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Optimal Treatment for Aorto-Iliac Occlusive Disease – Patency and Complications

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Disclosure

I have no current relationships with commercial entities.

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When to intervene?

- CLTI.
- Recurrent embolization.

Goal: saving the limb

- Claudication?

Goal: QoL

- Preserving a distal bypass or a transplanted kidney

Supervised Exercise vs Primary Stenting for Claudication Due to Aortoiliac Peripheral Artery Disease: 6-Month Outcomes from the CLEVER Study

Compared treatments for disabling aortoiliac claudication at 6 months (supervised exercise, primary stenting, pharmacologic therapy).

Peak walking time:

- Supervised exercise (greatest).
- Stenting (intermediate).
- Pharmacologic therapy (least).

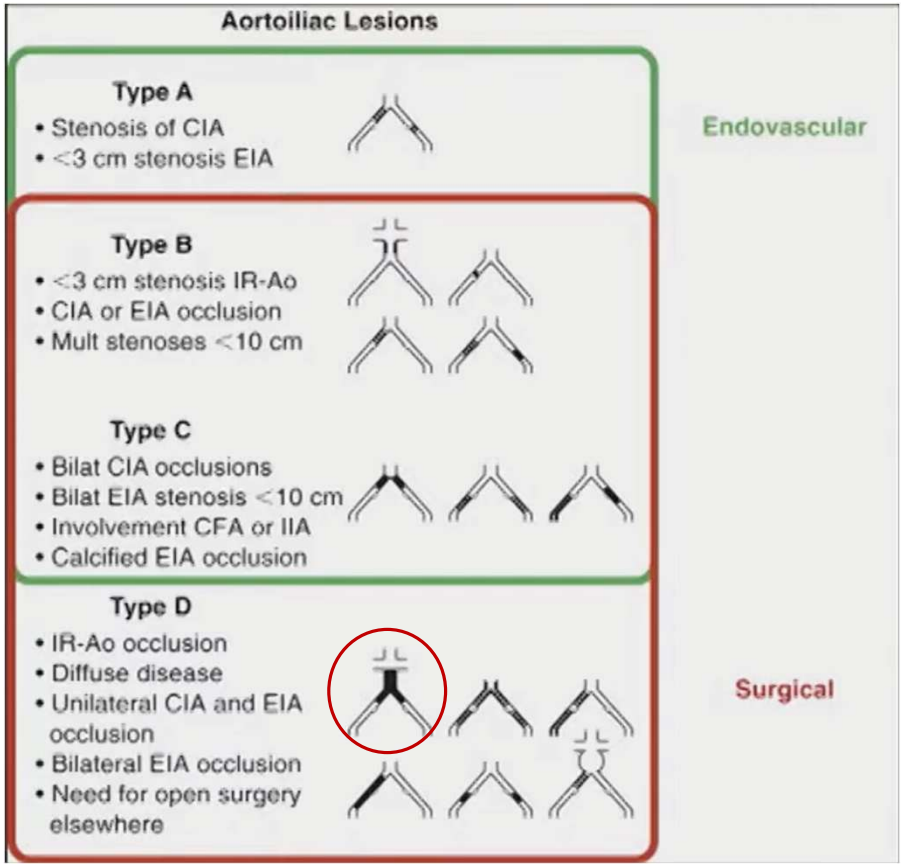
QoL improved in stenting and SVT but not in medical therapy. Stenting > SVT

outcomes from patients provided these distinct strategies of care. Superior treadmill-defined benefits from the SE group could be derived from the "specificity-of-training" effect or from improved cardiorespiratory fitness, as the use of SE is known to be associated with physiologic improvement in systemic and limb function. This study also did not evaluate the

In summary, these results indicate both treatments are superior to OMC and provide widened choices for all patients. The selection of the ideal treatment will depend on the patient's preference. At the very least, the CLEVER 6 month results suggests that SE is a reasonable strategy compared with stenting and that efforts be made to develop SE programs that are available and affordable to patients.

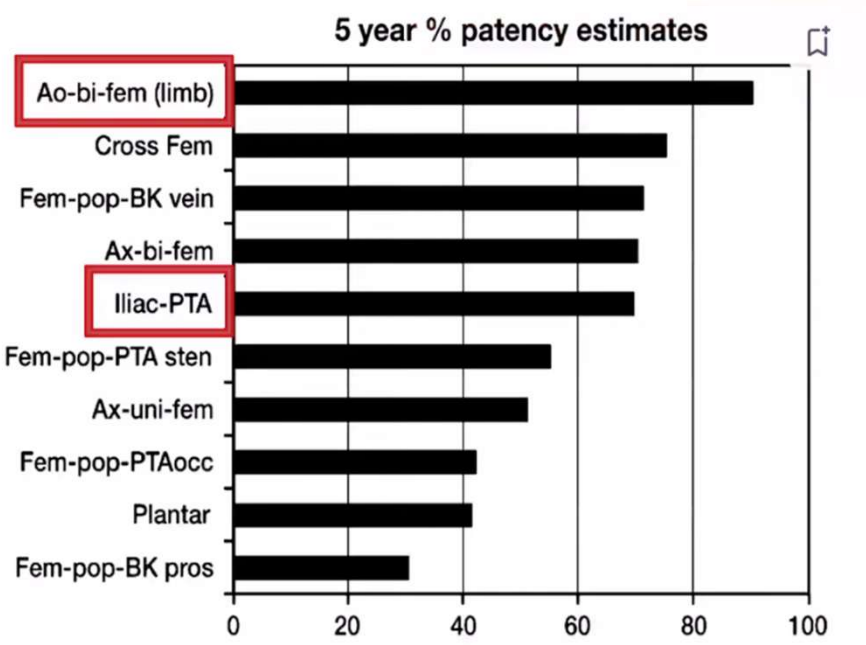
Least Complex

Most Complex



Excessive tortuosity or calcification.

Adjacent branches involvement (IMA, renals)



~~Patency~~

AFS/QoL

VQI and Global Vascular Guidelines CLTI date

1-year major amputation: ~10–15% despite successful revascularization

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TASC C/D

Open or Endo?

We don't know

BMJ Open. 2025 Oct 7;15(10):e106474. doi: 10.1136/bmjopen-2025-106474.

Assessing the clinical and cost-effectiveness of endovascular vs open revascularisation in severe occlusive aorto-iliac disease (EVOCC trial): study protocol for a randomised controlled trial

- **Primary objective:** to determine whether open surgery offers superior clinical and cost-effectiveness compared to endovascular revascularisation in severe aorto-iliac disease (TASC II C/D classification).
- **Secondary objectives:** to evaluate amputation-free survival, mortality, cardiovascular events, hospital readmissions, re-interventions and cost-effectiveness.

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Open or Endo?

Open repair versus endovascular treatment of complex aortoiliac lesions in low risk patients

Michele Antonello, MD, Francesco Squizzato, MD, Silvia Bassini, MD, Luca Porcellato, MD, Franco Grego, MD, *and* Michele Piazza, MD, *Padua, Italy*

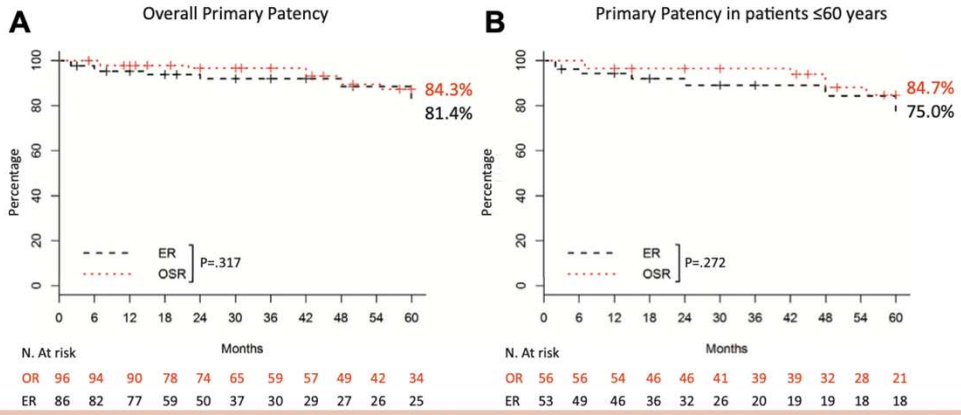


Fig 3. A, Overall Kaplan-Meier curves for the 5-year primary patency rates in the open surgical repair (OSR) and endovascular repair (ER) groups. Standard error <10%. **B,** Kaplan-Meier curves for the 5-year primary patency rates in the subgroup of younger patients. Standard error <10%.

No difference in limb salvage outcomes

Variable	OSR group	ER group	*P* value
Clinical data			
Rutherford category	96 limbs	86 limbs	
3	35 (36.4)	41 (47.6)	.135
4	42 (43.7)	33 (38.3)	.546
5-6	19 (19.7)	12 (13.9)	.328

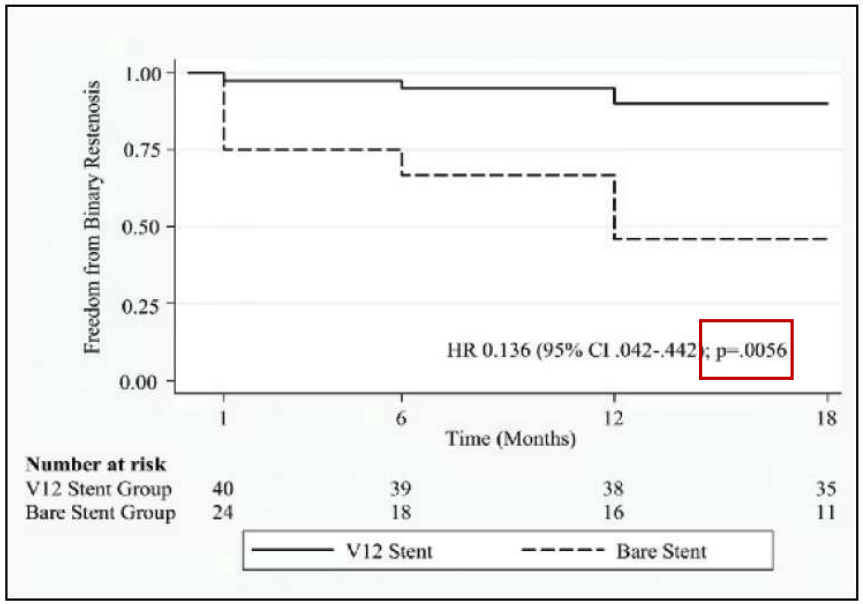
Table V. Cox proportional hazards for primary patency in 182 limbs treated with open or endovascular intervention

Variable	HR	95% CI	*P* value
TASC class D	1.51	0.42-5.36	.520
Bilateral disease	2.55	0.67-9.68	.166
ER	0.89	0.18-3.59	.781
Female sex	0.49	0.06-4.00	.507
ER + female sex	2.89	1.45-26.60	.024[a]

CI, Confidence interval; *ER,* endovascular repair; *HR,* hazard ratio; *TASC,* TransAtlantic Inter-Society Consensus II.
[a]Statistically significant.

Even with endovascular there are lot of unanswered questions

Covered vs Uncovered stents



CERAB vs **Kissing stents**

There is no absolute contraindications

Anatomical

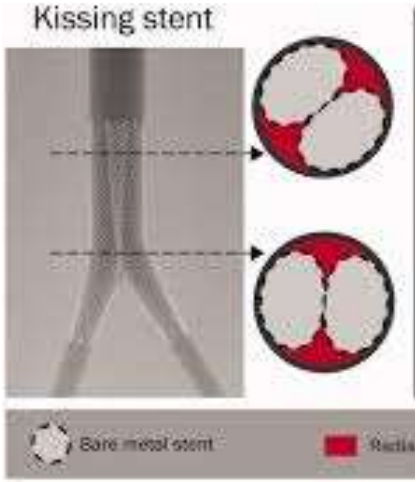
- Juxtarenal aortic occlusion.
- Circumferential heavy (>1 mm) calcification.
- Hypoplastic aortic syndrome.
- Juxtaposition to aneurysmal disease.

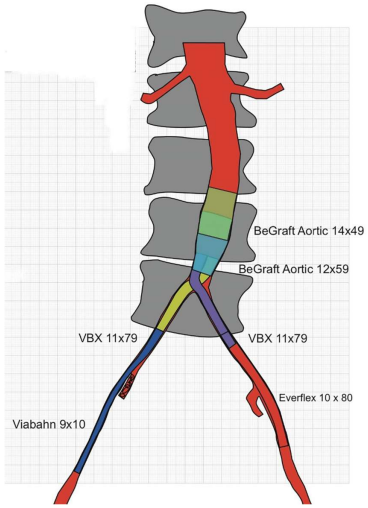
Patient factors

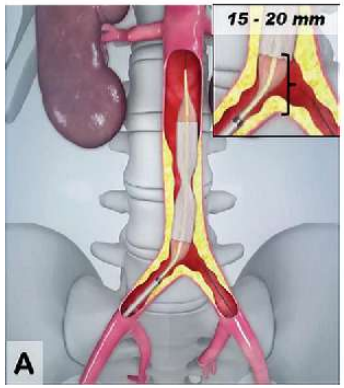
- CKD

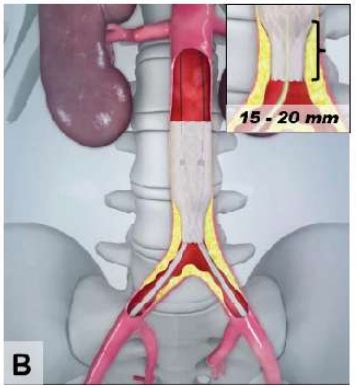
ENDOVASCULAR

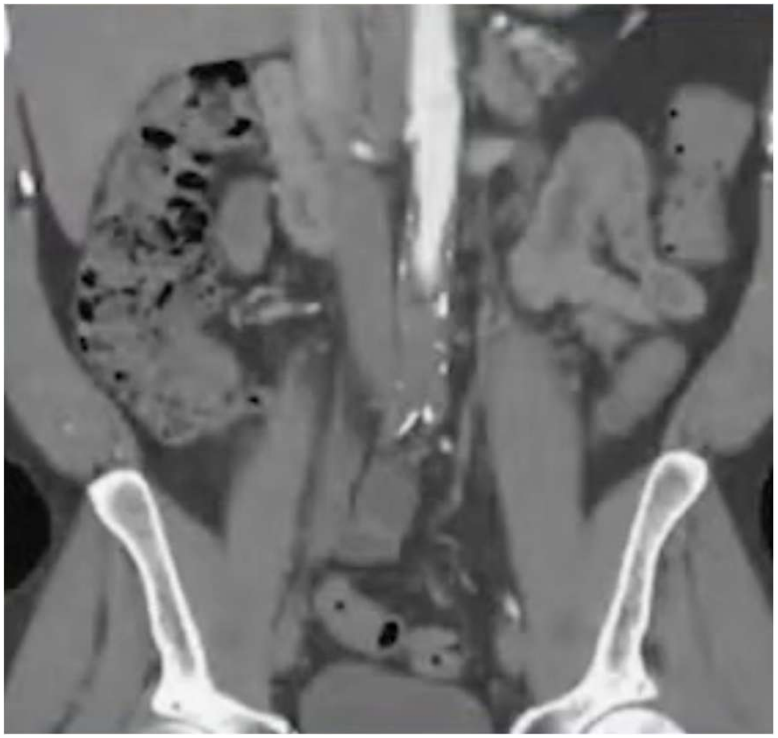
CERAB vs Kissing stents

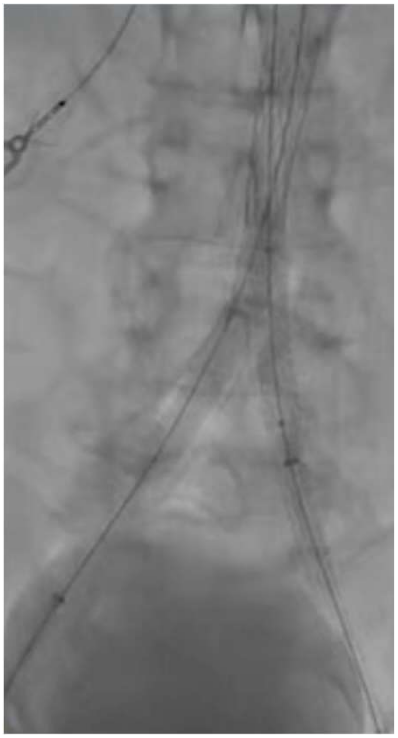


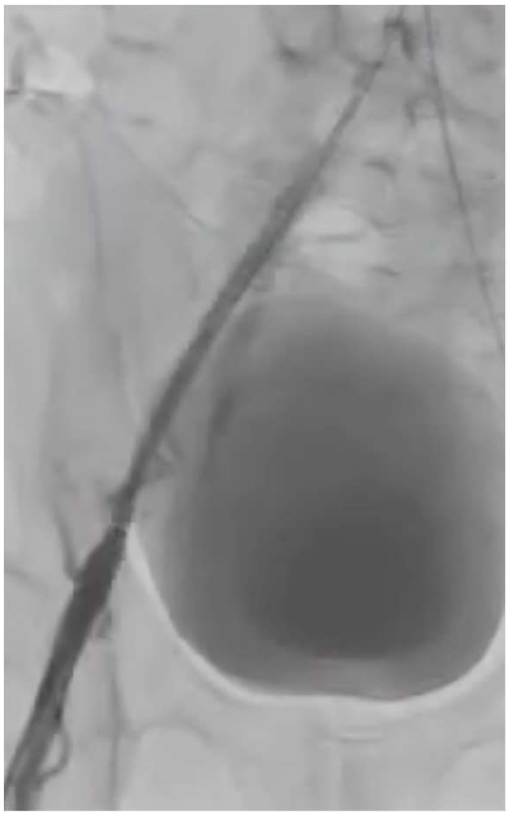












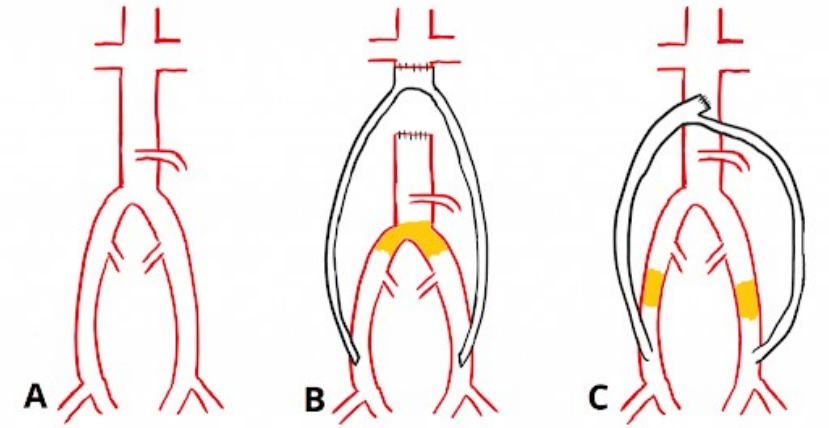
Maintain wire access.
Balloon inflation across the perforation

Femoral venous access
Resuscitation

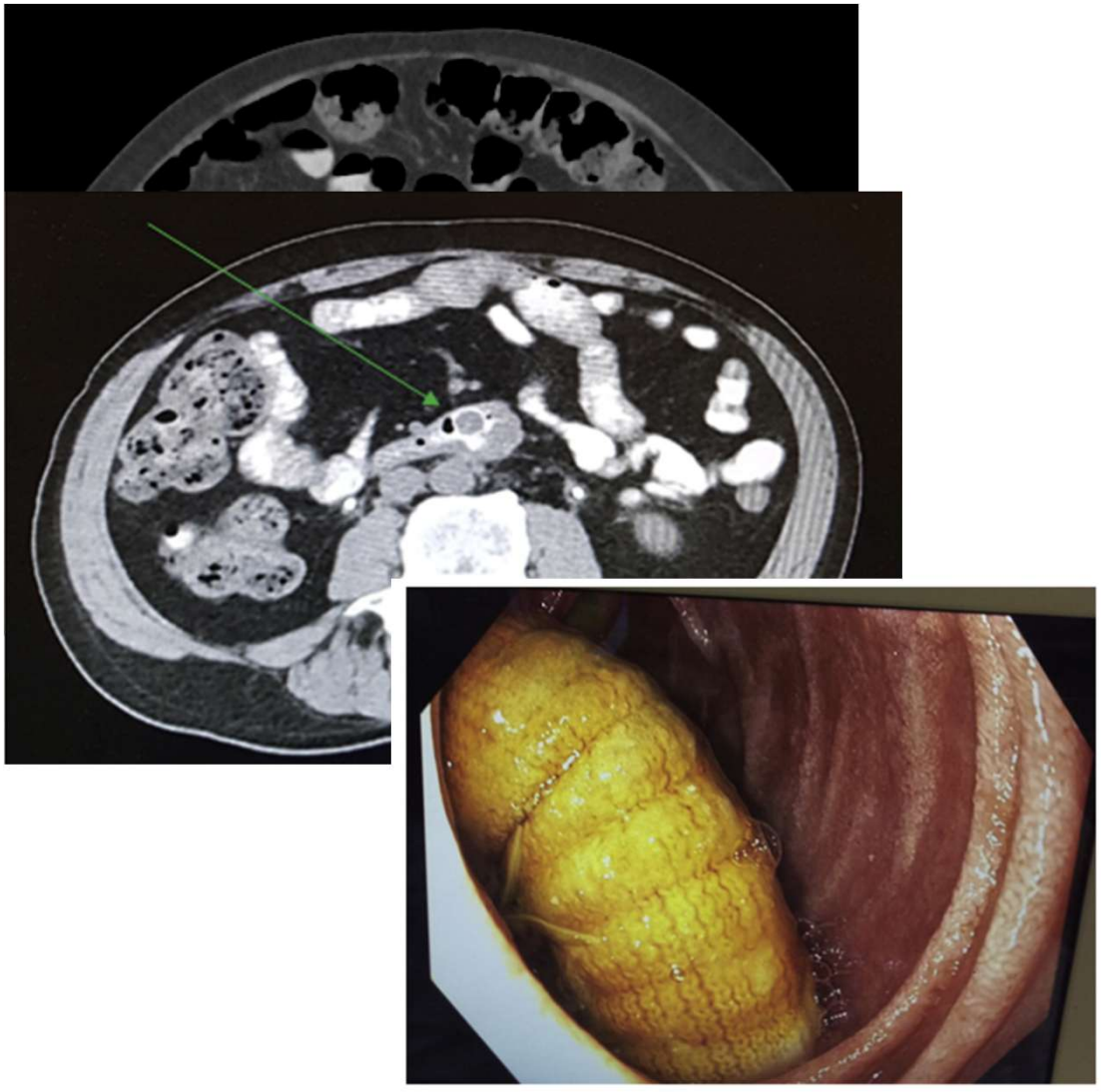
Anesthesia and blood.

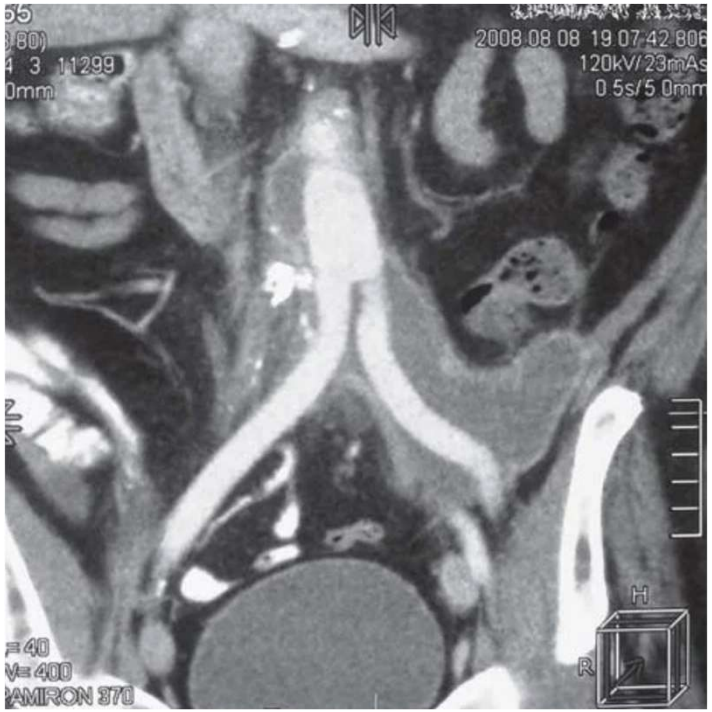
Stent graft

OPEN
ABF



It is important to perform the proximal anast close to the level of the renals to avoid disease progression leading to long-term failure.

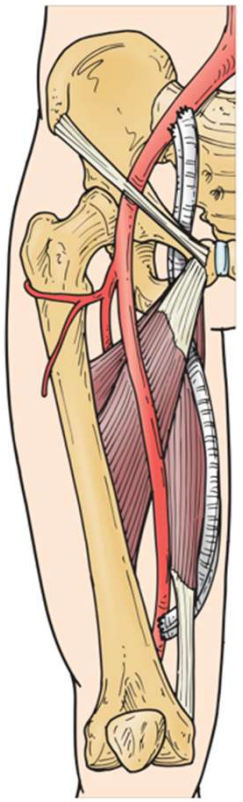


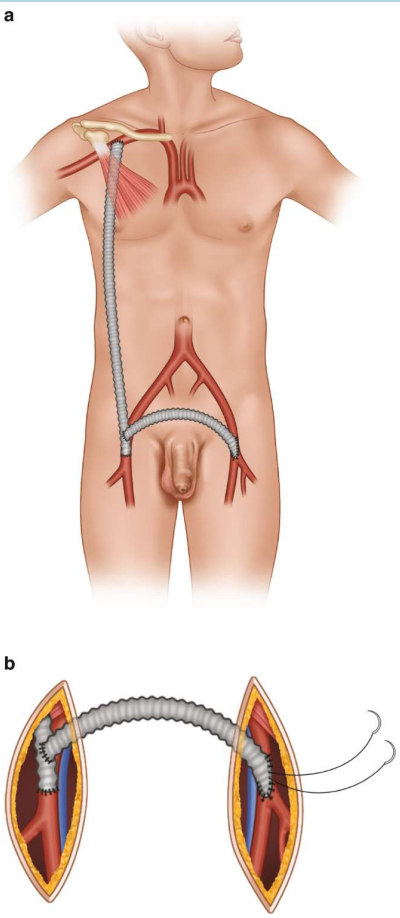

2008 08 08 19 07 42 806
120kV/23mA
0 5s/5 0mm
H
R

OPEN
EXTRA-ANATOMICAL

Advanced comorbidities
Hostile abdomen
Infection

Fem-fem: **5-year primary patency (**Approximately 70%).
Ax-fem: **5-year primary patency (**60% to 70%).
Obturator bypass: **5-year primary patency** (50% to 60%)





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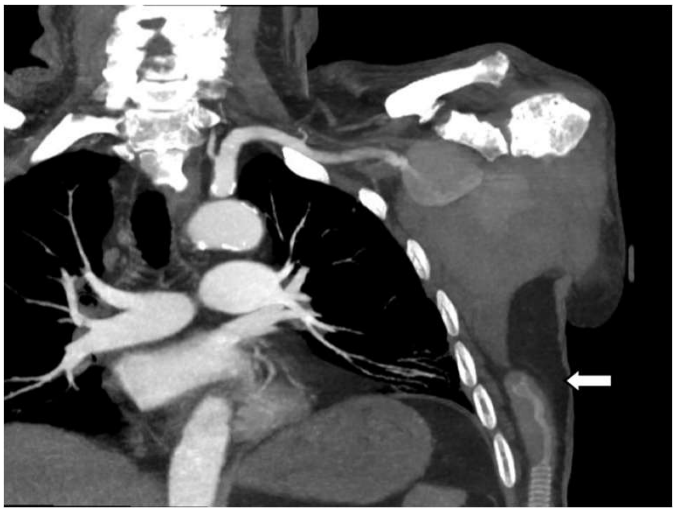
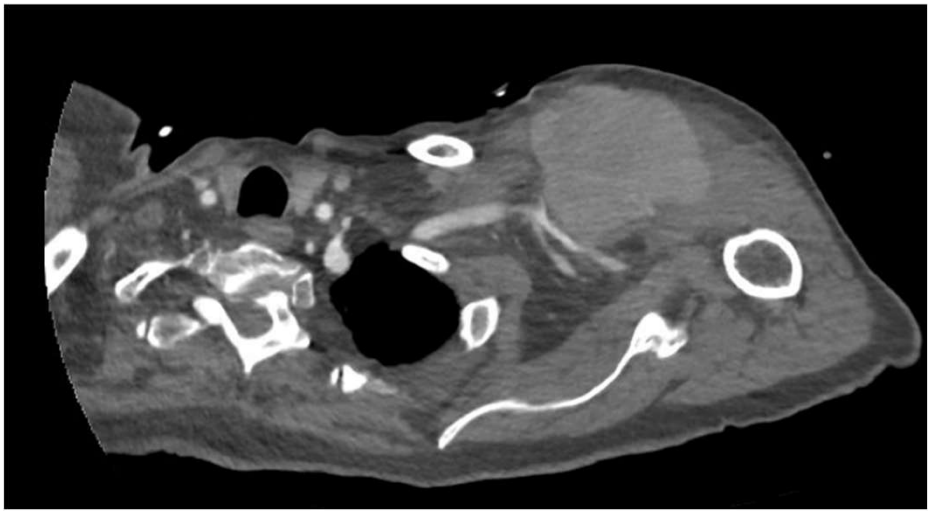
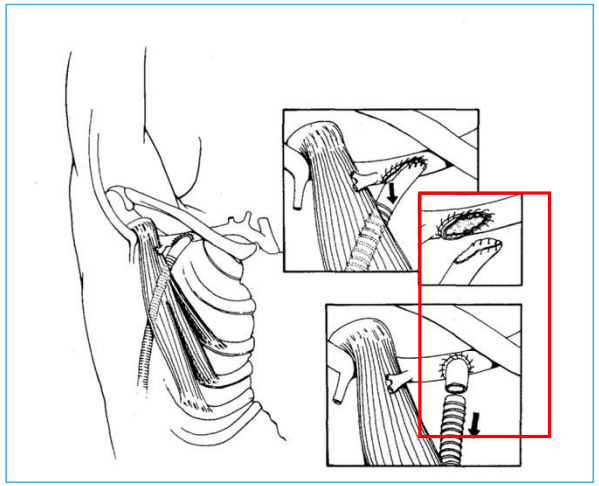
EXTRA-ANATOMICAL

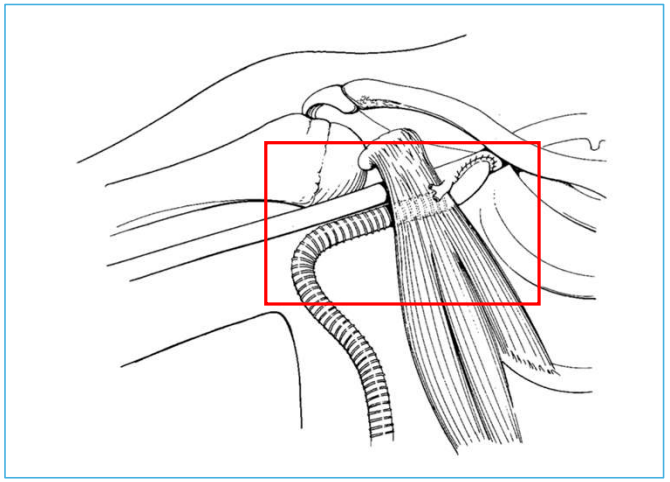




Alameer et al., J Radiol Clin Imaging, 2022

OPEN
EXTRA-ANATOMICAL





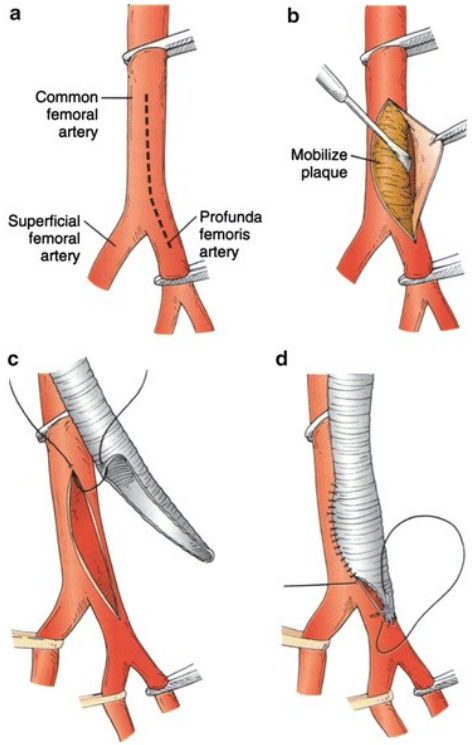
- Place the anastomosis as medial as possible on the axillary artery
- Leave redundancy in the graft
- Allow some bowing of the graft into the axilla posterior to the pectoralis minor muscle.

Adjunct procedures

Profundoplsty

Extensive femoral endarterectomy (above the IL)

Fem-pop bypass (simultaneous): if SFA occlusion and profunda is atretic and severely disease profunda



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Patency
Special Considerations

Younger age (<50y)

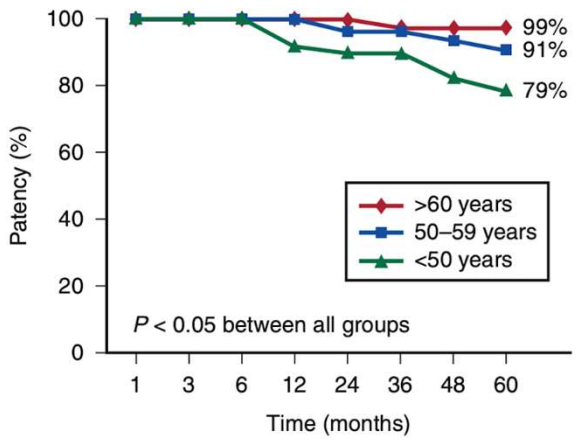

Figure 109.12 Overall 5-year cumulative secondary patency rates in a recent cohort of patients undergoing aortobifemoral bypass grafting, indicating an inverse relationship between age and graft patency.[20]

Small aortic syndrome

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Open or Endo?

We don't know

What's best in your hands

Goal
Resolve stenosis/restore flow to improve AFS/QoL
Avoid rupture
Avoid embolization

Follow the local outcomes

ABF
Type C & D lesions
Young patient
Low CV risk
Non-obese
Non-hostile abdomen

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