

20TH INTERNATIONAL EXPERTS SYMPOSIUM

CRITICAL ISSUES

in aortic endografting 2016

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TIPS AND TRICKS: Percutaneous access

G Pratesi, MD

*Vascular Surgery
Policlinico Tor Vergata
University of Rome "Tor Vergata"*



Disclosure

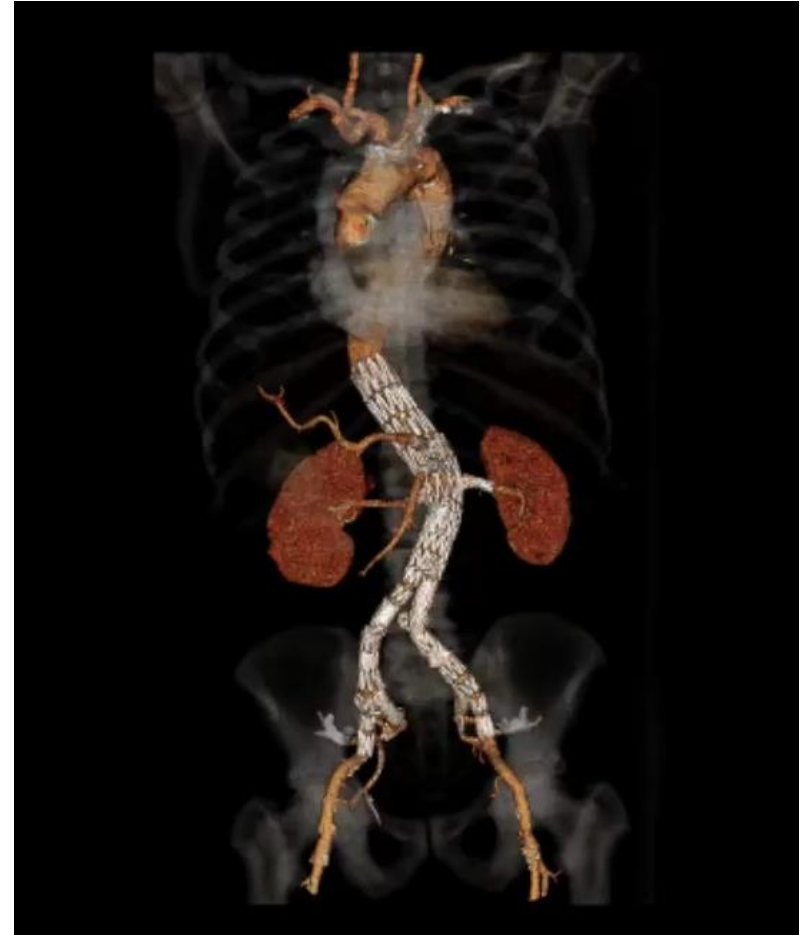
Giovanni Pratesi, M.D.

I have the following potential conflicts of interest to report:

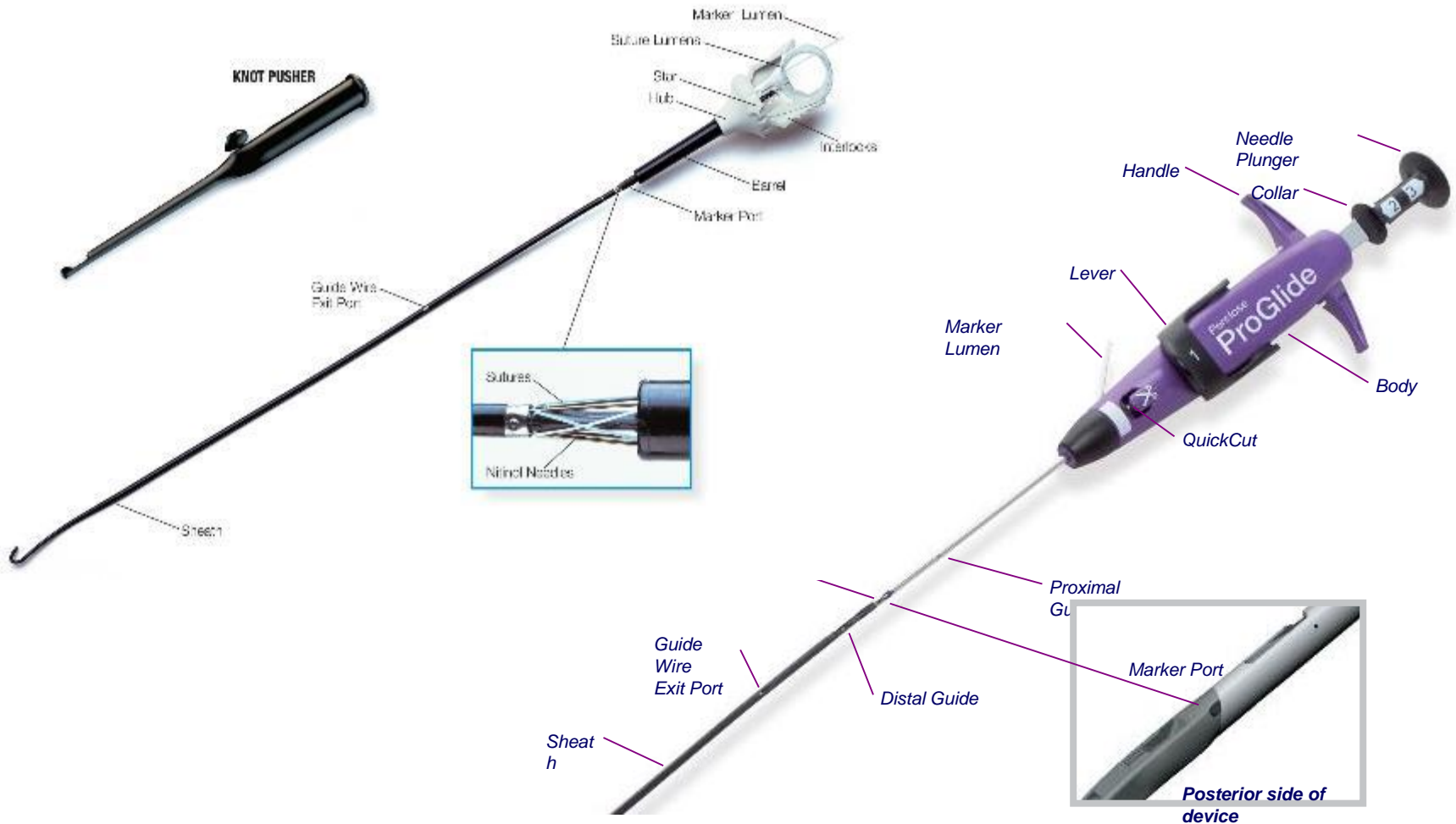
- ☒ *Consulting: Abbott, Cook, Cordis, Medtronic, WL Gore & Associates*
- ☐ *Employment in industry*
- ☐ *Stockholder of a healthcare company*
- ☐ *Owner of a healthcare company*
- ☐ *Other(s)*
- ☐ *I do not have any potential conflict of interest*

EVAR and percutaneous access: an ideal combination

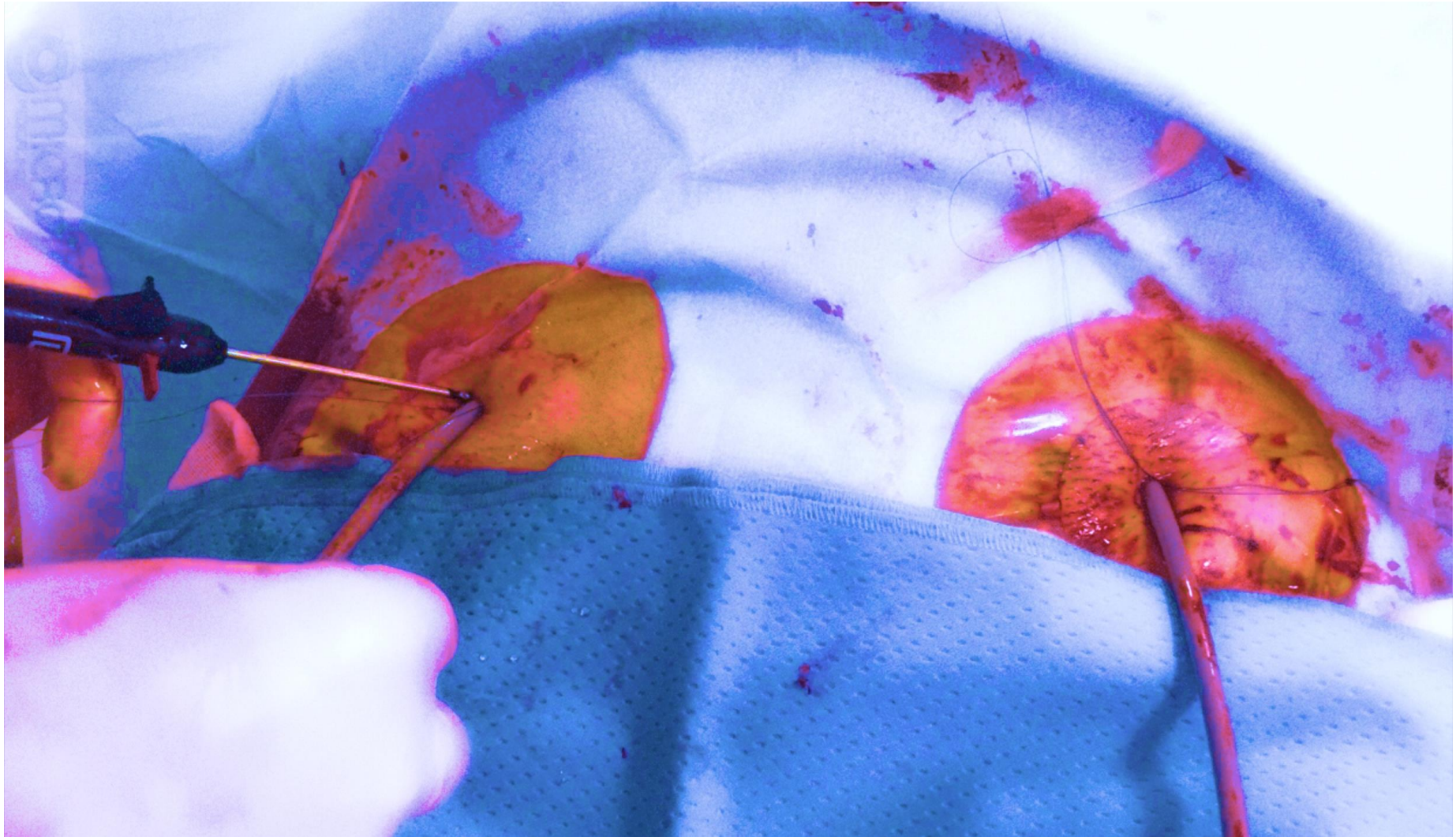
- Rapid, safe and effective
- Local anesthesia
- Lower risk of wound-related complications (eg, seroma, infection, nerve injury)
- Reduced discomfort for the patient
- Early ambulation, shorter hospitalization
- *Totally endovascular, minimally invasive procedure*



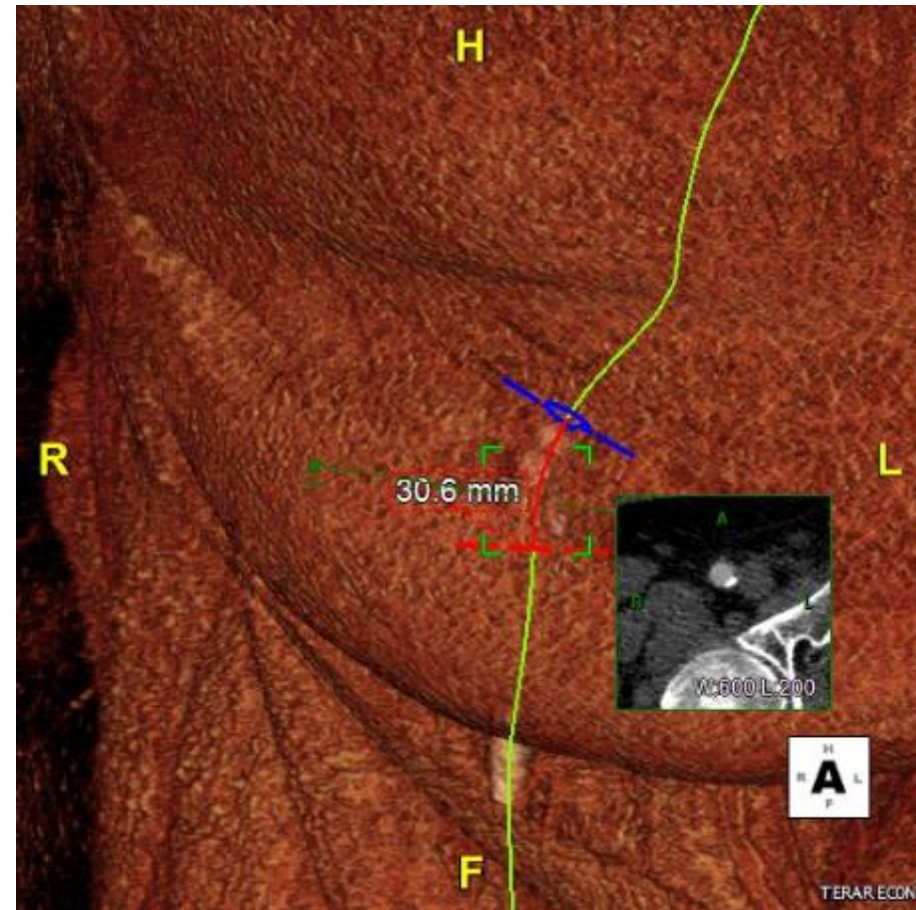
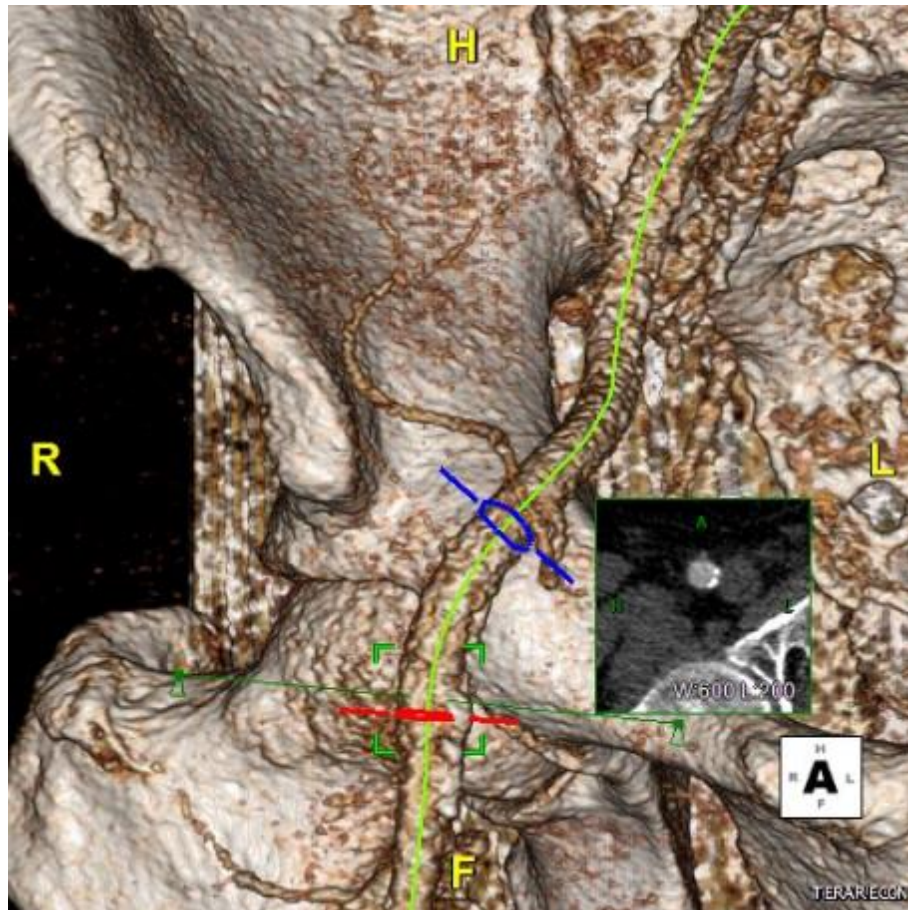
Suture mediated closure devices: Prostar XL & Proglide



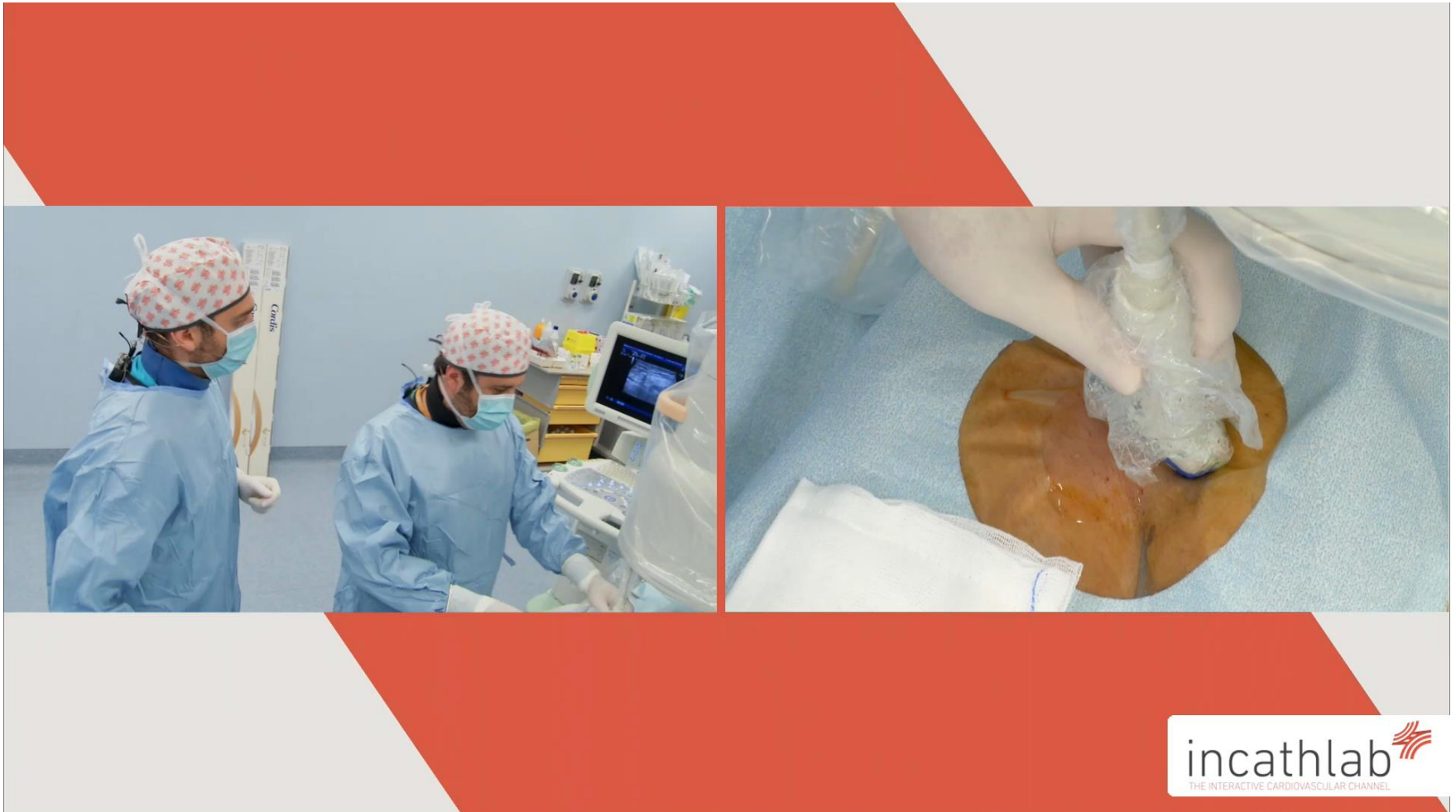
Learning curve in percutaneous access: a multifactorial strategy



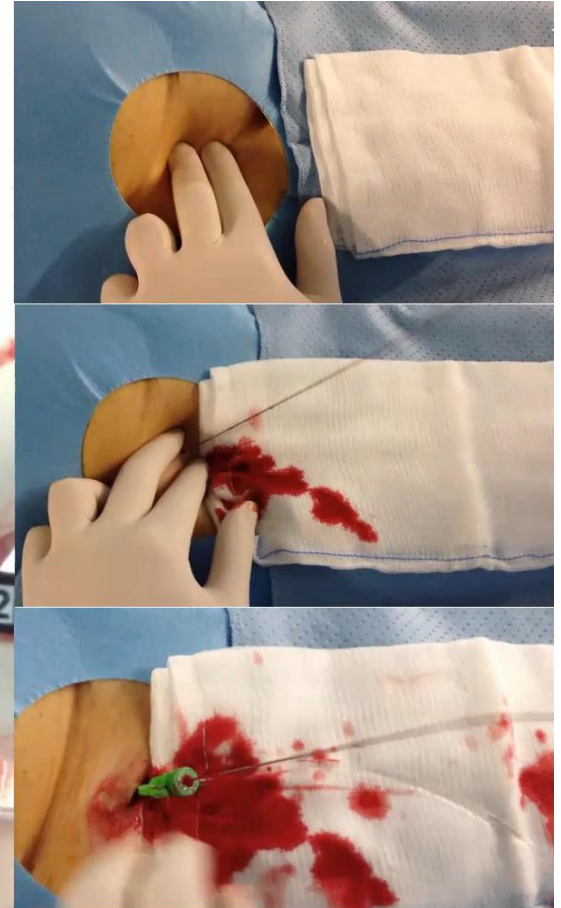
1. Preoperative evaluation



2. *Ultrasound guided puncture*

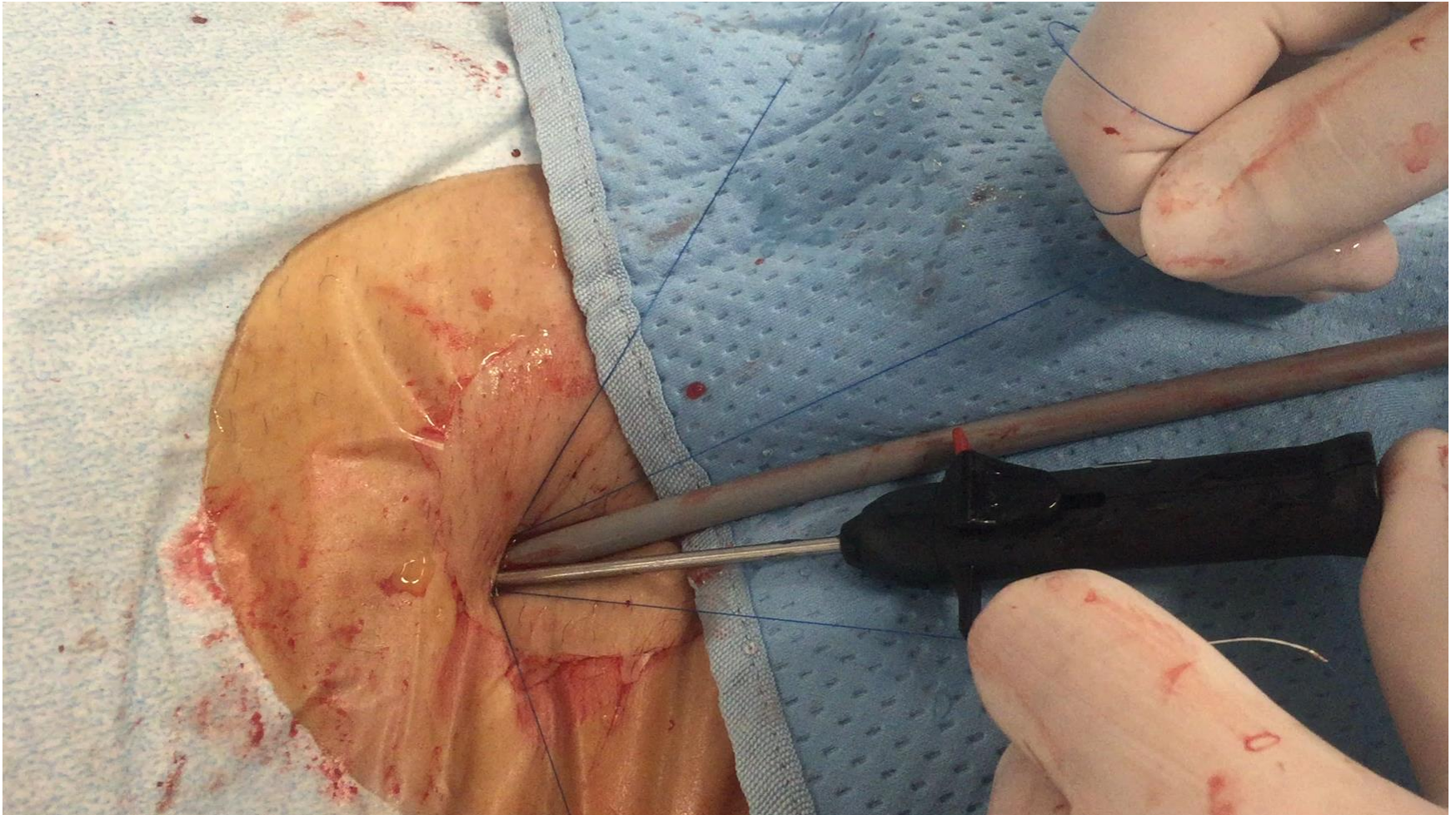


3. Double Proglide technique



Approved for large bore sheath up to 21 Fr

4. *Progressive closure*



5. Post-closure duplex and CT follow-up access sites examination



A Systematic Literature Review of the Efficacy and Safety of the Prostar XL Device for the Closure of Large Femoral Arterial Access Sites in Patients Undergoing Percutaneous Endovascular Aortic Procedures **CME**

Outcome	Effect measure	Absolute rate, n/N OR total patient number	Pooled result, effect size (95% CI) – random-effects model	Pooled result, effect size (95% CI) – fixed-effects model
Absolute rate of procedural success (access sites)	Average success rate with Prostar XL	624/692	91% (87%–95%)	92% (91–94%)
Absolute rate of procedural success (patients)	Average success rate with Prostar XL	426/481	89% (84%–94%)	92% (90–95%)
Total procedural time	Difference in procedural time between Prostar XL and surgical cut-down (weighted mean)	N = 193	62.4 (27.8–97.1) min	66.1 (57.7–74.4)
Complication rate	Risk ratio for complications (risk with Prostar XL 10 vs. Risk with surgical cut-down)	N = 189	0.87 (0.41–1.88)	0.94 (0.51–1.72)

The Prostar XL is an effective and safe device for use in percutaneous closure of large femoral artery sites, comparable to open surgical femoral artery cut-down

Haulon S et al., Eur J Vasc Endovasc Surg 2011

Outcomes of total percutaneous endovascular aortic repair for thoracic, fenestrated, and branched endografts

2009-2014: 102 pts; total percutaneous closure was performed using two Perclose devices in 170 femoral arteries with ≥ 20 F-diameter sheaths in 163 (96%)

- *Technical success: 95%*
- *3 thrombosis, 1 retroperitoneal hematoma, 1 pseudoaneurysm*
- *No access-related complications >30 days*

Table II. Aneurysm extent and sheath size in 102 patients treated by thoracic, fenestrated, and branched stent grafts using percutaneous closure

<i>Variable</i>	<i>No. (%)</i>
Type of repair	
Pararenal	48 (47)
Thoracoabdominal	27 (26)
Thoracic	19 (19)
Aortoiliac	8 (8)
Sheath size (by artery)	
<20F	7 (4)
≥ 20 F	163 (96)

The rate of access related complications (5%) is similar to that reported for PEVAR of infrarenal AAAs using smaller-profile devices.

De Souza LR et al., J Vasc Surg 2015

Italian Percutaneous EVAR (IPER) Registry: outcomes of 2381 percutaneous femoral access sites' closure for aortic stent-graft

G. PRATESI¹, M. BARBANTE¹, R. PULLI², A. FARGION², W. DORIGO²
R. BISCEGLIE¹, A. IPPOLITI¹, C. PRATESI² on behalf of IPER Registry Collaborators

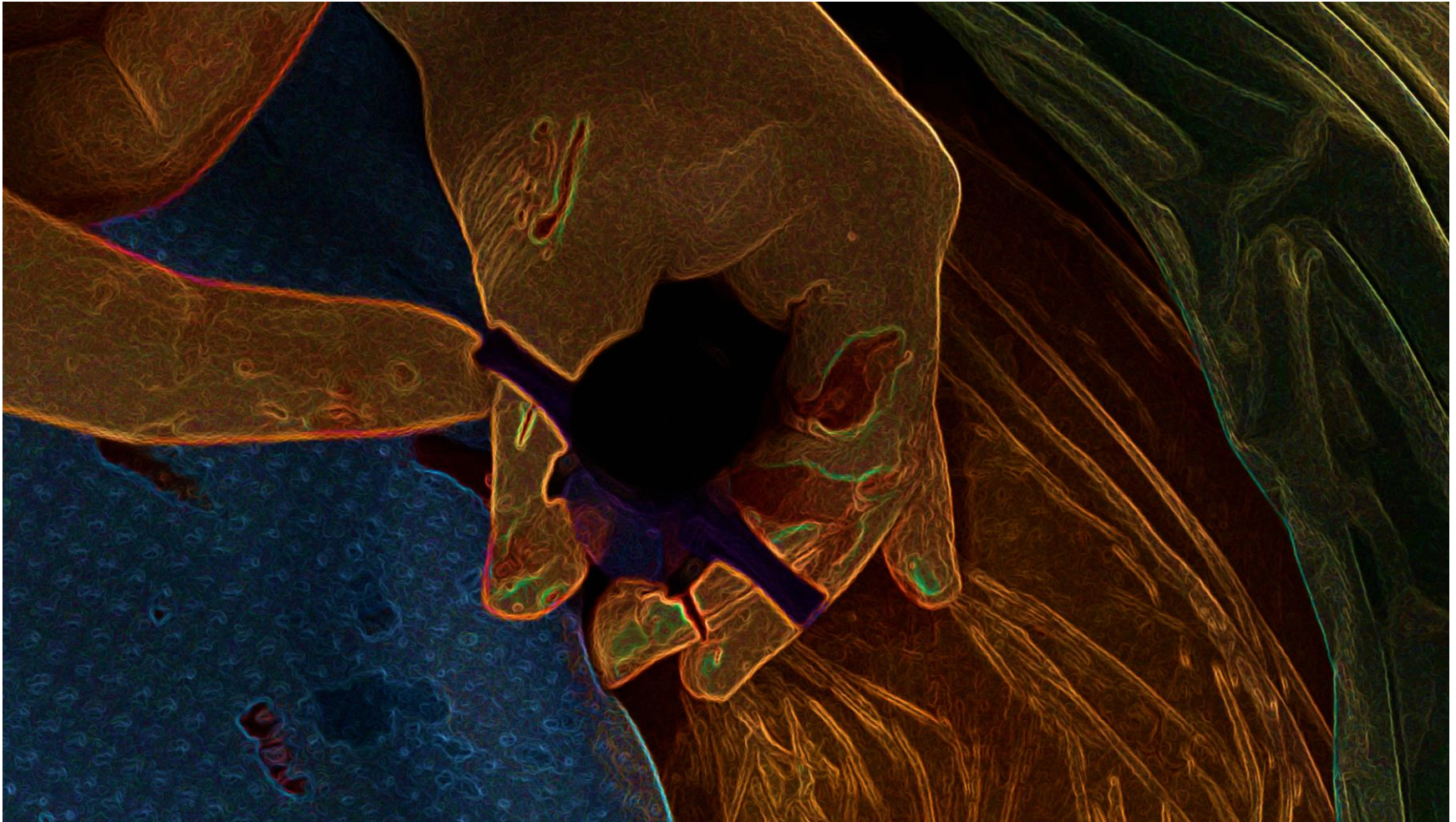
192 TEVAR/f-bEVAR
Technical success: 96.9%

2189 EVAR
Technical success: 96.3%

	TEVAR/f-bEVAR (192/2381)	EVAR (2189/2381)	<i>p</i>
Fr device (mean \pm SD)	21.3 \pm 2.1	16.7 \pm 3.4	.03
Profile > 20 Fr	54 (43.5%)	482 (21.3%)	.001
CFA diameter, mm (mean \pm SD)	8.4 \pm 1.7	8.2 \pm 1.4	.15
CFA < 7 mm	9 (7.2%)	163 (7.2%)	.54
High CFA bifurcation	2 (1.6%)	64 (2.8%)	.32
CFA stenosis >50%	6 (4.8%)	66 (2.9%)	.16

J Cardiovasc Surg 2015

How to improve outcomes in pEVAR: tips & tricks



pEVAR tips & tricks: one Proglide up to 14F femoral access

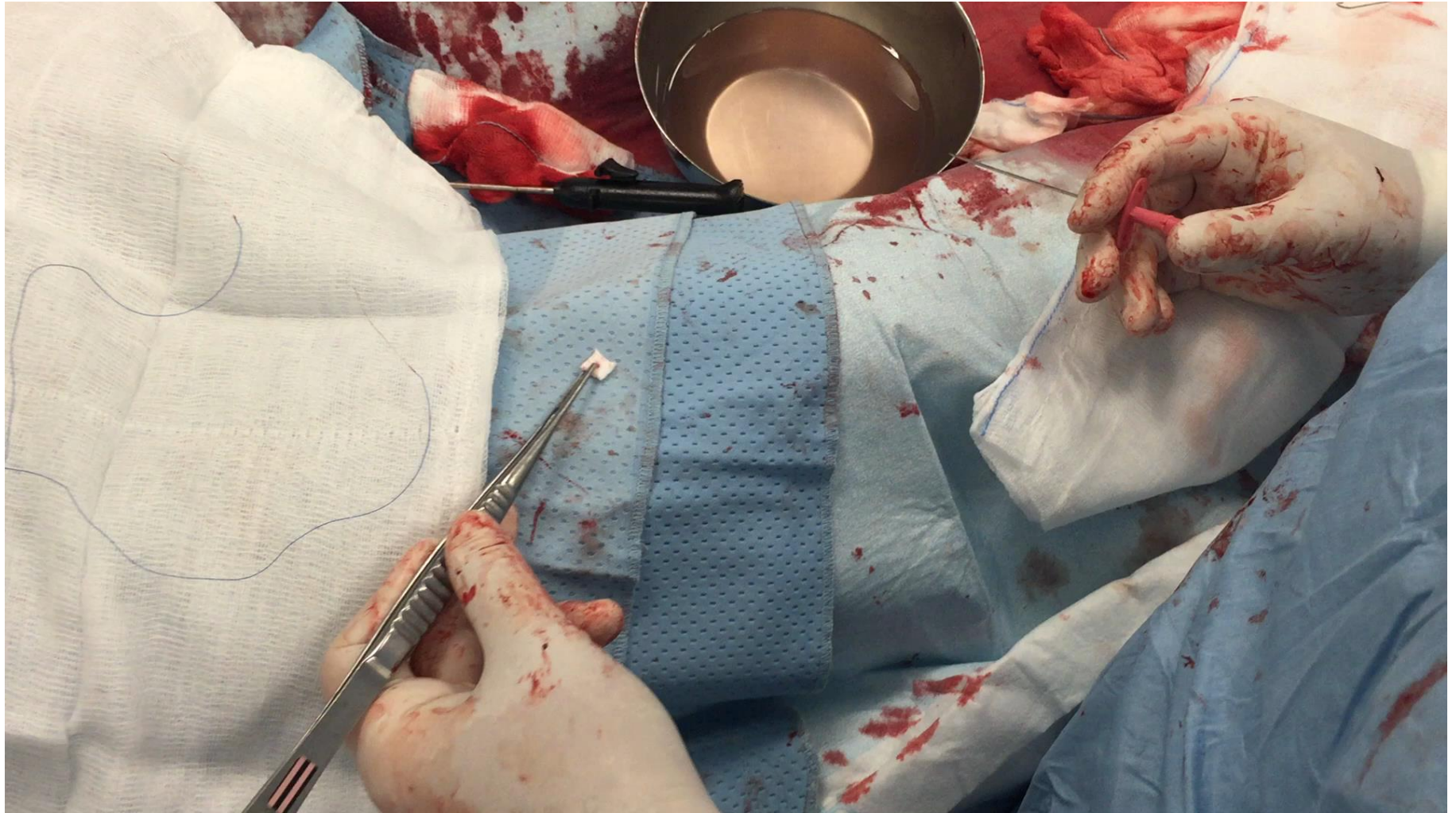


pEVAR tips & tricks: sheath downsizing during complex f/bEVAR



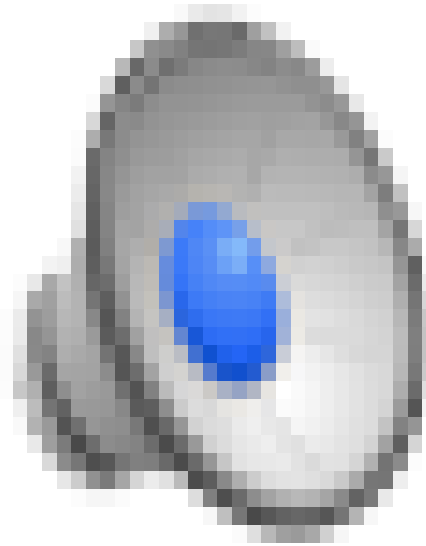
pEVAR: tips & tricks

pledgets with minor bleeding



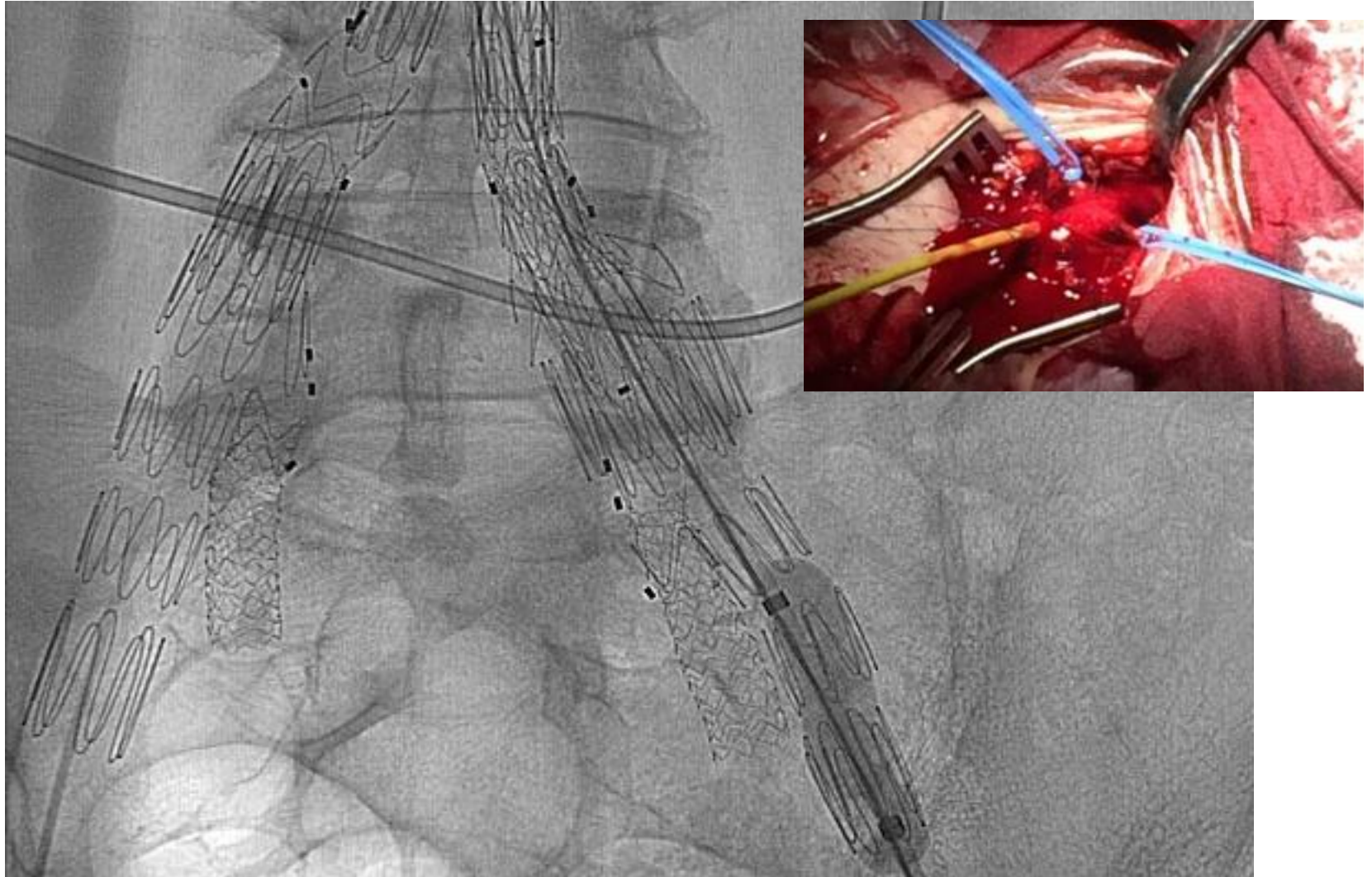
pEVAR: tips & tricks

third Proglide if you are not satisfied

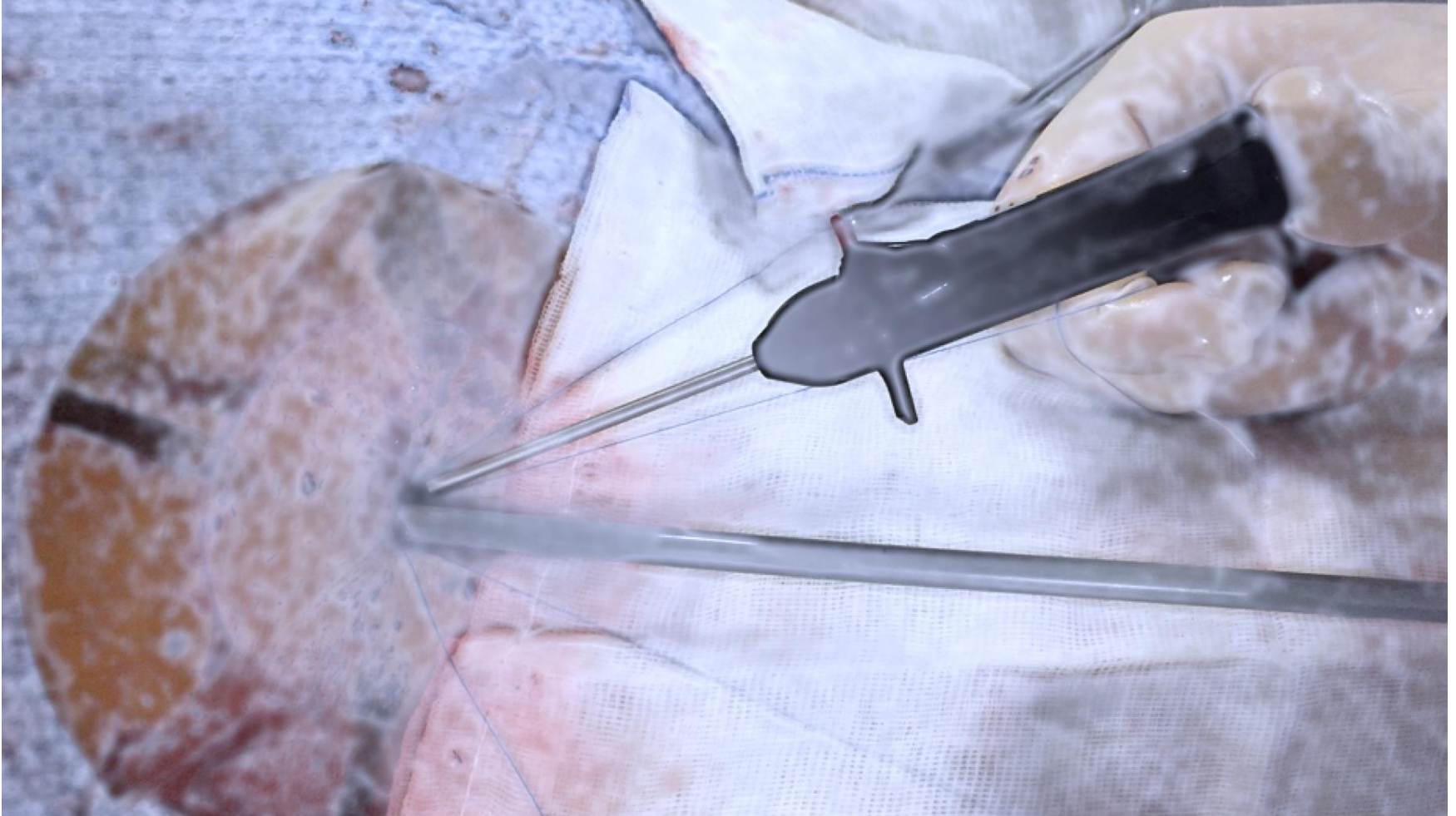


pEVAR: tips & tricks

endoclamping in case of failure



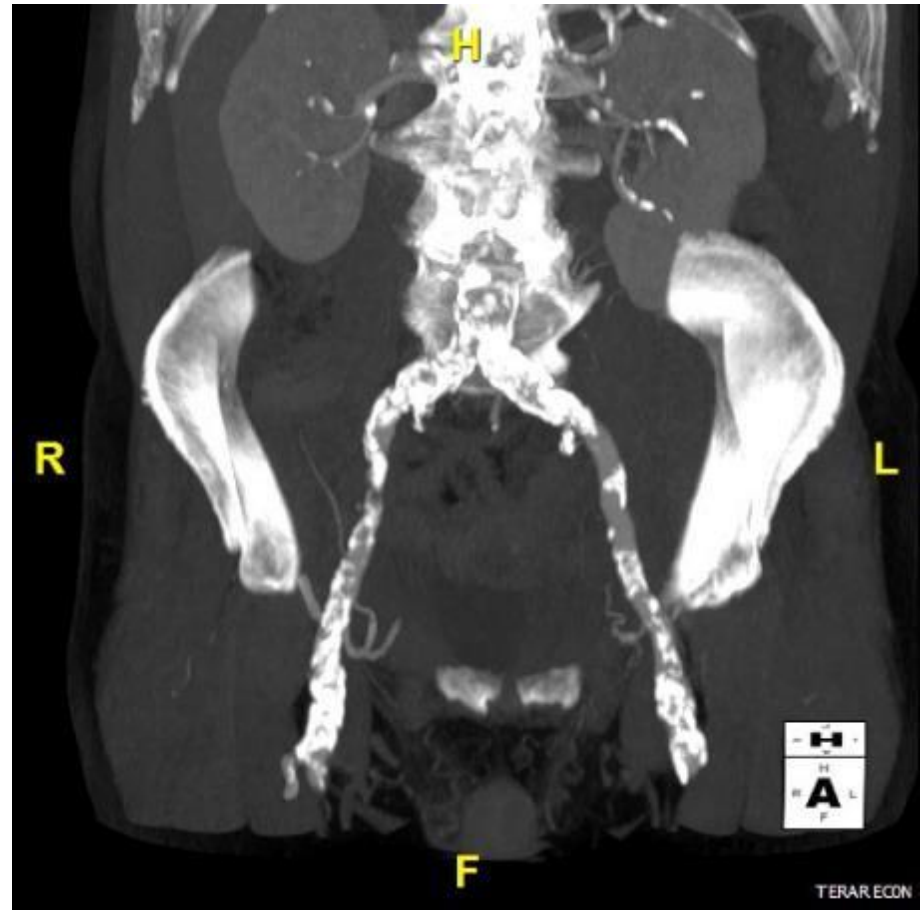
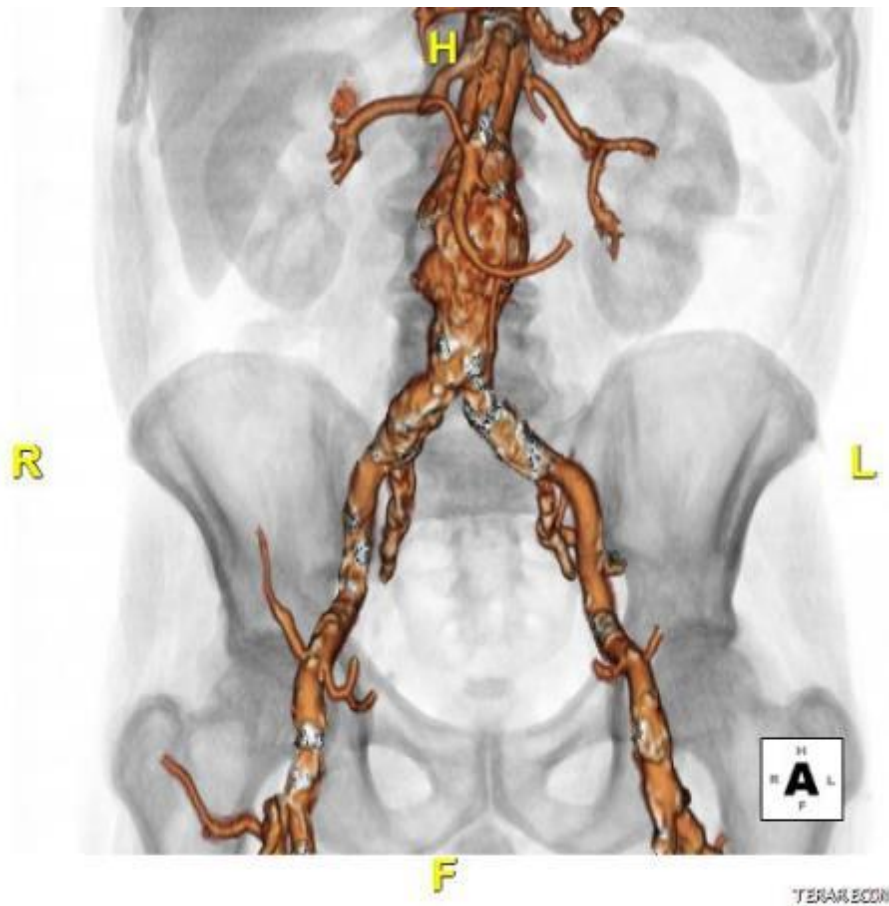
Expanding pEVAR applicability: toward a 100% percutaneous closure



Expanding pEVAR applicability: obese patient



Expanding pEVAR applicability: calcified common femoral arteries



Expanding pEVAR applicability: calcified common femoral arteries



Expanding pEVAR applicability: calcified common femoral arteries

