



ACC.16™

65<sup>th</sup> Annual Scientific Session & Expo

# Involving Patients with Low Risk Chest Pain in Discharge Decisions: A Multicenter Trial

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AT THE  
INTERSECTION  
OF SCIENCE  
& CHANGE

#ACC16

# Background

- Chest Pain 2<sup>nd</sup> most common reason patients visit US EDs
- 1.5% ACS missed
- Stress testing frequently obtained in low risk patients
- False positive test results, unnecessary procedures, ↑ cost



# What's Next?

Prepared for: \_\_\_\_\_

## 1 Your Chest Pain Diagnosis

Your initial test results are **NEGATIVE for a heart attack**. These included:

- **Blood tests** to look for an enzyme called troponin that is released when the heart muscle is damaged. Additional troponin tests may be done to monitor you for heart attack during your emergency visit.
- **An electrocardiogram** to check whether your heart is getting enough oxygen and blood.

The chest pain you are experiencing today may be a warning sign of a **FUTURE** heart attack.

## 2 What You Can Do

Examining your risk will help you and your clinician decide together whether or not you should have additional heart testing.

Additional tests<sup>1</sup> may include:

- **A stress test** which views blood flow to your heart at rest and under stress.
- **A coronary CT angiogram** which takes pictures of the arteries in your heart to check for a blockage in the flow of blood.

<sup>1</sup>Stress test options include nuclear stress testing, ultrasound stress testing, or exercise ECG (electrocardiogram) stress testing. Nuclear stress testing and coronary CT angiography include exposure to radiation which has been shown to be related to increased cancer risk over a lifetime. Your doctor can help you explore which option may be best for you.

## 3 Your Personal Risk Evaluation

Your risk of having a heart or pre-heart attack within the next 45 days can be determined by comparing you to people with similar factors<sup>2</sup> who also came to the Emergency Department with chest pain.

## 4 Would you prefer to have additional heart testing during this emergency visit or decide later during an outpatient appointment?

- I would like to have a stress test or coronary CT angiogram during my emergency visit.** I realize that this may increase the cost of my care and/or lengthen my stay.
- I would like to be seen by a heart doctor within 24-72 hours** and would like assistance in scheduling this appointment.
- I would like to schedule an appointment on my own** to consult with my primary care physician.
- I would like my Emergency Department doctor to make this decision for me.**

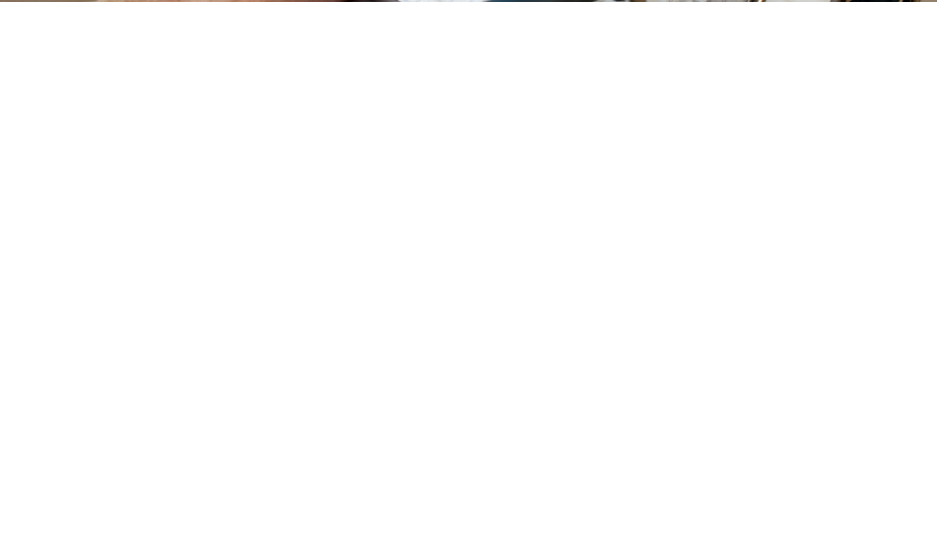
<sup>2</sup>• Age  
• Gender  
• Race  
• If chest pain is made worse when manual pressure is applied to the chest area  
• If there is a history of coronary artery disease  
• If the chest pain causes perspiration  
• Findings on electrocardiograms (electronic tracings of the heart)  
• Initial cardiac troponin result

Of every **100** people like you who came to the Emergency Department with chest pain...



**1** had a heart or a pre-heart attack within 45 days of their Emergency Department visit, **99** did not.





# Design

Multicenter patient level RCT

Patients randomized to usual care or Chest Pain Choice

Included: Patients with chest pain considered for observation unit admission

Excluded: High risk features



# Knowledge and Engagement

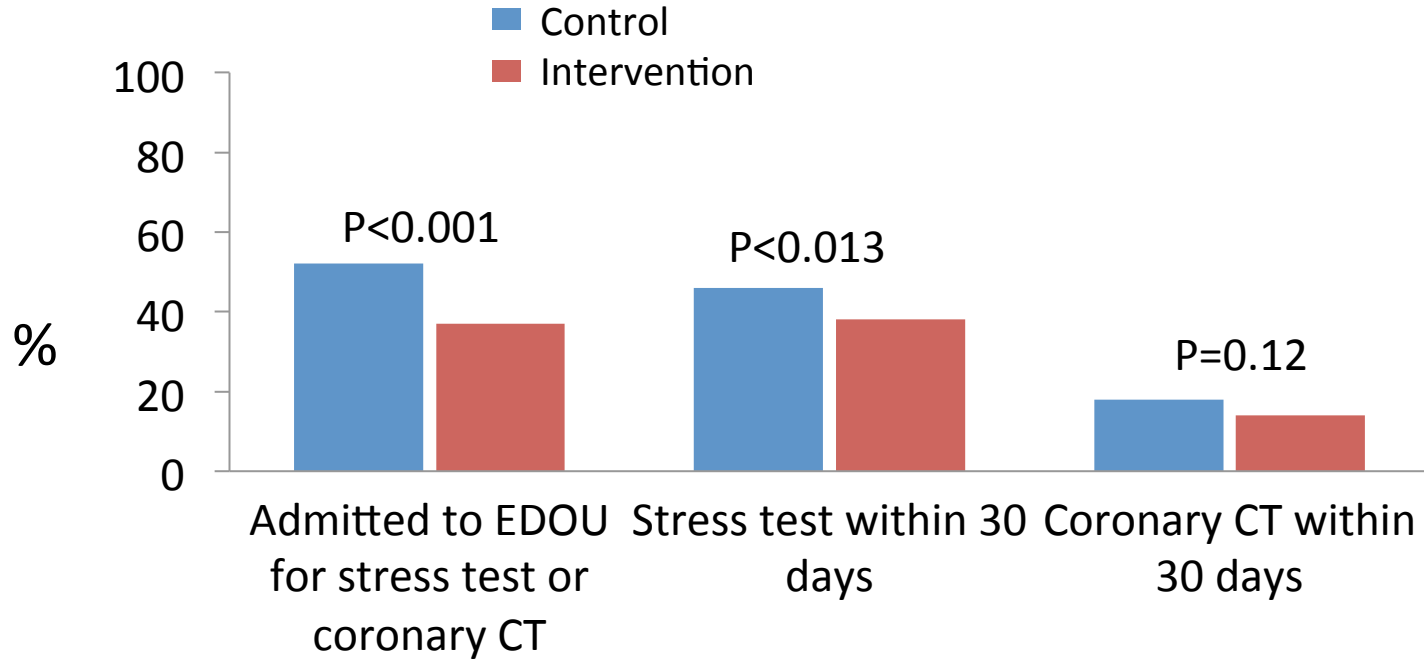
<b>Variable</b>	<b>Control (n=451)</b>	<b>Intervention (n=447)</b>	<b>P-value</b>
Knowledge [Mean (SD)]	3.56 (1.50)	4.23 (1.54)	<0.001
Engagement (Option scale)	8	18	<0.001

# Safety

Variable	Control (n=451)	Intervention (n=447)	P-value
MACE within 30 days of discharge	0 (0%)	1 (0%)	1.0



# Resource Use





# Conclusions

Outcome	Change
Patient knowledge	↑
Patient engagement	↑
Resource use	↓
Safety	↔