

Thrombus Aspiration during Percutaneous coronary intervention in Acute myocardial infarction Study (TAPAS)

Mortality and reinfarction at 1 year

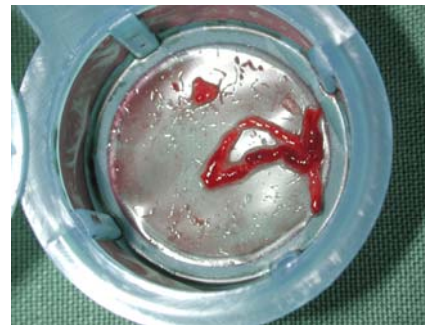
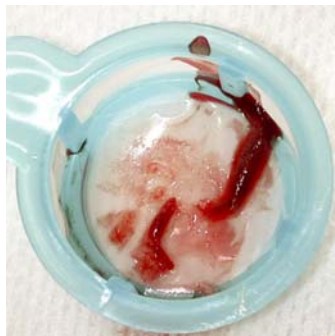
F. Zijlstra, MD PhD
Thoraxcenter

University Medical Center Groningen,
The Netherlands



TAPAS: Background

- Myocardial perfusion after primary PCI determines clinical outcome
- Embolization of atherothrombotic material plays a crucial role in microvascular obstruction and impaired myocardial perfusion
- Previous trials have shown the feasibility of thrombus aspiration during primary PCI



TAPAS: Methods (1)

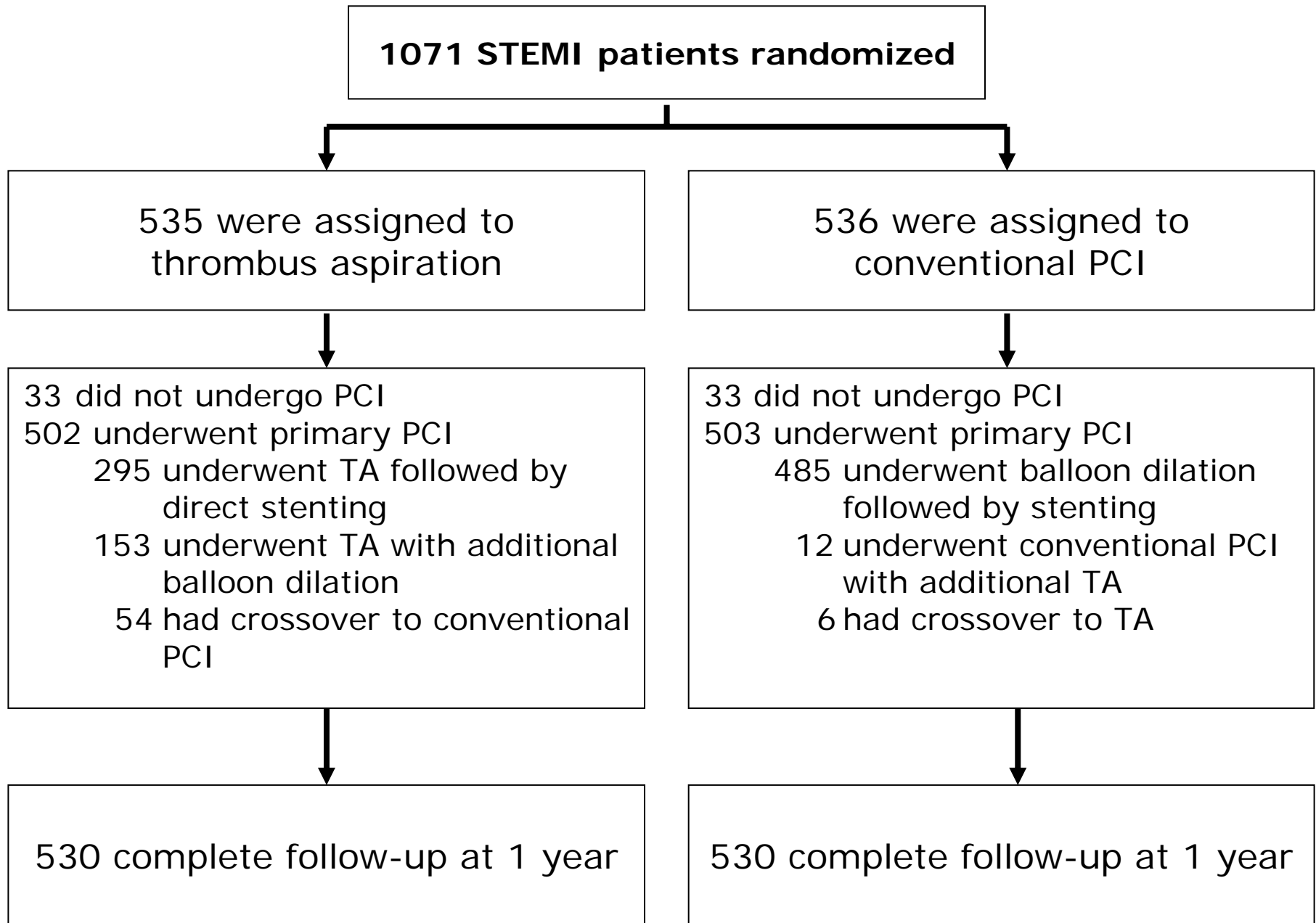
- Single center, prospective, randomized
- Consecutive patients with STEMI
- Primary endpoint
 - Myocardial blush grade (core lab)
- Secondary endpoints
 - ST-segment elevation resolution
 - 30 day death and death / reinfarction
 - 1-year death and death / reinfarction



TAPAS: Methods (2)

- Randomization before angiography to thrombus aspiration or conventional PCI
- Exclusion criteria
 - Rescue PCI after thrombolysis
 - Life expectancy < 6 months
- Standard treatment
 - Heparin, aspirin, clopidogrel, abciximab
- Intention to treat analysis





Baseline clinical characteristics

Characteristic	Thrombus aspiration N = 535	Conventional N = 536
Age, years	63±13	63±13
Male gender	68%	73%
Body mass index	27±4	27±4
Hypertension	33%	37%
Family history	46%	45%
Diabetes	11%	13%
Hypercholesterolemia	24%	27%
Current smoking	46%	48%
Previous MI	10%	11%
Total ischemic time (min)	190 (110-270)	185 (107-263)

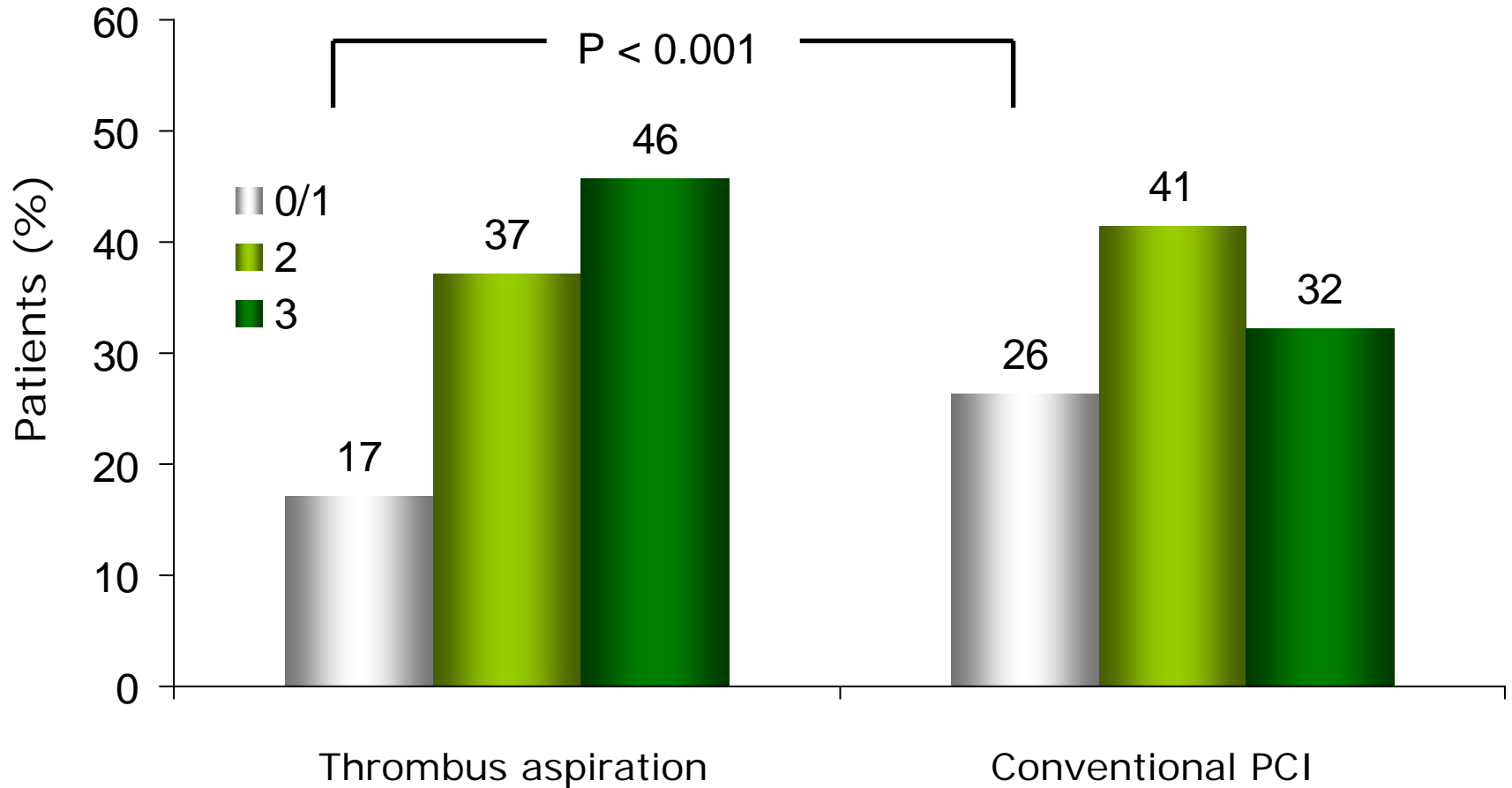


Baseline angiographic characteristics

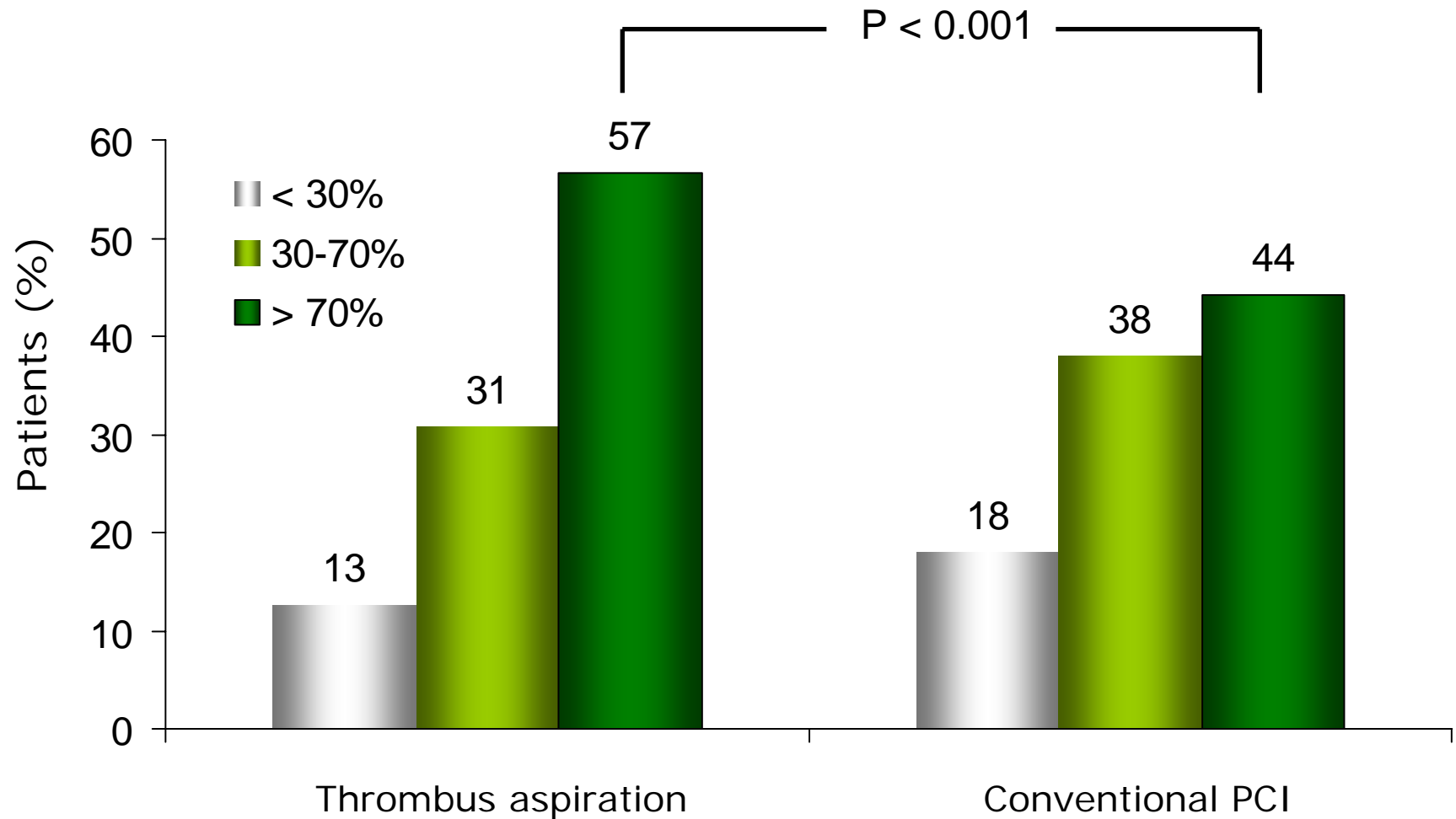
Characteristic	Thrombus aspiration N = 535	Conventional N = 536
Infarct related vessel		
LAD	43%	43%
LCX	18%	15%
RCA	37%	40%
Multivessel disease	66%	69%
TIMI flow grade		
0 or 1	55%	60%
2	19%	16%
3	26%	25%
Thrombus	49%	46%



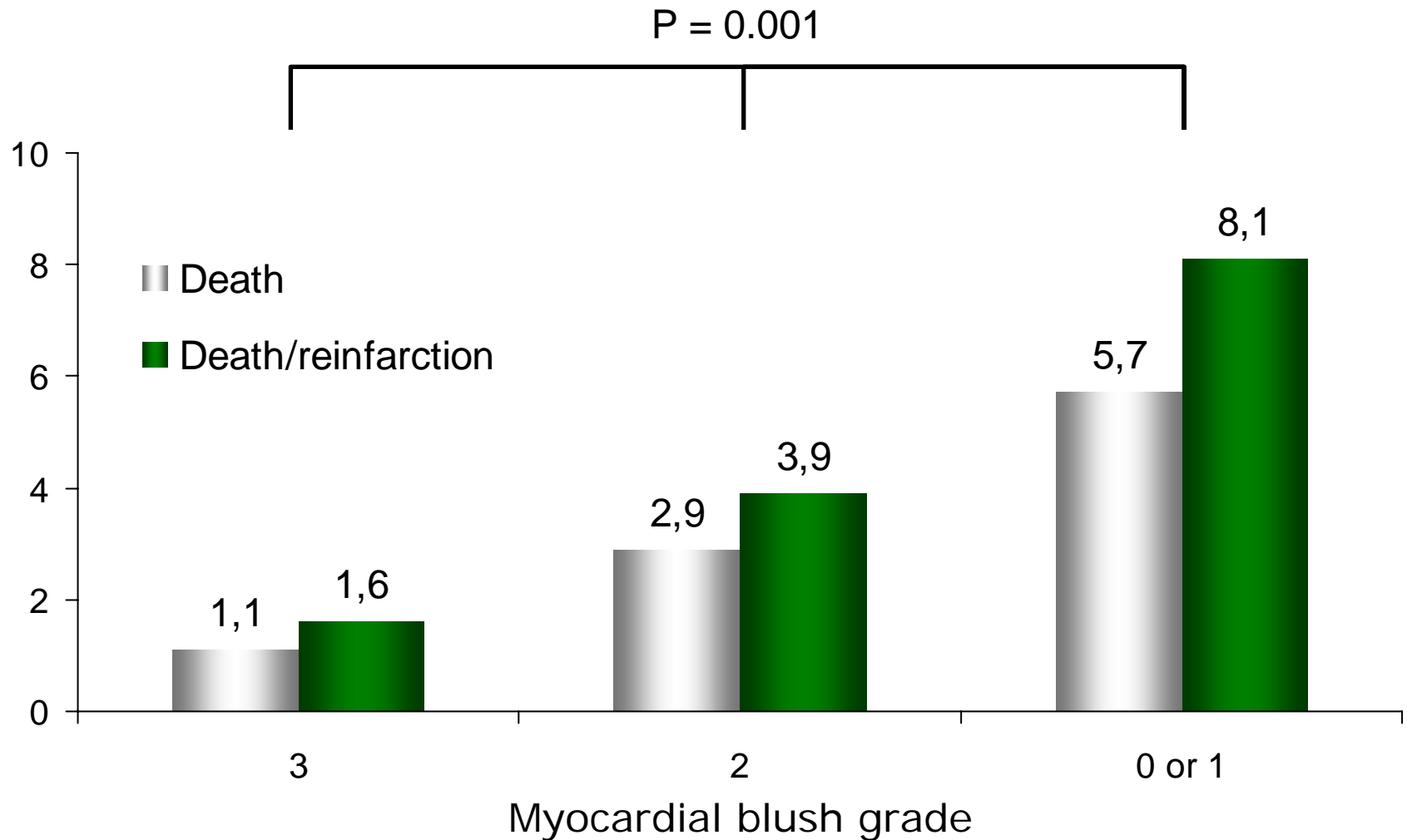
Primary endpoint: Myocardial blush grade



ST-segment elevation resolution

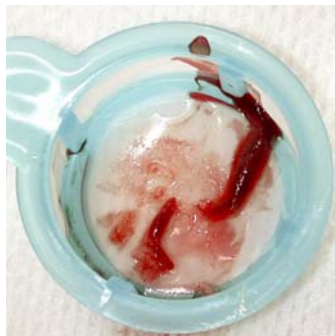


Myocardial blush grade and death or death/reinfarction at 30-days

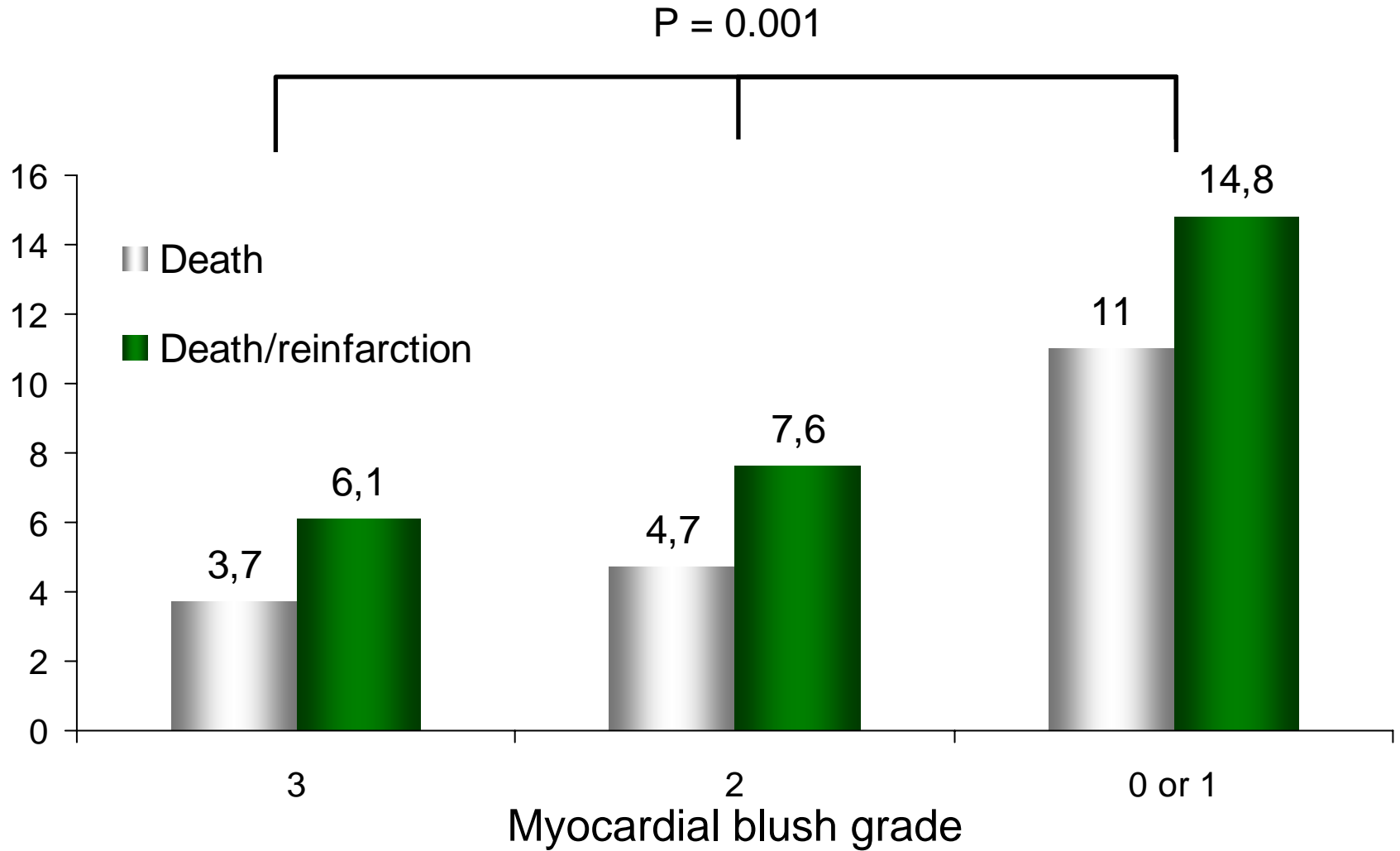


TAPAS: Summary of findings at 30 days

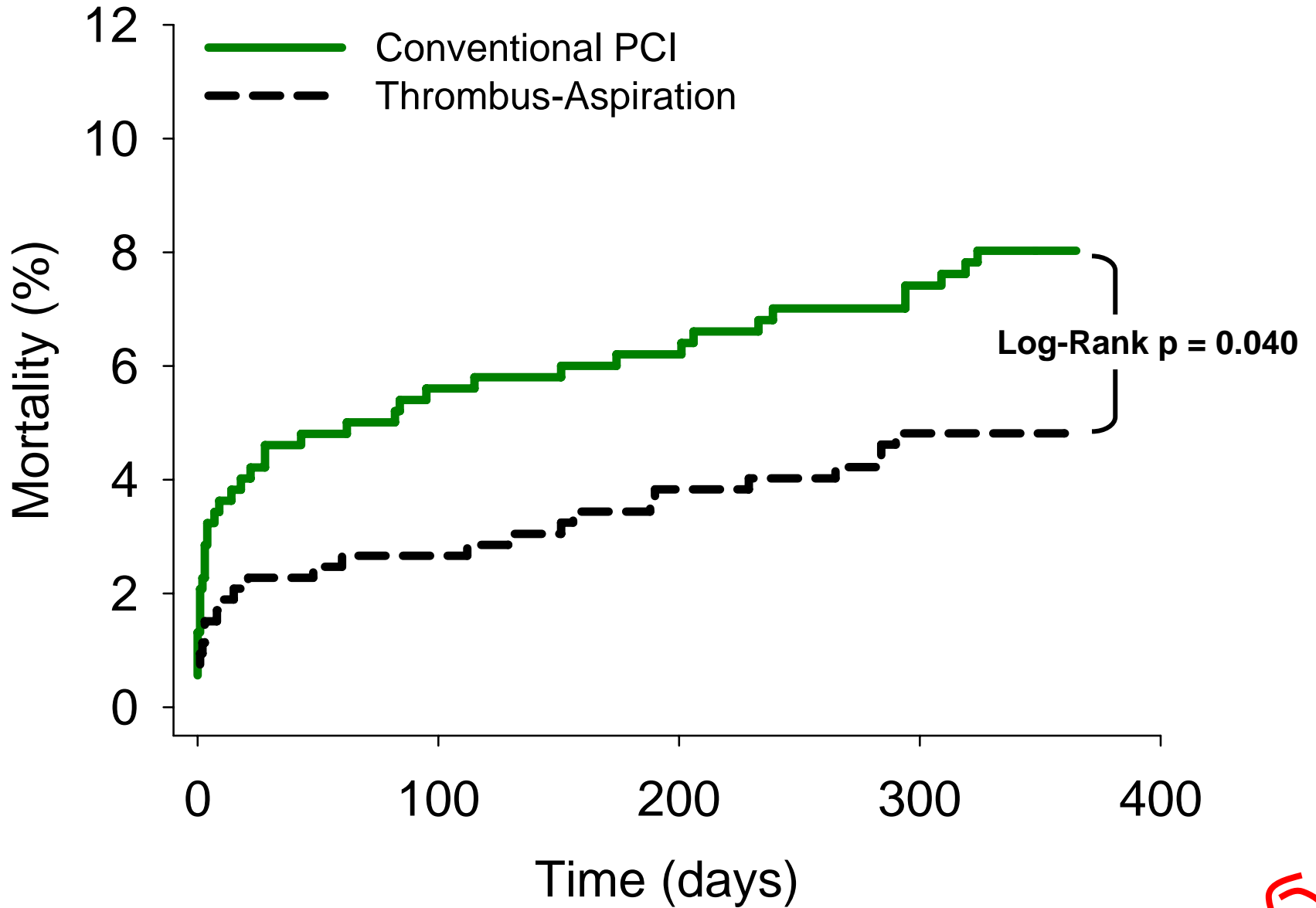
- Thrombus aspiration results in improved myocardial reperfusion
- Myocardial blush grade predicts 30-day rates of death and reinfarction
- Does improved myocardial reperfusion translate into clinical benefit at 1 year?



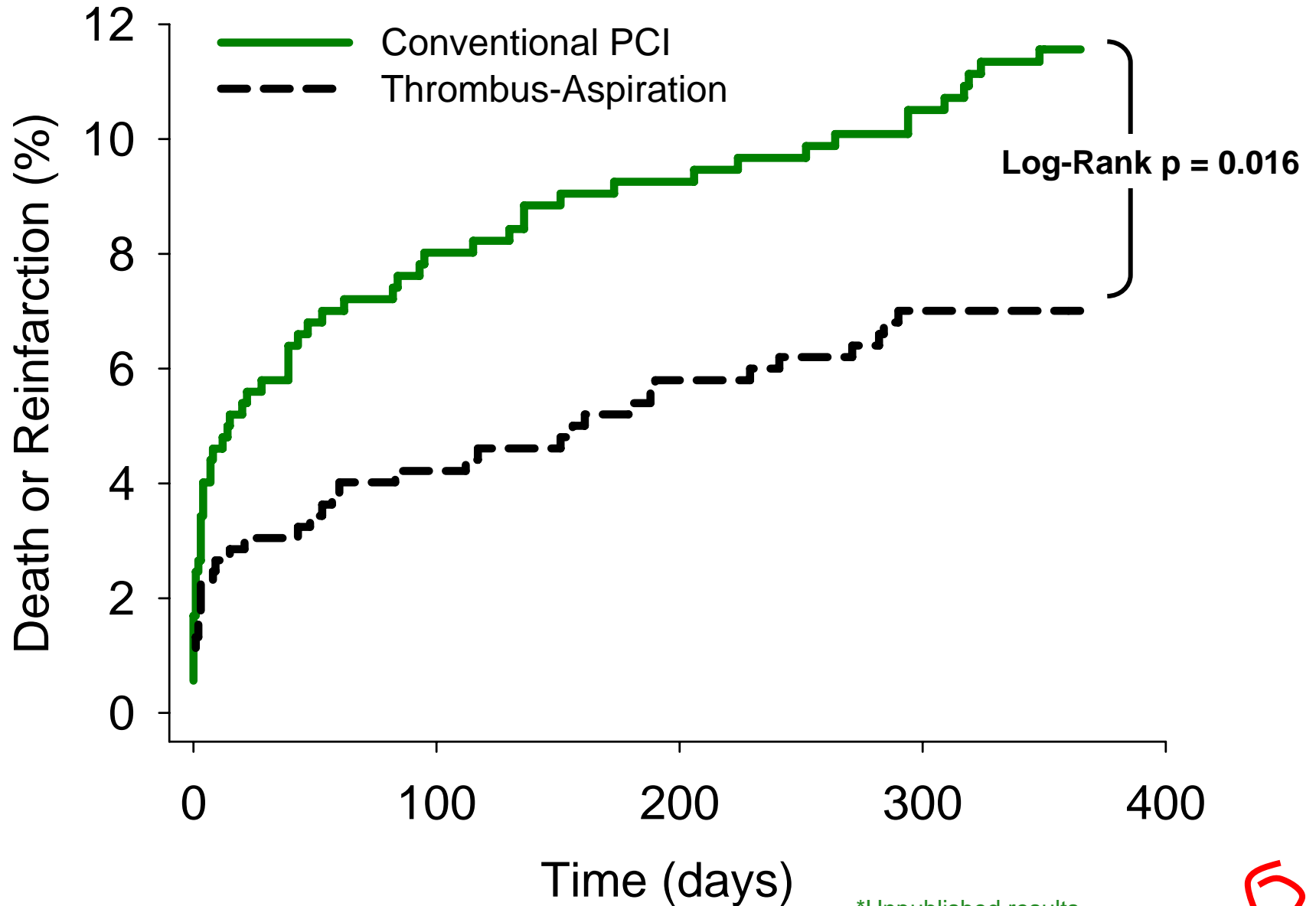
TAPAS one year outcome: Myocardial blush grade and death or death/reinfarction at 1 year



Mortality at 1 year



Mortality or non-fatal ReMI at 1 year



TAPAS: Mortality and reinfarction at 1 year

- Myocardial blush grade predicts clinical outcome at 1 year
- Thrombus aspiration results in a lower mortality and combined mortality and non-fatal reinfarction at 1 year

