

Neues vom ESC 2008 in München



Koronare Herzkrankheit

Bielefeld, den 10. September 2008

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Städtische Kliniken Bielefeld

Koronare Herzkrankheit



Konservative Therapie

Hemmung der Thrombozytenaggregation mit
Prasugrel/Clopidogrel (Triton Studie)

Interventionelle Therapie

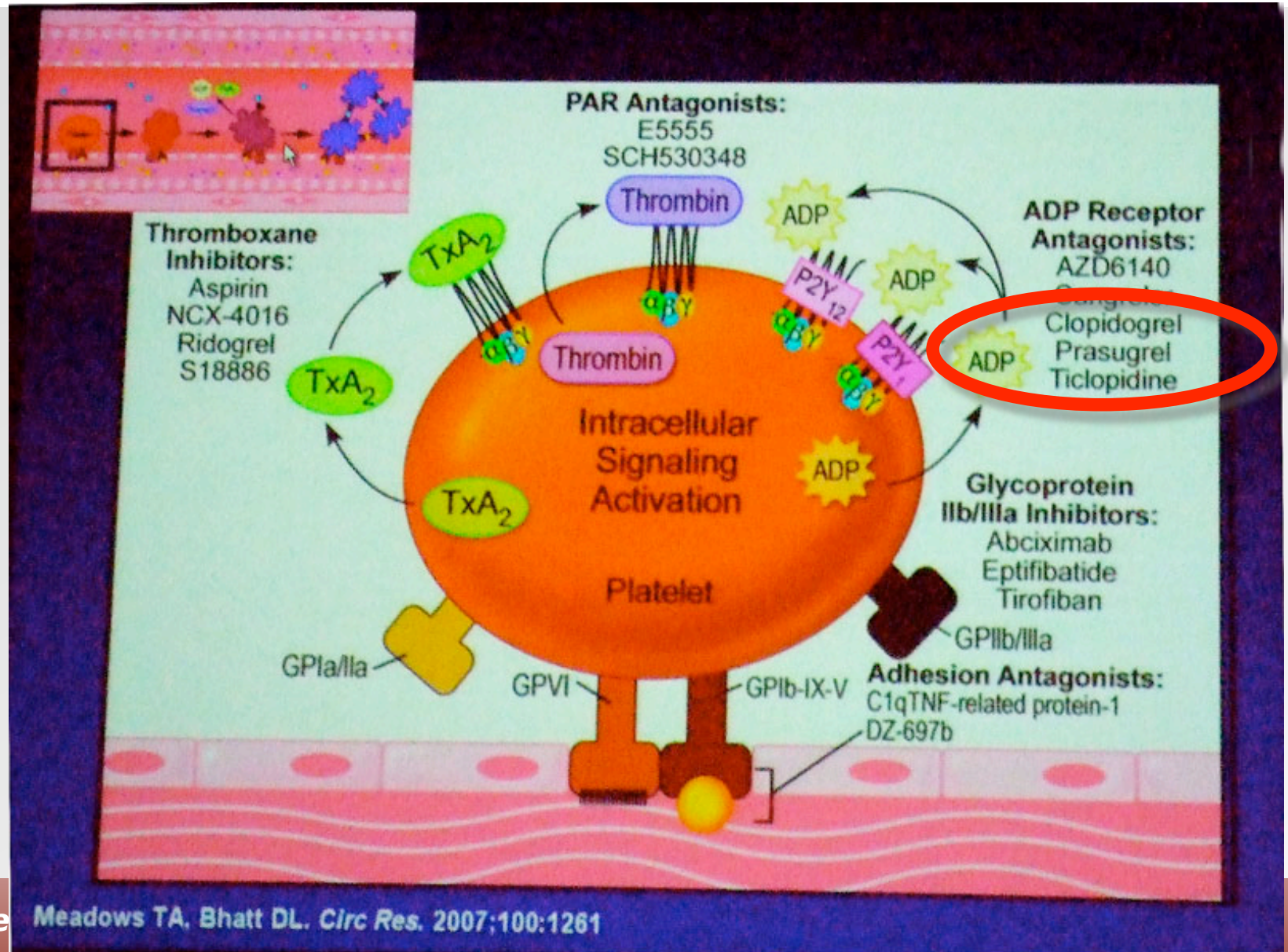
DES aktueller Stand:
Hauptstammstenose / 3 Gefäß KHK, PCI oder Bypass?
(Syntax Studie)

Arteriosklerose im Stent (pathol. Anatom. Aspekte)

Prävention

Epitheliale Progenitorzellen und Sport bei adipösen Kindern

Triton-TIMI 28 Studie

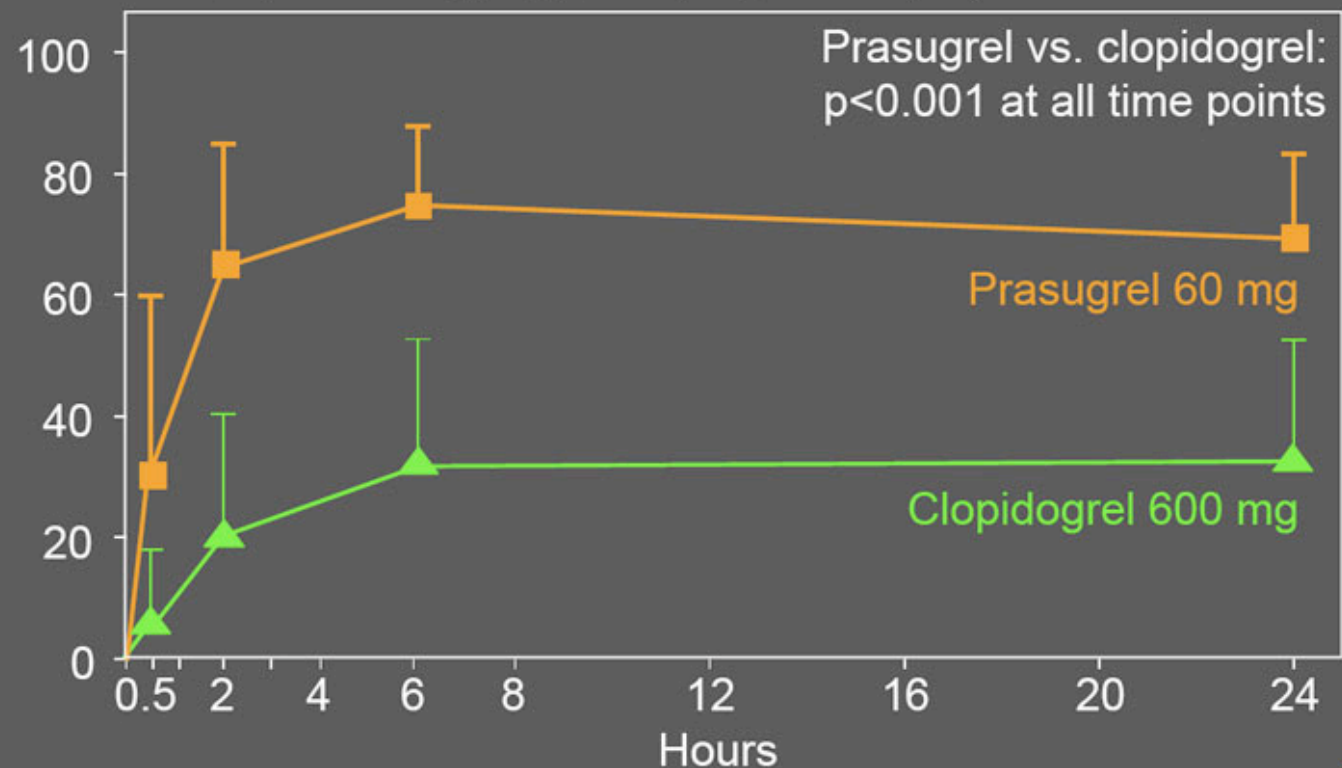


TRITON-TIMI 38 trial STEMI



Superior antiplatelet effect of prasugrel vs. clopidogrel

Inhibition of platelet aggregation (20 μ M ADP, %)



Wiviott, Trenk et al.; Circulation 2007 (PRINCIPLE TIMI 44)



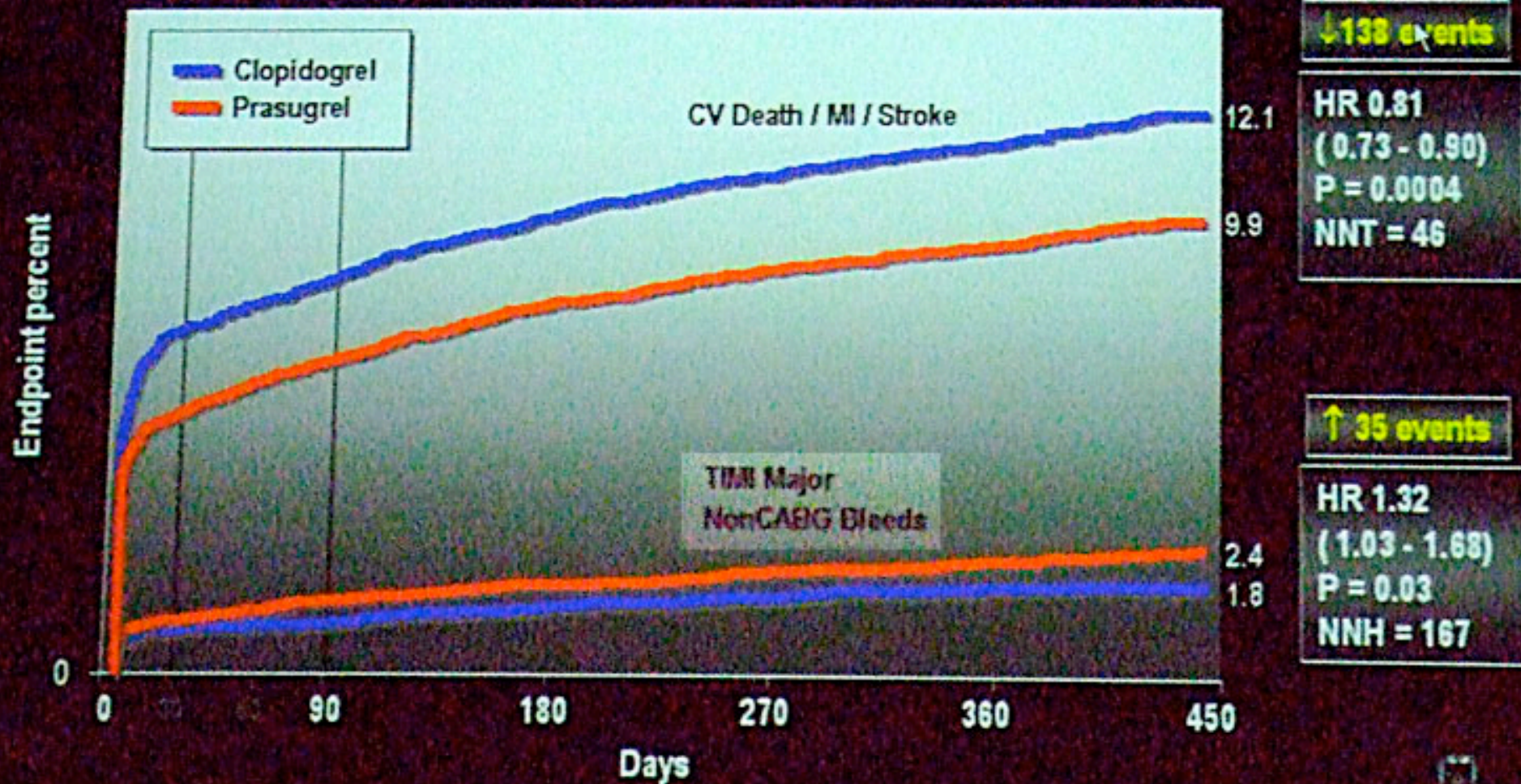
TRITON-TIMI 38 Studie ACS-Patienten



- ACS Patienten (STEMI N=3.534, NSTEMI N=10.074)
- Prasugrel (60mg Start- und 10mg Erhaltungsdosis)
- Clopidogrel (300mg Start- und 75mg Erhaltungsdosis)
- **Ergebnis**
- Reduzierung der ischämischen Ereignisse unter Prasugrel (signifikant)
- Erhöhtes Risiko von schwerwiegenden Blutungen (signifikant)

Triton TIMI 38

Balance of Efficacy and Safety



↓ 138 events

HR 0.81
(0.73 - 0.90)
P = 0.0004
NNT = 46

↑ 35 events

HR 1.32
(1.03 - 1.68)
P = 0.03
NNH = 167



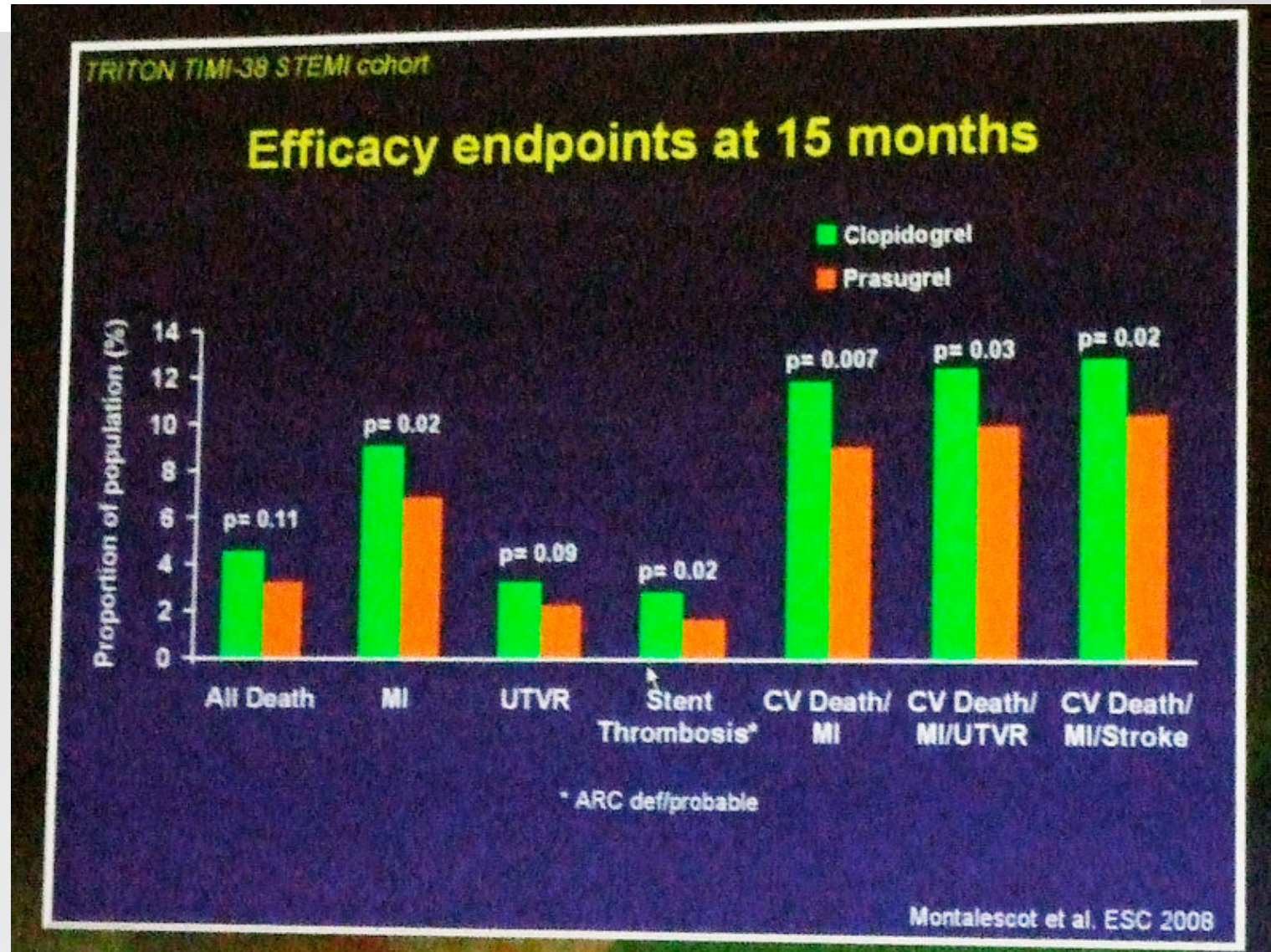
TRITON-TIMI 38 trial STEMI



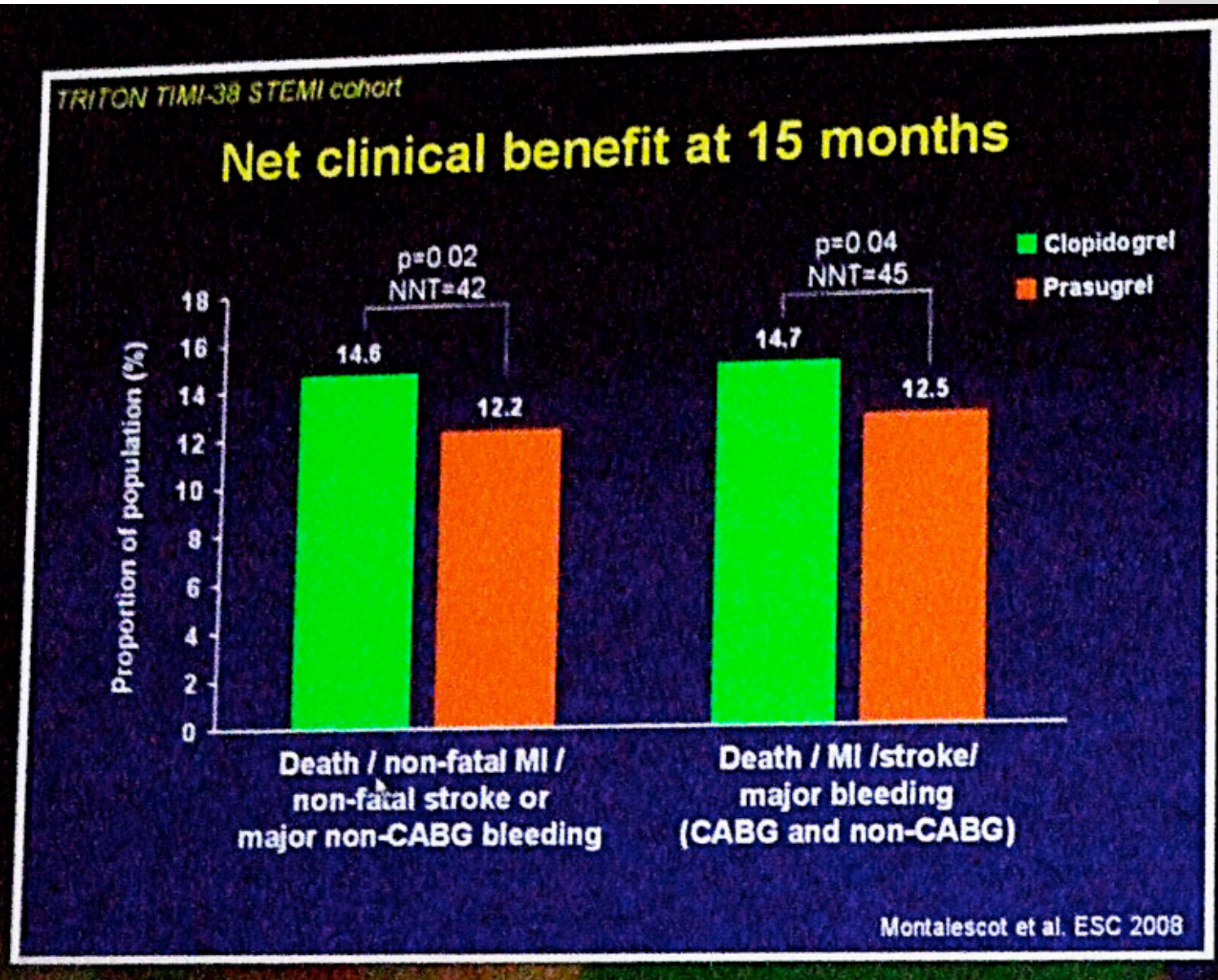
Auswertung der Untergruppe der Patienten mit ST-Hebungsinfarkt (STEMI), die eine perkutane Koronarintervention (PCI) erhalten haben

- 3.534 Patienten mit STEMI
- Primäre PCI < 12 Std. nach Symptombeginn (69%)
- Sekundäre PCI > 12 Std. < 14 Tage nach Symptombeginn (31%)
- Nachbeobachtung median 15 Monate
- Bare metal Stents (BMS) 59%,
Drug eluting Stents (DES) 33%

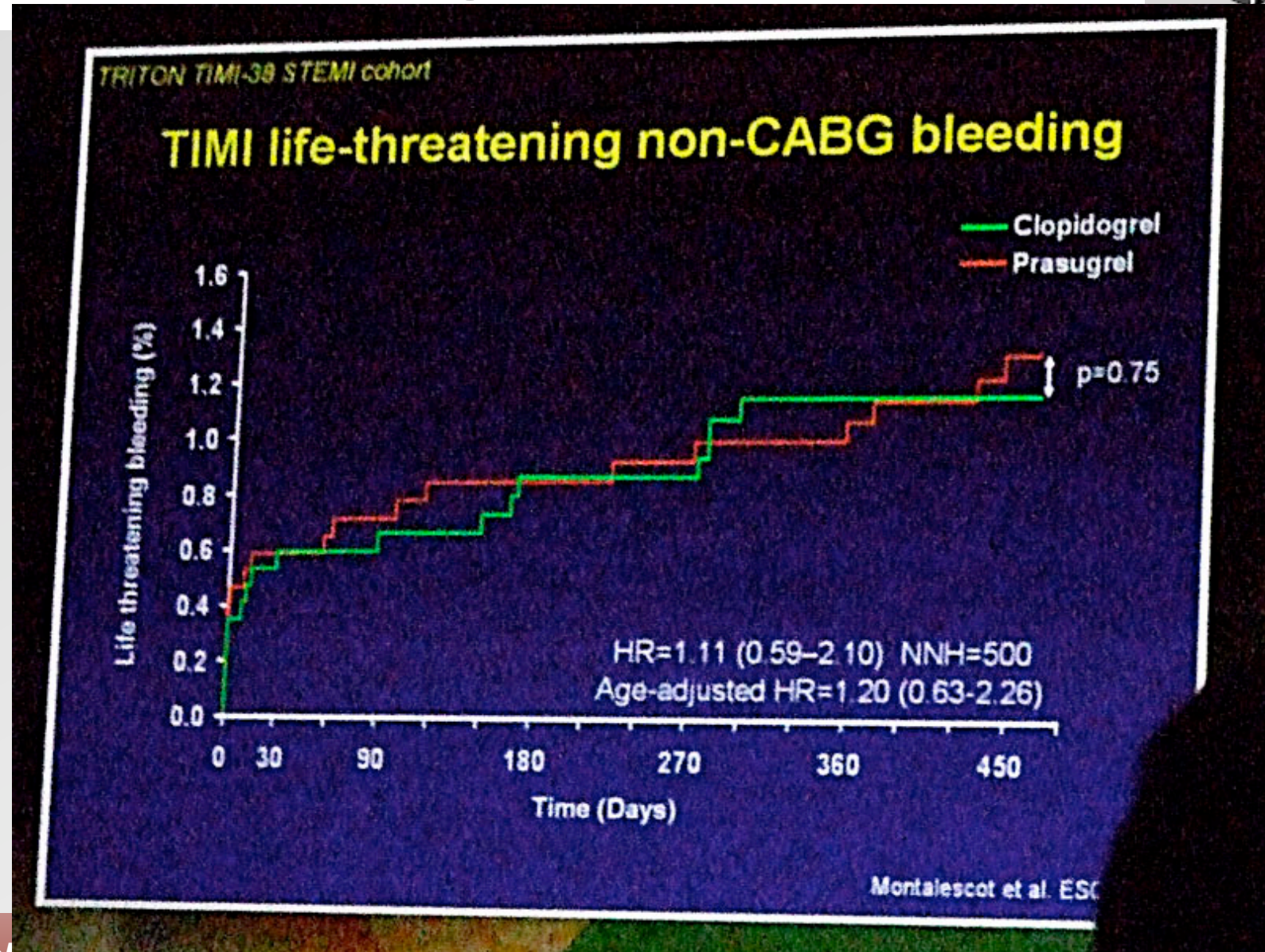
TRITON-TIMI 38 Studie STEMI



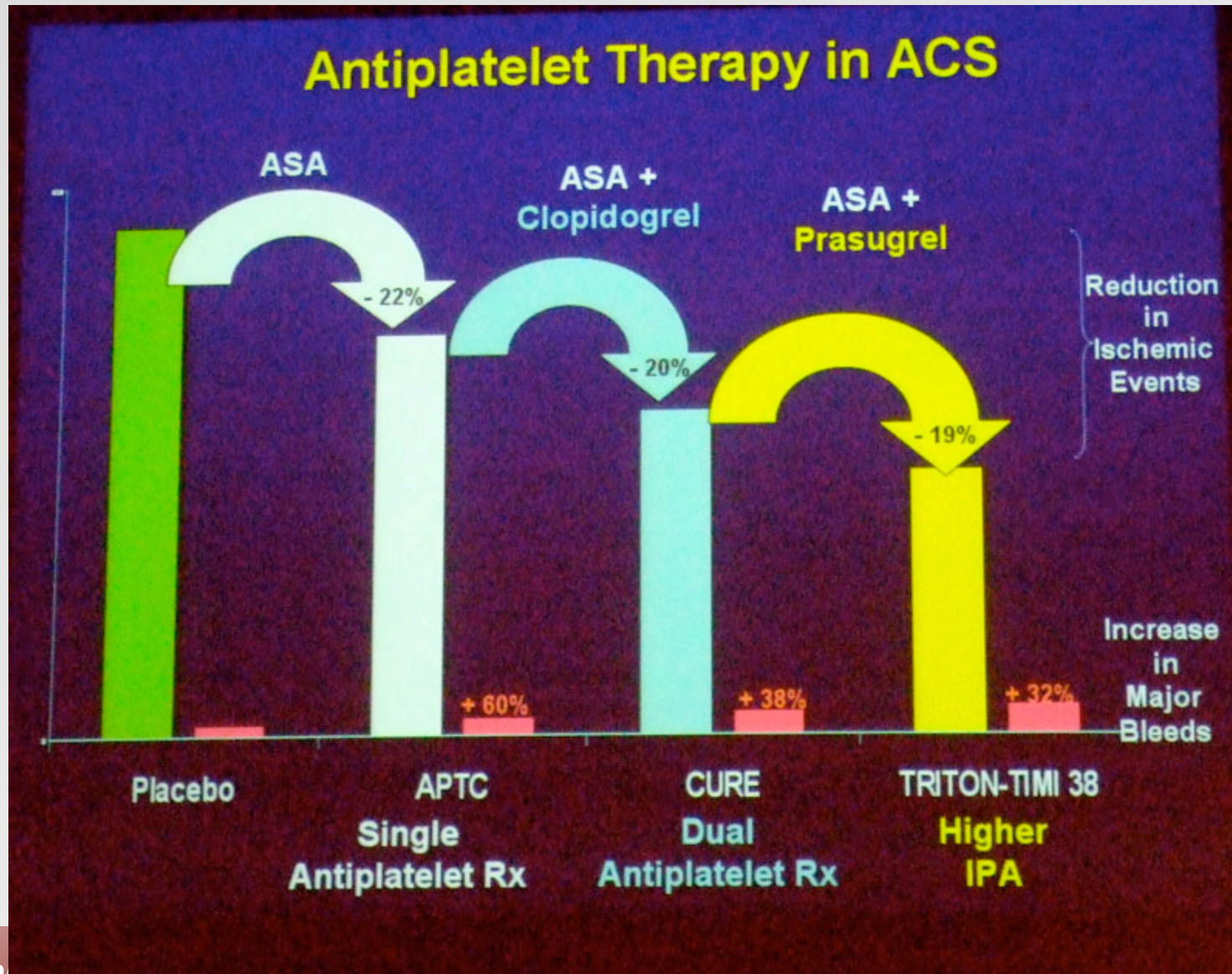
TRITON-TIMI 38 Studie STEMI



TRITON-TIMI 38 Studie STEMI



TRITON-TIMI 38 Studie STEMI



Conclusions

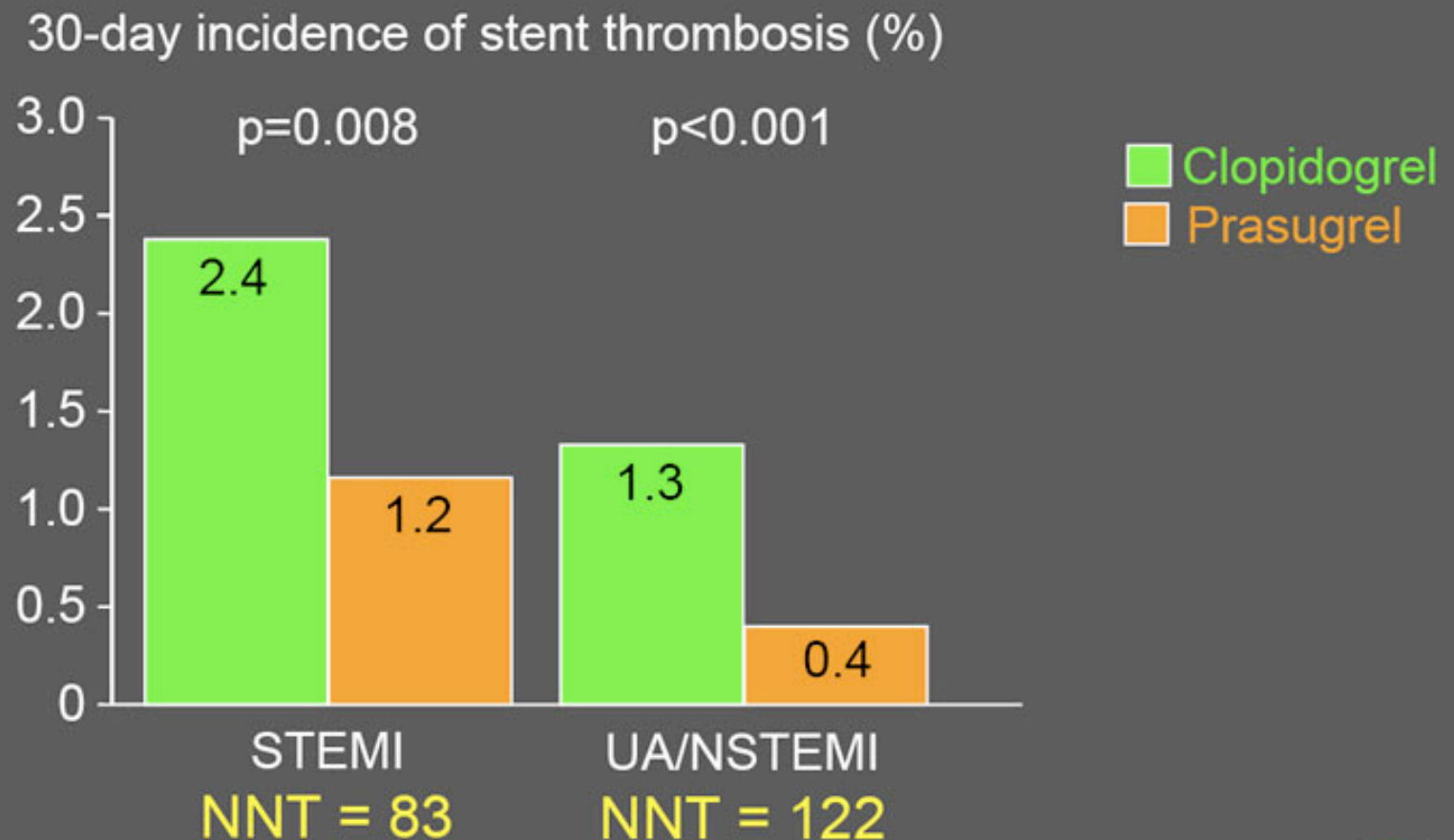
In STEMI patients undergoing PCI

- Prasugrel was superior to standard dose clopidogrel to prevent ischaemic events
- Prasugrel did not have more bleeding events compared to those who were treated with clopidogrel, and this was equally true for:
 - Primary PCI
 - Secondary PCI
 - Major bleeding
 - Minor bleeding
- These data make prasugrel an especially attractive alternative to clopidogrel in PCI for STEMI

TRITON-TIMI 38 Studie Stent Thrombosen



Stent Thrombosis in STEMI and UA/NSTEMI



Syntax Studie

Randomisierte Gruppe



SYNTAX

The Synergy between Percutaneous Coronary Intervention with TAXUS and Cardiac Surgery: The SYNTAX Study

Primary Endpoint Results at One Year in the Randomized Cohort

Patrick W. Serruys MD PhD
Friedrich W. Mohr MD PhD
On behalf of the SYNTAX investigators

Conflicts of Interest: None



Syntax Studie

PTCA mit Taxus DES gegen ACVB-OP

Randomisierte Gruppe



SYNTAX Eligible Patients

SYNTAX

De novo disease

Limited Exclusion Criteria

- Previous interventions
- Acute MI with CPK > 2x
- Concomitant cardiac surgery

Left Main Disease
(isolated, +1, +2 or +3 vessels)

3 Vessel Disease
(revasc all 3 vascular territories)

SYNTAX Trial Design



62 EU Sites + 23 US Sites

Total enrollment
N=3075

Stratification:
LM and Diabetes

Randomized Arms
N=1800

Two Registry Arms

CABG
N=897

vs.

TAXUS*
N=903

CABG
N=1077

PCI
N=198

5yr FU
N=649

No FU
N=428

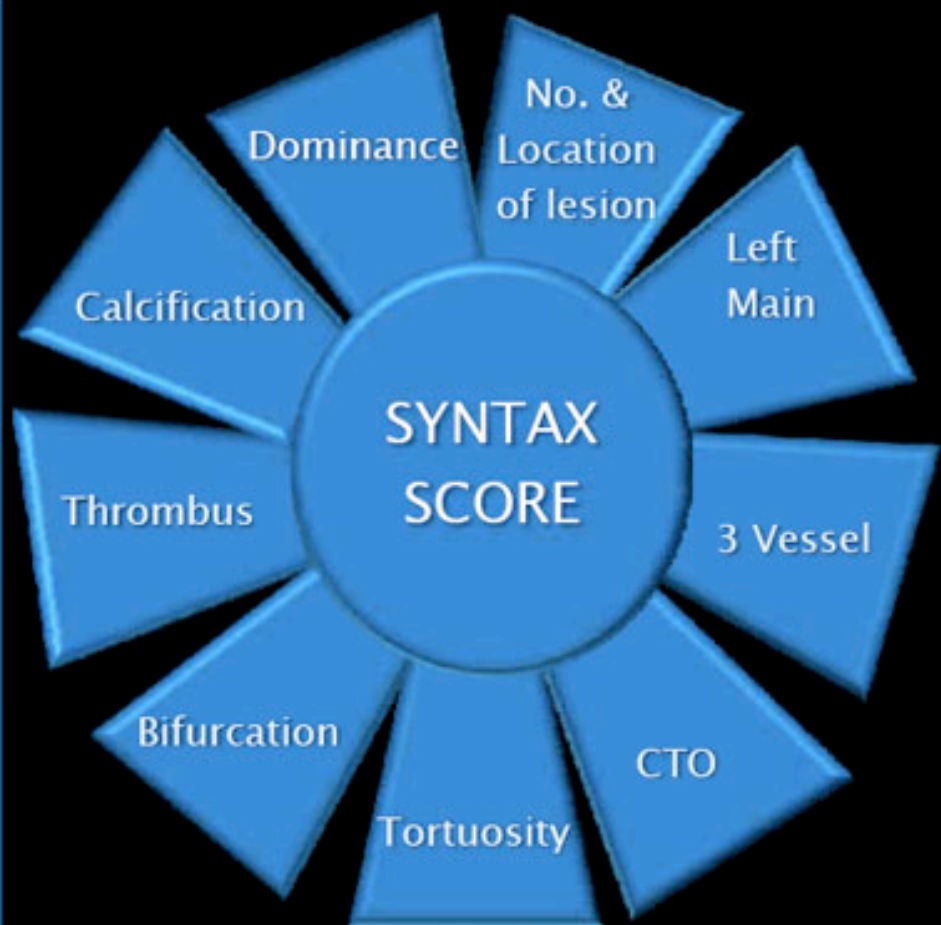
*TAXUS Express

Patient Profiling

SYNTAX

Local Heart team (surgeon & interventional cardiologist) assessed each patient in regards to :

- Patient's operative risk (EuroSCORE & Parsonnet score)
- Coronary lesion complexity (Newly developed SYNTAX score)
- Goal: SYNTAX score to provide guidance on optimal revascularization strategies for patients with high risk lesions

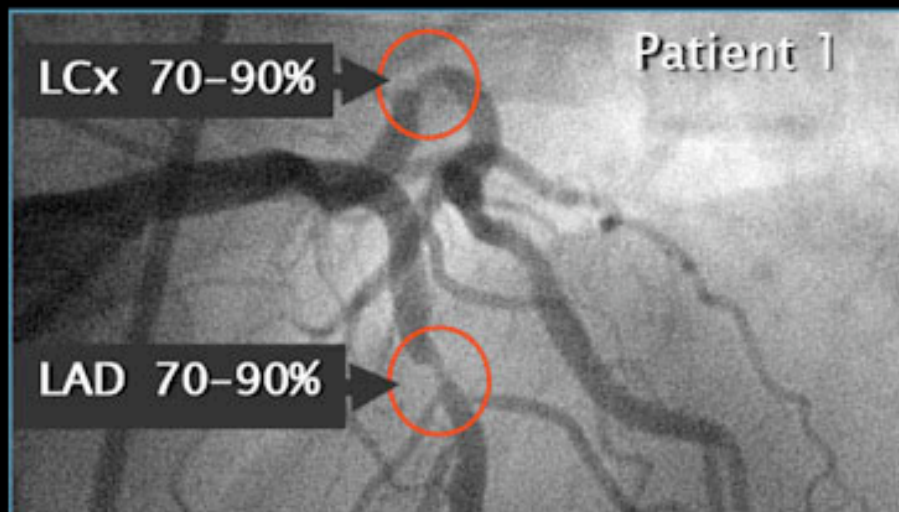


Sianos et al, EuroIntervention 2005;1:219-227
Valgimigli et al, Am J Cardiol 2007;99:1072-1081
Serruys et al, EuroIntervention 2007;3:450-459

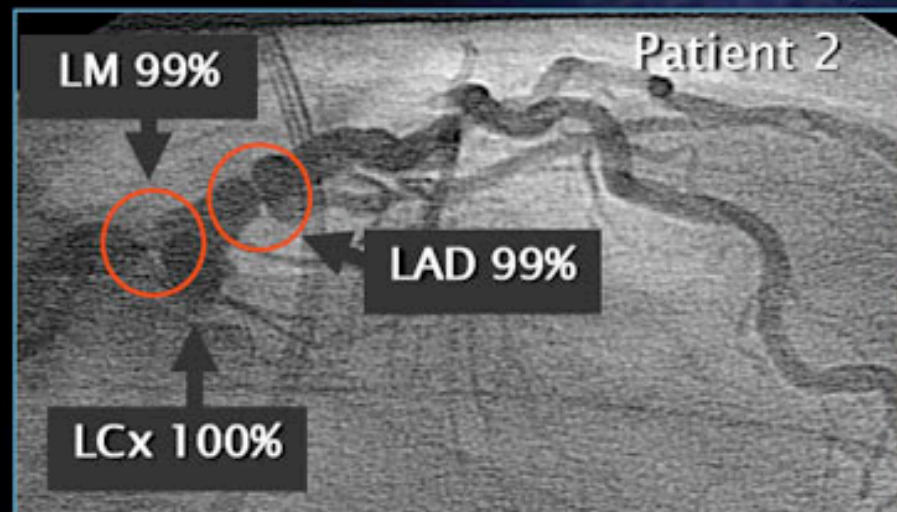
BARI classification of coronary segments
Leaman score, Circ 1981;63:285-299
Lesions classification ACC/AHA, Circ 2001;103:3019-3041
Bifurcation classification, CCI 2000;49:274-283
CTO classification, J Am Coll Cardiol 1997;30:649-656

There is '3-vessel disease' and '3-vessel disease'

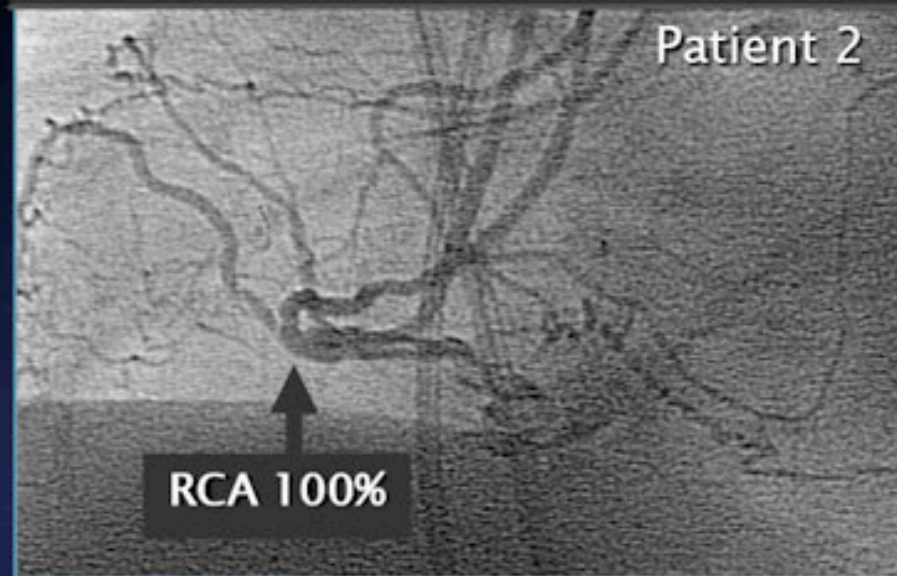
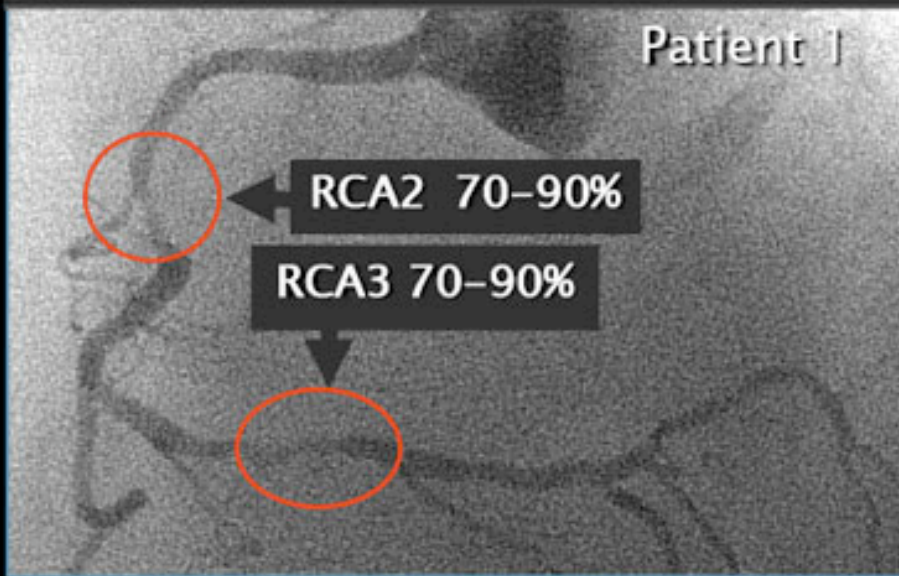
SYNTAX



SYNTAX SCORE 21



SYNTAX SCORE 52



Syntax Studie

Randomisierte Gruppe



SYNTAX Primary Endpoint *Randomized trial*

SYNTAX
Randomized trial

*The primary clinical endpoint is the 12 Month major Cardiovascular or Cerebrovascular event rate (MACCE *)*

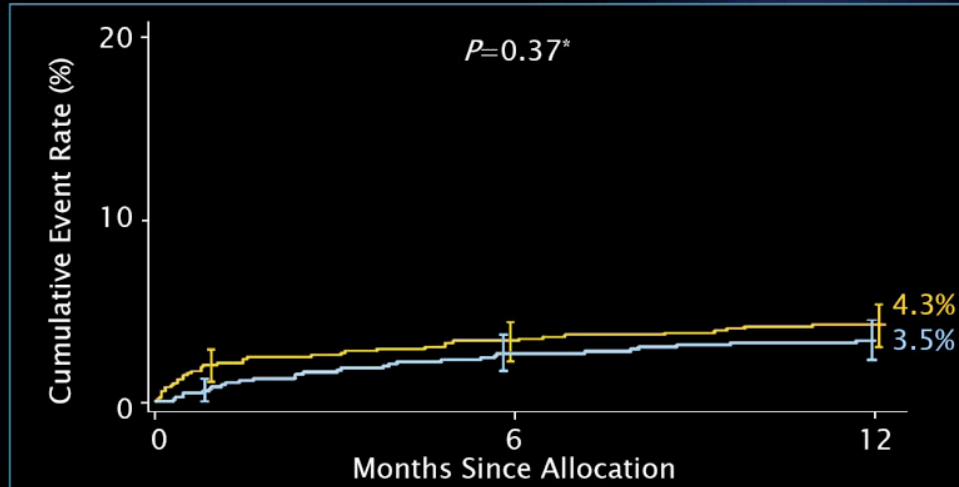
- MACCE is defined as:
 - All cause Death
 - Cerebrovascular Accident (CVA/Stroke)
 - Documented Myocardial Infarction (ARC definition)
 - Any Repeat Revascularization (PCI and/or CABG)
- All events CEC Adjudicated

*ARC MACCE definition Circ 2007; 115:2344-2351

All-Cause Death to 12 Months

SYNTAX

CABG (N=897) TAXUS (N=903)



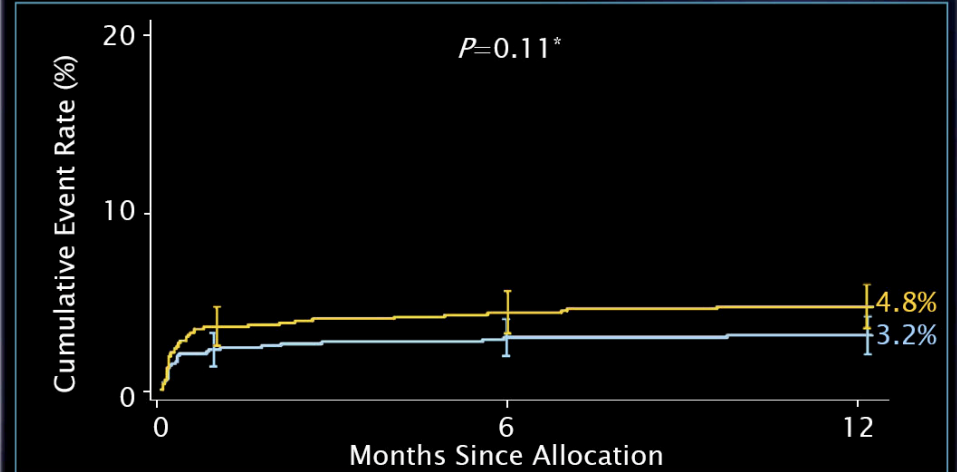
Event Rate • ±1.5 SE. *Fisher's Exact Test

ITT population

Myocardial Infarction to 12 Months

SYNTAX

CABG (N=897) TAXUS (N=903)



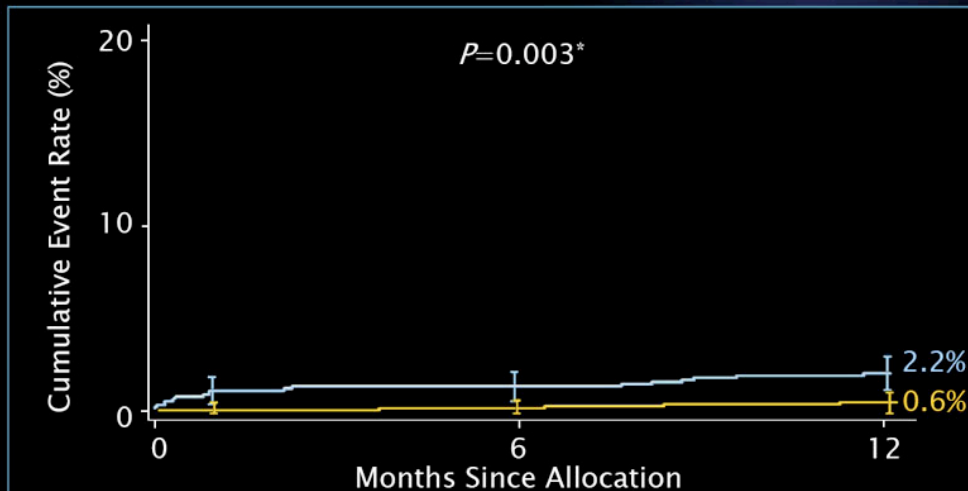
Event Rate • ±1.5 SE. *Fisher's Exact Test

ITT population

CVA to 12 Months

SYNTAX

CABG (N=897) TAXUS (N=903)



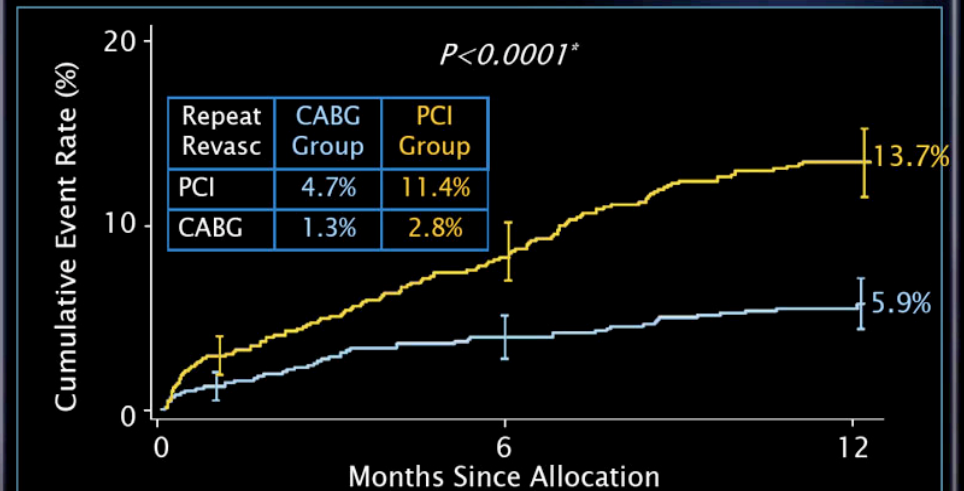
Event Rate • ±1.5 SE. *Fisher's Exact Test

ITT population

Repeat Revascularization to 12 Months

SYNTAX

CABG (N=897) TAXUS (N=903)



Event Rate • ±1.5 SE. *Fisher's Exact Test

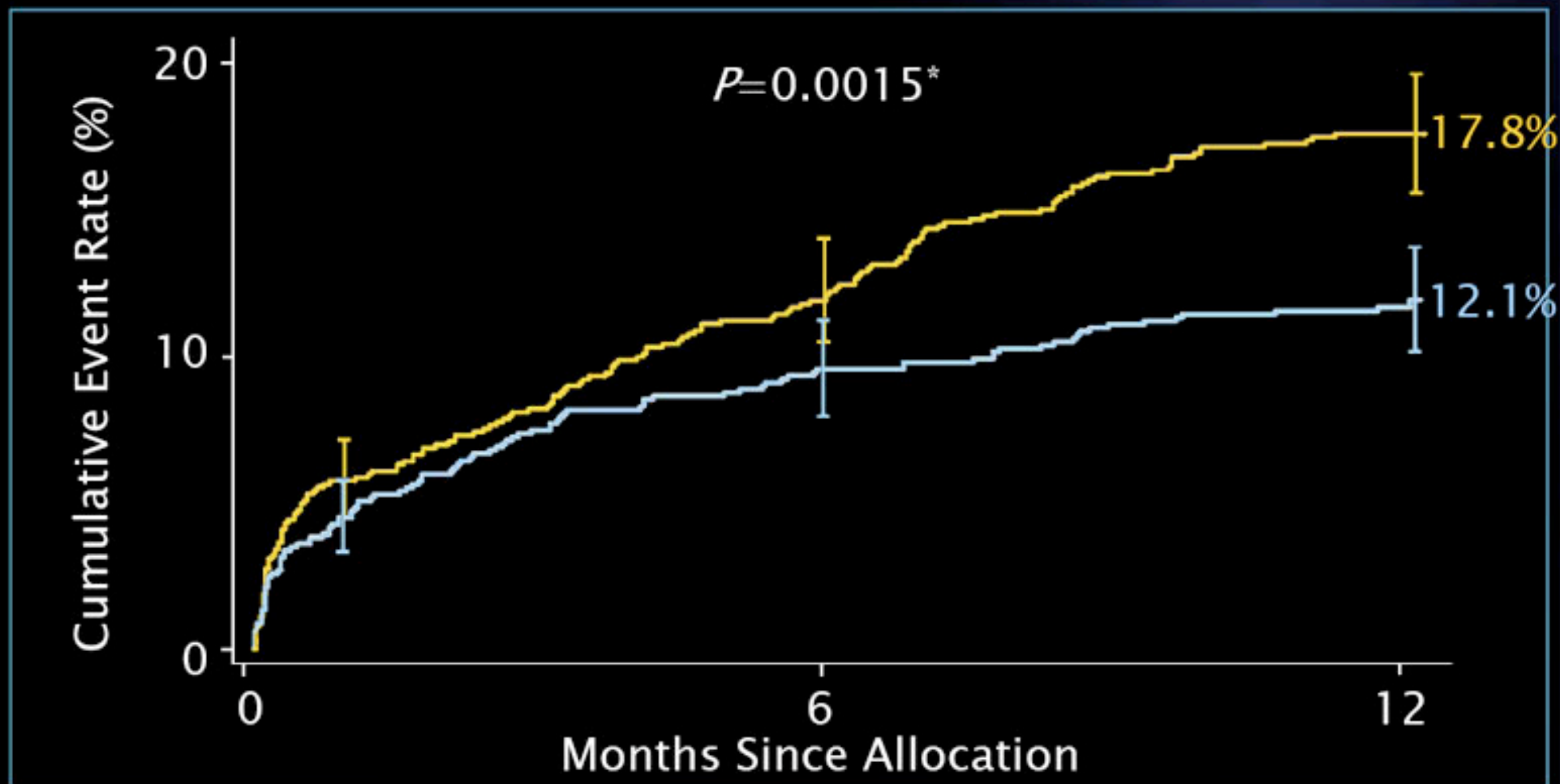
ITT population

MACCE to 12 Months



■ CABG (N=897)

■ TAXUS (N=903)



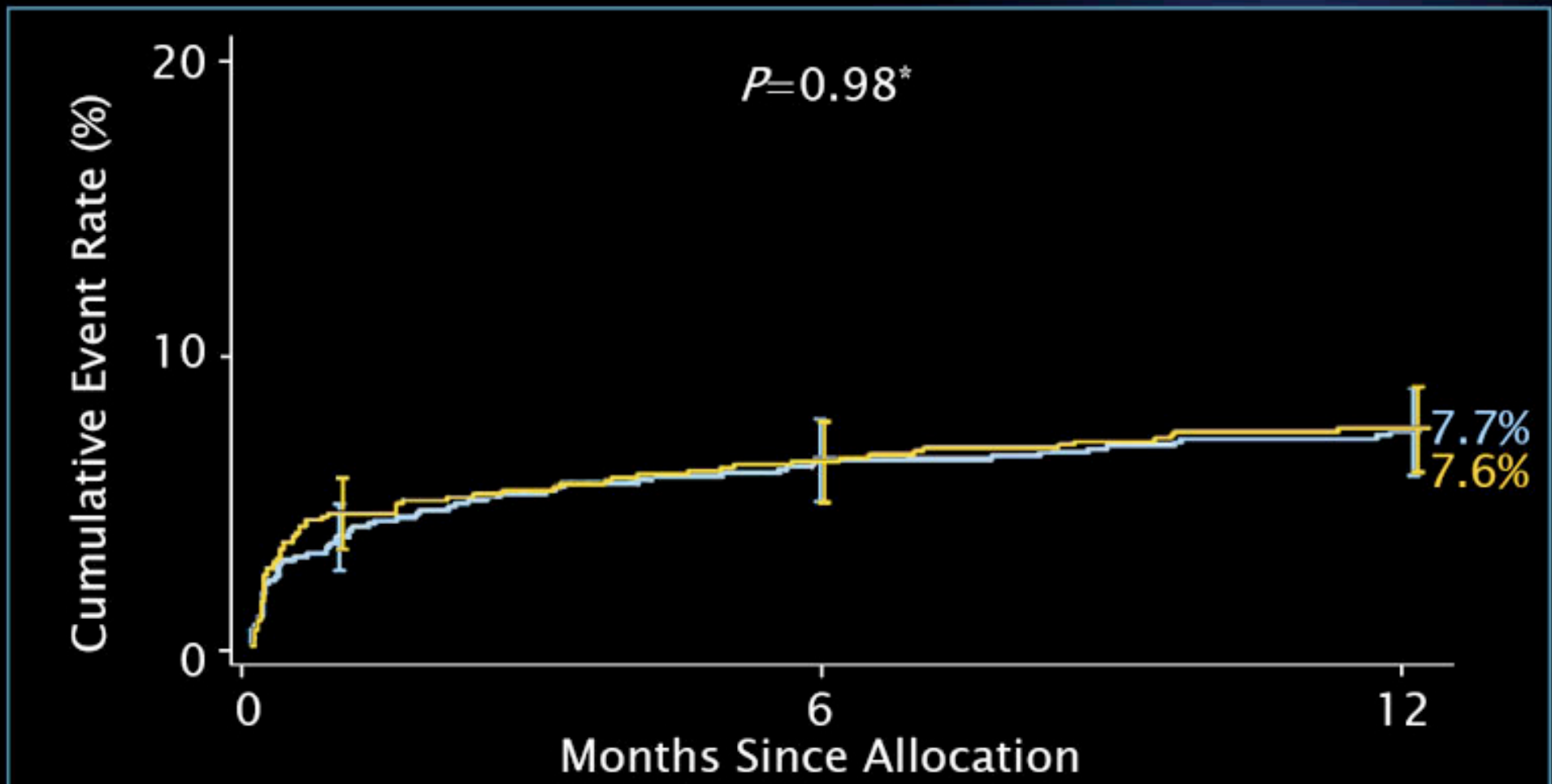
Event Rate • 1.5 SE. *Fisher's Exact Test

ITT population

All-Cause Death/CVA/MI to 12 Months SYNTAX

■ CABG (N=897)

■ TAXUS (N=903)



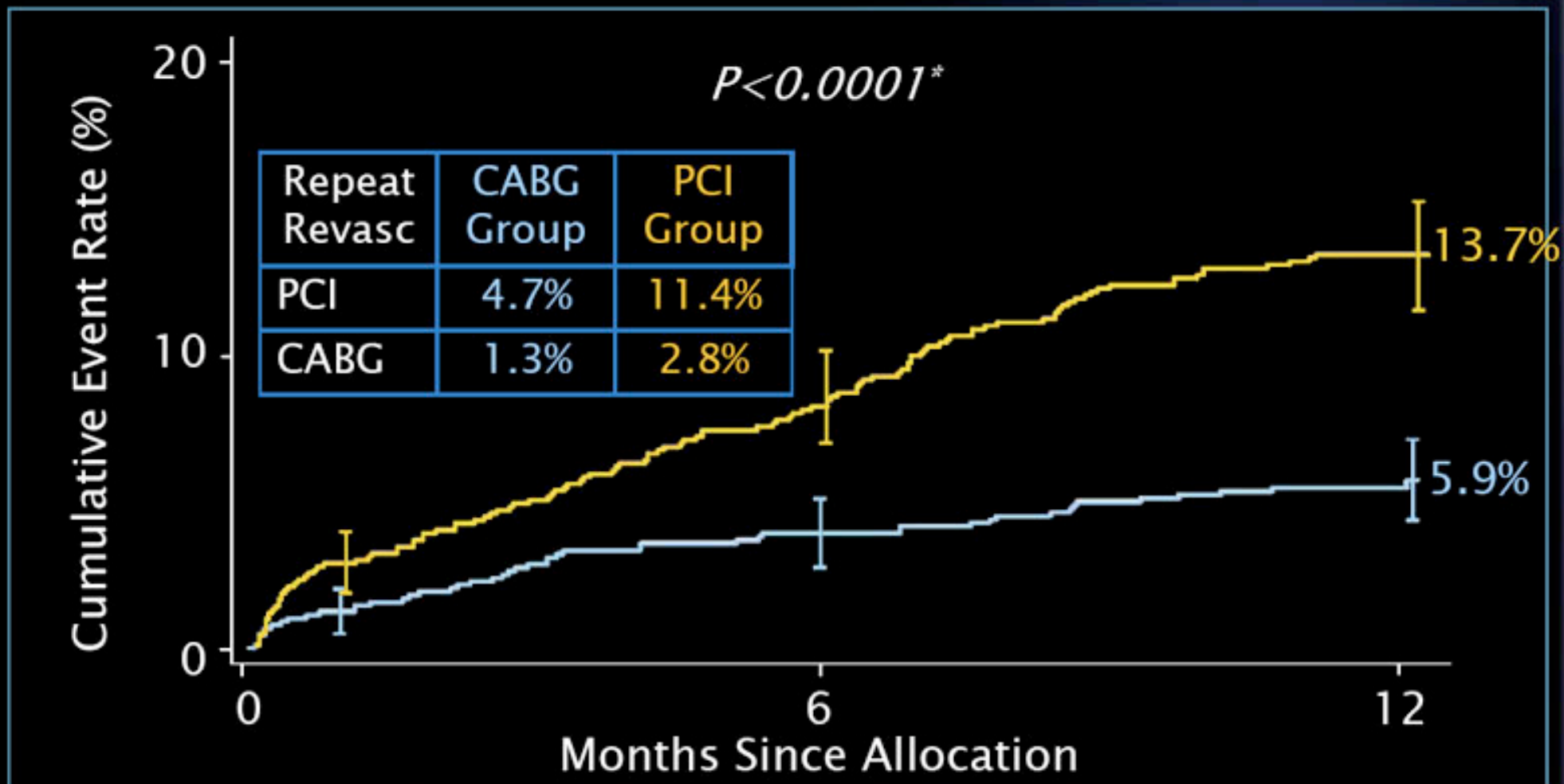
Event Rate • ± 1.5 SE. *Fisher's Exact Test

ITT population

Repeat Revascularization to 12 Months SYNTAX

■ CABG (N=897)

■ TAXUS (N=903)



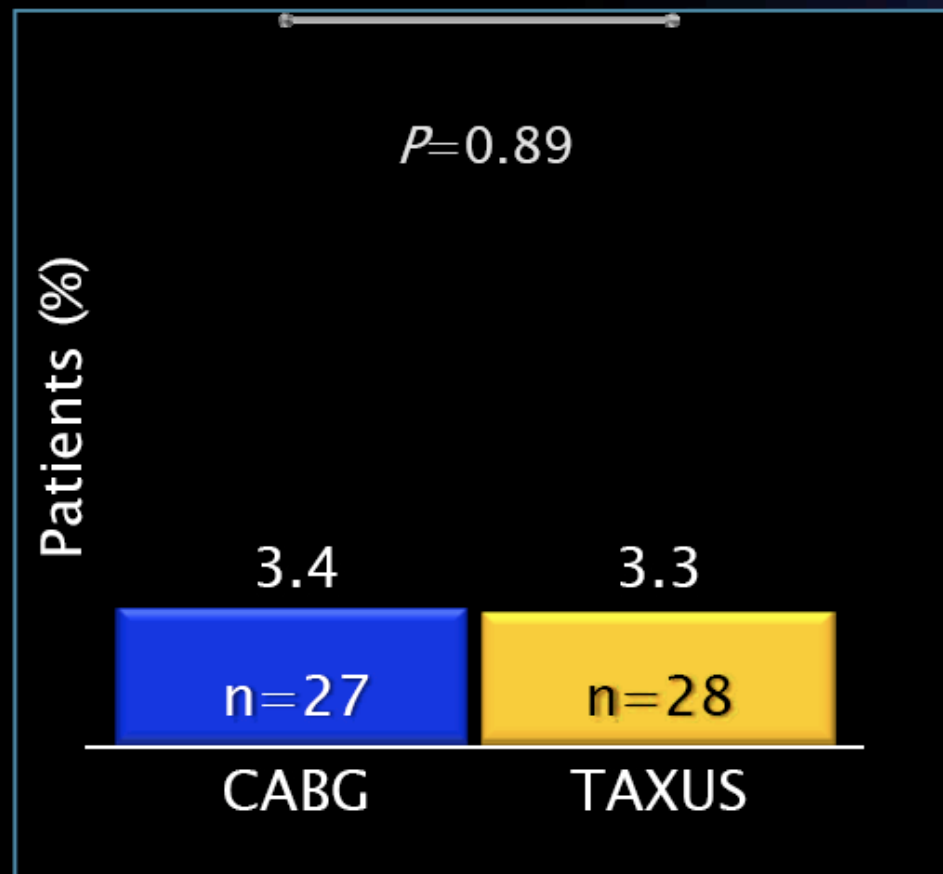
Event Rate • ±1.5 SE. *Fisher's Exact Test

ITT population

Symptomatic Graft Occlusion & Stent Thrombosis to 12 Months



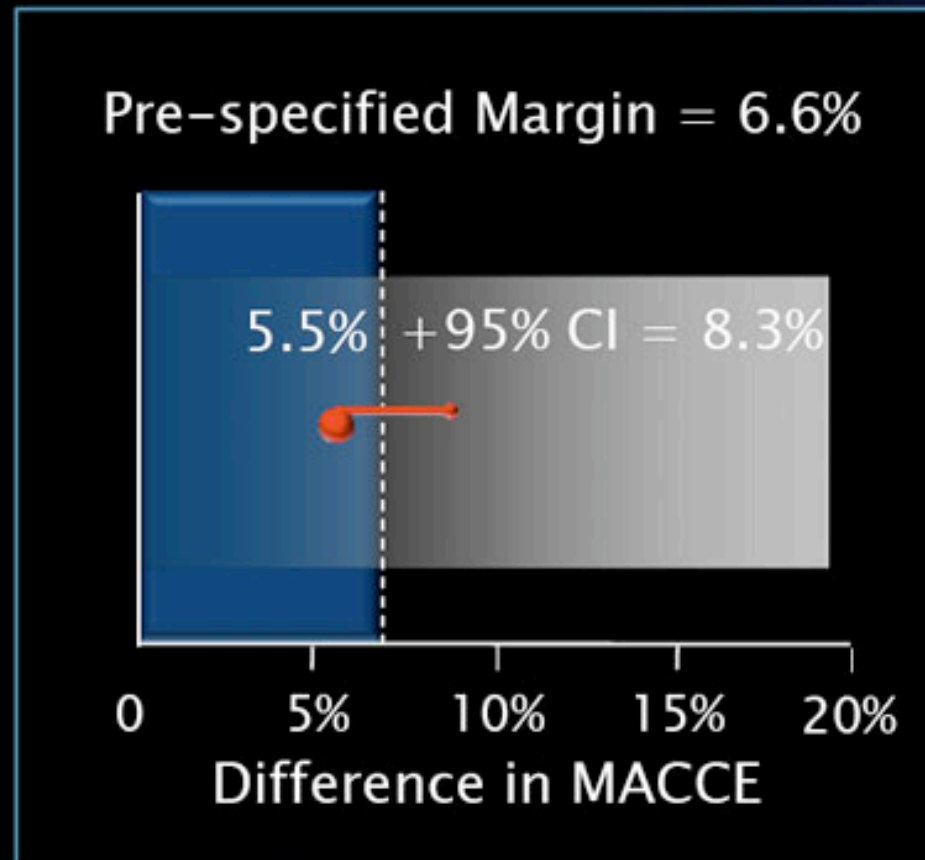
■ CABG (N=897) ■ TAXUS (N=903)



ITT population

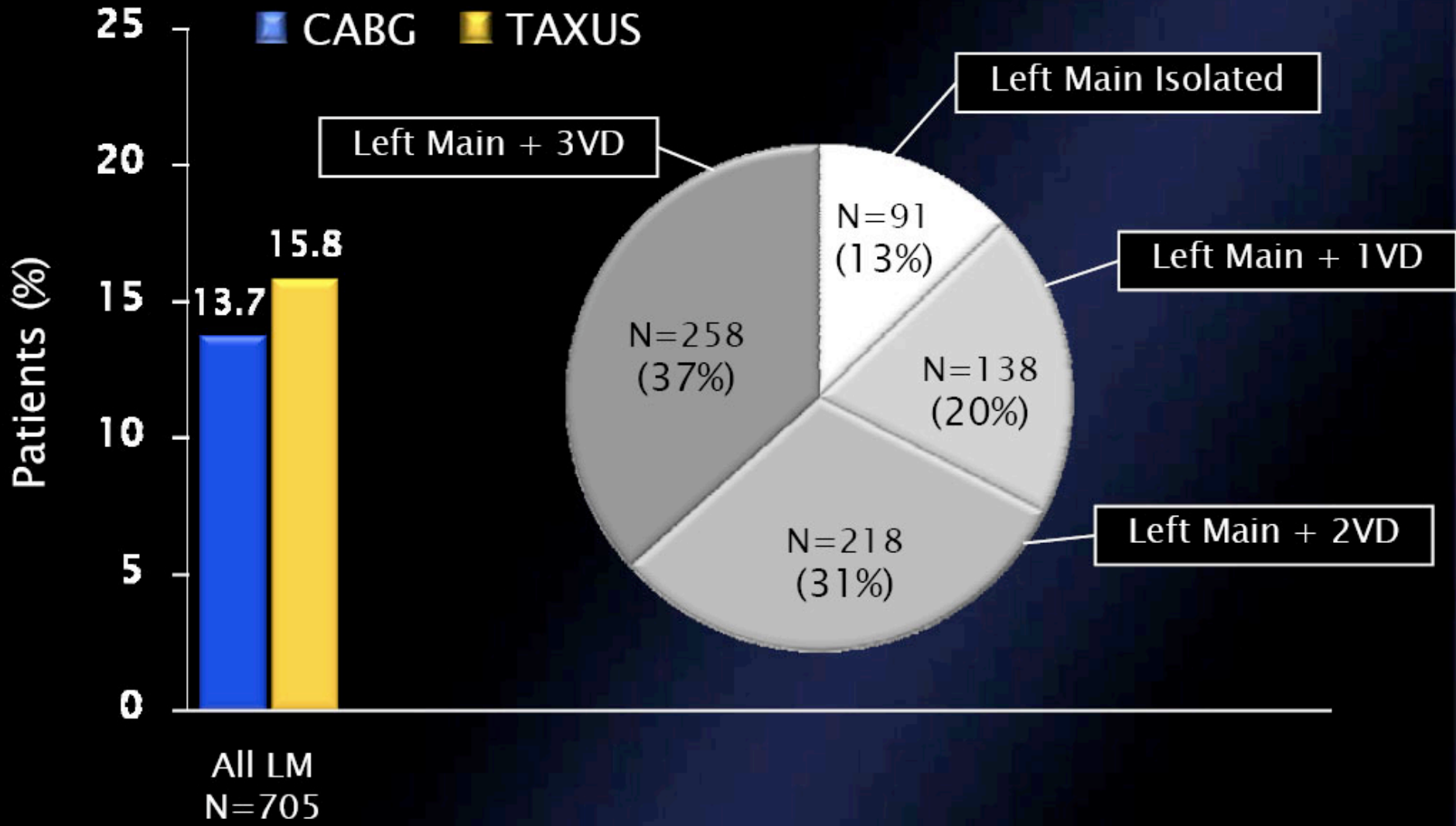
Primary Endpoint: 12 Month MACCE

Non-inferiority analysis

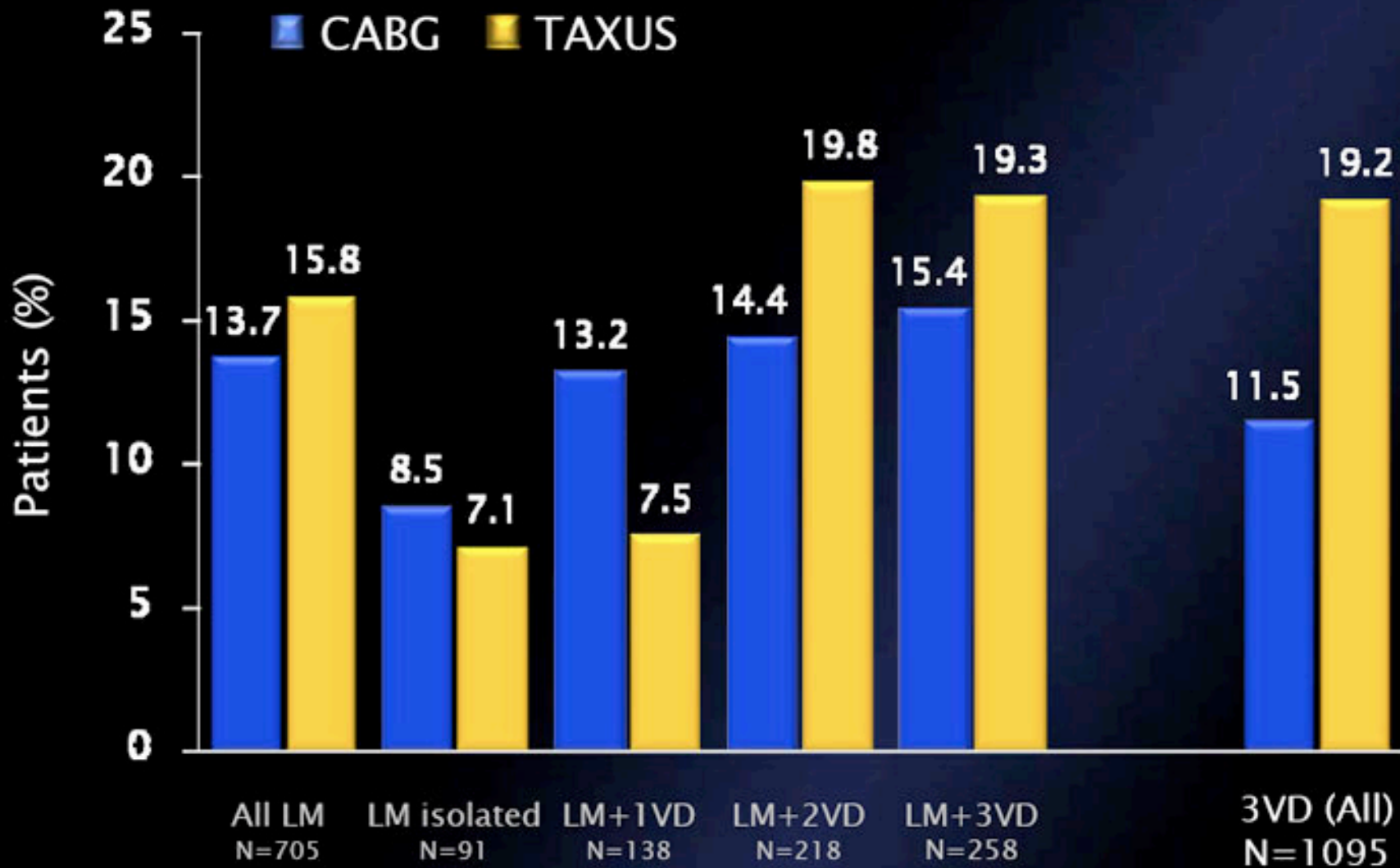


The criteria for non-inferiority comparison was not met for the primary endpoint, further comparisons for the LM and 3VD subgroups are observational only and hypothesis generating

12 Month LM Subgroup MACCE Rates



12 Month Subgroup MACCE Rates



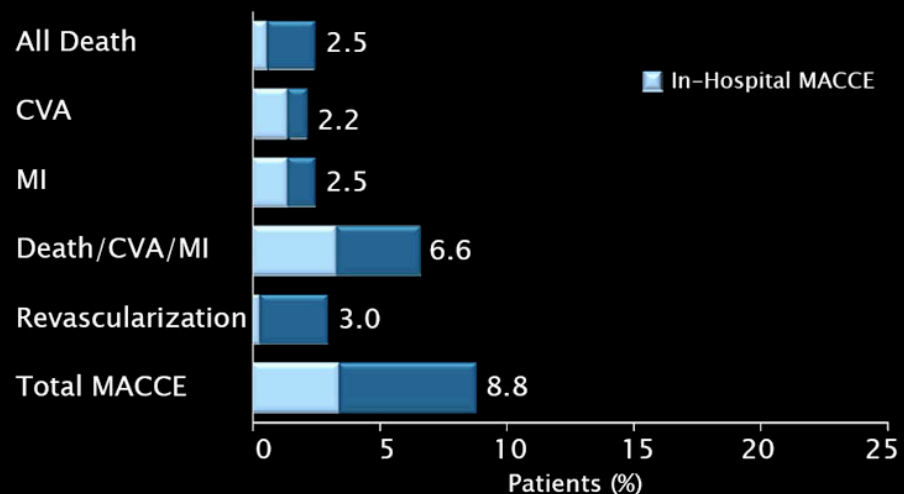
Syntax Studie

Register Gruppe



12 Month MACCE Rates
CABG Registry (N=644)

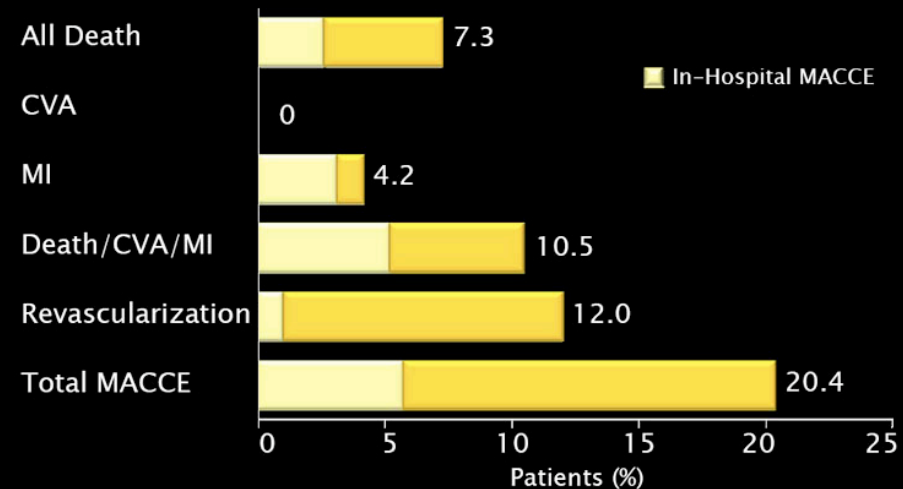
SYNTAX



Per-protocol population

12 Month MACCE Rates
PCI Registry (N=192)

SYNTAX



Per-protocol population

Syntax Studie Register

Zusammenfassung Daten



- von 3075 Pat. Konnten 1275 Pat. nicht randomisiert werden
- 198 Pat. Inoperabel für ACB => PCI
- 1077 nicht PCI geeignet => ACB

Syntax Studie Register

PCI Ergebnisse



- PCI Patienten haben die höchste Co-Morbidität
- In dieser inoperablen PCI Gruppe innerhalb von 12 Monaten
 - Verstorbene 7,3%
 - Cerebrovask. Ereignisse (CVA) 0,0%
 - Myokardinfarkt 4,2%
 - Erneute Revaskularisation 12%
 - MACCE 20,4%

Syntax Studie Register

ACB-Ergebnisse



- ACB Patienten, die einer PCI nicht zugänglich sind, haben besonders komplexe Stenosen
- In dieser ACB Gruppe innerhalb von 12 Monaten
 - Verstorben 2,5 %
 - Cerebrovask. Ereignisse 2,2%
 - Myokardinfarkt 2,5%
 - Erneute Revaskularisation 3%
 - MACCE 8,8%

Syntax Studie Register Zusammenfassung



- Die Syntax Studie hat eine große Zahl von konsekutiven Patienten mit 3- Gefäßerkrankung und oder mit Hauptstammstenose mit und ohne 1- oder Mehrgefäßerkrankung aufgenommen
- Der primäre Endpunkt (12 Monats MACCE) für nicht Unterlegenheit der PCI wurde nicht erreicht
- Für 1/3 der für die Studie vorgesehenen Patienten bleibt die ACB Operation die einzige Behandlungsoption
- Bei Patienten, die nicht mit einer PCI behandelt werden können, sind die OP Ereignisse exzellent
- Für Patienten, die nicht einer ACB Operation unterzogen werden können, ist die PCI eine funktionsfähige Option

Syntax Studie

Randomisierte Gruppe



KERCKHOFF
KLINIK

SYNTAX Lessons

Pro Stent

- Less stroke
(0.6% vs. 2.2%)
- Shorter hospitalisation
(7 vs. 14 days)
- Isolated LM (+ 1VD)

Pro CABG

- Less reintervention
(5.9 vs. 13.7%)
- Complete Revasc.
(63% vs 57%)
- LM + 2/3-vessel

Symptomatic Graft Occlusion & Stent Thrombosis identical !

Hamm, Bad Nauheim ESC 2008

Arteriosklerose im Stent?



Frage:

Wie stellen Sie sich die Zukunft der Neo-Intima im Stent vor?

- Eine „stumme Narbe“?
- Ein „vitales Endothel“ mit der Fähigkeit zur Arteriosklerose?

Wednesday, 3 September 2008 - 08:30-12:30 Ankara - Zone B3

**STATE OF THE ART - NEW INSIGHTS
INTO THE SAFETY OF DRUG ELUTING
STENTS**

Featured Research

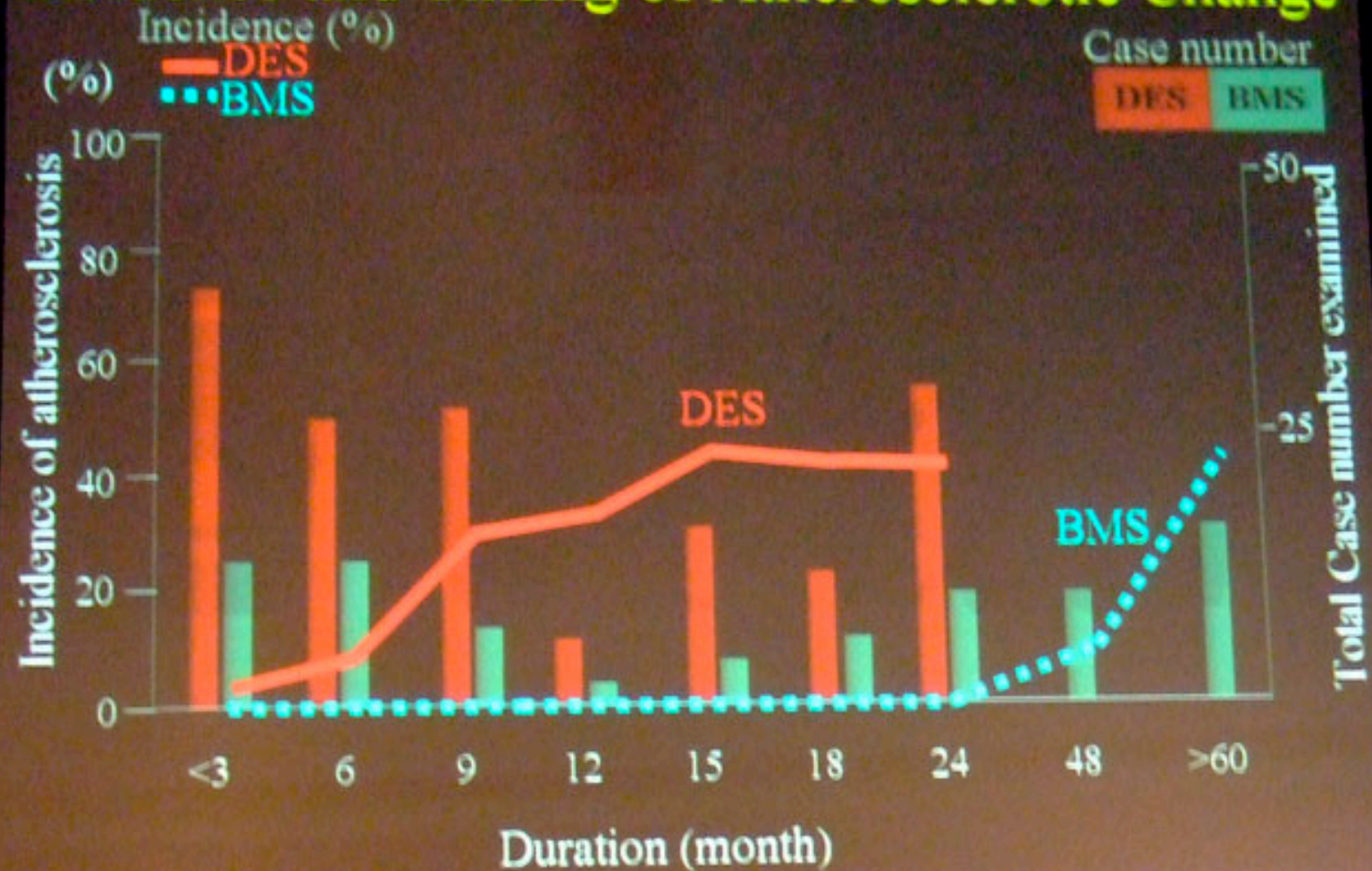
Chairperson(s): P.W. Serruys (Rotterdam, NL); J. Marco (Monaco, MC)
State of the Art and Featured Research Session

- 08:30 **The risk of late stent malapposition is higher after drug-eluting stent compared to bare-metal stent implantation and is associated with late stent thrombosis: meta-analysis and systematic review.** 4555
- A.M. Hassan, S.C. Bergheanu, T. Stijnen, B.L. Van Der Hooven, M.J. Schoneveld, J.W. Jukema (Leiden, NL)
- 08:45 **Drug-eluting stents accelerate atherosclerosis at the sites of stented coronary arteries.** 4556
- G. Nakazawa, E. Ladich, A.V. Finn, E.K. Mont, A.P. Burke, F.D. Kolodgie, R. Virmani (Gaithersburg, Atlanta and Miami, US)
- 09:00 **A comparative analysis of major clinical outcomes using drug-eluting stents vs. bare metal stents in a large single center tertiary clinical setting.** 4557
- R. Kornowski, T. Ben Tal, H. Vaknin Assa, E. Lev, D. Brosh, I. Ben Dor, I. Teplitzky, E. Rechavia, S. Fuchs, A. Assali (Petach Tikva, IL)
- 09:15 **Safety and efficacy of DES vs. BMS in patients with diabetes mellitus, a four year follow up study from the SCAAR registry.** 4558
- U. Stenestrand, S. James, J. Lindback, J. Carlsson, F. Schersten, T. Nilsson, L. Wallentin, B. Lagerqvist (Linkoping, Uppsala, Kalmar, Helsingborg and Karlstad, SE)
- 09:30 **State of the Art - New insights into the safety of drug eluting stents.** 4559
- P.W. Serruys (Rotterdam, NL)

10:00 Coffee Break (Moderated Posters)

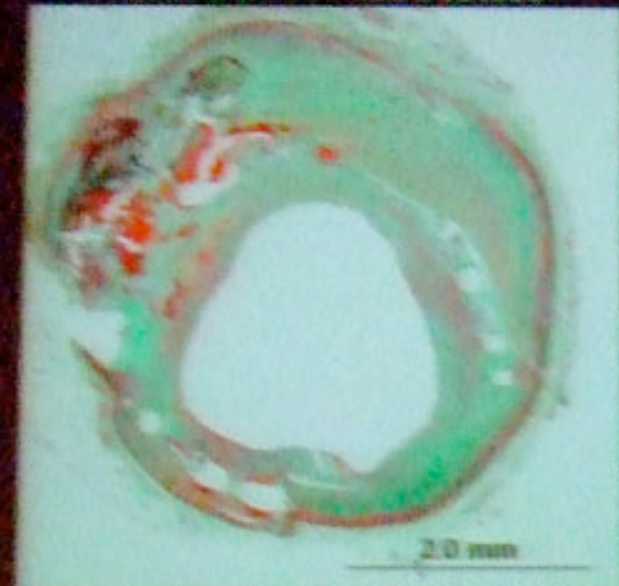
THERE IS MORE TO INTERVENTION THAN SIMPLY PLACING Abstracts

Incidence and Timing of Atherosclerotic Change

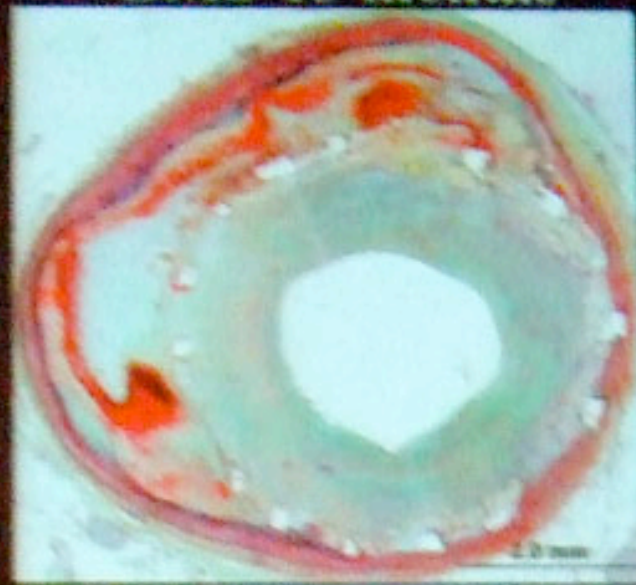


Typical Neointimal Formation in BMS (~2years)

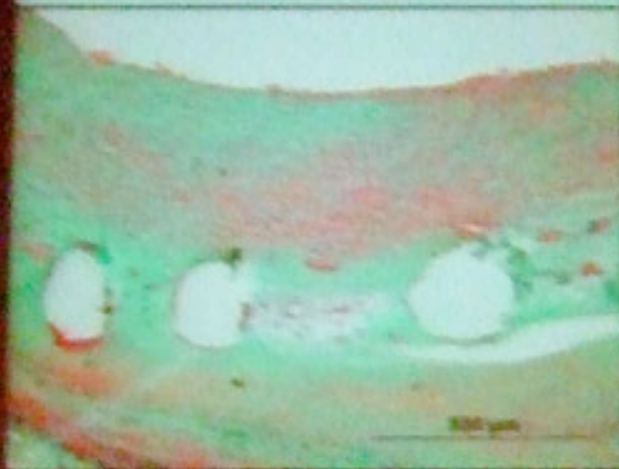
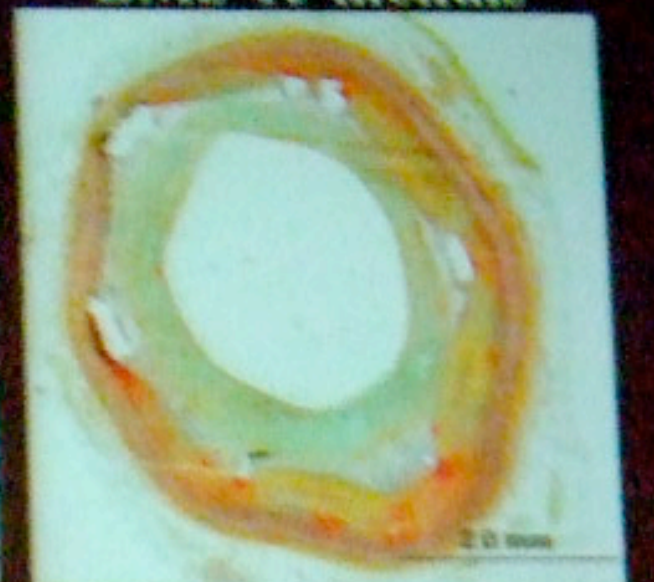
BMS 7 months



BMS 13 months

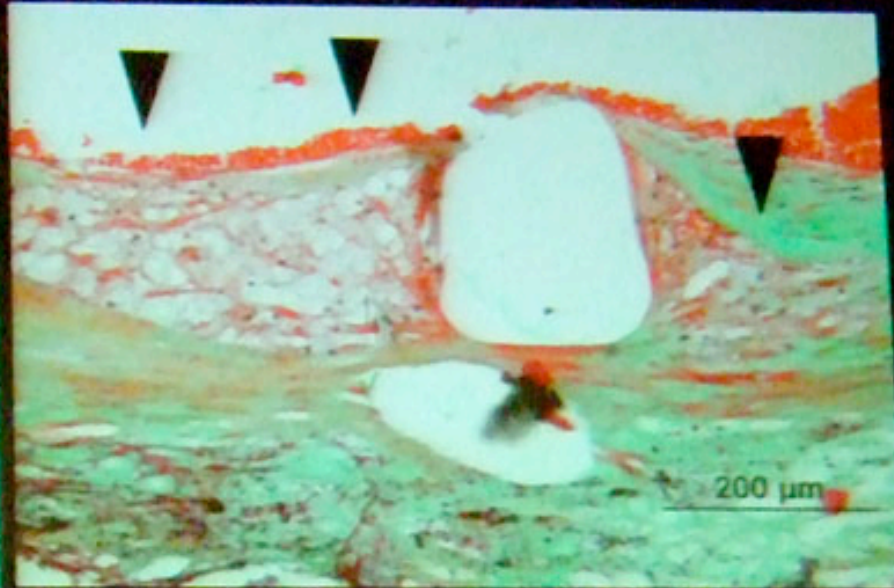
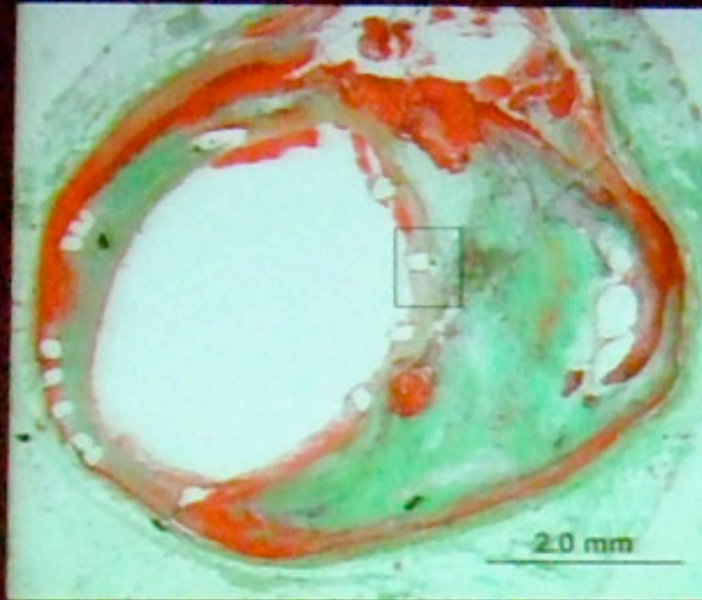


BMS 15 months

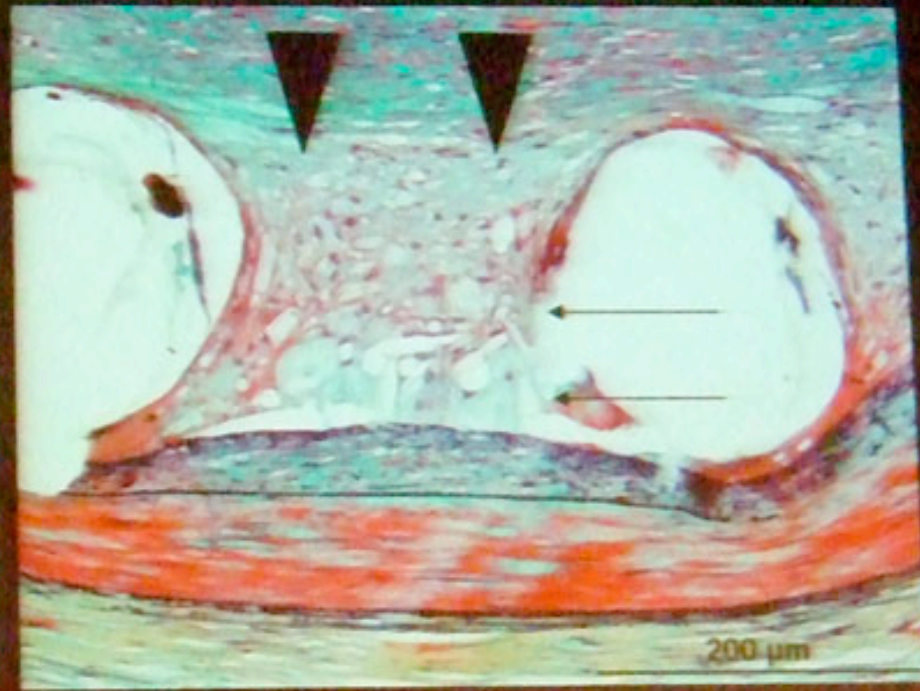
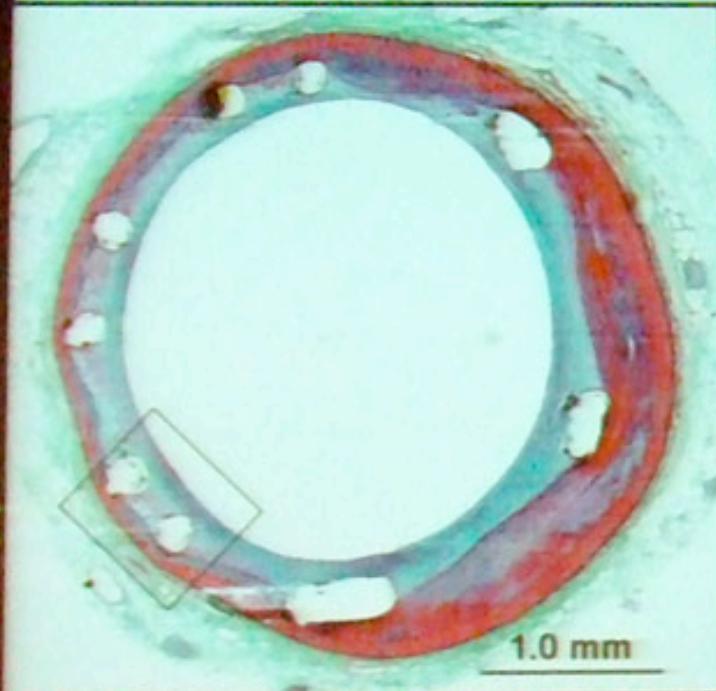


Early Atherosclerotic Change in DES

Taxus 7 months

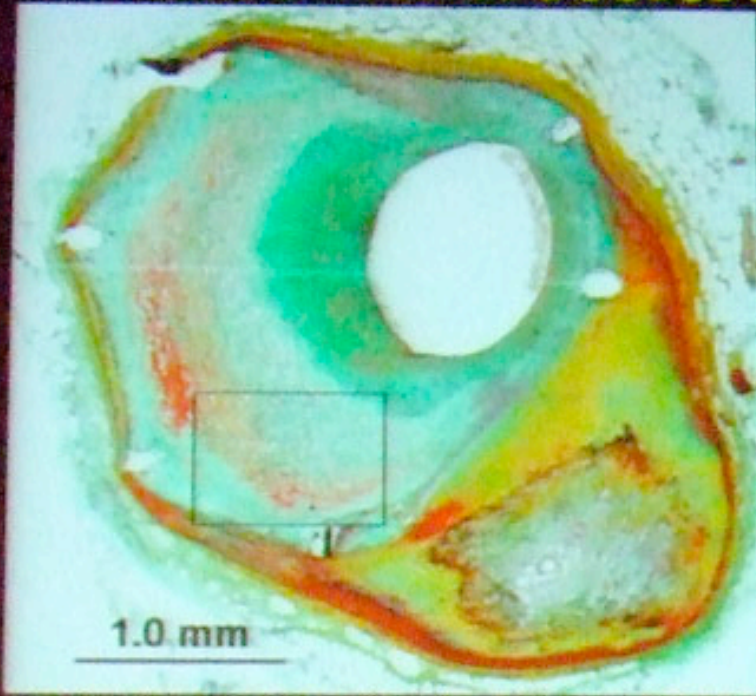


Cypher 12 months

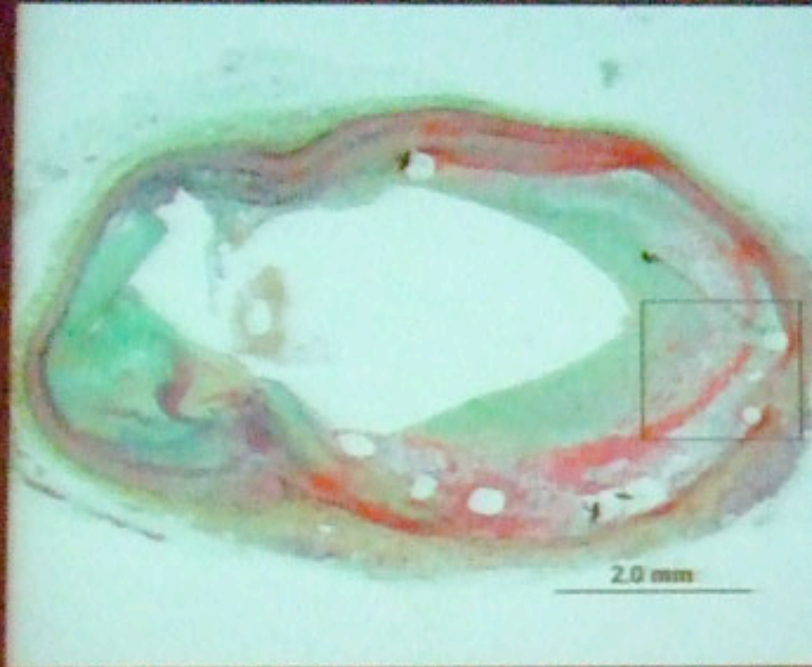


Late Atherosclerotic Change in DES

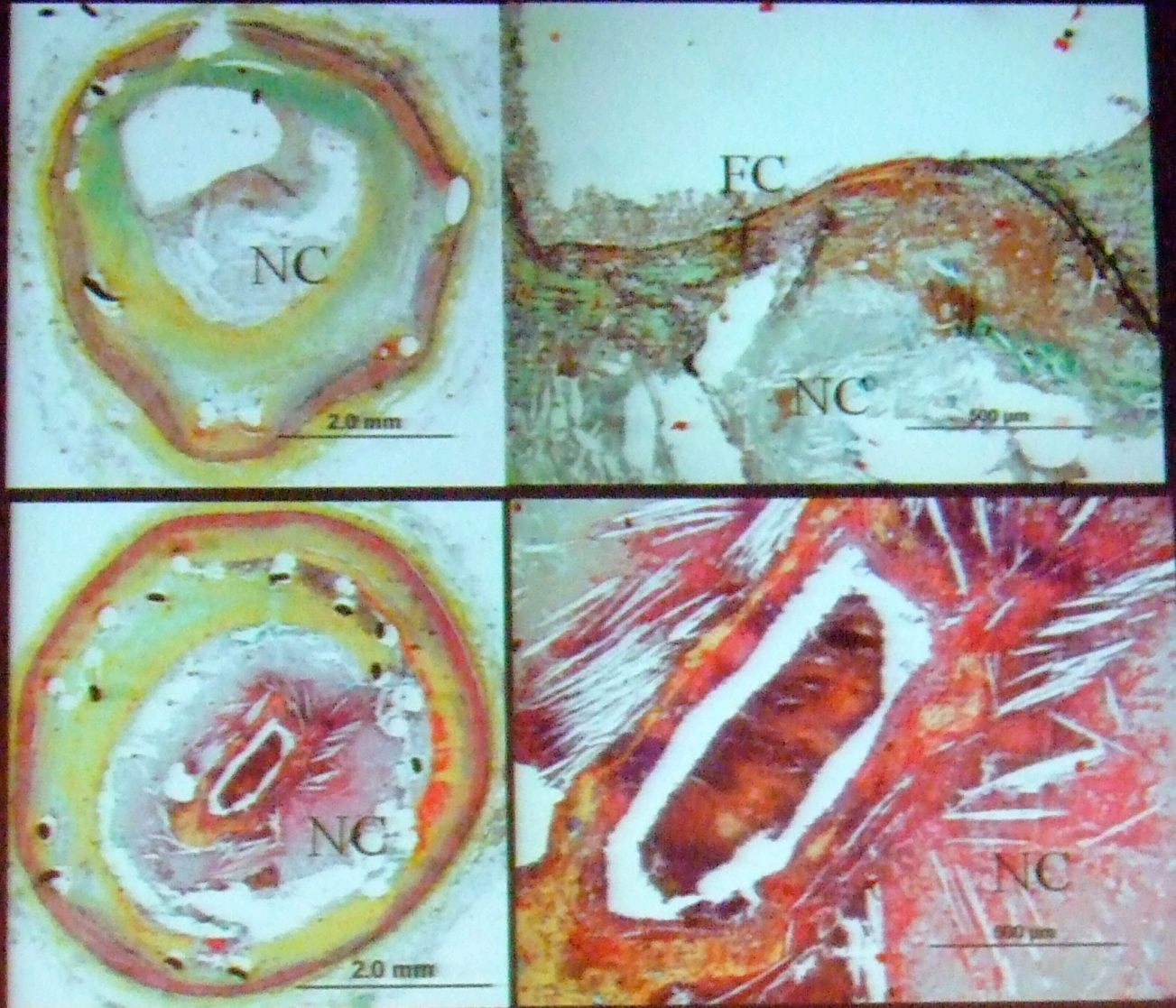
Cypher 13 months



Taxus 14 months



Plaque Rupture secondary to newly formed atherosclerosis within the stent



BMS implantation >5 years antemortem. Died suddenly

Conclusion

- The incidence Atherosclerotic change is a frequent finding in DES and occurs significantly earlier as compared to BMS
- Acute thrombus secondary to plaque rupture within neointima was observed in very late BMS (>5 yrs), suggesting that some late events following stent implantation are related to accelerated atherosclerosis
- Other important factors that are associated with atherosclerotic change are younger age, stent duration, underlying unstable lesion, and shorter stent length

Vascular dysfunction in obese children

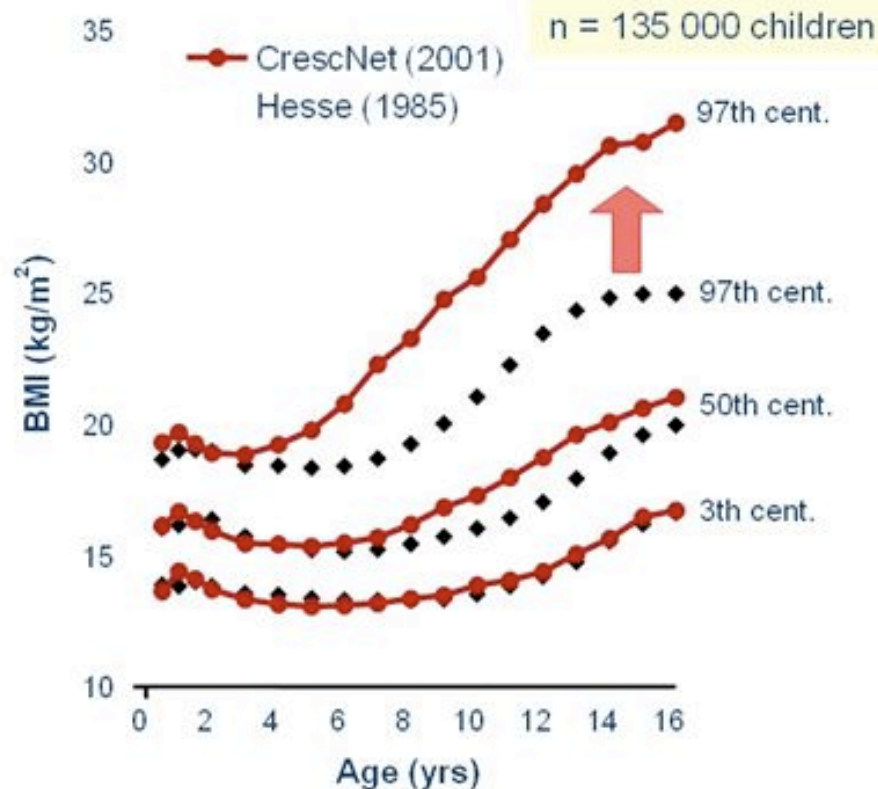
Sandra Erbs

University of Leipzig, Heart Center,
Germany

UNIVERSITÄT LEIPZIG
HERZZENTRUM

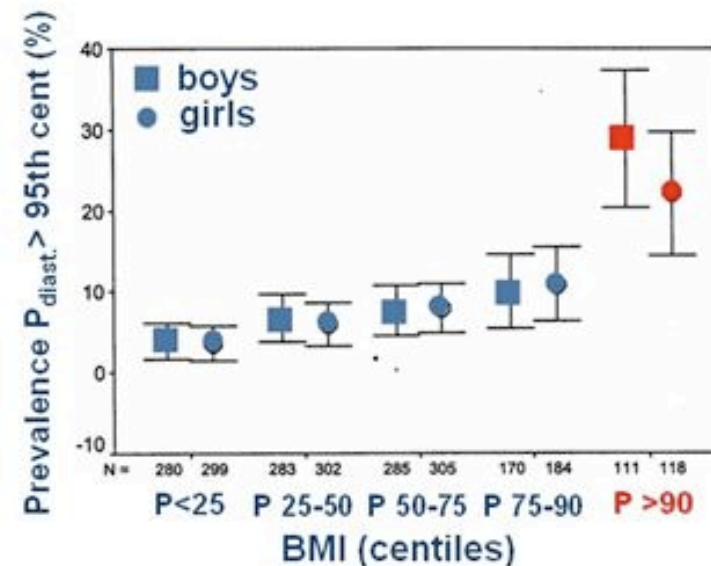
Background

Off the growth curve: increasing prevalence of obesity in childhood



Kiess W, Horm Res 2001
Keller E, J Pediatr Endocrinol Metab 2002

Increased prevalence of hypertension with increasing degree of obesity

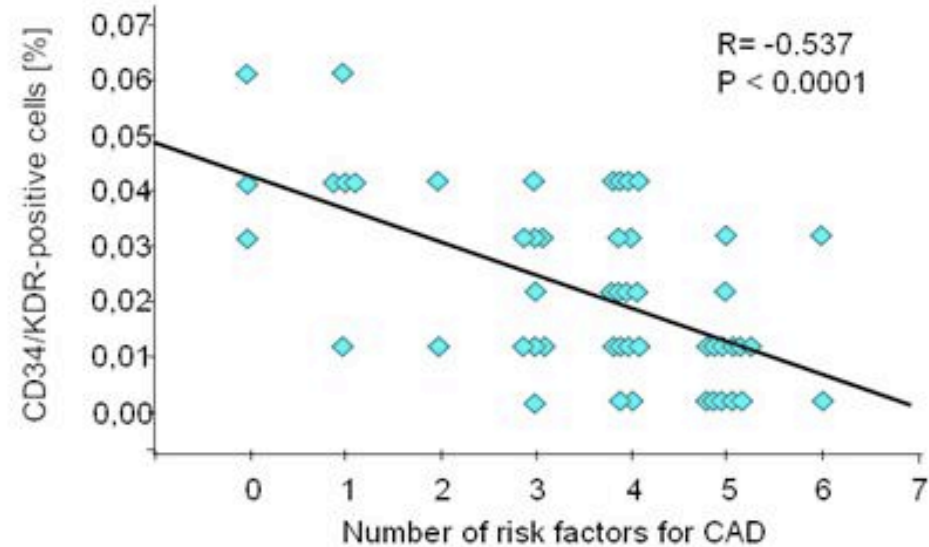
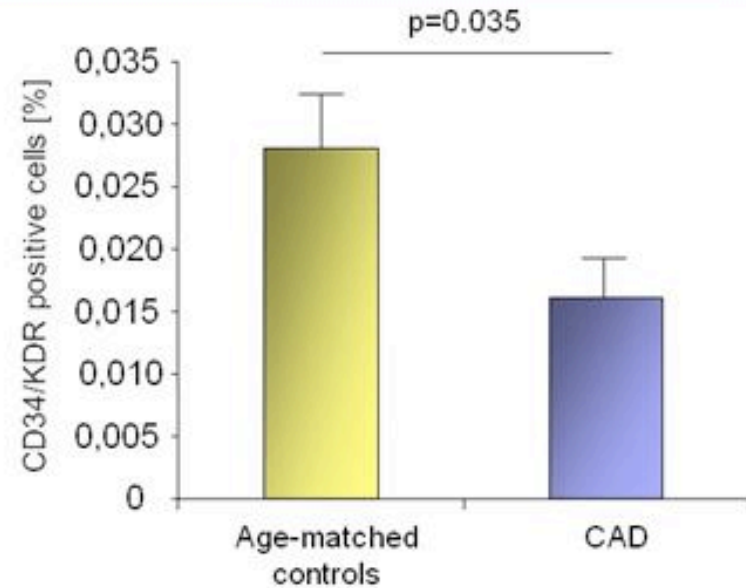
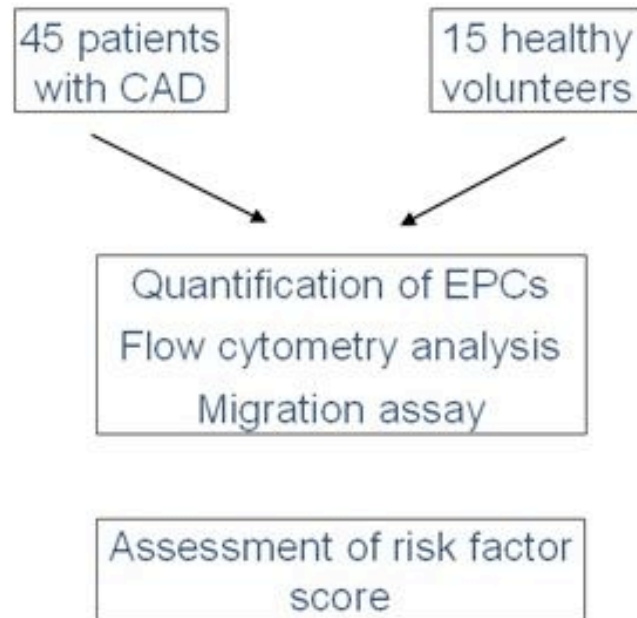


n=2365 children
age: 5 – 17.5 y

Reich A, Int J Obes 2003

Circulating progenitor cells and cardiovascular risk profile

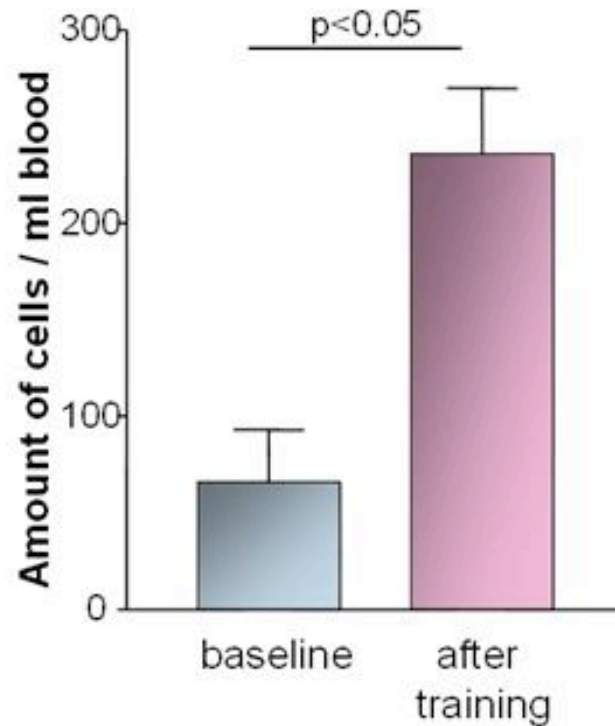
Study design



Vasa M et al.: *Circ Res.* 2001;89:e1-e7.

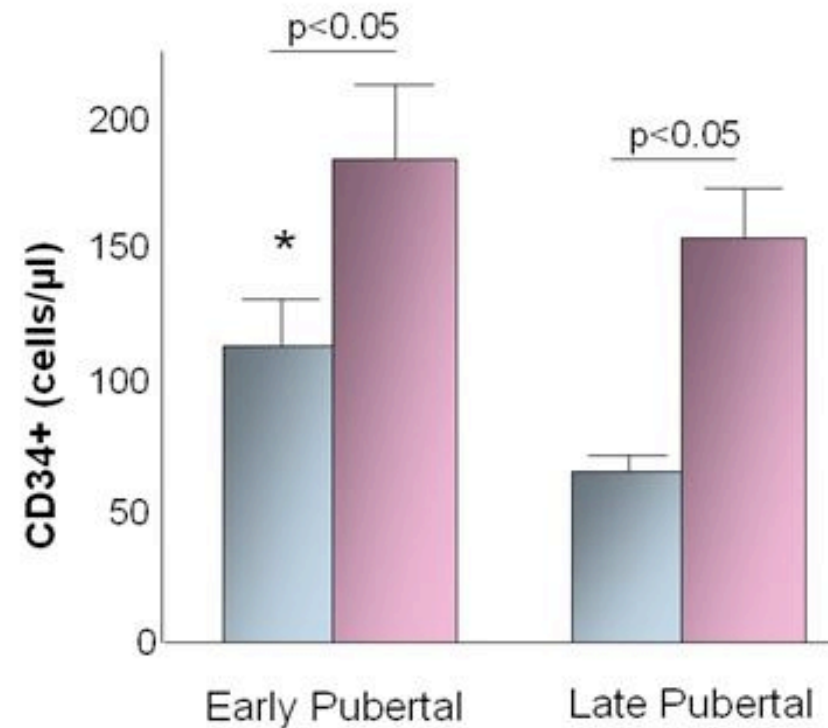
Acute Exercise and Endothelial Progenitor Cells

Healthy Volunteers



Rehman et al. J Am Coll Cardiol 2004

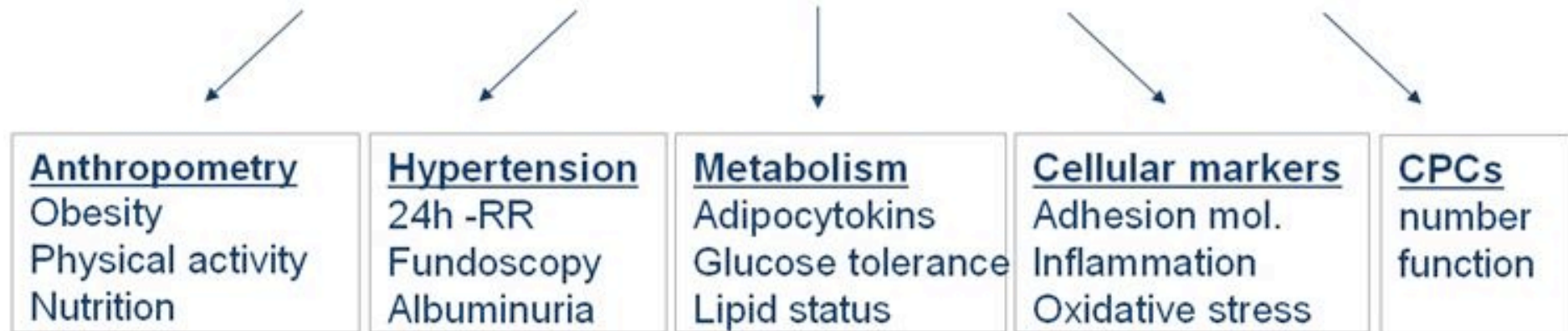
Boys



Zaldivar et al. Pediatric Res 2007

Study Protocol „Obese Children Study“

Cross sectional study with **90 obese** vs. **60 lean** children



Impact on vascular function:
→ peripheral endothelial function
→ carotid artery intima-media-thickness

Baseline Characteristics

planned:

90 obese
children

60 lean
children

recruited and analysed:

35

38

age [years]

11±3

12±3

gender f / m

17 / 18

24 / 14

height [cm]

156±4

157±3

weight [kg]

71±5

44±2

*

BMI

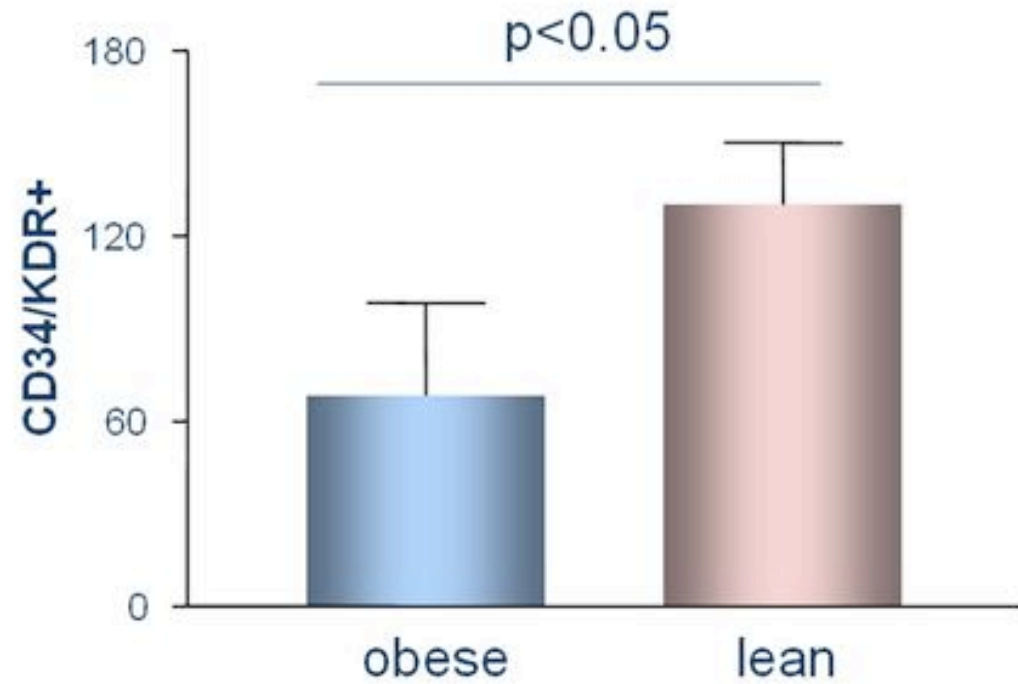
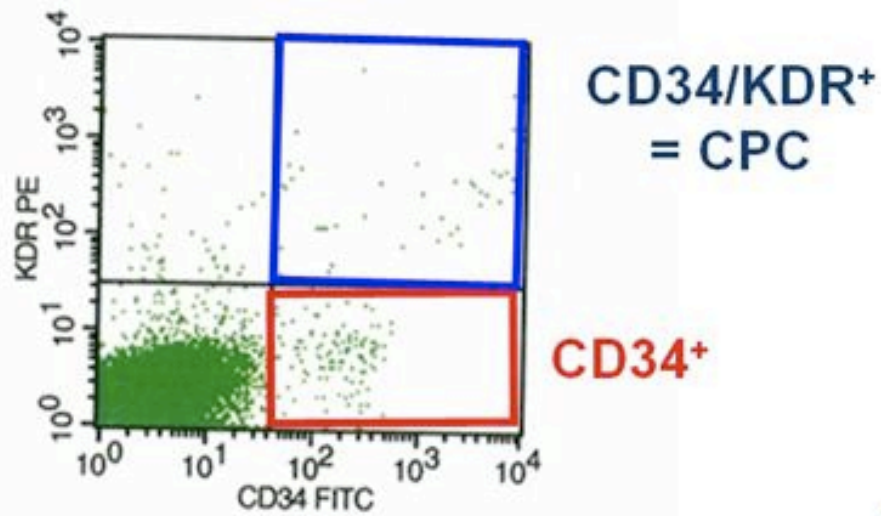
28.1±1.3

17.5±0.4

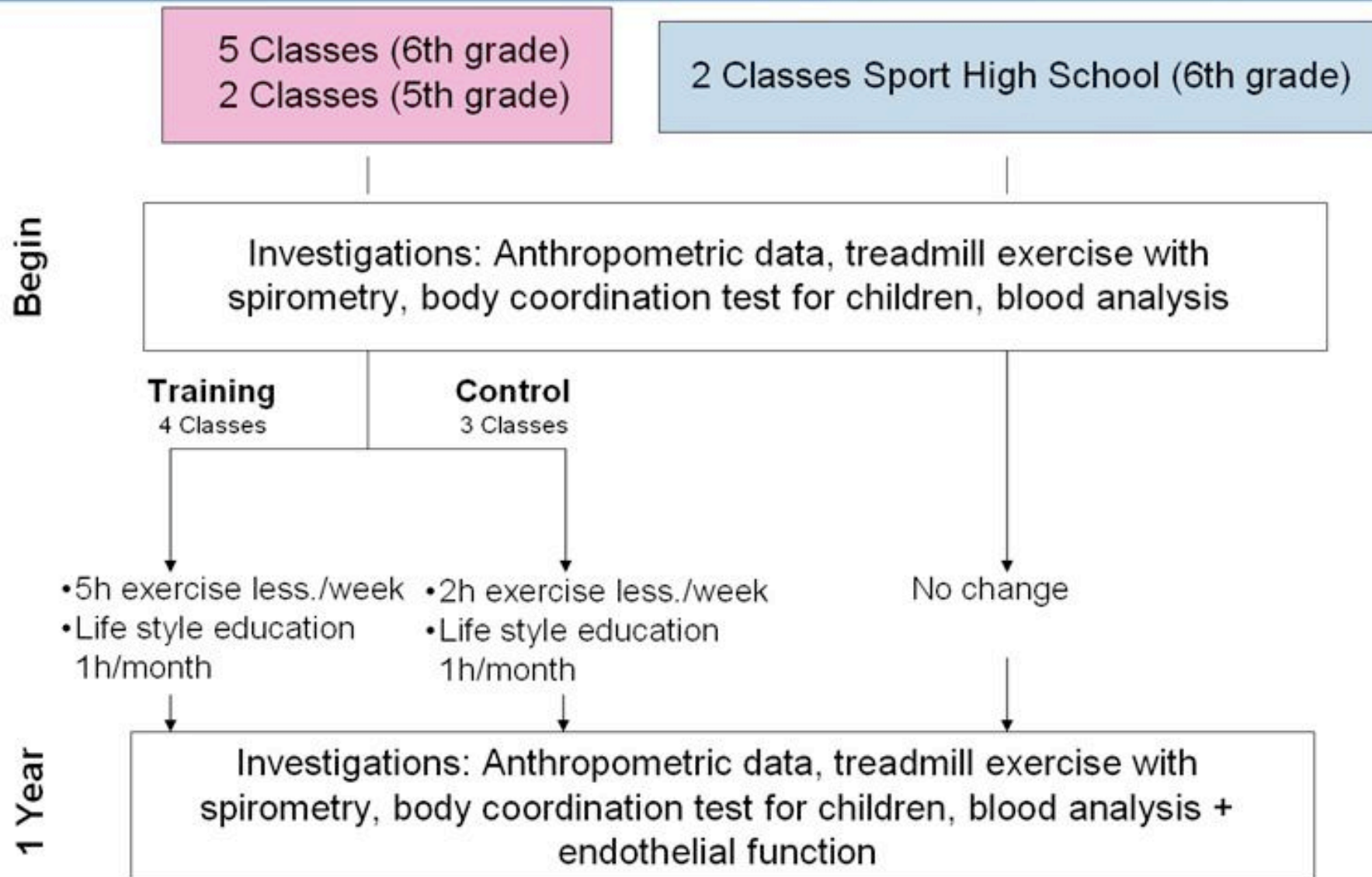
*

* p<0.05

Circulating Progenitor Cells



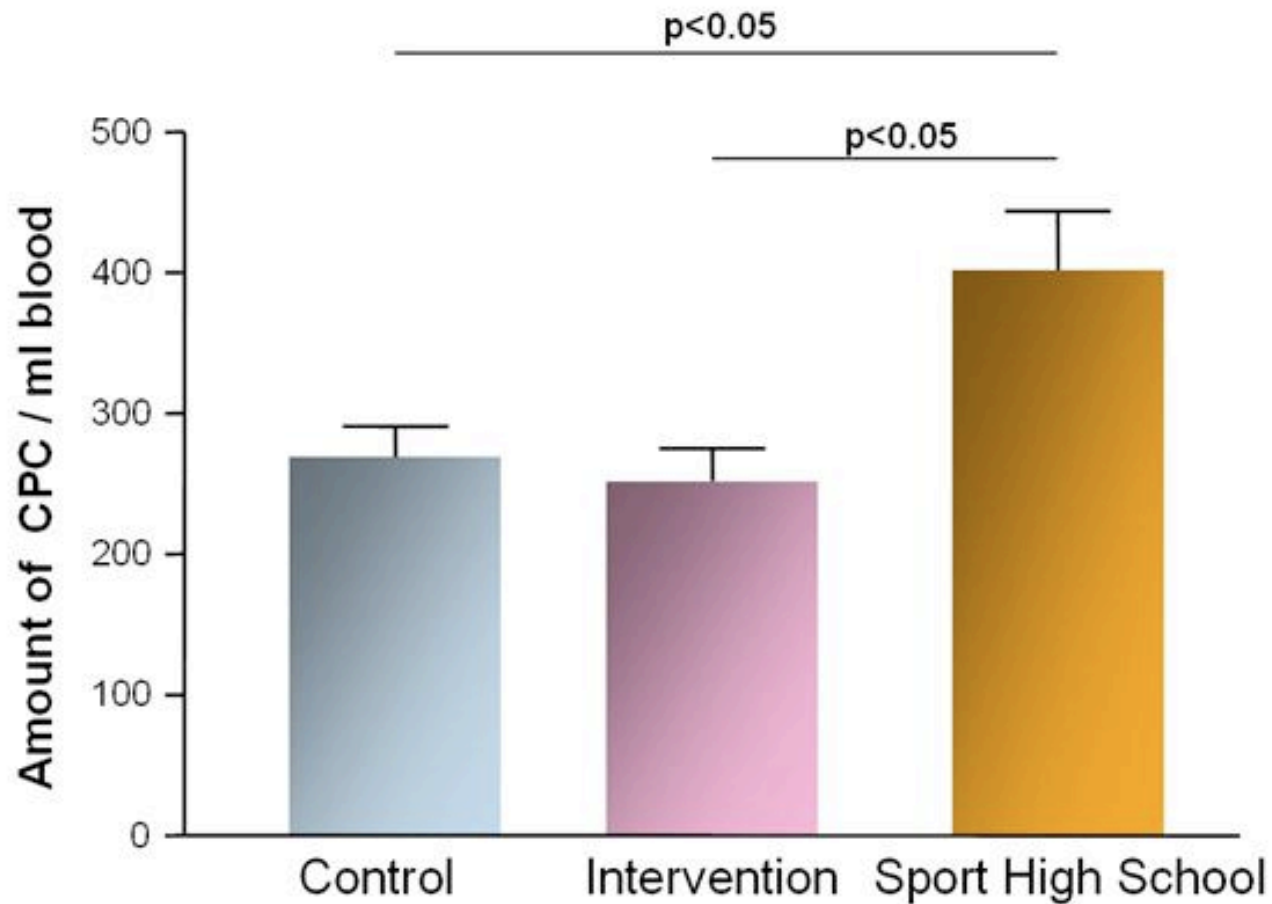
Study Protocol „School Children Study“



Conducted and realized by Dr. Claudia Walther, Univ. of Leipzig, Heart Center

Circulation endothelial progenitor cells

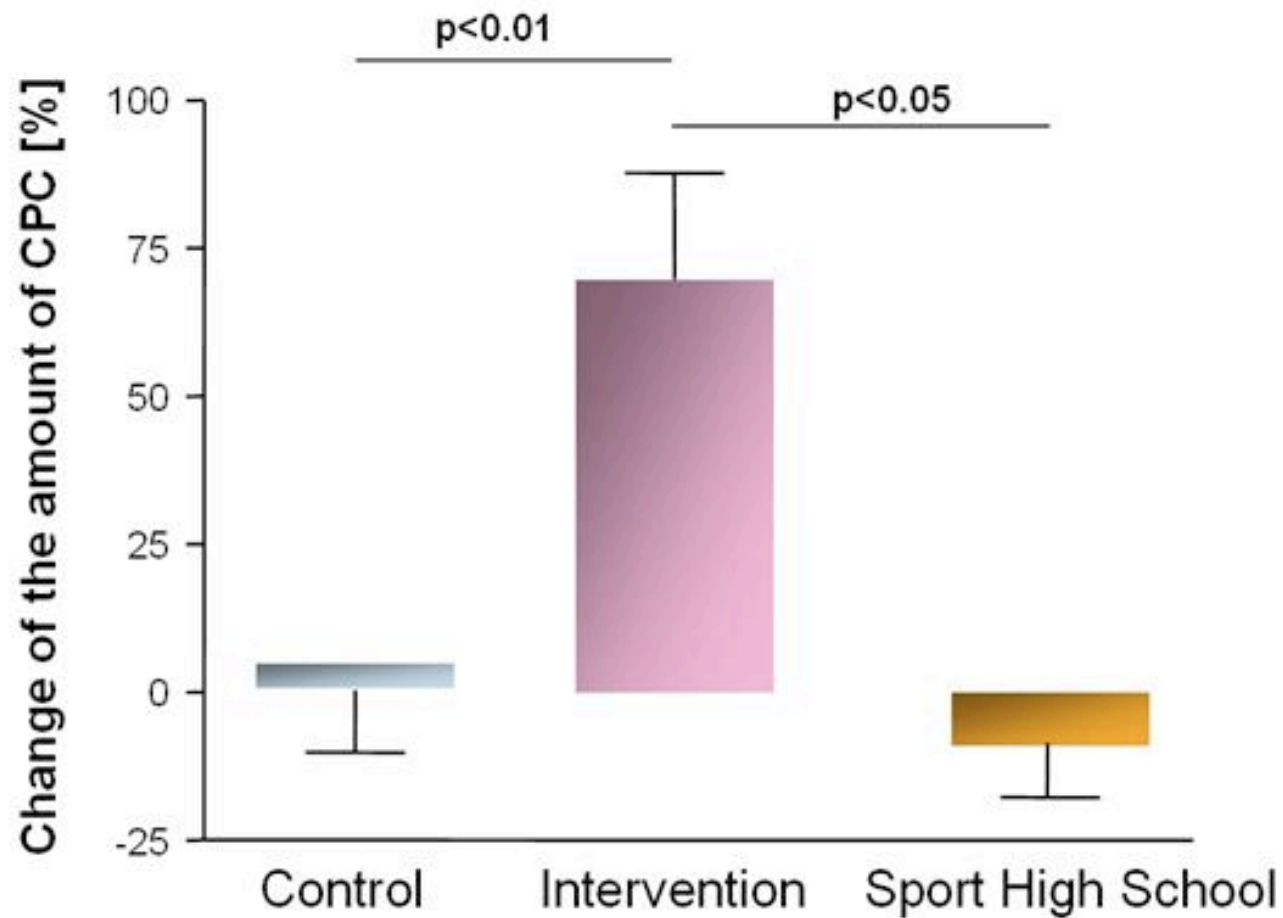
CD34^{pos.}/ KDR^{pos.} cells at begin



Conducted and realized by Dr. Claudia Walther, Univ. of Leipzig, Heart Center

Circulation endothelial progenitor cells

Percentage change after one year



Conducted and realized by Dr. Claudia Walther, Univ. of Leipzig, Heart Center



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Informationen zum Thema Herzkrankheiten für Patienten und Ärzte

- Home
- Themen:
 - Koronare Herzkrankheit (Übersicht)
 - Herzmuskelerkrankungen (Übersicht)
 - Herznotfall!!!
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Koronare Herzkrankheit (KHK)
aktualisiert

Sitemap



Herzmuskelerkrankungen (Kardiomyopathien)

Vorwort KHK

Was ist eine KHK?

Herzinfarkt

Risikofaktoren und Vorbeugung

Warnhinweis bitte lesen

Hier können Sie das Buch über die KHK
Titel: Wie ist denn das mit den Herzkranzgefäßen?

Vorwort Kardiomyopathien

Alles über die HOCM (Hypertrophisch Obstruktive Kardiomyopathie)

TASH Behandlung der HOCM

Alle Vorträge werden unter <http://www.theheart.de> nachzulesen sein

Neu

Mit der Herzkrankheit Leben "Sexualität bei Herzkrankheit" Auch als .pdf zum herunterladen

Aktuell! Vorträge vom 25. Bielefelder Seminar über aktuelle Fragen in der Kardiologie **Kardiale Bildgebung, was ist praxisrelevant 2008?**

Vorbeugung

**Herznotfall was tun?!
Sofort 112 anrufen!**

Bücher und weitere Hinweise Internet zur Koronaren Herzkrankheit

KHK Links



Wir befolgen die HONcode Prinzipien. **verify here.**

Günstigste Darstellung mit MS I-Explorer ab 4.0 auch Mozilla oder Safari möglich

Alles über die ARVC (Arrhythmogene rechtsventrikuläre Kardiomyopathie) Kardiomyopathie Links

Vorträge	Merkblätter-Tipps	Hocm - TASH - Literatur/Links
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Erste Hilfe beim Herznotfall (für Patienten und Angehörige)

Röntgen-Kontrastmittel-Nephropathie-Prophylaxe

Top Ten TASH Literatur / Literature www.tash-heart.de

Vielen Dank für Ihre
Aufmerksamkeit

