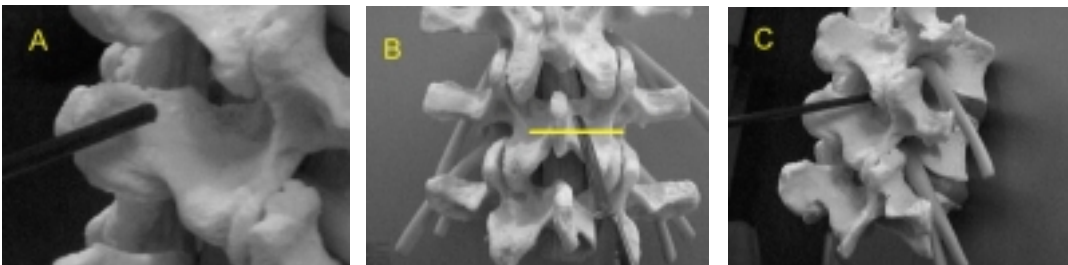
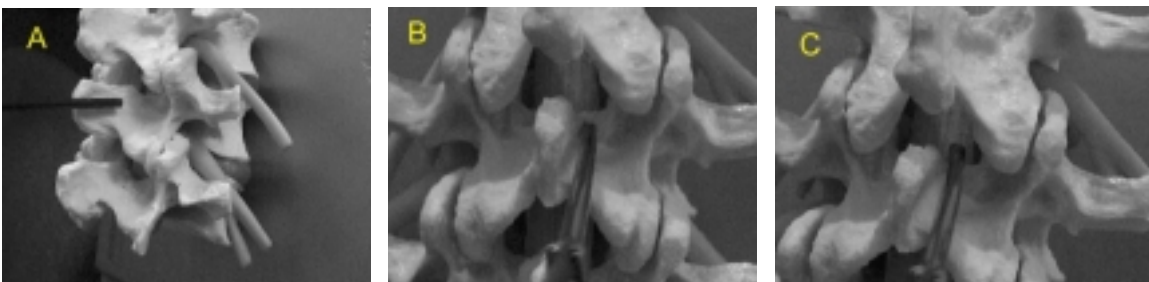


This figure shows the osseous anatomy in the lumbar spine region. Textbooks tell us to insert the spinal or epidural needle between the spinous processes.

I am going to propose an another approach.



Here the needle is inserted at the center of the spinous process and approximately 5 mm to the right in this case and with a cephalad angulation. In B, the yellow line shows that the needle enters the skin at the center of the spinous process. C shows that if the cephalad angulation is just right, the needle will just miss the lamina and pierce the ligamentum flavum.



If the needle is inserted with too little or no cephalad angulation (Figure A) then it will hit the lamina (Figure B). This can be overcome by coming back to the skin (but not coming out of the skin) and redirecting the needle more cephalad (Figure C).