FFR-guided PCI optimization directed by HD-IVUS versus standard of care: 2-year results from the FFR REACT trial

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Background

- In the FFR REACT trial, IVUS-guided PCI optimization in patients with post-PCI FFR <0.90 significantly improved post-PCI FFR and post-PCI IVUS parameters.
- IVUS-guided PCI optimization in patients with post-PCI FFR <0.90 did not reduce target vessel failure (TVF) as compared to standard of care.

Aims

- To investigate whether IVUS-guided post-PCI optimization in patients with post-PCI FFR <0.90 as compared to standard of care reduces TVF at 2-year follow-up.

Methods

- Single-center RCT enrolling patients with (un)stable angina or NSTEMI and angiographically successful PCI.
- Patients with post-PCI FFR <0.90 were randomized to IVUS-guided PCI optimization or standard of care
- Patients with post-PCI FFR ≥0.90 were followed in a dedicated registry.

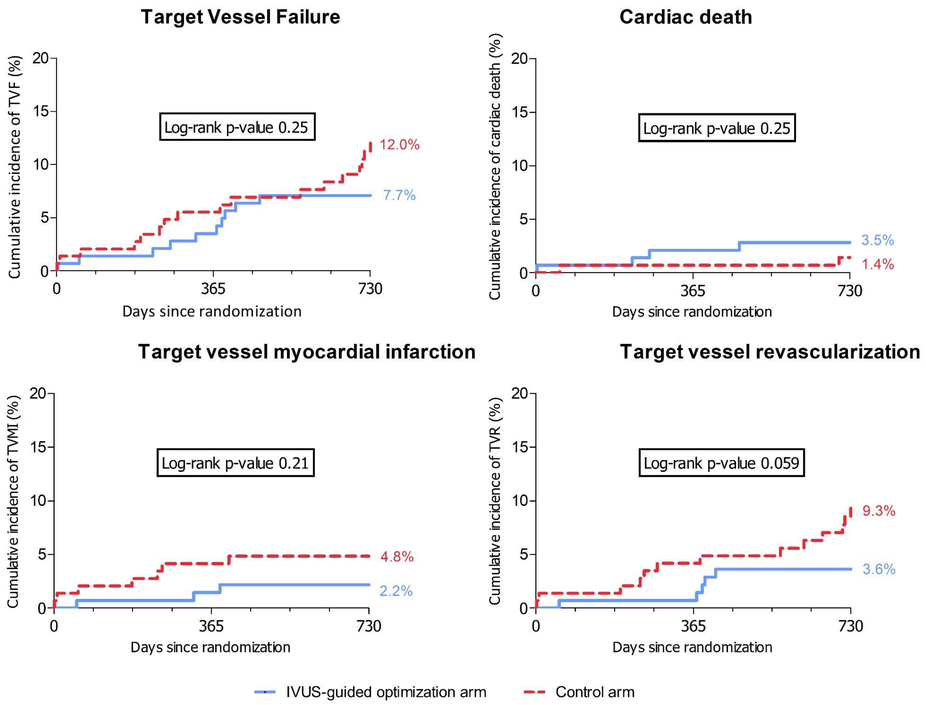
Results

- Mean post-PCI FFR was 0.90±0.07 (720 vessels).
- A total of 291 patients (309 vessels) had a post-PCI FFR <0.90 and were randomized (mean FFR 0.84±0.05).
- In the IVUS-guided optimization arm, additional optimization was performed in 104/152 (68.4%) vessels.
- PCI optimization resulted in a signficant increase in post PCI FFR and MLA (Figure 3).
- Clinical endpoints are depicted in the Central illustration

Conclusions

- A trend towards lower rates of TVF, TVMI, and TVR was observed favoring the IVUS-guided optimization arm. However, these findings were not statistically significant.

2-year clinical outcome



IVUS-guided PCI optimization in patients with post-PCI FFR <0.90 did not significantly reduce TVF at 2-year follow-up as compared to standard of care

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Figure 1: study design

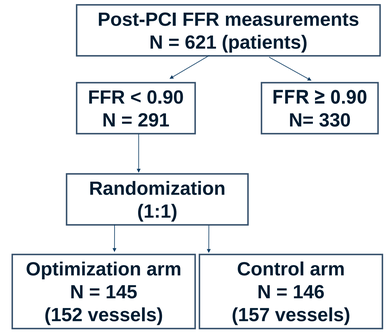


Figure 2: additional treatment

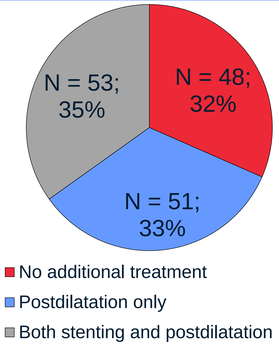


Figure 3: effect of optimization on FFR and MLA

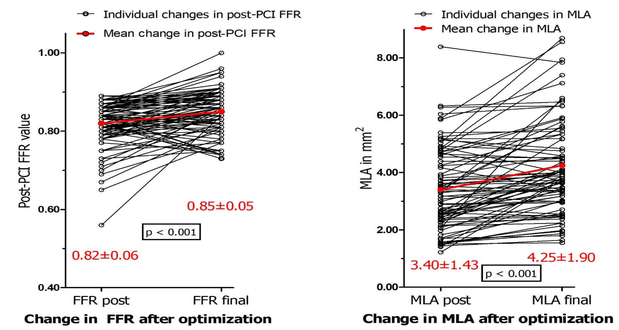
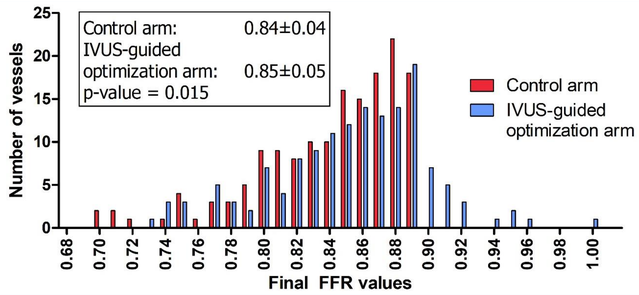


Figure 4: final FFR values (n=309)



Disclosures

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