

Electron Beam Computed Tomography (EBCT)

Date of Origin: 11/2001

Last Review Date: 09/26/2018

Effective Date: 09/27/2018

Dates Reviewed: 09/2002, 10/2002, 07/2003, 07/2004, 07/2005, 06/2006, 06/2007, 06/2008, 12/2009, 02/2011, 02/2012, 11/2012, 09/2013, 08/2015, 09/2016, 09/2017, 09/2018

Developed By: Medical Necessity Criteria Committee

I. Description

Electron Beam Computed Tomography (EBCT) is an ultra-fast CT scan, which is capable of identifying microcalcifications in the coronary arteries. The rationale for performing an EBCT is that calcium is deposited early in the formation of atherosclerotic plaques, and calcification may be useful as an early marker of the atherosclerotic process.

Research has indicated that EBCT is highly sensitive in detecting coronary artery calcification in comparison to other types of CT. Moreover, various studies have shown a strong correlation between EBCT calcium scores and quantities of atherosclerotic plaque. However, there is skepticism about the relationship between EBCT calcium scores and the likelihood of coronary events because of the following factors:

- Calcium does not collect exclusively at sites with severe stenosis
- EBCT calcium scores do not identify the location of specific vulnerable lesions
- Substantial non-calcified plaque is frequently present in the absence of coronary artery calcification

There are no proven relationships between coronary artery calcification and the probability of plaque rupture. The critical issue that defines the utility (or lack thereof) of ultrafast CT is its prognostic value. The evidence in the peer-reviewed medical literature linking detectable coronary calcium to event outcomes such as future coronary bypass surgery, angioplasty, myocardial infarction, and coronary death is limited. Large-scale prospective studies are still needed to define a role for ultrafast CT.

In depth studies to establish the value and indications for these tests have not been reported. Peer reviewed literature does not substantiate the value of this test over current established technology. The American College of Cardiology/American Heart Association Consensus Document review indicates that the published literature does not clearly define which asymptomatic individuals would benefit from EBCT. The Consensus recommends that appropriately designed studies of EBCT for this purpose (of defining benefit) are strongly encouraged.

II. Criteria: CWQI HCS-0052

- A. Moda Health considers EBCT an investigational diagnostic test and NOT covered. There is insufficient well designed studies to support the effectiveness of EBCT.

III. Information Submitted with the Prior Authorization Request:

- 1.

IV. CPT or HCPC codes covered:

Codes	Description
75571	Computed tomography, heart, without contrast material, including image post processing and quantitative evaluation of coronary calcium
S8092	Electron beam computed tomography (also known as ultrafast CT, cine CT)
0144T	Computed tomography, heart, without contrast material, including image post processing and quantitative evaluation of coronary calcium

V. CPT or HCPC codes NOT covered:

Codes	Description

V. Annual Review History

Review Date	Revisions	Effective Date
11/2012	Annual Review: Added table with review date, revisions, and effective date.	12/01/2012
09/2013	Annual Review: No Changes	09/25/2013
08/2014	Annual Review: Added 0144T CPT code to list of codes.	08/25/2014
08/2015	Annual review: Added additional literature	08/26/2015
09/2016	Annual review: No change	9/28/2016
09/27/2017	Annual Review: No change; updated to new template	09/27/2017

09/26/2018	Annual Review: No change	09/26/2018
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VI. References

- 1.
- 2.

Appendix 1 – Applicable Diagnosis Codes:

Codes	Description

Appendix 2 – Centers for Medicare and Medicaid Services (CMS)

Medicare coverage for outpatient (Part B) drugs is outlined in the Medicare Benefit Policy Manual (Pub. 100-2), Chapter 15, §50 Drugs and Biologicals. In addition, National Coverage Determination (NCD) and Local Coverage Determinations (LCDs) may exist and compliance with these policies is required where applicable. They can be found at: <http://www.cms.gov/medicare-coverage-database/search/advanced-search.aspx>. Additional indications may be covered at the discretion of the health plan.

Medicare Part B Covered Diagnosis Codes (applicable to existing NCD/LCD):

Jurisdiction(s): 5, 8	NCD/LCD Document (s):

NCD/LCD Document (s):

Medicare Part B Administrative Contractor (MAC) Jurisdictions

Jurisdiction	Applicable State/US Territory	Contractor
F (2 & 3)	AK, WA, OR, ID, ND, SD, MT, WY, UT, AZ	Noridian Healthcare Solutions, LLC