

Left Atrial Ligation with the LARIAT Device

Technique Tips & Tricks

Issam D. Moussa, MD

Professor of Medicine
Rutgers Robert Wood Johnson Medical School

Chief of Cardiology
Robert Wood Johnson University Hospital
New Brunswick, New Jersey

Why Does Atrial Fibrillation Cause Stroke?

The Left Atrial Appendage (LAA)

91% of stroke in AF is caused by blood clots that form in the Left Atrial Appendage (LAA)

LAA



The LARIAT Device Components



**13F (4.3mm) Pericardial
access Sheath**



Remote suture delivery
device compatible with
access $\geq 4.3\text{mm}$ WITH open /
close capabilities allow
control & precise placement

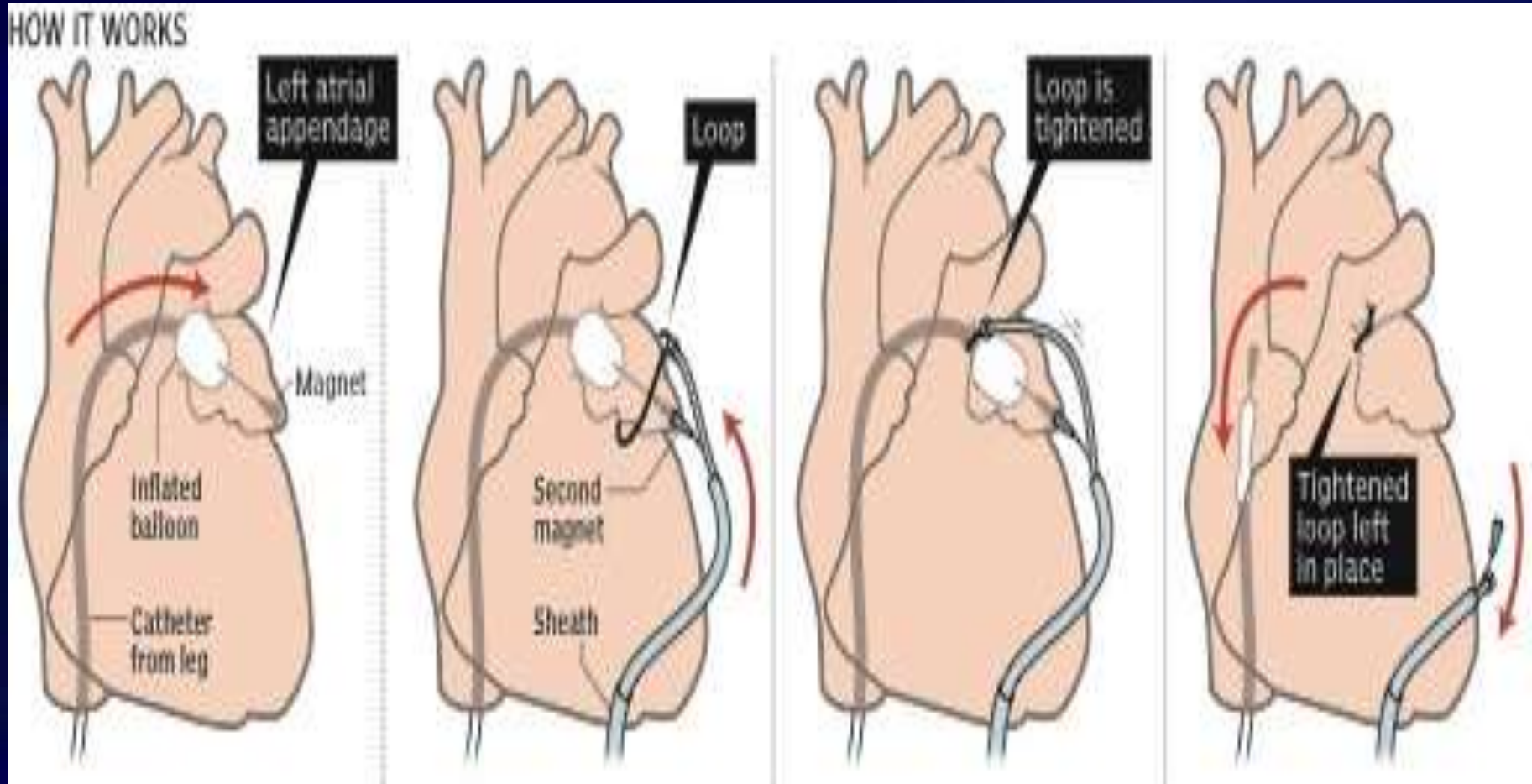
Includes SofTIP & TenSURE
accessories



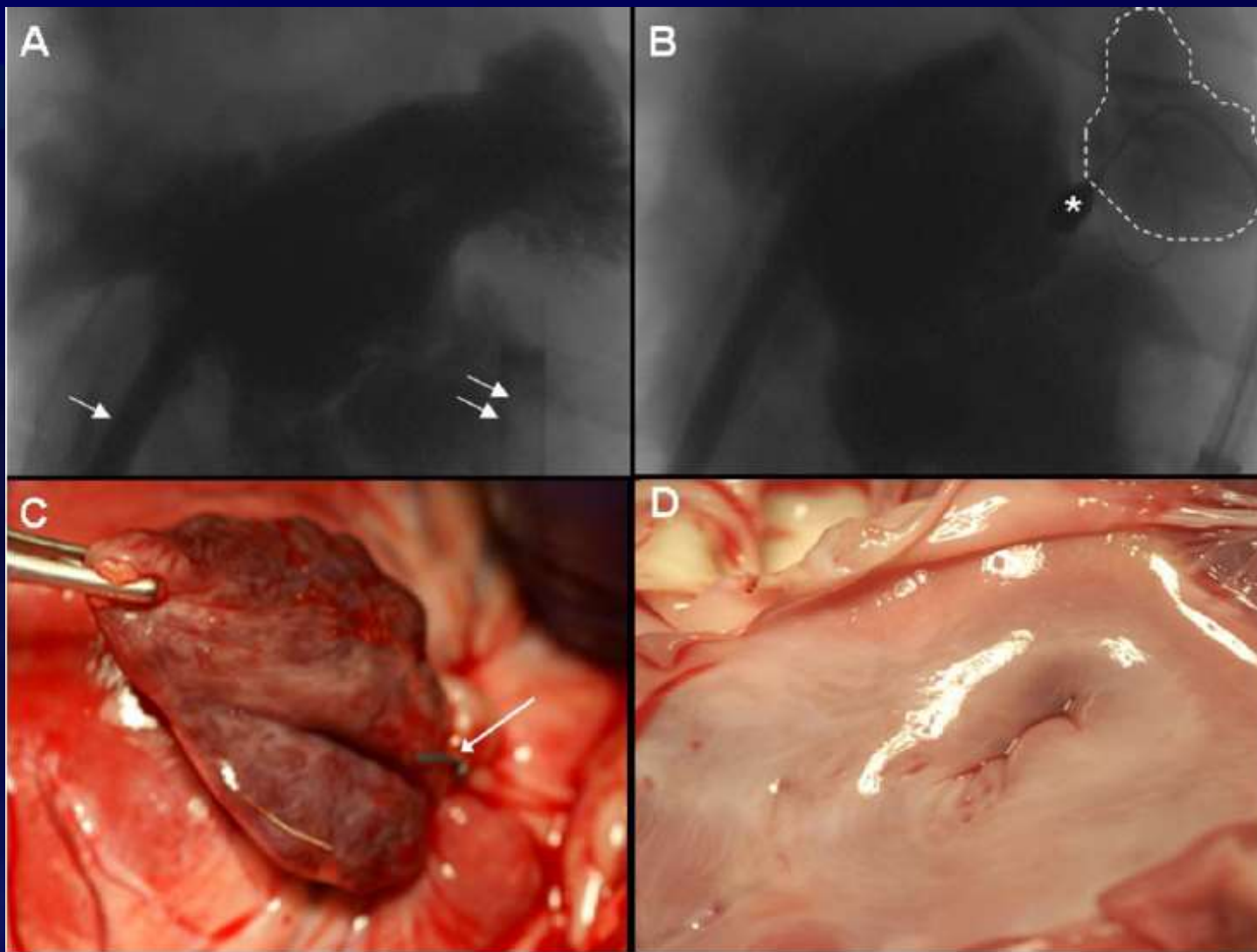
40mm pre-tied, "0"
polyester suture loop
mounted on collapsible
snare

LAA Closure: The LARIAT Device

How It Works



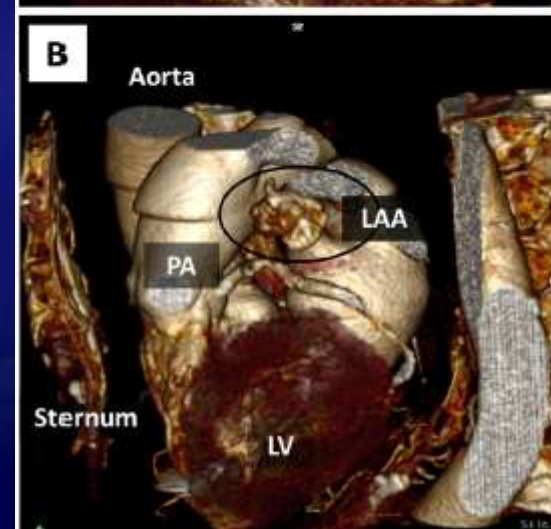
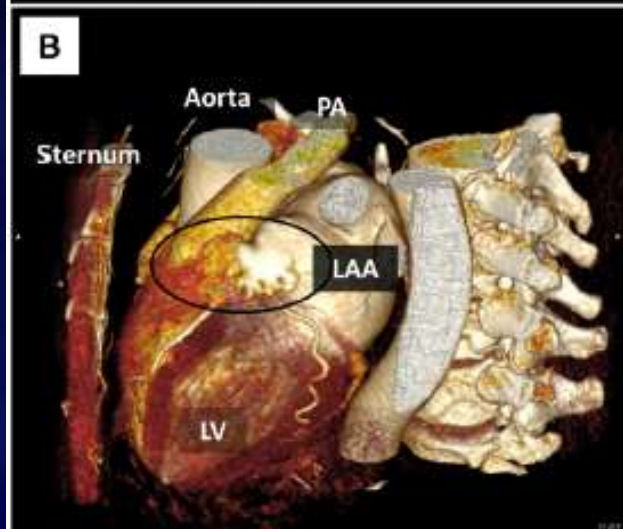
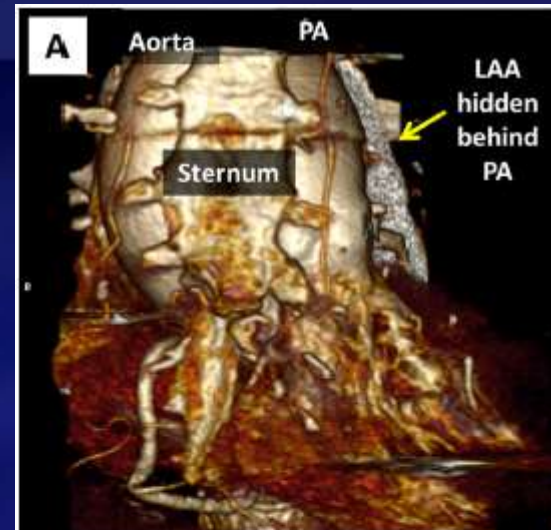
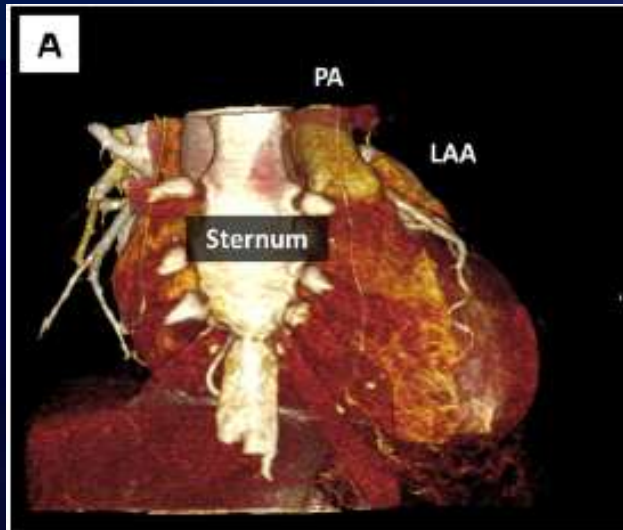
LAA Closure: The LARIAT Device



Contraindications to LARIAT

- **Any prior cardiac surgery**
- **Known pericarditis**
- **LAA > 4 cm**
- **Inaccessible LAA (behind the pulmonary artery, etc..)**

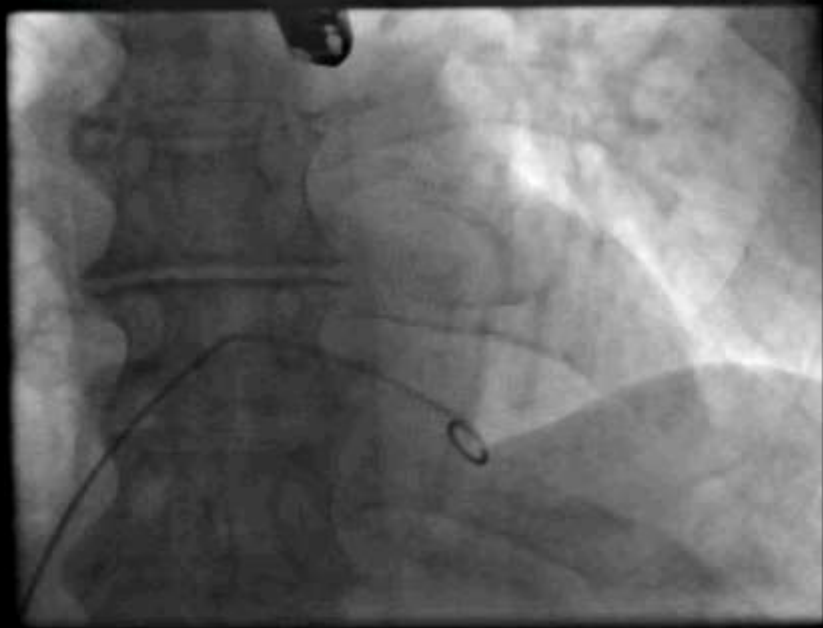
Anatomic Suitability



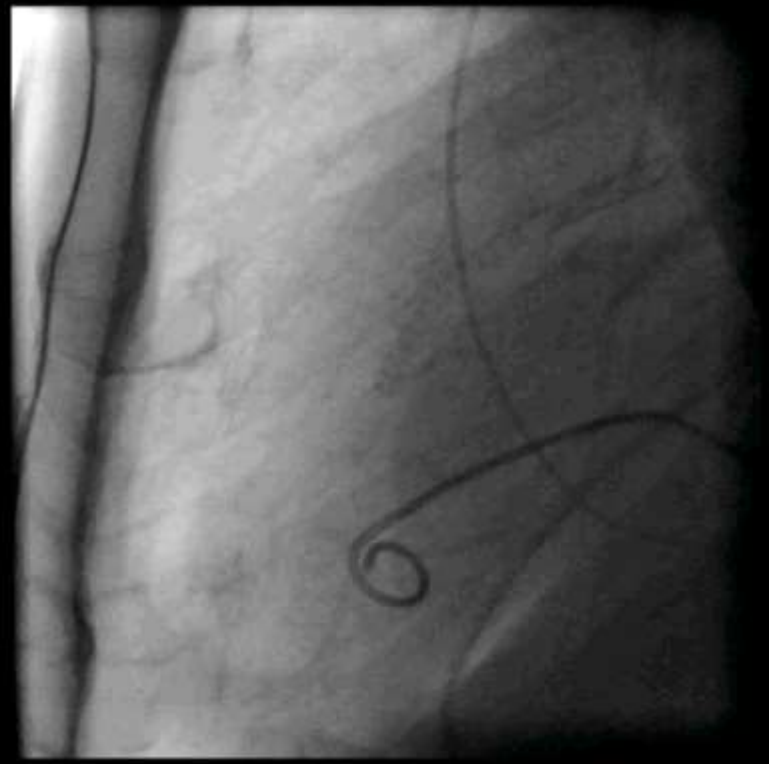
Case Study

- **HPI**
 - **72 year-old male with history of CAD s/p
PCI**
 - Persistent atrial fibrillation**
 - Prior stroke**
 - GI bleeding while on Warfarin**

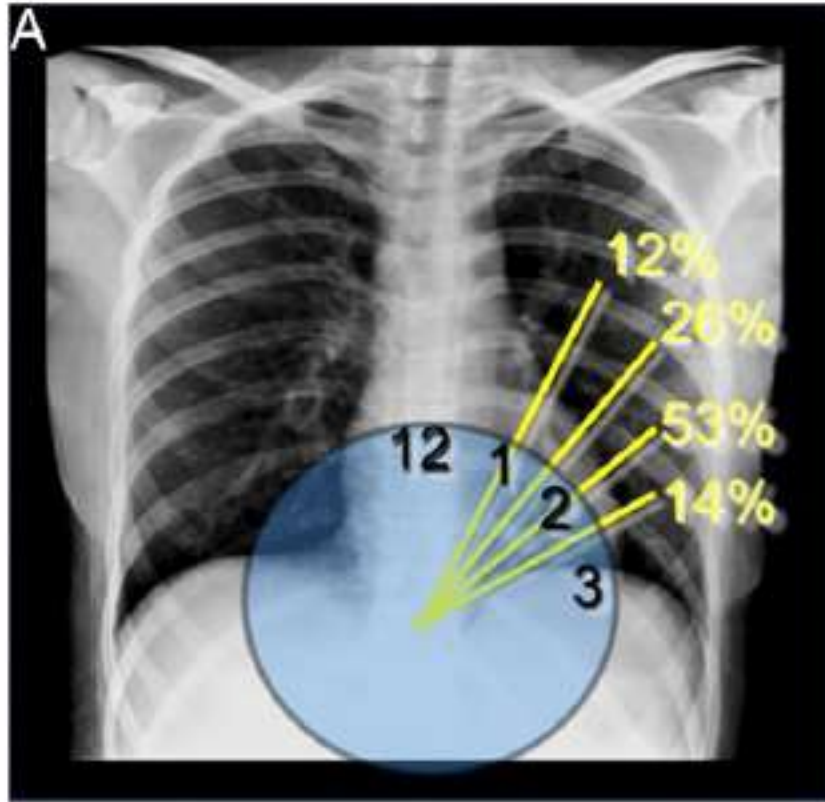
Lossy Compression - not intended for diagnosis



Lossy Compression - not intended for diagnosis

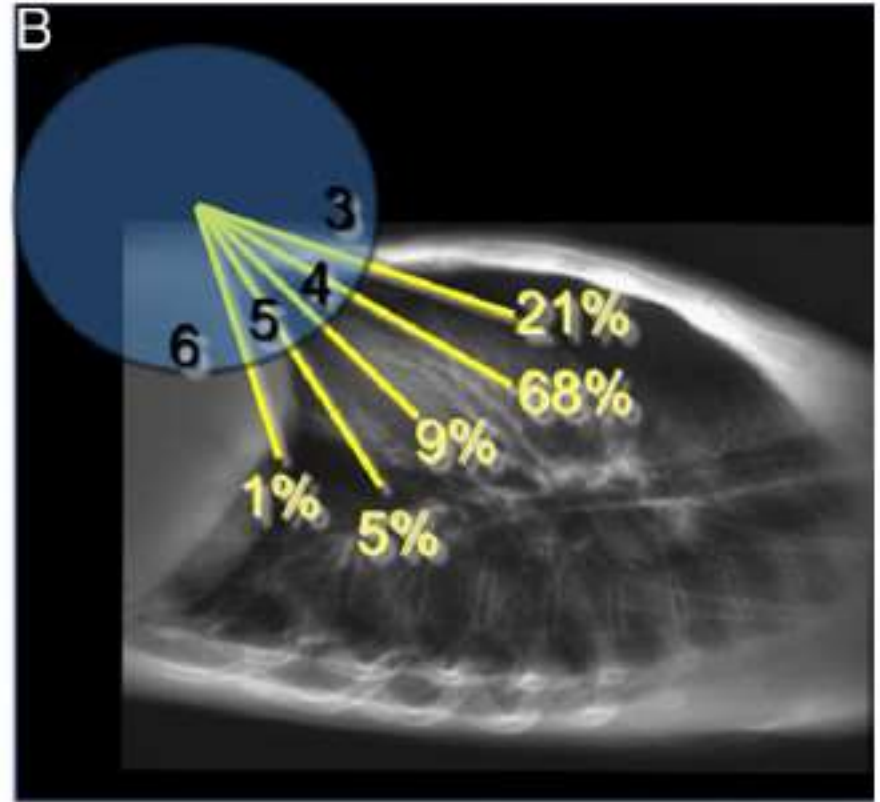


Pericardial Access



AP Angle of Access:

1:00	10/85 (12%)	- 4/10 (40%) required 2 nd stick
1:30	22/85 (26%)	- 5/22 (23%) required 2 nd stick
2:00	45/85 (53%)	- 8/45 (18%) required 2 nd stick
2:30	12/85 (14%)	- 1/12 (8%) required 2 nd stick



Lateral Angle of Access:

3:30	18/85 (21%)	- 4/18 (22%) required 2 nd stick
4:00	58/85 (68%)	- 10/58 (17%) required 2 nd stick
4:30	8/85 (9%)	- 0/8 (0%) required 2 nd stick
5:00	4/85 (5%)	- 2/4 (50%) required 2 nd stick
5:30	1/85 (1%)	- 1/1 (100%) required 2 nd stick

Pericardial Access

Lassy Compression - not intended for diagnosis



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Pericardial Access

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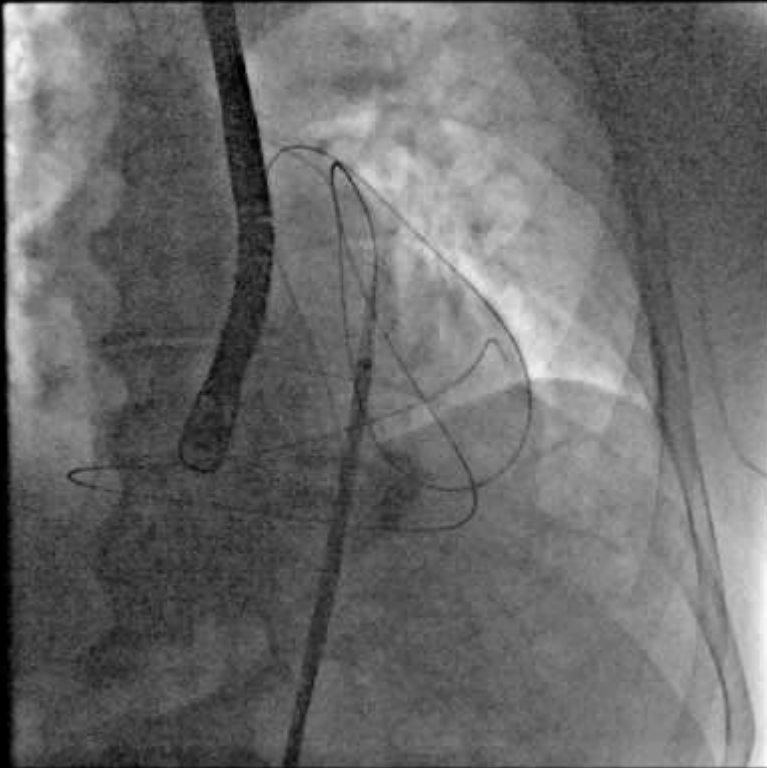


Lessy Compression - not intended for diagnosis

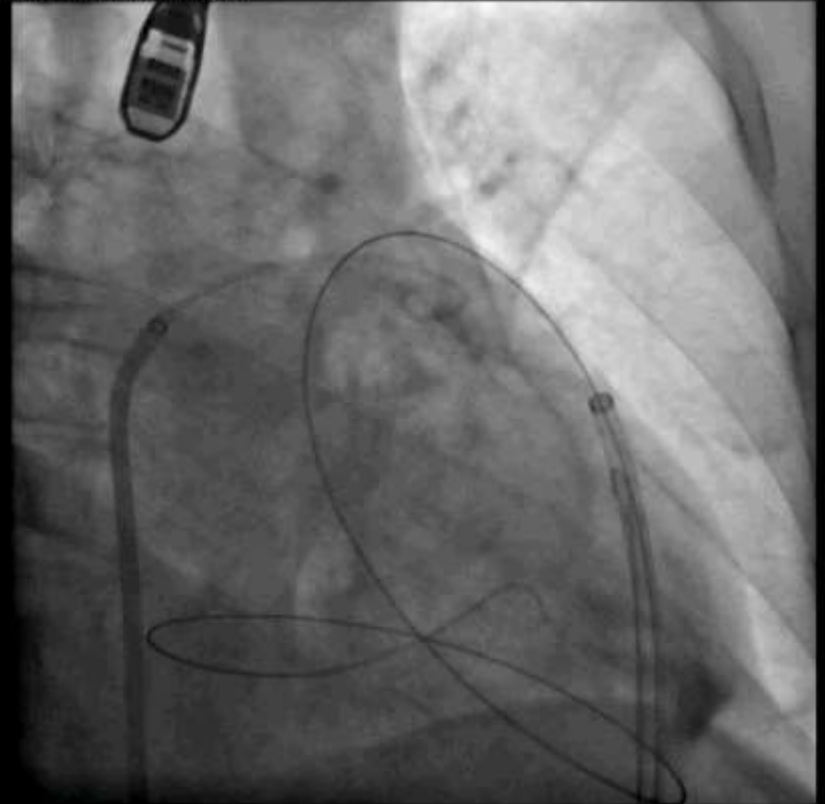


Pericardial & Transseptal Access

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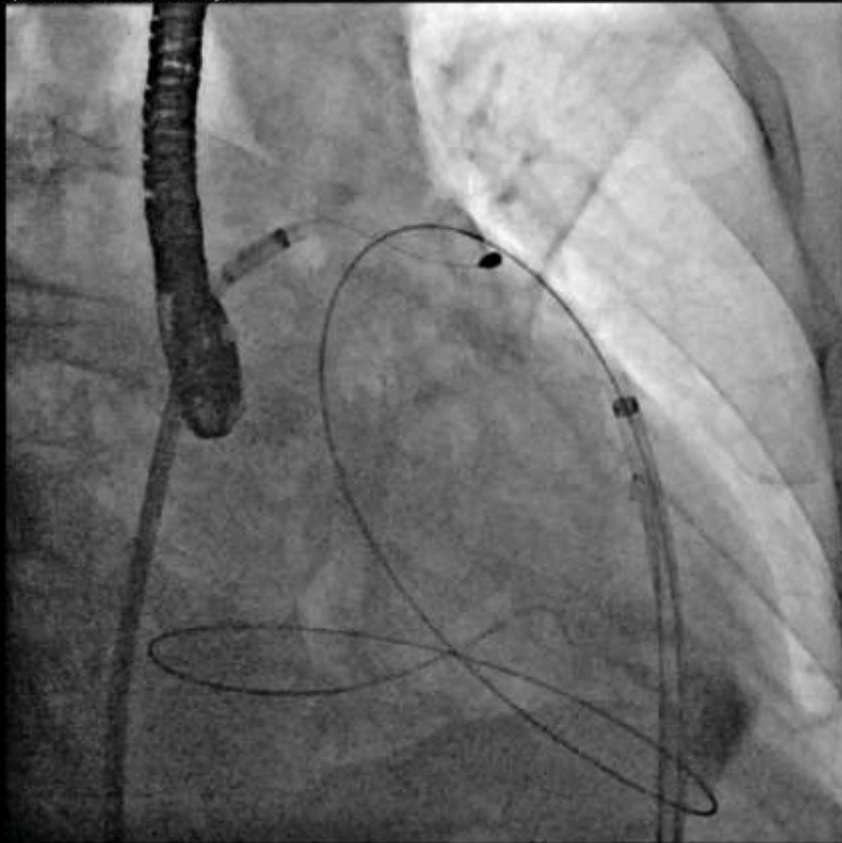


Lossy Compression - not intended for diagnosis



“Building the Rail”

Lossy Compression - not intended for diagnosis

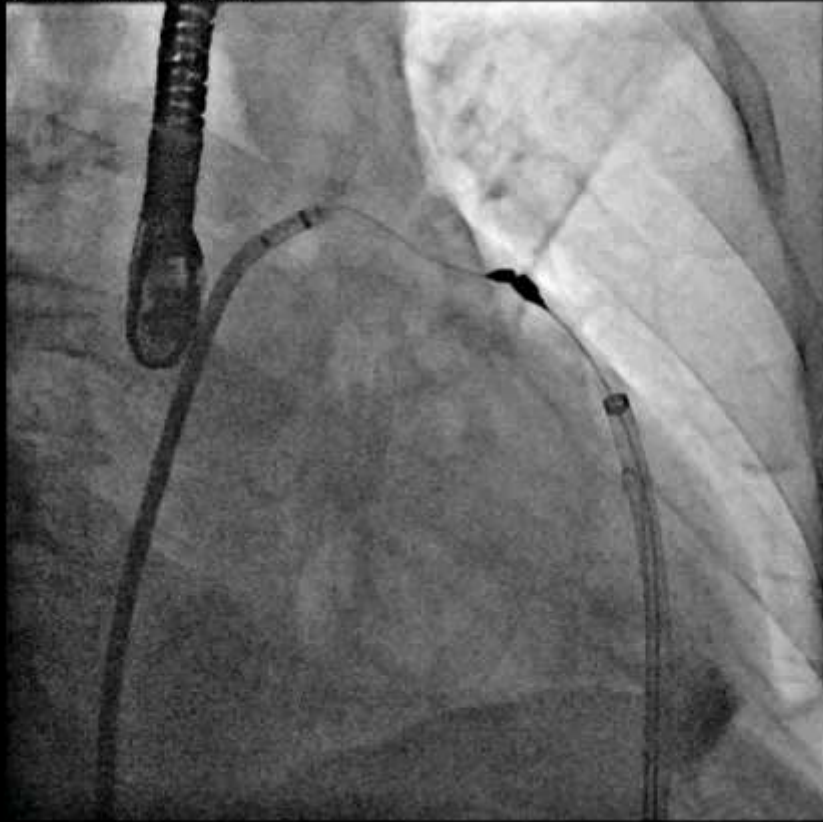


Lossy Compression - not intended for diagnosis



“Building the Rail”

Lossy Compression - not intended for diagnosis



Lossy Compression - not intended for diagnosis



Advancing the LARIAT

Lossy Compression - not intended for diagnosis



Lossy Compression - not intended for diagnosis



Lessy Compression - not intended for diagnosis

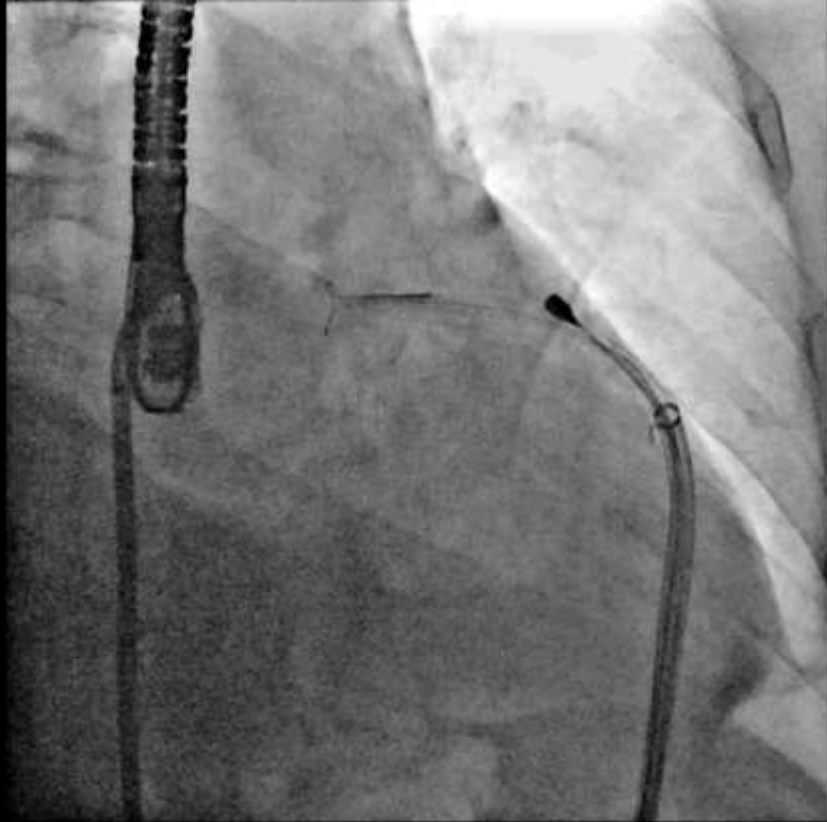


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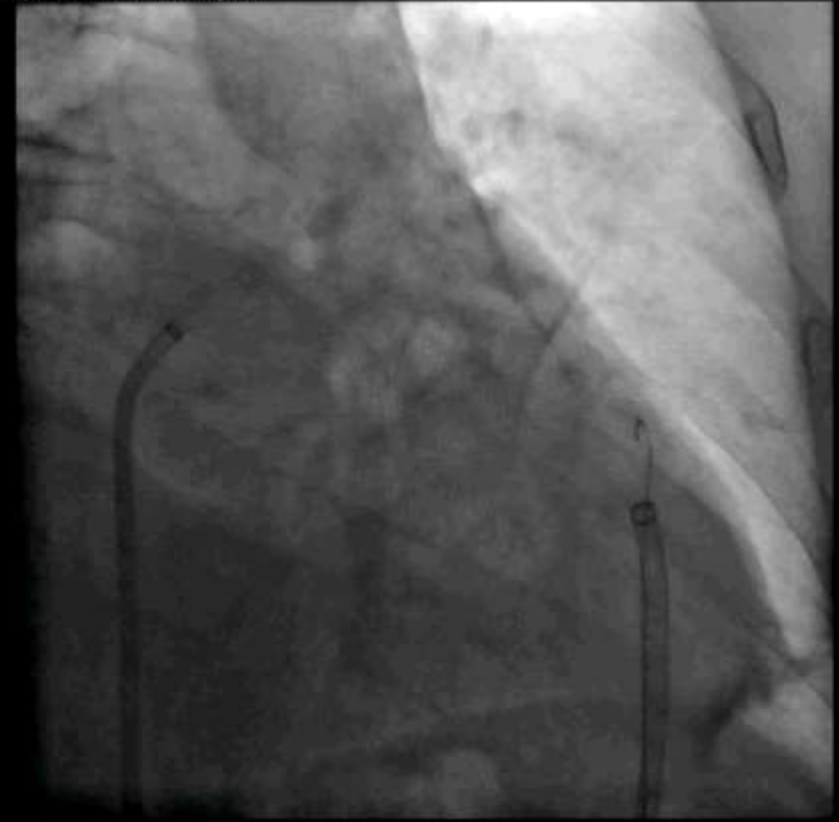


Completion

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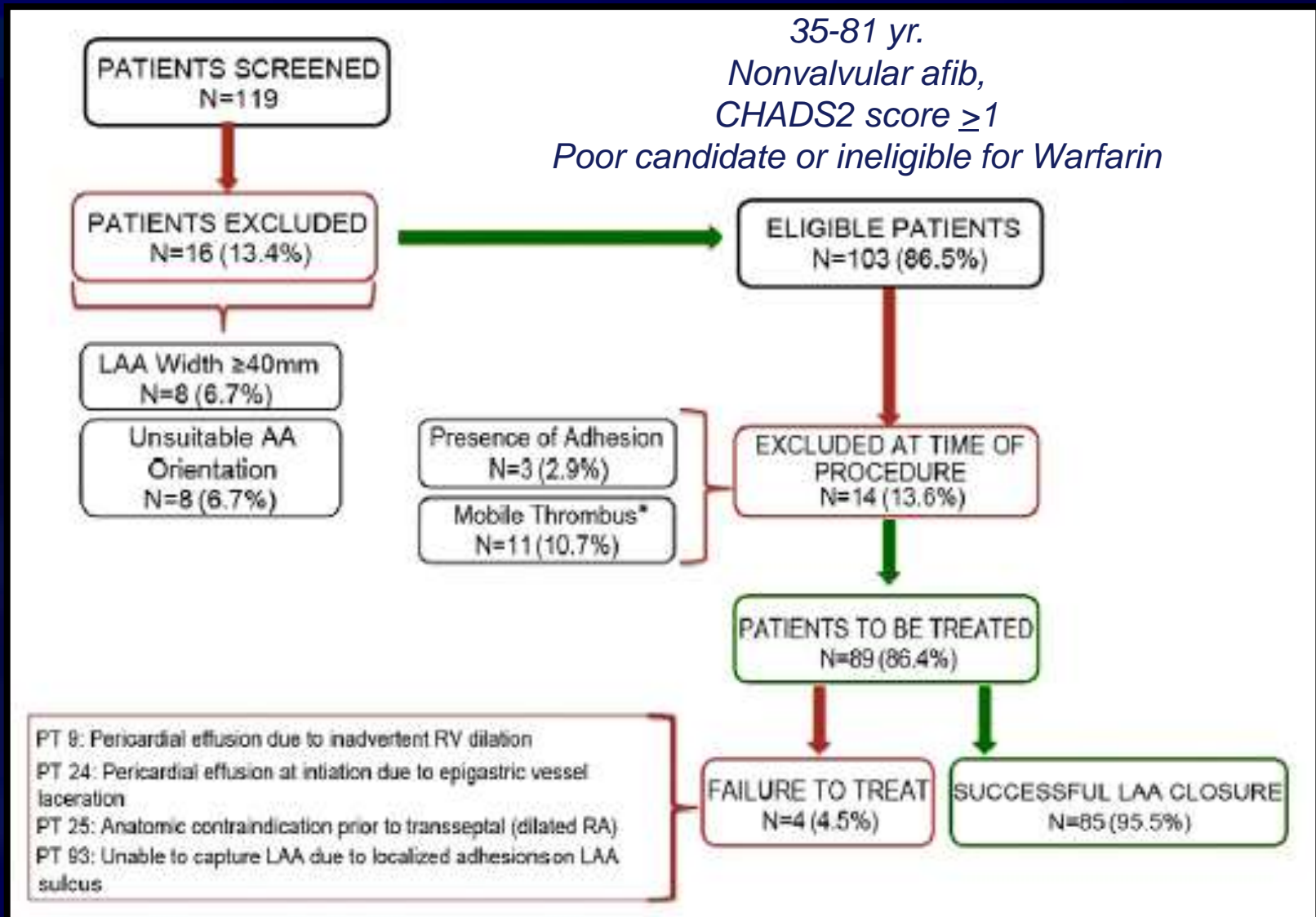


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The Evidence Base



The Evidence Base

TABLE 1 Baseline Demographic and Clinical Characteristics of the Study Population (n = 154)

Age (yrs)	72.1 ± 9.4
Age >75 yrs	70 (45)
Male	96 (62)
Hypertension	125 (81)
Diabetes mellitus	56 (36)
History of heart failure	53 (34)
Peripheral arterial disease	21 (14)
Prior CVA/TIA	58 (38)
Prior hemorrhagic CVA	21 (14)
Prior major bleed or propensity for bleeding	96 (62)
Labile INR measurements	31 (20)
Concomitant chronic NSAID use	22 (14)
Liver disease	9 (6)
Renal disease	14 (9)
Significant alcohol consumption	16 (10)
CHADS ₂ score	3 (2-4)
CHA ₂ DS ₂ VASC score	4 (3-5)
HAS-BLED score	3 (2-4)

Procedural Success & Complications

- *Device Success* 94%
- *Clinical Success* 86%
- *Cardiac tamponade* 4.5%
- *Urgent cardiac surgery* 2.0%
- *Death* 0.8%

Indications for LAA Closure?

