

Outcomes of a consecutive series of 708 patients with  
acute limb ischaemia

A single center report from Munich

K.Stoklasa, G.Biro, S.Dallmann-Sieber, M.Salvermoser, A.Zimmermann, H.-H.Eckstein

Department of Vascular and Endovascular Surgery, Klinikum rechts der Isar,  
Technical University of Munich

# Disclosure

---

---

Speaker name: Kerstin Stoklasa

.....

I have the following potential conflicts of interest to report:

- Consulting
- Employment in industry
- Stockholder of a healthcare company
- Owner of a healthcare company
- Other(s)
  
- I do not have any potential conflict of interest

# Background:

- ✓ Frequent case of emergency in the vascular medicine
- ✓ High procedural mortality and limb loss in 16-42% of cases

## Research questions:

- Evaluation of a large cohort in terms of survival and limb salvage
- Are there clinical and morphological variables, that cause a worse outcome in our collective with acute limb ischaemia?

# Patients and methods

## Inclusion and exclusion criteria:

- 708 consecutively treated pts, January 2004 - December 2016
- main diagnosis ICD I74.0, I74.3, I74.5 and invasive surgery

## Variables:

- Age, gender, co-morbidities/ASA, previous revasc (open, endo, hybrid procedure)
- Severity of acute limb ischaemia classified according TASC I-III

## Endpoints:

- **Primary endpoints: 30d mortality, 30d amputation rate**
- Secondary endpoints: periprocedural complications (Reocclusion, bleeding, renal, cardial, pulmonary)

## Statistics:

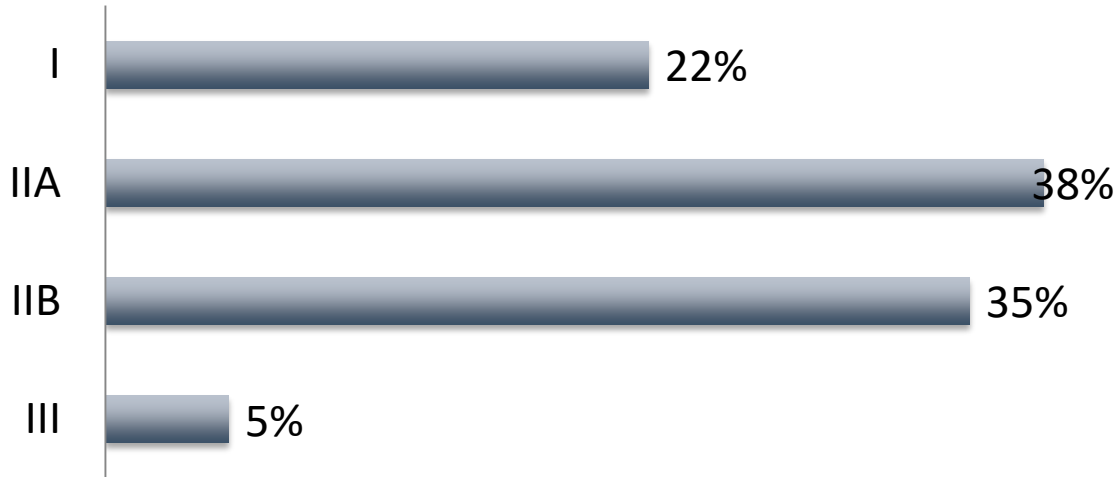
- Uni- und multivariate (Chi-Quadrat, t-test, wald-test)

# Baseline characteristics

Characteristics	%
Age (y)	72, SD 14.2
Gender, female	44.9
Coronary artery disease	39.5
Peripheral artery disease	38.1
Previous revascularization	44.0
Atrial fibrillation	33.0
Chronic kidney failure	17.1
Stroke	15.1
COPD	11.0
Diabetes	22.0
Hypertension	68.6
Preoperative statin therapy	41.5
Current/former smokers	41.7

# Baseline characteristics

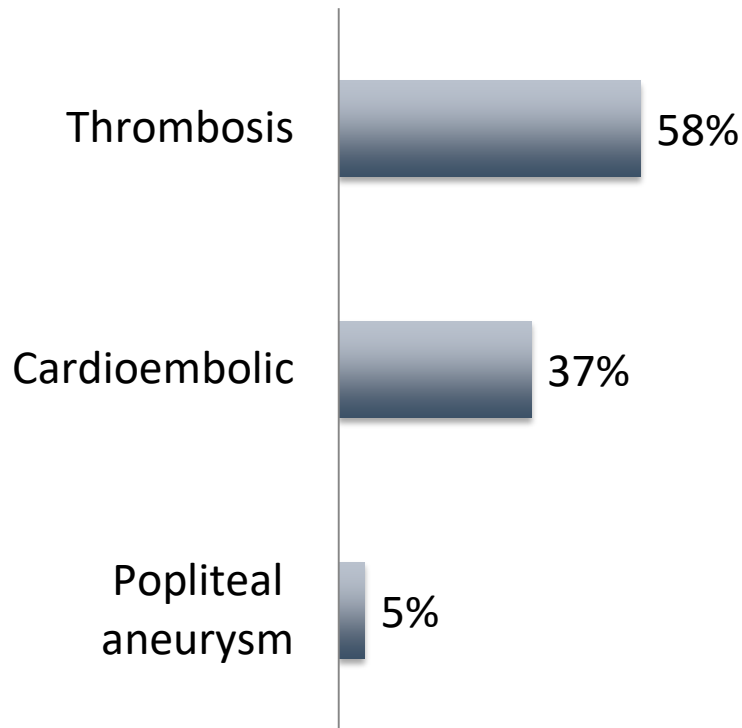
## TASC classification



ASA physical status	%
1	0,6
2	17,9
3	42,5
4	36,0
5	3,0

# Baseline characteristics

## Etiology

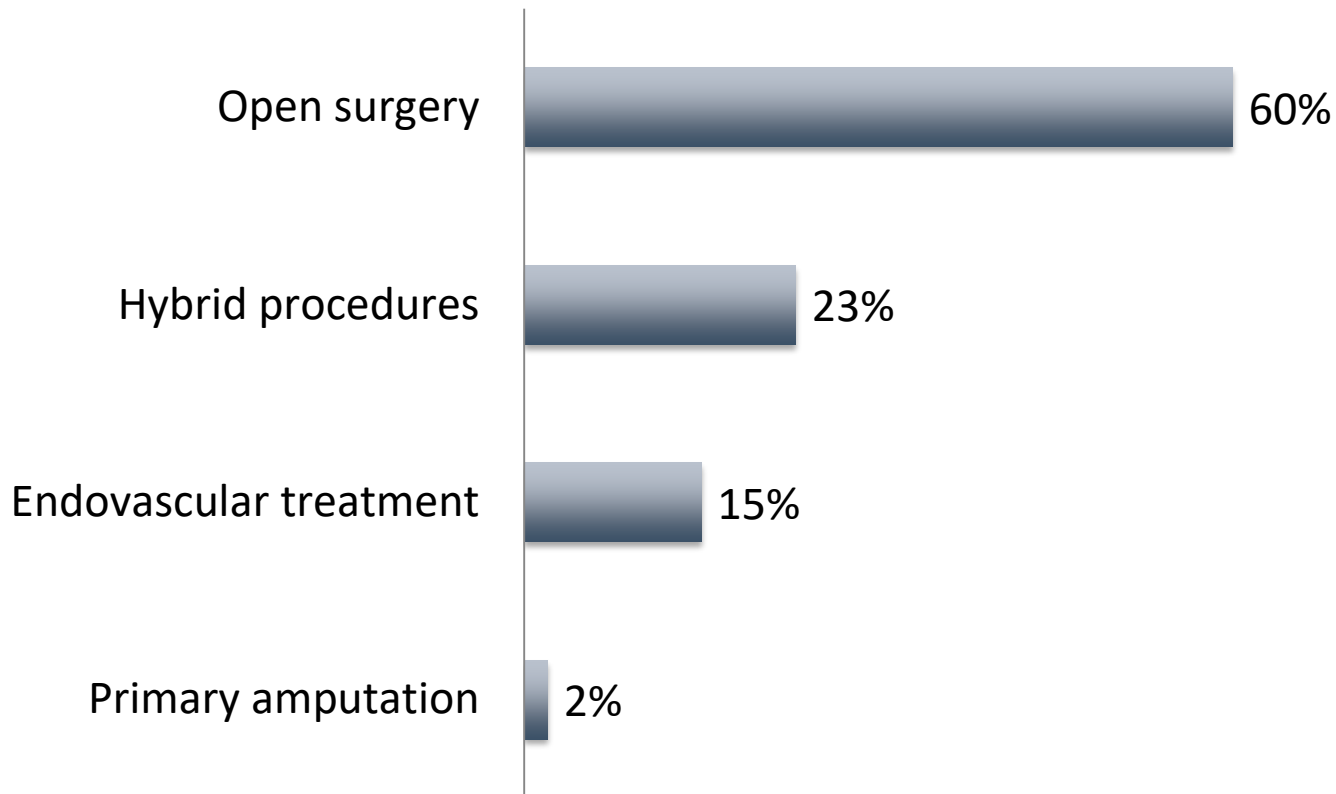


## Localization

<u>Localization</u>	<u>%</u>
Aorta	5,9
Iliac artery	19,4
Femoral artery	31,6
Popliteal artery	17,4
Below the knee	5,1
Foot	0,6
Bypass	20,1

# Method of treatment

## Surgical treatment



Dermatofasciotomy in 33% of the cases



# Short-term outcomes

## Severe early complications

30-day mortality	8%
30-day amputation rate	9%
Length of hospital stay (d)	10, SD 18
Reocclusion	15%
Surgery associated hemorrhage	4%
Renal	9%
Cardial	14%
Pulmonary	11%

# Results - Clinical and morphological variables

Variables	%	30-d mortality p-value	30-d amputation rate p-value
Gender, female	44.9	<b>0.006</b>	0.313
Atrial fibrillation	33.0	<b>0.005</b>	0.119
Previous revascularization	44.0	<b>0.027</b>	0.119
Genetic thrombophilia	2	0.999	<b>&lt;0.001</b>
Preoperative statin therapy	41.5	<b>&lt;0.001 protective</b>	<b>0.042 protective</b>
ASA classification: Cochran-Armitage test for trend		<b>&lt;0.001</b>	0.812
TASC classification: Cochran-Armitage test for trend		<b>&lt;0.001</b>	<b>&lt;0.001</b>
Cardioembolic occlusion	37	<b>0.001</b>	0.645
Arterial thrombosis	58	<b>0.018</b>	0.610

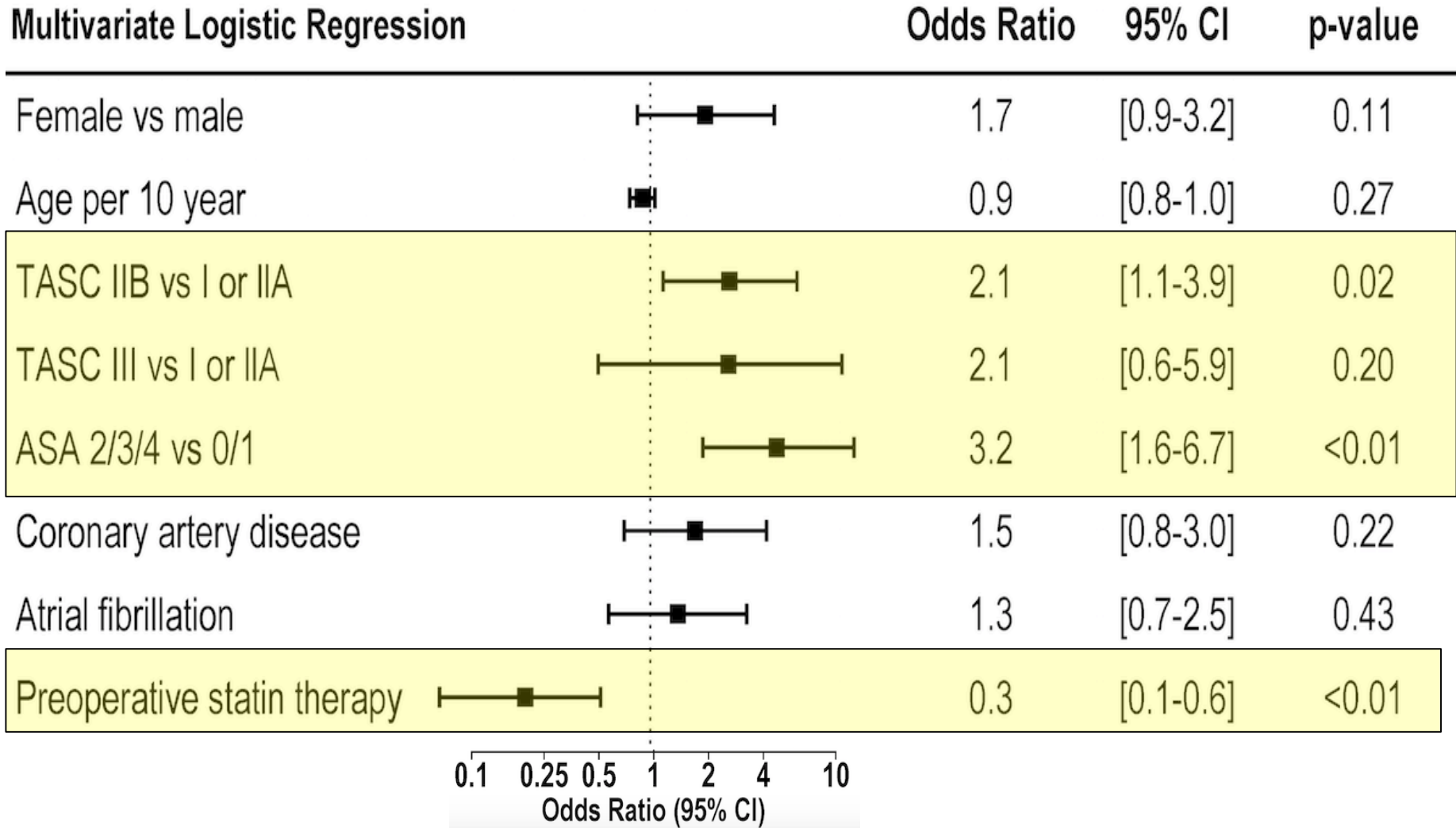
# Results – closure localization, treatment methods and periprocedural complications

Variables	%	30-d mortality p-value	30-d amputation rate p-value
Aorta	6	<b>0.002</b>	0.999
Iliac artery	19	<b>0.015</b>	0.483
Popliteal artery	17	<b>0.025</b>	0.669
Bypass occlusion	20	<b>0.022</b>	0.219

**No significantly difference in surgical treatment**

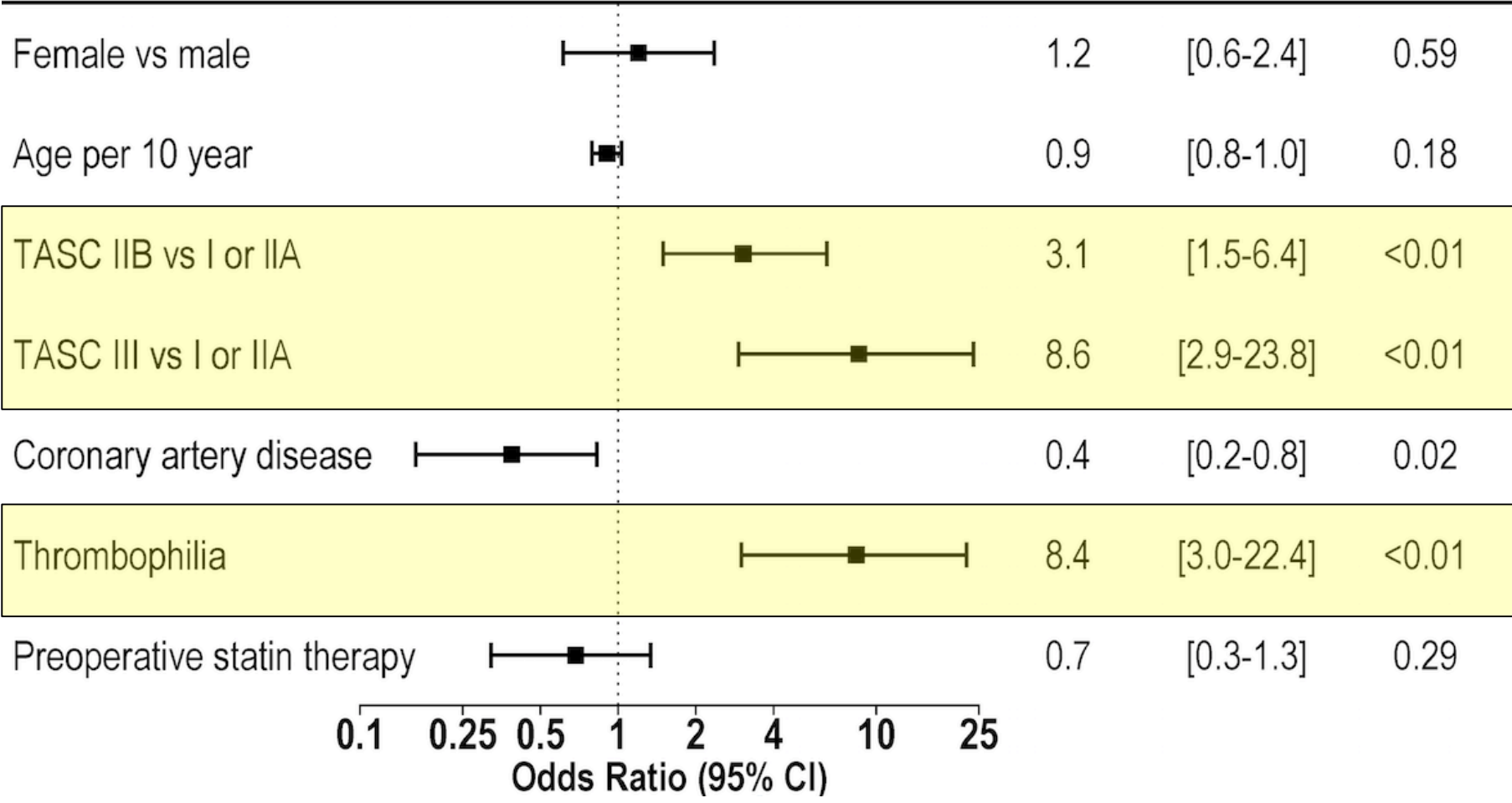
Reocclusion	15	0.101	<b>&lt;0.001</b>
Pulmonary complications	11	<b>&lt;0.001</b>	0.653
Cardial complications	14	<b>&lt;0.001</b>	0.869
Renal complications	9	<b>&lt;0.001</b>	0.999

# Outcomes – 30-day mortality



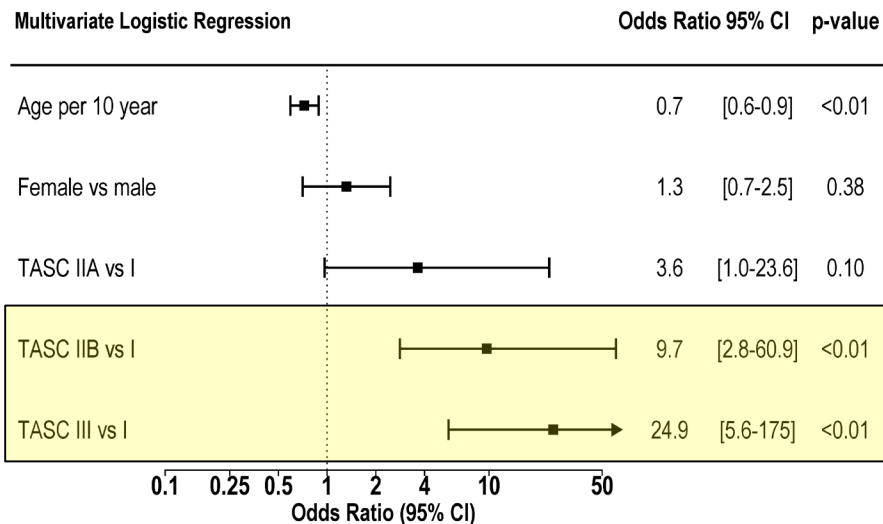
# Outcomes – 30-day amputation rate

## Multivariate Logistic Regression

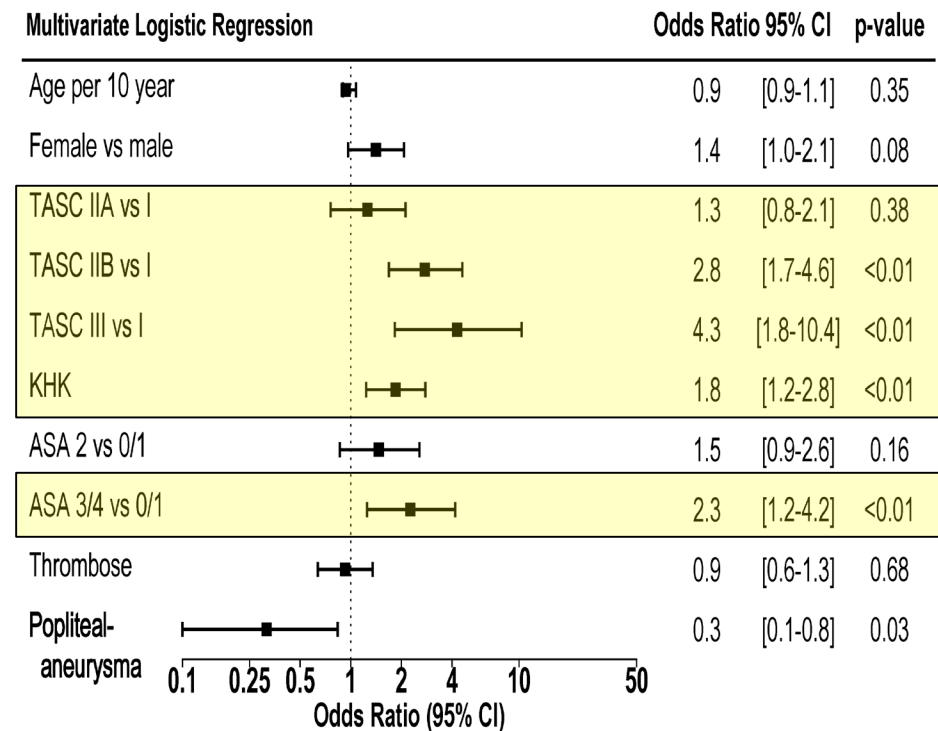


# Outcomes – Reocclusion and internistic complications

## In-hospital reocclusion:



## Severe internistic complications:



- ✓ 30-day mortality 8%, 30-day amputation rate 9%
- ✓ Significantly higher mortality and amputation rate in short-term follow up:
  - Patients with an advanced ischaemia (TASCIIB/III)
  - Patients suffering from increased ASA-classification (ASA 3/4)
- ✓ Female patients are subject to a higher 30-day mortality

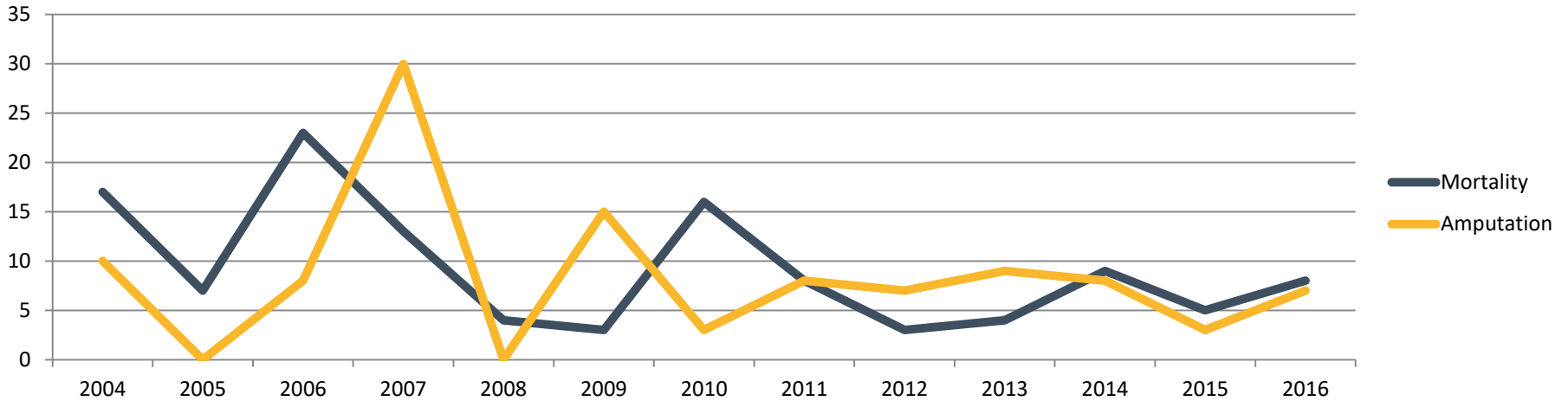
## Outlook:

Mid-term follow-up under investigation

**Thank you!**

# Graphical trend

## In-hospital mortality and amputation-rate



## Surgical treatment

