**04-70450-25**

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# Subject: Whole Body Computed Tomography (CT)

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## DESCRIPTION:

Whole body computed tomography (CT) scan, encompassing the body from the neck to the pelvis have been proposed as a general screening test for diseases of the thyroid (i.e., cancer), lungs (i.e., lung cancer), heart (i.e., cardiovascular disease), and abdominal and pelvic organs (cancer, cardiovascular disease). Often the test is marketed directly to the patient and is offered through mobile CT scanners that travel from community to community. According to the American College of Radiology and U.S. Food and Drug Administration, there is no evidence or data to support the use of whole body CT scanning for disease screening in asymptomatic individuals.

**Summary and Analysis of Evidence:** The American College of Radiology (ACR), (2002) does not believe there is sufficient evidence to justify recommending total body CT screening for patients with no symptoms or a family history suggesting disease. To date, there is no evidence that total body CT screening is cost efficient or effective in prolonging life. In addition, the ACR is concerned that this procedure will lead to the discovery of numerous findings that will not ultimately affect patients' health but will result in unnecessary follow-up examinations and treatments and significant wasted expense.

Brenner, Elliston (2004) To estimate the radiation-related cancer mortality risks associated with single or repeated full-body computed tomographic (CT) examinations by using standard radiation risk estimation methods. The estimated dose to the lung or stomach from a single full-body CT examination is 14-21 mGy, which corresponds to a dose region for which there is direct evidence of increased cancer mortality in atomic bomb survivors. Total doses for repeated examinations are correspondingly higher. The authors used estimated cancer risks in a U.S. population derived from atomic bomb-associated cancer mortality data, together with calculated organ doses from a full-body CT examination, to estimate the radiation risks associated with single and multiple full-body CT examinations. A single full-body CT examination in a 45-year-old adult would result in an estimated lifetime attributable cancer mortality risk of around 0.08%, with the 95% credibility limits being a factor of 3.2 in either direction. A

45-year-old adult who plans to undergo annual full-body CT examinations up to age 75 (30 examinations) would accrue an overall estimated lifetime attributable risk of cancer mortality of about 1.9%, with the 95% credibility limits being a factor of 2 in either direction. The authors provided estimates of lifetime cancer mortality risks from both single and annual full-body CT examinations. These risk estimates are needed to assess the utility of full-body CT examinations from both an individual and a public health perspective.

In an UpToDate article "Multiple myeloma: Clinical features, laboratory manifestations, and diagnosis" (Laubach, 2025) Multiple myeloma (MM) is typically characterized by the neoplastic proliferation of plasma cells producing a monoclonal immunoglobulin. The plasma cells proliferate in the bone marrow and can result in extensive skeletal destruction with osteolytic lesions, osteopenia, and/or pathologic fractures. The diagnosis of MM is often suspected because of one (or more) of the following clinical presentations: bone pain with lytic lesions discovered on routine skeletal films or other imaging modalities, an increased total serum protein concentration and/or the presence of a monoclonal protein in the urine or serum, systemic signs or symptoms suggestive of malignancy, such as unexplained anemia, hypercalcemia, which is either symptomatic or discovered incidentally, and acute kidney failure with a bland urinalysis or rarely the nephrotic syndrome due to concurrent immunoglobulin light chain (AL) amyloidosis. Imaging- Imaging is a key part of the evaluation of all patients with suspected MM. Cross-sectional imaging (i.e., CT, PET/CT, MRI) is preferred because these modalities are more sensitive than plain radiographs for the detection of most skeletal lesions in MM. The approached described below is generally consistent with that of the International Myeloma Working Group. These tests are also appropriate in patients receiving intensive therapies to monitor disease response. Choice of modality — Cross-sectional imaging is preferred over plain radiographs for the detection of bone involvement in patients being evaluated for suspected MM. One of three modalities can be used: whole body low dose computed tomography (CT) without contrast, whole body combined fluorine-18-labeled fluorodeoxyglucose positron emission tomography/computed tomography (18F-FDG PET/CT), whole body magnetic resonance imaging (MRI) (or at a minimum MRI of the spine and pelvis)."

In an UpToDate article "Diagnosis of monoclonal gammopathy of undetermined significance" (Laubach, 2025) Monoclonal gammopathy of undetermined significance (MGUS) is a clinically asymptomatic premalignant clonal plasma cell or lymphoplasmacytic proliferative disorder. It is defined by the presence of a serum monoclonal protein (M protein) at a concentration <3 g/dL, a bone marrow with <10 percent monoclonal plasma cells, and absence of end-organ damage (lytic bone lesions, anemia, hypercalcemia, kidney impairment, hyperviscosity) related to the proliferative process.MGUS occurs in over 3 percent of the white population over the age of 50 and is typically detected as an incidental finding when individuals undergo a protein electrophoresis as part of an evaluation for a wide variety of clinical symptoms and disorders (e.g., peripheral neuropathy, vasculitis, hemolytic anemia, skin rashes, hypercalcemia, or elevated erythrocyte sedimentation rate). There are three distinct clinical types of MGUS, each with a risk of progressing through a unique intermediate (more advanced) premalignant stage and then to a malignant plasma cell dyscrasia or lymphoproliferative disorder: MGUS occurs in over 3 percent of the white population over the age of 50 and is typically detected as an incidental finding when individuals undergo a protein electrophoresis as part of an evaluation for a wide variety of clinical symptoms and disorders (e.g., peripheral neuropathy, vasculitis, hemolytic anemia, skin rashes, hypercalcemia, or elevated erythrocyte sedimentation rate). There are three distinct clinical types of

MGUS, each with a risk of progressing through a unique intermediate (more advanced) premalignant stage and then to a malignant plasma cell dyscrasia or lymphoproliferative disorder:

- Non-IgM MGUS (IgG, IgA, or IgD MGUS) – Non-IgM MGUS is the most common subtype of MGUS and has the potential to progress to smoldering (asymptomatic) multiple myeloma and to symptomatic multiple myeloma. Less frequently, these individuals progress to AL amyloidosis, light chain deposition disease, or another lymphoproliferative disorder.
- IgM MGUS – IgM MGUS accounts for approximately 15 percent of MGUS cases. It is considered separately from the non-IgM MGUS because it has the potential to progress to smoldering Waldenström macroglobulinemia and to symptomatic Waldenström macroglobulinemia, and less often to lymphoma or AL amyloidosis. Infrequently, IgM MGUS can progress to IgM multiple myeloma.
- Light chain MGUS (LC-MGUS) – LC-MGUS is a unique subtype of MGUS in which the secreted M protein lacks the immunoglobulin heavy chain component. LC-MGUS may progress to light chain smoldering multiple myeloma (idiopathic Bence Jones proteinuria) and to light chain multiple myeloma, AL amyloidosis, or light chain deposition disease

Cross-sectional imaging – Imaging is indicated for a subset of individuals to evaluate for multiple myeloma. We suggest whole body low dose computed tomography (CT) without contrast or whole-body magnetic resonance imaging (MRI) for most individuals with MGUS. These modalities are more sensitive than plain radiographs for the detection of most skeletal lesions in myeloma. Imaging in myeloma is discussed separately.

In a review of whole-body low-dose multidetector-row CT in multiple myeloma, multiple myeloma is a hematological malignancy of plasma cells usually detected due to various bone abnormalities on imaging and rare extraosseous abnormalities. The traditional approach for disease detection was based on plain radiographs, showing typical lytic lesions. Still, this technique has many limitations in terms of diagnosis and assessment of response to treatment. The new approach to assess osteolytic lesions in patients newly diagnosed with multiple myeloma is based on total-body low-dose CT. The authors concluded that whole-body low-dose CT has the advantage to better assess bone disease in patients suffering from monoclonal plasma cell disease, identifying osteolytic lesions that justify treatment in otherwise asymptomatic patients. This imaging modality is also useful to evaluate disease complications, such as pathological fractures, and to assess treatment response (Pierro et al, 2021).

## POSITION STATEMENT:

Whole body computed tomography scanning is considered **investigational or experimental** when used as a screening test (e.g., in individuals without signs and symptoms of disease). Current literature does not support the use of whole body CT scanning for disease screening in asymptomatic individuals. The evidence is insufficient to determine that whole body computed tomography scanning results in an improvement in the net health outcome.

Whole body CT for the following conditions **meets the definition of medical necessity** in initial staging, restaging and management:

- Multiple myeloma
- Smoldering multiple myeloma

- Monoclonal gammopathy of undetermined significance
- Solitary plasmacytoma

## BILLING/CODING INFORMATION:

There is no specific code for whole body CT scanning.

## REIMBURSEMENT INFORMATION:

Refer to section entitled **POSITION STATEMENT**.

## PROGRAM EXCEPTIONS:

**Federal Employee Program (FEP):** Follow FEP guidelines.

**Medicare Advantage products:** No Local Coverage Determination (LCD) were found at the time of the last guideline reviewed date.

The following National Coverage Determination (NCD) was reviewed on the last guideline reviewed date: Computed Tomography, (220.1) located at cms.gov.

If this Medical Coverage Guideline contains a step therapy requirement, in compliance with Florida law 627.42393, members or providers may request a step therapy protocol exemption to this requirement if based on medical necessity. The process for requesting a protocol exemption can be found at Coverage Protocol Exemption Request.

## DEFINITIONS:

No guideline specific definitions apply.

## RELATED GUIDELINES:

**Computed Tomography to Detect Coronary Artery Calcification, 04-70450-02**
**Computed Tomographic Angiography (CTA) for Coronary Artery Evaluation, 04-70450-03**
**Computed Axial Tomography (CT), Head/Brain 04-70450-18**
**Computed Axial Tomography (CT), Temporal Bone/Mastoid & Maxillofacial 04-70450-19**
**Computed Axial Tomography (CT), of the Neck for Soft Tissue Evaluation 04-70450-20**
**Computed Axial Tomography (CT), Thorax 04-70450-21**
**Computerized Axial Tomography (CT) Abdomen and Pelvis 04-70450-22**
**Computed Axial Tomography (CT), Spine (Cervical, Thoracic, Lumbar) 04-70450-23**
**Computed Axial Tomography (CT), Extremity (Upper & Lower) 04-70450-24**

## OTHER:

Other names used to report whole body CT scanning:

Computerized Axial Tomography (CAT)
Computed Tomography, Whole Body

CT Scan, Whole Body
Full-Body CT Screening
Total Body CT
Total-Body Screening
Whole Body CT Scan
Whole-Body CT Screening
Whole-Body CT Screening Tool
X-ray Computed Tomography (CT)

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## COMMITTEE APPROVAL:

This Medical Coverage Guideline (MCG) was approved by the Florida Blue Medical Policy and Coverage Committee on 10/23/25.

## GUIDELINE UPDATE INFORMATION:

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| 09/15/09 | New Medical Coverage Guideline. |
| 01/01/10 | Revised Florida Blue Radiology Management program exception section. |
| 09/15/11 | Annual review; maintain experimental or investigational position statement. Updated references. |
| 05/11/14 | Revision: Program Exceptions section updated. |
| 03/15/17 | Revision; updated other section and references. |
| 09/15/19 | Review; no change in position statement. Updated references. |
| 11/15/21 | Review; no change in position statement. |
| 07/01/22 | Revision to Program Exceptions section. |
| 08/21/23 | Update to Program Exceptions section. |
| 01/01/24 | Position statement maintained. |
| 11/15/24 | Review; no change in position statement. Updated references. |
| 11/15/25 | Review; add statement for multiple myeloma, smoldering multiple myeloma, monoclonal gammopathy of undetermined significance and solitary plasmacytoma. Updated references. |
| 11/23/26 | Revision; revised position statement for clarity. |