

Nontraumatic Chest Wall Pain

Nontraumatic chest wall pain is musculoskeletal pain not caused by blunt force. It can affect bones, cartilages, joints, ligaments, tendons, and muscles. Initial imaging is performed to find the cause of pain and to guide treatment.

For an individual with nontraumatic chest wall pain and no history of cancer, a chest x-ray is usually appropriate as the first imaging test. X-ray of ribs (<https://www.radiologyinfo.org/en/info/bonerad>) or ultrasound (US) (<https://www.radiologyinfo.org/en/info/genus>) of the chest may also be appropriate to look for fracture or soft tissue lumps and may help decide if further tests are needed.

For an individual with known or suspected cancer with an initial normal chest x-ray (<https://www.radiologyinfo.org/en/info/chestrad>), the next test may be CT chest (<https://www.radiologyinfo.org/en/info/chestct>) ordered with or without contrast and a whole-body bone scan (<https://www.radiologyinfo.org/en/info/dexa>) to look for tumor or chest wall involvement. Further individualized testing can be done as appropriate, with x-rays of ribs, positron emission tomography using 2-deoxy-2-[fluorine-18]fluoro-D-glucose (18F-FDG)-positron emission tomography (PET) imaging/CT scan (<https://www.radiologyinfo.org/en/info/pet>), or MRI chest.

For an individual with suspected infectious or inflammatory conditions, a CT chest ordered with or without contrast is usually appropriate. Ultrasound chest, MRI (<https://www.radiologyinfo.org/en/info/chestmr>) without and with contrast, 18F-FDG-PET/CT skull base to midthigh, and a white blood cell chest scan may also be appropriate.

For an individual with a history of prior chest interventions such as a chest tube or prior surgery, a CT chest ordered with or without contrast is usually appropriate. US chest, MRI chest ordered with or without contrast, and 18F-FDG-PET/CT skull base to midthigh may be appropriate.

— By Emily Chu and Tasneem Kassam Lalani, MD. This information originally appeared in the *Journal of the American College of Radiology*.

Disclaimer

This information is copied from the RadiologyInfo Web site (<http://www.radiologyinfo.org>) which is dedicated to providing the highest quality information. To ensure that, each section is reviewed by a physician with expertise in the area presented. All information contained in the Web site is further reviewed by an ACR (American College of Radiology) - RSNA (Radiological Society of North America) committee, comprising physicians with expertise in several radiologic areas.

However, it is not possible to assure that this Web site contains complete, up-to-date information on any particular subject. Therefore, ACR and RSNA make no representations or warranties about the suitability of this information for use for any particular purpose. All information is provided "as is" without express or implied warranty.

Please visit the RadiologyInfo Web site at <http://www.radiologyinfo.org> to view or download the latest information.

Note: Images may be shown for illustrative purposes. Do not attempt to draw conclusions or make diagnoses by comparing these images to other medical images, particularly your own. Only qualified physicians should interpret images; the radiologist is the physician expert trained in medical imaging.

Copyright

This material is copyrighted by either the Radiological Society of North America (RSNA), 820 Jorie Boulevard, Oak Brook, IL 60523-2251 or the American College of Radiology (ACR), 1891 Preston White Drive, Reston, VA 20191-4397. Commercial reproduction or multiple distribution by any traditional or electronically based reproduction/publication method is prohibited.

