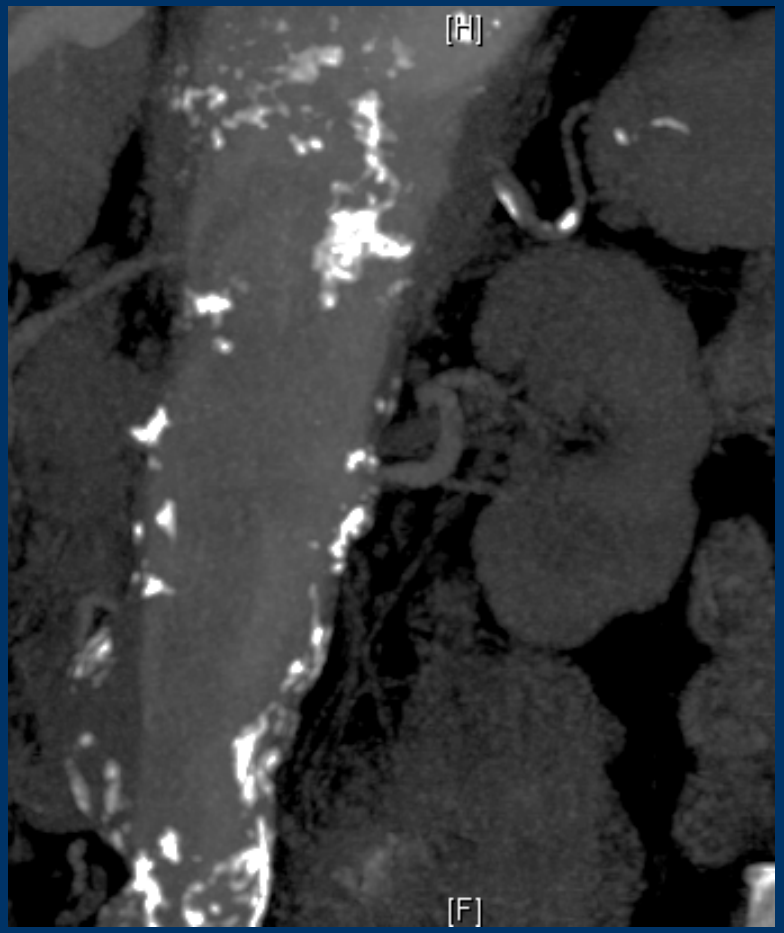
Monday Conference
Division of Vascular Surgery
Interesting Case Conference

January 31, 2011

Case

- 72 year old female with an 8 cm Extent I TAA
- 2008 Ascending aortic aneurysm repair /AVR/CABGx1
- 3 month ICU stay with tracheostomy/bilateral blindness
- PMH: HTN ,HL, Graves' disease, COPD uses nighttime 02 (FEV1=1.25), CRI (Cr~1.5)
- PSH: above and C/S, lap chole, TAH



40-42 mm at distal arch
40 mm below SMA

Vascular Surgery

9/10/10 Mesenteric Angio

16 mm

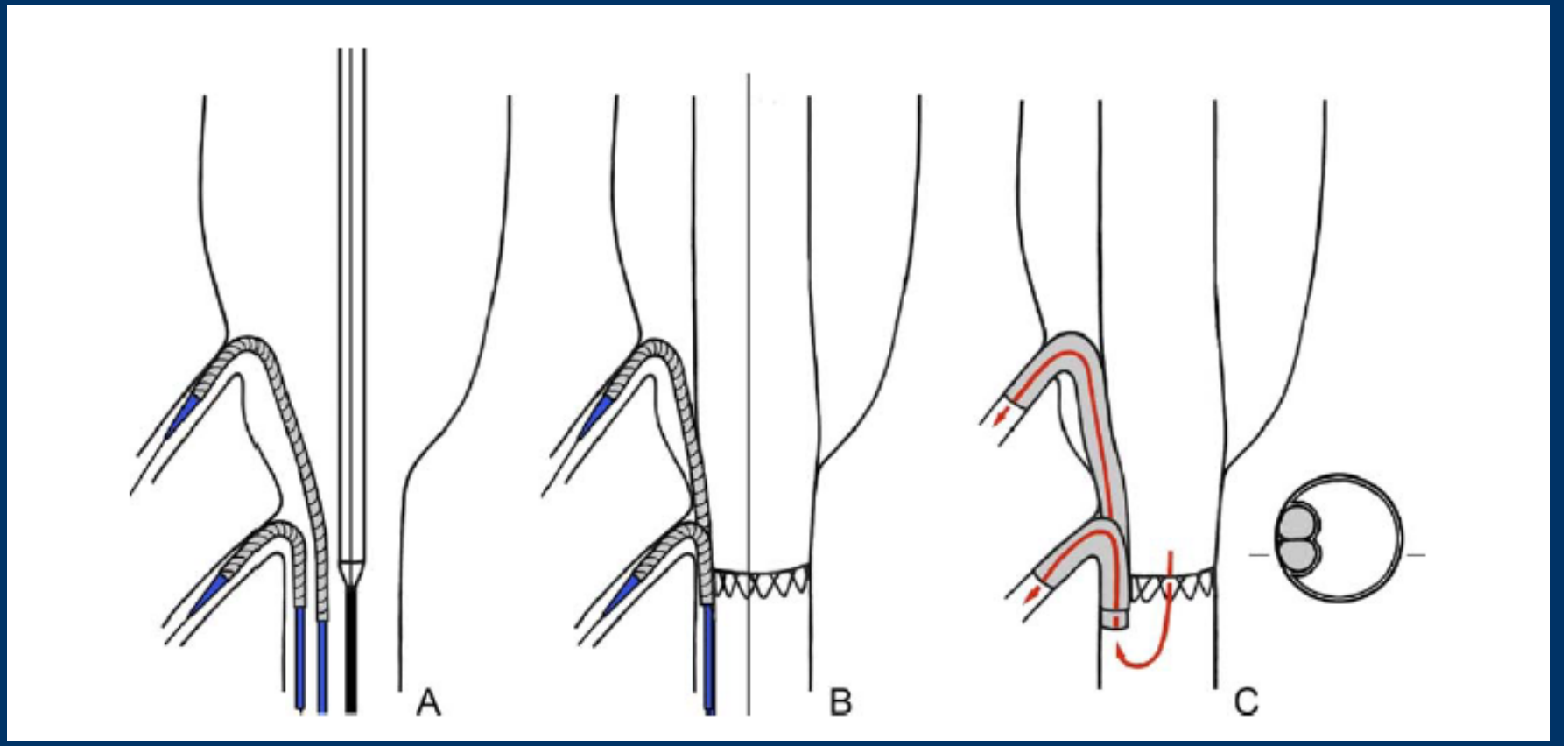
SMA

Vascular Surgery

Periscope graft to extend distal landing zone in ruptured thoracoabdominal aneurysms with short distal necks

Zoran Rancic, MD, PhD,[a] Thomas Pfammatter, MD,[b] Mario Lachat, MD,[a] Lukas Hechelhammer, MD,[b] Thomas Frauenfelder, MD,[b] Frank J. Veith, MD,[c,d] Frank J. Criado, MD,[c] and Dieter Mayer, MD,[a] *Zurich, Switzerland; New York, NY; and Baltimore, Md*

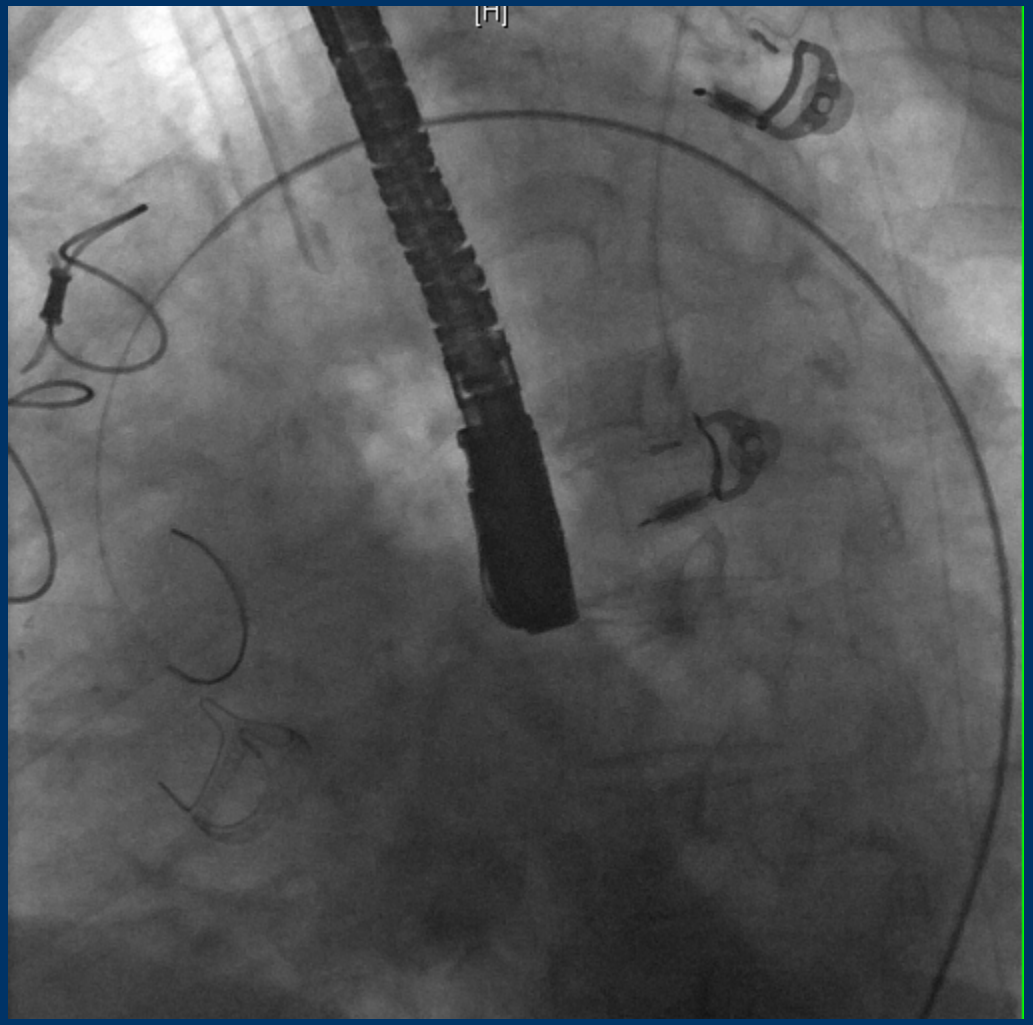
Vascular Surgery

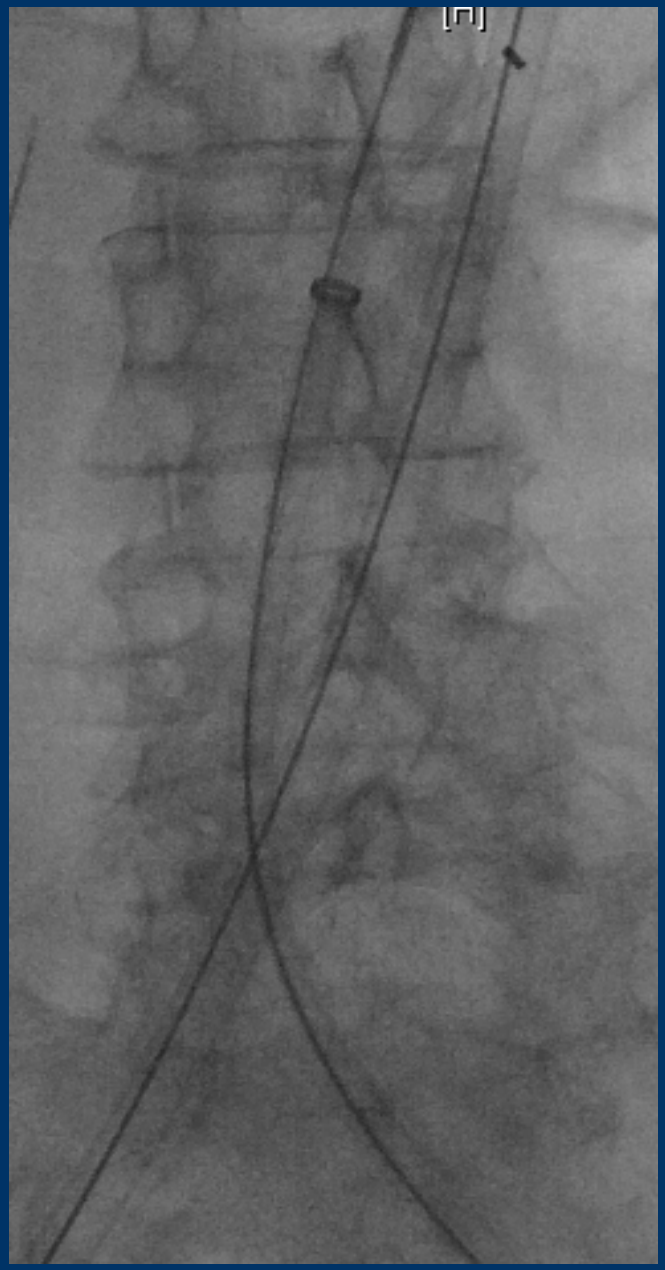

A
B
C

Cath Lab 1/15/11

- Lee/Dake/Greenberg/G Lee
- Complex repair of TAA with reverse snorkel (“periscope”) configuration
- Lumbar catheter
- Bilateral CFA exposure

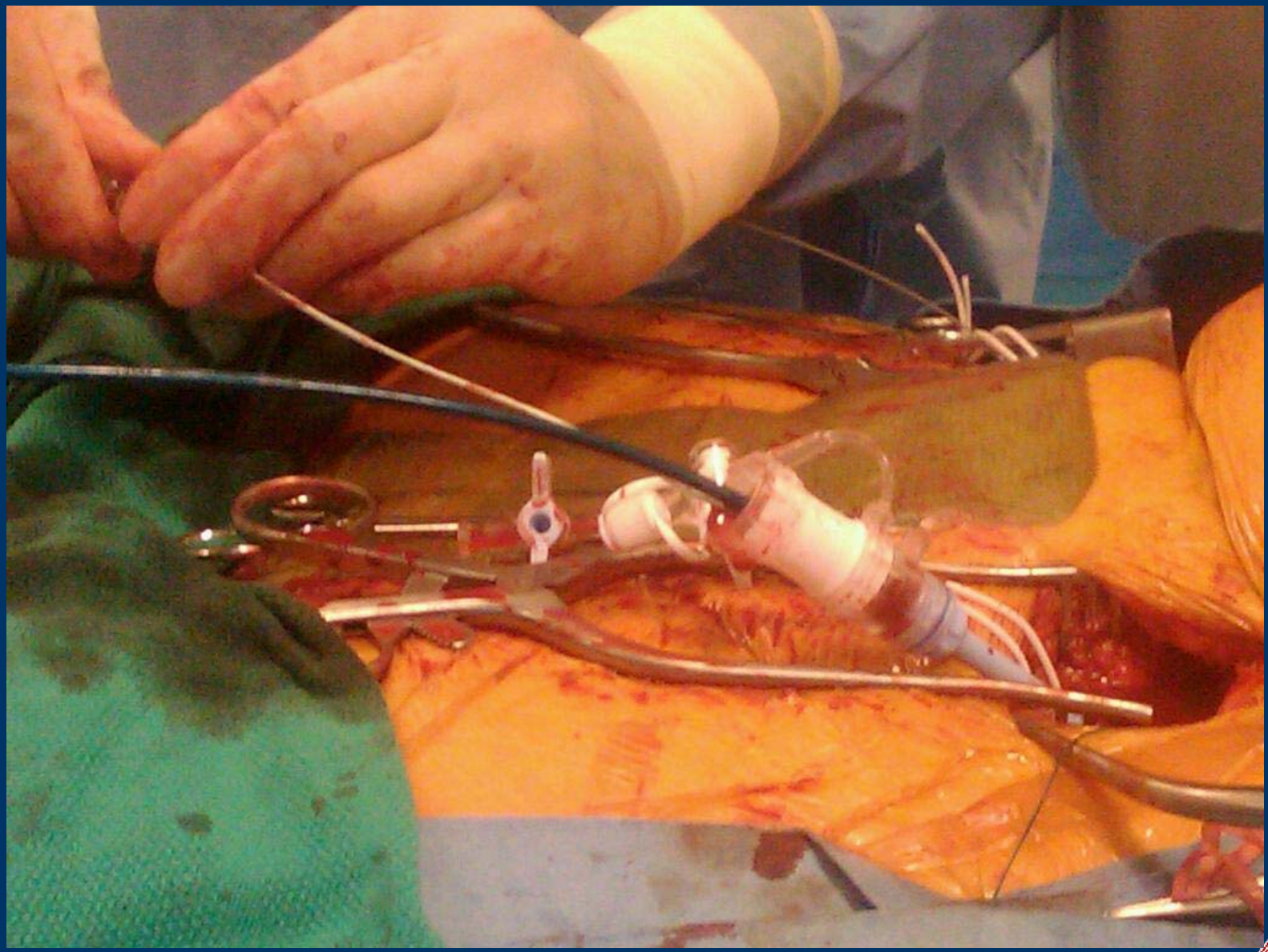
Ascending Aorta via R CFA



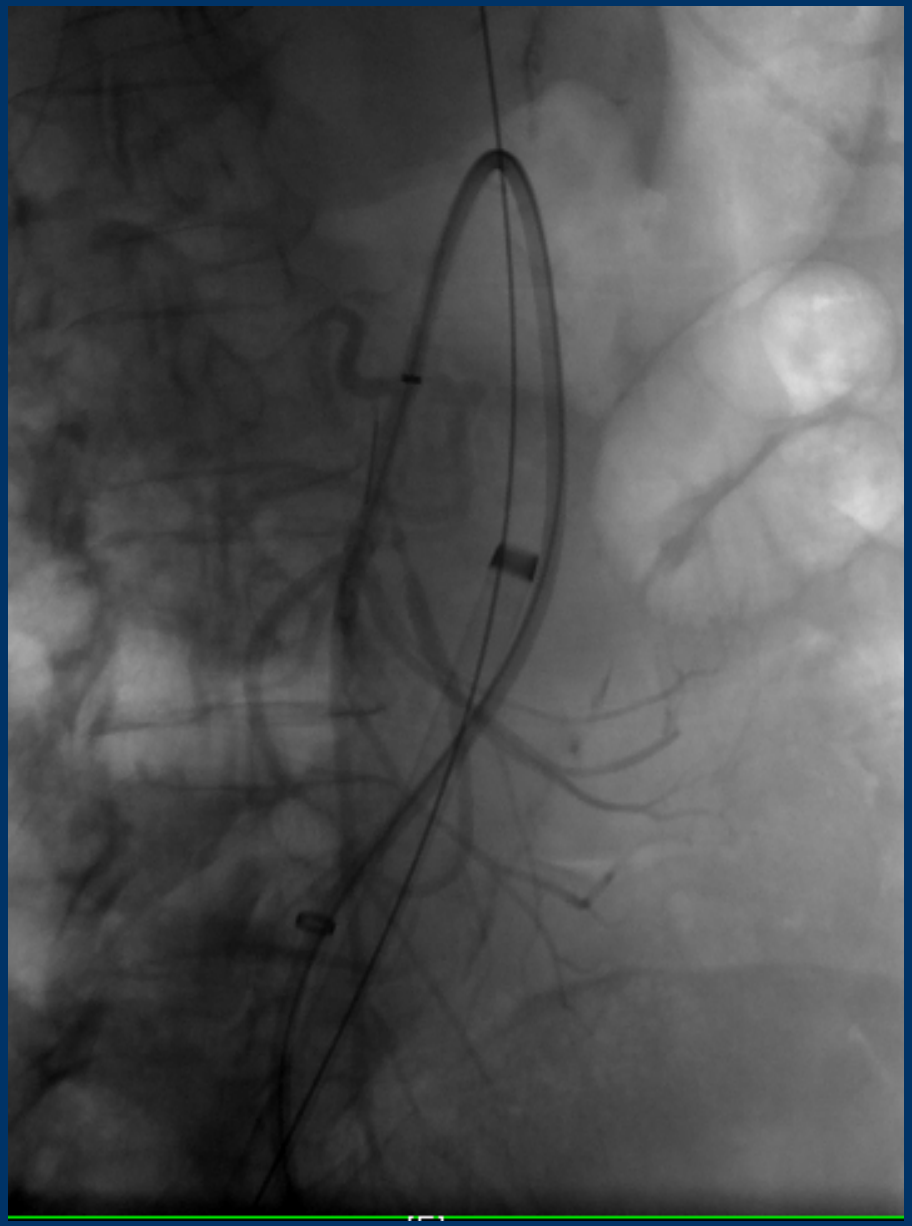


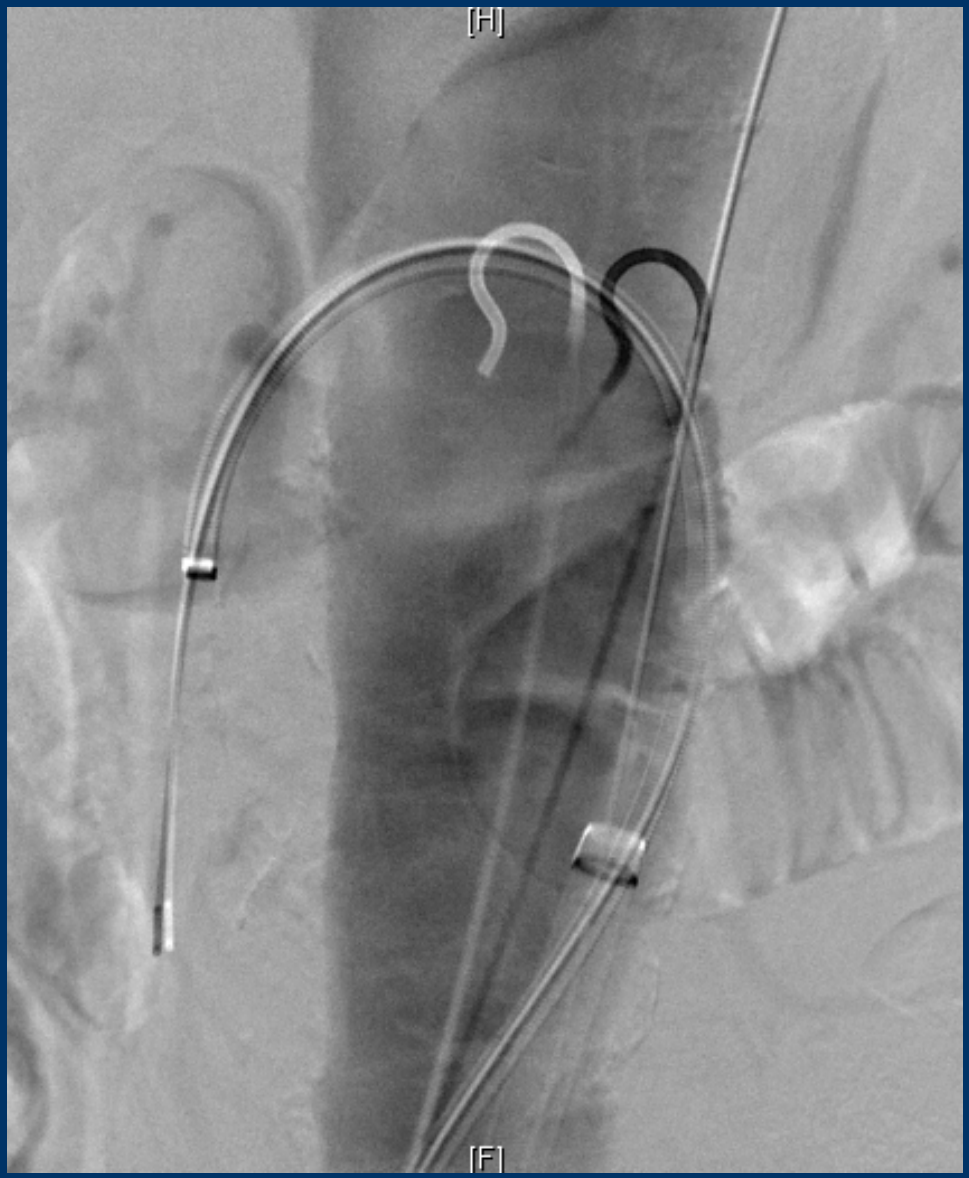
16F Dry Seal sheath:
8F Ansel sheath/
C2 catheter
5F UF catheter

24F Dry Seal sheath

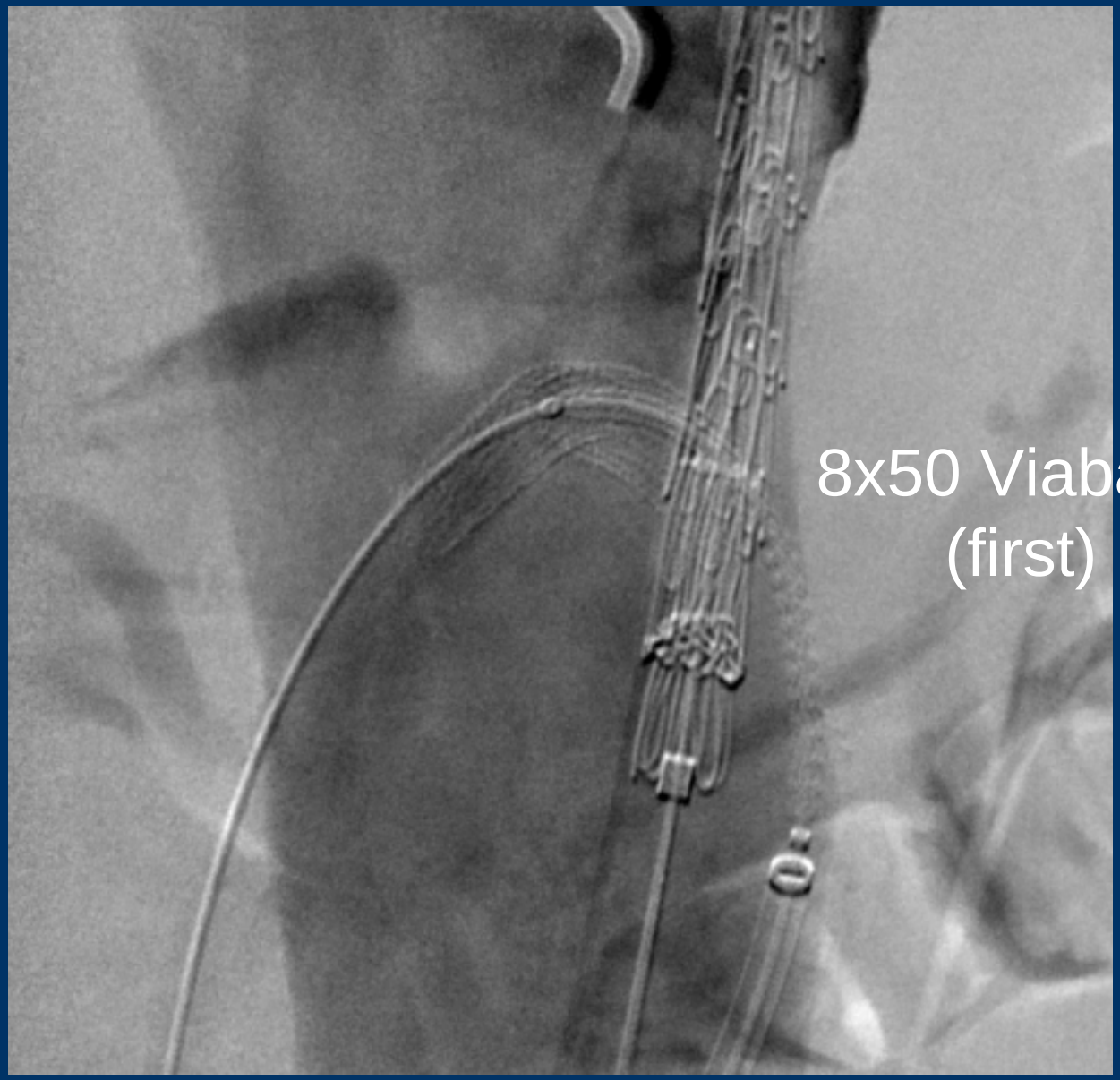


Vascular Surgery

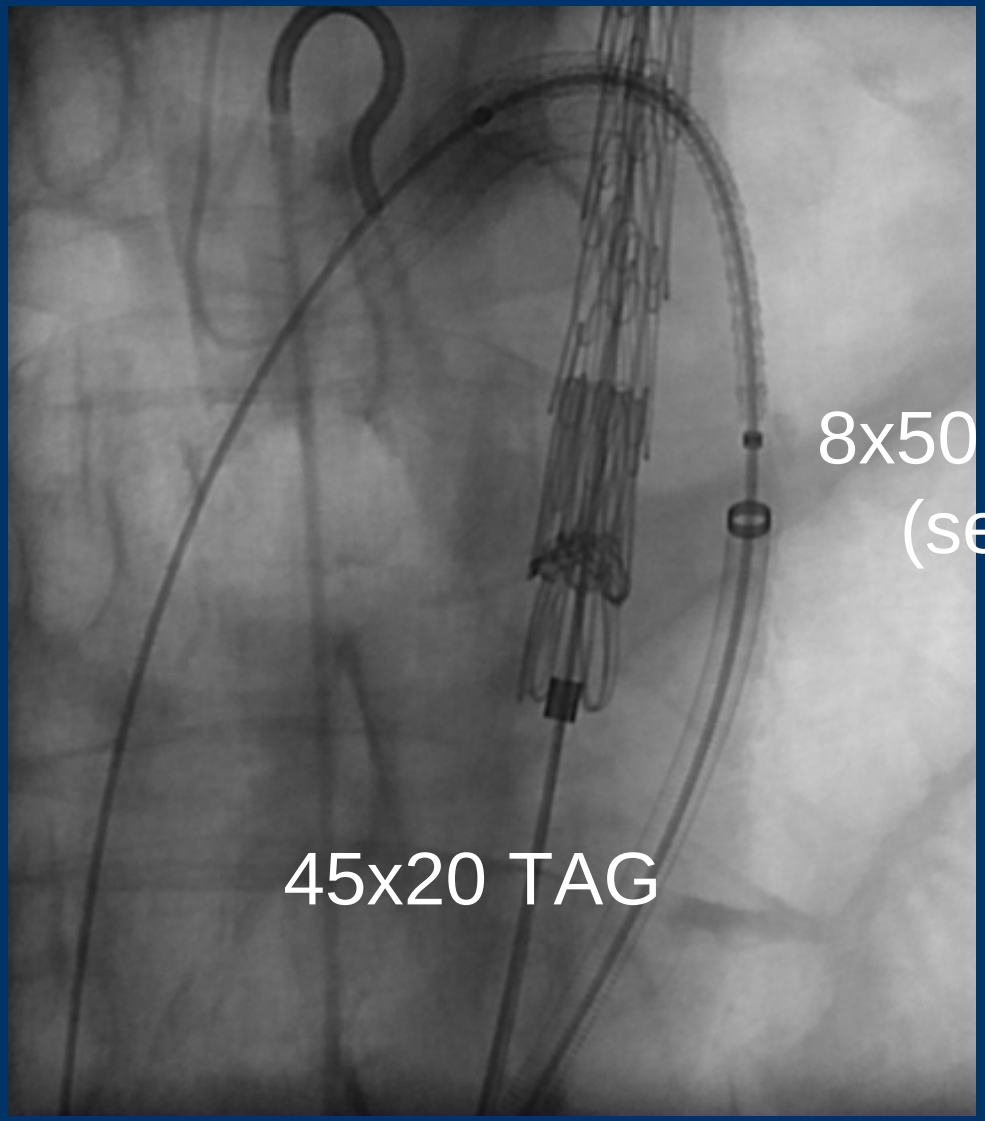



[H]
[F]

Visceral System



8x50 Viabahn
(first)

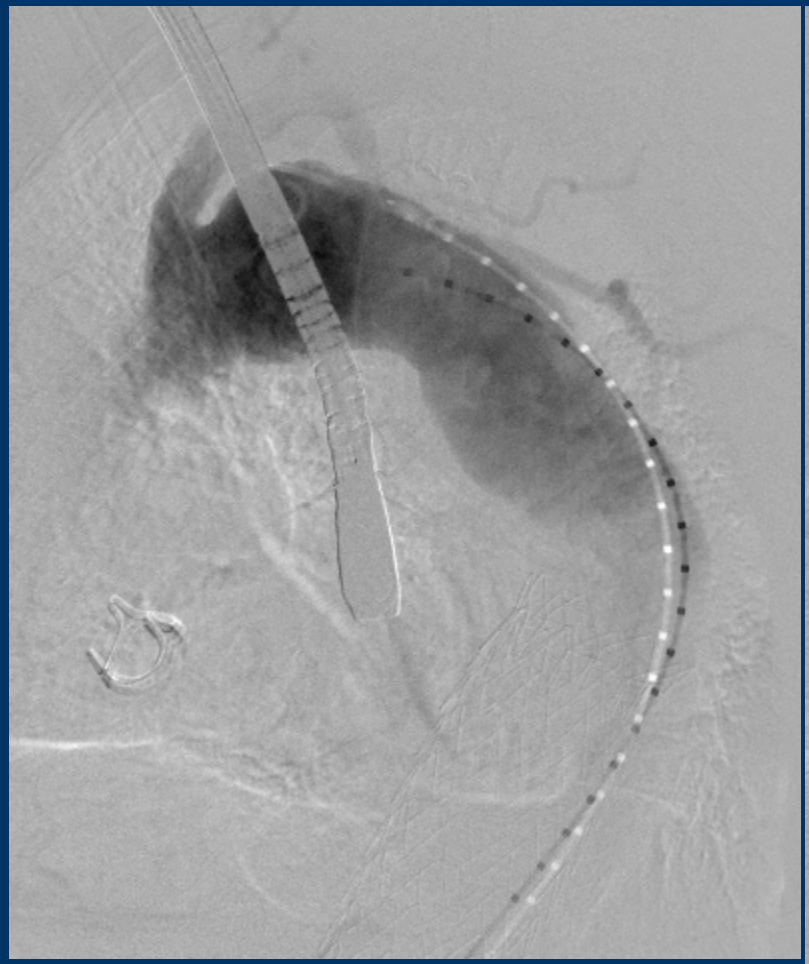

8x50 Viabahn
(second)
45x20 TAG

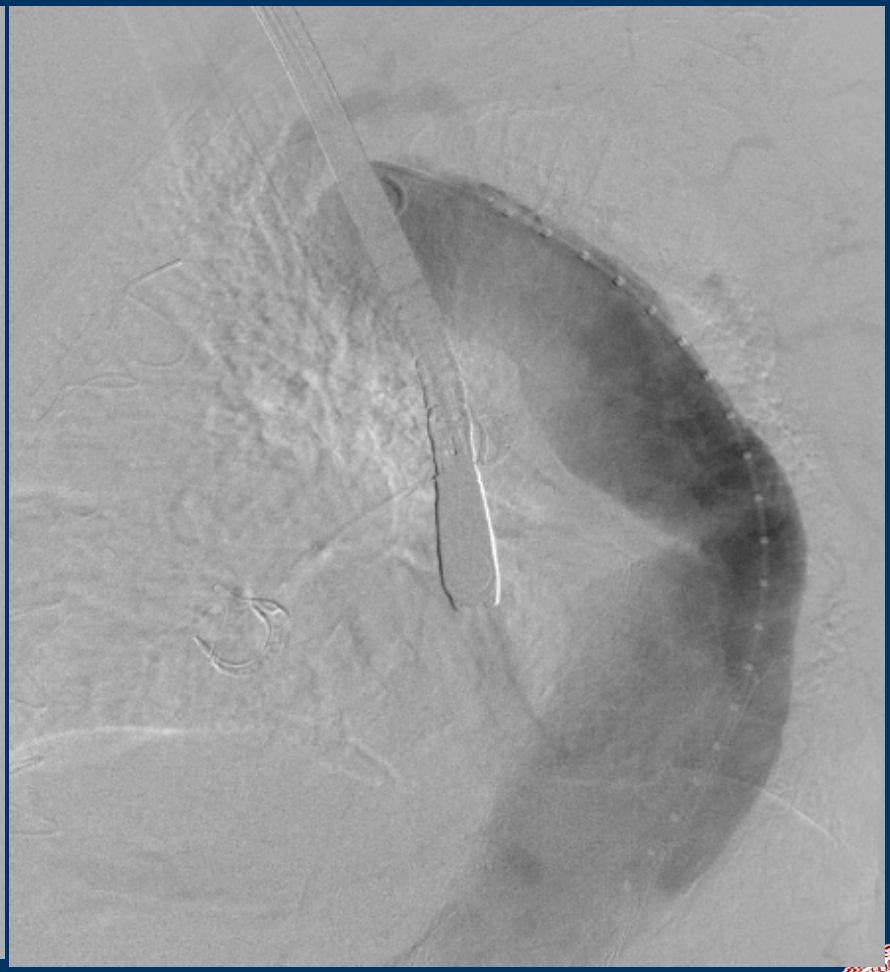
Simultaneous TAG/Periscope Deployment

8x28 Omnilink stent
Overlap region

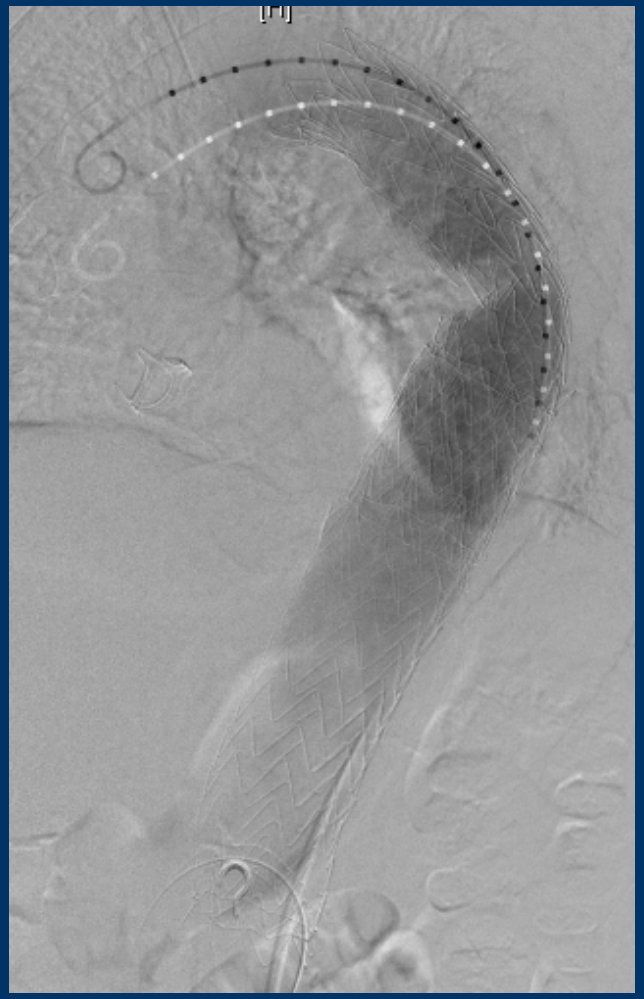

[H]
[F]

Thoracic Aortogram

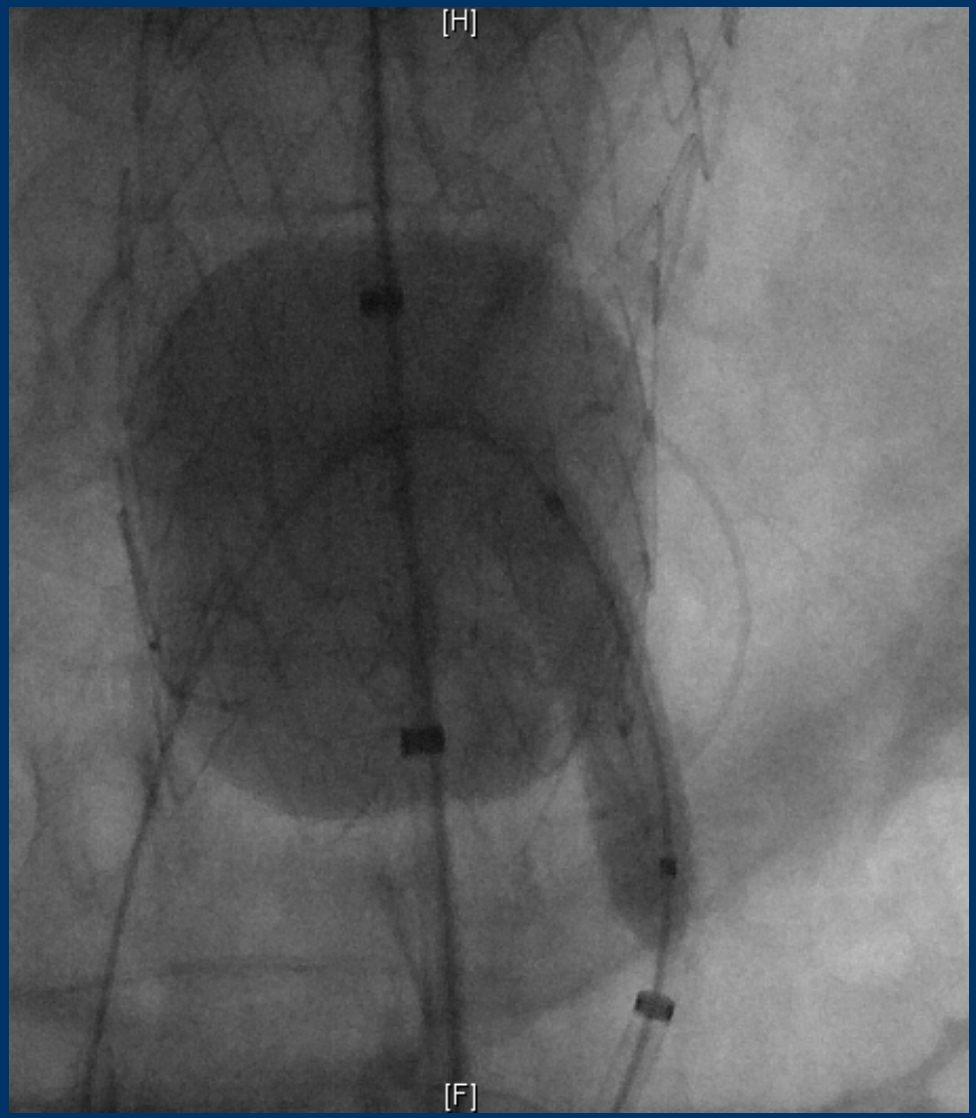




45 x 20 TAG

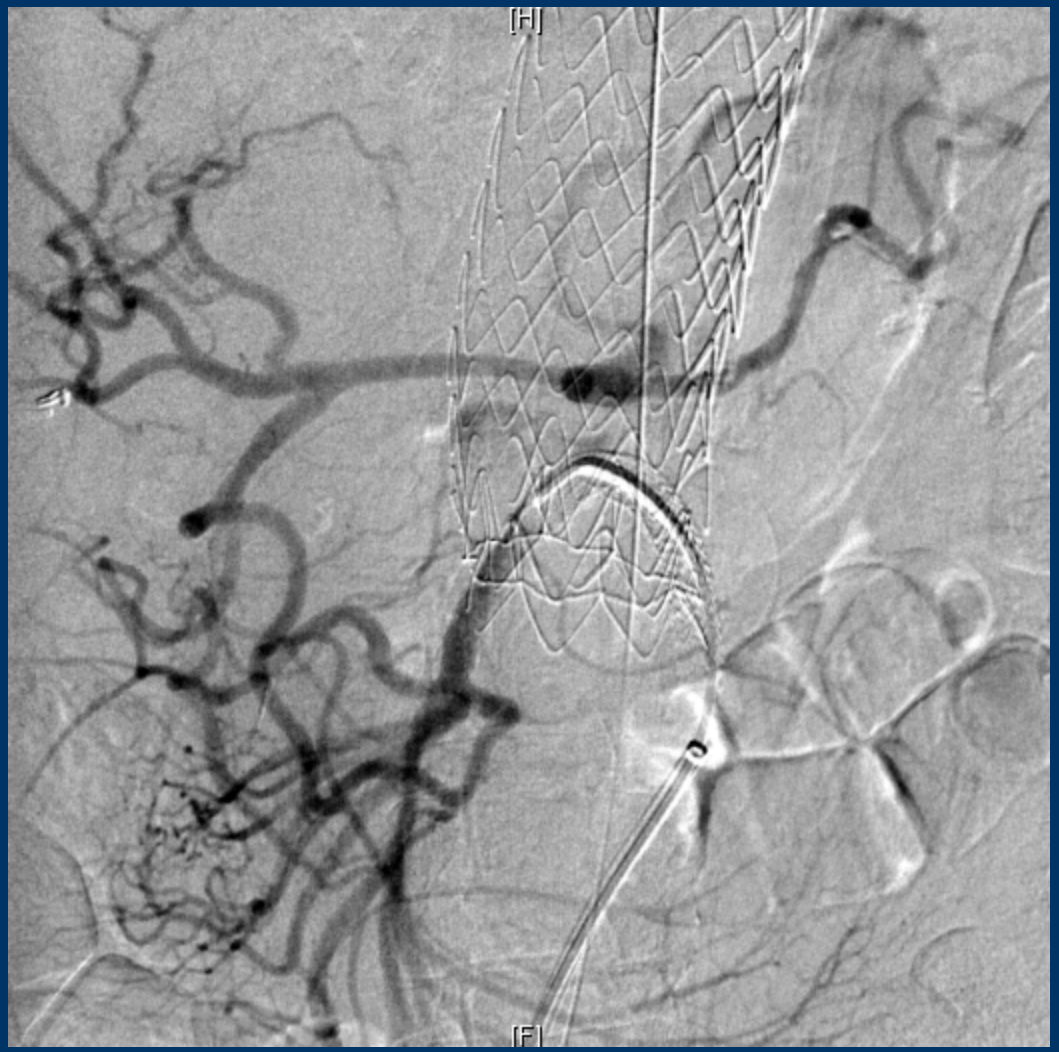


Molding at Periscope Overlap




[F]

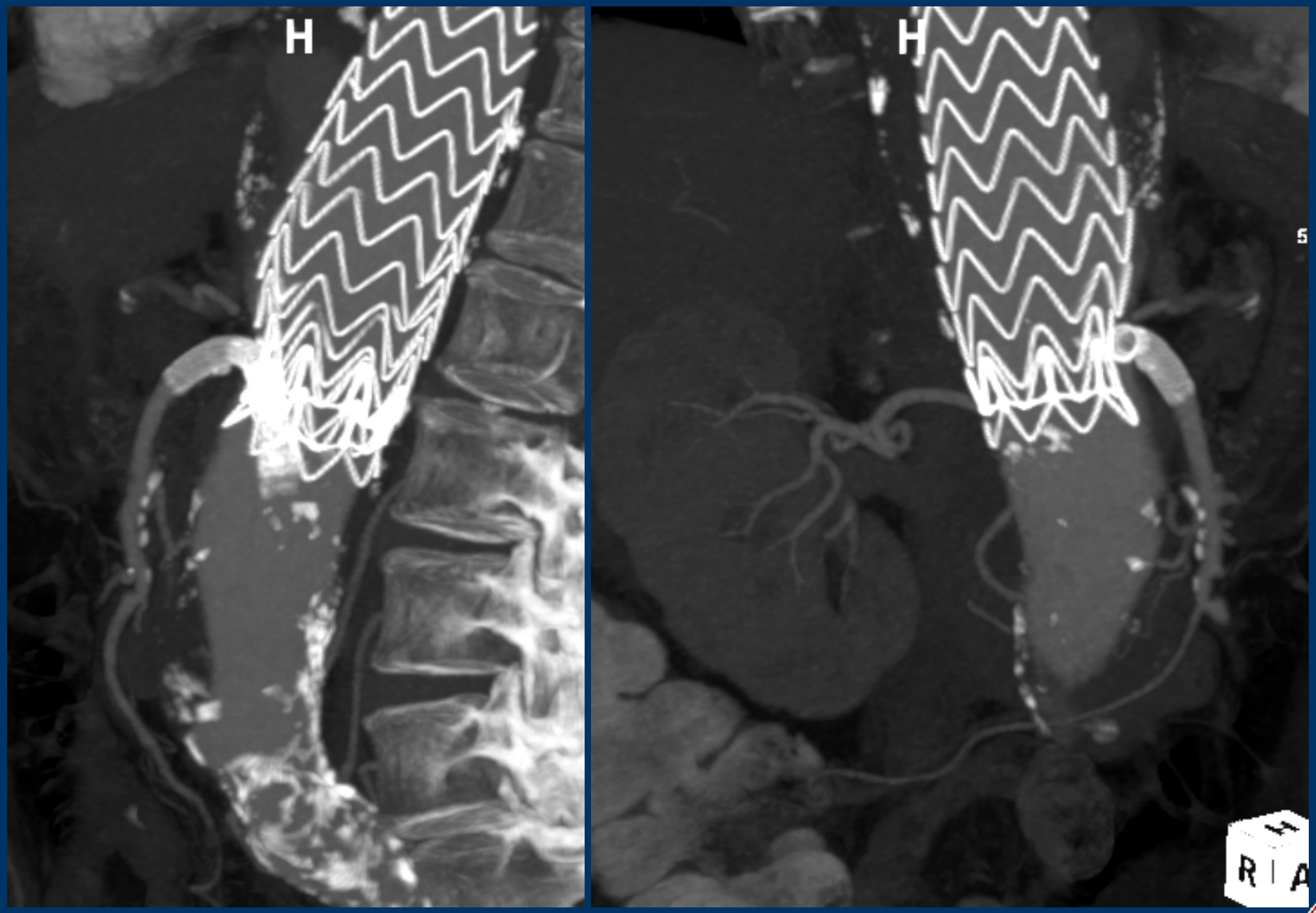
SMA Angiogram



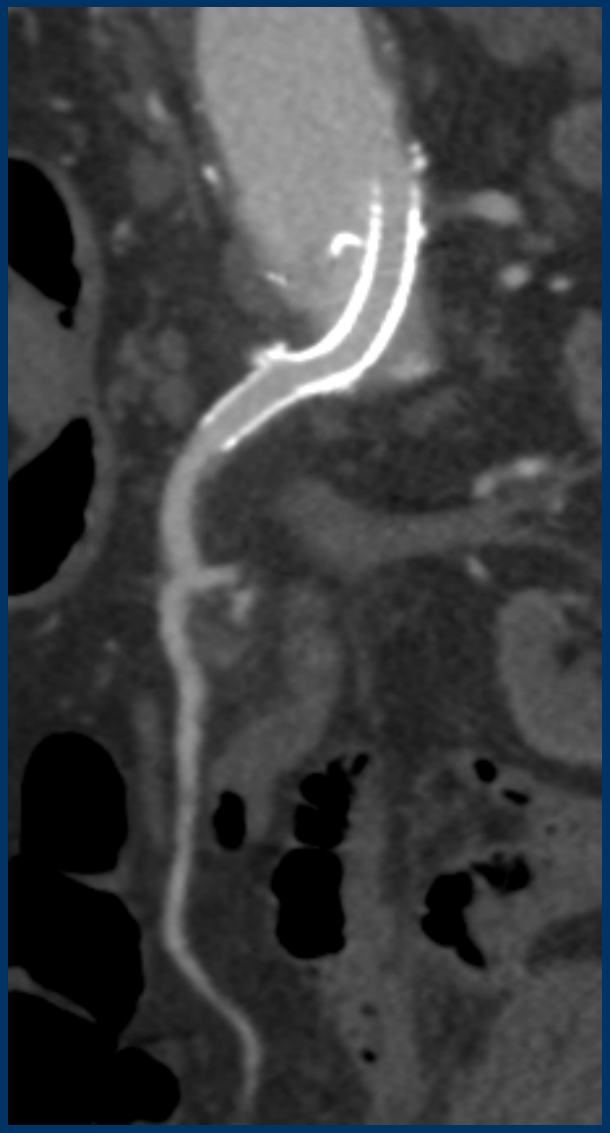
Post-Op

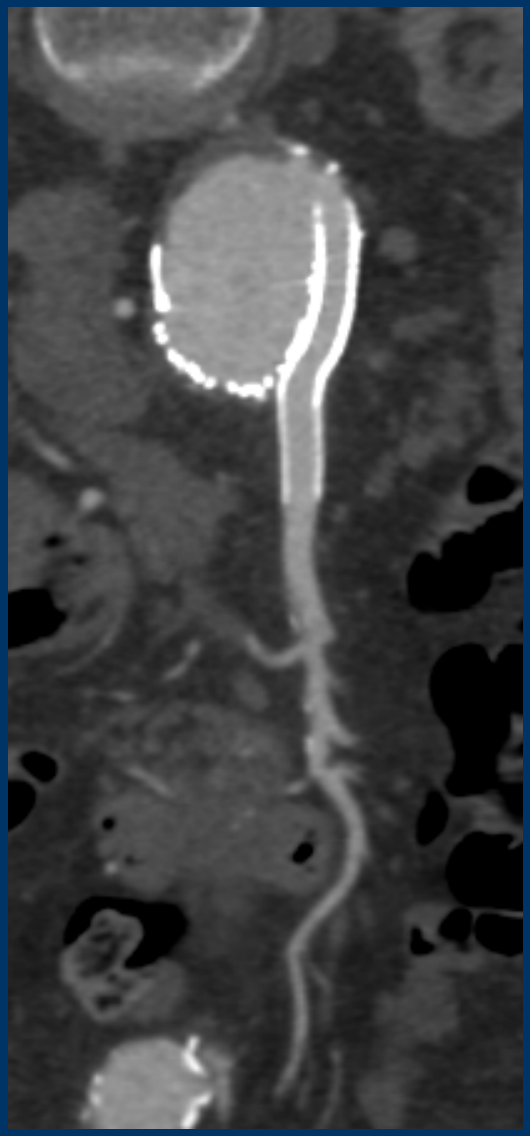
- Lumbar drain dc'd POD#2
- ICU until POD#3
- Urinary retention requiring foley on dc
- DC POD#8
- Foley removed 1 week later

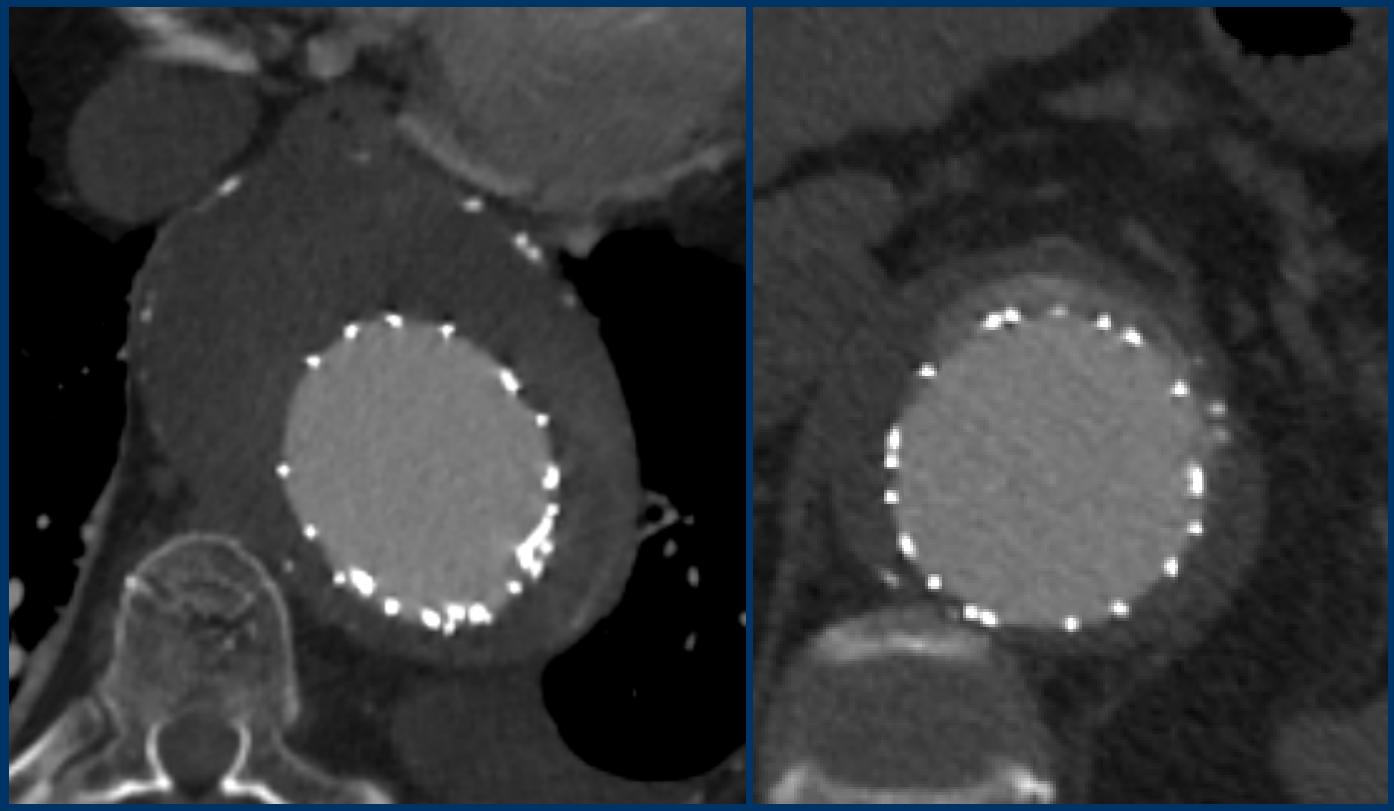

F

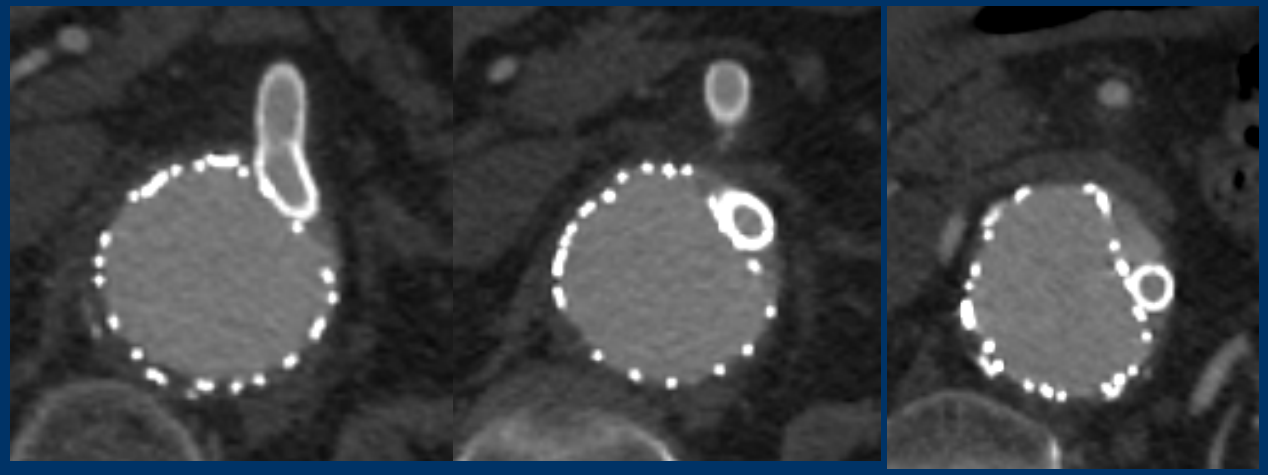


Vascular Surgery









Outcomes of planned celiac artery coverage during TEVAR

Manish Mehta, MD, MPH, R. Clement Darling III, MD, John B. Taggert, MD, Sean P. Roddy, MD, Yaron Sternbach, MD, Kathleen J. Ozsvath, MD, Paul B. Kreienberg, MD, and Philip S. K. Paty, MD, *Albany, NY*

Vascular Surgery

Overview

- SMA-celiac collaterals critical for celiac artery coverage (CAC)
- SMA collaterals can result from celiac artery stenosis
- 10-15% patients have replaced right HA

- Largest series of CAC to extend distal seal zone during TEVAR

Methods

- Patients underwent detailed CTA of SMA-celiac collaterals
- Poor collateralization prompted verification with catheter-based angiography
- Celiac occlusion SMA angiogram performed
- Mean f/u 15 months

Results

- 31/228 TEVAR patients had CAC in 5 yrs

Table I. Patient demographics

TEVAR with celiac artery coverage	31
Male/female	11 (35%), 20 (65%)
Mean age	74.2 years
Mean TAA size	6.5 cm (range 5.4 cm-8.2 cm)
Coronary artery disease	18 (58%)
Hypertension	28 (90%)
Chronic obstructive pulmonary disease	12 (39%)
Pre-existing renal failure (dialysis)	4 (12%)
Mean estimated blood loss	379 cc

TAA, Thoracic aortic aneurysms; *TEVAR*, thoracic endovascular aneurysm repair.

Results

Table II. Complications in TEVAR patients with celiac coverage

TEVAR with celiac artery coverage	31	Outcome
Visceral ischemia	2 (6%)	
- Shock liver	1 (3%)	Death
- Acalculus cholecystitis	1 (3%)	Cholecystectomy
Paraplegia	2 (6%)	1 death
30-day mortality	2 (6%)	
Type 1b endoleak @ distal attachment site	2 (6%)	Coil embolization
Type II endoleak: celiac artery retrograde flow	3 (10%)	Coil embolization

TEVAR, Thoracic endovascular aneurysm repair.

Recommendations

- Thorough preop evaluation of celiac-SMA collaterals
- Treatment of coexisting SMA disease
- Vigilant objective monitoring for mesenteric ischemia
- CSF drainage
- Long terms surveillance of SMA stents crucial as in-stent stenosis at 3-5 yrs is common