

# FUTURE Local Coverage Determination (LCD): Chest X-Ray Policy (L37547)

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Please Note: Future Effective Date.

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## Contractor Information

<b>Contractor Name</b>	<b>Contract Type</b>	<b>Contract Number</b>	<b>Jurisdiction</b>	<b>State(s)</b>
<a href="#">Noridian Healthcare Solutions, LLC</a>	A and B MAC	01111 - MAC A	J - E	California - Entire State
<a href="#">Noridian Healthcare Solutions, LLC</a>	A and B MAC	01112 - MAC B	J - E	California - Northern
<a href="#">Noridian Healthcare Solutions, LLC</a>	A and B MAC	01182 - MAC B	J - E	California - Southern American Samoa
<a href="#">Noridian Healthcare Solutions, LLC</a>	A and B MAC	01211 - MAC A	J - E	Guam Hawaii Northern Mariana Islands American Samoa
<a href="#">Noridian Healthcare Solutions, LLC</a>	A and B MAC	01212 - MAC B	J - E	Guam Hawaii Northern Mariana Islands
<a href="#">Noridian Healthcare Solutions, LLC</a>	A and B MAC	01311 - MAC A	J - E	Nevada
<a href="#">Noridian Healthcare Solutions, LLC</a>	A and B MAC	01312 - MAC B	J - E	Nevada American Samoa
<a href="#">Noridian Healthcare Solutions, LLC</a>	A and B MAC	01911 - MAC A	J - E	California - Entire State Guam Hawaii Nevada Northern Mariana Islands

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## LCD Information

### Document Information

Original Effective Date  
For services performed on or  
after 06/22/2018

Revision Effective Date  
N/A

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L37547

Revision Ending Date  
N/A

LCD Title  
Chest X-Ray Policy

Retirement Date  
N/A

Proposed LCD in Comment Period  
N/A

Notice Period Start Date  
05/07/2018

Source Proposed LCD  
[DL37547](#)

Notice Period End Date  
06/21/2018

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#### CMS National Coverage Policy

Title XVIII of the Social Security Act (SSA), §1862(a)(1)(A), states that no Medicare payment shall be made for items or services which "are not reasonable and necessary for the diagnosis or treatment of illness or injury or to improve the functioning of a malformed body member."

Title XVIII of the Social Security Act, §1862(a)(7) and 42 Code of Federal Regulations (CFR) §411.15(a)(1), exclude routine physical examinations.

Title XVIII of the Social Security Act, §1833(e), prohibits Medicare payment for any claim lacking the necessary documentation to process the claim.

CMS Manual System, Pub. 100-02, Medicare Benefit Policy Manual, Chapter 15, §80, Requirements for Diagnostic X-Ray, Diagnostic Laboratory, and Other Diagnostic Tests, sets forth the levels of physician supervision required for furnishing the technical component of diagnostic tests for a Medicare beneficiary who is not a hospital inpatient or outpatient.

CMS Manual System, Pub. 100-02, Medicare Benefit Policy Manual, Chapter 15, §§80.4-80.4.4, Coverage of Portable X-Ray Services Not Under the Direct Supervision of a Physician applicability of health and safety standards apply to all suppliers of portable x-ray services and the scope of portable x-ray benefit and exclusions from coverage as portable x-ray services.

CMS Manual System, Pub. 100-02, Medicare Benefit Policy Manual, Chapter 15, §250, Medical and Other Health Services Furnished to Inpatients of Hospitals and Skilled Nursing Facilities including payments under arrangement.

42 CFR 486.100, stipulates that portable X-rays must comply with Federal, State, and local laws and regulations.

CMS Manual System, Pub. 100-08, Medicare Program Integrity Manual, Chapter 3, §3.4.1.3, Diagnoses Code Requirement.

42 Code of Federal Regulations, §410.32, addresses diagnostic x-ray tests, diagnostic laboratory tests, and other diagnostic tests: Conditions.

CMS Manual System, Pub. 100-04, Medicare Claims Processing Manual, Chapter 13, §§100 and 100.1, Interpretation of Diagnostic Tests describes how physicians should handle billing when two providers read a chest X-ray. Medicare will pay for the interpretation and report that directly contributes to the diagnosis and treatment of the individual patient.

CMS Manual System, Pub, 100-02, Medicare Benefit Policy Manual, Chapter 15, §80.6.1, Definitions.

Coverage Guidance

### **Coverage Indications, Limitations, and/or Medical Necessity**

Radiographs of the chest are common tests performed in many outpatient offices (radiology and many others), clinics, outpatient hospital departments, inpatient hospital episodes, skilled nursing facilities, homes, and other settings. They can be used for many pulmonary diseases, cardiac diseases, infections and inflammatory diseases, chest and upper abdominal trauma situations, malignant and metastatic diseases, allergic and drug related diseases. There are thousands of diagnoses which would constitute reasonable and necessary conditions for chest X-rays. Despite that, Noridian data shows that there are a large number of chest radiographs that do NOT appear reasonable and necessary. To simplify this policy, make it easier for patients to receive, and for physicians to be reimbursed for chest X-rays and avoiding coding errors, we are converting this to a negative policy.

Noridian is listing those diagnoses that are not reasonable and necessary based on literature from medical societies and clear community standards and for which data analysis shows are the more common reasons for denial. A chest X-ray that is not reasonable and necessary contributes to unneeded patient radiation exposure, patient anxiety, unnecessary visits to a medical or radiology facility, and increased costs to both patients and the Medicare Trust Fund.

In general, preprocedural chest X-rays in the absence of pulmonary or cardiac diseases, chest X-rays in the absence of signs or symptoms, and chest X-rays for minor trauma of the head, lower back or extremities are not the community standard. In rare circumstances, when a usually not reasonable and necessary chest radiograph is appropriate, this local coverage policy allows for individual reconsideration of that case. Radiographs of the chest are commonly performed in outpatient offices (radiology and many others), clinics, outpatient hospital departments, inpatient hospital episodes, skilled nursing facilities, homes, and other settings. They are used to diagnose and aid in treatment decisions for pulmonary diseases, cardiac diseases, infections and inflammatory diseases, chest and upper abdominal trauma situations, malignant and metastatic diseases, allergic and drug related diseases.

In general, preprocedural chest X-rays in the absence of pulmonary or cardiac diseases, chest X-rays in the absence of signs or symptoms, and chest X-rays for minor trauma of the head, lower back or extremities are not the current accepted medical practice.

### **Summary of Evidence**

In ACR-SPR-STR PRACTICE PARAMETER FOR THE PERFORMANCE OF CHEST RADIOGRAPHY (a practice guideline from the *American College of Radiology*, the *Pediatric Society for Radiology* and the *Society of Thoracic Radiology*) 2017 revision, in the Section of Indications and Contraindications (page 2 or 9); indication number 5 states:

"Preoperative radiographic evaluation when cardiac or respiratory symptoms are present when there is a significant potential for thoracic pathology that may influence anesthesia or the surgical result or lead to increased perioperative morbidity or mortality. Routine preoperative chest x-rays are not appropriate [2]."

Also, under Section V - Specifications of the Examination, the language includes:

"The written or electronic request for chest radiography should provide sufficient information to demonstrate the medical necessity of the examination and allow for its proper performance and interpretation. Documentation that satisfies medical necessity includes 1) signs and symptoms and/or 2) relevant history (including known

diagnoses). Additional information regarding the specific reason for the examination or a provisional diagnosis would be helpful and may at times be needed to allow for the proper performance and interpretation of the examination."

In American College of Radiology ACR Appropriateness Criteria; Routine Chest Radiography (2000-updated 2015); in the section Summary of Recommendations:

### **Summary of Recommendations**

- Available evidence does not support the broad performance of routine chest radiography. Despite the frequent demonstration of abnormalities, routine chest radiographs uncommonly add clinically significant information that would not have been predicted by a reliable history and physical examination.
- In the case of the preoperative chest radiograph, evidence suggests that increased management value may accompany advanced patient age (especially >70 years) and certain other patient- and procedure-related risk factors (eg, history of cardiopulmonary disease, unreliable history and physical examination, high-risk surgery); however, the ability of a preoperative chest radiograph to forecast postoperative pulmonary complications is low.
- The decision to perform a chest radiograph in the preoperative, preintervention, hospital admission, and asymptomatic outpatient settings should principally derive from a need to investigate a clinical suspicion for acute or unstable chronic cardiopulmonary disease that could influence patient care. Selective ordering is recommended, including in patients of advanced age or otherwise at increased risk.
- Routine chest radiography is not definitively indicated in uncomplicated hypertension. There may be value in patients with moderate to severe hypertension and potential aortic coarctation or cardiogenic edema, in addition to patients with overt cardiopulmonary signs or symptoms.
- The anticipated value from ordering a chest radiograph should be weighed against adverse effects, including radiation exposure, procedural delay, anxiety, and potential morbidity from the investigation of incidental findings."

In an FDA publication; White Paper: Initiative to Reduce Unnecessary Radiation Exposure from Medical Imaging, (updated 2-23-2017) there is discussion regarding types of imaging, concerns about radiation exposure and types of unnecessary exposure the white paper states:

### "3. Unnecessary Radiation Exposure"

"Because CT, fluoroscopy, and nuclear medicine require the use of radiation, some level of radiation exposure is inherent in these types of procedures. Nevertheless, when these procedures are conducted appropriately, the medical benefits they can provide generally outweigh the risks."

"However, if proper precautions are not taken, patients may be exposed to radiation without clinical need or benefit. Unnecessary radiation exposure may result from the use of a radiation dose above what is optimal to meet the clinical need in a given procedure. To a point, using a higher radiation dose can produce a higher-resolution image. If the dose is too low, the quality of the resulting image may be poor, and, as a result, a physician may not be able to make an accurate clinical determination. An optimal radiation dose is one that is as low as reasonably achievable while maintaining sufficient image quality to meet the clinical need."

"Unnecessary radiation exposure may also result from the performance of a particular medical imaging procedure when it is not medically justified given a patient's signs and symptoms, or when an alternative might be preferable given a patient's lifetime history of radiation exposure."

"There is broad agreement that steps should be taken to reduce unnecessary exposure to radiation"

Further on, under Issues Related to Decision Making: "In some cases, ordering physicians may lack or be unaware of recommended criteria to guide their decisions about whether or not a particular imaging procedure is medically efficacious. As a result, they may order imaging procedures without sufficient justification and unnecessarily expose patients to radiation. Various professional organizations, including American College of Radiology (ACR) and the American College of Cardiology (ACC), have developed and are working to disseminate imaging referral criteria, called "appropriateness criteria" or "appropriate use criteria," associated with a number of medical conditions.<sup>18</sup> However, criteria for appropriate ordering of medical imaging exams have not yet been broadly adopted by the practicing medical community."

In a document entitled *Choosing Wisely* (a collaboration of the *American Board of Internal Medicine, the American College of Radiology and Consumer Reports*), a 2012 publication for patients and physicians-with Subtitle *Chest X-Rays Before Surgery-When You Need One and When You Don't*; the language states:

"A chest X-ray usually doesn't help."

"Many people are given a chest X-ray to "clear" them before surgery. Some hospitals require a chest X-ray for almost every patient. But, if you do not have symptoms of heart or lung disease, and your risk is low, an X-ray probably will not help. It is not likely to show a serious problem that would change your treatment plan."

"A chest X-ray does not help the surgeon or the anesthesiologist manage your care. Most of the time, a careful medical history and physical exam are all you need."

- In the *Annals of the Royal College of Medicine*, v.92(8); 2010 Nov. in an article entitled: Erect Chest Radiography in the Setting of the Acute Abdomen: Essential tool or an unnecessary waste of resources?, the authors state as their conclusion:
  - "The majority of CXRs performed on emergency surgical admissions with abdominal pain are unnecessary. By obtaining a clear history, performing a thorough clinical examination and following the RCR guidelines most of the CXRs could be avoided. This would lead to less radiation exposure, reduce delays to diagnosis, and provide significant financial savings."

Searching the National Library of Medicine, there was no supporting literature regarding or suggesting chest radiographs in the setting of common headaches, pain, unspecified urinary tract infections, lower back pain, trauma unrelated to the thorax or upper abdomen or unspecified conditions such as "general signs and symptoms".

Although frequency of radiographs is not part of this local coverage determination, recent articles in the past 2 years are questioning the high frequency of repeat radiographs in the ICU, post certain procedures, and on ventilator patients.

## **Analysis of Evidence (Rationale for Determination)**

Level of Evidence: Evidence excellent with articles and white papers within recent years.

Of the 47 references cited in the *ACR Appropriateness Criteria® Routine Chest Radiography* document, 45 are categorized as diagnostic references including 1 well designed study, 2 good quality studies, and 4 quality studies that may have design limitations. Additionally, 1 reference is categorized as a therapeutic reference. There are 39 references that may not be useful as primary evidence. There is 1 reference that is a meta-analysis study. The 47 references cited in the *ACR Appropriateness Criteria® Routine Chest Radiography* document were published from 1965-2014. While there are references that report on studies with design limitations, 3 well designed or good quality studies provide good evidence.

Quality – High quality evidence as shown by supportive papers by major national clinical societies and the Federal Drug Administration

Strength – Major strength as evidence that papers relate to current recommended national standards of care for patients. Policy simplifications also reduce provider errors.

Weight – No literature differs or is opposite to national society recommendations, or to FDA concerns.

The most recent peer reviewed guidelines recommend not ordering or requiring routine preoperative or

preprocedural chest X-rays in patients with no cardiac, pulmonary or thoracic issues to avoid unnecessary radiation, unnecessary outpatient visits for patients, and to save money for patient co-pays and the Medicare system. The Medicare Manuals do not support coverage for services that are not reasonable and necessary for the diagnosis or treatment of an illness or to repair a damaged organ. Chest radiographs taken for distant fractures or situations unrelated to any signs, symptoms or tests of pulmonary, cardiac, thoracic or related conditions are considered not reasonable and necessary. The criteria stated by the American College of Radiology is a recently accepted standard

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## Coding Information

### Bill Type Codes:

Contractors may specify Bill Types to help providers identify those Bill Types typically used to report this service. Absence of a Bill Type does not guarantee that the policy does not apply to that Bill Type. Complete absence of all Bill Types indicates that coverage is not influenced by Bill Type and the policy should be assumed to apply equally to all claims.

N/A

### Revenue Codes:

Contractors may specify Revenue Codes to help providers identify those Revenue Codes typically used to report this service. In most instances Revenue Codes are purely advisory. Unless specified in the policy, services reported under other Revenue Codes are equally subject to this coverage determination. Complete absence of all Revenue Codes indicates that coverage is not influenced by Revenue Code and the policy should be assumed to apply equally to all Revenue Codes.

N/A

### CPT/HCPCS Codes

#### **Group 1 Paragraph:**

N/A

#### **Group 1 Codes:**

71045 RADIOLOGIC EXAMINATION, CHEST; SINGLE VIEW  
71046 RADIOLOGIC EXAMINATION, CHEST; 2 VIEWS  
71047 RADIOLOGIC EXAMINATION, CHEST; 3 VIEWS  
71048 RADIOLOGIC EXAMINATION, CHEST; 4 OR MORE VIEWS

### ICD-10 Codes that Support Medical Necessity

#### **Group 1 Paragraph:**

N/A

#### **Group 1 Codes:**

#### **ICD-10 Codes Description**

XX000 Not Applicable

## Group 1 Medical Necessity ICD-10 Codes Asterisk Explanation:

NA

ICD-10 Codes that DO NOT Support Medical Necessity

### Group 1 Paragraph:

NA

### Group 1 Codes:

ICD-10 Codes	Description
D64.9	Anemia, unspecified
I70.90	Unspecified atherosclerosis
M06.9	Rheumatoid arthritis, unspecified
M25.559	Pain in unspecified hip
M54.5	Low back pain
N39.0	Urinary tract infection, site not specified
R41.0	Disorientation, unspecified
R41.82	Altered mental status, unspecified
R51	Headache
R52	Pain, unspecified
R68.89	Other general symptoms and signs
S09.90XA	Unspecified injury of head, initial encounter
T14.90XA	Injury, unspecified, initial encounter
Z01.810	Encounter for preprocedural cardiovascular examination
Z01.818	Encounter for other preprocedural examination
Z04.3	Encounter for examination and observation following other accident
Z98.890	Other specified postprocedural states

ICD-10 Additional Information

NA

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## General Information

Associated Information

N/A

Sources of Information

N/A

Bibliography

1. Richards, S., Shiffermiller, J., Wells, A., May, S., Chakraborty, S., Caverzagie, K. and Beachy, M. (2014). A Clinical Process Change and Educational Intervention to Reduce the Use of Unnecessary Preoperative Tests. *Journal of Graduate Medical Education*, 6(4), pp.733-737. Retrieved August 4, 2017
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3. Alazzawi, S., De Rover, W., Morris-Stiff, G. and Lewis, M. (2010). Erect chest radiography in the setting of the acute abdomen: essential tool or an unnecessary waste of resources? *The Annals of The Royal College of Surgeons of England*, 92(8), pp.697-699. Retrieved August 4, 2017
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6. ACR-SPR-STR PRACTICE PARAMETER FOR THE PERFORMANCE OF CHEST RADIOGRAPHY. (2017). *American College of Radiology*, [online] Resolution 2, p.Practice Parameter - Chest Radiography. Available at: [American College of Radiology](#)

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## [Revision History Information](#)

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## [Associated Documents](#)

Attachments N/A

Related Local Coverage Documents Article(s) [A55936 - Response to Comments: Chest X-Ray Policy](#) LCD(s) [DL37547 - Chest X-Ray Policy](#)

Related National Coverage Documents N/A

Public Version(s) Updated on 04/19/2018 with effective dates 06/22/2018 - N/A [Back to Top](#)

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## [Keywords](#)

- 71045
- 71046
- 71047
- 71048
- Chest
- X-Ray

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