2017 MID-ATLANTIC
CONFERENCE

7th ANNUAL CURRENT CONCEPTS IN
VASCULAR THERAPIES

2017

David Dexter
MD FACS
Sentara Vascular Specialists
Assistant Professor of Surgery EVMS

P-Q Bypass

Disclosures

- I have no financial disclosures
- The PQ bypass is not cleared for use or sale in the United States

Lower Leg Revascularization

- What to do with a SFA occlusion
  - Fem-Pop Bypass
  - SFA endovascular recanalization intraluminal
    - Must stay in the lumen
  - SFA endovascular subintimal recanalization
    - Must get back into the lumen

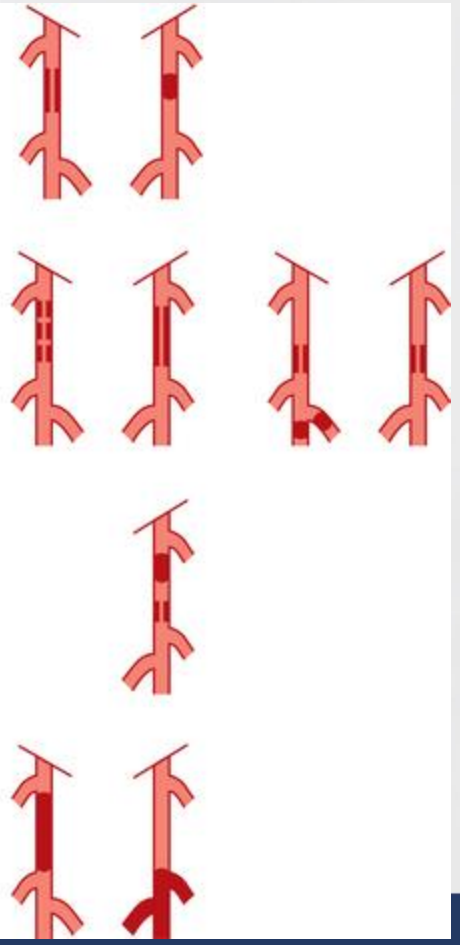
TASC II Criteria

Type A lesions
- Single stenosis ≤10 cm long
- Single occlusion ≤5 cm long

Type B lesions
- Multiple lesions (stenoses or occlusions), each ≤5 cm
- Single stenosis or occlusion ≤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 long
- 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 two 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

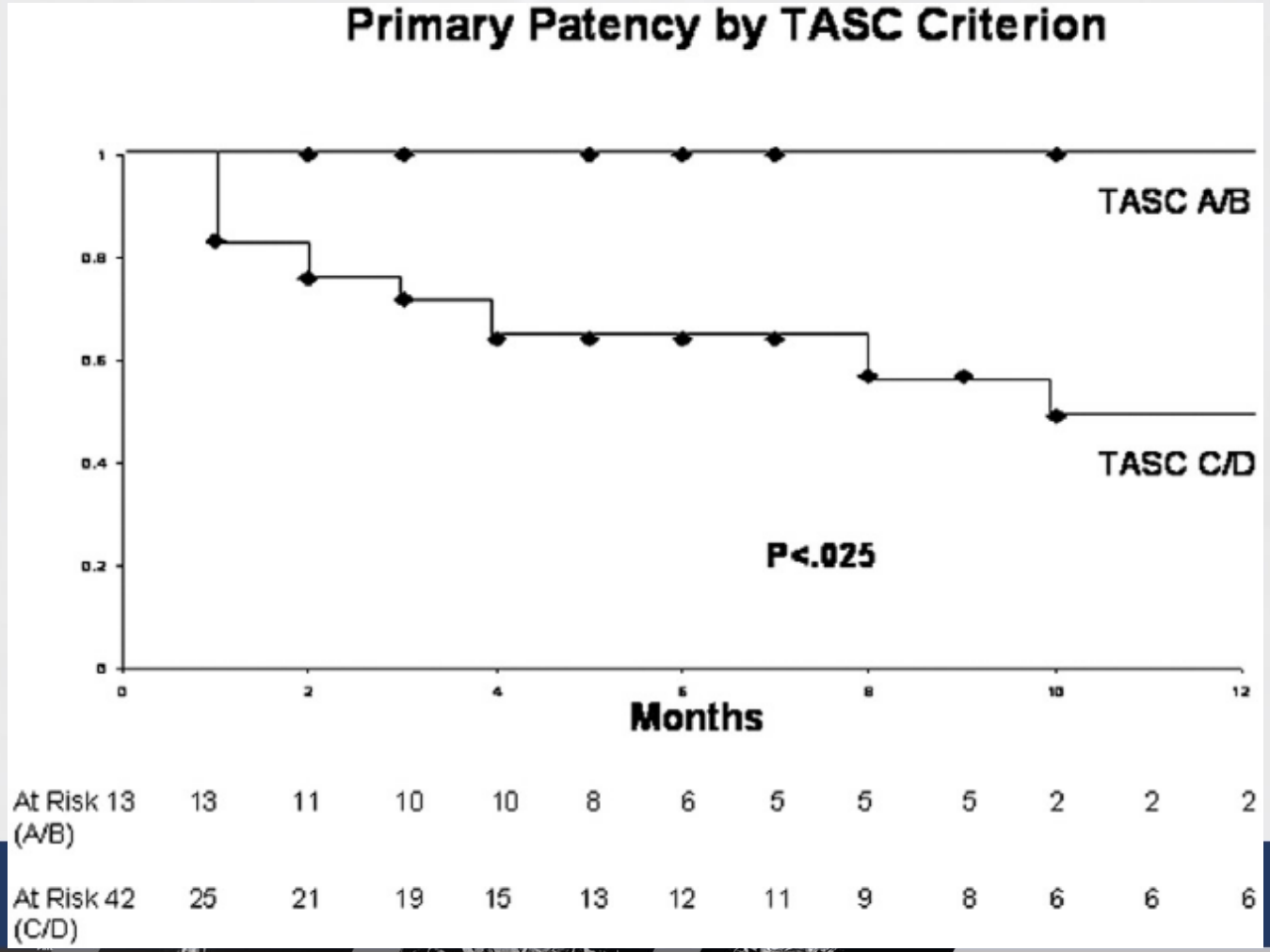


B

TASC II

- Longer lesions have lower endovascular success rates and lower endovascular patency rates than shorter lesions.
- In longer lesions Bypass is likely superior to endovascular techniques

TASC II


Primary Patency by TASC Criterion
TASC A/B
TASC C/D
P<.025
Months
1
0.8
0.6
0.4
0.2
0
0
2
4
6
8
10
12
At Risk 13 (A/B) 13 11 10 10 8 6 5 5 5 2 2 2
At Risk 42 (C/D) 25 21 19 15 13 12 11 9 8 6 6 6

Lower Leg Revascularization

- Fem-Pop Success Rates
  - 100%
  - Complications – 10-20%
- SFA recanalization success rates

  80-90%

  Complications 5-10%

Predicting Cardiac Complications

- MI,CHF, arrythmia
- Revised Cardiac Risk Index – 6 factors:
  - CAD, CHF, IDDM, CVA, creat > 2, high risk surgery
  - Only 20% of operations in derivation set were vascular
- Underestimates risk in vascular surgery patients in VSGNE

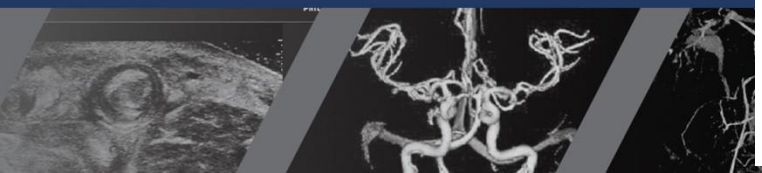
Number of RCRI Risk Factors	RCRI Predicted Risk (%)	VSGNE Actual Event Rate (%)
0	0.4	**2.6**
1	0.9	**6.7**
2	6.6	**11.6**
≥ 3	11.0	**18.4**

-Bertges et al, J Vasc Surg, 2010

What techniques can we use to cross difficult sfa lesions?

P-Q Bypass

- Minimally invasive
- Percutaneous
- Femoral Popliteal Bypass



PQ Bypass

TORUS STENT GRAFT SYSTEM

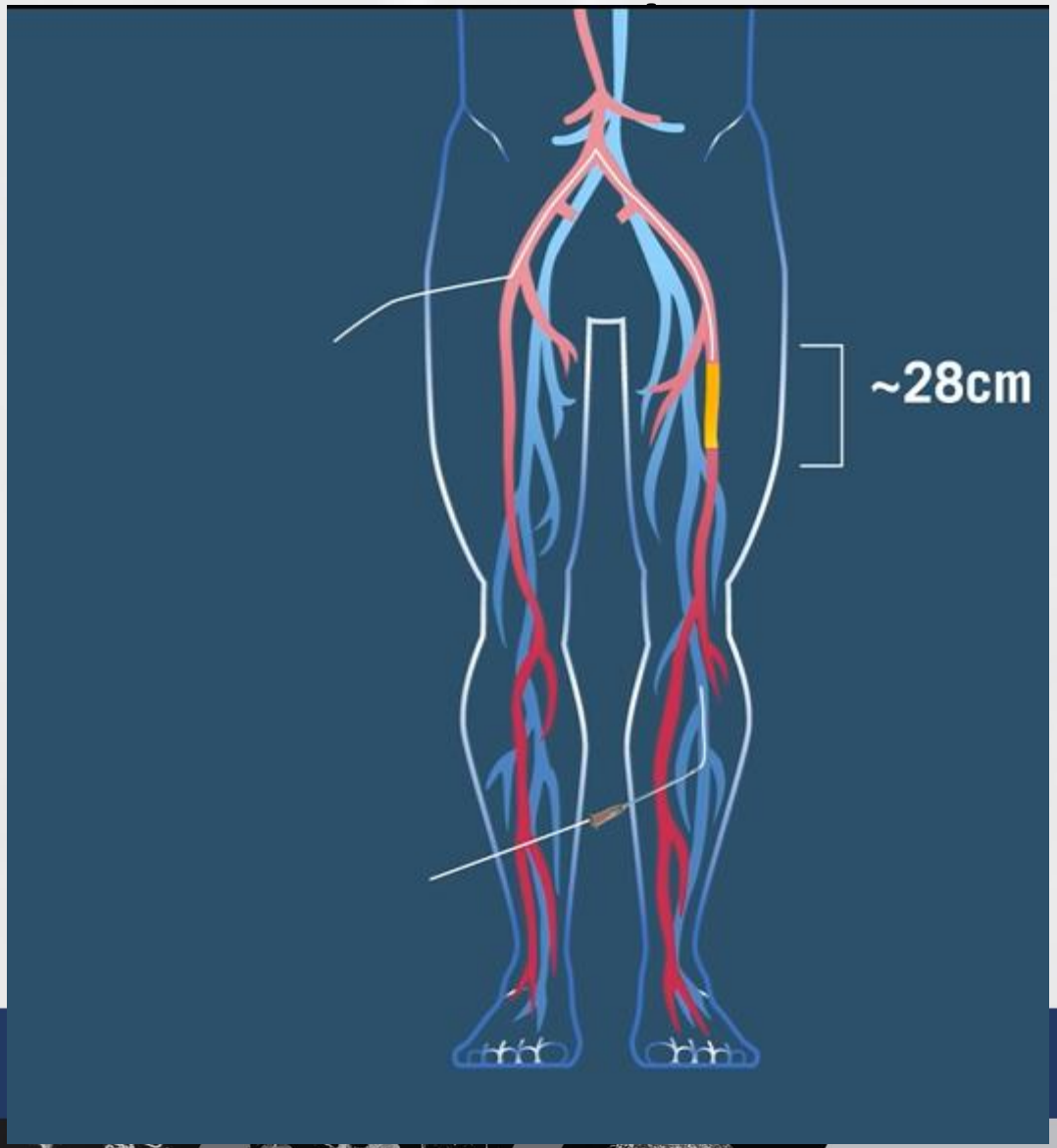
The PQ Stent Graft System features a flexible, self-expanding composite structure made of a nitinol wire frame encapsulated in ePTFE. Designed for flexibility and robust durability to help maintain an open lumen, the PQ Stent Graft System is under investigation in Europe for both standard intra-arterial placement and for use in the PQ DETOUR procedure.

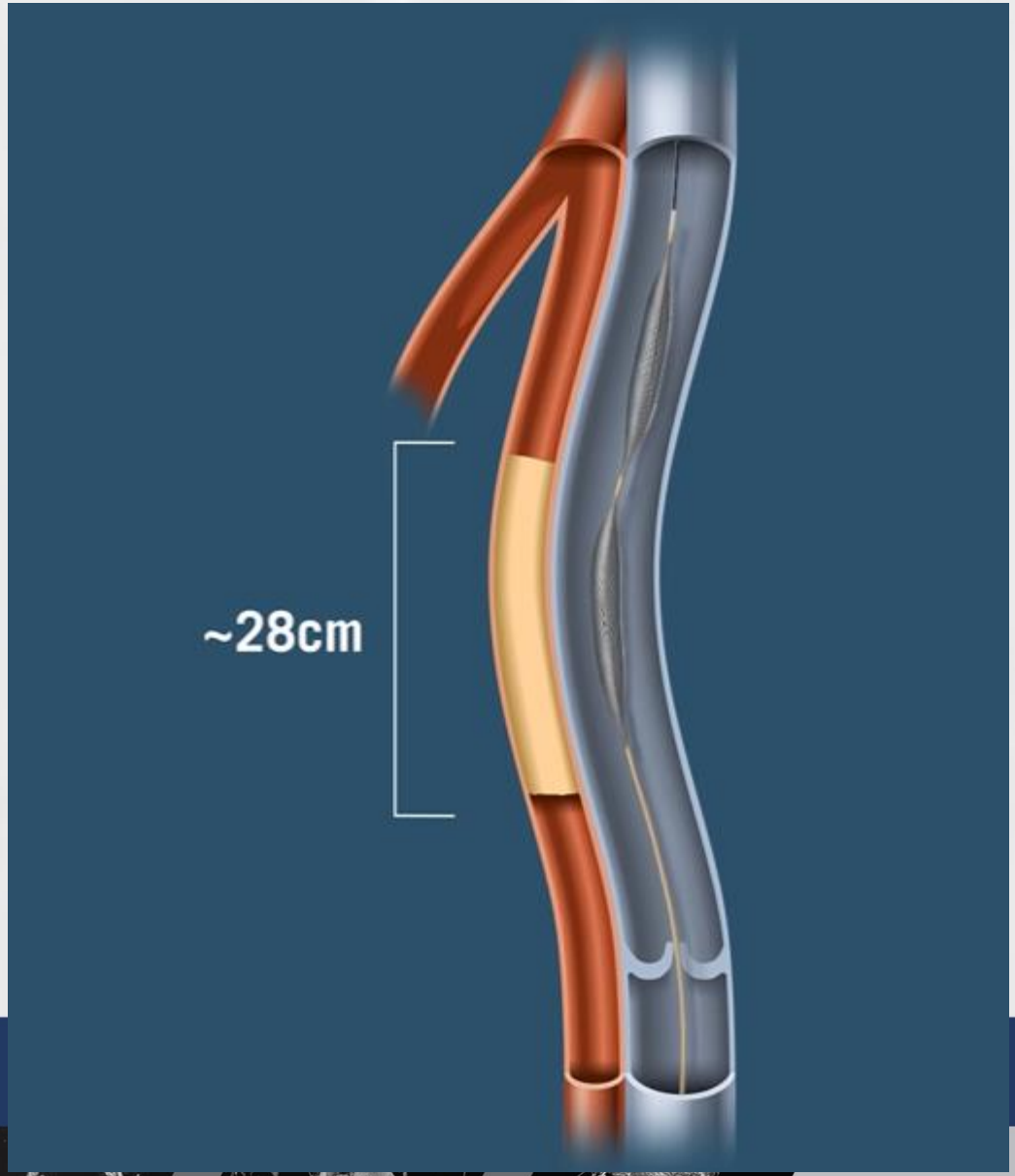
PQ SNARE

The PQ Snare is an over-the-wire, dual-nitinol-caged endovascular scaffold created to present a destination and snare for guidewires, then extract them through the tibial vein scaffold.

PQ CROSSING DEVICE

The PQ Crossing Device is a spring-loaded guidewire support and delivery system. During the PQ DETOUR procedure, it is designed to create initial artery-vein-artery communication.


~28cm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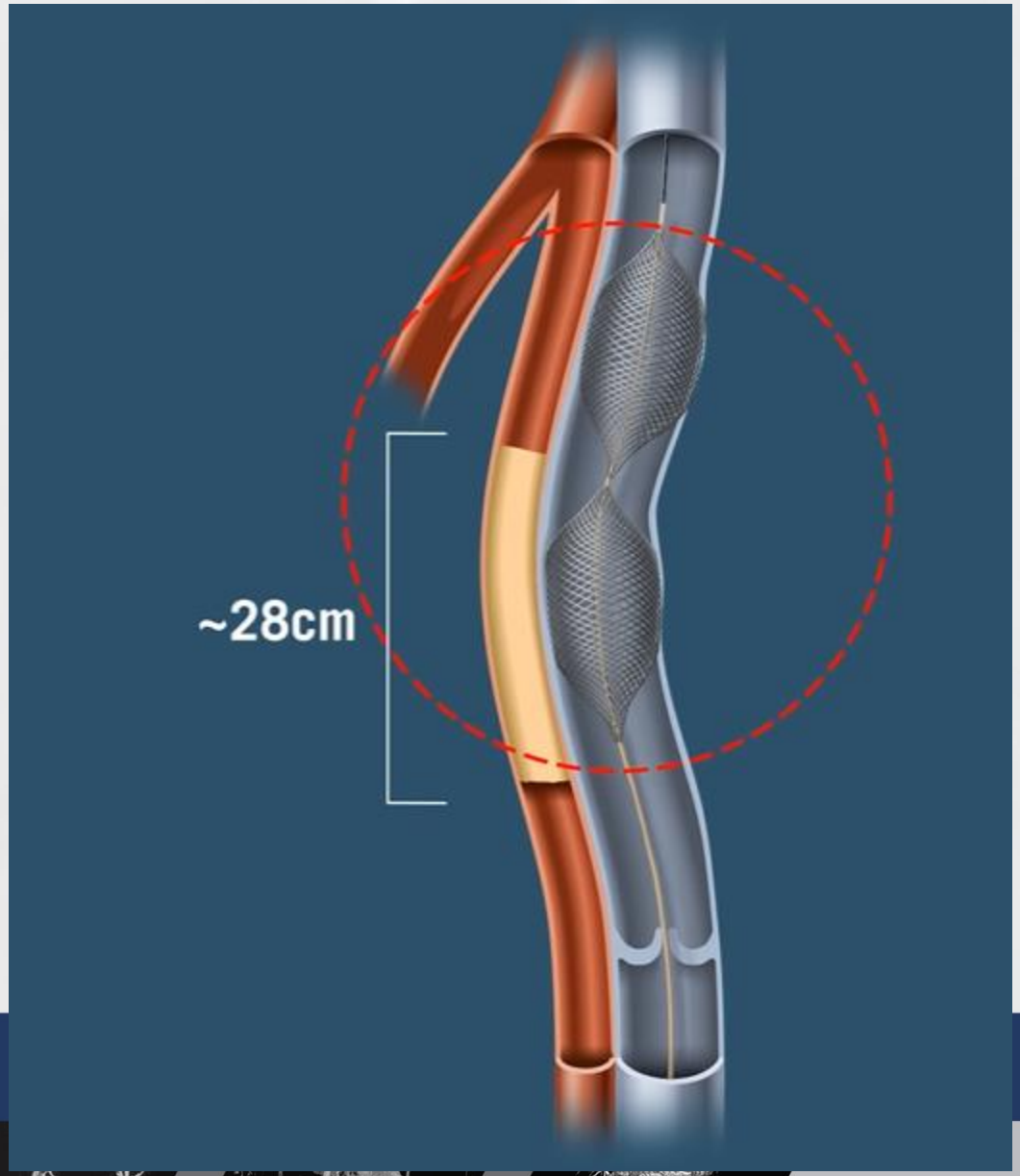
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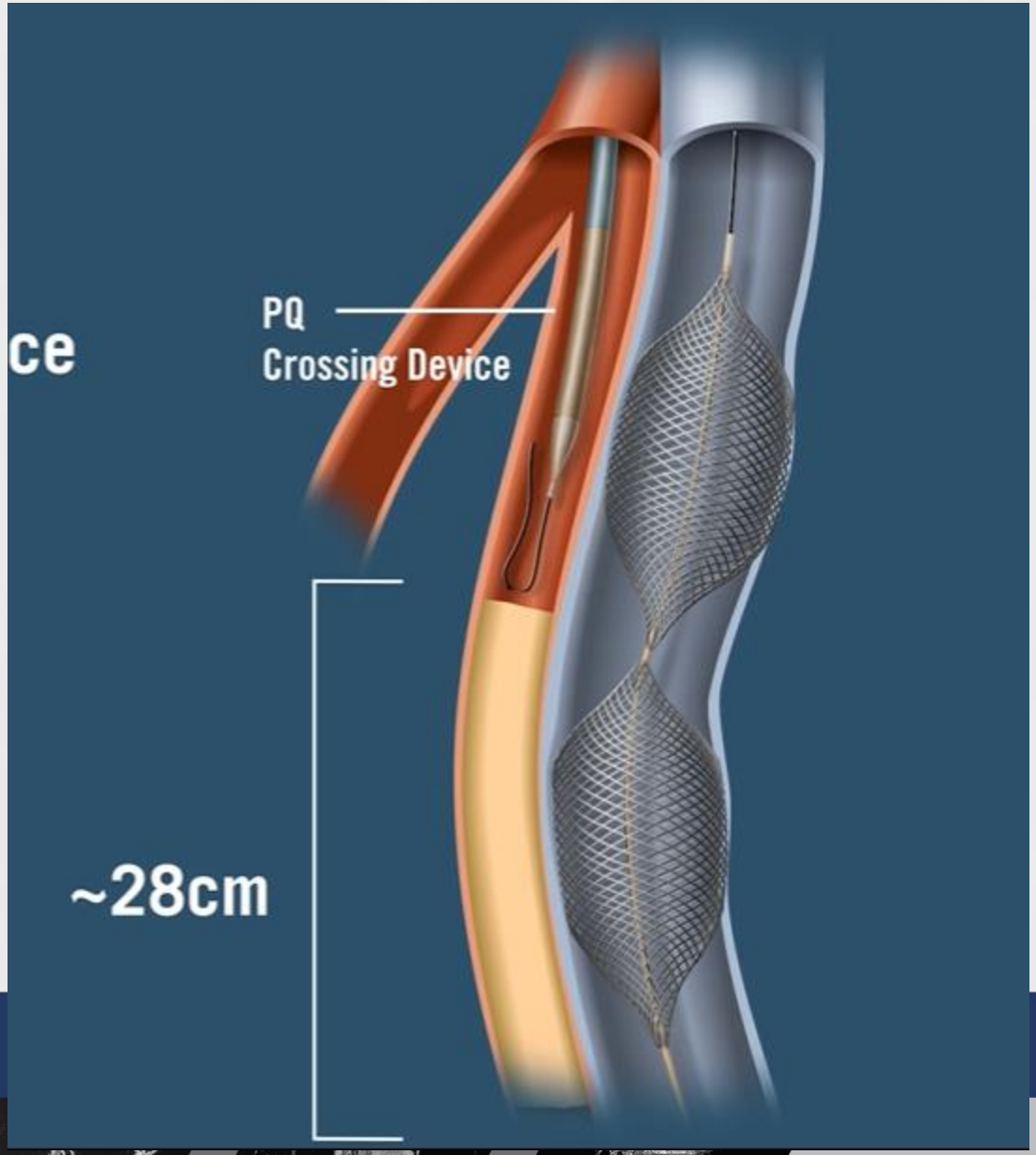
ce
PQ
Crossing Device
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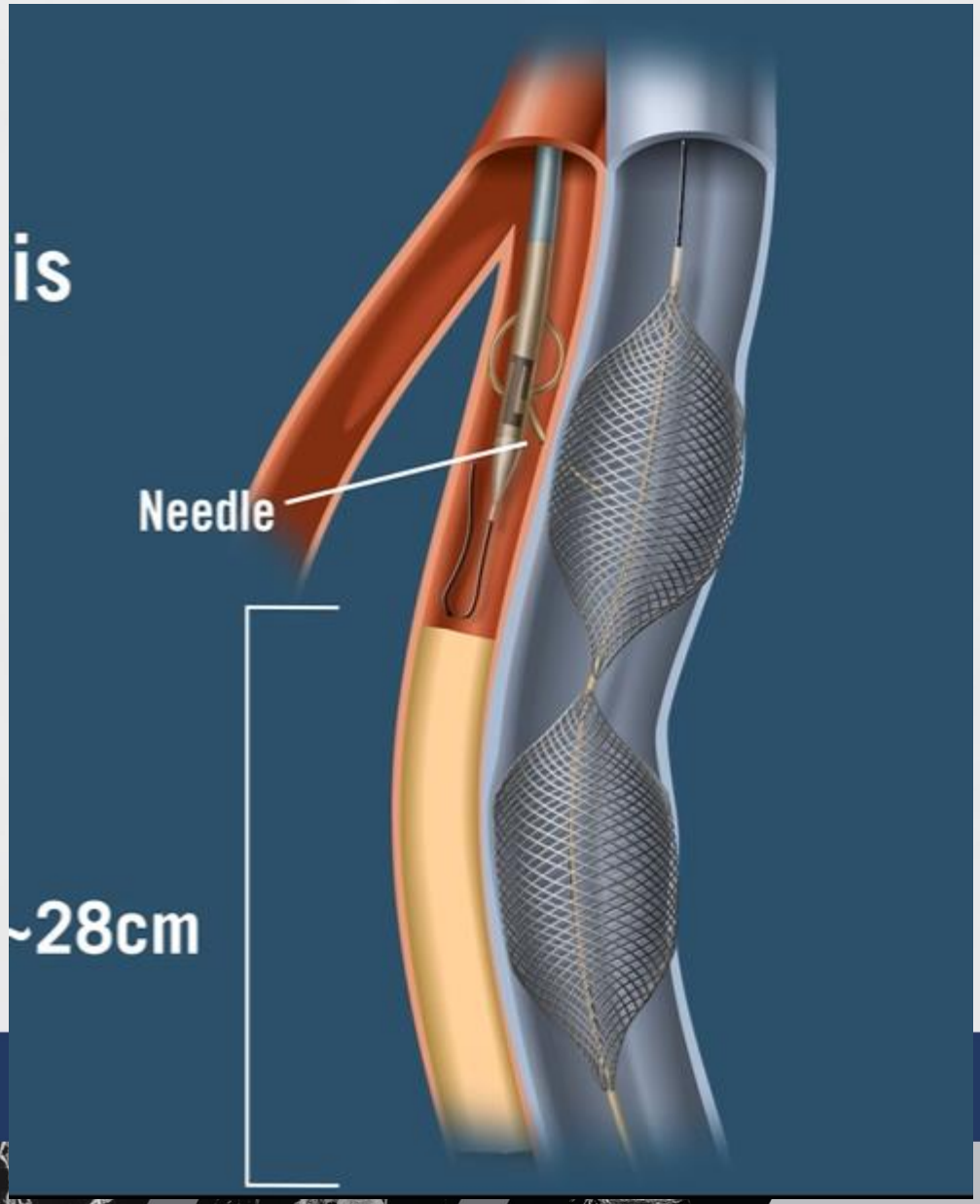
is
Needle
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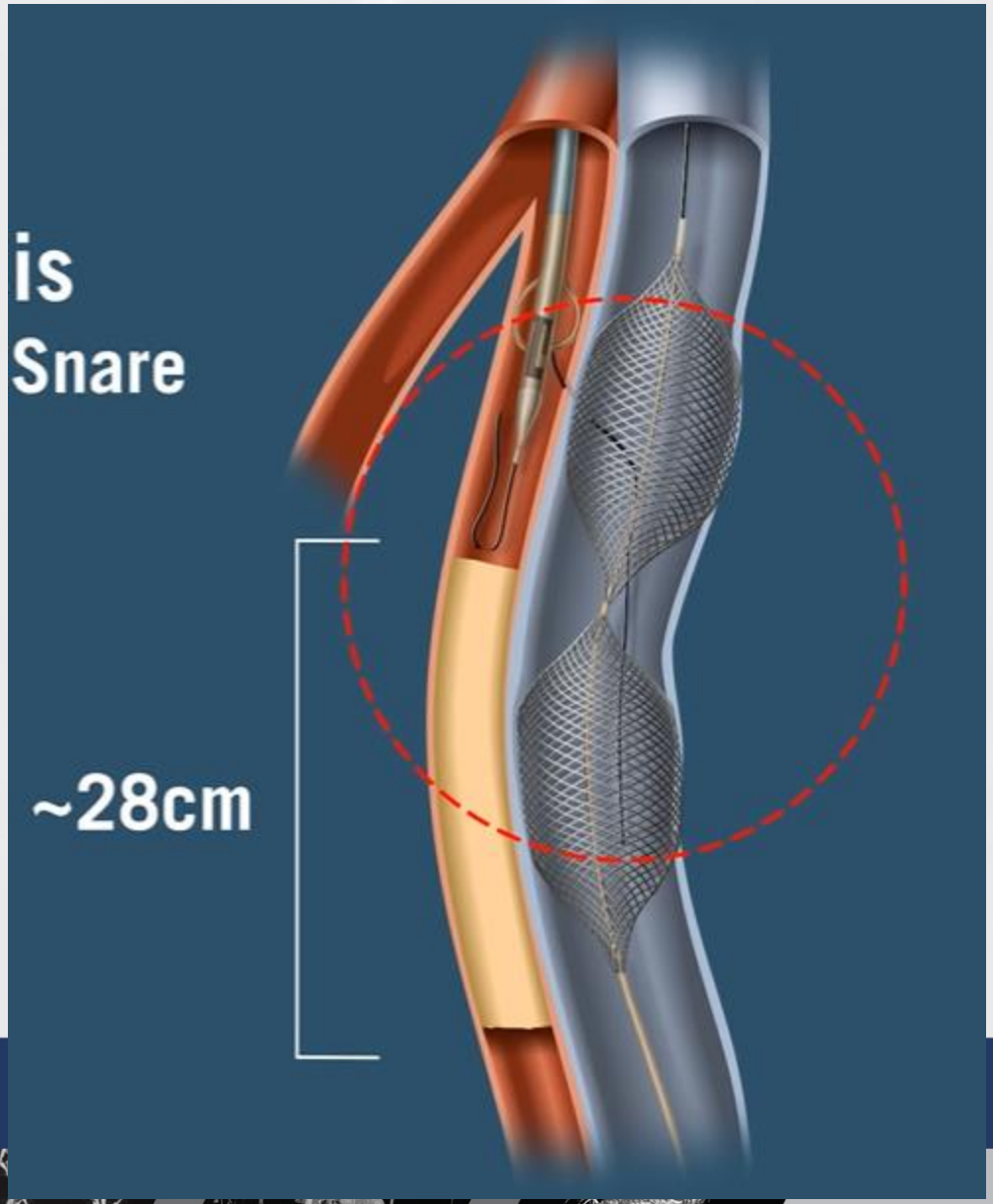
is
Snare
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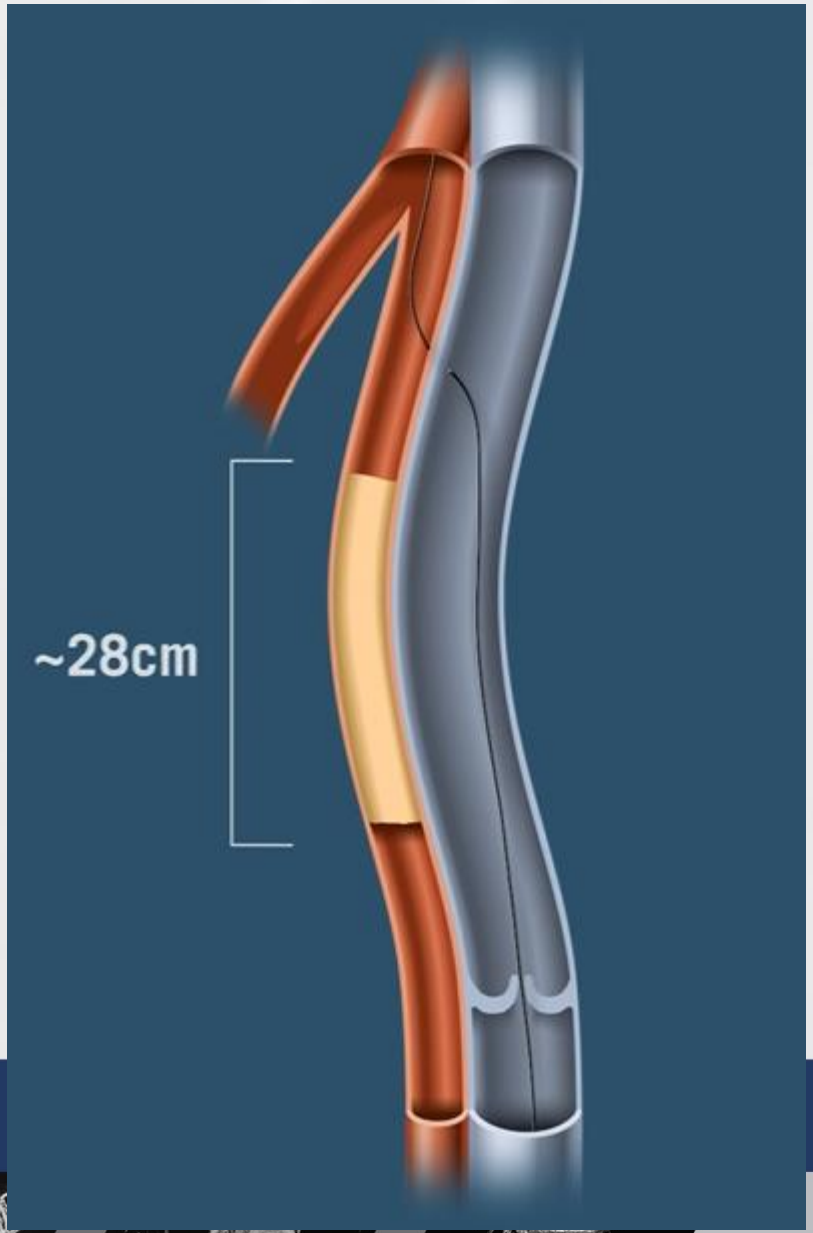
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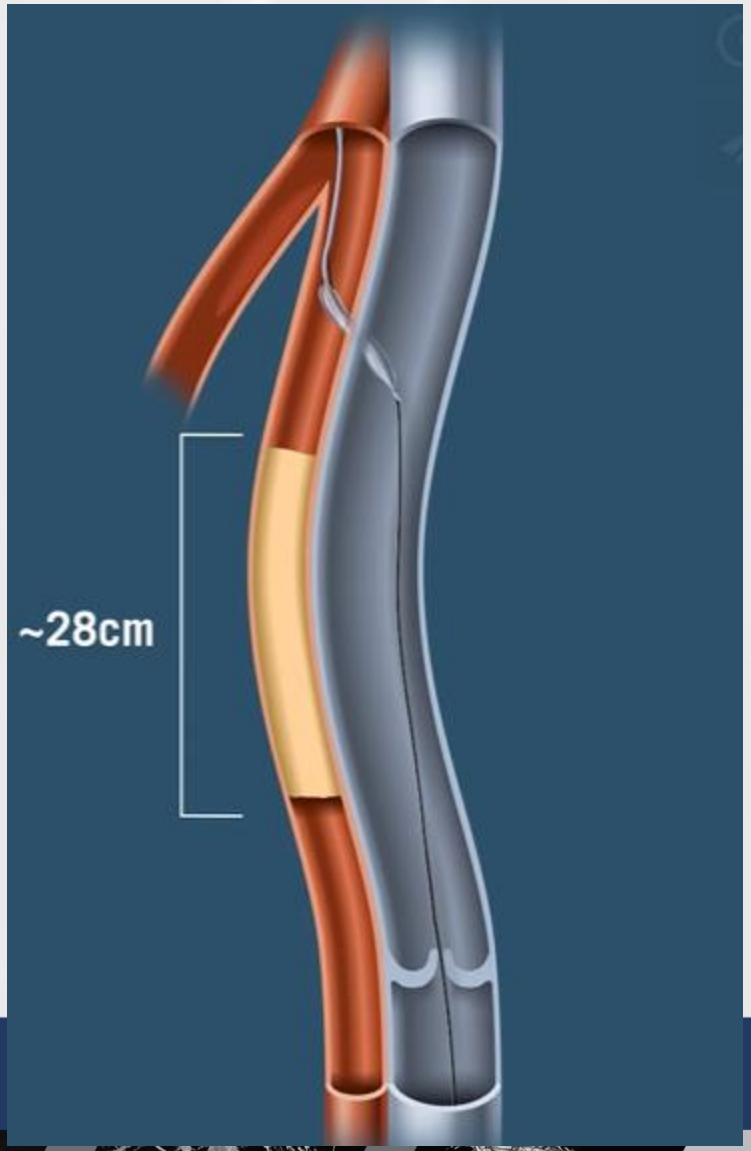
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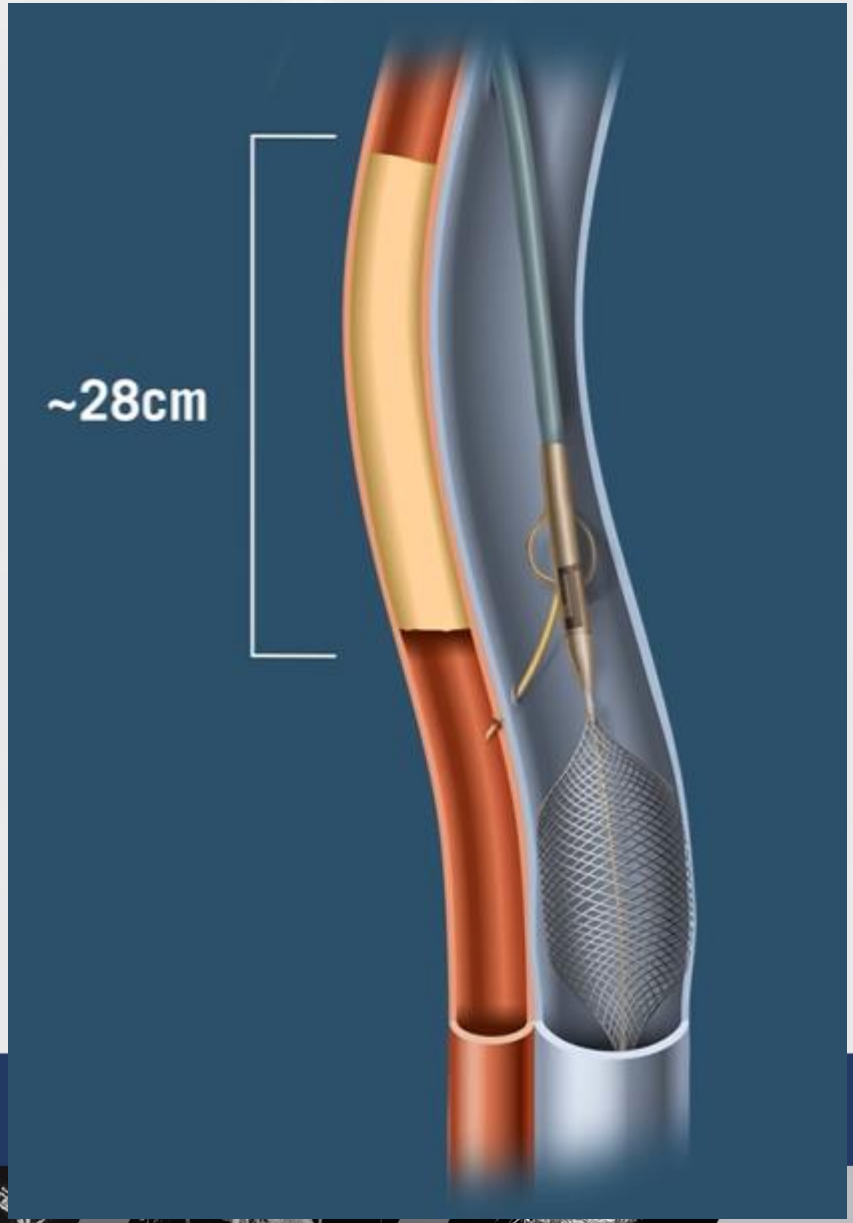
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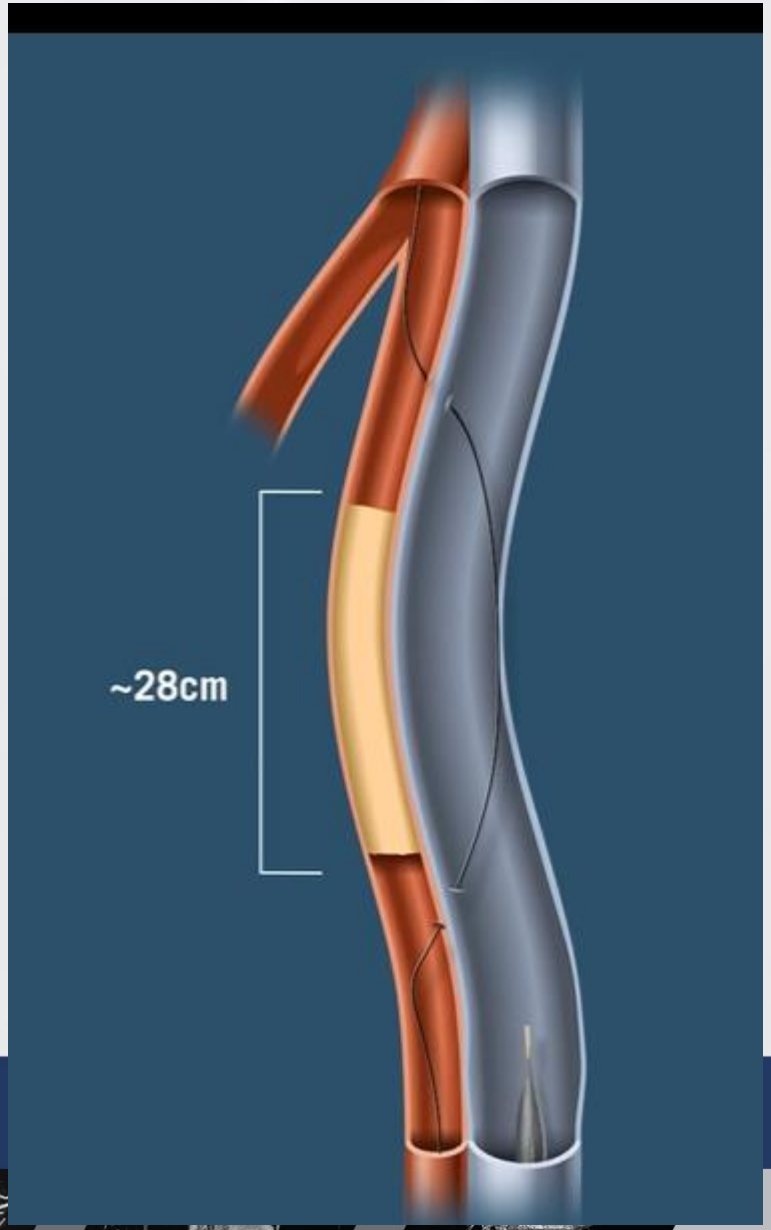
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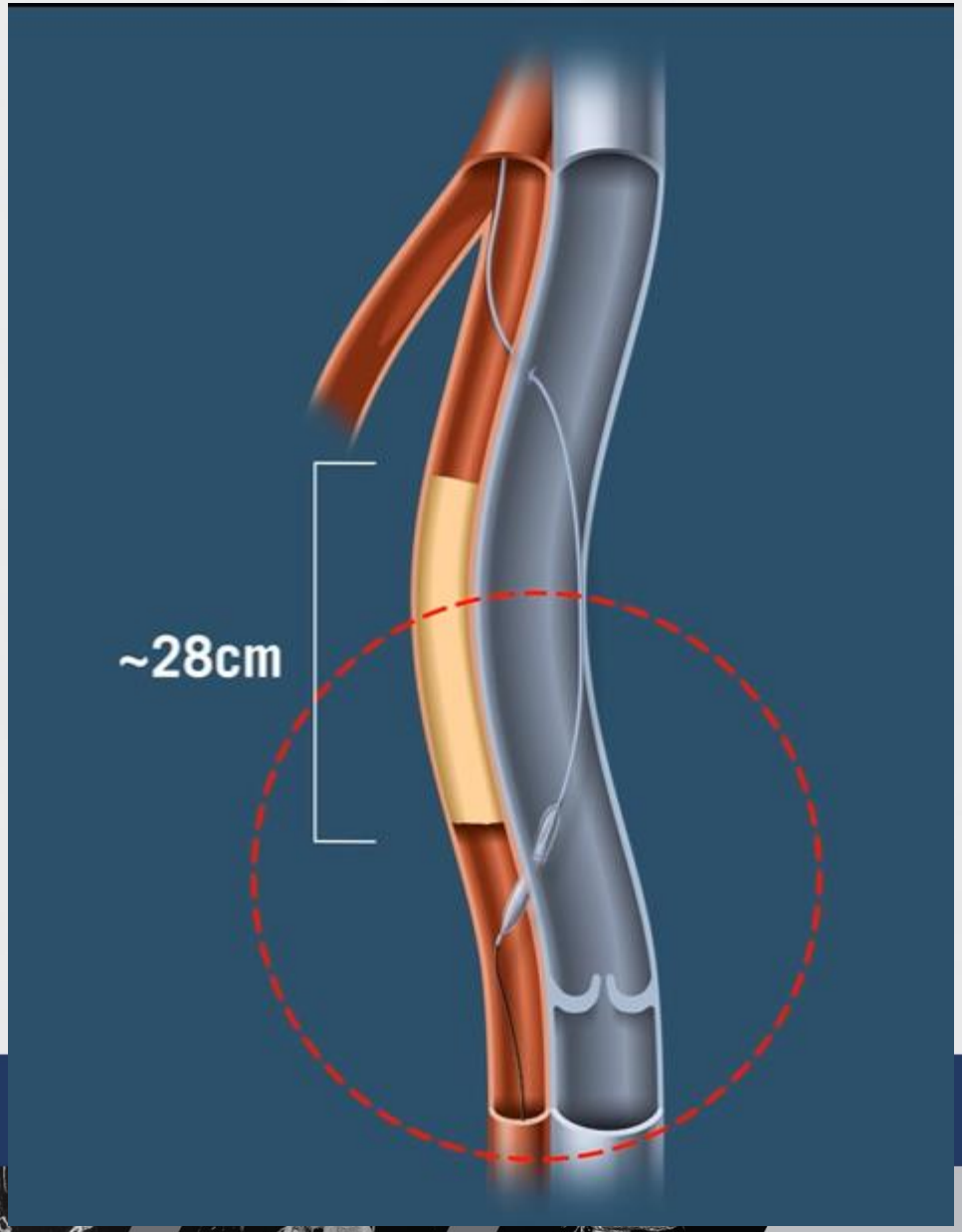
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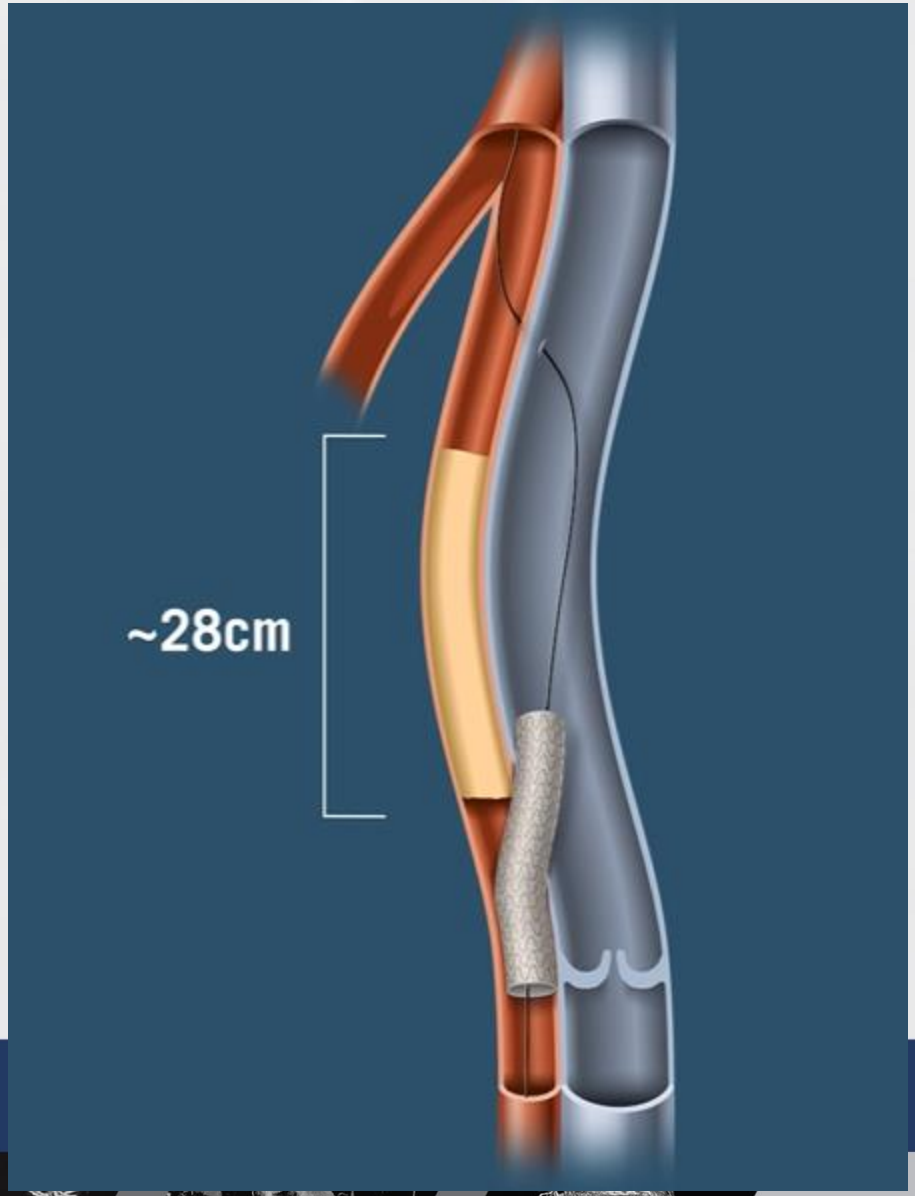
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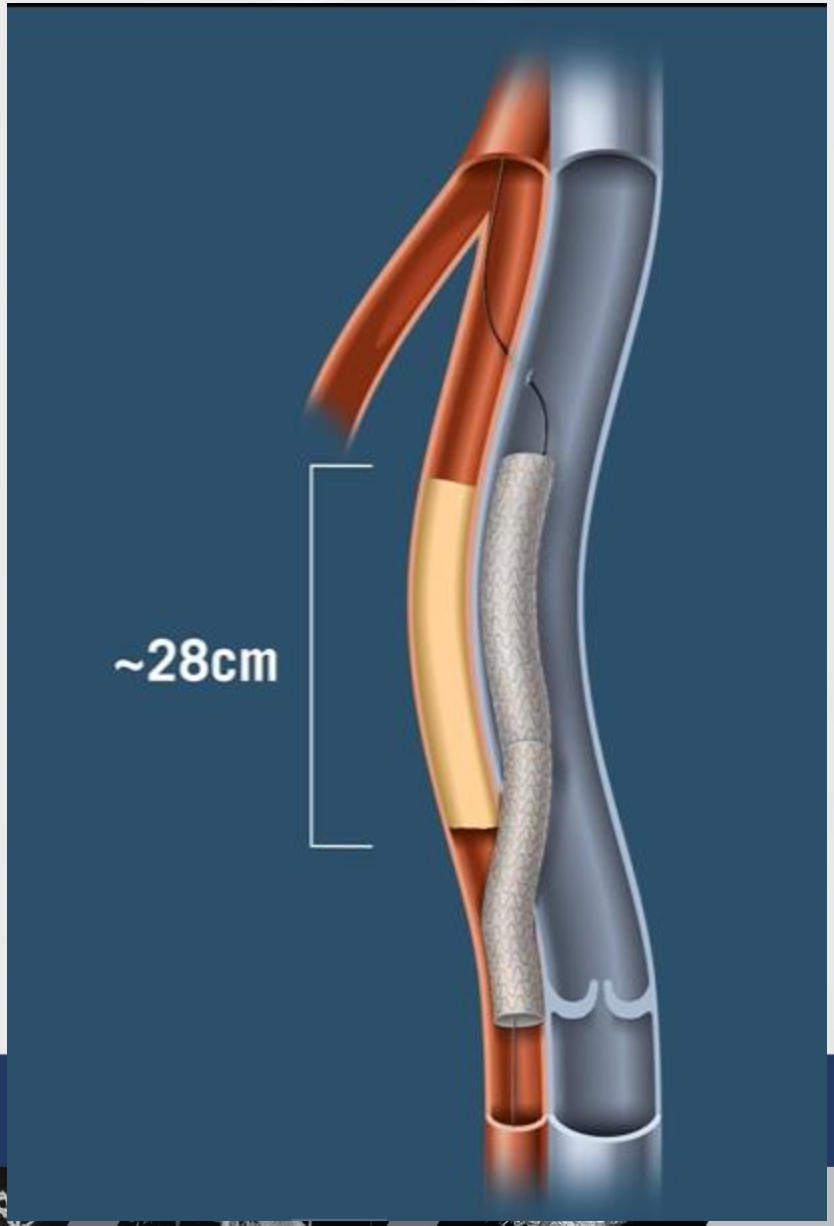
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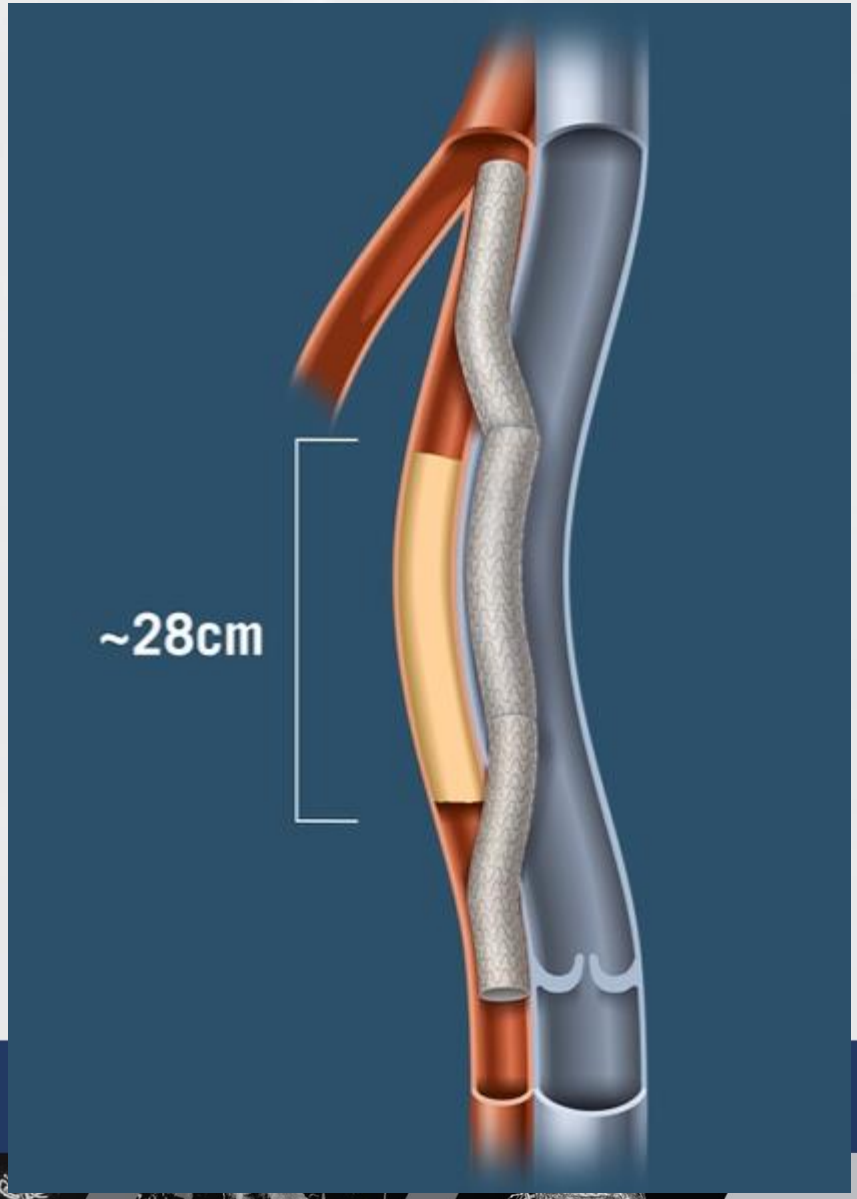
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DETOUR I Data

- 60 patients
- 59 received treatment
- lesion length was 28.6 cm
- 95% chronic total occlusions
- 93% considered TASC II D lesions
- Mean age 64 years, 83.3% were men
- 33.3% had previous revascularization

DETOUR I Data

- The 30-day MAE was 3.%
  - death, target vessel revascularization, target limb amputation.
- 6-month primary patency was 84.7
- Procedural and technical success rates were 96.7% and 98.3%.

DETOUR I Data

- Venous health was maintained at 6 months
  - No change in Villalta and Venous Clinical Severity Score scales
- The endpoint of ≥ 1 improvement on Rutherford class at 6 months in 94.7% (*P*<.0001).
  - In addition, 91.2% improved by two or three Rutherford classes at 6 months

Conclusions

- In early studies minimally invasive bypass technique appears to be safe and effective
- Further studies will be coming in the US and the world