Medical Coverage Policy | Ultrasonographic Measurement of Carotid Intima-Medial Thickness as an Assessment of Subclinical Artherosclerosis

EFFECTIVE DATE:10|01|2015
POLICY LAST UPDATED: 05|19|2021

OVERVIEW
Ultrasonographic measurement of carotid intima-medial (or intimal-media) thickness (CIMT) refers to the use of B mode ultrasound to determine the thickness of the 2 innermost layers of the carotid artery wall, the intima and the media. Detection and monitoring of intima-medial thickening, which is a surrogate marker for atherosclerosis, may provide an opportunity to intervene earlier in atherogenic disease and/or monitor disease progression.

MEDICAL CRITERIA
Not applicable.

PRIOR AUTHORIZATION
Not applicable.

POLICY STATEMENT
Medicare Advantage Plans
Ultrasonographic measurement of carotid artery intima-medial thickness (CIMT) as a technique of identifying subclinical atherosclerosis is not covered for use in the screening, diagnosis, or management of atherosclerotic disease as the evidence is insufficient to determine the effects of the technology on health outcomes.

Commercial
Ultrasonographic measurement of carotid artery intima-medial thickness (CIMT) as a technique of identifying subclinical atherosclerosis is not medically necessary for use in the screening, diagnosis, or management of atherosclerotic disease as the evidence is insufficient to determine the effects of the technology on health outcomes.

COVERAGE
Benefits may vary between groups and contracts. Please refer to the appropriate Evidence of Coverage, Subscriber Agreement for applicable not medically necessary/not covered benefits/coverage.

BACKGROUND
Heart disease is the leading cause of mortality in the United States, accounting for more than half of all deaths. Coronary heart disease (CHD), also known as coronary artery disease, is the most common cause of heart disease.1, In a 2020 update on heart disease and stroke statistics from the American Heart Association, it was estimated that 605,000 Americans have a new coronary attack (first hospitalized myocardial infarction or CHD death) and 200,000 have a recurrent attack annually.

Established major risk factors for CHD have been identified by the National Cholesterol Education Program Expert Panel. These risk factors include elevated serum levels of low-density lipoprotein cholesterol and total cholesterol, and reduced levels of high-density lipoprotein cholesterol. Other risk factors include a history of cigarette smoking, hypertension, family history of premature CHD, and age.

The third report of the NCEP Adult Treatment Panel (ATP III) establishes various treatment strategies to modify the risk of CHD, with emphasis on target goals of LDL cholesterol. Pathology studies have demonstrated that levels of traditional risk factors are associated with the extent and severity of atherosclerosis. ATP III recommends use of the Framingham criteria to further stratify those patients with 2

or more risk factors for more intensive lipid management. However, at every level of risk factor exposure, there is substantial variation in the amount of atherosclerosis, presumably related to genetic susceptibility and the influence of other risk factors. Therefore, there has been interest in identifying a technique that can improve the ability to diagnose those at risk of developing CHD, as well as measure disease progression, particularly for those at intermediate risk.

The carotid arteries can be well-visualized by ultrasonography, and ultrasonographic measurement of the CIMT has been investigated as a technique to identify and monitor subclinical atherosclerosis. B mode ultrasound is most commonly used to measure CIMT. CIMT is measured and averaged over several sites in each carotid artery. Imaging the far wall of each common carotid artery yields more accurate and reproducible CIMT measurements than imaging near wall. Two echogenic lines are produced, representing the lumen-intima interface and the media-adventitia interface. The distance between these 2 lines constitutes the CIMT.

In addition, available studies do not define how the use of CIMT in clinical practice improves outcomes. There appears to be no scientific literature that directly and experimentally tests the hypothesis that measurement of CIMT results in improved patient outcomes and no specific guidance on how measurements of CIMT should be incorporated into risk assessment and risk management. The existing data are insufficient to determine the impact of this technology on net health outcome. Therefore, CIMT is considered investigational for use in the screening, diagnosis, or management of atherosclerotic disease.

Regulatory Status
In February 2003, SonoCalc® (SonoMetric Health, LLC, Bountiful, UT) was cleared for marketing by the U.S. Food and Drug Administration (FDA) through the 510(k) process. FDA determined that this softwarewas substantially equivalent to existing image display products for use in the automatic measurement of the IMT of the carotid artery from images obtained from ultrasound systems. Subsequently, several other devices have been approved through the 510(k) process. Product code: LLZ.

CODING

The following code(s) are not medically necessary:
93895 Quantitative carotid intima media thickness and carotid atheroma evaluation, bilateral

RELATED POLICIES

None

PUBLISHED

Provider Update, July 2021
Provider Update, August 2020
Provider Update, September 2019
Provider Update January 2019
Provider Update January 2018

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