

ICD-10 Physician Tips, Issue #5

Thomas J. Gilbert, Jr. MD, MPP, CDI Chief Clinical Officer
Natalie Culhane, RCM Coding
Karen Rice, Editing and QA Services
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Vertebral Fractures

- Vertebral fractures may be traumatic, stress-related or pathologic.
- Traumatic fractures are secondary to excessive forces on normal bone, and fatigue/stress fractures to excessive chronic repetitive forces on normal bone.
- Pathologic fractures are secondary to normal forces on abnormal bone and can be seen with osteoporosis, following radiation therapy or with neoplasm.
- Fragility or insufficiency fractures (pathologic fractures secondary to osteoporosis) are commonly seen with age-related, post-menopausal or senile osteoporosis, with chronic steroid use, with malabsorption or following oophorectomy.

In the ICD-10 guidelines and in the medical literature, the phrase *collapsed vertebra* appears to be synonymous with vertebral fracture. In ICD-10, anterior wedging of the vertebra is included under collapse.

Many radiologists will refer to a vertebral deformity. Vertebral fractures commonly result in deformities: compression fractures result in anterior wedge-shaped deformities or compression deformities; and burst-type fractures result in burst type deformities or vertebra plana. The term deformity is noncommittal with respect to the chronicity of the fracture, however, many radiologists reserve the term for old fractures.

Acute and subacute fractures can be distinguished from old fractures on MRI by the presence of adjacent marrow edema. Old fractures contain normal or fatty marrow on MRI. Pathologic fractures secondary to neoplasm show replacement of fatty marrow throughout the vertebral body often with involvement of the posterior elements of the vertebra, areas of osteolysis or paraspinous masses. Pathologic fractures secondary to neoplasm are often associated with metastatic lesions in other segments of the spine or pelvis.

Acute and subacute fractures can be distinguished from old fractures on CT by the presence of acute fracture lines or cortical deformities. Fracture lines are typically not seen on CT unless there is a nonunion, in which case the fracture line will be corticated. Pathologic fractures typically show decreased bony density on CT with or without osteolysis, cortical destruction, or extrasosseous soft tissue mass.

Not all anterior wedge shaped deformities are secondary to old fractures, however. Mild anterior wedge-shaped deformities can also be developmental (with Scheuermann's or Scheuermann's-like disease) particularly in the lower thoracic or upper lumbar spine. Sometimes you cannot distinguish between a developmental deformity and an old fracture deformity.

Relevant codes include the following:

For vertebral fractures and for each of the codes listed below, documentation must indicate initial v. subsequent encounter:

Initial: When receiving active treatment for the fracture

Subsequent: When active treatment has been completed; receiving routine care during recovery or healing phase with **normal healing, delayed healing or nonunion.**

Sequela: For complications that arise as a direct result of the fracture.

Vertebral fracture with no history of trauma, no diagnosis of osteoporosis or no other bone disorder.

- **M48.5-** *Collapsed (fractured) vertebra, not elsewhere classified*

Fatigue (stress) fracture of the vertebra. Fatigue or stress fractures are secondary to abnormal chronic repetitive forces on normal bone. Chronic repetitive stresses might occur if a patient tried to run a marathon without training properly or if a young man or woman enters boot camp.

- **M48.4-** *for fatigue fracture of vertebrae*

Traumatic vertebral fracture. Fracture occurs when abnormal forces from an injury or trauma are applied to normal bone.

- **S12.--** *for cervical vertebral fractures*
- **S22.0-** *for thoracic vertebral fractures*
- **S32.0-** *for lumbar vertebral fractures*
- **S32.1-** *for sacral fractures with specific reference to zone 1, zone 2 and zone 3.*

Traumatic fracture coding requires additional detail as to the type of fracture, anatomic region of the bone involved, stability, and traumatic spondylolisthesis.

Pathologic (fragility or insufficiency) vertebral fractures. Fracture with normal forces (e.g. fall from a standing position or bending over and picking up something) on abnormal or weakened bone.

- **M80.08** *for age-related osteoporosis with current pathological fracture (If there is marrow edema or the radiologist called an acute, subacute or healing fracture)*

- **M80.88** for other osteoporosis with current pathologic fracture (e.g. with chronic steroid use, malabsorption or post oophorectomy)

Pathologic vertebral fracture secondary to other causes.

- **M84.58** for neoplasm (Also code underlying neoplasm)
- **M84.68** for fracture following previous radiation therapy
- **M84.68** for other disease (Also code underlying condition if possible)

History of an osteoporotic compression fracture which has healed.

- **Z87.310**