

# PCI reduces death/myocardial infarction in stable patients with silent ischemia

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# Disclosures

**Stephane Fournier, Aalst, Belgium**

I do not have any potential conflict of interest

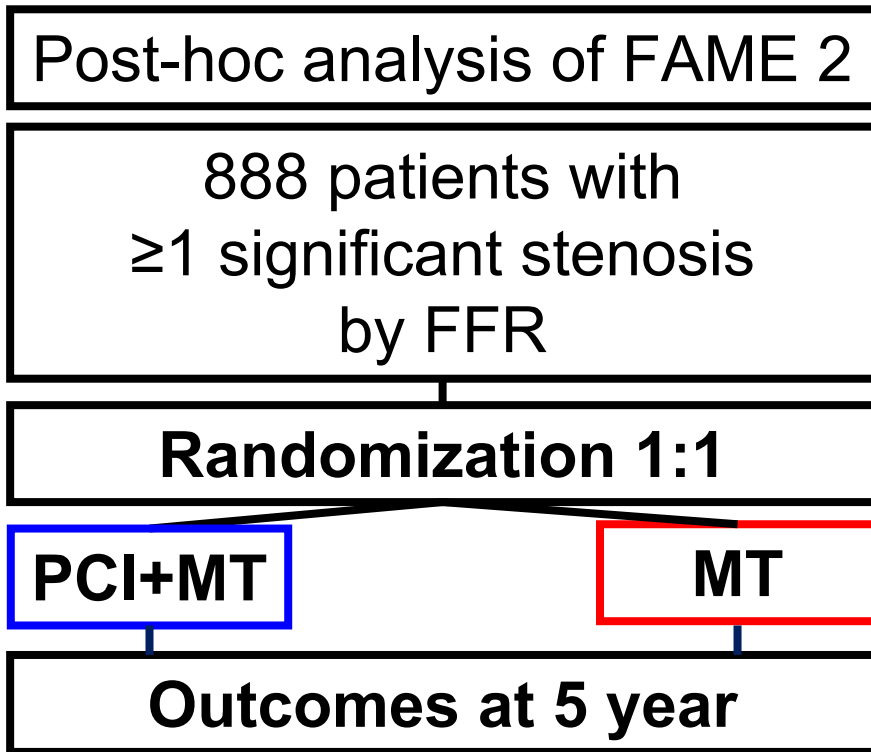
# Introduction

- Earlier data suggest that silent ischemia portends adverse outcomes
  - Post MI: SWISSI II : JAMA 2007;297:1985-91.
  - Suspected ACS: Eur Heart J 2001;22:1997-2006.
- The effects of PCI in stable patients with silent ischemia is unknown

# Hypothesis

- Patients with hemodynamically significant stenoses but w/o symptoms ( $\approx$  'silent ischemia') have a worse outcome than symptomatic patients
- PCI improves outcome in silent ischemia

# Methods



NEJM 2018 Jul 19;379(3):250-259

# Outcomes

## – MACE

- Death (All cause)
- Myocardial infarction
- Urgent revascularisation

## – Death or MI

## – Non-urgent revascularisation

## – Any revascularisation



# Baseline characteristics (overall population)

|                                 | Silent ischemia (n=98) | Symptomatic (n=789) | p-value |
|---------------------------------|------------------------|---------------------|---------|
| Male                            | 83 (85%)               | 608 (77%)           | 0.086   |
| Age                             | 65.5 [58.0 ; 72.0]     | 63.0 [57.0 ; 70.0]  | 0.052   |
| Current smoker                  | 13 (13%)               | 166 (21%)           | 0.071   |
| Hypertension                    | 78 (80%)               | 615 (78%)           | 0.710   |
| Diabetes                        | 32 (33%)               | 210 (27%)           | 0.206   |
| Hyperlipidemia                  | 65 (66%)               | 620 (79%)           | 0.006   |
| Peripheral vascular disease     | 22 (22%)               | 69 (9%)             | <0.001  |
| Family history                  | 61 (62%)               | 400 (51%)           | 0.094   |
| Renal failure                   | 9 (9%)                 | 16 (2%)             | <0.001  |
| Previous MI                     | 68 (69%)               | 474 (60%)           | 0.143   |
| History of PCI in target vessel | 81 (83%)               | 648 (82%)           | 0.828   |
| Prox/Mid-LAD sign. by FFR       | 55 (56%)               | 484 (61%)           | 0.318   |
| ≥ 3 lesions with ≥50% DS        | 16 (16%)               | 168 (21%)           | 0.701   |
| ≥ 3 lesions sign. by FFR        | 9 (9%)                 | 80 (10%)            | 0.066   |

# Results (1)

**‘Natural History’ of silent ischemia**  
(i.e. outcomes of patients assigned  
to Medical Therapy alone)



# Results (2) : Patients with MT alone

**Silent Ischemia** **Symptomatic**  
**n=45** **n=395**

HR [95% CI] \*

P value \*

- Primary Endpoint
  - Mortality
  - MI
  - Urgent revasc
- Death or MI
- All revasc
- Non Urgent revasc

\* Adjusted for baseline characteristics

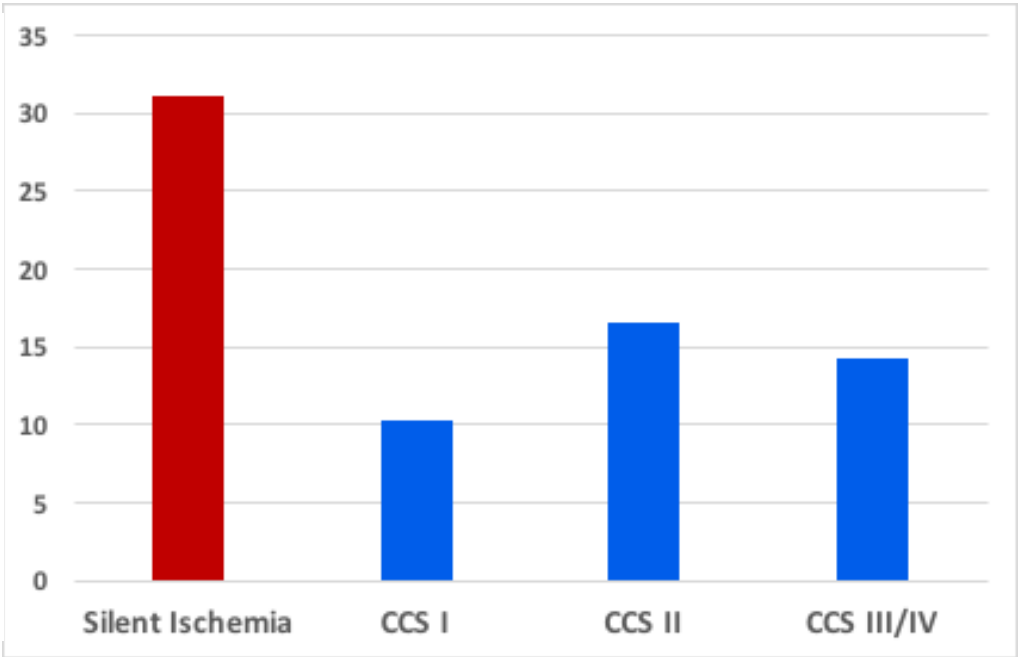
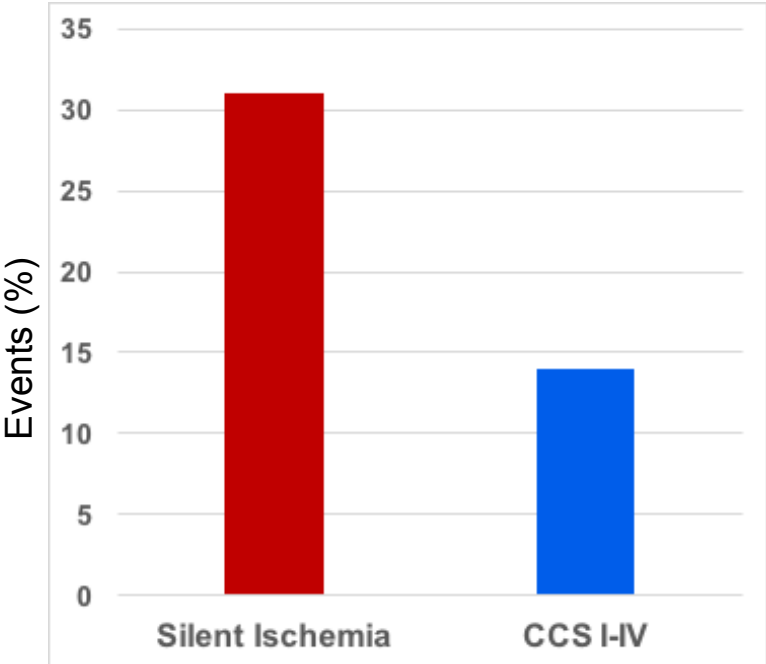


# Results (2) : Patients with MT alone

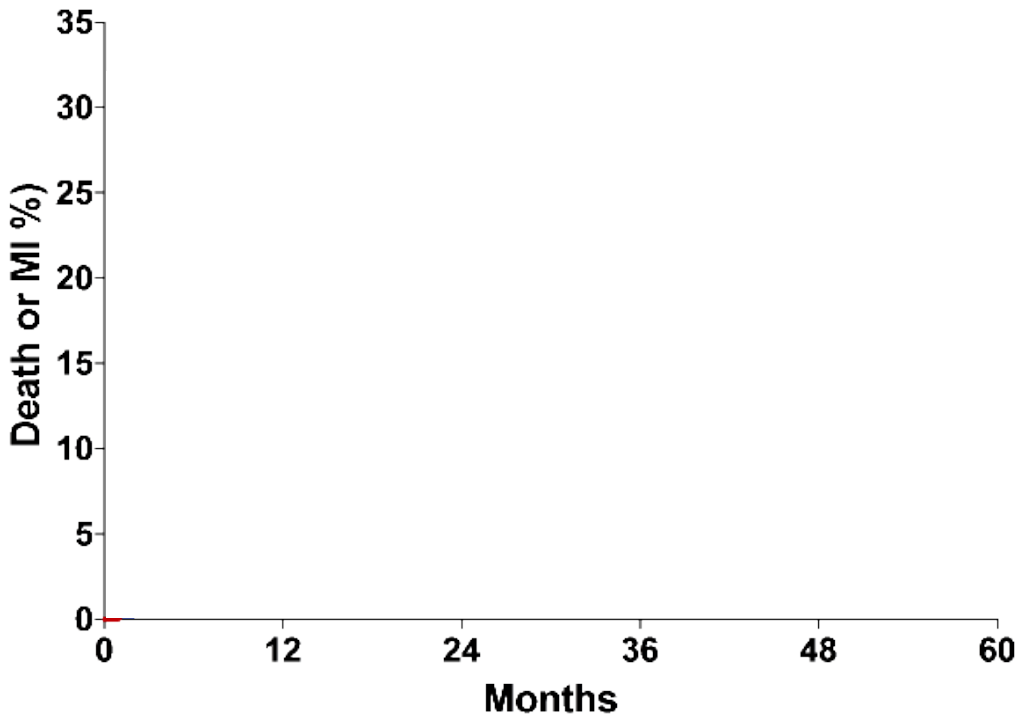
|                          | <b>Silent Ischemia<br/>n=45</b> | <b>Symptomatic<br/>n=395</b> | HR [95% CI] *      | P value * |
|--------------------------|---------------------------------|------------------------------|--------------------|-----------|
| <b>Primary Endpoint</b>  | 14 (31%)                        | 105 (27%)                    | 1.13 [0.64 ; 2.01] | 0.667     |
| <b>Mortality</b>         | 5 (11%)                         | 18 (5 %)                     | 1.68 [0.61 ; 4.61] | 0.312     |
| <b>MI</b>                | 11 (24%)                        | 42 (11 %)                    | 2.67 [1.35 ; 5.38] | 0.005     |
| <b>Urgent revasc</b>     | 12 (27%)                        | 81 (21%)                     | 1.38 [0.74 ; 2.57] | 0.314     |
| <b>Death or MI</b>       | 14 (31 %)                       | 57 (14 %)                    | 2.16 [1.18 ; 3.97] | 0.013     |
| <b>All revasc</b>        | 17 (38 %)                       | 208 (53 %)                   | 0.61 [0.37 ; 1.01] | 0.054     |
| <b>Non Urgent revasc</b> | 8 (18 %)                        | 147 (37 %)                   | 0.43 [1.24 ; 0.70] | 0.023     |

# Results (3) : Patients with MT alone

## Death/Myocardial Infarction



# Results (4) : Patients with MT alone

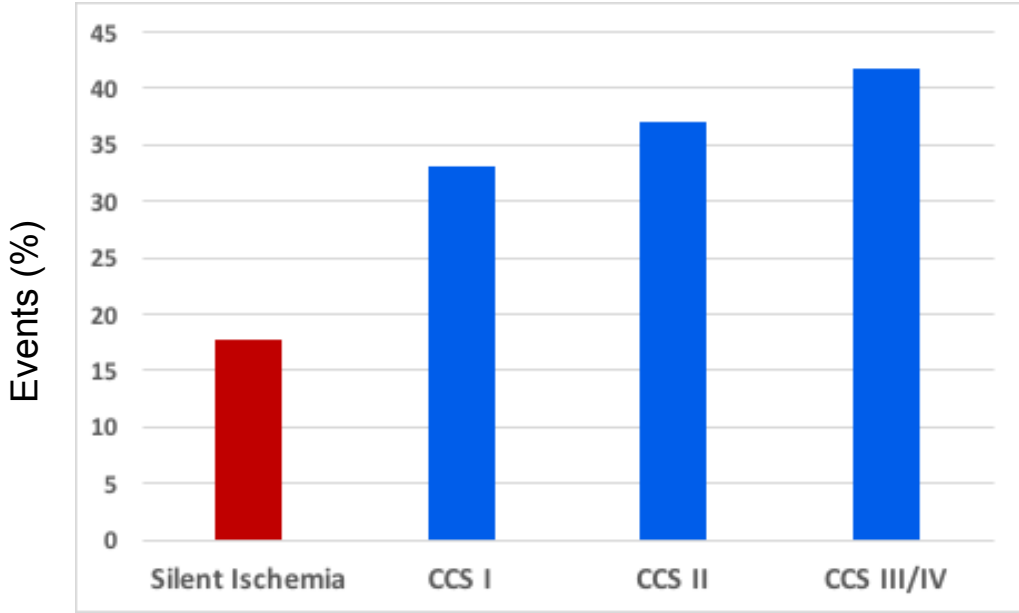
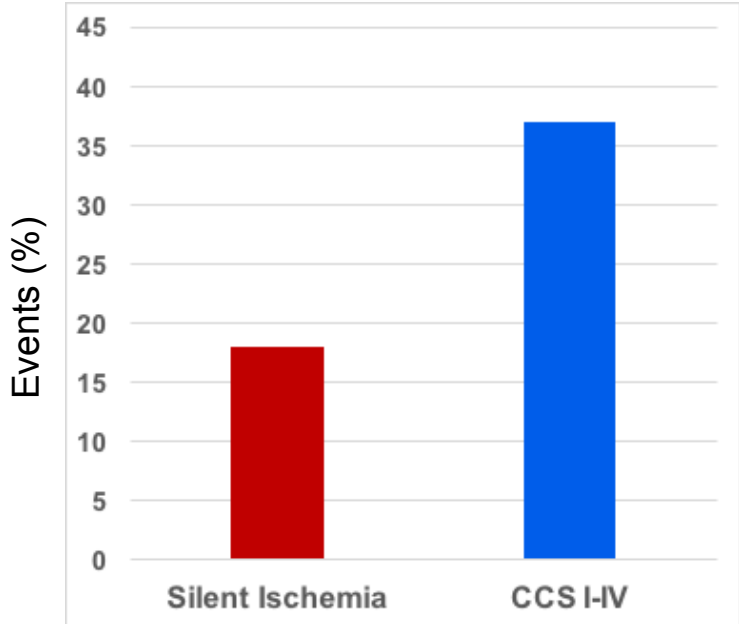


At risk :  
Silent Ischemia  
CCS I to IV



# Results (5) : Patients with MT alone

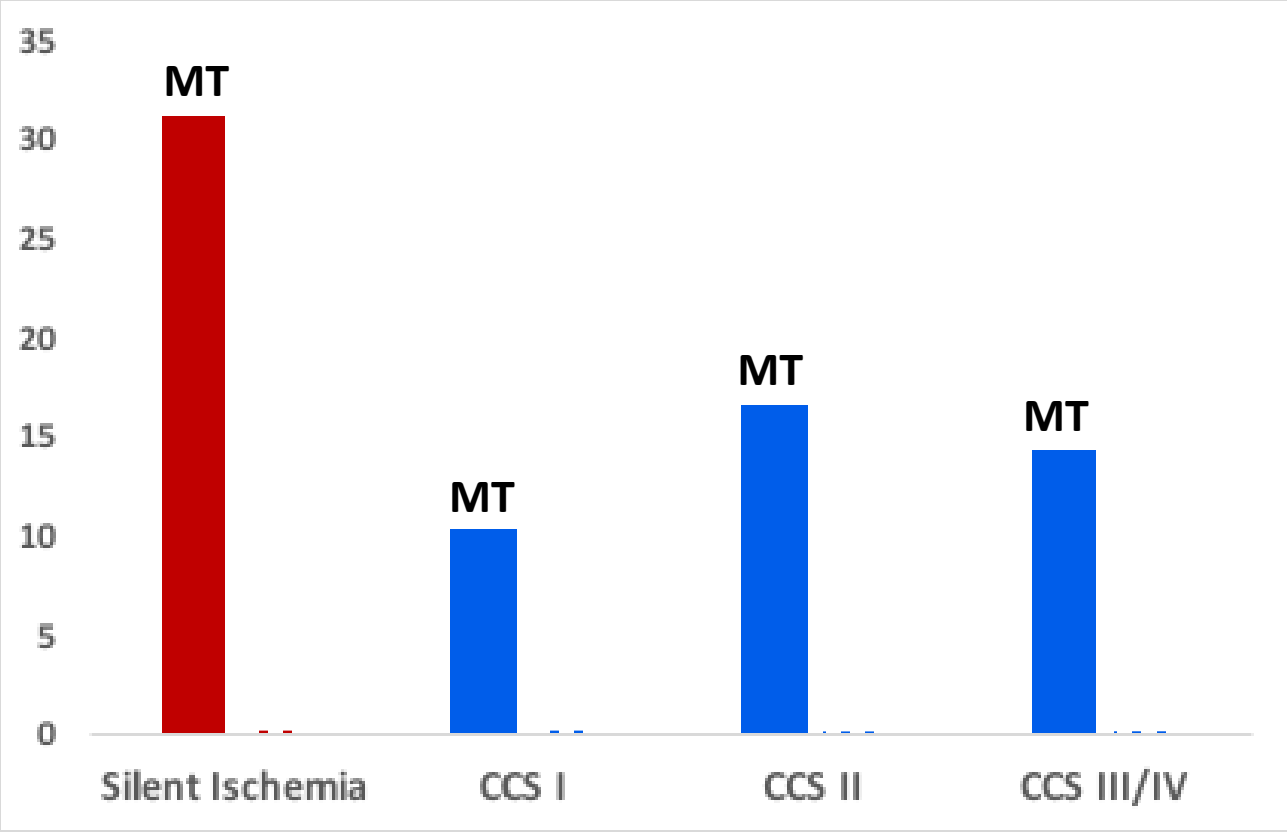
## Non-Urgent Revascularisation



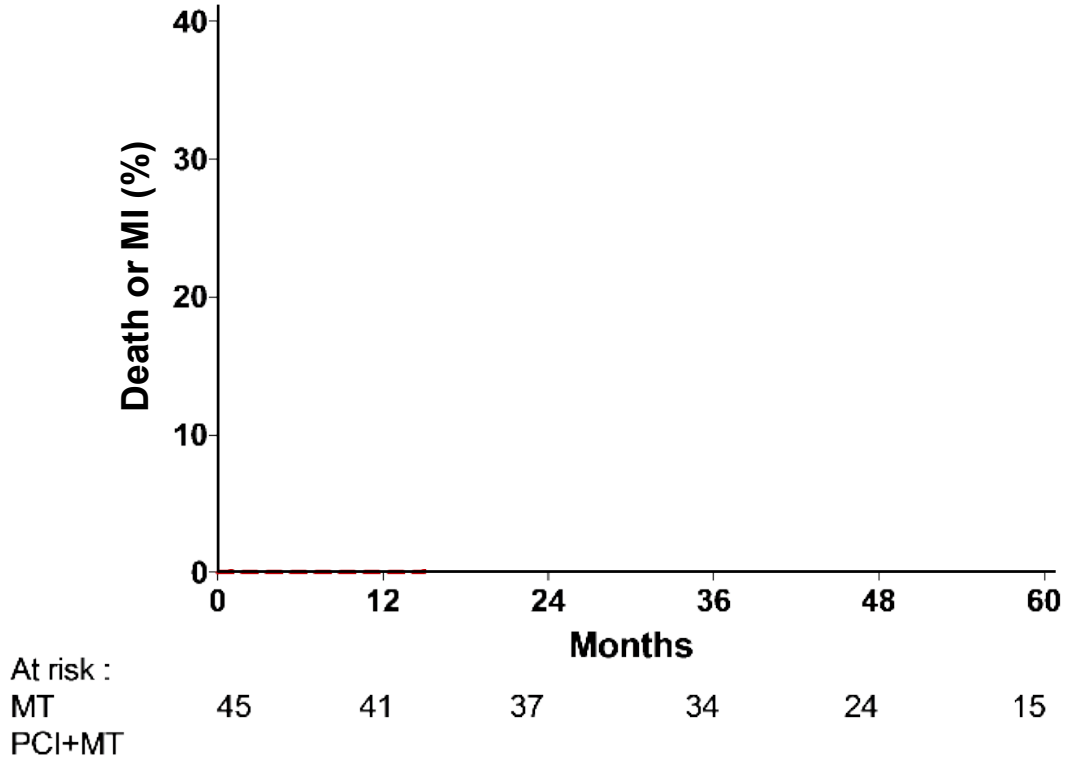
# Results (6)

## Effect of PCI : Silent Ischemia vs Symptomatic Patients

# Results (7) : Effect of PCI on Death/MI



# Results (8) : Effect of PCI on Death/MI





# Limitations

- Post-hoc analysis
- Sample size

# Conclusion

- In stable patients with silent ischemia, the rate of death/MI is >twice as high, but the rate of revascularisation >twice as low as compared to patients with symptomatic ischaemia
- In stable patients with silent ischaemia, PCI reduces the rate of death/MI as compared to Medical Therapy alone

# Back Up Slides

# Back up Slide

## Death or MI

|                 | PCI       | MT        | HR (95% CI)         |
|-----------------|-----------|-----------|---------------------|
| Silent ischemia | 5 (9.4)   | 14 (31.1) | 0.236 [0.084;0.658] |
| Symptomatic     | 48 (12.2) | 57 (14.4) | 0.845 [0.576;1.241] |

