

# **Novel Treatment of Emboli-Prone Atherosclerotic Aneurysm**

*Corey Foster, MD, C. Huie Lin MD, PhD  
and Jasvinder Singh, MD*

*Division of Cardiology*

*Washington University School of  
Medicine*

*St Louis, Missouri*

# Disclosure Statement of Financial Interest

**I, Corey Foster DO NOT have a financial interest/arrangement or affiliation with one or more organizations that could be perceived as a real or apparent conflict of interest in the context of the subject of this presentation.**

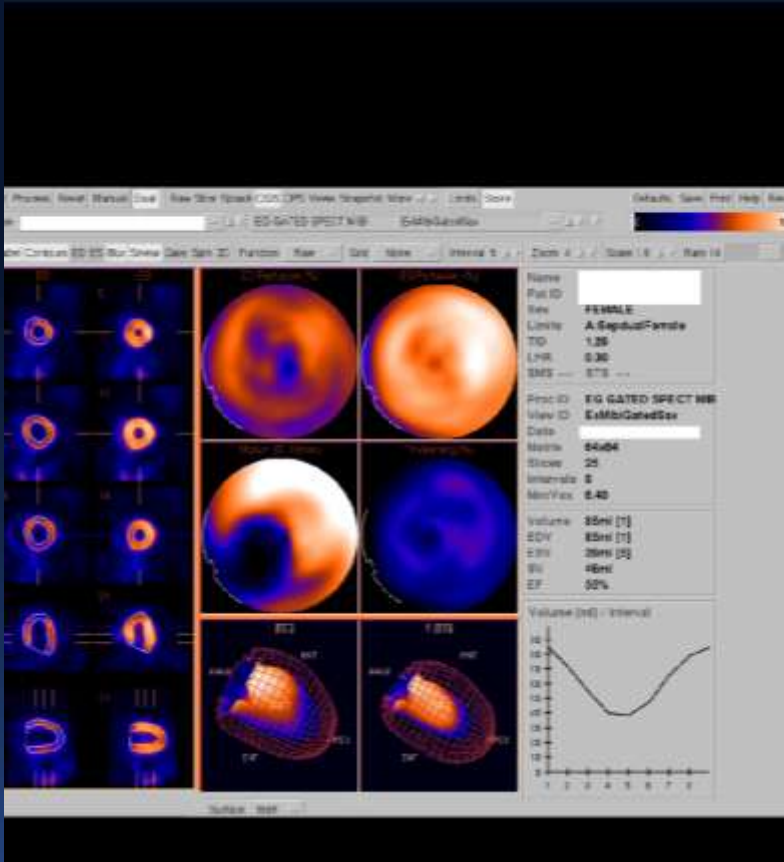


# Introduction

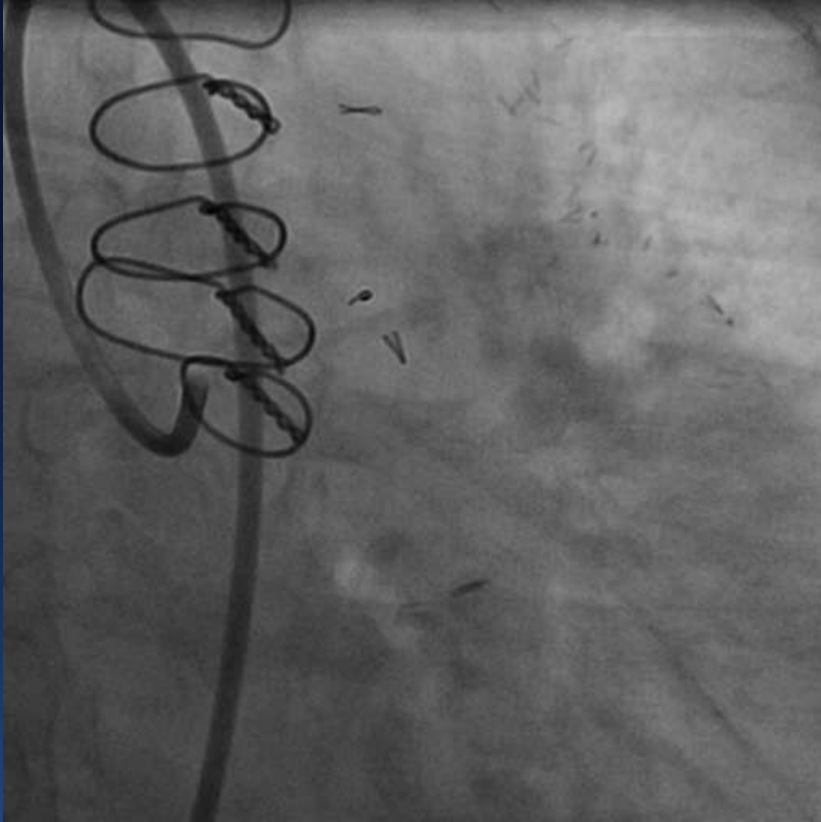
- **Coronary Artery Aneurysms**
  - **Management challenge**
  - **Treatment options**
    - **Surgical**
    - **Transcatheter**
      - **Covered Stents**
- **Proxis embolic device**
  - *Child catheter*

# Pre-Operative Evaluation

- A 49 year-old female with a history of kidney/pancreatic transplant with progressive renal allograft dysfunction was being evaluated for redo kidney transplant.

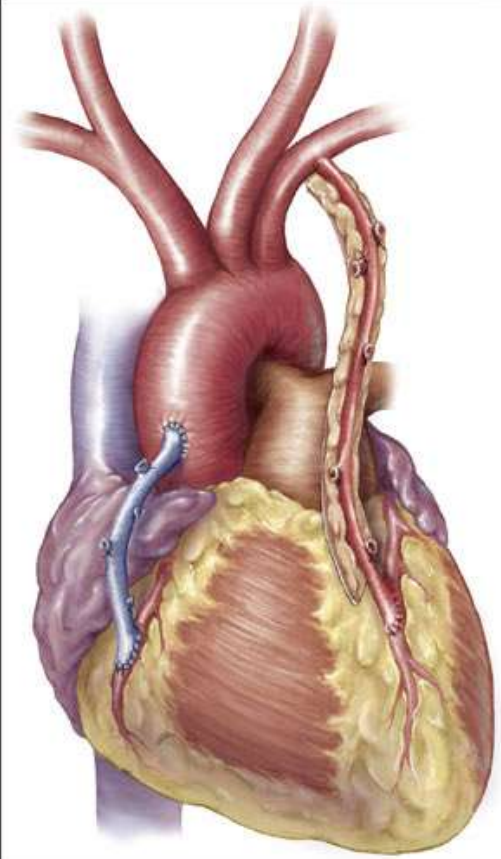


# Diagnostic Catheterization



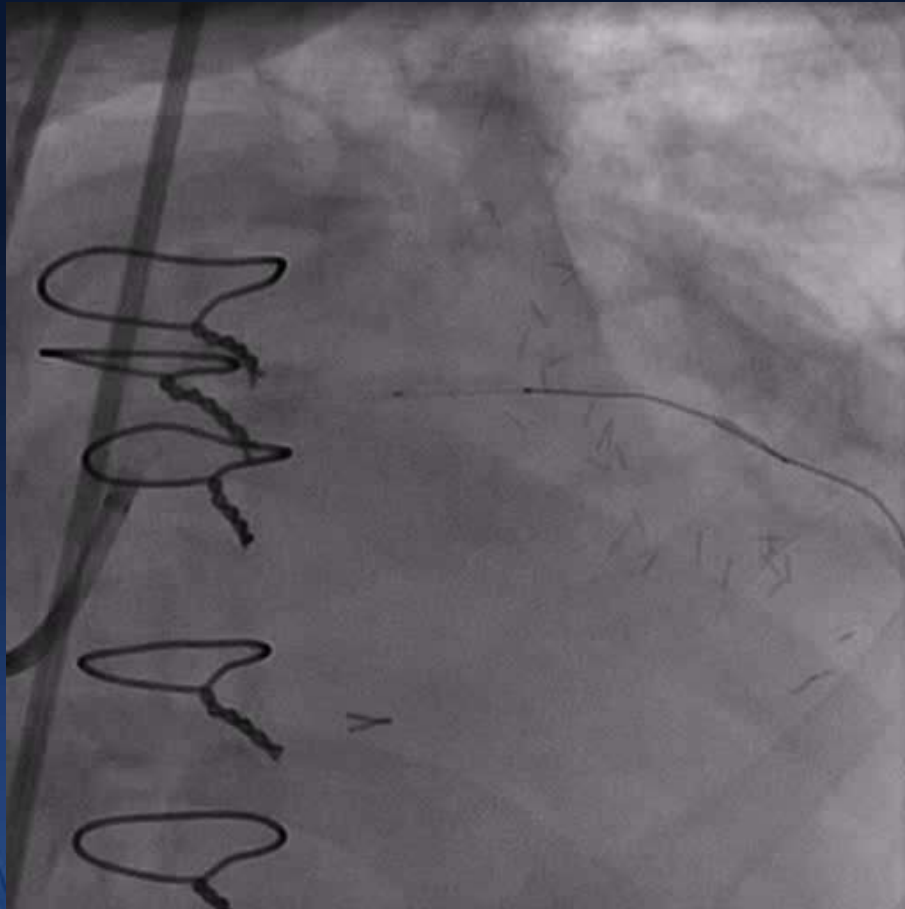
- Severe two vessel coronary artery disease involving the LAD and RCA.
- Large coronary aneurysm, (>10 mm), in the mid left anterior descending coronary artery.
- Markedly elevated LVEDP

# Coronary Artery Bypass Grafting



- The left anterior descending artery aneurysm was not visualized during surgery as it was quite proximal near the root of the heart.

# Lesion Identification



- An 8F guiding catheter was used for cannulation
- The lesion was crossed with mild difficulty
- 2.5 x 15 mm NC Quantum Apex balloon was then inflated with yield of the lesion.

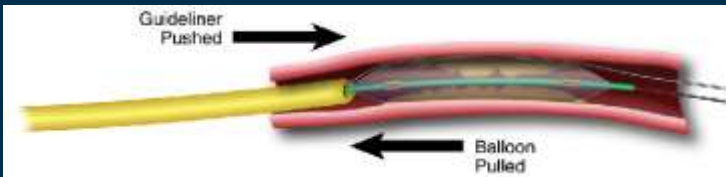
# Use of Guideliner for BMS

- “GAIN Technique”

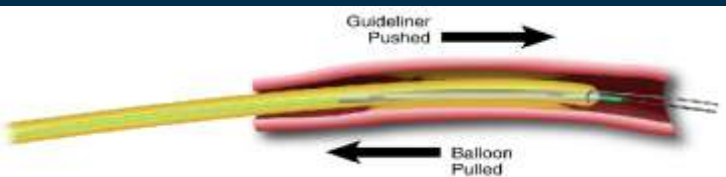
**Step 1. Inflate noncompliant balloon at nominal pressure**



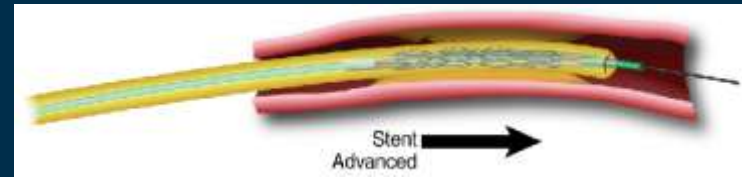
**Step 2. Advance GuideLiner while pulling on anchored balloon**



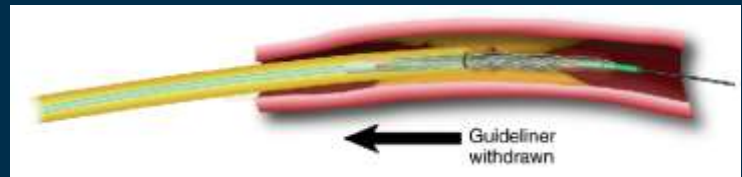
**Step 3. Deflate balloon and continue advancing GuideLiner**



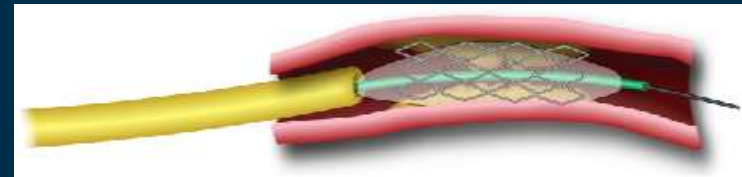
**Step 4. Deliver stent through GuideLiner**



**Step 5. Unsheath stent by withdrawing GuideLiner**

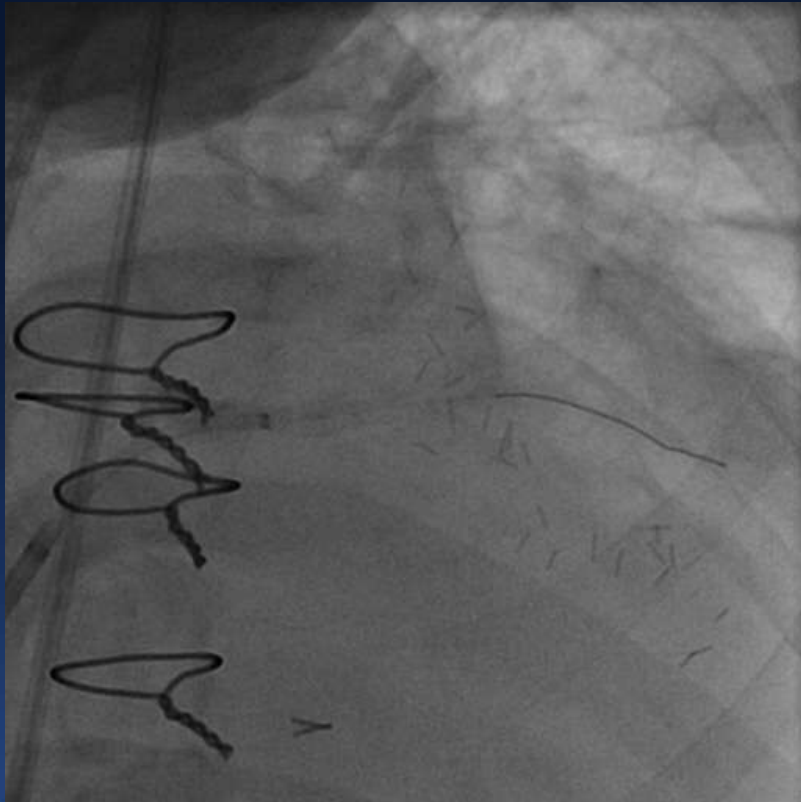


**Step 6. Deploy stent**



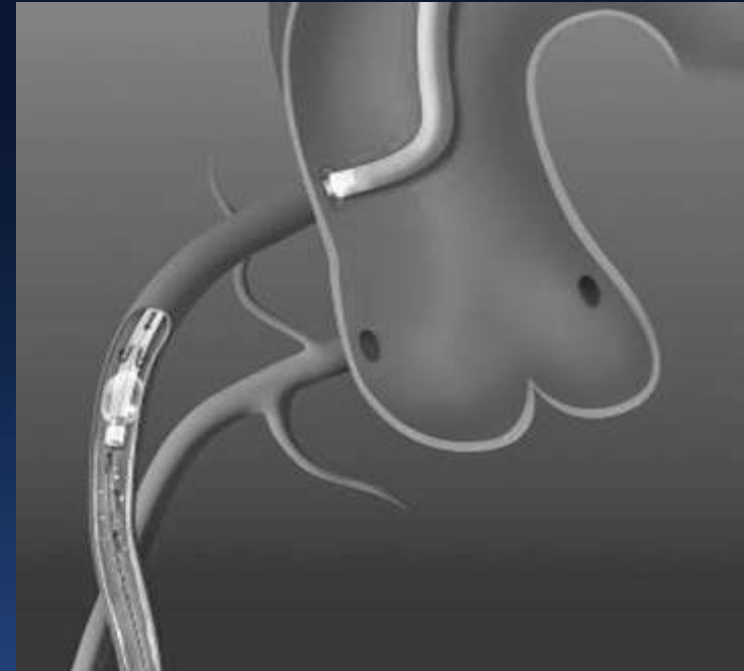
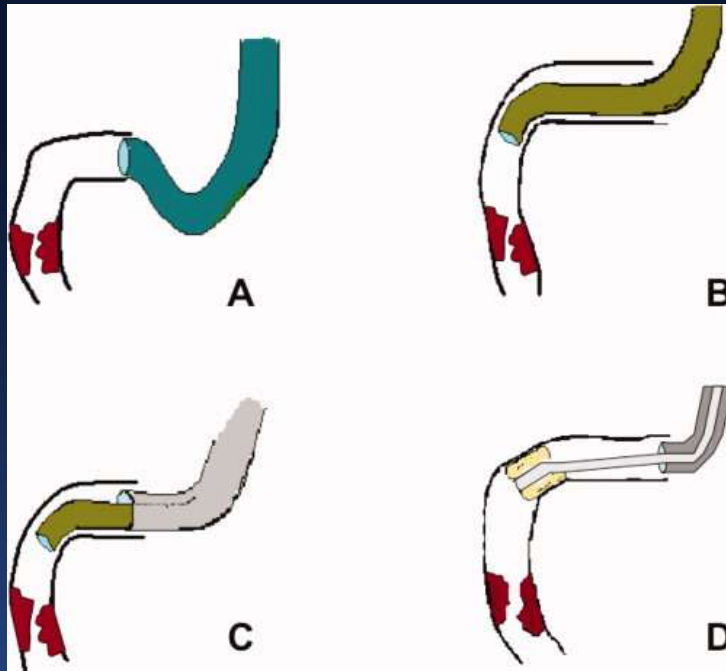


# Stent Scaffold



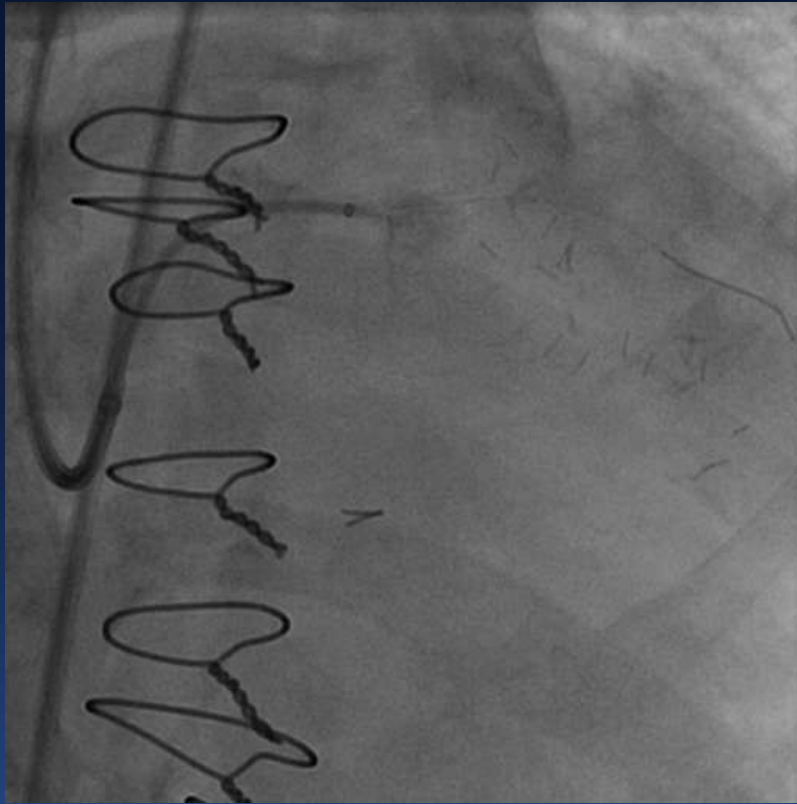
- The GraftMaster stent would not go past the proximal lesion.
- A 2.5 x 12 mm bare metal stent was then placed covering the entire aneurysmal segment

# Catheter Support and Hybrid Techniques



*Proxis Catheter System*

# Proxis Device Support



- Proxis device was hooked onto the guide catheter.
- 2.75x10mm DuraStar balloon anchor

# Aneurysm Exclusion



- A 3.0 x 12 mm GraftMaster stent was successfully placed covering the entire proximal and distal neck of the aneurysm and this stent was deployed.

# Epilogue/Conclusions

- **Complex coronary aneurysm in the mid left anterior descending artery, with successful occlusion with a 3.0x12mm GraftMaster covered stent.**
- **Subsequent cardiac catheterization showed that the covered stent was patent and had entirely excluded the aneurysm.**

# Epilogue/Conclusions

- **Use of Proxis device proved to be invaluable in this setting as to achieve the dual benefit of maintaining yield of the lesion and delivery of the covered stent.**
- **Long-term follow-up will be needed to evaluate the safety and utility of the Proxis catheter in delivery of stents in challenging coronary anatomy.**

# Thank You

- **TCT Challenging Case Selection Committee**
- **Huie Lin, MD PhD**
- **Jasvindar Singh, MD**