

# Feasibility of using CTCA in patients with acute low-to-intermediate likelihood chest pain in a DGH

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## Key words:

chest pain, coronary angiography,  
exercise tolerance test, guidelines

doi: 10.5837/bjc.2013.002

Br J Cardiol 2013;20:39

**C**urrent European Society of Cardiology guidelines state that in troponin-negative acute coronary syndrome with no ST-segment change on electrocardiogram (ECG), a stress test is recommended. In the UK, exercise tolerance testing (ETT) is currently the most common first-line test. The high proportion of false-positive and inconclusive results often mandates second-line tests. We compared the diagnostic accuracy and cost implication of computed tomography coronary angiography (CTCA) as first-line investigation compared with ETT. We hypothesised that CTCA would outperform ETT because of its excellent negative-predictive value.

Our results suggest that it is feasible to use CTCA to investigate patients with acute low-to-intermediate likelihood chest pain in place of ETT at no extra cost. Moreover, this cost analysis only took into consideration the actual cost of investigation. Three US clinical trials have shown that CTCA in the emergency room can substantially reduce patient length of stay, reducing overall cost further. CTCA also recognises non-obstructive coronary atheroma, which, combined with clinical risk factors, may prompt the physician to initiate secondary prevention medication earlier.



## Conflict of interest

None declared.

## Key messages

- Computed tomography coronary angiography (CTCA) has excellent negative-predictive value in patients with low-to-moderate likelihood chest pain
- CTCA has been shown to lead to early discharge reducing patient stay and cost
- A multi-centre clinical trial is needed to evaluate the clinical efficacy of CTCA in a UK context
- Prospective gating reduces the radiation dose to 2–3 mSv



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