Computed tomography of the coronary arteries in diagnosis

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Importance of the field: Cardiac computed tomography (CT) has recently emerged as a non-invasive alternative to catheter angiography for the assessment of coronary artery disease. Rapid technological advances have rendered coronary CT angiography to a robust, accurate and fast imaging modality to assess coronary artery disease in selected patients. The list of further indications in which cardiac CT is an appropriate test remains a topic of discussion. Areas covered in this review: This review discusses the main literature available on the use of cardiac CT in the indications considered appropriate in the 2006 Appropriateness Criteria by the American College of Radiology with special emphasis on the temporal trends in the utilization of cardiac CT in clinical practice and in the opinion of the experts, and provides an outlook on how cardiac CT might evolve in the future. What the reader will gain: The reader will gain insight into the strengths and shortcomings of CT of the coronary arteries in coronary artery diagnosis and will learn why cardiac CT is appropriate in some indications but not in others. Take home message: Recent research in cardiac CT has substantially improved the evaluation of the coronary arteries with CT, and the list of indications cardiac CT is appropriate for might expand further in the coming years.