

A single high-sensitivity troponin T result could quickly and safely rule out MI in the ED

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High-sensitivity assays for cardiac troponin T can quickly and safely rule out myocardial infarction (MI) in patients presenting to emergency departments (ED) with possible emergency acute coronary syndrome. A single troponin T concentration below the limit of detection in combination with a nonischemic electrocardiogram (EKG) means that MI is unlikely and patients can be safely discharged. The findings of a collaborative meta-analysis are published in *Annals of Internal Medicine*.

Only 10 to 20 percent of [patients](#) who present to EDs with suspected cardiac-related chest pain are diagnosed with acute MI. High-sensitivity assays for cardiac troponin T have been used to rapidly rule out acute MI, but studies advocating this approach have several limitations. If findings can be validated across multiple studies that are free of these limitations, then this approach could enable safe discharge of many more patients than is achieved in current practice.

Researchers at Christchurch Hospital in Christchurch, New Zealand reviewed published data to test the utility of a single high-sensitivity cardiac troponin T measurement combined with an ECG to safely identify patients at low risk for MI on presentation to the ED. To address limitations of previous studies, the review included 11 clinically and geographically diverse cohorts. The data showed that in most, but not all settings, patients investigated for [acute coronary syndrome](#) with the cardiac troponin T assay had very low risk for acute MI or for major

adverse cardiac events within 30 days. This means that MI could be ruled out in a substantial proportion of patients after only one blood draw, allowing for safe, early discharge to outpatient management.

More information: *Annals of Internal Medicine* (2017).
<http://annals.org/aim/article/doi/10.7326/M16-2562>

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