Gundersen Health System

Pedicle Screws

Siemens go.All

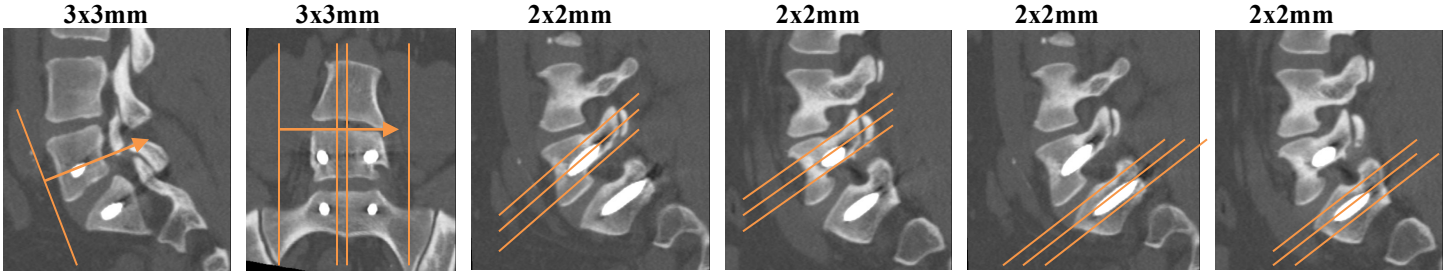
Application Examples: post-op pedicle screws	
Scan Protocol (See for Technical Factors)	**C-Spine T-Spine or L-Spine (**dependent on vertebral levels of pedicle screws / order)

These screws are used to correct deformity, and/or treat trauma. Similar to other bone screws, pedicle screws may be used in instrumentation procedures to affix rods and plates to the spine. The screws may also be used to immobilize part of the spine to assist fusion by holding bony structures together.

Scan Range: One vertebral level above and below area of interest, specified by neurology provider or Radiologist.

2D Reformations: When setting up to image pedicle screws, first align all viewport lines to be orthogonal to spine. Make a coronal MPR from the sagittal viewport and a sagittal MPR from the coronal viewport. Next, adjust lines on coronal and sagittal viewports to a pedicle screw, leaving axial viewport lines true to spine. Then, set range on sagittal viewport to be parallel to screw of interest. Repeat on each pedicle screw. Note same level pedicle screws may be on same series, but only if they are entering into pedicle at same angle. L5-S1 pedicle screw post processing example is depicted below.

1.Coronal MPR **3x3mm** 2.Sagittal MPR **3x3mm** 3.L5 RT Pedicle **2x2mm** 4.L5 LT Pedicle **2x2mm** 5.S1 RT Pedicle **2x2mm** 6.S1 LT Pedicle **2x2mm**



Pedicle Anatomy

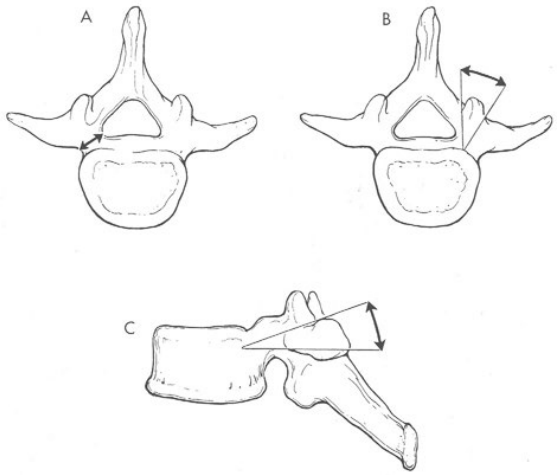


Diagram illustrating the pedicle width (A), the transverse or coronal pedicle angle (B),and the sagittal pedicle angle (C).

Axial Slice Parallel to Pedicle Screw Placement

3D: No