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.

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