

Measure #147: Nuclear Medicine: Correlation with Existing Imaging Studies for All Patients Undergoing Bone Scintigraphy – National Quality Strategy Domain: Communication and Care Coordination

2017 OPTIONS FOR INDIVIDUAL MEASURES:
REGISTRY ONLY

MEASURE TYPE:
Process

DESCRIPTION:
Percentage of final reports for all patients, regardless of age, undergoing bone scintigraphy that include physician documentation of correlation with existing relevant imaging studies (e.g., x-ray, MRI, CT, etc.) that were performed

INSTRUCTIONS:
This measure is to be reported **each time** bone scintigraphy is performed during the **performance period**. There is no diagnosis associated with this measure. It is anticipated eligible clinicians who perform the professional component of the bone scintigraphy study will report on this measure.

Measure Reporting:
The listed denominator criteria is used to identify the intended patient population. The numerator options included in this specification are used to submit the quality actions allowed by the measure. The quality-data codes listed do not need to be submitted for registry-based submissions; however, these codes may be submitted for those registries that utilize claims data.

DENOMINATOR:
All final reports for patients, regardless of age, undergoing bone scintigraphy

Denominator Criteria (Eligible Cases):
Patient encounter during the **performance period** (CPT): 78300, 78305, 78306, 78315, 78320

NUMERATOR:
Final reports that include physician documentation of correlation with existing relevant imaging studies (e.g., x-ray, MRI, CT, etc.)

Definition:
Relevant Imaging Studies – Relevant imaging studies are defined as studies that correspond to the same anatomical region in question.

Numerator Options:
Performance Met:

Final report for bone scintigraphy study includes correlation with existing relevant imaging studies (eg, x-ray, MRI, CT) corresponding to the same anatomical region in question **(3570F)**

OR

Denominator Exception:

Documentation of system reason(s) for not documenting correlation with existing relevant imaging studies in final report (eg, no existing relevant imaging study available, patient did not have a previous relevant imaging study) **(3570F with 3P)**

Note: Correlative studies are considered to be unavailable if relevant studies (reports and/or actual examination material) from other imaging modalities exist but could not be obtained after reasonable efforts to retrieve the studies are made by the interpreting physician prior to the finalization of the bone scintigraphy report.

OR

Performance Not Met:

Bone scintigraphy report not correlated in the final report with existing relevant imaging studies, reason not otherwise specified (**3570F with 8P**)

RATIONALE:

Radionuclide bone imaging plays an integral part in tumor staging and management; the majority of bone scans are performed in patients with a diagnosis of malignancy, especially carcinoma of the breast, prostate gland, and lung. This modality is extremely sensitive for detecting skeletal abnormalities, and numerous studies have confirmed that it is considerably more sensitive than conventional radiography for this purpose. However, the specificity of bone scan abnormalities can be low since many other conditions may mimic tumor; therefore, it is important that radionuclide bone scans are correlated with available, relevant imaging studies. Existing imaging studies that are available can help inform the diagnosis and treatment for the patient. Furthermore, correlation with existing radiographs is considered essential to insure that benign conditions are not interpreted as tumor. While there are no formal studies on variations in care in how often correlation with existing studies is not performed, there is significant anecdotal information from physicians practicing in the field that there is a gap in care and that correlation is not occurring frequently when images are available.

Literature suggests that as many as 30% of Radiology reports contain errors, regardless of the imaging modality, radiologists' experience, or time spent in interpretation. Evidence has also suggested that Radiology reports are largely non-standardized and commonly incomplete, vague, untimely, and error-prone and may not serve the needs of referring physicians. Therefore, it is imperative that existing imaging reports be correlated with the Nuclear Medicine bone scintigraphy procedure to ensure proper diagnosis and appropriate patient treatment.

CLINICAL RECOMMENDATION STATEMENTS:

Bone scintigraphic abnormalities should be correlated with appropriate physical examination and imaging studies to ascertain that osseous or soft-tissue abnormalities, which might cause cord or other nerve compression or pathologic fracture in an extremity, are not present. (SNM, 2003)

Interpretation criteria

Bone scans are very sensitive for disease, but specificity of findings is low and must be interpreted in light of other information

1. History
2. Physical Exam
3. Other test results
4. Comparison with previous studies

(SNM, 2003)

Reporting

1. Description of technique
2. Description of abnormal tracer uptake
3. Correlation with other studies
4. Comparison with previous studies
5. Interpretation

(SNM, 2003)

Comparisons with previous examinations and reports, when possible, should be a part of the imaging consultation and report. Integrated PET/CT studies are more valuable when correlated with previous diagnostic CT, previous PET, previous PET/CT, previous MRI, and all appropriate imaging studies and clinical data that are relevant. (SNM, 2010)

As bone tracer concentration reflects osteoblastic activity which is a common response to a wide range of pathologies, a focus of abnormal tracer concentration should not be confidently assigned to a particular pathology without a typical pattern of tracer distribution such as multiple randomly placed foci in metastatic bone disease or multiple aligned foci of rib uptake in trauma. In the absence of this, correlation of foci or uptake with alternative modality images such as plain radiographs, MR or CT images should be reviewed when available as this can significantly increase the accuracy of bone scintigraphy interpretation. (BNMS, 2014)

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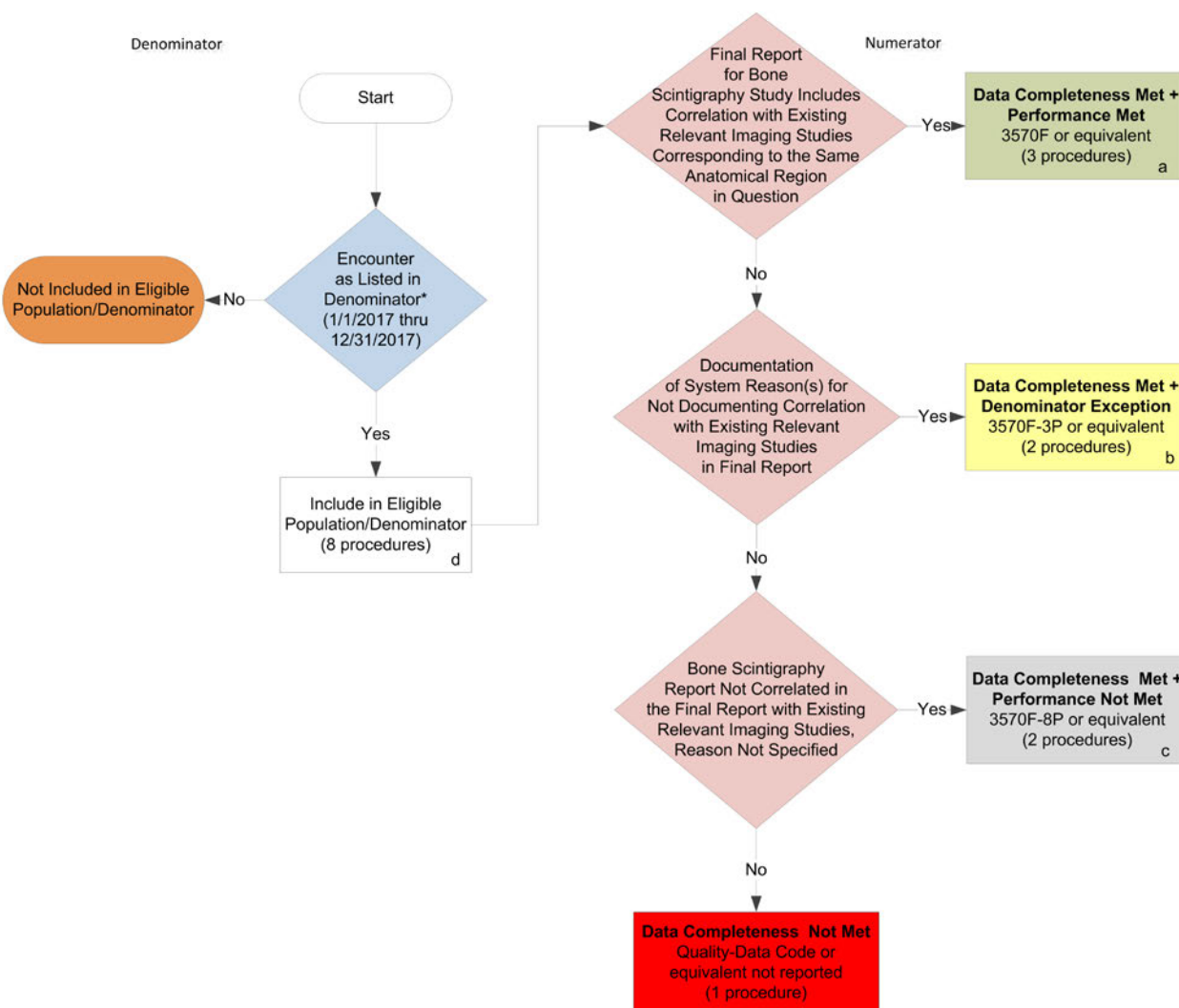
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2017 Registry Individual Measure Flow
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SAMPLE CALCULATIONS:

Data Completeness =

$$\frac{\text{Performance Met (a=3 procedures)} + \text{Denominator Exception (b=2 procedures)} + \text{Performance Not Met (c=2 procedures)}}{\text{Eligible Population / Denominator (d=8 procedures)}} = \frac{7 \text{ procedures}}{8 \text{ procedures}} = 87.50\%$$

Performance Rate=

$$\frac{\text{Performance Met (a=3 procedures)}}{\text{Data Completeness Numerator (7 procedures) - Denominator Exception (b=2 procedures)}} = \frac{3 \text{ procedures}}{5 \text{ procedures}} = 60.00\%$$

* See the posted Measure Specification for specific coding and instructions to report this measure.
 NOTE: Report Frequency: Procedure

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 The measure diagrams were developed by CMS as a supplemental resource to be used in conjunction with the measure specifications. They should not be used alone or as a substitution for the measure specification.

v1

2017 Registry Individual Measure Flow

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Please refer to the specific section of the Measure Specification to identify the denominator and numerator information for use in reporting this Individual Measure.

1. Start with Denominator
2. Check Encounter Performed:
 - a. If Encounter as Listed in the Denominator equals No, do not include in Eligible Patient Population. Stop Processing.
 - b. If Encounter as Listed in the Denominator equals Yes, include in the Eligible population.
3. Denominator Population:
 - a. Denominator population is all Eligible Patients in the denominator. Denominator is represented as Denominator in the Sample Calculation listed at the end of this document. Letter d equals 8 procedures in the sample calculation.
4. Start Numerator
5. Check Final Report for Bone Scintigraphy Study Includes Correlation with Existing Relevant Imaging Studies Corresponding to the Same Anatomical Region in Question:
 - a. If Final Report for Bone Scintigraphy Study Includes Correlation with Existing Relevant Imaging Studies Corresponding to the Same Anatomical Region in Question equals Yes, include in Data Completeness Met and Performance Met.
 - b. Data Completeness Met and Performance Met letter is represented in the Data Completeness and Performance Rate in the Sample Calculation listed at the end of this document. Letter a equals 3 procedures in Sample Calculation.
 - c. If Final Report for Bone Scintigraphy Study Includes Correlation with Existing Relevant Imaging Studies Corresponding to the Same Anatomical Region in Question equals No, proceed to Documentation of System Reason(s) for Not Documenting Correlation with Existing Relevant Imaging Studies in Final Report.
6. Check Documentation of System Reason(s) for Not Documenting Correlation with Existing Relevant Imaging Studies in Final Report:
 - a. If Documentation of System Reason(s) for Not Documenting Correlation with Existing Relevant Imaging Studies in Final Report equals Yes, include in Data Completeness Met and Denominator Exception.
 - b. Data Completeness Met and Denominator Exception letter is represented in the Data Completeness in the Sample Calculation listed at the end of this document. Letter b equals 2 procedures in the Sample Calculation.
 - c. If Documentation of System Reason(s) for Not Documenting Correlation with Existing Relevant Imaging Studies in Final Report equals No, proceed to one Scintigraphy Report Not Correlated in the Final Report with Existing Relevant Imaging Studies, Reason not Specified.

7. Check Bone Scintigraphy Report Not Correlated in the Final Report with Existing Relevant Imaging Studies, Reason not Specified:
 - a. If Bone Scintigraphy Report Not Correlated in the Final Report with Existing Relevant Imaging Studies, Reason not Specified equals Yes, include in the Data Completeness Met and Performance Not Met.
 - b. Data Completeness Met and Performance Not Met letter is represented in the Data Completeness in the Sample Calculation listed at the end of this document. Letter c equals 2 procedures in the Sample Calculation.
 - c. If Bone Scintigraphy Report Not Correlated in the Final Report with Existing Relevant Imaging Studies, Reason not Specified equals No, proceed to Data Completeness Not Met.
8. Check Data Completeness Not Met :
 - a. If Data Completeness Not Met equals No, Quality Data Code or equivalent not reported. 1 procedure has been subtracted from the data completeness numerator in the sample calculation.