

40 Years of PCI

Where Next?

Bernhard Meier

Swiss Cardiovascular Center Bern
University Hospital
Bern, Switzerland



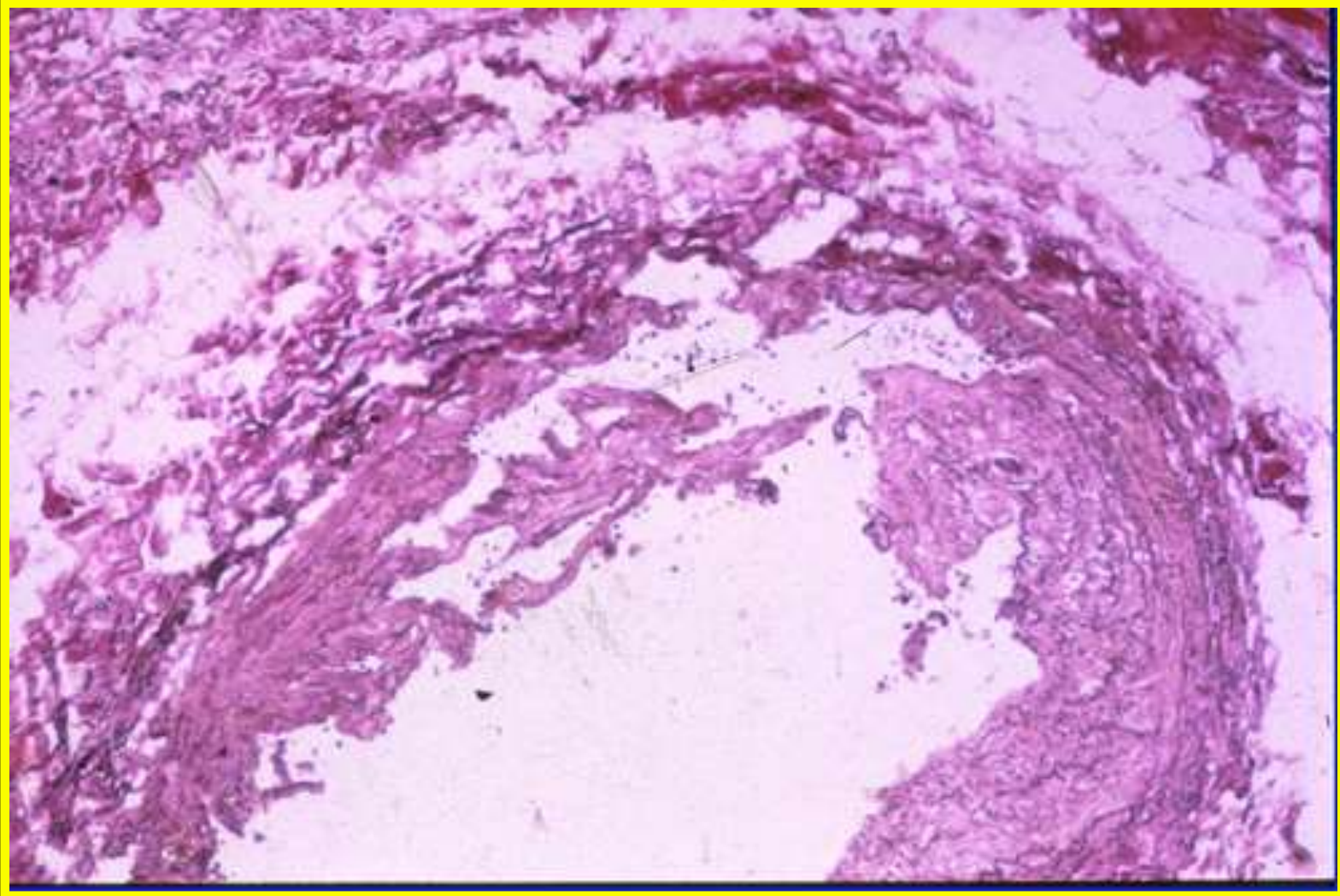
**PTCA
Dog Studies**

**September 24, 1975
to
October 22, 1975**



First Dog PTCA Series: Acute

October 22, 1975



Schneider J. Infobl Dt Ges Kardiologie 2:30-32, 1995

First Dog PTCA Series: 1 Month

Follow-Up



World's First PCI, Man, 38 Years

September 14, 1977, angina

23 years

April 10, 2000, angina

2 months later

December 7, 2000, angina

September 16, 1977, post balloon

FFR = 0.83

23 years + 5 months

September 9, 2000, angina

Post balloon

1 month

October 20, 1977, asymptomatic

Post balloon

37 years (14 years later)

November 6, 2014, angina

10 years

September 16, 1987, asymptomatic

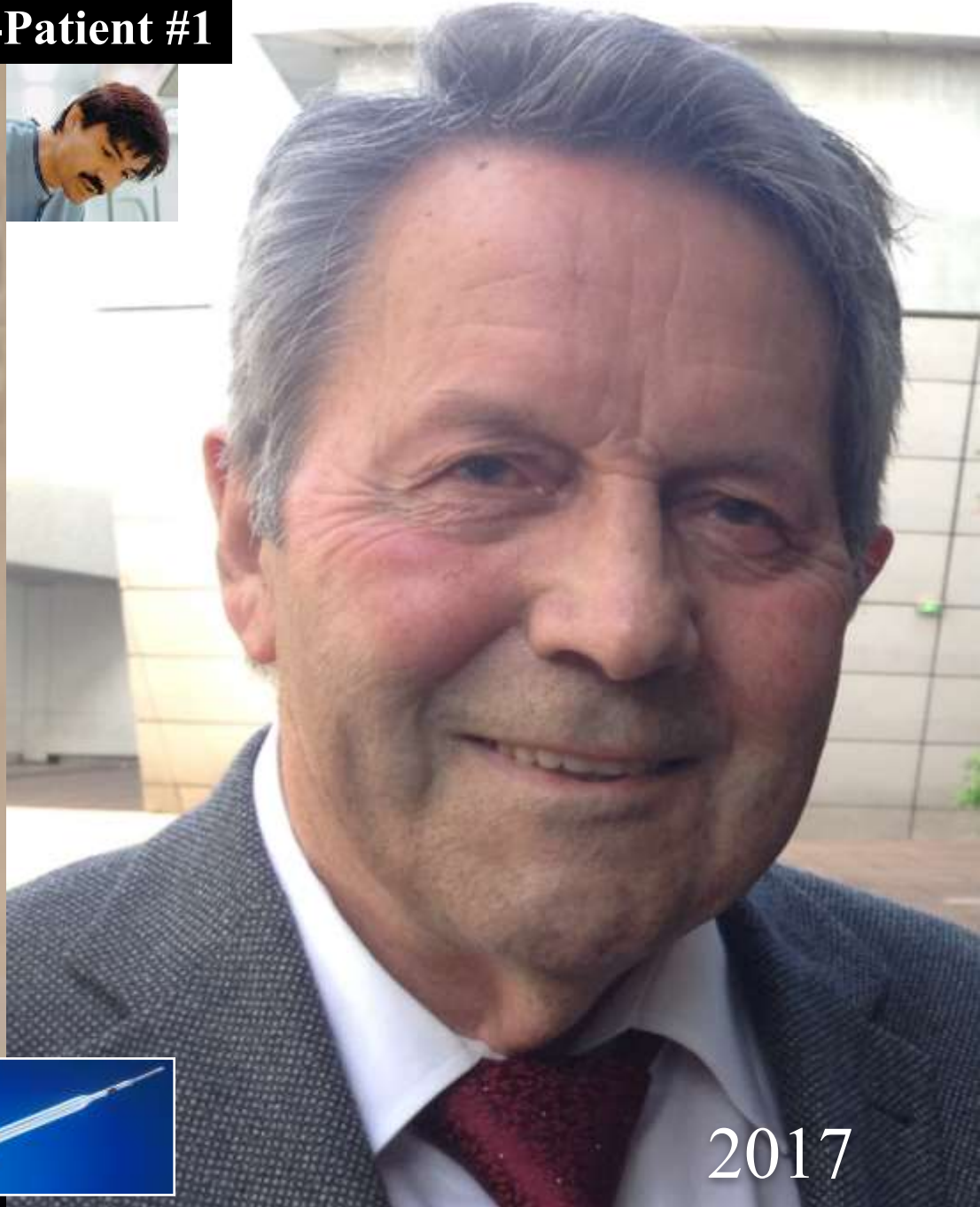
Post bare metal stent

Post drug eluting stent

PCI-Patient #1



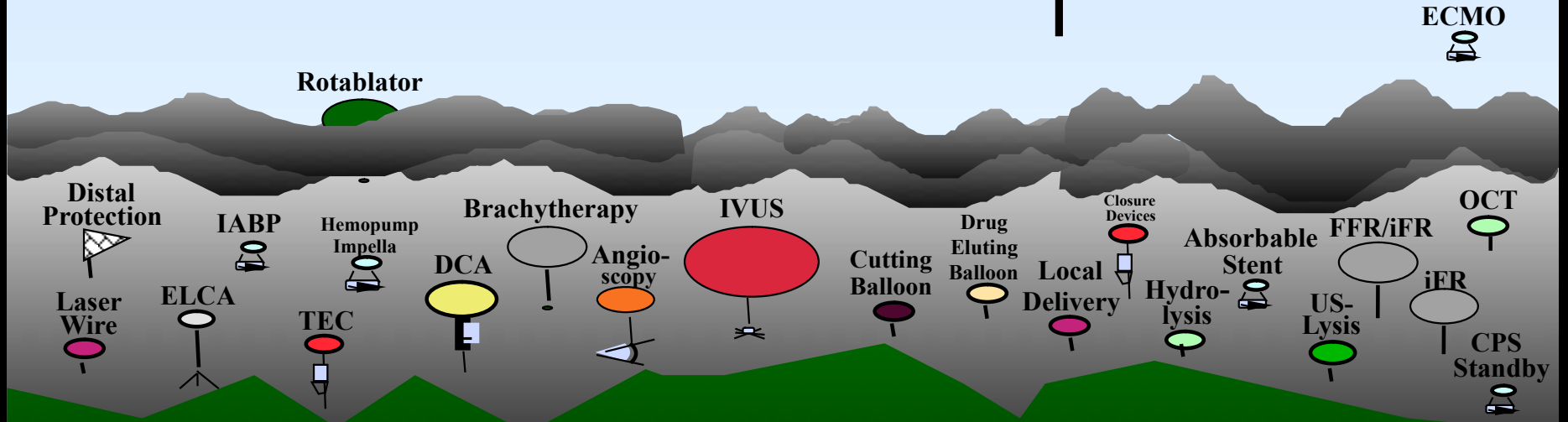
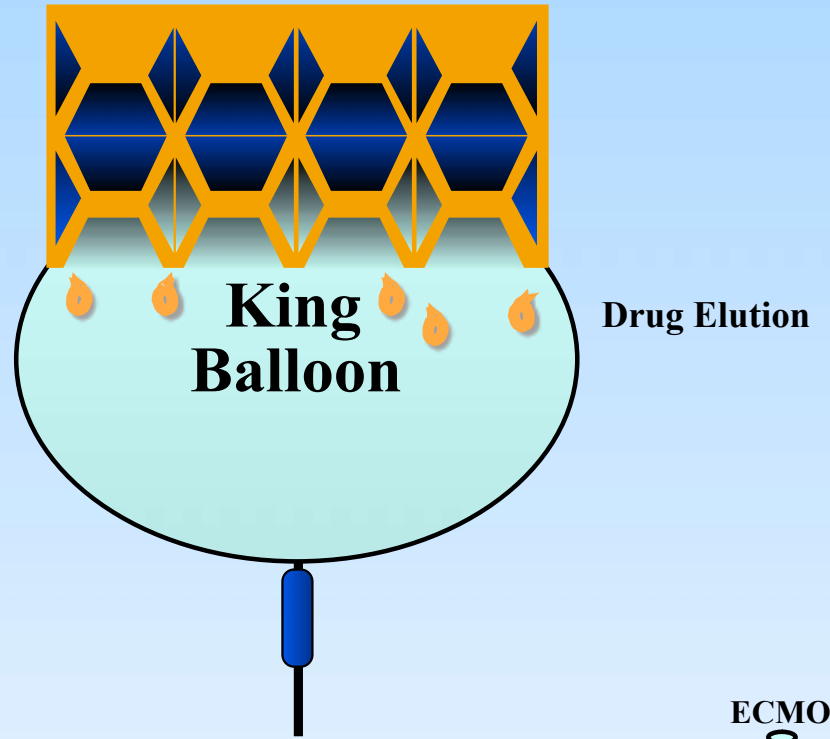
1977



2017



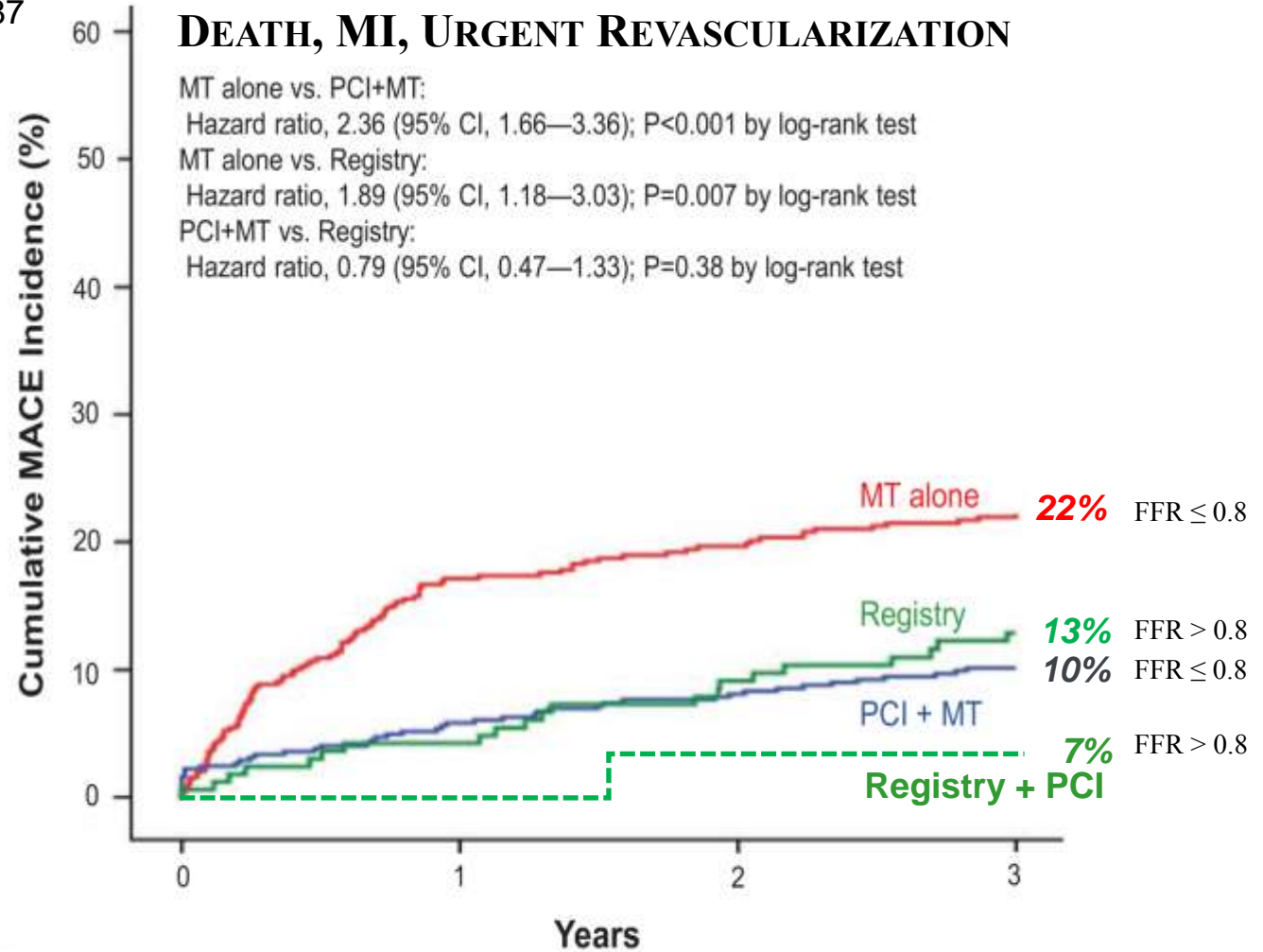
1977 - 2017



FAME-2: 3-YEAR RESULTS

The FFR Fallacy

Fearon et al. *Circulation* 2018;137:480-487



No. at Risk

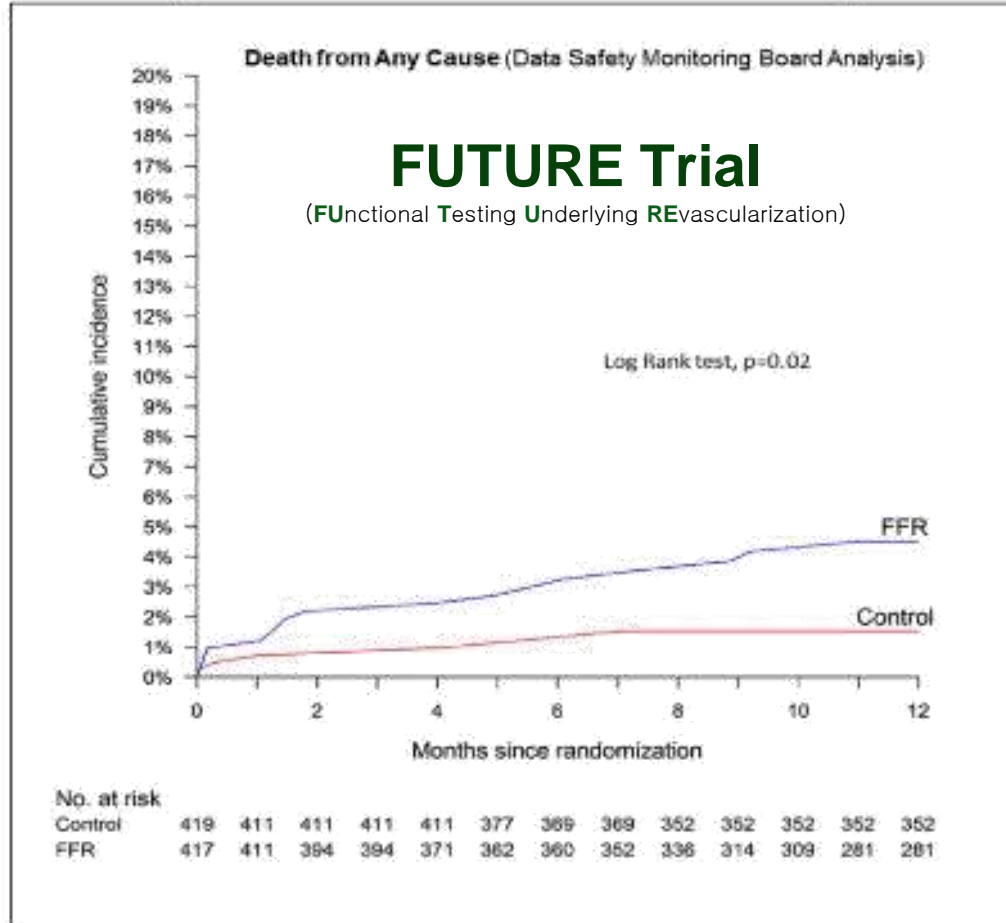
	0	1	2	3
MT alone	441	362	350	339
PCI+MT	447	417	405	392
Registry	166	156	148	141

Courtesy:
Stephan Windecker, MD

DSMB: unexpected excess mortality in FFR group compared to control during safety analysis



Rioufol G, AHA 2016



Over n = 836 first patients

All-cause deaths at 12 months : 24

- control : 7 (2%)

- FFR : 17 (4%)

P=0.02

Cardiovascular death :

72% of all deaths

Sponsor and Steering Committee decided to follow DSMB recommendation and stopped recruitment at n=936 patients of **1721 patients planned**

Results and follow-up are presented at end of monitoring visits, June 20th 2016

Femoral



Radial



The Radial Fallacy

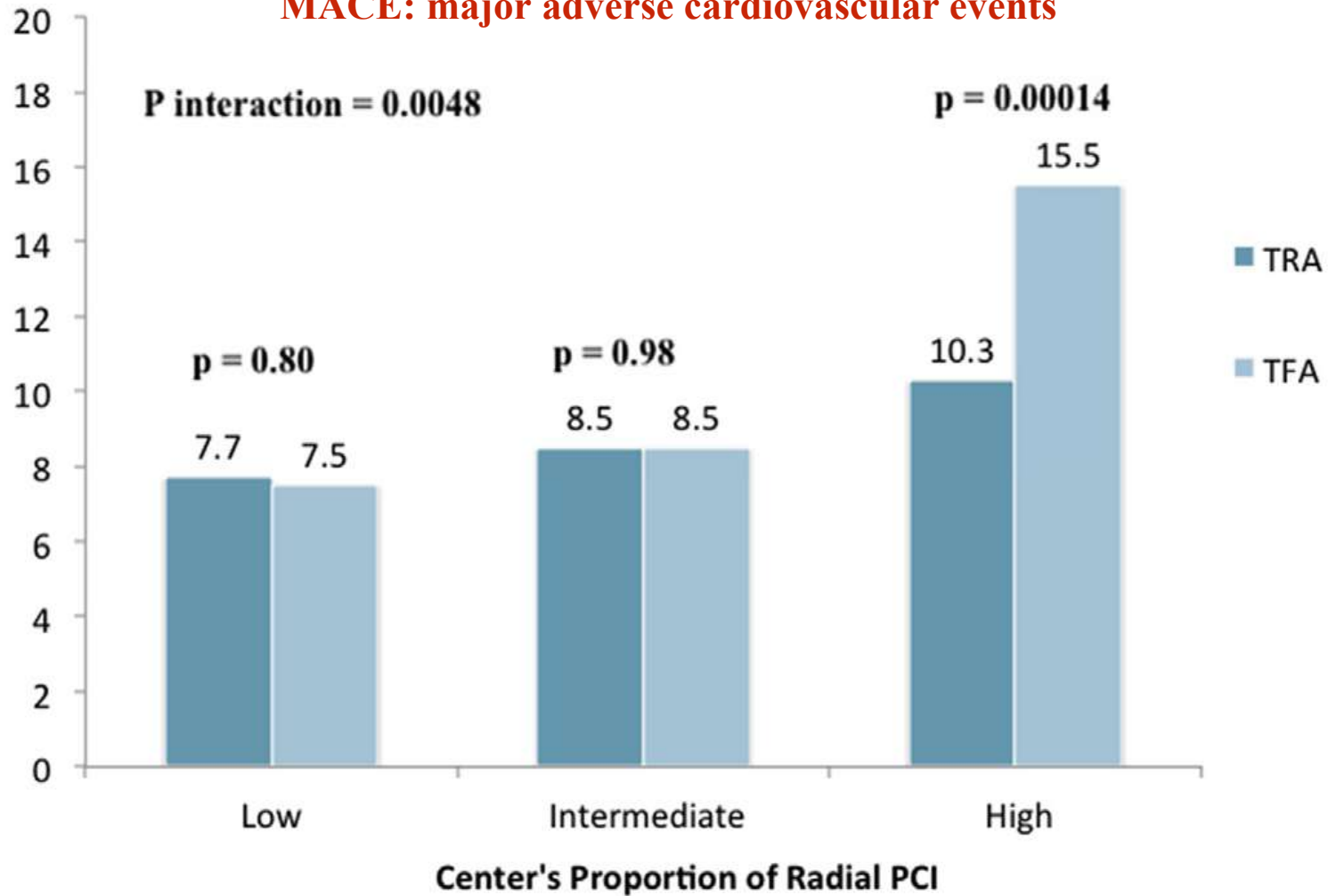


In contrast to the monocyclist who suffers his own learning phase falls and crashes, it is the patient who suffers in the radialist's learning phase falls and crashes.



MACE and NACE Between TRA and TFA in the MATRIX Trial Stratified by Center's Radial PCI

MACE: major adverse cardiovascular events



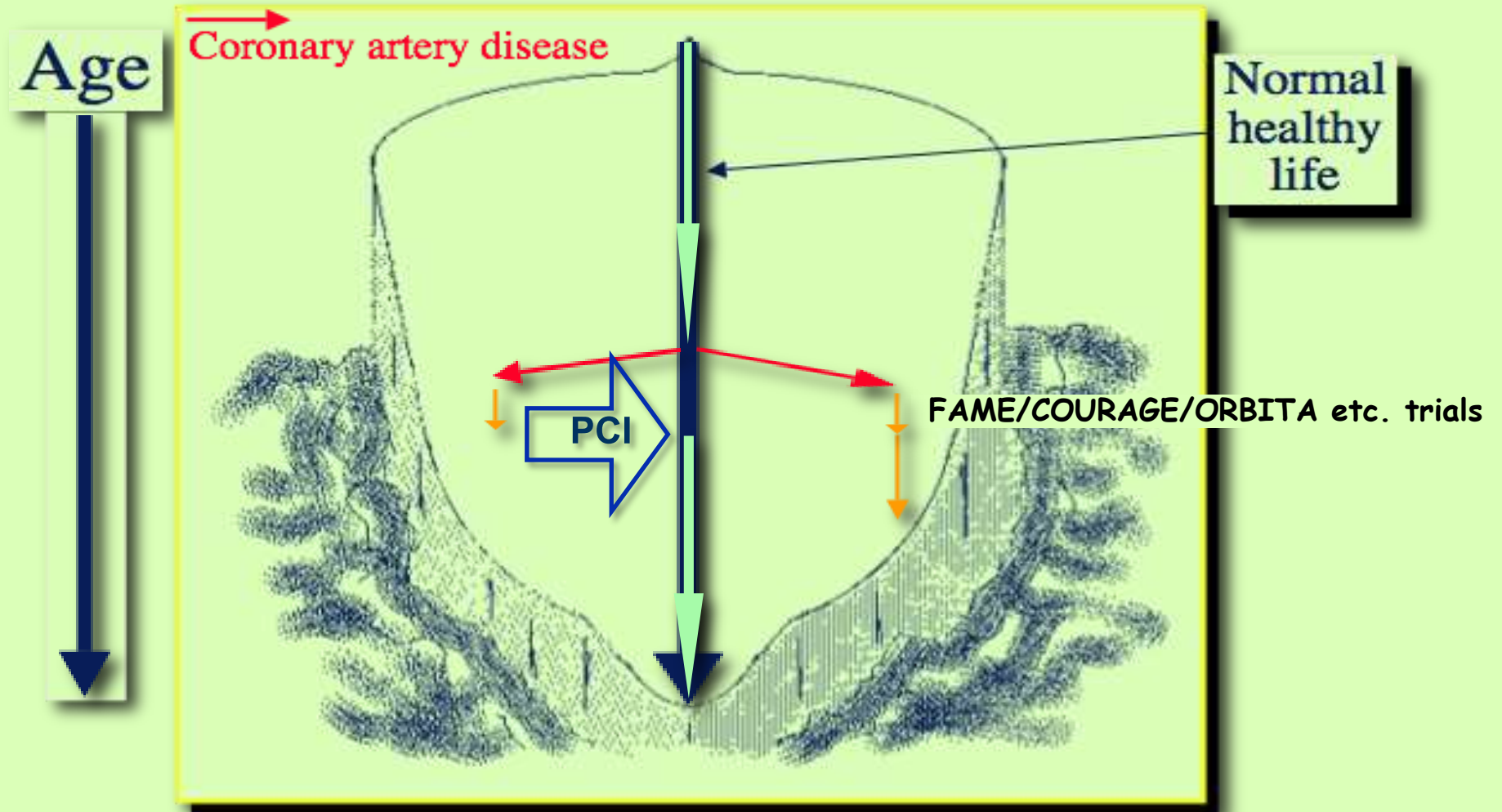
Radial Artery Coronary Angiography and Subsequent CABG

- 167 papers on radial artery coronary angiography
- 11 papers analyzed
- **Acute radial artery occlusion: 2.3 - 30.5%**

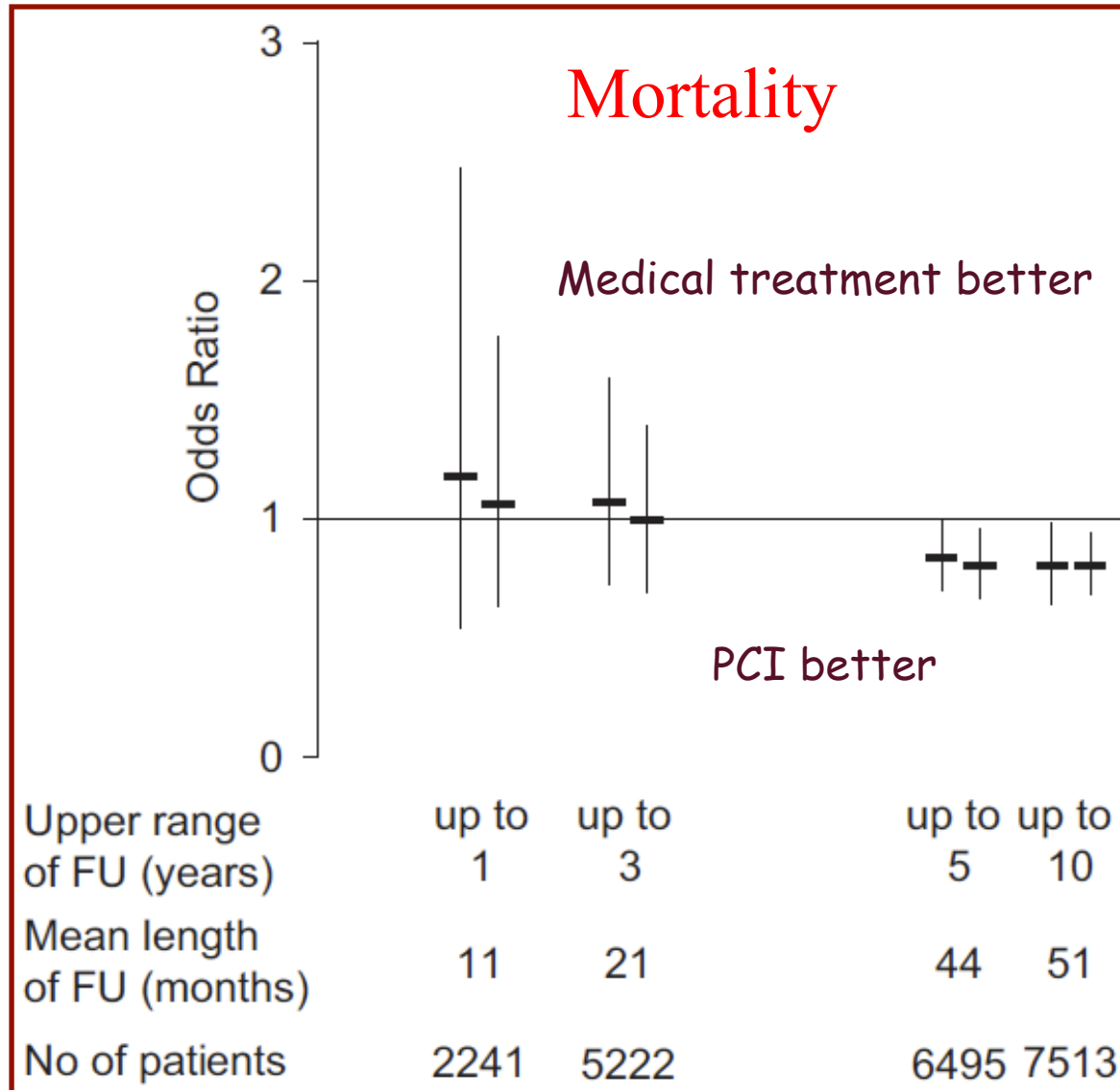
Avoid radial artery as a bypass conduit if it has previously been used for coronary angiography!

The Best Use of Coronary Angioplasty

The Course of Life

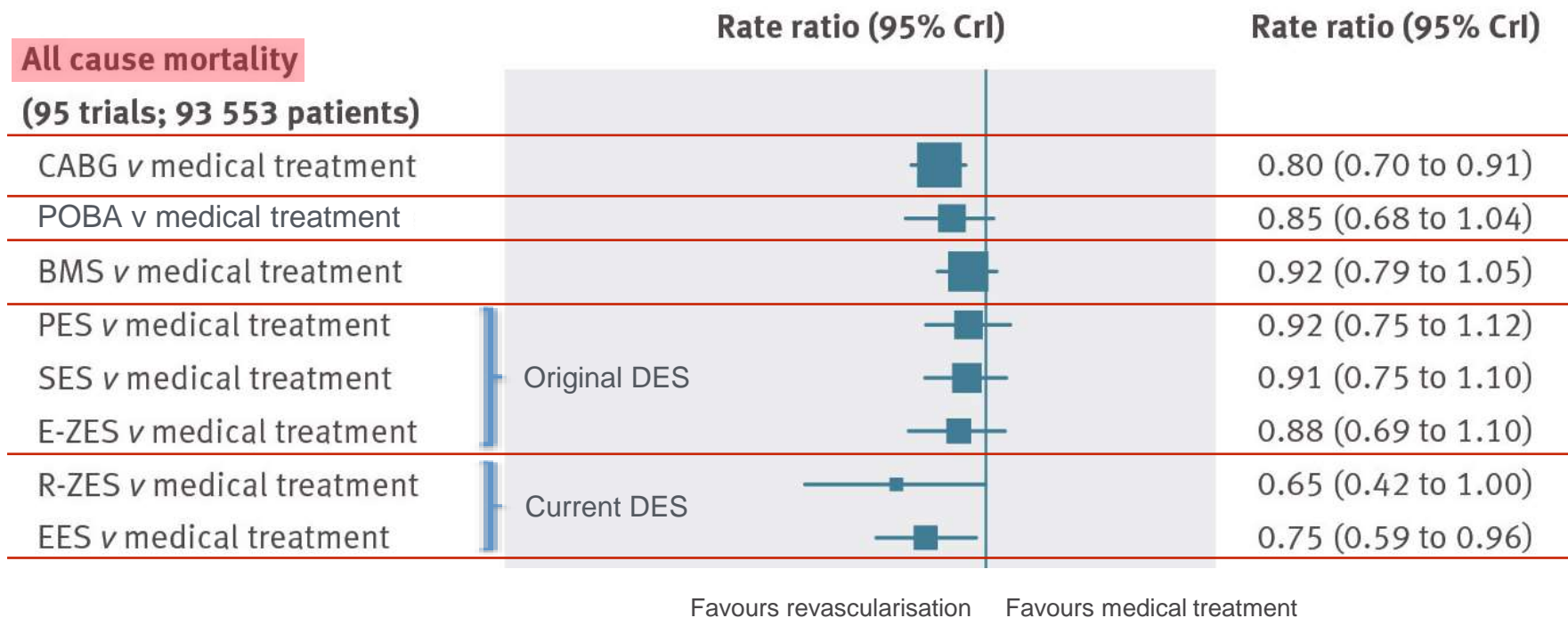


PCI vs. Medical Treatment with Increasing Follow-Up



Revascularisation versus medical treatment in patients with stable coronary artery disease

Network meta-analysis



BMS bare metal stent
 CABG coronary artery bypass grafting
 EES **Xience** everolimus-eluting stent
 E-ZES **Endeavor** zotarolimus-eluting stent
 PES **Taxus** paclitaxel-eluting stent
 POBA plain old balloon angioplasty
 R-ZES **Resolute** zotarolimus-eluting stent
 SES **Cypher** sirolimus eluting stent

Interventional Cardiologists

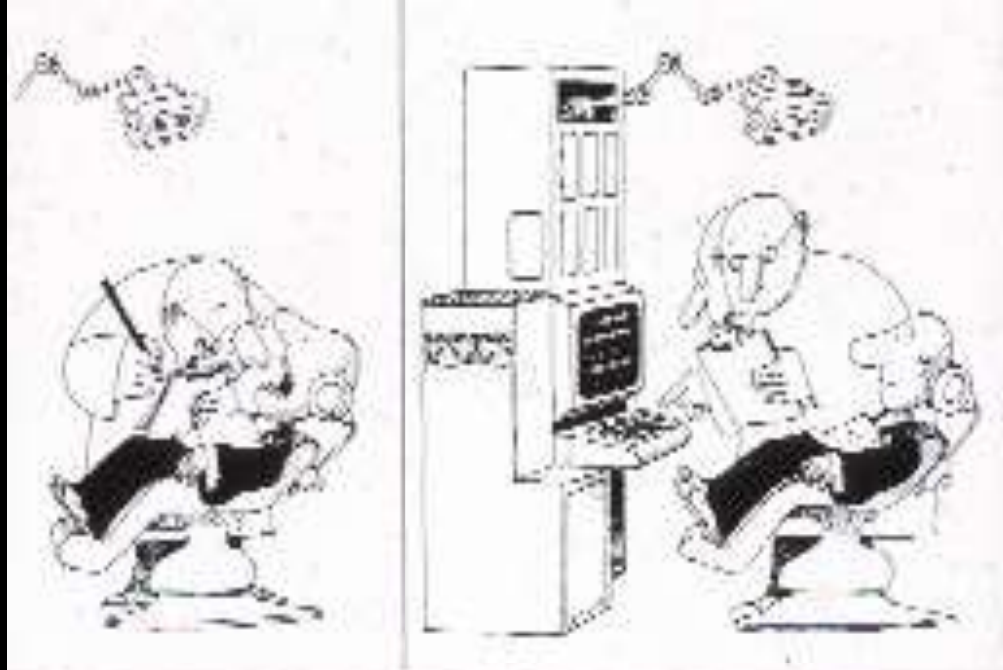
Cardiac Surgeons



We are in this boat together!

ABSORB





The **Post**-Interventional Cardiologist



CorPath
Fletcher Spath Inc.