Contrast-enhanced cardiac computed tomographic angiography in the diagnosis of coronary artery stenosis or for evaluation of acute chest pain

BlueCross BlueShield Association

Record Status
This is a bibliographic record of a published health technology assessment. No evaluation of the quality of this assessment has been made for the HTA database.

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Citation

Authors' objectives
The objective of this Assessment is to determine the usefulness of computed tomography angiography (CTA) as a substitute for coronary angiography for two indications: 1) in the diagnosis of coronary artery stenosis, and 2) in the evaluation of acute chest pain in the emergency room (ER). Uses of CTA for other indications are not addressed in this Assessment.

Authors' conclusions
Based on the available evidence, the Blue Cross and Blue Shield Association Medical Advisory Panel made the following judgments about whether CTA for screening or diagnostic evaluation of the coronary arteries meets the Blue Cross and Blue Shield Association Technology Evaluation Center (TEC) criteria.

1. The technology must have final approval from the appropriate governmental bodies. Multiple manufacturers have received U.S. Food and Drug Administration (FDA) 510(k) clearance to market multi detectorrow computed tomography (MDCT) machines equipped with at least 16 detector rows and at least two models of electron beam computed tomography (EBCT) machines have been cleared through FDA 510(k) clearance. Intravenous iodinated contrast agents used for cardiac CTA have also received FDA approval.

2. The scientific evidence must permit conclusions concerning the effect of the technology on health outcomes. Current studies are inadequate to determine the effect of CTA on health outcomes for the diagnosis of coronary artery stenosis in patients referred for angiography or for evaluation of acute chest pain in the ER.

3. The technology must improve the net health outcome; and

4. The technology must be as beneficial as any established alternatives. The available evidence is inadequate to determine whether CTA improves the net health outcome or is as beneficial as established alternatives for diagnosis of coronary artery stenosis or for evaluation of acute chest pain in the ER.

5. The improvement must be attainable outside the investigational settings. Whether use of CTA improves health outcomes has not been established in the investigational setting.

Based on the above, CTA as a substitute for coronary angiography in the diagnosis of coronary artery stenosis does not meet the TEC criteria. CTA in the evaluation of acute chest pain in the emergency room also does not meet the TEC criteria.
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