

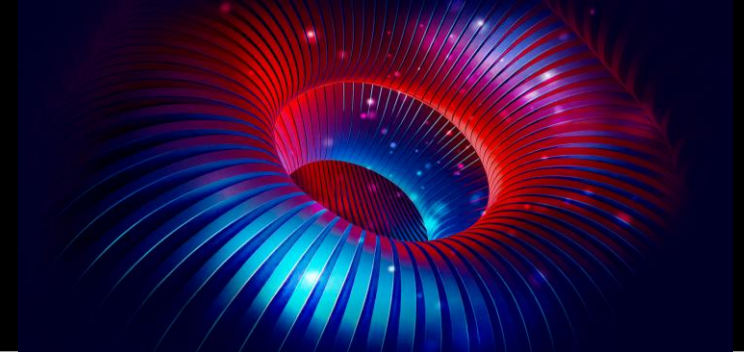
ciw

WORLD

CHALLENGES & INNOVATIONS IN VASCULAR WORLD

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

MÉRIDIEN ÉTOILE
PARIS



Stenting couvert des lésions iliaques externes : le gold standard ?

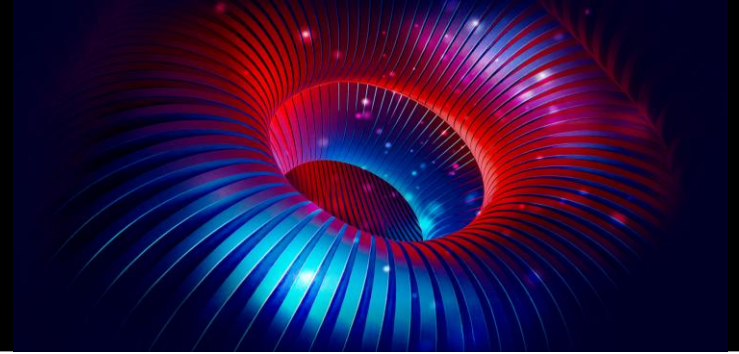
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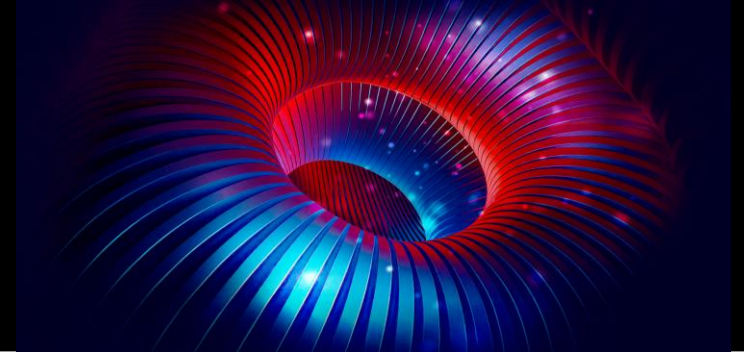


Conflits et liens d'intérêts



- **GE Healthcare, speaker & consulting fees**
- **Cookmedical, speaker & consulting fees, travel expenses, research grant**
- **WL GORE, travel expenses, research grant**
- **ABBOTTVASCULAR, consulting fees**
- **BSCI, consulting fees**

Context



- **Prevalence of Iliac atheromatous lesions: approximately 25-30%***

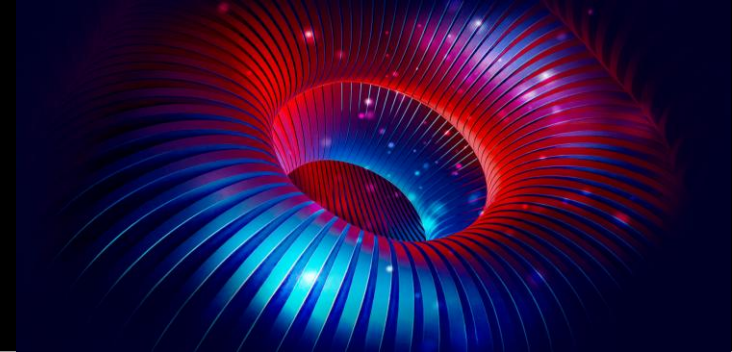
Tortuous anatomy

Hypogastric patency

CFA lesions

Currently, **no clear guidelines** exist to guide the choice of endovascular devices in treating iliac occlusions

Literature insights



Aortobifemoral bypass vs covered endovascular reconstruction of aortic bifurcation

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ABSTRACT

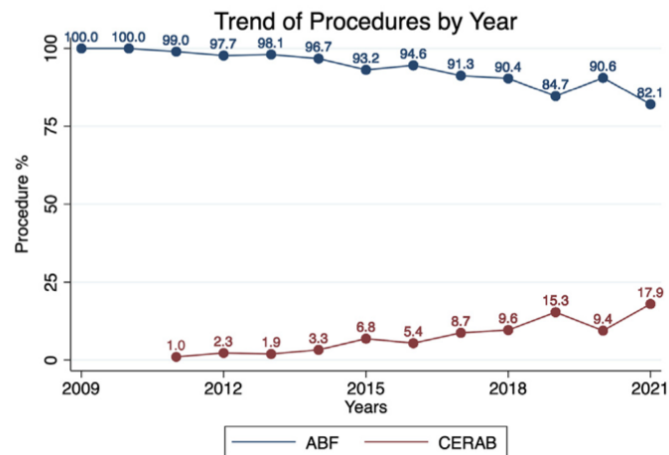
Background: Covered endovascular reconstruction of aortic bifurcation (CERAB) is increasingly used as a first line-treatment in patients with aortoiliac occlusive disease (AIOD). We sought to compare the outcomes of patients who underwent CERAB compared with the gold standard of aortobifemoral bypass (ABF).

Methods: The Vascular Quality Initiative was queried for patients who underwent ABF or CERAB from 2009 to 2021. Propensity scores were generated using demographics, comorbidities, Rutherford class, and urgency. The two groups were matched using 5-to-1 nearest-neighbor match. Our primary outcomes were 1-year estimates of primary patency, major adverse limb events (MALEs), MALE-free survival, reintervention-free survival, and amputation-free survival. Standard statistical methods were used.

Results: A total of 3944 ABF and 281 CERAB were included. The ABF group was significantly younger (64.7 vs 60.2; $P < .001$), had a higher proportion of females (11.1% vs 0.3%; $P = .03$). In the matched analysis, the ABF group had significantly higher primary patency rates (98.3% [$\pm 0.9\%$] vs 96.6% [$\pm 0.9\%$]; $P = .001$), significantly lower MALE rates (1.8% vs 6.6%; $P = .01$), significantly lower reintervention rates (1.8% vs 10.3%; $P = .001$), significantly lower amputation rates (1.8% vs 10.3%; $P = .001$), significantly lower length of stay (1 vs 7 days; $P < .001$), and significantly lower 30-day mortality (1.8% vs 10.3%; $P = .001$).

Conclusions: CERAB had lower rates of reintervention and amputation. However, patients who underwent CERAB were significantly older. Although CERAB is an effective treatment for AIOD, the outcomes of CERAB compared with ABF are inferior.

Keywords: Covered endovascular reconstruction of aortic bifurcation; aortobifemoral bypass; Major adverse limb events; Primary patency



Design

Vascular Quality Initiative database: **3944 ABF vs 281 CERAB**

Propensity-matched analysis (**229 CERAB vs 929 ABF**)

Key Results (1 year)

Primary patency → 98.3% (ABF) vs 96.6% (CERAB)

MALE-free survival → 93.2% vs 83.2% (favoring ABF, $p < 0.001$)

Reintervention-free survival → 92.9% vs 62.5% ($p < 0.001$)

Length of stay → 1 vs 7 days (CERAB vs ABF)

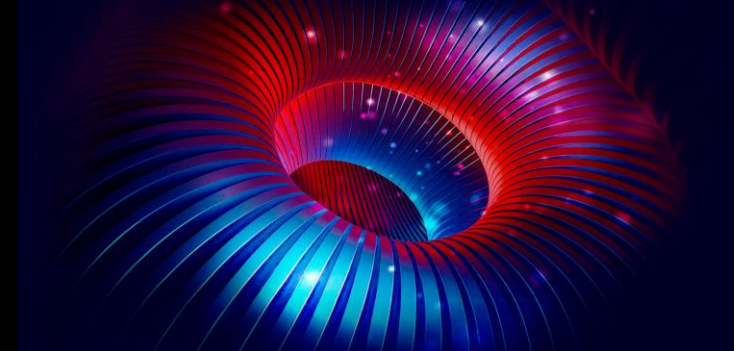
Complications (CERAB lower) Pulmonary Renal Cardiac

Take-Home Message

→ CERAB = similar patency with lower perioperative morbidity

→ BUT higher reintervention and MALE rates

Literature insights



Review

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Sage

Treatment Options for TASC II C and D Aorto-iliac Occlusive Disease: A Systematic Review and Network Meta-analysis

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Abstract
Objective: To comprehensively clarify various treatment options for Trans-Atlantic Inter-Society Consensus (TASC) II C and D aorto-iliac occlusive disease (AIOD) through network meta-analysis (NMA), thus offering in-depth perspectives for clinical decision-making. **Methods:** A systematic literature search of PubMed, Embase, Cochrane Library, and Web of Science was performed to identify controlled studies of operative treatment for AIOD. After quality assessment of the included studies, an NMA was performed using Stata software for primary outcomes: primary patency rate (1, 2, 3, and 5 years), and secondary outcomes: early postoperative mortality and perioperative complication rates. This study was prospectively registered in PROSPERO (ID: CRD42024535252). **Results:** Fifteen studies involving 7 surgical treatments were included aorto-femoral bypass (AoFB), axillofemoral bypass (AxFB), femoral-femoral bypass (FFB), aorto-iliac bypass (AIB), kissing covered stent (KS), covered endovascular reconstruction of aortic bifurcation (CERAB), and hybrid surgery. Results of the NMA indicated that compared with AoFB, CERAB had a comparable 1-, 2-, 3-, and 5-year postoperative primary patency rates. The AxFB yielded the lowest 1-year (odds ratio [OR]=0.31, 95% confidence interval [CI]=0.14-0.71) postoperative primary patency rates, and the same trend was maintained at 2-year (OR=0.29, 95% CI=0.15-0.56) and 3-year (OR=0.31, 95% CI=0.14-0.68) post-operation. Surface under the cumulative ranking curve (SUCRA) analysis ranked CERAB the highest for the 2-, 3- and 5-year postoperative primary patency rates (75.9% vs 91.9% vs 87.8%), with AxFB ranking the lowest (7% vs 19.5% vs 22.7%). The AxFB (77.8%) had the highest incidence of perioperative complications, followed by AIB (75.3%), with CERAB (3.7%) ranking the lowest. **Conclusion:** For patients with TASC II C and D AIOD, CERAB demonstrated a comparable durability in primary patency rates with AoFB and fewer perioperative complications than other interventions. The AxFB demonstrated the lowest postoperative primary patency rates and the highest incidence of perioperative complications. However, the mentioned limitations necessitate high-quality research to verify these findings.

Design

Network meta-analysis of **15 studies**

Compared **7 strategies in TASC C/D:** AoFB, CERAB, kissing stents, hybrid, AxFB, FFB, AIB

Key Results

CERAB vs AoFB → Comparable primary patency at **1, 2, 3, and 5 years**

SUCRA* ranking → CERAB highest for patency (**~76–92% across timepoints**)

Axillofemoral bypass → Worst patency (OR ~0.29–0.31 vs AoFB)

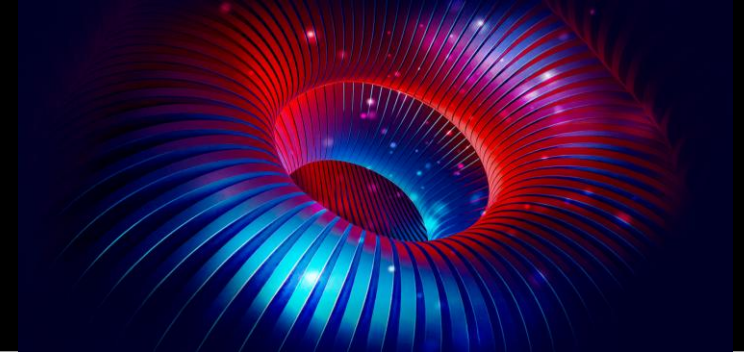
Perioperative complications → CERAB lowest (**3.7%**) vs AxFB highest (**77.8%**)

Take-Home Message

→ **CERAB achieves surgical-like durability with lower morbidity**

→ **Endovascular reconstruction is a strong alternative in TASC C/D**

Literature insights



Durability of the balloon-expandable covered versus bare-metal stents in the Covered versus Balloon Expandable Stent Trial (COBEST) for the treatment of aortoiliac occlusive disease

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Objective: The Covered vs Balloon Expandable Stent Trial (COBEST) is the first multicenter trial to investigate the patency of covered stents (CSs) and bare-metal stents (BMSs) in the treatment of aortoiliac arterial disease. The short-term results demonstrated that CSs were superior to BMSs in maintaining patency for TransAtlantic Inter-Society Consensus (TASC) C and D lesions at 18 months and were equivalent to BMSs for TASC B lesions. The current study was conducted to determine if the initial patency advantage of CSs over BMSs was sustained at the 5-year follow-up.

Methods: A retrospective post hoc analysis of COBEST was performed. Originally, 125 patients with 168 iliac arteries were prospectively enrolled and randomly assigned to receive a CS or BMS. In this study, 77 of the 125 patients (61.6%; 119 limbs) were assessed at 60 months for the primary and secondary end points, with particular attention paid to the outcomes stratified according to TASC lesion severity. The primary end point was the rate of binary stenosis or freedom from stent occlusion of the treated area, as determined by ultrasound imaging or quantitative visual angiography.

Results: The 5-year results of the COBEST showed that the CS had a significantly higher patency rate than the BMS at 18, 24, 48, and 60 months (95.1%, 82.1%, 79.9%, 74.7% for CS vs 73.9%, 70.9%, 63% and 62.5% for BMS; log-rank test, $P = .01$). On multivariate analysis, the type of stent used (hazard ratio [HR], 2.797; 95% confidence interval [CI], 1.471-5.318; $P = .002$) and the Rutherford classification (HR, 2.019; 95% CI, 1.278-3.191; $P = .026$) significantly affected the adjusted primary patency. On subgroup analysis, the CS showed significantly higher patency and a survival benefit compared with the BMS in TASC C and D lesions (HR, 8.639; 95% CI, 54.253-75.753; $P = .003$). Moreover, fewer patients received target limb revascularization in the CS group than in the BMS group (odds ratio, 2.32; 95% CI, 1.47-3.36; $P = .02$); however, there was no statistically significant difference in the rate of amputations between the groups.

Conclusions: The 5-year results of the COBEST demonstrated that the CS has an enduring patency advantage over the BMS in both the short and long terms. Furthermore, the CS showed acceptable patency rates for the treatment of more severe TASC C and D lesions, and patients who received a CS required fewer revascularization procedures. However, the choice of stent did not affect the rate of major limb amputations. (J Vasc Surg 2016;64:83-94.)

Design

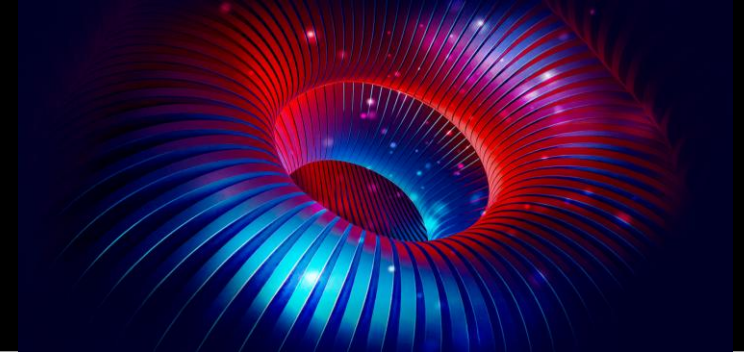
Long-term follow-up (5 years) – 50% TASC C/D
CS vs BMS in common iliac occlusive lesions +/- extensive
125 patients (168 iliacs) / 14 associated external iliac stenting

Key Results :

- **Primary patency at 5 years: → CS ~74% vs BMS ~63%**
- **No significant sex-based differences or TASC differences**

+ Mwipatayi et al. Vascular 2024

Literature insights



Cardiovasc Intervent Radiol (2023) 46:579–587
<https://doi.org/10.1007/s00270-023-03370-9>

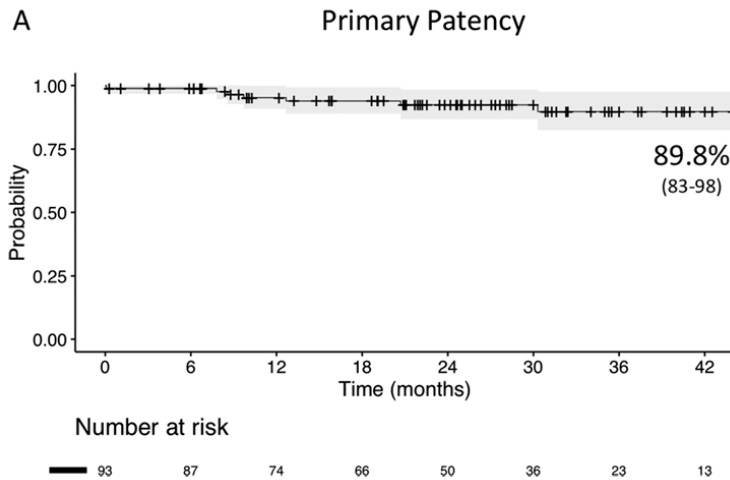


CLINICAL INVESTIGATION

ARTERIAL INTERVENTIONS

Outcomes of Self-Expanding Covered Stents for the Treatment of External ILIAC Artery Obstructive Disease

Francesco Squizzato¹ · Vicente Mosquera-Rey² · Amer Zannabi Al-Sibbai² · Lino Antonio Cambor Santervas² · Edoardo Pasqui³ · Giancarlo Palasciano³ · Gianmarco de Donato³ · Manuel Alonso Pérez² · Michele Antonello¹ · Michele Piazza¹



Design

Multicenter retrospective study (2015–2021)
93 patients,
Viabahn self-expanding covered stents (no propaten)
CIA lesions excluded
Majority **TASC C/D (72%)**

Key Results

- **51% of CFA endarterectomy**
- **Technical success: 100%**
- **Primary patency → 89.8% at ~3 years**
- **Complications → 6.5% procedural**
- **Predictors of failure → Stent diameter <8 mm**
- **No impact of tortuosity or calcification**

Take-Home Message

- Excellent mid-term outcomes of covered stents in EIA
- **Vessel diameter is a key determinant of patency**



Literature insights – hypogastric faith

Patency of the Internal Iliac Artery after Placement of Common and External Iliac Artery Stents

AVS 2017

Margie Vinogradova,¹ Hye Joon Lee,¹ Ehrin J. Armstrong,² John Laird,¹ and Misty D. Humphries,¹ Sacramento, California; Denver, Colorado

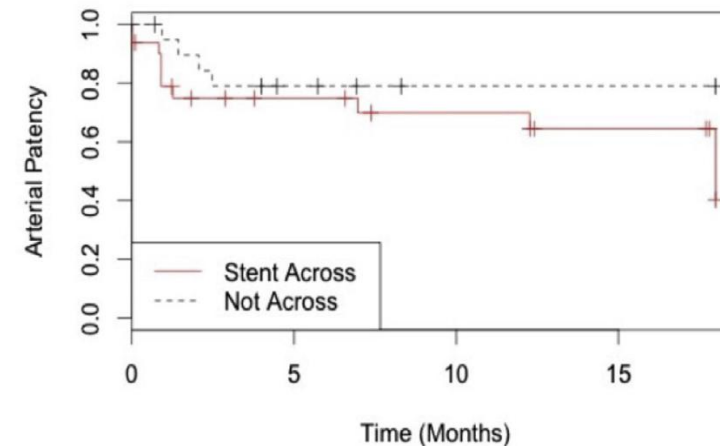
Background: Treatment of severe aortoiliac occlusive disease (AIOD) frequently requires long-segment stenting of the common and external iliac arteries (CIA and EIA, respectively). This study aims to analyze the patency of the internal iliac artery (IIA) after placement of a CIA and EIA stents across the orifice.

Methods: A retrospective analysis of all patients who underwent de novo ipsilateral stent placement in the CIA and EIA between 2006 and 2013 was performed. Kaplan–Meier analysis was used to analyze patency of the IIA, and Cox proportional hazard models were used to identify characteristics associated with occlusion.

Results: We identified 77 patients and 93 limbs where ipsilateral CIA and EIA stents were placed. Preintervention angiographic review found 52 cases of a patent ipsilateral IIA where stents were placed across the origin of the IIA in 31 cases and staggered across the orifice in 20 limbs. Kaplan–Meier analysis demonstrated a 37% patency in limbs where the stent covered the IIA orifice compared to 78% patency in uncovered arteries ($P = 0.04$). New-onset buttock claudication developed in 4 patients, 2 with patent IIAs and 2 with occluded. New-onset impotence also developed in 3 patients with occluded IIA and 5 patients with patent IIAs.

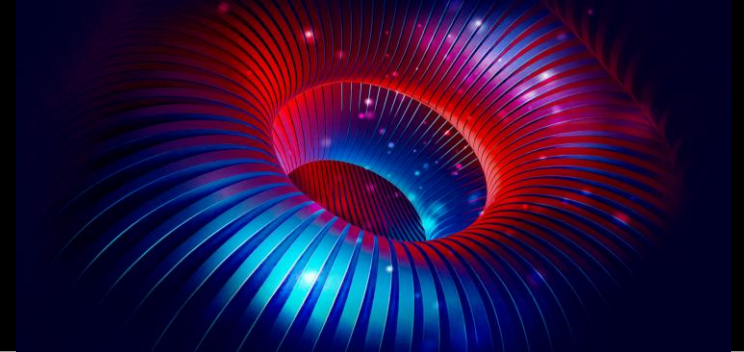
Conclusions: Placement of stents across the origin of the IIA may not result in immediate occlusion, but long-term patency of covered IIAs is decreased compared to uncovered IIAs. This study is limited by a small sample size, but when treating AIOD, coverage of the internal iliac origin should be avoided to maintain patency of the pelvic circulation.

Internal Iliac Patency After Stent Crossing

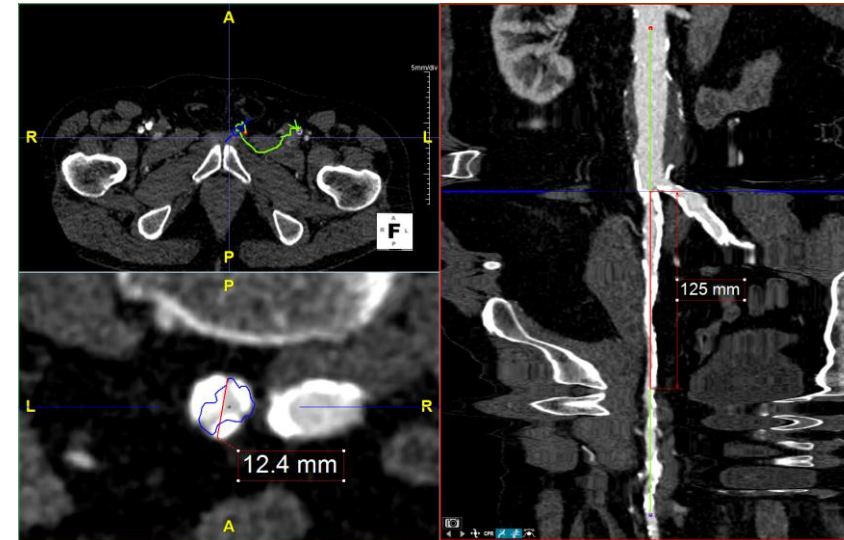


	0	5	10	15
Stent Across	31	16	13	10
Not Across	21	12	8	8

Study design



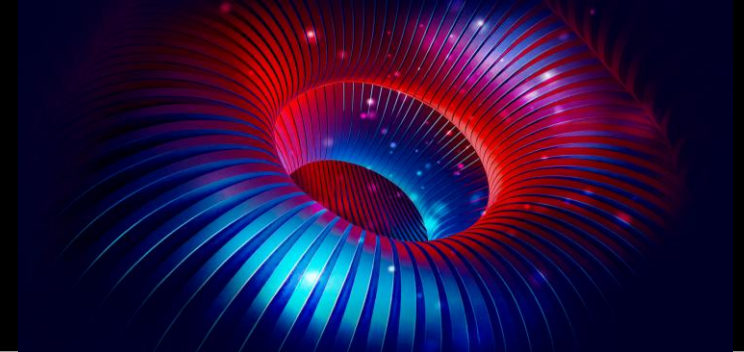
- Multicentric retrospective observationnal study
- From 2021 to 2023 - **183 consecutive patients and 207 limbs**
- Rutherford 3 to 6
- External Iliac artery occlusive lesions
- Exhaustive Anatomical analysis:
 - Diameter
 - Length
 - Calcification
 - Tortuosity



Centre Hospitalier Régional
Universitaire de Lille



Device – VSX, WL Gore

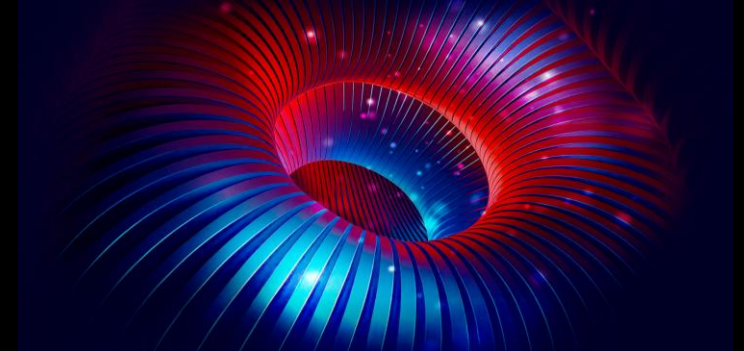


- Combined with a **heparin-coated PTFE**
- **Flexibility and radial force**
- **Low profile (6F or 7F sheaths).**
- **PROPATEN bioactive coating:**
 - ✓ Inhibits platelet adhesion
 - ✓ Reduces the risk of in-stent thrombosis



	Diameter ² (mm)	Length ¹ (mm)	Shaft ¹ (cm)	Sheath ¹ (Fr)
0.018	5 ² - 8	2.5, ³ 7.5, ⁴ 10, ⁵ 15	120	6, ⁷
0.035	5 ² - 13	2.5, ³ 7.5, ⁴ 10, ⁵ 15	75, ⁸ 120	5 ² - 13 ⁹

Population studied



	Overall
N	183
Age (median [IQR])	66.00 [58.00, 71.00]
Gender male (%)	129 (70.5)
Hypertension (%)	135 (73.8)
Hyperlipidemia (%)	106 (57.9)
Diabetes (%)	46 (30.9)
Coronary heart disease (%)	59 (32.2)
Chronic kidney disease (%)	29 (15.8)
Stroke (%)	11 (6.0)
Smoke habits (%)	
No smoker	47 (25.7)
Current smoker	128 (69.9)
Former smoker	8 (4.4)
BMI (median [IQR])	24.60 [21.47, 29.00]
Previous PAD treatment (%)	65 (35.5)
Aspirin (%)	152 (83.1)
Clopidogrel (%)	26 (14.2)
Oral anticoagulation (%)	43 (23.5)
Statin (%)	137 (74.9)

RB 5-6 : 25%

Mean Lesion Length (mm)	95.3 ± 14.7
Mean Diameter (mm)	7.2 ± 0.9
Hypogastric Patency (%)	116 (68)
TASC	
B (%)	34 (16.4)
C (%)	32 (15.5)
D (%)	141 (68.1)
Calcification Severity (%)	
0	57 (27.5)
1	52 (25.1)
2	51 (24.6)
3	47 (22.7)
Inflow Lesion (%)	117 (56.5)
Internal Iliac Artery (%)	140 (67.6)
Outflow Lesion (%)	113 (54.6)



Follow-up

30-days

- 10 iliac thrombosis
- 3 groin infections associated with CFA endarterectomy

3-months

- 4 thrombosis

6-months

- Freedom from CD-TLR 90.2%
- Cumulative incidence of loss of patency 10.8%

1-year

- Freedom from CD-TLR 86.3%
- Cumulative incidence of loss of patency 13%
- Major Amputation : 3%

Median follow-up 23 months

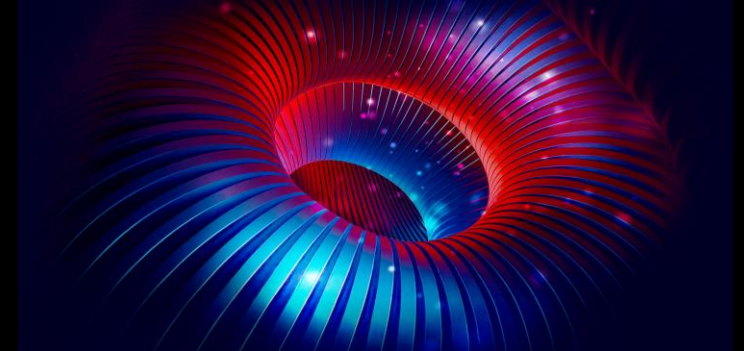
Primary patency @2y: 75.8%

Freedom from CD-TLR @2y: 81.8%

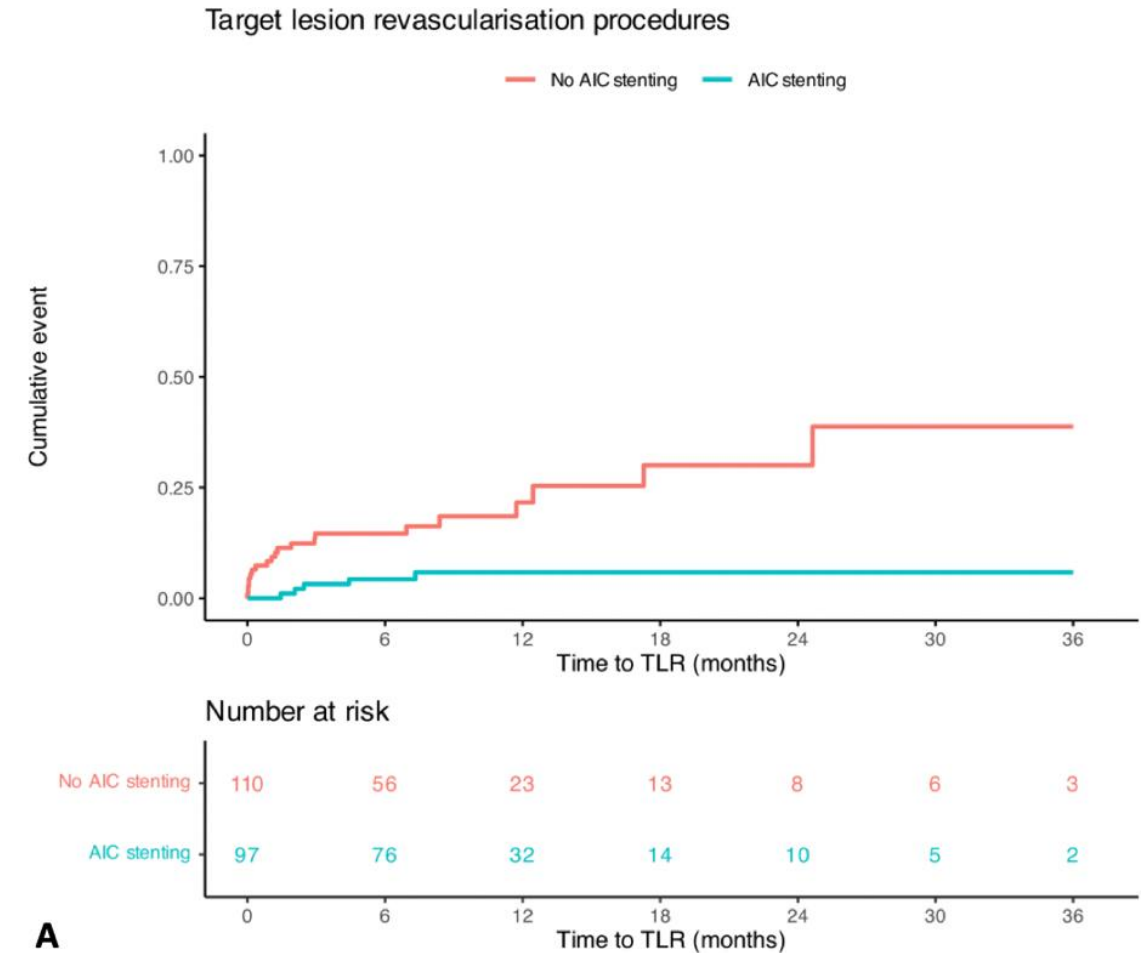
Overall mortality: 4.3%



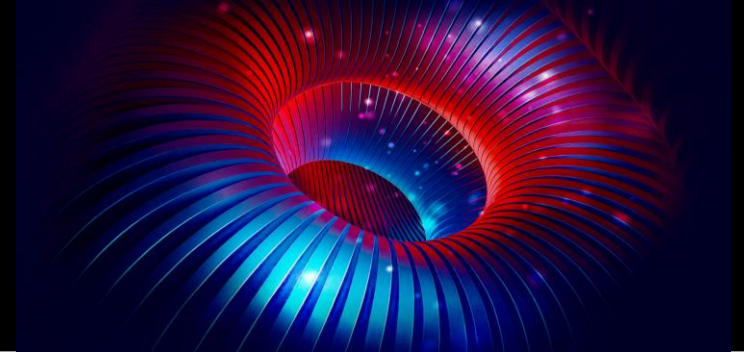
Main results



👉 Absence of concomitant common iliac stenting was the main predictor of patency loss (adjusted HR 0.17 [0.06-0.51])



Main results



The **VSX** is a **safe and effective device** for treating atheromatous occlusive lesions of the external iliac artery, providing high procedural success and excellent patency rates.

Often associated with concomitant procedures (CFA endarterectomy &/or CI stenting)

Lack of data with no RCT

Ongoing research is essential to optimize patients' selection and procedural strategies, with the aim of reducing complications and improving long-term results.



Stenting couvert des lésions iliaques externes : le gold standard ?

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