

			Sacroiliitis Intraarticular derangement and soft tissue injury Derangements of axial skeleton and spinal cord Herniated intervertebral disk Pigmented villonodular synovitis Inflammatory and metabolic muscle pathology
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^aRelative cost for imaging study.

Abbreviations: NA, not commercially available; WBC, white blood cell.

Computed tomography (CT) provides detailed visualization of the axial skeleton. Articulations previously considered difficult to visualize by radiography (e.g., zygapophyseal, sacroiliac, sternoclavicular, hip joints) can be evaluated using CT. CT has been demonstrated to be useful in the diagnosis of low back pain (e.g., spinal stenosis vs herniated disk), sacroiliitis, osteoid osteoma, and stress fractures. Helical or spiral CT (with or without contrast angiography) is a novel technique that is rapid, cost effective, and sensitive in diagnosing pulmonary embolism or obscure fractures, often in the setting of initially equivocal findings. High-resolution CT can be advocated in the evaluation of suspected or established infiltrative lung disease (e.g., scleroderma or rheumatoid lung). The recent use of hybrid (positron emission tomography [PET] or single-photon emission CT [SPECT]) CT scans in metastatic evaluations has incorporated CT to provide better anatomic localization of scintigraphic abnormalities.

¹⁸F-Fluorodeoxyglucose (FDG) is the most commonly used radiopharmaceutical in PET scanning. FDG-PET/CT scans are rarely indicated in septic or inflammatory arthritis but have been useful in the evaluation of patients with fever of unknown origin or suspected large vessel vasculitis. For instance, while FDG-PET is useful in assessing vascular inflammation/activity, MRI angiography can best define the extent of vascular damage. Dual-energy CT (DECT) scanning, developed in urology to identify urinary calculi, has been a