

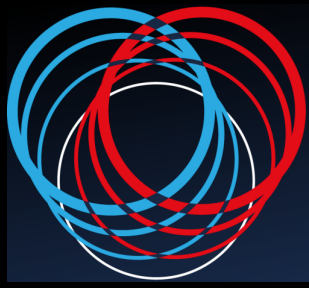
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WORLD

CHALLENGES & INNOVATIONS IN VASCULAR WORLD

31 MARS **2026**
1^{ER} AVRIL

MÉRIDIEN ÉTOILE
PARIS



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Ischémie aiguë: les recommandations de l'ESVS sont obsolètes? La thrombectomie percutanée change les pratiques?

Acute limb ischemia: are the ESVS guidelines already outdated? Percutaneous thrombectomy is changing the paradigm?

Frederico Bastos Gonçalves



Conflits et liens d'intérêts



Je n'ai aucun conflit d'intérêt potentiel à déclarer

ALI is one of the oldest recognized vascular emergencies



Eur J Vasc Endovasc Surg (2020) 59, 169–170

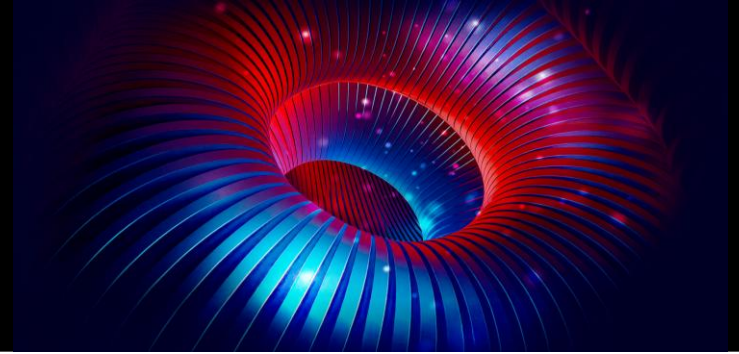
EDITORIAL

Where We Have Come From: A Short History of Surgery for Acute Limb Ischaemia

*“...making good cheer during the day, not complaining of any pain. However during the night there came upon him **gangrene and mortification of both legs without swelling or inflammation**, but there was a colour in certain places tending to **lividity, blackness, and greenness**. (...) there was **no feeling**, and when one pricked it with the point of a lancet or with a pin, **no blood came out of it**, and there was no warmth to the sense of touch. On the contrary one felt rather **coldness**.”*

Ambroise Paré (1564)

Epidemiology of ALI



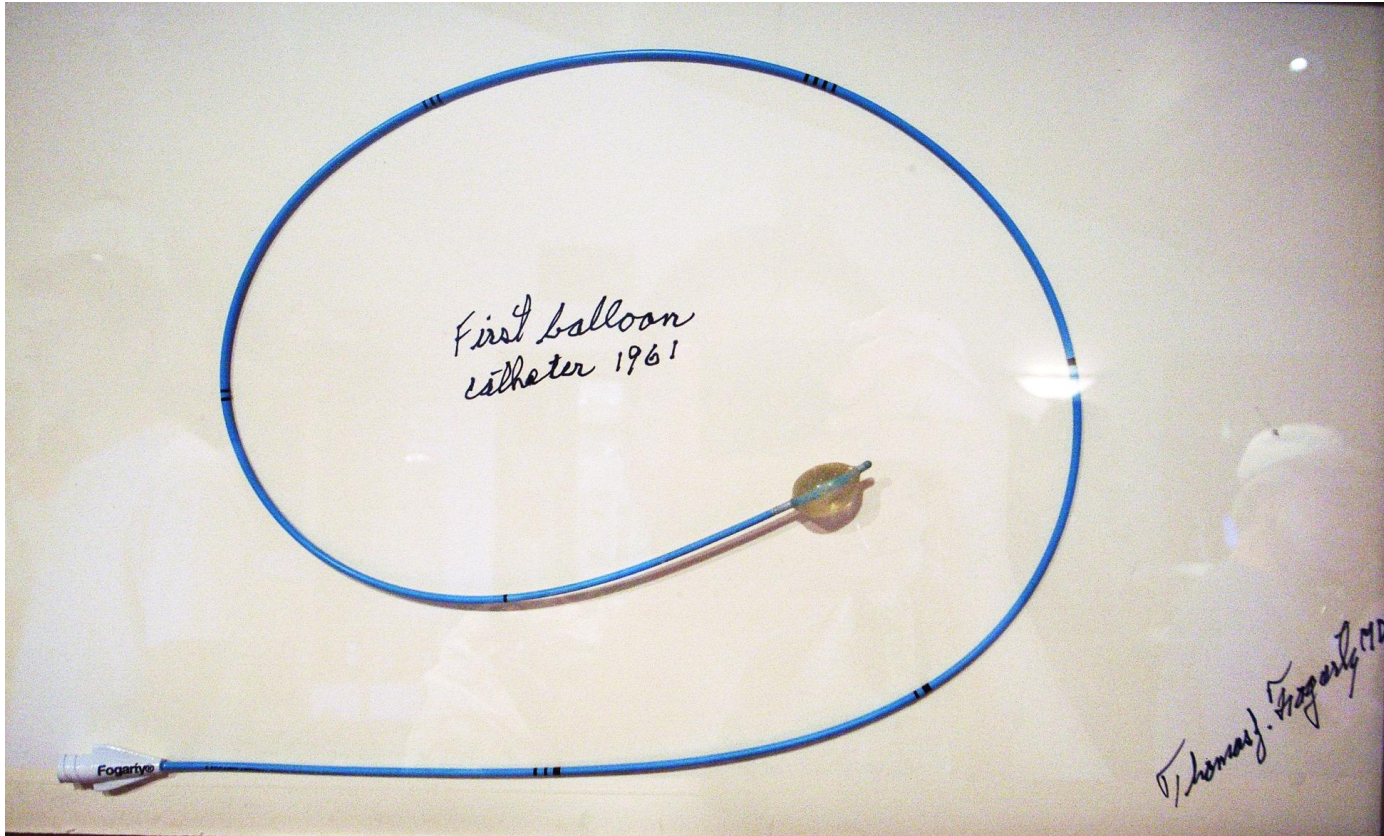
23-26 per 100 000 persons / year

Korabathina et al, Circulation 2013. Baril et al, J Vasc Surg 2014

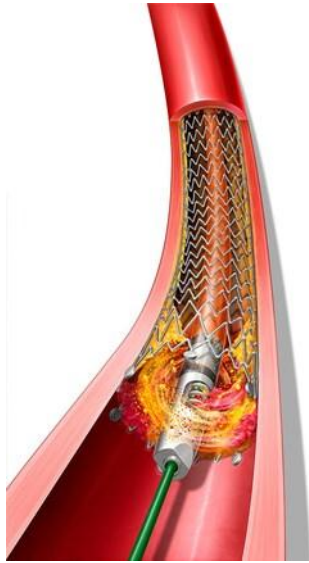
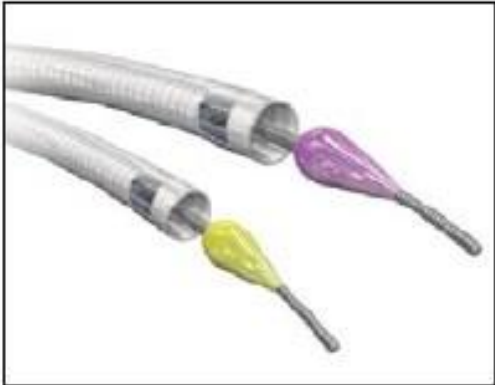
3-11 per 100 000 persons / year for rAAA

1-2 per 100 000 persons / year for type B dissection

ALI management changed dramatically with the invention of Thomas Fogarty (and generalization of heparin use) -1960s



Are we witnessing a new "revolution" in ALI management with novel percutaneous thrombectomy devices?



2020 ESVS ALI Guidelines (Chairs: Martin Bjorck and Jonothan Earnshaw)



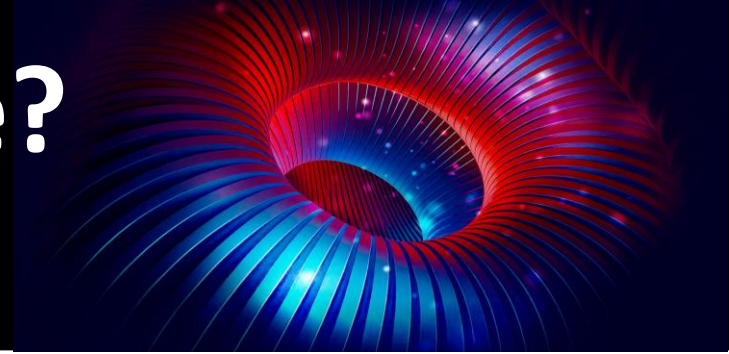
CLINICAL PRACTICE GUIDELINE DOCUMENT

Editor’s Choice – European Society for Vascular Surgery (ESVS) 2020 Clinical Practice Guidelines on the Management of Acute Limb Ischaemia

Martin Björck ^a, Jonothan J. Earnshaw ^a, Stefan Acosta ^a, Frederico Bastos Gonçalves ^a, Frederic Cochennec ^a, E.S. Debus ^a, Robert Hinchliffe ^a, Vincent Jongkind ^a, Mark J.W. Koelemay ^a, Gabor Menyhei ^a, Alexei V. Svetlikov ^a,

Recommendation 33		
For patients with acute limb ischaemia, aspiration and mechanical thrombectomy should be considered.		
Class	Level	References
Ila	C	Kwok <i>et al.</i> (2018), ¹⁴¹ Zehnder <i>et al.</i> (2000), ¹⁴⁷ Byrne <i>et al.</i> (2014), ¹⁴⁸ Kronlage <i>et al.</i> (2017) ¹⁵²

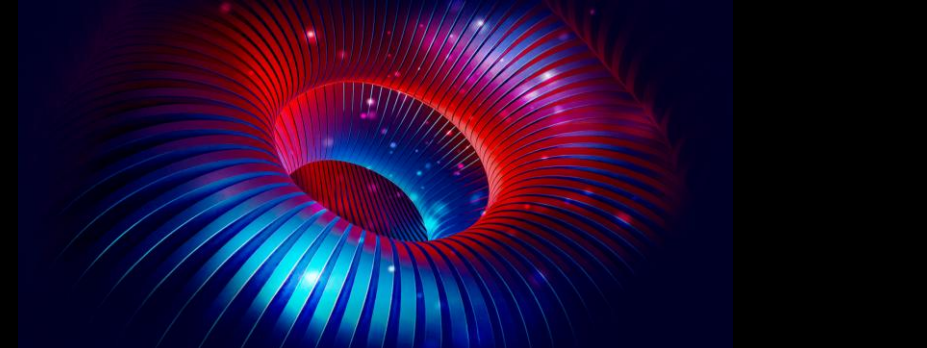
Has something changed since?



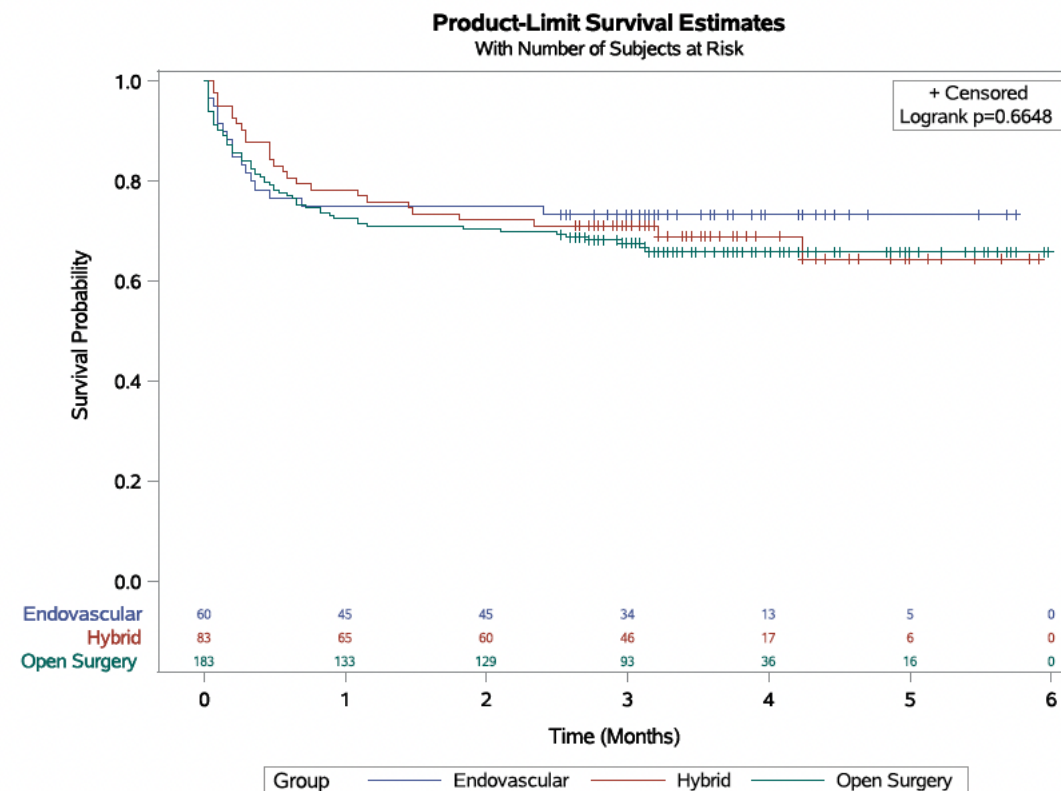
2027 ESVS Guidelines for the Management of acute limb ischaemia



Promote ALI



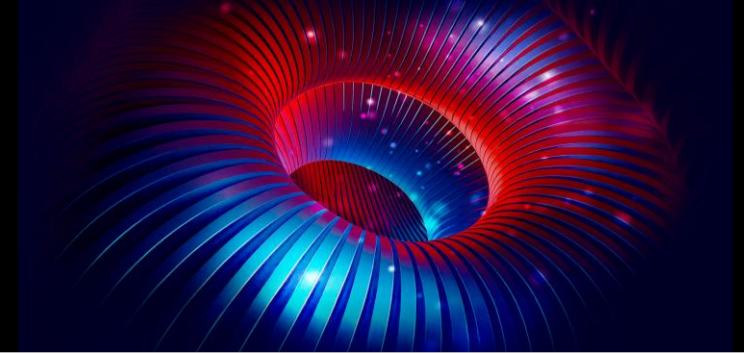
Variables	No. (%)
Revascularization	675 (95.7)
OSR	393 (55.7)
Hybrid procedure	147 (20.9)
EVT	135 (19.1)
PTA alone	29 (19.7)
PTA and stenting	53 (36.1)
Catheter guided embolectomy/ aspiration	47 (32)
Catheter directed thrombolysis	75 (51)
Catheter guided atherectomy	12 (8.2)
No revascularization	30 (4.2)



Insights from the prospective multicentre observational study evaluating acute lower limb ischemia on the influence of patient characteristics on treatment strategy selection and outcomes

Panagiotis Doukas, MD,^a Florian K. Enzmann, MD,^b Katariina Noronen, MD,^c Lan Tran, MD,^d Albert Busch, MD,^e Petar Zlatanovic, MD,^f Alexandru Predenciuc, MD,^g Juliette Raffort, PhD,^h Alexandra Gratl, MD,^b and Caroline Caradu, MD,ⁱ EVRC Collaborative, Aachen, Germany; Innsbruck, Austria; Helsinki, Finland; Amsterdam, the Netherlands; Dresden, Germany; Belgrade, Serbia; Chisinau, Moldova; and Nice and Bordeaux, France

Promote ALI



Prospective multicentre observational study evaluating acute lower limb ischaemia (PROMOTE-ALI)

Alexandra Gratl¹, Albert Busch², Caroline Caradu³, Panagiotis Doukas⁴, Katariina Noronen⁵, Alexandru Predenciuc⁶, Lan Tran⁷, Christian Zielasek⁸, Petar Zlatanovic⁹, Florian K. Enzmann^{1,*}  and the European Vascular Research Collaborative (EVRC)

705 patients

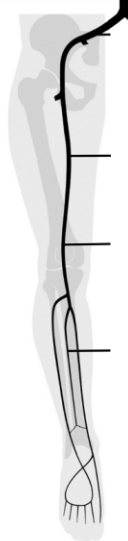
36 vascular centres

12 European countries

ALI after prior revascularization (N=219, 31%),

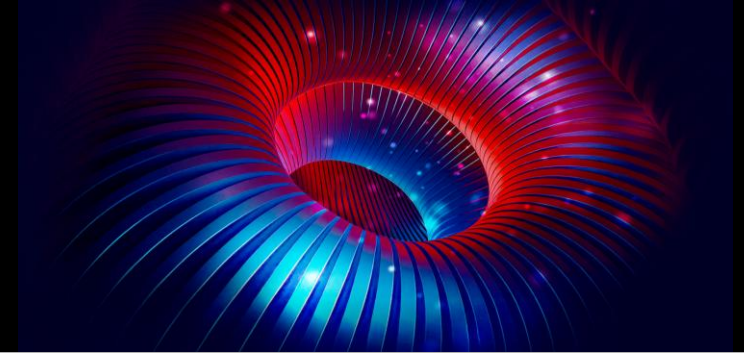
Native artery thrombosis (N=197, 28%)

Embolic events (N=194, 27%).



	Overall (n=705)	Patients with 90-d AFS (n=595)	Patients without 90-d AFS (n=110)	P-value
Aorta	29 (4.1)	17 (2.9)	12 (10.9)	0.001
Iliac	222 (31.5)	180 (30.3)	42 (38.2)	0.100
Femoral	443 (62.8)	374 (62.9)	69 (62.7)	0.979
Popliteal	364 (51.6)	299 (50.3)	65 (59.1)	0.089
Crural	161 (22.8)	123 (20.7)	38 (34.5)	0.001

Promote ALI



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AFS - 82.4% at 90 days

8% amputation

9% death

Independent risk factors for loss of 90-day AFS:

Acute kidney injury

No revascularization

Rutherford grade III ALI

Three or more levels of arterial occlusion

... Not type of revascularization

2027 ESVS ALI GL Comissioned Syst Rev



Peripheral Arteries

Eur J Vasc Endovasc Surg (2026) 71, 429–436

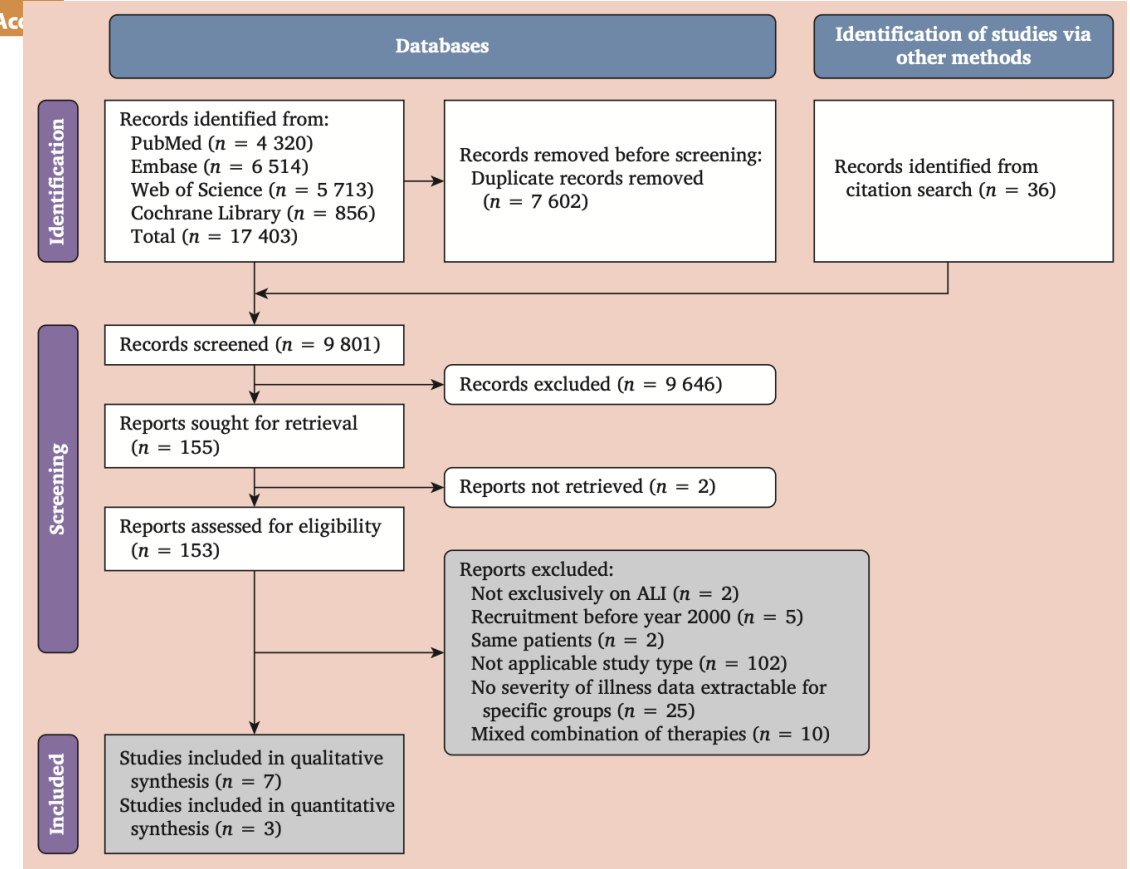


SYSTEMATIC REVIEW

Endovascular Management of Acute Lower Limb Ischaemia in Adult Patients: A Systematic Review and Meta-analysis

Stefan Acosta ^{a,*}, Vincent Jongkind ^{b,c}, Konstantinos Stavroulakis ^d, Caitlin W. Hicks ^e, Cristina Rocchi ^{f,g}, Merli Koitmäe ^{h,i}, Jos C. van den Berg ^j

- 2000, >10 ALI pts, reporting Rutherford classification, and comparing different endovascular management
- The main outcomes of interest were 30 day death, 30 day major amputation, major bleeding, distal embolisation, acute kidney injury, and fasciotomy



2027 ESVS ALI GL Commissioned Syst Rev

- Angiojet pharmacomechanical thrombolysis first vs. rTPA first
- Rotarex mechanical thrombectomy first vs. rTPA first
- Aspiration thrombectomy first vs. rTPA first

2027 ESVS ALI GL Comissioned Syst Rev

- No RCTs - **7 observational comparative studies** (6 good quality)
- **Only one meta-regression** analysis of 3 studies comparing the 30 day mortality between AngioJet pharmacomechanical thrombolysis first vs *rTPA* in R IIb pts – **no difference**
- the main finding: **reporting of disease severity indicators**, such as Rutherford classification, and important outcomes in eligible reports in the management of ALI **are often lacking and require urgent improvement.**
- The composite endpoint of major amputation or death at 30 days, the outcome that matters the most in ALI was missing in five of the seven observational studies in this review.

2027 ESVS ALI GL Comissioned Syst Rev

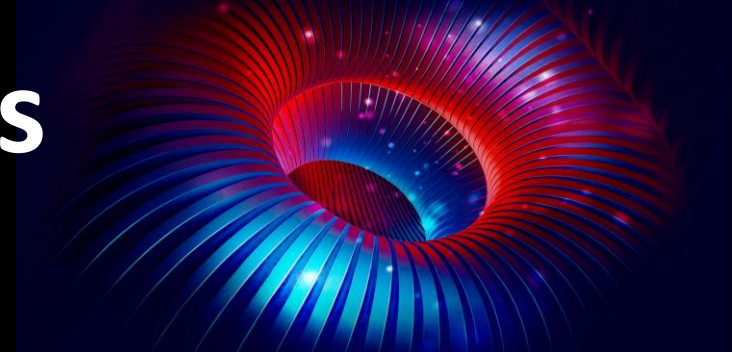


Acute limb ischemia: are the ESVS guidelines already outdated?

...is percutaneous thrombectomy really changing the paradigm??



Two other recent syst reviews



Endovascular Thrombectomy or Catheter-Directed Thrombolysis for Acute Limb Ischemia: Insights from A Systematic Review and Meta-Analysis



Comparison between ET vs CDT



In Acute Limb Ischemia

5 Retrospective studies

495 patients

ET : 256
CDT : 206

JEVT March 2026



Technical Success
RR 0.72, p=0.40



Clinical Success
RR 1.01, p=0.78



Major complication
RR 0.63, p=0.15



Limb Salvage
RR 1.00, p=0.94



Hospitalization time
MD -1.86 days, p=0.04

No significant differences were observed between groups for technical success, clinical success, limb salvage, or major complication. ET was associated with significantly shorter hospital stay.

ET and CDT demonstrate comparable effectiveness in revascularization outcomes for ALI. ET may offer added benefits by reducing complication rates and shortening recovery time.

Two other recent syst reviews



Pharmacomechanical thrombectomy versus catheter-directed thrombolysis in acute limb ischemia: a systematic review and meta-analysis

Ciofani et al, J Cardiovasc Surg 2026

- Four retrospective observational studies
- PMT and CDT provide comparable early and mid-term outcomes
- While PMT was associated with more periprocedural complications, it may offer advantages in selected cases requiring rapid revascularization.

Percutaneous thrombectomy

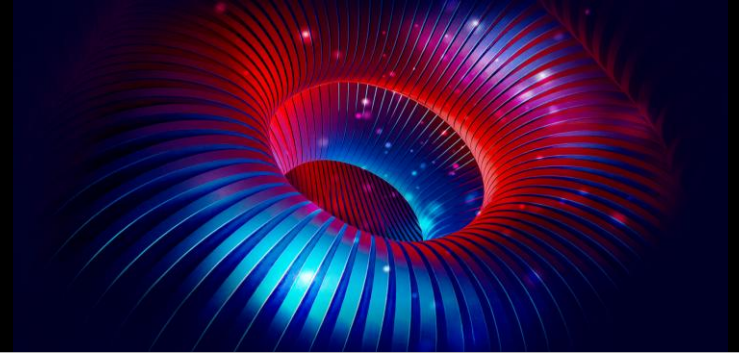
Can we find the right fit?



No device is universally applicable or equally effective for the treatment of all pathologies and they are associated with mixed results

- Local availability, reimbursement policies, and institutional experience
- Rotational thrombectomy and basket-like devices appear to be more effective in treating organized thrombus
- Aspiration and PMT thrombectomy catheters can be employed in both femoropopliteal and tibial vessels, whereas the use of rotational thrombectomy is typically limited for use proximally to the distal popliteal artery
- Guidewire guidance may be particularly important in patients with pre-existing peripheral arterial disease. In such cases, rotational or PMT devices may be preferred over aspiration catheters. Conversely, aspiration catheters are well suited for the removal of emboli

In summary...



Despite the obvious theoretical advantages, the role of percutaneous thrombectomy devices remains unclear – high quality data is desperately needed

Specific subgroups may benefit most:

- severe ischaemia (Rutherford IIb / III)**
- prior revascularizations**
- high surgical risk / high bleeding risk**

There may be a cost and logistic advantage

Keep an eye out for the 2027 ESVS ALI GL!



Frederico Bastos Gonçalves (chair) - Portugal
Willemien van der Water (co-chair) - Netherlands
Alexandra Gratl – Austria
Caitlin Hicks – USA
Cristina Rocchi – Italy
David Shipway – UK
Jos Van Der Berg – Switzerland
Konstantinos Stavroulakis – Germany
Leszek Kukulski - Poland
Riikka Tulamo – Finland
Sergi Bellmunt - Spain
Stefan Acosta - Sweden
Ulrich Rother – Germany
Vincent Jongkind - Netherlands
George Antoniou - UK (Coordinator)