

# Vascular Protection in Patients with CAD and PAD: New Options

---

Professor Dr Eike Sebastian Debus

Direktor Klinik für Gefäßmedizin

Gefäßchirurgie – Angiologie – Interventionelle Therapie

Deutsches Aortenzentrum Hamburg

Comprehensive Wound Center

# Disclosures

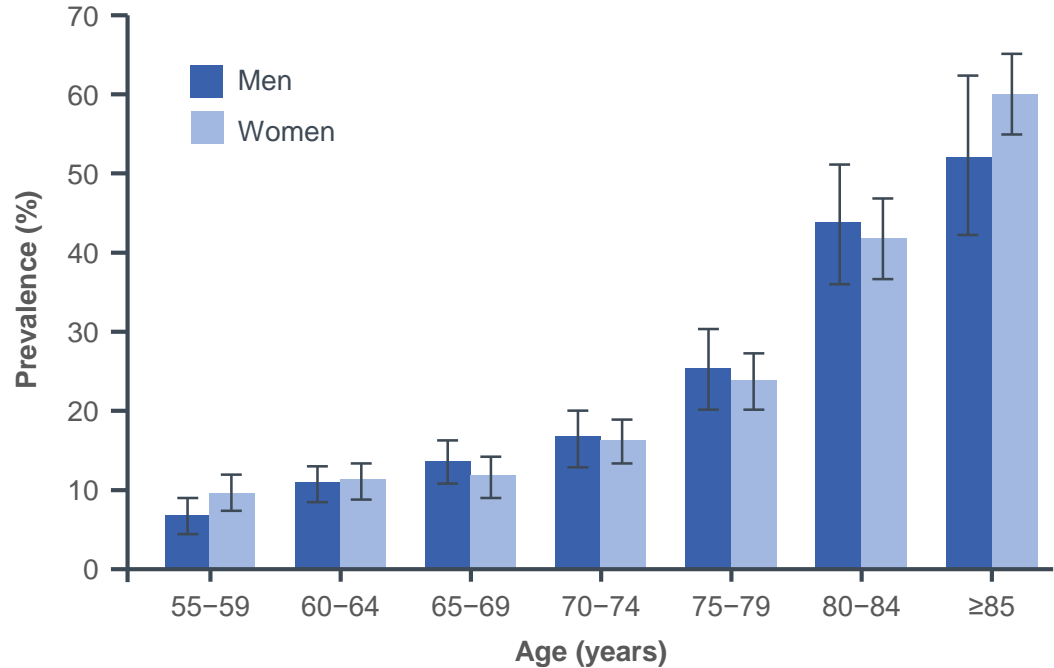
---

- ◆ I have the following potential conflicts of interest to report:
  - Grants/research support from **COOK and Vascutek**
  - Honoraria and travel support from **BAYER**

# Prevalence of PAD Is High and Increases Significantly with Age

## The Rotterdam study

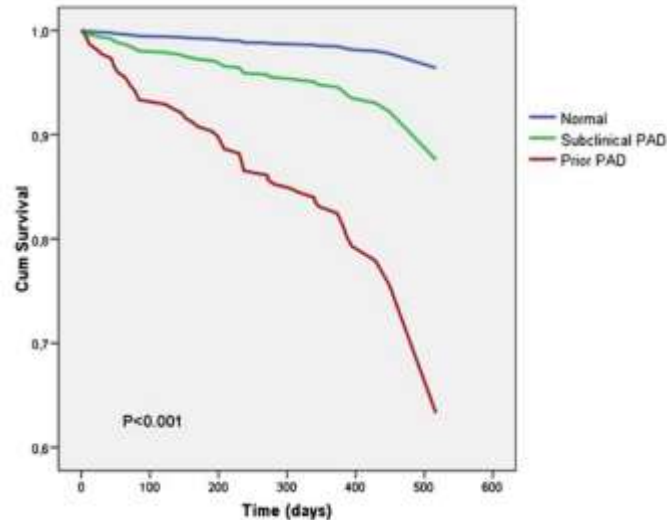
- ◆ Patients aged  $\geq 55$  years
- ◆ 19.1% had PAD
- ◆ Prevalence higher in women (20.5%) than in men (16.9%)
- ◆ Clear increase of PAD with age
- ◆  $>50\%$  of patients aged  $\geq 85$  years have PAD



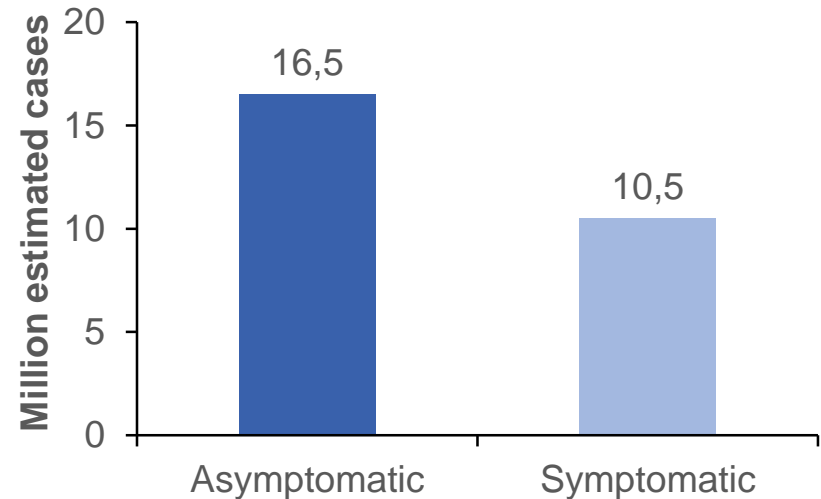
# PAD Is Currently Under-diagnosed

- ◆ Most patients with lower extremity PAD are asymptomatic<sup>1</sup>
  - Even asymptomatic patients are at high risk of cardiovascular events

## Cardiovascular mortality according to PAD status<sup>2</sup>



## Estimated cases of PAD in Europe and North America<sup>3</sup>



# PAD: It's All About Prevention

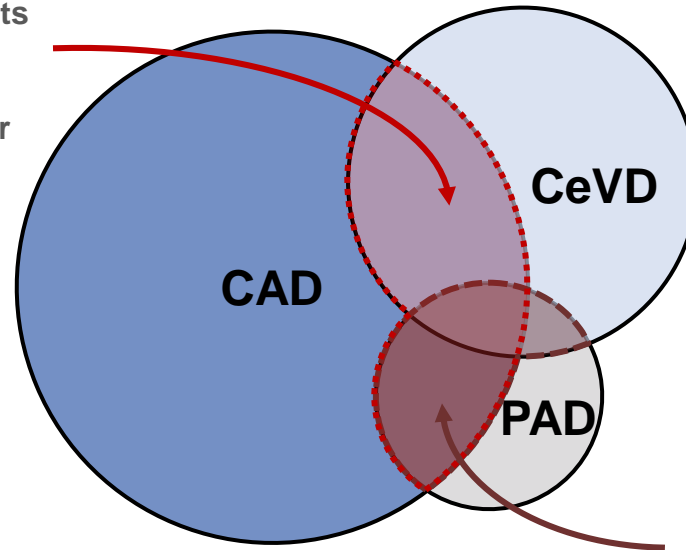
## CENTRAL ILLUSTRATION Cardiovascular Prevention in PAD



# PAD Is a Polyvascular Disease

- ◆ REACH registry (n=67,888): more than 3 in 5 patients with PAD have atherothrombotic disease in other arterial territories

24.8% of patients with CAD had concomitant disease in other vascular beds



61.5% of patients with PAD had concomitant disease in other vascular beds

Are vascular specialists aware of this and how does it inform their treatment?

# What Is New in the 2017 ESC/ESVS PAD Guidelines?

## 2017 New recommendations

### Lower extremity artery disease (LEAD)

- ◆ Screening for LEAD in CAD patients
- ◆ Screening for LEAD in HF patients
- ◆ Clopidogrel preferred over aspirin
- ◆ Antiplatelet therapy in isolated asymptomatic LEAD

**I**

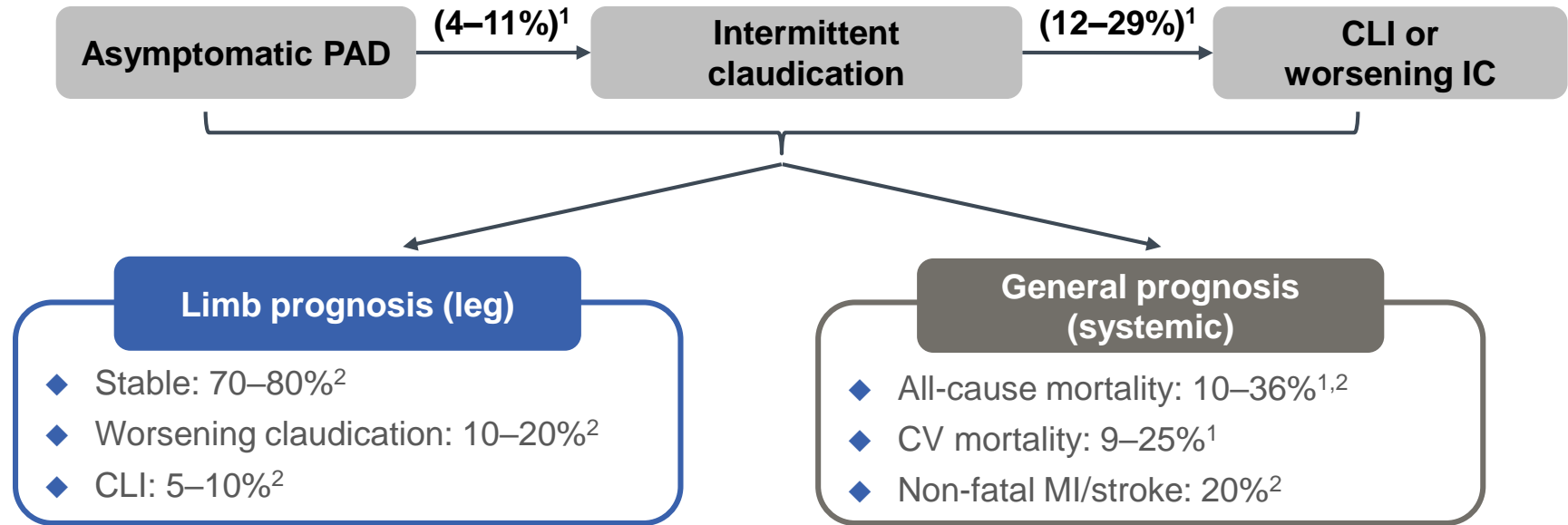
**IIa**

**IIb**

**III**

# Patients with PAD Are at Risk of Adverse Events and Disease Progression

## 5-year cumulative incidence rates



**Are vascular specialists aware of these outcomes and how to prevent them/manage these patients?**



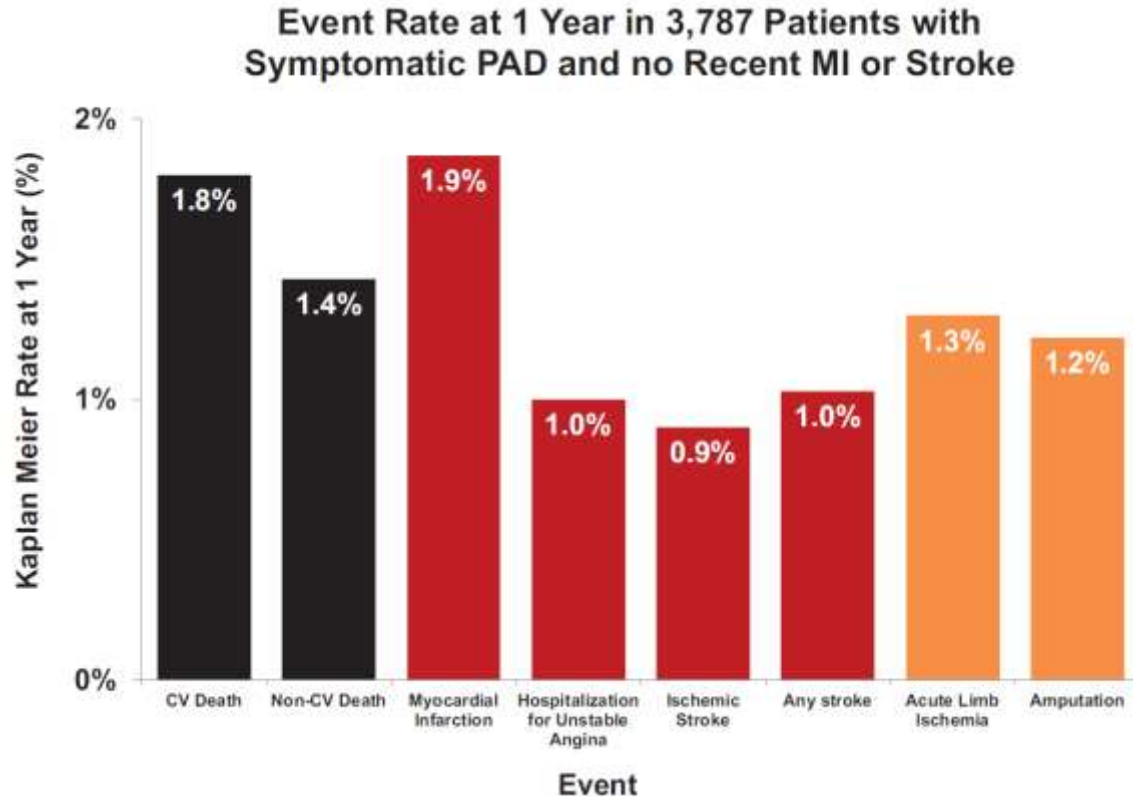
## **Vascular Medicine**

### **Acute Limb Ischemia and Outcomes With Vorapaxar in Patients With Peripheral Artery Disease**

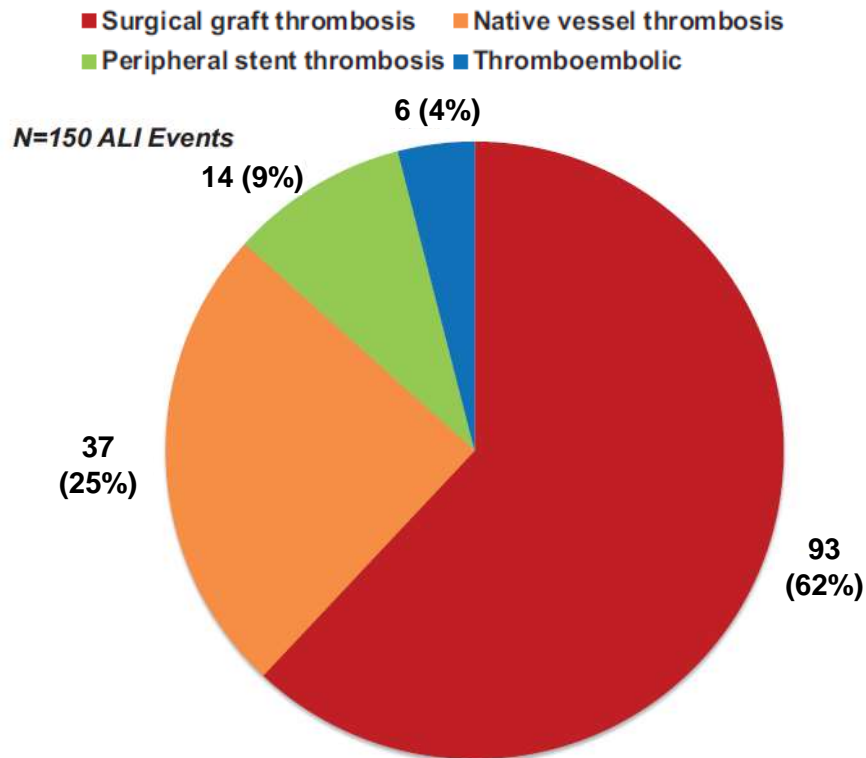
#### **Results From the Trial to Assess the Effects of Vorapaxar in Preventing Heart Attack and Stroke in Patients With Atherosclerosis–Thrombolysis in Myocardial Infarction 50 (TRA2°P-TIMI 50)**

Marc P. Bonaca, MD, MPH; J. Antonio Gutierrez, MD, MHS; Mark A. Creager, MD;  
Benjamin M. Scirica, MD; Jeffrey Olin, MD; Sabina A. Murphy, MPH;  
Eugene Braunwald, MD; David A. Morrow, MD, MPH

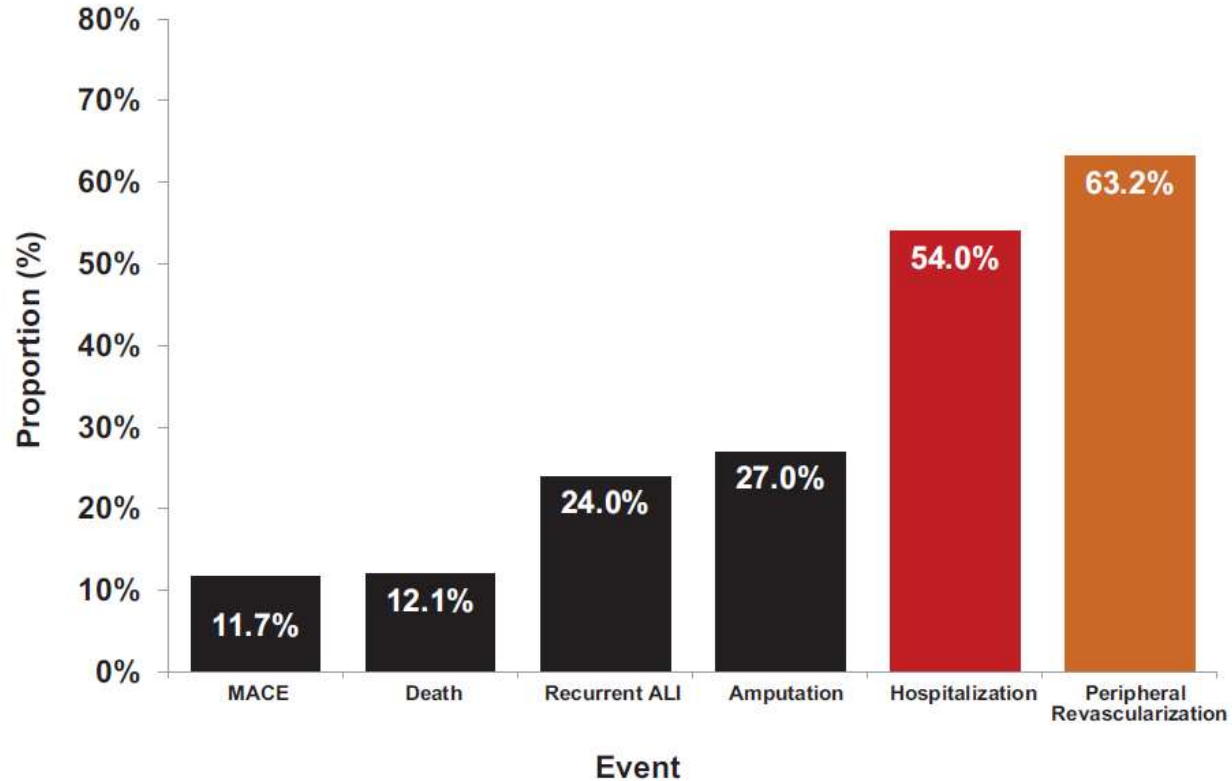
# CV Event Rates at 1 year



# Causes of Acute Limb Ischemia



# Outcomes After Acute Limb Ischemia



# 2017 ESC/ESVS Guidelines: Clinical Stages of LEAD

**Modern management of claudication:**

**CVD prevention**  
**Exercise therapy**

**± Revascularization**

Vasoactive drugs = no proof in the modern management

Fontaine classification				Rutherford classification		
Stage	Symptoms			Grade	Category	Symptoms
<b>I</b>	Asymptomatic		↔	0	0	Asymptomatic
<b>II</b>	<b>IIa</b>	Non-disabling intermittent claudication	↔	I	1	Mild claudication
				I	2	Moderate claudication
	<b>IIb</b>	Disabling intermittent claudication		I	3	Severe claudication
<b>III</b>	Ischaemic rest pain		↔	II	4	Ischaemic rest pain
<b>IV</b>	Ulceration or gangrene		↔	III	5	Minor tissue loss
				III	6	Major tissue loss

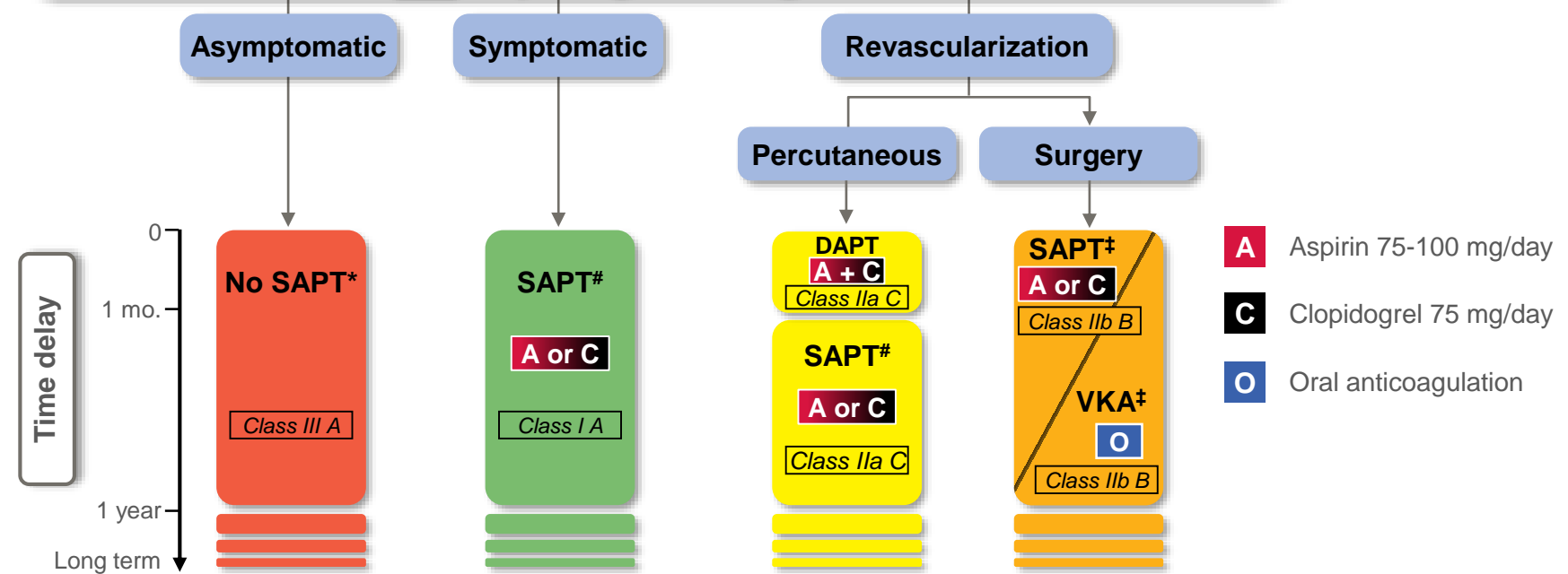
# Key Points in PAD Treatment with Revascularization

---

- ◆ Post-revascularization PAD **has different thrombotic risks** than stable PAD
- ◆ PAD antithrombotic practice patterns vary widely
  - Likely influenced by CAD treatment patterns
  - Little data to support varying DAPT prescribing patterns
- ◆ We are still searching for the best way to care for post-revascularization PAD

# ESC/ESVS Guidelines: Antiplatelet Therapy in Patients with Lower Extremity Artery Disease

## Management of antiplatelet therapy in patients with LEAD not requiring anticoagulation



\*SAPT should be considered if CAD/CAS; #DAPT may be considered if ACS/PCI <1 year or complex PCI; ‡evidence is weak and bleeding doubles as compared to SAPT

# The Optimal Antithrombotic Management of Patients with PAD Undergoing Revascularization Is Unknown

---

- ◆ DAPT after endovascular interventions is unproven but standard practice
- ◆ DAPT failed in a surgical revascularization trial
- ◆ Full-dose warfarin after surgical bypass shows no benefit over aspirin alone



# Conclusions

---

- ◆ PAD affects millions of people worldwide yet remains under-diagnosed and under-treated
- ◆ Revascularization is not a cure – patients with a history of ALI are at high risk of recurrent limb events or cardiovascular events
- ◆ Current therapeutic strategies for both chronic and post-interventional PAD are based on limited clinical data

# Thank you!

---

Martinistraße 52 | D-20246 Hamburg  
Ansprechpartner: Prof. Dr. E. S. Debus  
Klinikdirektor

Telefon +49 (0) 40 7410-53178

Telefax +49 (0) 40 7410-53272

[h.hidalgo@uke.de](mailto:h.hidalgo@uke.de) | [www.uke.de](http://www.uke.de)



# Vascular Protection in Patients with CAD and PAD: New Options

---

Professor Dr Eike Sebastian Debus

Direktor Klinik für Gefäßmedizin

Gefäßchirurgie – Angiologie – Interventionelle Therapie

Deutsches Aortenzentrum Hamburg

Comprehensive Wound Center