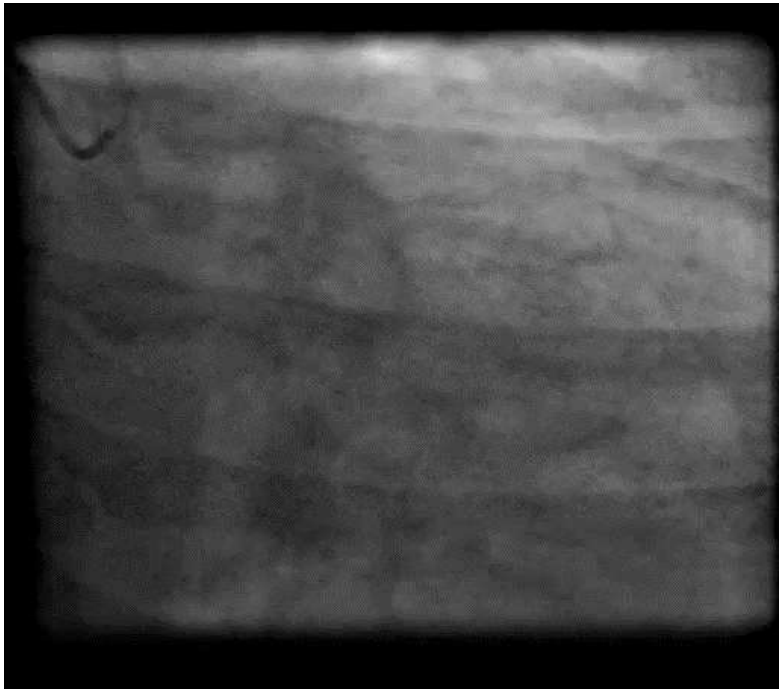
Importance of “Safe Landing”- a lesson worth learning

Muhammad Ahsan Arshad
Dougal McClean
Christchurch Hospital
New Zealand

Case Report

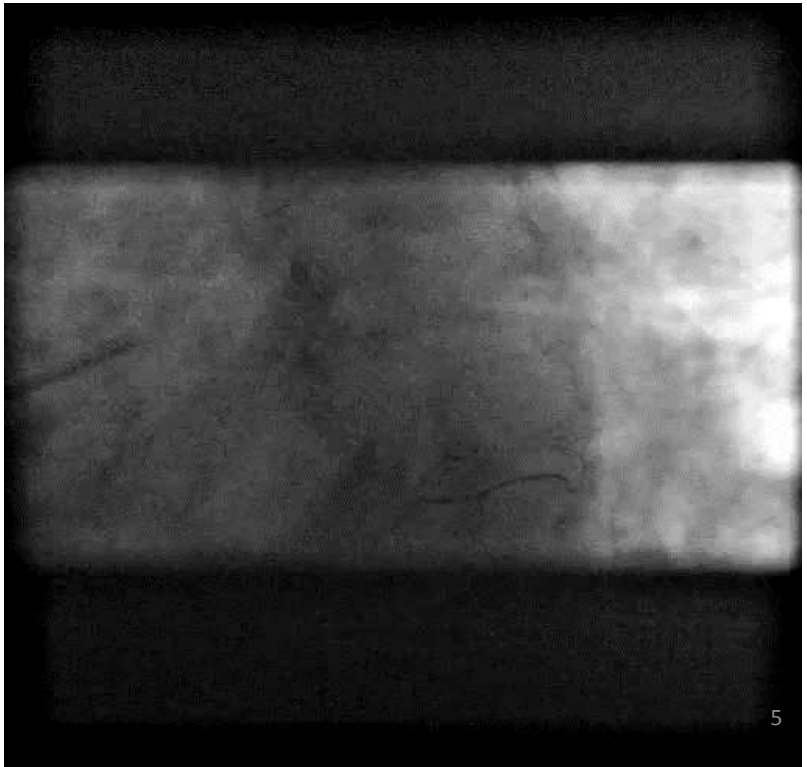
- 50 years old European female
- Current smoker
- T2DM on metformin
- HTN, Increased BMI
- Crohn’s disease
- Atypical chest/epigastric pain
- Modest hs TNI rise with no ischaemic ECG changes

Culprit LCx Lesion



Culprit LCx lesion

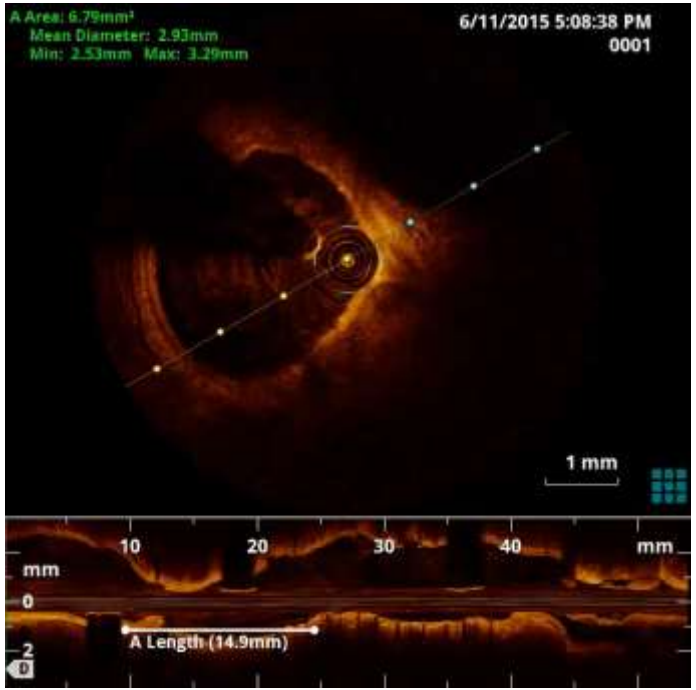
Stent Deployed

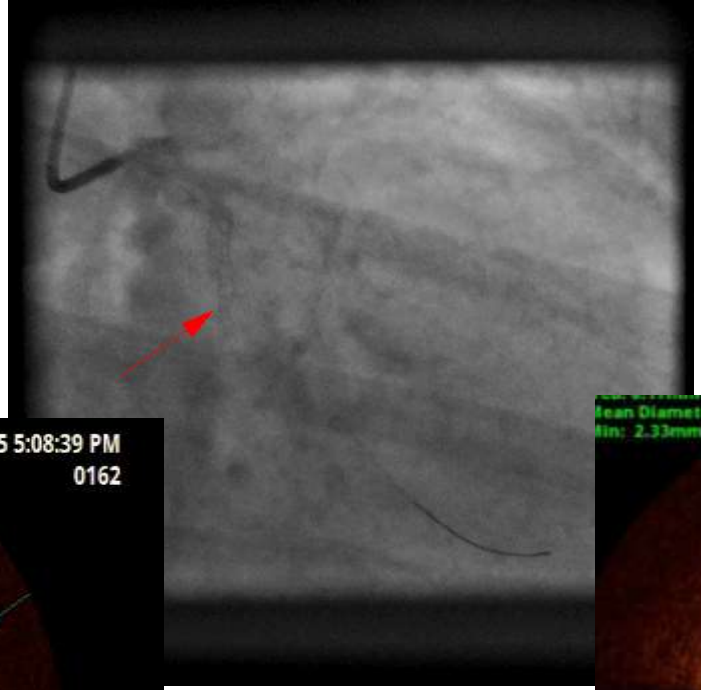


It’s not over till it’s over

- Pt develops severe chest pain
- ST segment depression on ECG monitoring
- Haziness over distal stent
- IC GTN with no effect
- ?edge dissection, not visible on angiogram (body habitus)
- What next?

OCT post 1st Stent





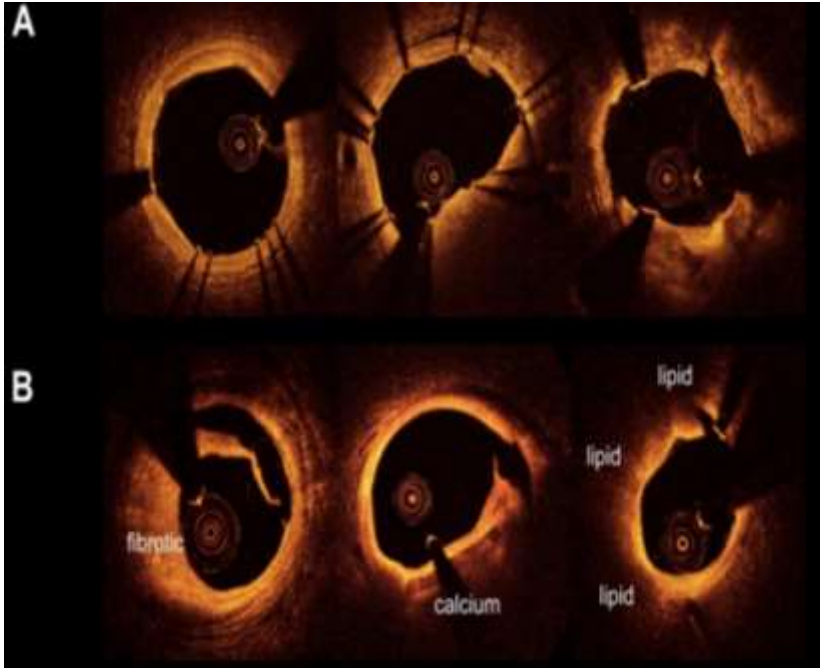

A Area: 5.52mm²
Mean Diameter: 2.63mm
Min: 2.32mm Max: 3.21mm
6/11/2015 5:08:39 PM
0162
1 mm

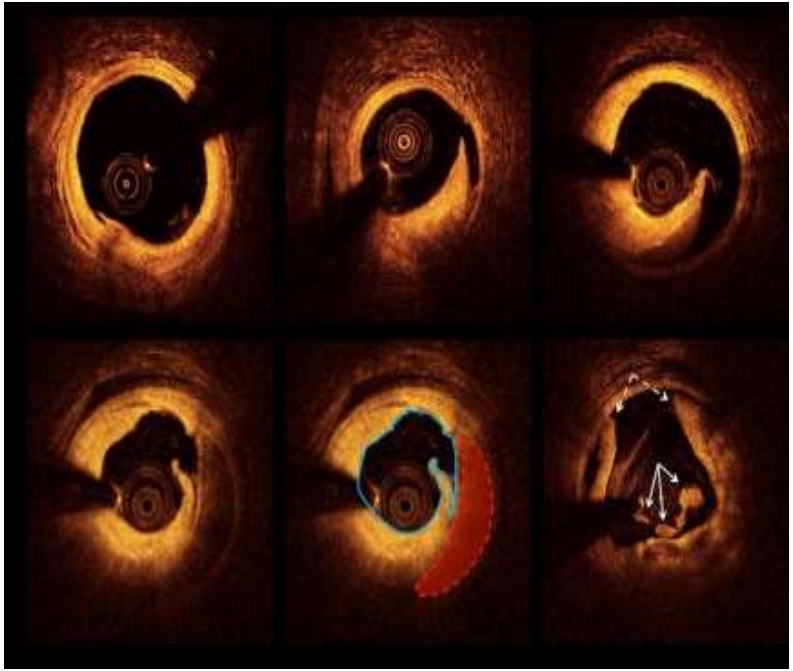

6/11/2015 5:08:39 PM
0001
1 mm

Stent Edge Dissection

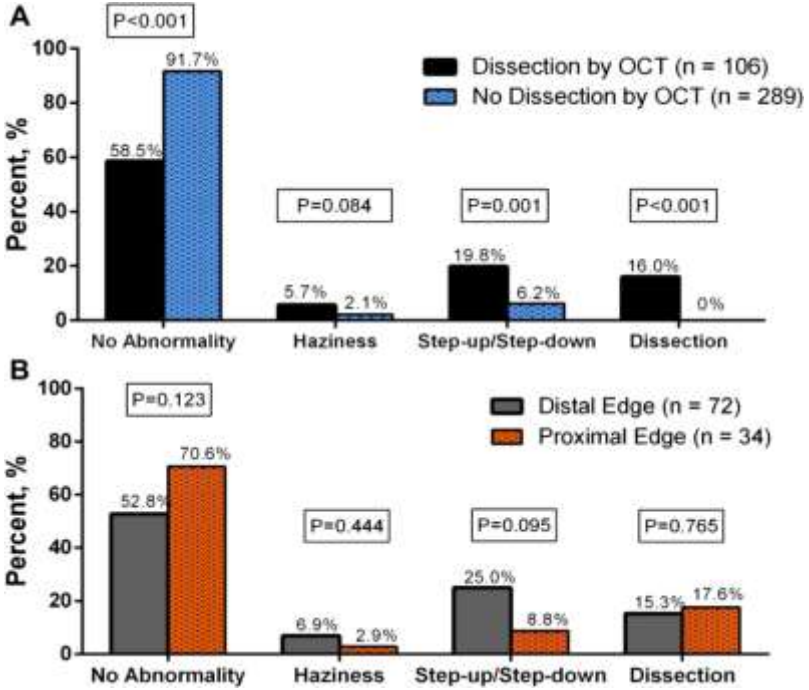
- Disruption of the vessel luminal surface within the 5mm of stent edges with visible flap
- Detection by OCT is far superior compared to IVUS and angiography
- Incidence is as high as 26-40% (Daniel Chamie and colleagues †)
- Superficial (intimal) or deep (medial/adventitial)
- “Geographic miss”, lipophilic plaque, TCFA, calcification angle, eccentricity, vessel overstretching are the independent predictors
- Stable small, superficial, non-flow limiting dissections can be safely left alone
- Deeper dissections with thicker flaps carry increase risk of restenosis and future adverse events †

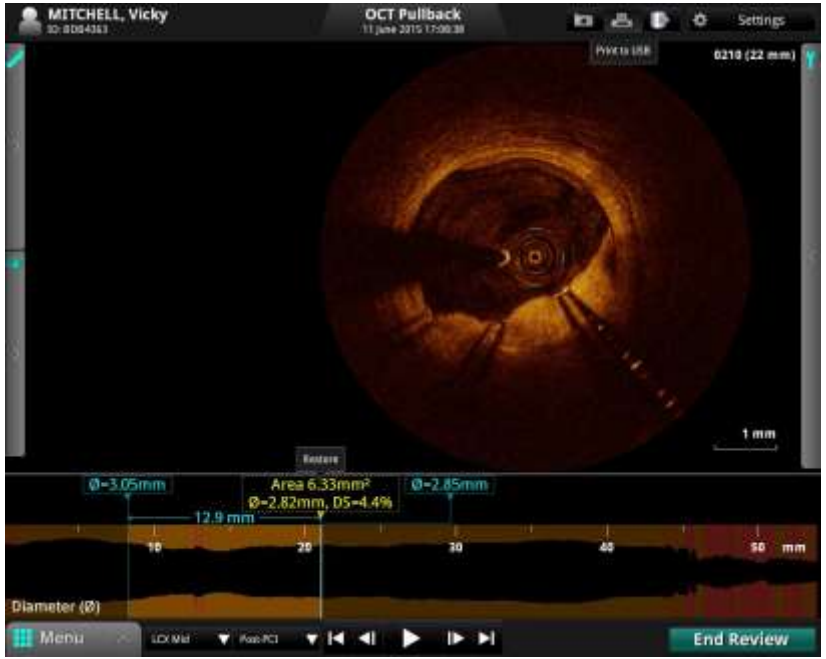
Stent Edge Dissection



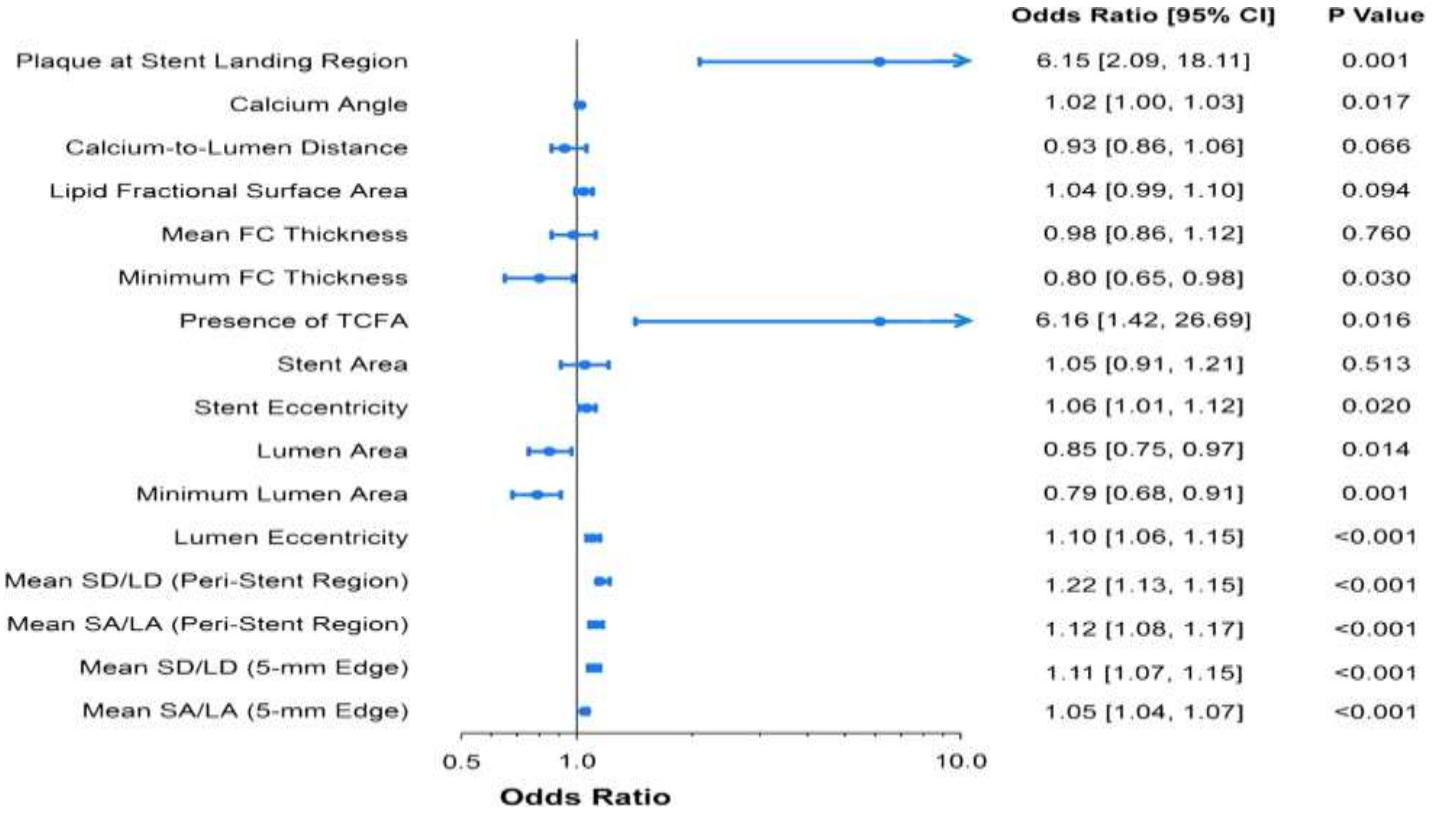


OCT vs Angiography

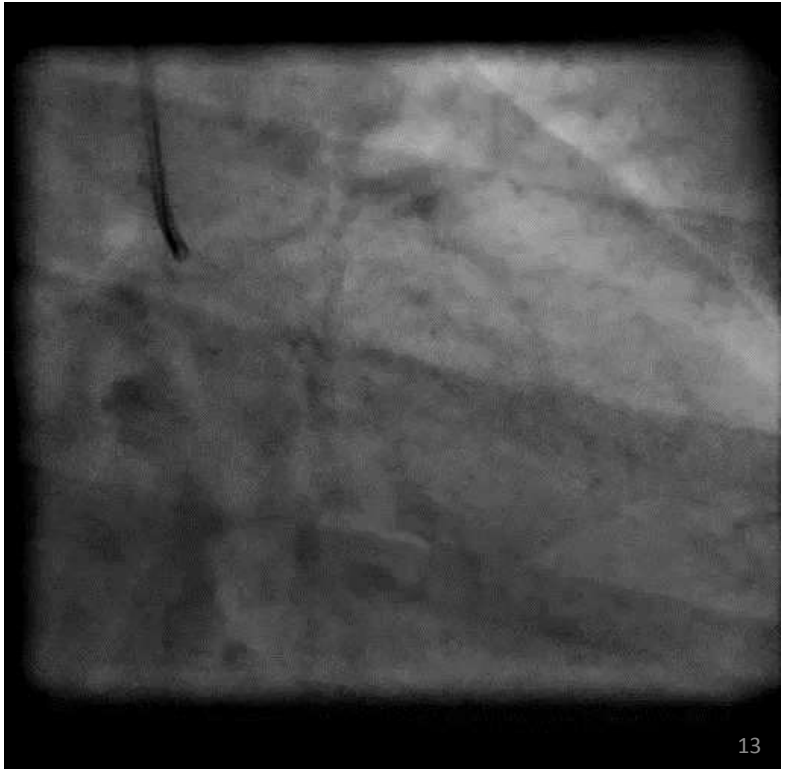




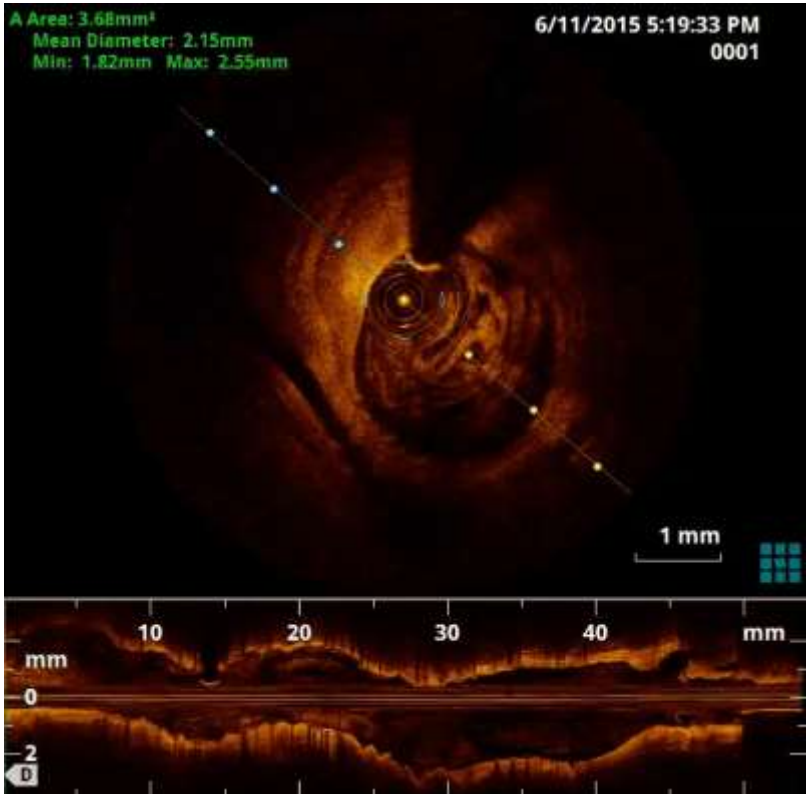
Predictors of OCT-detected stent edge dissection



2nd Stent Deployed



2nd Stent Deployed



So, checklist for “Safe Landing”!

- Angiography is great but “not the whole story”
- No angiographic lesion is “simple”
- Use intracoronary imaging to
  - evaluate the lesion and plaque
  - plan the intervention
  - finish off the “job” by optimizing the stent