



Chadi Tannoury, MD.
Orthopaedic Spine Surgeon
Co-Director of Spine Fellowship
Boston Medical Center

*Work Related Injuries Workshop
May 2 & 3, 2016*

What really hurts?

Hip vs. SIJ vs. Low back Pain:
History – Exam – Diagnostic Workup

10 min

Disclosure

- No COI to disclose

Scenario

- 47 y F
- Nursing Assistant
- While caring for a patient:
pulling him up in bed
- Sharp back pain:
 - Buttock
 - Groin
 - Thigh
 - Leg
 - Foot





What Does A Spine Surgeon Think?

- Lumbar Disc Herniation
- Lumbar Stenosis

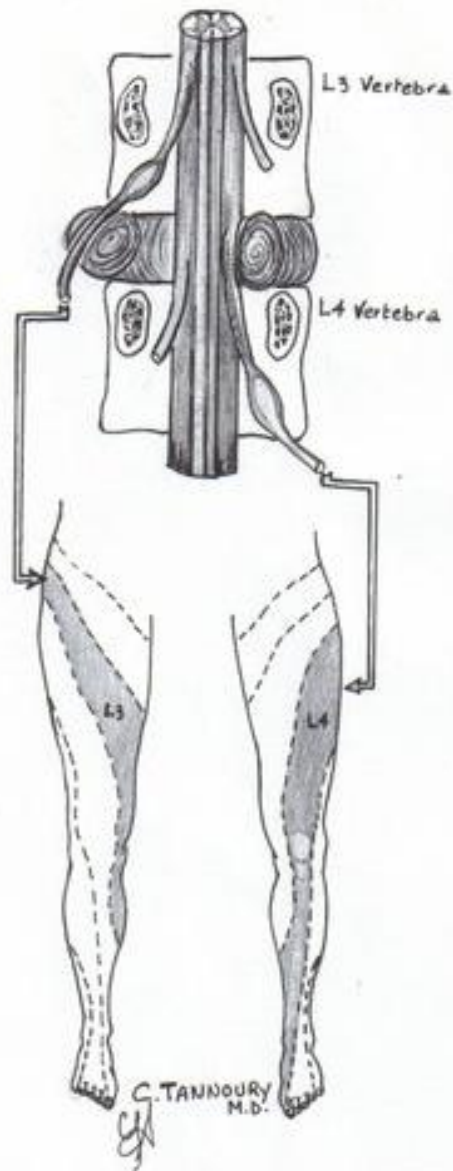
Mimickers of LBP

- Hip:
 - OA
 - ON
 - FAI
 - Stress Fracture
 - GT bursitis
 - SI joint
- Vascular
- Tumors
- Peripheral Neuropathy
 - Metabolic
 - Toxic (lead)
- Infection/ Autoimmune:
 - Pyogenic
 - GBS
 - Transverse Myelitis
- Iatrogenic:
 - Neuropathic
 - Myogenic

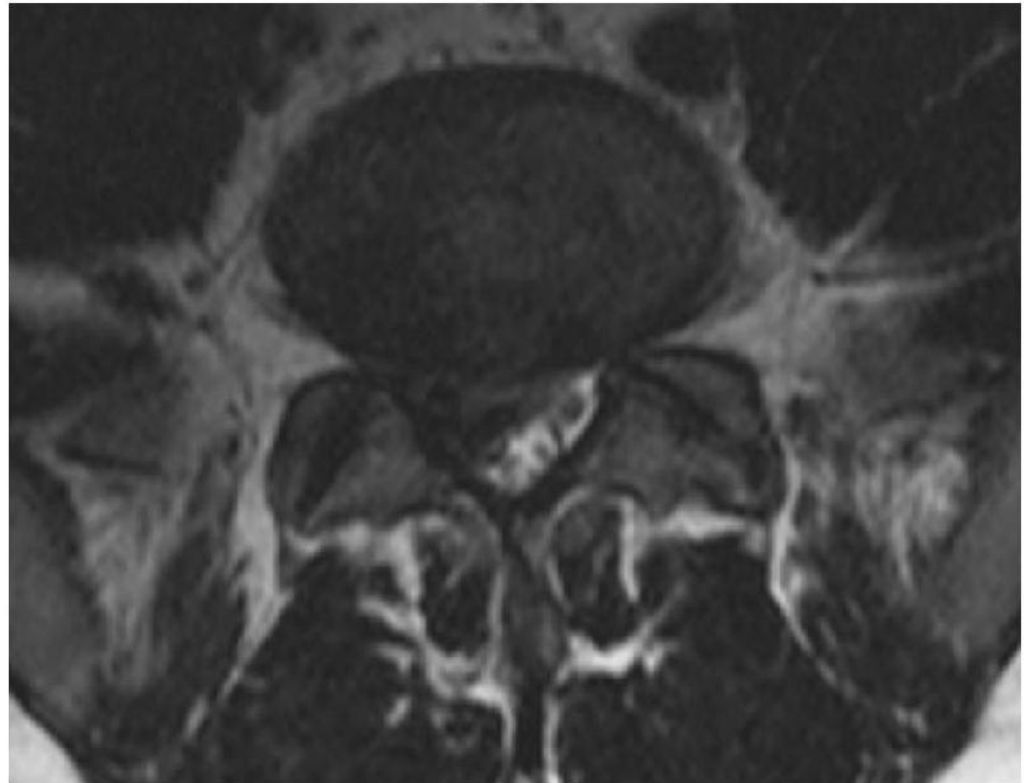
Lumbar Disc Herniation

- Age < 50
- Pain Onset:
 - Severe LBP (Picture annulus innervation)
 - Sciatica (fragment compress nerve / chemical irritation)
- Symptoms:
 - Pain, N, T (Dermatomal)
 - Aggravated: Cough, Sneeze
- Signs: SLR (60% +ve)
- RED FLAG: Saddle Anesthesia – Cauda equina sd

- Dermatomal distribution

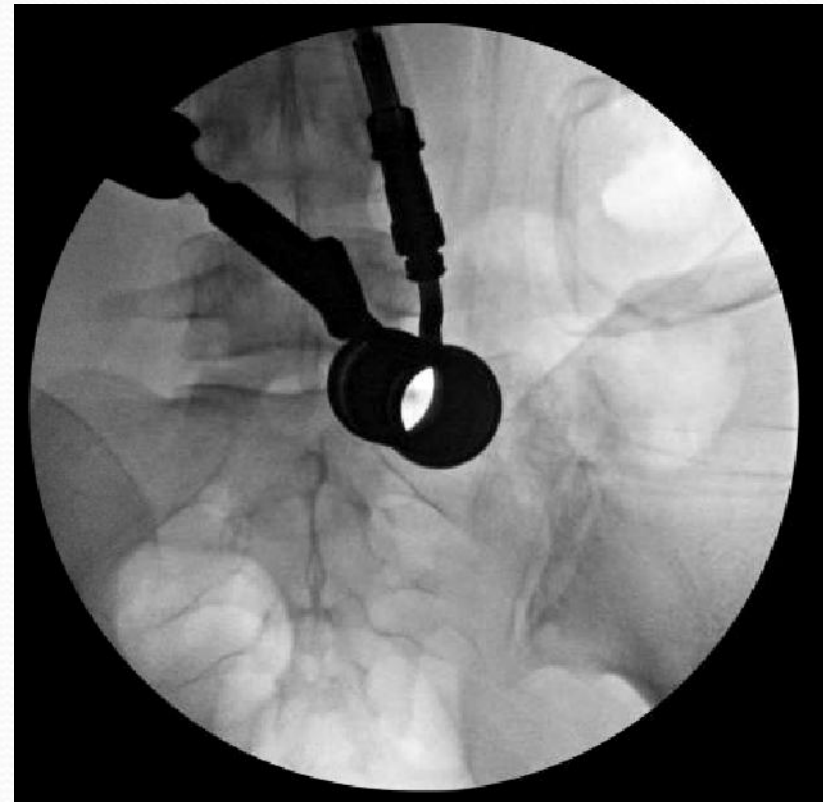
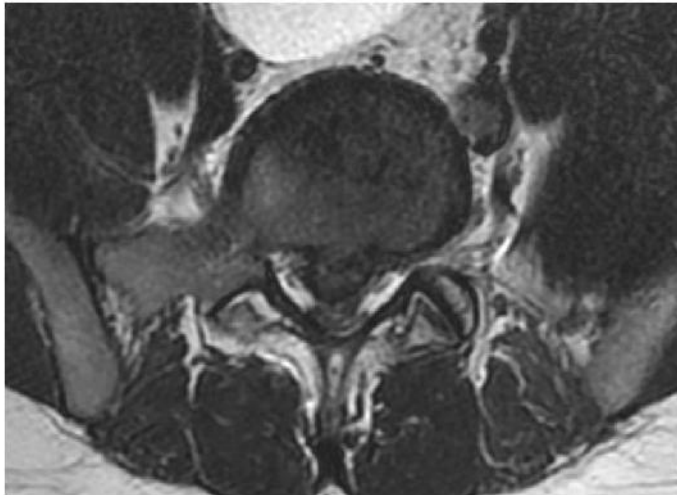


- L5-S1 HNP



Red Flag – Cauda Equina

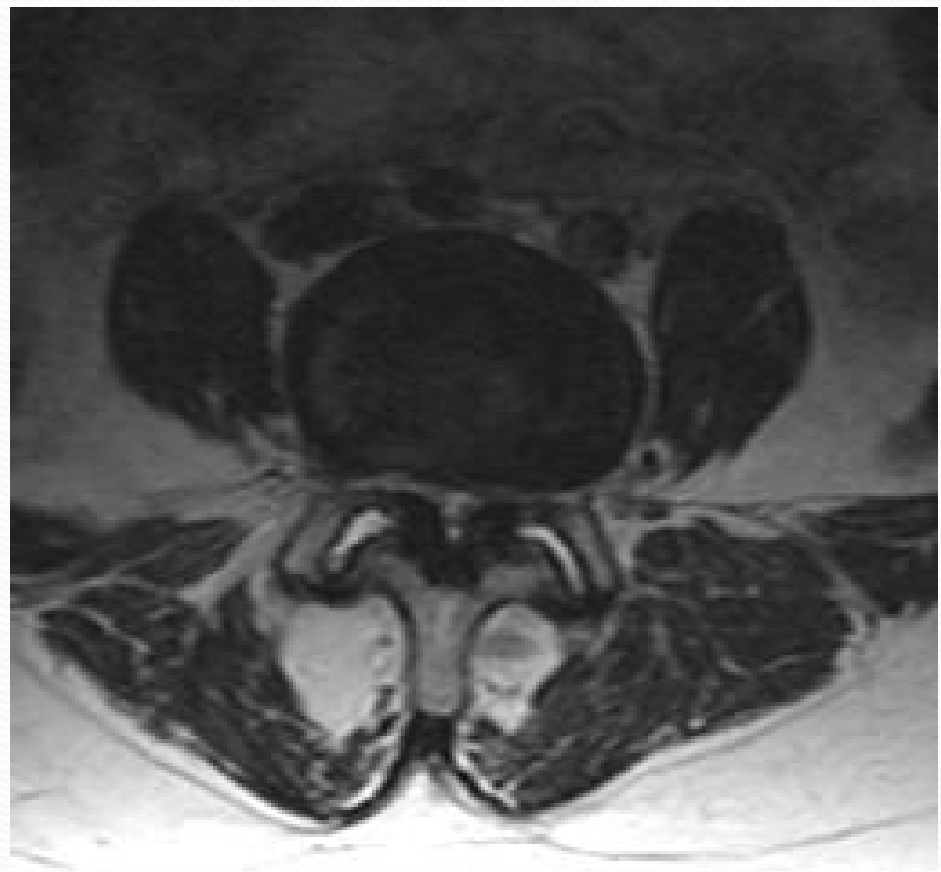
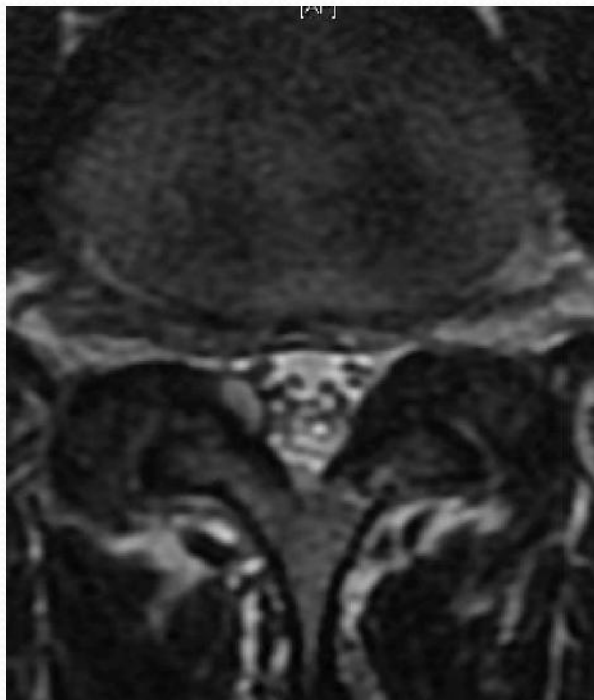
- Large HNP

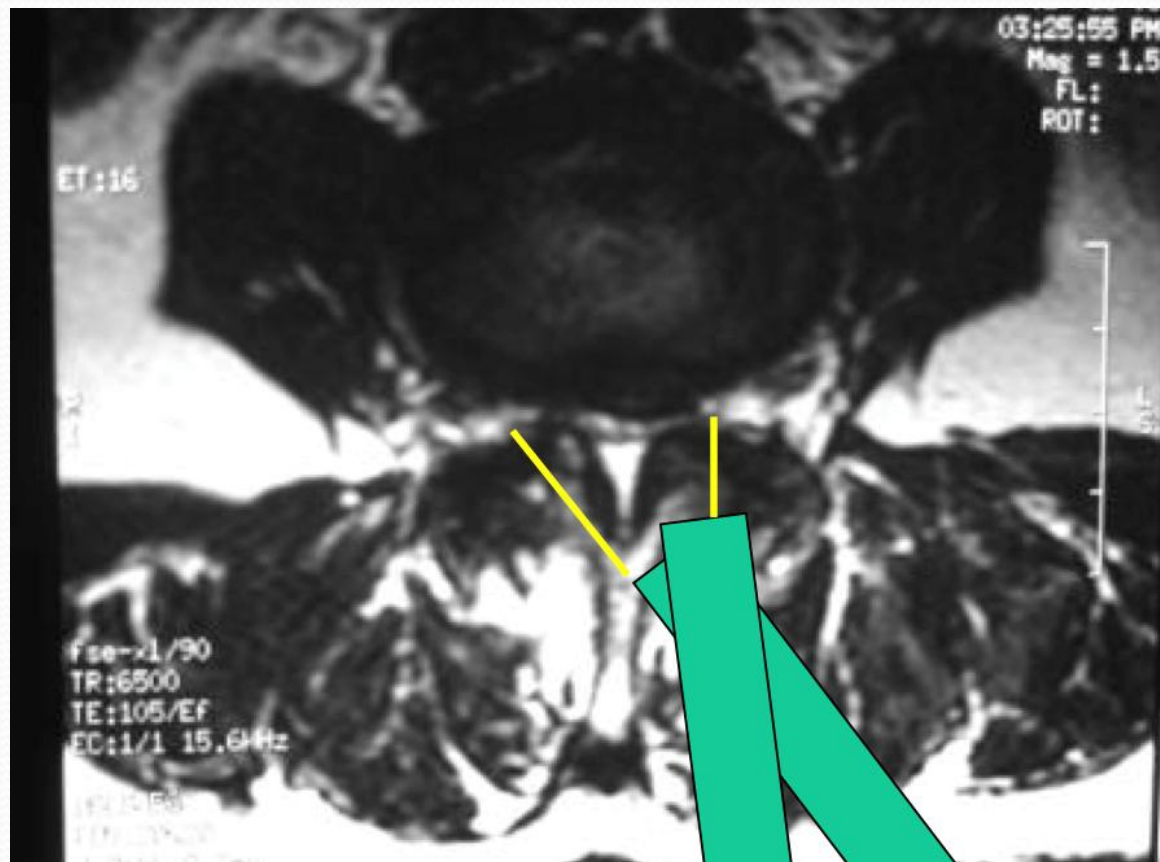


Lumbar Stenosis

- Age > 65 y
- Presenting Symptom:
 - Neurogenic Claudication
 - Acute on Chronic LBP
- Anatomy of lumbar stenosis (Picture)
 - Facet cyst
- Signs:
 - 50% Sensory Motor Changes (non specific)
 - SLR (20%)

- Facet cyst







Hip Joint - Pelvis

- Groin pain with activity → Hip (OA, ON, FAI)

HIP OA

- Age > 65 y
- Getting in out car, stairs, putting socks-shoes
- Buttock → ant groin, thigh, knee
- Sign: Decreased ROM Flex-IR ++ pain
- X-rays → Pathology
- Back vs. Hip: Intra-articular injection helps differentiate

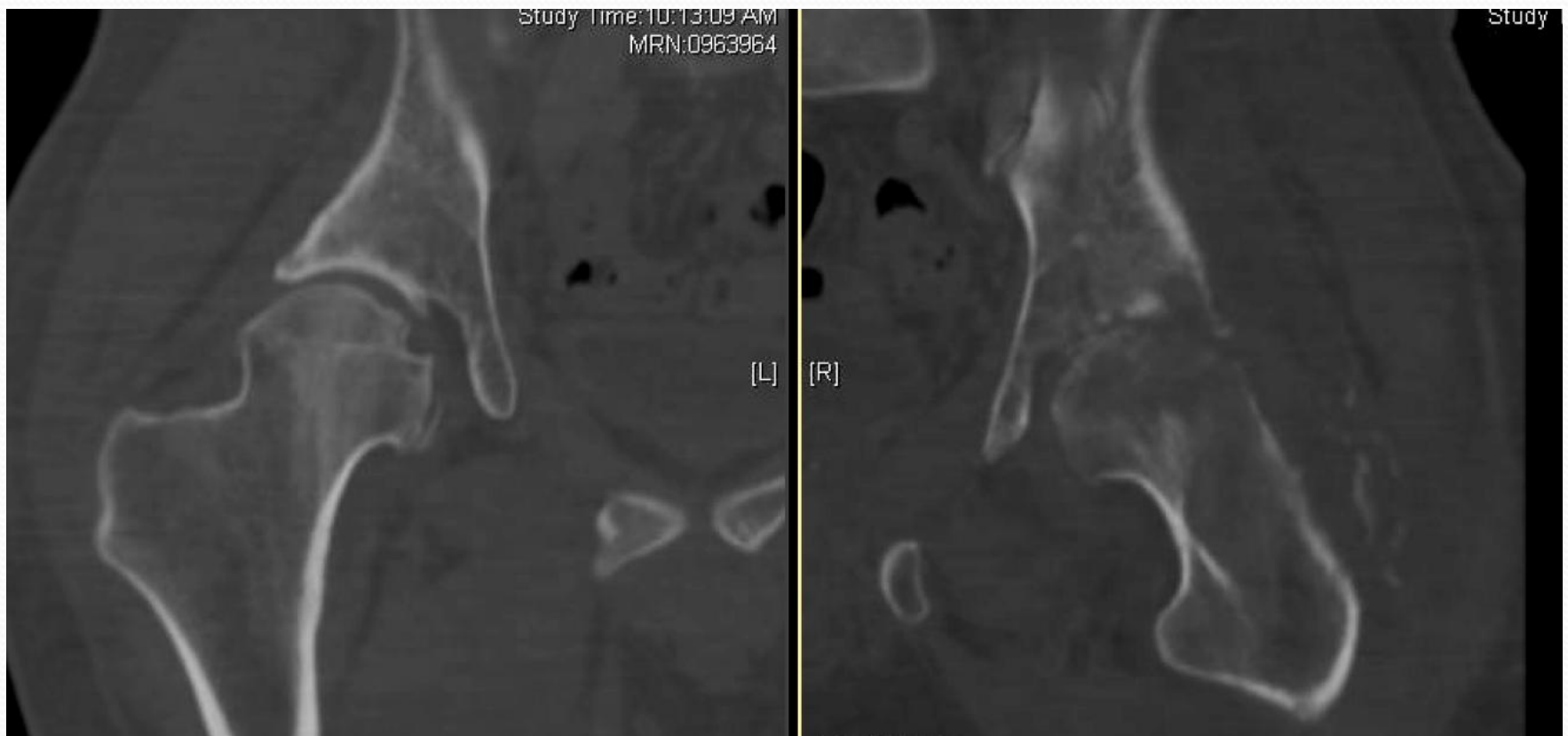
Back – Buttock pain



HIP ON

- Vascular insult → Necrosis → Collapse → OA
- Age 20-50 y
 - ETOH, Steroid, Sickle cell, Cocaine, etc.
 - X-ray ? → MRI

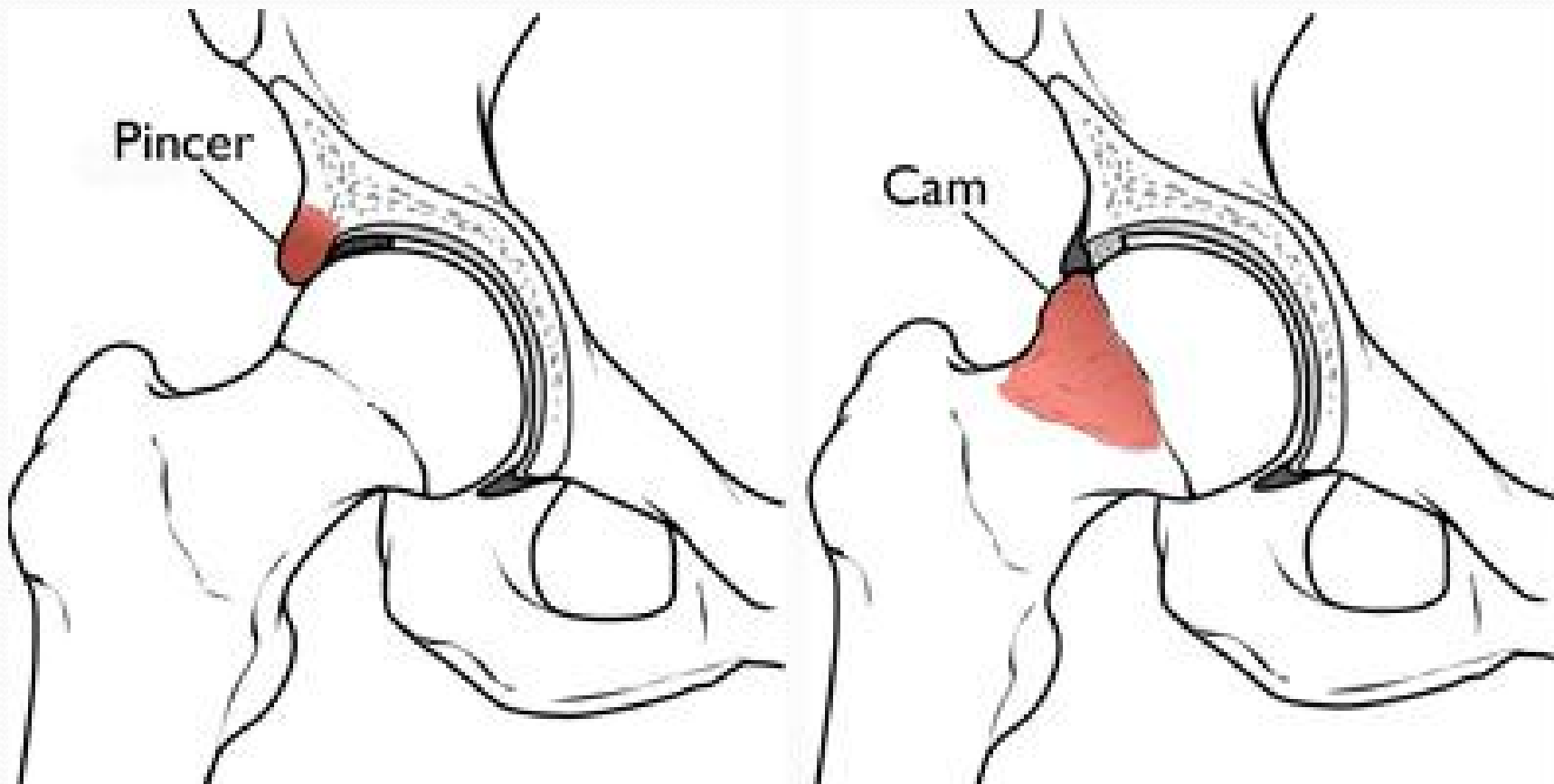
Infection → AVN → OA



HIP FAI

- Young patient
- Abnormal contact Femoral Neck w Acetabulum
- Cam vs. Pincer (images)
- FAI → Labrum tear
- Signs: Pain with Flex-Add-IR
- Test of Choice: Hip MRI Arthrogram

Ball-Socket Contour Mismatch



HIP

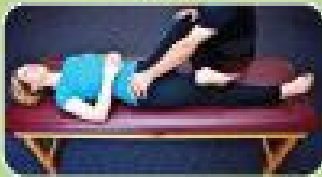
- Femoral Neck Stress Fracture:
 - Avid Runners / Military trainees
 - Onset: Insidious – Increase w Running, improve w rest
 - Female Athlete triad: Amenorrhea, OPorosis, Anorexia
 - If untreated → ON → OA
 - Diagnosis: MRI
- GT Bursitis:
 - Middle-aged patients, F 2x > M
 - TTP over lateral hip

Sacroiliac Joint Pain

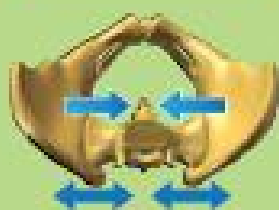
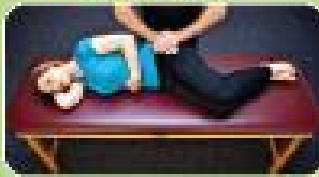
- Pain over PSIS w activity
- Diagnosis of exclusion
- Exam: (3 or more)
 - FABER
 - Gaenslen
 - Sacral compression
 - Thigh thrust
 - ASIS distraction
- Confirming: 3 series of Injection > 70%

SIJ Provocative Tests¹

FABER



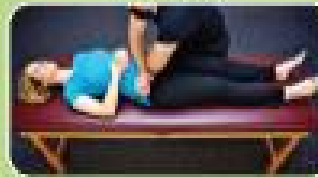
Compression



Thigh Thrust



Distraction



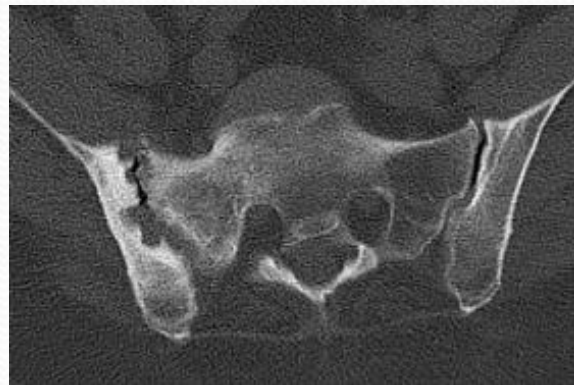
Gaenslen



If pain inferior to L5, negative neurological exam and minimum 3 positive tests, the SIJ is likely pain generator.

Note: At least 1 of 3 positive tests must be Compression or Thigh Thrust. Order image-guided diagnostic SIJ injection(s).

SIJ pathology



Vascular Disorders

- Vascular claudication
- Smoking, DM, HTN, HLD
- Pain: Distal to Proximal
- Improve: Stop Walking + Standing
- Exam: diminished pulses, skin dystrophic changes
- Tests: ABI < 0.9

TUMORS

- Prior history of Ca
- Pain Insidious onset → progressive
- Night Pain – Pain at rest – Pain out of proportion
- Presence of systemic constitutional symptoms
- Presence of neurologic deterioration
- Workup:
 - Advanced imaging: CT – MRI
 - Biopsy

50 y F – Thyroid Ca



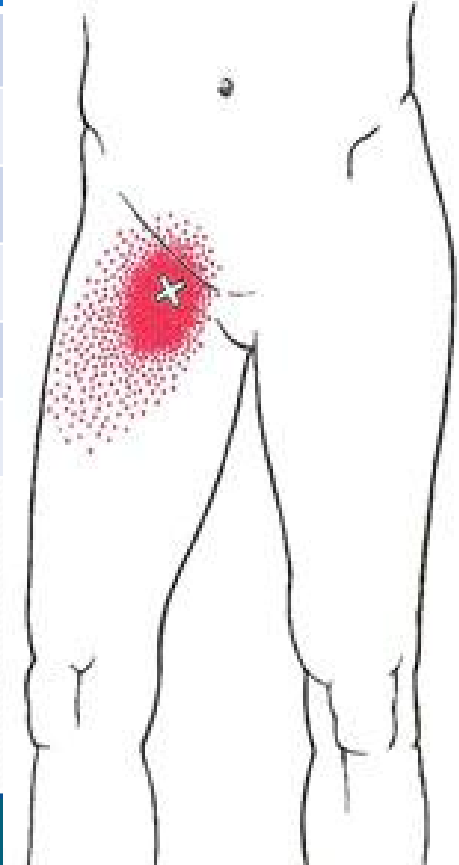
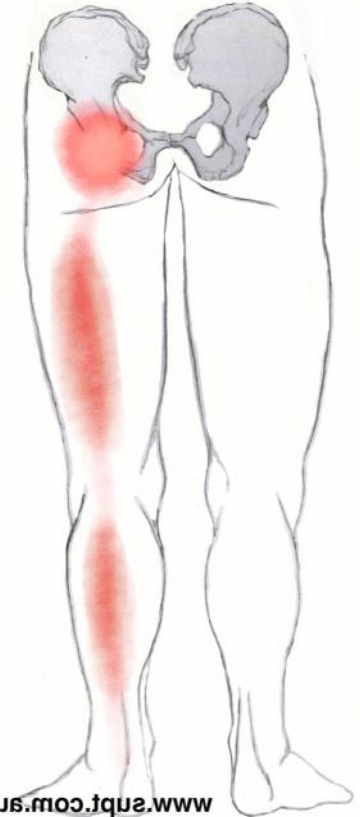
Peripheral Neuropathy

- DM is most common cause
- Neurotoxic exposure / drugs, infections (HIV, GBS)
- Distal Ext: Gloves/stocking distribution (Burning, numbness)
- Proximal:
 - Uni/Bilateral amyotrophy
 - Meralgia Paresthetica (LFCN)

To Sum it up

Characteristics	Hip	Spine
Pain Location	Groin – Ant thigh	Buttock - Dermatomal
History	Giving way	Claudication - Sciatica
Exacerbating Movement	Tying shoes	Standing - Walking
Gait	Limping	Leaning forward
Physical Exam	Limited ROM	SLR
	Pain with ROM	

To Sum it up

Characteristics	Hip	Spine
Pain Location		Butt
History		Clau
Exacerbating Movement		Star
Gait		Lea
Physical Exam		SLR
		



Thank you!

Work Related Injuries Workshop
May 2 & 3, 2016