



Medical Policy Reference Manual Medical Policy

6.01.026 ARCHIVED Whole Body Computed Tomography Scan as a Screening Test

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Description

Whole body computed tomography is an imaging technology used to generate detailed images with the use of multiple x-ray slices of the body. The tomographic images are then formatted by a computer and a 3-dimensional visualization is displayed. This technology (example: Virtual Physical™, LifeScore™ and Health View™) is being used to scan from the chin to below the hips, screening for diseases such as osteoporosis, cancer, heart disease, endocrine disorders, aneurysms, vascular disease, emphysema, kidney / gall stones and other disorders, whether or not risk factors are present.

Policy

The use of whole body computed tomography scans as a screening test is considered **experimental / investigational**, as it does not meet TEC criteria # 2 - 5.

Policy Guidelines

Experimental/Investigational

The term "experimental/investigational" describes services or supplies that are in the developmental stage and are in the process of human or animal testing. Services or supplies that do not meet all 5 of the criteria listed below adopted by the BlueCross BlueShield Association (BCBSA) Medical Policy Services (MPS) Assessment Criteria (formerly known as the TEC Criteria or "Technology Evaluation Center" criteria are deemed to be experimental/investigational):

1. The technology* must have final approval from the appropriate U.S. government regulatory bodies; and
2. The scientific evidence must permit conclusions concerning the effect of the technology on health outcomes; and
3. The technology must improve the net health outcome; and
4. The technology must be as beneficial as any established alternatives; and
5. The improvement must be attainable outside the investigational settings.

* Technology includes drugs, devices, processes, systems, or techniques

Rationale:

1. **The technology must have final approval from the appropriate U.S. government regulatory bodies:**

The U.S. Food and Drug Administration (FDA) 2017 designates that Whole-body CT screening has not met generally accepted criteria for an effective screening procedure and further states, that no scientific evidence demonstrates that whole-body scanning in the absence of symptoms provides more benefit than harm to individuals being screened.

2. **The scientific evidence must permit conclusions concerning the effect on health outcomes:**

There is a scarcity of peer-reviewed medical literature addressing Whole-body CT screening asymptomatic healthy people for occult disease. Additionally, no research data on Whole-body CT proves that, if uncovered, earlier treatment results in improved net health outcomes. The majority of evidence for Whole-body CT is comprised from unchanged and outdated, small, randomized control trials (RCTs) and retrospective reviews. Two retrospective reviews (N=982)

and (N=1192) by CD Furtado et al., (2005) observed whole body CT screenings and noted that a strong association between age of the patient and the number of findings and recommendations. Findings ranged from 22.5% of subjects younger than 40 years of age to 80% of patients older than or equal to 80 years of age. The authors concluded that with whole-body CT screening, findings were detected in a large number of subjects and most findings were benign by description requiring no further evaluation. However, 37% of patients had findings that elicited recommendations for additional evaluation, but further research is required to determine the clinical importance of these findings and the effect on patient care. Obuchowski (2006) conducted a small (N=50) randomized trial of whole-body screening (vs. no screening for three years) to determine the feasibility of a larger scale study. Ninety percent of the subjects were reported to be compliant with follow-up at two years. Images were interpreted independently by six radiologists from two institutions. Based on one interpretation, 16 (64%) subjects in the screening group had abnormal findings, but no cancers were detected. A second interpretation showed a similar rate of abnormal findings, although abnormalities were not in the exact same group of 16 subjects. On average, medical costs were twice as high for screened subjects. The authors concluded that a full-scale randomized controlled trial of whole-body screening will need to account for the large variability in interpretation of the images, the high rate of incidental findings, and the low prevalence of cancers. Total body screening targeted at older subjects has the highest yield of actionable findings. The efficacy and cost-effectiveness of total body screening for older subjects is unknown and needs further assessment.

3. The technology must improve the net health outcome:

According to Dixon, G.D. (2003), evidence showing that these procedures reduce morbidity or mortality when used to screen healthy asymptomatic patients remains essentially unchanged. In addition, Buls N. et al. (2005) states that there are very few published clinical trials examining the safety and effectiveness of whole-body CT scanning. Moreover, the radiation dose of the computed tomography (CT) scan itself could lead to an excess lifetime risk of fatal cancer and that radiation dose and associated risk should be included as fundamental parameters for investigating the outcomes of a CT-based screening program. Lastly, no medical professional organizations have recommended the use of Whole-body CT as a screening test for asymptomatic individuals. The FDA in 2017 indicated that recommendations from the U.S. Preventive Services Task Force and the American Medical Association affirm that Whole-body CT screening has not been demonstrated to meet generally accepted criteria as an effective screening procedure. The American College of Radiology (ACR) 2002 does not believe that there is sufficient evidence to justify recommending total body CT screening for patients with no symptoms or a family history suggesting disease. Medical professional societies have not endorsed whole-body CT scanning for individuals without symptoms. In conclusion, there is a lack of evidence promoting the use of Whole Body CT as a screening test and the current literature does not support an improvement in health outcomes; therefore, this procedure is considered investigational.

4. The technology must be as effective as any established alternatives:

There is a lack of research comparing Whole Body Computed Tomography Scan as a screening exam to any established alternatives. There is evidence that the full body CT screening has the risk of unnecessary radiation exposure and that it is not specific enough or tailored enough to detect conditions such as coronary artery calcification, lung cancer or colon polyps or masses. In addition, there are potentially hazardous risks associated with false positives and false negative findings which may increase patient anxiety and generate unnecessary follow up examinations and treatments. Studies fail to prove that Whole body CT screening is as effective compared with conventional radiographic imaging supplemented with selective CT.

5. The improvement must be attainable outside the investigational settings:

A net health outcomes improvement has not been demonstrated in the investigational settings. Therefore, it is not possible to determine whether an improvement outside of the investigational setting can be expected.

Update 2022:

A search of the peer-reviewed literature was performed from the period of December 2019 through October 2022. Findings in the recent literature do not change the conclusions regarding the use of whole-body CT scanning as a screening test. Therefore, the policy statement remains experimental / investigational.

Update 2020:

A search of the peer-reviewed literature was performed from the period of December 2017 through December 2019. Findings in the recent literature do not change the conclusions regarding the use of whole-body CT scanning as a screening test. Therefore, the policy statement remains experimental / investigational.

Update 2017:

A search of the peer-reviewed literature was performed for the period of October 2015 through November 2017. The literature regarding recommendations on the use of c as a screening test is unchanged. Therefore, the policy remains experimental / investigational.

Update 2015:

A search of the peer-reviewed literature was performed for the period of September 2013 through September 2015. The literature regarding recommendations on the use of whole-body CT scanning as a screening test is unchanged. Therefore, the policy remains experimental / investigational.

Update 2013:

A search of the peer-reviewed literature was performed for the period of August 2011 through August 2013. The literature regarding recommendations on the use of whole-body CT scanning as a screening test are unchanged. Therefore, the policy remains experimental / investigational.

Update 2011:

A search of the peer-reviewed literature was performed for the period of August 2009 through July 2011. The current literature does not support an improvement in health outcomes with whole-body CT screening. Recommendations from the U.S. Food and Drug Administration as well as various medical professional societies have not changed regarding the use of whole body computed tomography in asymptomatic individuals. Therefore, the policy statement that this procedure is considered experimental/investigational is unchanged.

Update 2009:

A search of the peer-reviewed literature was performed for the period of June 2007 through August 2009. Updated information from the FDA indicates the recommendations from the USPSTF, AMA, ACR, ACC/AHA, AAPM and HPS have not changed. Therefore, the policy statement is unchanged.

Update 2007:

A search of the peer-reviewed literature was performed for the period of June 2005 through June 2007. Updated information from the FDA indicates that recommendations from the U.S Preventive Services Task Force (USPSTF) and the American Medical Association (AMA) have been added to those of the American College of Radiology (ACR), the American College of Cardiology / American Heart Association (ACC/AHA), the American Association of Physicists in Medicine (AAPM), and the Health Physics Society (HPS), none of whom recommend CT screening. Therefore, the policy statement is unchanged.

Benefit Applications

There are no Benefit Application guidelines for this Medical Policy.

Provider Guidelines

This service should be reported using HCPCS code S8092.

Cross References to Related Policies and Procedures

6.01.003	Electron Beam Computed Tomography to Detect Coronary Artery Calcification, Policy
6.01.027	Computed Tomography as a Screening Test for Lung Cancer, Policy
6.01.028	Archived Computed Tomographic Colonography as a Test for Colon Cancer (Virtual Colonoscopy), Policy

References

The following were among the resources reviewed and considered in developing this policy. By reviewing and considering the resources, CareFirst does not in any way endorse the contents thereof nor assume any liability or responsibility in connection therewith. The opinions and conclusions of the authors of these resources are their own and may or may not be in agreement with those of CareFirst.

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This policy statement relates only to the services or supplies described herein. Coverage will vary from contract to contract and by line of business and should be verified before applying the terms of the policy.