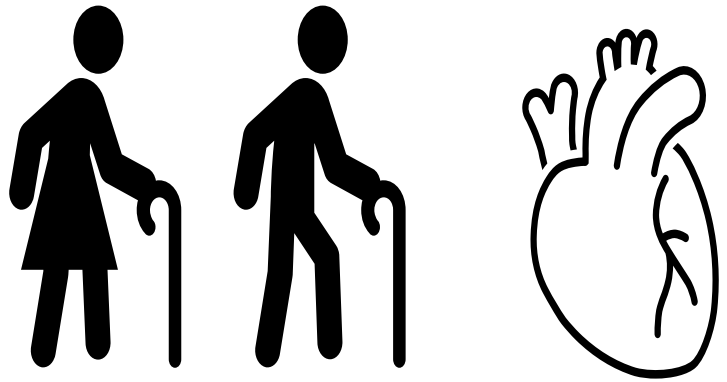
Evidence Accumulated Regarding Therapeutic strategy of older STEMI patients (EARTH-STEMI) collaborative initiative

The EARTH-STEMI meta-analysis

Background

-Several randomized clinical trials (RCTs) investigated the benefit of complete revascularization over culprit-only treatment strategy in patients admitted to hospital for ST-segment elevation myocardial infarction (STEMI).

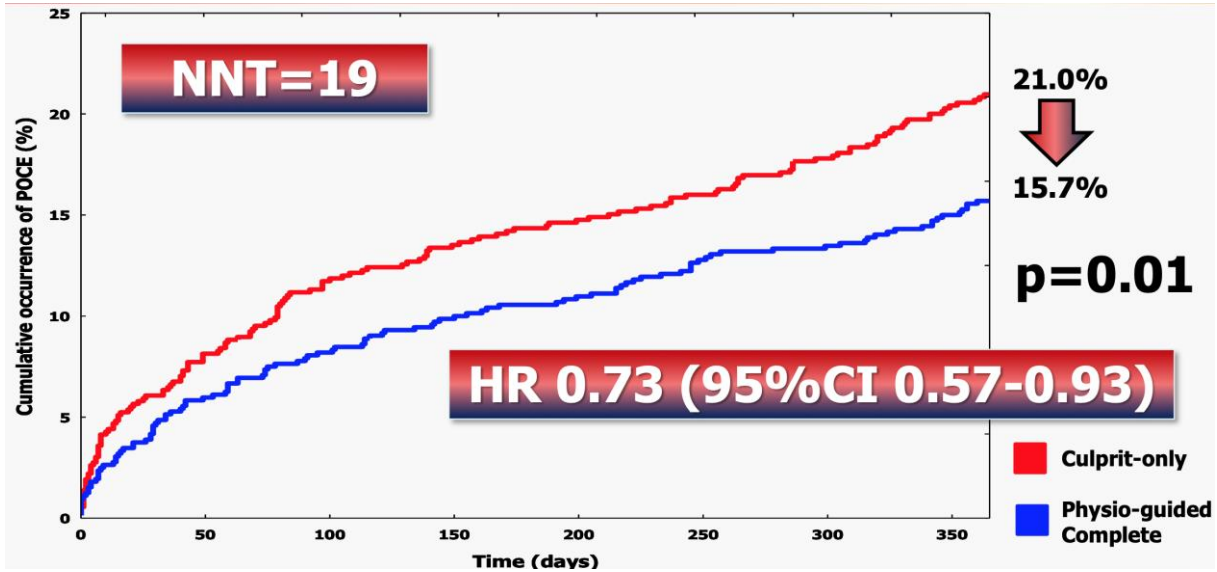
-These RCTs supported the benefit of complete revascularization strategy in the overall population, but some reports suggested that this could be not confirmed in older STEMI patients.



Background

- The FIRE trial has been designed to address this clinical question and confirmed that a physiology-guided complete revascularization reduces hard endpoints in elderly patient (aged 75 years and older) patients with myocardial infarction (MI) (both STEMI and no ST-segment elevation MI) and multivessel coronary artery disease.

- The integration of the FIRE findings with that from older STEMI patients from previous RCTs may further contribute to definitively clarify the best revascularization strategy for older STEMI patients.



Why EARTH-STEMI ?!?

- Mean age of previous RCT is around 62 years old
- A subanalysis from the DANAMI 3 questioned the benefit of complete revasc in older STEMI
- FIRE trial enrolled STEMI and NSTEMI patients
- STEMI subgroup of the FIRE trial is not powered for hard endpoints
- To merge our database will give the definitive answer for older STEMI patients with multivessel disease

AIM of the meta-analysis

The EARTH-STEMI is a patient-level meta-analysis about patient enrolled in all available RCTs regarding revascularization strategy in **older** patients **with STEMI and multivessel disease**.

The review questions is to assess the superiority of complete versus culprit only revascularization in older patients (aged >=75 years) with STEMI and multivessel disease:

1) in the composite of all-cause mortality, reinfarction and ischemia-driven revascularization;

2) in the composite of cardiovascular death and reinfarction;

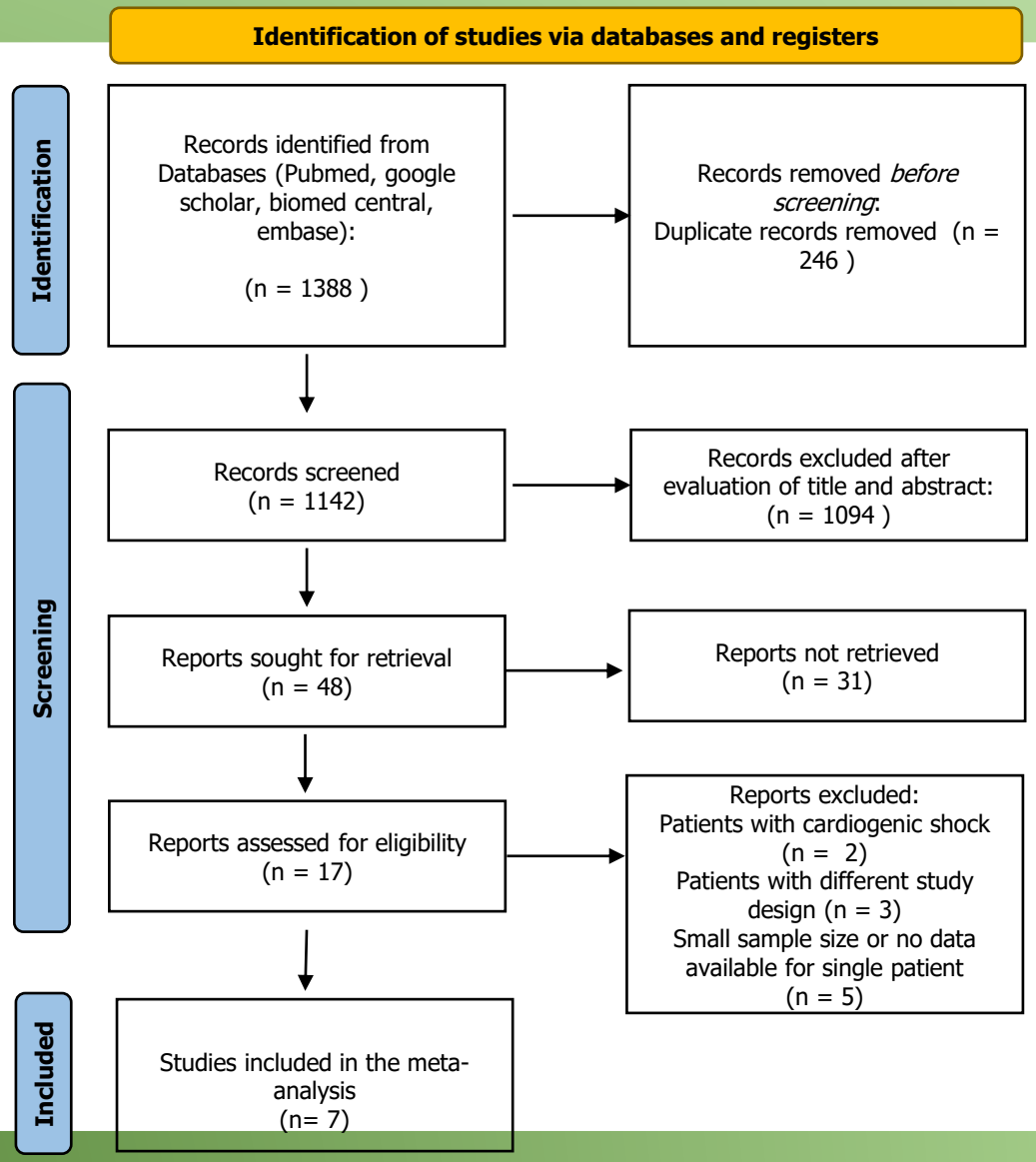
3) in the occurrence of the singular endpoints (cardiovascular death, all-cause death, myocardial infarction, stroke, major bleedings, contrast-induced acute kidney injury, ischemia-driven revascularization).

Analysis of subgroups

The following **subgroups** will be analysed:

- Impact of **sex** in complete vs culprit only revascularization in older adults
- Impact of **diabetes** in complete vs culprit only revascularization in older adults
- **Age** (<85 vs >85 years old)
- **Comorbidities** (peripheral artery disease, chronic obstructive pulmonary disease, chronic kidney disease, cancer, stroke, bleeding, BMI, frailty assessment)
- **Non culprit** lesion located on left anterior descending artery vs. different coronary vessel location
- Impact of **time delay to primary PCI**
- **Angiographic** vs. **physiology assessment** of non-culprit coronary lesion

PRISMA FLOW DIAGRAM



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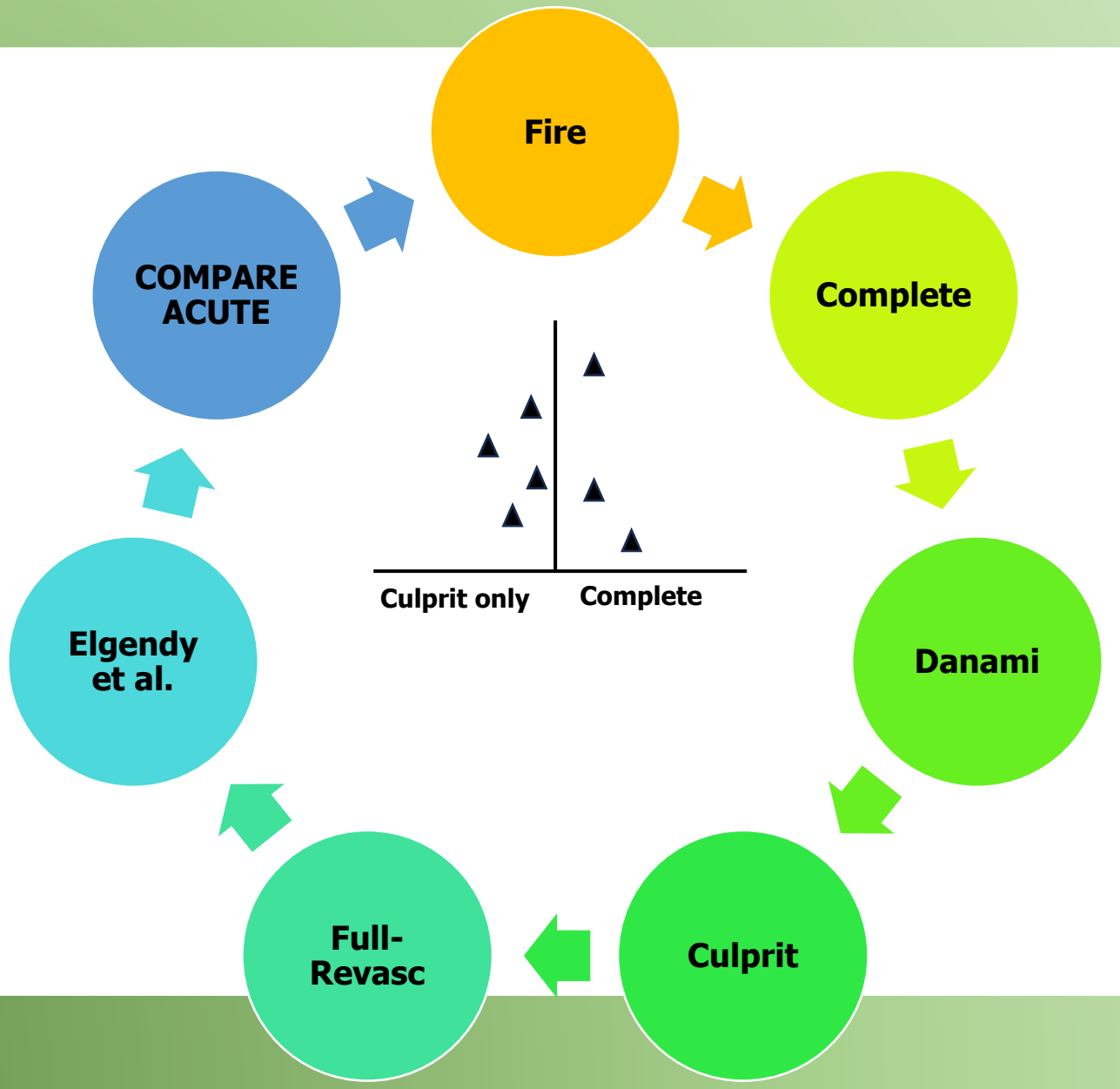
The meshed studies



RESULTS

- results will be published in the next months…

- STAY TUNED!!