

A Shocking Kiss

69 year old male for pre-operative risk

History:

- Peripheral vascular disease with left lower extremity gangrene
- End-stage renal disease
- Hypertension
- Diabetes mellitus

Physical:

- Vitals = 89 beats/min, 146/66, BMI 32
- Normal rate and regular rhythm
- Diminished distal pulses with left upper extremity fistula
- Left lower leg with Lisfranc amputation

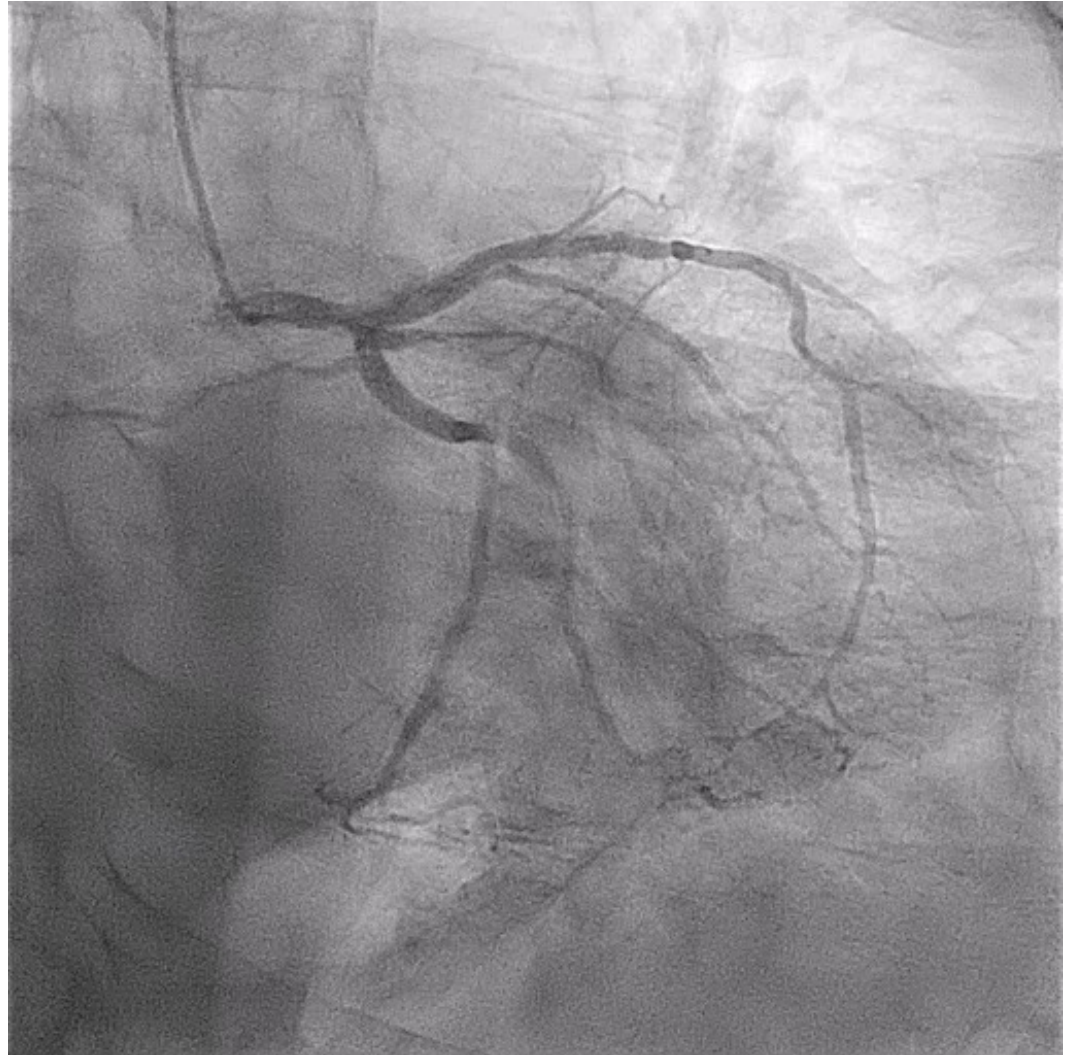
Non-invasive findings:

- ECG with normal sinus rhythm, borderline LVH
- Dobutamine stress echocardiogram with normal LV function at rest
- Severe inferior, anterior, lateral apical wall hypokinesis at stress

Diagnostic angiography:

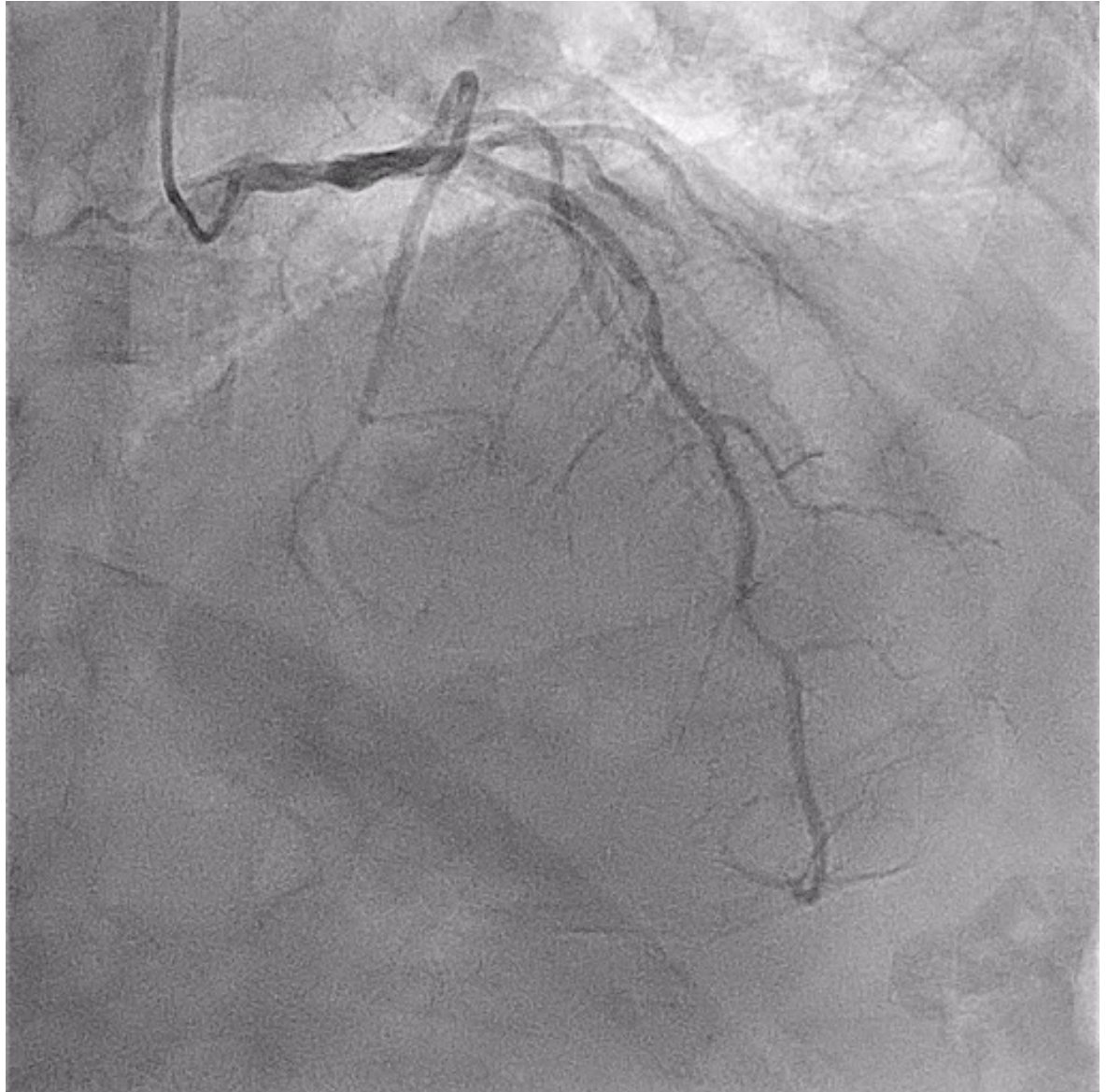
- Distal LM 50% lesion
- Extends into ostial LAD and ostial LCX, with 70% calcific lesions
- Medina 1,1,1 category
- Mid-LAD with 50% focal lesion
- Nonobstructive disease of RCA

- LM, Medina
1,1,1

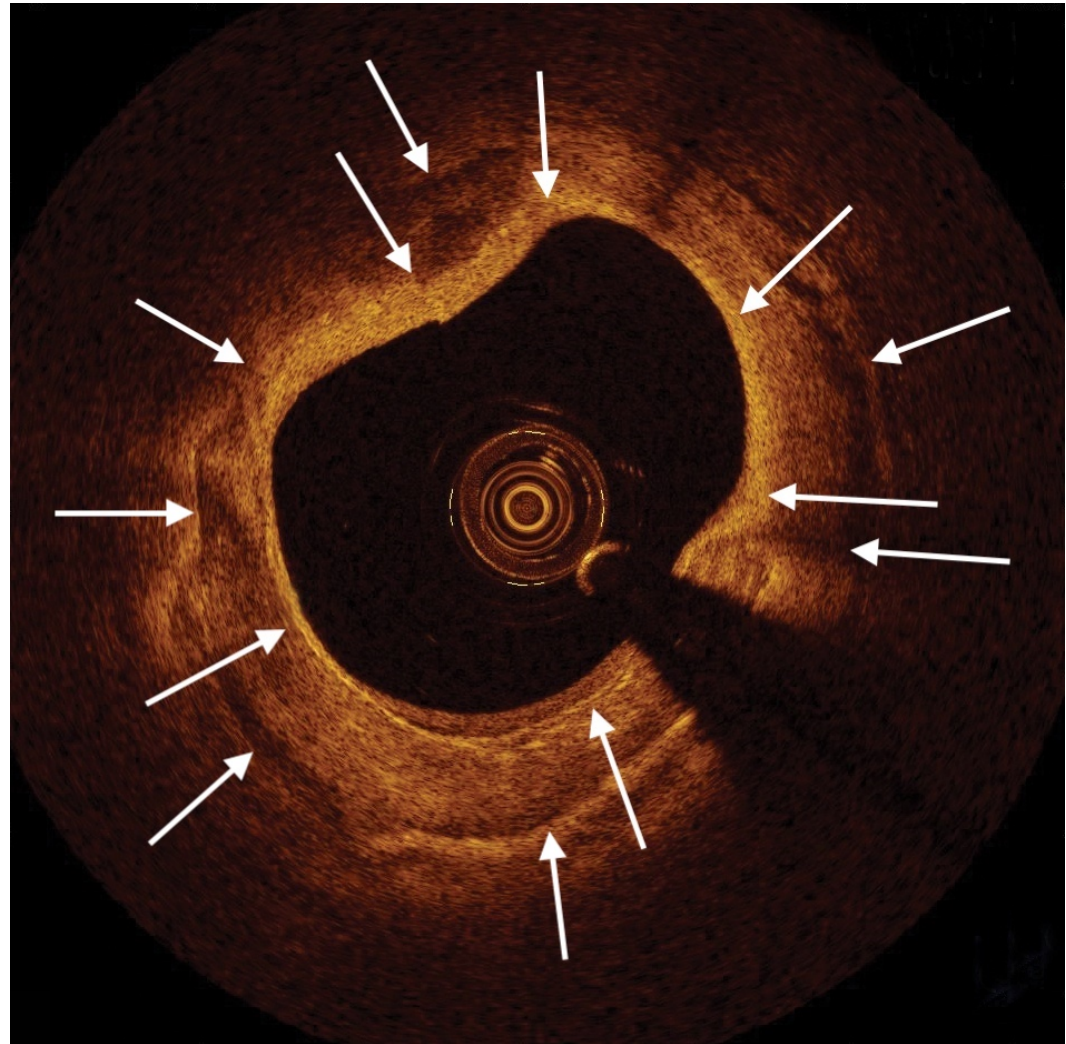


Surgical turn-down for CABG due to active infection.

- LM, Medina
1,1,1
- Mid-LAD
90%

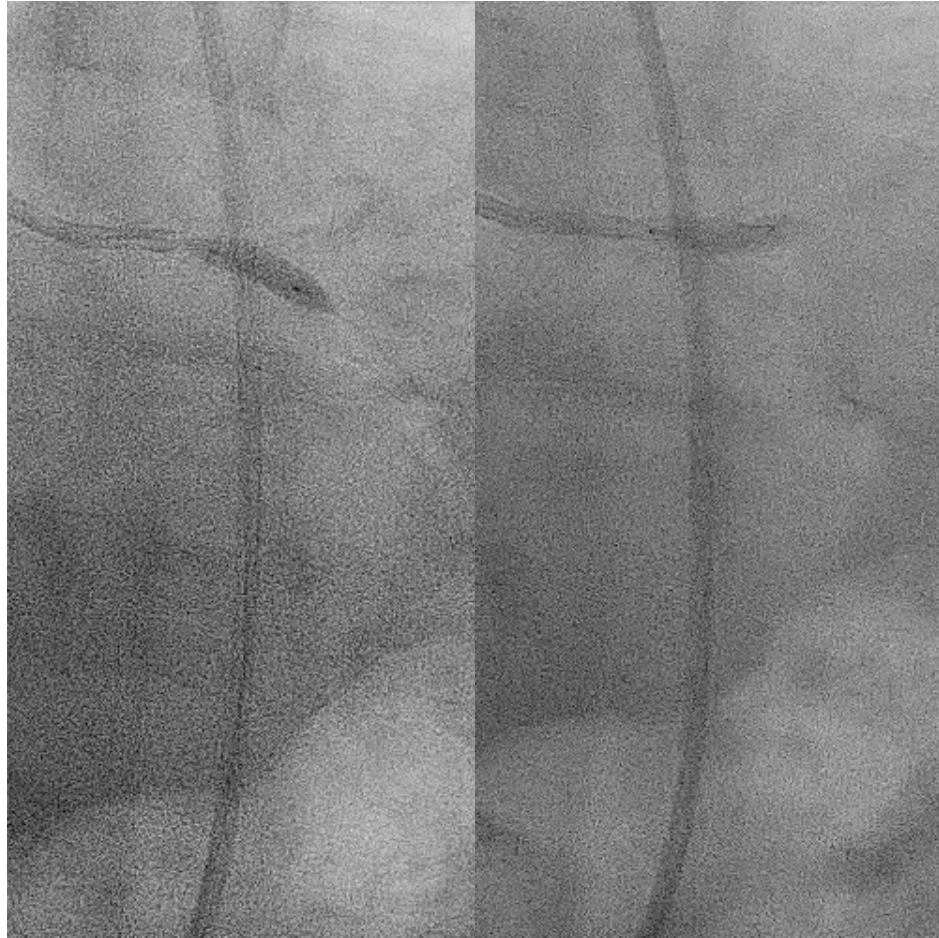


- LM, Medina
1,1,1
- Mid-LAD
90%
- OCT of
lesions with
360° Ca++



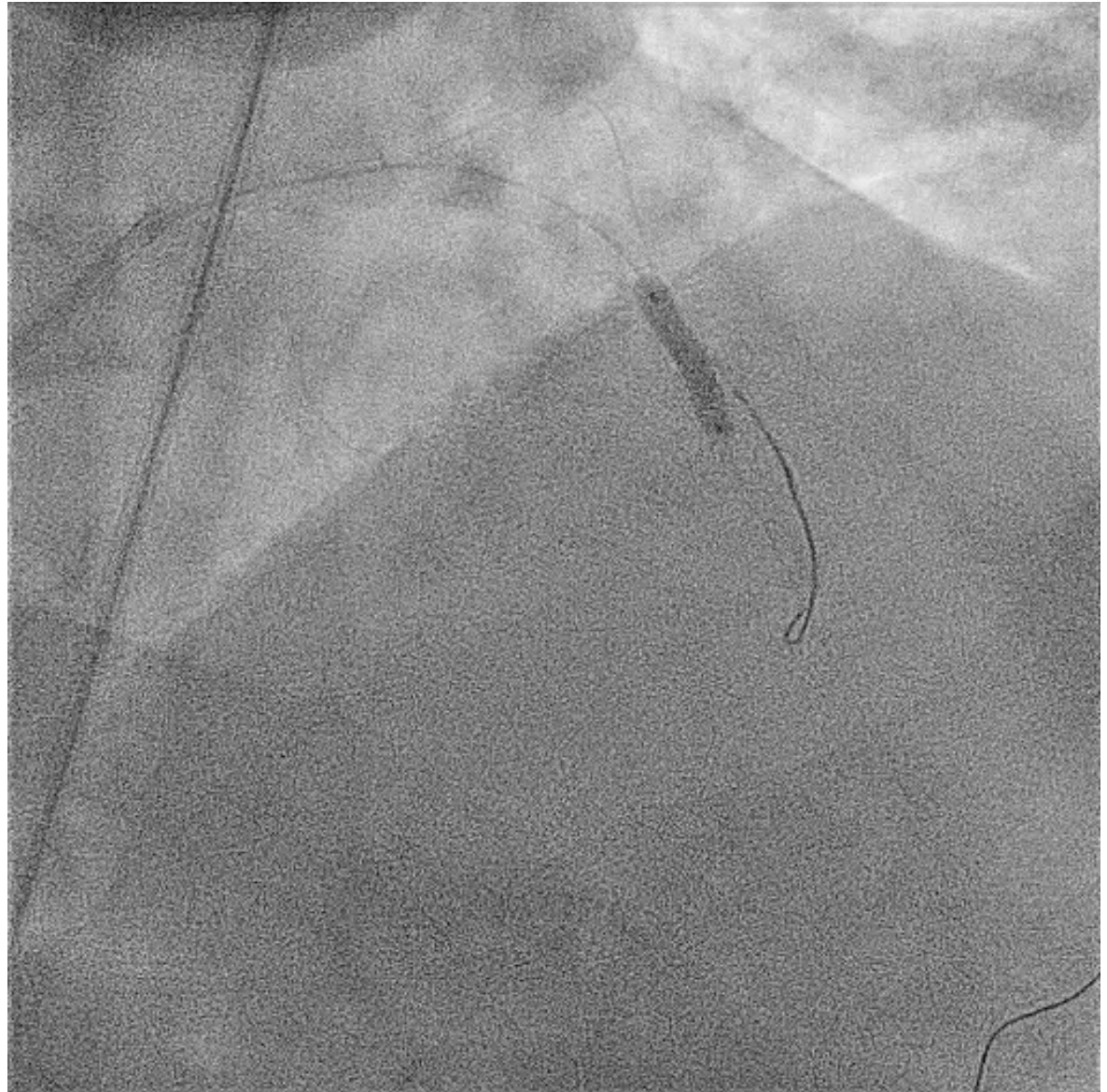
Nearly circumferential calcium (arrows)

- LM, Medina 1,1,1
- Mid-LAD 90%
- OCT of lesions with 360° Ca++
- Shockwave to ostial LCX and LAD



Given large, significantly calcified LCX, favored a 2-stent strategy with plaque modification to both branches, followed by DK-Crush after stenting mid-LAD lesion. Shockwave was used to leave both wires in place.

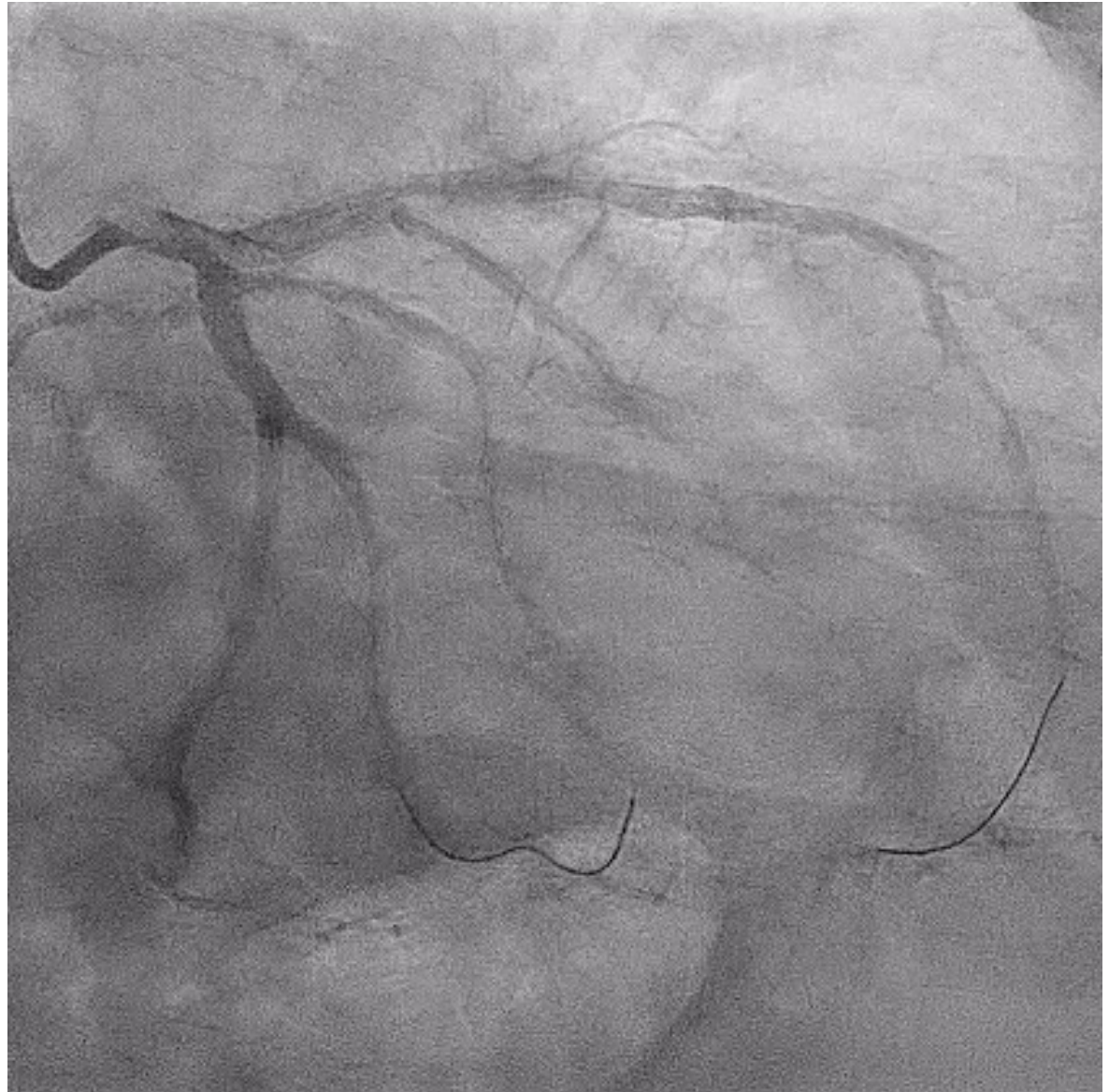
- LM, Medina 1,1,1
- mLAD 90%
- OCT of lesions with 360° Ca++
- Shockwave to ostial LCX and LAD
- DES to mid-LAD



- LM, Medina 1,1,1
- mLAD 90%
- OCT of lesions with 360° Ca++
- Shockwave to ostial LCX and LAD
- DES to mid-LAD
- DES in LCX, crushed by LAD balloon, and initial kiss



- LM, Medina 1,1,1
- mLAD 90%
- OCT of lesions with 360° Ca++
- Shockwave to ostial LCX and LAD
- DES to mid-LAD
- DES in LCX, crushed by LAD balloon, and initial kiss
- DES to LAD, followed by final kiss



Hospital Course

- Day 1: Admitted to hospital for worsening gangrene requiring amputation
- Day 3: Diagnostic angiography performed for pre-operative risk stratification
- Day 6: Successful revascularization of bifurcation disease after surgical turn-down
- Day 7: Taken to operating room for above-knee amputation
- Day 14: Discharged from hospital to sub-acute rehab center

Learning Points

- OCT imaging to help identify heavily Ca++ lesions
- Shockwave, versus atherectomy, allows for initial ballooning to access distal lesions with ↓ embolization or proximal complications
- Shockwave, versus orbital atherectomy, allows wire position maintenance
- Effective modification of 360° Ca++
- DK Crush with Shockwave allows for ↑ safety, ↓ procedure duration, and ↓ complexity compared to traditional atherectomy approach