



# Functional Coronary Angiography to Indicate and Guide Revascularization in STEMI Patients with Multivessel Disease:

The STEMI trial





# BACKGROUND



# ANGIO-DERIVED FFR



## **Perfect application:**

- 1. STEMI: projections during primary PCI
- 2. Virtual PCI: based on the same projections



## ANGIO-DERIVED FFR



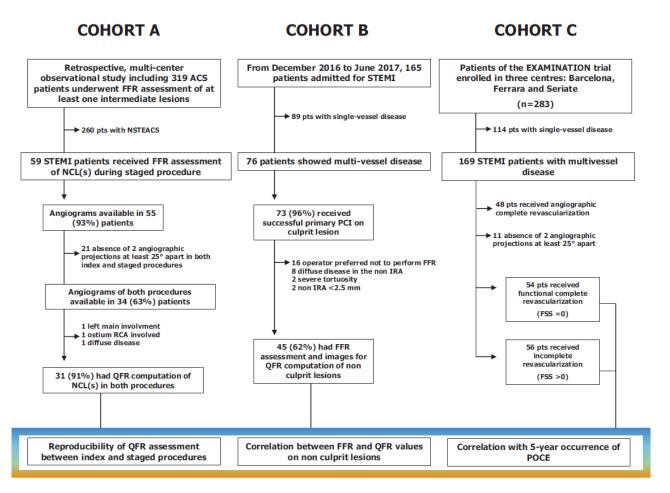
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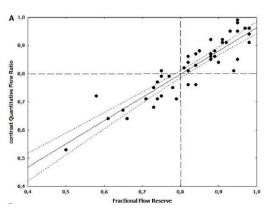


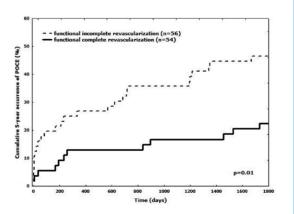
# QFR in STEMI setting





- QFR reproducible in index vs
   staged procedure
- QFR correlates with FFR
- QFR correlates with 5-year POCE











INCLUSION CRITERIA	EXCLUSION CRITERIA
AGE ≥ 75 YEARS  MI (STE OR NSTE)  MVD  SUCCESSFUL TREATMENT OF CULPRIT LESION	PLANNED SURGICAL REVASCULARIZATION     LIFE EXPECTANCY < 1 YEAR     PRIOR CABG     LEFT MAIN AS NON-CULPRIT LESION     INABILITY TO IDENTIFY THE CULPRIT LESION
ENR	OLLMENT
	DOMIZATION PATIENTS
CULPRIT-ONLY	FUNCTIONAL-COMPLETE
PRIMARY ENDPOINT: RATE OF PA	IICAL FOLLOW-UP TIENT ORIENTED COMPOSITE ENDPOINT INFARCTION, STROKE, REVASCULARIZATION)
I	ı
0 AND EVEL DO	CLINICAL FOLLOW-UP

In >300 patients in the PHYSIOLOGY-GUIDED COMPLETE arm the decision regarding non-culprit lesions was based on QFR



## FLOWER-MI



## No difference between FFR & angiocomplete, but...

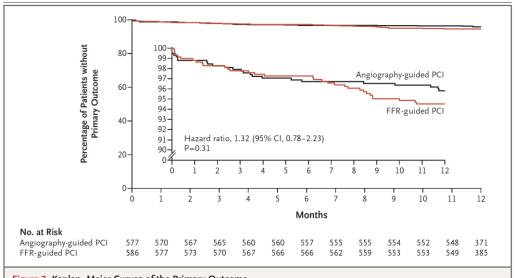


Figure 2. Kaplan-Meier Curves of the Primary Outcome.

The primary outcome was a composite of death from any cause, nonfatal myocardial infarction, or unplanned hospitalization leading to urgent revascularization. The inset shows the same data on an expanded y axis.

- 16% no FFR pre
- 82% no FFR post
- FFR patients received

2 procedures



# CAN ANGIO-DERIVED FFR OVERCOME FLOWER-MI LIMITATIONS?



#### **ISSUES:**

- Low rate of events
- FFR staged

No post-PCI FFR

#### **SOLUTIONS:**

- Consecutive enrollment
- Angio-FFR at index procedure
- Angio-FFR Virtual-PCI plan



# ANGIO-DERIVED FFR



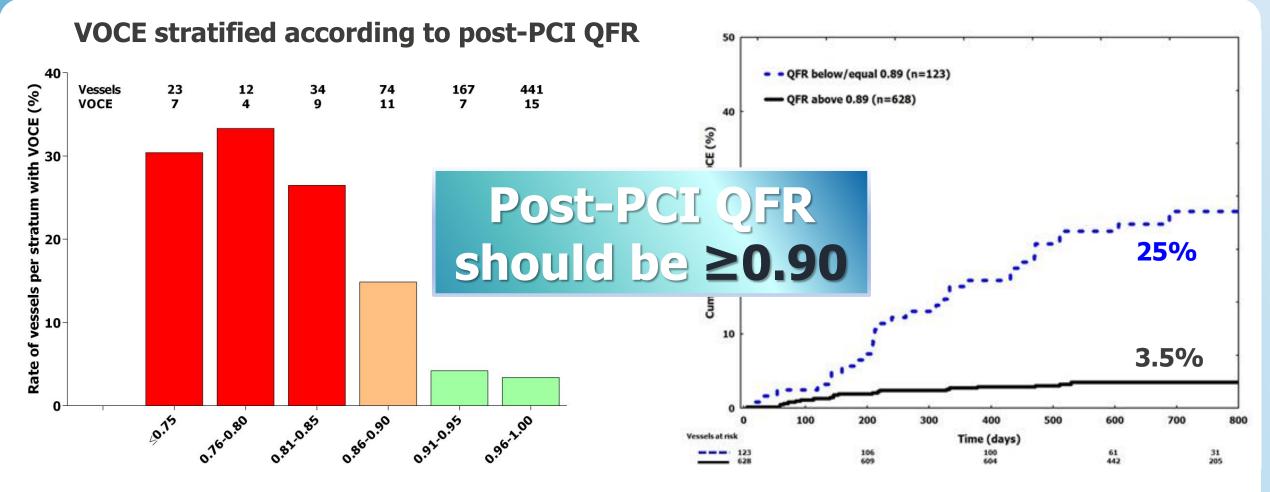
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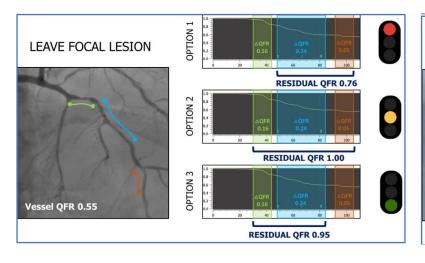
# Post-PCI QFR

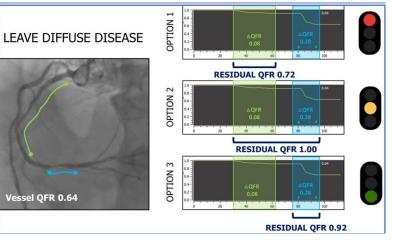


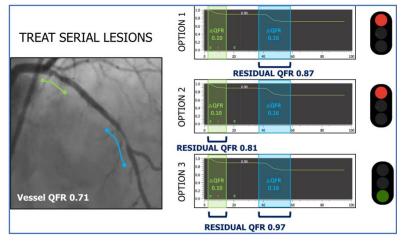




# VIRTUAL PCI PLAN CAN SUGGEST TOP



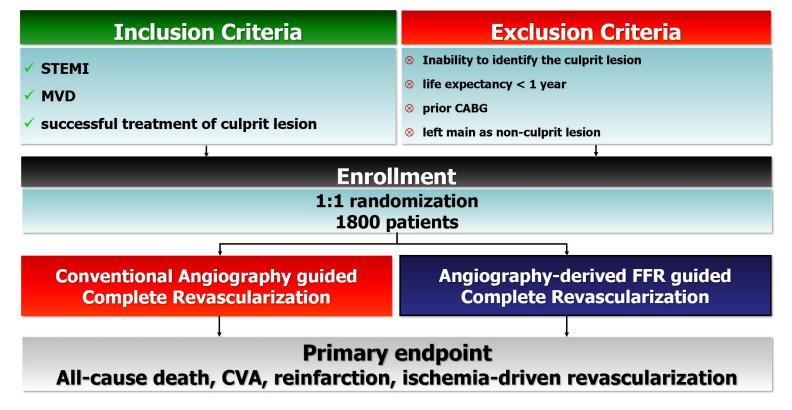






## Study Flow





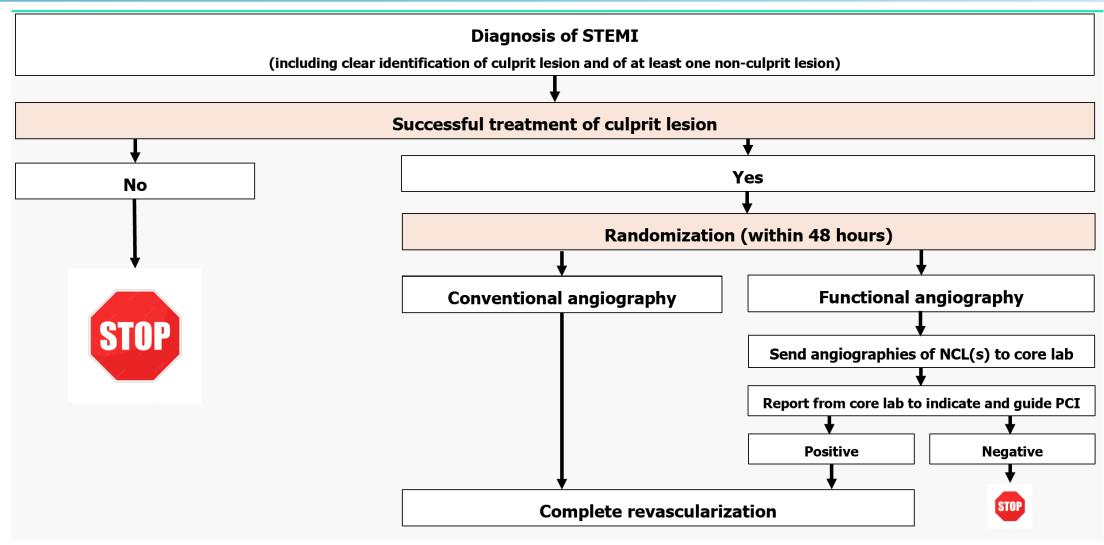
**Sample size: 1800 patients** 

Safety EP: BARC 3-5, CI-AKI, periprocedural MI



## trial — Study Procedures







## ENDPOINTS



#### PRIMARY EFFICACY ENDPOINT

Death, cerebrovascular accident, reinfarction, or ischemia driven revascularization

#### MAIN SECONDARY EFFICACY ENDPOINT

CV death and reinfarction

#### **SAFETY ENDPOINT**

Composite of contrast-associated acute kidney injury and bleeding BARC 3-5







#### **Study Principal Investigator**

#### **Simone Biscaglia**

Cardiology Unit

Ferrara University Hospital

+39 328 2682118

e-mail: bscsmn@unife.it

#### **Clinical Project Coordinator**

#### **Martina Viola**

Academic Research Organization

Ferrara University Hospital

+39 0532 236874

e-mail: vlimtn@unife.it