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SCIENTIFIC SESSIONS

Functional Testing Underlying coronary REvascularization
The FUTURE Is Now

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#AHA16

FFR - **What We Know & What We Don't**

- Revolutionized management of patients with CAD
- Acceptable safety profile
- Superior to angiography alone at determining functional significance of coronary stenoses
- Can identify lesions in which OMT rather than PCI appropriate (DEFER, DEFER DES)
- FFR-guided PCI results in fewer MACE than angio-guided PCI (FAME)
- After coronary angiography, can alter treatment decisions re OMT alone, PCI and CABG (FAMOUS-NSTEMI, RIPCORD)
- Whether FFR can reduce MACE by altering treatment decisions around OMT, PCI or CABG is unknown => FUTURE

The Right & The Wrong: FUTURE

- Right trial
  - Right question
  - Right patient cohort
  - Right design (all-cause mortality, MI, stroke, repeat revasc)
- What went wrong?
  - Interim DSMB analysis identified a statistically significant mortality excess at 1 year in FFR-allocated patients
  - No longer apparent when remainder of enrolled cohort accrued additional time in follow up

An End to the FUTURE
Were Sponsor/Steering Committee Correct in Halting the Trial?

- Should FUTURE have been continued to potentially demonstrate <u>harm?</u>
  - Unethical
  - Unlikely
    - Due to FFR procedure?
      - Few FFR-associated complications in FUTURE
      - No mortality signal with FFR in FAME
    - Due to the differential treatment decisions which occurred following FFR?
      - Identical rate of CABG
      - Less PCI (PCI doesn't reduce mortality in study cohort; 13/17 deaths underwent PCI)
- Should FUTURE have been continued to potentially demonstrate <u>superiority</u> of one strategy?
  - Would have been futile

Back to the FUTURE
Where Do We Go From Here?

- Assume FFR is safe
- Until proven otherwise, assume no difference in MACE between FFR-guided and angio-guided strategies in this broad CAD cohort
- Acknowledge FFR-guided approach associated with less resource use (7% ARR in initial PCI)
- <u>Employ an FFR-guided strategy when formulating treatment decisions in patients with CAD undergoing coronary angiography</u>