

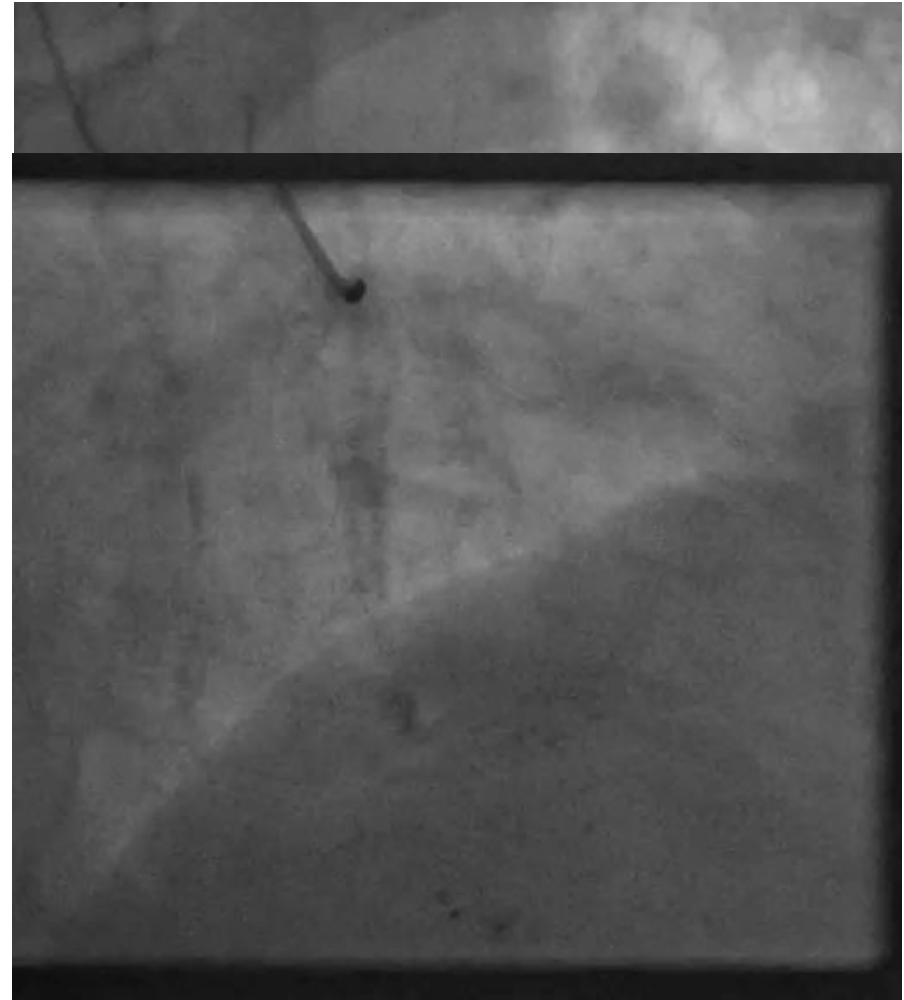


A novel cocktail to treat In-stent restenosis

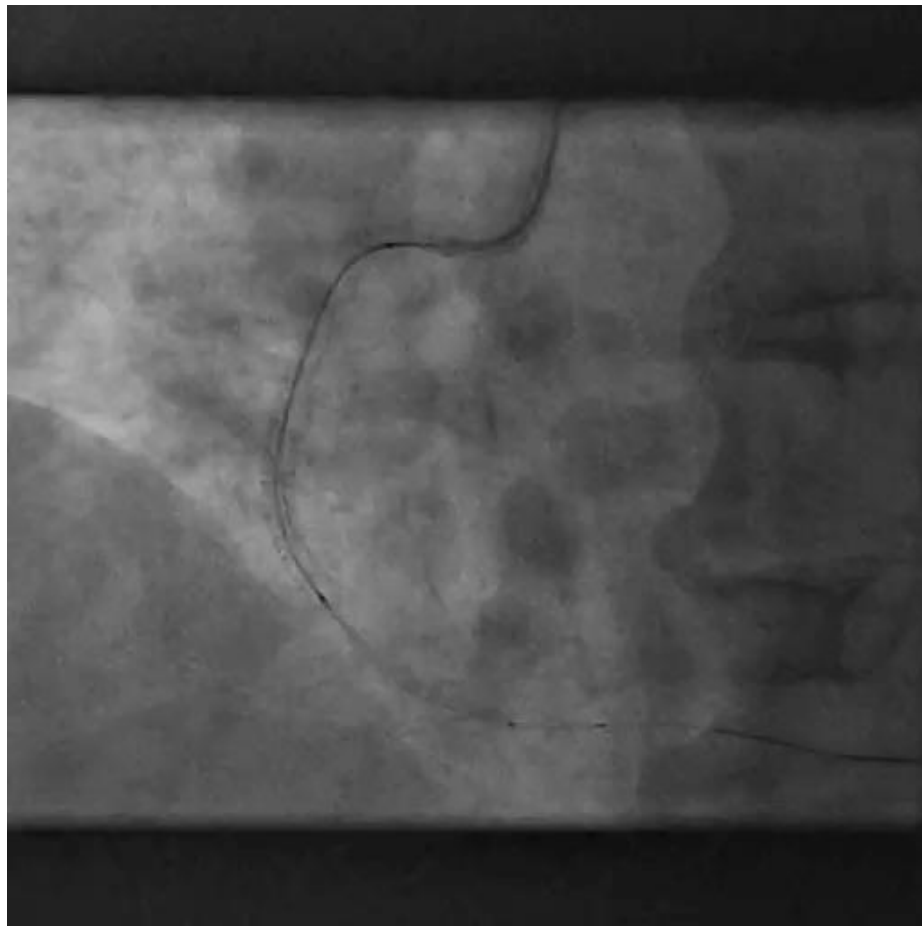
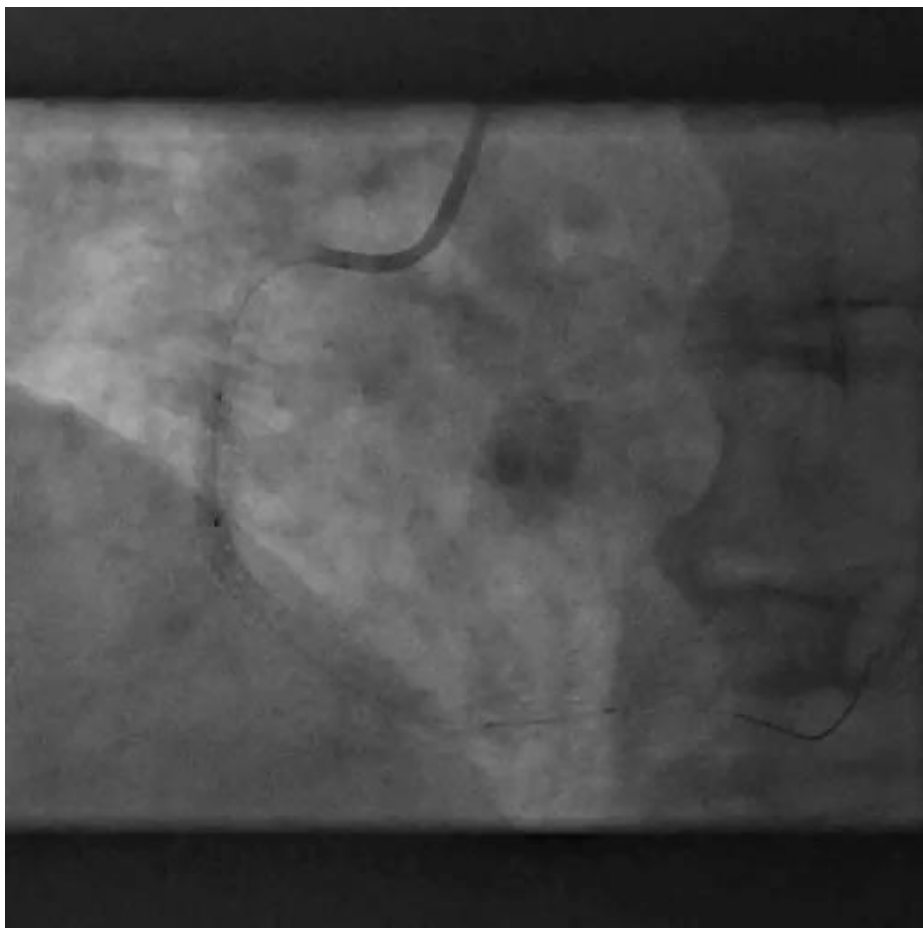
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No Conflicts of Interest

- 62 Male, complex history
 - IgA Nephropathy, End stage renal failure on dialysis
 - Obstructive sleep apnoea
 - **2002**: PCI to LAD and RCA
 - **2003**: Further PCI to LAD in-stent restenosis (ISR) with Taxus stent
 - **2020**: PCI to RCA ISR
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- Admitted with chest pain and mildly raised troponin levels
 - ECG showed new onset AF and lateral ST depression
 - Preserved LV function on echocardiogram
 - Underwent coronary angiogram



6F JR4 GC, guide extension
Pre-dilatation with 2.0 SCB followed by
OCT



OCT showed :

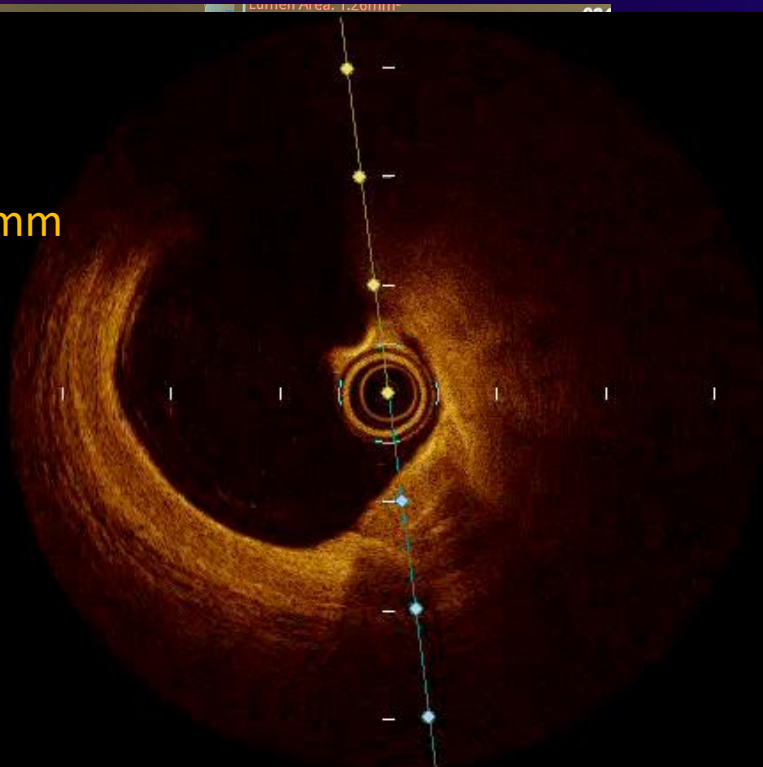
Critical ISR

Lumen area: 1.72mm^2

Vessel diameter: 3.8-4.0 mm

Stent diameter: 2-2.5mm

Extensive fibrocalcific
neo-atheroma



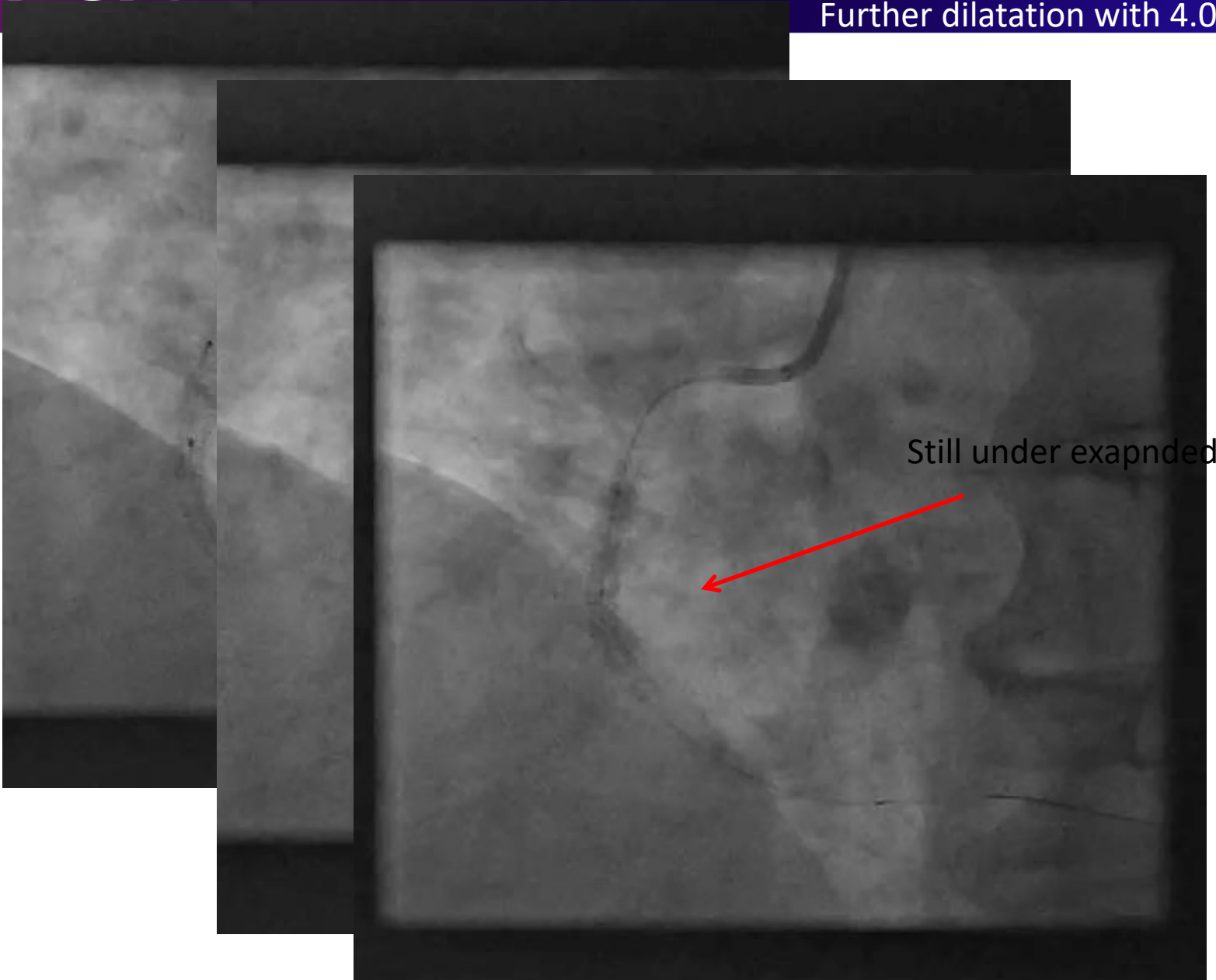
EXP ??%

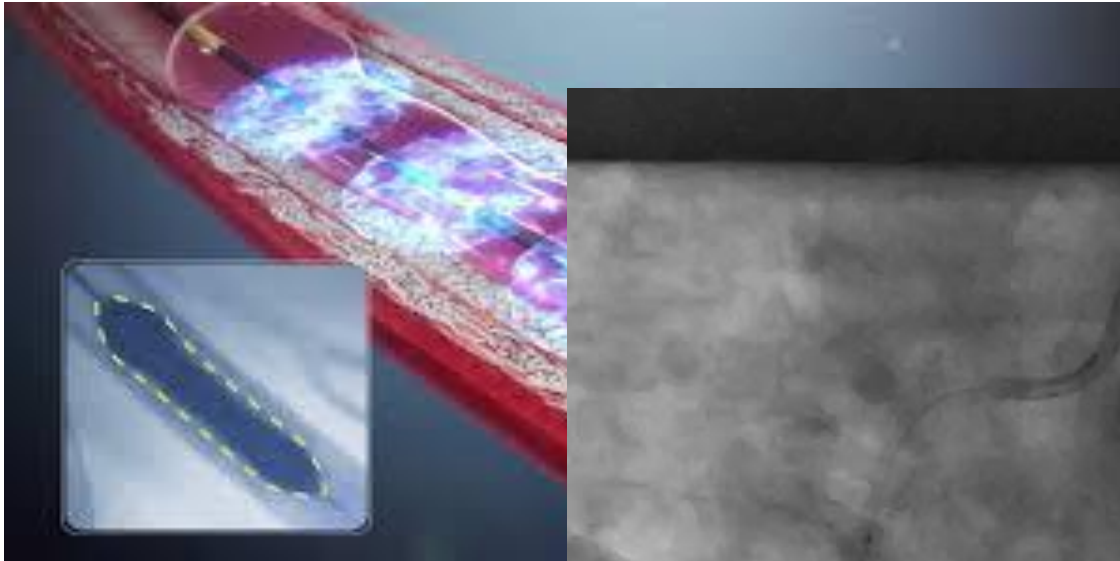
MSA 2.21mm^2

Area

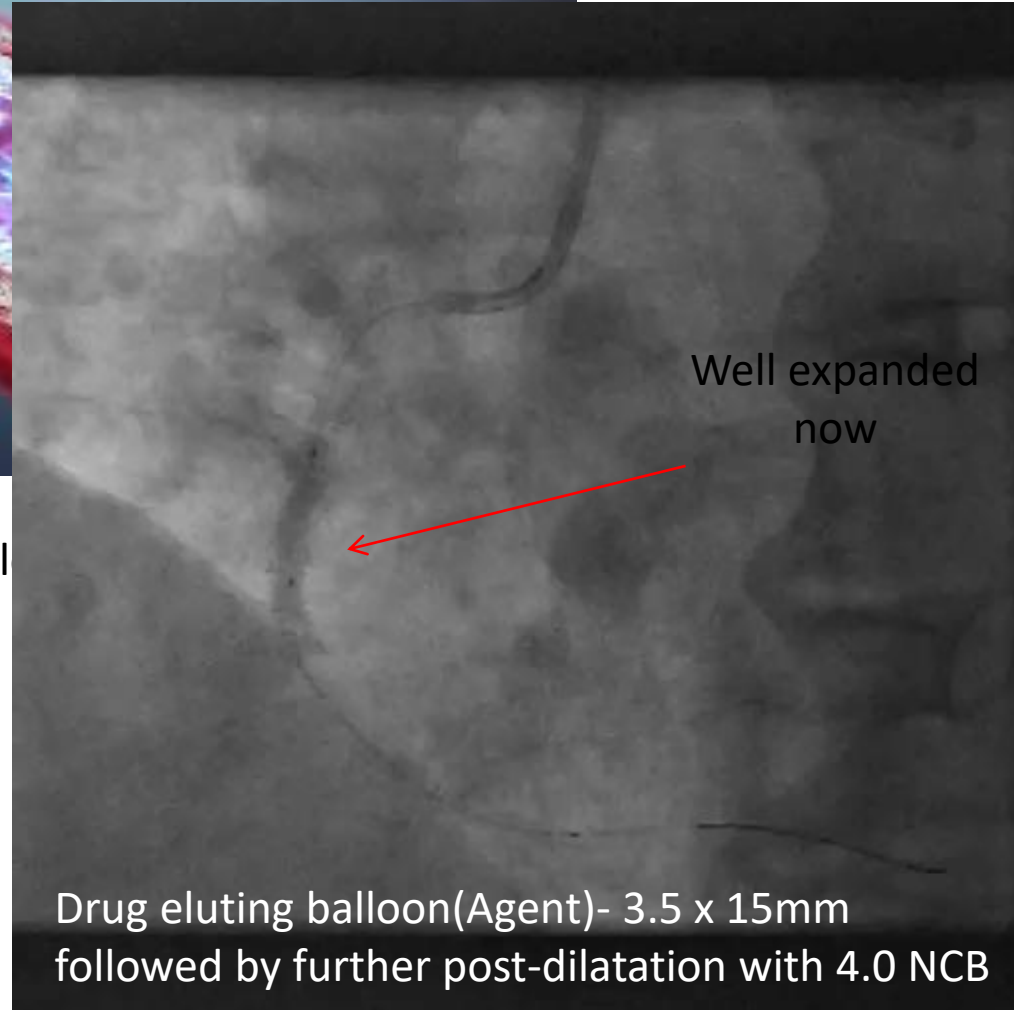


- Further dilatation with 2.5, 3.0 NCB followed by
- Wolverine cutting balloon- 3.5 x 10mm
Further dilatation with 4.0 NCB



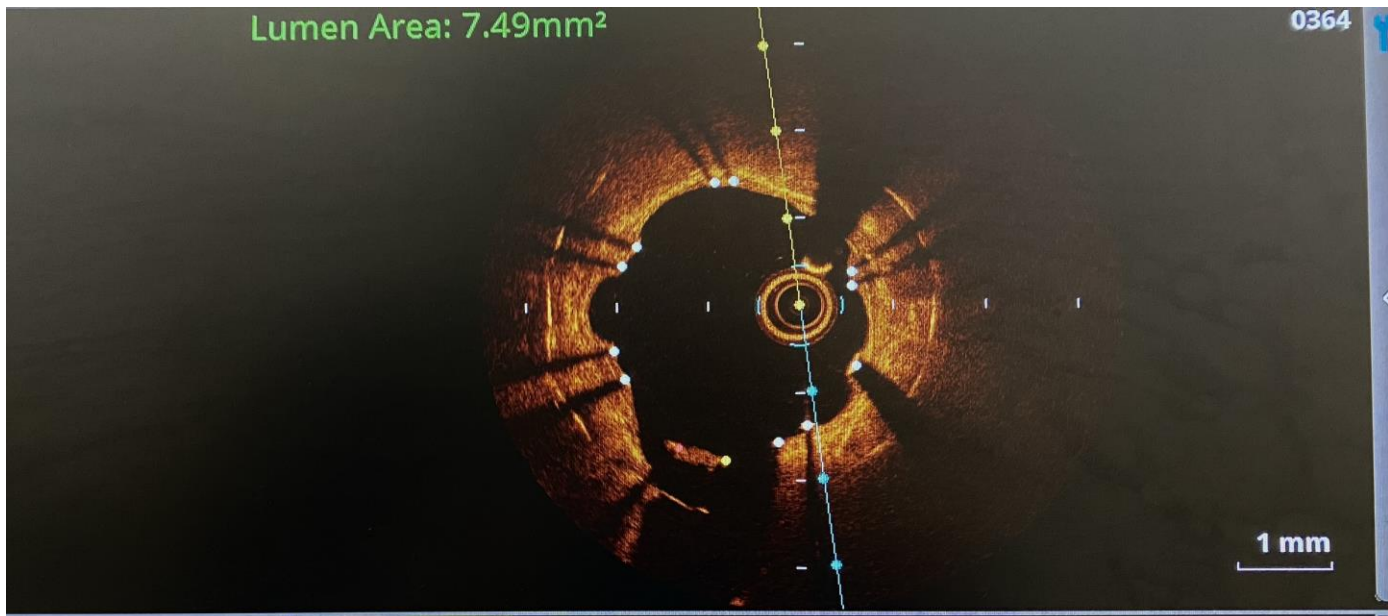
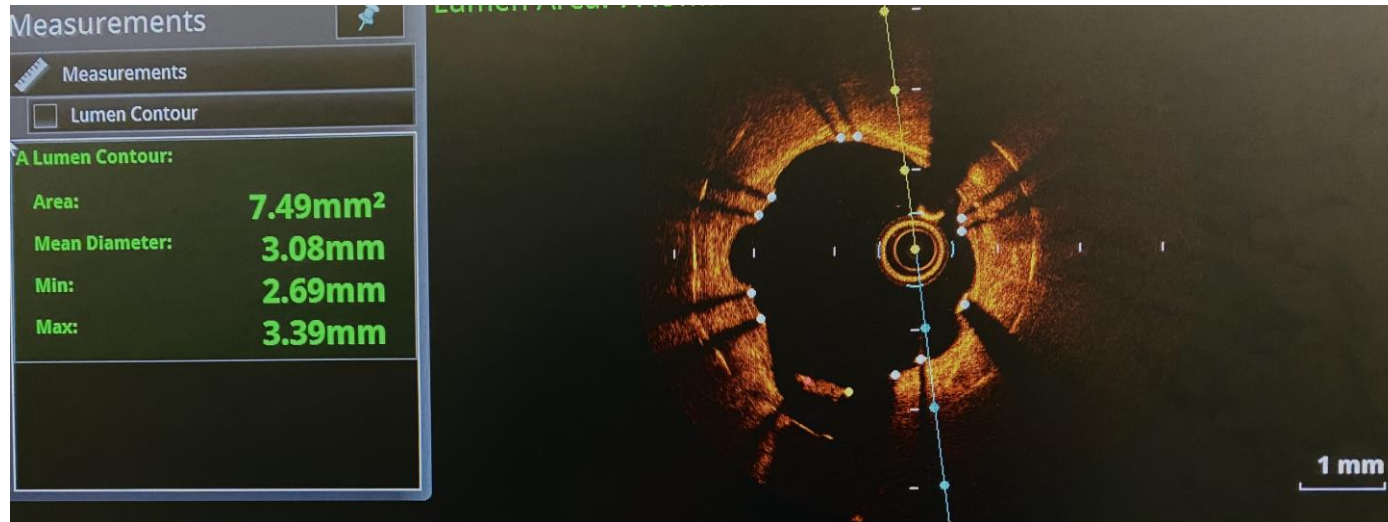


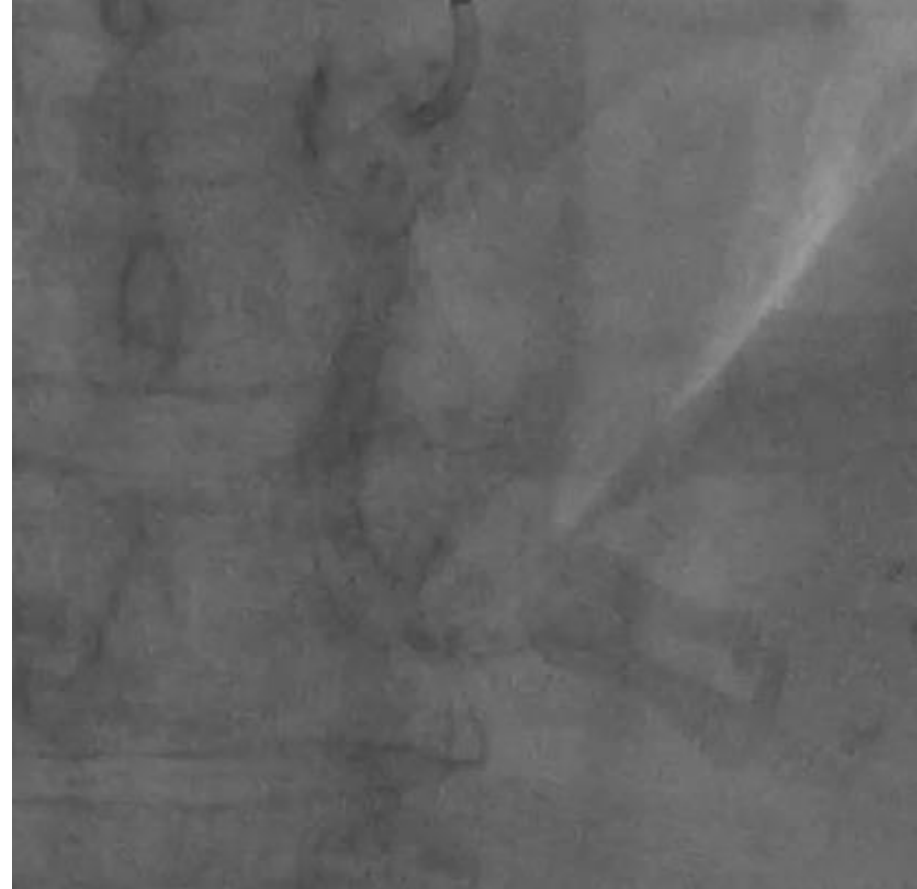
Shockwave 3.5 x 12mm ball
6 X 10 bursts given



Good lumen gain: 7.5mm²
Stent diameter -3.5 mm at ISR

Repeat OCT





Planning a repeat
angiogram in 6 months

- To our knowledge, Shockwave IVL never tested before to treat severe late ISR when other devices fail to expand fully.
- Our case showed successful modification of the plaque by creating fractures in the fibro-calcific ISR segment using Shockwave balloon .
- Imaging important to understand the pathophysiology of ISR
- Optimisation using NC balloon, Cutting balloon, high pressures balloon.
- Good lumen gain and adequate MLA achieved post shockwave balloon followed by drug eluting balloon.
- Promising results but randomised controlled clinical trials are required to evaluate its superiority and safety against currently available calcium-modifying devices.