



BTK strategies and best options
BTK biforcations: best treatment

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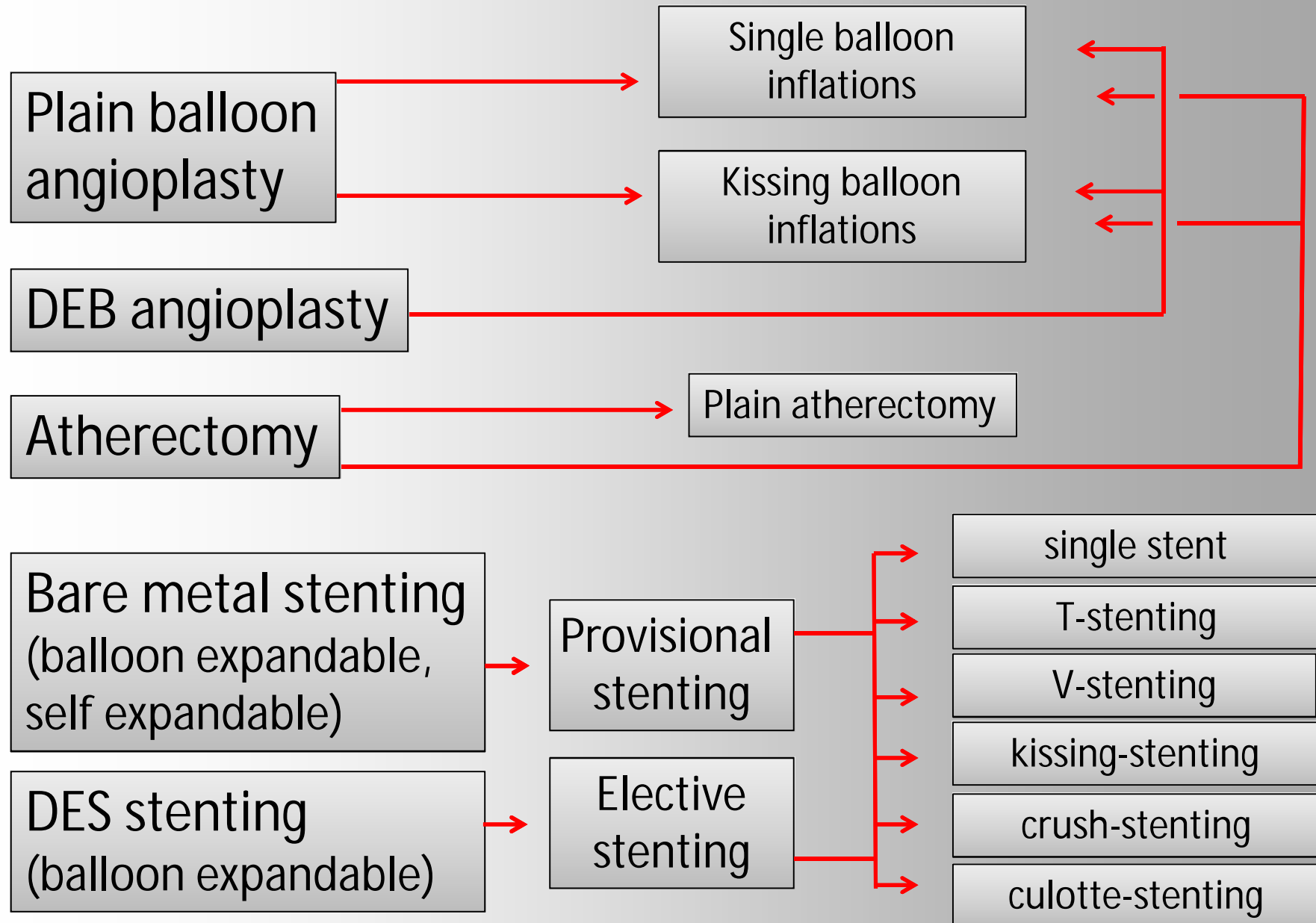
Milan - ITALY



Introduction

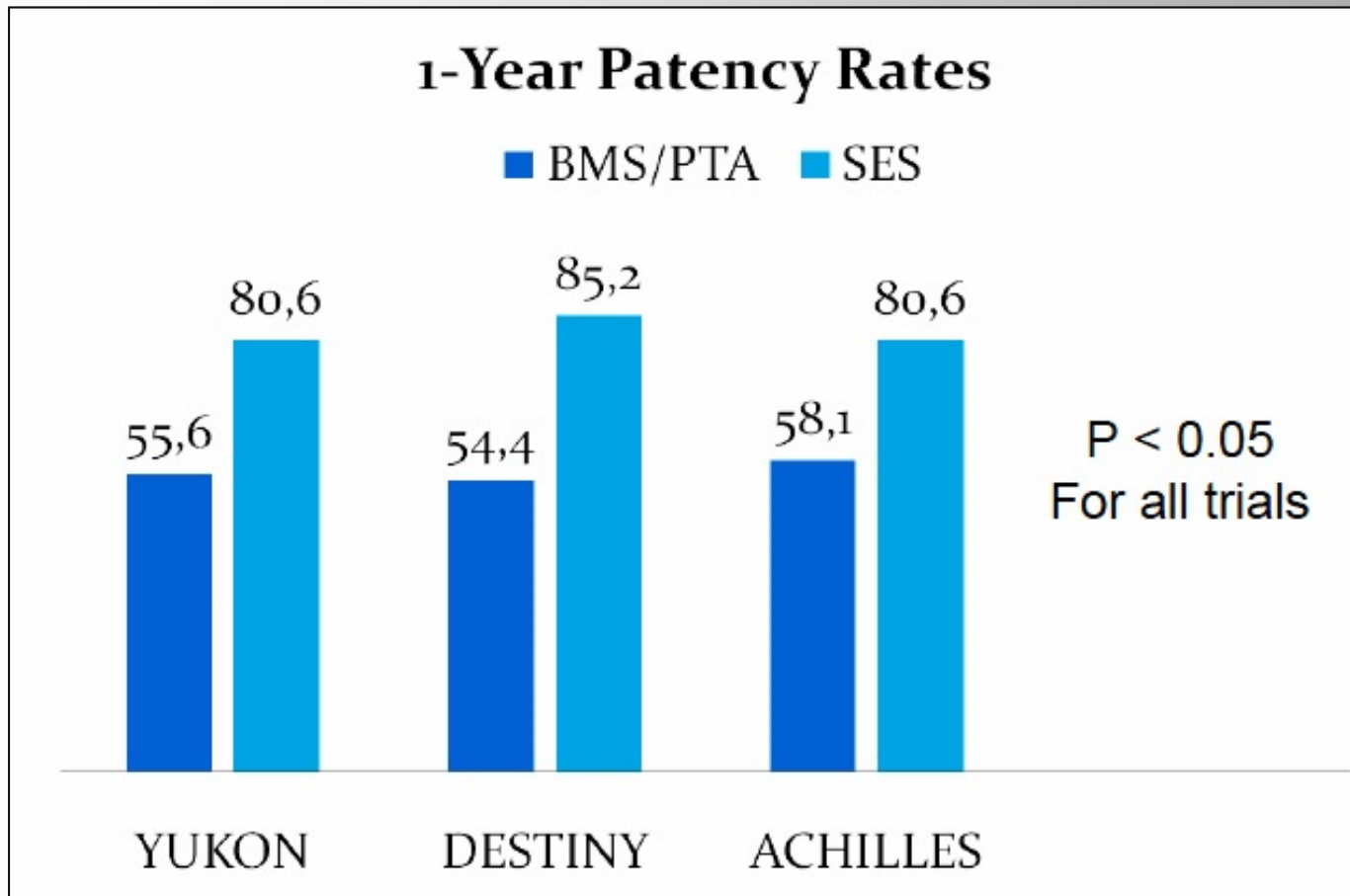
- Bifurcational lesions represent a challenge for interventionists in order to maintain the patency of both branches and to provide satisfactory mid term results
- There is little information regarding the optimal treatment of bifurcational lesions located in infra-popliteal arteries.
- Most of the devices and techniques adopted are transferred from the coronary experience into BTK vessels.

Endovascular strategies for bifurcational lesions



YUKON, DESTINY, ACHILLES trials

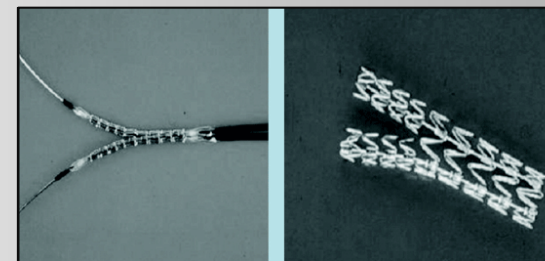
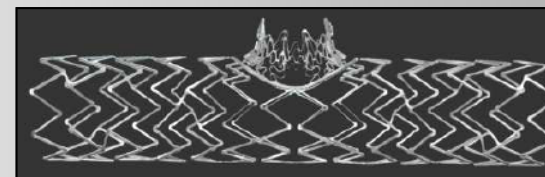
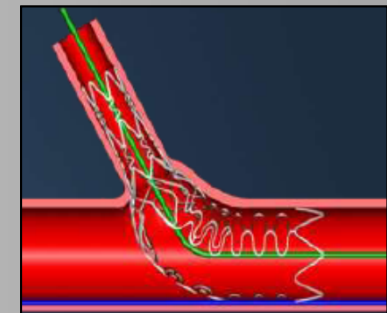
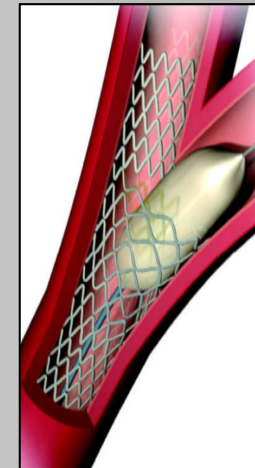
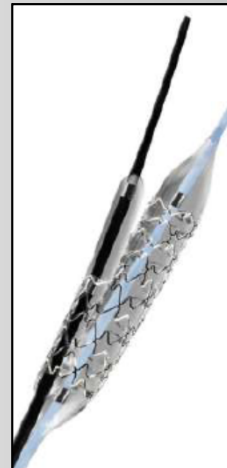
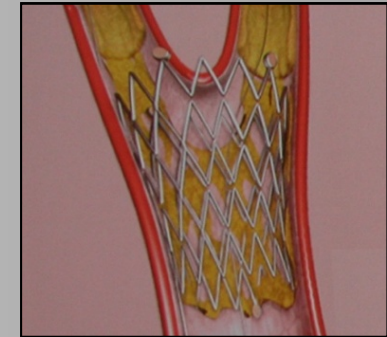
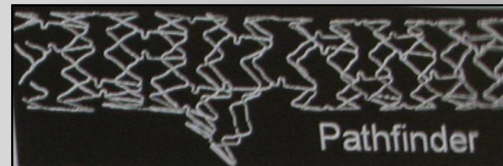
primary patency



Rastan et al. HHJ 2011; Scheinert et al. 2012; Bosiers et al. JVS 2012

Dedicated stents

- **Pathfinder/Frontier**
- **Petal**
- **Twin Rail**
- **Nile Croco**
- **Stentys**
- **Antares**
- **Sideguard**
- **Tryton**
- **Medtronic**
- **Devax Axxess**



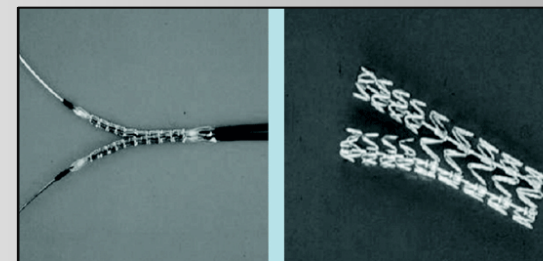
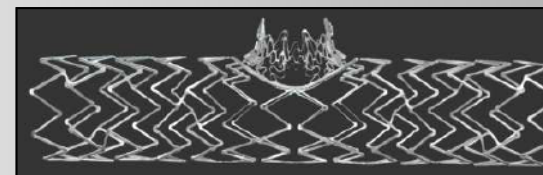
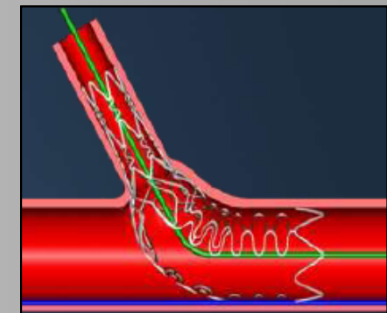
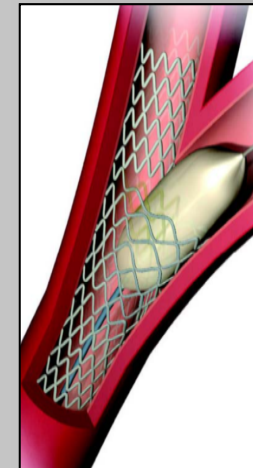
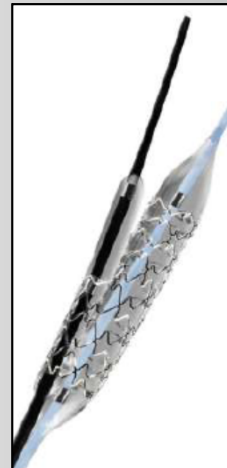
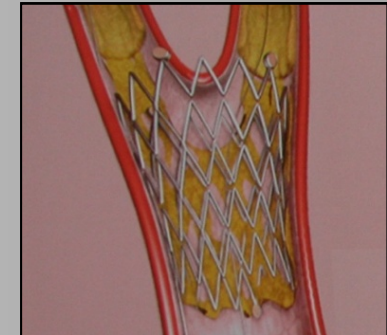
Dedicated stents

STRATEGY:

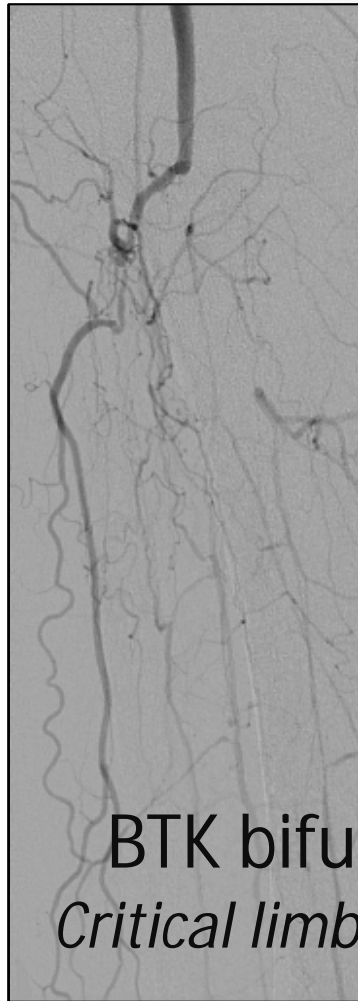
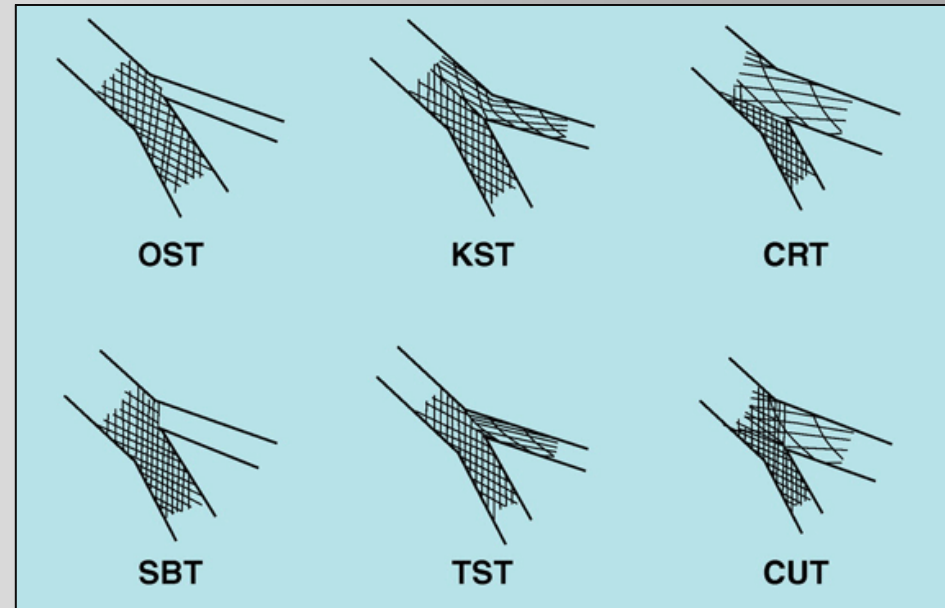
- stent only in the main branch with a dedicated stent which preserves the access to the side branch
- provisional stenting in the side branch

DRAWBACKS

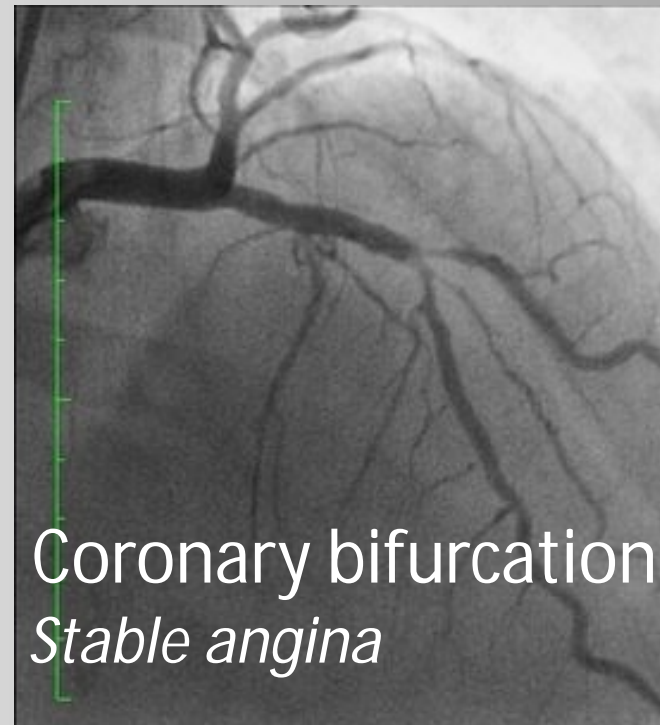
- Bulky and with large profile
- Passive orientation
- Wire tangle
- Poor deliverability



Bifurcational lesions stenting: techniques



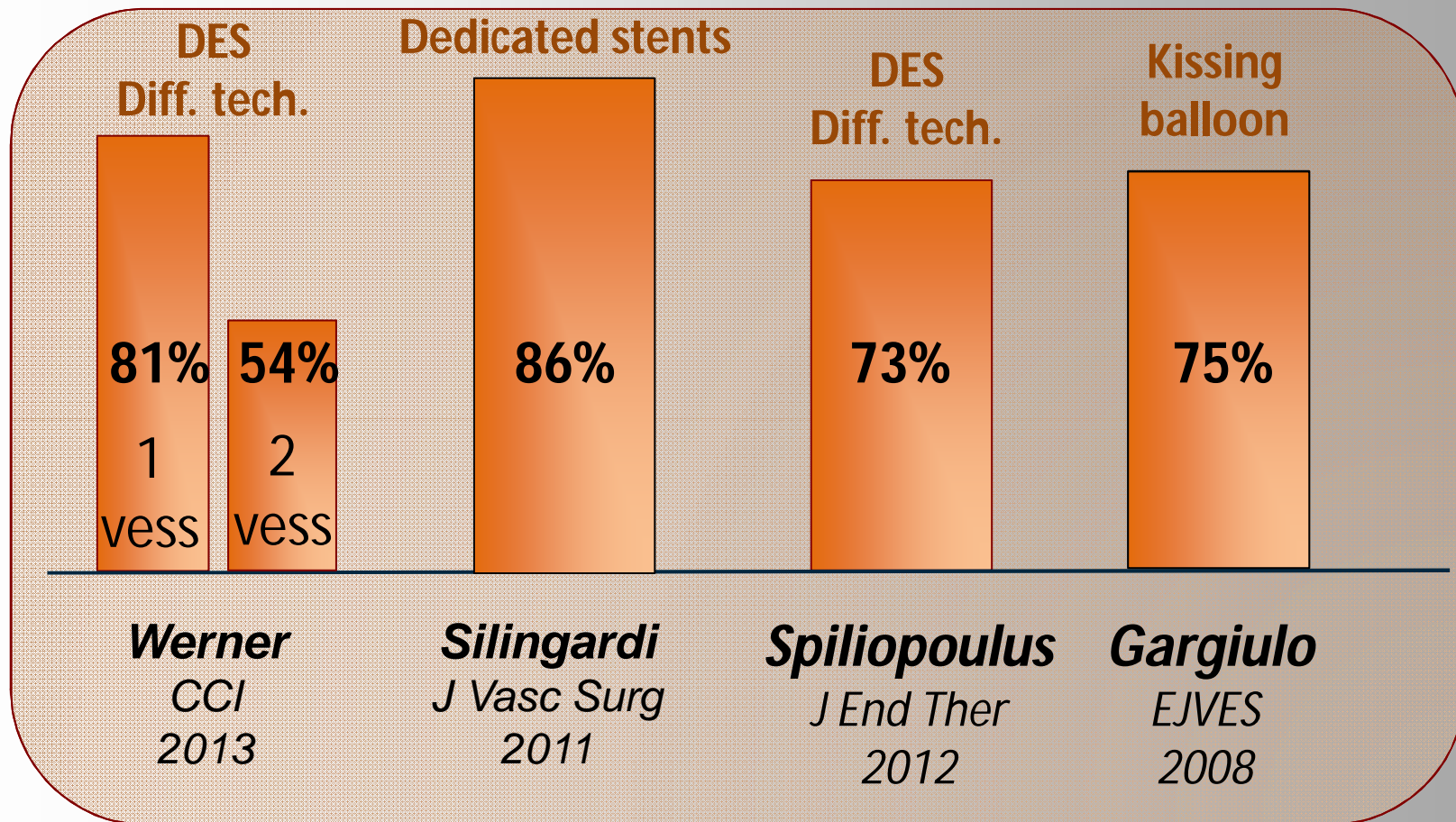
BTK bifurcation
Critical limb ischemia



Coronary bifurcation
Stable angina

BTK bifurcations: clinical studies

patency rate



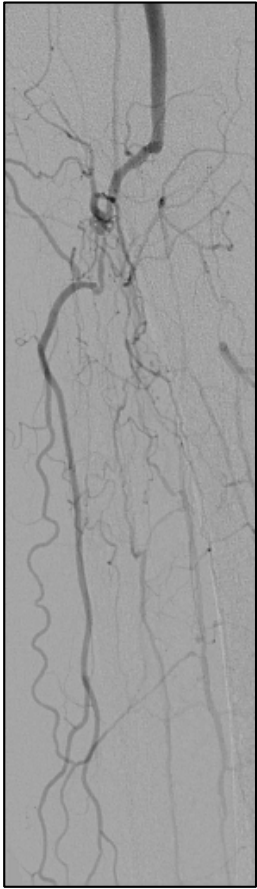
N = 11

31

39

29

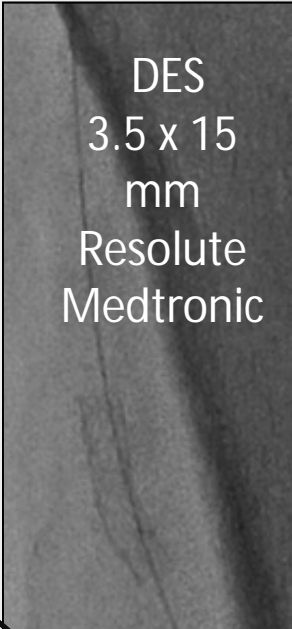
One-stent strategy



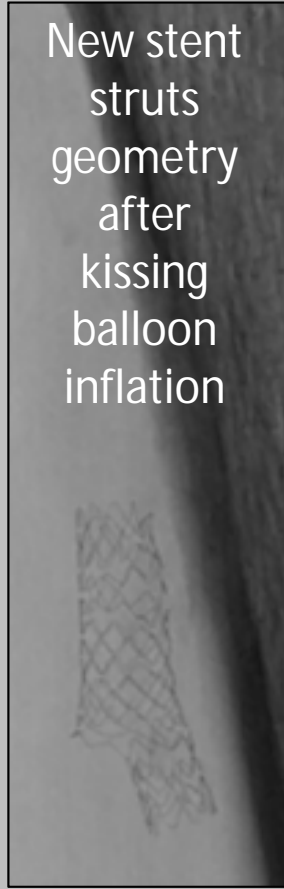
Occlusion of all the BTK vessels



Result after multiple inflations



Kissing balloon inflation



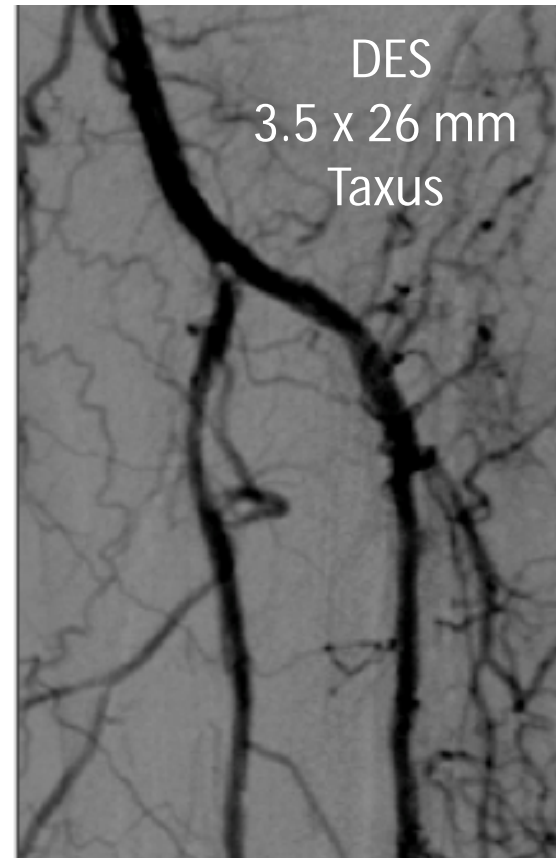
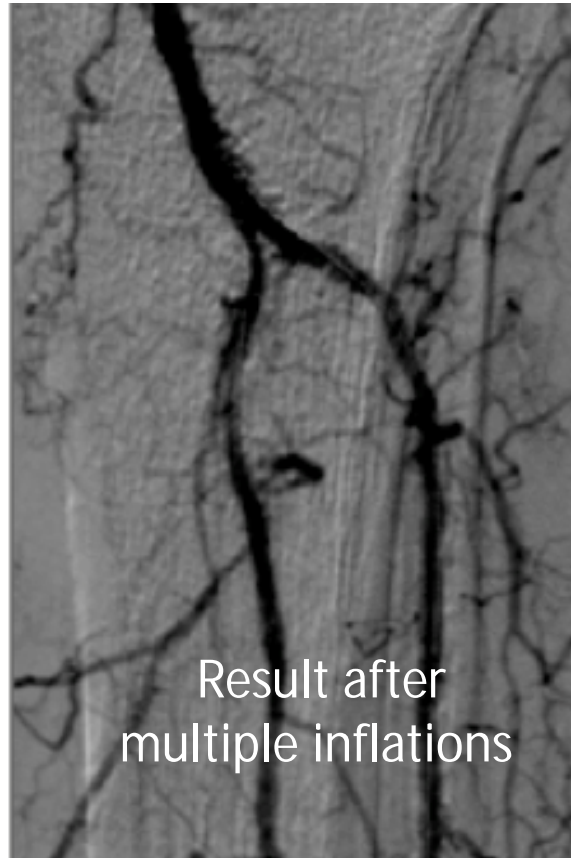
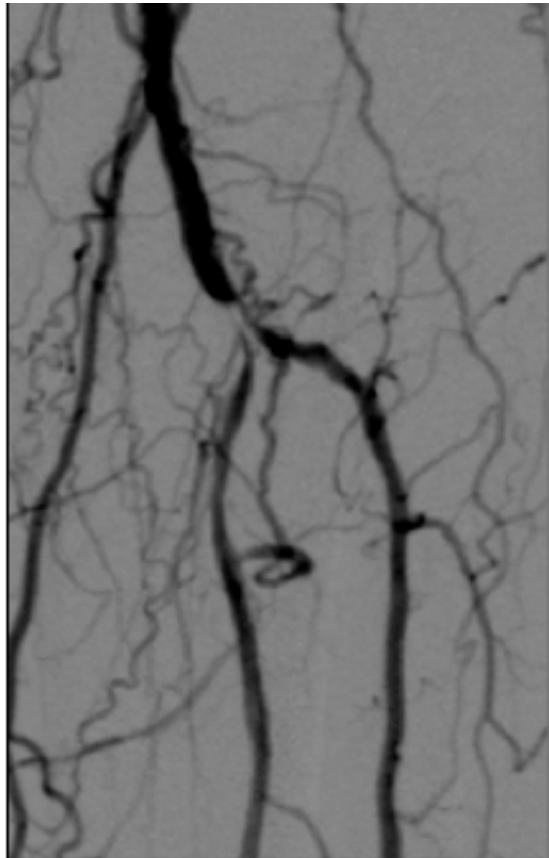
New stent struts geometry after kissing balloon inflation



Final result

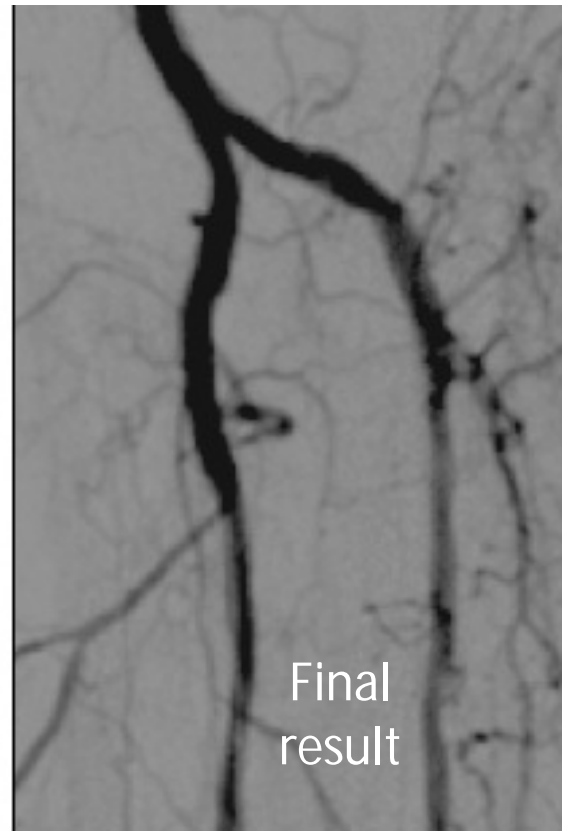
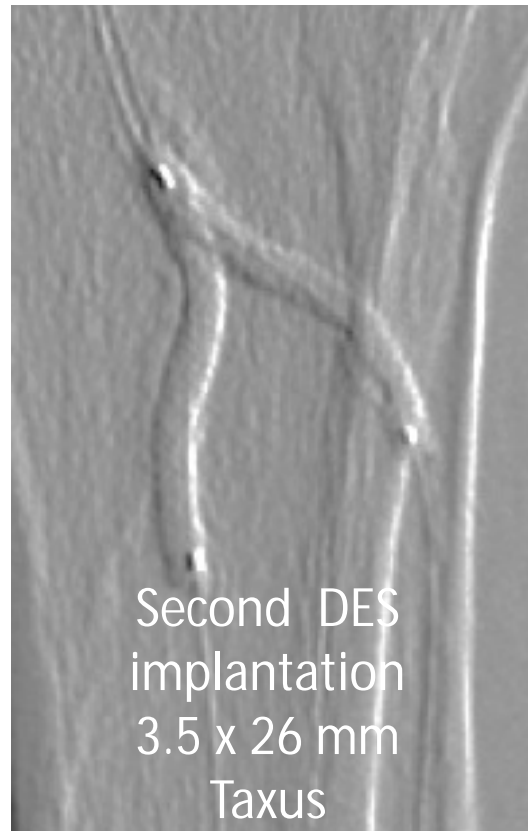
Two-stents strategy

Culotte techniques



Two-stents strategy

Culotte techniques



Two-stents strategy

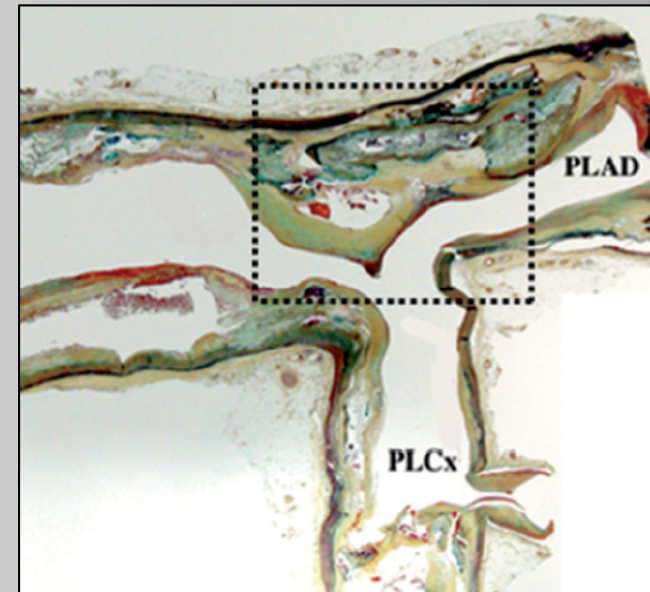
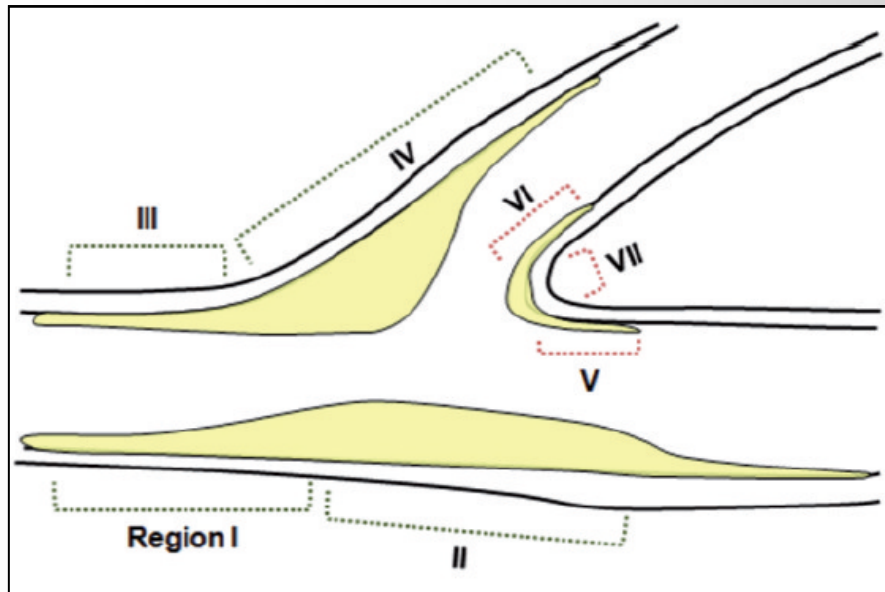
Culotte techniques



Schematic representation

The two stents are overlapped in the proximal portion of the bifurcation

Role of atherectomy in bifurcational lesions

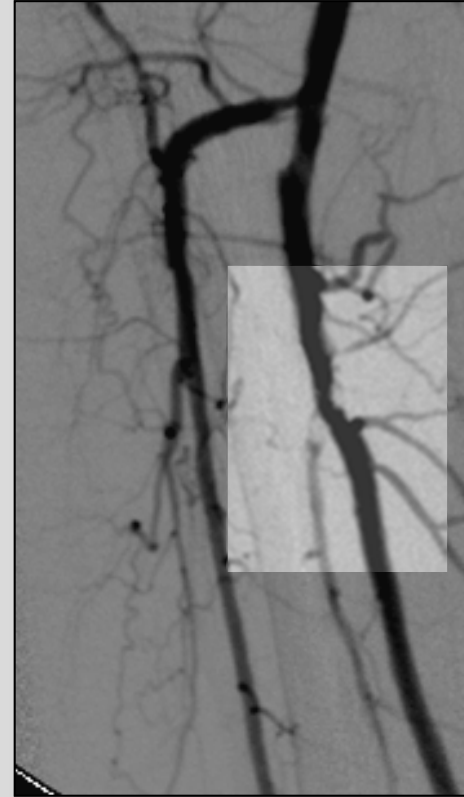
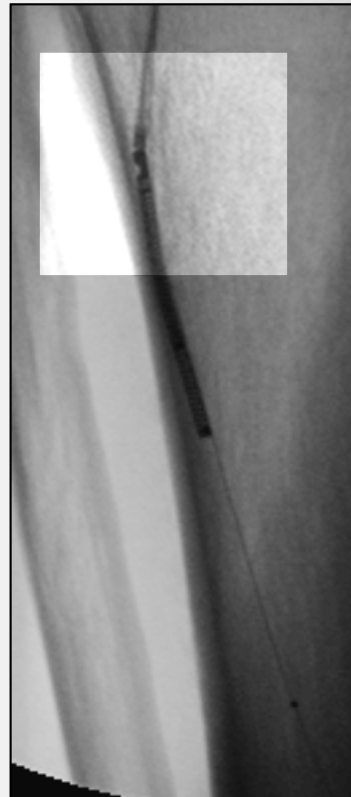


Bifurcational lesions

Atherosclerotic plaques are located in the lateral walls while the flow divider regions are spared

Role of atherectomy in bifurcational lesions

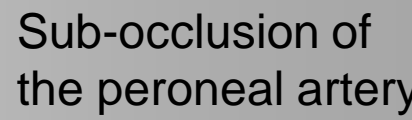
The cutting blade is **incorrectly** addressed to the bifurcation flow divider (vessel carina)



Residual stenosis in the main branch

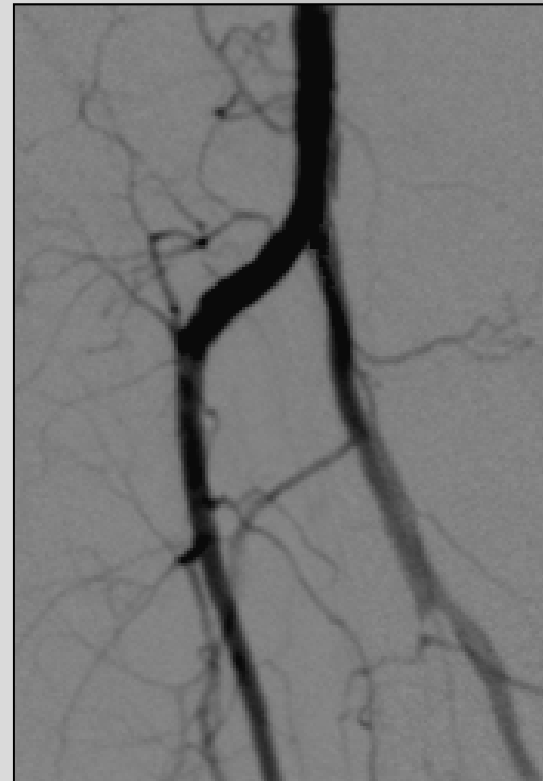
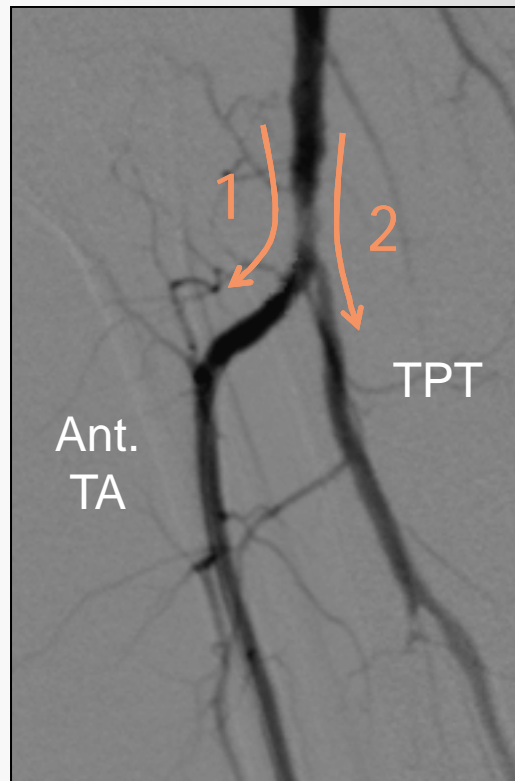


Sub-occlusion of the peroneal artery



Role of atherectomy in bifurcational lesions

The cutting blade is **correctly** addressed to the vessel wall opposite to the bifurcation flow divider (vessel carina)



Conclusions

- The information regarding the treatment of BTK bifurcational lesions are limited to small series of patients treated with different strategies.
- All the experiences indicate high success rates and good mid term patency.
- In absence of prospective randomized studies, operators should tailor their interventions according to lesion characteristics, clinical presentation and personal preference.