TROPONIN-ITIS

A CONDITION LEADING TO MISDIAGNOSIS OF ACUTE CORONARY SYNDROME BASED ONLY ON A TROPONIN ELEVATION
HS-Troponin Is Here!
WHAT ABOUT ALL THE FALSE POSITIVES?!
WE NEED TO BUILD A WALL AGAINST HS-TROPOinin
50% of patients with suspected cardiac chest pain and a positive hs-cTnT actually have AMI.

From Body et al, JACC 2011; 58; 1332-9
3 KEYS TO BEATING TROPONINITIS

1. CLINICAL CONTEXT
2. PATIENT'S BASELINE
3. RISE / FALL
Heart attack test

POSITIVE

ROYAL INFIRMARY OF
FAIRYLAND
The Multiple Causes of Troponin Elevation

- Cardiac contusion
- Heart failure
- Aortic dissection
- HOCM
- Takotsubo
- Arrhythmias or heart block
- Pulmonary embolism
- Renal failure
- SAH
- Myocarditis
- Critical illness
- Burns
- Extreme exertion
- Type 1 myocardial infarction
- Type 2 myocardial infarction
- Normal biological variation
Type 1

MYOCARDIAL INFARCTION

Type 2
1-year mortality

n>20,000

Type 1 AMI: 13.5%

Type 2 AMI: 24.7%

TROPOININ IS A MARKER OF MYOCARDIAL INFARCTION INJURY
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Hs-cTnT 99th percentile

14 ng/L in 'normals'

30 ng/L in 'all comers'

THE EMERGENCY DEPARTMENT

99th PERCENTILE
HS-TROPOONIN T

YOUNG PEOPLE
12 ng/L

OLDER PEOPLE
82 ng/L

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But...

THERE'S A GOOD REASON WHY THE CUT-OFF IS SO LOW!

Mills et al, JAMA 2011; 305(12): 1210-6
Does Sex Matter?
>16ng/L, men & women had the same (worse) prognosis

Cullen et al. Heart 2016: 102: 120-6
3 KEYS TO BEATING TROPNINITIS

1. CLINICAL CONTEXT
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DON'T RELY ON A 20% CHANGE TO DIAGNOSE ACUTE MYOCARDIAL INFARCTION
WHICH PATIENT HAS THE AMI?

Troponin 1: 15ng/L  
Troponin 2: 10ng/L  
DELTA 50%

Troponin 1: 2,000ng/L  
Troponin 2: 2,200ng/L  
DELTA 10%
KEEP IT SIMPLE

ABSOLUTE DELTA
TROTONIN 2 - TROTONIN 1

Better sensitivity AND specificity

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