



BAŞKENT ÜNİVERSİTESİ

Kritik bacak iskemisi ve Cerrahi Tedavi

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Başkent Üniversitesi Tıp Fakültesi Kalp – Damar Cerrahisi A.B.D.

Ankara

**3 - 6 Mayıs 2018 V. Ulusal Diyabetik Ayak
İnfeksiyonları Simpozyumu (Uluslararası Katılımlı) -
UDAİS 2018**



V. Ulusal
Diyabetik Ayak
İnfeksiyonları Simpozyumu

Selçuk-İzmir

03-06 Mayıs 2018

Korumar Ephesus Beach & Spa Resort



“A man is only as old as his arteries”

Sir William Osler
First Director of Medicine,
John Hopkins Hospital



Sir William Osler (1908)



- ◆ Günümüzde *periferik arter hastalığı* genellikle bacak arterlerinin aterosklerotik tıkayıcı hastalığını ifade etmek için kullanılan bir terimdir.
- ◆ 35 yaş üzerindeki hastalarda bacak arterlerindeki kronik oklüzif hastalığın başta gelen nedeni *aterosklerozis obliteranstır.*

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Yang Y, Gan Y, Cao J, Chen Y, He ZH, Luo H, Cai S, Xiang XD, Zhou R, Chen P.
Chin Med J (Engl). 2013 Sep;126(17):3222-7.

PMID: 24033940 [PubMed - in process] [Free Article](#)

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- ☐ [Thoracic stent graft versus surgery for thoracic aneurysm.](#)

2. Abrahá I, Romagnoli C, Montedori A, Cirocchi R.
Cochrane Database Syst Rev. 2013 Sep 11;9:CD006796. [Epub ahead of print]

PMID: 24027129 [PubMed - as supplied by publisher]

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- ☐ [Beta blockers for peripheral arterial disease.](#)

3. Paravastu SC, Mendonca DA, Da Silva A.
Cochrane Database Syst Rev. 2013 Sep 11;9:CD005508. [Epub ahead of print]

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- ☐ [Cardiovascular changes during chronic hypertensive states.](#)

4. Drozd D, Kawecka-Jaszcz K.
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- ☐ [\[Padma 28—a useful supplement in the treatment of peripheral arterial occlusive disease in the stages IIa and IIb\].](#)

Regli C, Groechenig E.
Forsch Komplementmed. 2013;20 Suppl 2:22-4. doi: 10.1158/000350748. Epub 2013 Jun 14. German.

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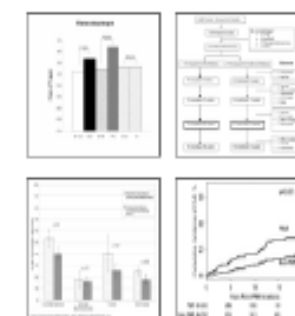
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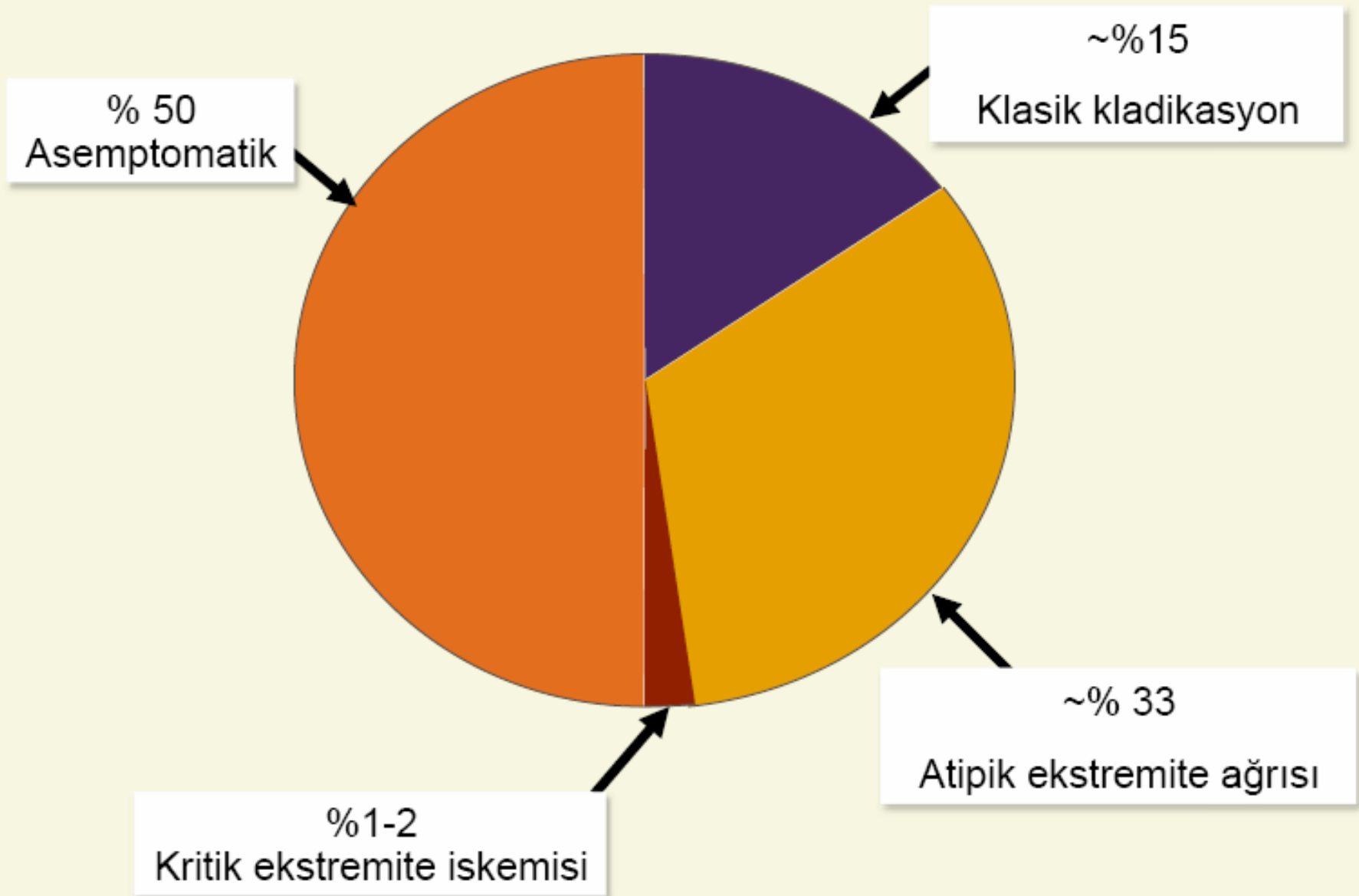
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PAH'ta Klinik Prezantasyon





PERİFERİK ARTER VE VEN HASTALIKLARI

ULUSAL TEDAVİ KILAVUZU 2016

Editör

Prof. Dr. A. Kürşat Bozkurt

Türk Kalp Damar Cerrahisi Derneği
Ulusal Vasküler ve Endovasküler Cerrahi Derneği
Fleboloji Derneği



Kritik bacak iskemisinin klinik tanımı

İspatlanmış arteriyel tıkalıcı hastalığı olan, kronik iskemik istirahat ağrısı, ülser veya gangren bulunan tüm hastalar için kullanılabilir. Kritik bacak iskemisi terimi kronikliği belirtir ve akut bacak iskemisinden ayırt edilmelidir (Çok güçlü öneri)

Öneri C-2:

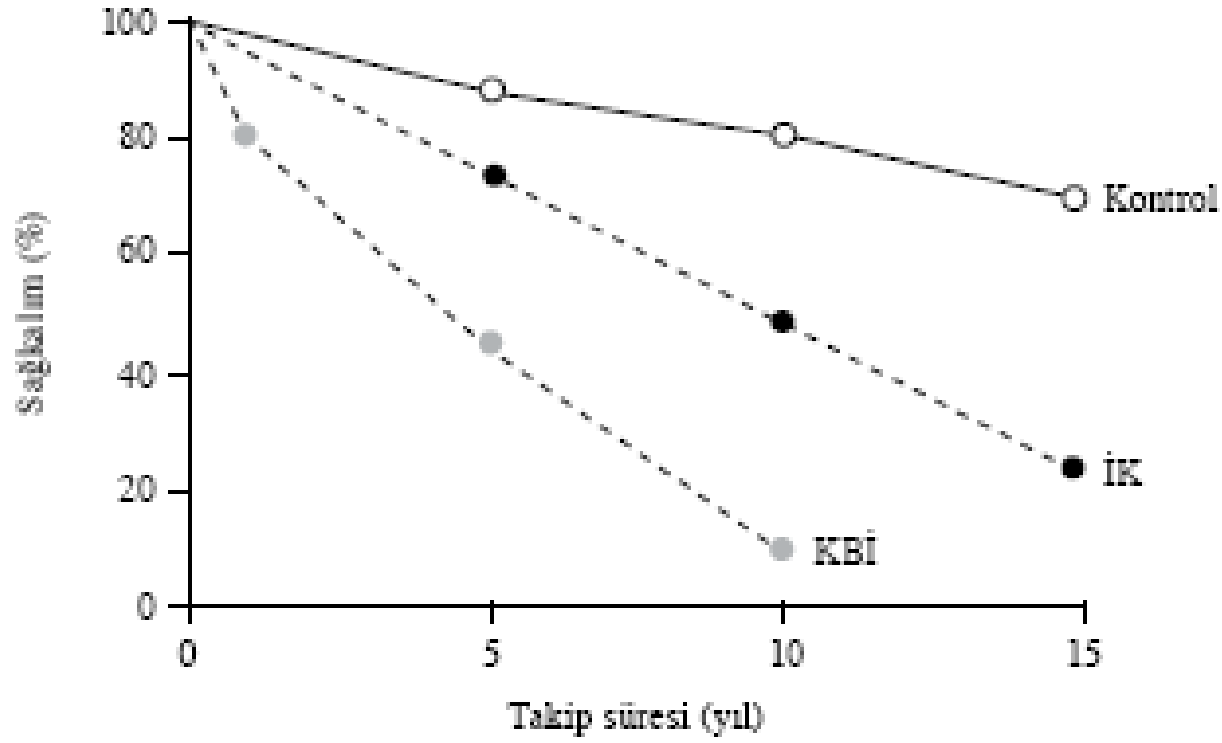
Kritik bacak iskemili hastalarda kardiyovasküler risk modifikasyonu

- a. Kritik bacak iskemisi olan tüm hastalar kardiyovasküler risk açısından değerlendirilmelidir (Güçlü öneri)*
- b. Kritik bacak iskemisi olan hastalara, kardiyovasküler risk faktörleri yönünden agresif tedavi yapılmalıdır (Çok güçlü öneri)*

Öneri C-3:

Kritik bacak iskemisinin klinik takibi

- a. Daha önceden KBİ tanısı konulmuş olan hastalar yüksek olasılıklı rekürrens ihtimaline karşı bir damar cerrahisi tarafından yılda iki kez değerlendirilmelidir (Zayıf öneri)*
- b. Risk altındaki tüm hastalar KBİ'nin objektif bulguları açısından düzenli ayak muayenesinden geçirilmelidir (Güçlü öneri)*



Kritik bacak iskemisi istirahat halinde bile arteriyel akım yetersizliđi nedeni ile dokuların kronik olarak yetersiz beslenmesi durumu olup, iskemik istirahat ağrısı, iskemik cilt lezyonları, ve 2 haftadan daha fazla sürede iyileşmeyen ülser veya gangreni olan hastaları tanımlar

Kritik bacak iskemisi

ayak bileği basıncının 50 mmHg,

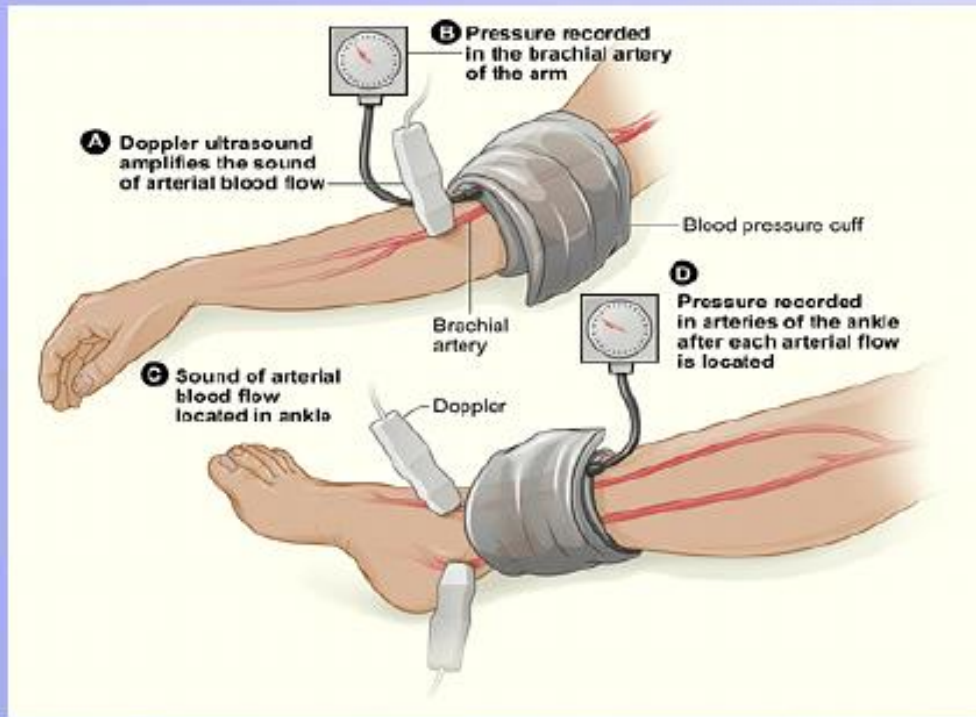
ayak baş parmağı basıncının 30 mmHg'nin
altında

veya AKİ <0.4 olduğu tablo olarak tanımlanır.

Fontaine		Rutherford		
Evre	Klinik	Evre	Kategori	Klinik
I	Aseptomatik	0	0	Aseptomatik
IIa	Hafif Klodikasyon	I	1	Hafif klodikasyon
IIb	Orta-Ciddi Klodikasyon	I	2	Orta klodikasyon
		I	3	Ciddi klodikasyon
III	İstirahat ağrısı	II	4	İskemik istirahat ağrısı
IV	Ülserasyon veya gangren	III	5	Minör doku kaybı
		IV	6	Major doku kaybı

Ayak Bileği / Kol İndeksi (ABI)

- 0,9-1,2 : Normal
- 0,7-0,89 : Hafif damar hastalığı
- 0,4-0,69 : Orta damar hastalığı
- 0,4> : Şiddetli damar hastalığı



ABI'de Değerlendirme

İstirahat ABI	Hastalığın şiddeti
> 1.4	Kalsifikasyon bulunabilir
> 1.0	Muhtemelen arteriyel hastalık yok
0.81-1.00	Belirgin arteriyel hastalık yok, veya hafif/belirgin olmayan hastalık var
0.5-0.80	Orta derecede hastalık
< 0.5	Şiddetli hastalık
< 0.3	Kritik iskemi

Component	Score	Description
W (Wound)	0	No ulcer (ischaemic rest pain)
	1	Small, shallow ulcer on distal leg or foot without gangrene
	2	Deeper ulcer with exposed bone, joint or tendon \pm gangrenous changes limited to toes
	3	Extensive deep ulcer, full thickness heel ulcer \pm calcaneal involvement \pm extensive gangrene
I (Ischaemia)		ABI Ankle pressure (mmHg) Toe pressure or TcPO ₂
	0	≥ 0.80 > 100 ≥ 60
	1	0.60–0.79 70–100 40–59
	2	0.40–0.59 50–70 30–39
	3	< 0.40 < 50 < 30
fi (foot Infection)	0	No symptoms/signs of infection
	1	Local infection involving only skin and subcutaneous tissue
	2	Local infection involving deeper than skin/subcutaneous tissue
	3	Systemic inflammatory response syndrome

Component	Score	Description		
W (Wound)	0	No ulcer (ischaemic rest pain)		
	1	Small, shallow ulcer on distal leg or foot without gangrene		
	2	Deeper ulcer with exposed bone, joint or tendon ± gangrenous changes limited to toes		
	3	Extensive deep ulcer, full thickness heel ulcer ± calcaneal involvement ± extensive gangrene		
I (Ischaemia)		ABI	Ankle pressure (mmHg)	Toe pressure or TcPO ₂
	0	≥0.80	> 100	≥60
	1	0.60–0.79	70–100	40–59
	2	0.40–0.59	50–70	30–39
	3	<0.40	<50	<30
fl (foot Infection)	0	No symptoms/signs of infection		
	1	Local infection involving only skin and subcutaneous tissue		
	2	Local infection involving deeper than skin/subcutaneous tissue		
	3	Systemic inflammatory response syndrome		

65 yaşında erkek hasta

DM +

Ayak başparmağında gangrenöz yara ve selülit benzeri tablo

Ayak başparmağı basıncı 30 mmHg

Sistemik enfeksiyon yok

Wound 2, Ischaemia 2, foot Infection 1 (Wlfl 2-2-1).

Yüksek amputasyon riski

Revaskülarize et, yara tedavisi, enfeksiyonla mücadele

- Kardiyovasküler ve serebrovasküler mortalite ve morbiditeyi azaltmak
- Ekstremiteyi kurtarmak
- Semptomları gidermek, yürüme kapasitesini artırmak ve yaşam kalitesini düzeltmek.

- Risk faktörlerinin kontrolü
- Egzersiz tedavisi
- “Antiplatelet” tedavi
- Semptomlara yönelik medikal tedavi
- Revaskülarizasyon

1- açık cerrahi ustaları

2- açık cerrahiyi kullanmalarına rağmen
endovasküler tedavi ve hibrid tedaviyi
seven grup

3- her ne koşulda olsun “önce
endovasküler” diyenler

Hangisi doğru?

Literatür?

Bypass versus angioplasty in severe ischaemia of the leg (BASIL): multicentre, randomised controlled trial

*BASIL trial participants**

Lancet 2005

27 İngiliz hastanesinden 452 hasta

İnfrainguinal

Primary endpoint = amputasyon

5.5 yıl

228 hastanın 195 (86%)i bypass cerrahisi ve 224 hastanın 216 (96%) sı balon anjioplasti

1yıl sonunda

248 (55%) hasta amputasyonsuz hayatta,

38 (8%) hasta amputasyona hayatta

36 (8%) hasta amputasyon sonrası exitus

130 (29%) hasta amputasyon olmadan exitus

İki yöntem kıyaslandığında Amputasyon free survival açısından anlamlı fark yok

İlk 1 yıl sonunda cerrahi maliyet daha pahalı

Ancak şüpheler mevcut

Randomizasyonu etkileyen faktörler

Hasta seçimi rol oynamış,

Transluminal anjioplasti mi? Yoksa subintimal mi?

greft ven mi? PTFE mi?

Bypass versus Angioplasty in Severe Ischaemia of the Leg (BASIL) trial in perspective

Andrew W. Bradbury, BSc, MD, MBA, FRCSEd, on behalf of the BASIL trial Investigators and Participants, *Birmingham, United Kingdom*

2 yıldan daha az yaşam beklentisi olan hastalara endovasküler

2 yıldan daha fazla beklentisi olan hastalara cerrahi

Multidisciplinary teamwork. BASIL strongly suggests that the best outcomes for SLI are achieved when vascular surgeons and interventional radiologists work closely together with other professionals as part of a multidisciplinary team in specialized, high-volumes centers (<http://www.vascularsociety.org.uk/>).

Bypass versus Angioplasty in Severe Ischaemia of the Leg (BASIL) Trial: What Are Its Implications?

Andrew W. Bradbury, BSc, MD, MBA, FRCSEd

life. In the short-term, BSX was significantly more morbid and expensive. However, for those patients who survived for 2 years after randomization, initial randomization to a BSX-first strategy was associated with a significant increase in subsequent OS of about 7 months and a nonsignificant increase in subsequent AFS of about 6 months. Vein BSX

months and a nonsignificant increase in subsequent AFS of about 6 months. Vein BSX performed significantly better than prosthetic BSX in terms of AFS but not OS. For most patients BAP also appears preferable to prosthetic BSX. Patients who underwent BSX after a failed BAP-first strategy did not fare as well as those who received BSX as their first procedure. Patients who are expected to live less than 2 years should usually be offered BAP first, especially when the alternative is prosthetic BSX. Those expected to survive beyond this time horizon (approximately 75% of the BASIL cohort) should usually be offered BSX first, especially where vein is available. Further RCTs to confirm or refute these findings and recommendations are required.

Semin Vasc Surg 22:267-274 © 2009 Elsevier Inc. All rights reserved.

A Comparison of Outcomes in Patients with Infrapopliteal Disease Randomised to Vein Bypass or Plain Balloon Angioplasty in the Bypass vs. Angioplasty in Severe Ischaemia of the Leg (BASIL) Trial

M.A. Popplewell^{a,*}, H.O.B. Davies^a, J. Narayanswami^a, M. Renton^b, A. Sharp^b, G. Bate^a, S. Patel^c, J. Deeks^c, A.W. Bradbury^a

^a Department of Vascular Surgery, University of Birmingham, Birmingham, UK

^b Heart of England Foundation Trust, Birmingham, UK

^c Birmingham Clinical Trials Unit, University of Birmingham, Birmingham, UK

WHAT THIS PAPER ADDS

These data reconfirm the need for further publicly funded, unbiased, pragmatic randomised controlled trials, such as BASIL-2 and BEST-CLI, to compare the clinical and cost effectiveness of infra-popliteal vein bypass and best endovascular treatment in patients suitable for both interventions.

in the PBA group. There were no statistically significant differences in AFS or OS; however, clinically important trends were apparent in favour of a VB first strategy. Patients allocated to VB demonstrated significantly quicker relief of rest pain when compared with PBA ($p = .005$), but no significant differences in improved tissue healing. Median length of index hospital admission was significantly greater in the VB than in the PBA group (18 vs. 10 days, $p < .0001$) but there was no difference between the two groups in median total hospital stay between randomisation and the primary endpoint (VB 43.5 vs. PBA 42 days).

Conclusions: Further randomised trials, like BASIL-2 and BEST-CLI, are required to determine whether patients with severe limb ischaemia who require IP revascularisation and who are suitable for VB should have bypass or endovascular intervention as their primary revascularisation procedure.

A Comparison of Clinical Outcomes Between Primary Bypass and Secondary Bypass After Failed Plain Balloon Angioplasty in the Bypass versus Angioplasty for Severe Ischaemia of the Limb (BASIL) Trial

Lewis Meecham ^{a,*}, Smitaa Patel ^b, Gareth R. Bate ^a, Andrew W. Bradbury ^a

^a University Department of Vascular Surgery, Heart of England NHS Foundation Trust, UK

^b Birmingham Clinical Trials Unit, Birmingham University, UK

WHAT THIS PAPER ADDS

Angioplasty has been seen as a “free shot” at revascularisation of chronic limb threatening ischaemia. This work suggests that patients requiring secondary bypass after failed initial angioplasty do significantly worse than those who undergo primary bypass surgery.

Conclusion: In the BASIL trial, clinical outcomes following PB were significantly better than in patients undergoing SB after failed PBA. Prior to treating patients with CLTI with primary PBA, clinicians should consider that if this should fail, the outcome of attempted subsequent bypass is likely to be significantly worse than if PB were attempted.

STUDY PROTOCOL

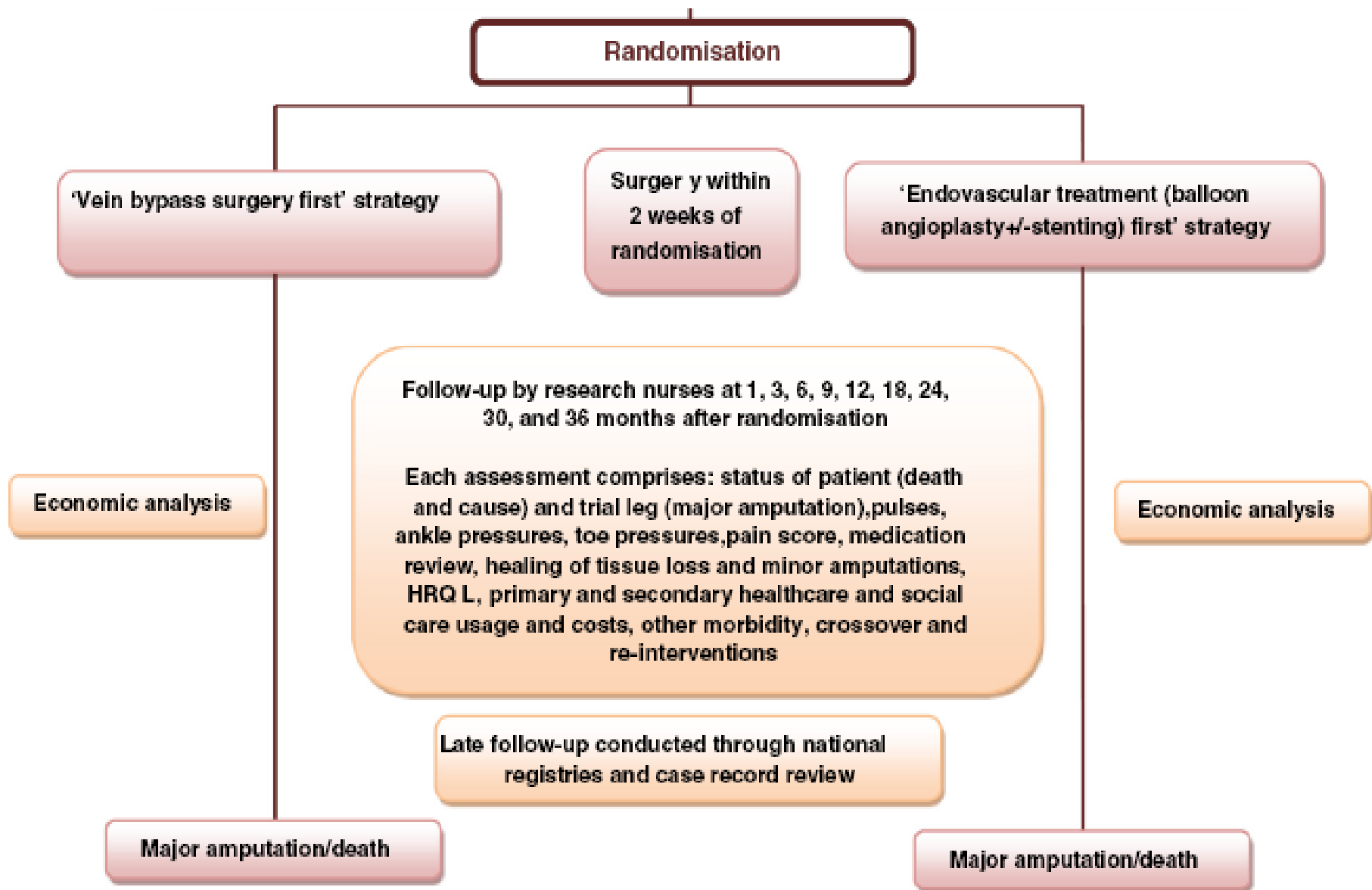
Open Access



Bypass versus angio plasty in severe ischaemia of the leg - 2 (BASIL-2) trial: study protocol for a randomised controlled trial

Matthew A. Popplewell^{1*}, Huw Davies¹, Hugh Jarrett², Gareth Bate¹, Margaret Grant², Smitaa Patel², Samir Mehta², Lazaros Andronis³, Tracy Roberts³, Jon Deeks², Andrew Bradbury¹ and on Behalf of the BASIL-2 Trial Investigators

Ven bypassı ile “en iyi endovasküler tedavi” kıyaslaması



Inclusion criteria

Have severe limb ischaemia due to infra-popliteal, +/- femoropopliteal disease

Be judged by responsible clinicians (consultant vascular surgeon, interventional radiologist, and diabetologists) working as part of a multi-disciplinary team to require early revascularisation in addition to best medical therapy, foot and wound care.

Have adequate inflow to support the randomised infra-popliteal intervention (if not, patients can be randomised to have their allocated infra-popliteal intervention at the same time or after the inflow procedure).

Be judged suitable for both vein bypass and best endovascular treatment following diagnostic imaging and a formal documented multi-disciplinary team meeting.

Exclusion criteria

Have an anticipated life expectancy of < 6 months

Are unable to provide consent due to incapacity

Are a non-English speaker where translation services are inadequate to provide informed consent

Are judged unsuitable for either revascularisation strategy by the responsible clinician

Tissue loss considered to be primarily of venous aetiology



Available online at www.sciencedirect.com

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The BEST-CLI trial: a multidisciplinary effort to assess whether surgical or endovascular therapy is better for patients with critical limb ischemia



Matthew T. Menard, MD^{a,*}, and Alik Farber, MD^b

^aDivision of Vascular and Endovascular Surgery, Brigham and Women's Hospital, Boston, MA 02115

^bDivision of Vascular and Endovascular Surgery, Boston Medical Center, Boston, MA 02118

Kuzey Amerika 120 merkez , 2100 hasta

Çift kohort design

1. Kohort 1620 hasta ve UYGUN SAFEN VEN
2. Kohort 480 hasta ve UYGUN OLMAYAN SAFEN VEN

	BASIL (65)	BASIL II	BEST-CLI (117)
Population	<ul style="list-style-type: none"> Rutherford classes IV, V, and VI due to infrainguinal disease 	<ul style="list-style-type: none"> Rutherford classes IV, V, and VI due to infrainguinal disease 	<ul style="list-style-type: none"> Rutherford classes IV, V, and VI due to infrainguinal disease
No. of patients	<ul style="list-style-type: none"> 452 patients 	<ul style="list-style-type: none"> Aims to recruit 600 patients 	<ul style="list-style-type: none"> Aims for 2,100 patients
Follow-up	<ul style="list-style-type: none"> Mean of 3.1 yrs 	<ul style="list-style-type: none"> Aims for a mean over 3 yrs 	<ul style="list-style-type: none"> From 2 to 4.2 yrs
Design	<ul style="list-style-type: none"> Bypass surgery or balloon angioplasty 	<ul style="list-style-type: none"> Saphenous vein bypass or any endovascular procedure 	<ul style="list-style-type: none"> Saphenous vein bypass vs. endovascular procedure, also smaller subset with PTFE
Primary endpoints	<ul style="list-style-type: none"> Time to major (above the ankle) limb amputation or death from any cause 	<ul style="list-style-type: none"> Time to major (above the ankle) limb amputation or death from any cause 	<ul style="list-style-type: none"> MALE (amputation above the ankle or major reintervention) or death from any cause
Results	<ul style="list-style-type: none"> No significant difference in short- or long-term between 2 approaches 	<ul style="list-style-type: none"> Not yet available 	<ul style="list-style-type: none"> Not yet available
Possible limitations	<ul style="list-style-type: none"> Selection bias with significant exclusions Angioplasty only Possibly underpowered Hemodynamic parameters not included Synthetic bypass included One-third of the patients were not included on antiplatelet agents and two-thirds were not on statin therapy Level of operator experience unknown 	<ul style="list-style-type: none"> Hemodynamic parameters not included Heterogeneity of endovascular options Operator experience unknown 	<ul style="list-style-type: none"> Broad heterogeneity of allowed endovascular revascularization options; defining the "best treatment" is left to each interventionist's discretion Operator experience No core laboratory adjudication for angiographic data

Endovascular Therapy Versus Bypass Surgery as First-Line Treatment Strategies for Critical Limb Ischemia

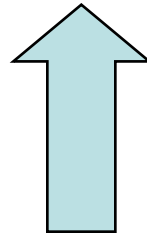
Results of the Interim Analysis of the CRITISCH Registry

Theodosios Bisdas, MD, PhD,^{a,b} Matthias Borowski, PhD,^c Konstantinos Stavroulakis, MD,^a Giovanni Torsello, MD,^{a,b} for the CRITISCH Collaborators

METHODS Between January 2013 and September 2014, 1,200 CLI patients (Rutherford 4 to 6) from 27 vascular centers were enrolled. The selection of the first-line treatment was left completely to the discretion of the responsible physician. The primary composite endpoint was amputation-free survival (AFS), that is, time to major amputation and/or death from any cause. A pre-specified interim analysis aimed at showing noninferiority of the endovascular therapy versus bypass surgery as to the hazard ratio (HR) of AFS (noninferiority bound = 1.33; interim α = 0.0058). Time-to-event analyses of major amputation, death, and the composite endpoint of reintervention and/or above-ankle amputation were also conducted.

RESULTS Endovascular therapy was applied to 642 (54%) and bypass surgery to 284 (24%) patients. Median follow-up time was 12 months in both groups. One-year AFS was 75% and 72%, respectively. The noninferiority of endovascular therapy versus bypass surgery for AFS was confirmed (HR: 0.91; upper bound of 1-sided (1 – 0.0058) confidence interval [CI]: 1.29; p = 0.003). An impact of the treatment strategy on time until death (HR: 1.14; 95% CI: 0.80 to 1.63; p = 0.453), major amputation (HR: 0.86; 95% CI: 0.56 to 1.30; p = 0.463), and reintervention and/or above-ankle amputation (HR: 0.89; 95% CI: 0.70 to 1.14; p = 0.348) was not observed.

KILAVUZLAR NE DİYOR?



2017 ESC Guidelines on the Diagnosis and Treatment of Peripheral Arterial Diseases, in collaboration with the European Society for Vascular Surgery (ESVS)

Document covering atherosclerotic disease of extracranial carotid and vertebral, mesenteric, renal, upper and lower extremity arteries

Endorsed by: the European Stroke Organization (ESO)

The Task Force for the Diagnosis and Treatment of Peripheral Arterial Diseases of the European Society of Cardiology (ESC) and of the European Society for Vascular Surgery (ESVS)

Authors/Task Force Members ^a, Victor Aboyans ^{*}, Jean-Baptiste Ricco ^{*}, Marie-Louise E.L. Bartelink, Martin Björck, Marianne Brodmann, Tina Cohnert, Jean-Philippe Collet, Martin Czerny, Marco De Carlo, Sebastian Debus, Christine Espinola-Klein, Thomas Kahan, Serge Kownator, Lucia Mazzolai, A. Ross Naylor, Marco Roffi, Joachim Röther, Muriel Sprynger, Michal Tendera, Gunnar Tepe, Maarit Venermo, Charalambos Vlachopoulos, Ileana Desormais

Recommendations	Class ^a	Level ^b
An endovascular-first strategy is recommended for short (i.e. <5 cm) occlusive lesions. ²⁹¹	I	C
In patients fit for surgery, aorto-(bi)femoral bypass should be considered in aorto-iliac occlusions. ^{281,292,293}	IIa	B
An endovascular-first strategy should be considered in long and/or bilateral lesions in patients with severe comorbidities. ^{288,294,295}	IIa	B
An endovascular-first strategy may be considered for aorto-iliac occlusive lesions if done by an experienced team and if it does not compromise subsequent surgical options. ^{76,281–283,286}	IIb	B
Primary stent implantation rather than provisional stenting should be considered. ^{294–296}	IIa	B
Open surgery should be considered in fit patients with an aortic occlusion extending up to the renal arteries.	IIa	C
In the case of ilio-femoral occlusive lesions, a hybrid procedure combining iliac stenting and femoral endarterectomy or bypass should be considered. ^{297–300}	IIa	C
Extra-anatomical bypass may be indicated for patients with no other alternatives for revascularization. ³⁰¹	IIb	C

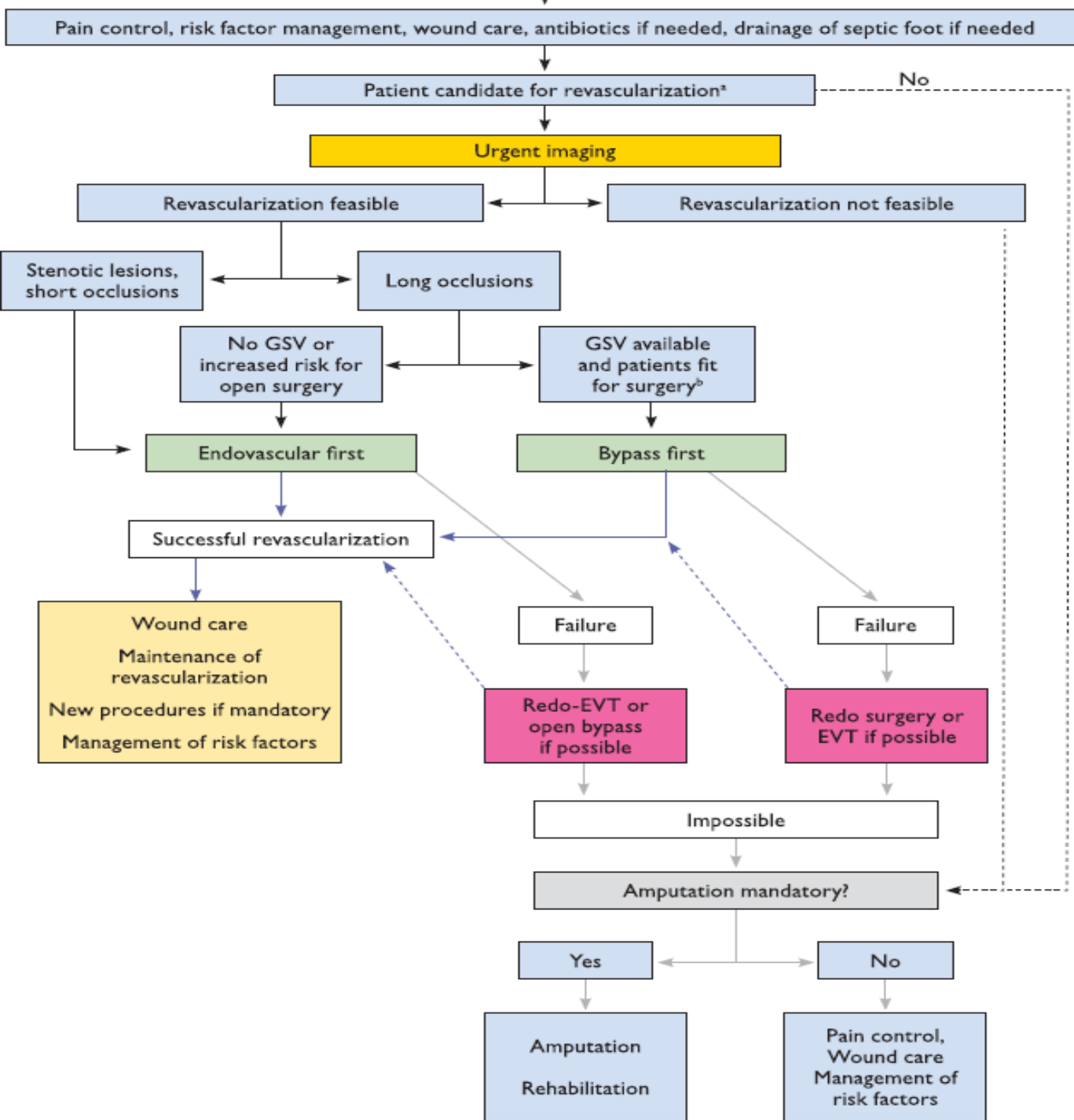
Recommendations on revascularization of femoro-popliteal occlusive lesions^c

Recommendations	Class ^a	Level ^b
An endovascular-first strategy is recommended in short (i.e. <25 cm) lesions. ^{302,303}	I	C
Primary stent implantation should be considered in short (i.e. <25 cm) lesions. ^{304,305}	IIa	A
Drug-eluting balloons may be considered in short (i.e. <25 cm) lesions. ^{77,306–310}	IIb	A
Drug-eluting stents may be considered for short (i.e. <25 cm) lesions. ^{302,303,311}	IIb	B
Drug-eluting balloons may be considered for the treatment of in-stent restenosis. ^{312,313}	IIb	B
In patients who are not at high risk for surgery, bypass surgery is indicated for long (i.e. ≥25 cm) superficial femoral artery lesions when an autologous vein is available and life expectancy is >2 years. ³¹⁴	I	B
The autologous saphenous vein is the conduit of choice for femoro-popliteal bypass. ^{284,315}	I	A
When above-the-knee bypass is indicated, the use of a prosthetic conduit should be considered in the absence of any autologous saphenous vein. ²⁸⁴	IIa	A
In patients unfit for surgery, endovascular therapy may be considered in long (i.e. ≥25 cm) femoro-popliteal lesions. ³¹²	IIb	C

Recommendations on revascularization of infra-popliteal occlusive lesions

Recommendations	Class ^a	Level ^b
In the case of CLTI, infra-popliteal revascularization is indicated for limb salvage. ^{320–326}	I	C
For revascularization of infra-popliteal arteries:		
• bypass using the great saphenous vein is indicated	I	A
• endovascular therapy should be considered. ^{320–326}	IIa	B

CLTI = chronic limb threatening ischaemia



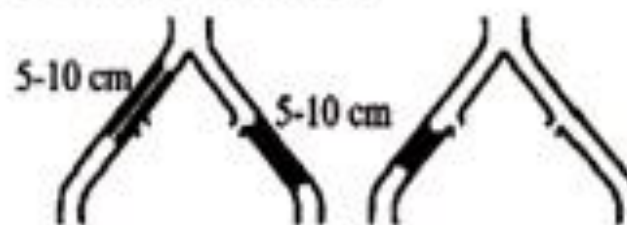
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Endovascular treatment of choice



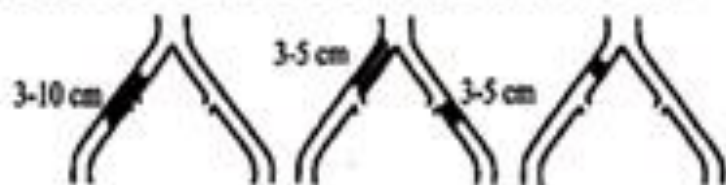
Type C

Currently, surgery treatment is more often used but insufficient evidence for recommendation



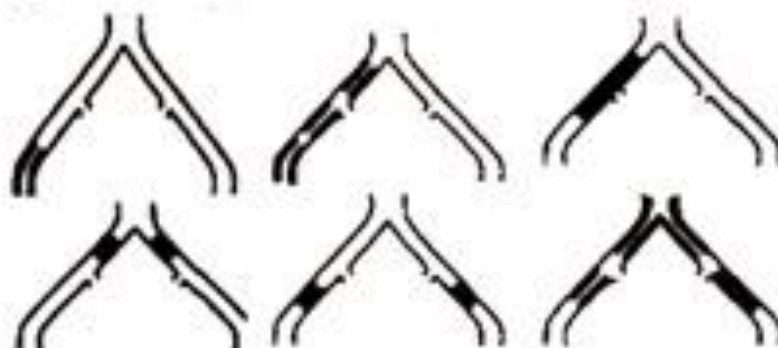
Type B

Currently, endovascular treatment is more often used but insufficient evidence for recommendation



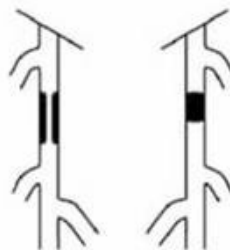
Type D

Surgical treatment of choice



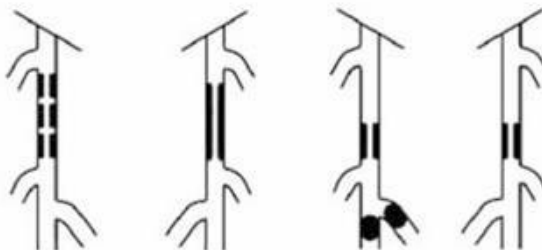
Type A Lesions

- Single Stenosis ≤ 10 cm in Length
- Single Occlusion ≤ 5 cm in Length



Type B Lesions

- Multiple Lesions (Stenoses or Occlusions), Each ≤ 5 cm
- Single Stenosis or Occlusions ≤ 15 cm Not Involving the Infrageniculate Popliteal Artery
- Single or Multiple Lesions in the Absence of continuous Tibial Vessels to Improve Inflow for a Distal Bypass
- Heavily Calcified Occlusion ≤ 5 cm in Length
- Single Popliteal Stenosis



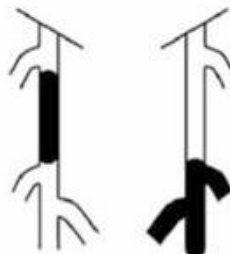
Type C Lesions

- Multiple Stenoses or Occlusions Totaling >15 cm With or Without Heavy Calcification
- Recurrent Stenoses or Occlusions That Need Treatment After 2 Endovascular Interventions



Type D Lesions

- Chronic Total Occlusions of CFA or SFA (>20 cm, Involving the Popliteal Artery)
- Chronic Total Occlusion of Popliteal Artery and Proximal Trifurcation Vessels



BAŞKENT DENEYİMİ



BAŞKENT ÜNİVERSİT

- 2008-2017
- 287 hasta istirahat ağrısı, ülser, nekroz
- Ort. Yaş 68.7
- 216 hastaya revaskülarizasyon
- 33 hasta primer amputasyon

DM	KBY	DM+KBY	İm1
114	54	21	

27 hastada DM veya KBY yok



BAŞKENT ÜNİVERSİTESİ

AÇIK CERRAHİ 101 hasta

Aortobifemoral bypass: 4 hasta

İliofemoral bypass : 7 hasta (4 hastaya endovasküler infrapopliteal girişim)

Femoral endarterektomi : 4 hasta (3 hastaya endovasküler infrapopliteal girişim)

Femoro femoral crossover bypass: 3 hasta

Axillo-unifemoral bypass:1 hasta

Suprapopliteal femoropopliteal bypass: 49 hasta (14 hastaya crural endovasküler girişim, 8 hastaya iliak artere girişim)

Femoro-crural bypass: 22 hasta (5 hastaya iliak artere girişim)

Popliteopedal bypass: 11 hasta

34 hasta hibrid

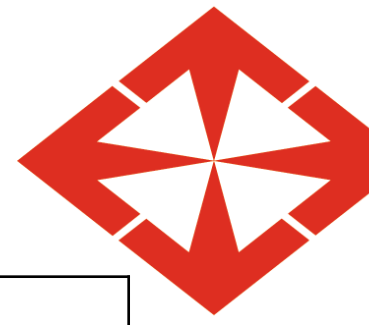


BAŞKENT ÜNİVERSİTESİ

ENDOVASKÜLER 115 hasta

59 hastaya iliak artere girişim (hepsine iliak stent) ve diz altı balon

56 hastaya endovasküler infrapopliteal girişim

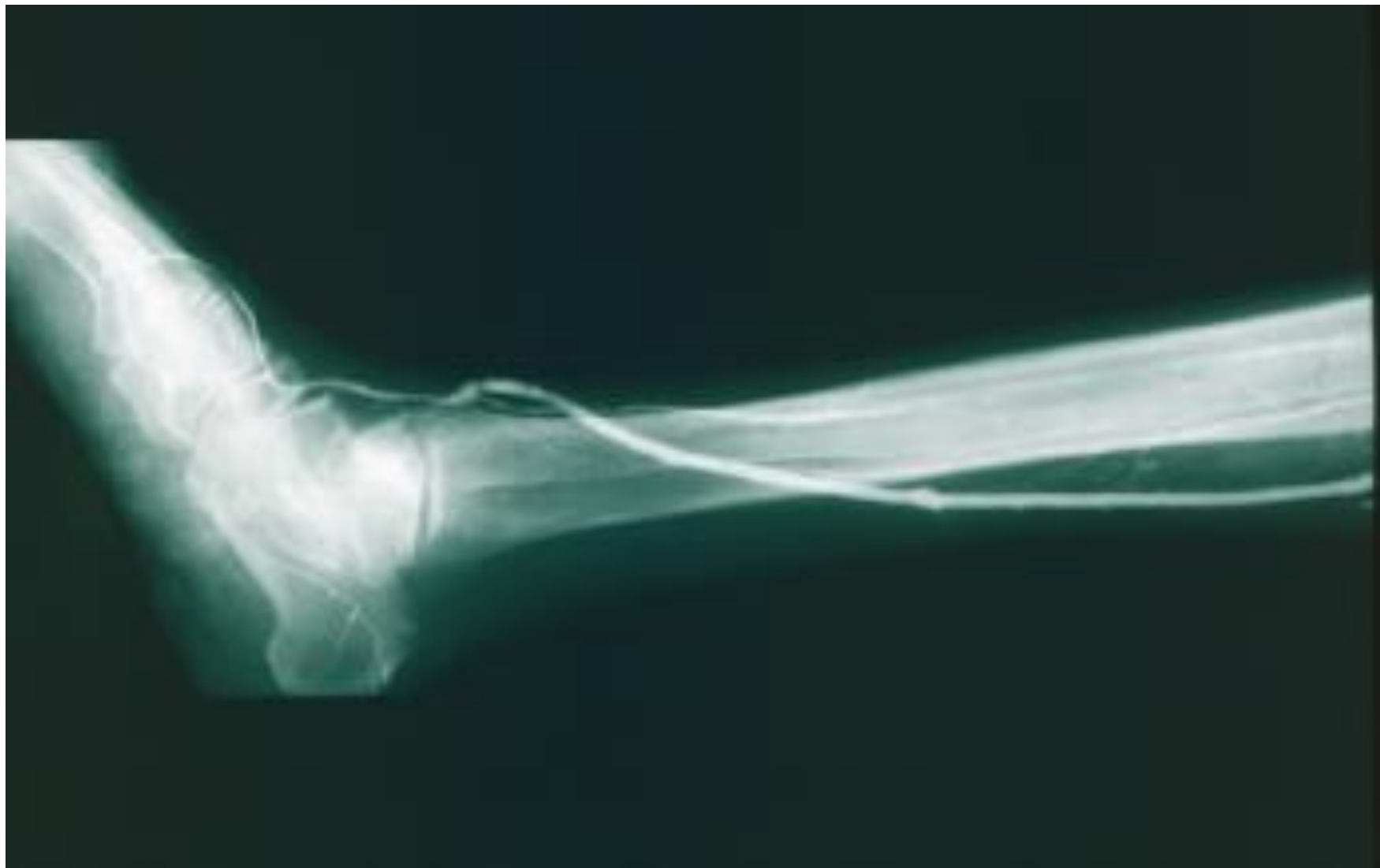


BAŞKENT ÜNİVERSİ

	CERRAHİ	ENDOVASKÜLER
KBY	23 hasta (%22.7)	31 hasta (%26.9)
DM	63 hasta (%62.3)	51 hasta (%44.3)
KBY +DM	8 hasta (%7.9)	13 hasta (%11.3)
Yaş	67.4 ± 11.2	65.1 ± 9.8
greft ve flap	18 hasta (%17.8)	22 hasta (%19.1)
HBO 1	14 hasta (%13.8)	17 hasta (14.7)
EGF	9 hasta (%8.9)	13 hasta (%11.3)
Koroner arter hastalığı	17 hasta (%16.8)	24 hasta (20.8)



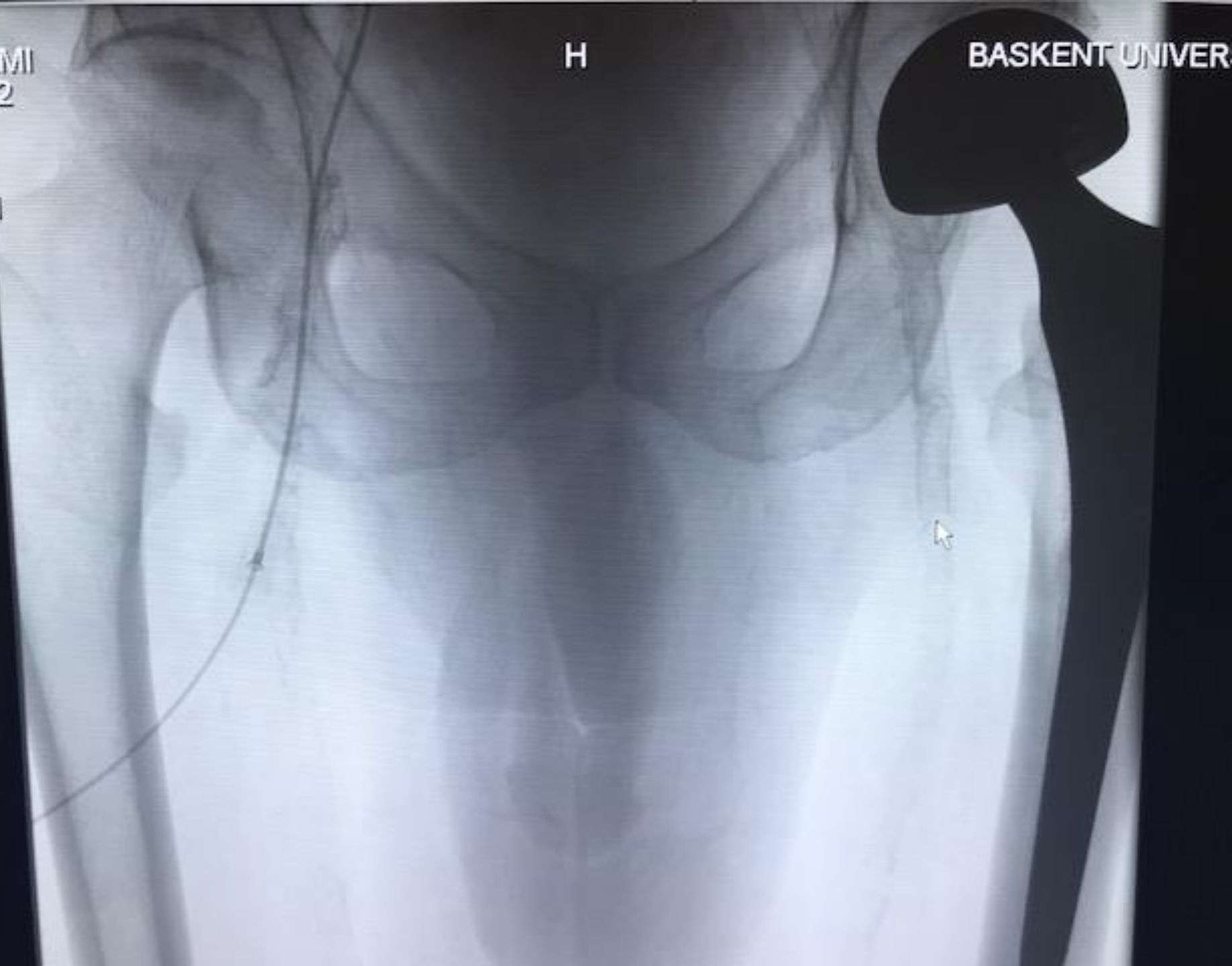


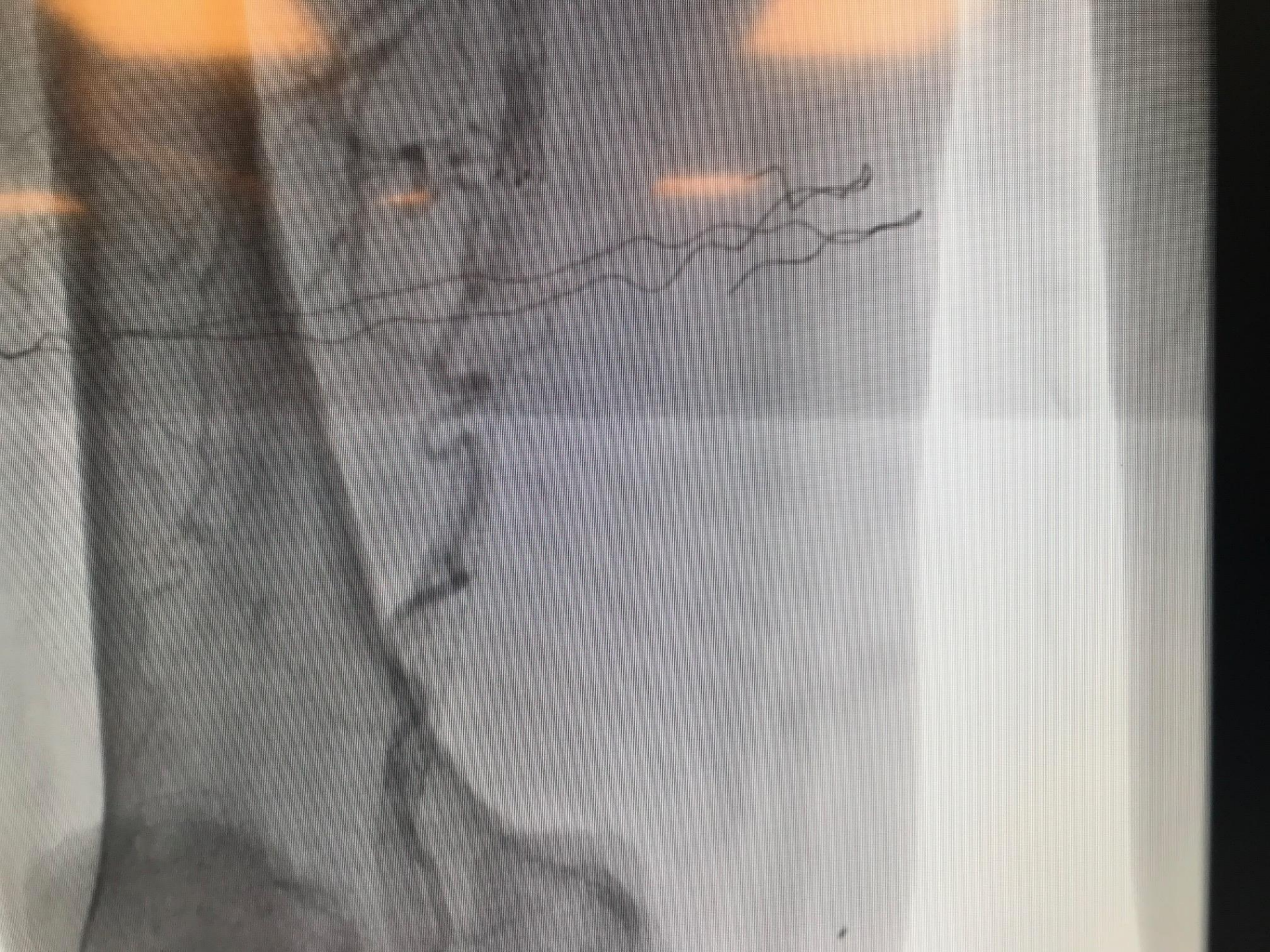


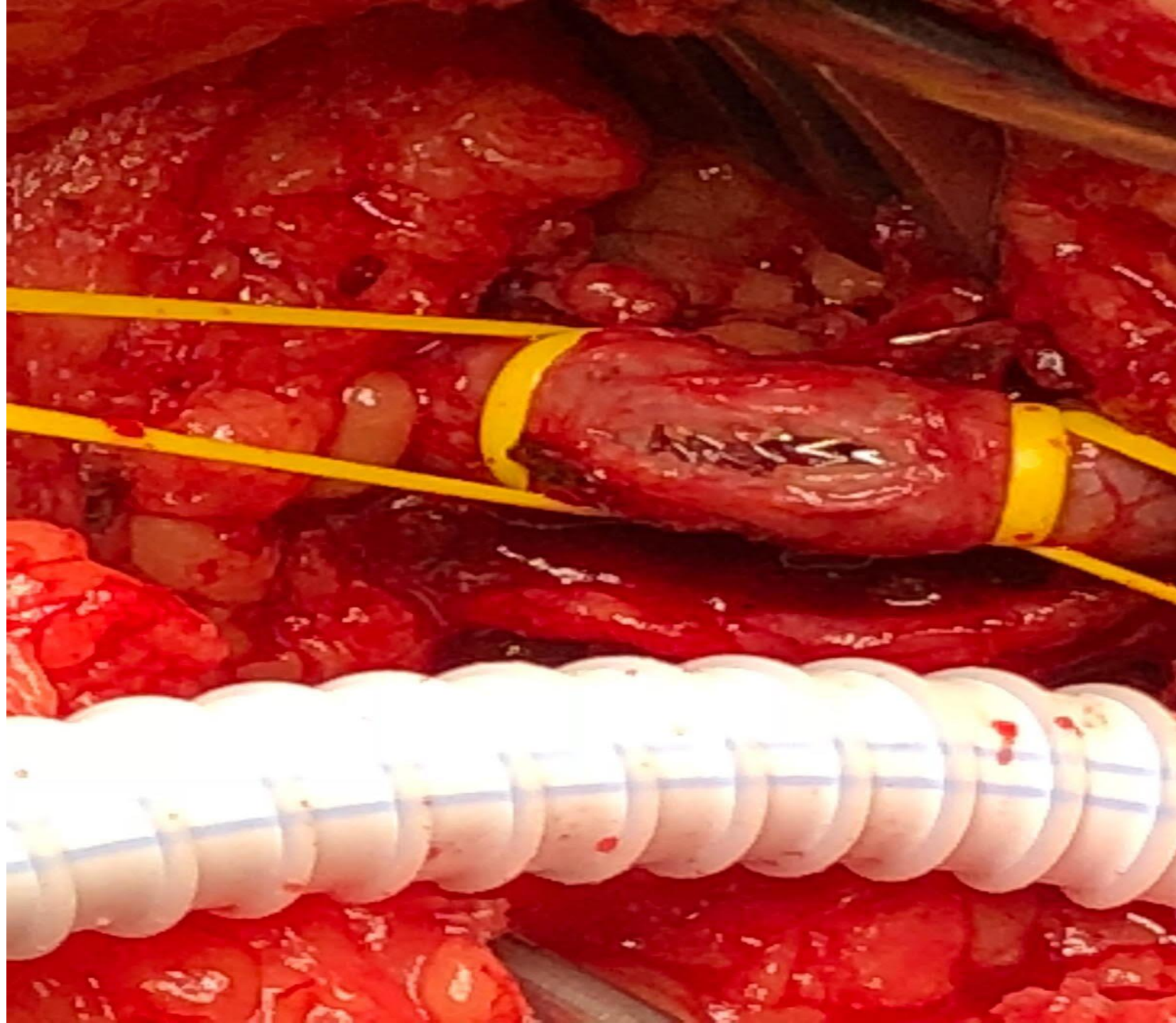


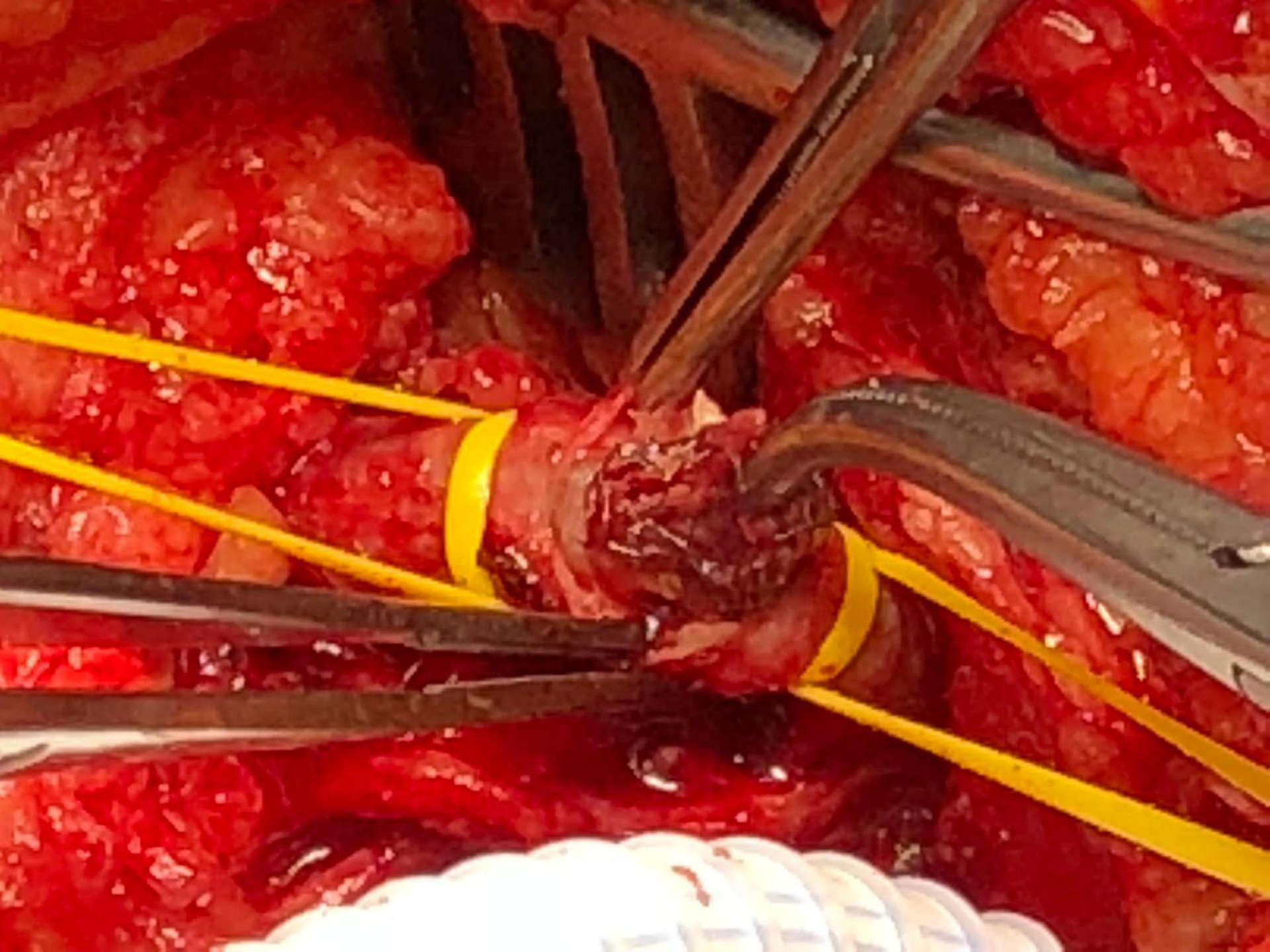


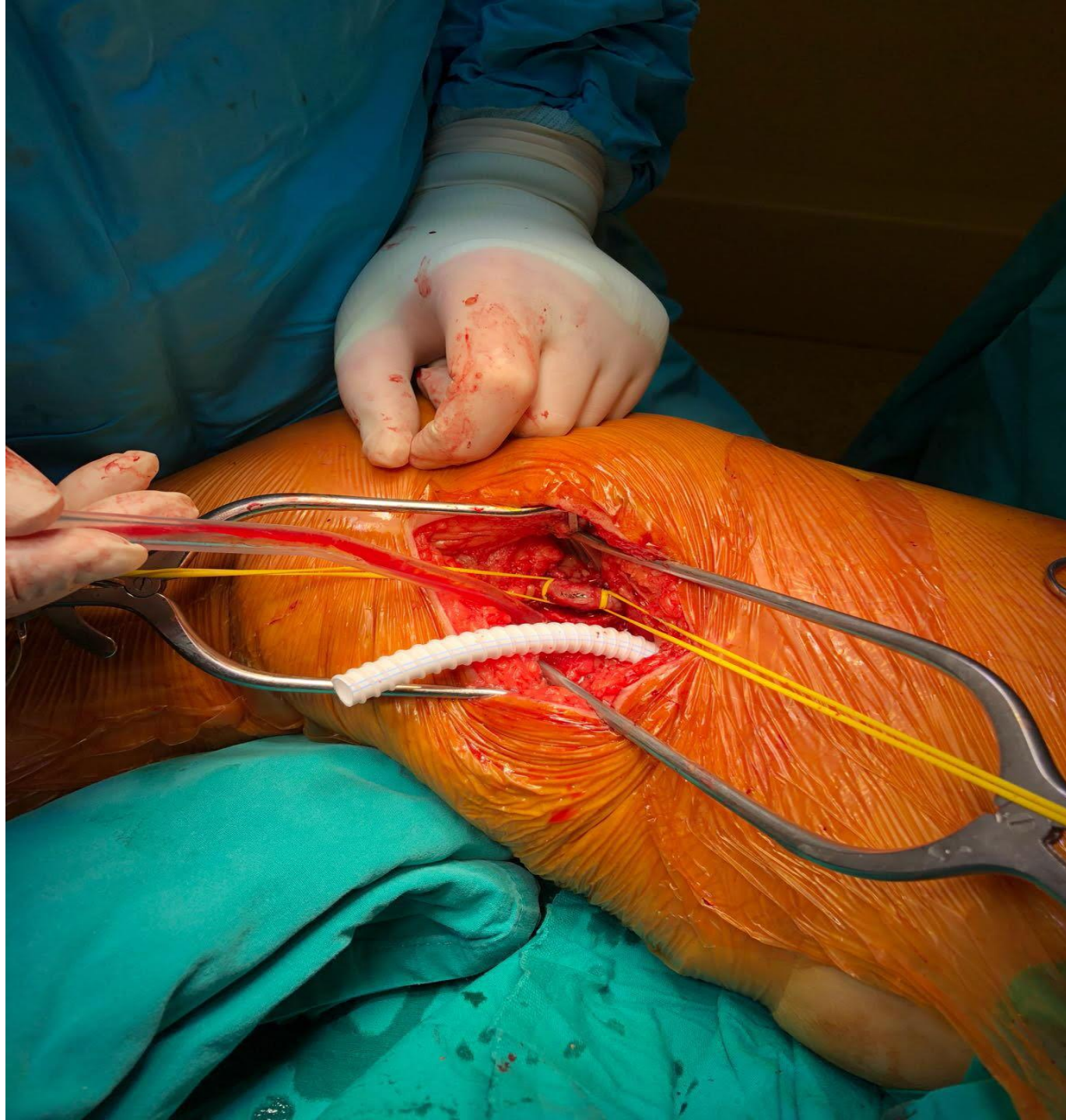








































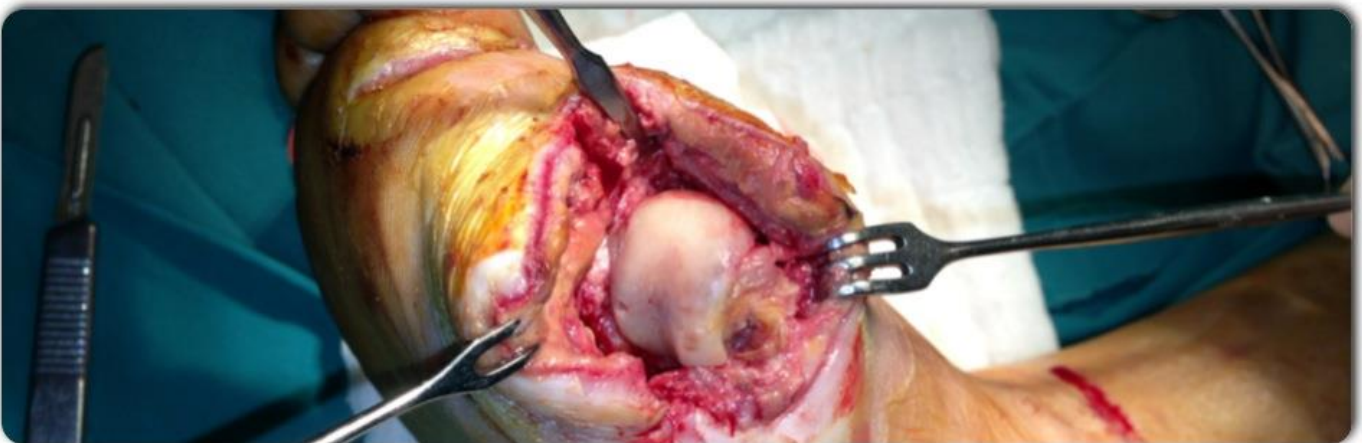














BAŞKENT ÜNİVERSİ

	CERRAHİ (101)	ENDOVASKÜLER (115)
Geç Mortalite	7 hasta (%6.9)	9 hasta (%7.8)
Geç dönem Amputasyon	14 hasta (%13.8)	21 hasta (%18.2)



BAŞKENT ÜNİVERSİTESİ

Yatış süreleri arasında fark yok (24- 71 gün)

Takip süresi 34.3 ± 5 ay

Hastane mortalitesi cerrahi grupta 3 hasta

Endovasküler grupta 2 hasta

Cerrahi grupta geç mortalite 7 hasta

Endovasküler grupta 9 hasta

Amputasyon yapılmadan sağkalım cerrahi grupta 1, 2 ve 3. yılda

%82, % 78 ve %75

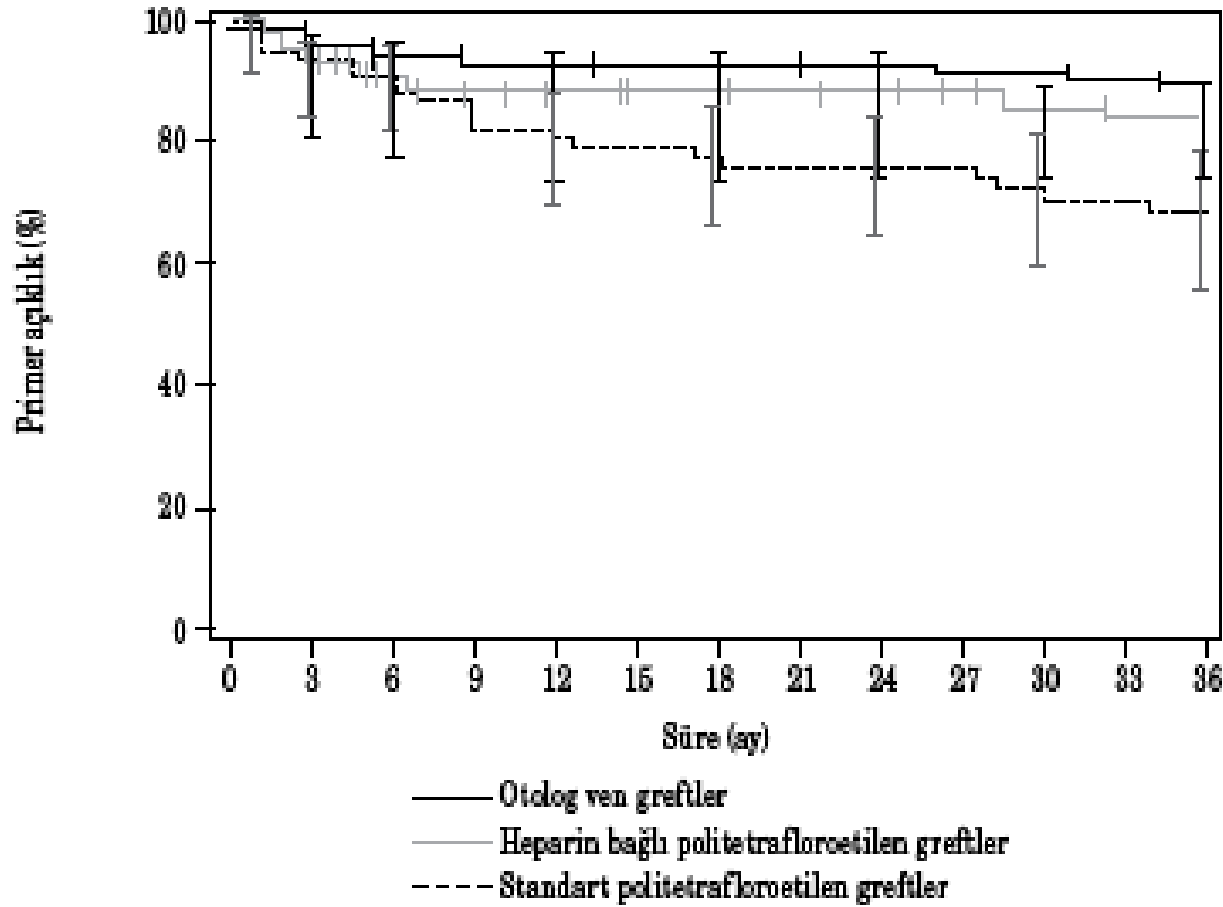
Geç dönem Amputasyon yapılmadan sağkalım endovasküler grupta 1, 2 ve 3. yılda

%85, % 79 ve %68

Endovaskülerde, ikinci girişim daha fazla (%12 vs % 5.9)



BAŞKENT ÜNİVERSİTESİ



Ne deđiřti?

**Diz altındaki 3 arterden birinin
revaskülarize edilmesi yeterli mi?**

Angiosom?

1: Post tibial A

4: Ant tibial A

5

Dorsalis Pedis A

2: Medial Plantar A

**3: Lateral
Plantar A**

1.

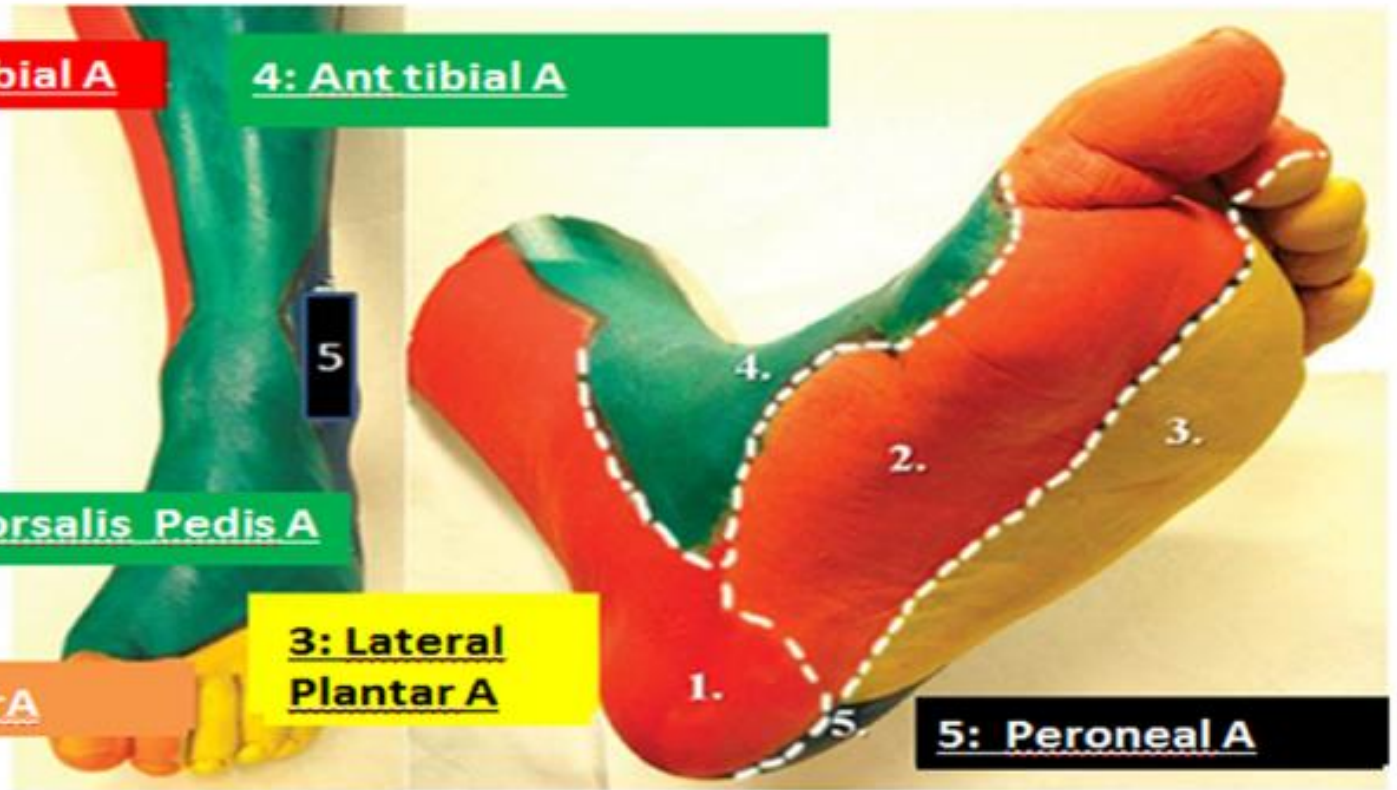
4.

2.

3.

5

5: Peroneal A



Surgical risk	Average (<5%)	High
Life expectancy	≥ 2 years	Limited
Severity of ischemia	Major tissue loss	Minor ulcer
Anatomic pattern	Multi-level, TASC C/D	Single level TASC A/B/C
Vein availability	GSV or good quality alternative vein	Inadequate vein
	↓	↓
	BYPASS FAVORED	ENDO FAVORED (Or Hybrid)

Tekrar tekrar işlem ?

Böbrek koruma ve kompanse böbrek hastalığı?

Hastayı ameliyattan kurtarma kavramı?

Çok uzun yatış süresi

- Uzun tedavi ve takip süresi
- Yüksek nüks oranı
- Cerrahi yöntem
- Disiplinler arası koordinasyon zorluğu
- Maliyet?
- Rehabilitasyon

KVC

- Revaskülerizasyon
- Anjioplasti
- Endovasküler Tedavi

Dahiliye

- Endokrinoloji
- Nefroloji

Ortopedi

- Major Amputasyon

Enfeksiyon
Hastalıkları

- Osteomyelit
- Yara yeri enfeksiyonu



BAŞKENT ÜNİVERSİTESİ

