#FullPhysiology

In Daily Practice

The additional value of invasive diagnosis over non-invasive diagnostic workflow

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Remember … we are talking about ANOCA !!!

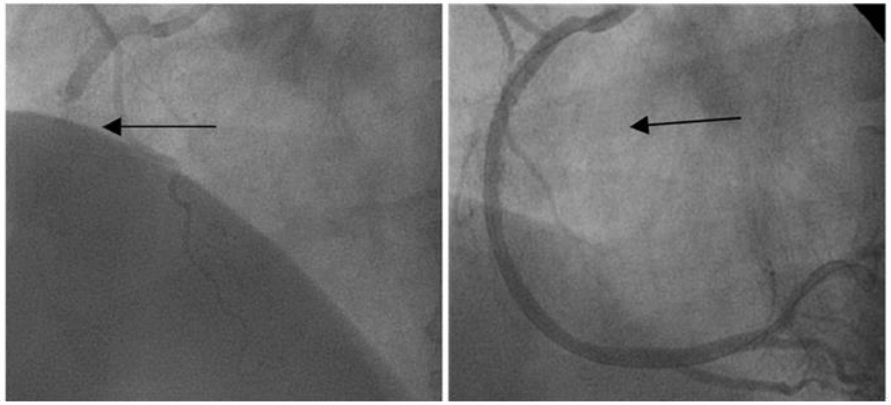
- Our journey makes sense if the patient has symptoms
- We are talking about ANOCA (no INOCA)
- Patient must have ANGINA or equivalent symptoms
- Our goal is to control symptoms and improve the quality of life

Skeletons in the closet

Patient with Angina

No obstructive CAD

"Don't worry, you has nothing!!!"



Patient with Angina after successful PCI

No obstructive CAD

"Don't worry, the stent works well!!!"

Patient with MI

Non culprit lesions

"This lesion yes, this lesion not…"

Skeletons in the closet

I can perform the right diagnosis and treatment without invasive test (without #FullPhysio)

Why this strange title …

1

Invasive Endotyping in Patients With Angina and No Obstructive Coronary Artery Disease: A Randomized Controlled Trial

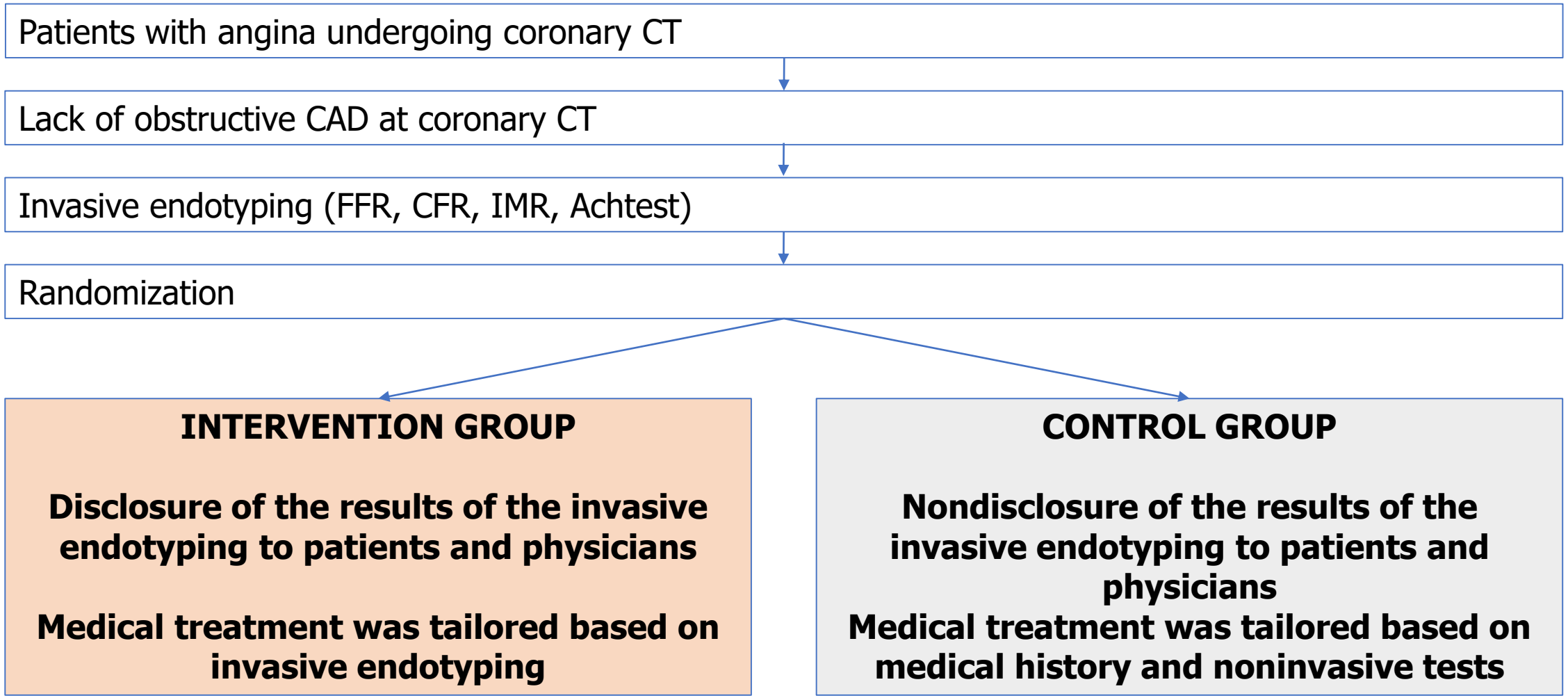
Novalia P. Sidik, Bethany Stanley, Robert Sykes, Andrew J. Morrow, Conor P. Bradley, Michael McDermott, Thomas J. Ford, Giles Roditi, Allister Hargreaves, David Stobo, Jacqueline Adams, John Byrne, Ahmed Mahrous, Robin Young, David Carrick, Ross McGeoch, David Corcoran, Ninian N. Lang, Robert Heggie, Olivia Wu, Margaret B. McEntegart, Alex McConnachie and Colin Berry

2

Rethinking False Positive Exercise Electrocardiographic Stress Tests by Assessing Coronary Microvascular Function

Aish Sinha, MBBS, BSc, Utkarsh Dutta, MSc, Ozan M. Demir, PhD, MBBS, MSc, Kalpa De Silva, PhD, MBBS, Howard Ellis, BSc, Samuel Belford, BSc, Mark Ogden, BSc, Matthew Li Kam Wa, MBBS, BSc, Holly P. Morgan, MBBS, BSc, Ajay M. Shah, MD, MBBS, Amedeo Chiribiri, PhD, MBBS, Andrew J. Webb, PhD, MBBS, Michael Marber, PhD, MBBS, Haseeb Rahman, PhD, BMBCh, Divaka Perera, MD, MBBChir

Invasive endotyping on top of coronary CT

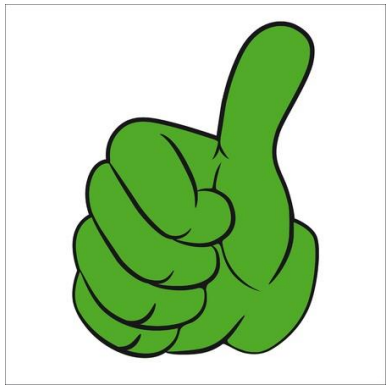


Invasive endotyping on top of coronary CT

Changes in diagnosis

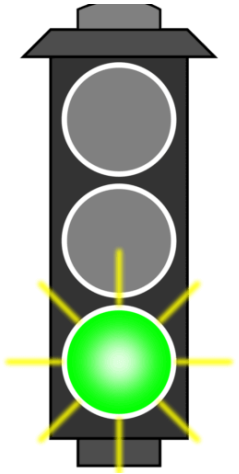
Vasomotor disorder
OR 4.05 (95%CI 2.32-7.24)

Normal coronary function
From 51% to 23%

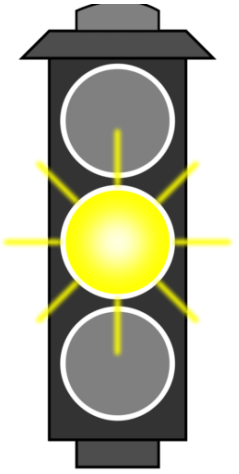


Changes in outcomes

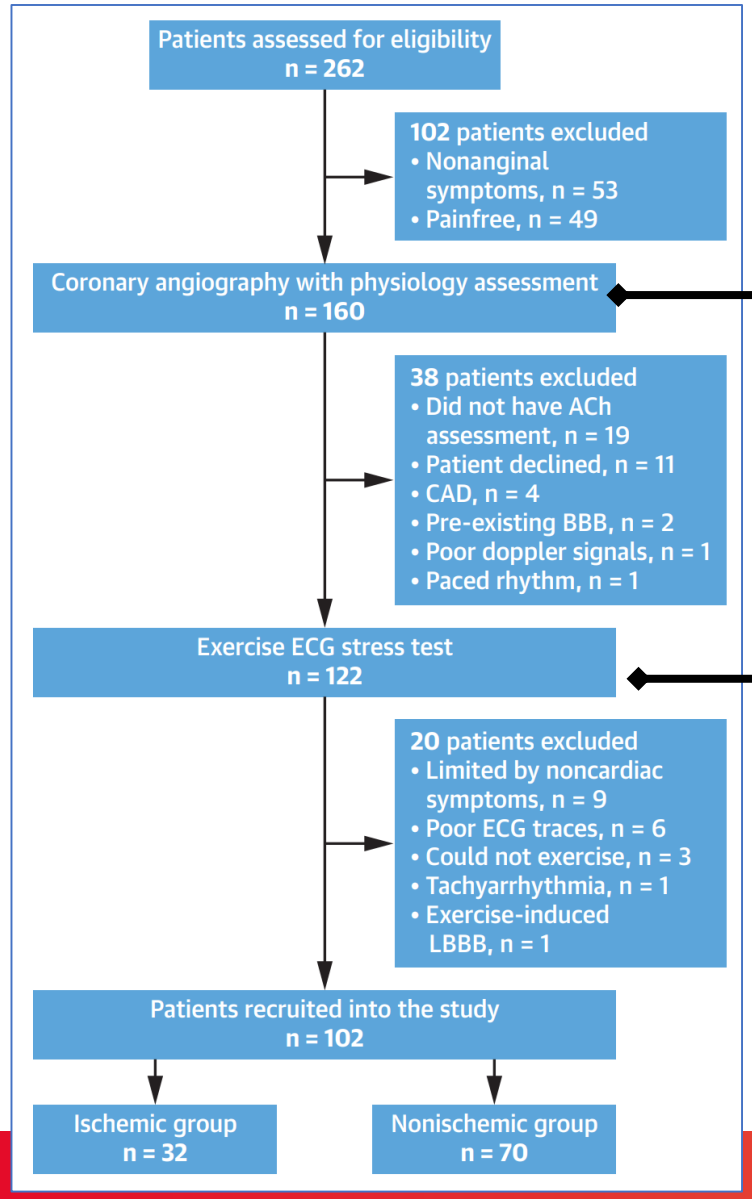
Treatment satisfaction
61% vs 70%

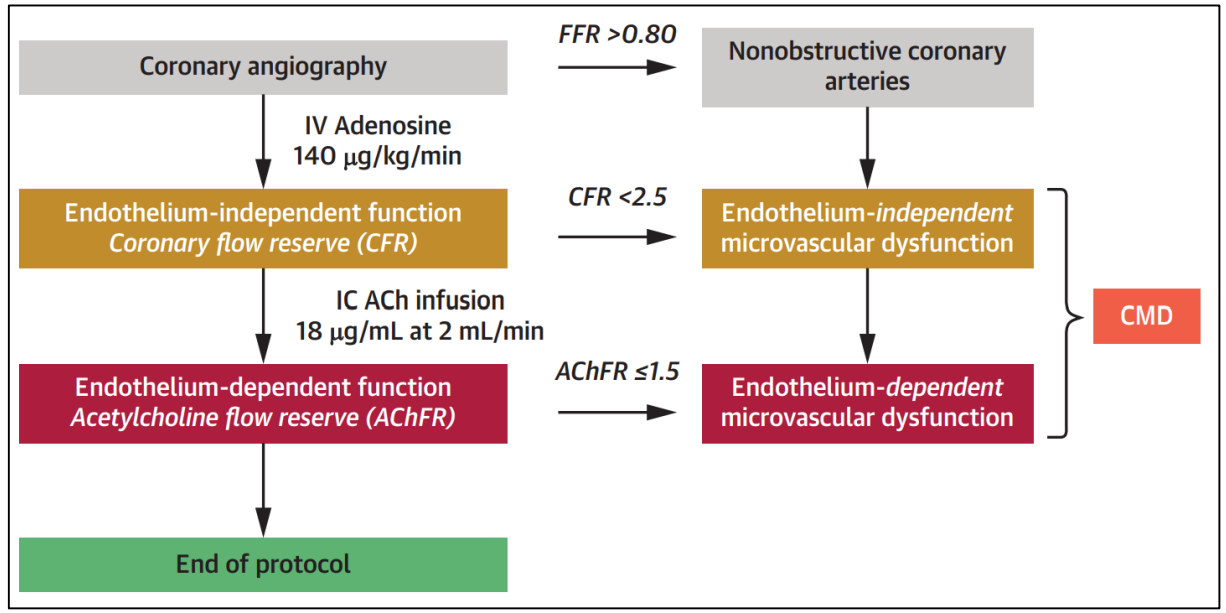


No difference in the SAQ summary score



Exercise stress test and CMD





Ischemic group if during the EST the patient complains angina and ECG shows significant ischemic changes

Exercise stress test and CMD

TABLE 4 Diagnostic Accuracy of Ischemia During Exercise Electrocardiographic Stress Testing to Detect Coronary Microvascular Dysfunction

	Endothelium-Independent Microvascular Dysfunction (CFR <2.5)	Endothelium-Dependent Microvascular Dysfunction (AChFR ≤1.5)	CMD (CFR <2.5 and/or AChFR ≤1.5)
Sensitivity	40	44	41
Specificity	77	97	100
PPV	63	97	100
NPV	57	44	34

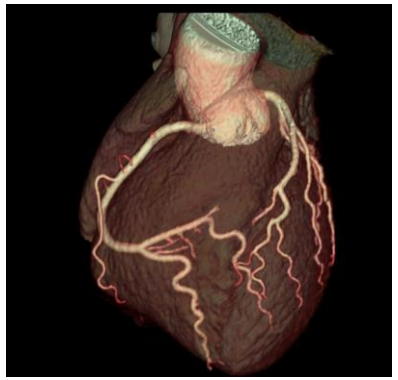
Values are %.

NPV = negative predictive value; PPV = positive predictive value; other abbreviations as in Table 2.

Positive (symptoms + ECG)
EST is suggestive of CMD

Why we need invasive #FullPhysiology

Patient with ANGINA (symptoms)



Non-obstructive disease

1

The patient has no disease
No further test
No medications
… The patient continues to complain symptoms and will search for a different opinion

Why we need invasive #FullPhysiology

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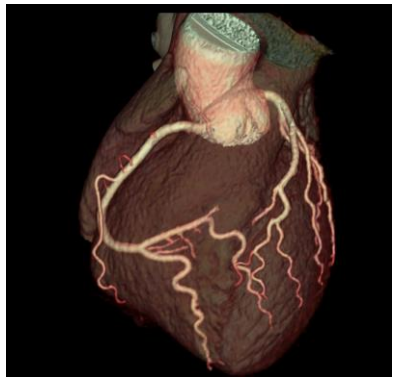

Non-obstructive disease

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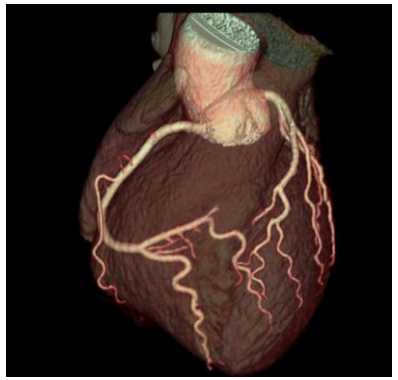
2

Suspected ANOCA
No further tests
Tailored therapy based on personal feeling
… 45% probability to be wrong
… 20% probability to overtreat a patient with normal coronary function

Why we need invasive #FullPhysiology

Patient with ANGINA (symptoms)



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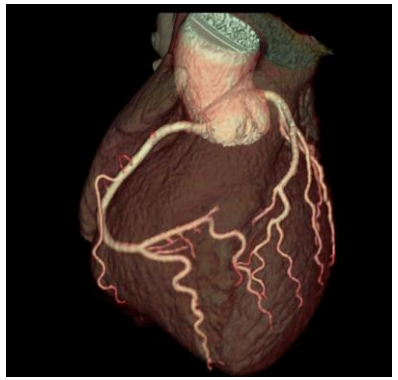
Noninvasive function test
If positive … you cannot distinguish between structural/functional CMD or abnormal vasoreactivity
If negative … you can miss the diagnosis

Why we need invasive #FullPhysiology

Patient with ANGINA (symptoms)



Non-obstructive disease

1. ***The patient has no disease***
   No further test
   No medications
   … The patient continues to complain symptoms and will search for a different opinion

2. ***Suspected ANOCA***
   No further tests
   Tailored therapy based on personal feeling
   … 45% probability to be wrong
   … 20% probability to overtreat a patient with normal coronary function

3. ***Noninvasive function test***
   If positive … you cannot distinguish between structural/functional CMD or abnormal vasoreactivity
   If negative … you can miss the diagnosis

4. ***#FullPhysiology is the only way to achieve right diagnosis and treatment***

Why we need invasive #FullPhysiology

- The pathway coronary CT + EST is reliable in 35% of the cases
- #FullPhysiology changes clinical judgment in around 40% of the cases
- Without #FullPhysiology, are you able to motivate patients to be compliant with tailored medical theraphies?
- Without #FullPhysiology, are you able to not prescribe medical therapy in patient with normal coronary function?

#Grazi

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