

MINOCA: Role of Imaging and Physiology

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Disclosures

- **None**



Objectives

- **Discuss the definition of MINOCA**
- **Understand the diagnostic algorithm**
- **Detail the clinical implications**
- **Recognize the importance of imaging and physiology in MINOCA**



Definition: MINOCA

- **Acute myocardial infarction (rise and fall of cTn with at least 1 value above the 99th percentile upper reference limit)**
- **Non-obstructive coronary arteries on angiography**
- **No specific alternative diagnosis**



Epidemiology: MINOCA

- Prevalence about 5-15%
- Younger (late 50s v early 60s)
- Women (close to 50% v 25% in AMI)
- Decreased likelihood to have traditional risk factors



Case Presentation: 57-year-old woman with chest pain

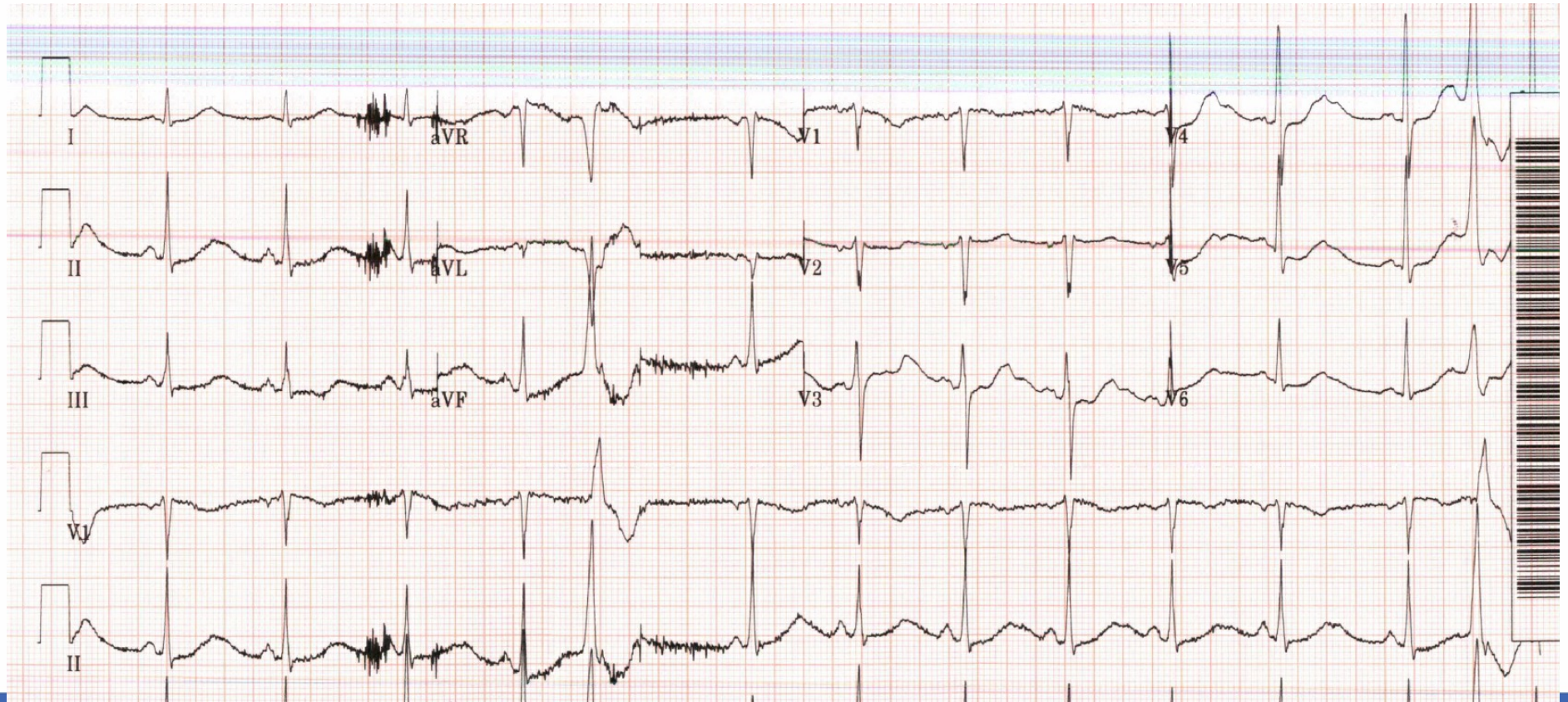
57-year-old woman with hypertension and tobacco use presented with midsternal chest pain. Associated symptoms: dyspnea, nausea, and vomiting.

Medical History:

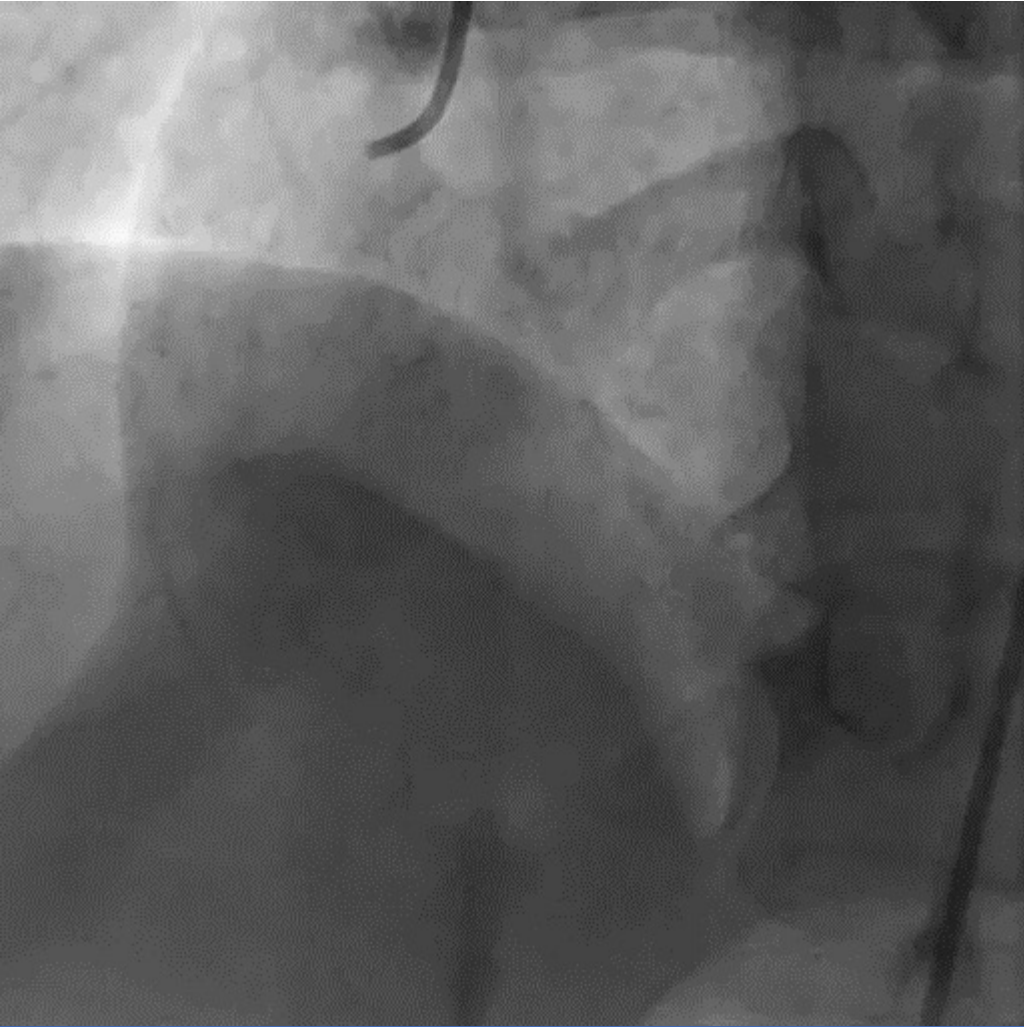
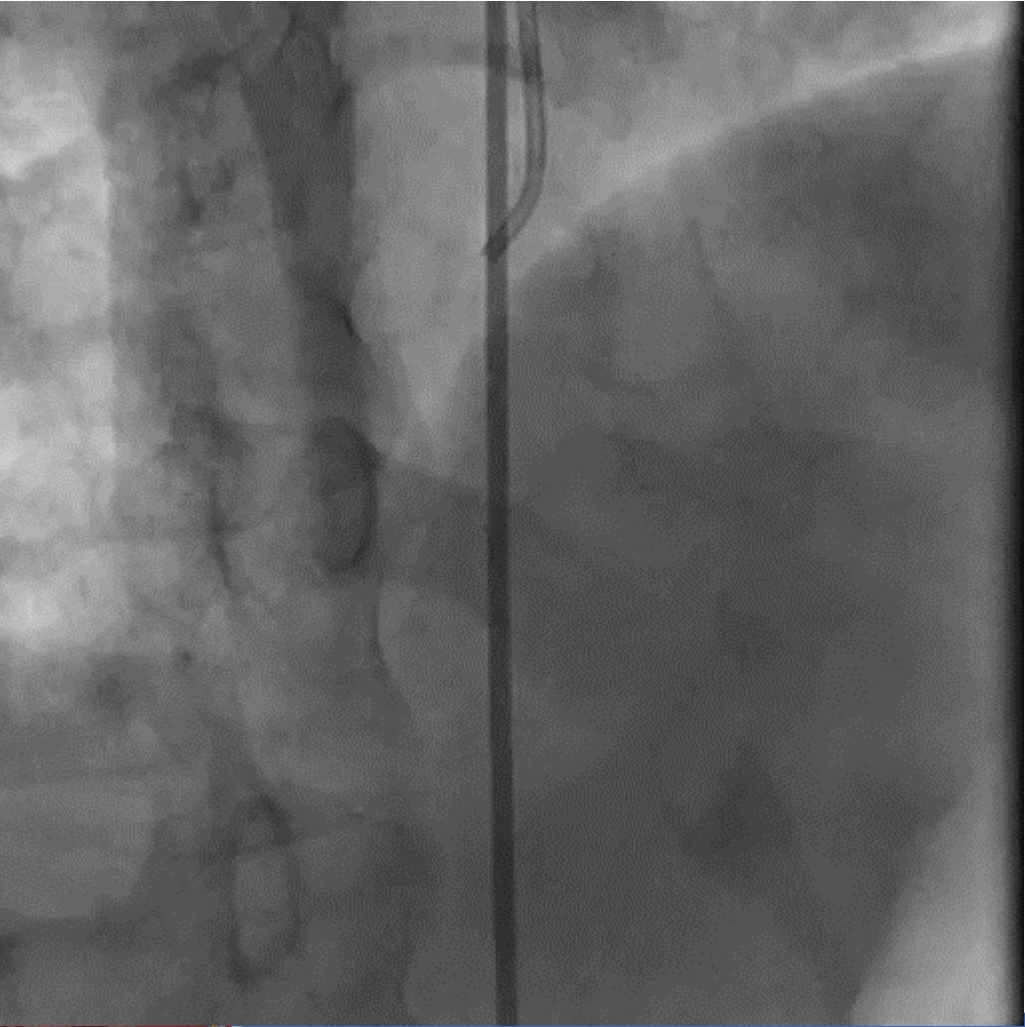
- Hypertension
- Tobacco Use

Medications:

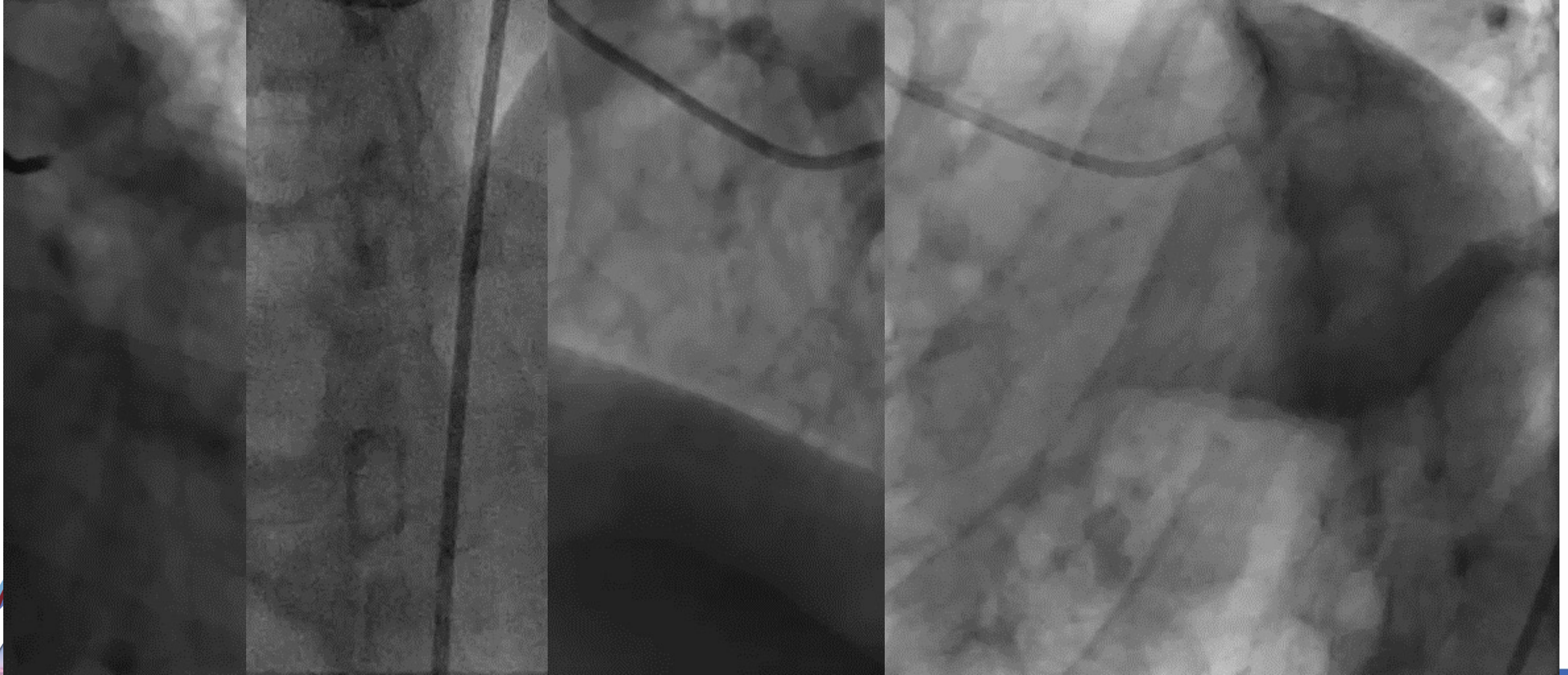
- Amlodipine



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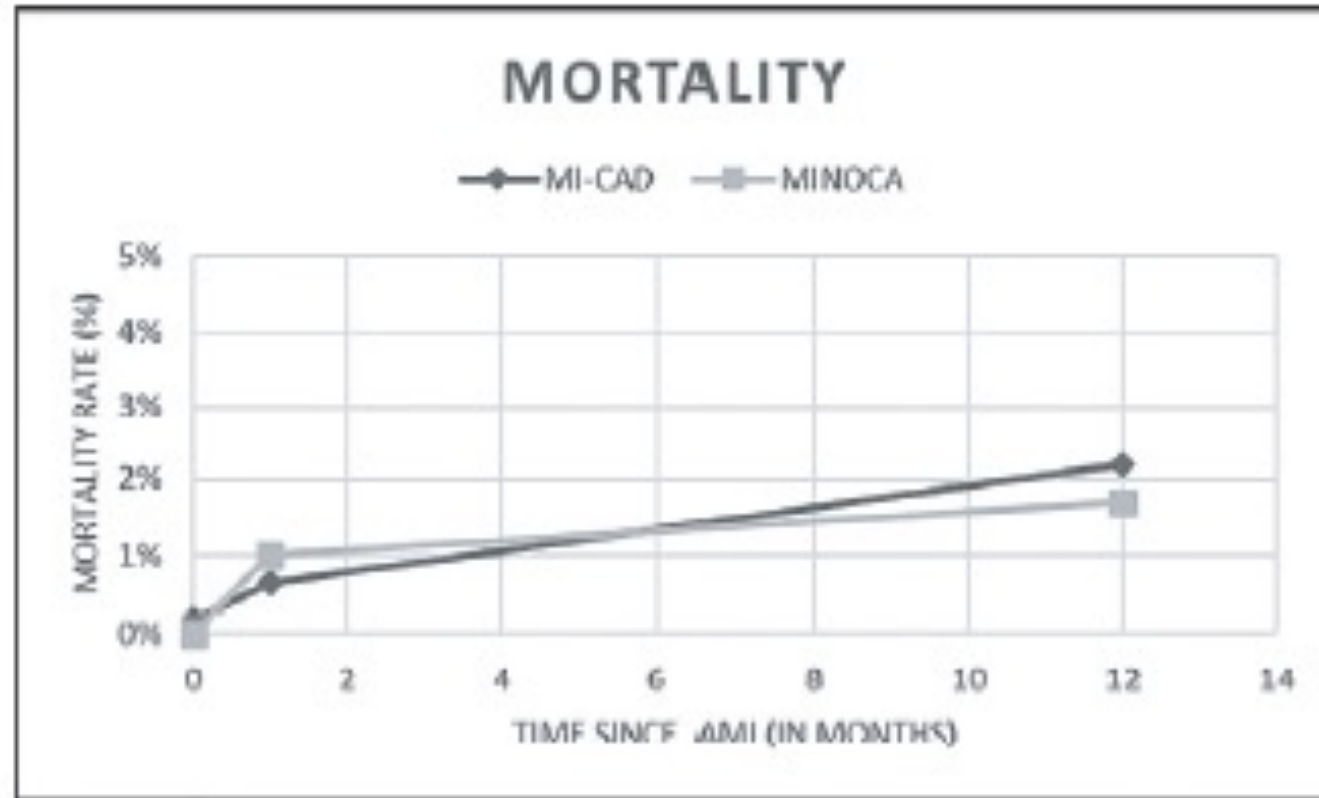


Case Presentation: 57-year-old woman with chest pain

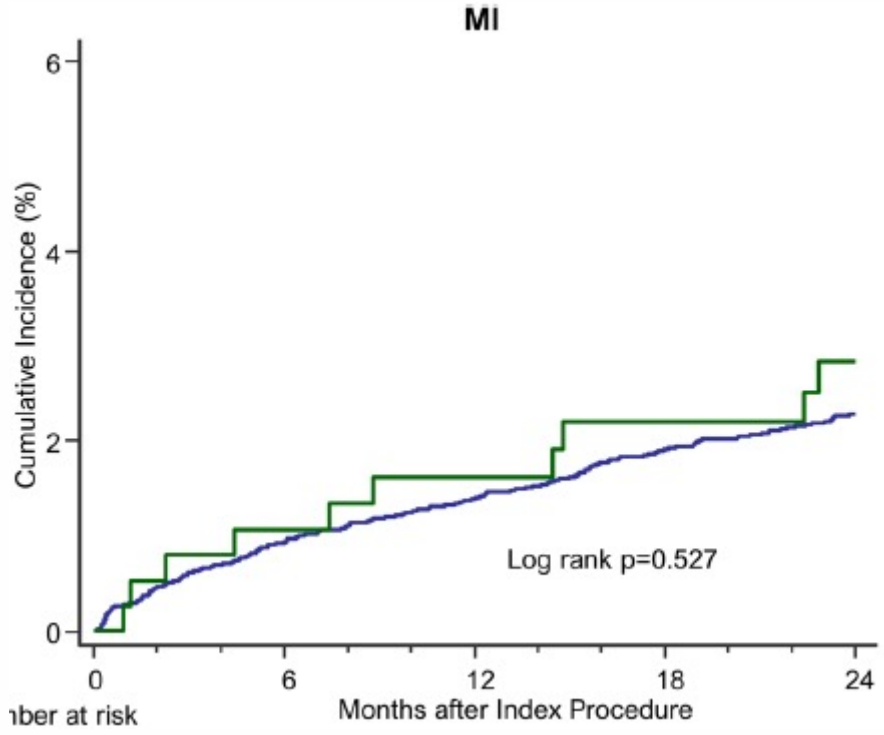
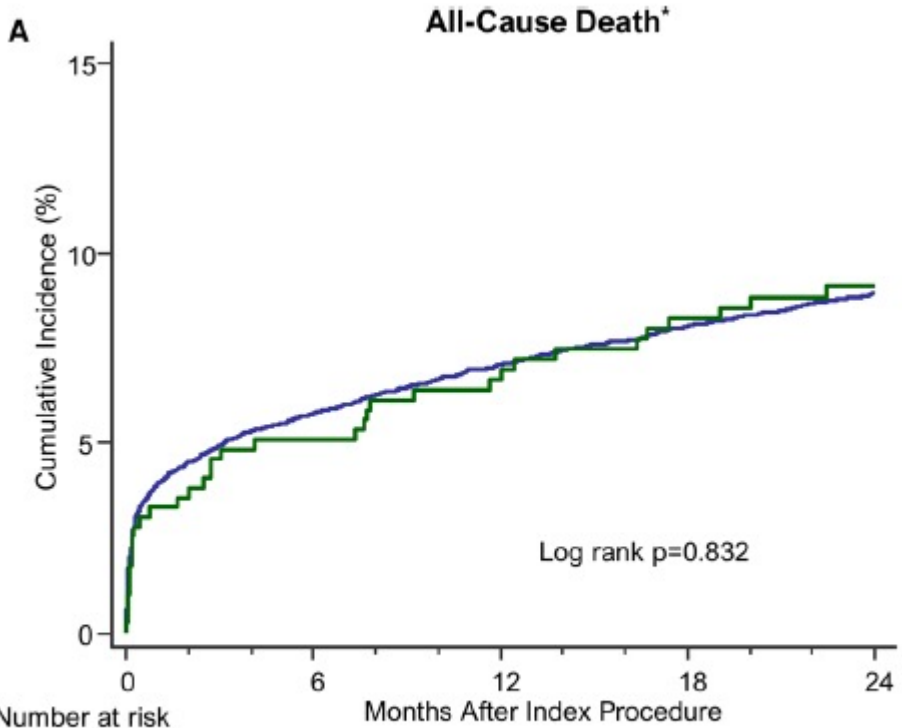
How would you approach this patient?



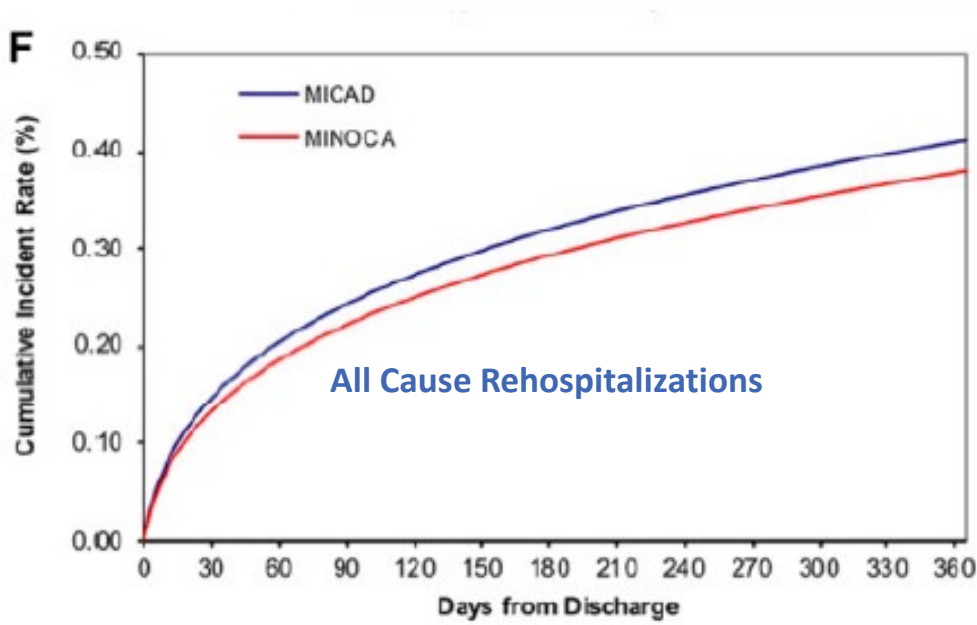
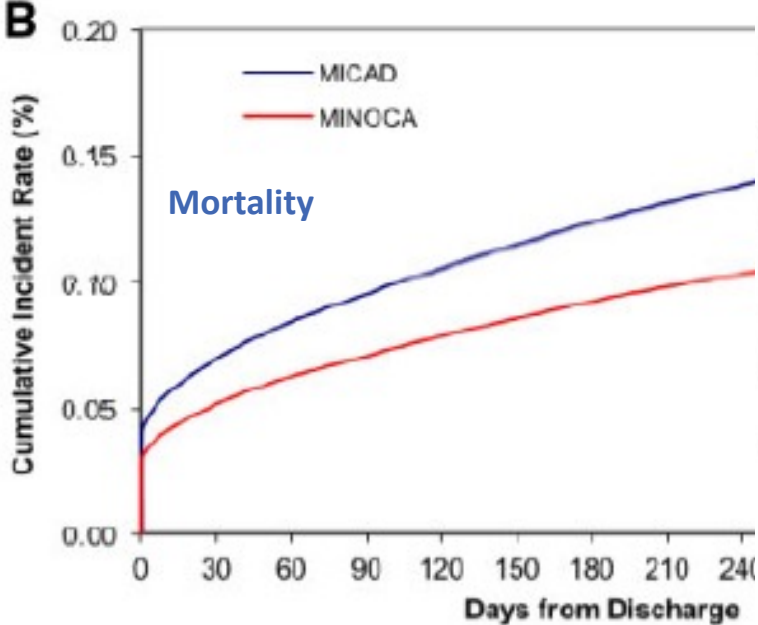
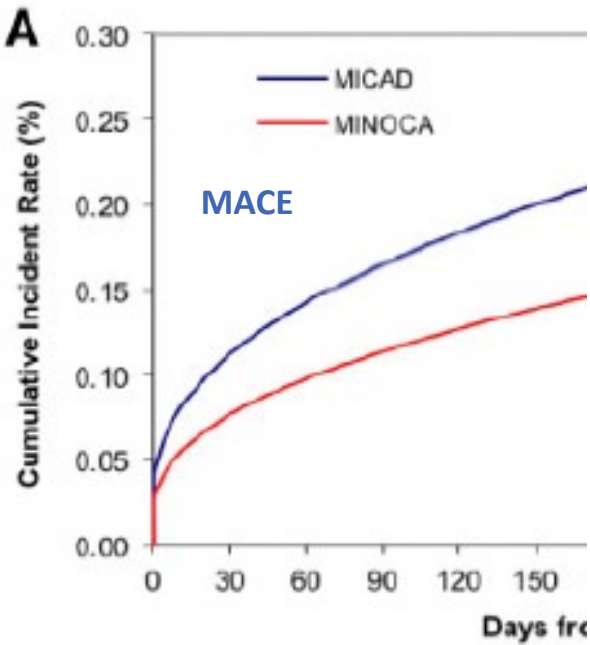
Clinical Importance: MINOCA



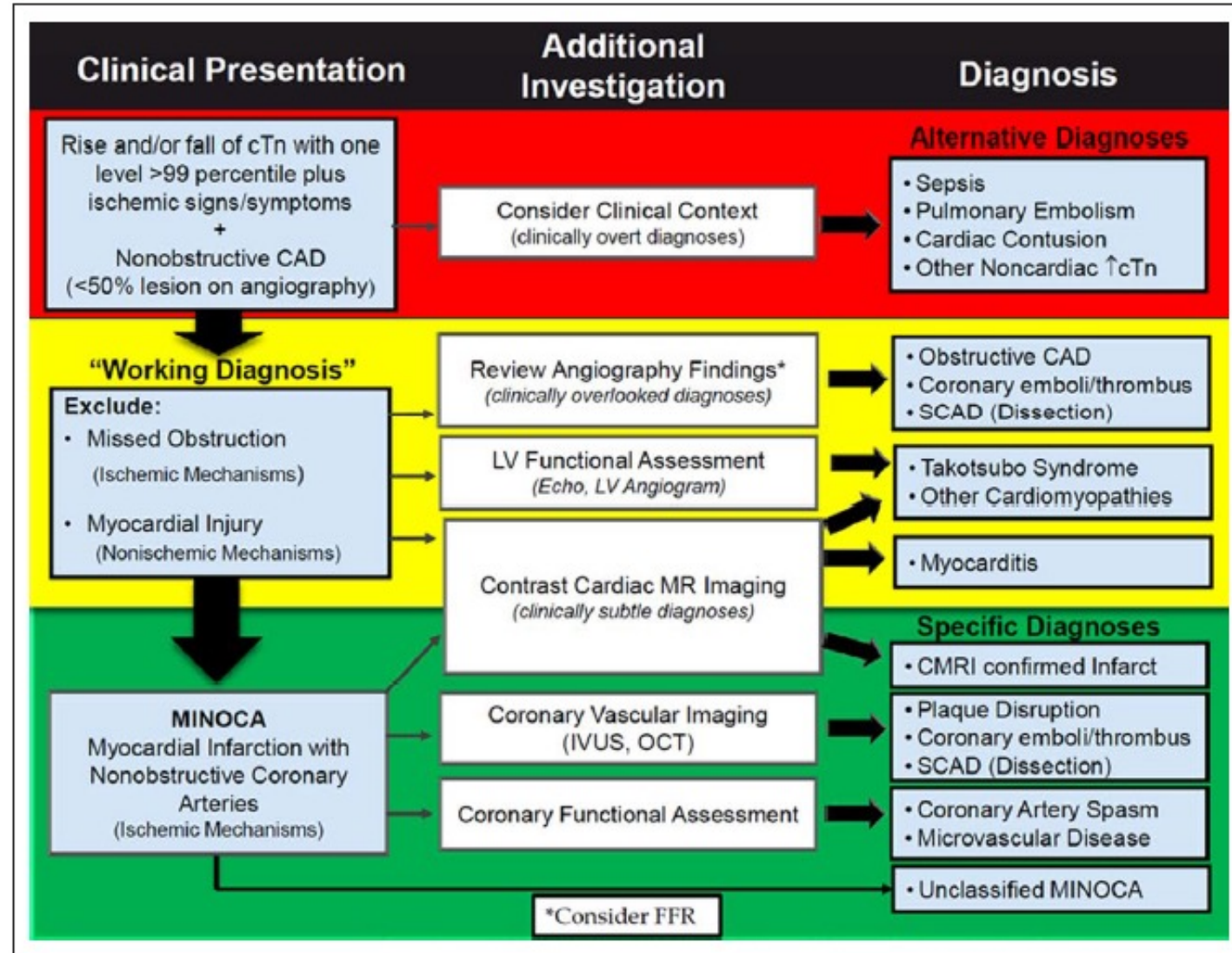
Clinical Importance: MINOCA



Clinical Importance: MINOCA



Diagnostic Algorithm: MINOCA



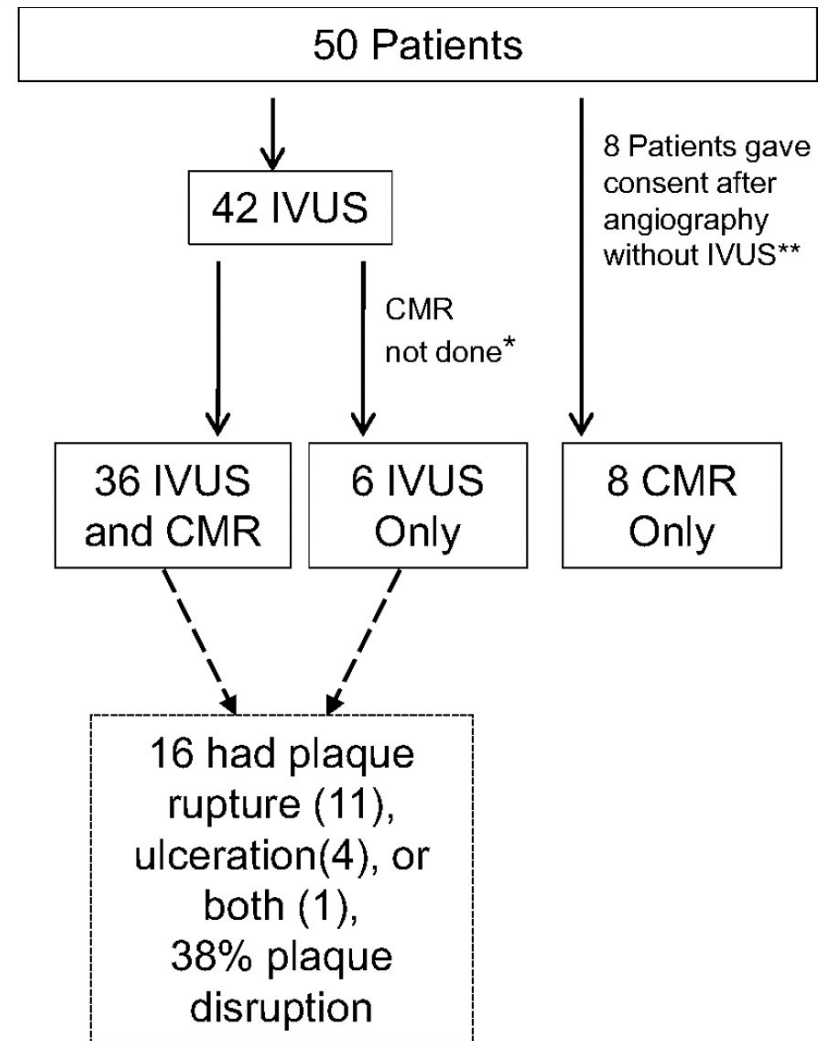
Plaque Erosion or Rupture: MINOCA

How often does this happen?

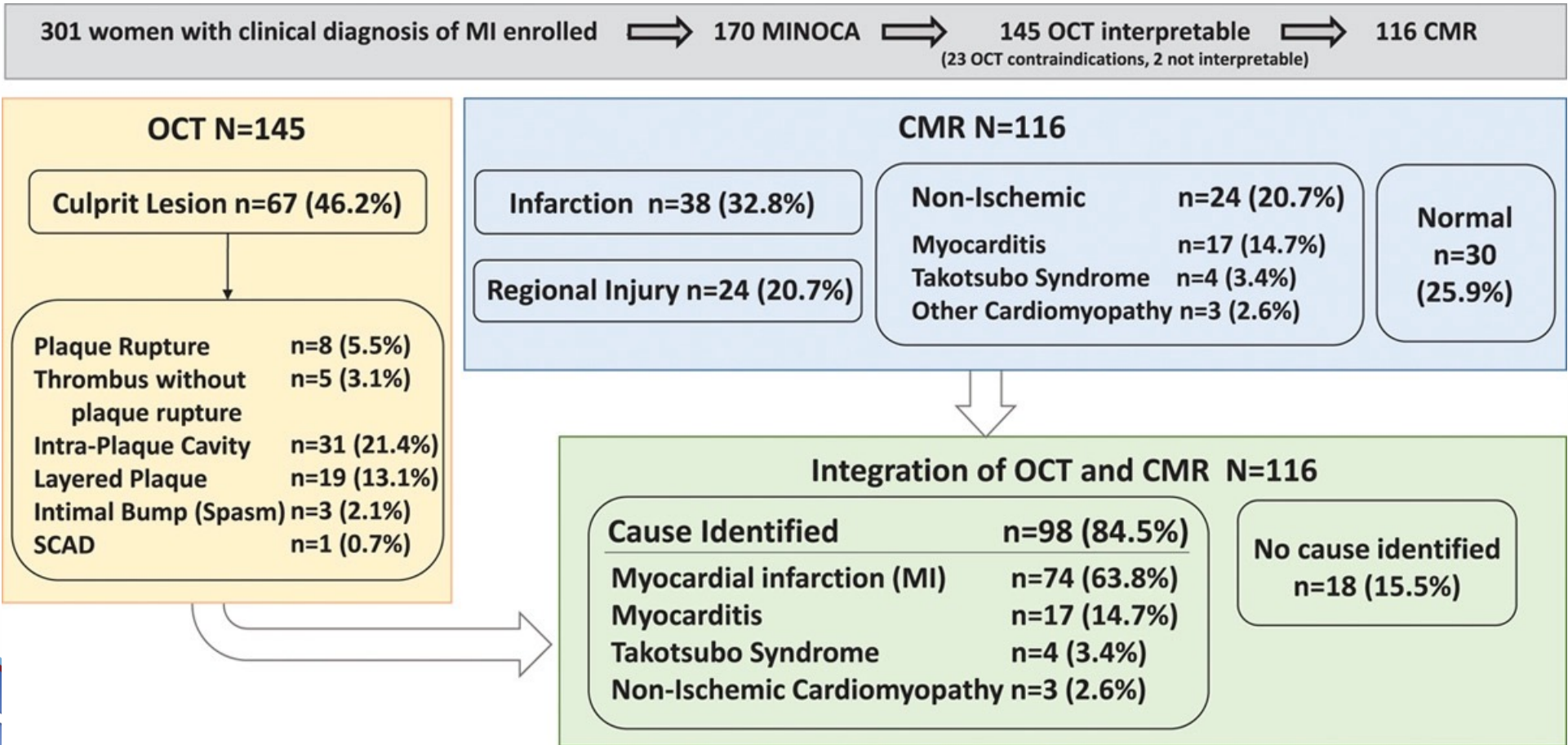
- A. 10%
- B. 33%
- C. 66%
- D. 80%



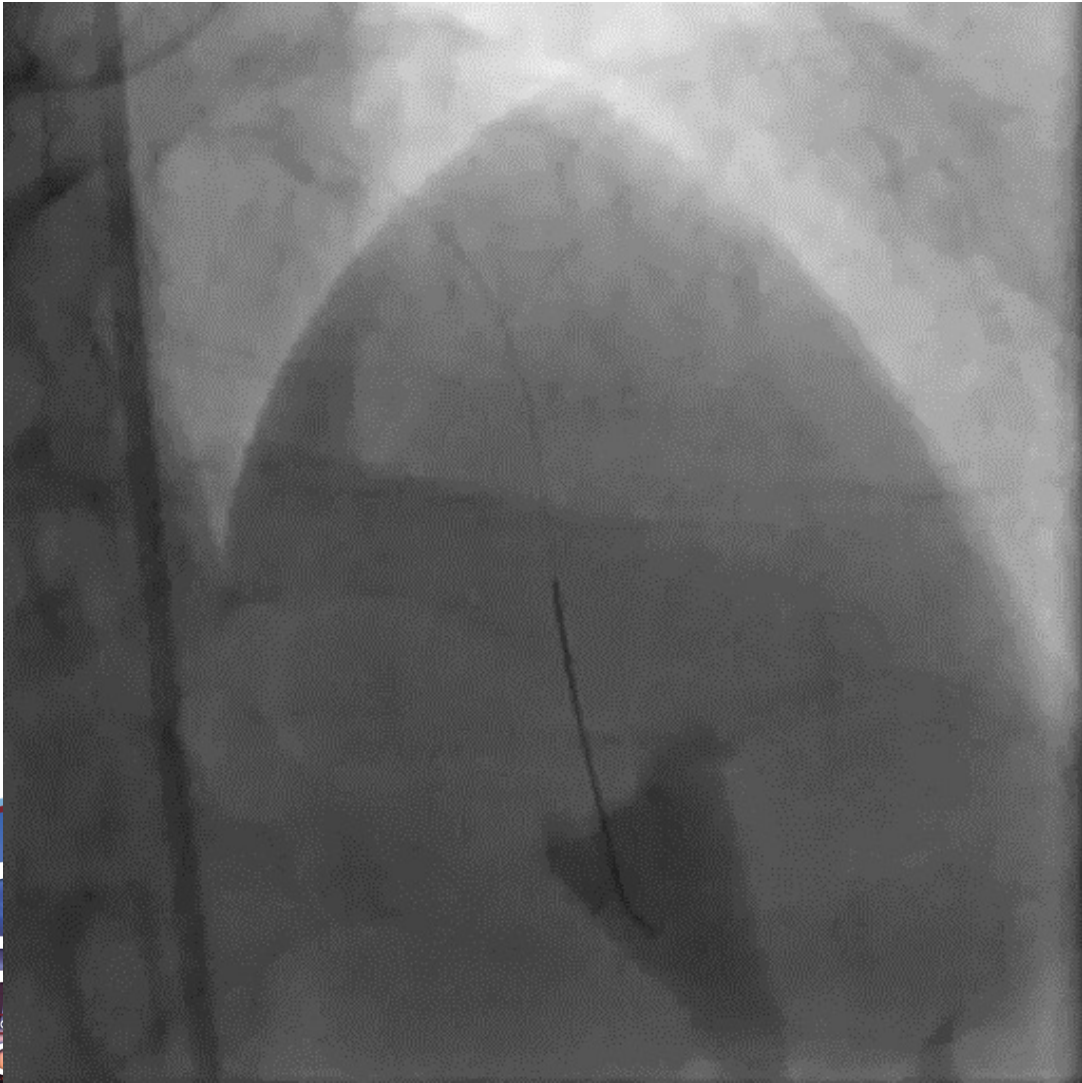
Plaque Erosion or Rupture: MINOCA



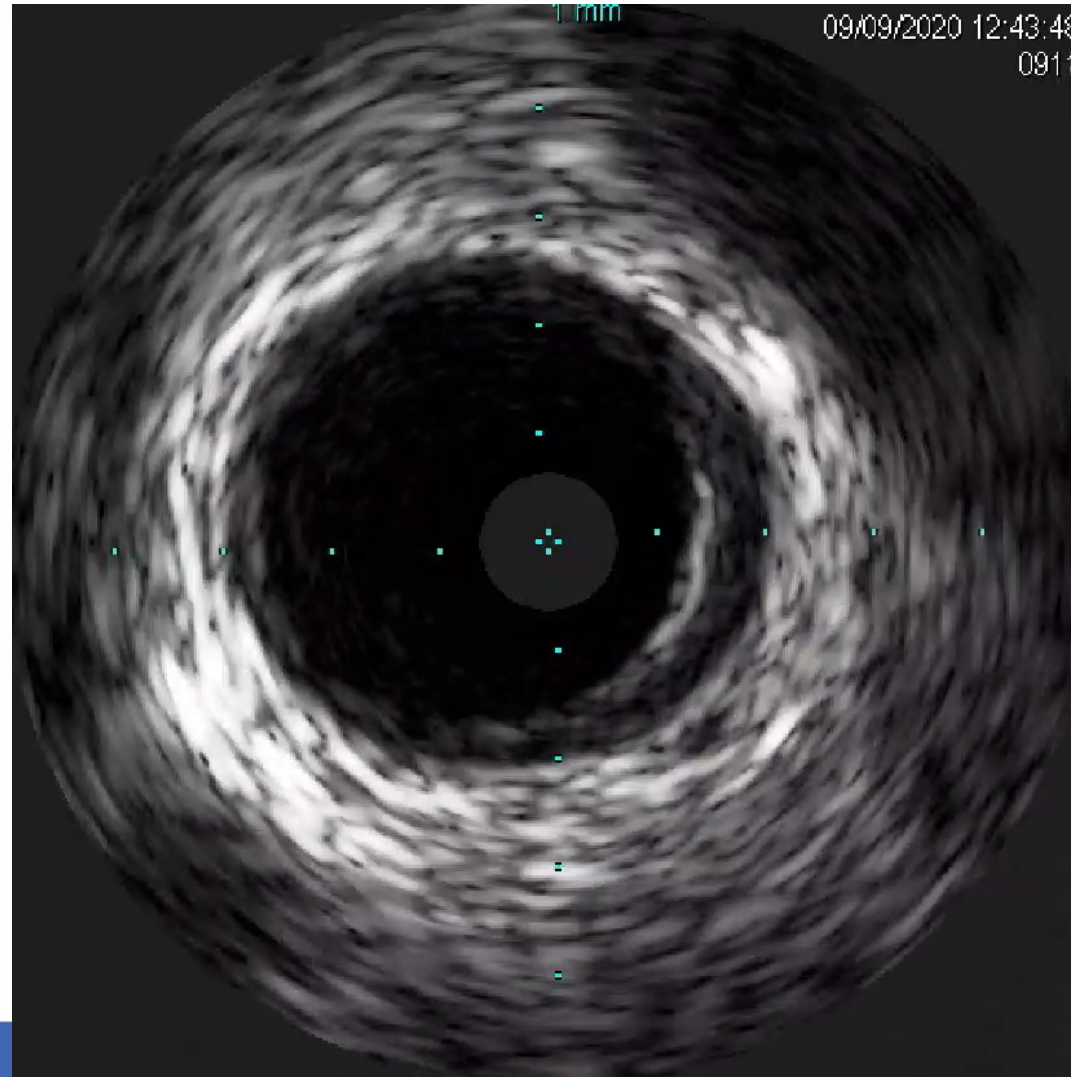
Plaque Erosion or Rupture: MINOCA



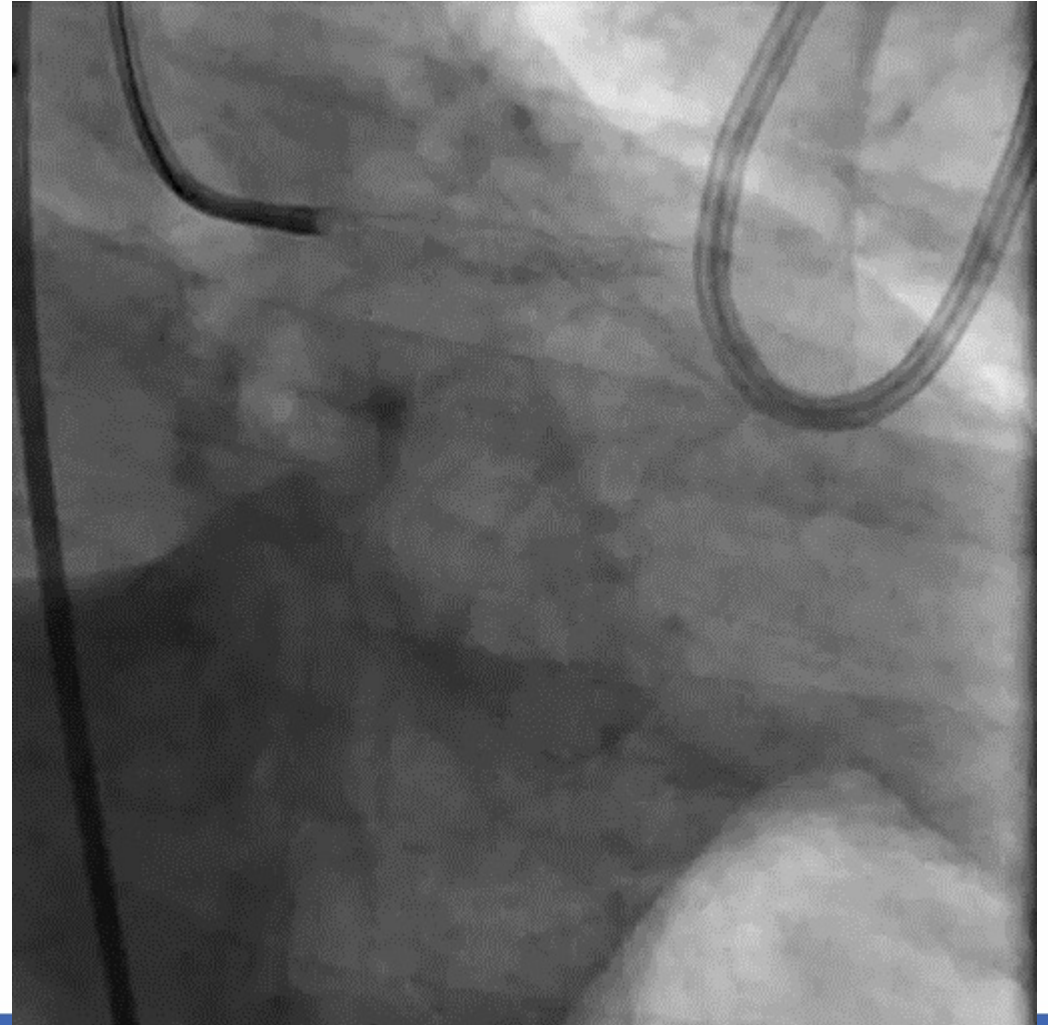
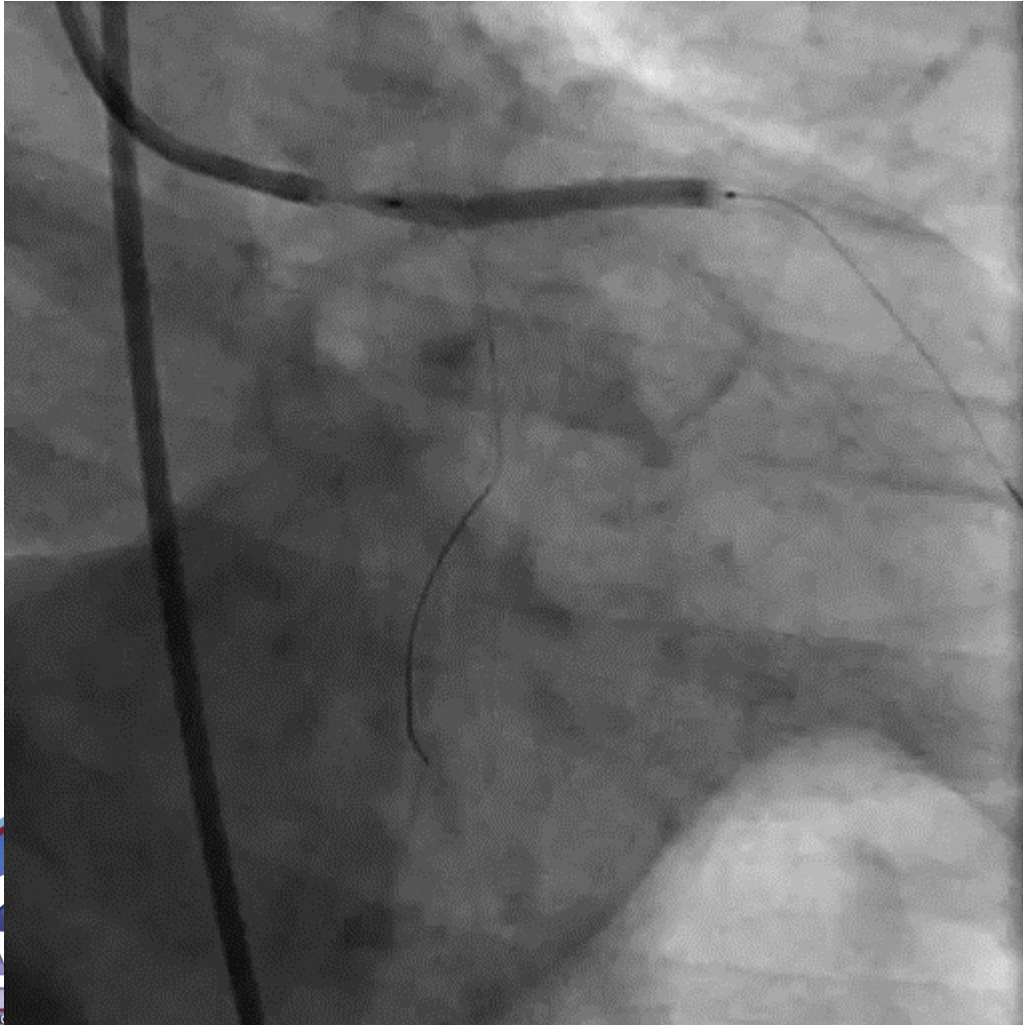
Case Presentation: MINOCA



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Case Presentation: MINOCA



Case Presentation: 56-year-old woman with chest pain

56-year-old woman with hypertension presented with intermittent chest pain. Associated symptoms: nausea, diaphoresis, dyspnea.

Medical History:

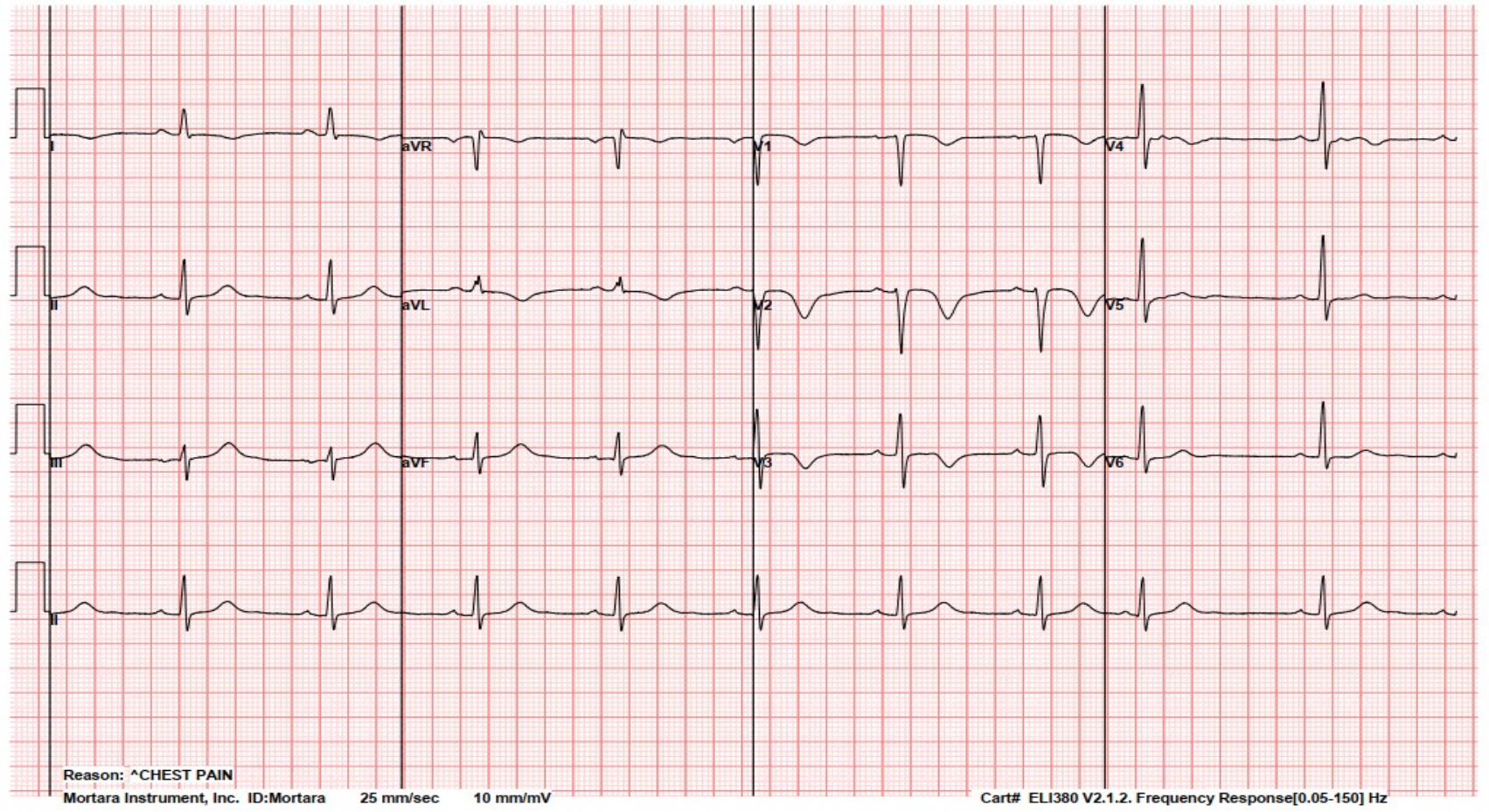
- Hypertension

Medications:

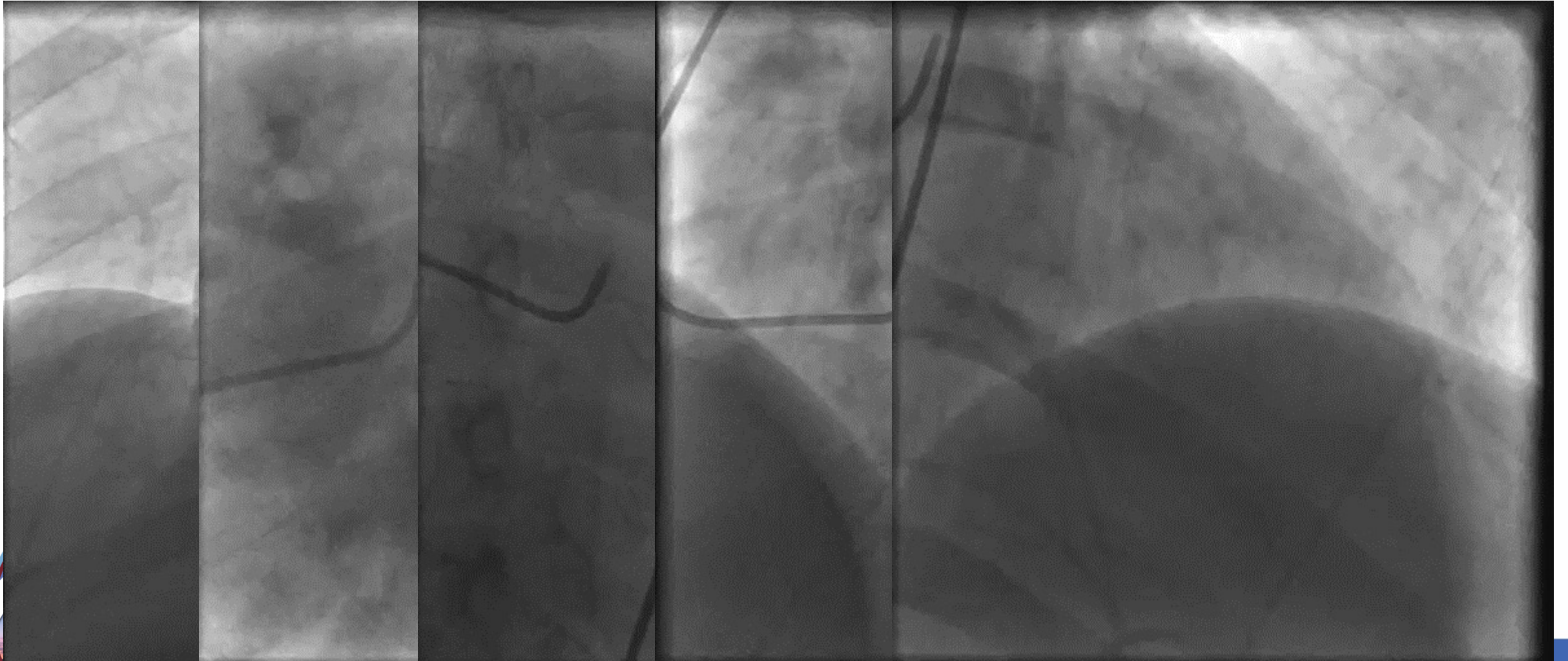
- Amlodipine

Family History:

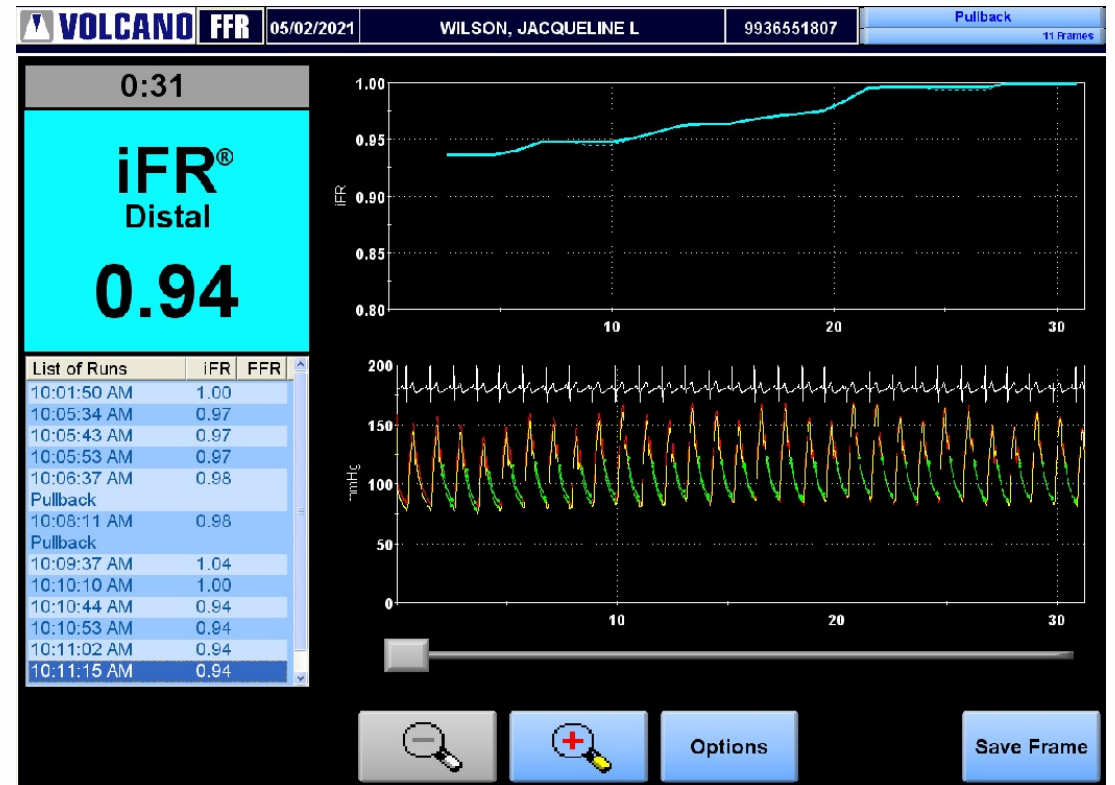
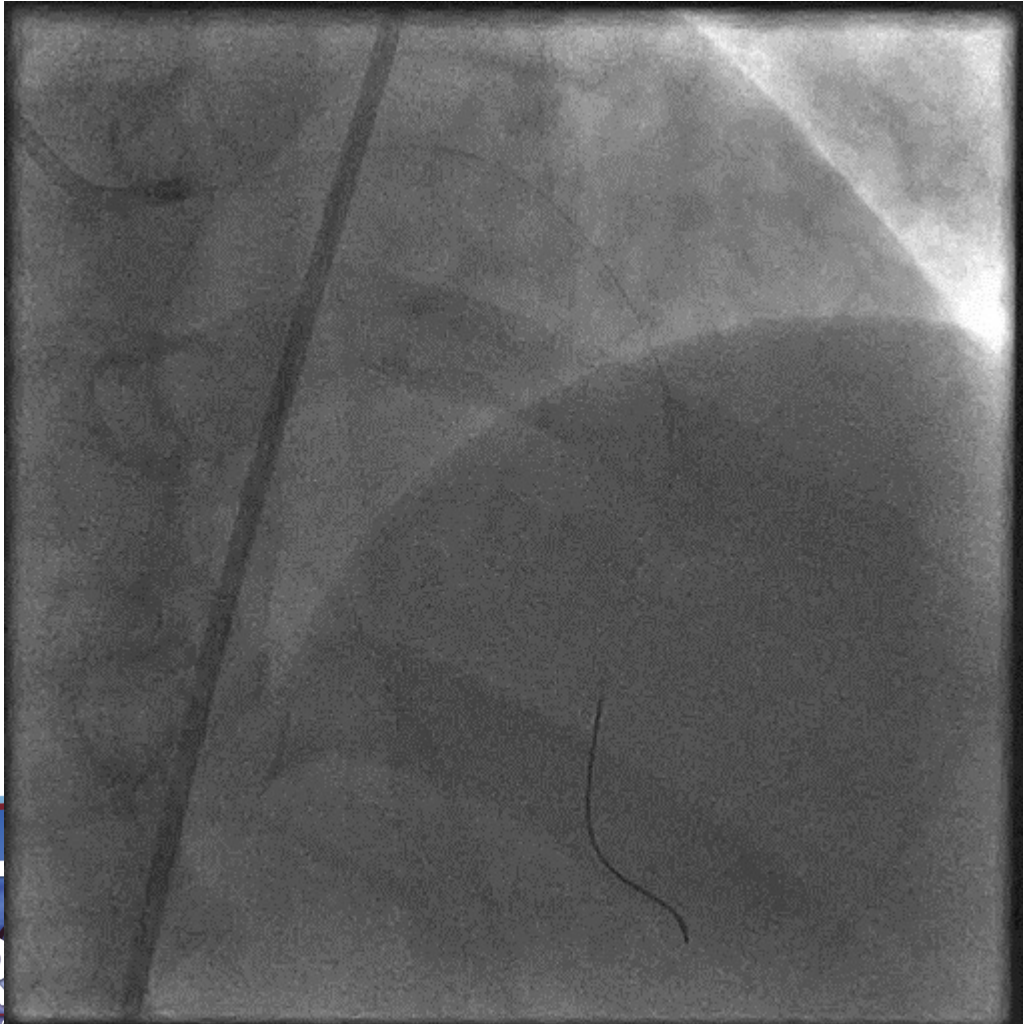
- Premature CAD



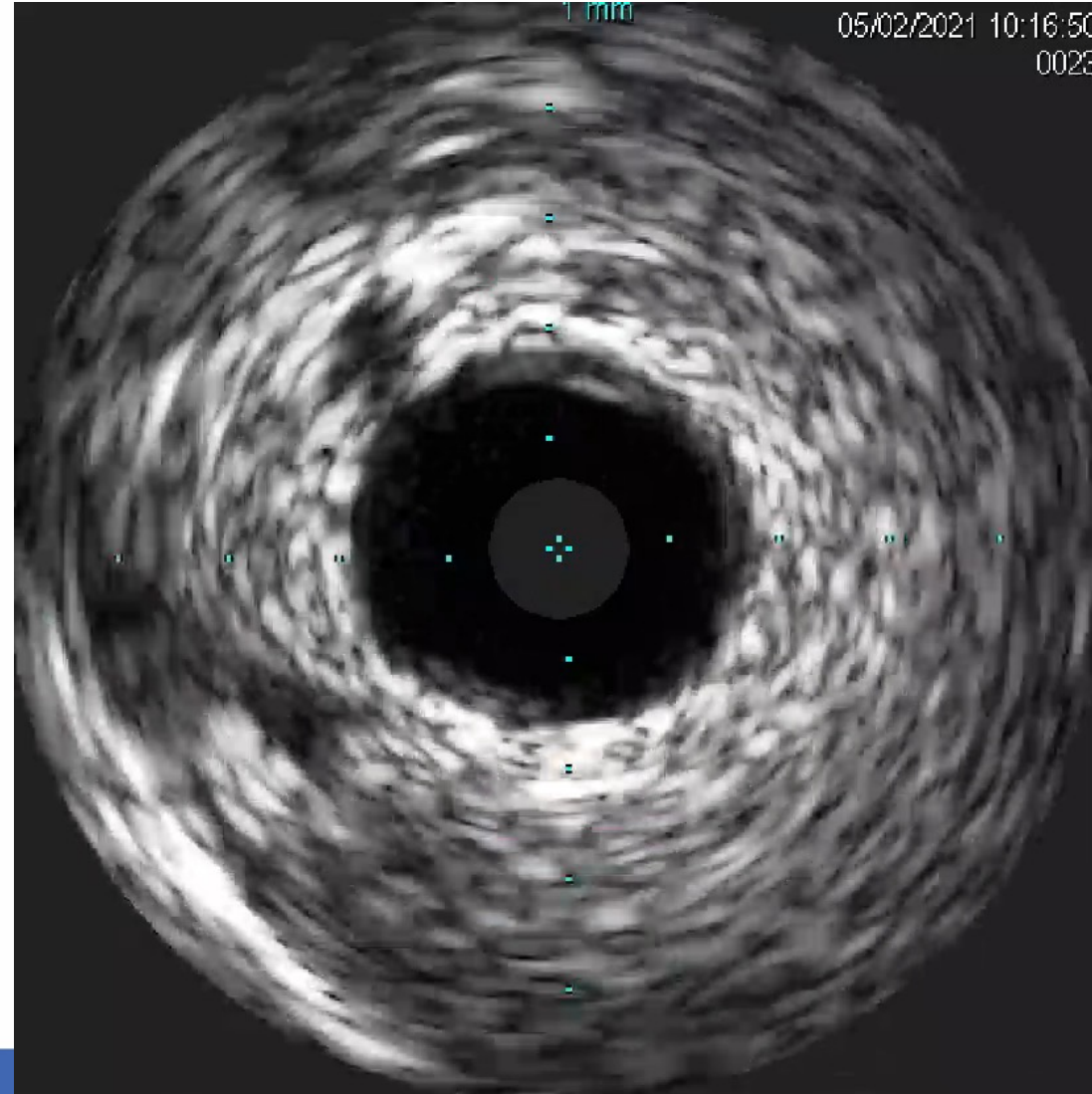
Case Presentation: MINOCA



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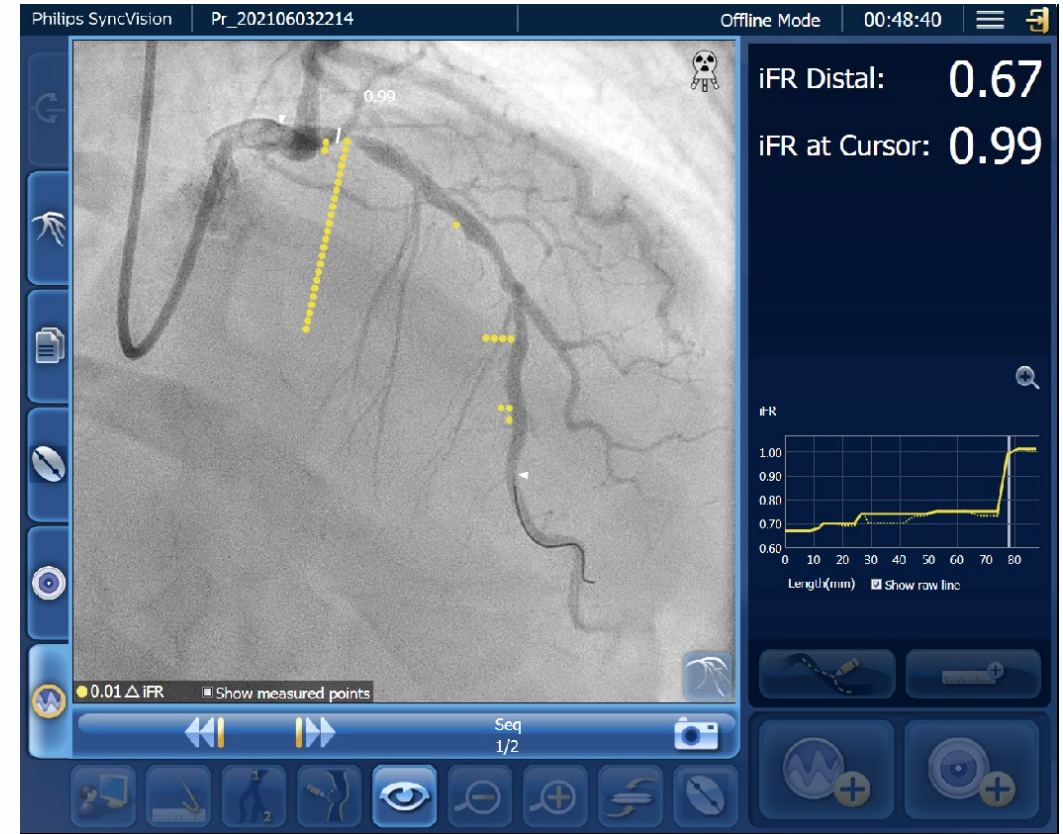
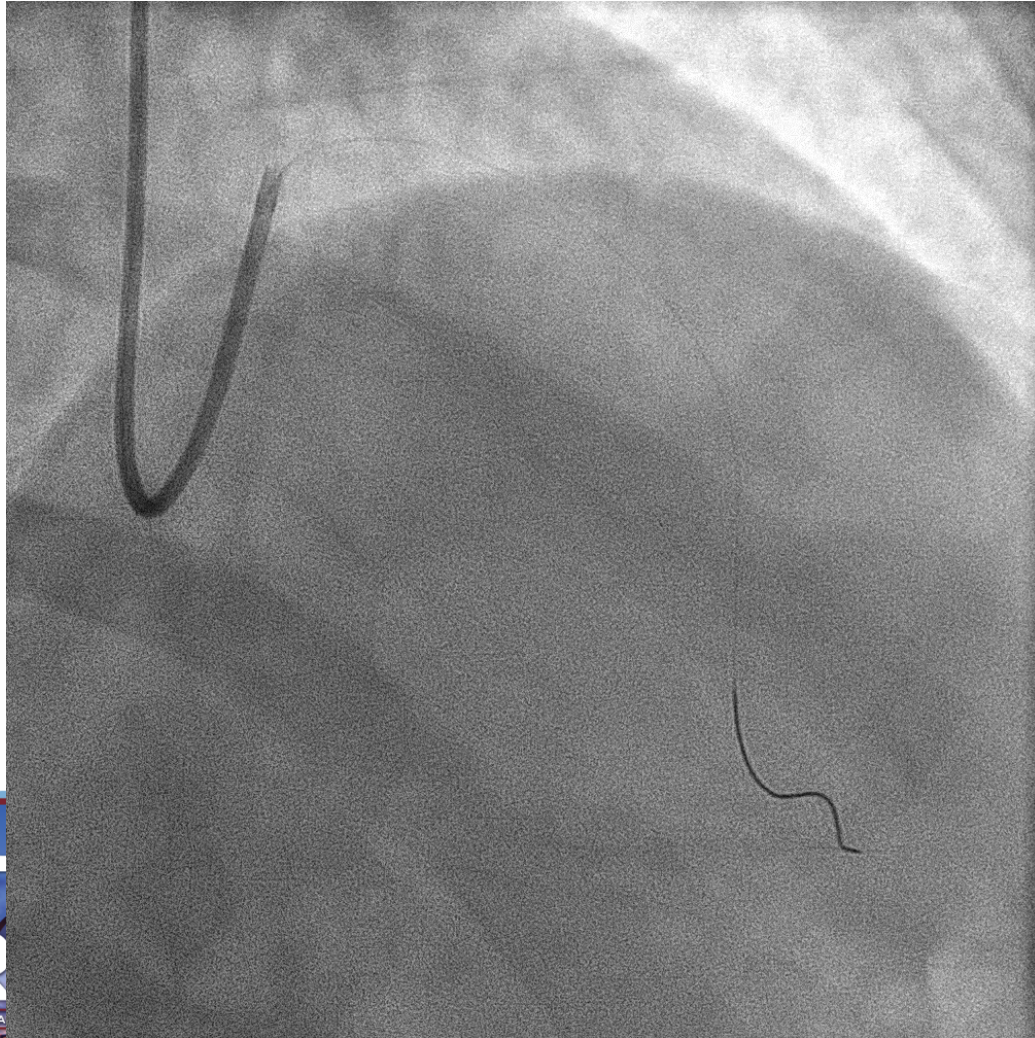


Case Presentation: MINOCA

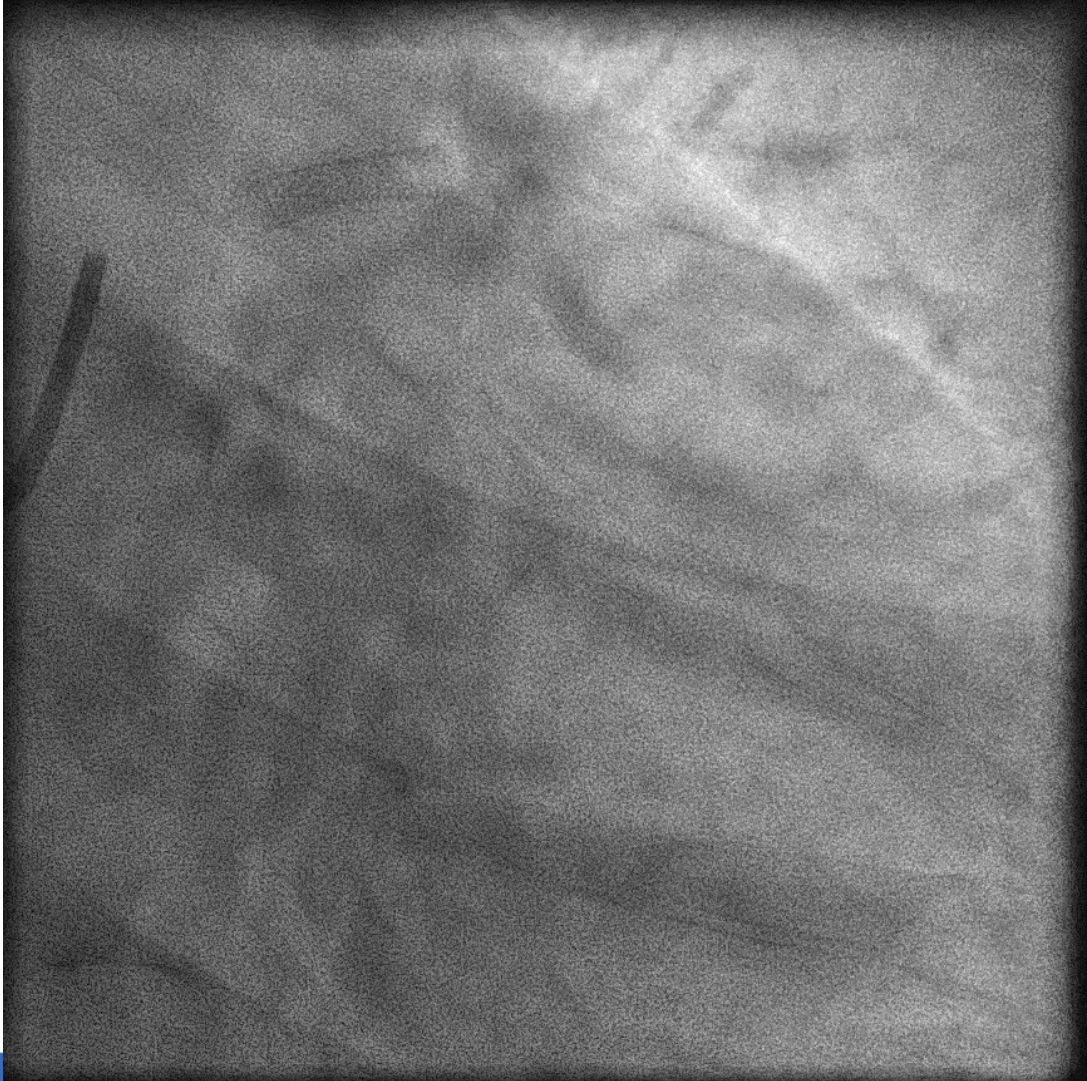
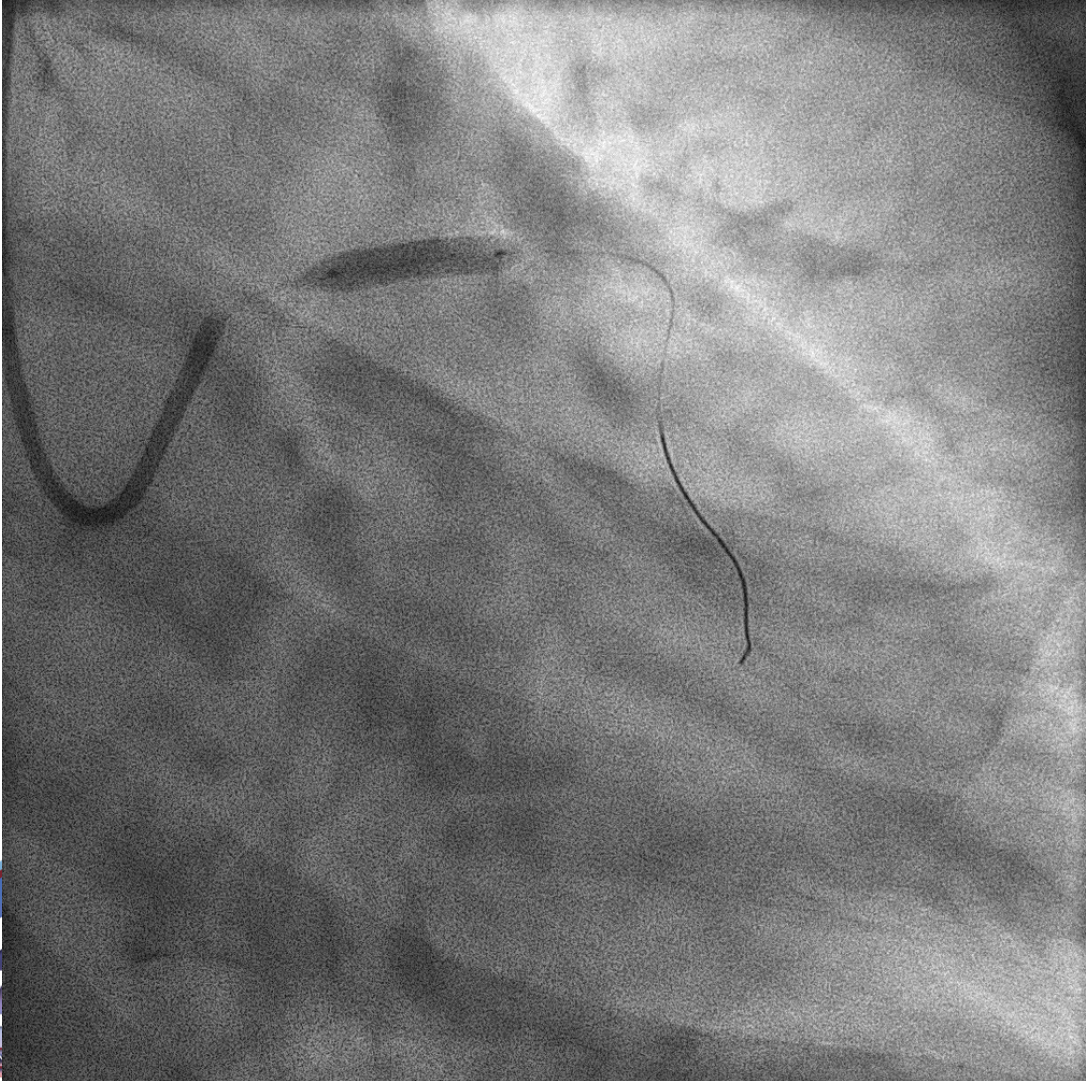
- Patient discharged on medical management
- Continues to have intermittent anginal pain
- Referred to us for evaluation within a month of her prior angiogram



Case Presentation: MINOCA



Case Presentation: MINOCA



Management: MINOCA

- Depending on underlying etiology – adequate workup is important
- Statins, RAS inhibitors, and beta-blockade has shown to be beneficial in multiple studies



Conclusion: MINOCA

- **Outcomes for patients with MINOCA are not benign, at times comparable those with MICAD**
- **1/3 to 2/3 of patients with MINOCA can have plaque rupture/erosion as the etiology of their presentation**
- **Imaging and Physiology is key in identifying these patients (Learn it and do it right!)**

