

BACK + HIP (Pain) = _____



Todd Weitzenberg MD

Kaiser Permanente Santa Rosa

KAISER PERMANENTE®
SPORTS MEDICINE

The “HACK”





Disclosures:

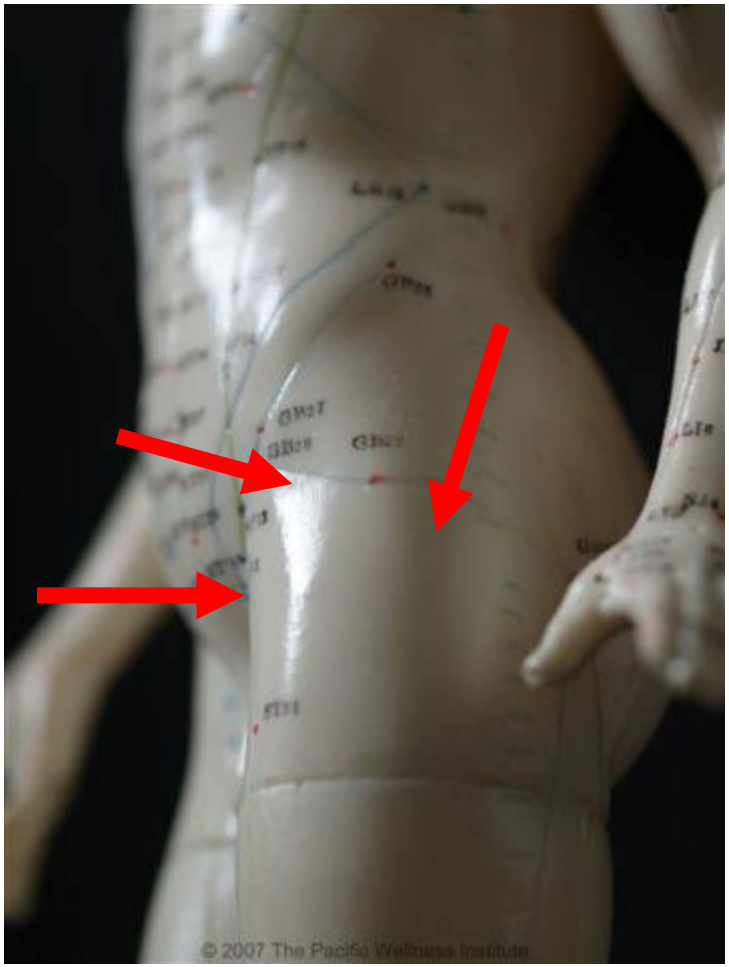
- **Dr. Todd Weitzenberg has no relationships to disclose.**

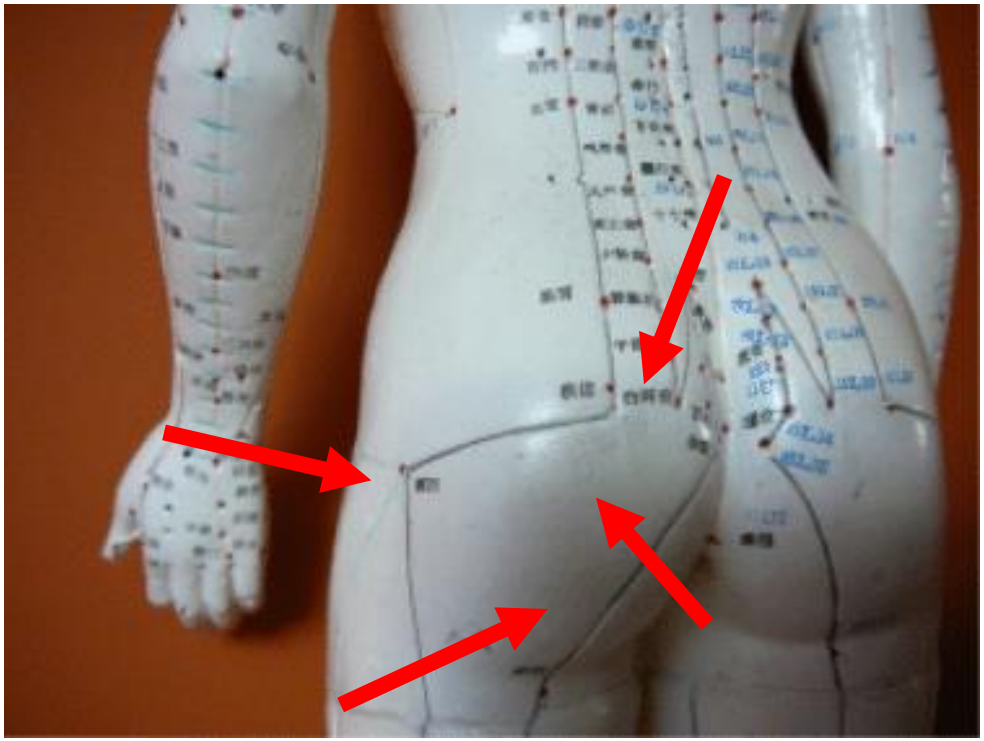
Objectives

- Accurately and efficiently manage hip pain in the primary care setting.
- Identify red flags for hip pain.
- Appropriately order imaging studies.
- Know when to refer to a specialist.

Where does it hurt?

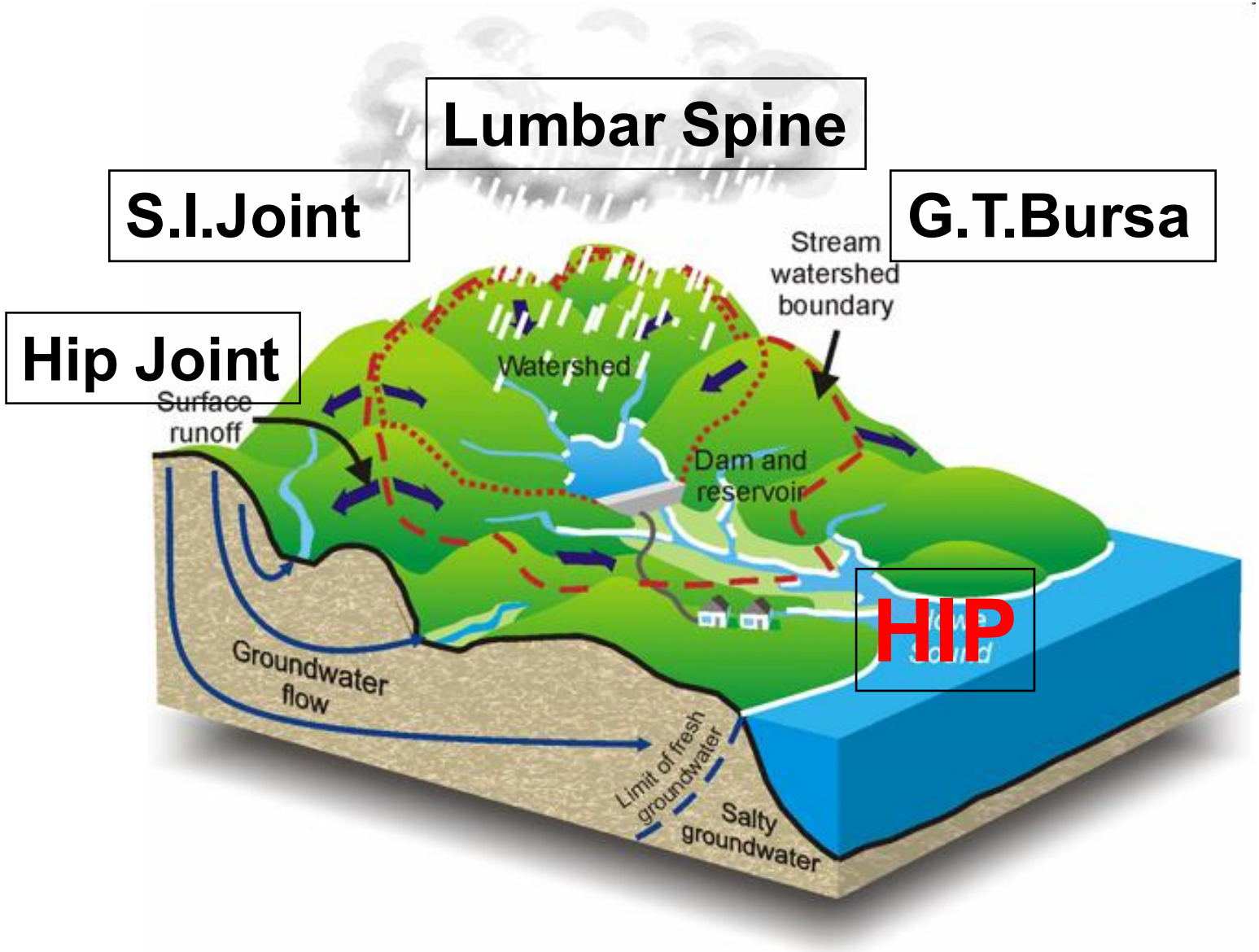
My ‘HIP’…





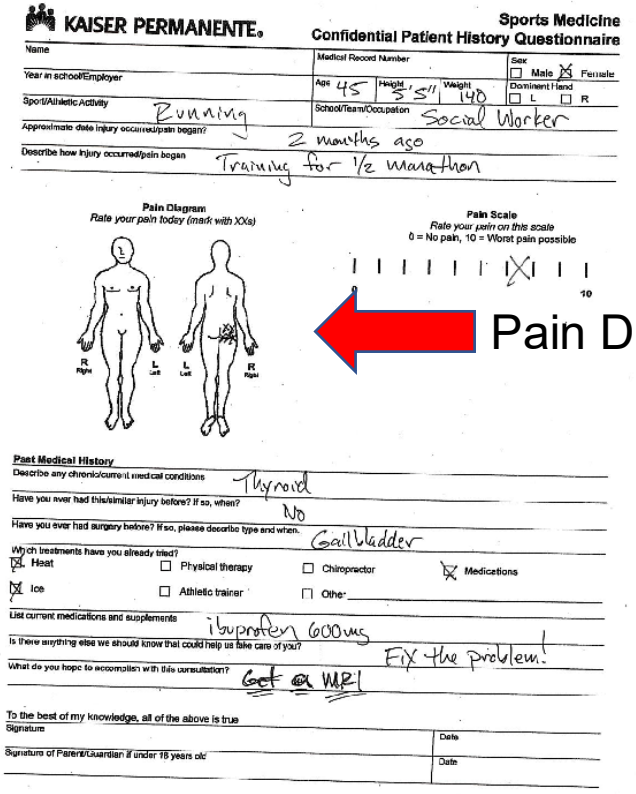
"THE HACK"

Watershed Zone



45 y.o. female runner

- Pain in the ‘hip’
- Aching, sore, some mild radiation into posterior thigh
- Some mild numbness and tingling post thigh
- Sometimes feels weak
- No known trauma
- Not better with ice, heat, stretching, ibuprofen



KAISER PERMANENTE®

Sports Medicine
Confidential Patient History Questionnaire

Name

Medical Record Number

Sex ☐ Male ☒ Female

Year in school/Employer

Age 45 | Height 5'5" | Weight 140

Dominant Hand ☐ L ☐ R

Sport/Athletic Activity: Running

School/Team/Occupation: Social Worker

Approximate date injury occurred/pain began? 2 months ago

Describe how injury occurred/pain began: Training for 1/2 marathon

Pain Diagram
Rate your pain today (mark with XXs)

Pain Scale
Rate your pain on this scale
0 = No pain, 10 = Worst pain possible

Pain Diagram

Past Medical History

Describe any chronic/current medical conditions: Thyroid

Have you ever had this/similar injury before? If so, when? No

Have you ever had surgery before? If so, please describe type and when. Gall bladder

Which treatments have you already tried?

☒ Heat ☐ Physical therapy ☐ Chiropractor ☒ Medications

☒ Ice ☐ Athletic trainer ☐ Other:

List current medications and supplements: ibuprofen 600mg

Is there anything else we should know that could help us take care of you? Fix the problem!

What do you hope to accomplish with this consultation? Get an MRI

To the best of my knowledge, all of the above is true

Signature Date

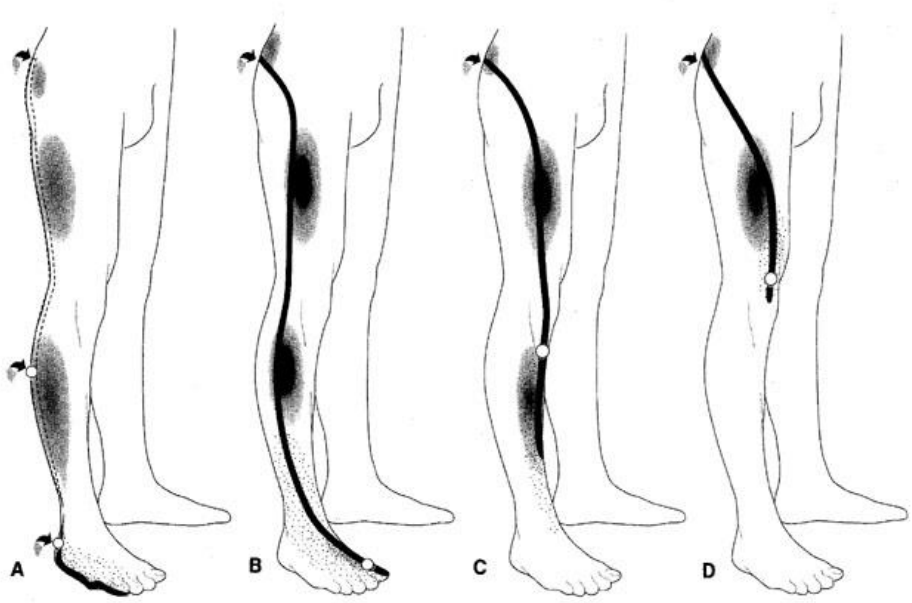
Signature of Parent/Guardian if under 18 years old Date

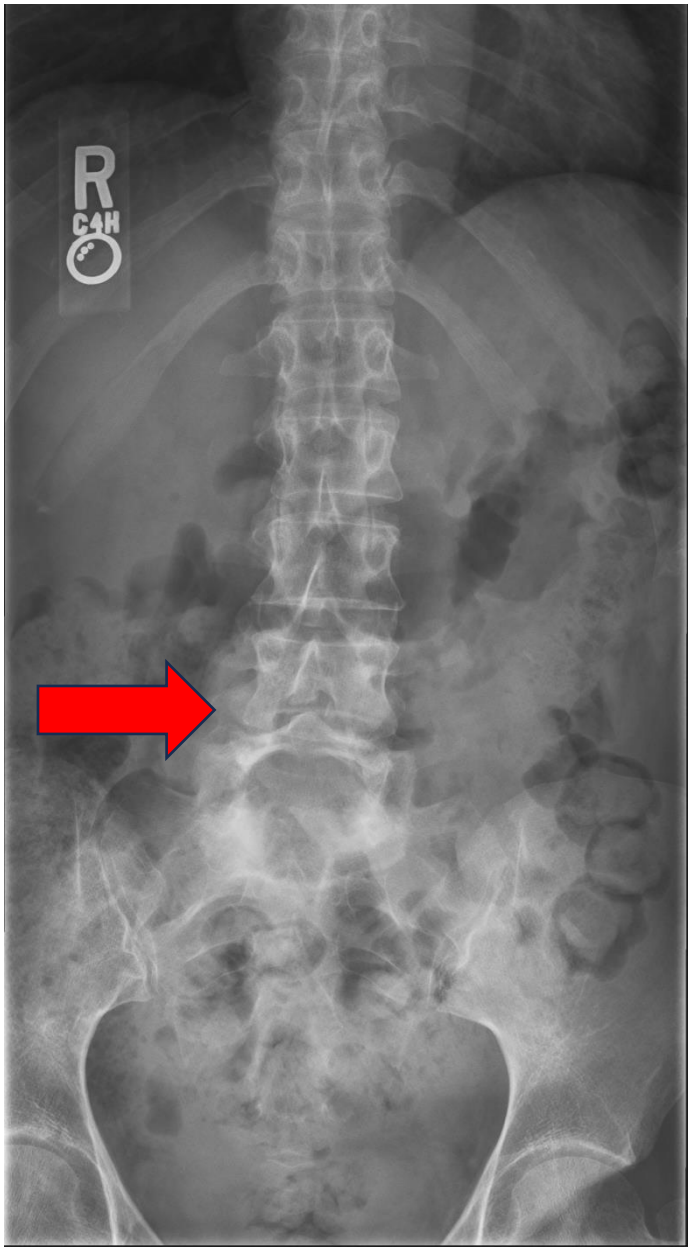
Physical Exam

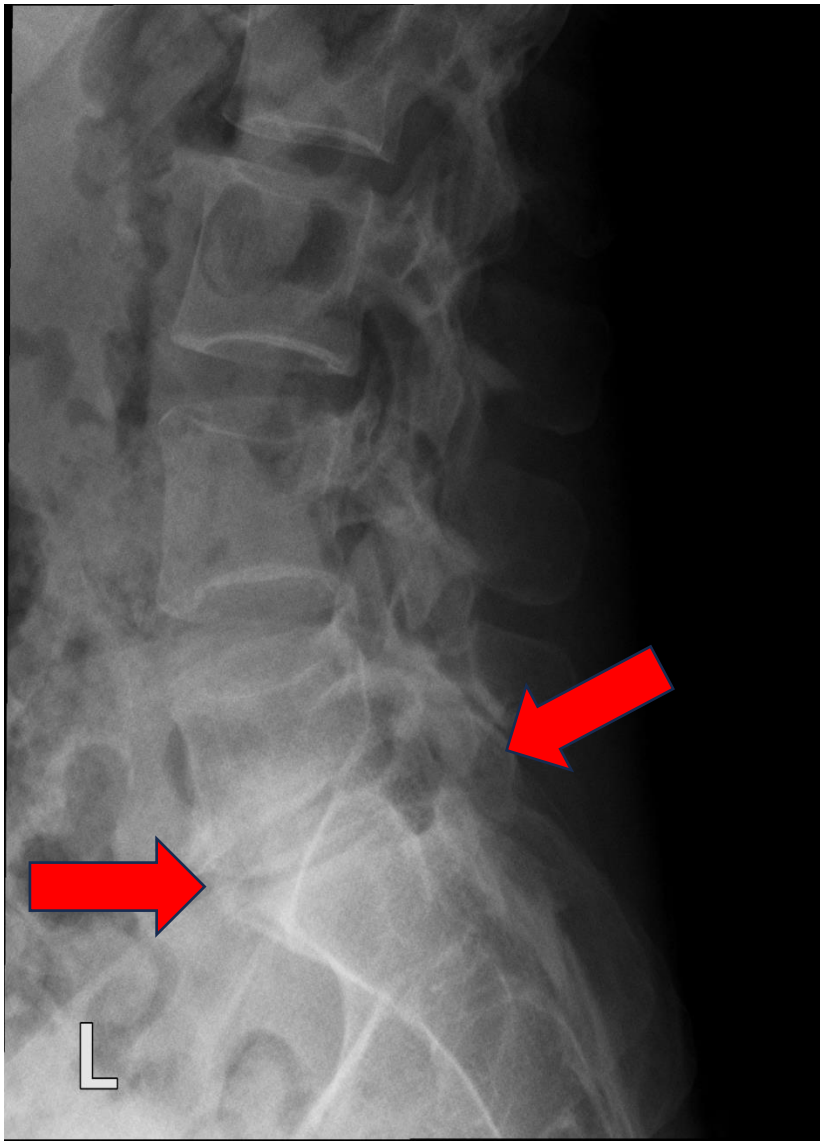
- TTP over right side, lumbosacral junction, sciatic notch and superior aspect of SI.
- Pain in same location with SLR , hip internal rotation and FABER's.
- Pain with flexion and extension of Lspine, greatest with combined Ext-Lat.Rot-Right.
- Antalgic gait favoring right hip.
- Neurovascular exam intact.

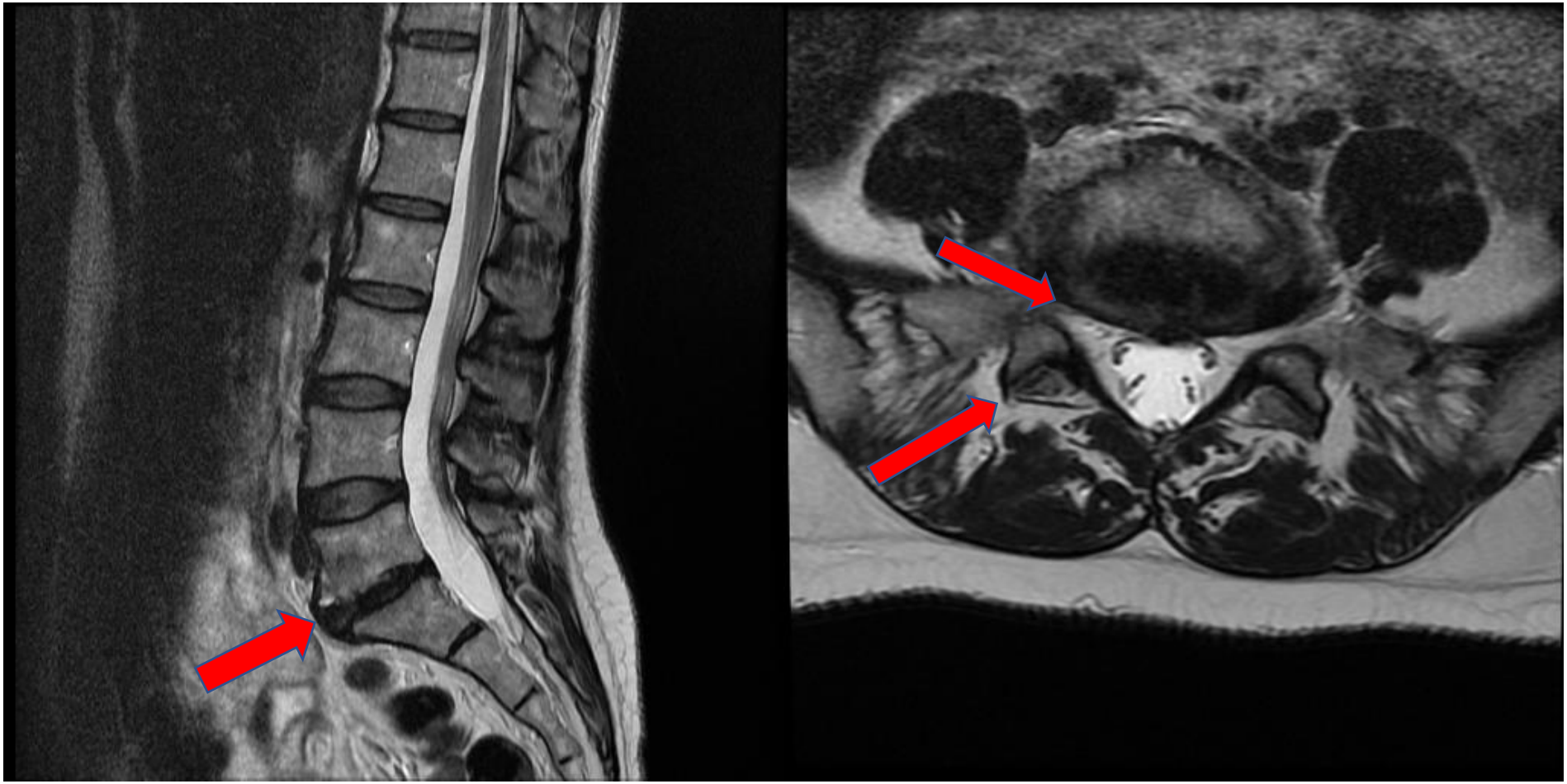
Lumbar Radiculopathy

- Pain from lumbar roots often starts in ‘buttocks’
- Neural tension?
  - Pain in hip with provocation
- Neurologically intact
- Hard to tell?




R
C4H


L



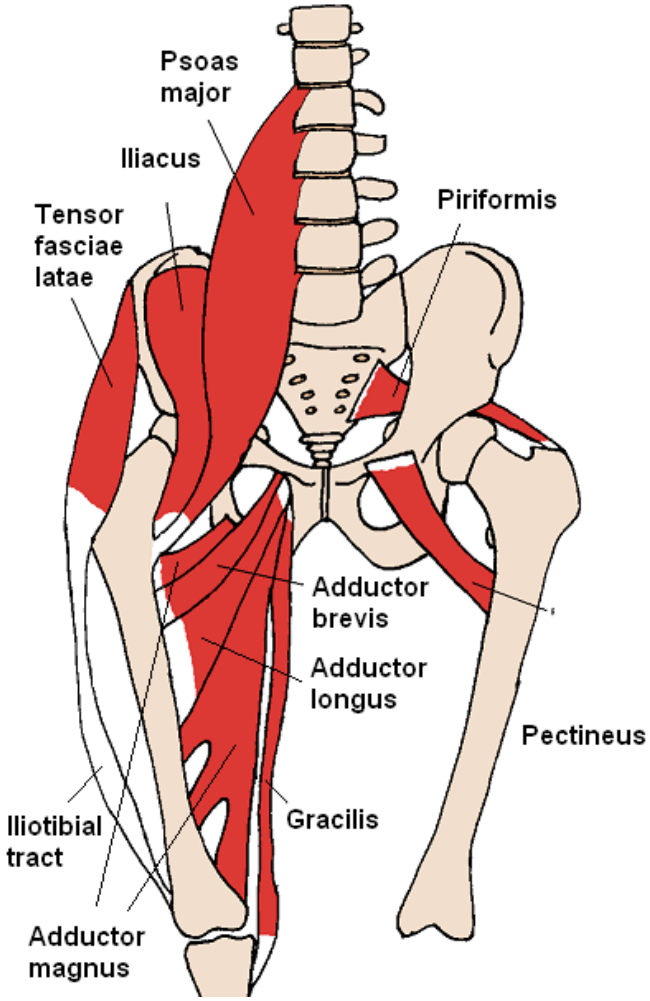
Lumbar Etiology?

- No significant symptoms in leg
- Neurologically intact
- Failed to improve with conservative treatment:
  - Rest, ice, heat, nsaids
  - Massage, chiropractor
  - Physical therapy

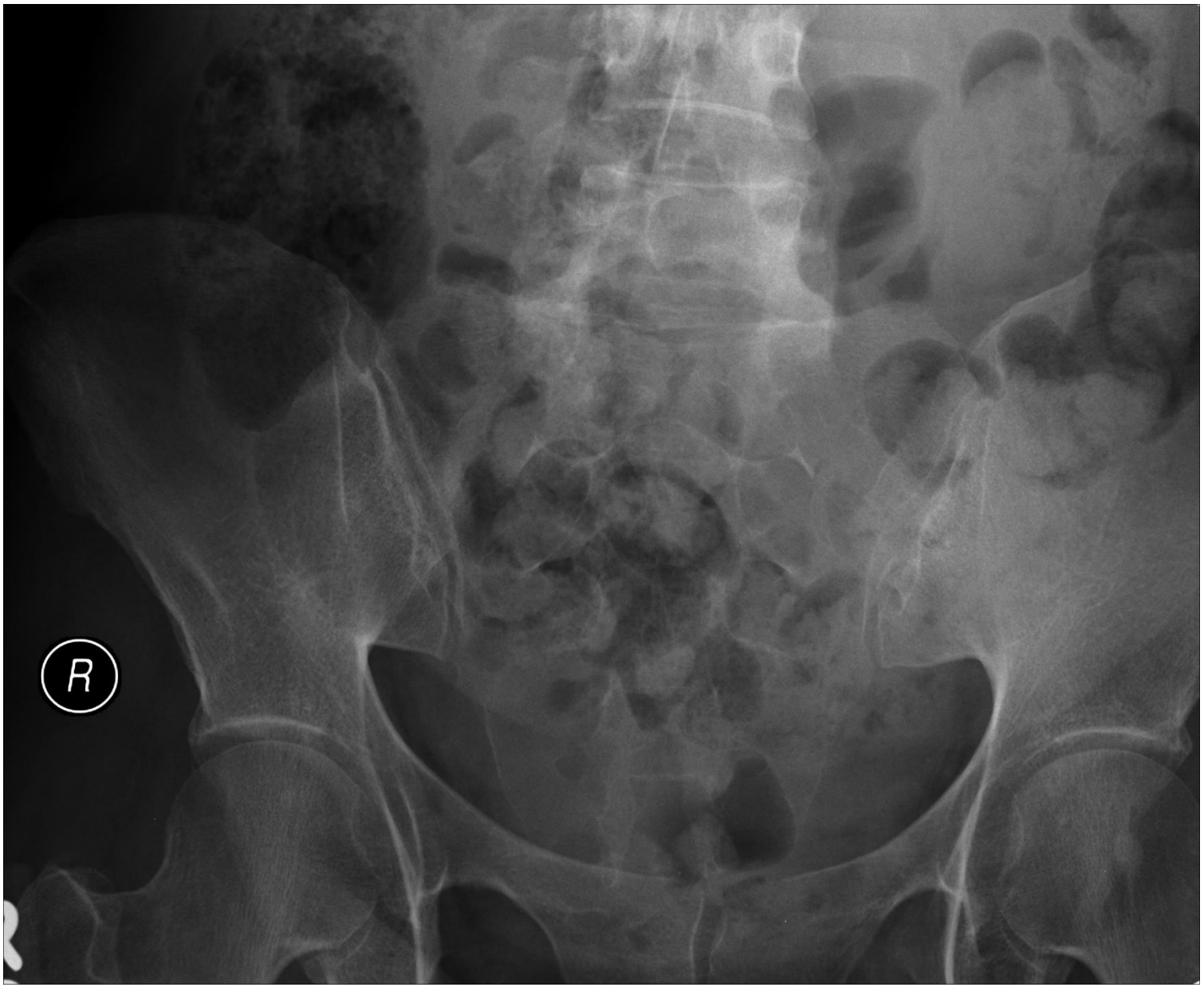
Now What?

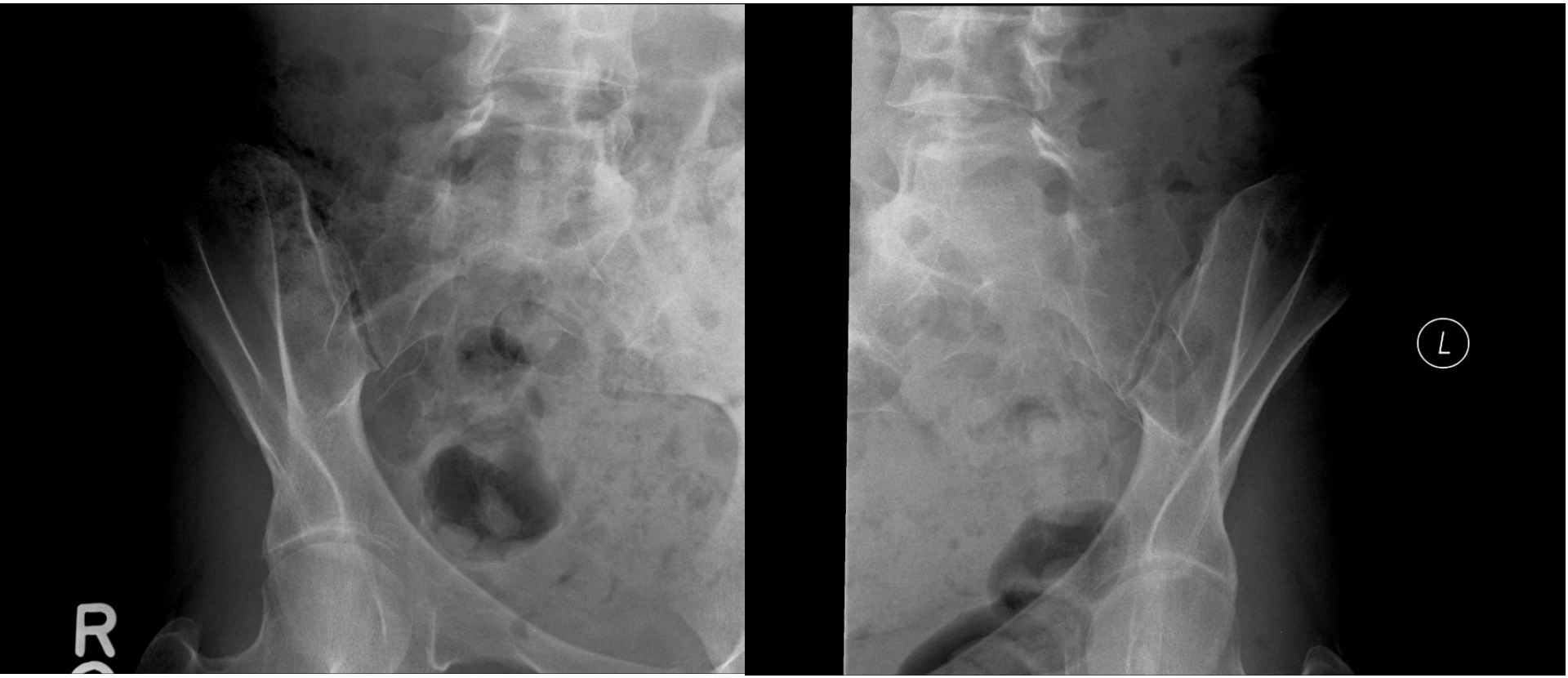
Hip Pathology?

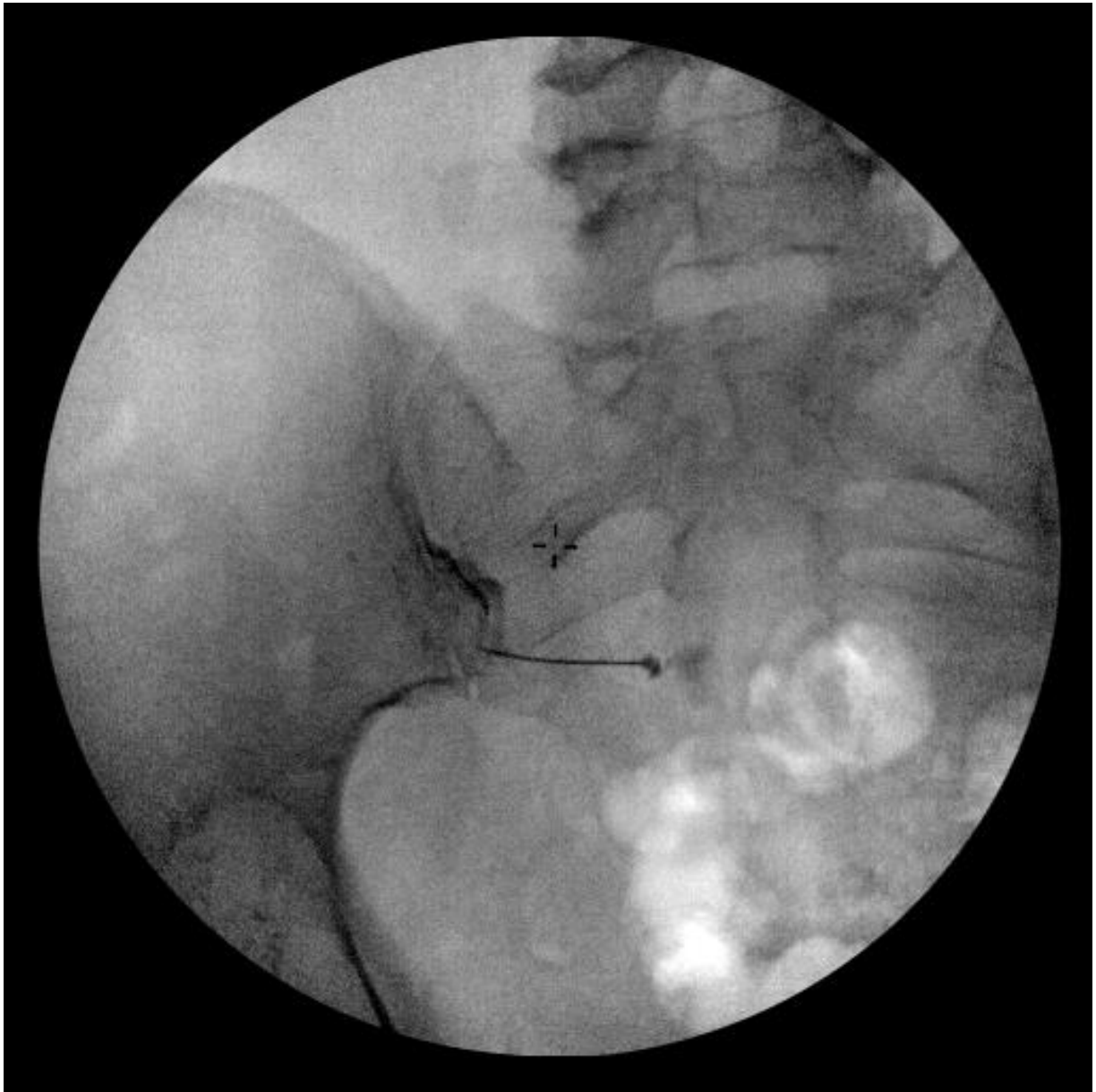
- Hip osteoarthritis
- Labral injury/FAI
- Piriformis syndrome
- Trochanteric bursitis
- I.T.Band Syndrome
- Ischialgluteal bursitis
- Sacroiliac joint pain



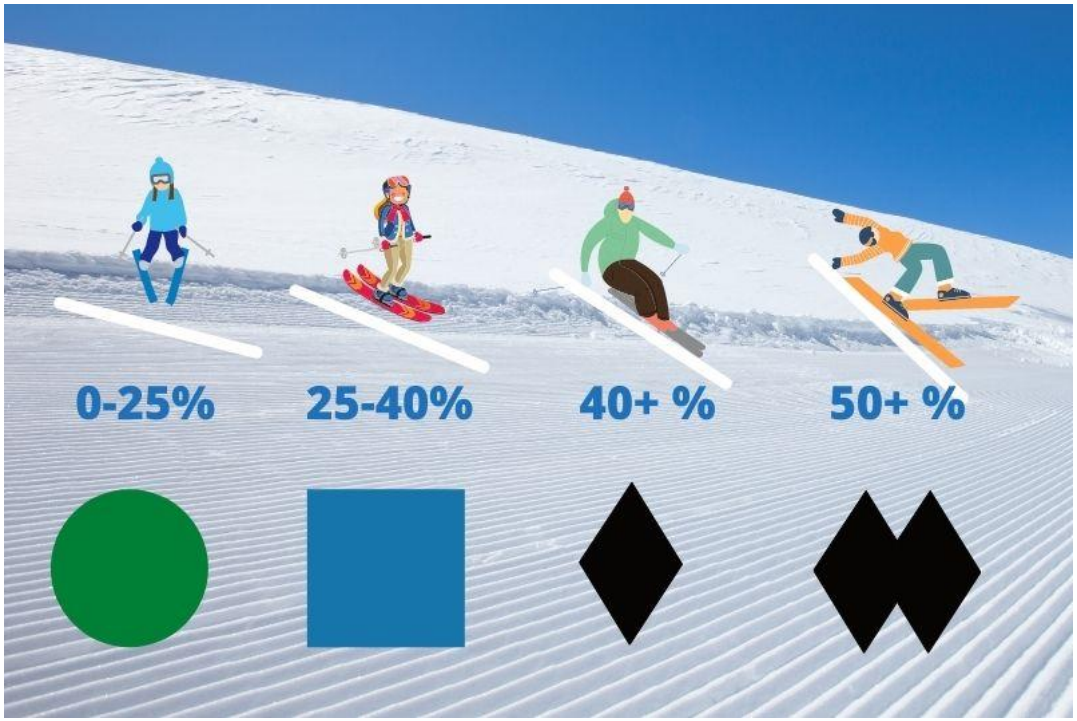

RO

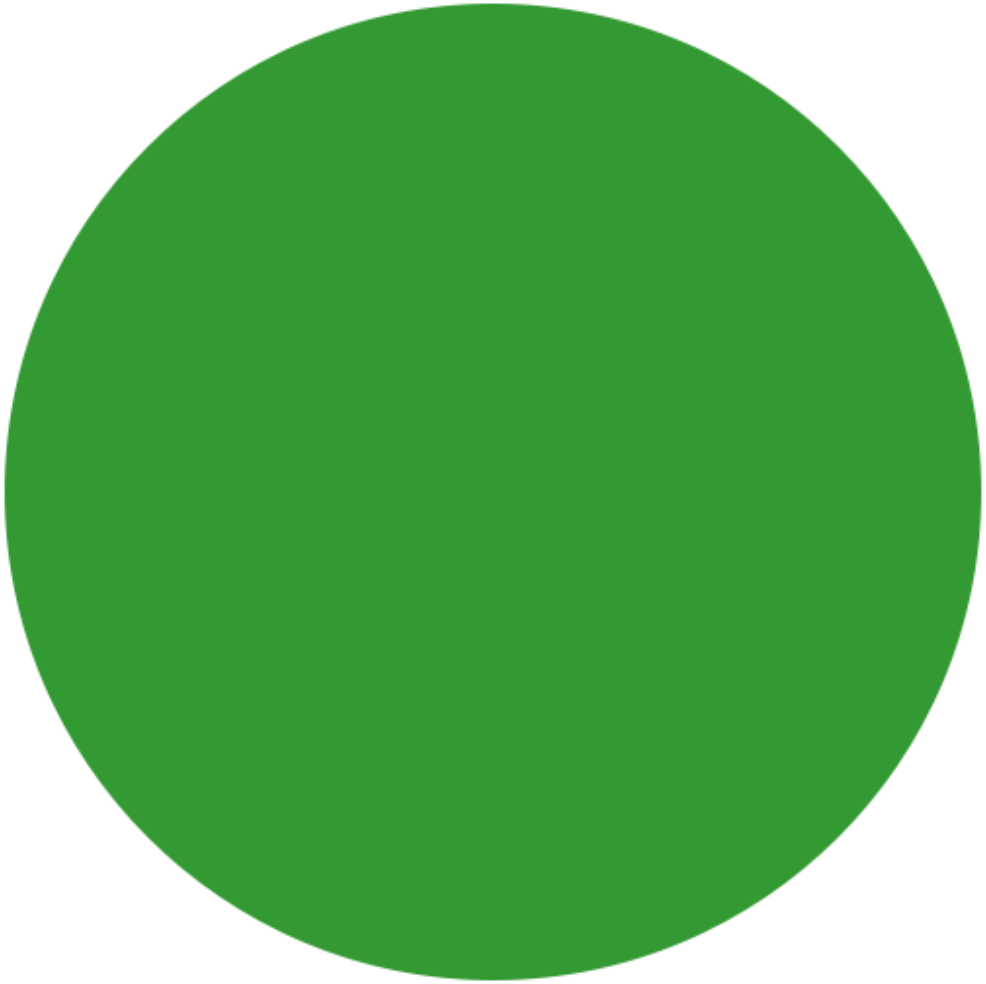

R


L



Let’s do some cases to help you learn how to break down “The Hack”…





Case #1: History

74 y.o. woman, complains of left hip pain.

Pain on side of hip.

Burning, aching, worse lying on her side at night.

Some radiation of pain down lateral side of thigh.

No numbness, tingling or weakness.

Case #1 Pain Diagram

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Please fill out this form and bring it to the appointment Name

Hip #1

MR #

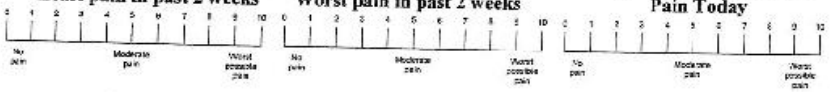
CONFIDENTIAL PATIENT HISTORY

Is your pain? ☐ Continuous ☐ Intermittent

Approximate date this pain began: _____

Rate your pain on these scales. (Mark with an X) 0 = No Pain 10 = Worst possible pain

Least pain in past 2 weeks **Worst pain in past 2 weeks** **Pain Today**

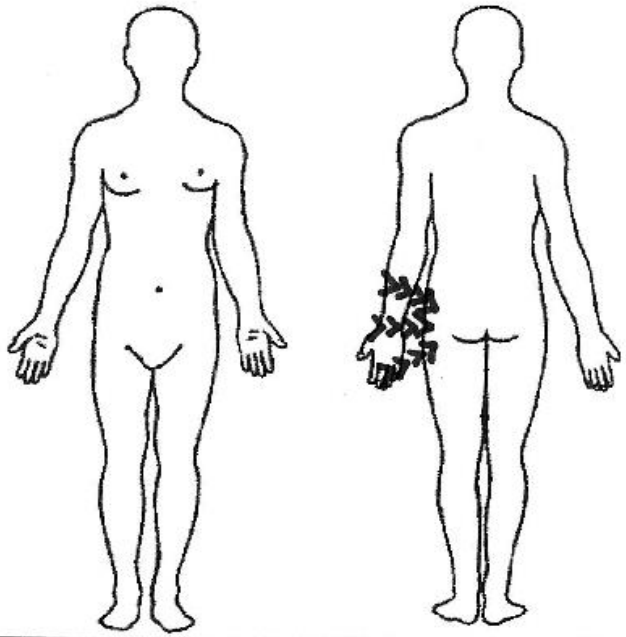


Use these symbols on the below diagram to describe your pain:

= Numbness // Stabbing >>>Aching ... Pins & Needles xxx Burning

Rate these activities on how they affect your pain:

	Better	Worse	No Change
Sitting	☐	☐	☐
Standing	☐	☐	☐
Bending forward	☐	☐	☐
Bending backward	☐	☐	☐
Lying flat on Back	☐	☐	☐
Lying flat on Stomach	☐	☐	☐
Lying flat on Side	☐	☐	☐
Walking	☐	☐	☐



List surgeries and dates:

_____

_____

Are you:

☐ **Currently Working Job Title:**

☐ **Retired** ☐ **Disabled**

MEDEX 1.12

Case #1: Exam

In excess of ideal body weight

Walks with antalgic gait

Mild pain with PROM of hip

SLR negative

Focal TTP over greater trochanter

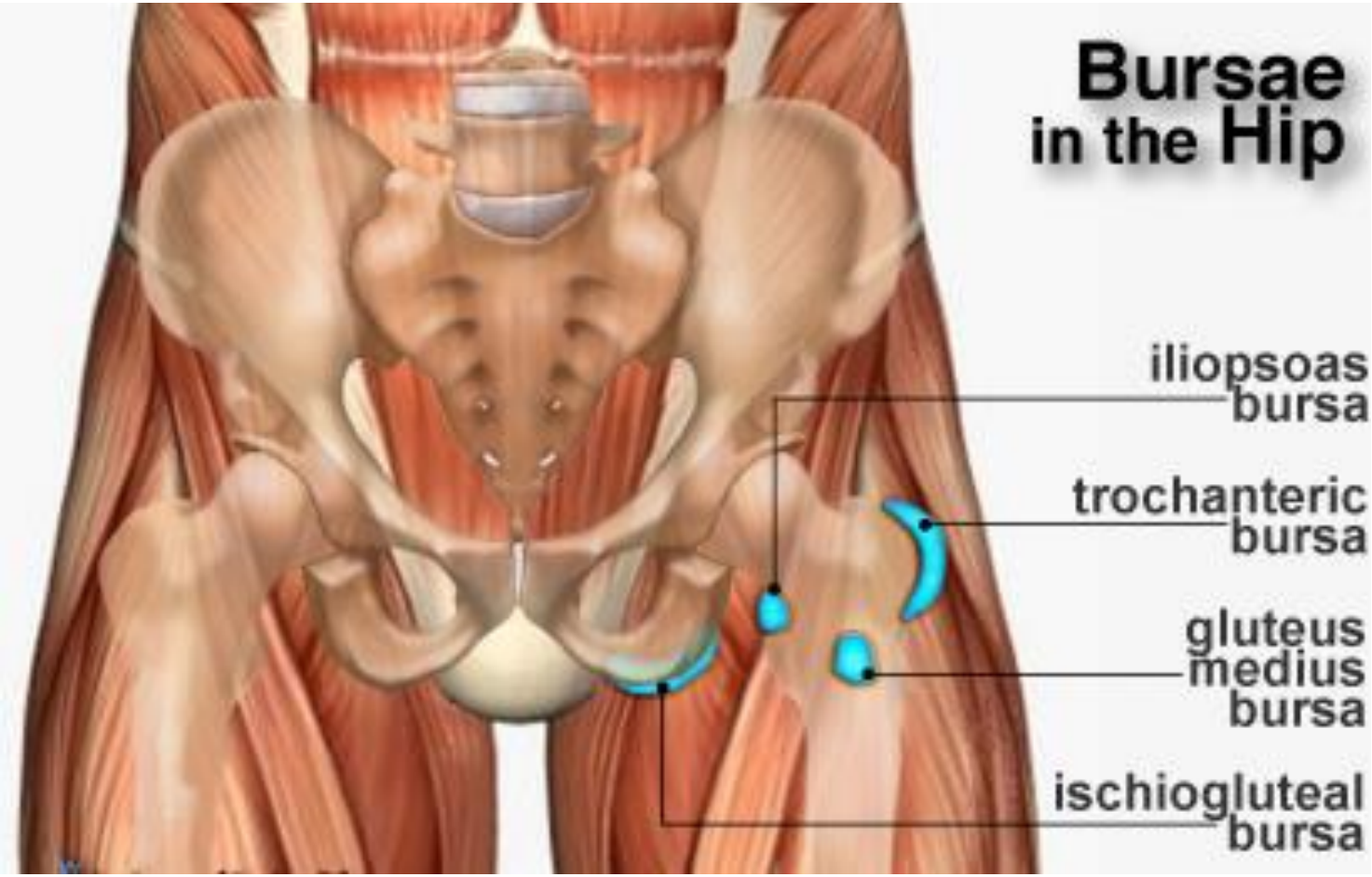
No leg length discrepancy

Neurovascular examination intact

Most likely diagnosis is?

- A: Hip osteoarthritis
- B: Iliotibial band syndrome
- C: Lumbar radiculopathy
- D: Hip Strain
- E: Trochanteric Bursitis

Trochanteric Bursitis



Trochanteric Bursitis: Treatment



Ice and Heat



NSAIDs



P.T.

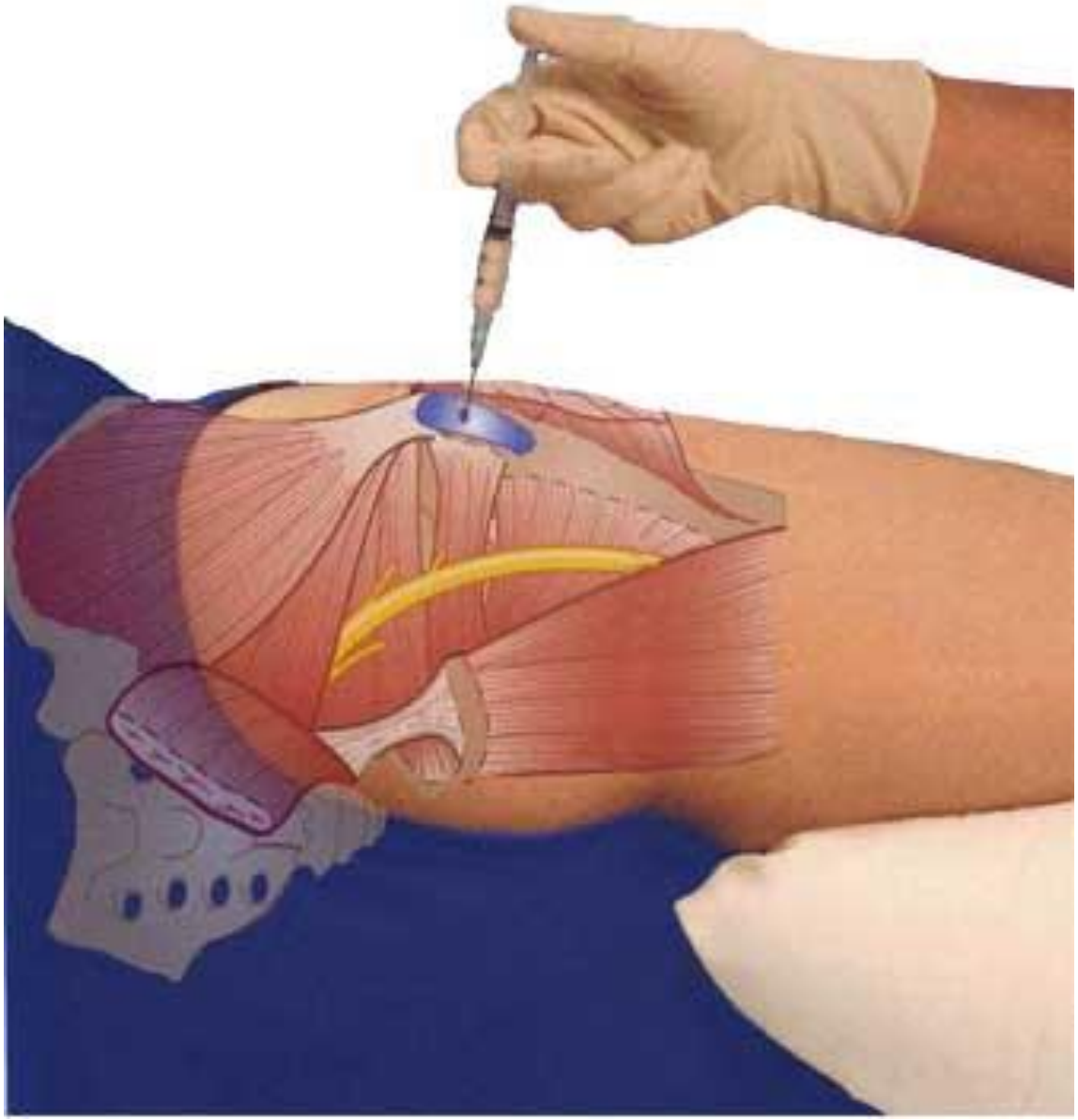
Stretching

Strengthening



Cortisone Injection

G.T.Bursa Cortisone Injection





Case #2

- 66 y.o. man complains of pain in his groin
- Pain started 6 mo.ago after a long hike, getting progressively worse
- Has diverticulitis with left lower quadrant pain that radiates into hip during flares
- Pain flared week ago after playing tennis
- Accupuncturist found tender spots in groin muscle

Case #2 Pain Diagram

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Please fill out this form and bring it to the appointment Name

MR #

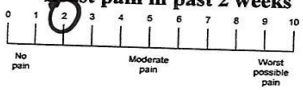
CONFIDENTIAL PATIENT HISTORY

Is your pain? ☐ Continuous ☐ Intermittent

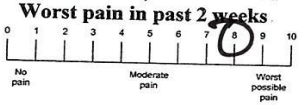
Approximate date this pain began: _____

Rate your pain on these scales. (Mark with an X) 0 = No Pain 10 = Worst possible pain

Least pain in past 2 weeks



Worst pain in past 2 weeks



Pain Today

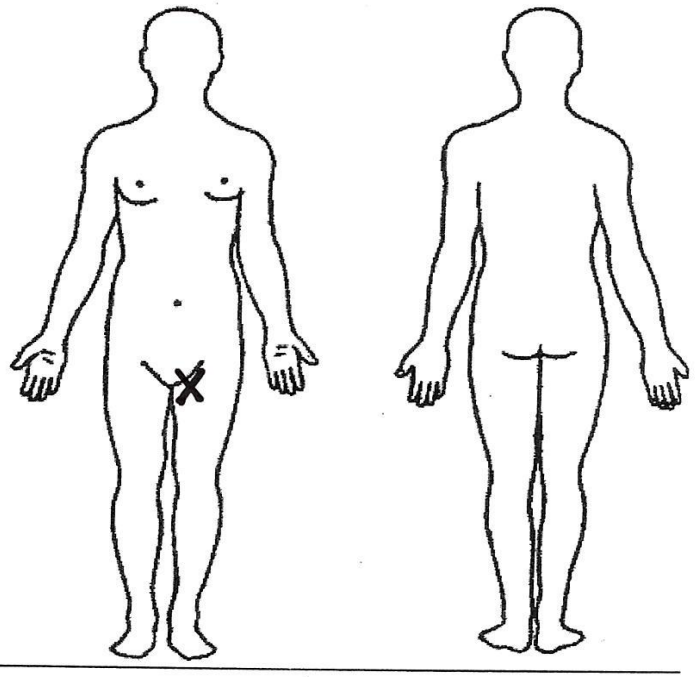


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Lying flat on Side	☐	☐	☐
Walking	☐	☑	☐



List surgeries and dates:

_____

_____

Are you:

☐ **Currently Working Job Title:**

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MEDHX 1.12

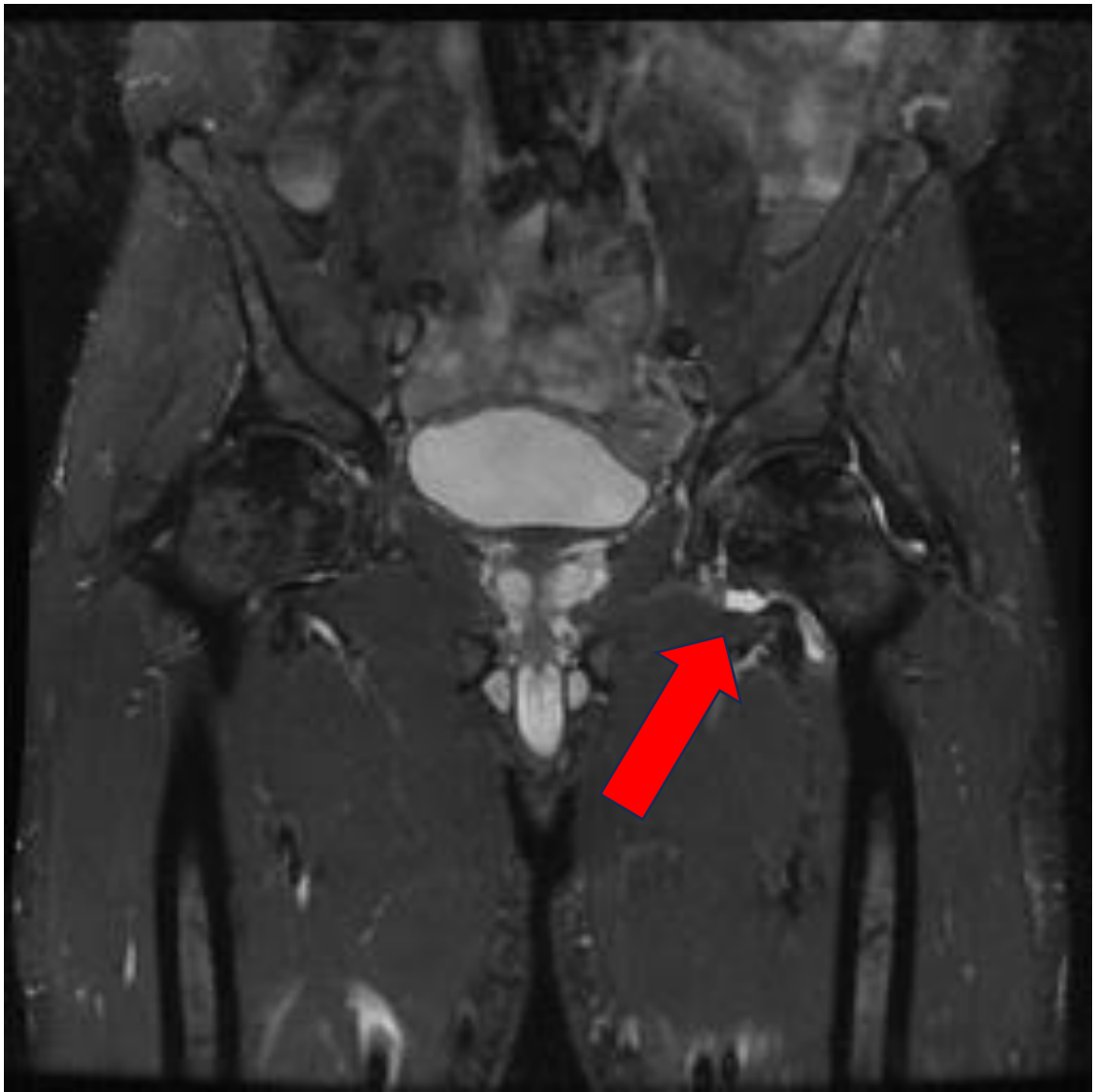
Hip Case #2: Exam

- Normal gait
- Mild TTP at adductor origin (groin)
- No pain with active resisted hip flexion or hip adduction
- Pain reproduced in groin with passive hip flexion and internal rotation, mild pain with external rotation
- SLR negative
- Neurovascular exam intact

Case #2: X-rays



Hip Case #2: MRI



Coronal Stir images show and left hip effusion.

Most likely diagnosis is?

- A: Hip osteoarthritis
- B: Iliotibial band syndrome
- C: Lumbar radiculopathy
- D: Sacroiliac Joint Dysfunction
- E: Trochanteric Bursitis

LEFT

Case #2: Fluoro



Hip Osteoarthritis: Treatment

- Acetaminophen and NSAIDs
- Activity Modification
- P.T.-Hip stabilization exercises
- Assistive Device: Cane
- Hip Arthrogram Corticosteroid Injection
- Hip Replacement Surgery



Case #3 : History

- 36 y.o. woman with right lateral hip pain
- Training for half marathon
- Started as a slight ache, but now with runs up to 8 miles, pain is stabbing with burning pain at night.
- Some numbness/tingling radiating down lateral thigh into lateral knee.
- Not better with ice, heat and NSAIDs

Case #3 Pain Diagram

KAISER PERMANENTE

Please fill out this form and bring it to the appointment Name

MR #

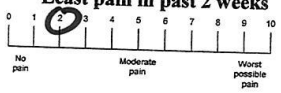
CONFIDENTIAL PATIENT HISTORY

Is your pain? ☐ Continuous ☐ Intermittent

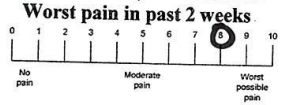
Approximate date this pain began: _____

Rate your pain on these scales. (Mark with an X) 0 = No Pain 10 = Worst possible pain

Least pain in past 2 weeks



Worst pain in past 2 weeks



Pain Today

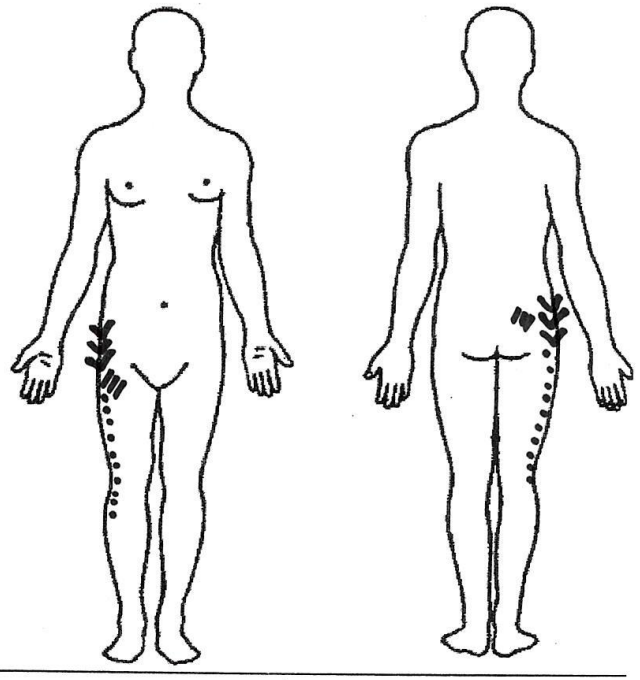


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Lying flat on Side	☐	☐	☐
Walking	☐	☐	☐



List surgeries and dates:

_____

_____

Are you:

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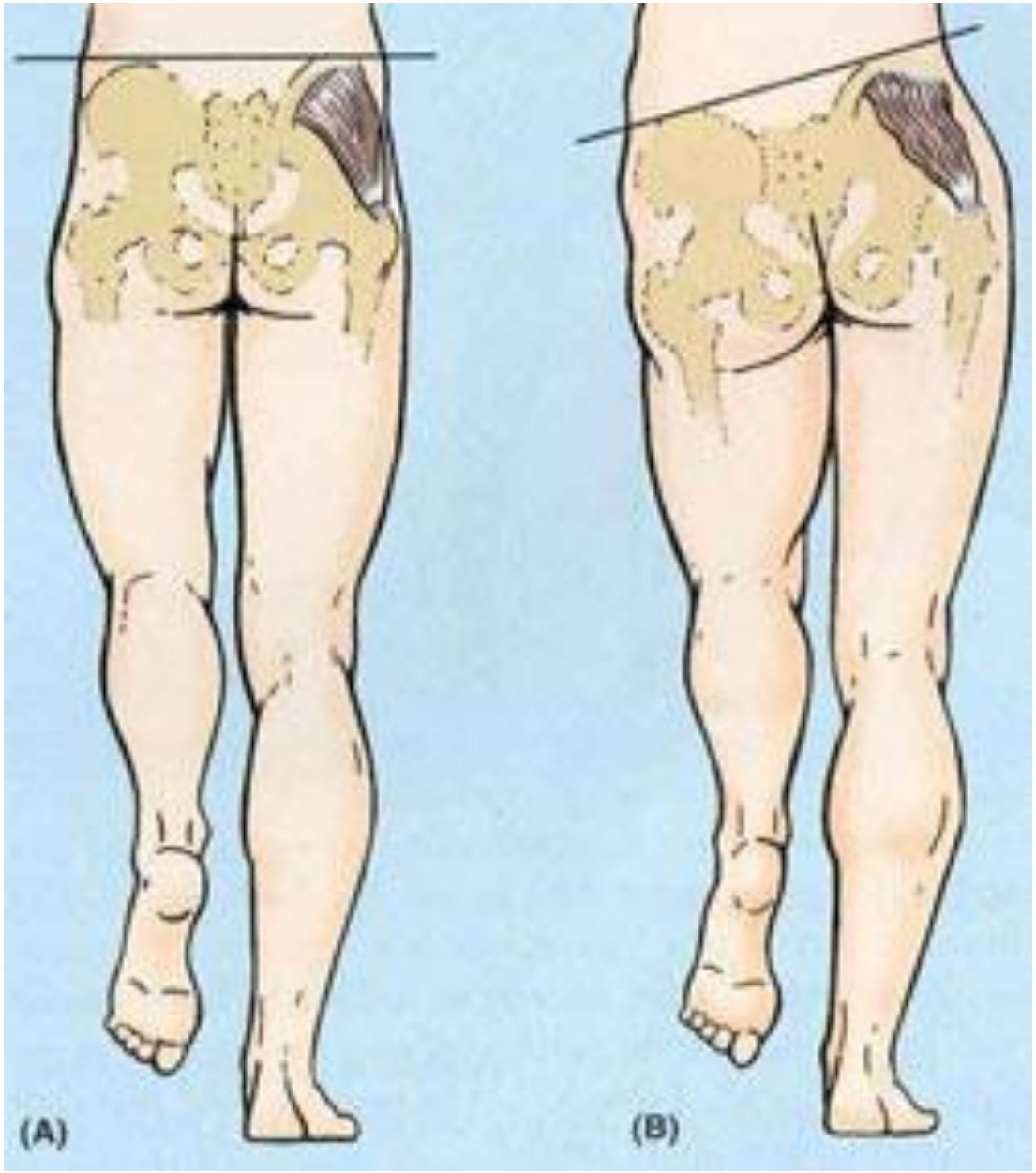
☐ **Retired** ☐ **Disabled**

MEDHX 1.12

Case #3: Exam

- No significant pain with hip passive motion
- Straight leg raise negative
- Positive TTP over GT and TFL and along the I.T.Band
- Positive Tendelenburg sign
- Positive Ober's stretch test
- Neurovascular exam intact

Trendelenburg Sign



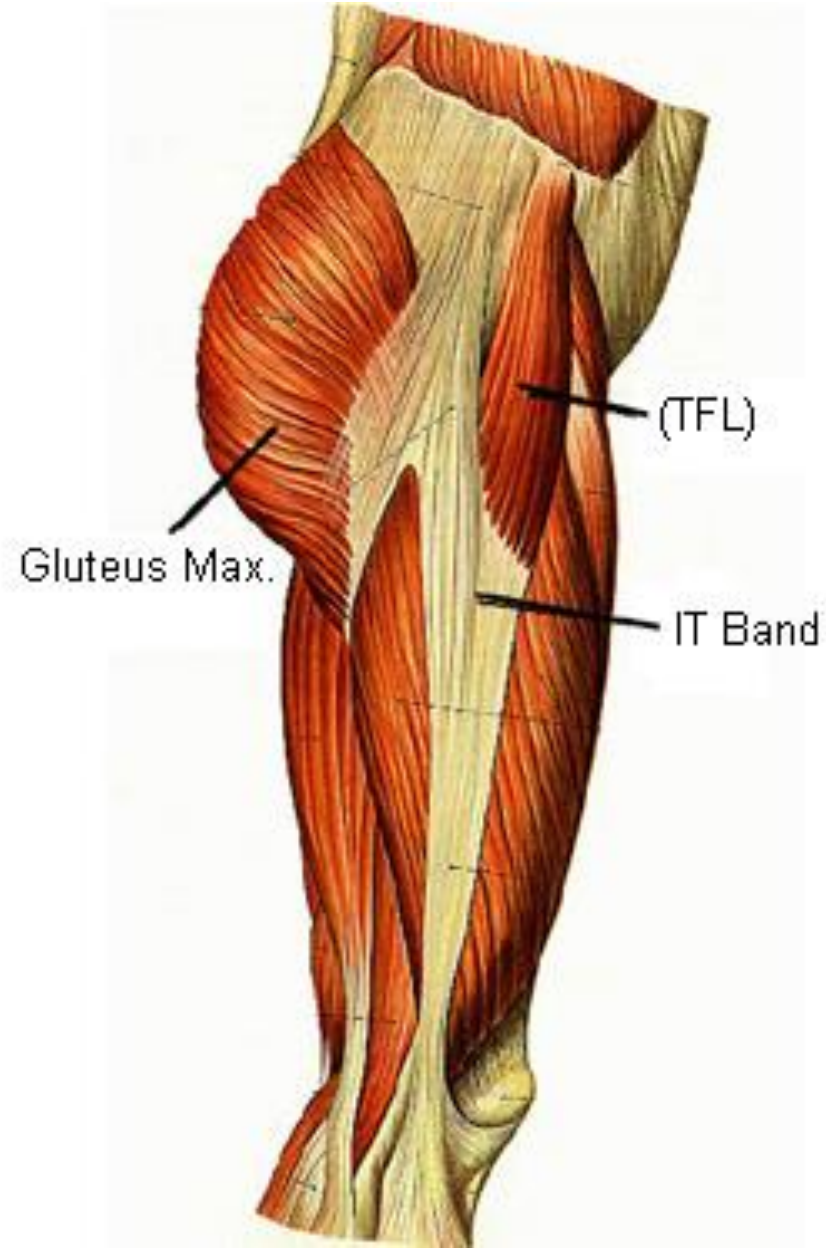
Ober's Test



Most likely diagnosis is?

- A: Hip osteoarthritis
- B: Iliotibial band syndrome
- C: Lumbar radiculopathy
- D: Sacroiliac Joint Dysfunction
- E: Trochanteric Bursitis

Iliotibial Band Syndrome



I.T.Band Syndrome- Treatment

- Ice and Heat
- Activity Modification
- NSAIDs
- P.T.

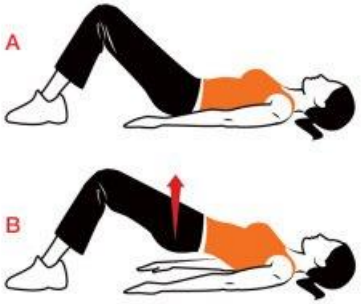
- Cortisone injection?

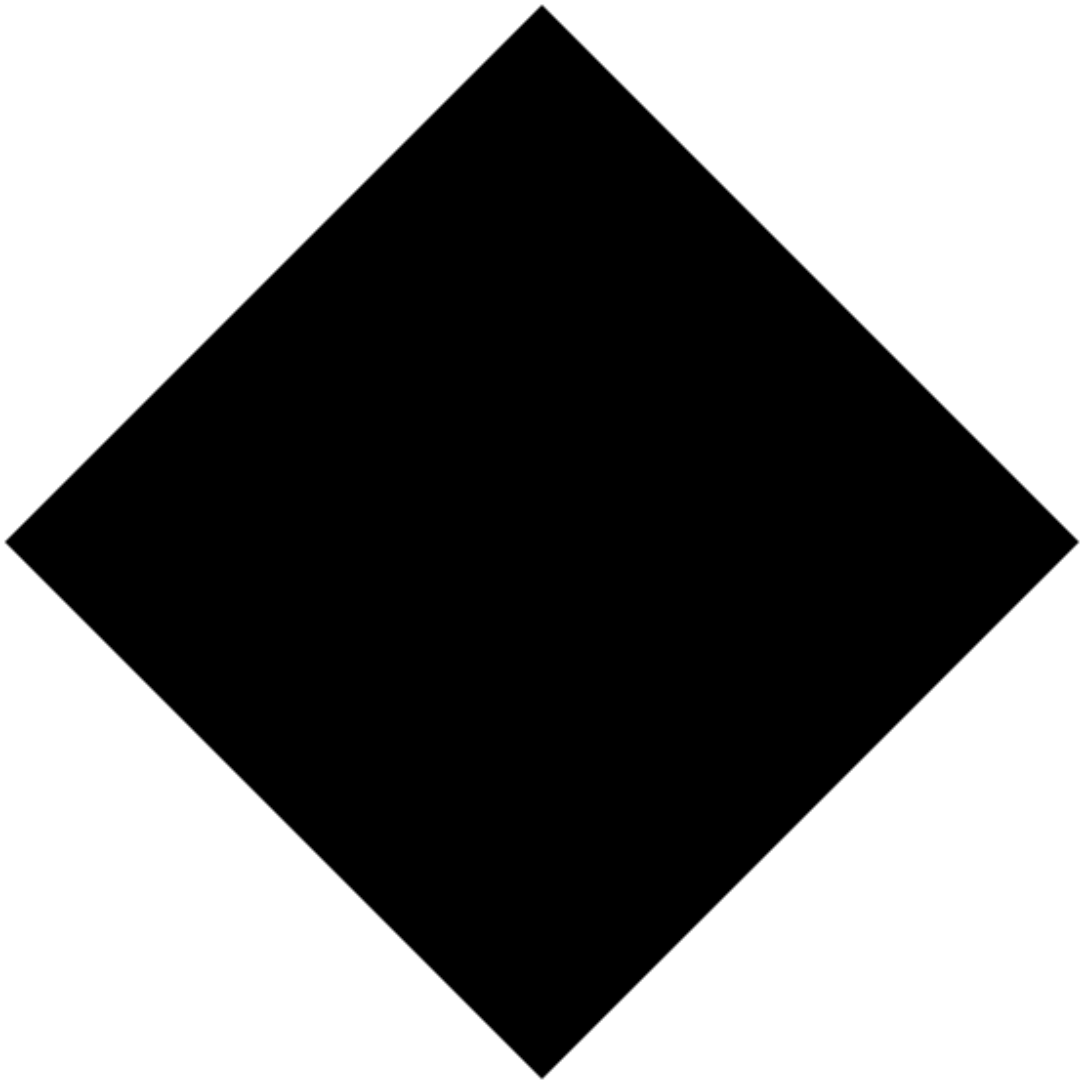
Stretch-Roller-Exercise !











Case #4

55yo man presents with severe left hip pain. Limits function.

Deep pain in groin AND in buttocks, radiating into posterior thigh.

Worse with walking, hard to put on socks or get in/out of car.

Seen in orthopedics, recommended hip arthrogram/cortisone injection.

Case #4 Pain Diagram

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Please fill out this form and bring it to the appointment Name

MR #

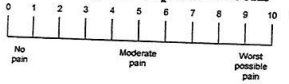
CONFIDENTIAL PATIENT HISTORY

Is your pain? ☐ Continuous ☐ Intermittent

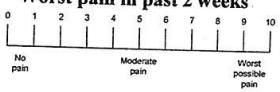
Approximate date this pain began: _____

Rate your pain on these scales. (Mark with an X) 0 = No Pain 10 = Worst possible pain

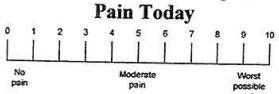
Least pain in past 2 weeks



Worst pain in past 2 weeks



Pain Today

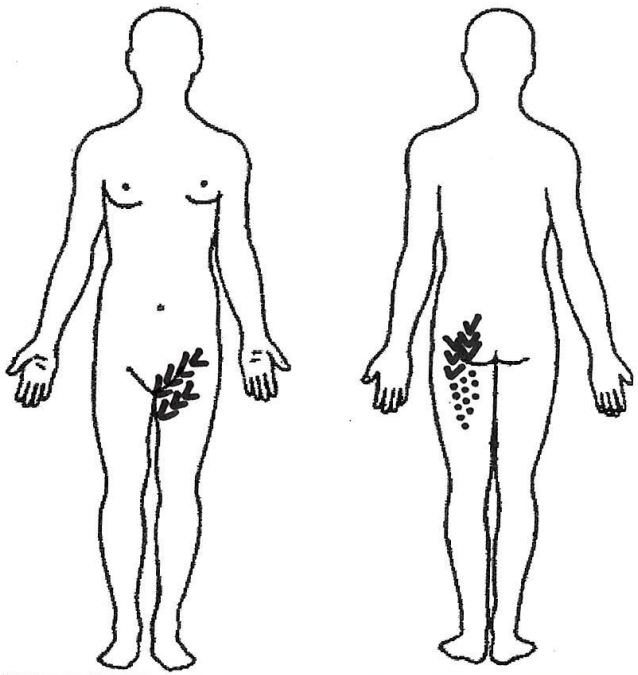


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Lying flat on Stomach	☐	☐	☐
Lying flat on Side	☐	☐	☐
Walking	☐	☐	☐



List surgeries and dates:

_____

_____

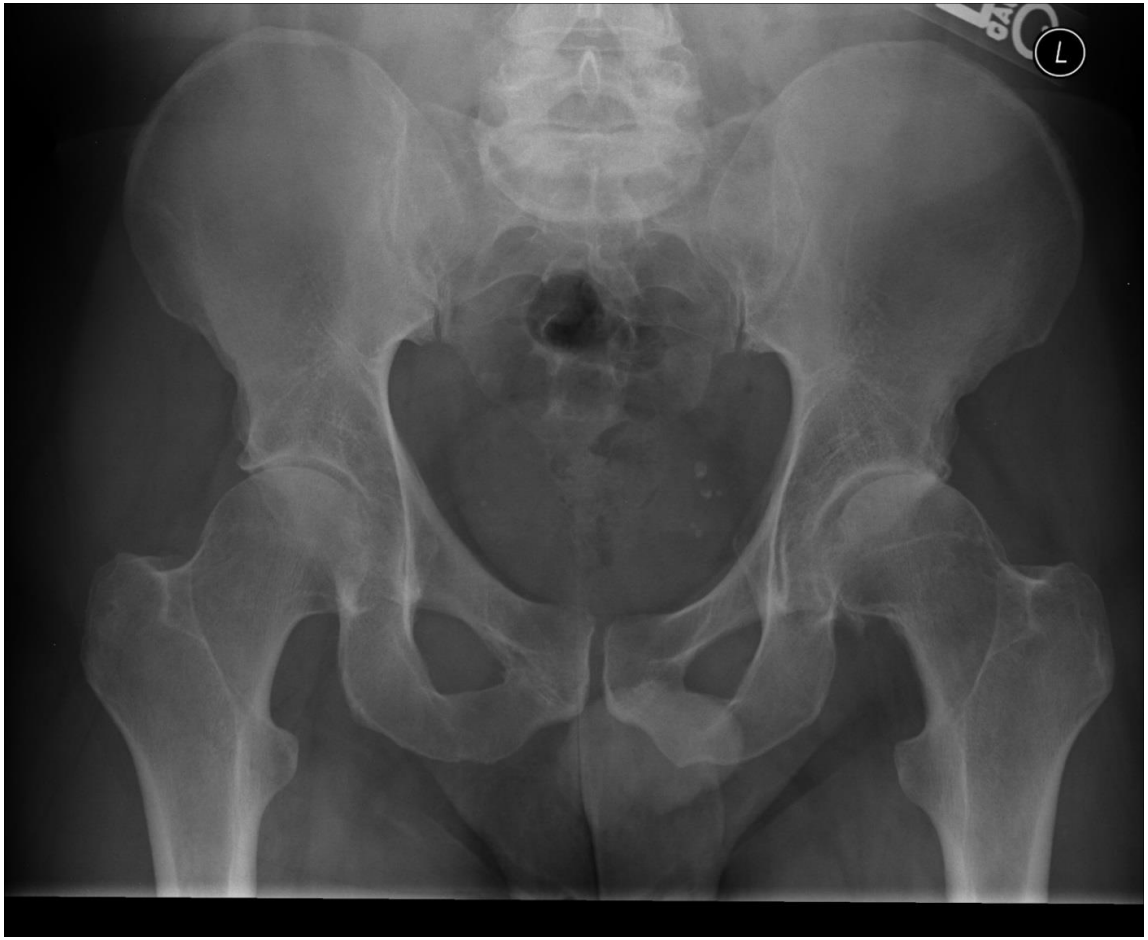
Are you:

☐ **Currently Working Job Title:**

☐ **Retired** ☐ **Disabled**

MEDHX 1.12

Case 4: X-ray 1



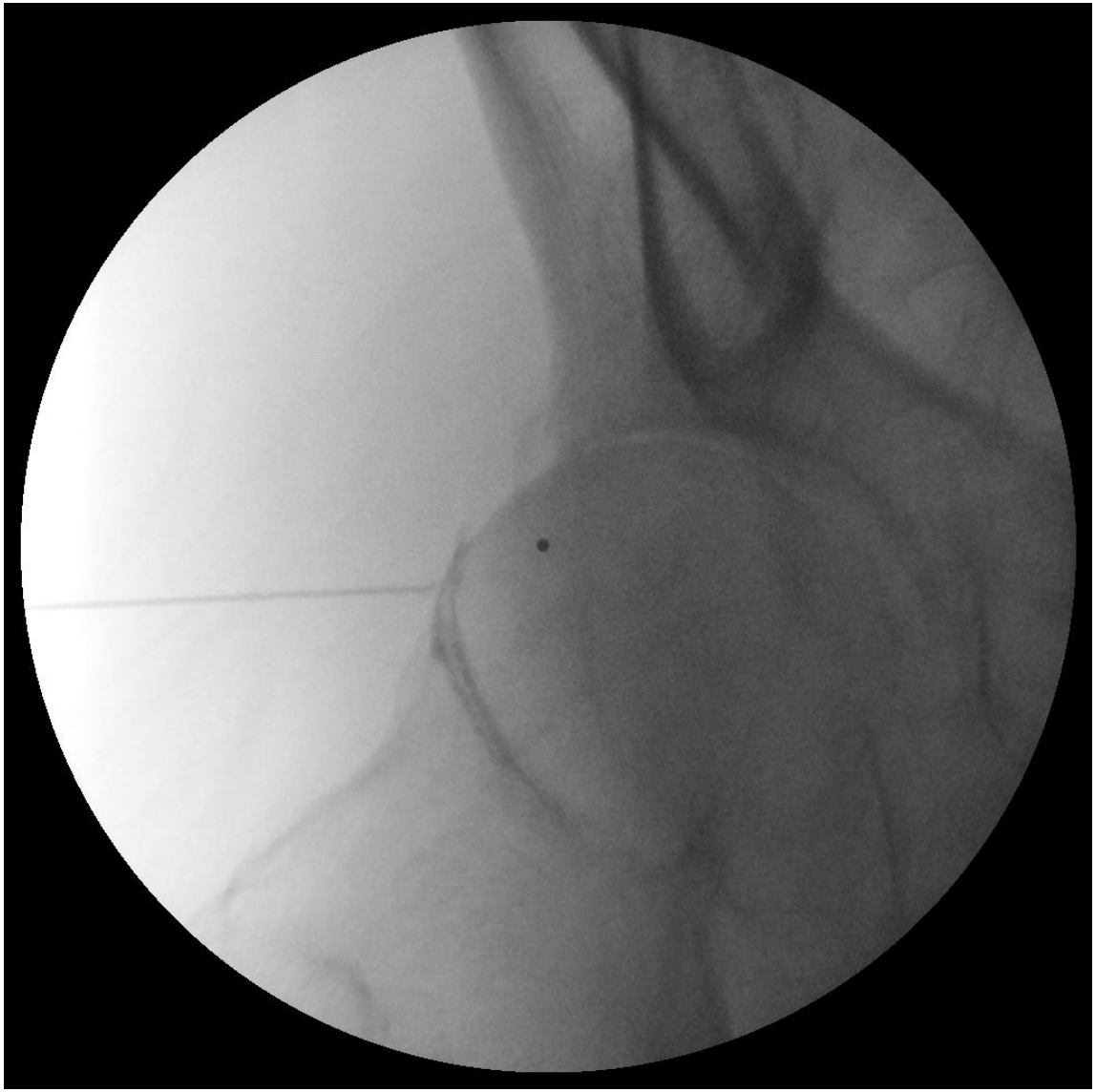
Most likely diagnosis is?

- A: Hip osteoarthritis
- B: Iliotibial band syndrome
- C: Lumbar radiculopathy
- D: Avascular Necrosis
- E: Trochanteric Bursitis

Correct-so we set him up for a fluoroscopically guided hip cortisone steroid injection.

LEFT

Case #4: Fluoro 1



Case #4, continued…

Patient has significant pain relief for over 6 months after the hip arthrogram cortisone steroid injection.

His pain flares and he presents for a repeat fluoroscopically guided hip CSI

Under fluoroscopy, you see this….

LEFT

Case #4: Fluoro 2



Now, what is the diagnosis ?

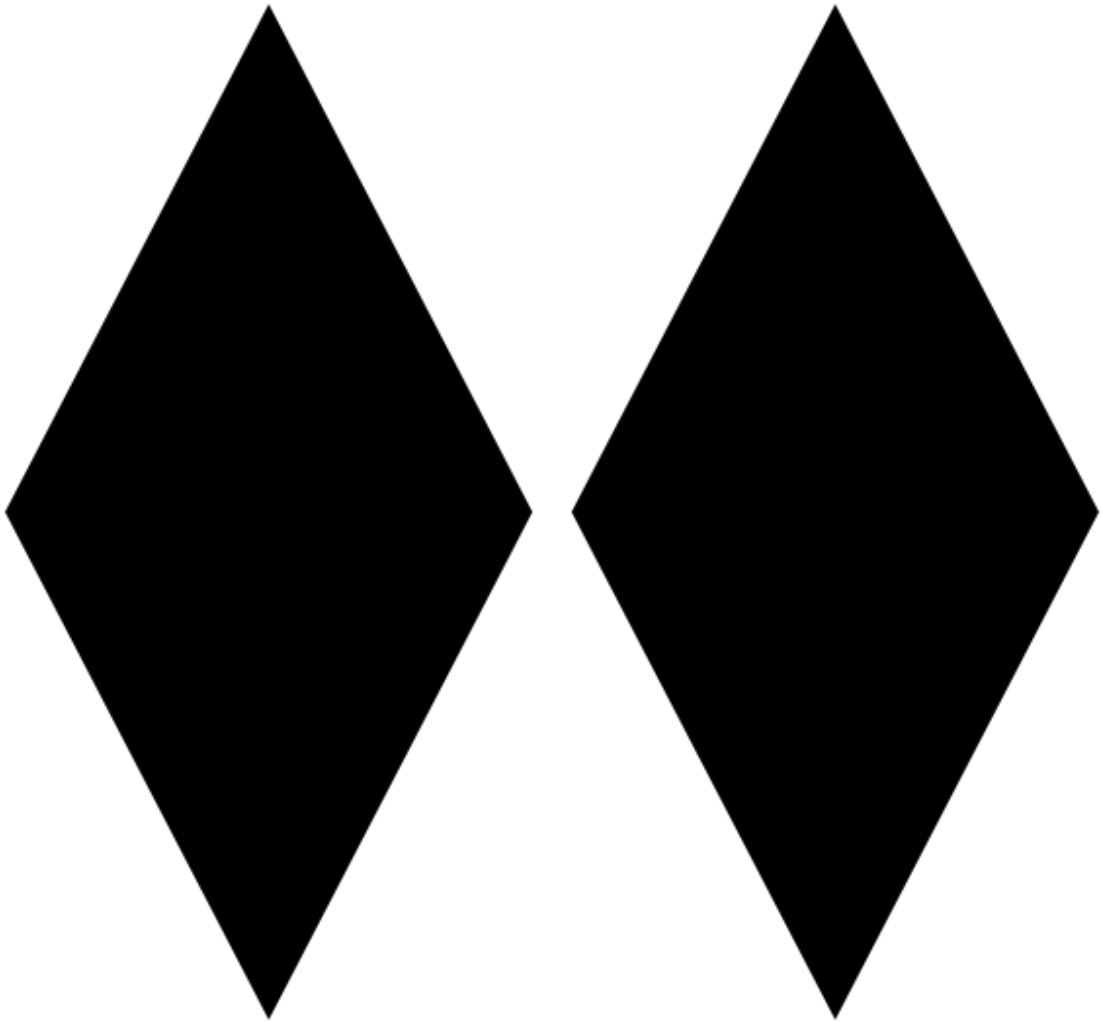
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- D: Avascular Necrosis
- E: Trochanteric Bursitis

Case #4: X-ray 2



Case #4: X-ray 3





Case #5

13 Y female volleyball/soccer

4 weeks ago diving in volleyball, landing on front of left hip. Sharp pain.

Now pain with running and kicking anterior hip.

Tried ice, heat, nsaids and rest without improvement.

Case #5 Pain Diagram

KAISER PERMANENTE®

Please fill out this form and bring it to the appointment Name

MR #

CONFIDENTIAL PATIENT HISTORY

Is your pain? ☐ Continuous ☐ Intermittent

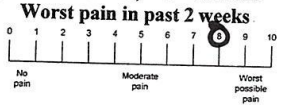
Approximate date this pain began: _____

Rate your pain on these scales. (Mark with an X) 0 = No Pain 10 = Worst possible pain

Least pain in past 2 weeks



Worst pain in past 2 weeks



Pain Today

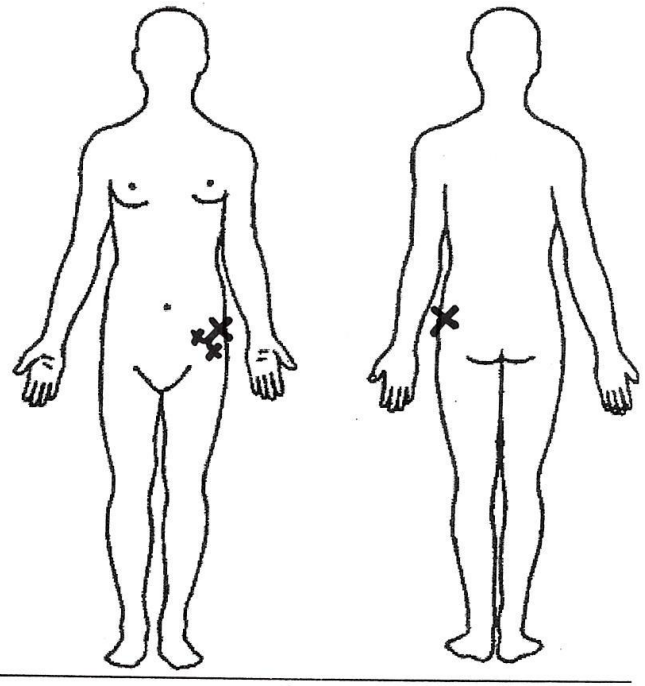


Use these symbols on the below diagram to describe your pain:

= Numbness /// Stabbing >>>Aching ... Pins & Needles xxx Burning

Rate these activities on how they affect your pain:

	Better	Worse	No Change
Sitting	☐	☐	☐
Standing	☐	☐	☐
Bending forward	☐	☐	☐
Bending backward	☐	☐	☐
Lying flat on Back	☐	☐	☐
Lying flat on Stomach	☐	☐	☐
Lying flat on Side	☐	☐	☐
Walking	☐	☐	☐



List surgeries and dates:

_____

_____

Are you:

☐**Currently Working Job Title:**

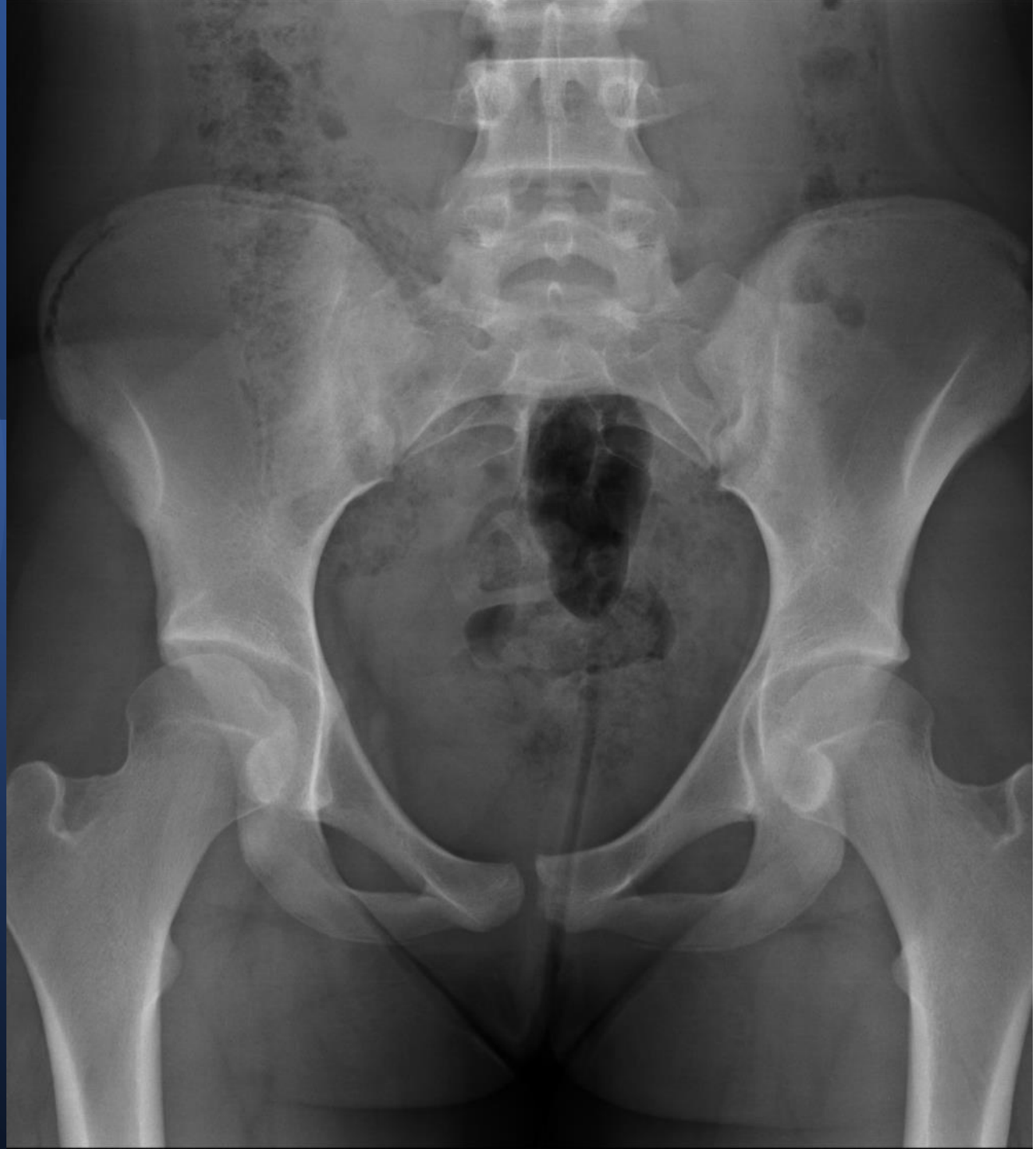
☐**Retired** ☐ **Disabled**

MEDHX 1.12

Case #5: Exam

- Normal gait
- Significant inflexibility of lower extremities
- Pain in anterior hip with hip flexor stretch
- Focal TTP over iliac crest just distal to ASIS
- No pain with forced passive motion of hip
- No leg length discrepency

Case #5: X-ray

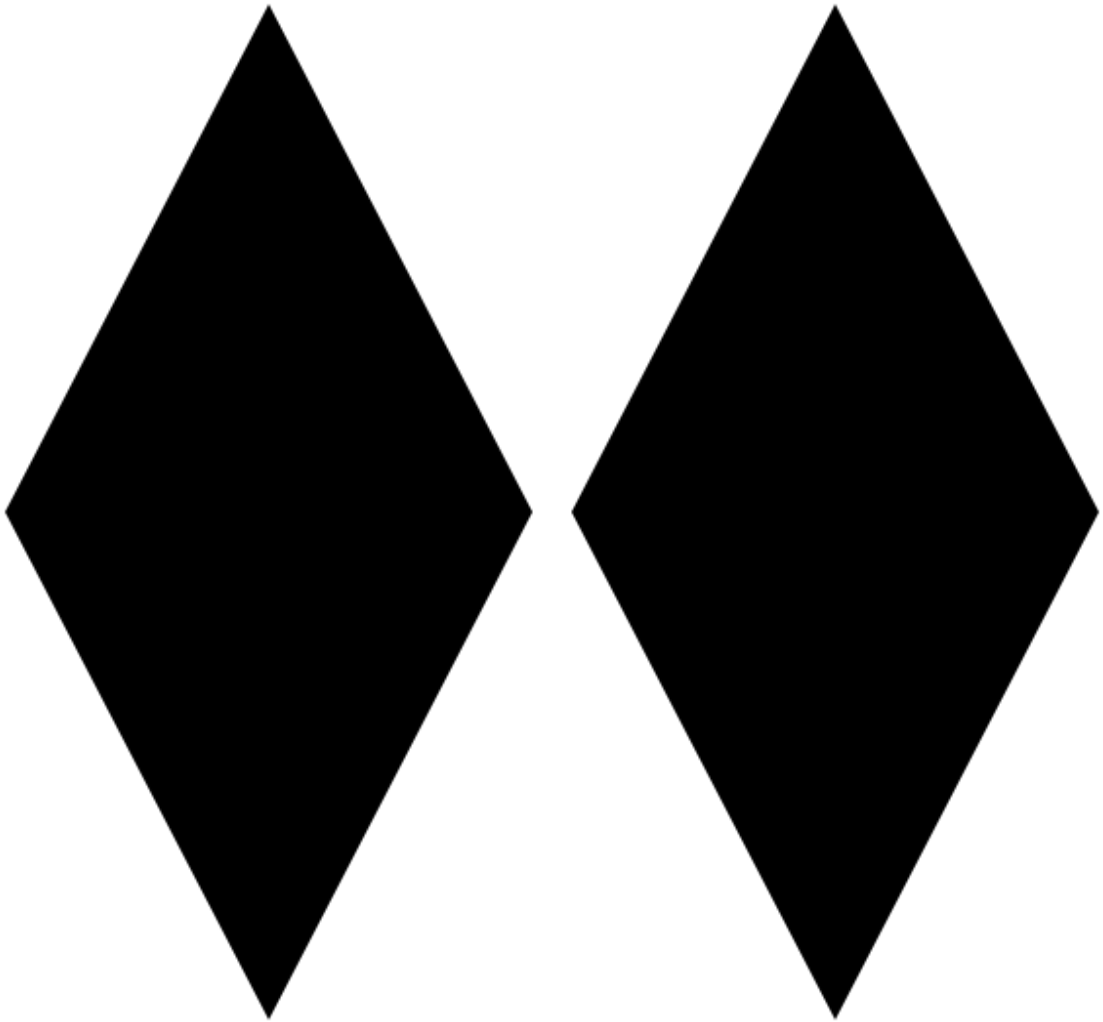


Most likely diagnosis is?

- A: Hip osteoarthritis
- B: Iliotibial band syndrome
- C: Iliac crest fracture
- D: Avascular Necrosis
- E: Slipped Capital Femoral Epiphysis

Iliac Crest Growth Plate Fracture

- Treatement:
- Rest
- P.T.
  - Stretching
    - Hip flexors, Quads, ITband, Hip extensors, hamstrings.
  - Exercises
    - Hip stabilization exercises
- No pain with passive stretch, No tenderness to palpation, no pain with running stairs.



Case #6

90 y.o. woman with back and leg pain.

History of spinal stenosis, back surgery, claudication,chronic pain, and dementia.

Legs are weak, 2 months ago fell, seen in ED, xrays completed-negative for fracture.

Started P.T.

Increased pain in right hip

Case #6 Pain Diagram

KAISER PERMANENTE®

Please fill out this form and bring it to the appointment Name

MR #

CONFIDENTIAL PATIENT HISTORY

Is your pain? ☐ Continuous ☐ Intermittent

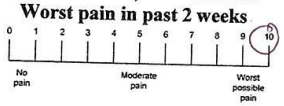
Approximate date this pain began: _____

Rate your pain on these scales. (Mark with an X) 0 = No Pain 10 = Worst possible pain

Least pain in past 2 weeks



Worst pain in past 2 weeks



Pain Today

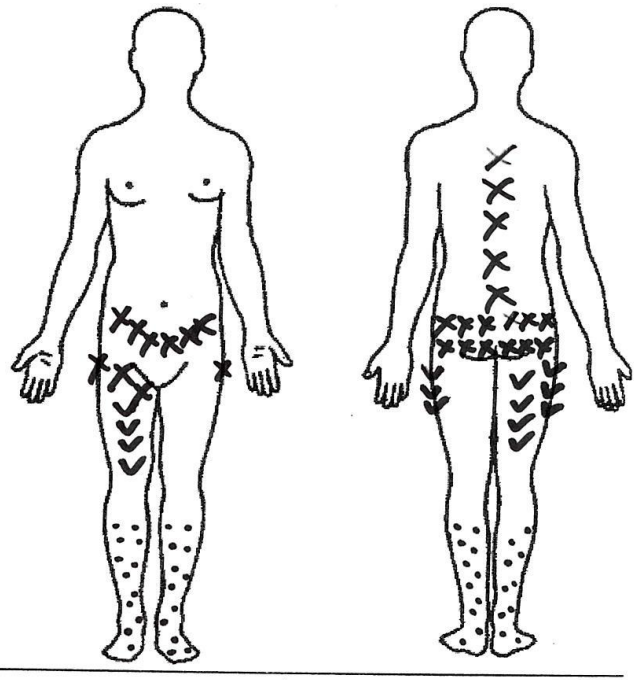


Use these symbols on the below diagram to describe your pain:

= Numbness /// Stabbing >>>Aching ... Pins & Needles xxx Burning

Rate these activities on how they affect your pain:

	Better	Worse	No Change
Sitting	☐	☐	☐
Standing	☐	☐	☐
Bending forward	☐	☐	☐
Bending backward	☐	☐	☐
Lying flat on Back	☐	☐	☐
Lying flat on Stomach	☐	☐	☐
Lying flat on Side	☐	☐	☐
Walking	☐	☐	☐



List surgeries and dates:

_____

_____

Are you:

☐ **Currently Working Job Title:**

☐ **Retired** ☐ **Disabled**

MEDHX 1.12

Case #6: Exam

- Presented to ER with severe hip pain. Treated with narcotics and referred to you for evaluation in your clinic.
- Able to stand with assistance and walk few steps in exam room with right hip pain.
- Noticeable leg length discrepancy with right shorter than left.
- Severe right hip pain with passive motion which is limited.
- Symmetric neurovascular exam.

Case #6: X-ray from the ER visit.



Case #6: X-ray (Office)



Most likely diagnosis is?

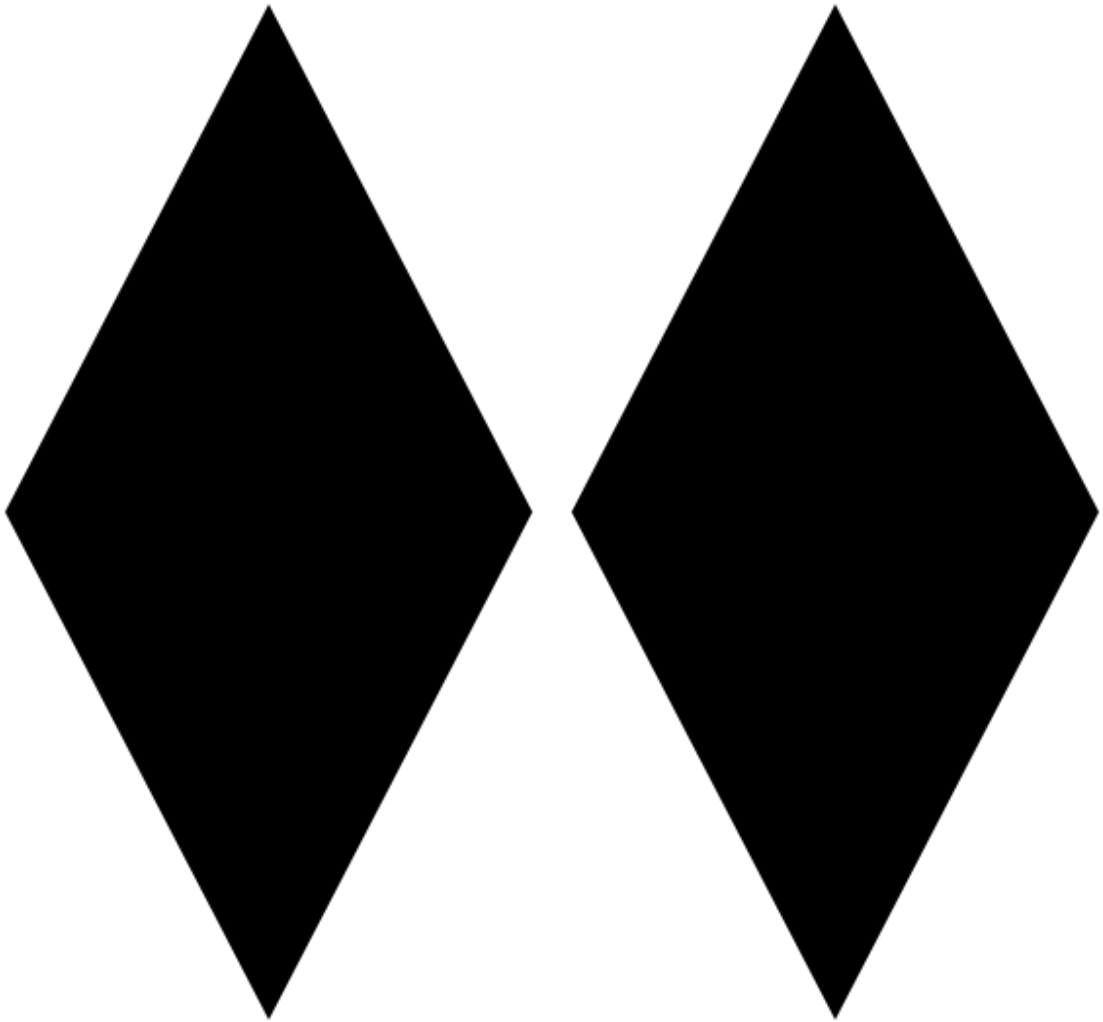
- A: Hip osteoarthritis
- B: Osteolysis of femoral neck
- C: Iliac crest fracture
- D: Avascular Necrosis
- E: Slipped Capital Femoral Epiphysis

Osteolysis of femoral neck

Very uncommon

Variant of AVN

LEG LENGTH DISCREPENCY



Case #7

65 yo man, active surfer and cyclist has on/off left hip/groin pain for over a year.

Bending forward he develops severe stabbing pain that radiates down his anterior thigh.

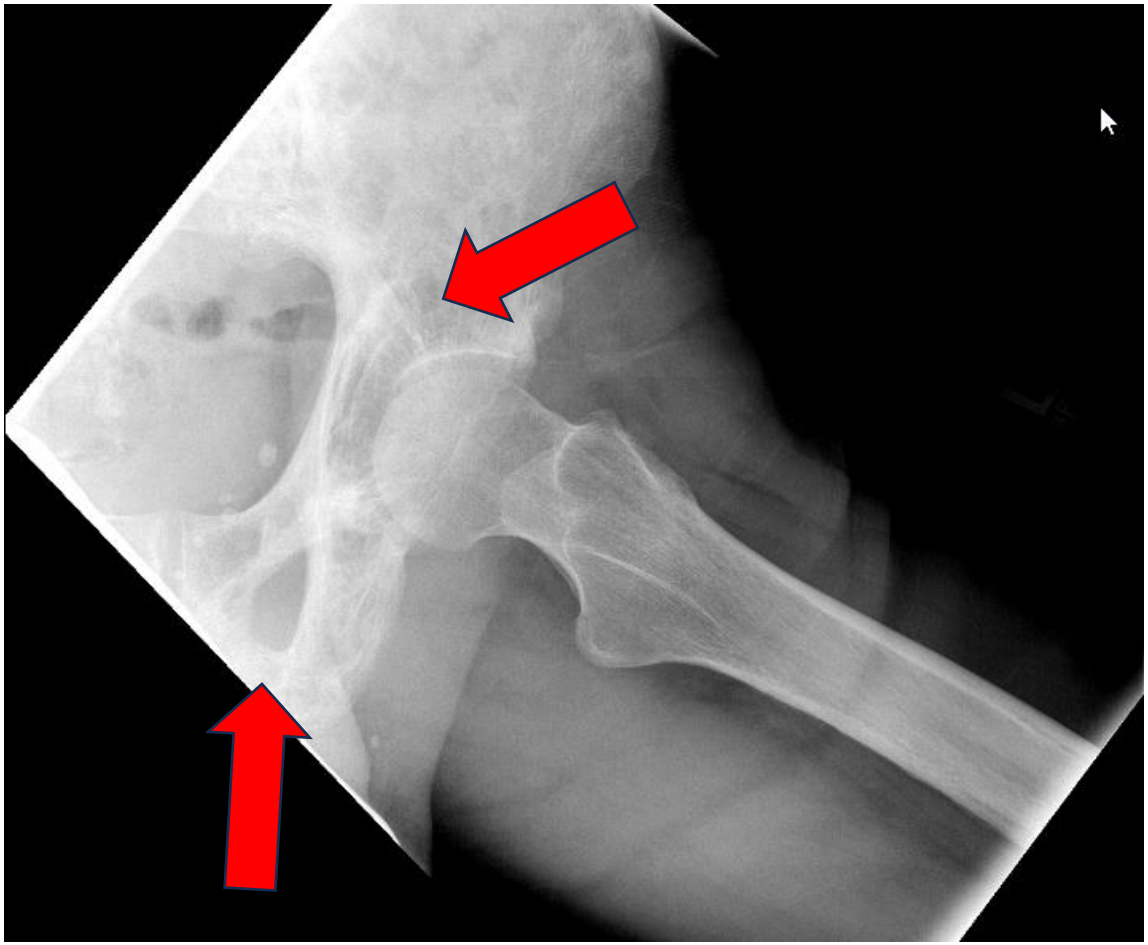
Hip joint feels like it is stuck and he is unable to bear weight

You get hip x-rays…

Case #7: X-Rays



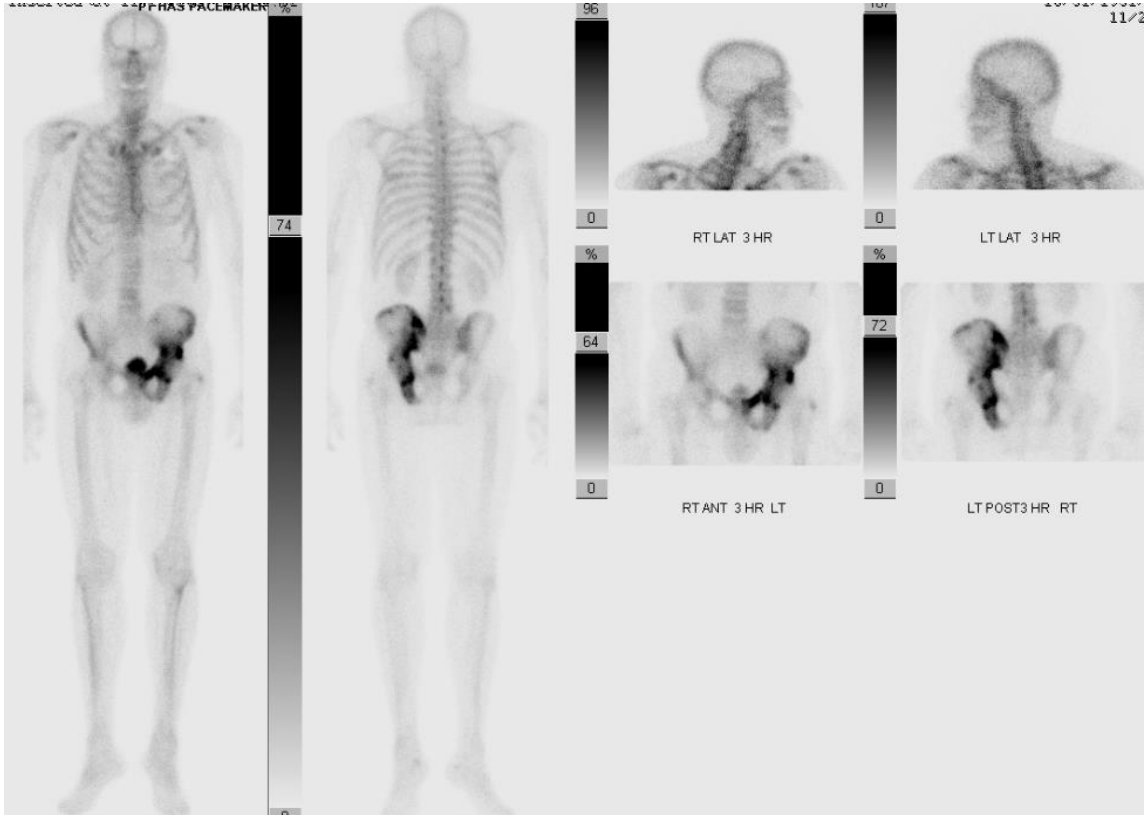
Case #7: X-rays Frog Leg Lateral



Most likely diagnosis is?

- A: Hip osteoarthritis
- B: Avascular Necrosis
- C: Stress Fracture
- D: Trochanteric Bursitis
- E: Paget's Disease

Bone Scan



Paget's Disease of Bone "Osteitis Deformans"

Age >55, Men > Women, often asymptomatic

Accelerated rate of bone remodeling

Focal disorder of bone metabolism that occurs in the aging skeleton

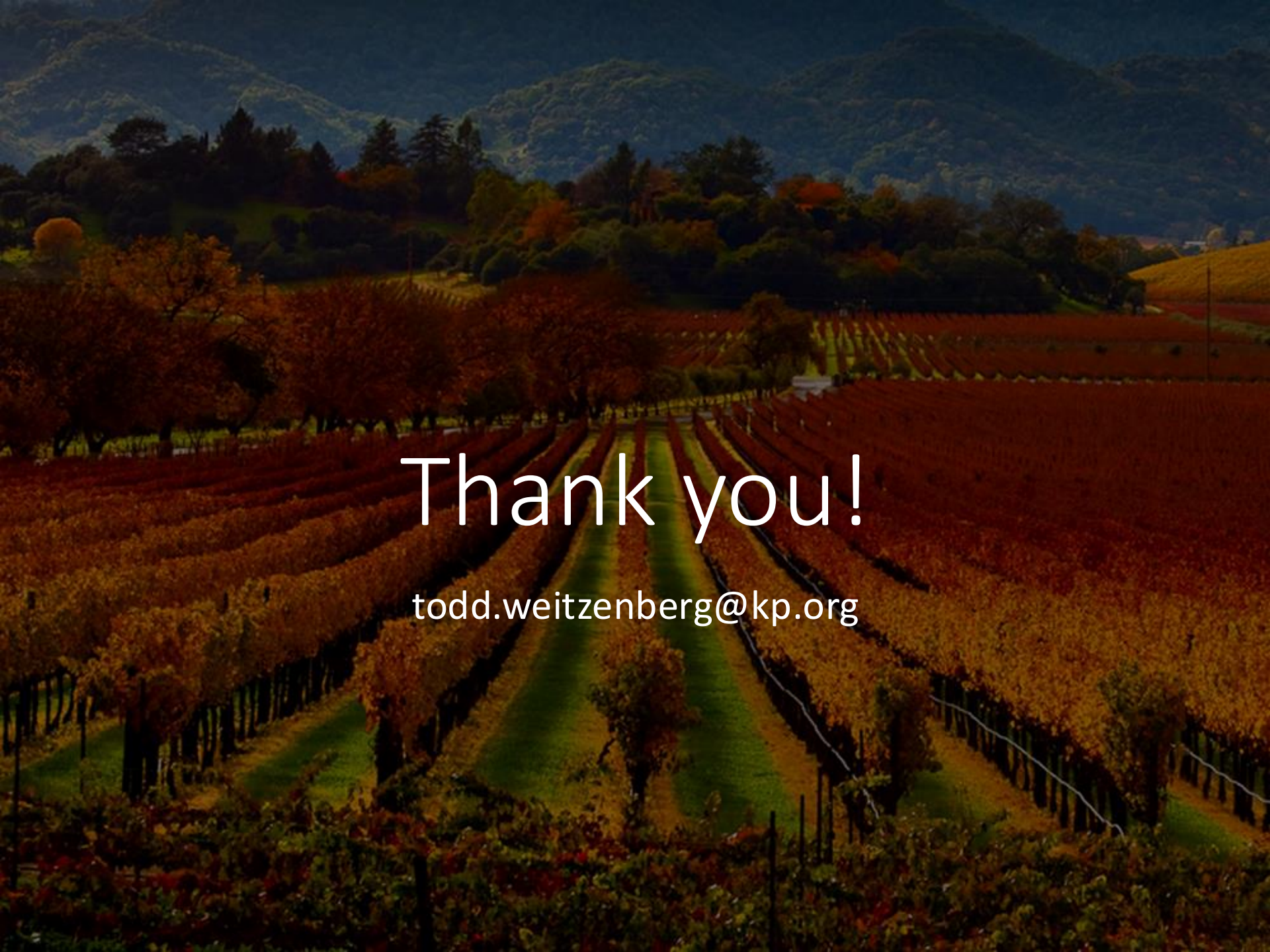
Labs: Frequently elevated:

- serum alkaline phosphatase (sAP)
- bone-specific alkaline phosphatase (bAP)

Diagnosis: Radiographic + elevated sAP

Nice Job!
KEY POINTS

- The hip is a ‘watershed zone’
- Use your history and exam skills
- Encourage active recovery program
- Check x-rays if trauma or fails to improve with conservative treatment
- Consult your musculoskeletal specialist if you have questions or concerns!


Thank you!
todd.weitzenberg@kp.org