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H T D I AORTIC SURGERY
HOW TO DO IT PERIPHERAL & VENOUS
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Hepatic artery aneurysm: open and endovascular treatment

Daniele Mascia

Vascular Surgery, “Vita-Salute” - San Raffaele University
Scientific Institute Ospedale San Raffaele, Milan – Italy

Chief: Prof. Roberto Chiesa

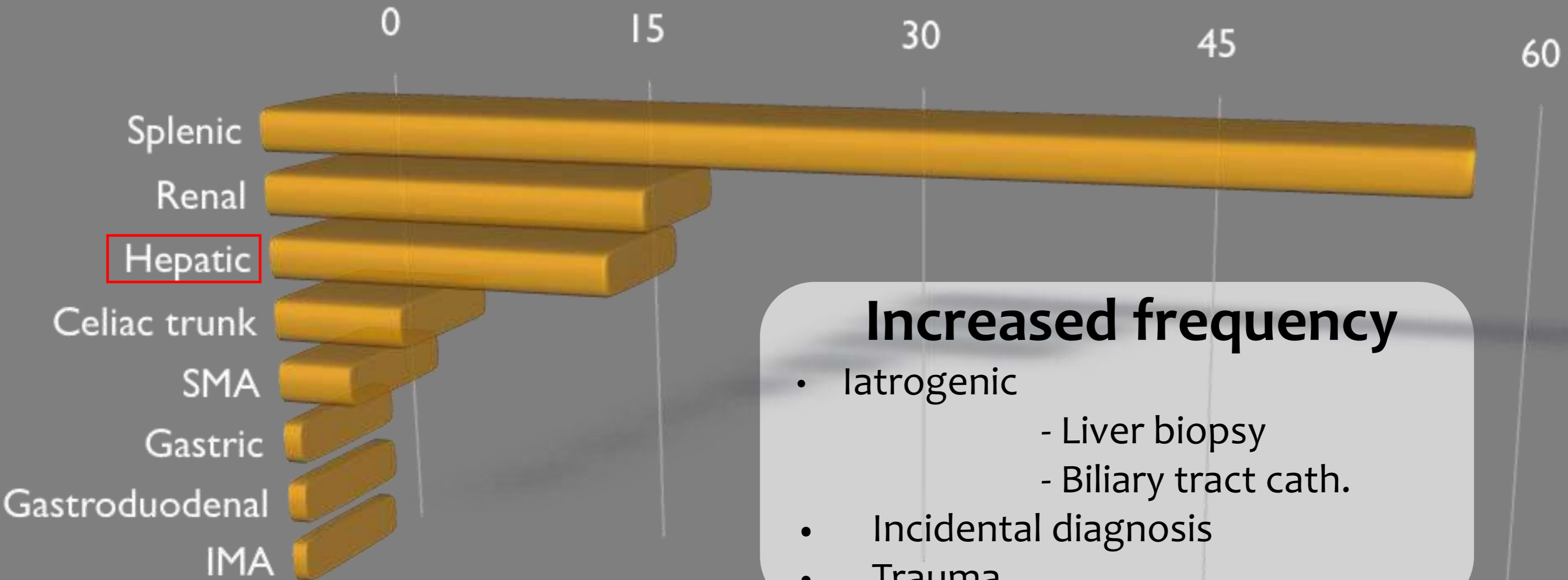


Disclosures

No conflicts of interest for this presentation



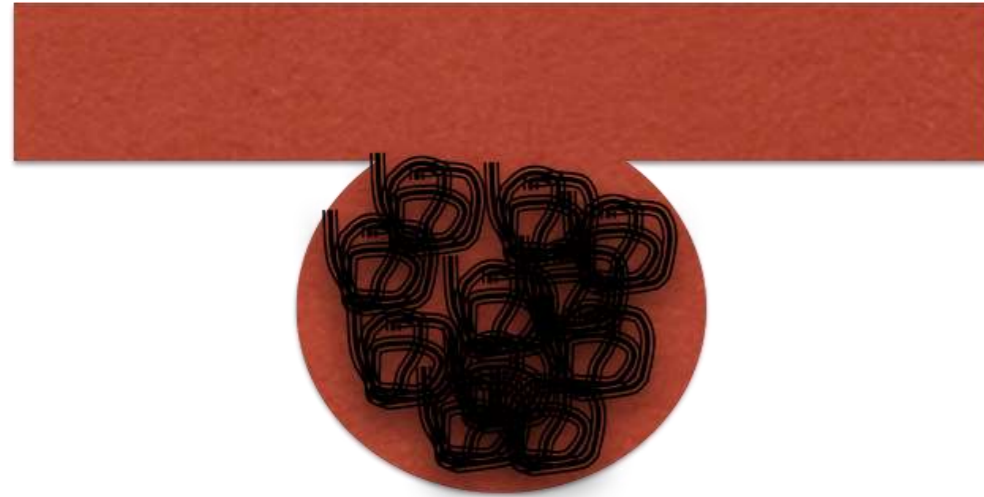
Hepatic artery aneurysms



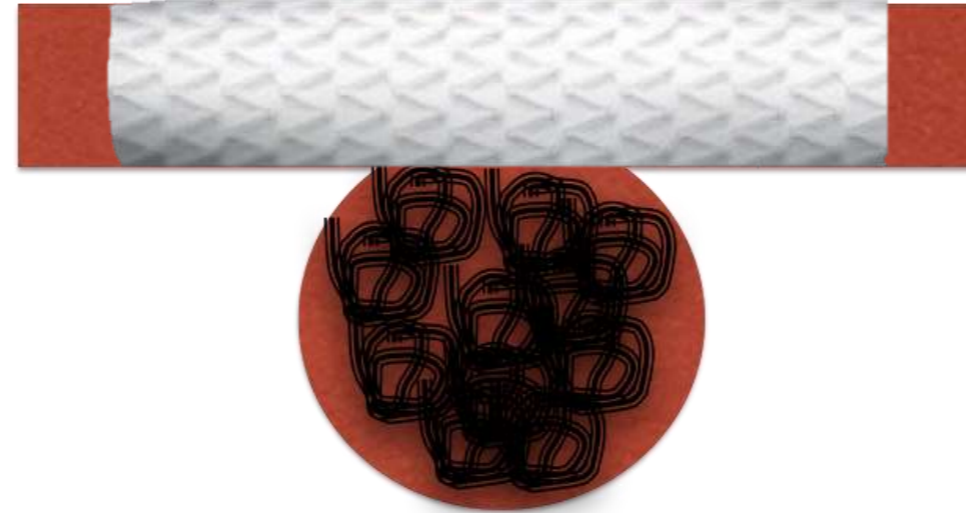
Increased frequency

- Iatrogenic
 - Liver biopsy
 - Biliary tract cath.
- Incidental diagnosis
- Trauma

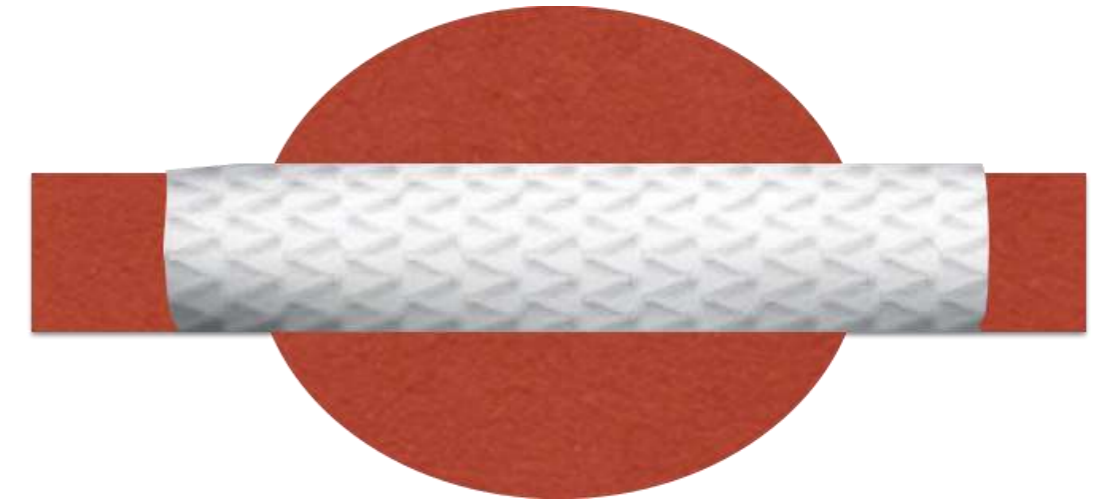
Endovascular treatment



Embolization



Stent / balloon assisted
embolization



Stent-graft exclusion

Endovascular treatment: embolization

- Saccular aneurysms
(coils packing / stent assisted)
- Vessel tortuosity (no necks)
- Useful when a bifurcation is involved

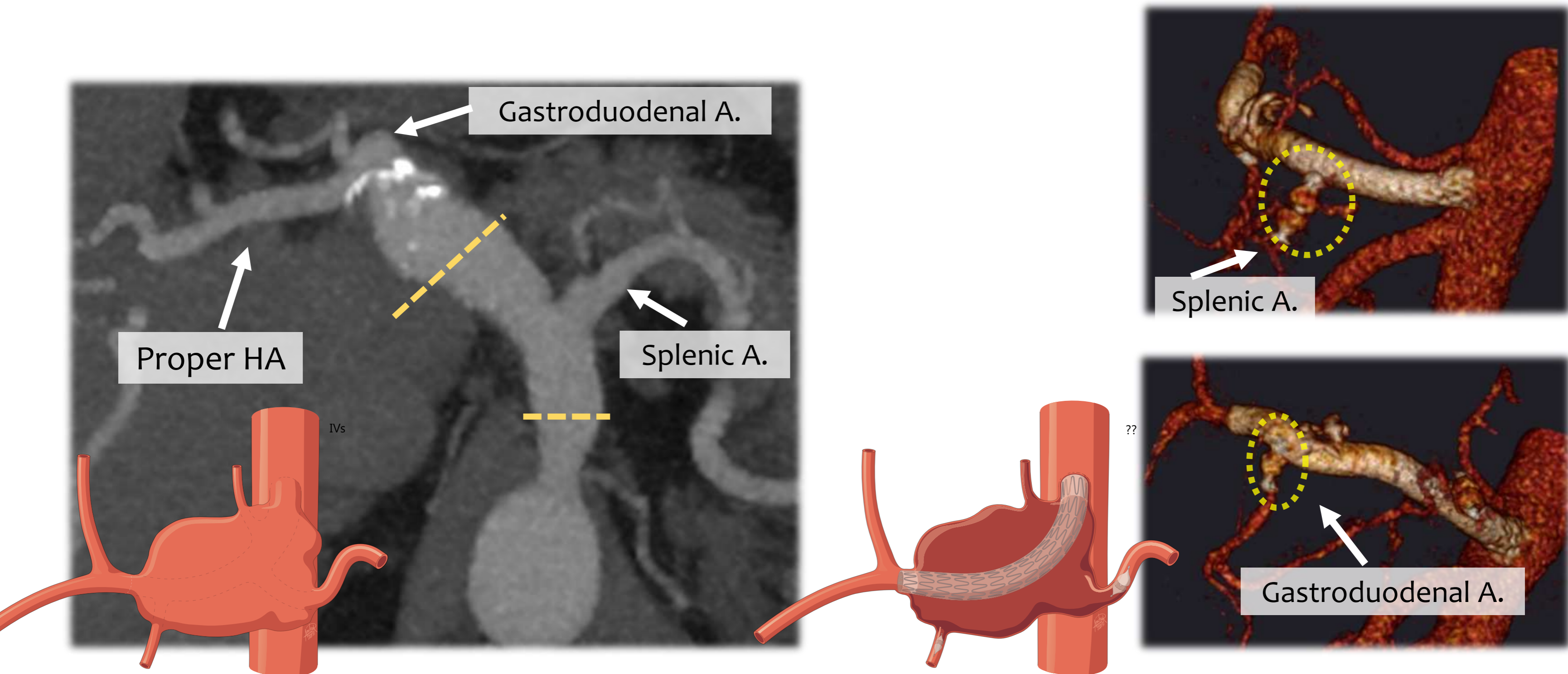


Endovascular treatment: SG-exclusion

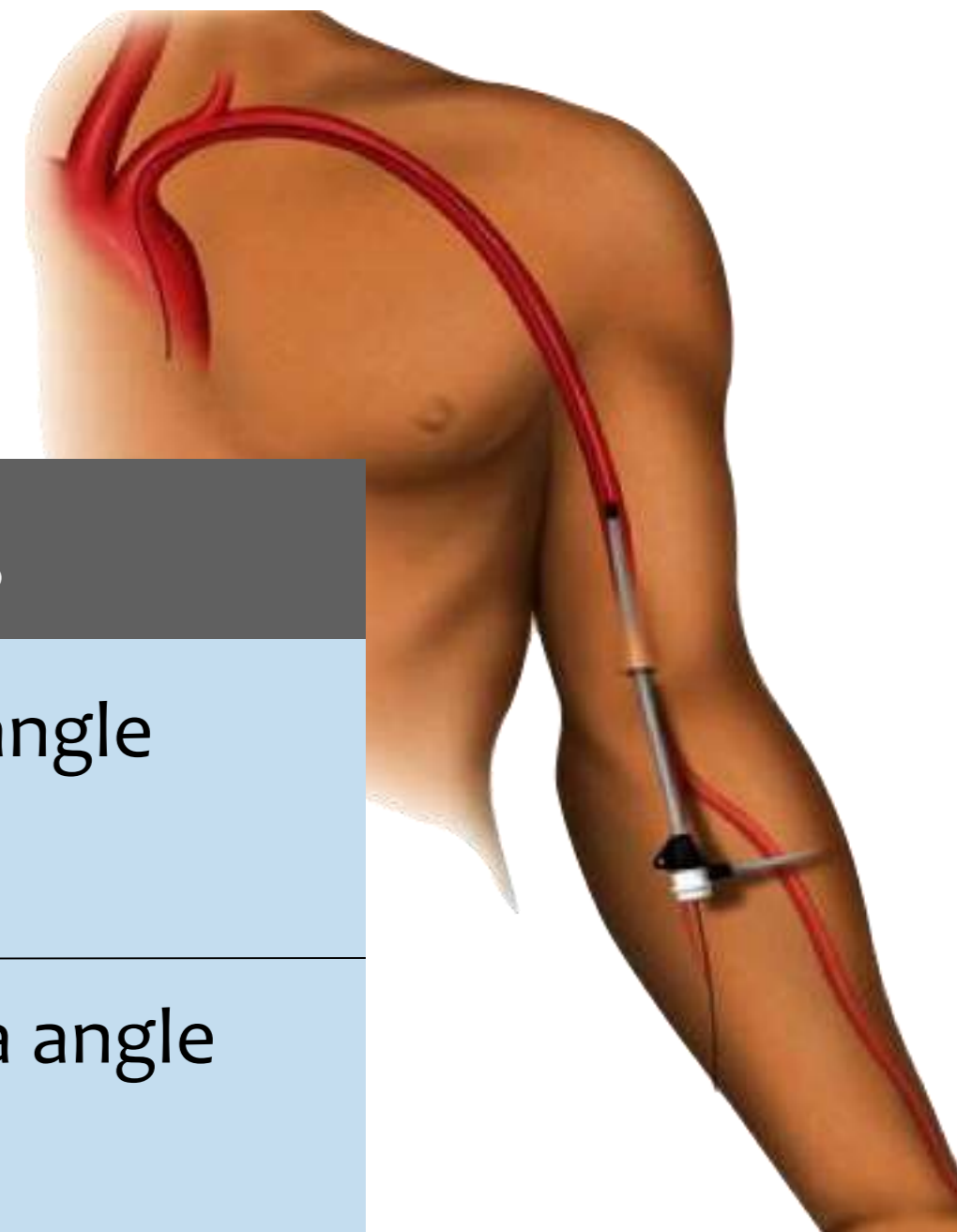
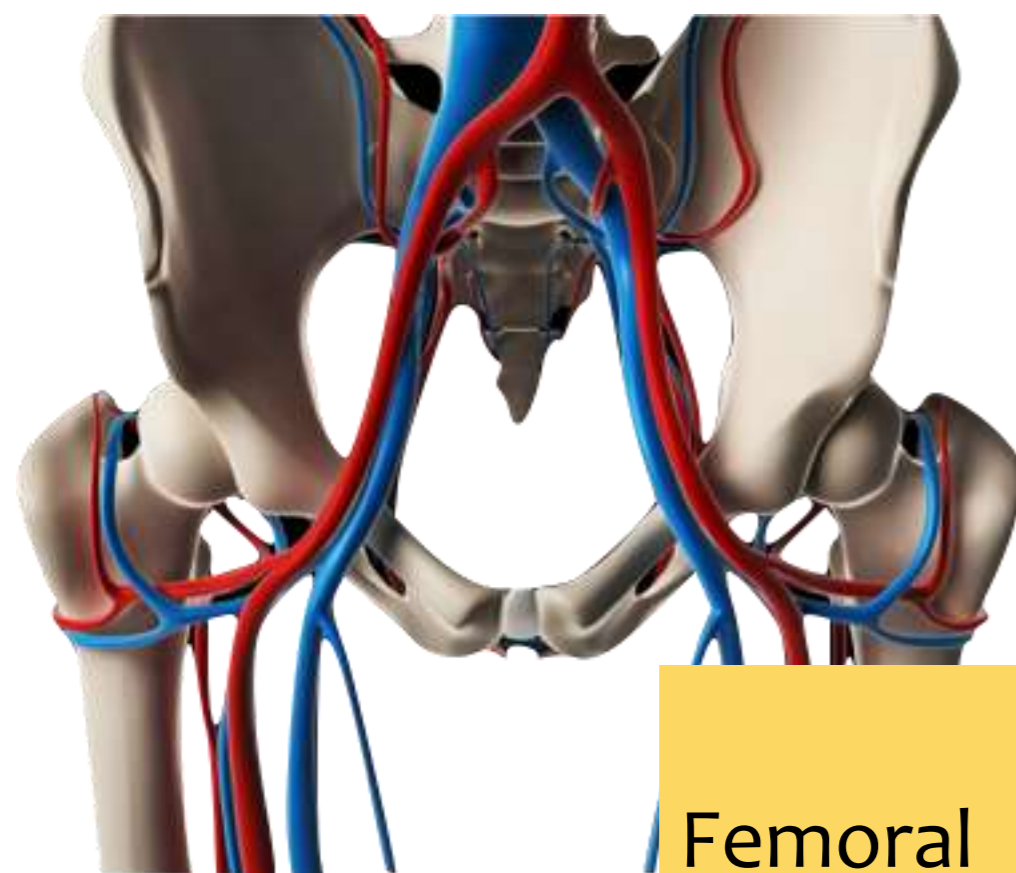
- Fit anatomy
- Bifurcations not involved
- Proximal and distal necks (10 mm)



Need for adequate landing zones



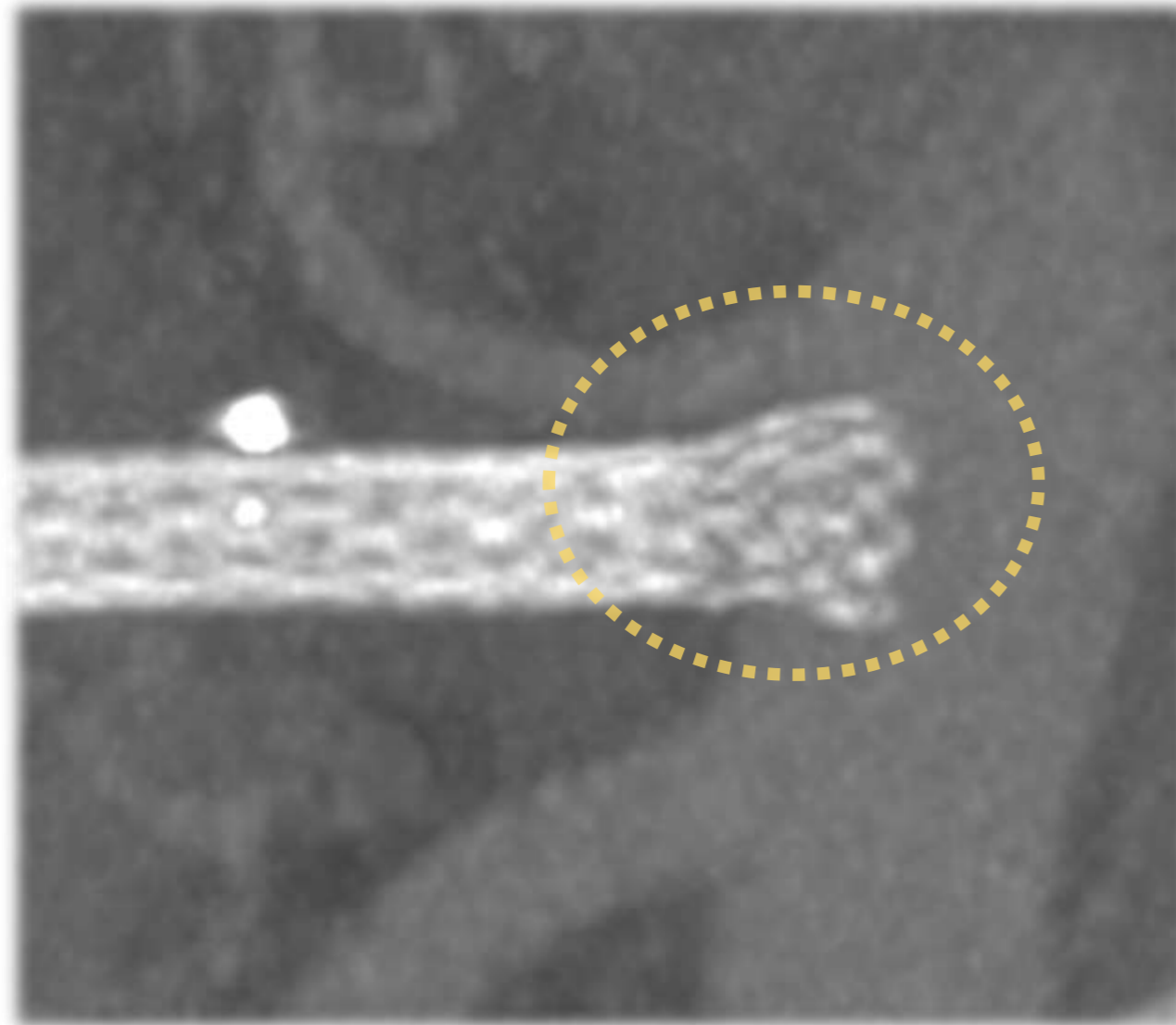
Technical issues: access site



	PROs	CONs
Femoral	Larger sheaths No arch manipulation	Steep CT-aorta angle PAOD
Brachial	CT direction (downward)	Subclavian-aorta angle Long sheaths

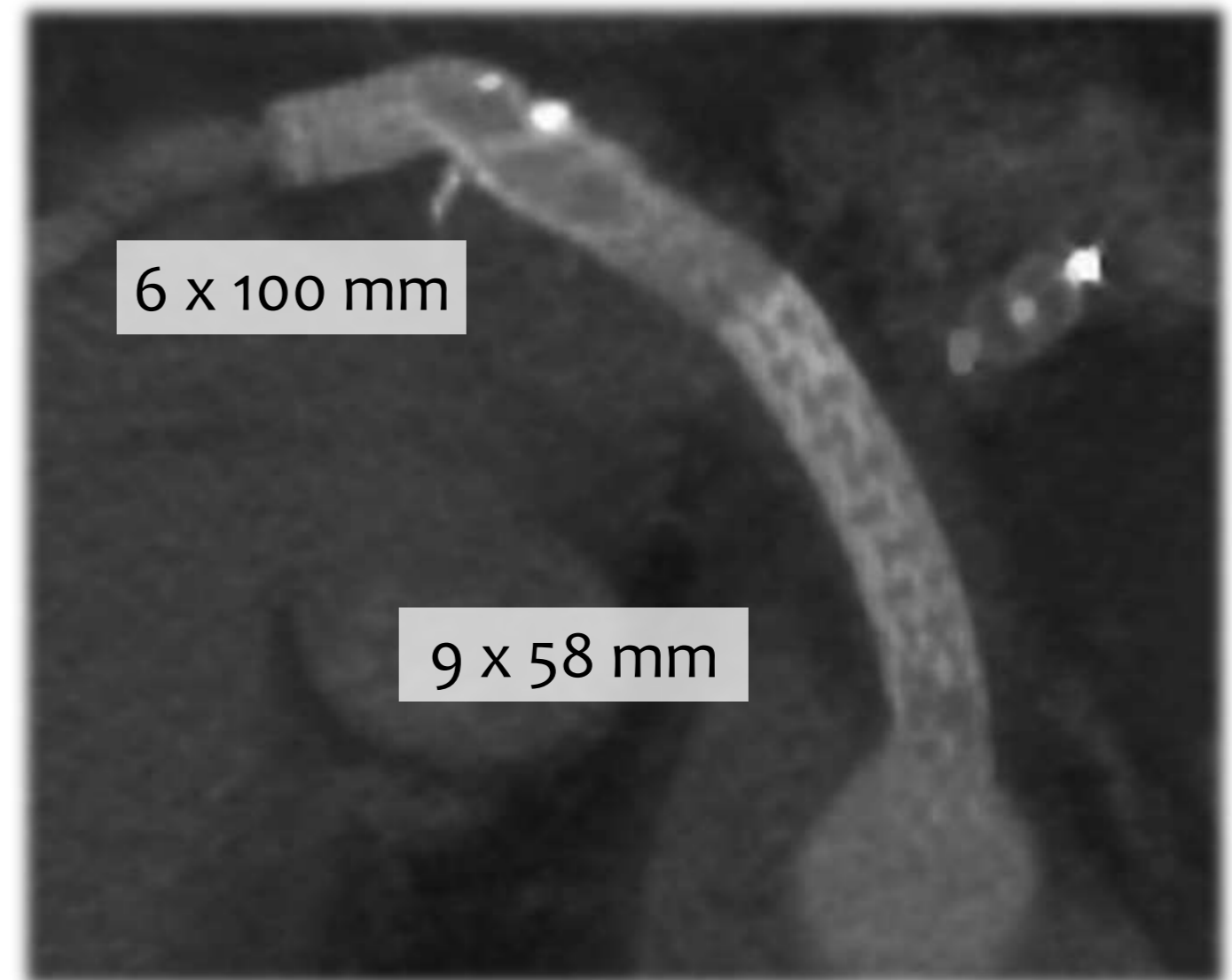
Technical issue: stent choice

Ballon-exp.: more precision in PLZ



They may be flared to match patient's anatomy

Self-exp.: more flexibility in DLZ



Telescope technique: mismatch between landing zones

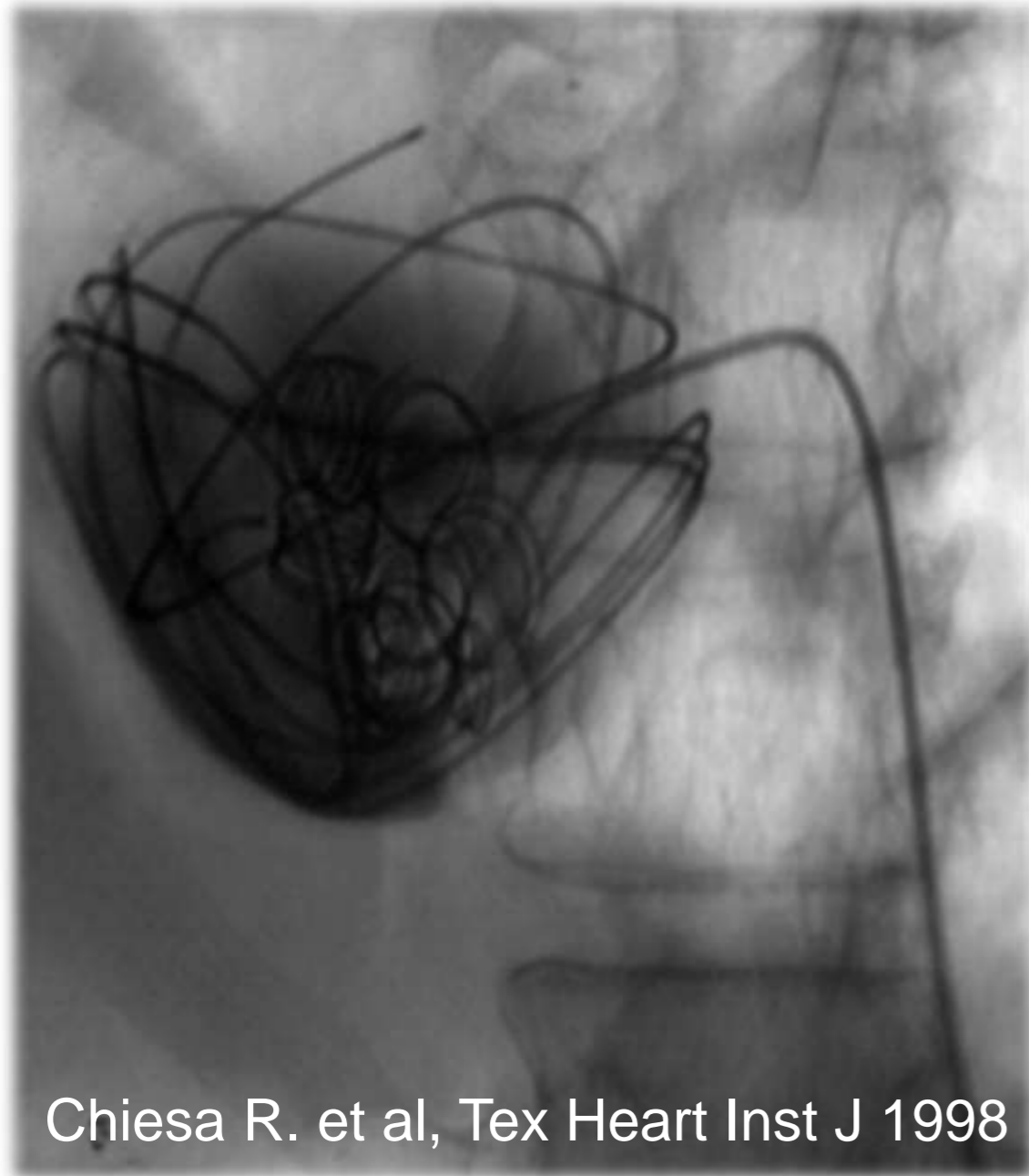
Open repair

Key-role if endo limitations / complications

- Anatomical limitations (large aneurysms)
- Not expendable collateral branches
- Stent-graft thrombosis
- Intra-procedural rupture

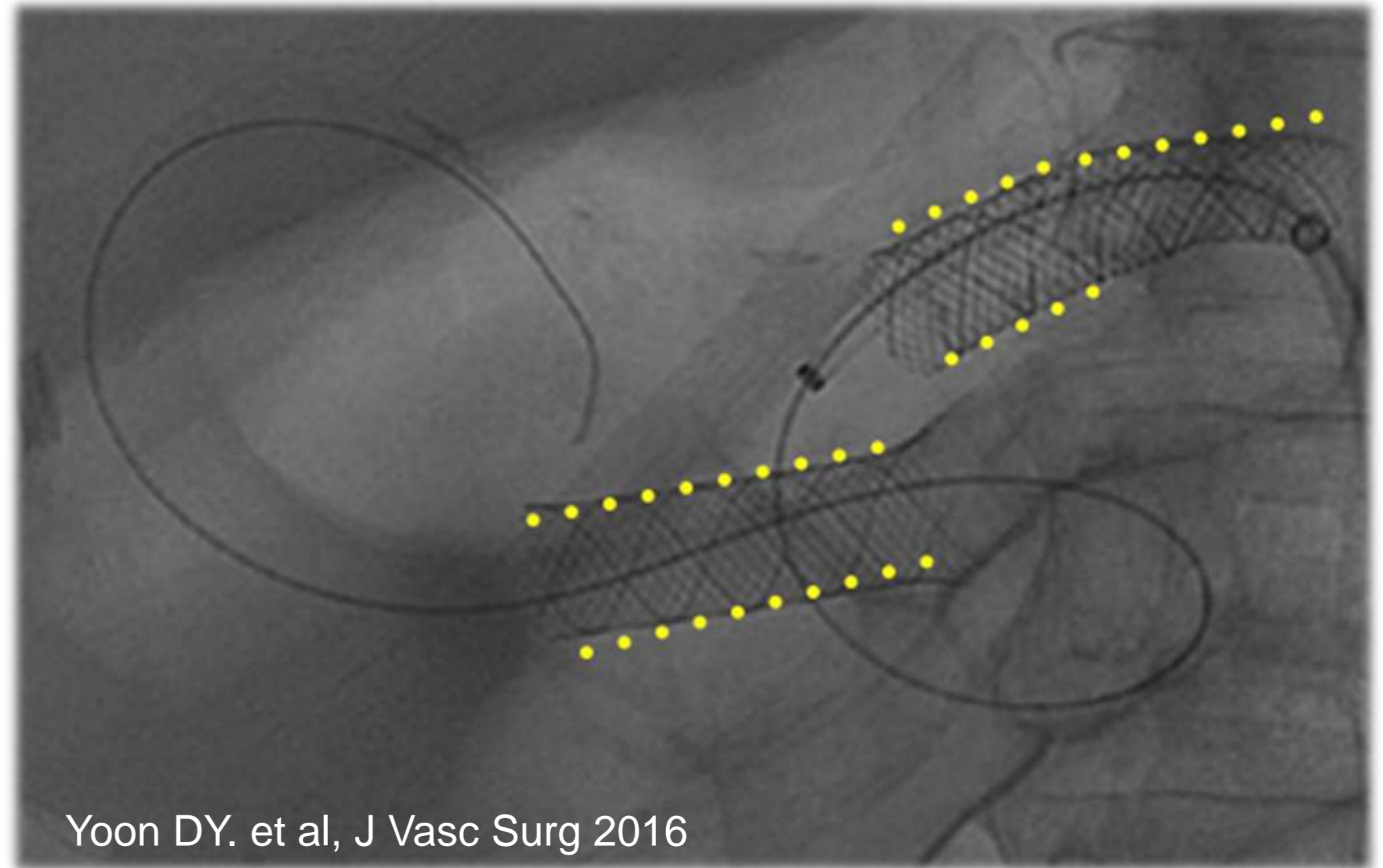


Large aneurysms



Chiesa R. et al, Tex Heart Inst J 1998

Aneurysms reperfusion

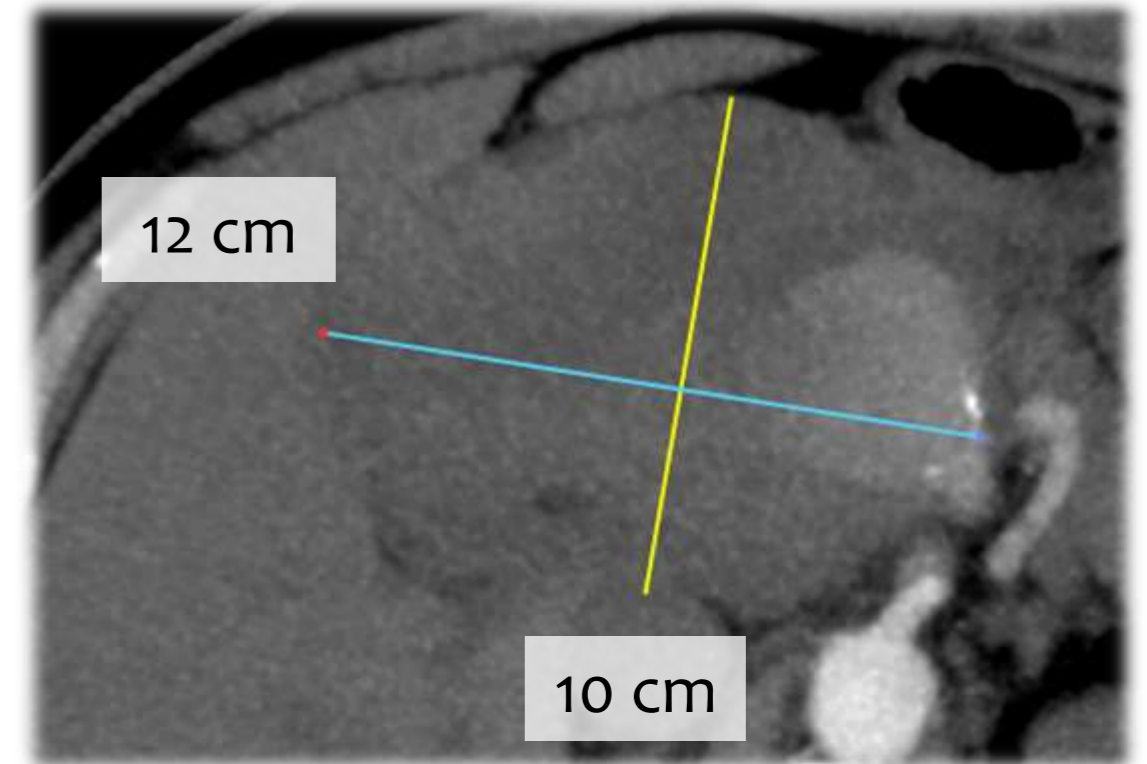


Yoon DY. et al, J Vasc Surg 2016

Stent-graft disconnection

Large aneurysms

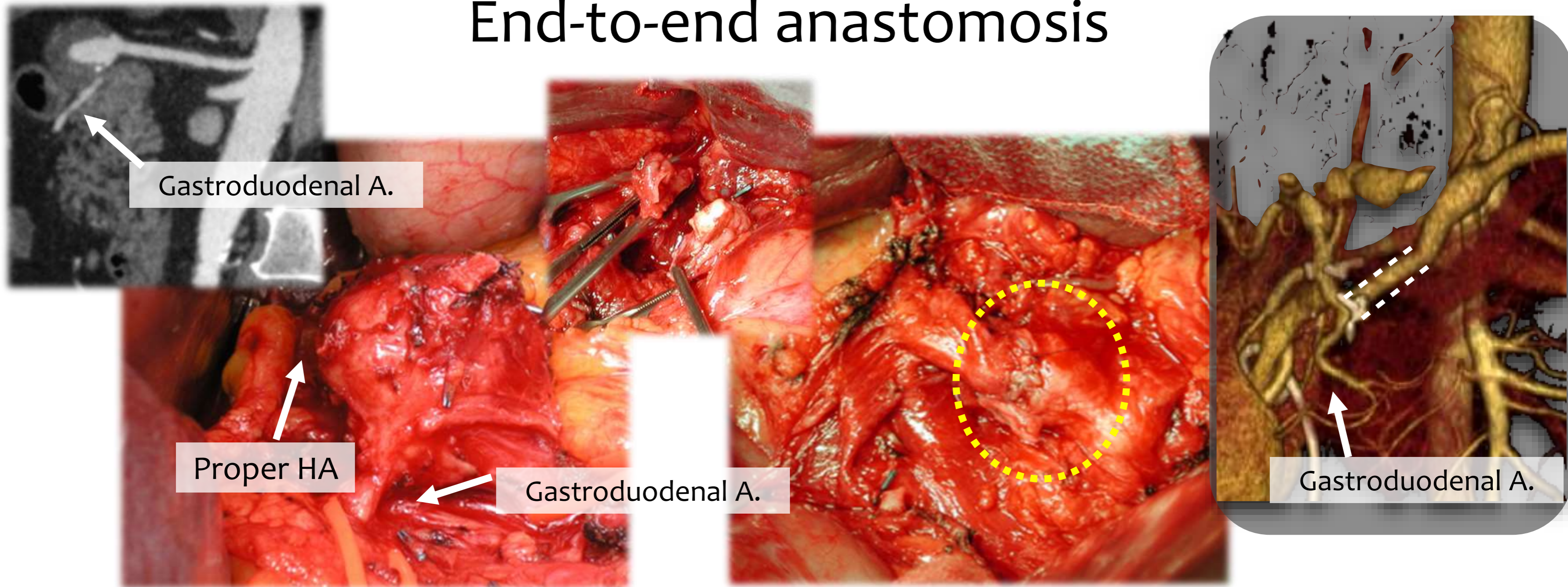
- 65 y.o. male
- ASA 4 (E.F. 35%)
- Renal Failure
(crea 1.55 mg/dL)



Aneurysm thrombosis
Outflow chronic occlusion

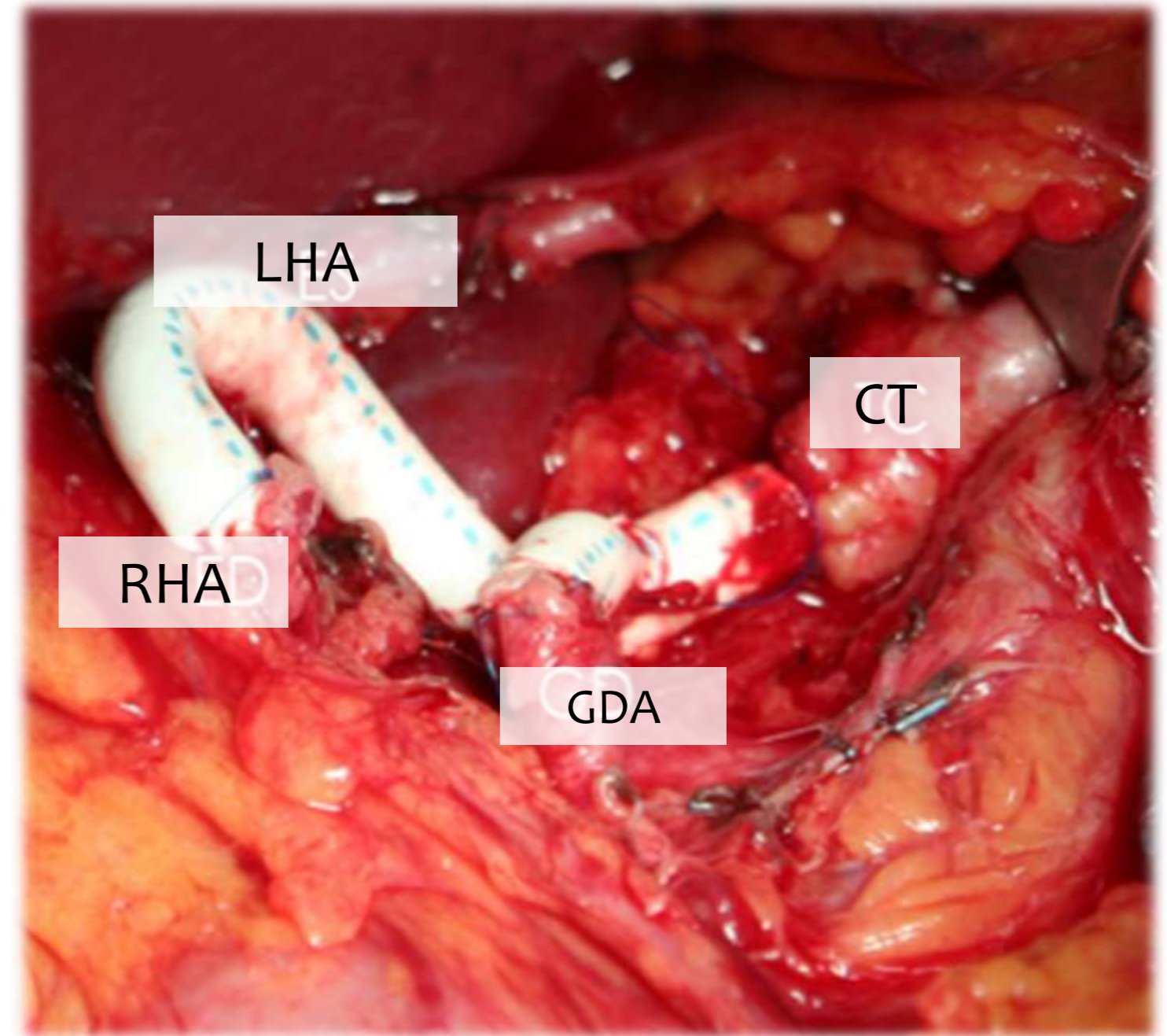
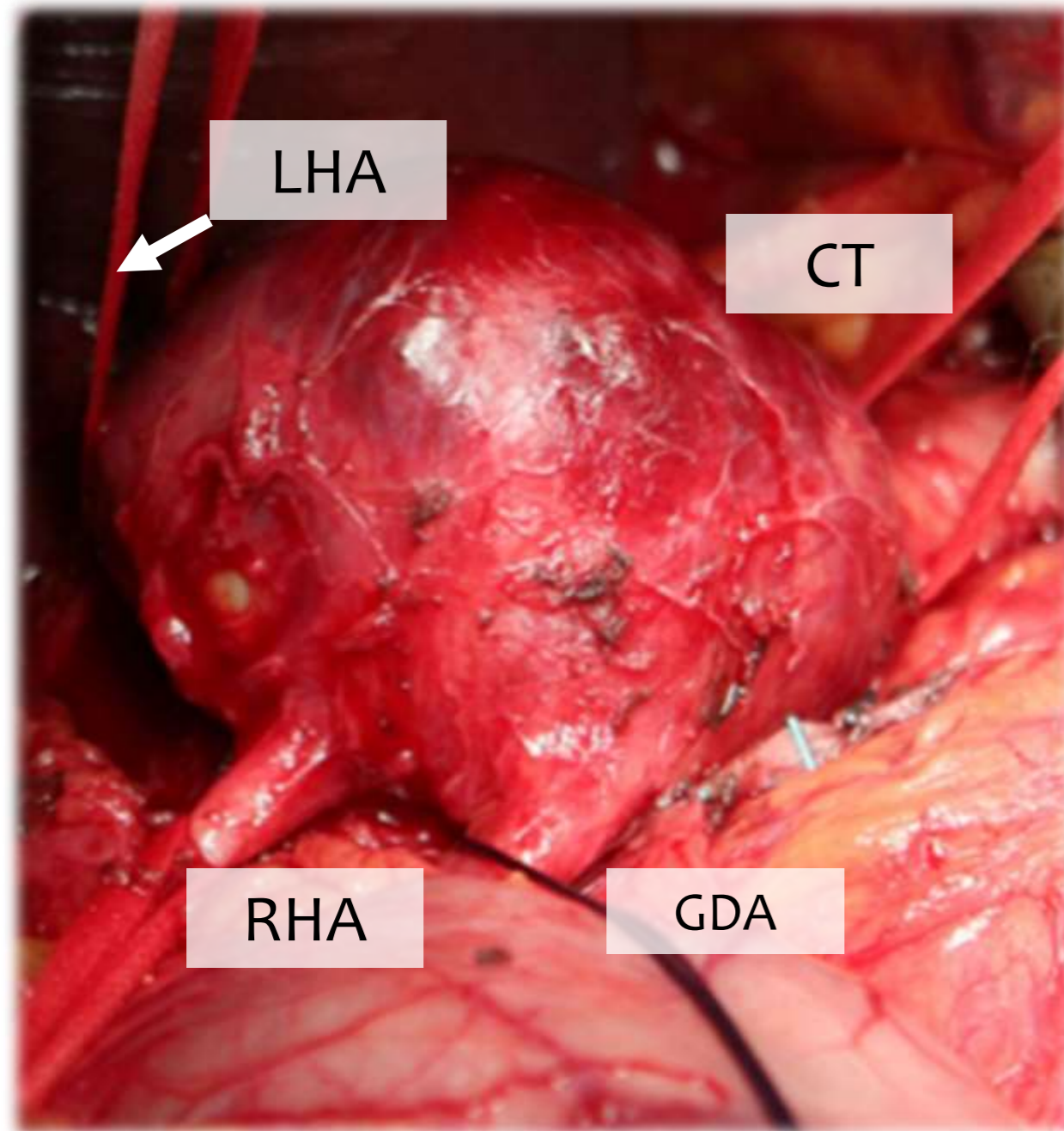
Tailored open approach

End-to-end anastomosis



Tailored open approach

Bypass graft for multiple vessels



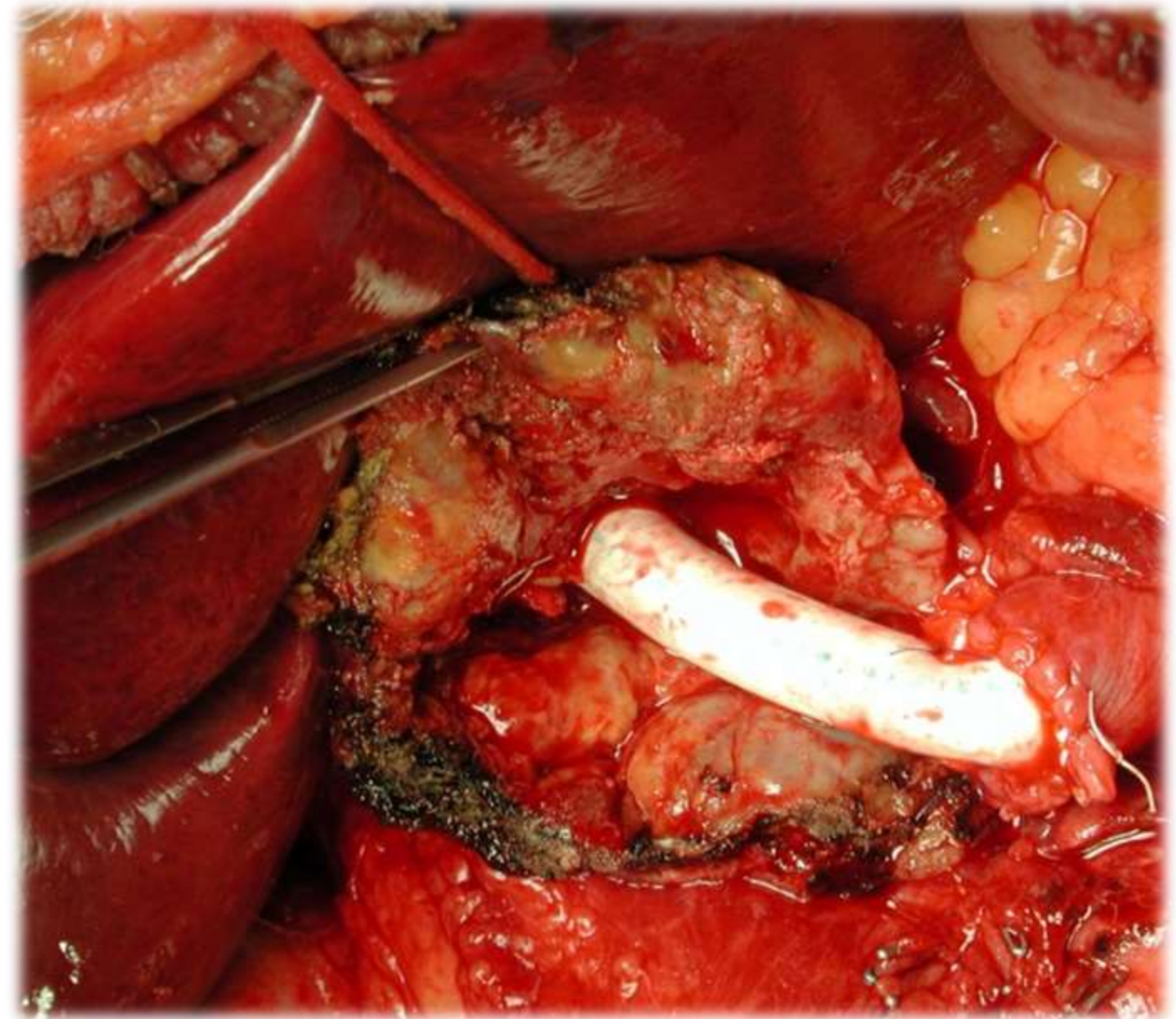
Stent-graft thrombosis



Covered-stent thrombosis



Hepatic ischemia



Bypass graft revascularization

San Raffaele experience '98-'18

Visceral artery aneurysms (N = 147)

Others

Hepatic artery (N= 31)

Males

Age

Elective treatment

Mean diameter

Atherosclerotic

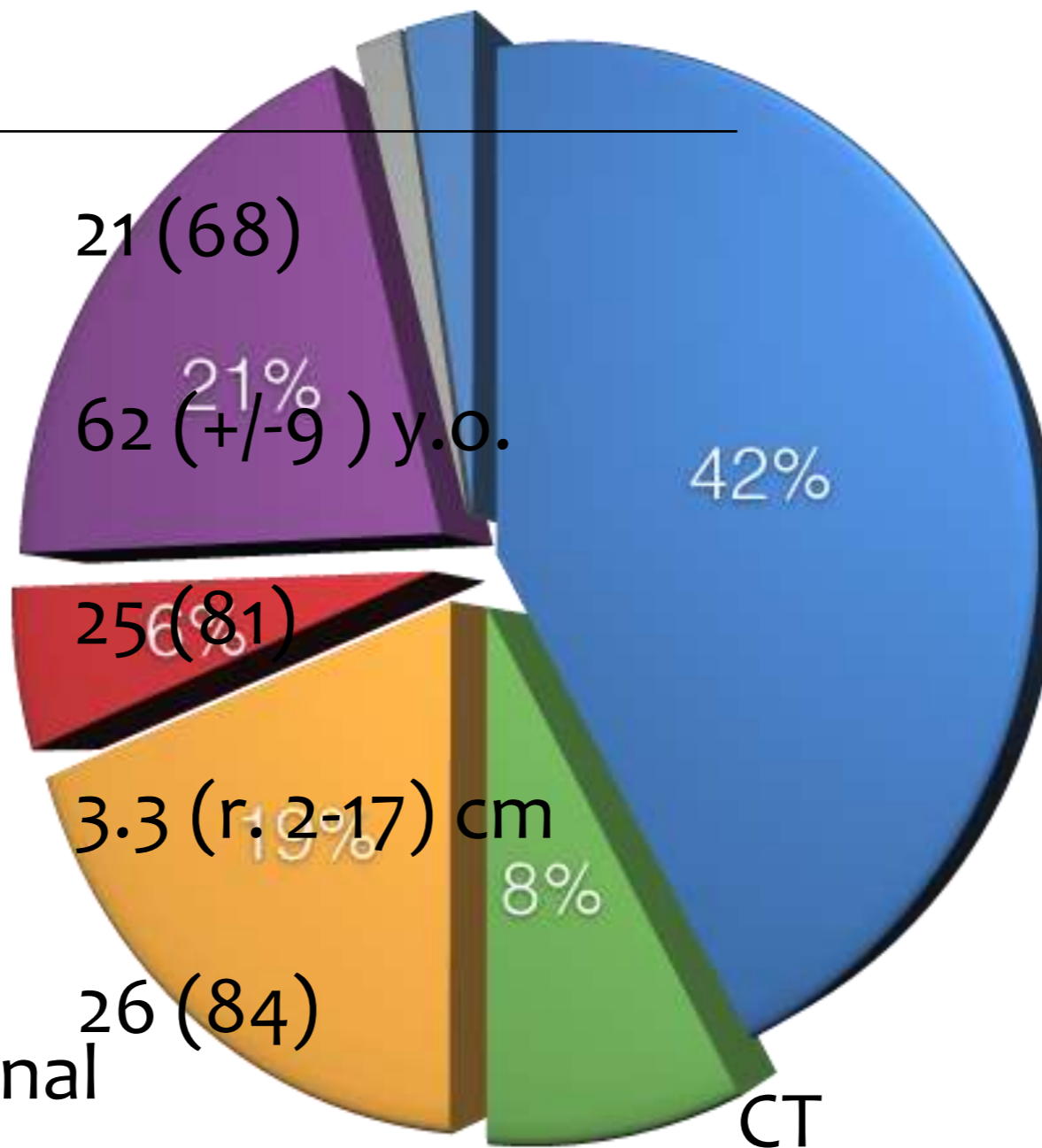
Hepatic

SMA

Renal

CT

Splenic



21 (68)

62 (+/-9) y.o.

25 (81)

3.3 (r. 2-17) cm

26 (84)

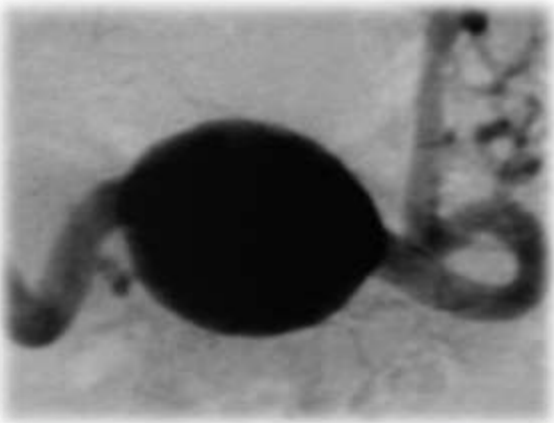
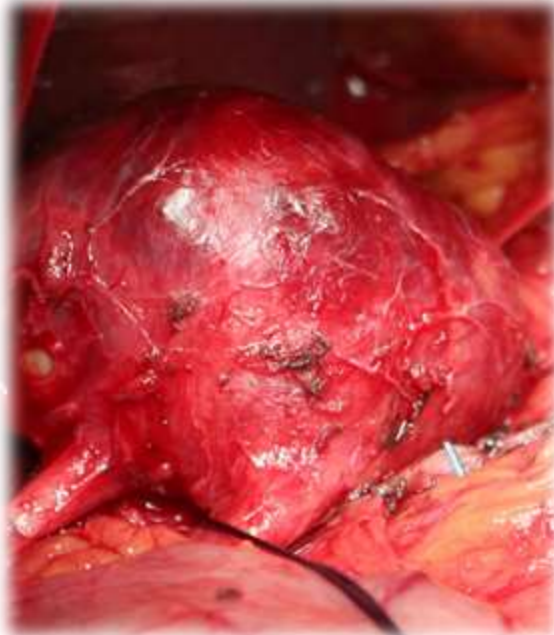
21%

19%

42%

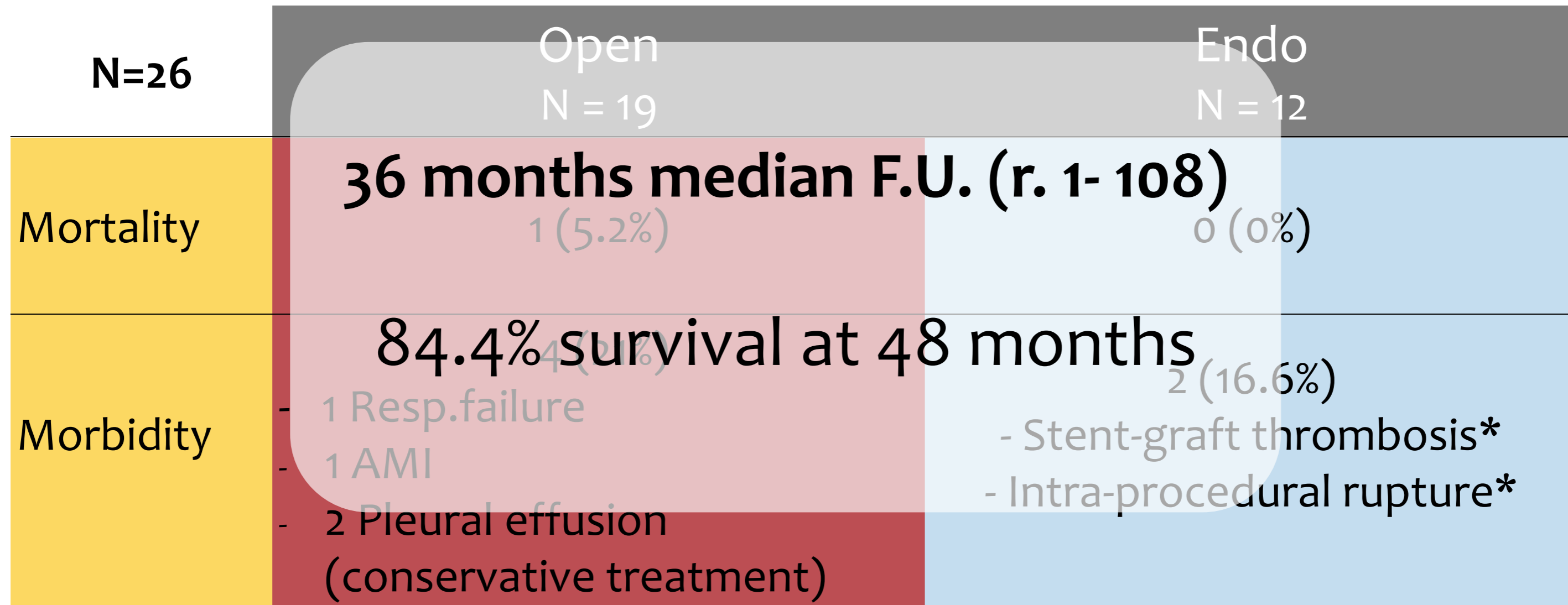
8%

San Raffaele experience '98-'18

		N=31	Procedures	N
	Endo	12	Stent-graft exclusion	7
			Coil embolization	5
	Open	19	End-to-end anastomosis	9
			Bypass graft	8
			Artery ligation	2

San Raffaele experience '98-'18

30-day Results



* open conversion

Conclusion

- ① Increased diagnosis in asymptomatic patients
- ② Endovascular treatment: preferred solution in anatomically fit patients
- ③ Open repair: good long term results with acceptable morbidity