



70th ESCVS
International congress of the European Society
for Cardiovascular and Endovascular Surgery



7th IMAD meeting



ABDOMINAL AORTIC ANEURYSM

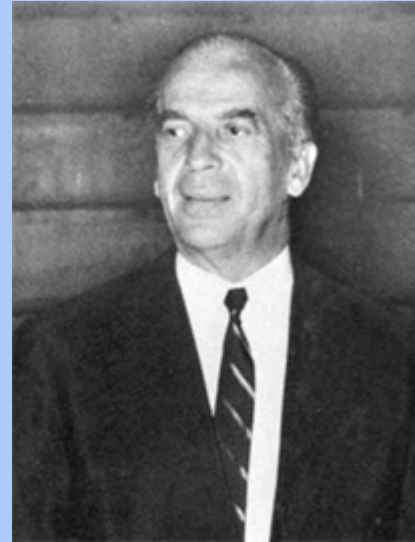
UNSUITABLE BOTH FOR OPEN AND ENDOVASCULAR REPAIR

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71st ANNIVERSARY – AAA RESECTION

- **Charles Dubost** – 1951
- 50 years old man with AAA – reconstruction with thoracic homograft harvested from young girl 3 weeks previously
- patient survived 8 years
- DeBakey called it Dubost's operation

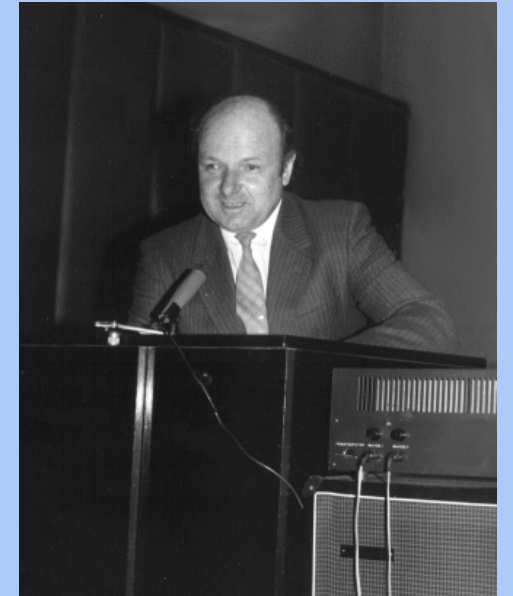


32nd ANNIVERSARY – EVAR

- **Juan Parodi** – 1990



- **Nikolai Volodos** - 1987



AAA TREATMENT - STATUS QUO

EVAR 1

DREAM

EVAR II

OVER

CAESAR

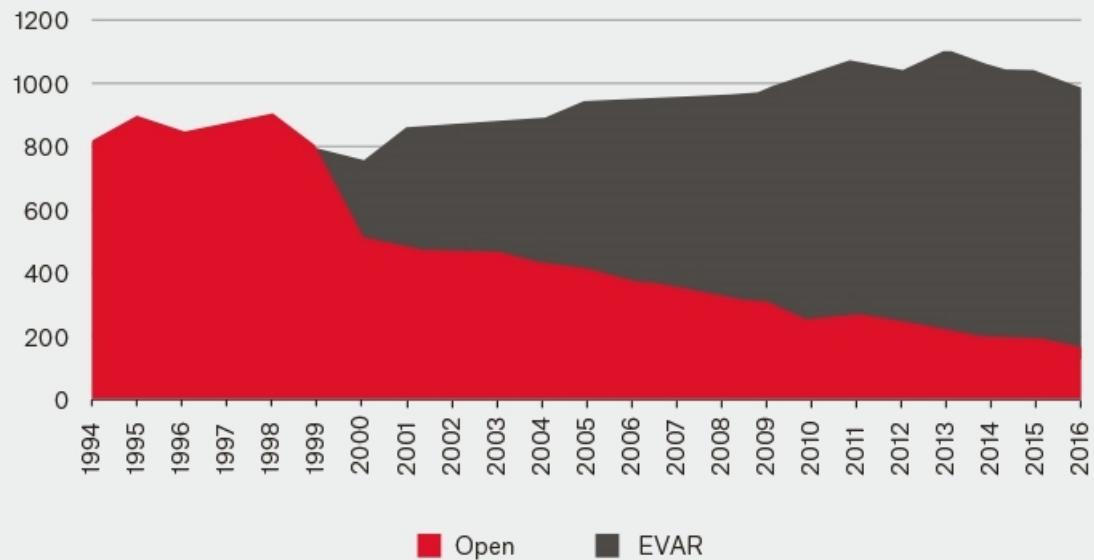
conflicting results

MASS

ACE

...bias

EVAR VS OR



Open repair

Hungary ...72%

Australia...35-40%

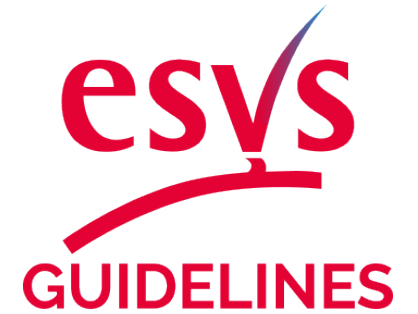
USA...21%

Serbia ...95%

Czech Republic...?

AAA TREATMENT - STATUS QUO

- ESVS guidelines 2019
- SVS guidelines 2018
- NICE guidelines 2020



DO WE ALWAYS FOLLOW THE GUIDELINES ?

- **indication to EVAR/OR – vascular center related....**
- center experiences
- financial affordability
- „boss decision“
- **individual approach for the patient**
- „off label use“

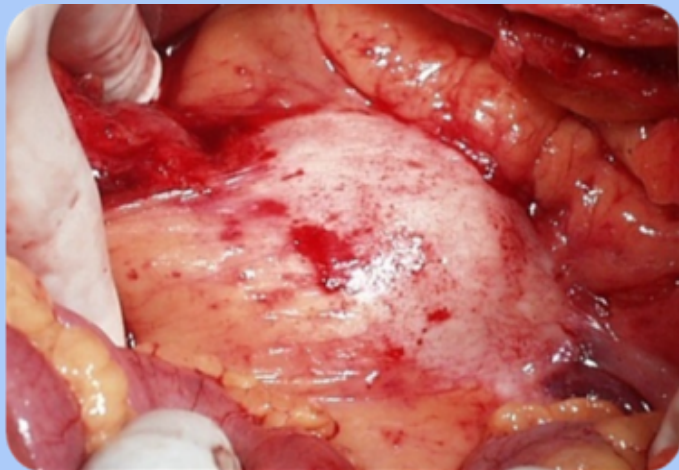
AAA IN 21st CENTURY

- the numbers of OR are falling
- „surgery skills“
- senior vascular surgeon generation



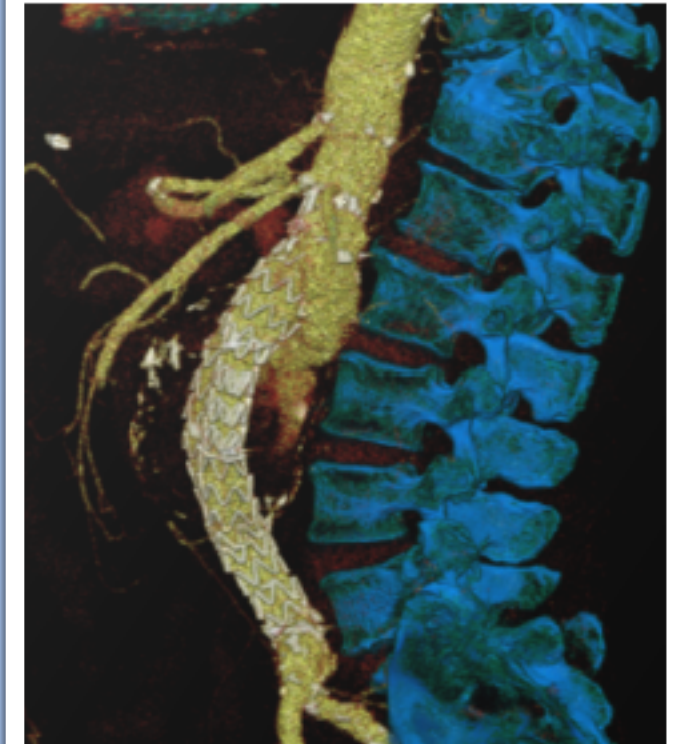
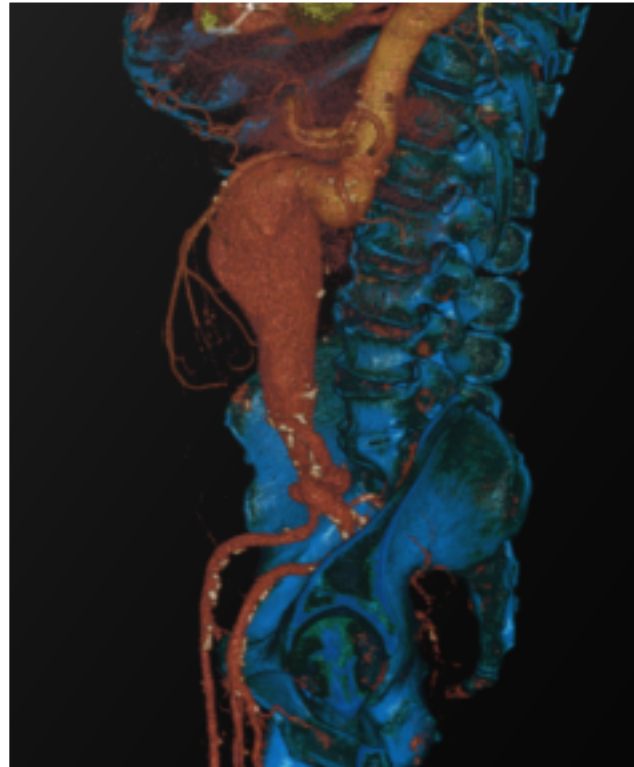
AAA UNSUITABLE FOR OR...

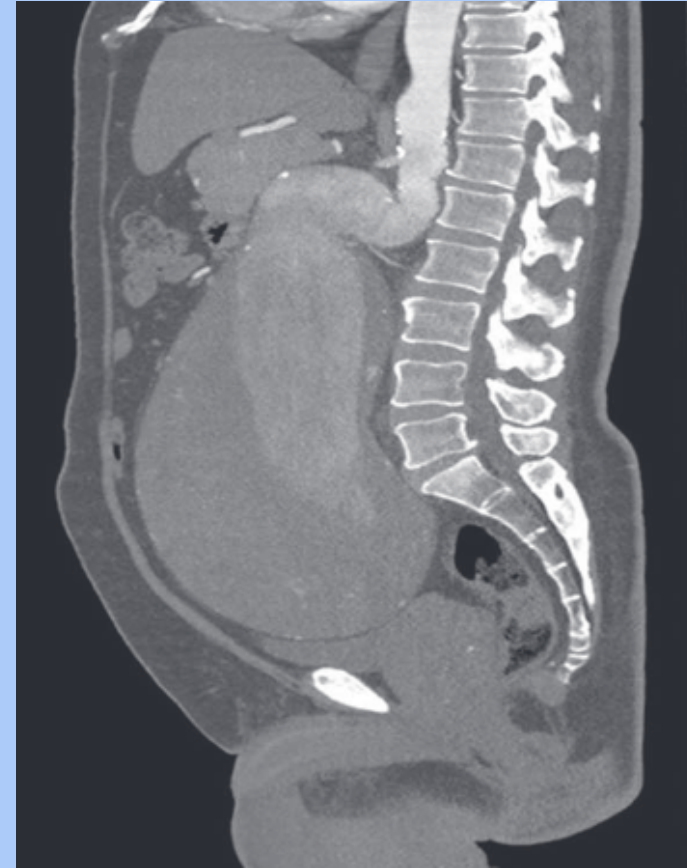
- hostile abdomen
- inflammatory AAA
- anatomic variation (horse shoe kidney, unfinished rotation of GIT...)



AAA UNSUITABLE FOR EVAR...

- AAA anatomy
- iliac arteries
- renal failure
- contrast allergy



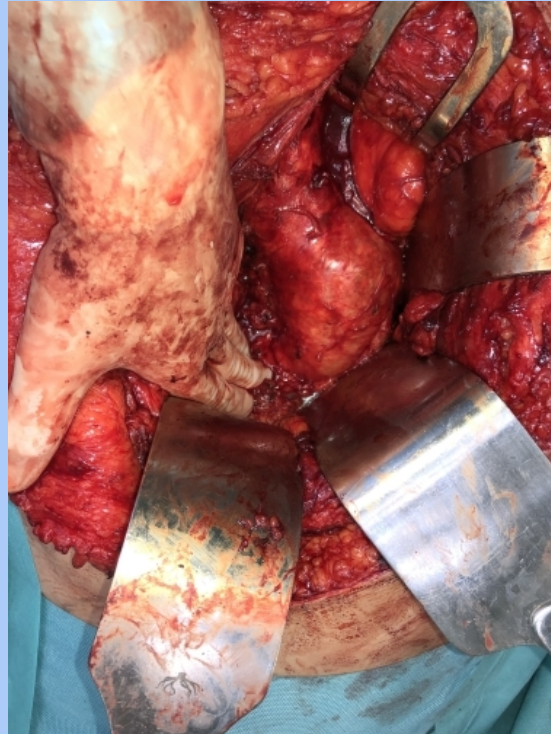
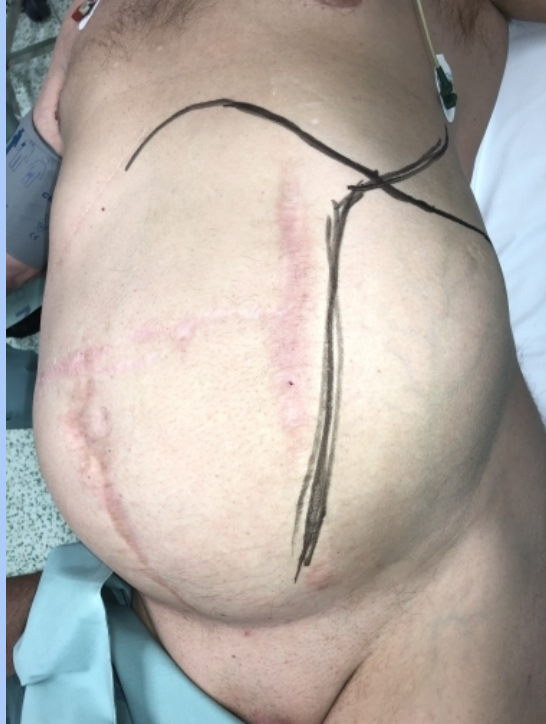


THERE ARE CASES...

UNSUITABLE BOTH FOR OR AND EVAR

- we must be ready to choose **lesser of two evils**

HOSTILE ABDOMEN



retroperitoneal approach

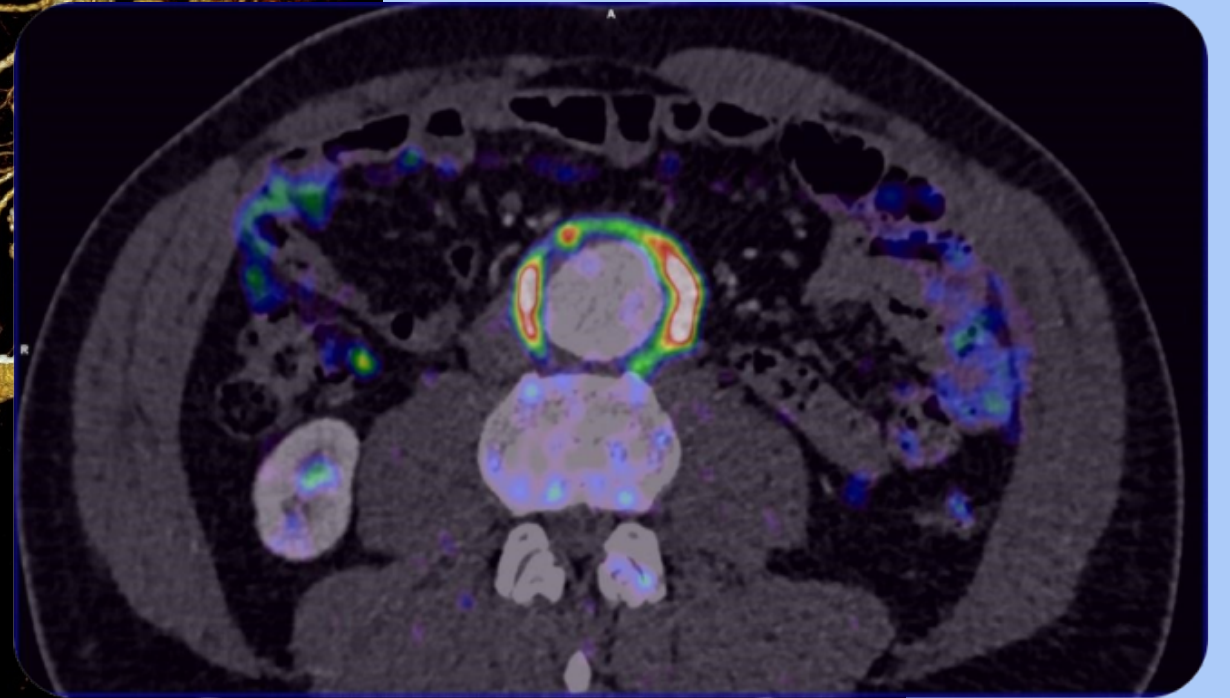
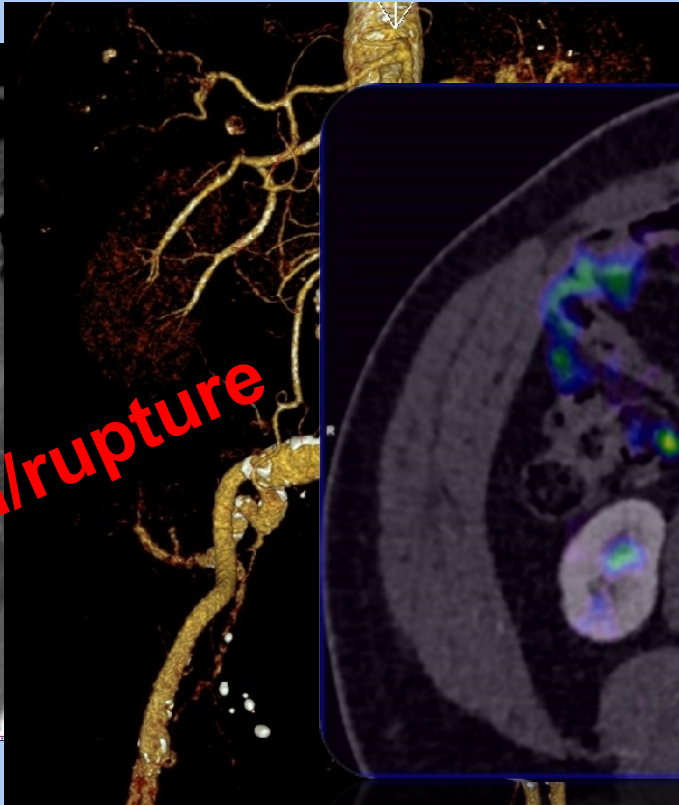
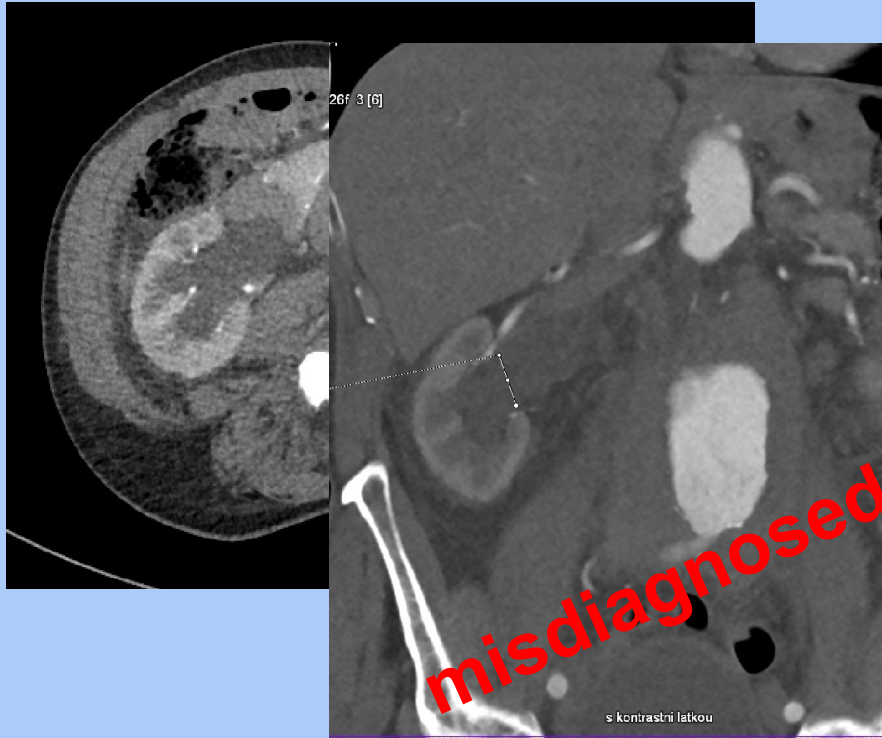
- excellent approach to supravisceral aorta
- faster recovery
- fewer pulmonary complications
- less pain

Twine CP et al. Systematic review and meta-analysis of the retroperitoneal versus the transperitoneal approach to the abdominal aorta. Eur J Vasc Endovasc Surg. 2013 Jul;46(1):36-47.

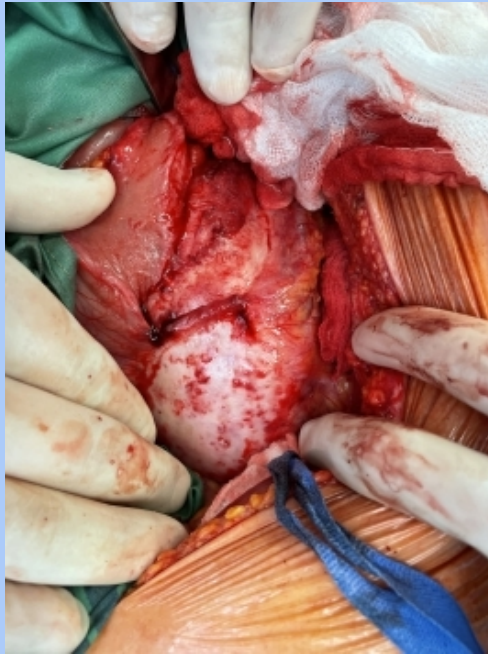
INFLAMMATORY AAA (4-7%)

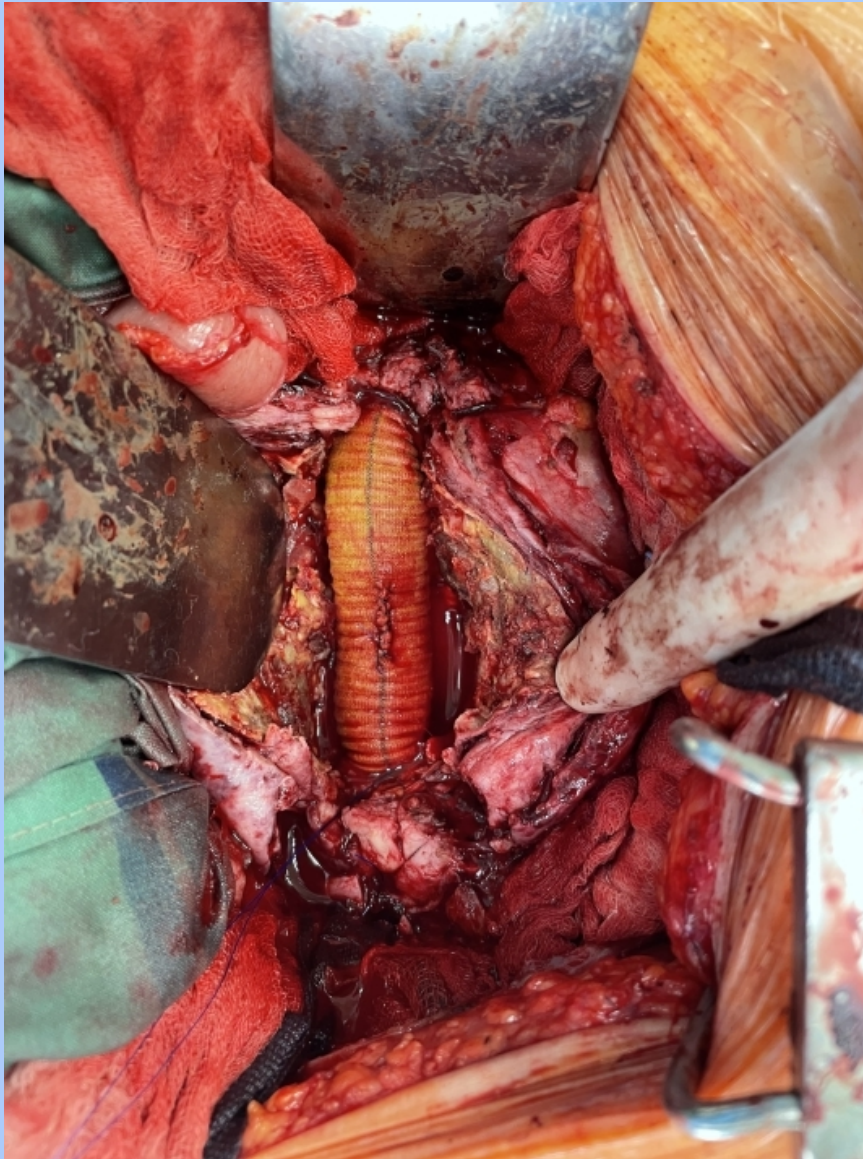
- most InflAAA belong to the group of chronic peri-aortitis (idiopathic peri-aneurysmal retroperitoneal fibrosis)
- about 5-10 years younger than patients with a degenerative AAA
- the majority are males (M:F ratio (6-30):1)
- heavy smokers (85-90%)
- higher frequency of aneurysm related symptoms (65-90%)
- negative blood cultures

INFLAMMATORY AAA (4-7%)



INFLAMMATORY AAA





tips and tricks

- limited dissection
- intraluminal occlusion
- silver graft (just for sure...)
- double J ureteric stents
- lifetime risk of rupture is low < 5%
- surgical mortality (6-11%)
- EVAR mortality (2.4%)

preferred EVAR

Cvetkovic S et al. Early and long-term results of open repair of inflammatory abdominal aortic aneurysms: Comparison with a propensity score-matched cohort. J Vasc Surg. 2020 Sep;72(3):910-917.

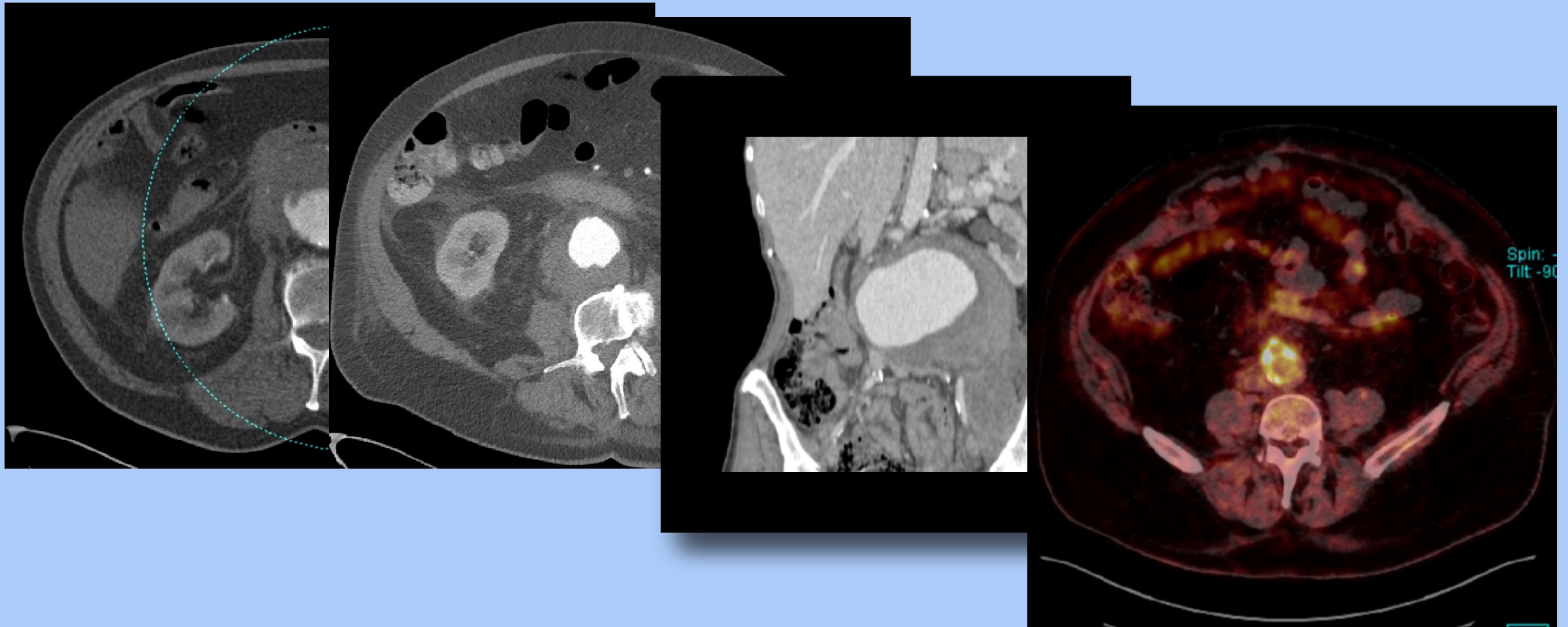
Recommendation 111	Class	Level	References
All patients with symptomatic inflammatory abdominal aortic aneurysms should be considered for medical anti-inflammatory treatment.	Ila	C	[264,512,530,720]

Recommendation 112	Class	Level	References
In patients with inflammatory abdominal aortic aneurysm with a threshold diameter of 5.5 cm and suitable anatomy, endovascular repair should be considered as a first option.	Ila	C	[315,530,657]

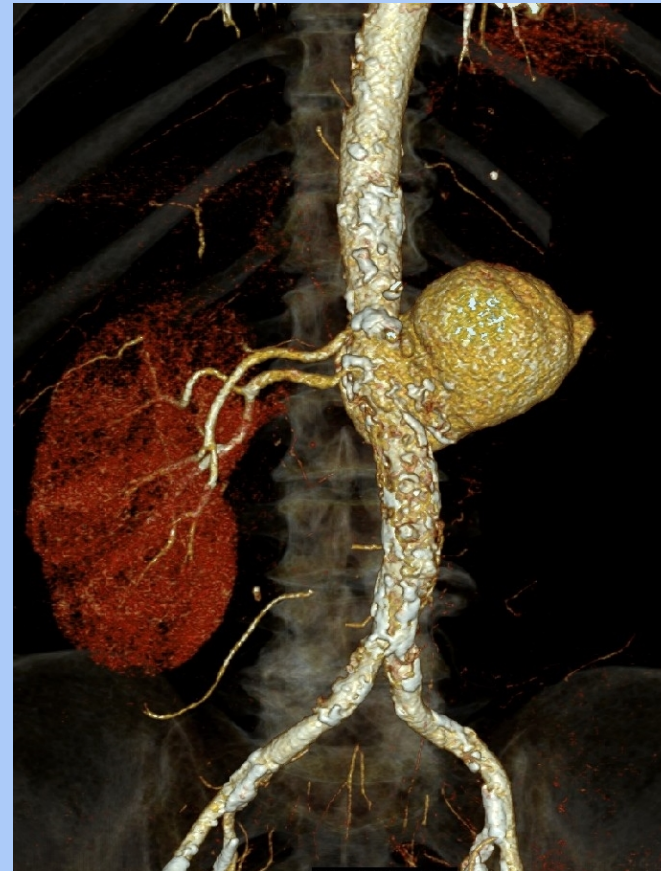
MYCOTIC AAA (1-2%)

- Gram positive as well as Gram negative species
- younger men
- clinical presentation, laboratory tests, CT findings
- immunosuppressive disease or medications
- source and causative microorganism – unclear in 1/3 cases
- increasing incidence

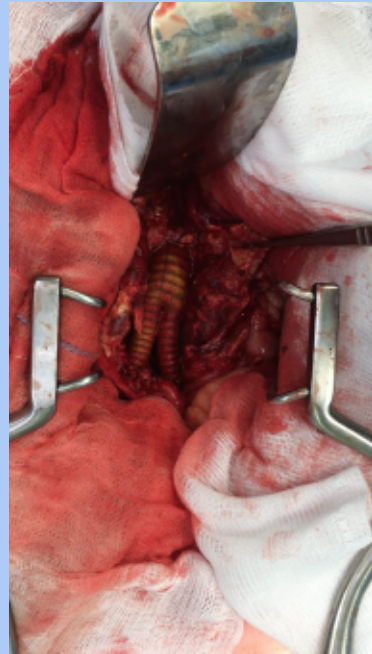
MYCOTIC AAA (4-6%)



MYCOTIC (FALSE) AAA (4-6%)



MYCOTIC AAA



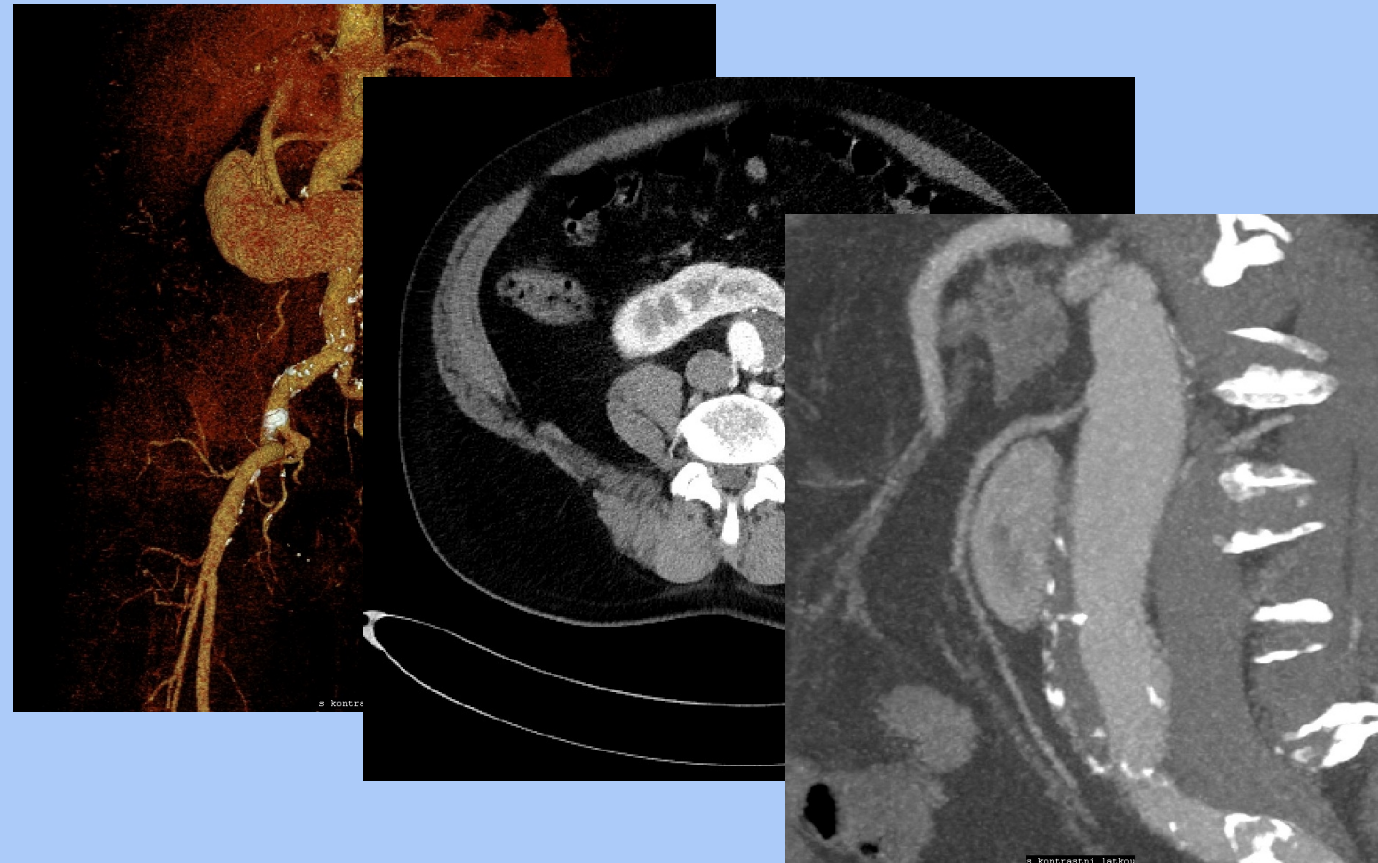
tips and tricks

- resection of AAA
- extensive local debridement
- revascularisation by extra-anatomical bypass or in situ reconstruction (silver)
- EVAR may be a bridge to later definitive surgery
- for those unfit for OR - permanent or palliative treatment
- ATB policy

Recommendation 109	Class	Level	References
Surgical techniques used in mycotic aneurysm repair should be considered based on patient status, local routines, and team experience, with endovascular repair being an acceptable alternative to open repair.	Ila	C	[173,317,617,644]

HORSESHOE KIDNEY + AAA (0,12%)

- prevalence 0,25%
- co-existence with AAA 0,12%
- small series - vague guidelines
- both OR and EVAR feasible



HORSESHOE KIDNEY + AAA



HORSESHOE KIDNEY + AAA



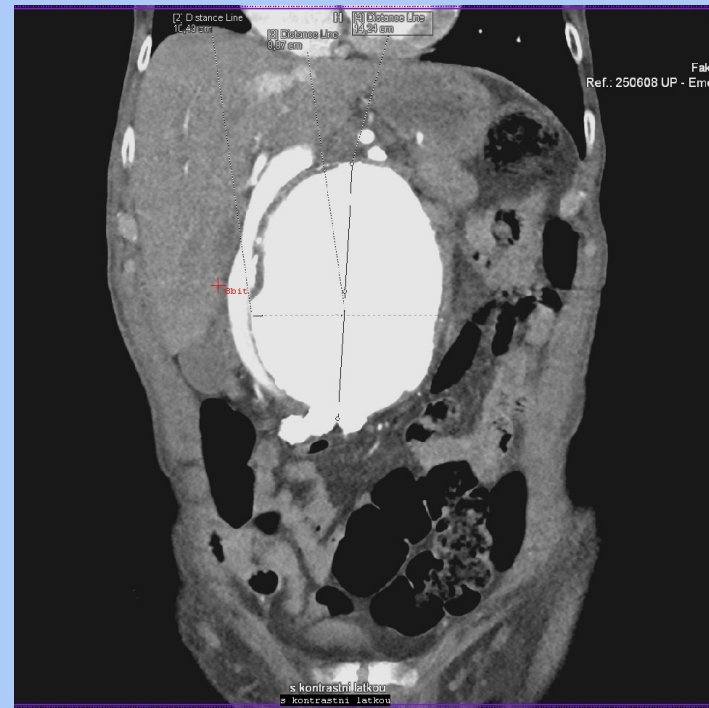
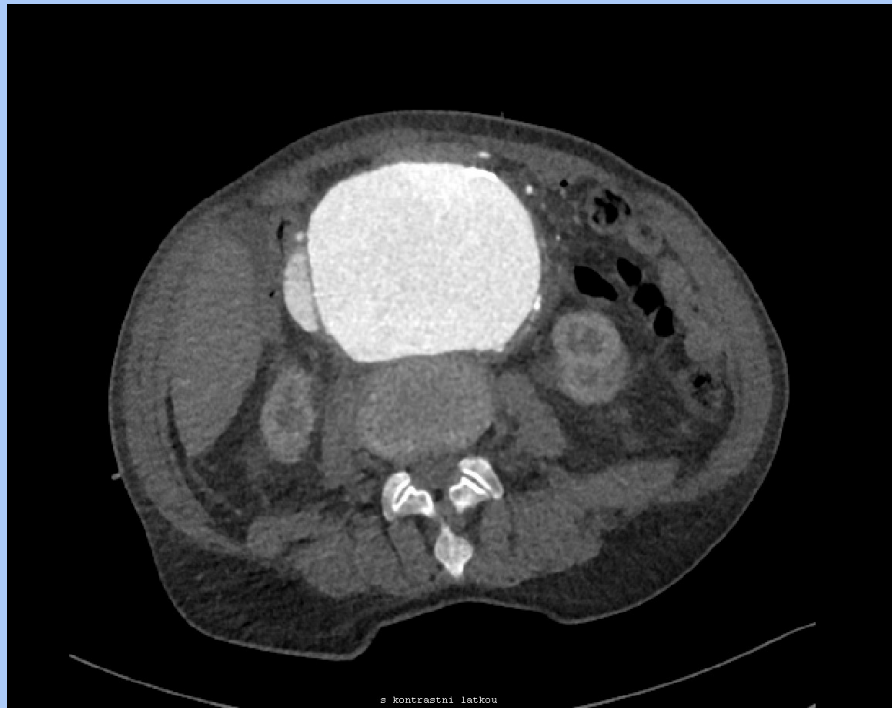
tips and tricks

- transperitoneal/retroperitoneal approach
- save renal branches

Recommendation 124	Class	Level	References
A retroperitoneal approach for patients requiring open surgical repair or endovascular repair if anatomically feasible may be considered as preferred options for the surgical treatment of abdominal aortic aneurysm with a co-existing horseshoe kidney.	IIB	C	[118,519,659]

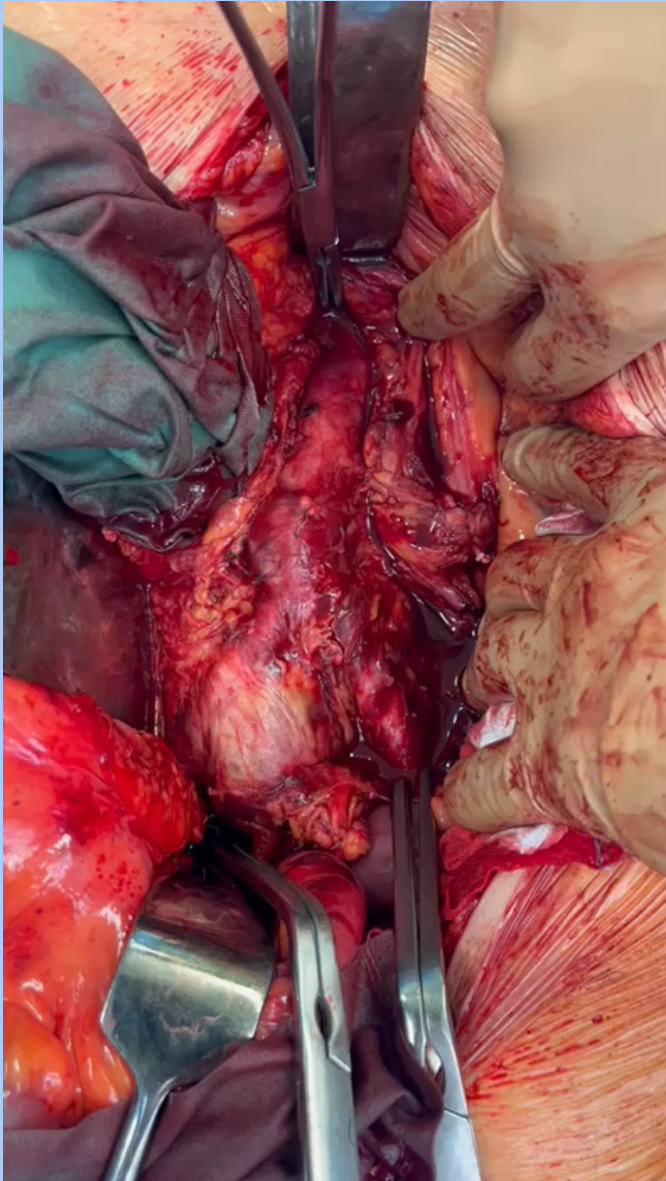
Recommendation 125	Class	Level	References
Preservation of the renal isthmus and anomalous renal arteries >3 mm in diameter should be considered during both open and endovascular repair of abdominal aortic aneurysm with a co-existing horseshoe kidney.	IIa	C	[118,138,659]

AORTO-CAVAL FISTULA (0,22%)



AORTO-CAVAL FISTULA



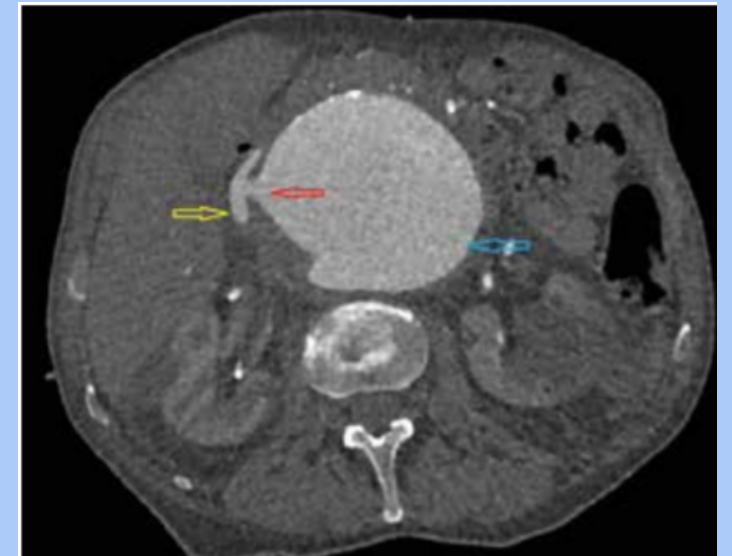


- worse results compared to rupture AAA
- heart failure
- specific signs in CT scan
- OR / EVAR
- lack of large data

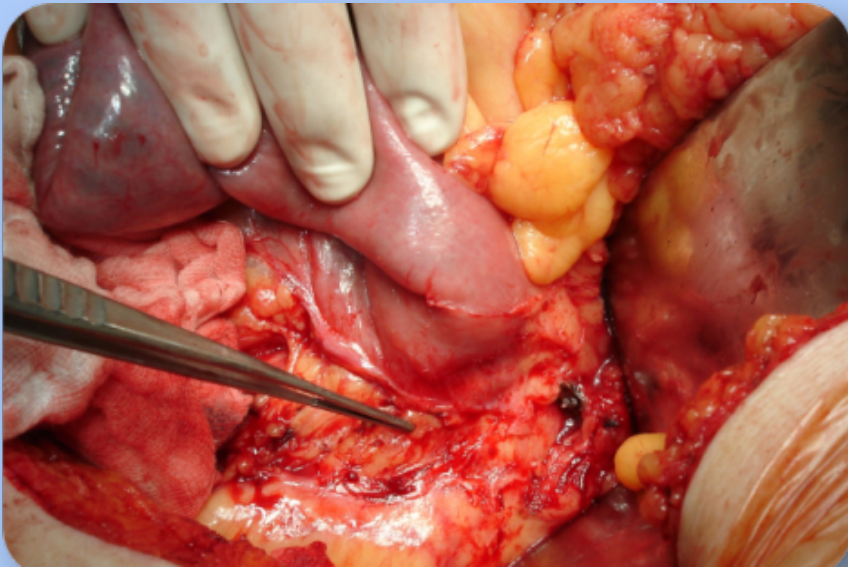
AORTO-CAVAL FISTULA

tips and tricks

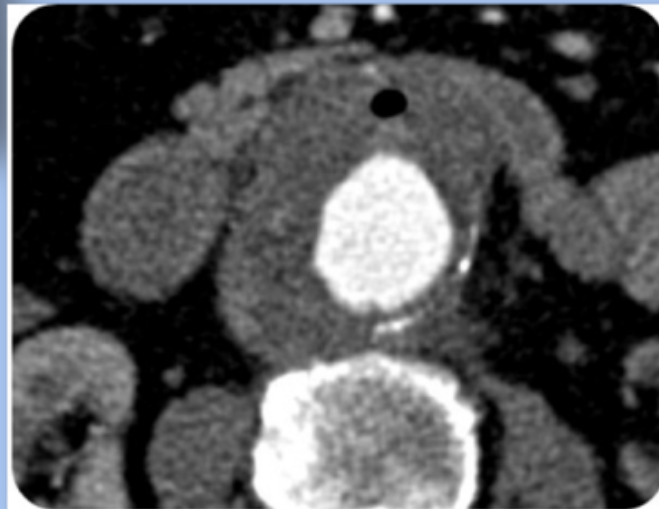
- transluminal (transaortic) suture
- limited dissection
- EVAR – just aortic stentgraft



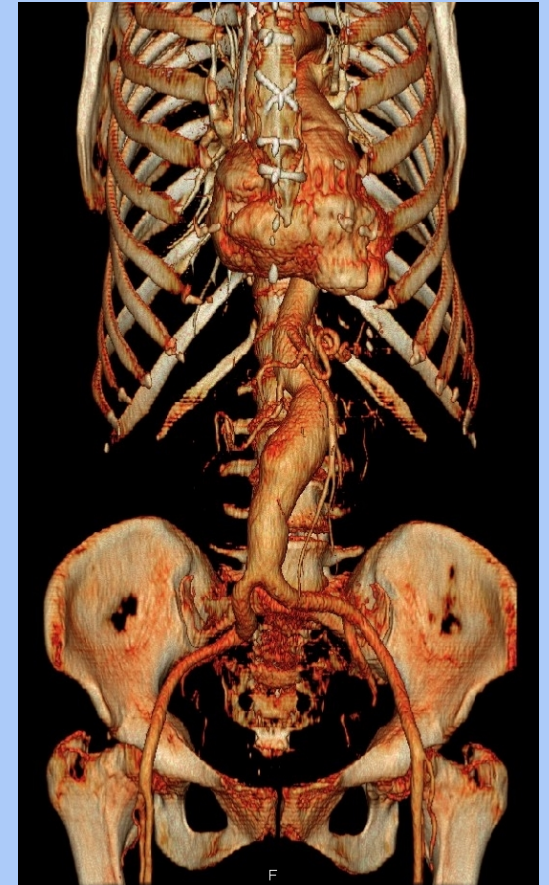
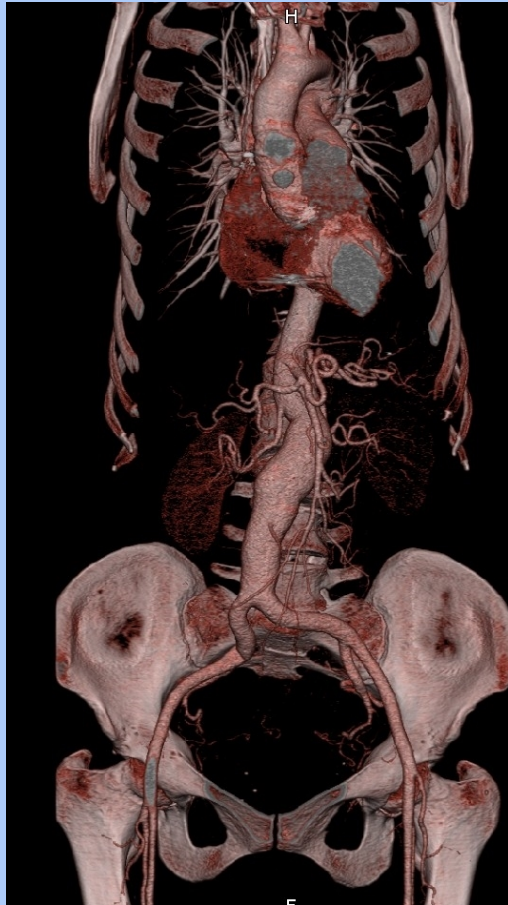
AORTO-DUODENAL FISTULA (0,04%)



- open repair
- silver graft, alograft
- also EVAR is published



GENETIC SYNDROMS



GENETIC SYNDROMES

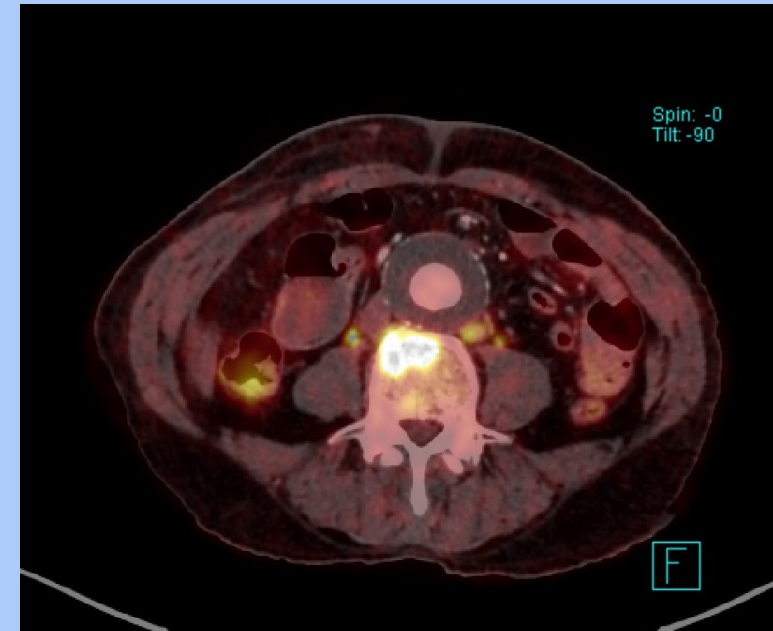
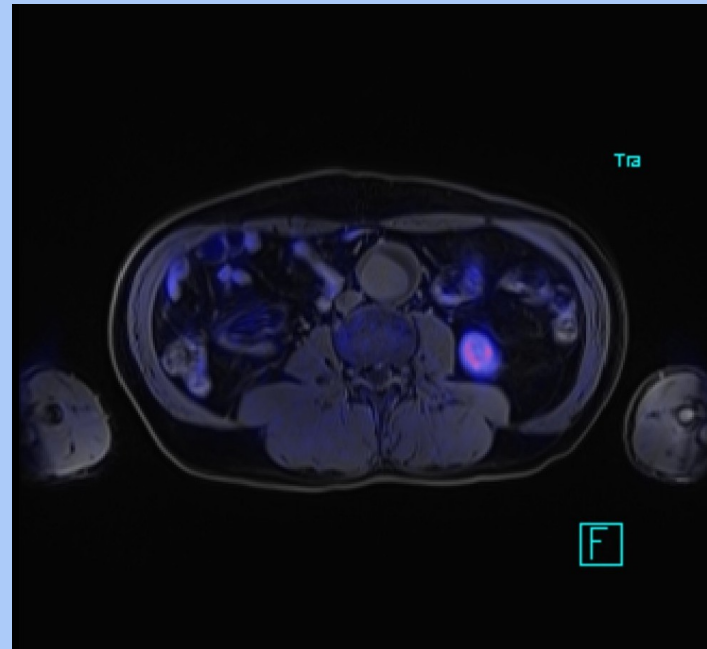
- specific surgery technique
- atraumatic handling of tissues
- sewing of anastomoses with pledgeted sutures
- use of supporting cuffs and glues.

Recommendation 123	Class	Level	References
In young patients with suspected connective tissue disorders and abdominal aortic aneurysms, open surgical repair is recommended as first option.	I	C	[250,544]

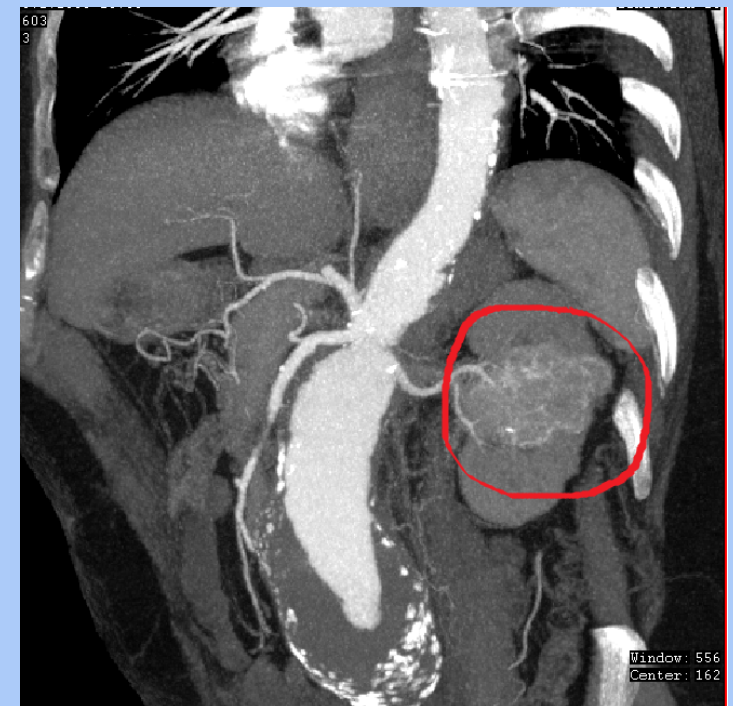
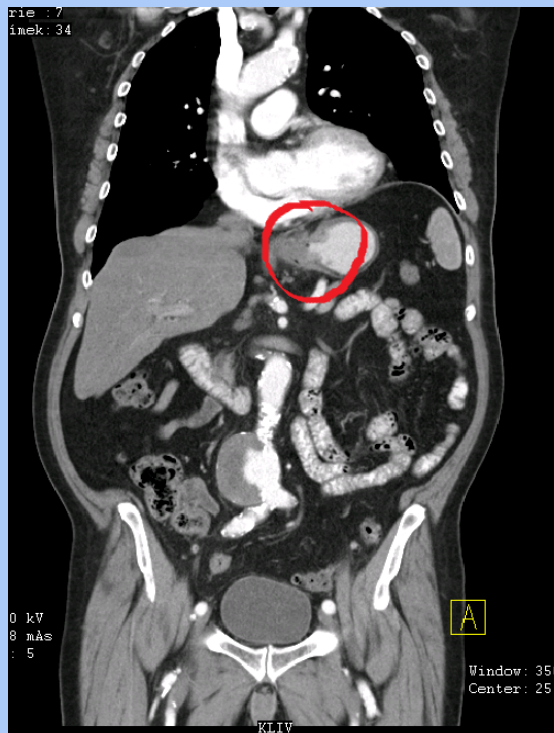
AAA + MALIGNANCY (5-7%)

- lack of large trials (heterogenous group)
- what is the priority ?
- “treat what is most threatening or symptomatic first” (large AAA, obstructing colonic cancer, bleeding gastric cancer... etc.)
- individual approach (simultaneously / multistage)

AAA + MALIGNANCY

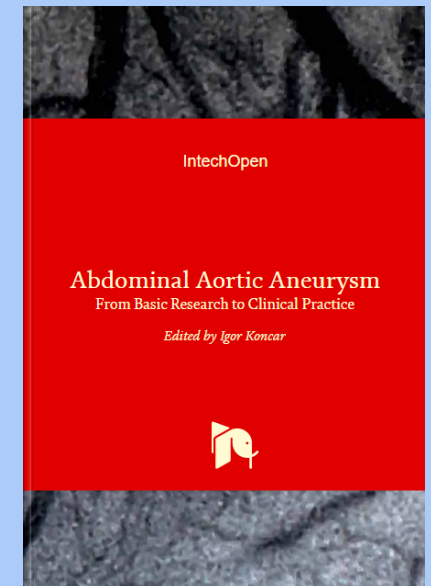


AAA + MALIGNANCY



AAA + MALIGNANCY

Recommendation 118	Class	Level	References
Patients with abdominal aneurysm and concomitant cancer are not recommended prophylactic aneurysm repair on a different indication (diameter threshold) from patients without cancer, including cases of chemotherapy.	III	C	[73,450]
Recommendation 119	Class	Level	References
In patients with concomitant malignancy, a staged surgical approach, with endovascular repair of a large or symptomatic abdominal aortic aneurysm first, to allow for treatment of malignancy with minimal delay, is recommended.	I	C	[357,366,425]



CONCLUSION

- **EVAR – OR**
- sometimes we choose the better from the bad options
- our decision should not be influenced by lack of experience or skills
- all mentioned pathologies will be here forever...

THANK YOU