



How to manage device uncrossable lesion: A case from CCT 2015

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Case

61-year-old, male

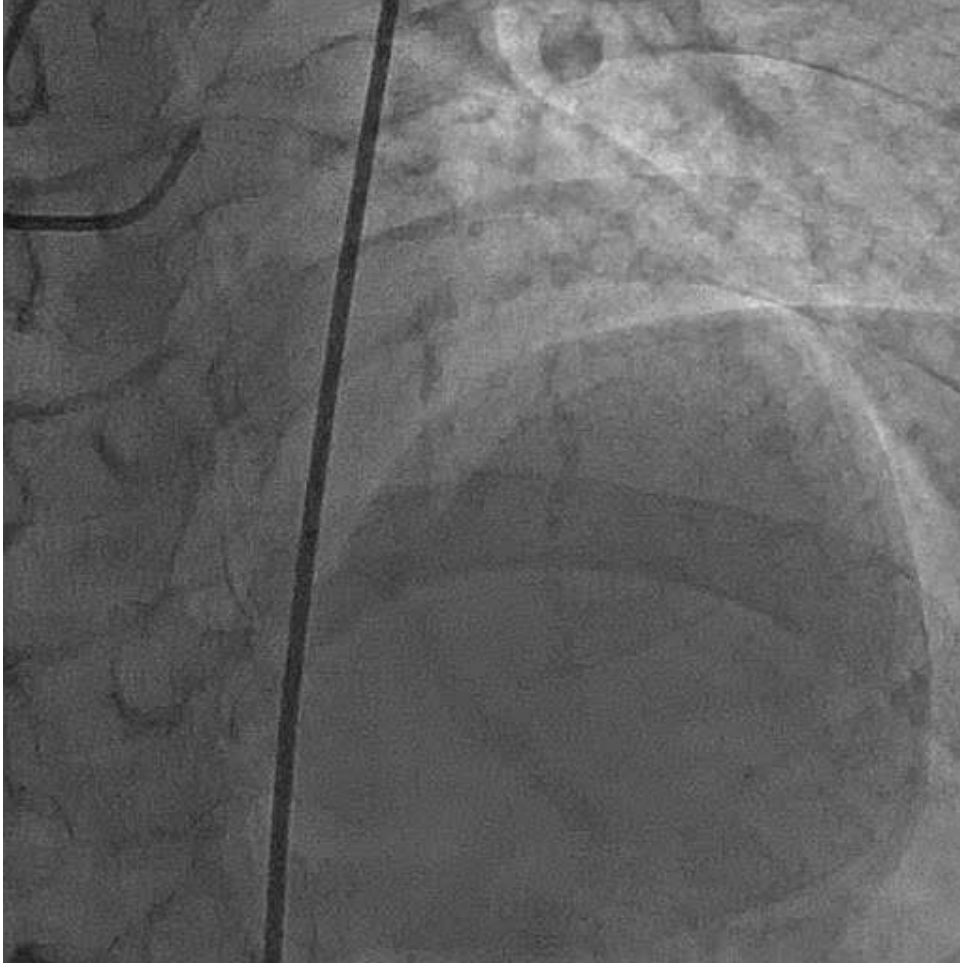
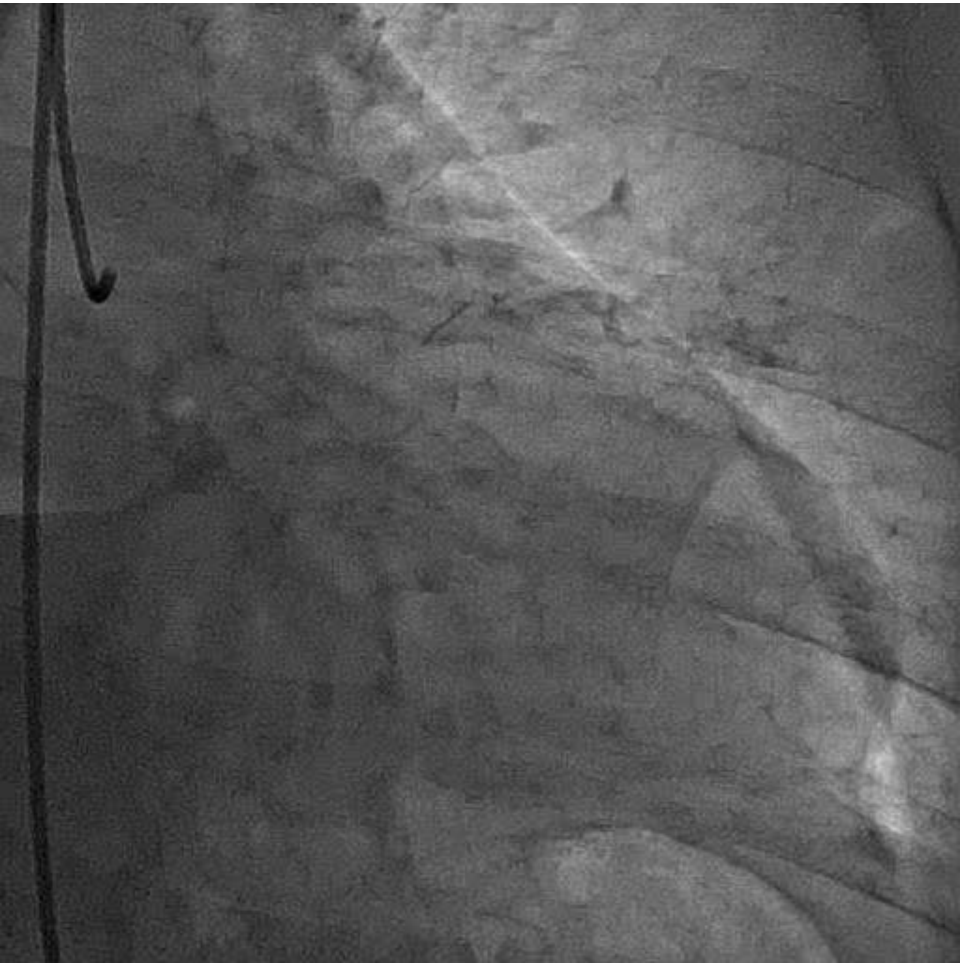
Diagnosis: NSTEMI

Present history: 23 years of diabetes mellitus (Insulin therapy). Stable angina for 20 years. Emergent department visit because of severe prolonged chest pain.

Coronary risk factor: Diabetes

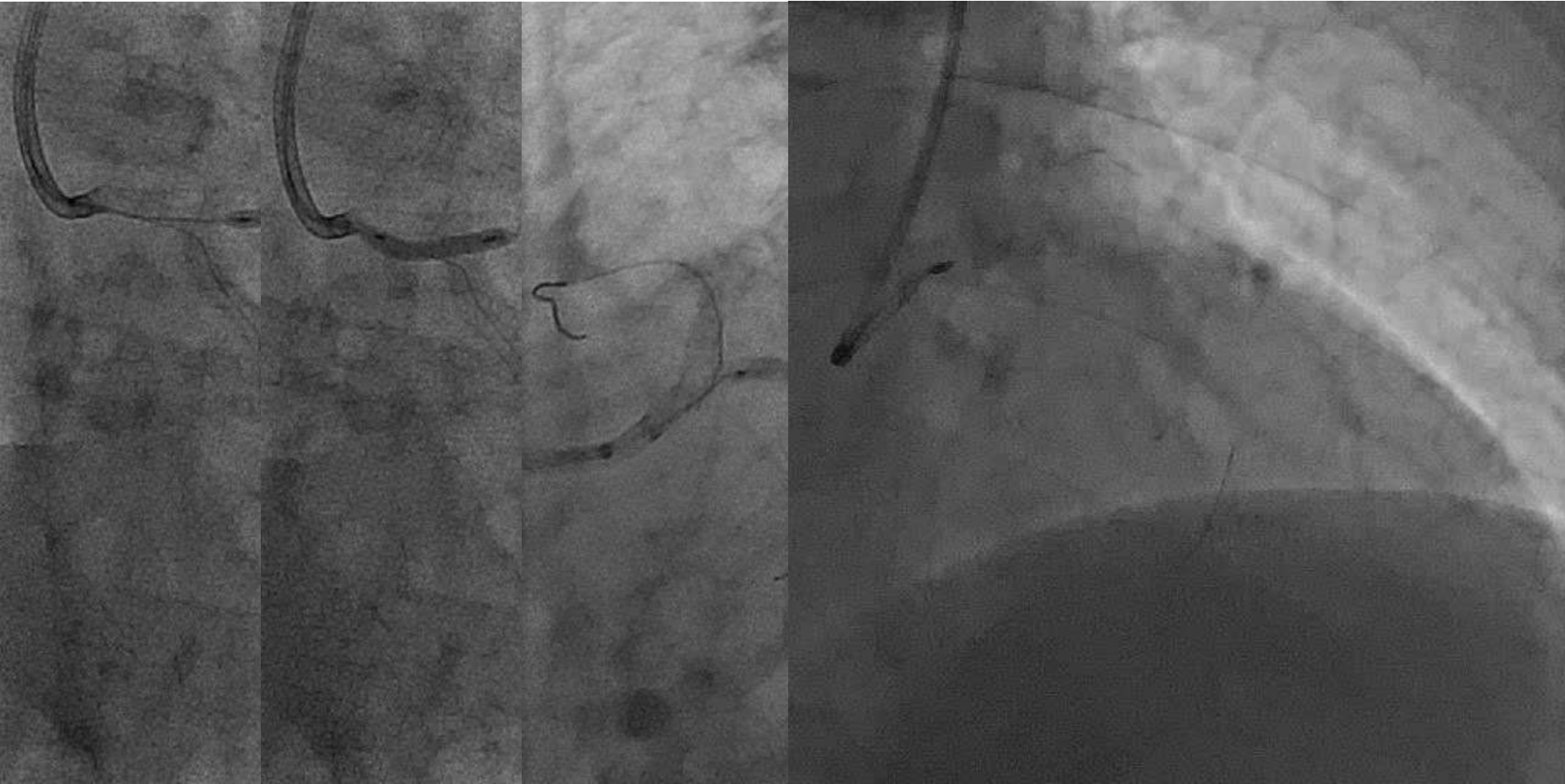


Baseline CAG



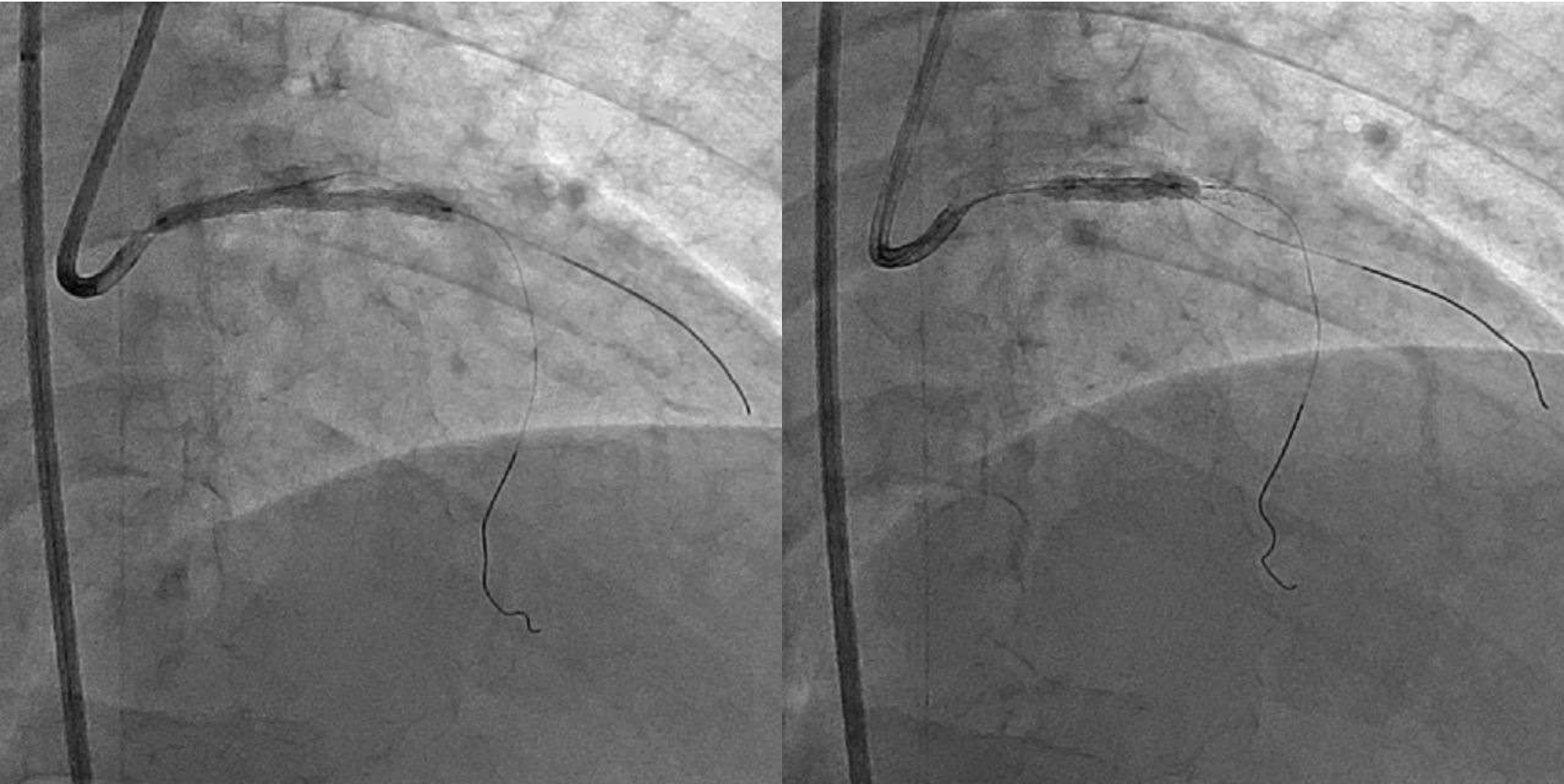


First stage PCI





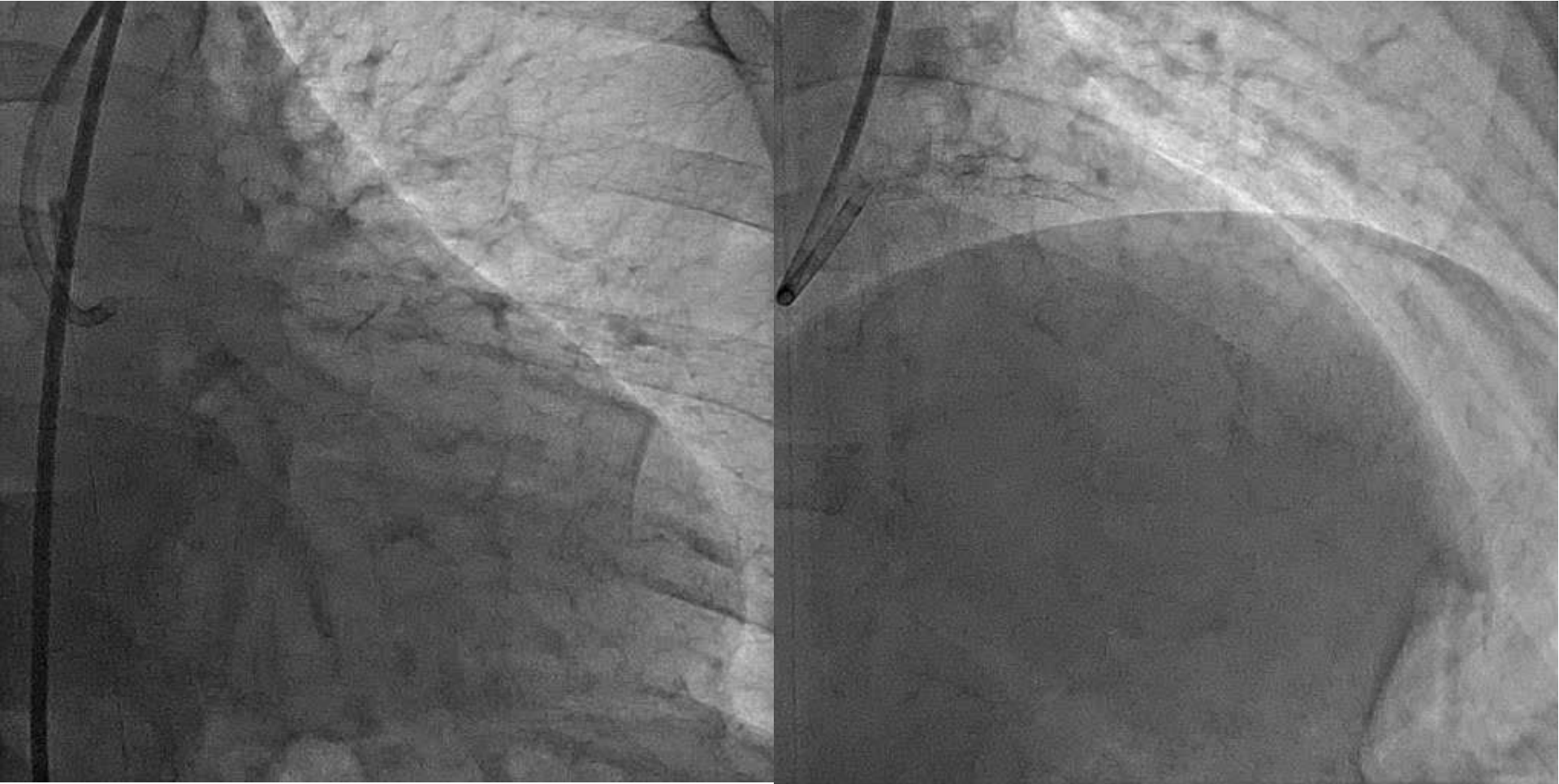
First stage PCI





Complex Cardiovascular Therapeutics

Angiograms immediately after first stage PCI





Second stage PCI



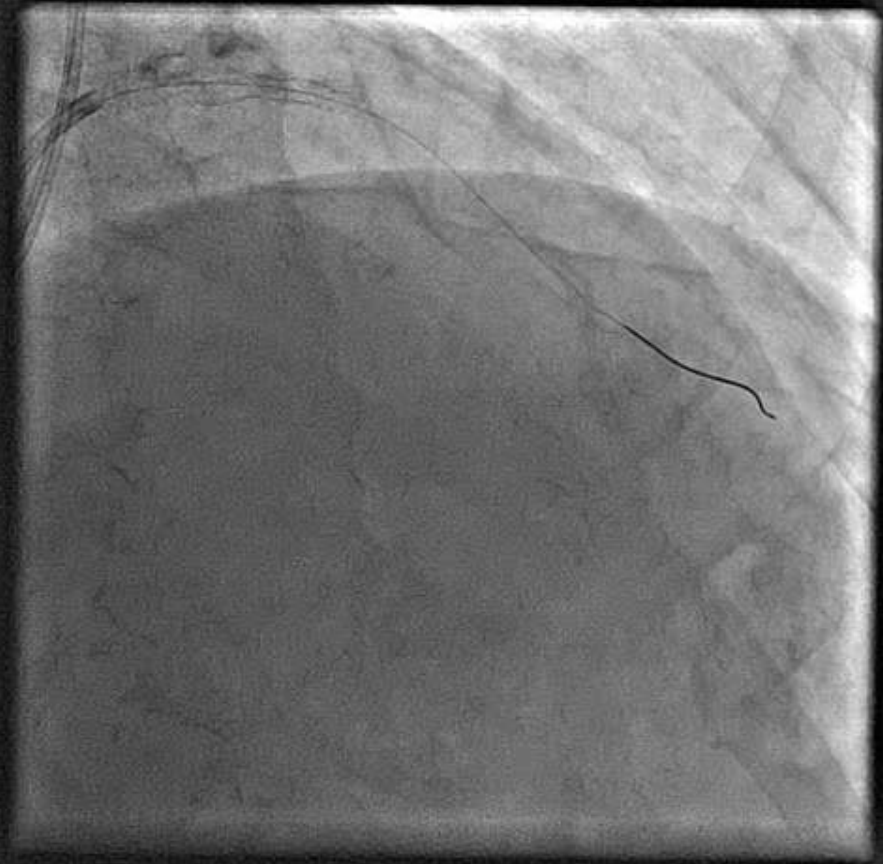


Second stage PCI



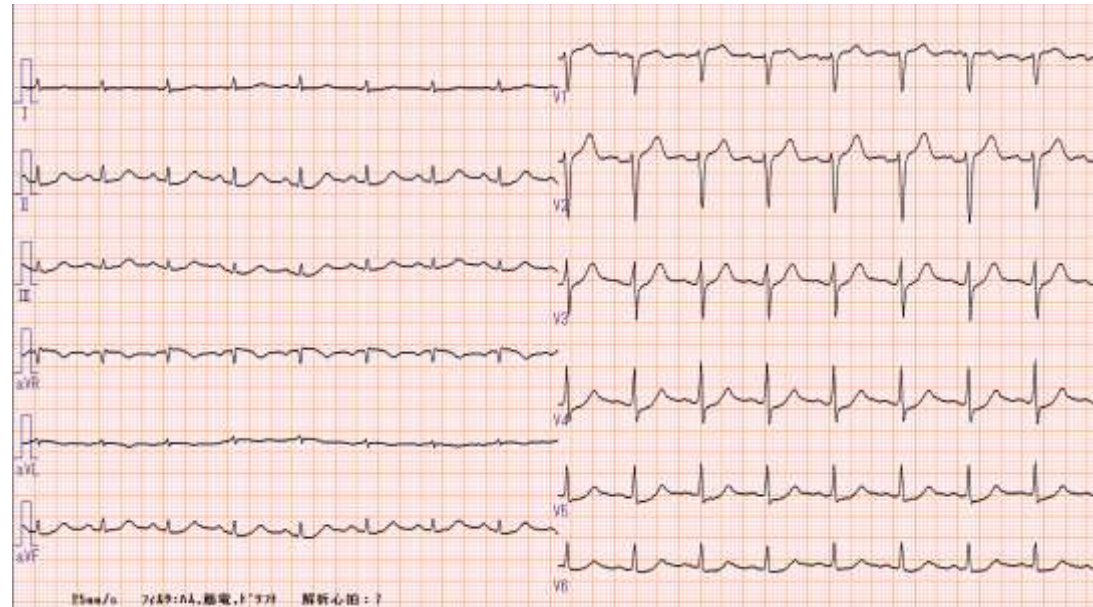


Angiograms after second stage PCI



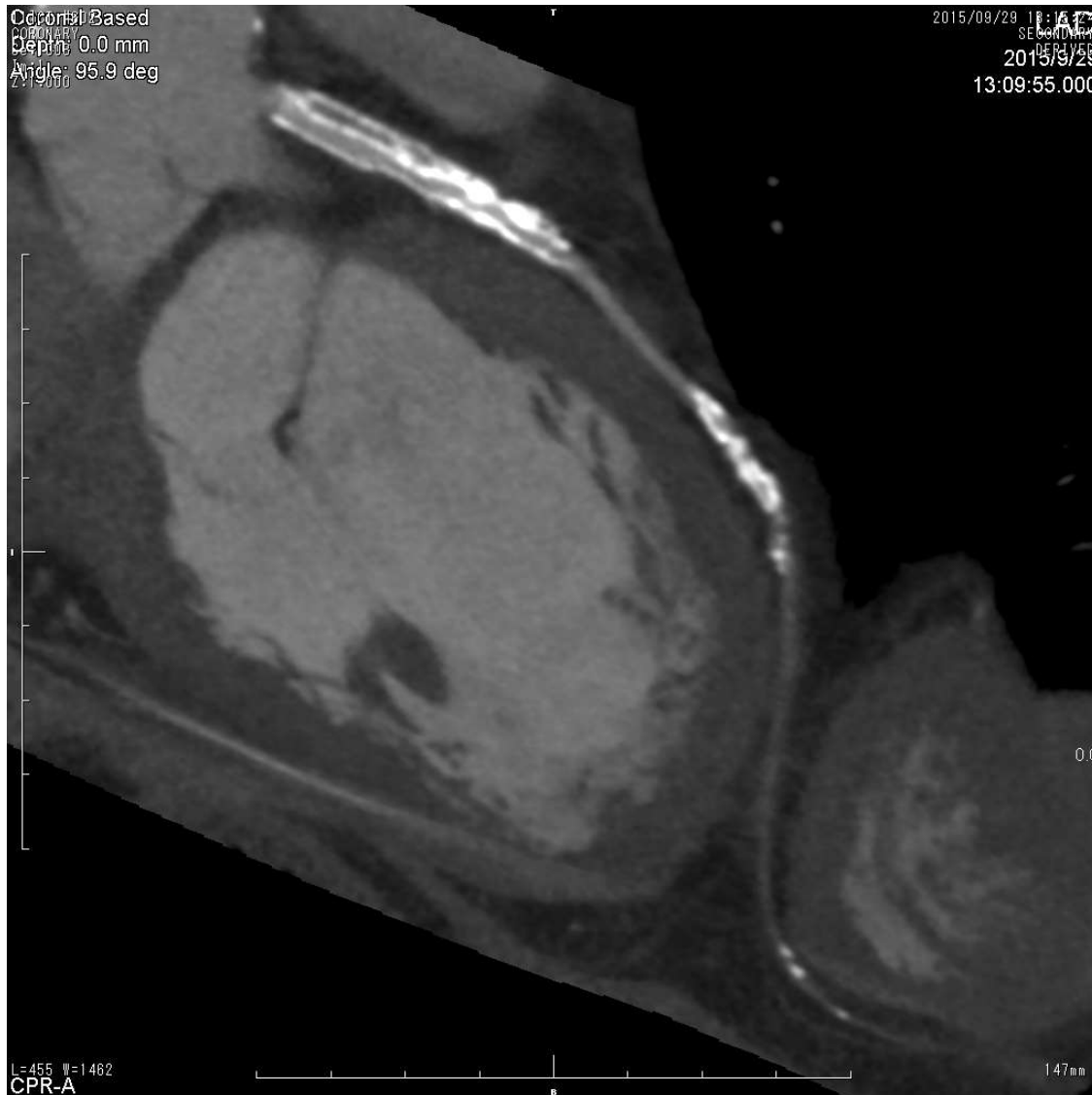


Chest X-ray and ECG



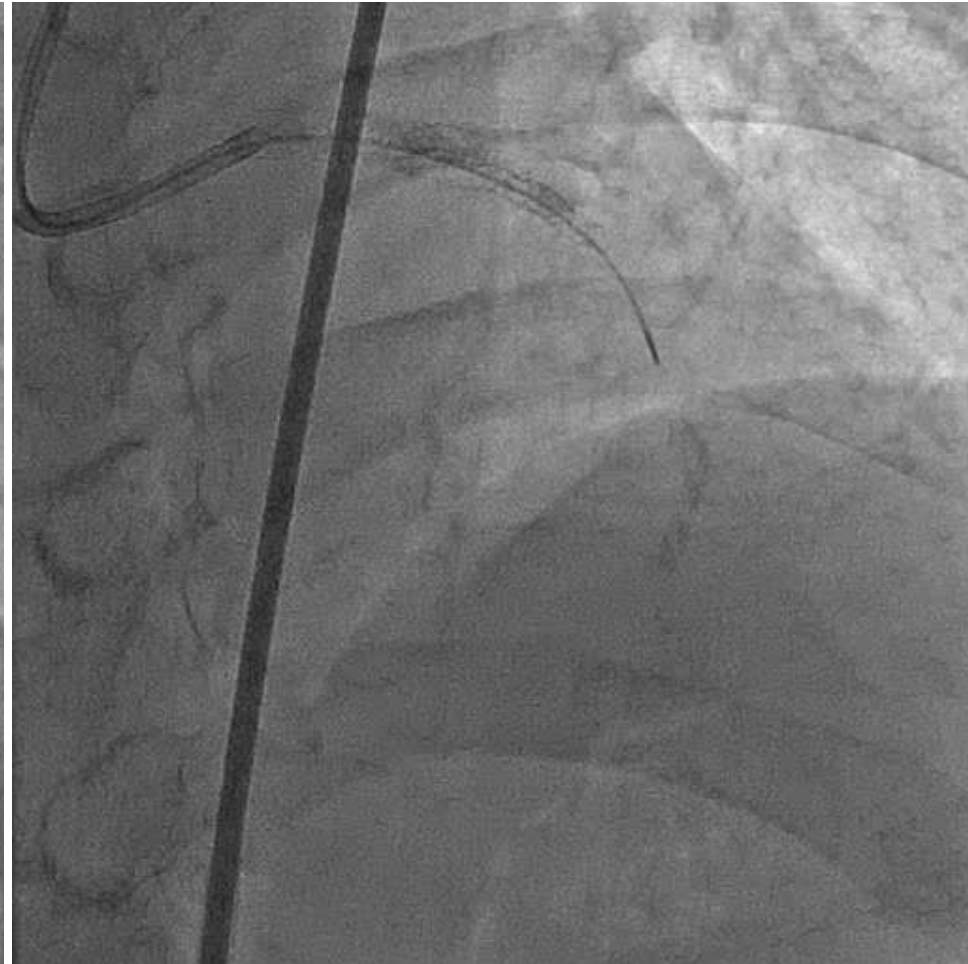
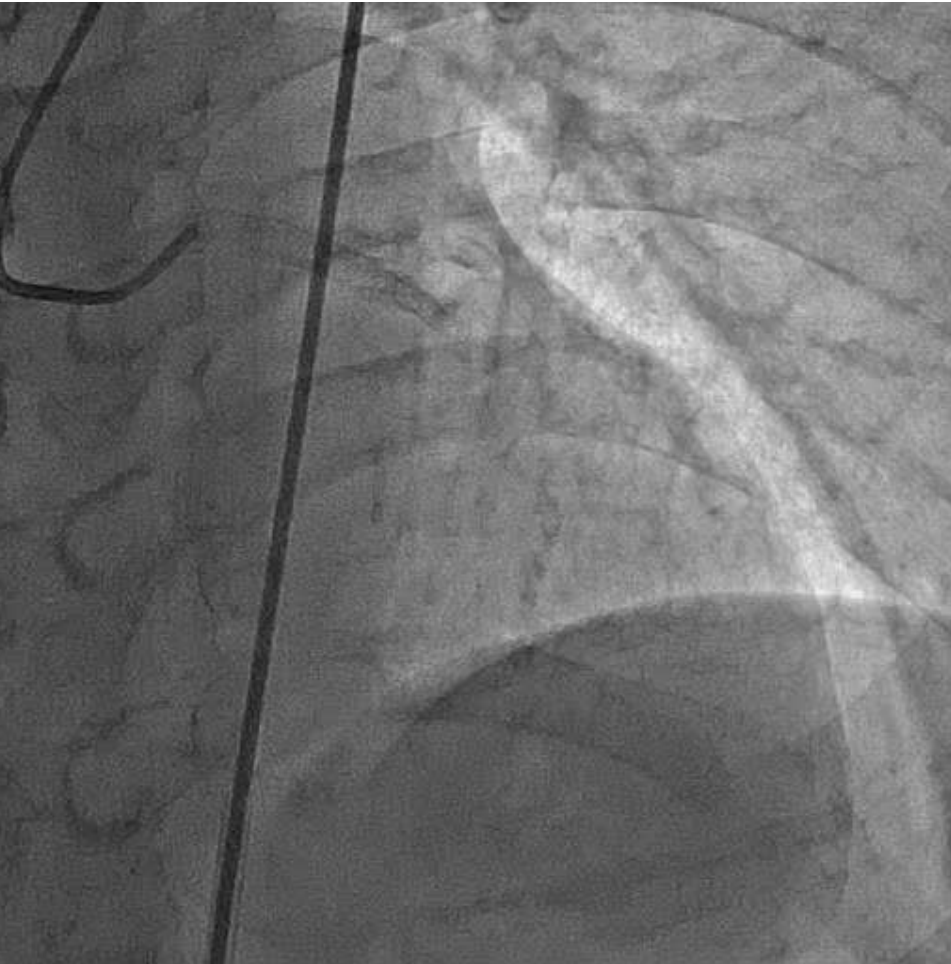


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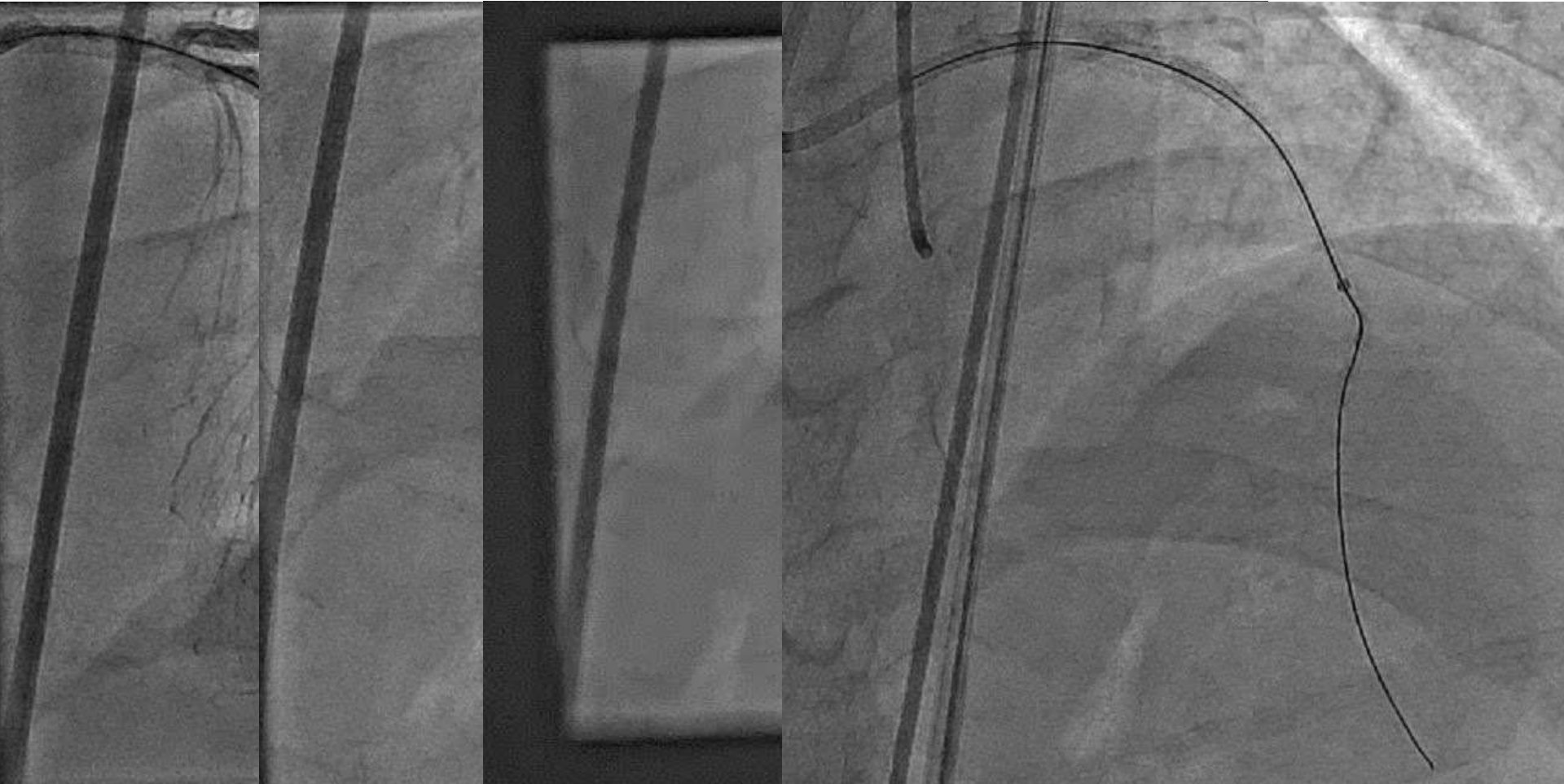


Baseline CAG at third attempt



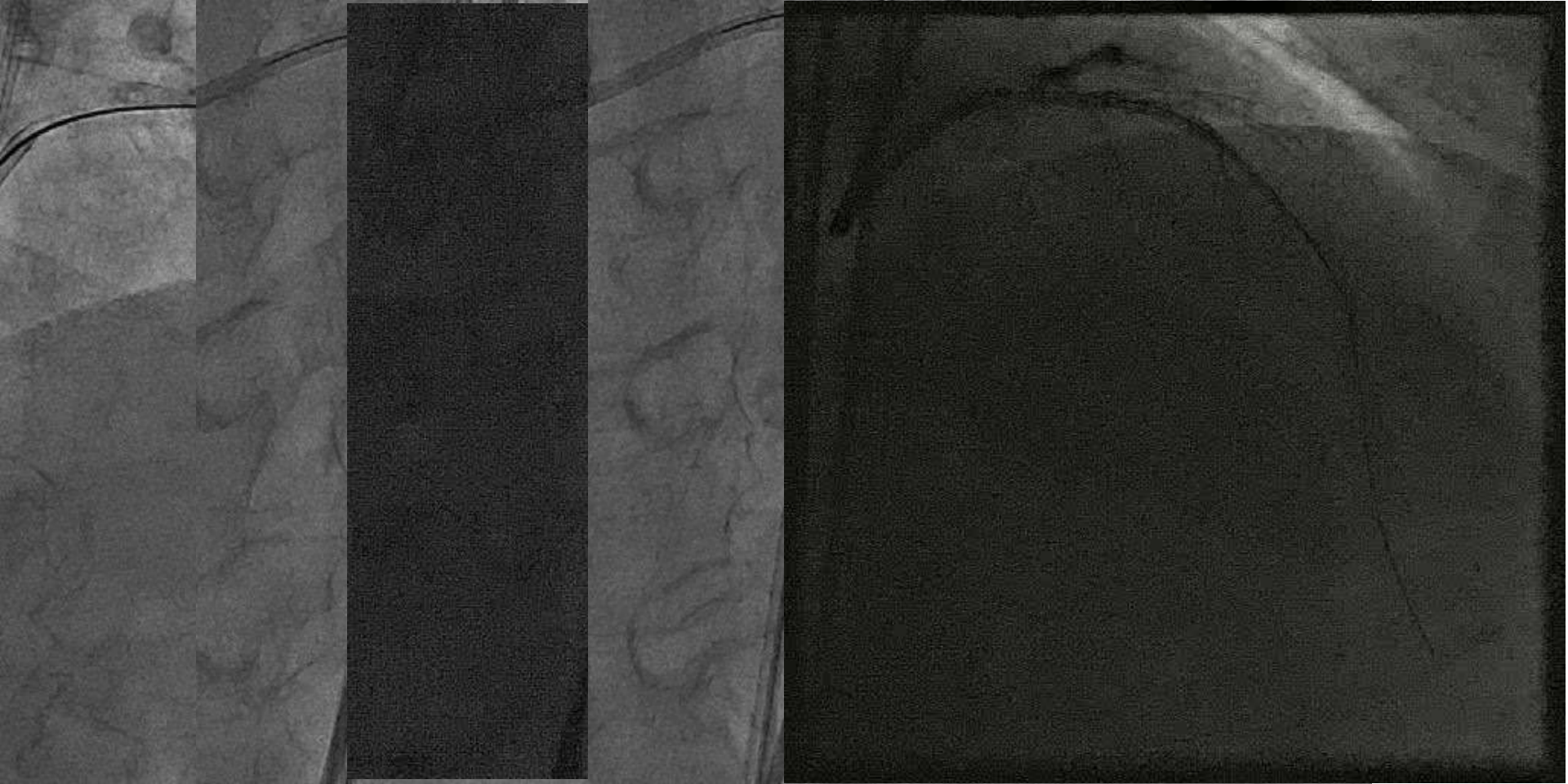


Third stage PCI

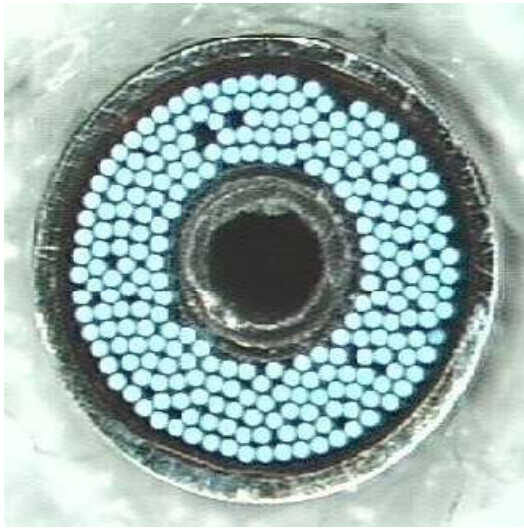




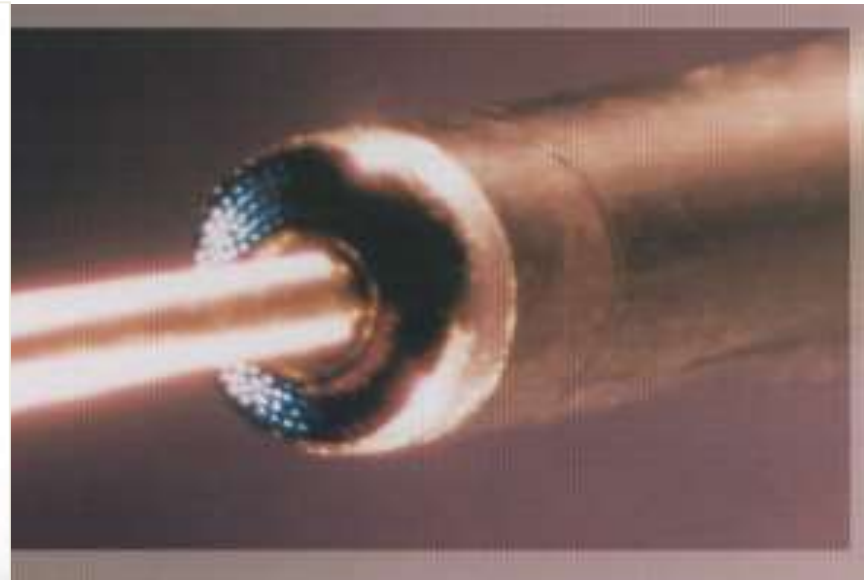
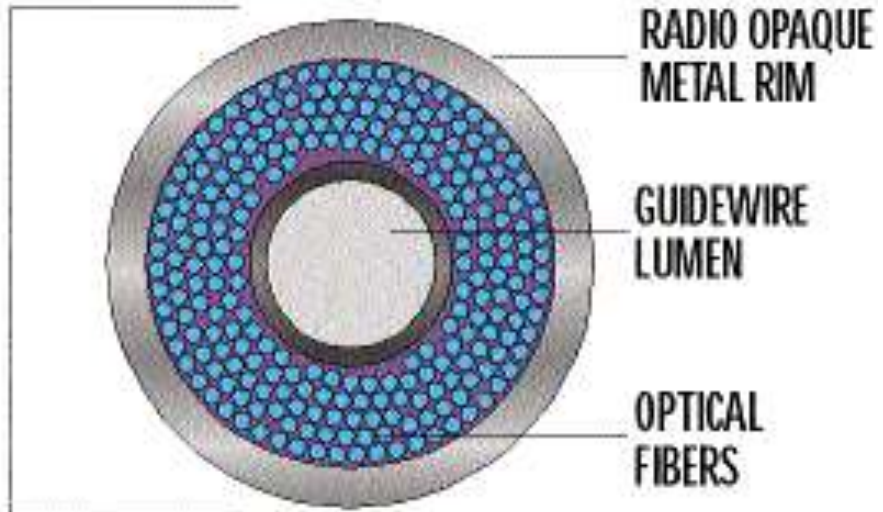
Third staged PCI



Complex Cardiovascular Therapeutics

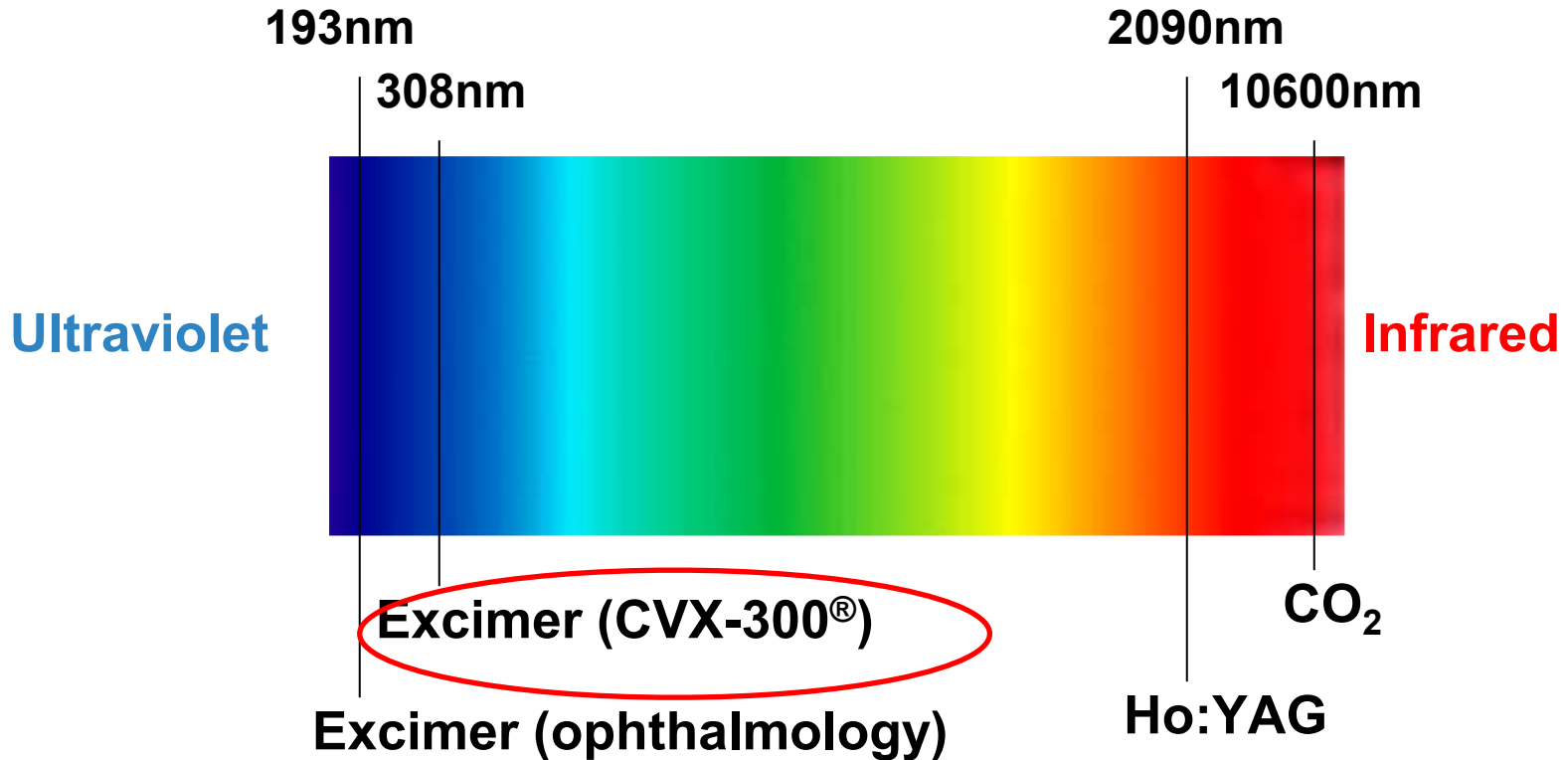


TIP OUTER DIAMETER

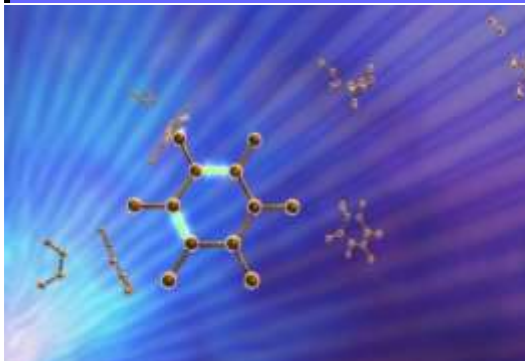

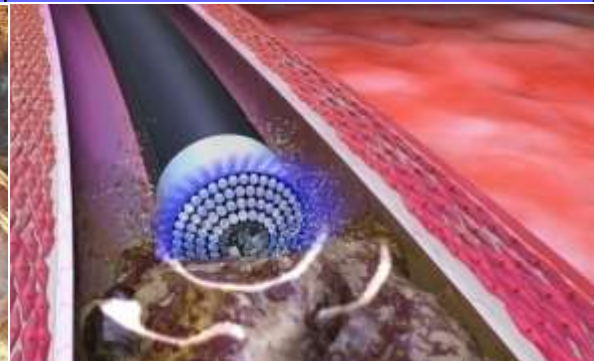




Ultraviolet vs. Infrared

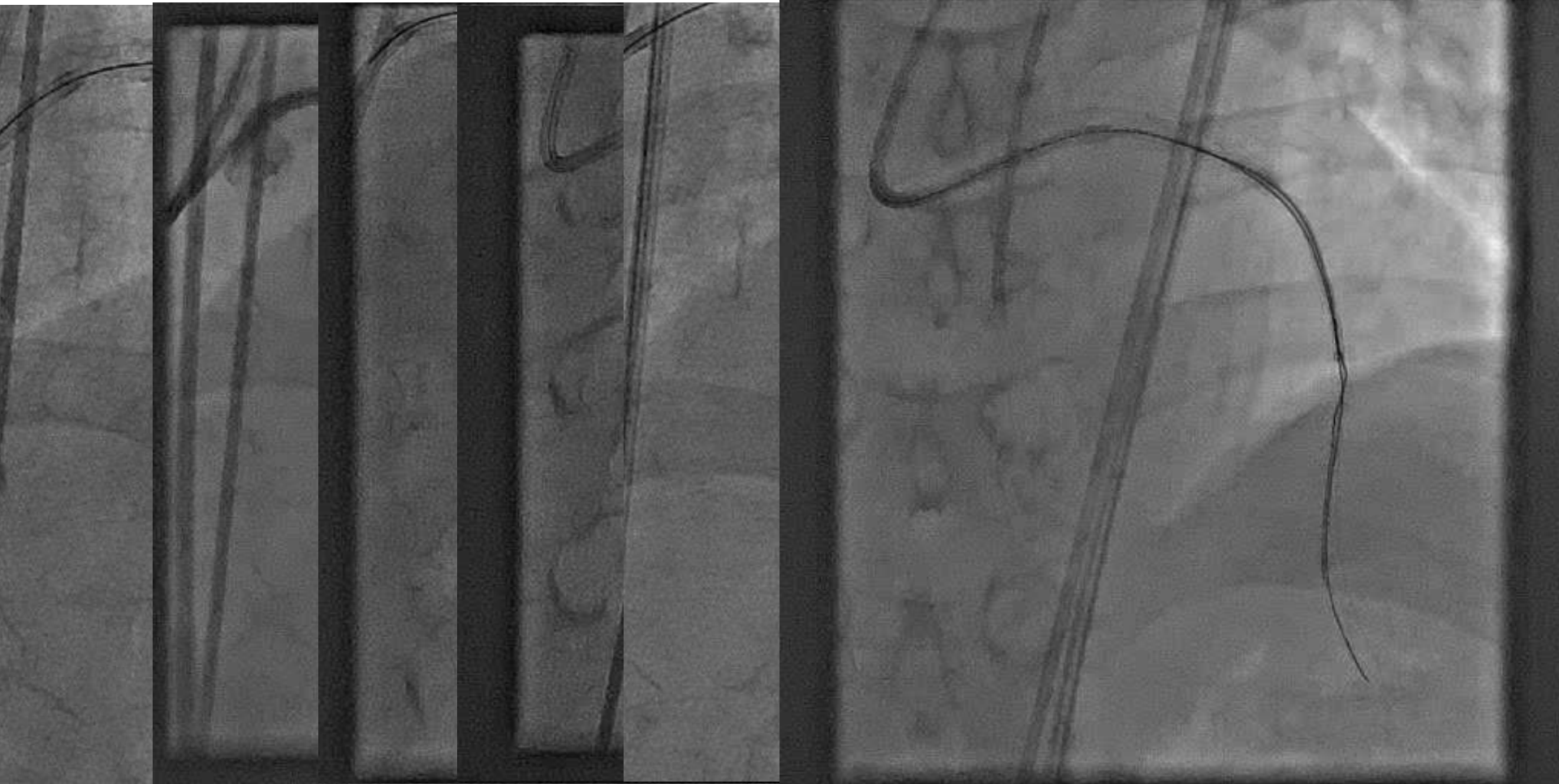


Mechanism of action

② Photochemical	③ Photothermal	④ Photomechanical
Dissolving molecular bonds	Produces photo-thermal energy	Creating kinetic energy
		

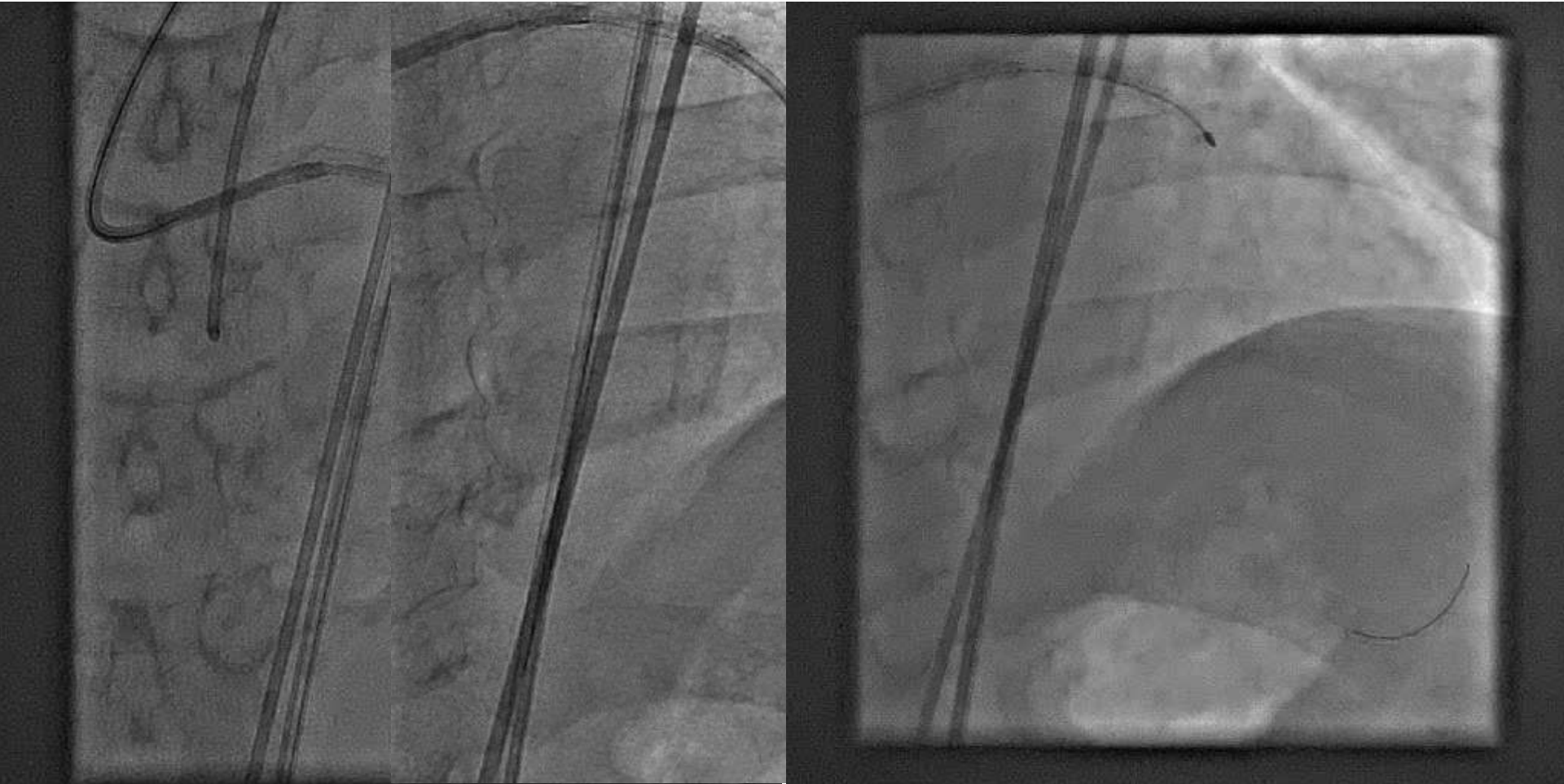


Third stage PCI



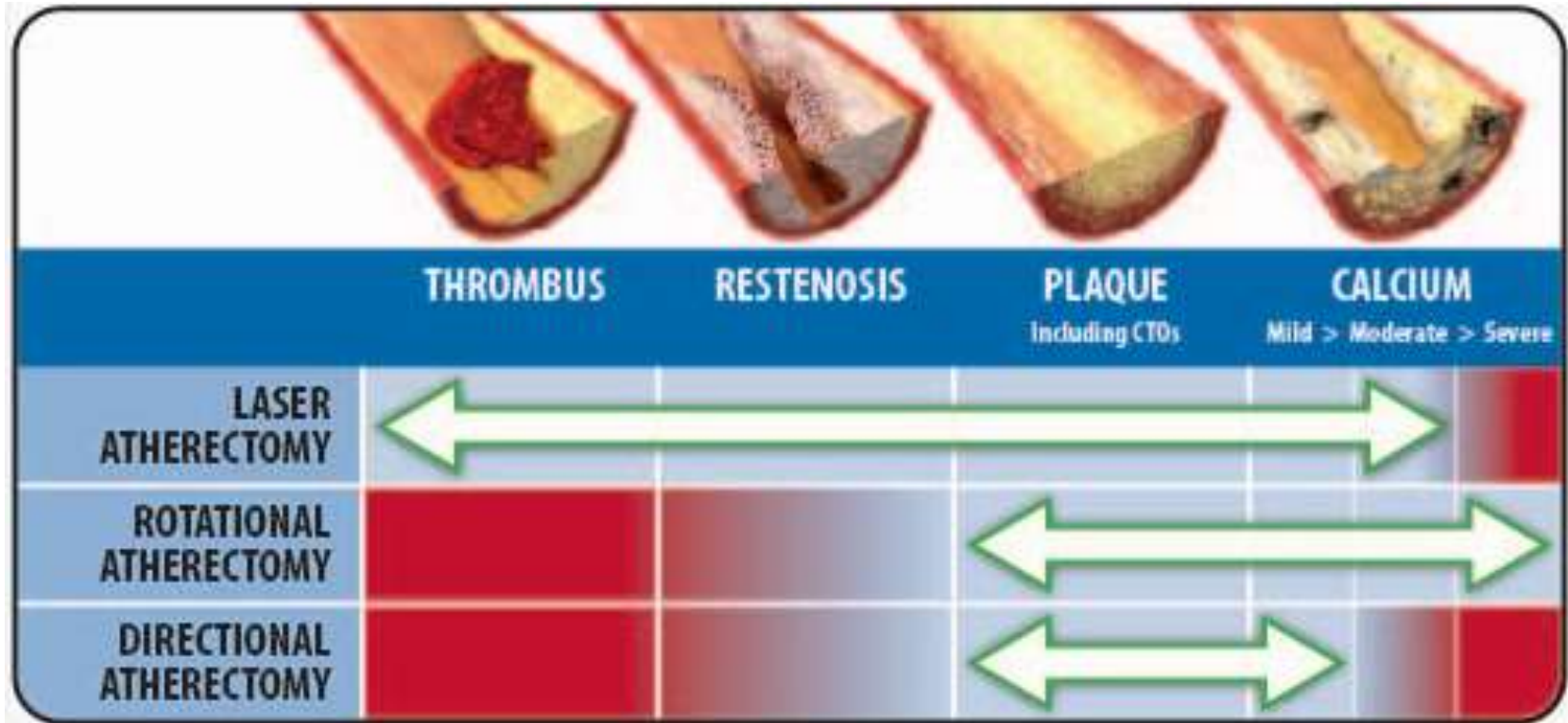


Third stage PCI



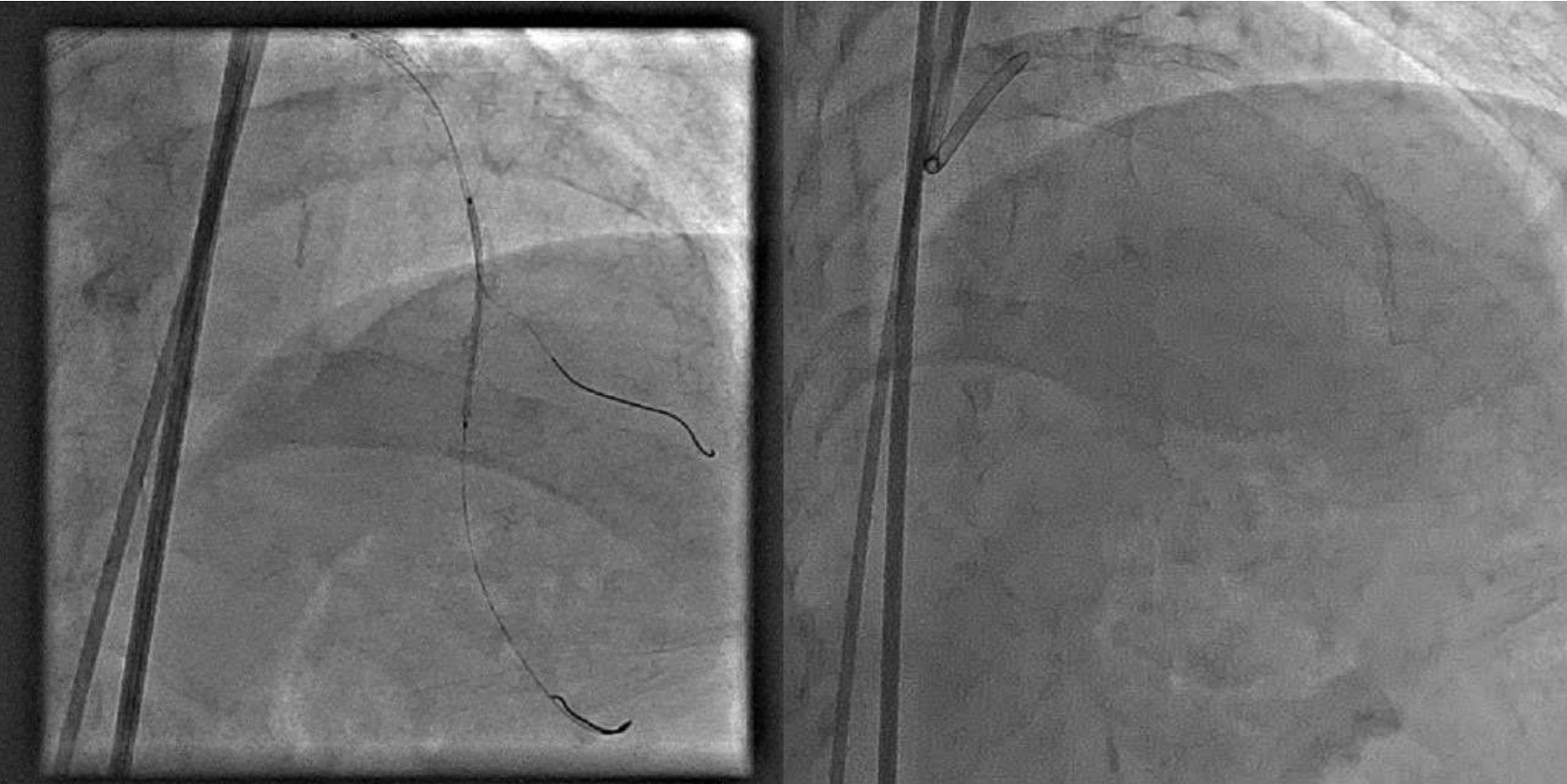


Complex Cardiovascular Therapeutics





Final angiogram





How to manage device uncrossable lesions

- ✓ **Anchor balloon technique**
- ✓ **Mother-child technique (Monorail system; GuideLiner, Guidezilla, Guiding extension; KIWAMI etc, including KIWAMI lock)**
- ✓ **Low profile balloon (including .010" slender system)**
- ✓ **Tornus catheter**
- ✓ **Cracking technique (with a non coated and non tapered stiff wire like Miracle 12)**
- ✓ **Buddy wire (Utilize principle of action and reaction)**
- ✓ **Debulking (Rotablator, Excimer laser)**



Message

Combination of several techniques (mother-child, small profile balloon, cracking, buddy wire and combined debulking with excimer laser and rotablator) can manage severe calcified CTO lesion.