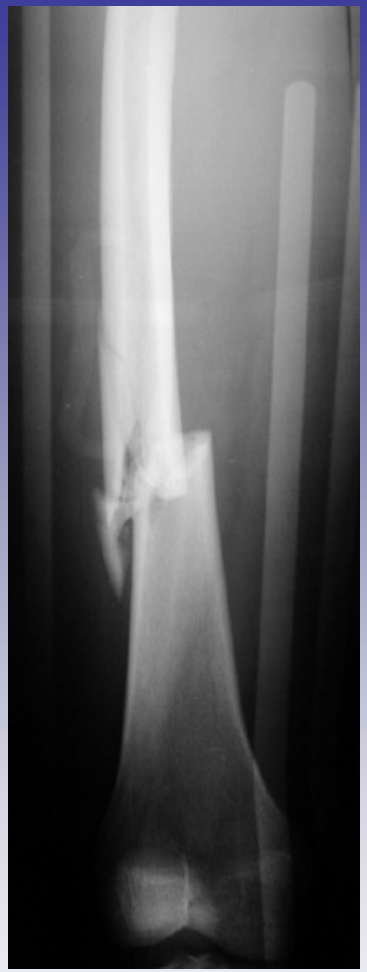
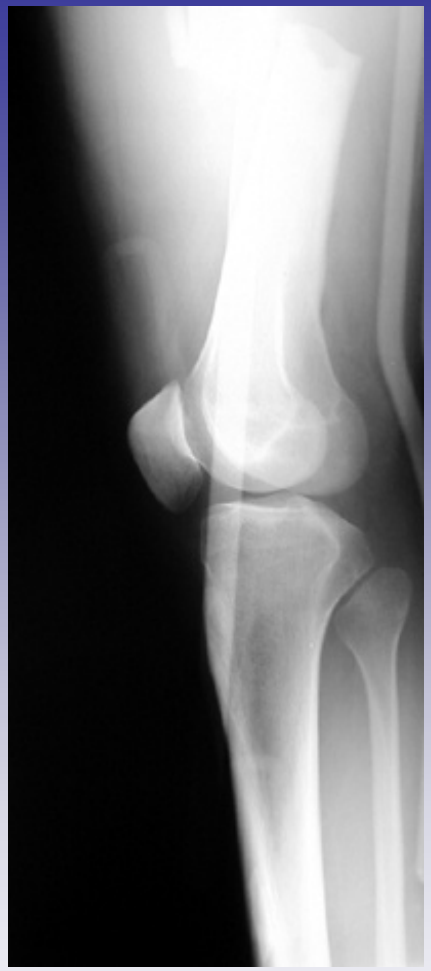
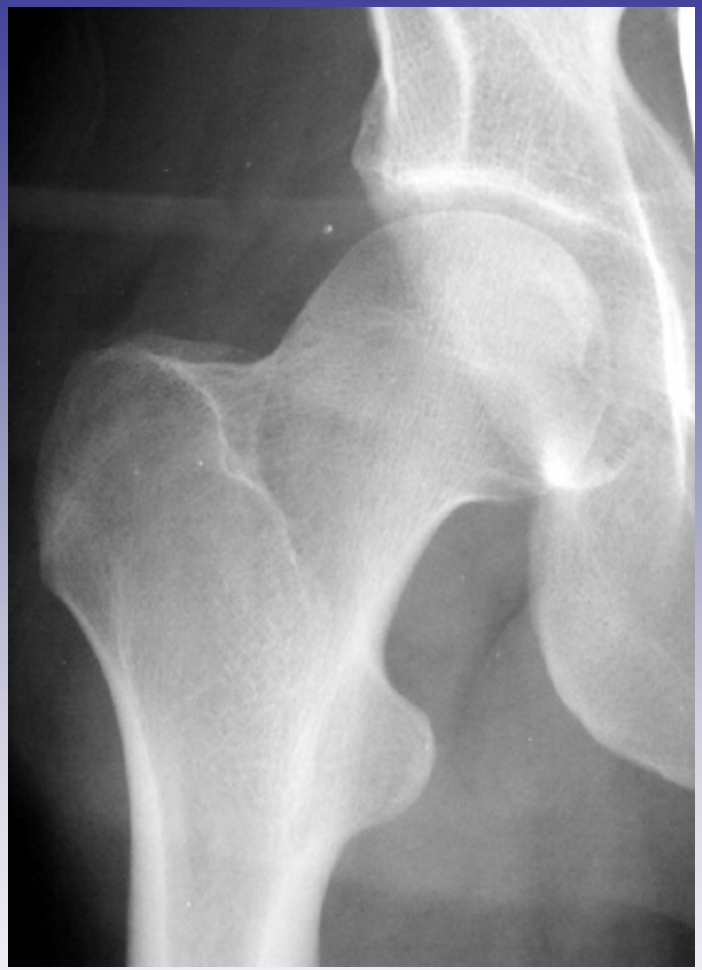
ANTEROGRADE INTRAMEDULLARY NAILING

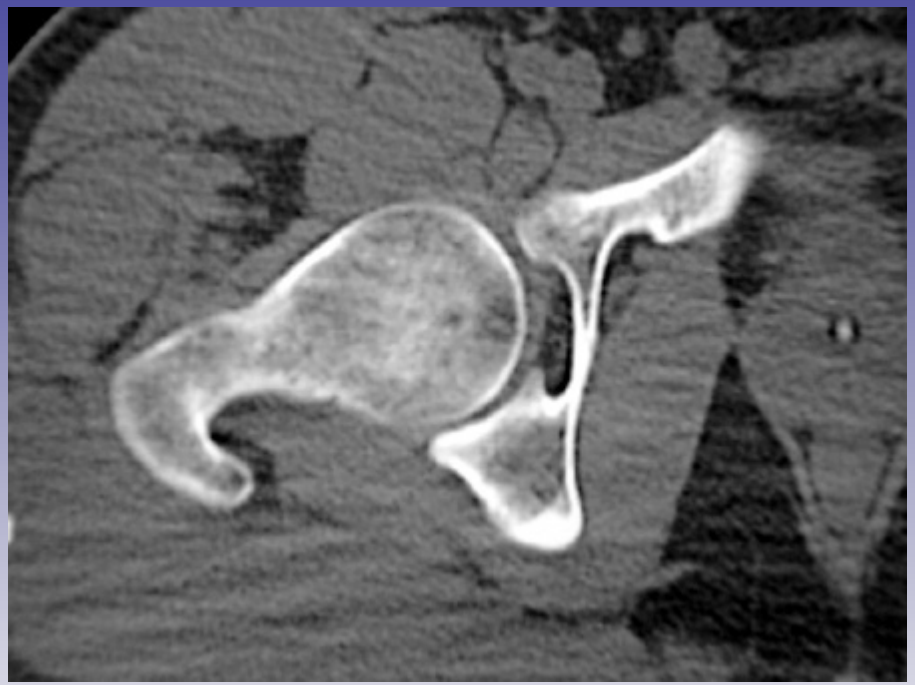


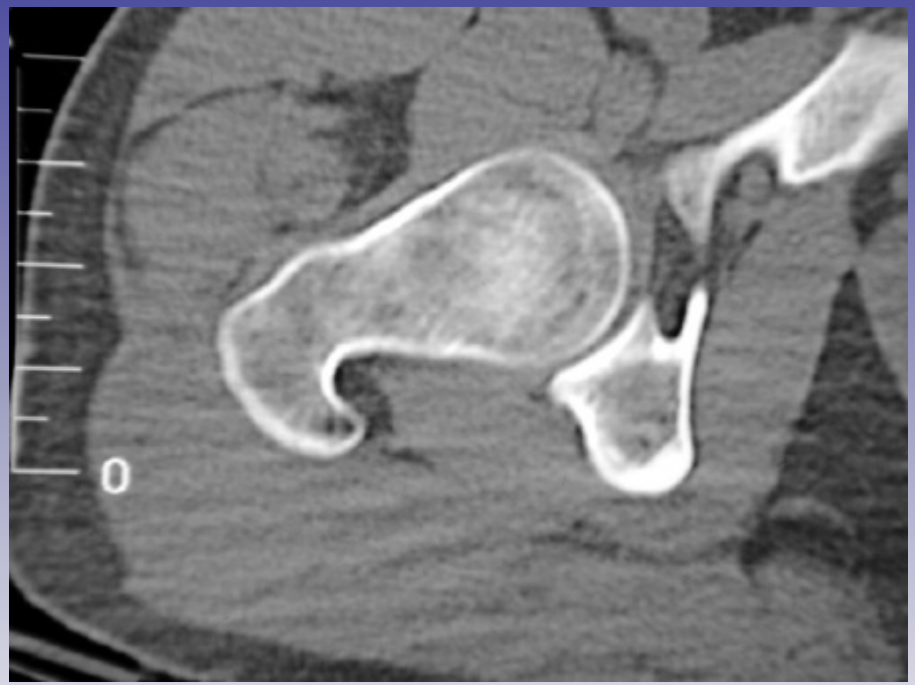


These images demonstrate a distal femoral shaft fracture occurring from blunt trauma.

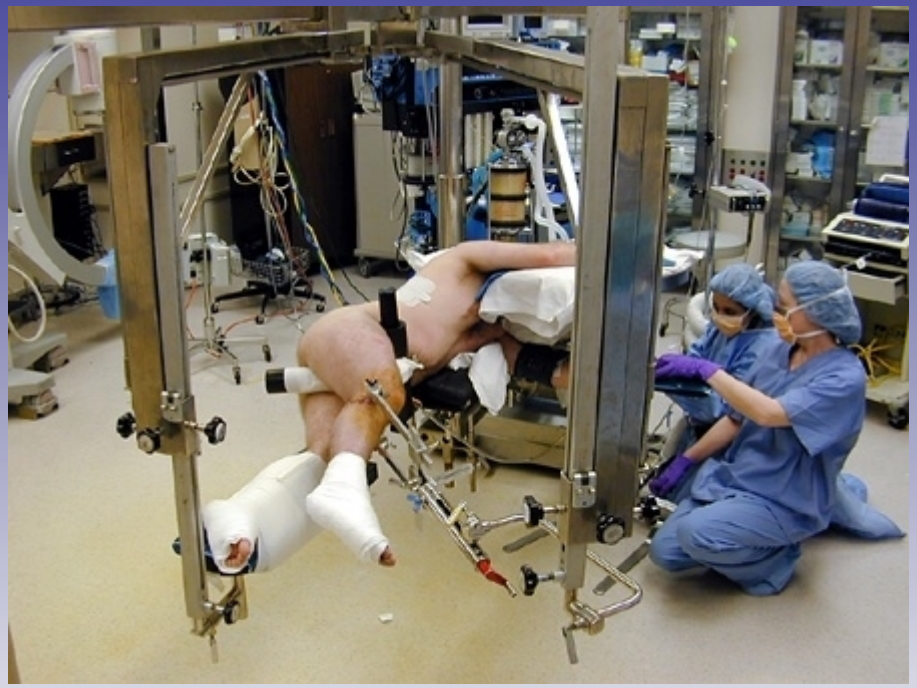


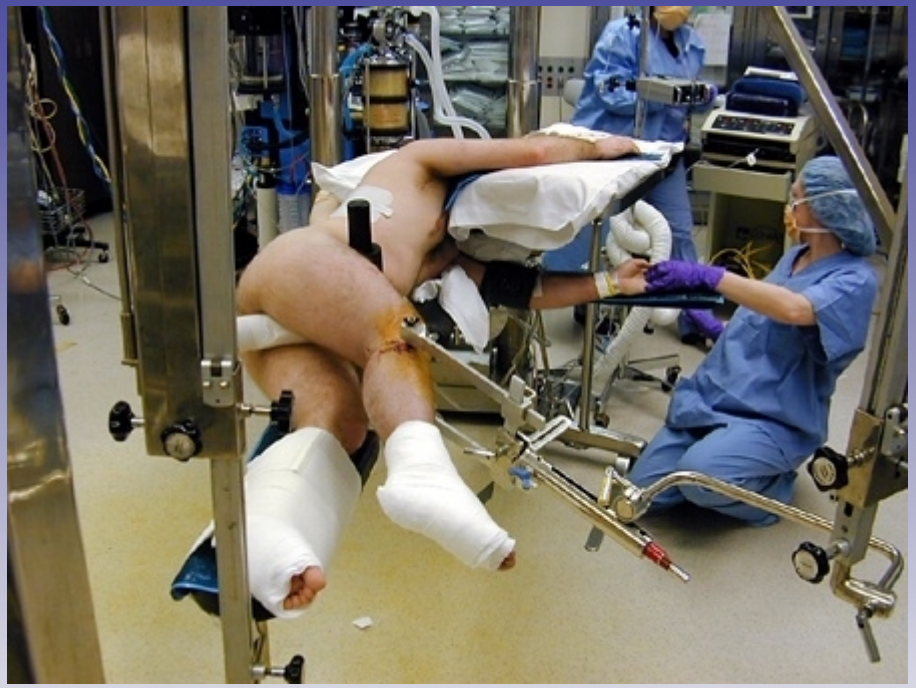
Before performing antegrade femoral nailing, a high-quality AP radiograph of the hip is necessary to rule out occult femoral neck fracture.



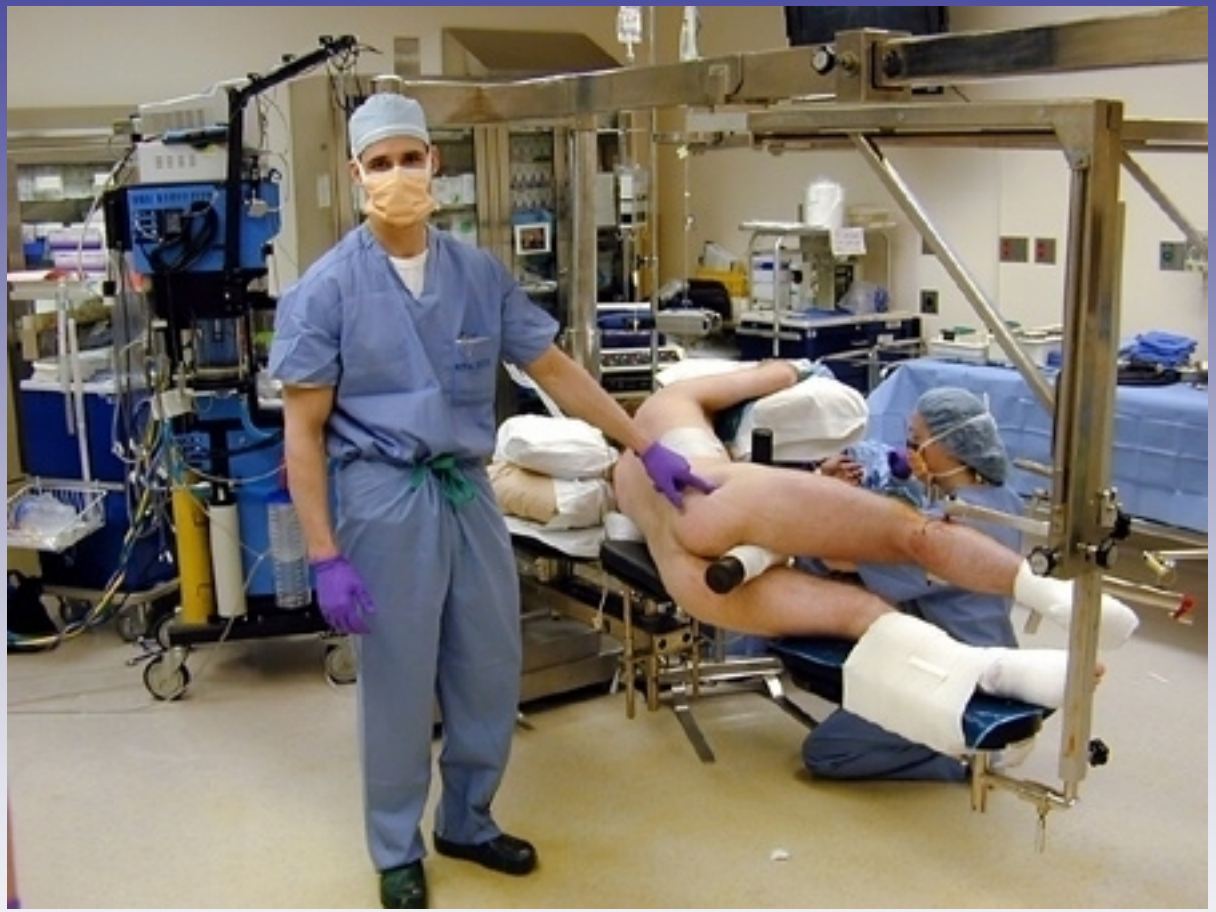


Many patients with femoral shaft injuries have CT scans performed to rule out intraabdominal injury. The CT scan cuts through the femoral neck should also be reviewed to rule out fracture.

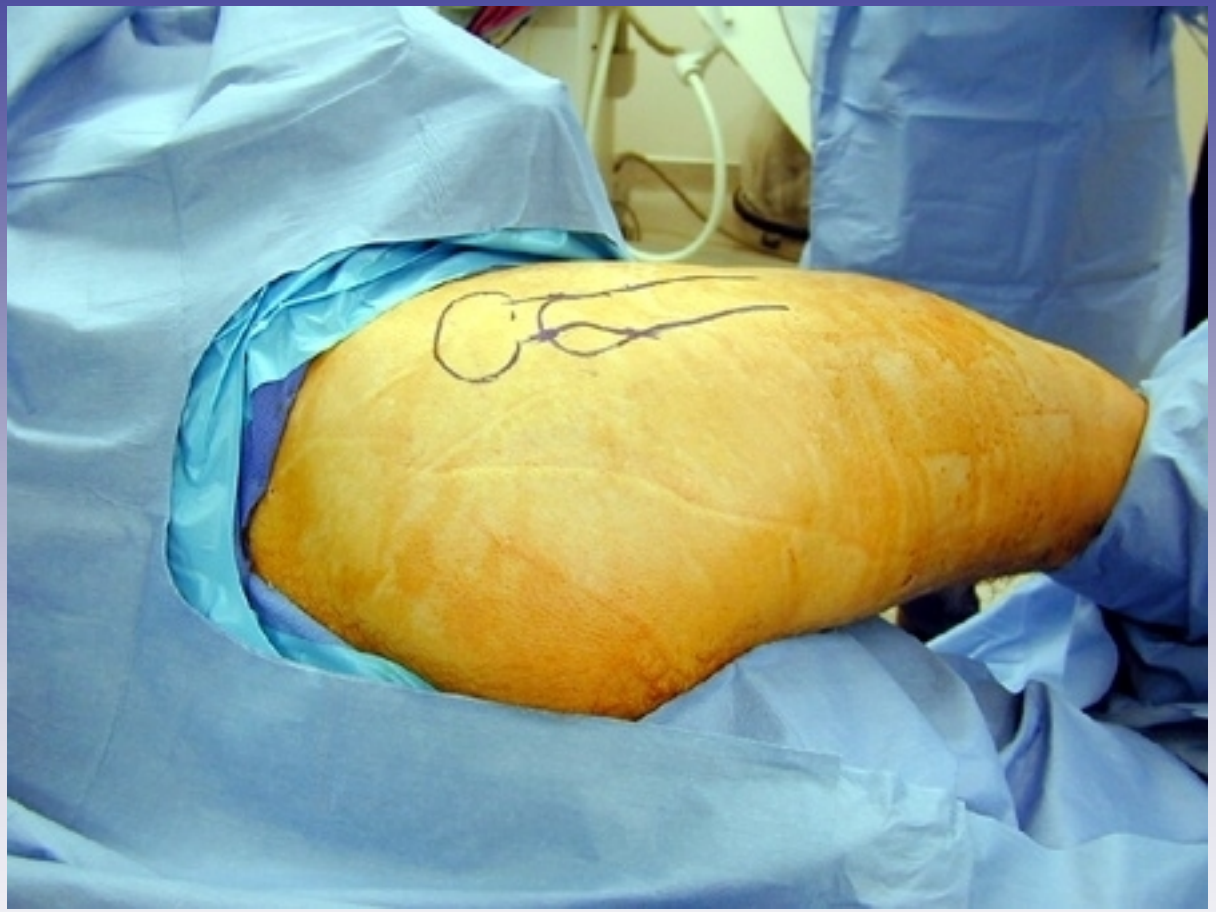




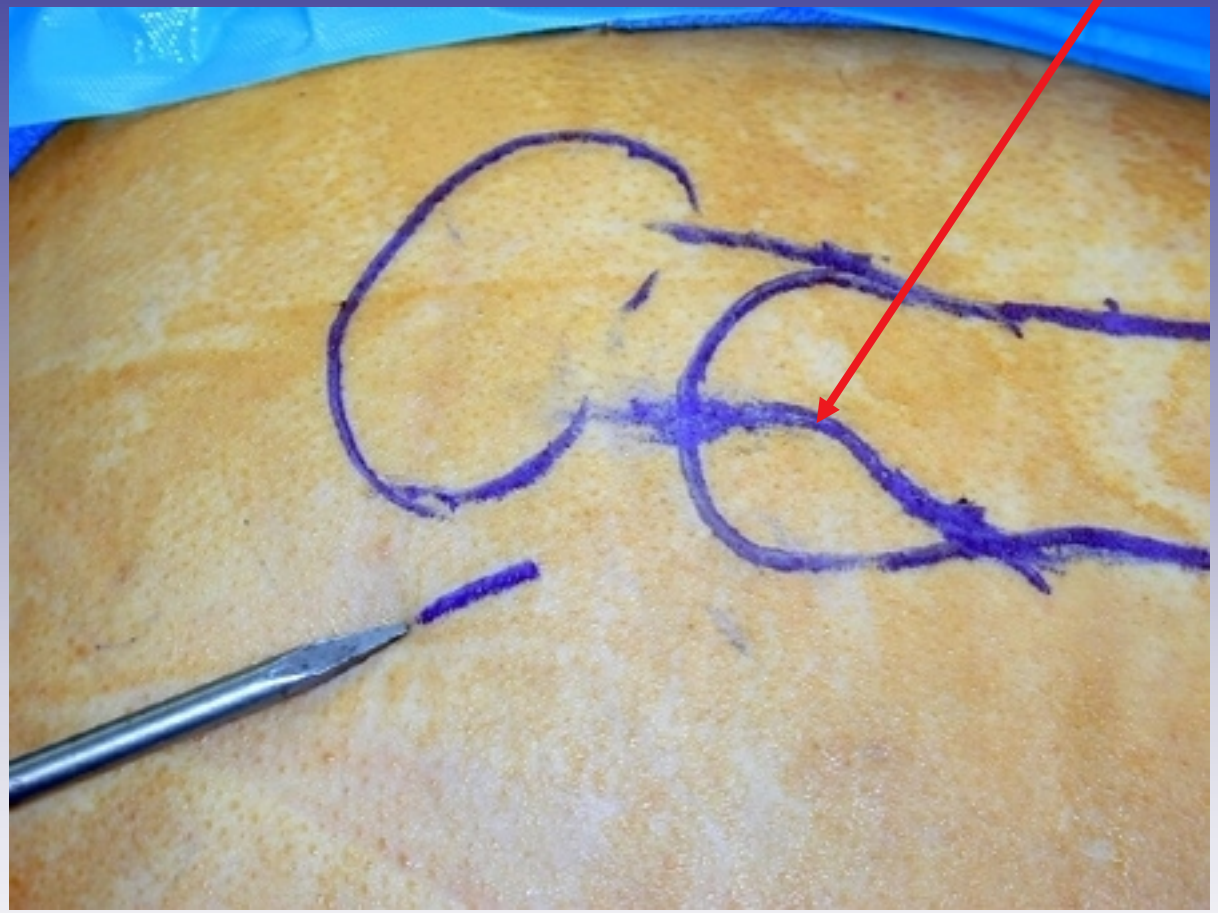
Lateral decubitus position is preferred for antegrade femoral nailing in the patient with normal pulmonary status and no spine or pelvic injury. The affected leg is flexed, exposing the piriformis fossa without steric interference from the patient's torso.



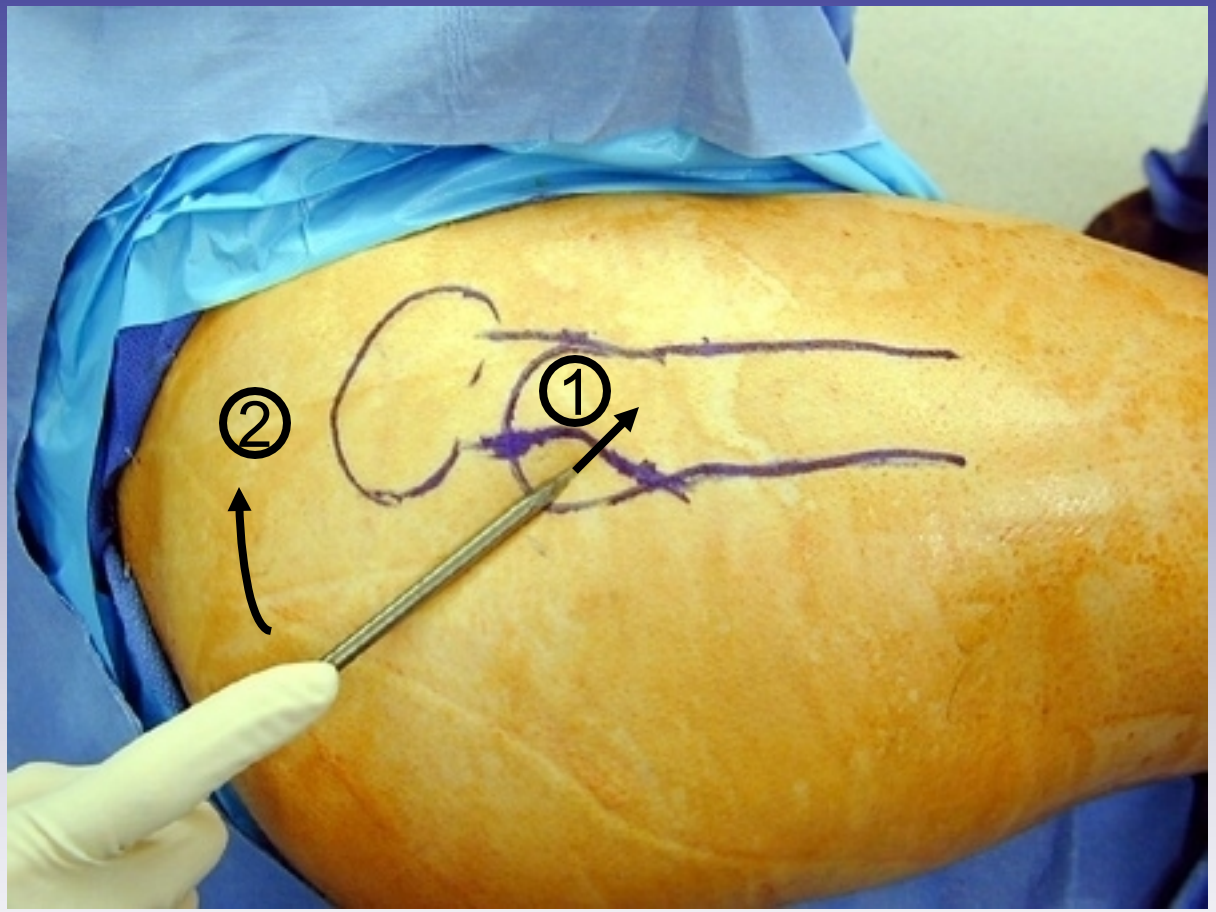
The downside leg is well supported and padded to avoid neuropraxia. The surgeon is pointing to the starting point for the piriformis entry point.



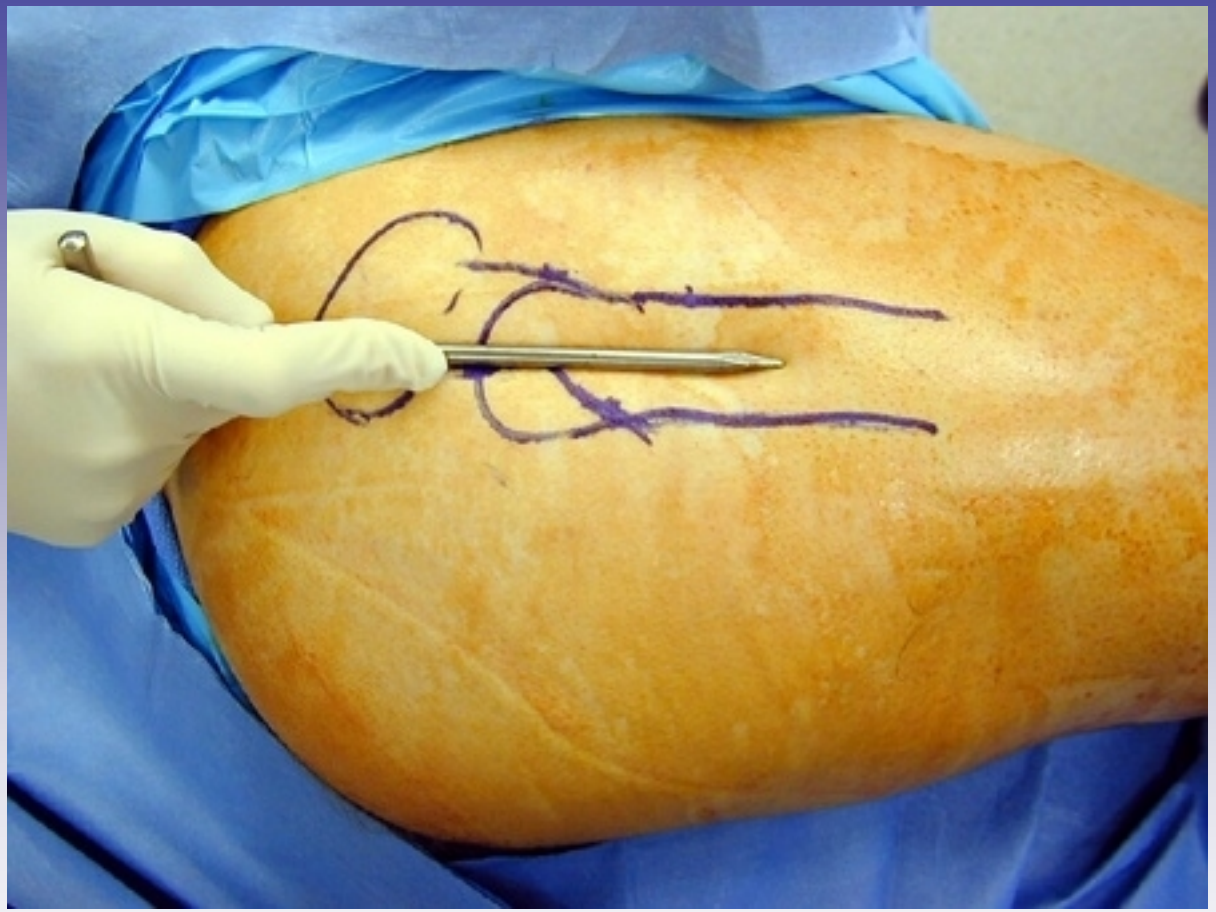
View of the area that is prepped out for performing the nailing.



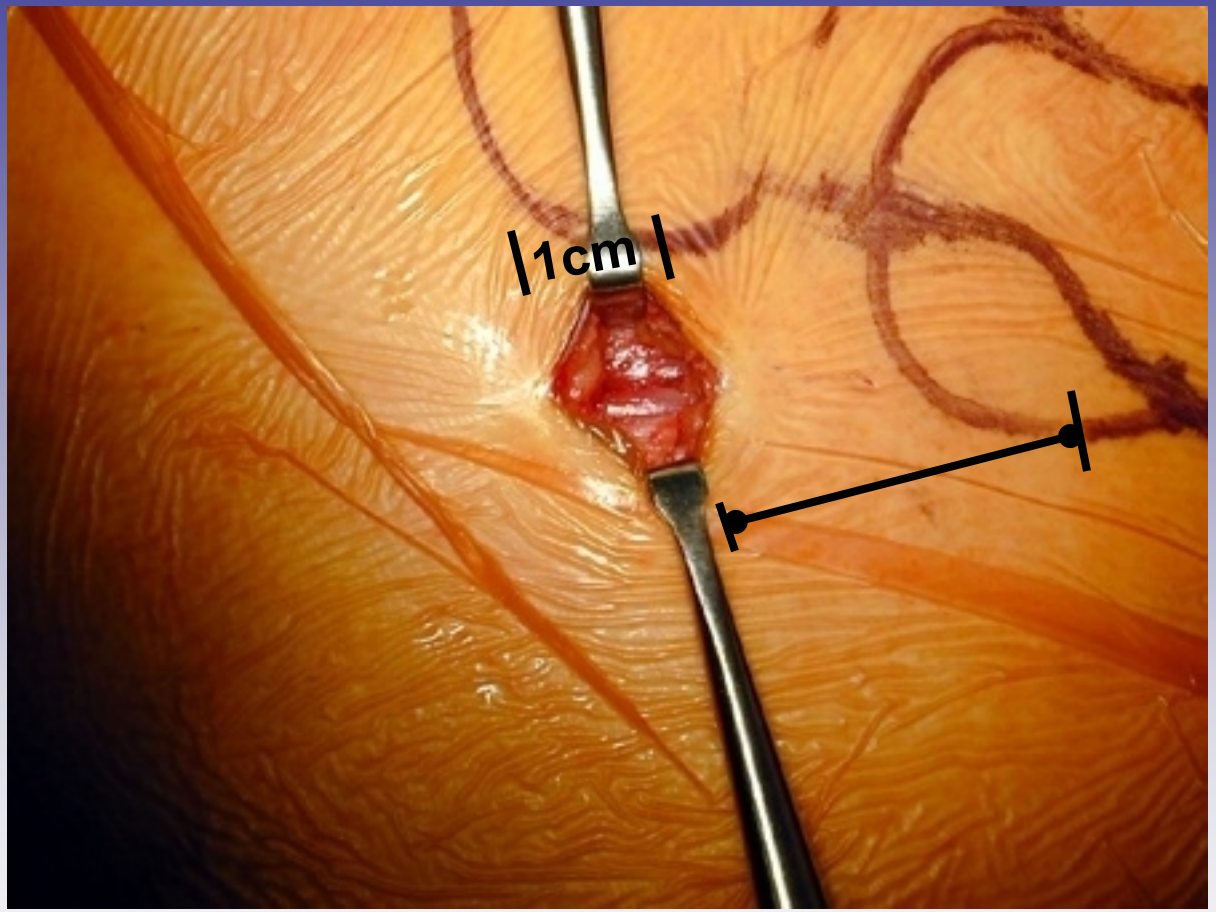
The piriformis fossa entry portal is directly in line with the canal of the shaft. However, it is slightly posterior to the femoral neck. It is curvilinear and angled posteriorly.



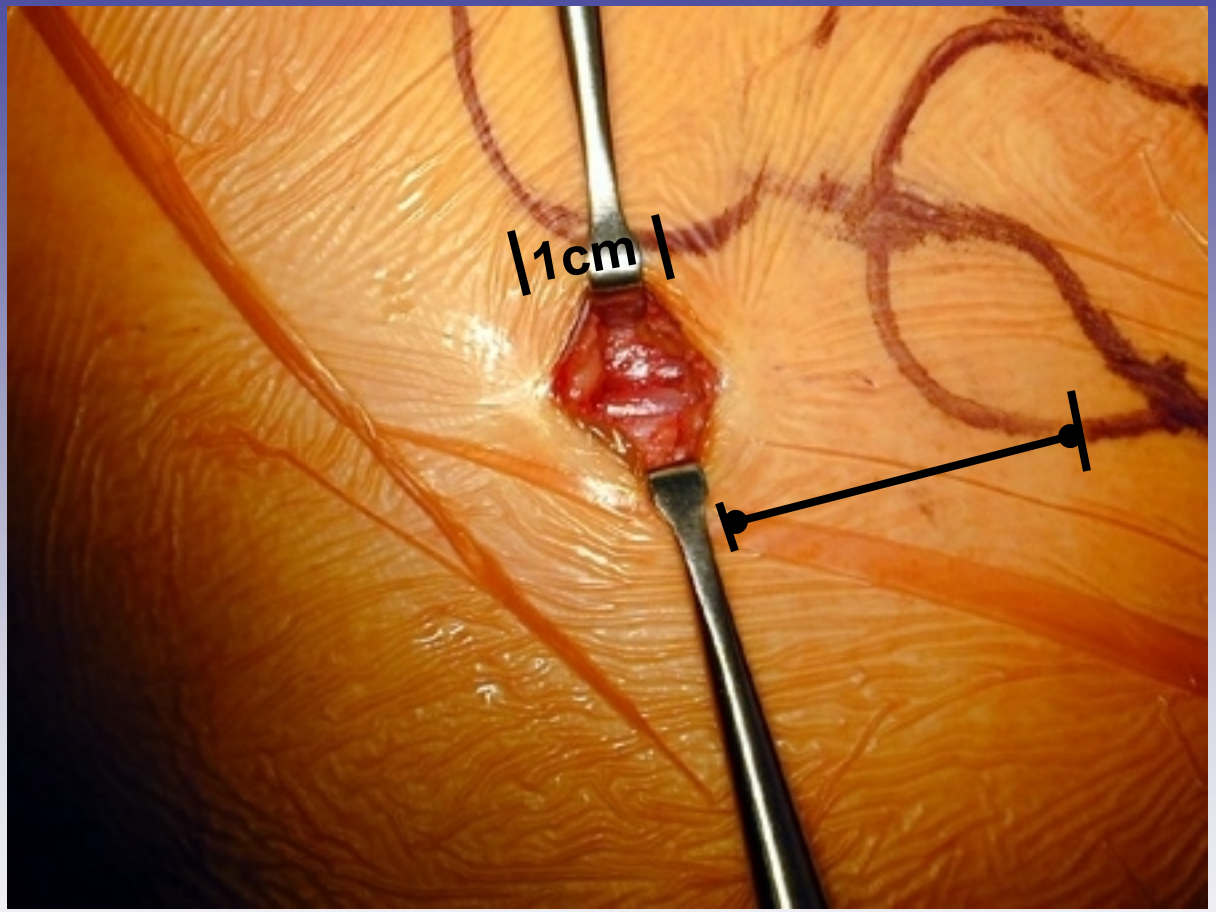
Because the piriformis entry portal is on a sloped surface, a straight awl must be introduced first at an angle to the femoral shaft directly anteriorly…



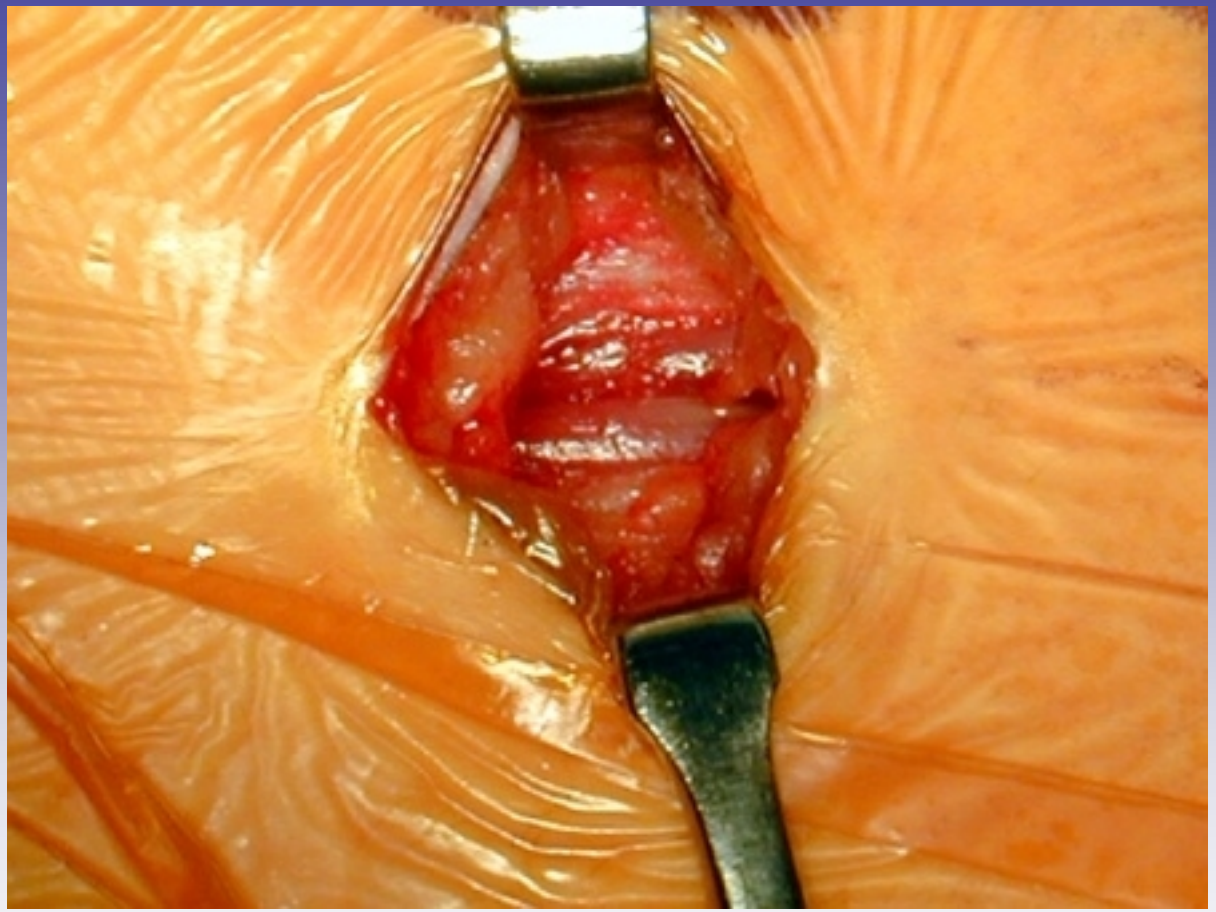
…and then as it’s introduced, the hand is raised up to go in line with the femoral shaft.



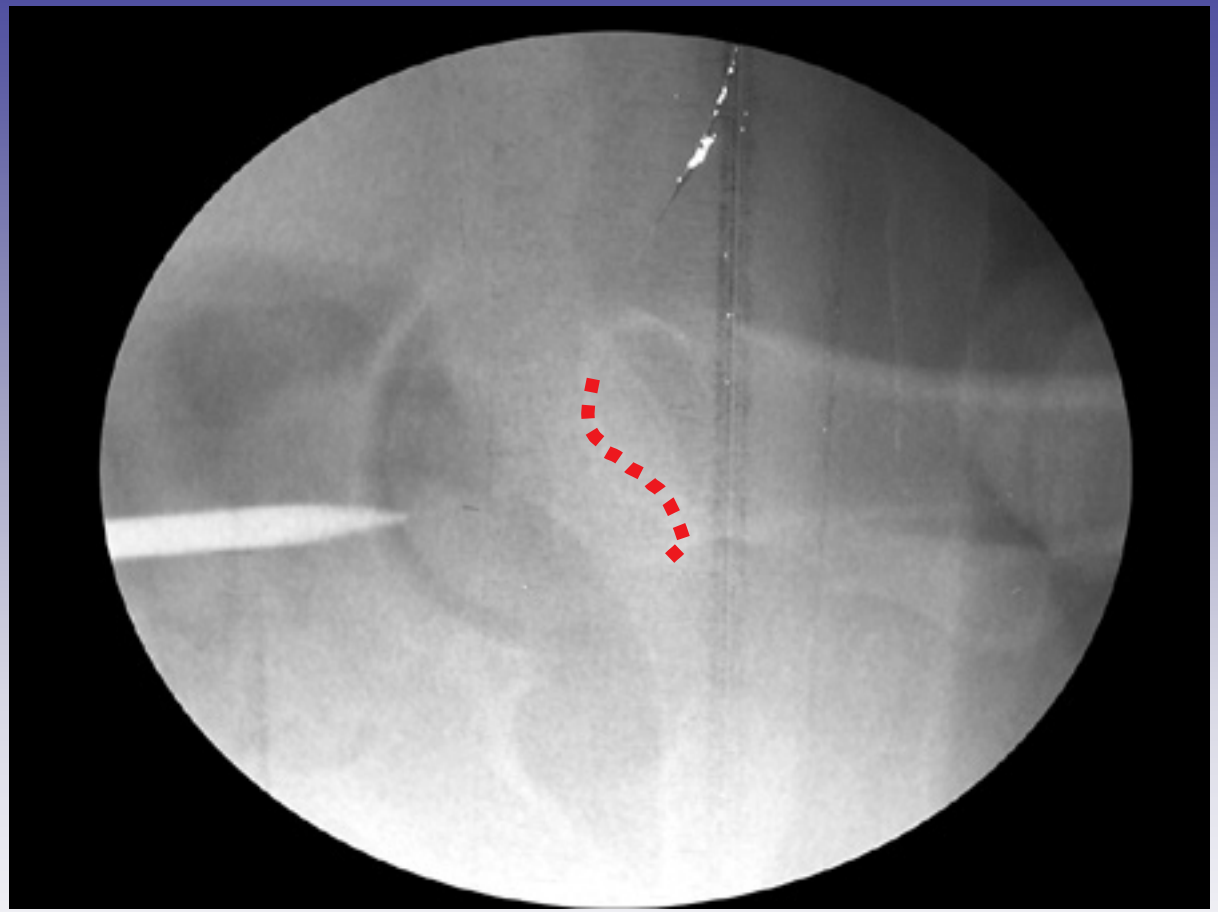
The skin incision, which can be approximately 1 to 1-1/2cm in length, should be made at a distance away from the piriformis fossa to allow for direct entry into the fossa. This can be best estimated by looking



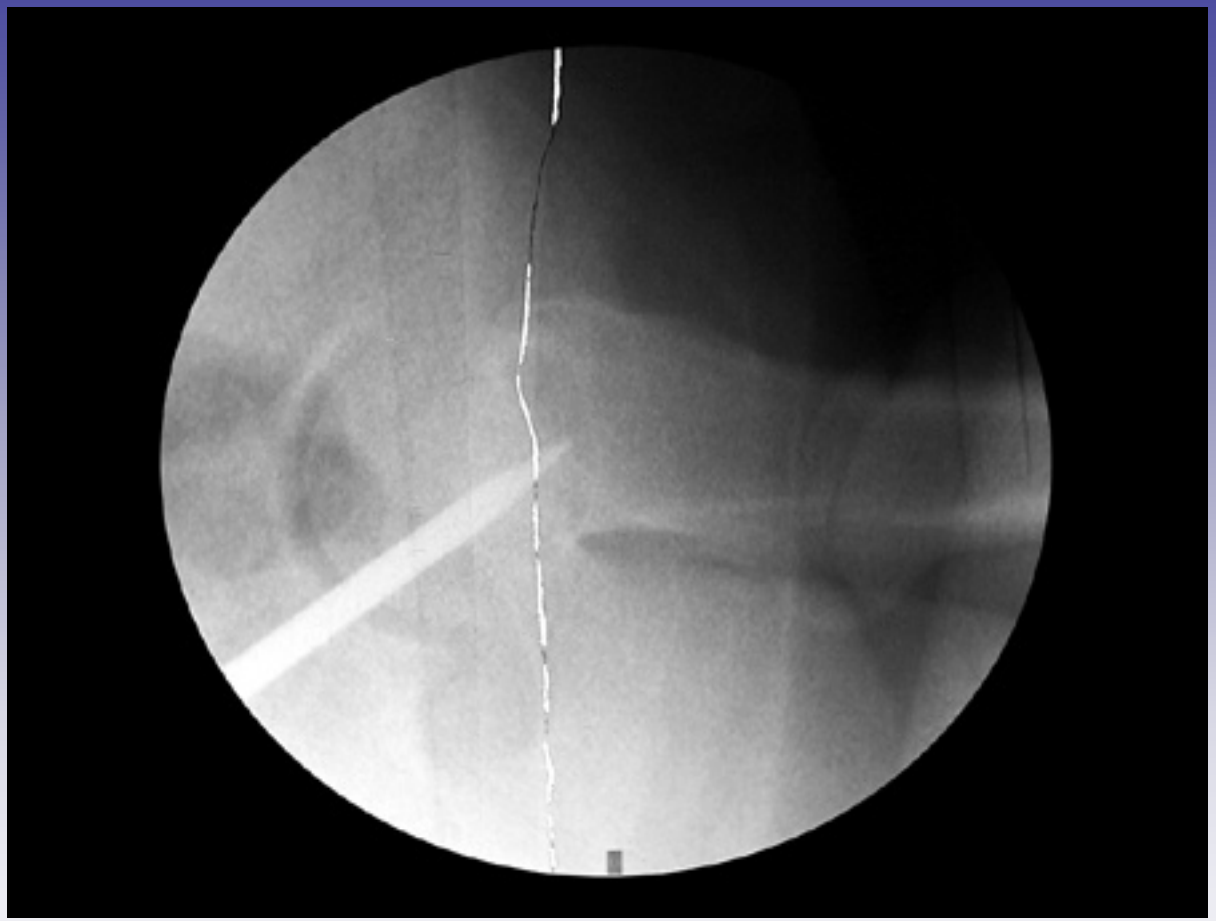
at the AP radiograph to determine how proximal the incision needs to be with respect to the trochanter. The heavier the patient, the more proximal in the buttocks the incision needs to be in order to be in line with the femoral shaft.



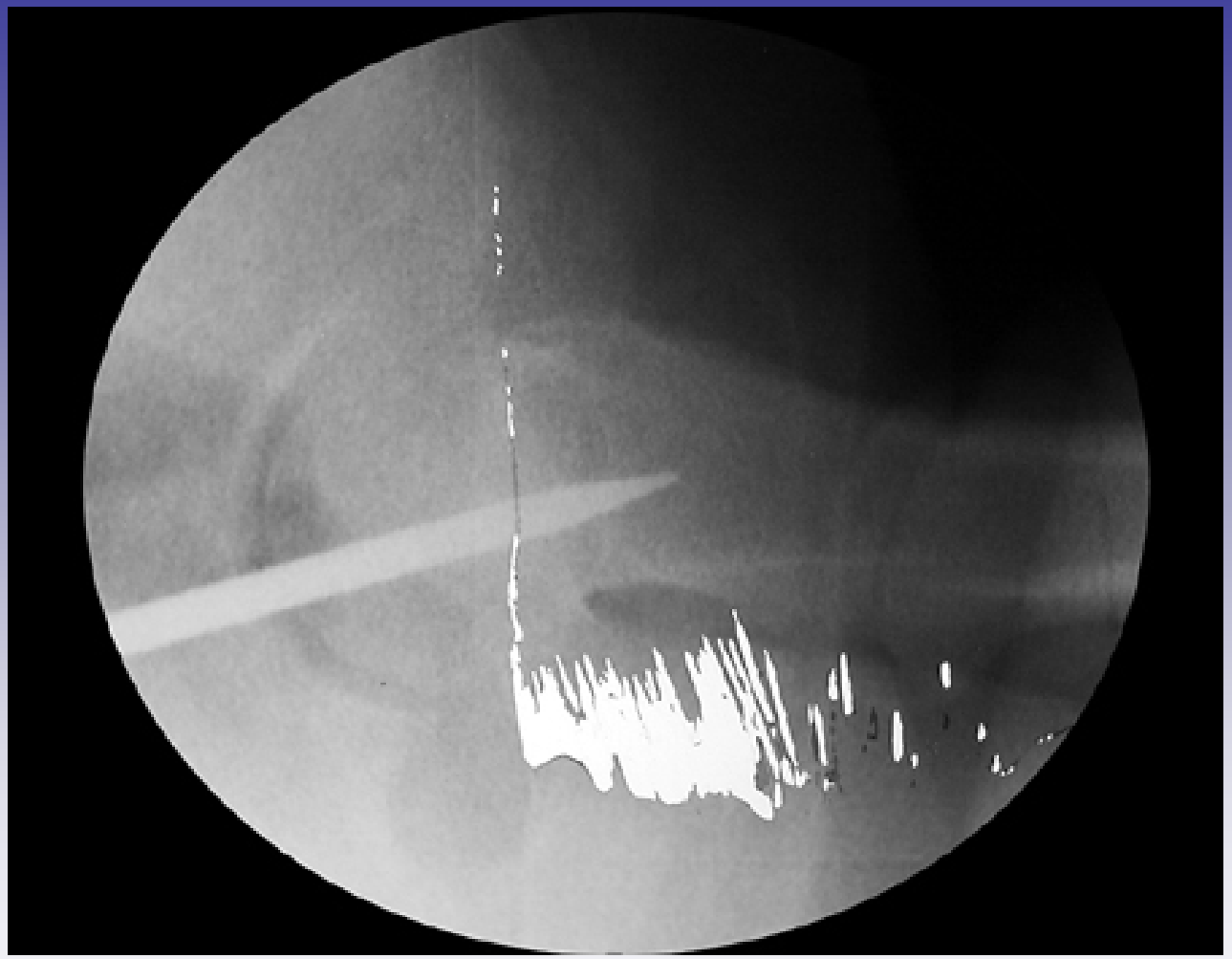
The fascia of the Tensor fascia Lata muscle is divided, exposing some of the musculature.



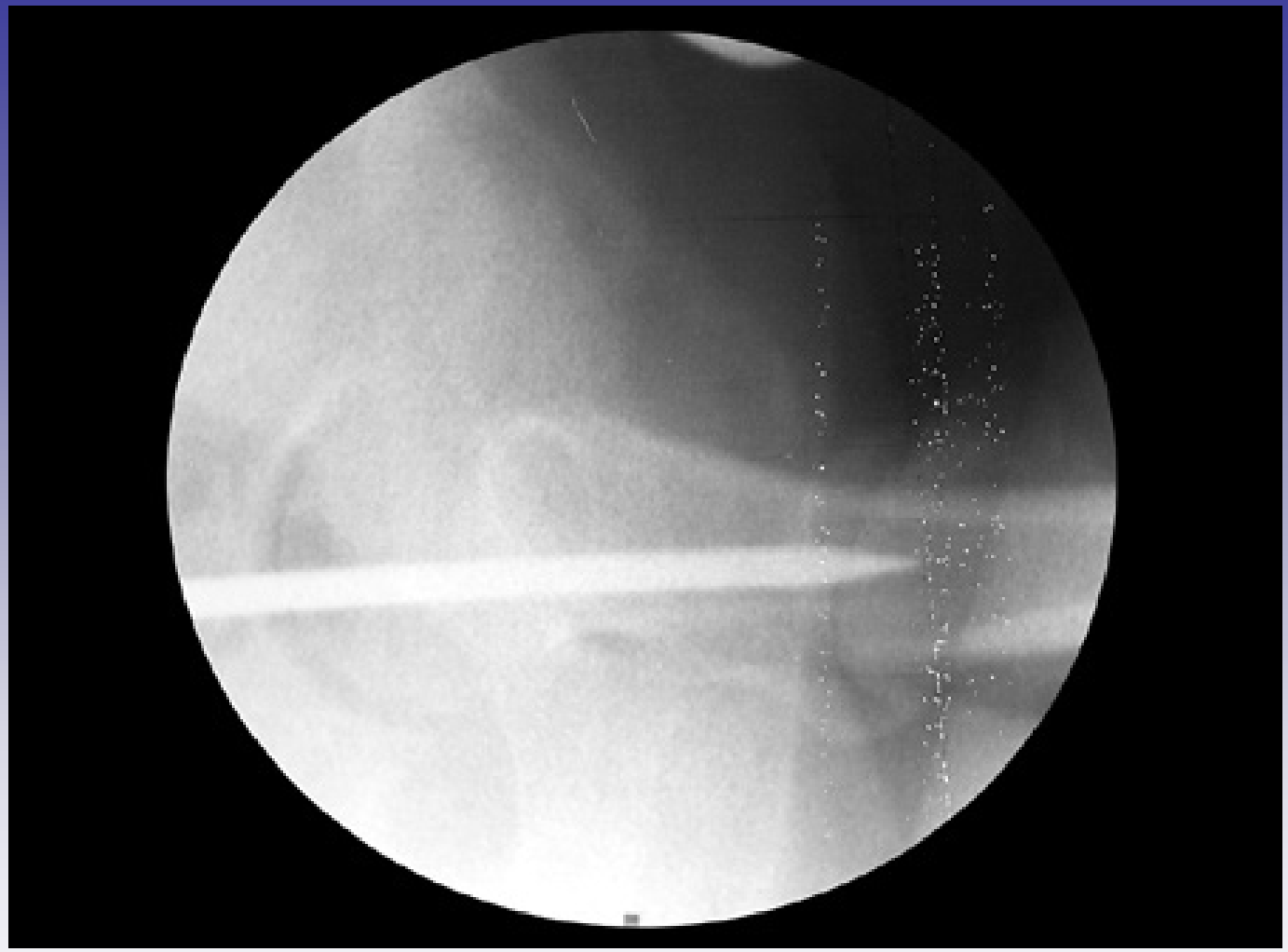
The perfect lateral radiograph of the hip demonstrates the neck to be colinear with the shaft and slightly anterior to it. The piriformis fossa is easier visualized.



The straight awl is introduced through the incision, then gently placed against the piriformis fossa directed anteriorly.



The awl is introduced into the femoral canal; as it enters the bone, the awl is adjusted to be in line with the femoral shaft by moving the hand and awl anteriorly.



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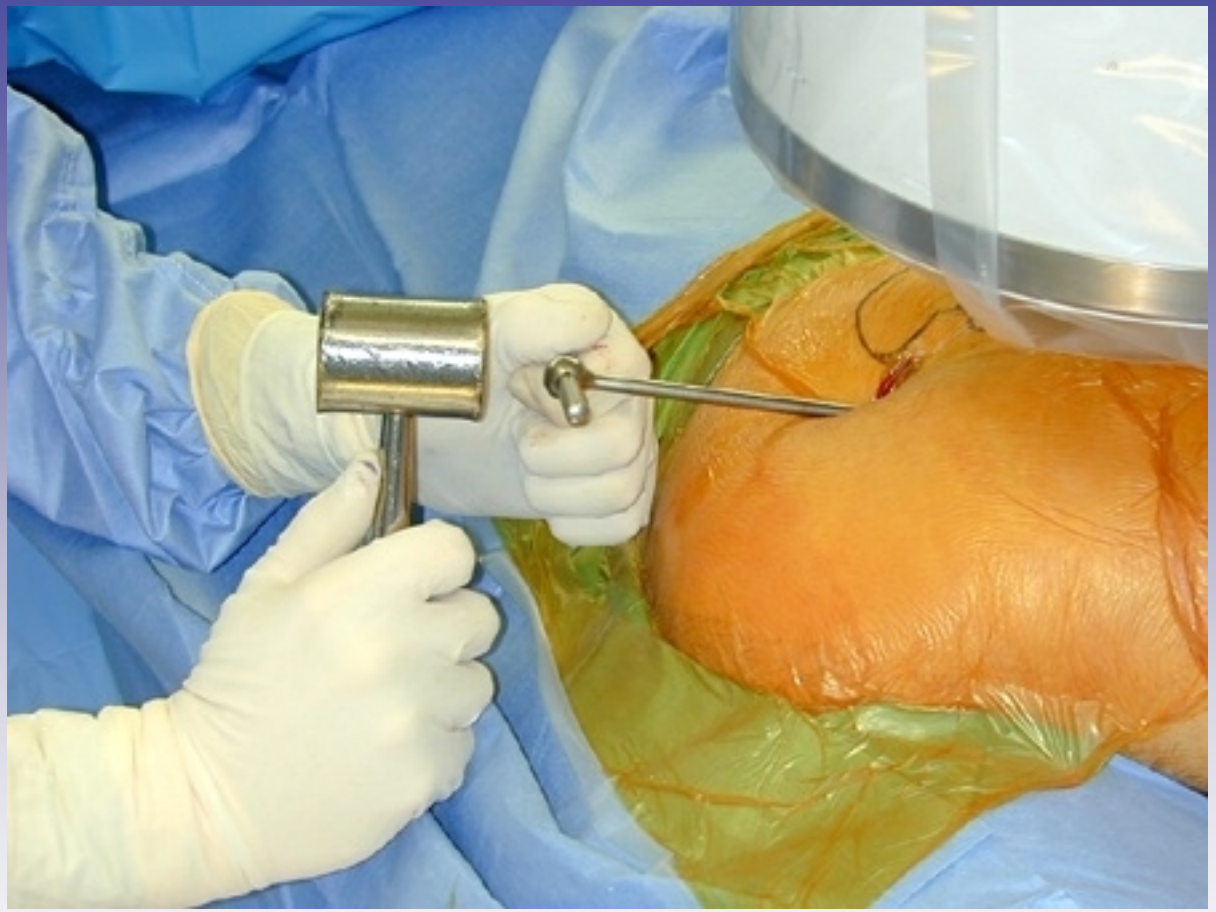
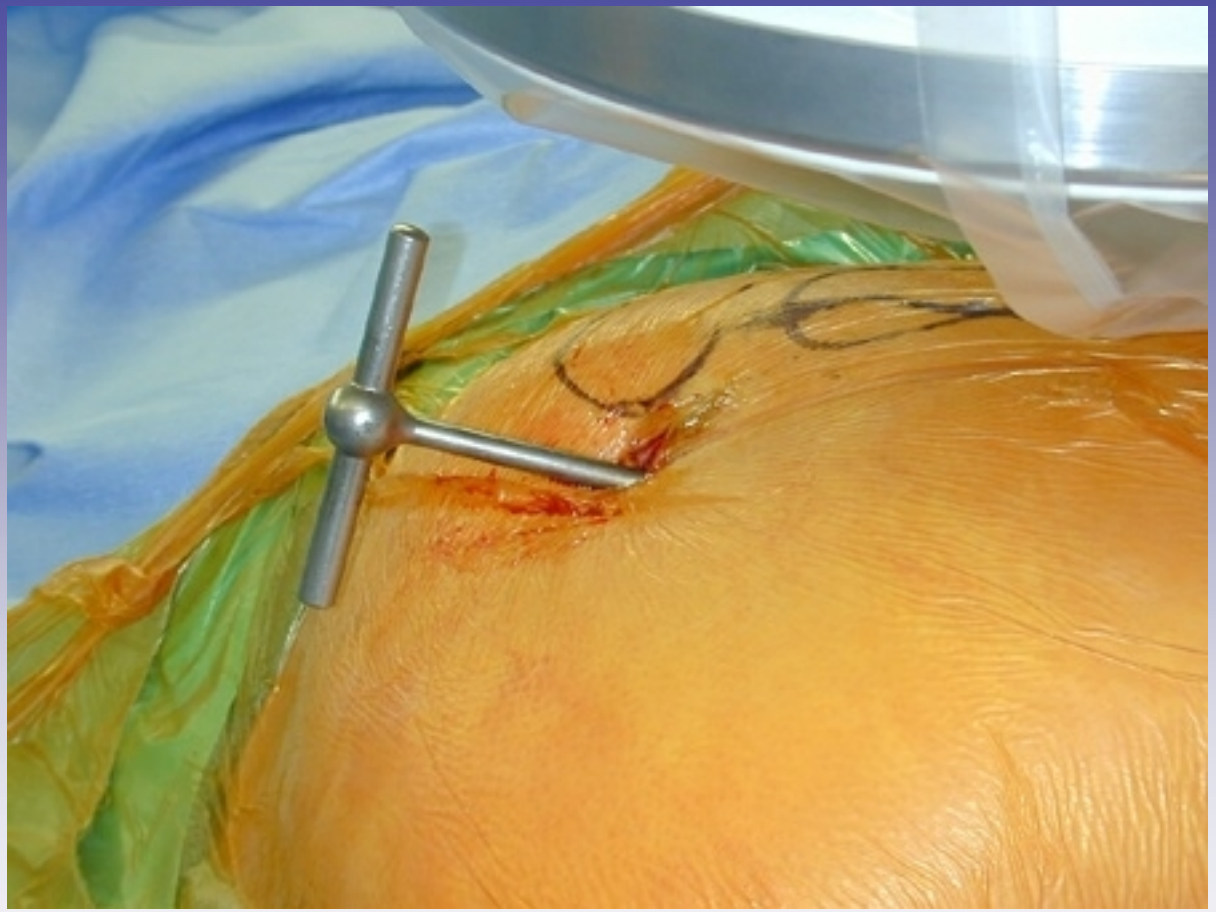


Once the awl has been introduced gently, it is tapped down past the calcar to allow for easy passage of the guidewire.



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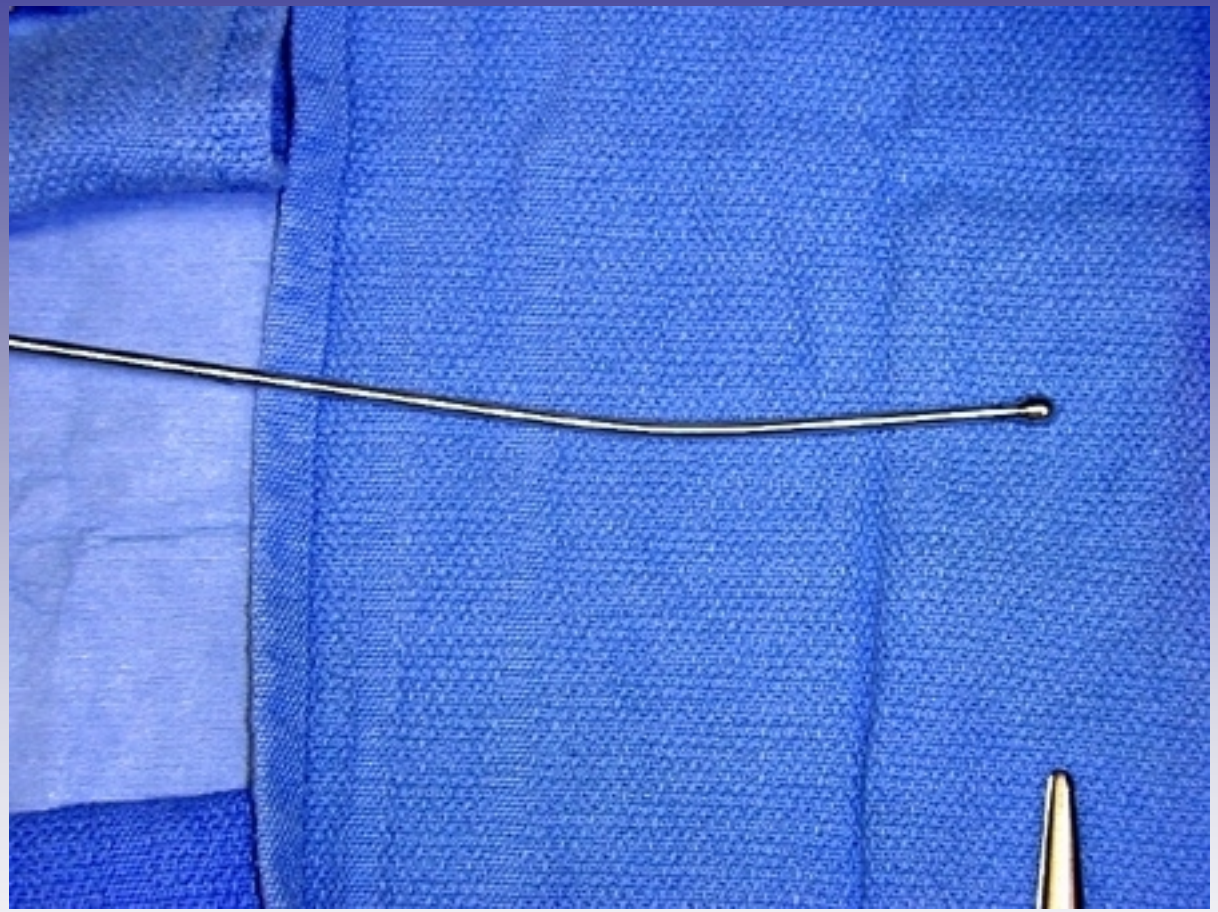

The guidewire should have a gentle distal bend to allow easy passage across the fracture site. The guidewire is introduced down the femoral shaft..