

# High-sensitivity troponin levels can predict MI risk

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(HealthDay)—For patients presenting to the emergency department with

symptoms suggestive of myocardial infarction, a tool developed to integrate high-sensitivity troponin I or T concentrations and dynamic change during serial sampling can estimate the probability of myocardial infarction and 30-day outcomes, according to a study published in the June 27 issue of the *New England Journal of Medicine*.

Johannes T. Neumann, M.D., from the University Heart Center Hamburg in Germany, and colleagues determined the concentrations of high-sensitivity troponin I or high-sensitivity troponin T in 15 international cohorts of patients with symptoms suggestive of myocardial infarction; troponin was measured at presentation to the [emergency department](#) and after early or late serial sampling. A [risk assessment tool](#) was developed to estimate the risk of index and subsequent myocardial infarction or death at 30 days.

The researchers found that the prevalence of myocardial infarction was 15.3 percent among 22,651 patients. There was a correlation for lower high-sensitivity troponin concentrations at presentation and smaller absolute changes during serial sampling with lower likelihood of myocardial infarction and reduced short-term risk of cardiovascular events. The negative predictive value for myocardial infarction was 99.5 percent with high-sensitivity troponin I concentrations of less than 6 ng/L and an absolute change of less than 4 ng/L after 45 to 120 minutes (early serial sampling), with an associated 30-day risk of subsequent [myocardial infarction](#) or death of 0.2 percent.

"These data suggest that the concentration of high-sensitivity troponin may be useful as a risk-prediction biomarker as well as a [diagnostic test](#)," the authors write.

The high-sensitivity troponin I and [troponin](#) T assays were partly donated by Roche and Abbott.

**More information:** [Abstract/Full Text \(subscription or payment may be required\)](#)

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