

*Coronary Computed Tomographic Angiography for  
Detection of Coronary Artery Disease*

*Evidence Review Group Scoping Call Summary  
July 2, 2008*

***Present:***

**ICER:** Steve Pearson, Dan Ollendorf, Katy Marttila

**Affiliated Researcher:** Alex Goehler

**Evidence Review Group:** Robin Cisneros, Scott Gazelle, Alan Go, Mark Hlatky, Udo Hoffmann, Bob Honigberg, John Lesser, Bob McDonough, Jim Min, Mark Pauly, Rita Redberg, Campbell Rogers, Sean Sullivan, Sean Tunis

***Absent:***

**Evidence Review Group:** Leah Hole-Curry, Peter Neumann, Don Rucker, Peter Ubel

**Meeting Summary**

*Appraisal-Specific*

- With respect to the settings of primary interest for our evaluation of CCTA:
  - In the outpatient setting, some in the group felt that a growing proportion of use was as a follow-up to a non-diagnostic result from another non-invasive test; target population of interest would be those with low-to-intermediate likelihood of CAD
  - There was debate over the size of the population receiving CCTA because of risk factors for CAD, not necessarily because of active symptoms
  - A suggestion was made to prioritize the settings for review as follows: (a) symptomatic patients presenting in outpatient setting, low-to-intermediate CAD risk, with nuclear stress testing as primary comparator; (b) triage of acute chest pain in ED setting; (c) screening of asymptomatic patients in outpatient setting
  - There was general agreement that the appraisal should document the level of evidence for all settings of interest, but the major focus of the review (and the corresponding focus for economic modeling) will be on populations (a) and (b) above, as the level of available evidence and current payer focus is greatest in these settings
  - ICER will *not* evaluate CT calcium scoring, as the primary focus of this appraisal is on identifying (or ruling out) significant stenosis, and not on early-stage disease.

- With respect to methods used to determine level of CAD risk:
  - It was mentioned that while multiple methods exist (e.g., Duke, Diamond-Forrester), they all essentially evaluate quality of chest pain as well as age and sex
  - The distinction between CCTA's diagnostic accuracy vs. its prognostic ability was mentioned as important to consider – the appraisal will need to thoroughly examine test characteristics, but should also make whatever connections are available to cardiac events and other “hard” outcomes
- The group felt that multiple comparator strategies and diagnostic pathways be evaluated in comparison to CCTA to accurately reflect the variability in current practice.
- There was general agreement that gender represented an important subpopulation of interest, given differences in underlying CAD prevalence by gender as well as the potential for radiation risks to be higher among women due to greater amount of tissue in the scanned area.
- With respect to radiation risks:
  - Because the diagnostic pathway may include CCTA as well as other tests that involve radiation, the total dose received by the patient from all tests should be considered
  - There have been aggressive efforts recently to use prospective gating strategies to lower radiation dose to the patient, and these should be considered in any estimates
  - A recent study by Hausleiter and colleagues (PROTECTION 1) illustrated variability in radiation dosing and in use of dose-saving strategies
- With respect to evaluation of results presented on a (a) per patient vs. (b) per vessel basis, the comment was made that newer-generation technology has reduced the number of undetectable segments. Some in the group felt that clinical decisions around undetectable vessels are in part a function of where they are found (e.g., distal vs. proximate location, vessel size). However, it was generally agreed that in typical clinical practice, the presence of any undetectable segment would likely lead to a non-diagnostic result and a requirement for further testing.
- With regard to incidental findings, caution with estimating the rate of such findings as well as the follow-up activity that ensues was urged, as there are currently scant data on both.

- It was also mentioned that the results of several important, recently-completed studies are currently pending in peer-reviewed journals; further discussions will be held to see if these results can be shared with ICER by the principal investigators.

*General*

- It was mentioned that information on potential biases and conflicts of interest will be requested of all ERG members at a later date.
- Given the relatively short timeline for this evaluation, date ranges for both the subcommittee conference calls and the final, in-person ERG meeting were provided – the first week of September for the calls, and the second week of December for the meeting. Separate e-mail communications will be forthcoming on these dates.
- A question was asked of ICER on how individual participant responses are weighted. ICER has no formal weighting scheme for votes, as the ERG's efforts are considered advisory; however, voting has been conducted in the past to gauge the group's opinion and inform ICER's determination. Ultimately, final determination of results and the rating scheme are ICER's responsibility.
- Another question was asked regarding publication of findings. The public posting process for the final report was described, and the flexibility to produce additional papers for the peer-reviewed literature was also discussed.