

Plain radiographs

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It is not appropriate to order spine radiographs for every patient presenting with neck or low back pain. Patients with red flag signs or symptoms and those who have not responded to conservative treatment require imaging, with most units in resource-rich countries utilising MRI (no radiation penalty) in this situation. Standing radiographs of the whole spine are important for the assessment of scoliosis. Radiographs cannot diagnose early-stage tumour or infection, because significant bone destruction (between 40% and 60% of bone mass) must occur before a radiographic abnormality is detected.

Condition Signs and symptoms Cauda equina syndrome Severe or progressive bilateral neurological deficit of the legs, such as major motor weakness with knee extension, ankle eversion or foot dorsiflexion Recent-onset urinary retention (caused by bladder distension because the sensation of fullness is lost) and/or urinary incontinence or alteration of function (caused by loss of sensation when passing urine) Recent-onset faecal incontinence (due to loss of sensation of rectal fullness) Perianal or perineal sensory loss (saddle anaesthesia or paraesthesia) Unexpected laxity of the anal sphincter Spinal fracture Sudden onset of severe central spinal pain that is relieved by lying down A history of major trauma (e.g. road traffic collision or fall from a height), minor trauma or just strenuous lifting in people with osteoporosis who take corticosteroids Structural deformity of the spine such as a step from one vertebra to an adjacent vertebra There may be point tenderness over a vertebral body Cancer The person being 50 years of age or more Gradual onset of symptoms Severe unremitting pain that remains when the person is supine, aching night pain that prevents or disturbs sleep, pain aggravated by straining (for example, at stool or when coughing or sneezing) and thoracic pain Localised spinal tenderness No symptomatic improvement after 4–6 weeks of conservative low back pain therapy Unexplained weight loss Past history of cancer; breast, lung, gastrointestinal, prostate, renal and thyroid cancers are more likely to metastasise to the spine Infection (such as discitis, vertebral osteomyelitis or spinal epidural abscess) Tuberculosis or recent urinary tract infection Diabetes History of intravenous drug use HIV infection, use of immunosuppressants or where the person is otherwise immunocompromised HIV, human immunodeficiency virus.

TABLE 37.6 Non-spinal causes of low back pain: referred pain. Respiratory, e.g. mesothelioma Vascular, e.g. abdominal aortic aneurysm Renal, e.g. pyelonephritis Gastrointestinal, e.g. peptic ulcer, pancreatitis Urogenital, e.g. testicular, ovarian or prostatic carcinoma

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