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.

Criteria: CWQI HCS-0026
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.

EBCT is considered to be an investigational diagnostic test and is not covered by Moda Health at this time.

Information to be Submitted with Pre-Authorization Request:
None. This is considered to be investigational.
Moda Health Plan, Inc.
Medical Necessity Criteria

Subject: Electron Beam Computed Tomography (EBCT)

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<th>Revision Date(s): 9/02, 10/02, 7/03, 7/04, 7/05, 6/06, 6/07, 6/08, 12/09, 2/11, 2/12, 11/12, 09/13, 8/14, 8/15, 9/16</th>
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Applicable CPT/HCPC Codes:
Note: list may not be all inclusive

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<th>Code</th>
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<td>75571</td>
<td>Computed tomography, heart, without contrast material, including image post processing and quantitative evaluation of coronary calcium</td>
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<tr>
<td>S8092</td>
<td>Electron beam computed tomography (also known as ultrafast CT, cine CT)</td>
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<tr>
<td>0144T</td>
<td>Computed tomography, heart, without contrast material, including image post processing and quantitative evaluation of coronary calcium</td>
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Review Date | Revisions | Effective Date |
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<td>09/25/2013</td>
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<td>08/2014</td>
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<td>08/25/2014</td>
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<td>08/2015</td>
<td>Annual review: Added additional literature</td>
<td>08/26/2015</td>
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<td>09/2016</td>
<td>Annual review:</td>
<td>09/28/2016</td>
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References:

- Budoff MJ, Achenbach S, American Heart Association Committee on Cardiovascular Imaging and Intervention; American Heart Association Council on Cardiovascular Radiology and Intervention; American Heart Association Committee on Cardiac Imaging, Council on Clinical Cardiology, et al. Assessment of coronary artery disease by cardiac computed tomography: a scientific statement from the American Heart Association Committee on Cardiovascular Imaging and Intervention, Council on Cardiovascular Radiology and Intervention, and Committee on Cardiac Imaging, Council on Clinical Cardiology. Circulation. 2006 Oct 17; 114(16):1761-91.
EBCT scan can point to medical options, but not early diagnosis for coronary artery disease. June 30, 2000, American Heart Association.

EBCT screening does not modify cardiovascular lifestyle risk. Hayes Alert. 6(5) May 2003.


O’Malley PG, Feuerstein IM, Taylor AJ. Impact of electron beam tomography with or without case management, on motivation, behavioral change, and cardiovascular risk profile. JAMA 2003 May; 289(17): 2215-23.

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- Ultrafast Computed Tomography. October 3, 2000, Heart Center Online.
- Physician Advisors