History and Physical Exam

Andrea Trescot, MD

“The diagnosis is hidden in the patient’s history, and the cause is elicited by the physical exam.”

J. Bart Staal

History

- The history given by the patient, in the patient's own words, is key to making the diagnosis
- There are reproducible, recognizable patterns of pain that provide clues to the cause of the pain.
  - Unfortunately, by the time the patient has reached a pain specialist, the pain may have spread beyond its original site, "like a forest fire raging out of control", so the initial pain pattern is important

History

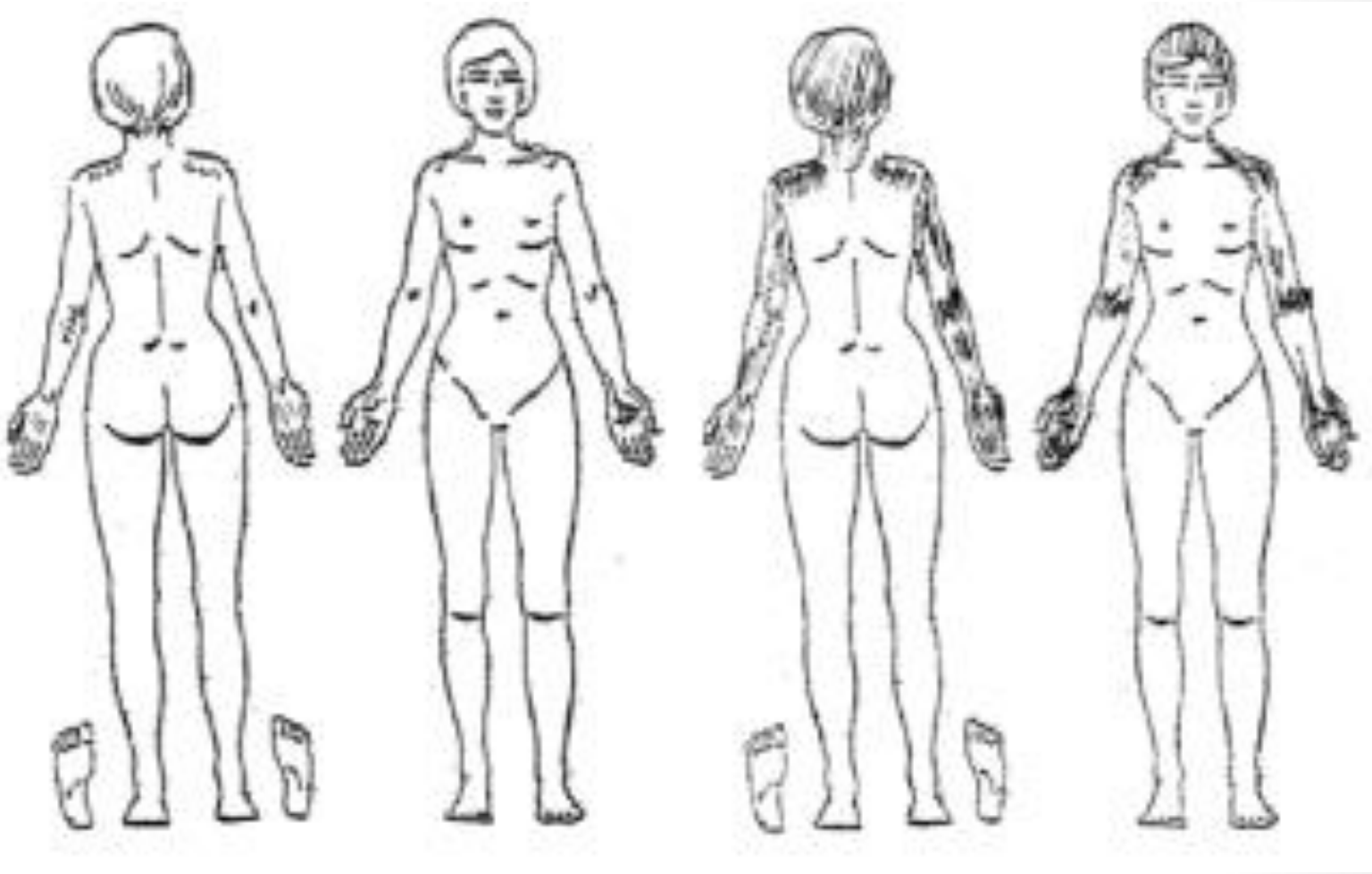
- The history should include
  - The mechanism of injury
    - How did the pain start?
  - The initial site of pain
  - The initial pain referral pattern
  - Any associated weakness or sensory changes
- These are vital clues to the etiology of the pain

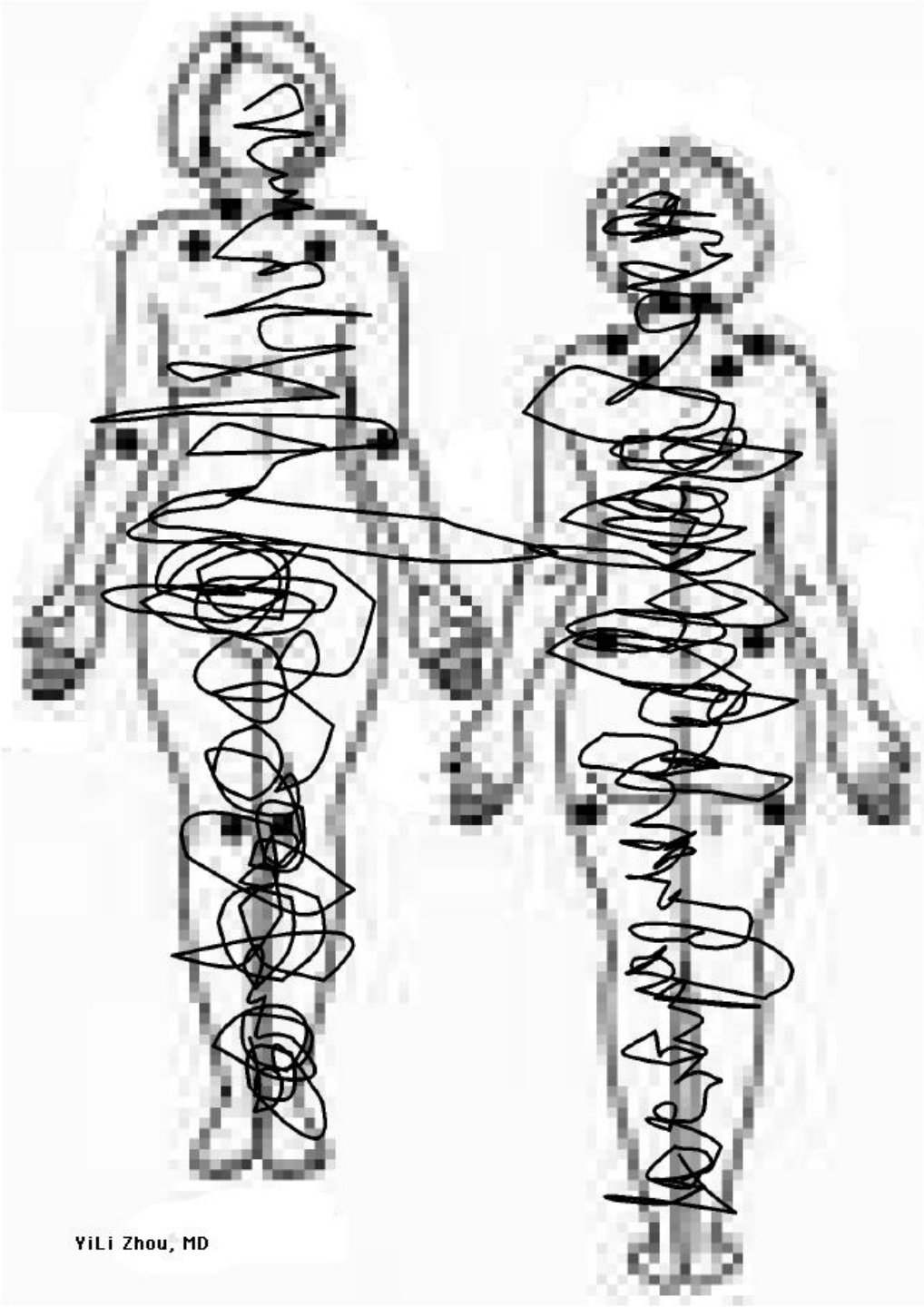
Specific Questions

- Where does it hurt?
- Where and when did it start to hurt?
- What makes it better?
- What makes it worse?

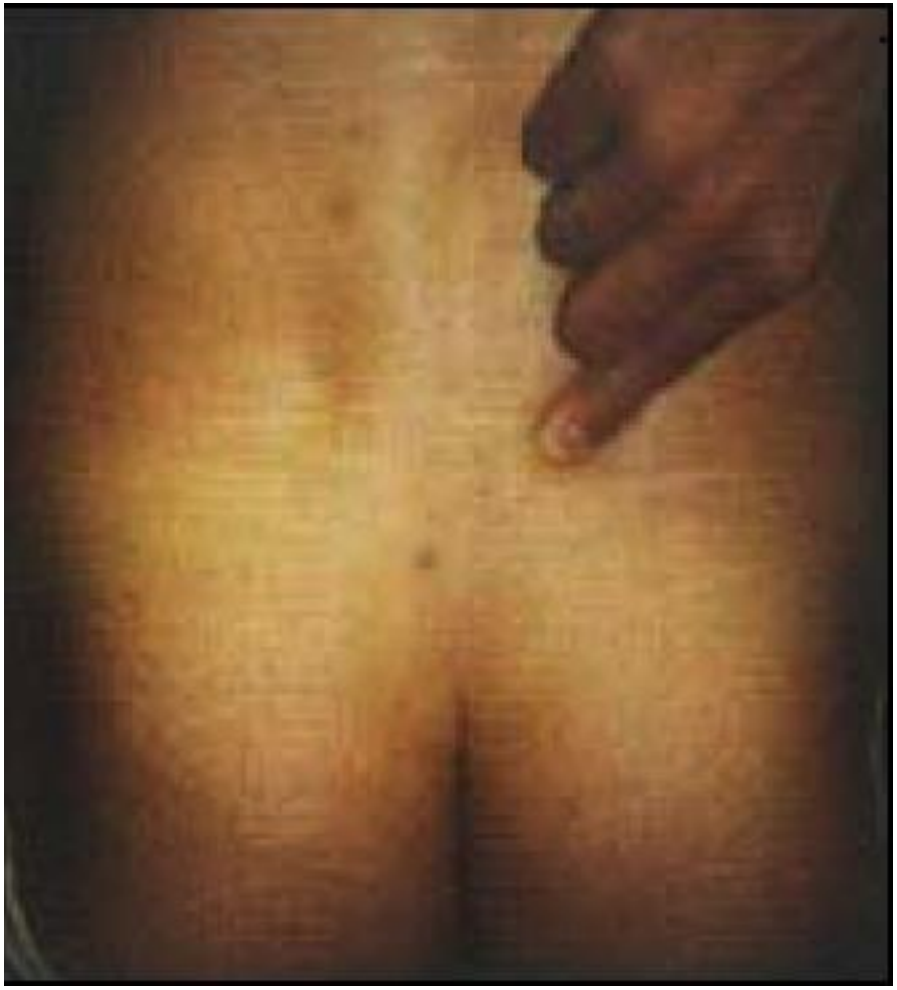
It is important to ask these questions in this order, since patients will respond “nothing” to “what makes it better?”

Site of pain	Quality (looking for neuropathic features)
Radiation pattern	Duration
Intensity (at rest and with movement)	Temporal variation
Previous therapies and response	Precipitating factors
Mood	Relieving factors
Activities of daily living	Sleep
Current therapies	Patient beliefs regarding cause of pain




YiLi Zhou, MD

“Show me where it hurts”



Physical exam

It is important to do a physical exam because…

- Patients and doctors do not use the same words
  - “hip”, “back”
- The physical exam should direct the intervention
  - SI vs radiculopathy
- Diagnostic studies do not show pain

MRIs do not show pain

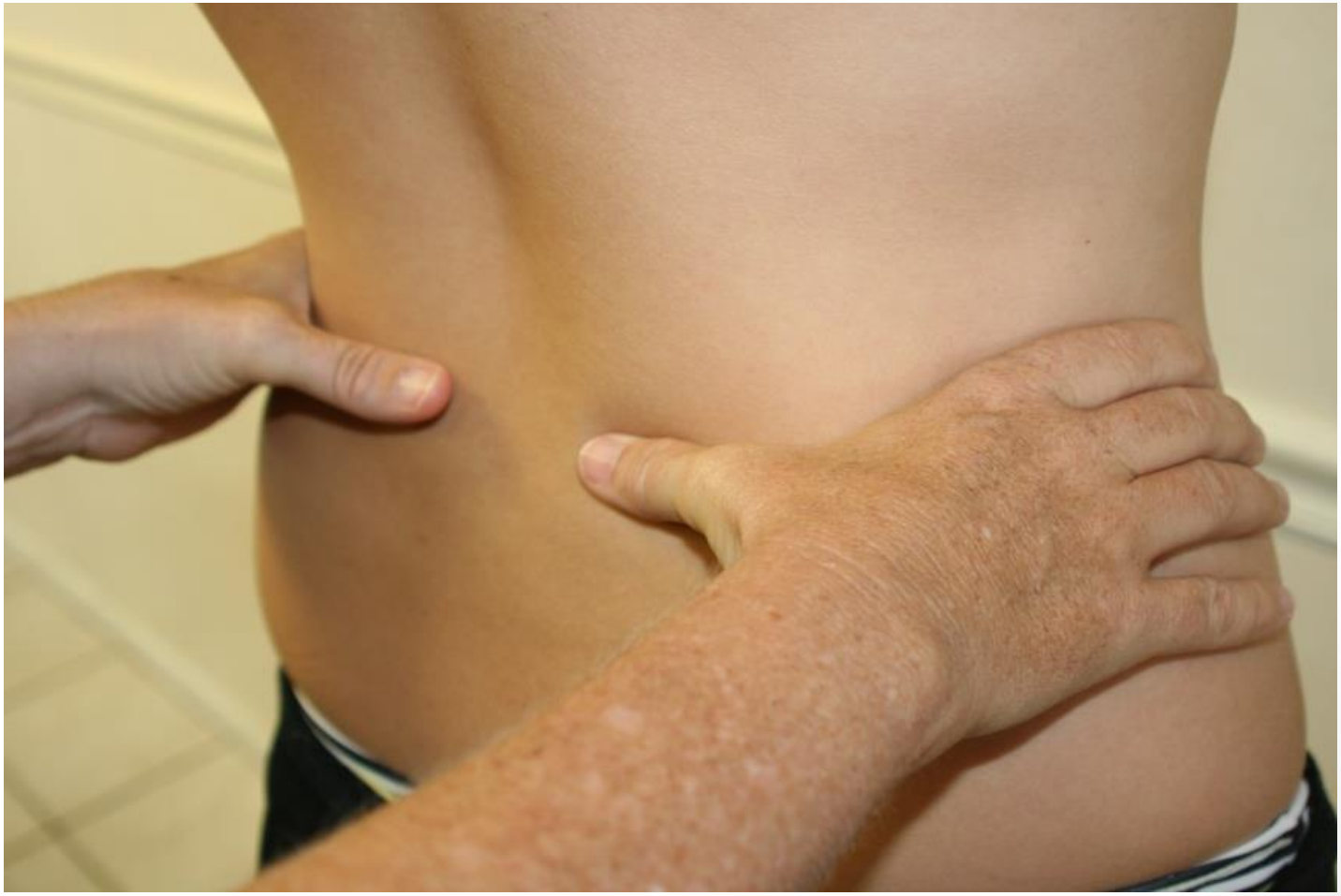
MRI Study

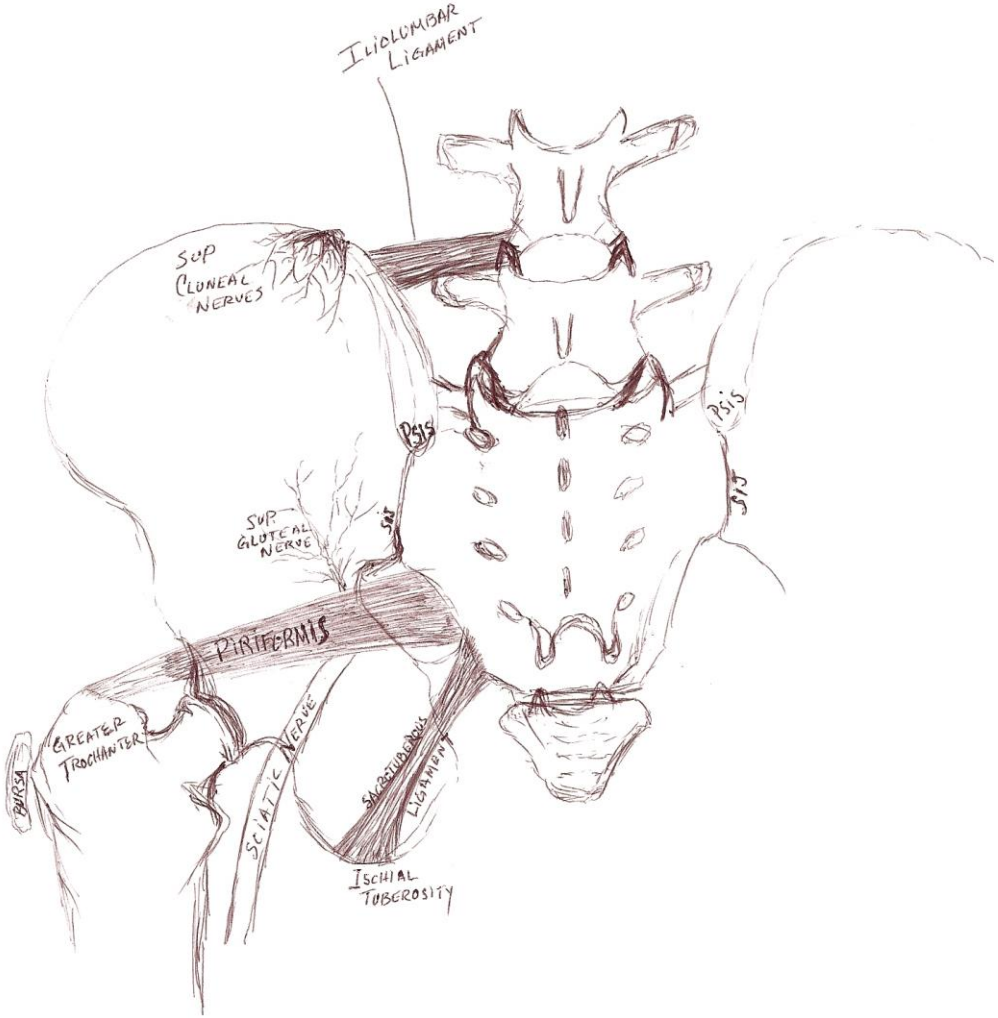
- **98 asymptomatic patients**
  - **52% had disc bulges**
  - **27% had disc protrusions**
  - **1% had disc extrusions (outside the annulus)**
  - **14% had annular defects**
  - **8% had facet pathology**
  - **7% had spondylolithesis**
  - **7% had stenosis (central or foraminal)**

Jensen
NEJM July 1994

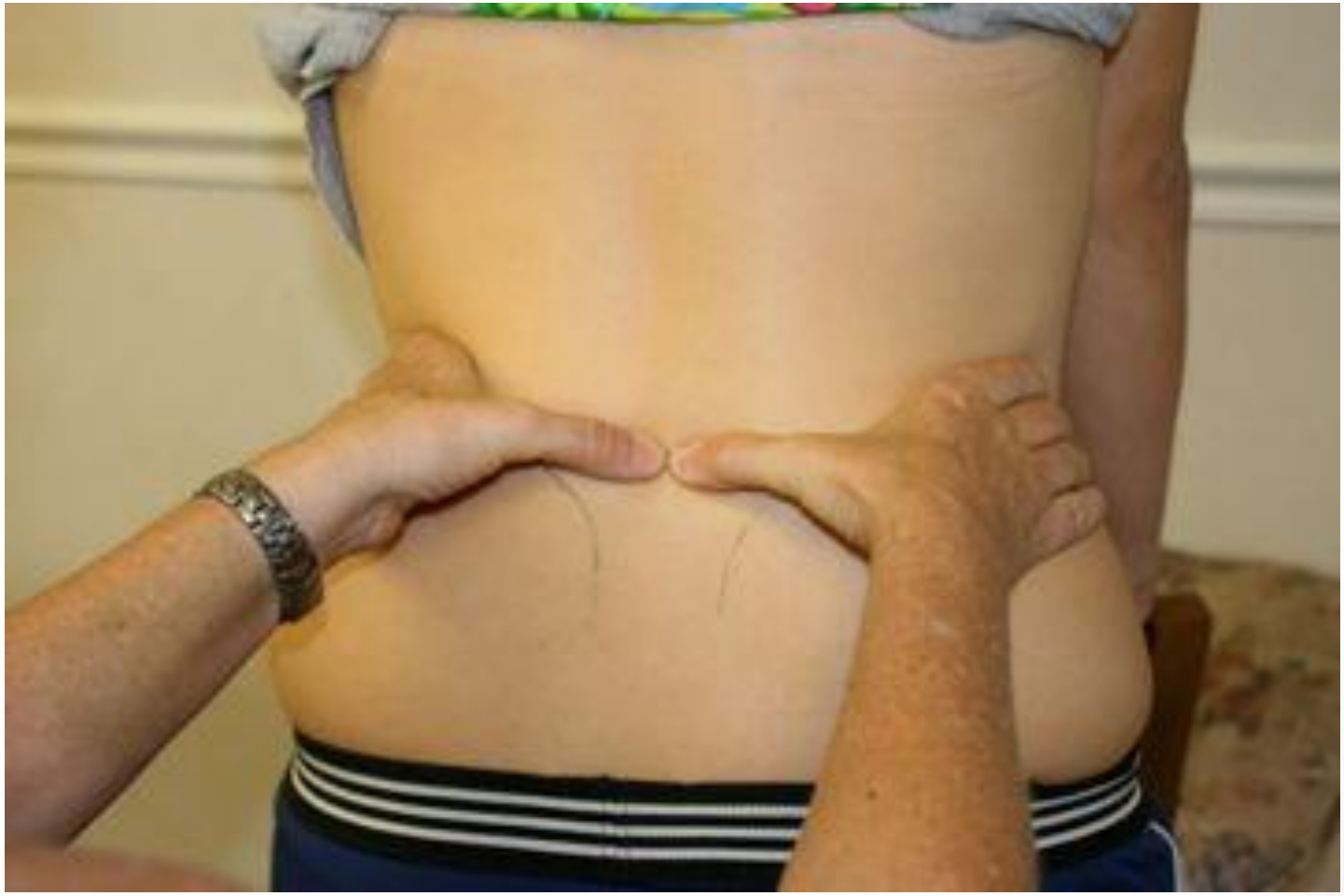
Physical exam of the back

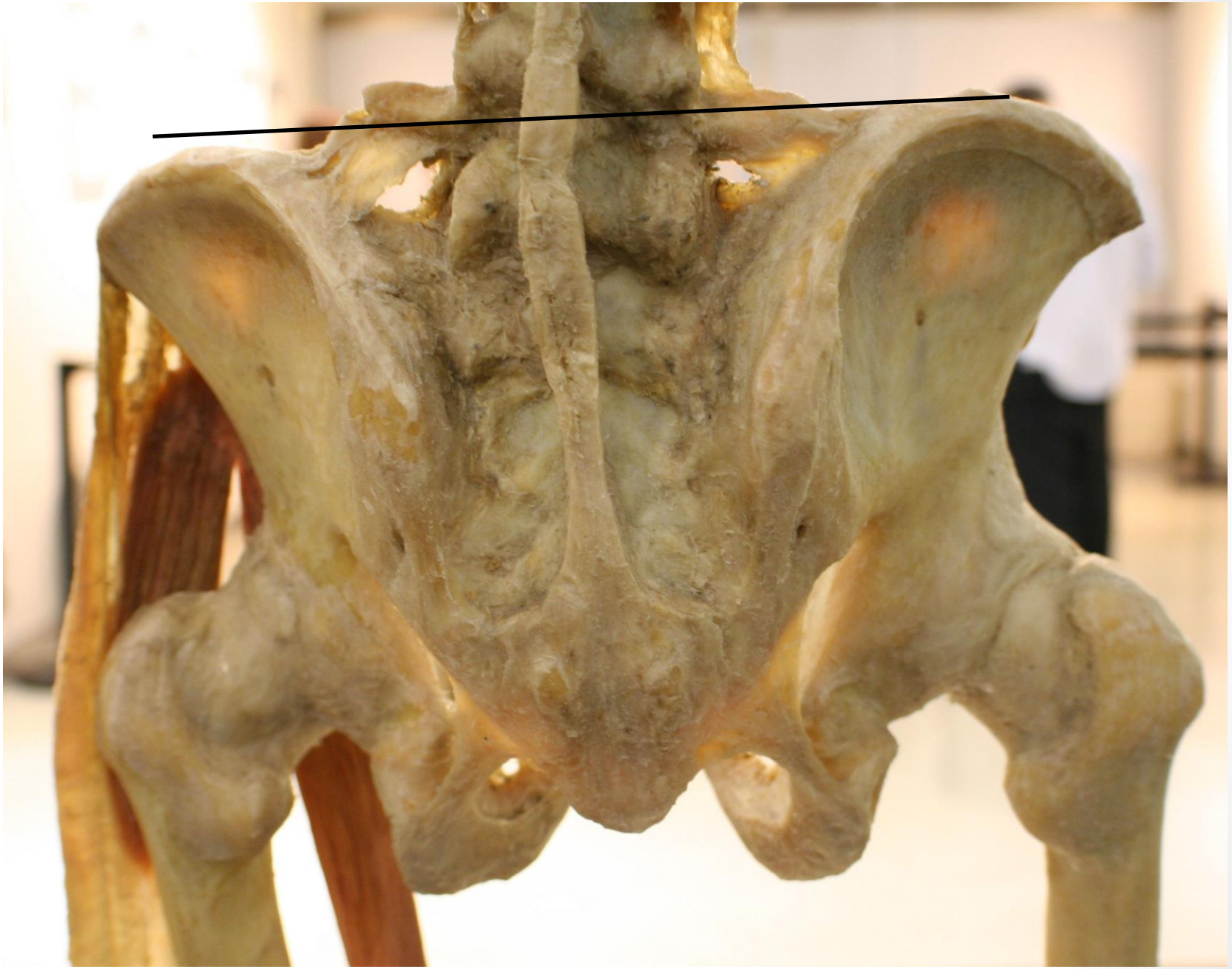
Back Exam

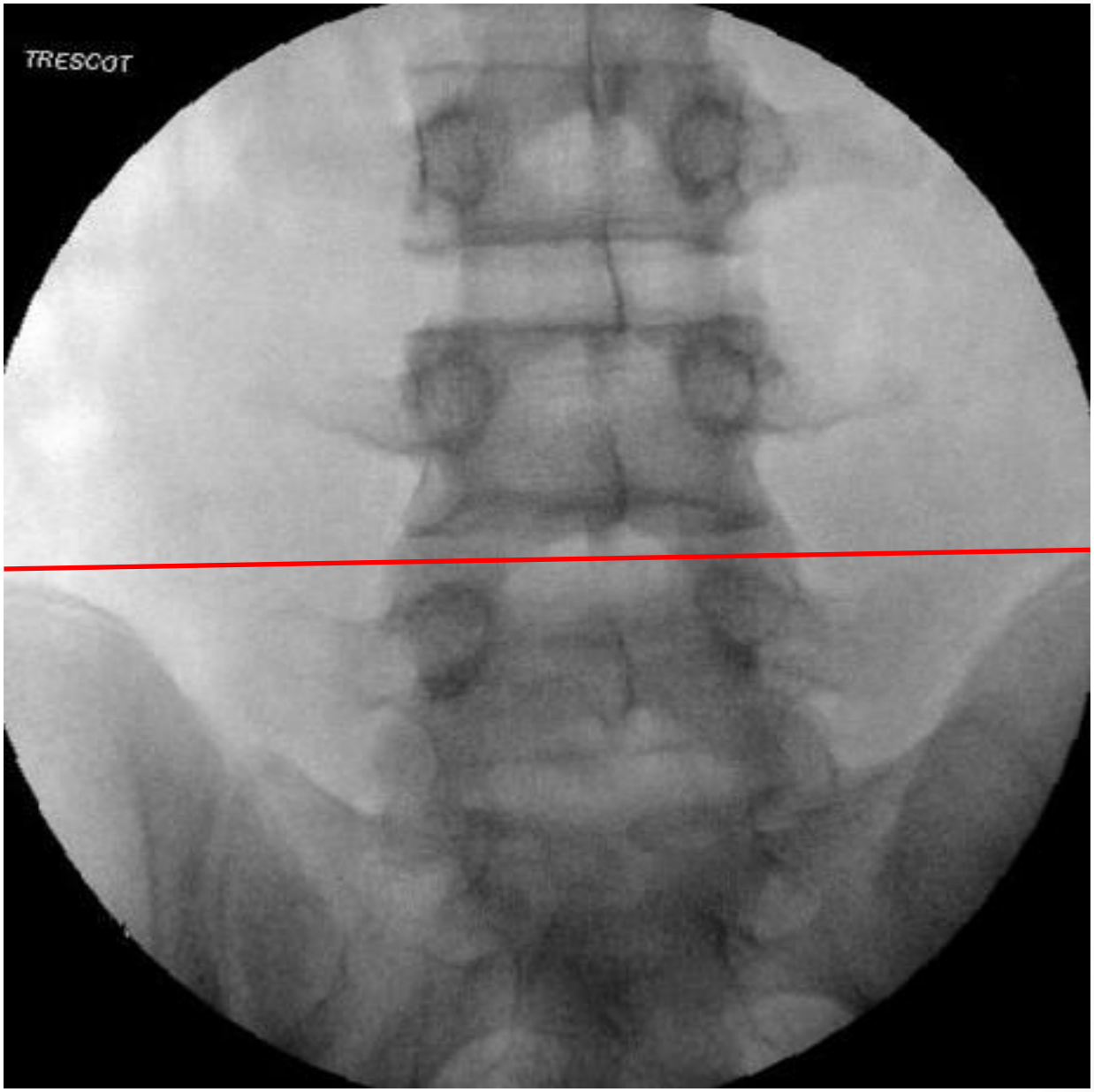



ILIOLUMBAR LIGAMENT
SUP CLUNEAL NERVES
PSIS
PSIS
SUP GLUTEAL NERVE
SIS
SIS
PIRIFORMIS
GREATER TROCHANTER
BURSA
SCIATIC NERVE
SACROTUBEROUS LIGAMENT
ISCHIAL TUBEROSITY
Luis N. Hernandez, M.D.

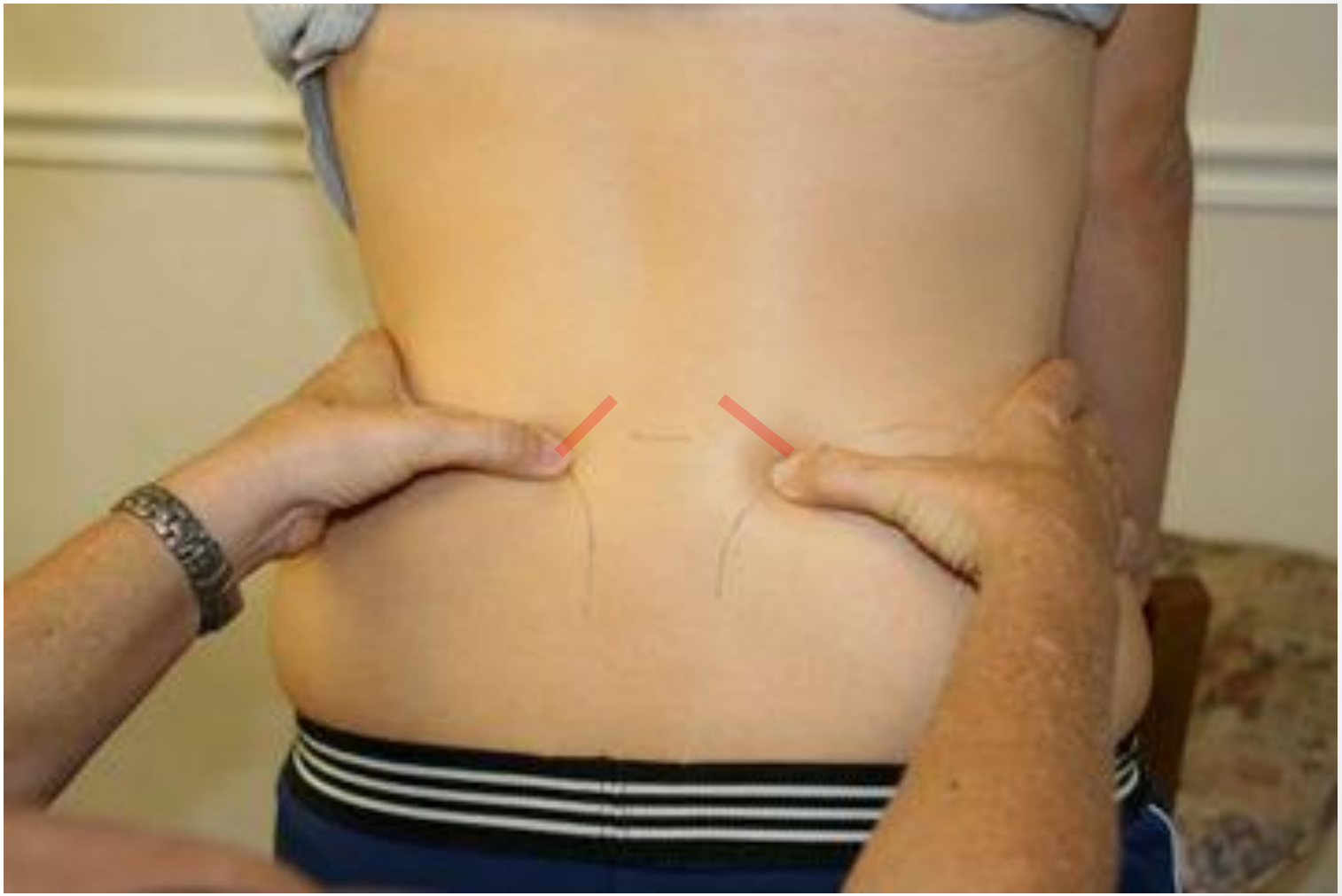
Midline L45



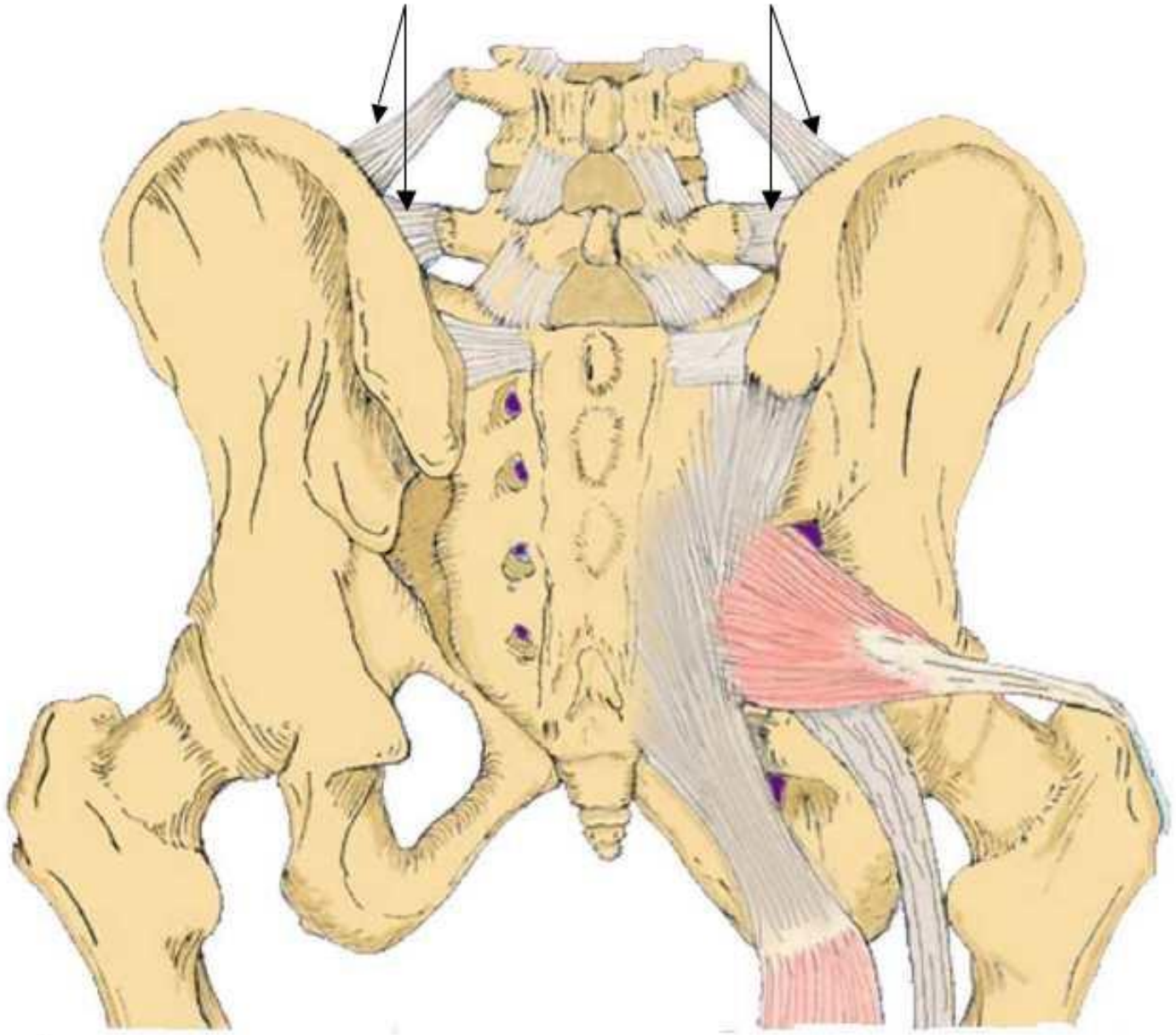


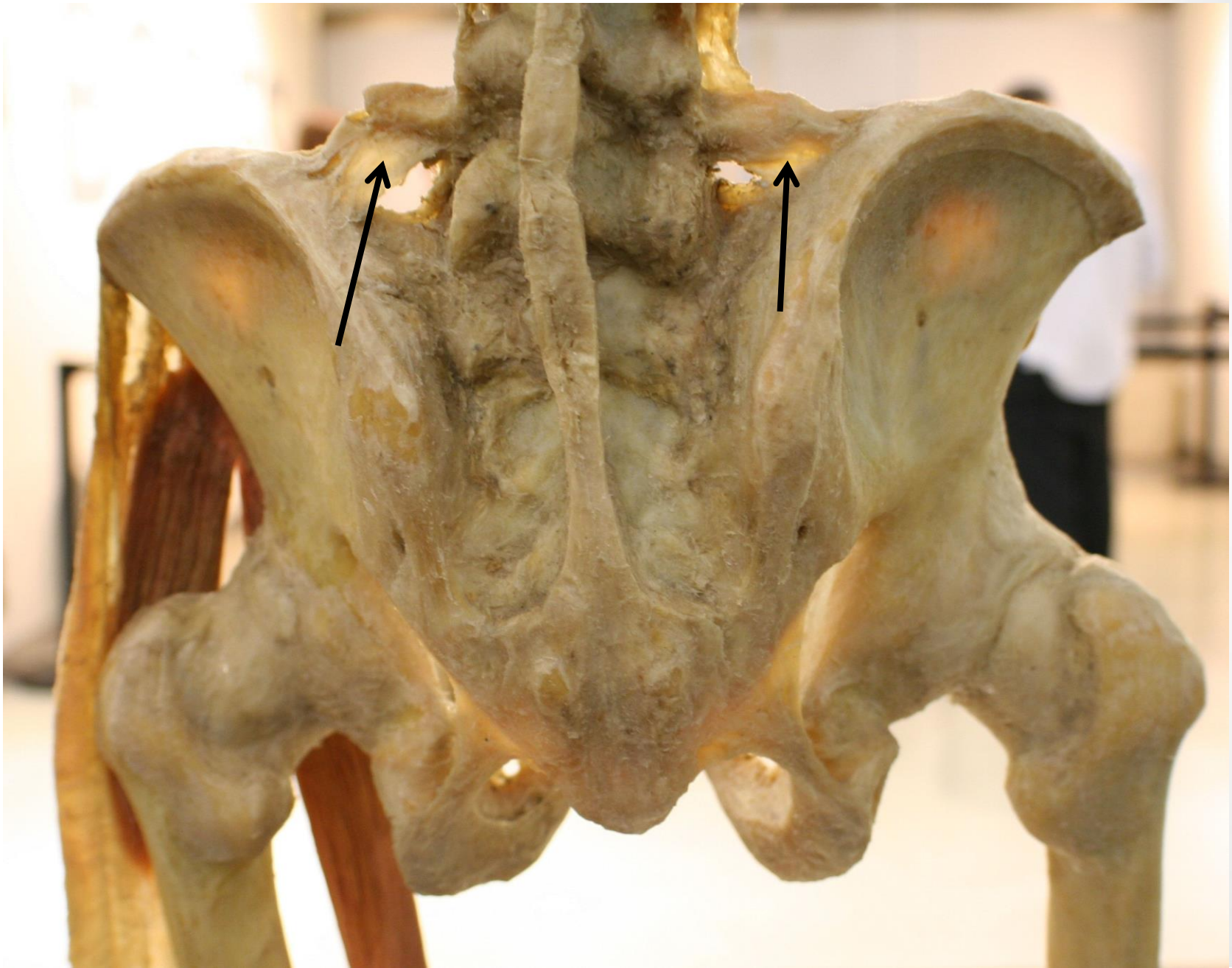

TRESCOT

Iliolumbar Ligament

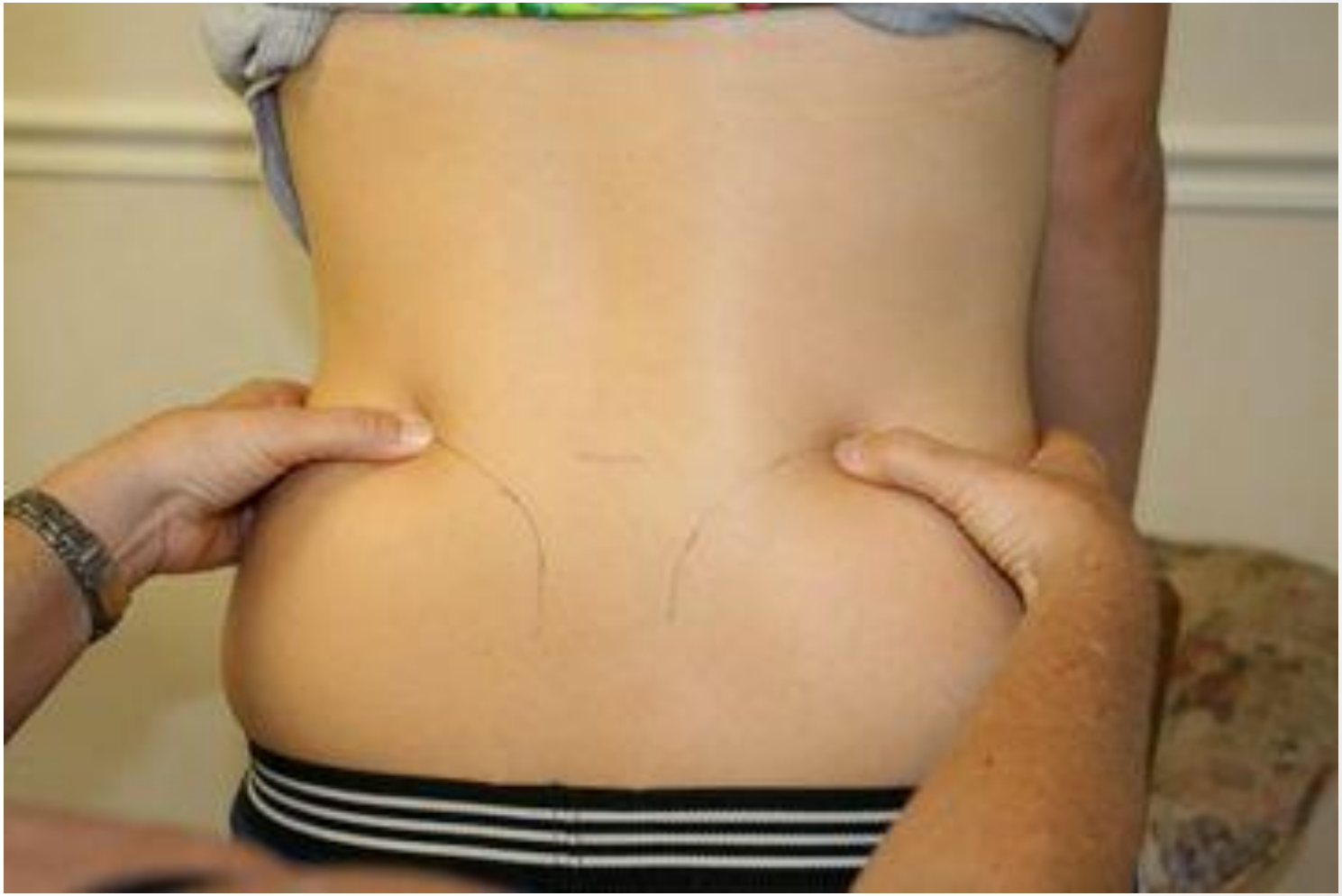


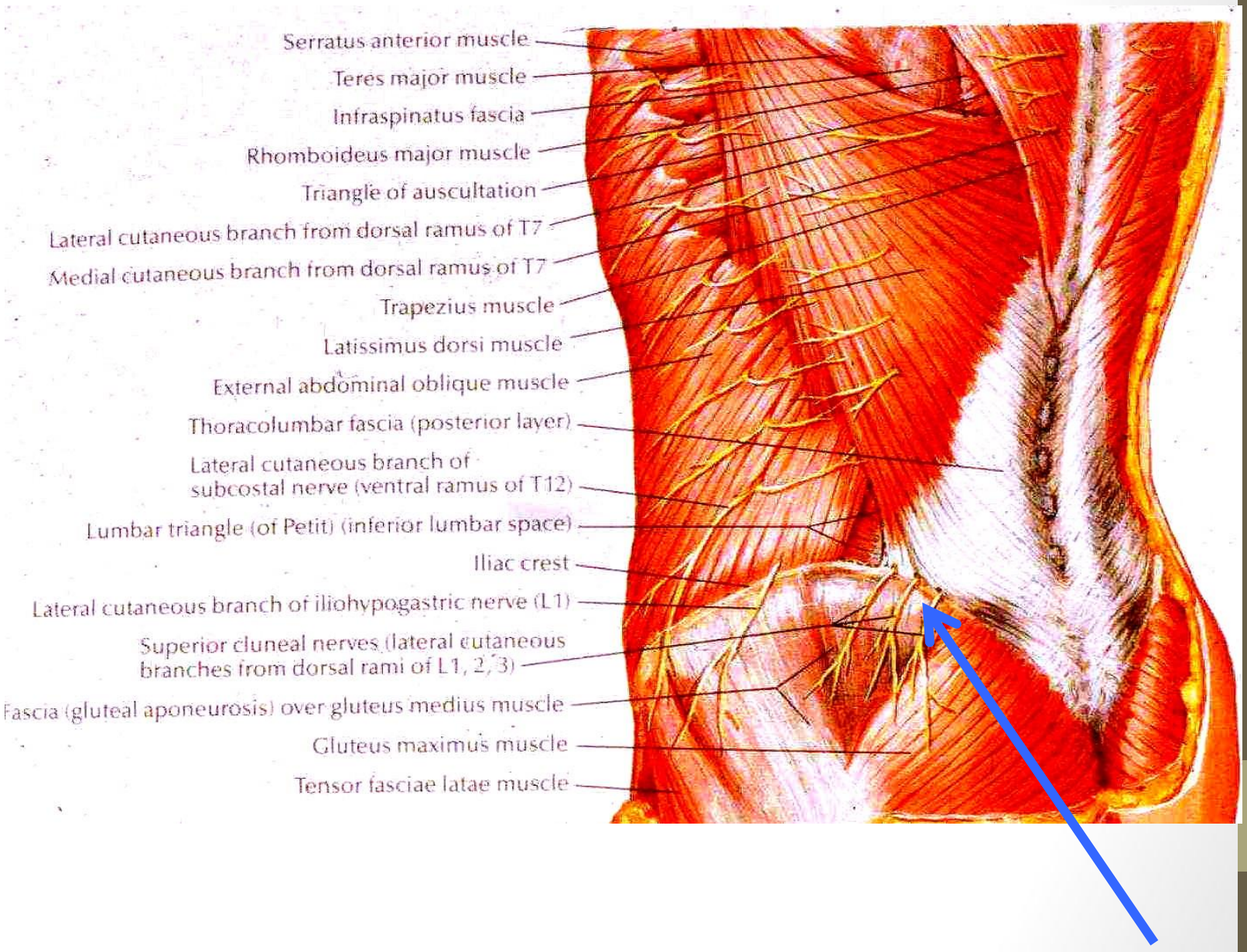
Iliolumbar Ligament

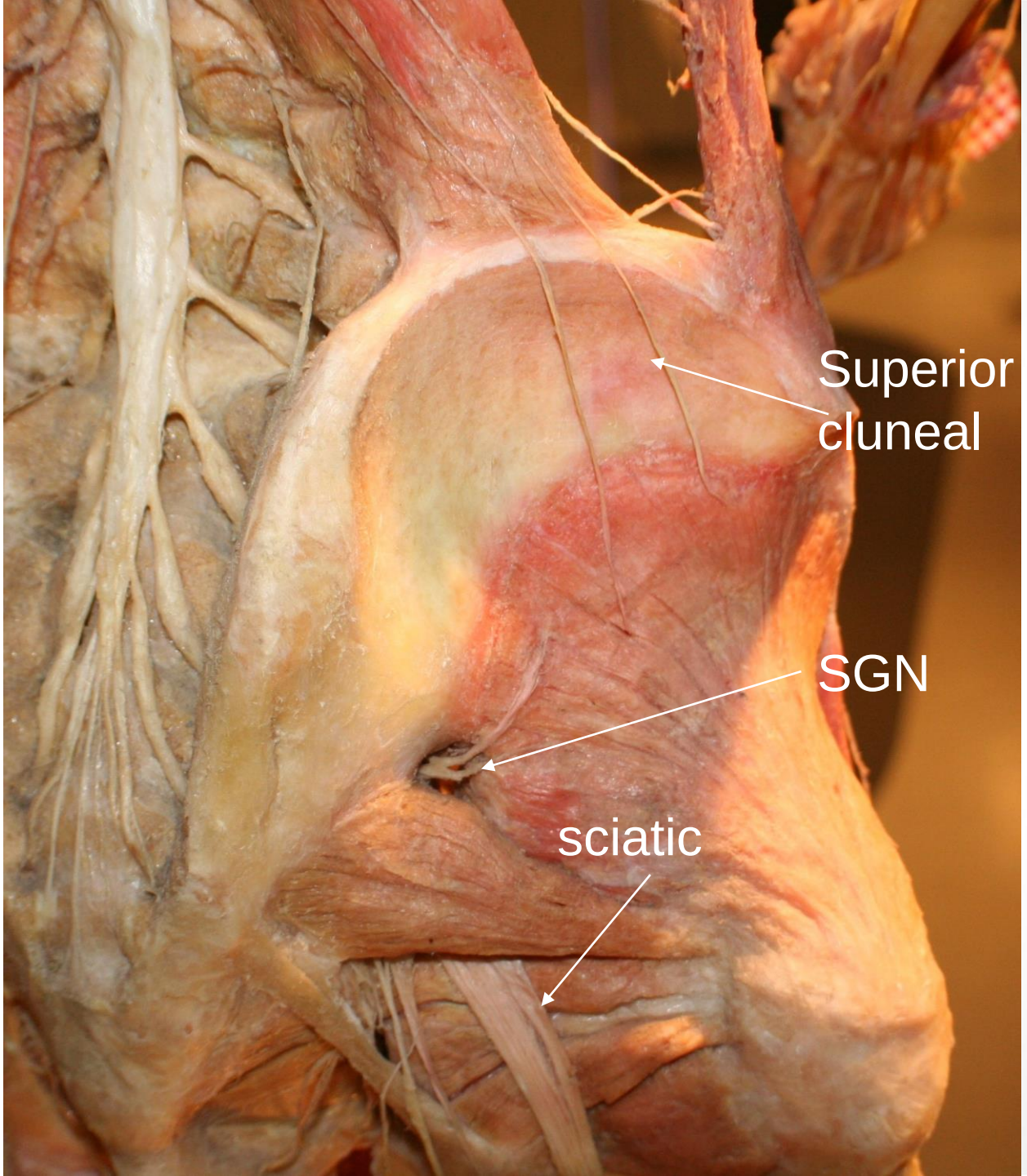




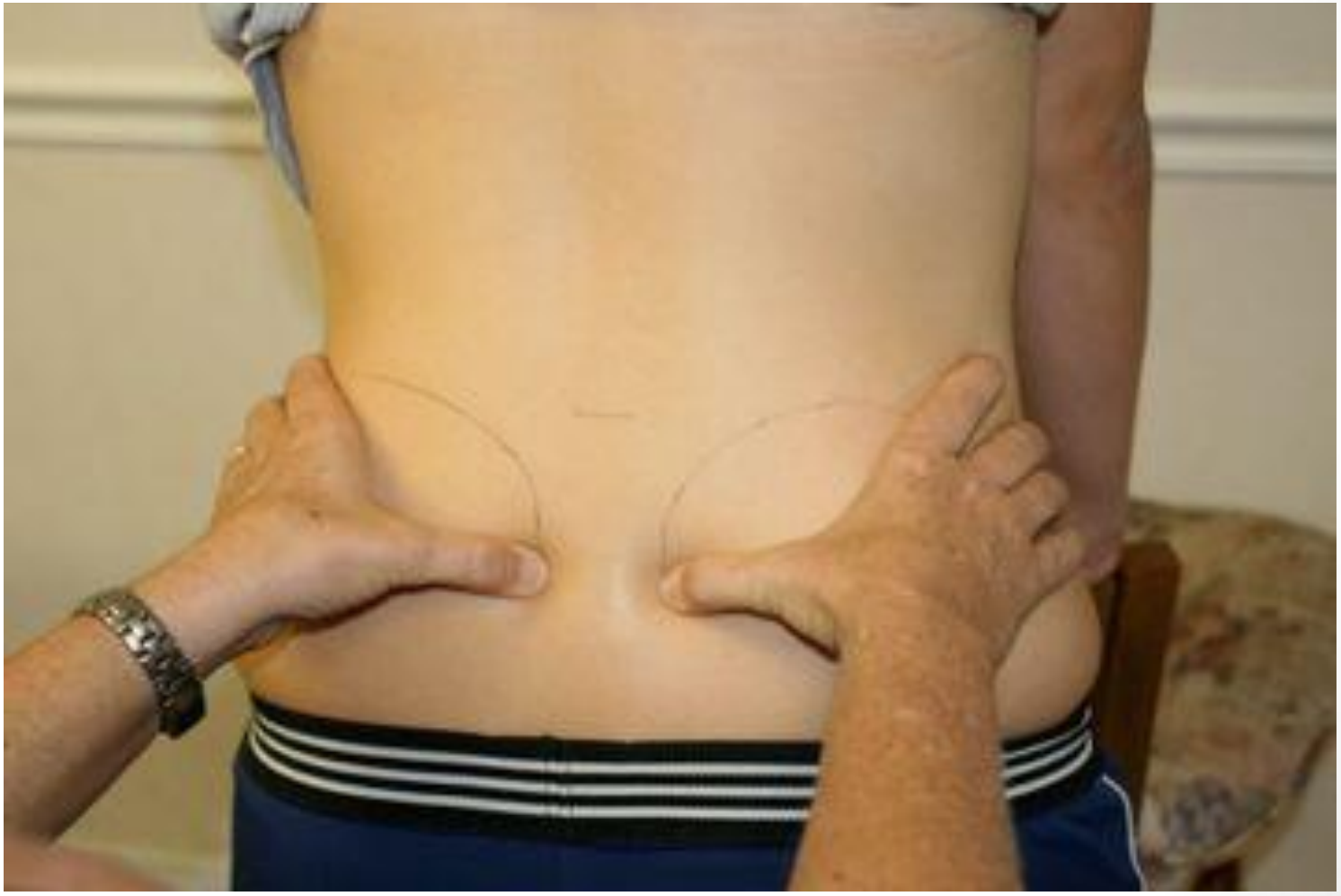
Cluneal Nerve

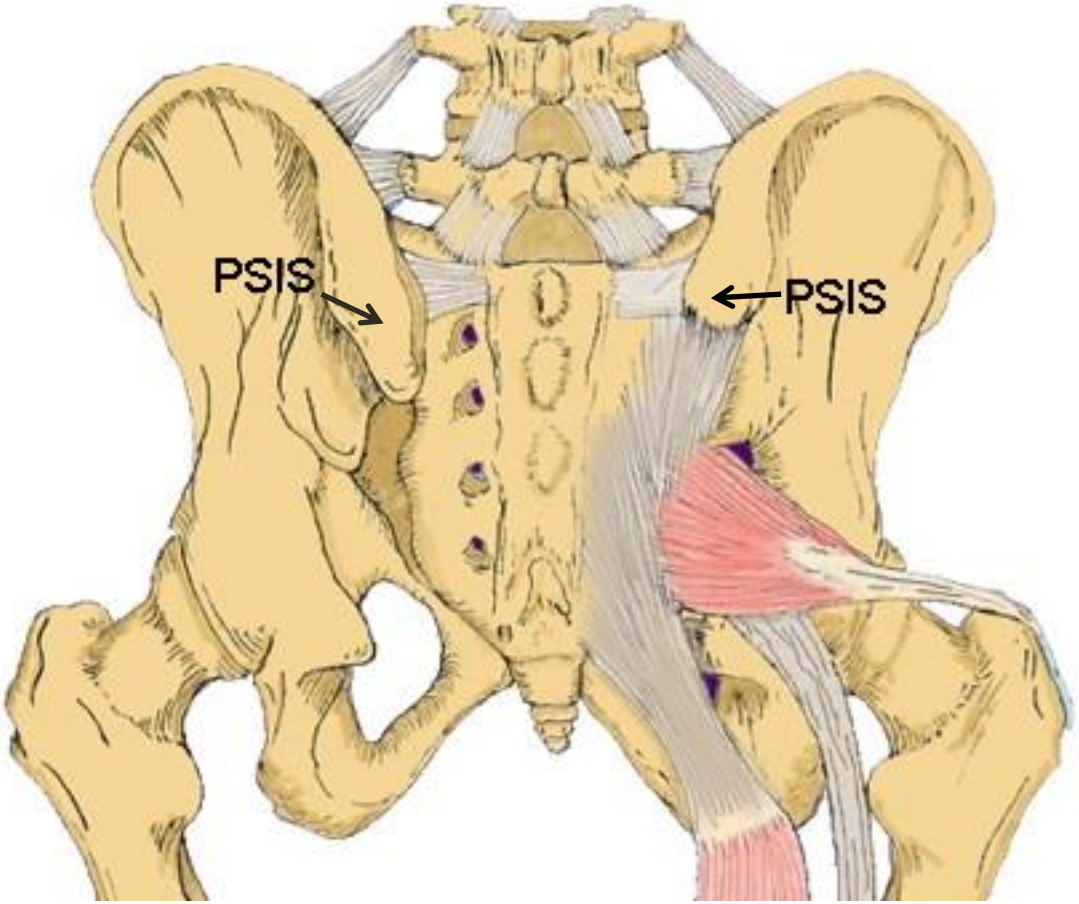


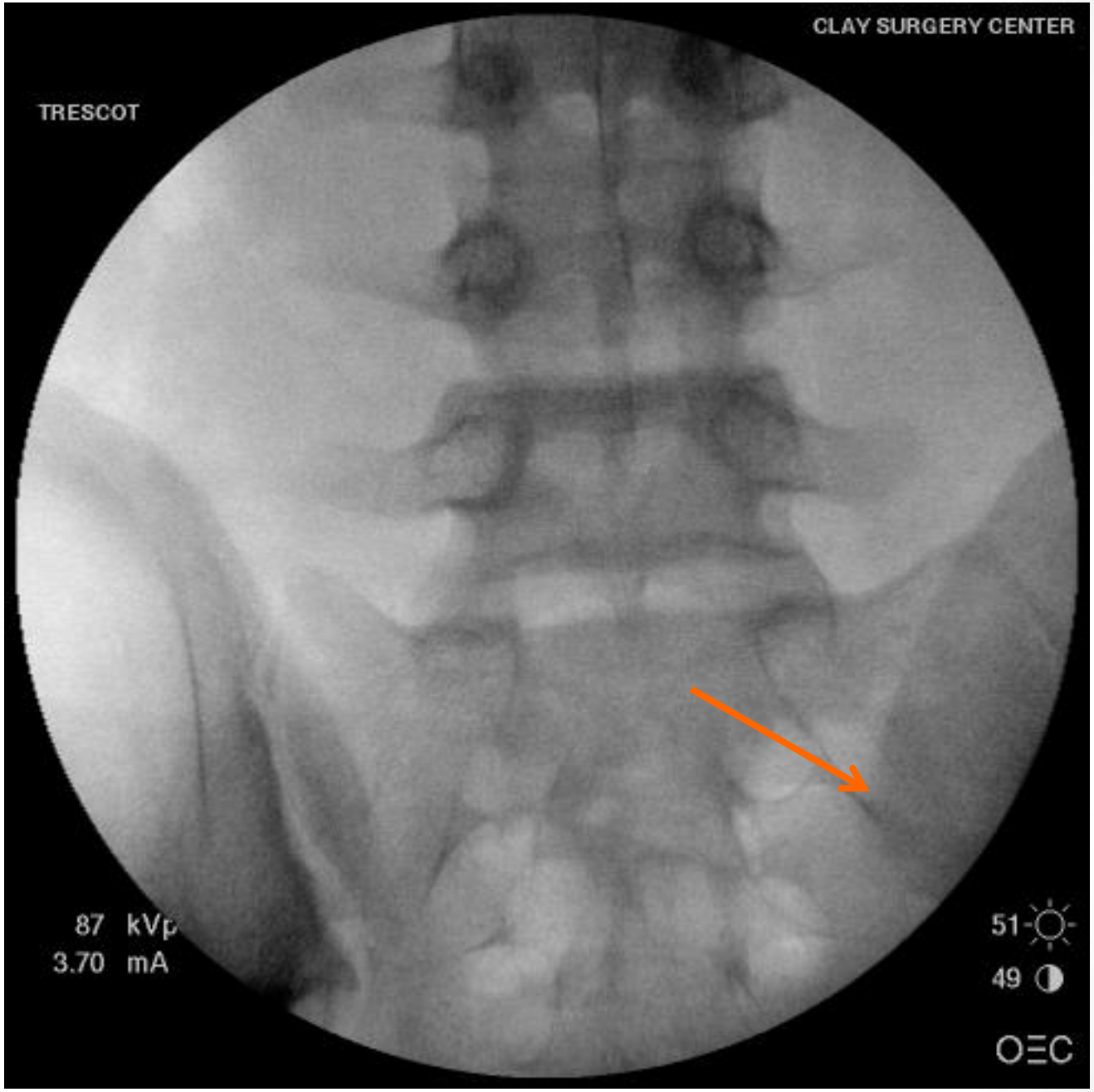

Serratus anterior muscle
Teres major muscle
Infraspinatus fascia
Rhomboideus major muscle
Triangle of auscultation
Lateral cutaneous branch from dorsal ramus of T7
Medial cutaneous branch from dorsal ramus of T7
Trapezius muscle
Latissimus dorsi muscle
External abdominal oblique muscle
Thoracolumbar fascia (posterior layer)
Lateral cutaneous branch of subcostal nerve (ventral ramus of T12)
Lumbar triangle (of Petit) (inferior lumbar space)
Iliac crest
Lateral cutaneous branch of iliohypogastric nerve (L1)
Superior cluneal nerves (lateral cutaneous branches from dorsal rami of L1, 2, 3)
Fascia (gluteal aponeurosis) over gluteus medius muscle
Gluteus maximus muscle
Tensor fasciae latae muscle


Superior cluneal
SGN
sciatic

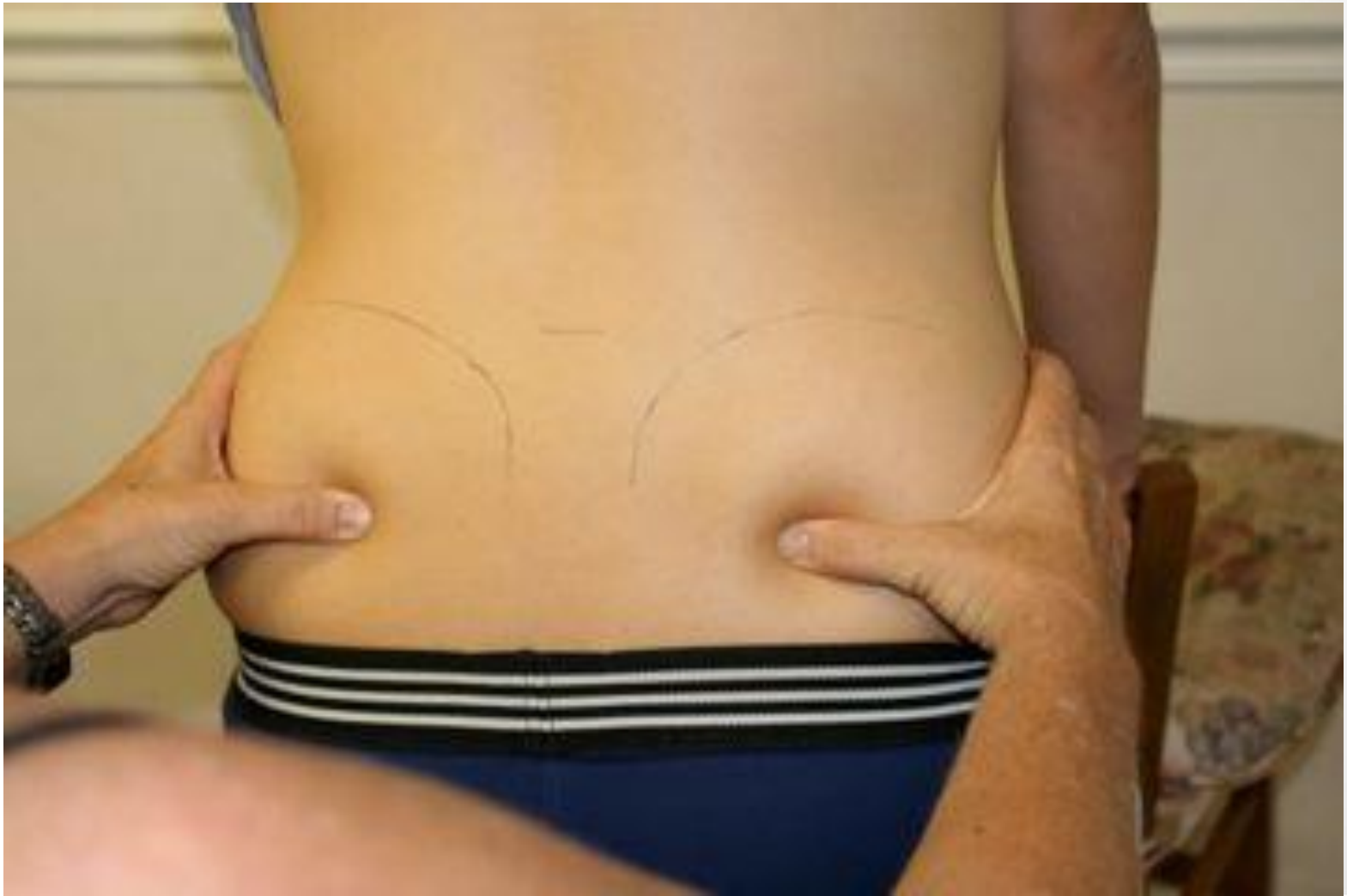
Posterior Superior Iliac Spine (PSIS)

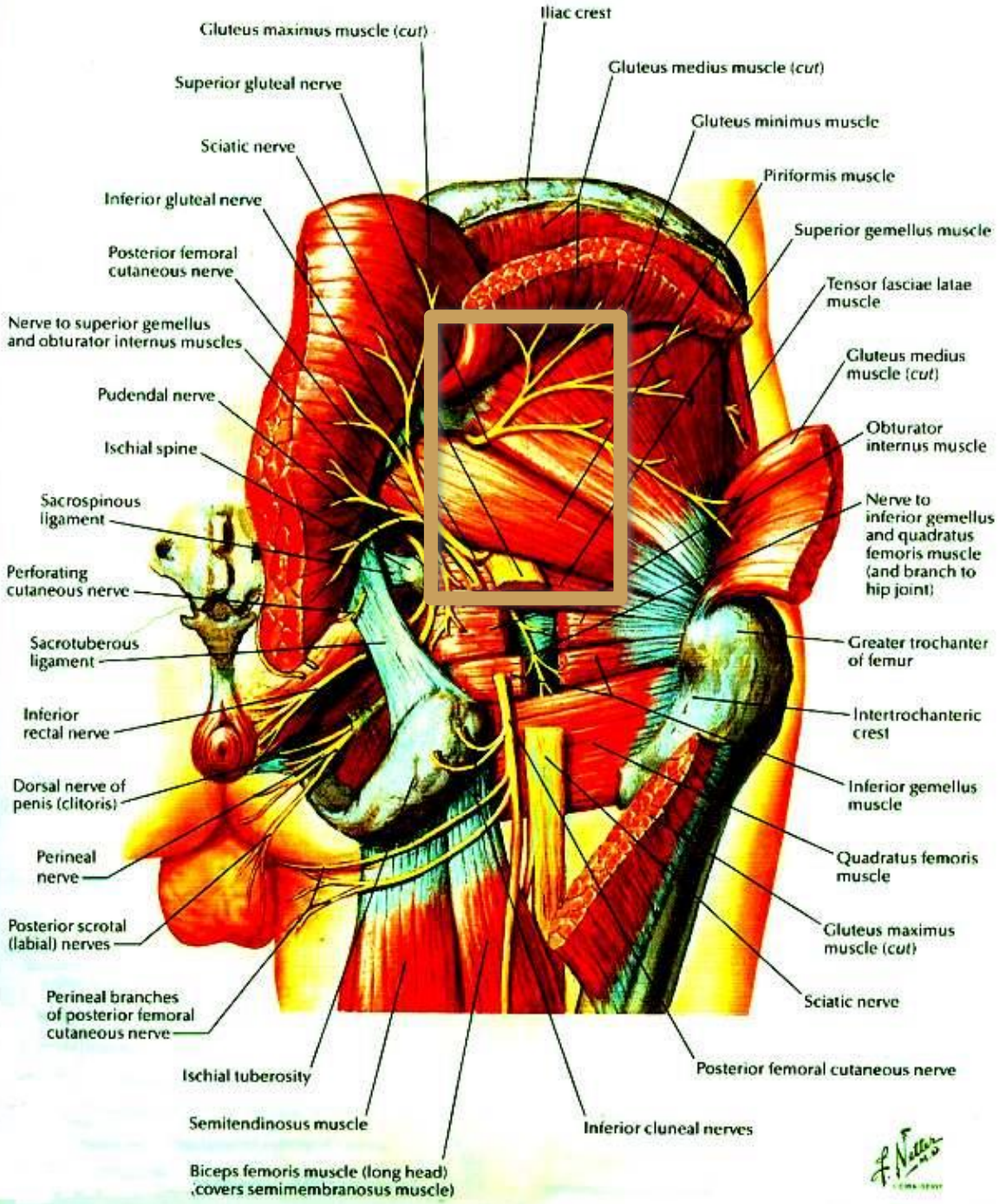


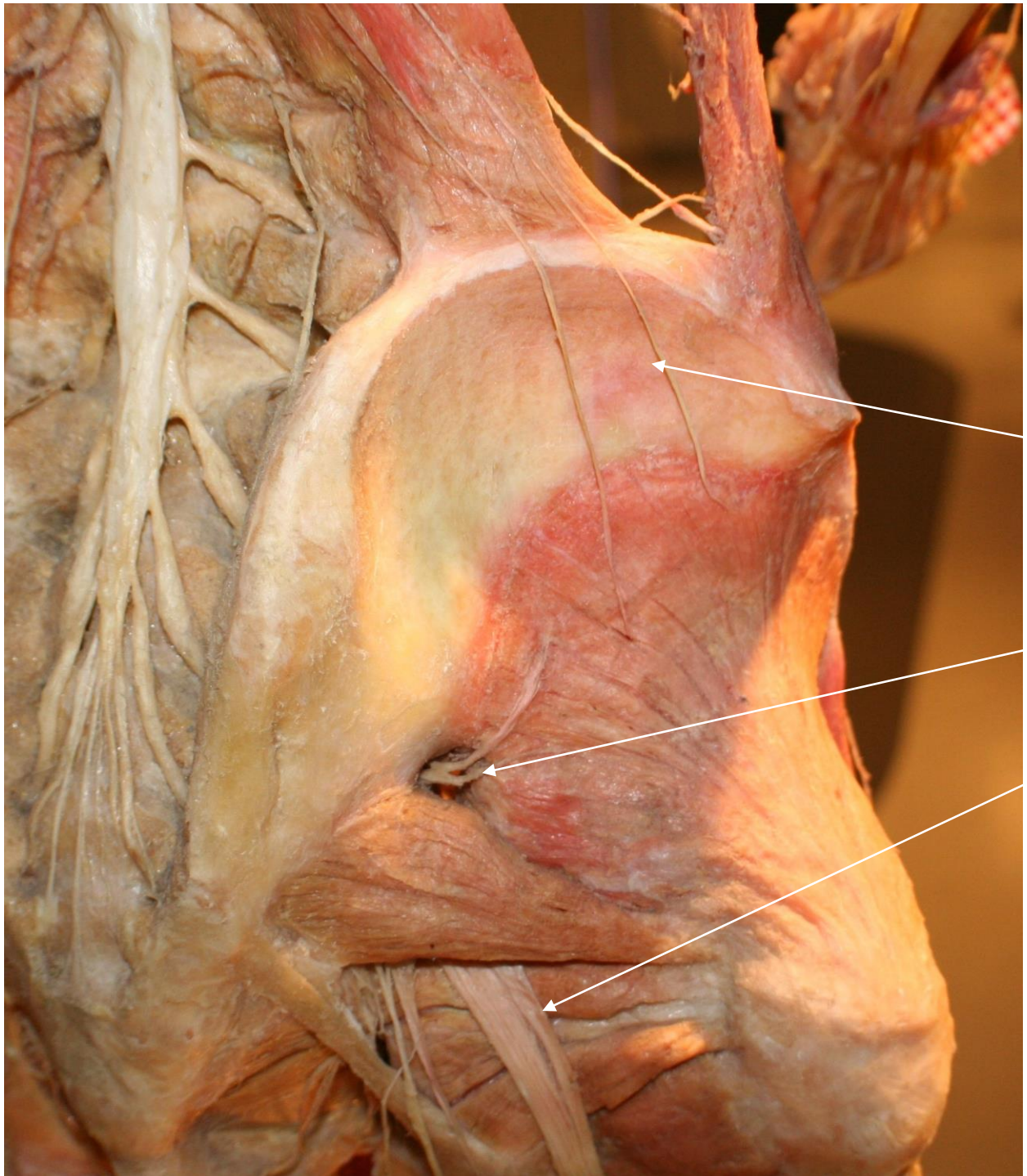

PSIS
PSIS


CLAY SURGERY CENTER
TRESCOT
87 kVp
3.70 mA
51
49
OEC

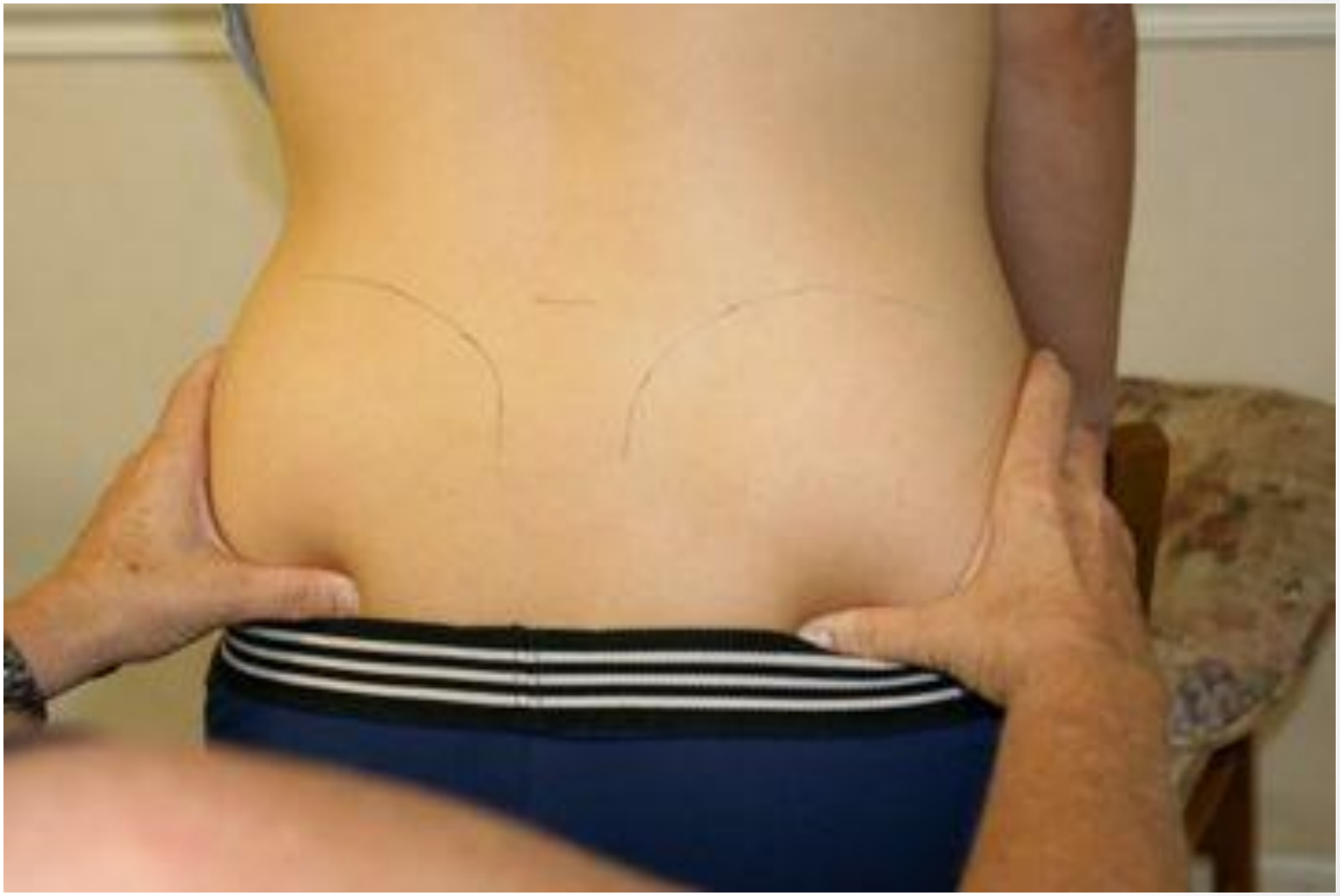
Superior Gluteal Nerve

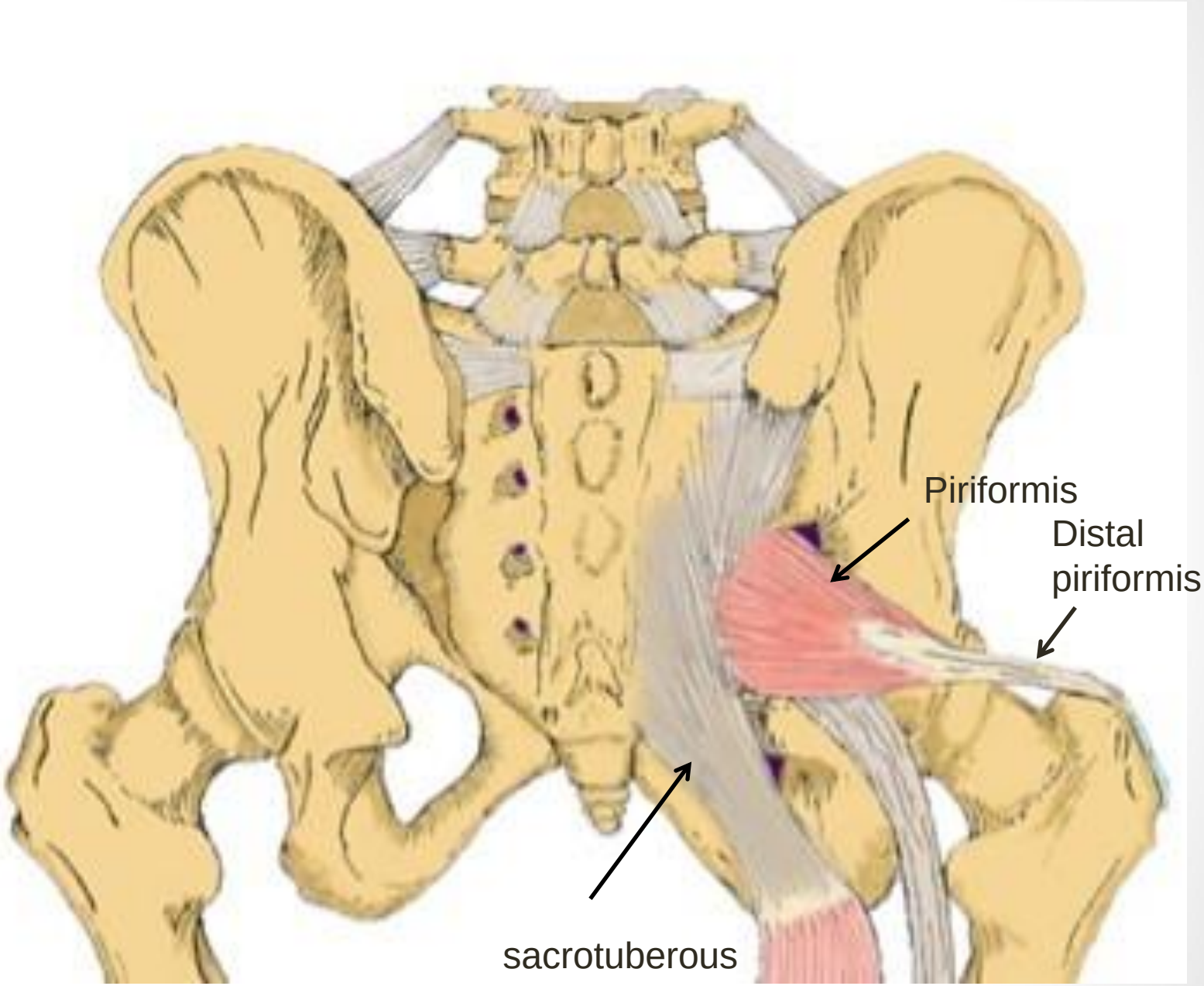


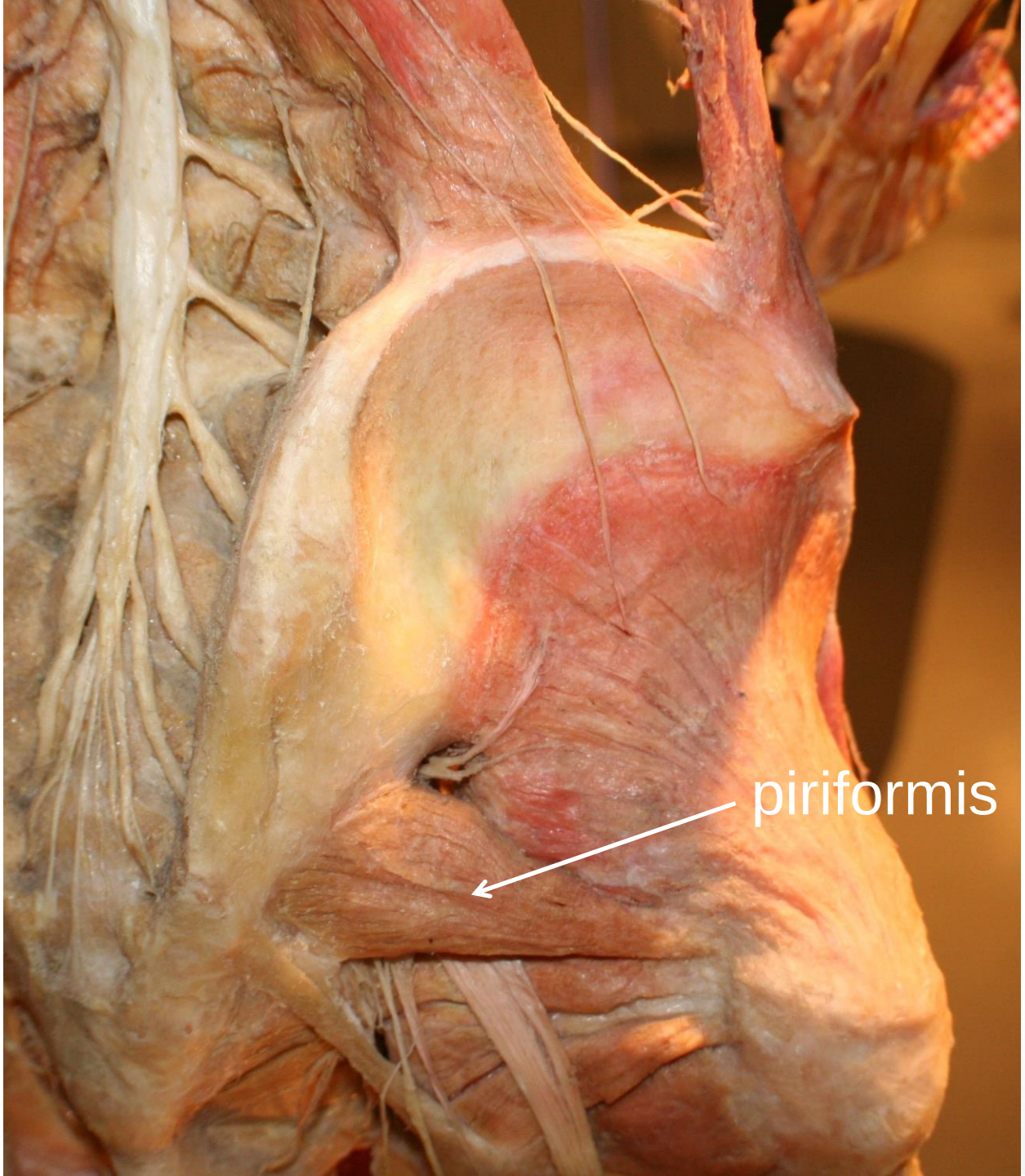

Gluteus maximus muscle (cut)
Iliac crest
Gluteus medius muscle (cut)
Superior gluteal nerve
Gluteus minimus muscle
Sciatic nerve
Piriformis muscle
Inferior gluteal nerve
Superior gemellus muscle
Posterior femoral cutaneous nerve
Tensor fasciae latae muscle
Nerve to superior gemellus and obturator internus muscles
Gluteus medius muscle (cut)
Pudendal nerve
Obturator internus muscle
Ischial spine
Sacrospinous ligament
Nerve to inferior gemellus and quadratus femoris muscle (and branch to hip joint)
Perforating cutaneous nerve
Greater trochanter of femur
Sacrotuberous ligament
Intertrochanteric crest
Inferior rectal nerve
Inferior gemellus muscle
Dorsal nerve of penis (clitoris)
Quadratus femoris muscle
Perineal nerve
Gluteus maximus muscle (cut)
Posterior scrotal (labial) nerves
Sciatic nerve
Perineal branches of posterior femoral cutaneous nerve
Posterior femoral cutaneous nerve
Ischial tuberosity
Semitendinosus muscle
Inferior cluneal nerves
Biceps femoris muscle (long head) ;covers semimembranosus muscle)


Superior cluneal
SGN
sciatic

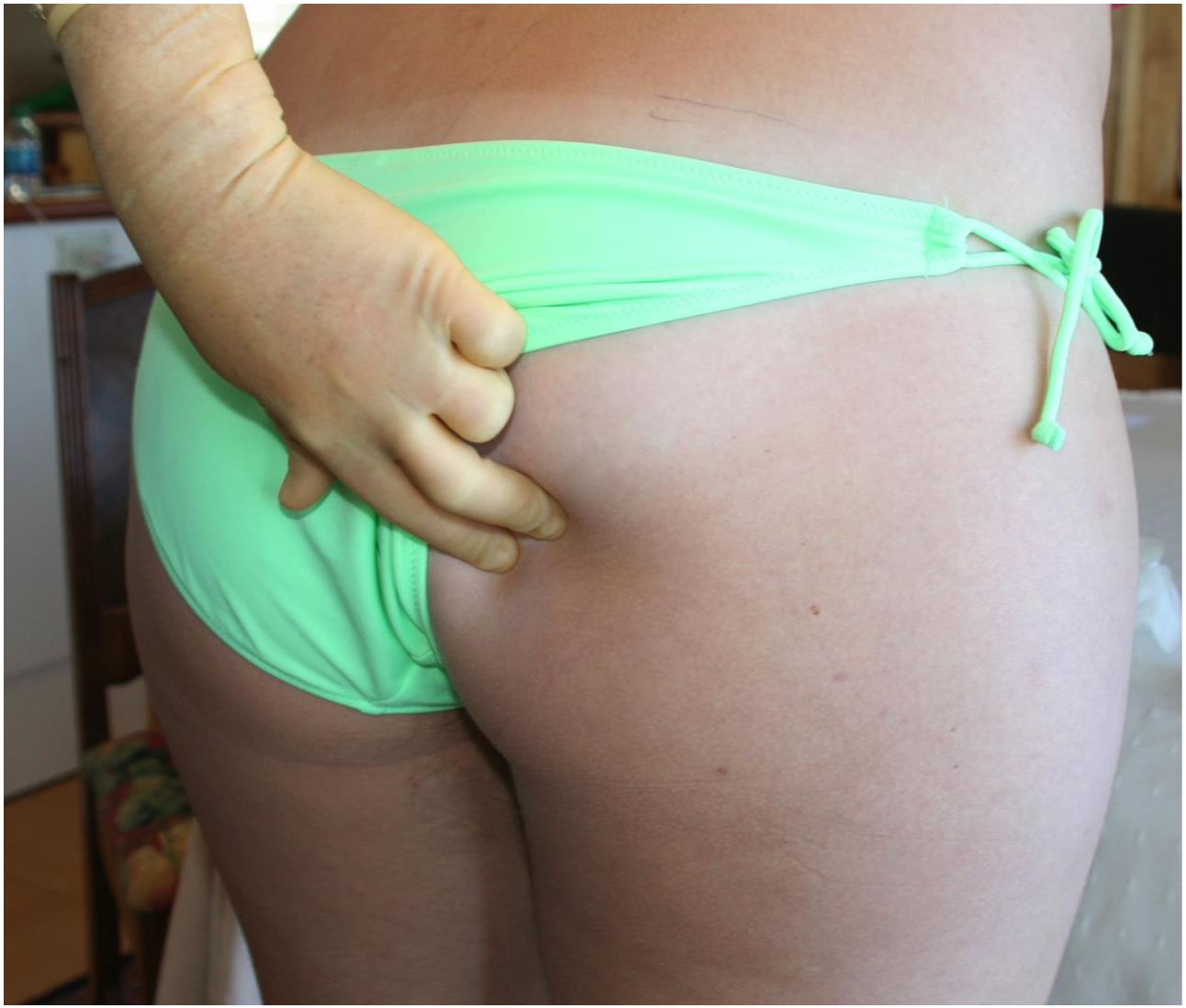
Piriformis

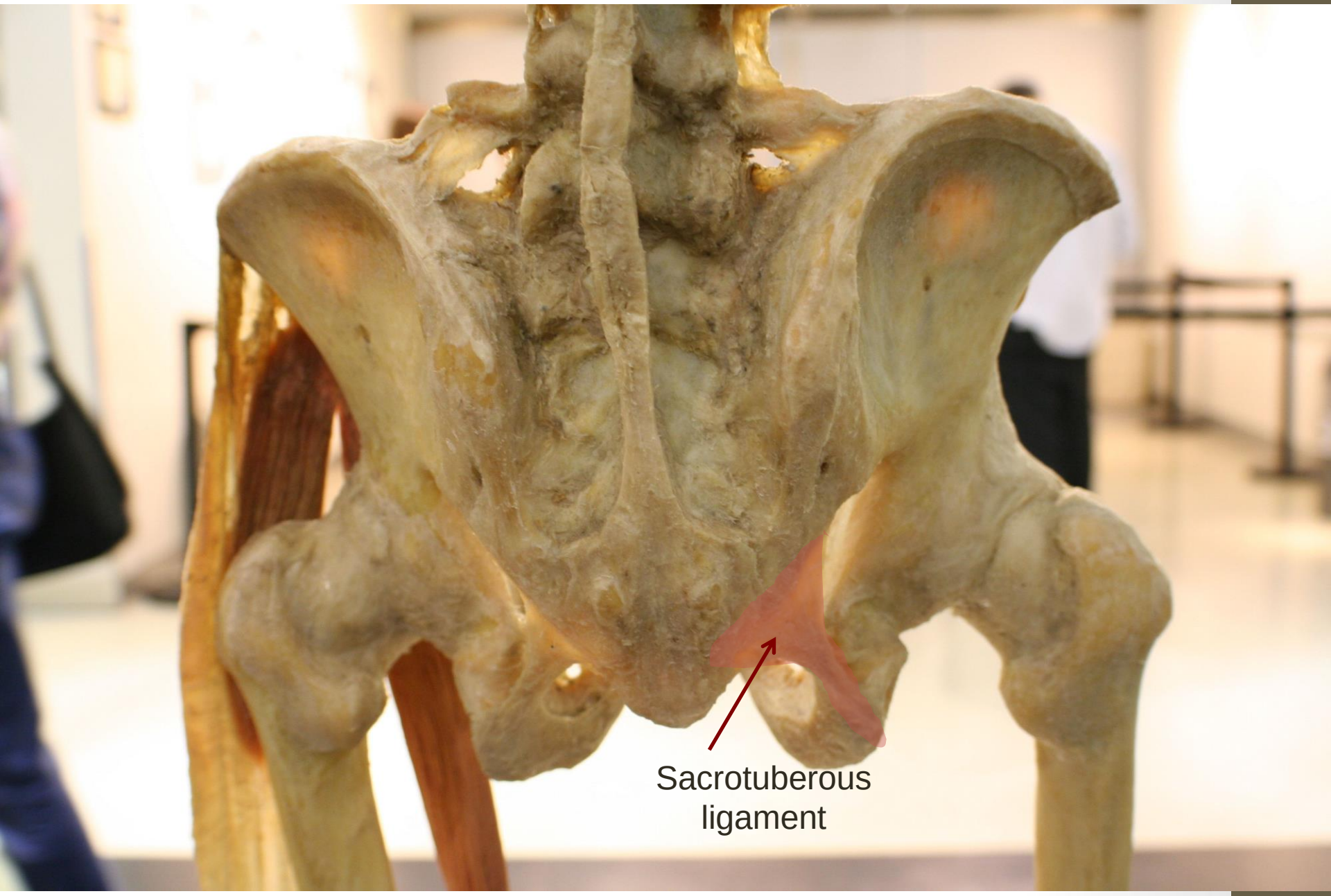


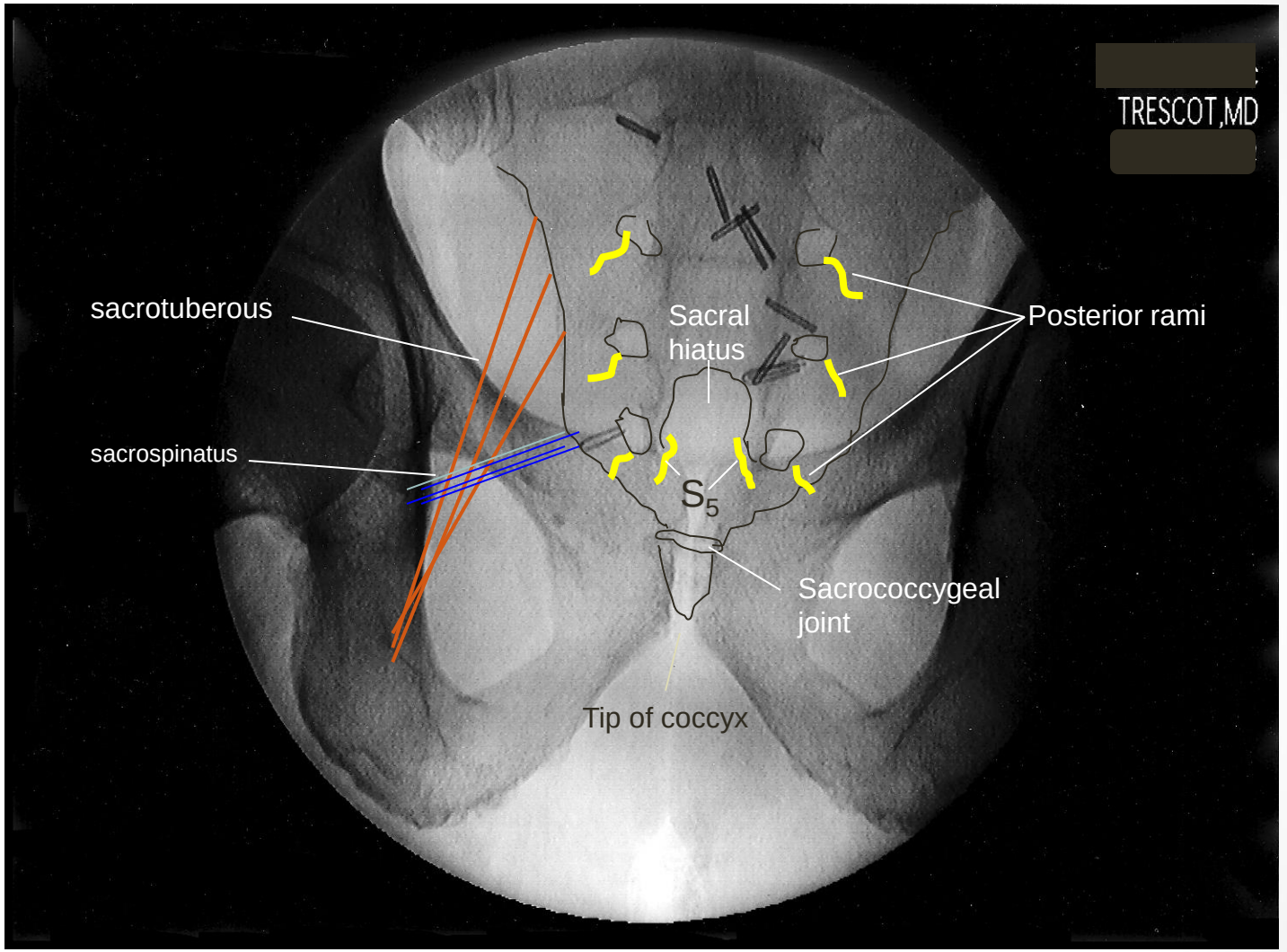

Piriformis
Distal
piriformis
sacrotuberous


piriformis

Sacrotuberous Ligament




Sacrotuberous
ligament

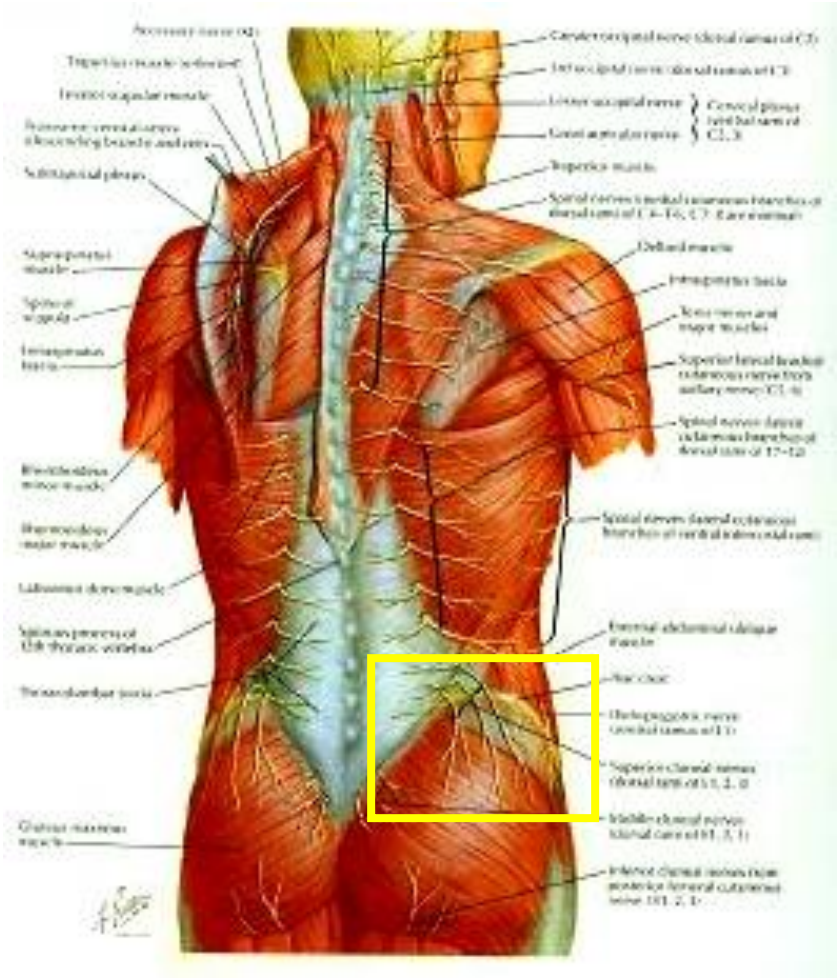

TRESCOT,MD
sacrotuberous
sacrospinatus
Sacral hiatus
Posterior rami
S5
Sacrococcygeal joint
Tip of coccyx

Diagnosis = Treatment

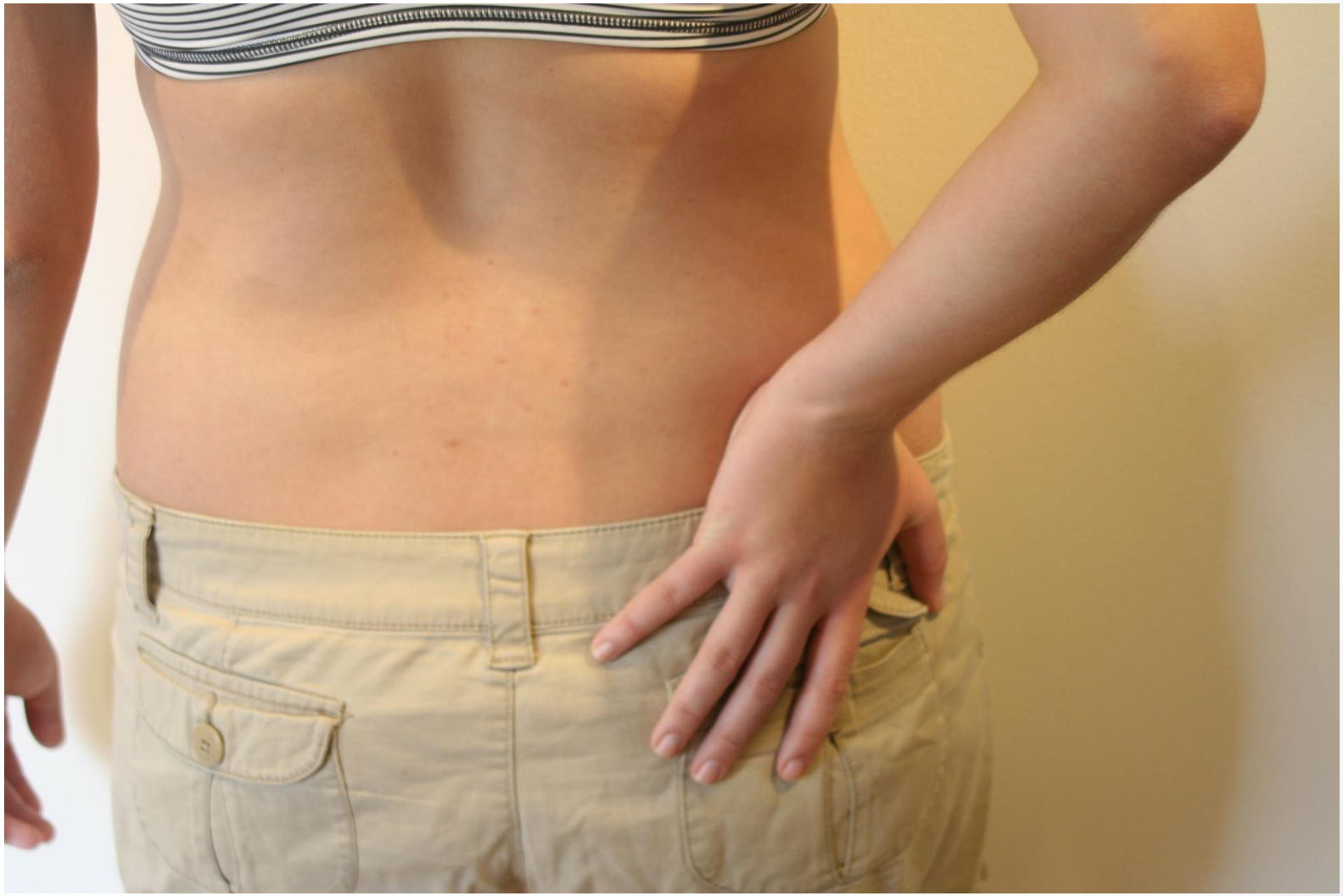
- Orthopedic surgeons can see broken bones
- Internists can measure blood pressure
- Neurologists can test nerves

- Interventional pain management doctors use their ears and their hands to direct their eyes and their needles

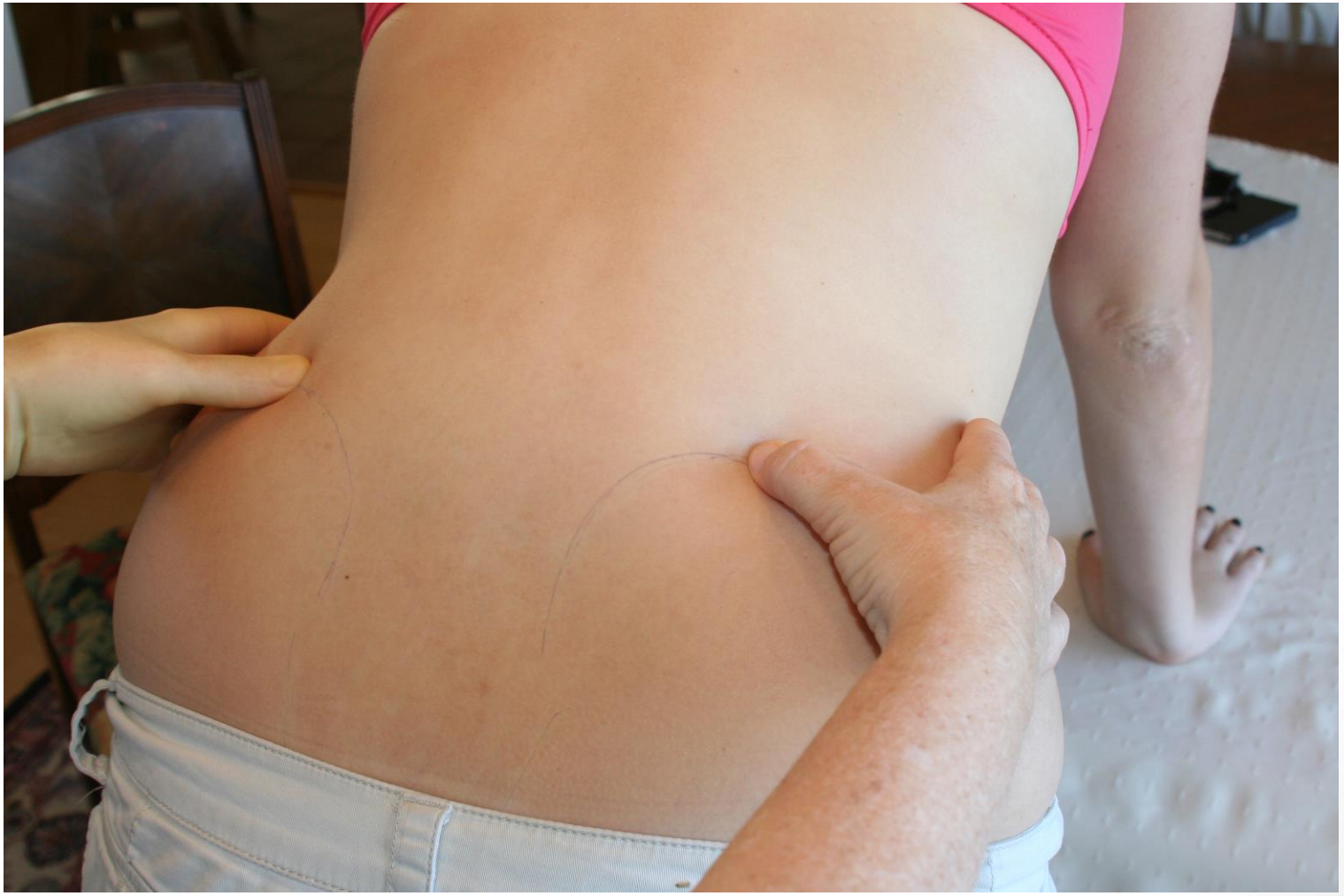
Clinical Diagnosis



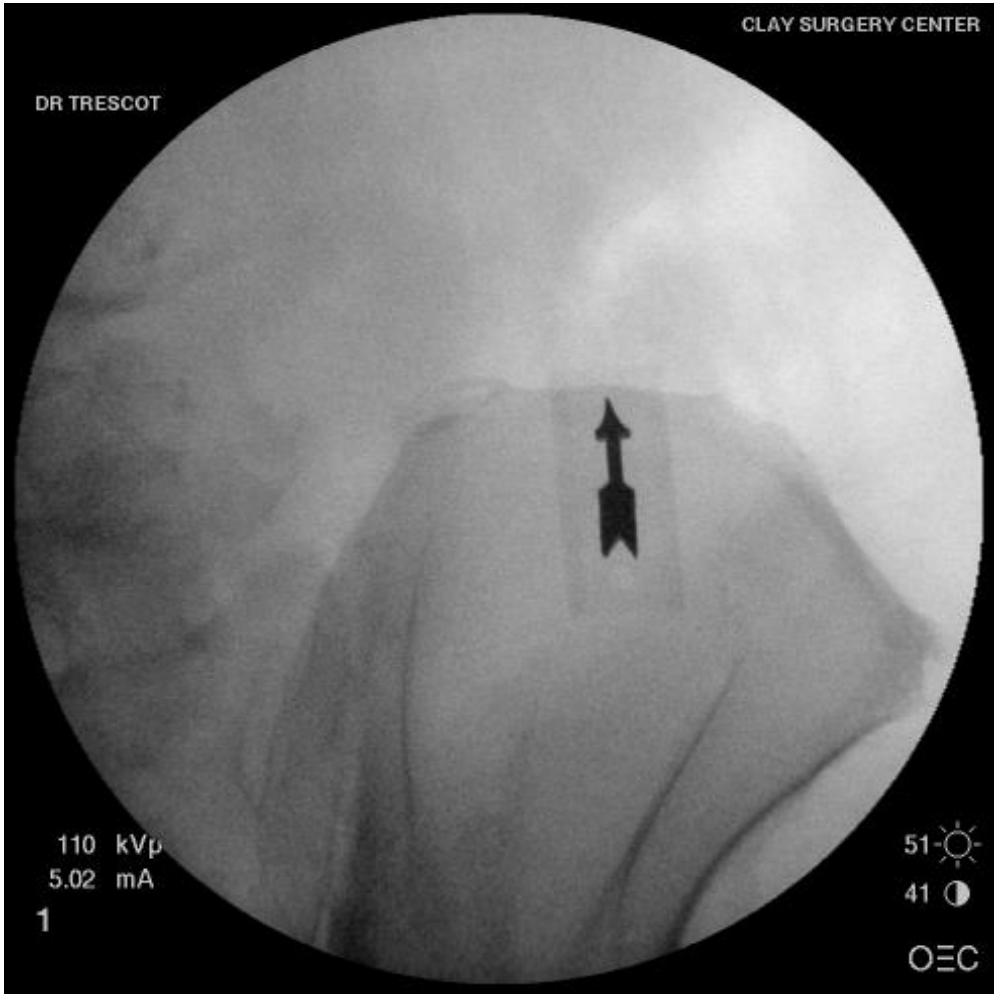
Patient Pattern



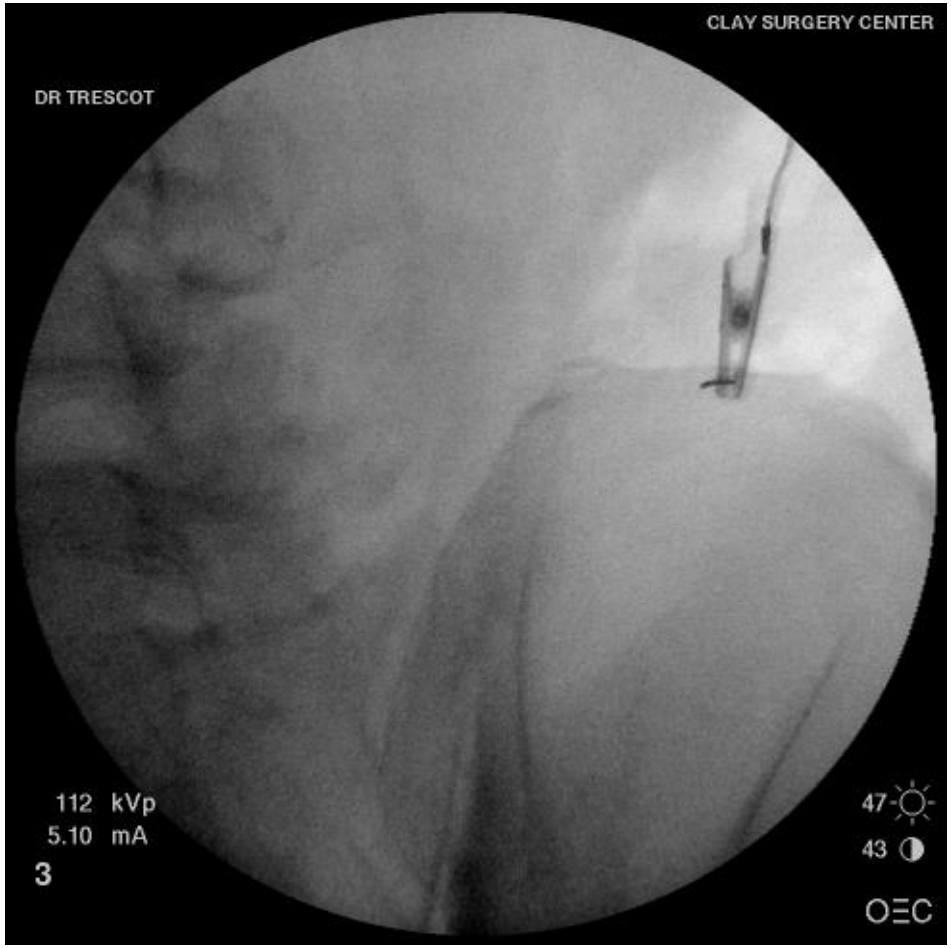
Physical Exam



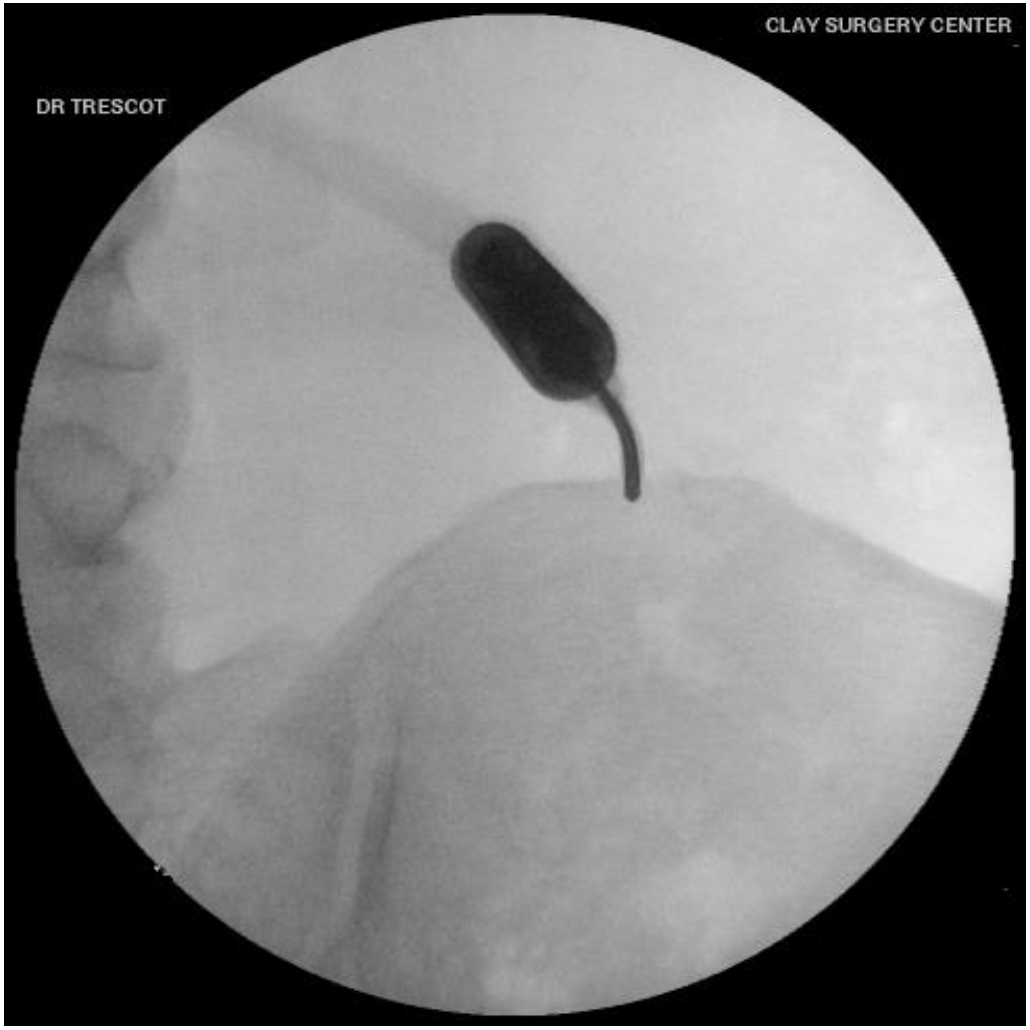
Fluoroscopic Exam



Diagnostic Injection



Cryo Probe Placement



You can’t treat what you cannot diagnose

Andrea Trescot, MD
DrTrescot@gmail.com