

Routine invasive versus selective invasive strategy in NSTEMI

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- **Non-ST-elevation myocardial infarction (NSTEMI) represents the most common presentation of acute coronary syndrome**
- **IN Swedish nationwide analysis no improvement in 1-year survival of NSTEMI patients was seen in between 1990 and 2010, while STEMI patients did show improved survival**
- **Thus, diagnosis, risk Role and timing of coronary intervention in of NSTEMI continues to be a major challenge in the upcoming decade and is often less straight forward than in STEMI.**

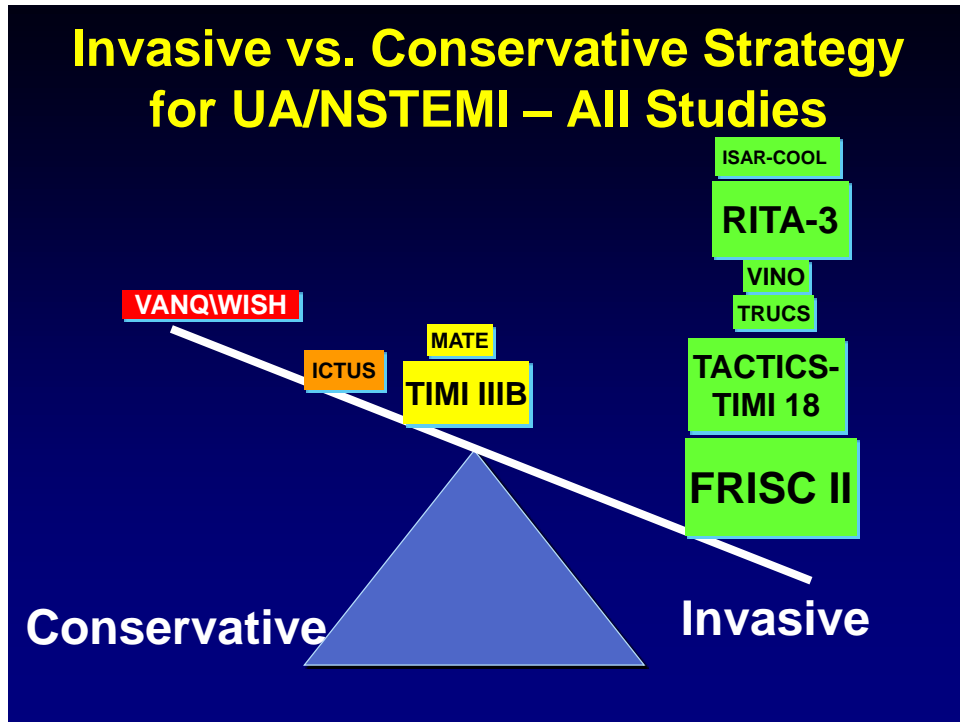
- Two general approaches have emerged. The first named “early invasive” or “routine invasive” strategy, involving routine early CAG followed by revascularization when appropriate.
- The second is the “conservative” or “selective invasive” approach, with initial pharmacological management and CAG followed by revascularization for recurrent or stress-induced ischemia only

Selective Invasive

- ❖ Antiplatelet and anticoagulant pretreatment may reduce the risk of subsequent intervention
- ❖ intervention may not be necessary in low risk responding to medical treatment
- ❖ Allow more thorough assessment

Routine Invasive

- ❖ Prevent ischemic events in observation period
- ❖ Early recognition of high risk coronary anatomy
- ❖ Shorten hospital stay



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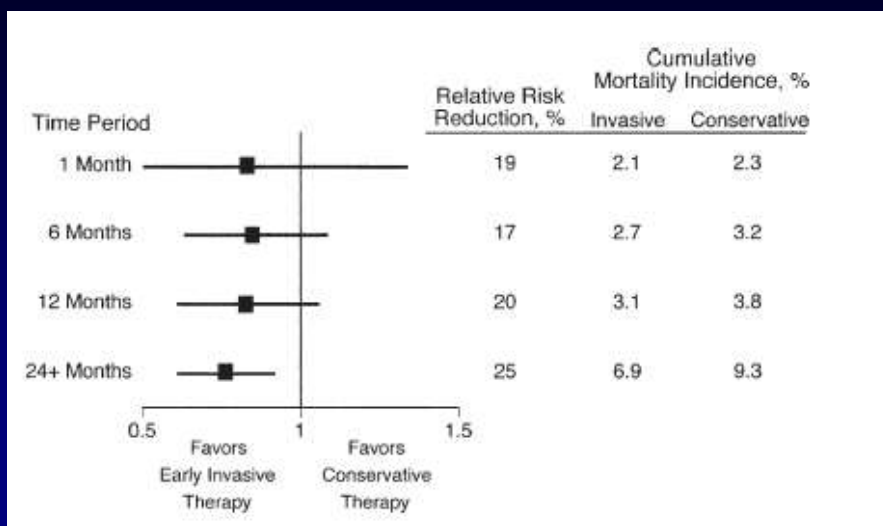
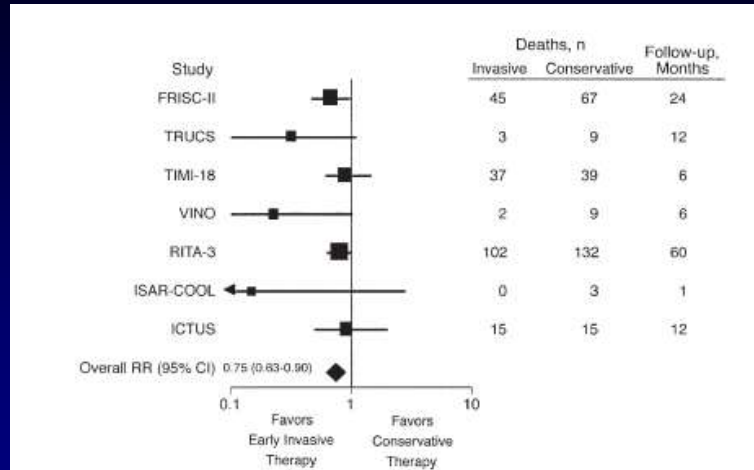
FOCUS ISSUE: CARDIAC INTERVENTION

Intervention in Acute Coronary Syndromes

Benefit of Early Invasive Therapy in Acute Coronary Syndromes

A Meta-Analysis of Contemporary Randomized Clinical Trials

Anthony A. Bavry, MD, MPH,* Dharam J. Kumbhani, MD, SM,† Andrew N. Rassi, MD,‡
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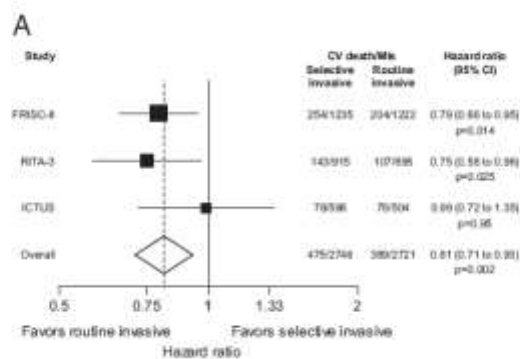


Long-Term Outcome of a Routine Versus Selective Invasive Strategy in Patients With Non-ST-Segment Elevation Acute Coronary Syndrome

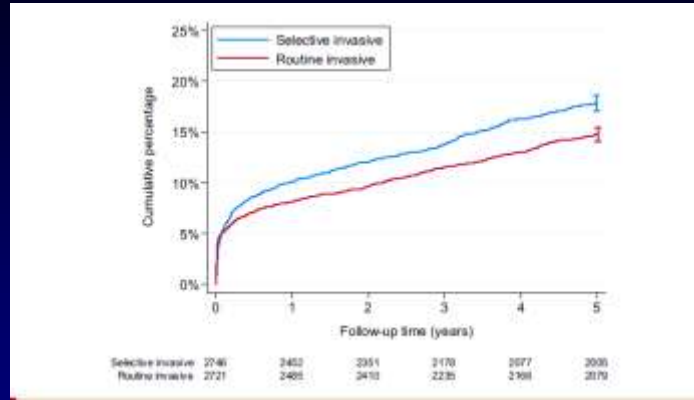
A Meta-Analysis of Individual Patient Data

Keith A. A. Fox, BSc, MB, CtrB,* Tim C. Clayton, BSc, MSc,† Peter Damman, MD,‡
 Stuart J. Pocock, BSc, MSc, PhD,† Robbert J. de Winter, MD, PhD,‡ Jan G. P. Tijssen, PhD,‡
 Bo Lagerqvist, MD, PhD,§ Lars Wallentin, MD, PhD,§ for the FIR Collaboration

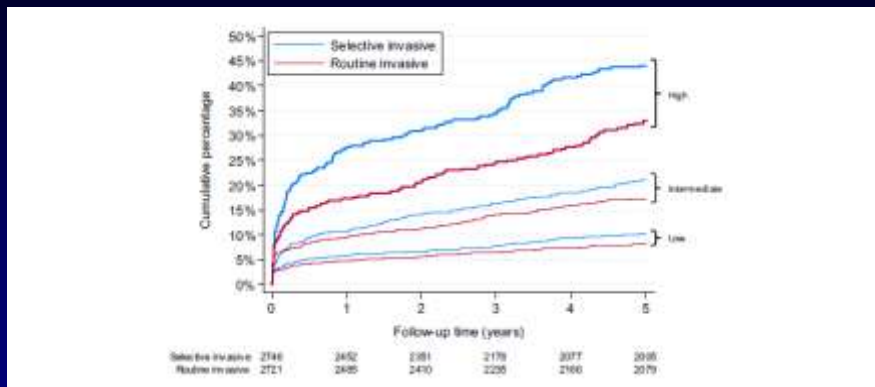
Meta-Analyses for CV Death or MI (FRISC-II, RITA-3, ICTUS Studies)



Cumulative Risk of CV Death or MI



Cumulative risk of death MI by group risk

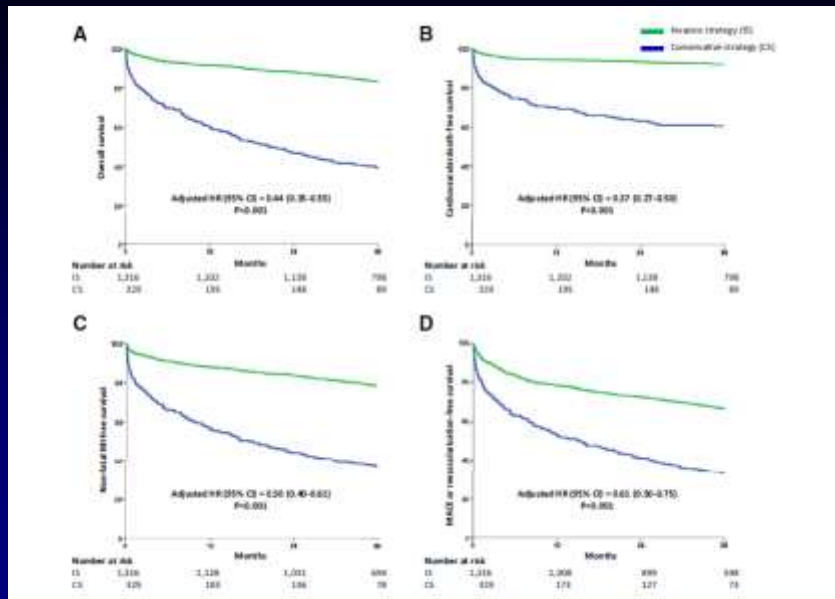


MINI-FOCUS ISSUE: ACUTE CORONARY SYNDROMES
Clinical Research

**Use of Invasive Strategy in Non-ST-Segment
 Elevation Myocardial Infarction Is a Major
 Determinant of Improved Long-Term Survival**

CME

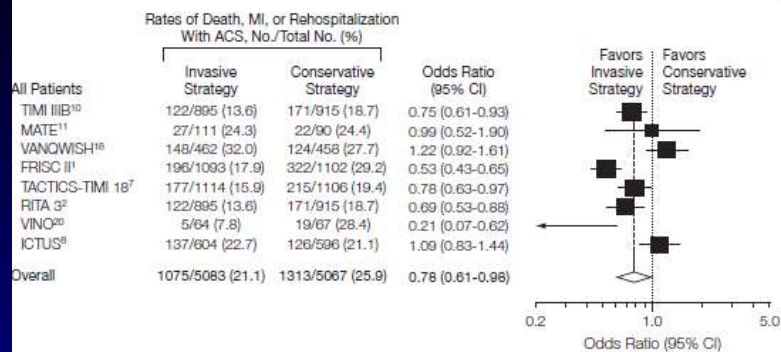
FAST-MI (French Registry of Acute Coronary Syndrome)



Early Invasive vs Conservative Treatment Strategies in Women and Men With Unstable Angina and Non-ST-Segment Elevation Myocardial Infarction

A Meta-analysis

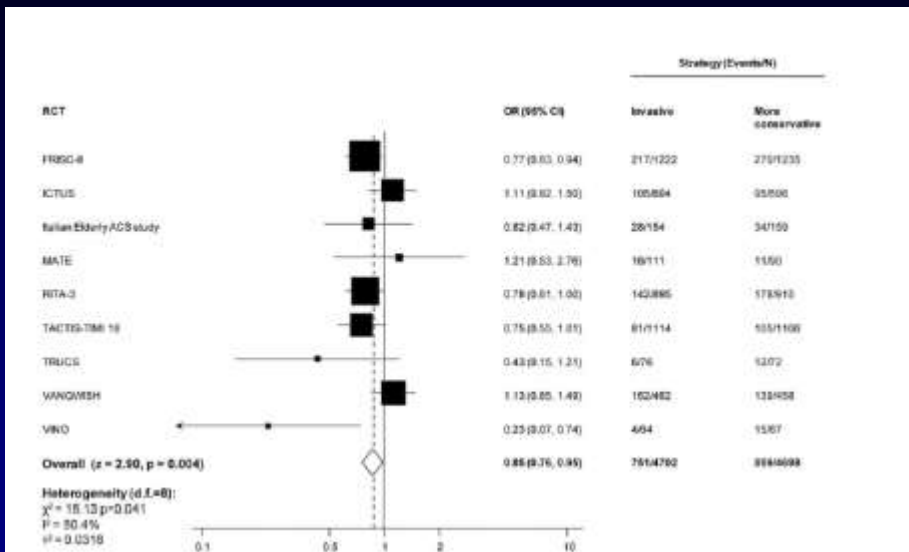
JAMA. 2008;300(1):71-80



Original Studies

Early Invasive Versus Selectively Invasive Strategy in Patients With Non-ST-Segment Elevation Acute Coronary Syndrome: Impact of Age

Fabio Angeli,^{1*} MD, Paolo Verdecchia,² MD, Stefano Savonitto,³ MD, Nuccia Morici,⁴ MD, Stefano De Servi,⁵ MD, and Claudio Cavallini,⁶ MD

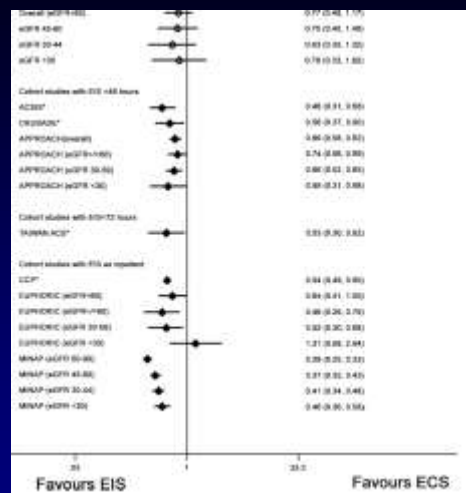


RESEARCH ARTICLE

Impact of an Early Invasive Strategy versus Conservative Strategy for Unstable Angina and Non-ST Elevation Acute Coronary Syndrome in Patients with Chronic Kidney Disease: A Systematic Review

Catriona Shaw^{1,2*}, Dorothea Nitsch³, Jasmine Lee⁴, Damian Fogarty⁵, Claire C. Sharpe²

PLOS ONE | DOI:10.1371/journal.pone.0153478 May 19, 2016



- Small, randomized trials comparing early intervention with delayed intervention have generated conflicting results.
- A key issue in the revascularization strategy selection is the so called “treatment-risk paradox”. This refers to the observation that invasive management is more common in lower risk patients and often denied in high-risk patients in clinical practice

Immediate invasive 2 hs

Recommendations	Class ^a	Level ^b
<p>An immediate invasive strategy (<2 h) is recommended in patients with at least one of the following very-high-risk criteria:</p> <ul style="list-style-type: none"> – haemodynamic instability or cardiogenic shock – recurrent or ongoing chest pain refractory to medical treatment – life-threatening arrhythmias or cardiac arrest – mechanical complications of MI – acute heart failure with refractory angina or ST deviation – recurrent dynamic ST- or T-wave changes, particularly with intermittent ST-elevation. 	I	C

Early invasive < 24 hs

An early invasive strategy (<24 h) is recommended in patients with at least one of the following high-risk criteria:

- rise or fall in cardiac troponin compatible with MI
- dynamic ST- or T-wave changes (symptomatic or silent)
- GRACE score > 140.

I

A

invasive strategy < 72 hs

An invasive strategy (<72 h) is recommended in patients with at least one of the following intermediate-risk criteria:

- diabetes mellitus
- renal insufficiency (eGFR < 60 mL/min/1.73 m²)
- LVEF < 40% or congestive heart failure
- early post-infarction angina
- recent PCI
- prior CABG
- GRACE risk score > 109 and < 140,

or recurrent symptoms or known ischaemia on non-invasive testing.

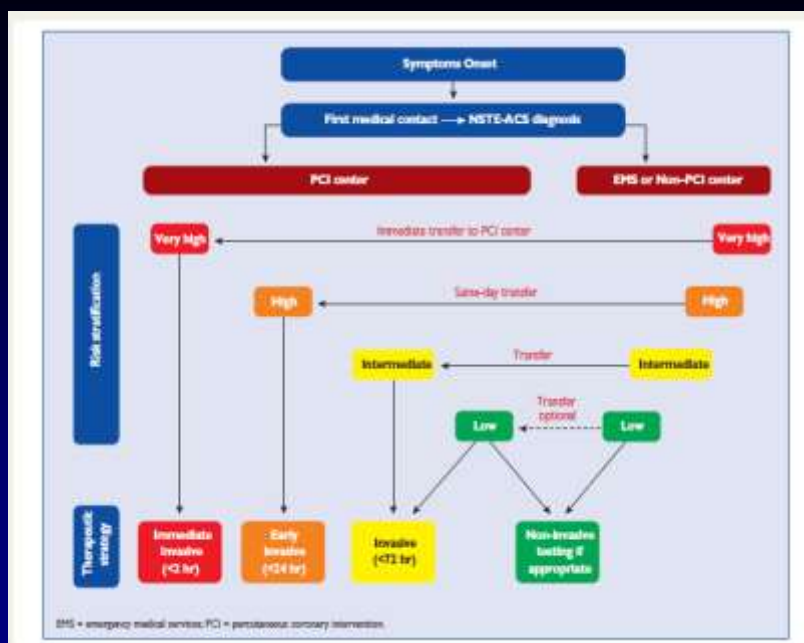
I

A

322,
324

Selective invasive

In patients with none of the above mentioned risk criteria and no recurrent symptoms, non-invasive testing for ischaemia (preferably with imaging) is recommended before deciding on an invasive evaluation.	I	A
In centres experienced with radial access, a radial approach is recommended for coronary angiography and PCI.	I	A
In patients undergoing PCI, new-generation DESs are recommended.	I	A
In patients with multivessel CAD, it is recommended to base the revascularization strategy (e.g. ad hoc culprit-lesion PCI, multivessel PCI, CABG) on the clinical status and comorbidities as well as the disease severity (including distribution, angiographic lesion characteristics, SYNTAX score), according to the local Heart Team protocol.	I	C



Conclusions

- early as opposed to a delayed invasive strategy is safe and associated with a lower risk of refractory ischaemia and a shorter duration of hospital stay.
- The selection of the optimal timing of invasive coronary angiography and revascularization should be guided by individual risk stratification.

Thank you