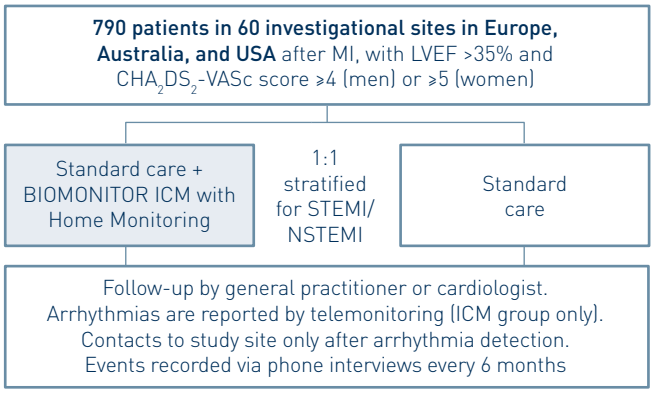
Biomonitoring in Patients with Preserved Left Ventricular Function after Diagnosed Myocardial Infarction

BIO|GUARD-MI

ACC 2022 LATE-BREAKING CLINICAL TRIAL, WASHINGTON DC

Study Design

- Randomized, controlled, prospective study
- To investigate whether early treatment after implantable cardiac monitor (ICM)-documented arrhythmias in high-risk post-myocardial infarction (MI) patients improves outcome
- Primary endpoint: Time to first major adverse cardiac event (MACE)

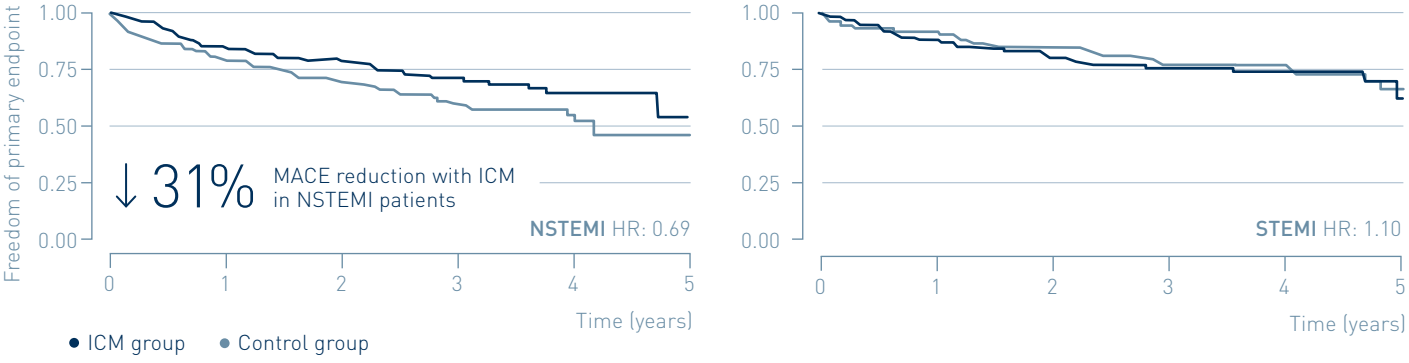


Main Results

In the primary endpoint analysis of the total patient population, a trend towards MACE reduction in the ICM group was observed but did not reach statistical significance (HR = 0.84, p = 0.21).

A sub-group analysis shows a 31% reduction of MACE in patients with non-ST segment elevation myocardial infarction (NSTEMI).

Primary endpoint: Time to first major adverse cardiac event (MACE) in NSTEMI and STEMI



Clinical Relevance

- Arrhythmias are connected to poor outcomes after myocardial infarction.
- BIO|GUARD-MI is the first trial to investigate the impact of continuous arrhythmia monitoring with ICMs on clinical outcomes in post-MI patients.
- Early treatment of high-risk NSTEMI patients guided by continuous arrhythmia monitoring with BIOMONITOR and Home Monitoring may reduce major adverse cardiac events (MACE).

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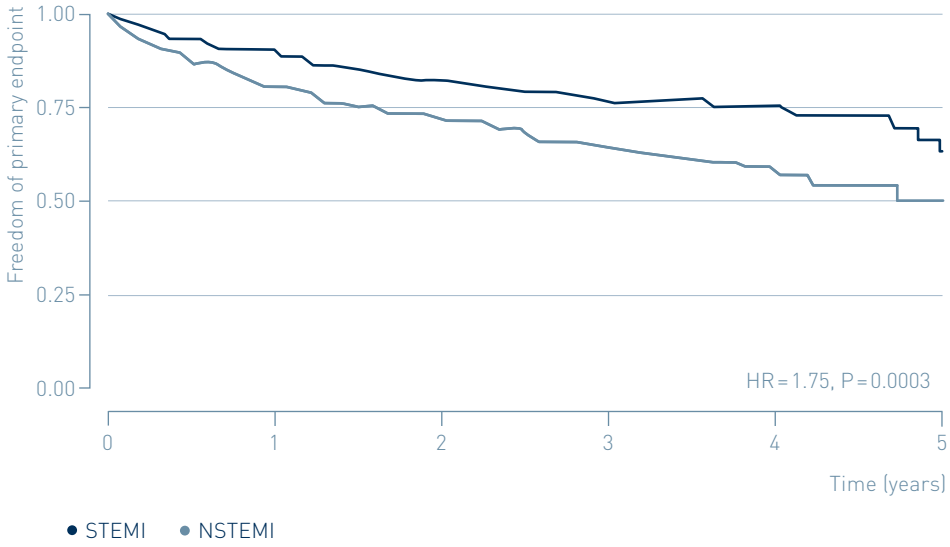
The benefit of ICM-guided treatment in NSTEMI patients appears to be connected to their higher risk for primary endpoint events.

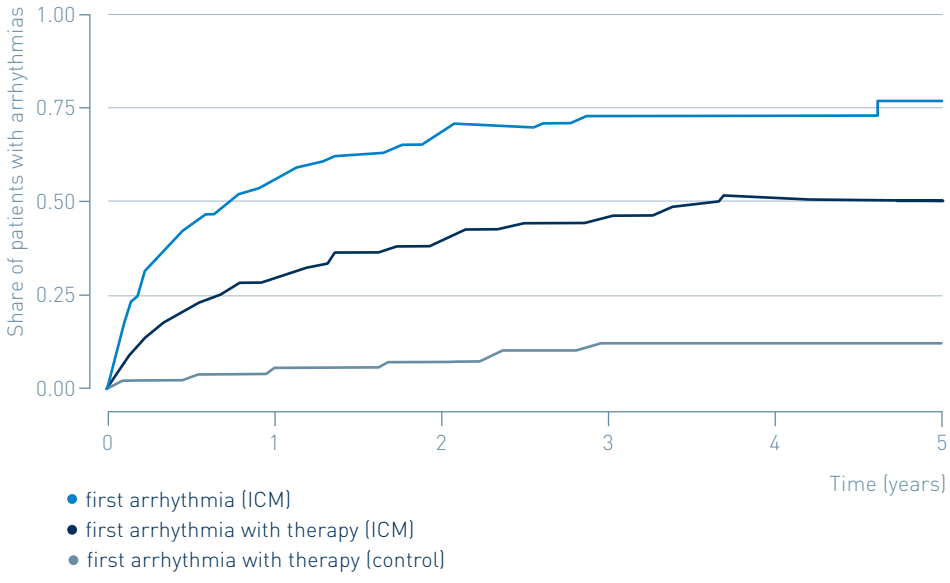
Risk for primary endpoint in NSTEMI and STEMI



↑75% increased risk of MACE in NSTEMI patients

Continuous arrhythmia monitoring in post-MI patients identifies a large arrhythmia burden, and many of the arrhythmias require guideline recommended therapies.

Detection of arrhythmias and treatment



At 2 years

of patients in the **ICM group** had a first arrhythmia detected

of patients in the **ICM group** received a change in therapy

of patients in the **control group** received a change in therapy

Abbreviations: HR=hazard ratio. ICM=implantable cardiac monitor. LVEF=left ventricular ejection fraction. MACE=major adverse cardiac events. MI=myocardial infarction. NSTEMI=non-ST-segment elevation myocardial infarction. STEMI=ST-segment elevation myocardial infarction.

Source: Jons C. (Rigshospitalet, Copenhagen, Denmark). American College of Cardiology 71st Annual Scientific Session, 2022, Washington DC, USA.

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