

# Diagnosing acute aortic syndrome: New guideline for hard-to-diagnose condition

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A new guideline aimed at helping clinicians identify the difficult-to-diagnose acute aortic syndrome is published in [CMAJ \(Canadian Medical Association Journal\)](#).

Acute aortic syndrome (AAS) is a life-threatening condition that underlies 1 in 2000 visits to the [emergency department](#) for severe chest or back pain. The rate of misdiagnosis is estimated to be as high as 38%, and the risk of death can increase 2% for every hour of delay in diagnosis.

The target audience for the guideline includes [emergency physicians](#), primary care clinicians, internists, radiologists, vascular surgeons, cardiothoracic surgeons and critical care physicians as well as [decision-makers](#) and patients.

"This guideline is intended as a resource for practising clinicians, both as an [evidence base](#) and a guide to investigation for this high-risk aortic catastrophe," writes Dr. Robert Ohle, an emergency physician at the Health Science North Research Institute, Northern Ontario School of Medicine, Sudbury, Ontario, with coauthors.

Recommendations include:

- Assessment of risk factors, pain features and high-risk physical exam findings to establish pre-test disease risk
  - Risk factors include connective tissue disease, aortic valve disease, recent aortic procedure, [aortic aneurysm](#) and family history of AAS
  - High-risk pain includes sudden-onset or thunderclap pain, severe or worst-ever pain, tearing, migrating or radiating pain
  - High-risk physical exam findings include aortic regurgitation, pulse deficit, neurological deficit and hypotension/[pericardial effusion](#)

- Diagnostic strategy

- The guideline recommends no investigation of those at low risk, D-dimer testing of people of moderate risk and immediate electrocardiogram-gated computed tomography (CT) of the aorta for high-risk individuals

To help with decision-making, the guideline group created a clinical decision aid to accompany the guideline.

The guideline can be adapted by clinicians based on local circumstances, as a one-size-fits-all approach may not be feasible.

"This document may serve as a basis for adaption by local, regional or national guideline groups," write the authors. "For example, guideline implementation in an urban centre with 24-hour access to CT may differ from a rural or remote location that requires transfer of a patient with accompanying staff."

Provided by Canadian Medical Association Journal

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