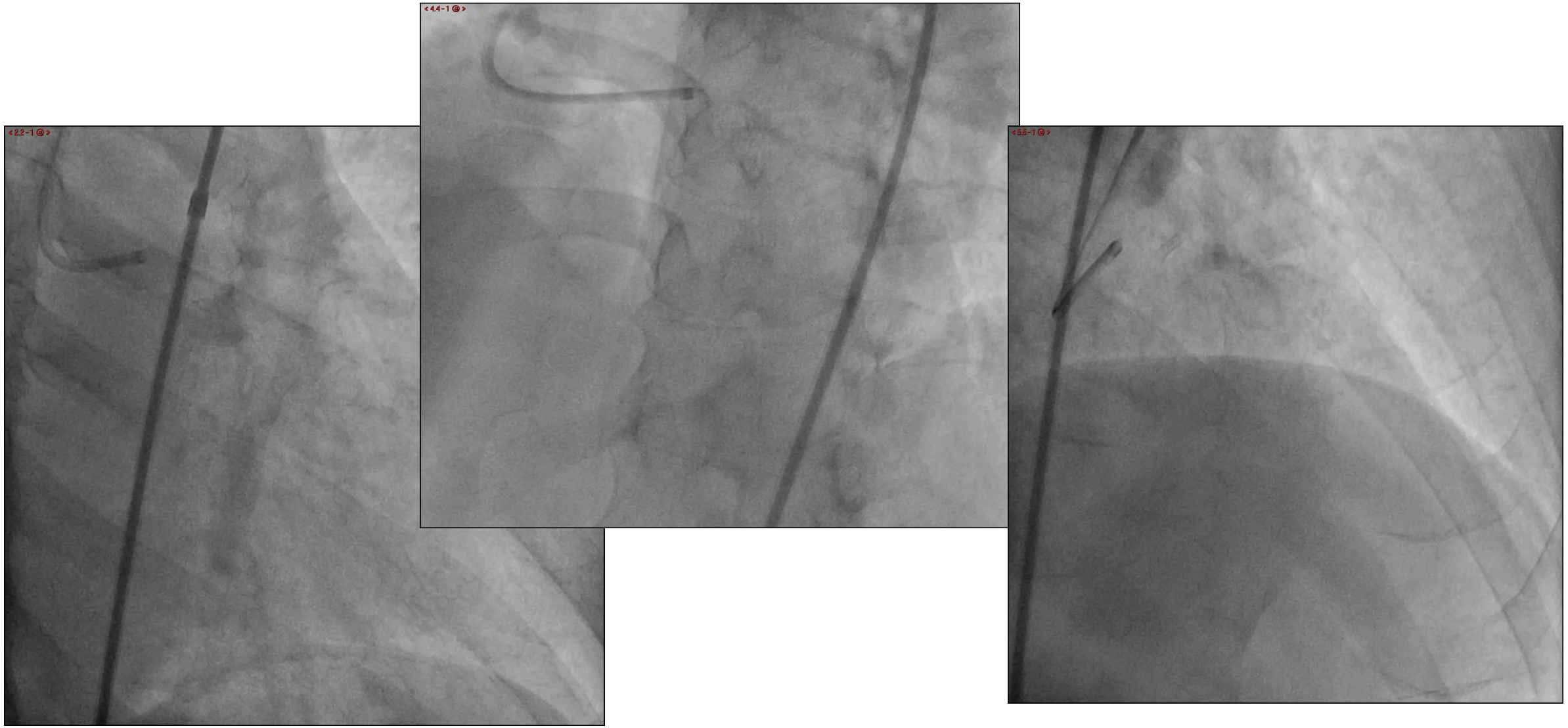


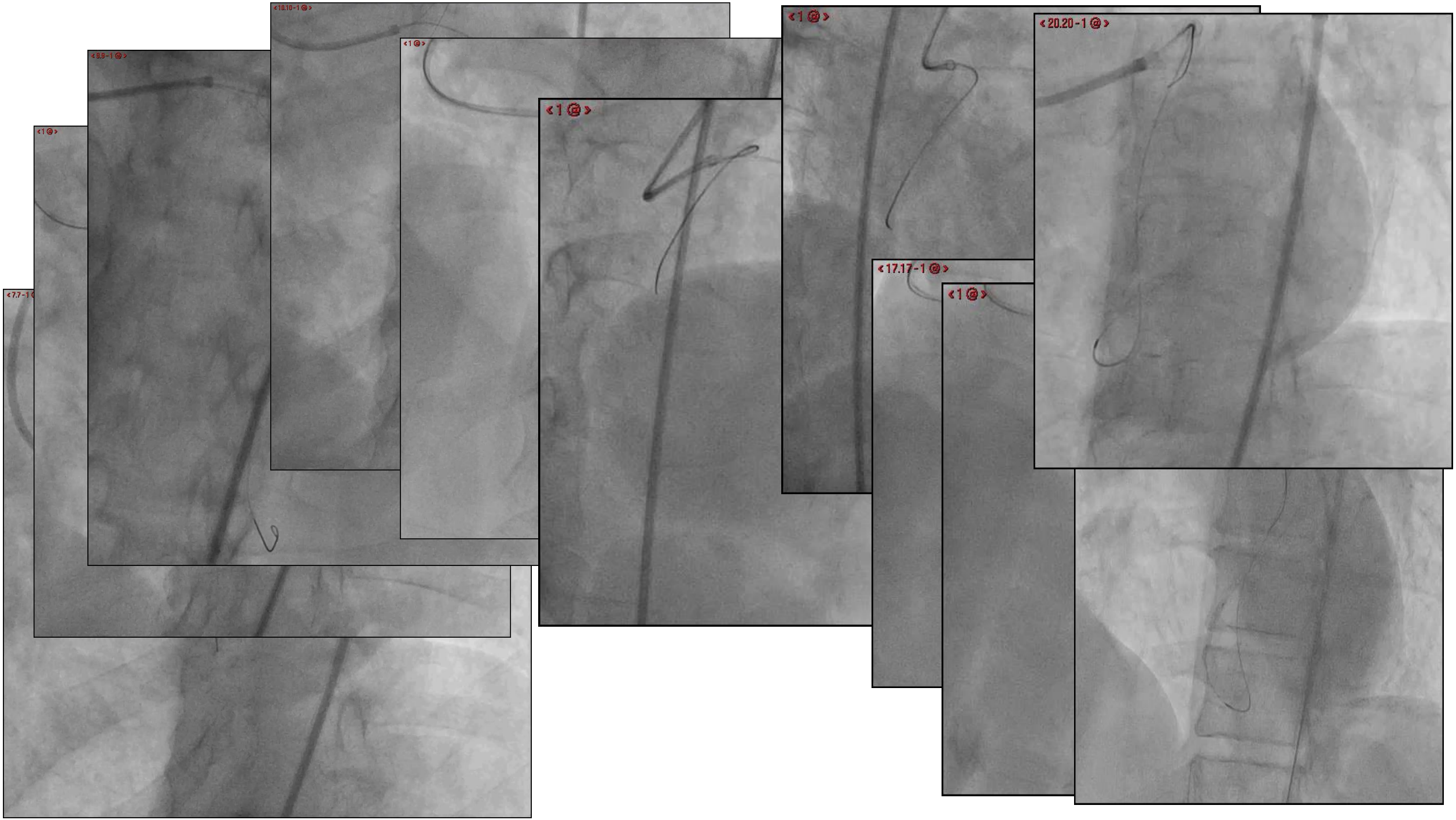
Simsek B, et al. J Am Coll Cardiol Intv. 2022;15(14):1413-1422.

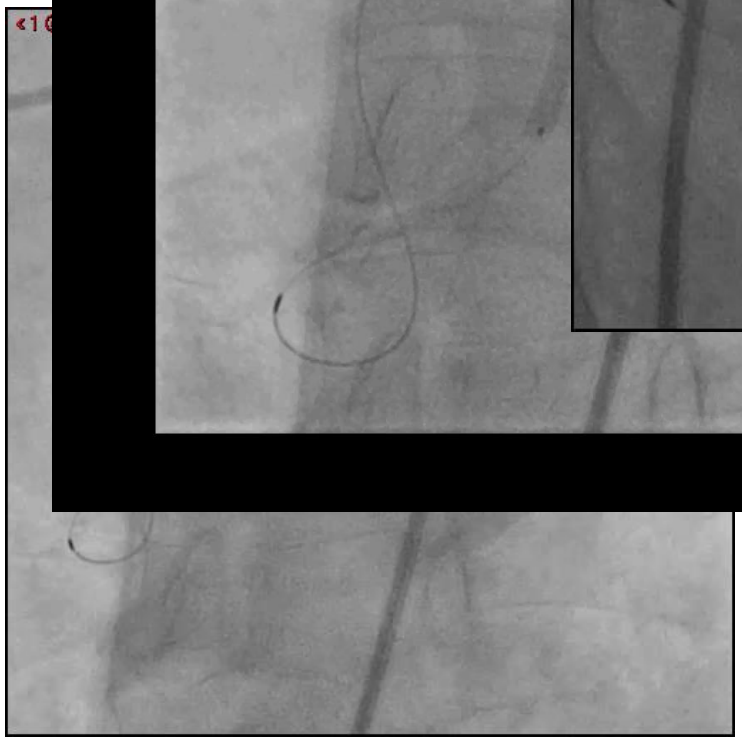
Progress CTO complications score



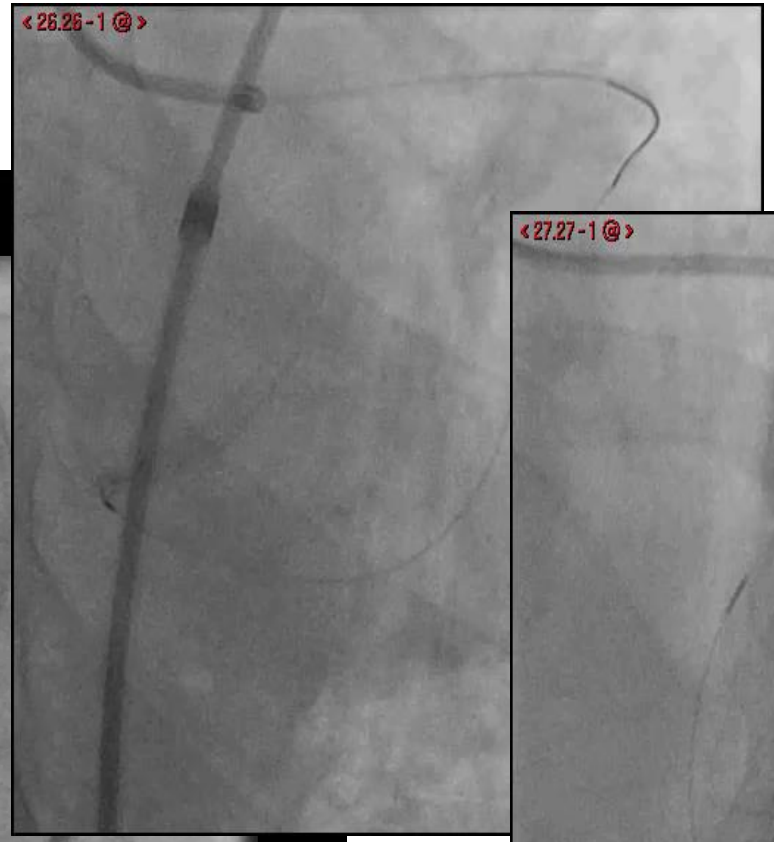
Diagnostic Coronary Angiography




‹1@›
‹20.20-1@›
‹17.17-1@›



‹ 24.24-1 @ ›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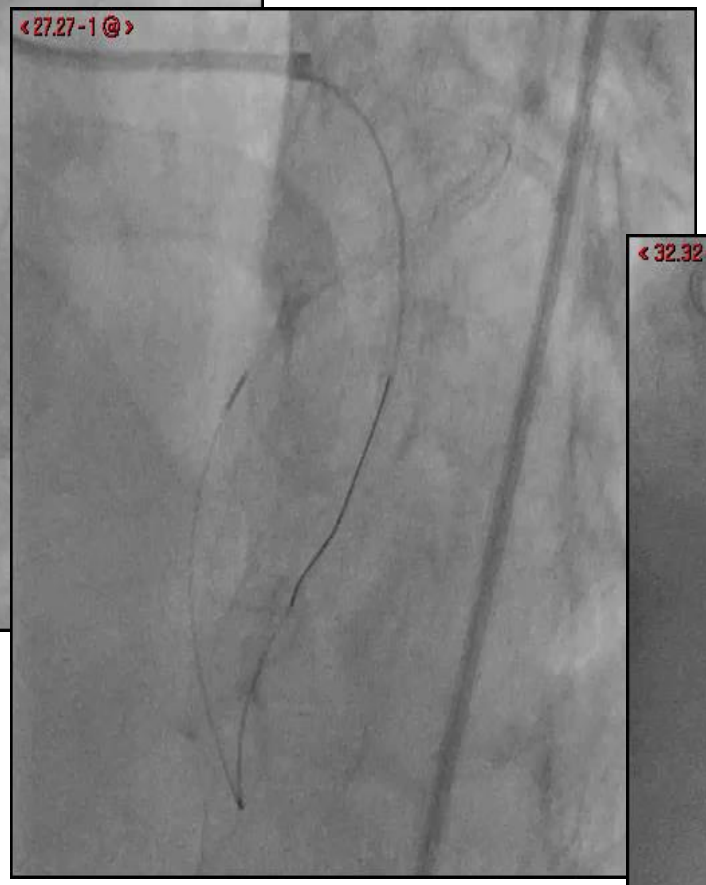
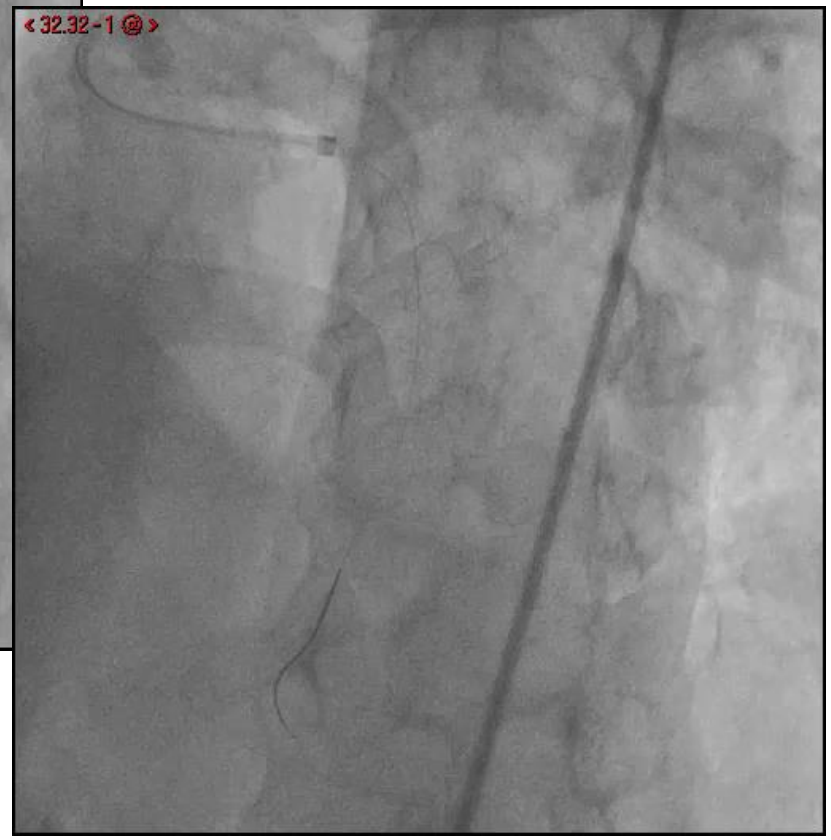

‹ 27.27-1 @ ›


‹ 32.32-1 @ ›

CTO PCI OF Cx

- **Guiding Catheter**: EBU 4.0 - 8F
- **Wires**: SION;SION black;Fielder XT-A;Gaia 2nd ;CP-12; Gladius; RG3 330cm
- **MC**: Antegrade- Corsair Pro XS 135cm / Retrograde – Caravel 150 cm
- **Pre-Dil- Balloons**: Ryurei(Terumo) 2.0X15, Euphora NC 2.5x10
- **Stents**: Xience PROA 3.0x28, Xience PROA 2.5x38
- **Post-Dil-Balloons**: NC Euphora 2.75x20, 3.0x15

Procedure Data

- Procedure duration – 166 min
- Time to GW crossing – 90 min
- **Radiation-**

1. Fluoro time - 86.5 min
2. Total DAP – 3.96 mGy•m²
3. AK – 4,384 mGy

- Contrast media – 500 ml

Unique Procedure-
Single Guiding Catheter for both
Antegrade and Retrograde PCI

Take Home Message

1. Learn all aspects of the patient's diagnostic angio have a plan & strategy
2. Use imaging whenever feasible to plan the procedure
3. Maximize support – long sheath, active & passive
4. Use protective wire to tackle complications
5. Avoid persistence in a failure mode
6. Use orthogonal views to verify your distal wire location
7. Do not advance your MC until verification of wire location
8. Advance your retrograde MC as distal as possible on the externalization wire
9. Withdraw your guiding back to the Ao. before removing your retrograde gear
10. Finalize by checking for complications – should be reacted upon ASAP


Thank
You