MSK CASE STUDIES

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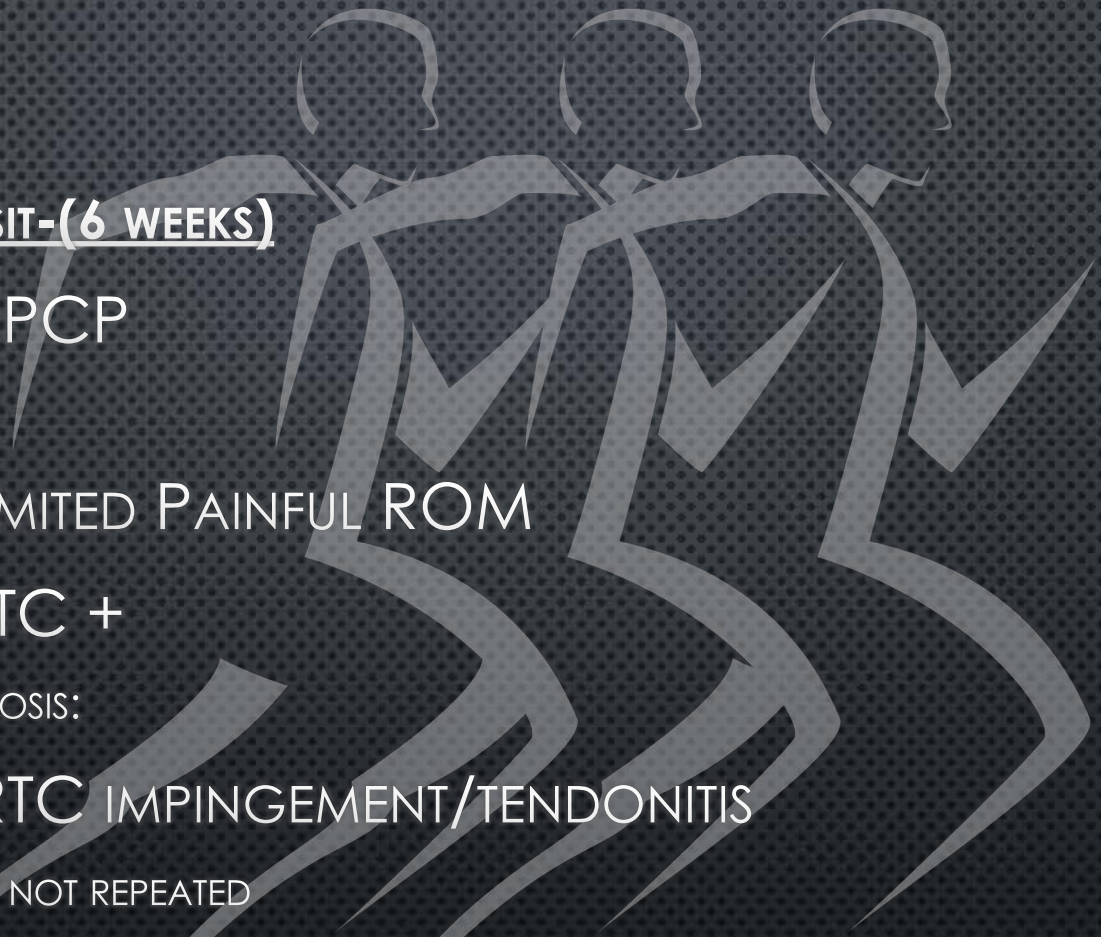
- ***JBJS- JOPA*** *Journal of Orthopaedics for Physician Assistants- Associate Editor*
- ***American Academy of Surgical Physician Assi****stants – Editorial Review Board*

SHOULDER PAIN

SHOULDER PAIN

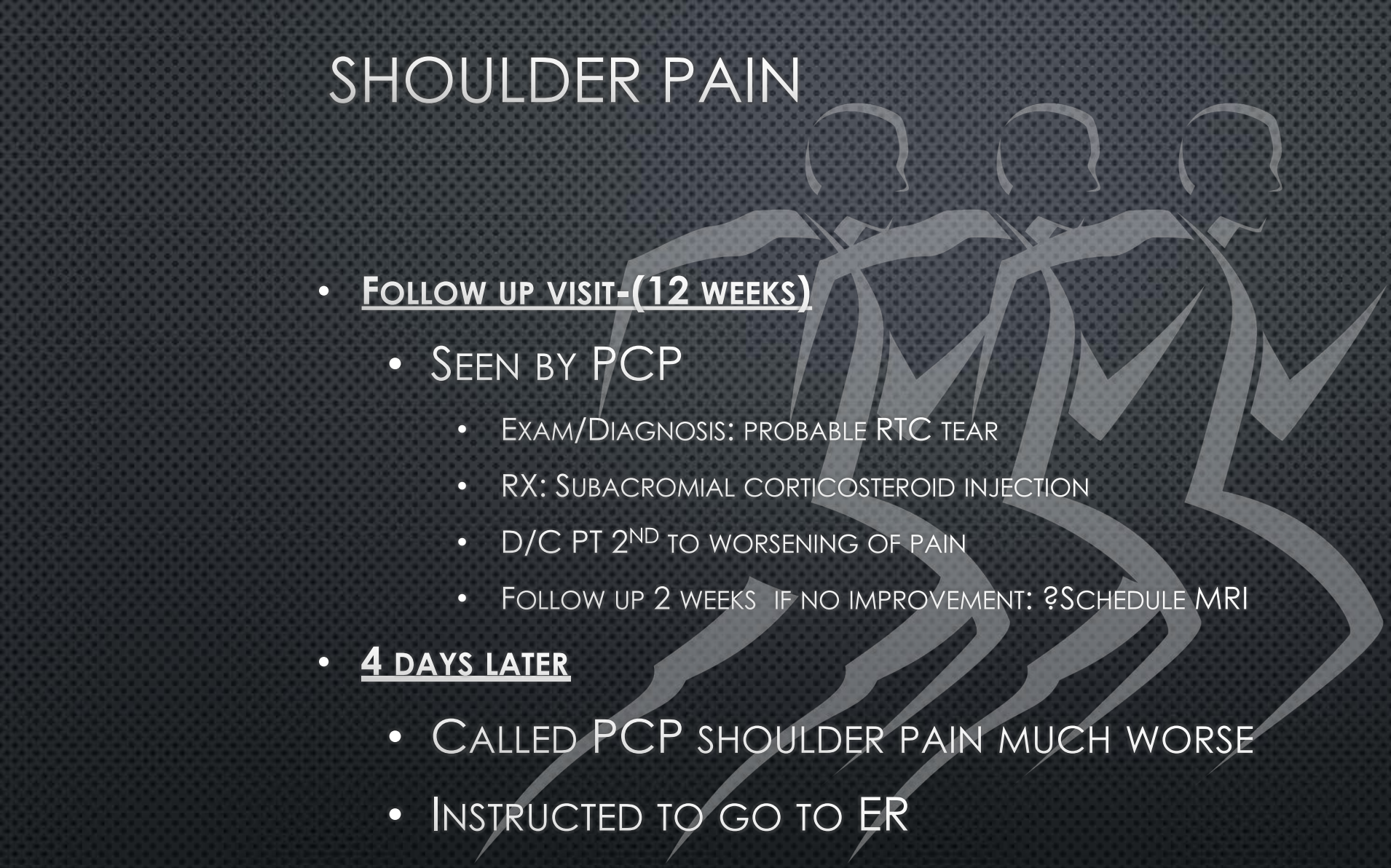
- **CHIEF COMPLAINT**: SHOULDER PAIN
  - 56 YO MALE WITH 3 WEEK COMPLAINT OF SHOULDER PAIN
  - SEEN BY PRIMARY CARE PROVIDER
  - NO HX OF TRAUMA
  - NO SPORTS OR STRENGTH TRAINING ACTIVITY
  - **INITIAL MANAGEMENT**
    - EXAM/DIAGNOSIS: RTC IMPINGEMENT/TENDONITIS
    - X-RAY: NEGATIVE
    - RX: OTC NSAIDS, REST, HEP
    - FOLLOW UP 4 WEEKS IF NOT IMPROVED

SHOULDER PAIN



- **Follow up visit-(6 weeks)**
  - Seen by PCP
    - Exam:
      - Limited Painful ROM
      - RTC +
    - Diagnosis:
      - RTC impingement/tendonitis
    - X-ray: not repeated
    - RX: Rx-NSAIDS, Formal PT 6 weeks
    - Follow up 6 weeks if not improved

SHOULDER PAIN



- **Follow up visit-(12 weeks)**
  - Seen by PCP
    - Exam/Diagnosis: probable RTC tear
    - RX: Subacromial corticosteroid injection
    - D/C PT 2ND to worsening of pain
    - Follow up 2 weeks if no improvement: ?Schedule MRI
- **4 days later**
  - Called PCP shoulder pain much worse
  - Instructed to go to ER

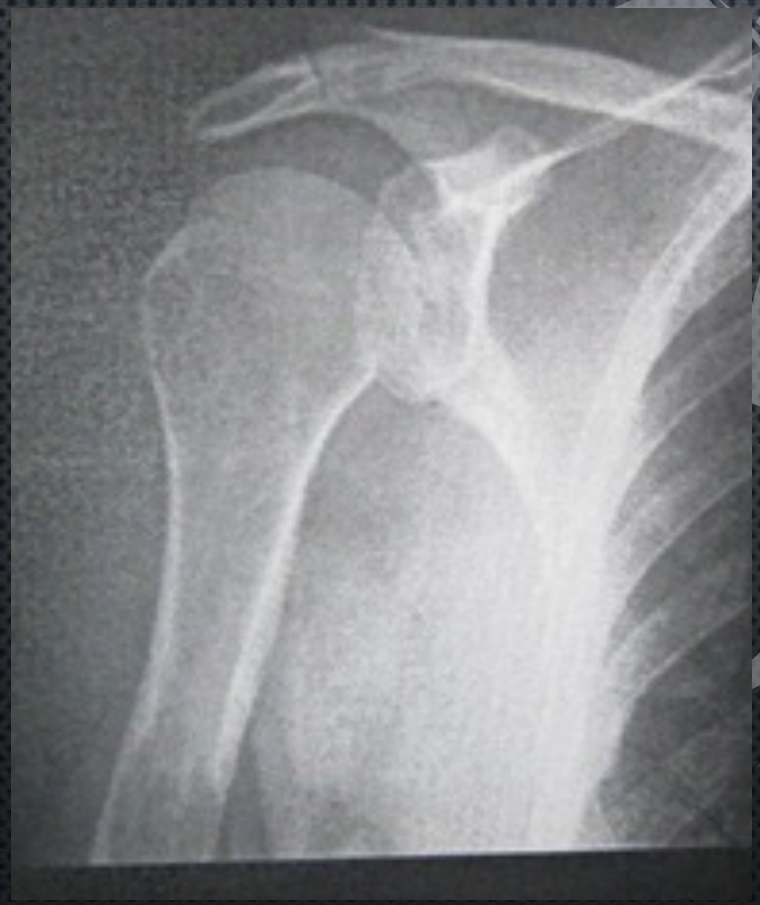
SHOULDER PAIN

- **CHIEF COMPLAINT**: INTRACTABLE RTC/SHOULDER PAIN
- **HISTORY:**
  - 56 YO MALE WITH 3+MONTH HX WORSENING SHOULDER PAIN
  - PROGRESSIVELY GETTING WORSE - CONSTANT
  - NOW UNABLE TO LIFT ARM WITHOUT ASSISTANCE
  - NO HX OF TRAUMA
  - NO SPORTS OR STRENGTH TRAINING ACTIVITY
  - NO MOVING/YARD WORK/HOME IMPROVEMENTS/CHILD CARE/AUTOMOTIVE/FACTORY
- **PRESENTING SYMPTOMS:**
  - SEVERE, CONSTANT PAIN
  - DELTOID PAIN
  - SLEEP PAIN
  - NITE PAIN
  - LIMITED ROM

SHOULDER PAIN

- **Allergies**: none (Drugs-Food-Latex)
- **Medications**: OTC NSAIDS, Verapamil, Atorvastatin
- **PMH**: HTN, Hypercholesterolemia
- **SocialHx**: occasional cigar & etoh, negative drugs
- **FMH**: Throat/Lung CA
- **Physical Exam:**
  - General: AAO, normal appearance, no acute distress
  - Skin-no abnormalities
  - Palpate: tender AC jt, Coracoid, Deltoid/Proximal humerus
  - ROM: limited shoulder/painful, normal cervical ROM
  - Neuro/sensory intact
  - Ortho Tests: unable to perform 2ND to pain

Radiographs
PCP office 3+ moths ago



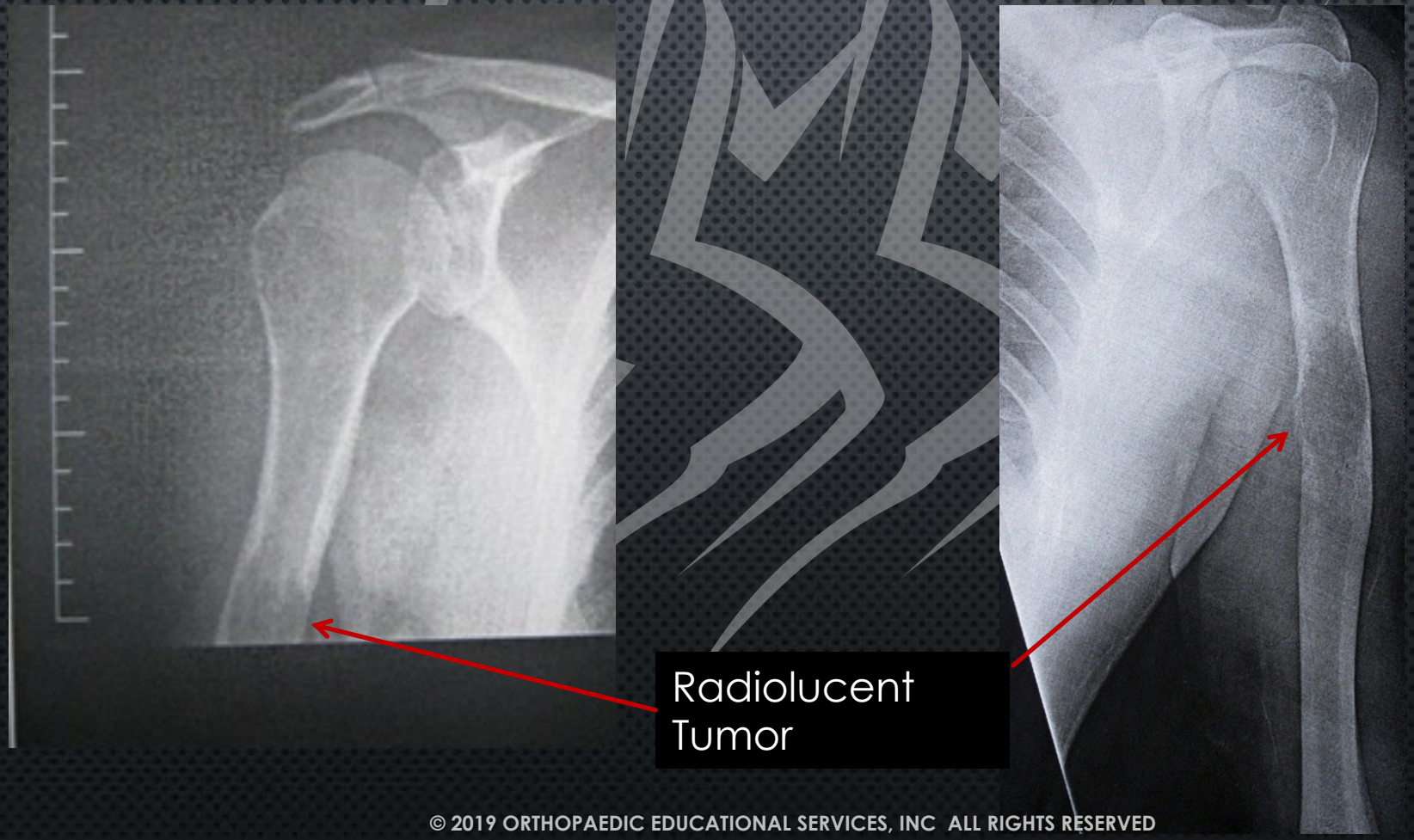
What is your Diagnosis

- RTC Impingement
- Rupture RTC Tendon
- Shoulder Arthritis
- Proximal Humerus fx
- Cervical Radiculopathy

DIAGNOSIS: PATHOLOGIC HUMERUS FX

PCP OFFICE 3+ MONTHS AGO

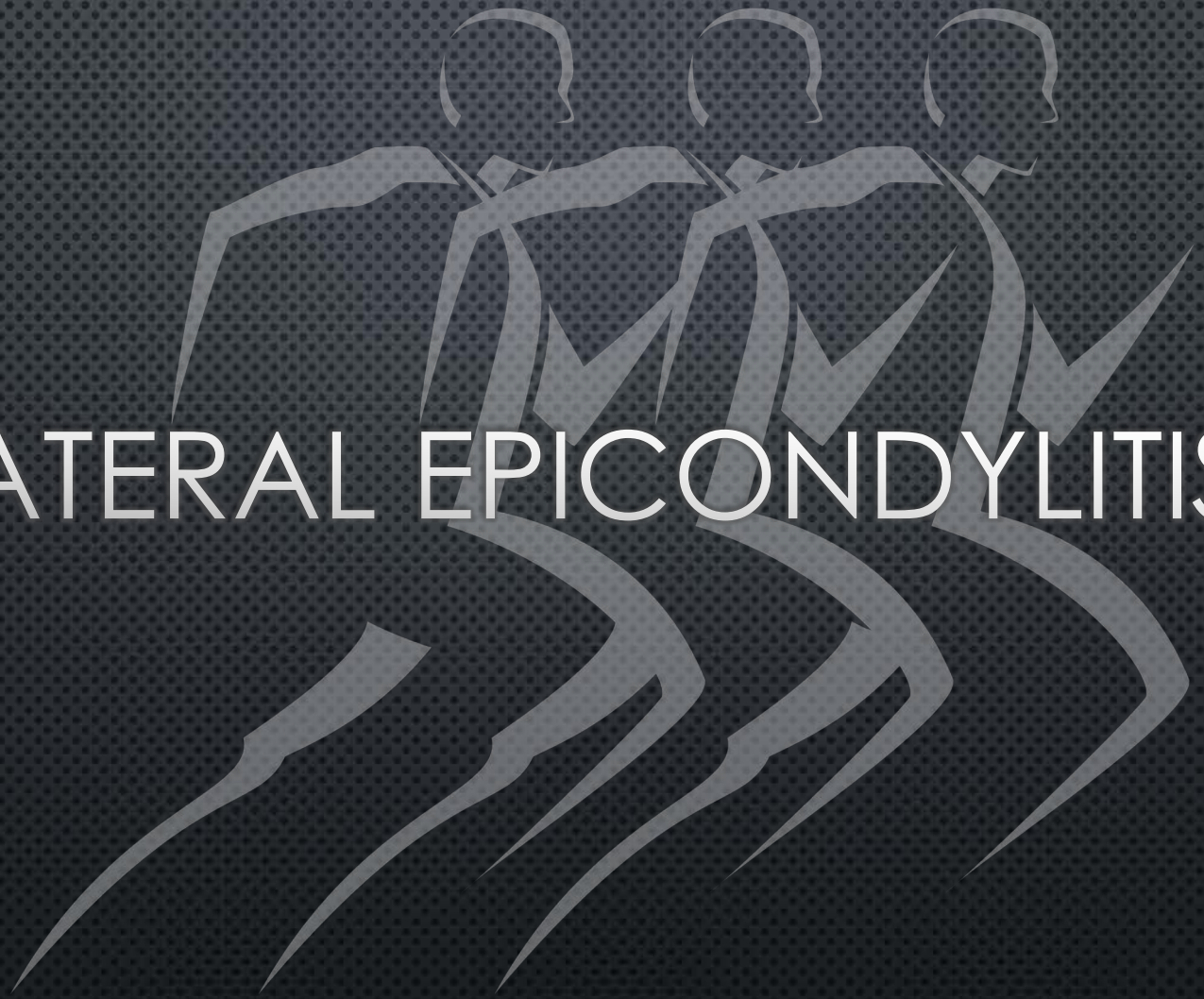
ER VISIT



TREATMENT

- **Diagnosed with Renal Cell Carcinoma**
  - Originates lining proximal convoluted tubules kidney
  - Most common kidney cancer in adults (80%)
  - Frequently presents: back/groin pain, Abd mass, weight loss, hematuria
  - Metastasis to bone (pelvis most common)
  - Responds poorly to Radiation and Chemotherapies
  - Favorable response to Immunotherapy
  - 5 year survival for patients with metastatic renal cell carcinoma is between 5 and 15%

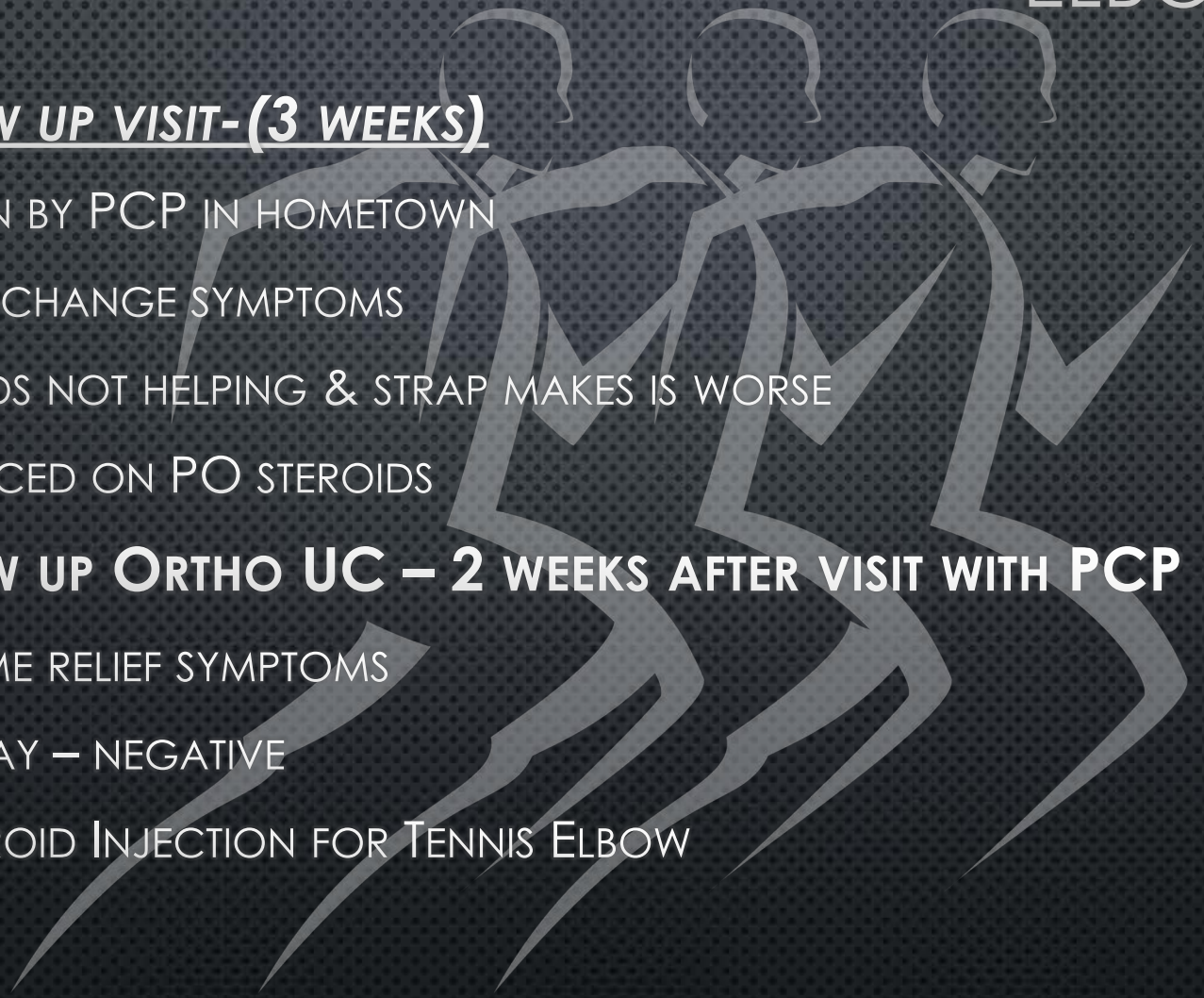
LATERAL EPICONDYLITIS



Elbow Pain

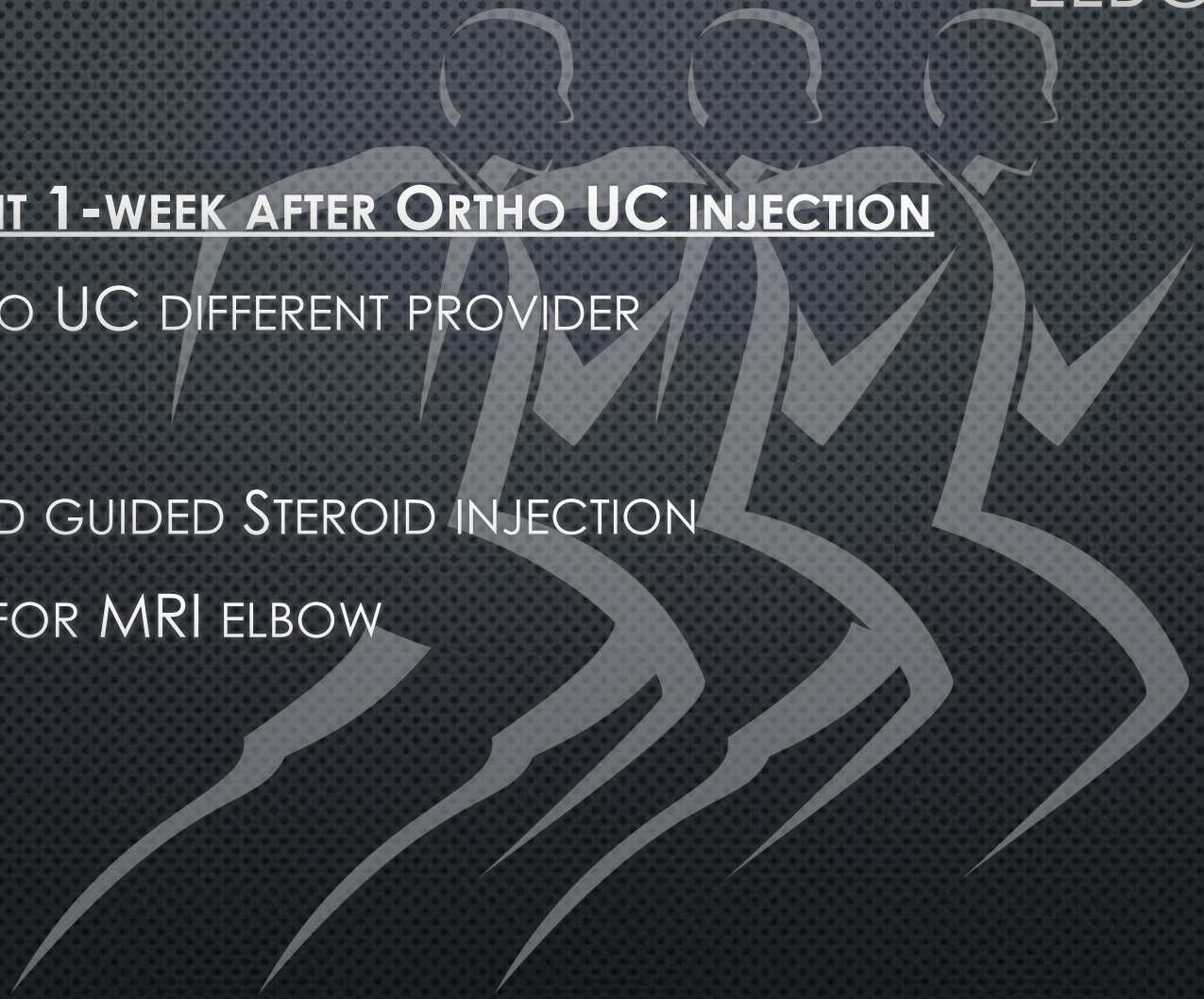
- **Chief Complaint**: Elbow pain
  - 44 yo female 4-week complaint of Elbow pain
  - Small animal Veterinarian
  - Elbow pain inhibiting surgical care
  - Trouble lifting/grasping/using surgical instruments
  - **Initial management**
    - Seen Ortho Urgent Care in NJ
    - Exam/Diagnosis: Lateral Epicondylitis
    - XR/O for Carpal Tunnel Syndrome
    - RX: Meloxicam and Tennis elbow strap
    - Follow up 4 weeks if not improved

ELBOW PAIN



- ***Follow up visit- (3 weeks)***
  - Seen by PCP in hometown
  - No change symptoms
  - Meds not helping & strap makes is worse
  - Placed on PO steroids
- **Follow up Ortho UC – 2 weeks after visit with PCP**
  - Some relief symptoms
  - X-ray – negative
  - Steroid Injection for Tennis Elbow

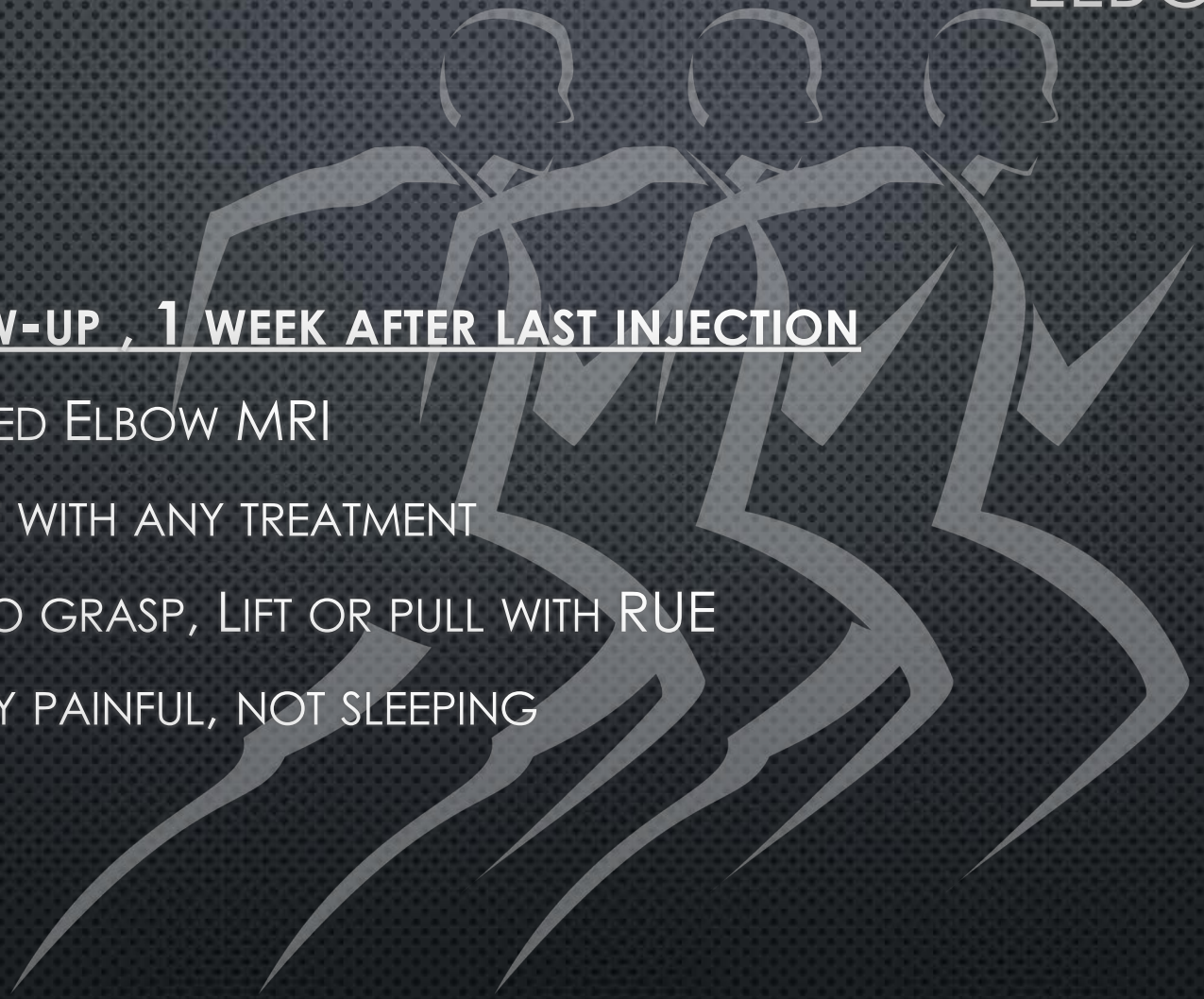
ELBOW PAIN



Follow up visit 1-week after Ortho UC injection

- Same Ortho UC different provider
- NO exam
- Ultra-sound guided Steroid injection
- Scheduled for MRI elbow

ELBOW PAIN



ORTHO FOLLOW-UP , 1 WEEK AFTER LAST INJECTION

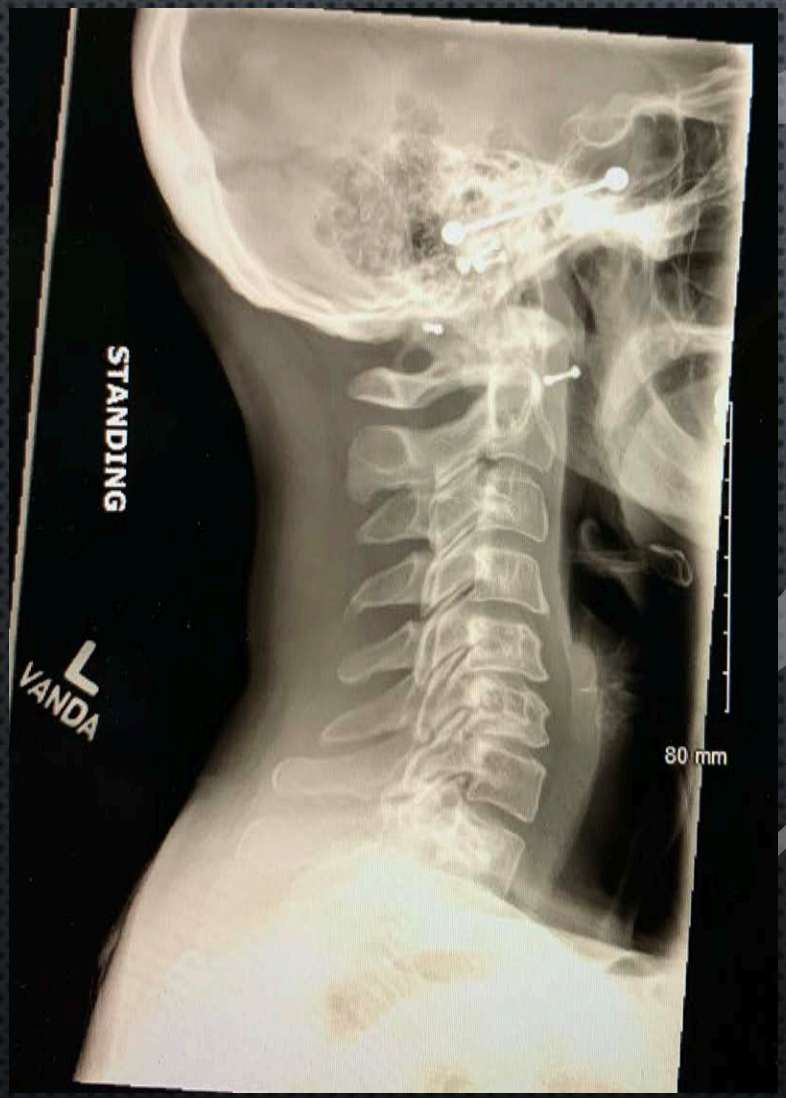
- CANCELLED ELBOW MRI
- NO RELIEF WITH ANY TREATMENT
- UNABLE TO GRASP, LIFT OR PULL WITH RUE
- EXTREMELY PAINFUL, NOT SLEEPING

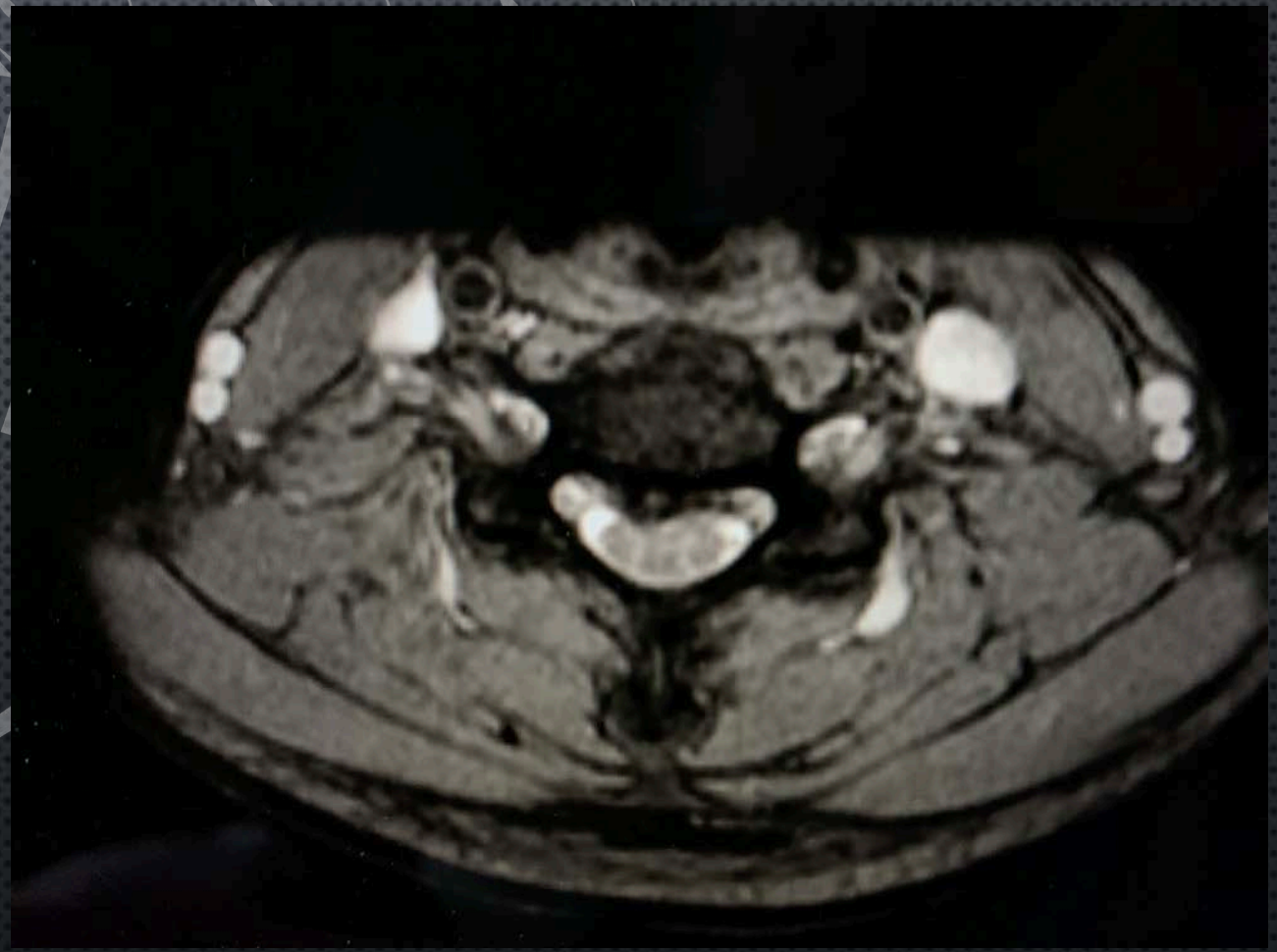
ELBOW PAIN

- **ALLERGIES**: NONE (DRUGS-FOOD-LATEX)
- **MEDICATIONS**: MELOXICAM, PREDNISONE, ACETAMINOPHEN
- **PMH**: NEG
- **SOCIALHX**: NEG
- **FMH**: NEG
- **PHYSICAL EXAM:**
  - GENERAL: AAO, NORMAL APPEARANCE, NO ACUTE DISTRESS
  - SKIN-NO ABNORMALITIES
  - PALPATE: NON-TENDER LATERAL EPICONDYLE/ECRB/CET
  - ROM: NO LIMITS WRIST/ELBOW ROM
  - STRENGTH: GRIP DIMINISHED
  - NEURO/SENSORY NUMBNESS TIP RING AND LONG FINGER
  - ORTHO TESTS: NEGATIVE FINGER EXTENSION TEST

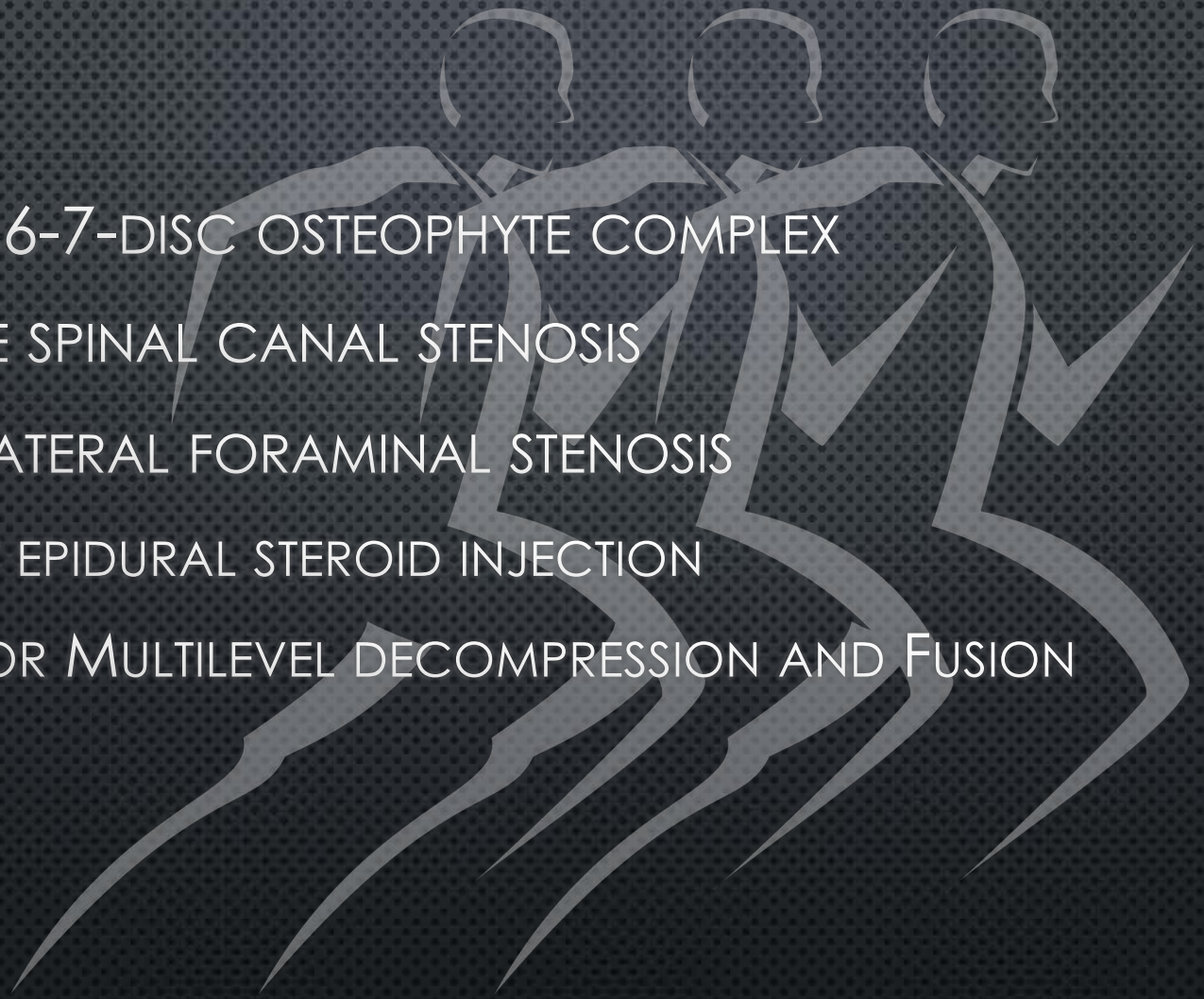
WHAT IS YOUR DIAGNOSIS?

CERVICAL STENOSIS & RADICULOPATHY





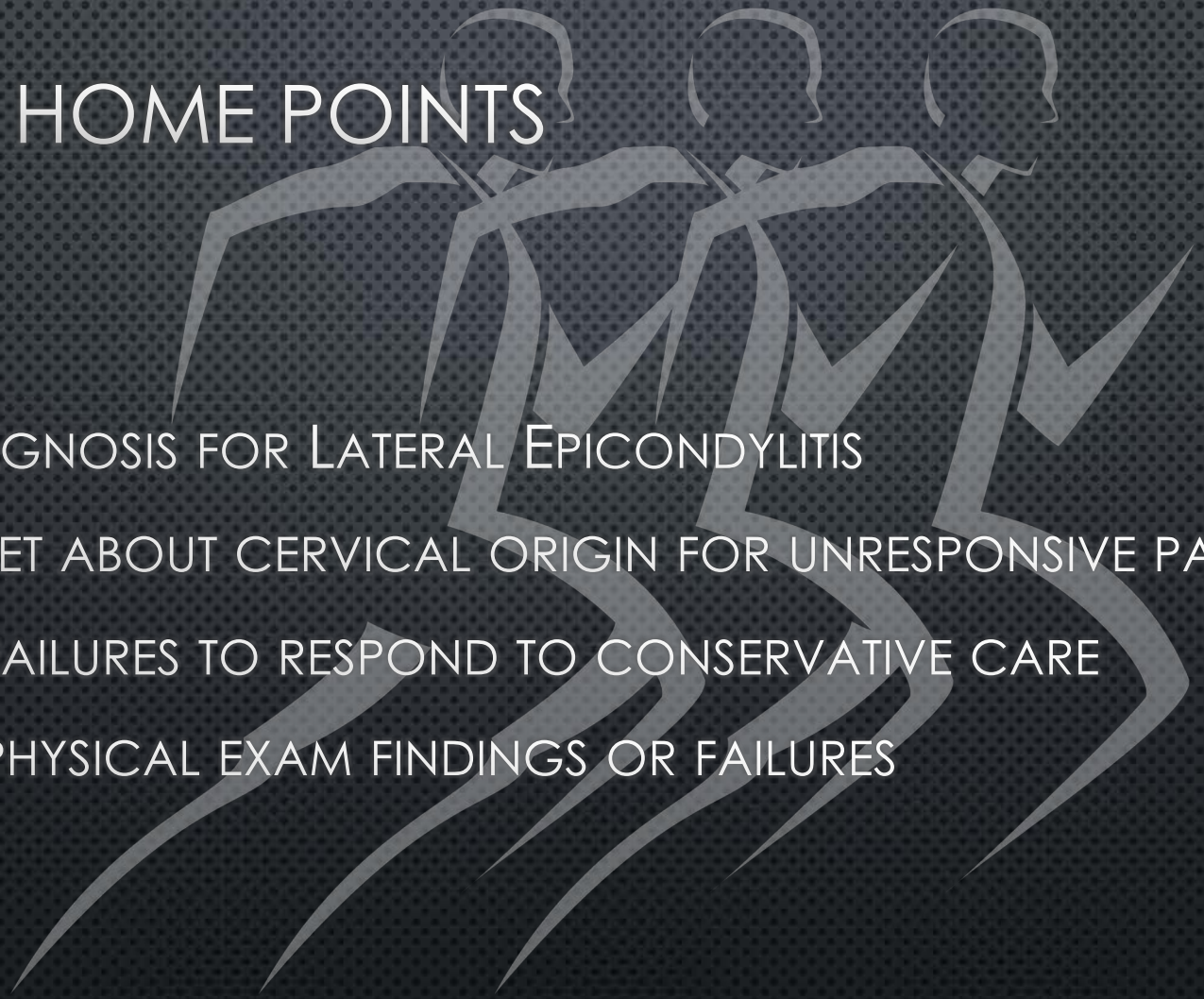
TREATMENT



Diagnosis-

- C5-6 & C6-7-disc osteophyte complex
- Moderate spinal canal stenosis
- Severe bilateral foraminal stenosis
  - Urgent epidural steroid injection
  - Plan for Multilevel decompression and Fusion

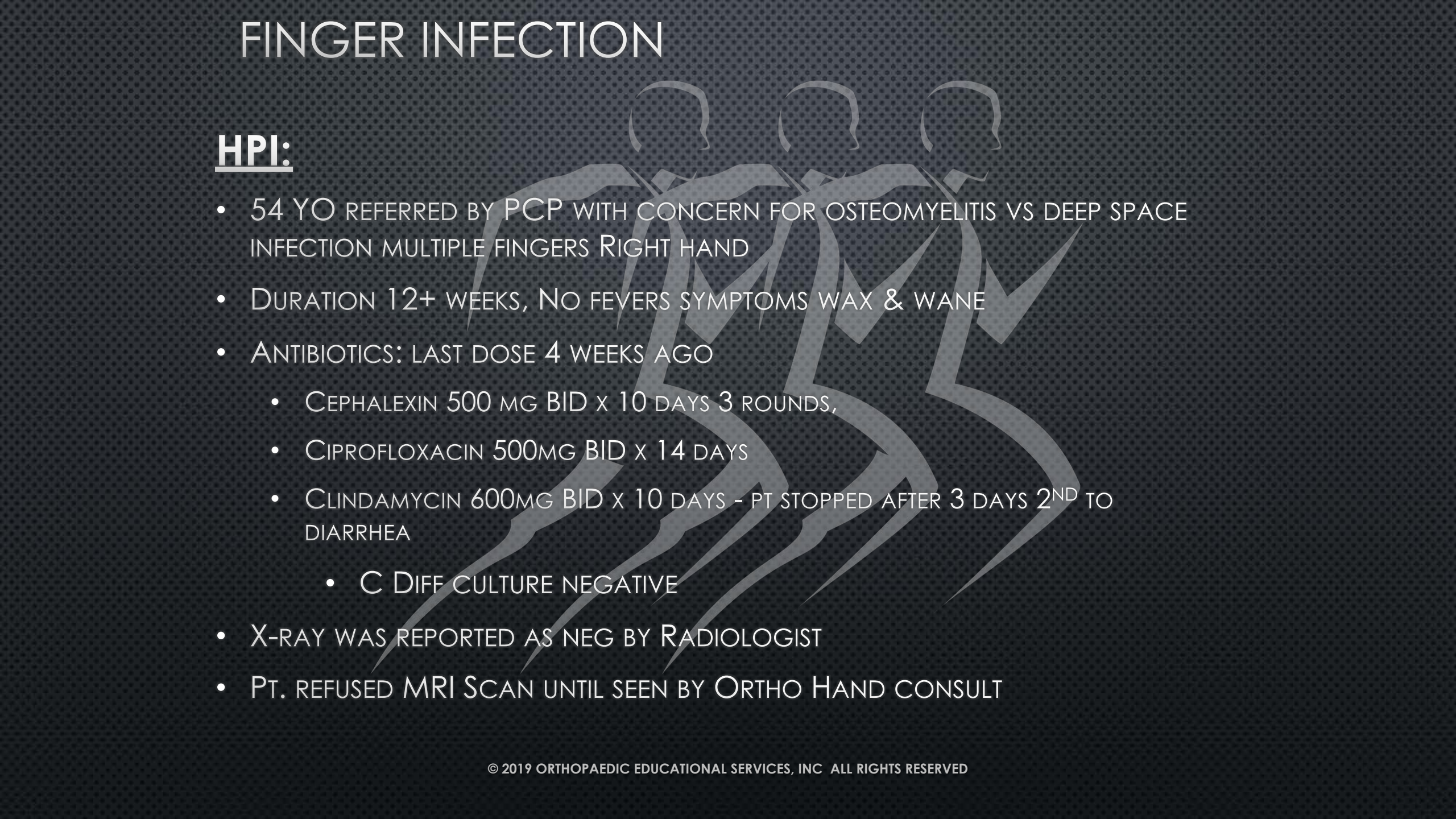
TAKE HOME POINTS



- Unusual diagnosis for Lateral Epicondylitis
- Don't forget about cervical origin for unresponsive pain symptoms
- Recognize failures to respond to conservative care
- Recognize physical exam findings or failures

FINGER INFECTION

FINGER INFECTION



HPI:

- 54 YO referred by PCP with concern for osteomyelitis vs deep space infection multiple fingers Right hand
- Duration 12+ weeks, No fevers symptoms wax & wane
- Antibiotics: last dose 4 weeks ago
  - Cephalexin 500 mg BID x 10 days 3 rounds,
  - Ciprofloxacin 500mg BID x 14 days
  - Clindamycin 600mg BID x 10 days - pt stopped after 3 days 2ND to diarrhea
    - C Diff culture negative
- X-ray was reported as neg by Radiologist
- Pt. refused MRI Scan until seen by Ortho Hand consult

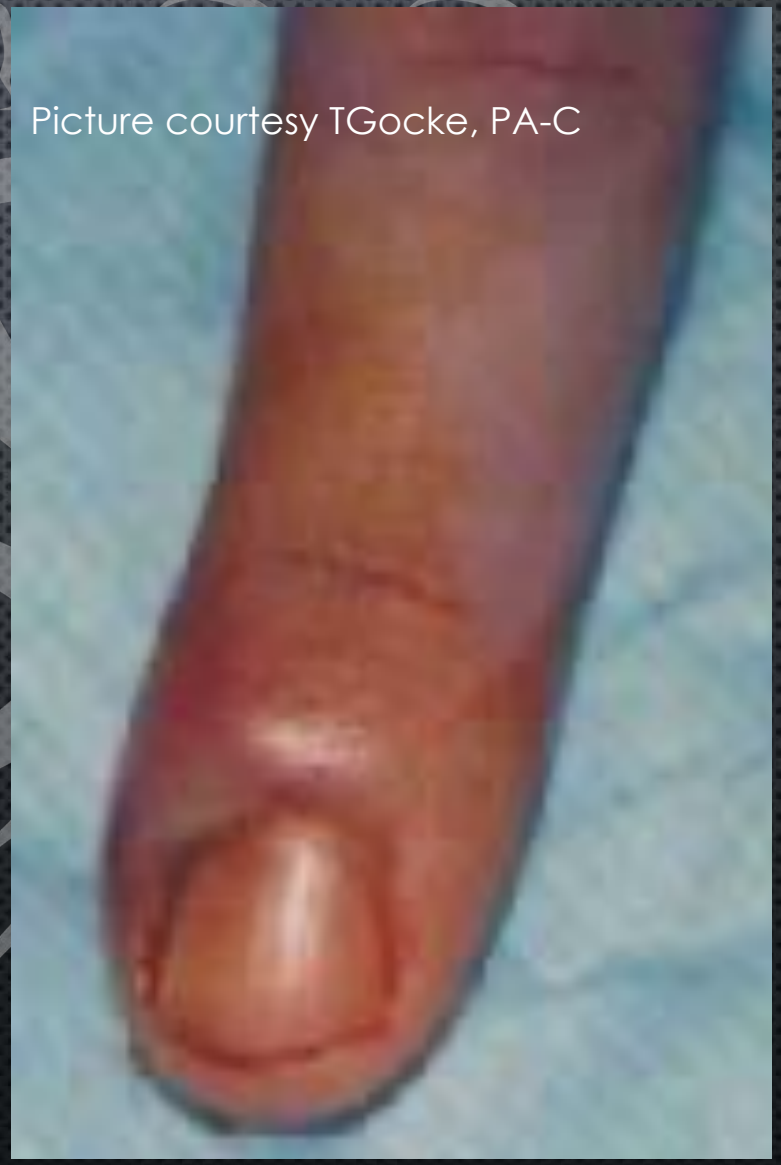
FINGER INFECTION

- Allergies: PCN (Rash as an infant)
- PMH: IDDM, HTN
- Meds: Insulin, HTN meds, ASA
- SocHx: ETOH, - drugs, Tobacco (smoke & dip)
- Exam: Right Hand/Fingers
  - Skin: Swelling, redness and Fluctuance paronychium IF, LF, RF
  - Palpation: Tender in Paronychium IF,LF,RF, no pad tenderness
  - ROM: pain with Flex/Ext @ DIP joints
  - Neurovascular: Cap Refill < 3 sec, intact lite touch
- X-rays
  - PA, Lateral R & L Hand/fingers
    - Read as negative by Radiologist
- Labs: WBC, ESR, CRP - Normal BS:278, hA1C: 10

FINGER INFECTION

What is your Diagnosis?

- Herpetic Whitlow
- Paronychia
- Felon
- Chronic Osteomyelitis



Antibiotics choices: Human Bites: Adults/Children - **PO**

PARONYCHIA

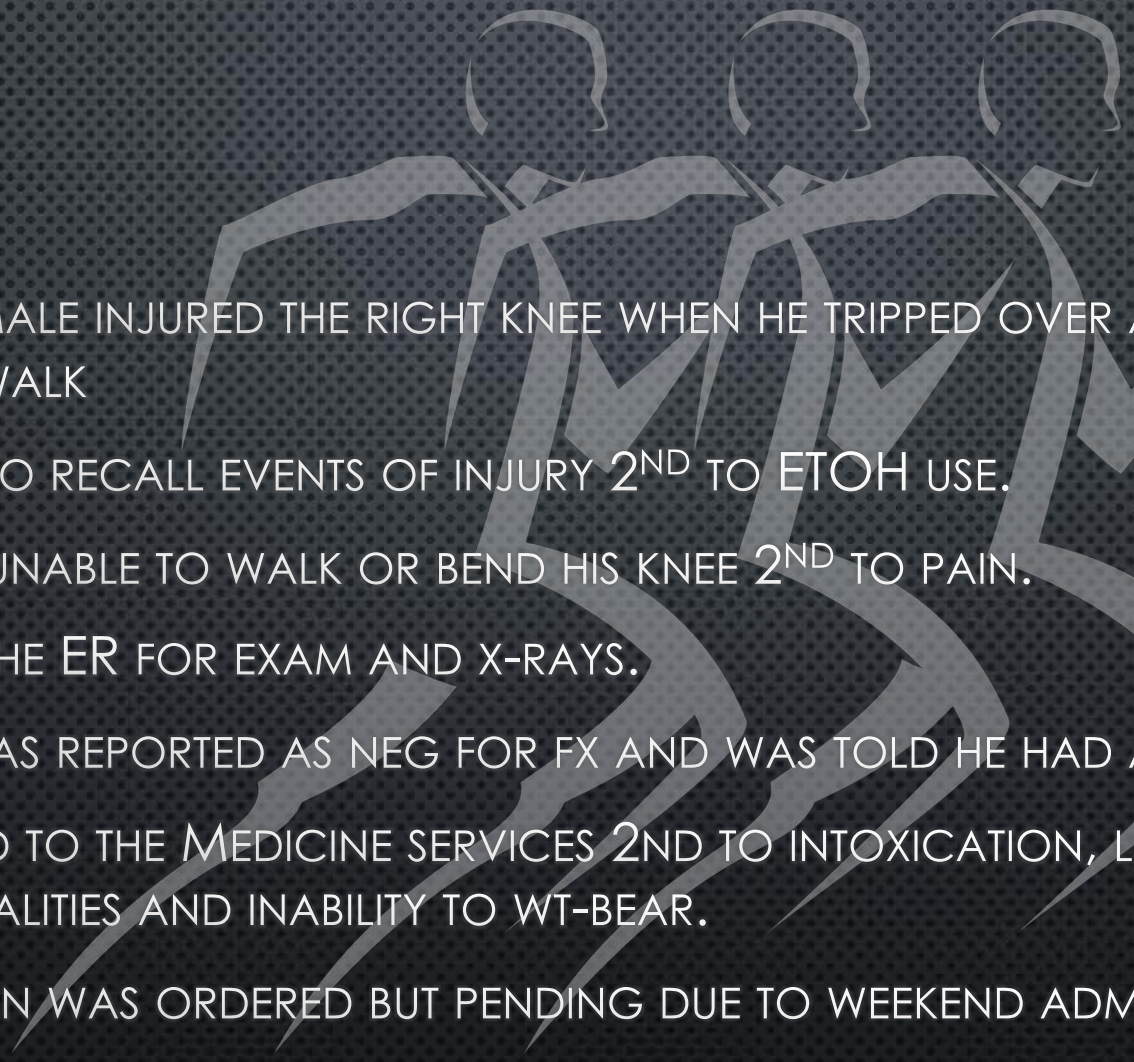
- **Primary Drug of choice**
  - Amoxicillin/Clavulanate 875/125mg PO BID or 500/125mg PO TID x 7-10 days
  - Eikenella/Pasteurella – susceptible to PEN/ Ampicillin
  - Staph/Anaerobes – produce Beta-lactamase = Beta-lactam inhibitor (Clavulanate) makes more effective
- **Penicillin Allergy**
  - **Clindamycin or Metronidazole plus:**
    - Cefuroxime (Ceftin) 500mg PO BID
    - Doxycycline 100mg PO BID
    - Moxifloxacin (Avelox) 400mg PO Daily
    - TMP-SMX 800/160 PO BID

http://www.globalrph.com/antibiotic/bites.htm

Human and Other Mammalian Bite Injuries of the Hand: Evaluation and Management; JAAOS January 2015

KNEE PAIN

SPRAINED KNEE



HPI:

- 34 YO male injured the right knee when he tripped over a tree root in the sidewalk
- Unable to recall events of injury 2ND to ETOH use.
- He was unable to walk or bend his knee 2ND to pain.
- Seen in the ER for exam and x-rays.
- X-ray was reported as neg for fx and was told he had a bad sprain
- Admitted to the Medicine services 2nd to intoxication, lab abnormalities and inability to wt-bear.
- MRI Scan was ordered but pending due to weekend admit

SPRAINED KNEE

- Allergies: NKDA
- PMH: IDDM, HTN
- Meds: Insulin, HTN meds,
- SocHx: ETOH, - drugs
- Exam: Right Knee
  - 400 + lbs
  - 3+ effusion R knees
  - Skin: no lesions
  - ROM: 0 to 10 degrees, pain with any knee motion
  - Neurovascular: faint pulses, drop foot, L5 sensory changes
  - Ortho: Poor exam 2ND to body size, pain with any motion
- X-rays
  - AP, & Cross-table Lateral

RADIOGRAPHS

AP VIEW

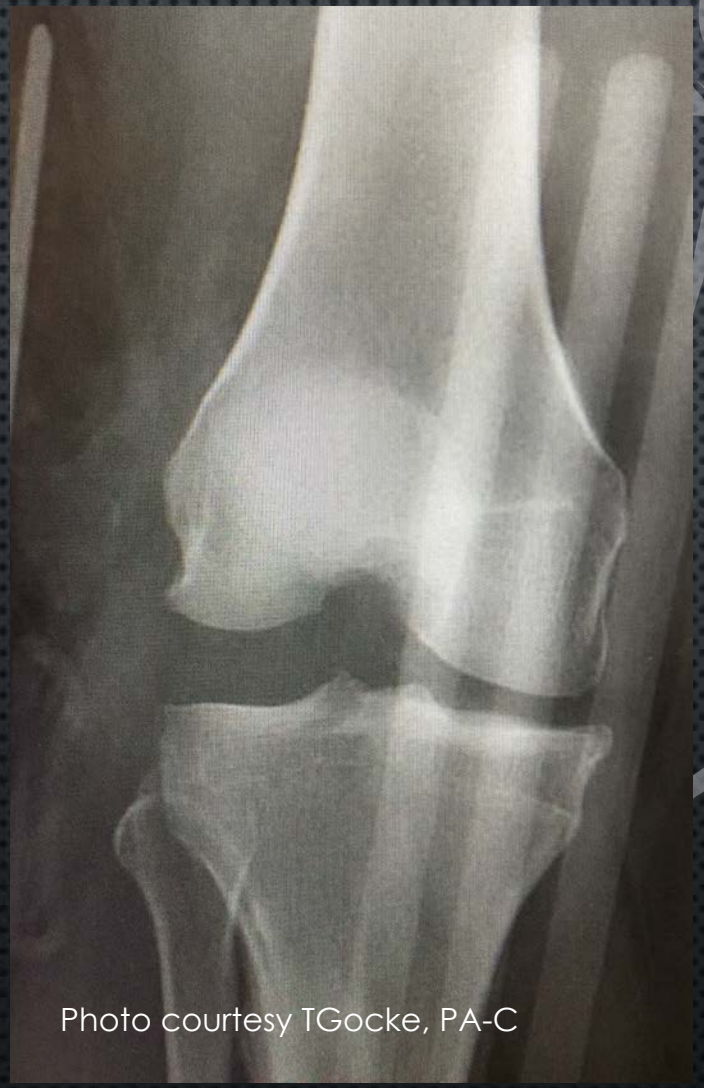


Photo courtesy TGocke, PA-C

CROSS TABLE LATERAL VIEW

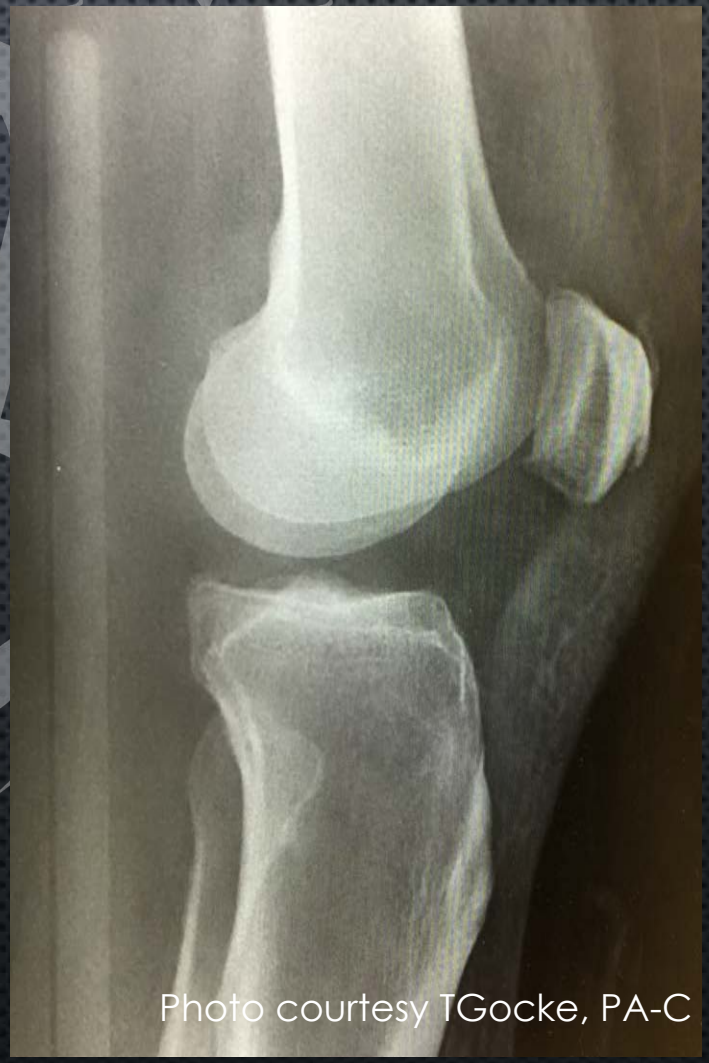
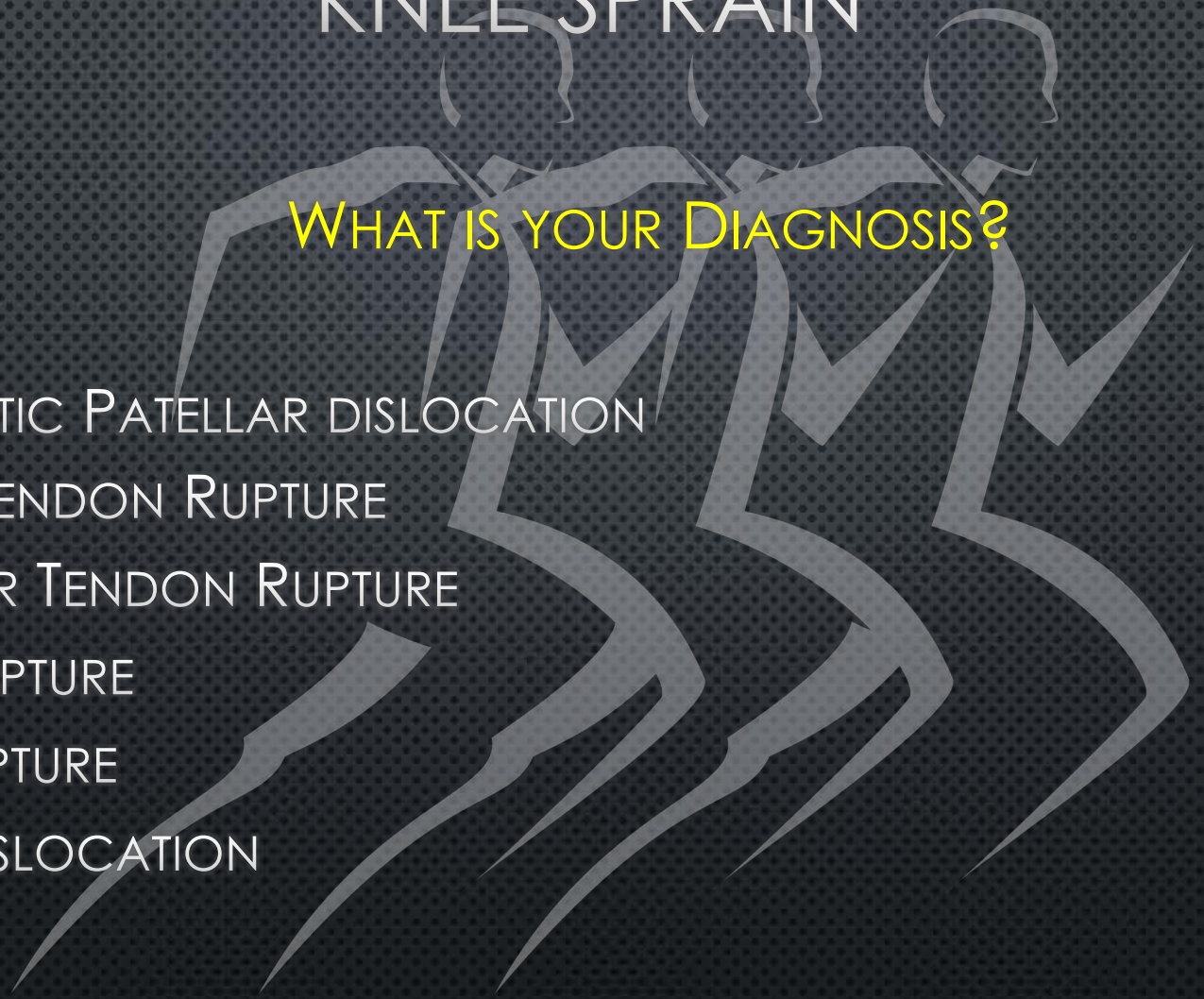


Photo courtesy TGocke, PA-C

KNEE SPRAIN



WHAT IS YOUR DIAGNOSIS?

- TRAUMATIC PATELLAR DISLOCATION
- QUAD TENDON RUPTURE
- PATELLAR TENDON RUPTURE
- ACL RUPTURE
- LCL RUPTURE
- KNEE DISLOCATION

ANSWER

Multi-ligament knee injury: Knee Dislocation - ?

MRI results:

- Medial meniscus tear
- ACL, PCL, LCL, Deep MCL ruptures
- Iliotibial band rupture
- Biceps Femoris Tendon rupture
- Popliteus Tendon rupture
- Posterior lateral corner joint capsule tear
- Common Peroneal nerve rupture (stretch injury)

TAKE HOME POINTS

- Mechanism of injury –Vague hx
- Physical Exam changes:
  - Unable to move knee
  - Multiple Ligament injury -
  - Drop Foot
  - Dorsal foot sensory changes
  - Asymmetric pulse assessments
- PMH: ETOH
- Reports x-ray was neg for fx
    - Joint effusion
    - Lateral joint swelling
    - Avulsion fx Fibular head
    - Varus knee alignment

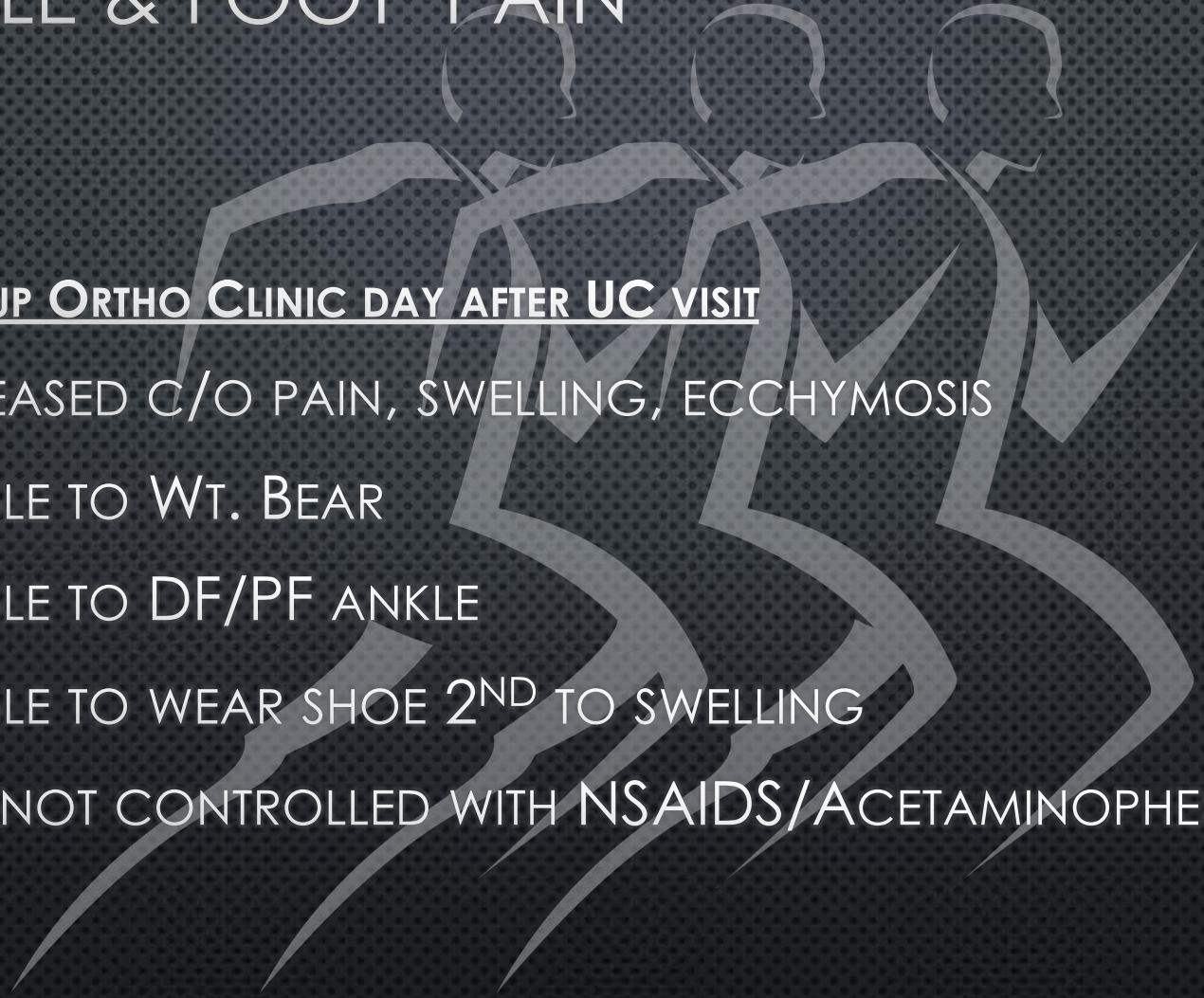
Skin is not a stabilizer

ANKLE & FOOT PAIN

ANKLE & FOOT PAIN

- **CHIEF COMPLAINT**: ANKLE & FOOT PAIN
  - 22 YO FEMALE WITH 4-DAY COMPLAINT OF LEFT ANKLE AND FOOT PAIN
  - COLLEGE VB COACH
  - TRIPPED OVER BAG ON FLOOR AND TWISTED ANKLE AND FOOT
  - DIFFICULTY WITH WT-BEARING
  - PREVIOUS HX LISFRANC JOINT INJURY W/ SURGERY
  - **INITIAL MANAGEMENT**
    - SEEN @ UC THE MORNING FOLLOWING HER INJURY
    - X-RAY: NEGATIVE PER UC PROVIDER
    - RX: OTC NSAIDS, REST, ACE WRAP AND CRUTCHES
    - FOLLOW UP W/ ORTHO IF NOT IMPROVED

ANKLE & FOOT PAIN



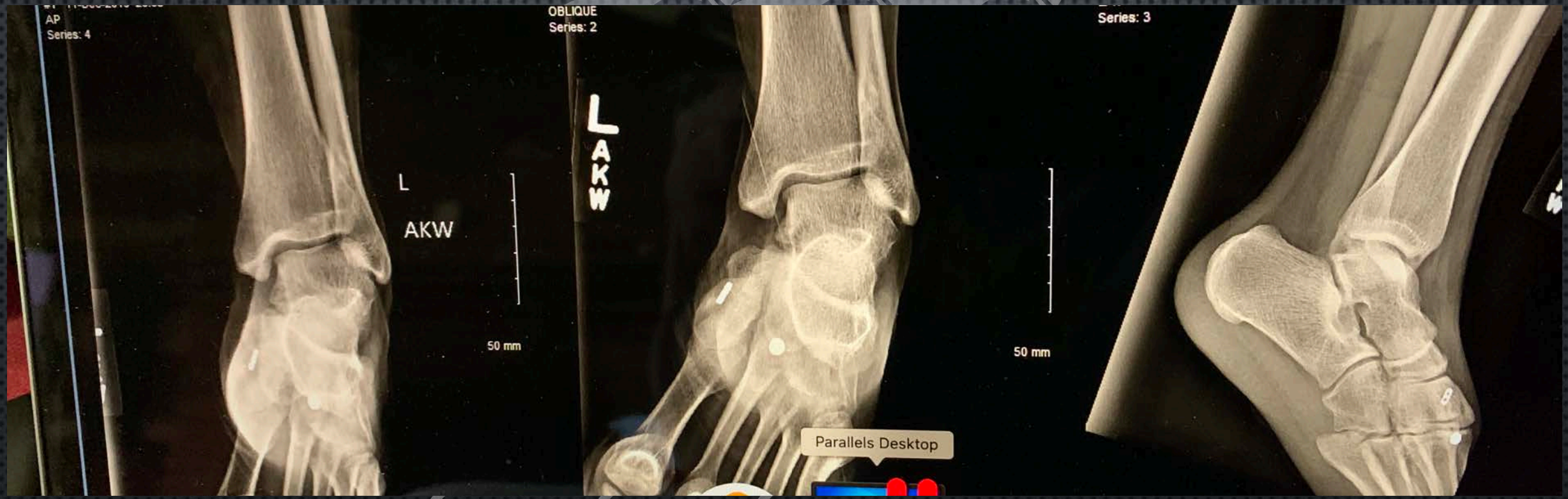
Follow up Ortho Clinic day after UC visit

- Increased c/o pain, swelling, ecchymosis
- Unable to Wt. Bear
- Unable to DF/PF ankle
- Unable to wear shoe 2nd to swelling
- Pain not controlled with NSAIDS/Acetaminophen

ANKLE & FOOT PAIN

- **Allergies**: none (Drugs-Food-Latex)
- **Medications**: OTC NSAIDS, Acetaminophen
- **PMH**: Asthma, D&C, Lisfranc injury
- **SocialHx**: Neg ETOH, Tobacco, Drugs
- **FMH**: DM, HTN, CA [Breast, ovarian, colon]
- **Physical Exam:**
  - General: AAO, normal appearance, no acute distress
  - Skin- deformity Tarsometatarsal jt.
  - Palpate: Tender Talonavicular jt, Neg Lisfranc, ankle jt
  - ROM: limited Ankle DF/PF, Inv/Eve
  - Neuro/sensory intact
  - Ortho Tests: Stable Anterior Drawer

RADIOLOGY



WHAT IS YOUR DIAGNOSIS?

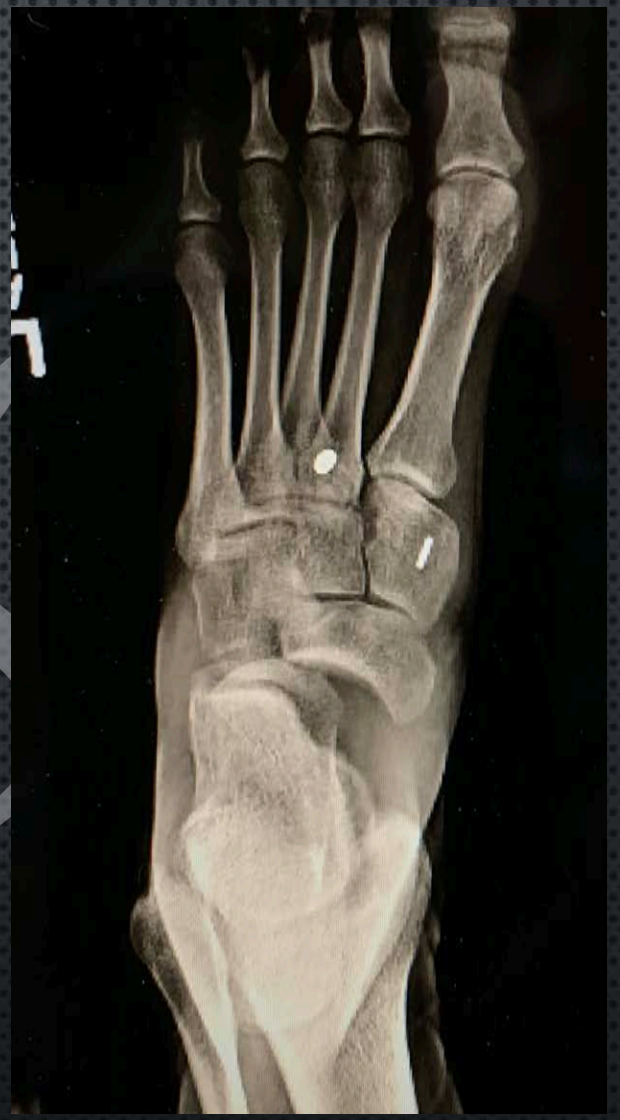
ANSWER

Talonavicular joint dislocation

- Ankle X-ray normal
- Foot X-ray dislocation Talonavicular joint
- Previous hx Lisfranc joint injury with surgical correction
- Referred to Teaching Hospital for follow up care same day
- Underwent conscious sedation & Closed reduction

Take Home Points

- **Knowledge foot/ankle anatomy**
- **Enhance skills Interpreting foot & Ankle radiographs**

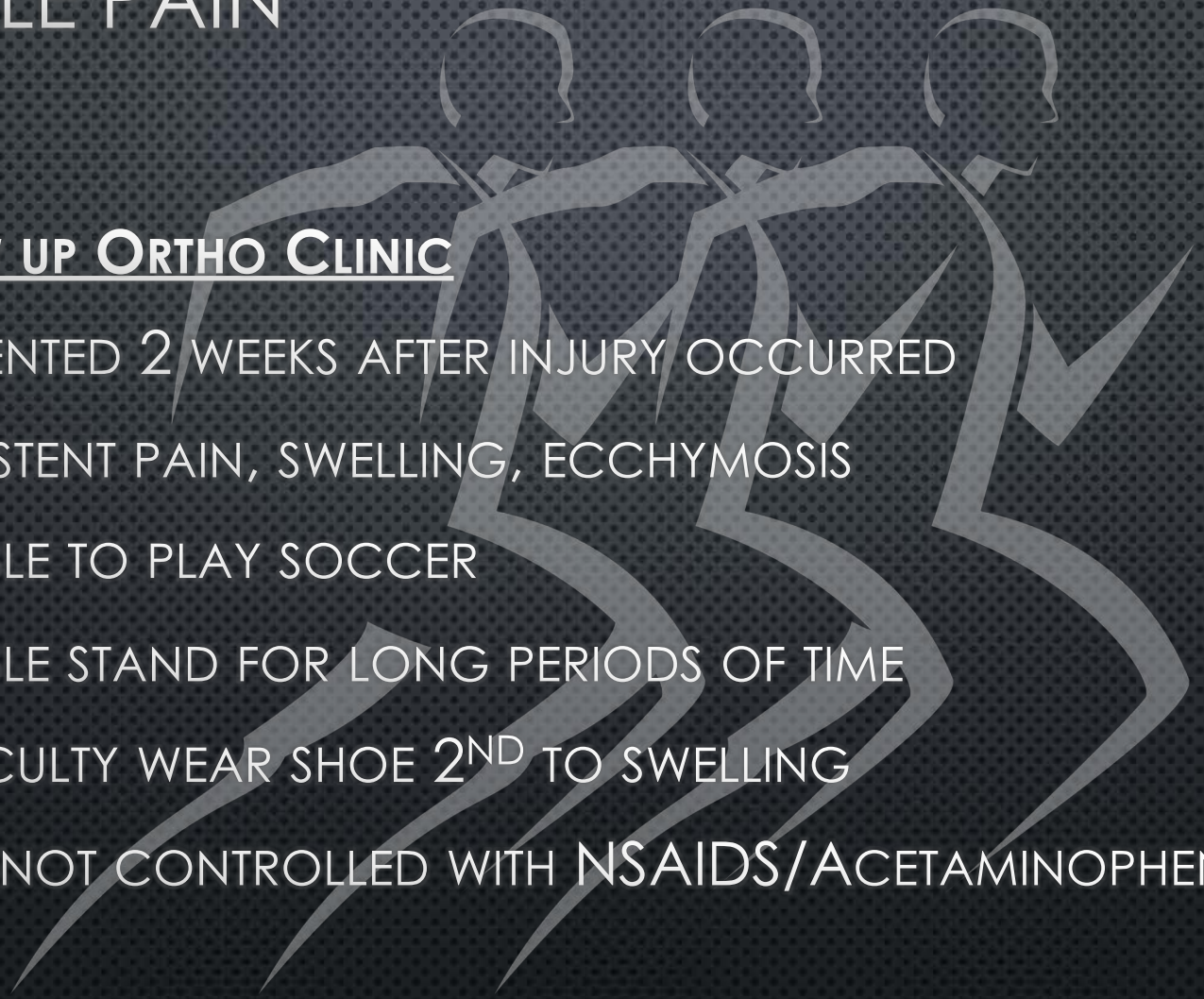


ANKLE PAIN

ANKLE PAIN

- **CHIEF COMPLAINT**: ANKLE & FOOT PAIN
  - 31 YO FEMALE WITH ANKLE INJURY AFTER PLAYING SOCCER
  - INITIALLY UNABLE TO WT BEAR AFTER INJURY WITH PAIN
  - PERSISTENT SWELLING AND ECCHYMOSIS
  - MANAGED WITH HOME TREATMENT & LIMITED ACTIVITY

ANKLE PAIN



Follow up Ortho Clinic

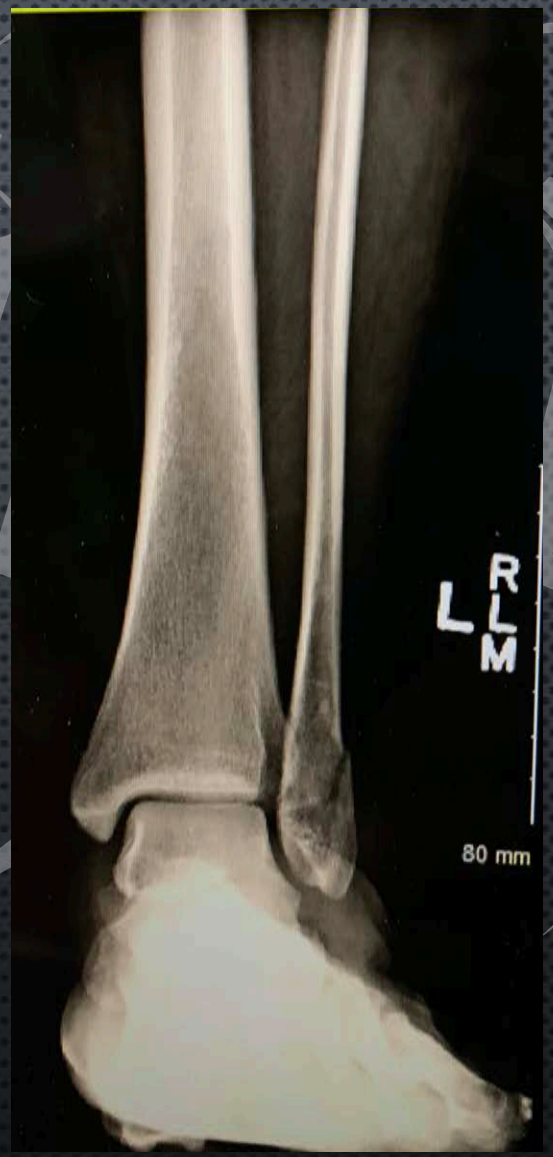
- Presented 2 weeks after injury occurred
- Persistent pain, swelling, ecchymosis
- Unable to play soccer
- Unable stand for long periods of time
- Difficulty wear shoe 2ND to swelling
- Pain not controlled with NSAIDS/Acetaminophen

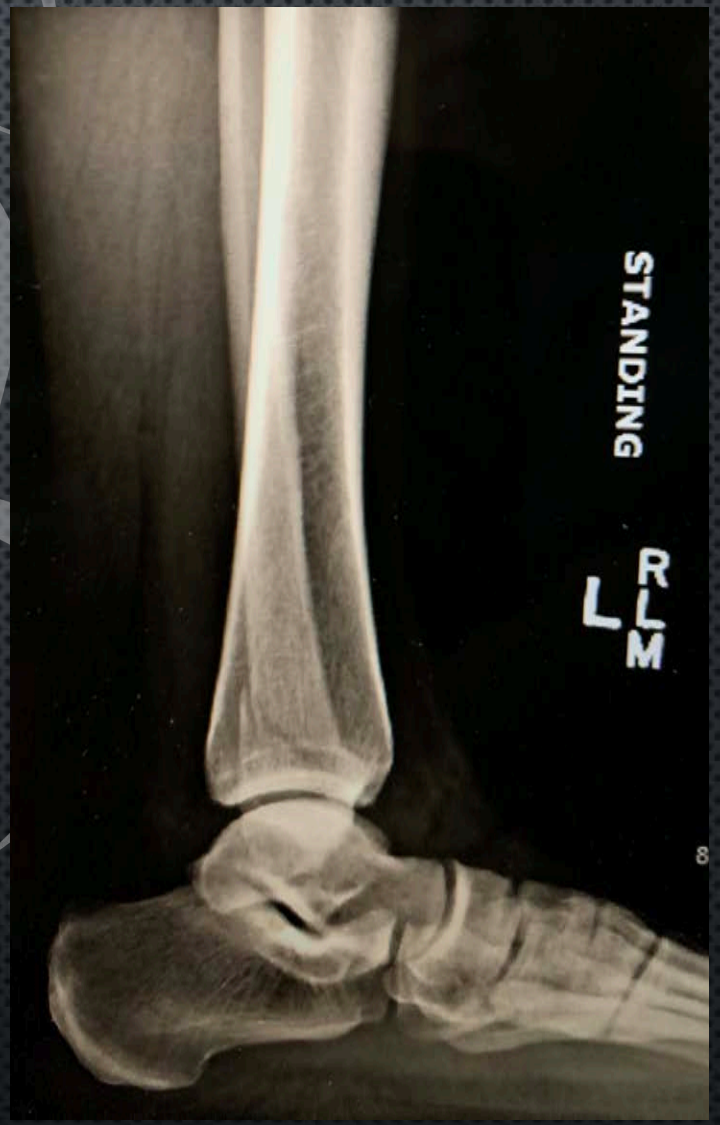
ANKLE PAIN

- **Allergies**: none (Drugs-Food-Latex)
- **Medications**: OTC NSAIDS, Acetaminophen, Loestrin
- **PMH**: Tonsillectomy
- **SocialHx**: Neg ETOH, Tobacco, Drugs
- **FMH**: DM, HTN,
- **Physical Exam:**
  - General: AAO, normal appearance, no acute distress
  - Skin- Swelling & ecchymosis
  - Palpate: Tender lateral/Medical Malleolus, Syndesmosis
  - ROM: limited Ankle DF/PF, Inv/Eve
  - Neuro/sensory intact
  - Ortho Tests: Anterior Drawer laxity

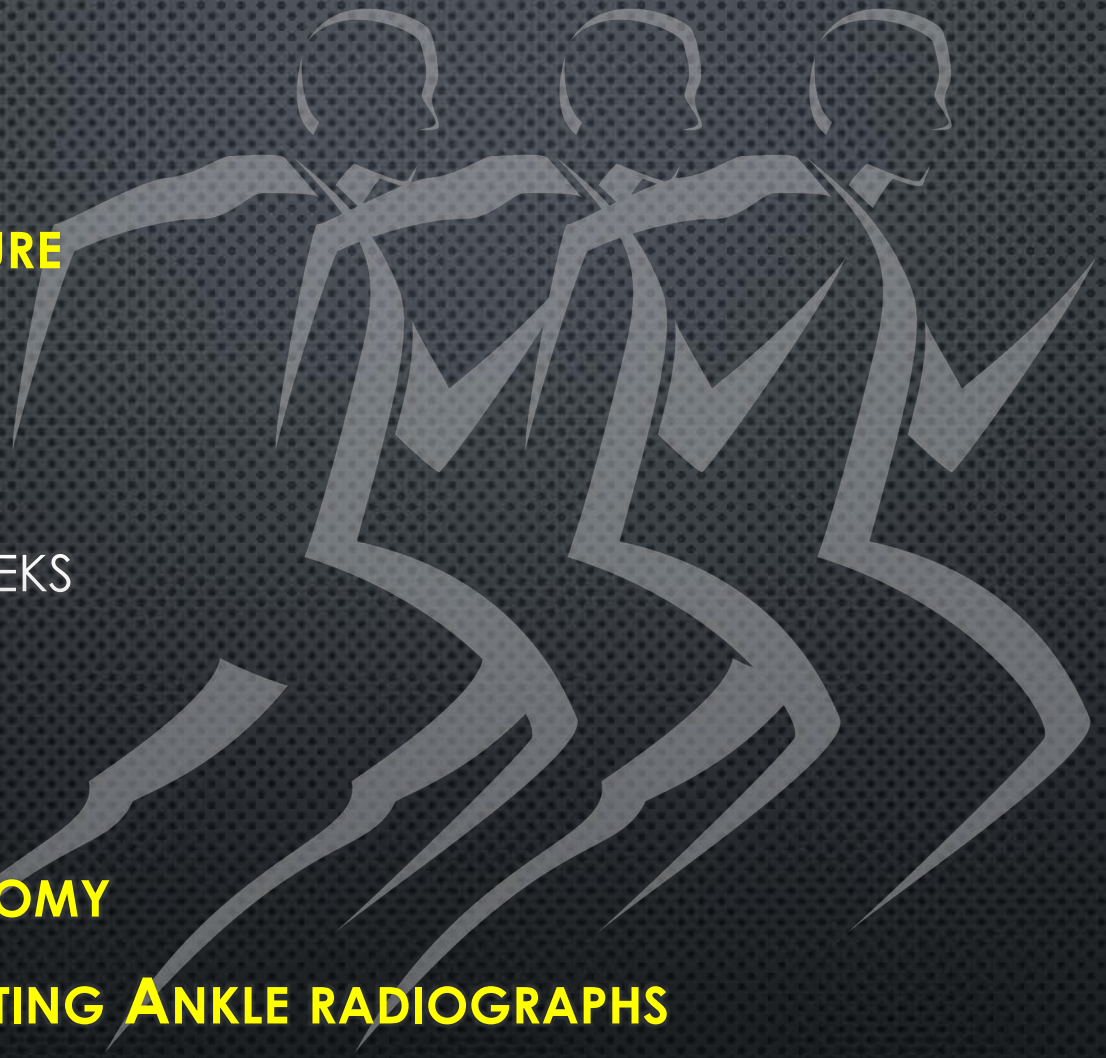
RADIOLOGY

WHAT IS YOUR DIAGNOSIS?





ANSWER

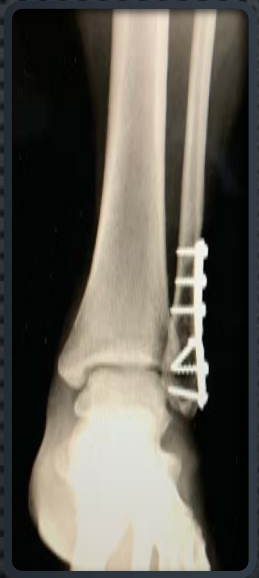


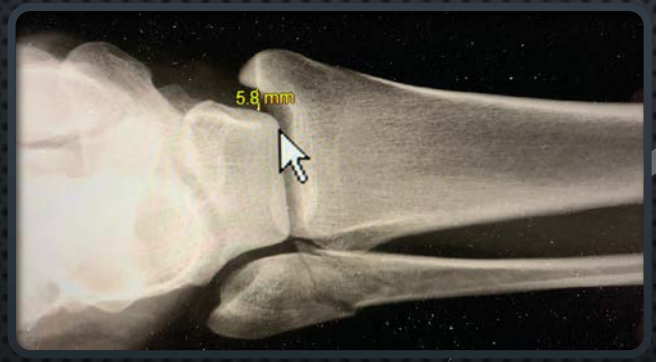
Lateral Malleolus Fracture

- Ankle X-ray
- Ankle Fx boot WBAT
- Follow up appt in 4 weeks

Take Home Points

- **Knowledge ankle anatomy**
- **Enhance skills Interpreting Ankle radiographs**





ANSWER – DID YOU REALLY PAY ATTENTION

- **LATERAL MALLEOLUS FRACTURE**
- ANKLE FRACTURE AT THE LEVEL ANKLE MORTISE
- MEDIAL & LATERAL MALLEOLUS TENDERNESS
- GRAVITY STRESS VIEW POSITIVE

- **TAKE HOME POINTS**
- **KNOWLEDGE ANKLE ANATOMY**
- **ENHANCE SKILLS INTERPRETING ANKLE RADIOGRAPHS**

KNEE PAIN AFTER A FALL

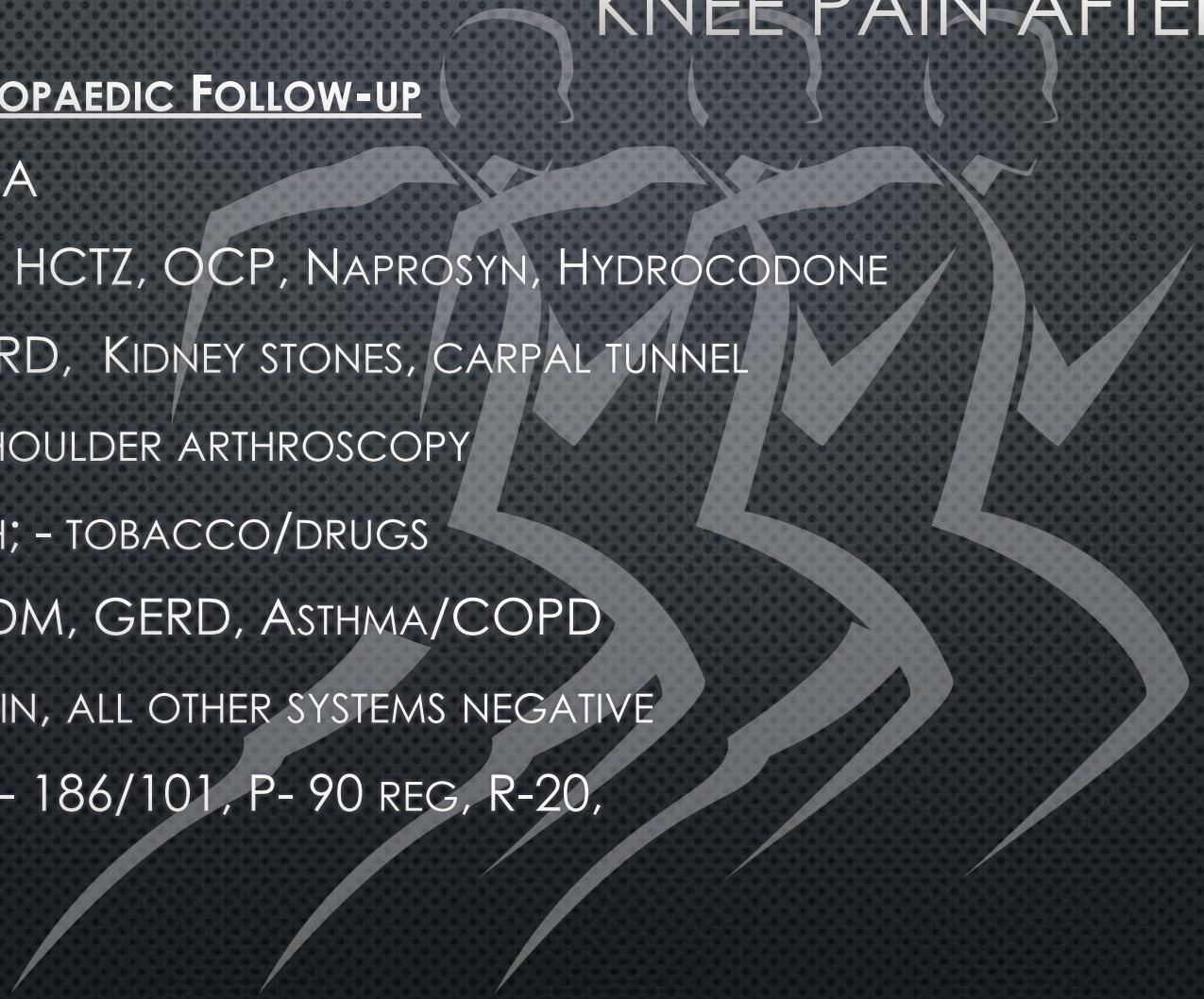
KNEE PAIN AFTER A FALL

- **CC: KNEE PAIN**
- **HPI:**
  - 78 YO FEMALE TRIPPED AND FELL ON A FLEXED KNEE
  - ACUTE ONSET OF PAIN AND UNABLE TO WALK
  - PT TAKEN TO LOCAL ER BY EMS 2ND TO PAIN & UNABLE TO WALK
- **PE: (ED)**
  - VITAL SIGNS STABLE
  - DIFFICULTY WITH WEIGHT BEARING – IMPROVED AFTER PAIN MANAGEMENT

KNEE PAIN AFTER A FALL

- **PE: (ED) cont.**
  - Radiographs
    - KNEE AP & Lateral : negative
  - Diagnosis:
    - Contusion Knee
  - Treatment:
    - NSAIDS
    - Ice
    - Knee immobilizer/walker/TDWB-WBAT
    - Follow-up appt 1 week on-call orthopaedist

KNEE PAIN AFTER A FALL



2ND OPINION ORTHOPAEDIC FOLLOW-UP

- **ALLERGIES**: NKDA
- **MEDS:** LISINIPRIL, HCTZ, OCP, NAPROSYN, HYDROCODONE
- **PMH**: HTN, GERD, KIDNEY STONES, CARPAL TUNNEL
- **SURGICALHX:** SHOULDER ARTHROSCOPY
- **SOCHX**: + ETOH; - TOBACCO/DRUGS
- **FAMHX**: HTN, DM, GERD, ASTHMA/COPD
- **ROS**: + KNEE PAIN, ALL OTHER SYSTEMS NEGATIVE
- **VITAL SIGNS**: BP- 186/101, P- 90 REG, R-20,

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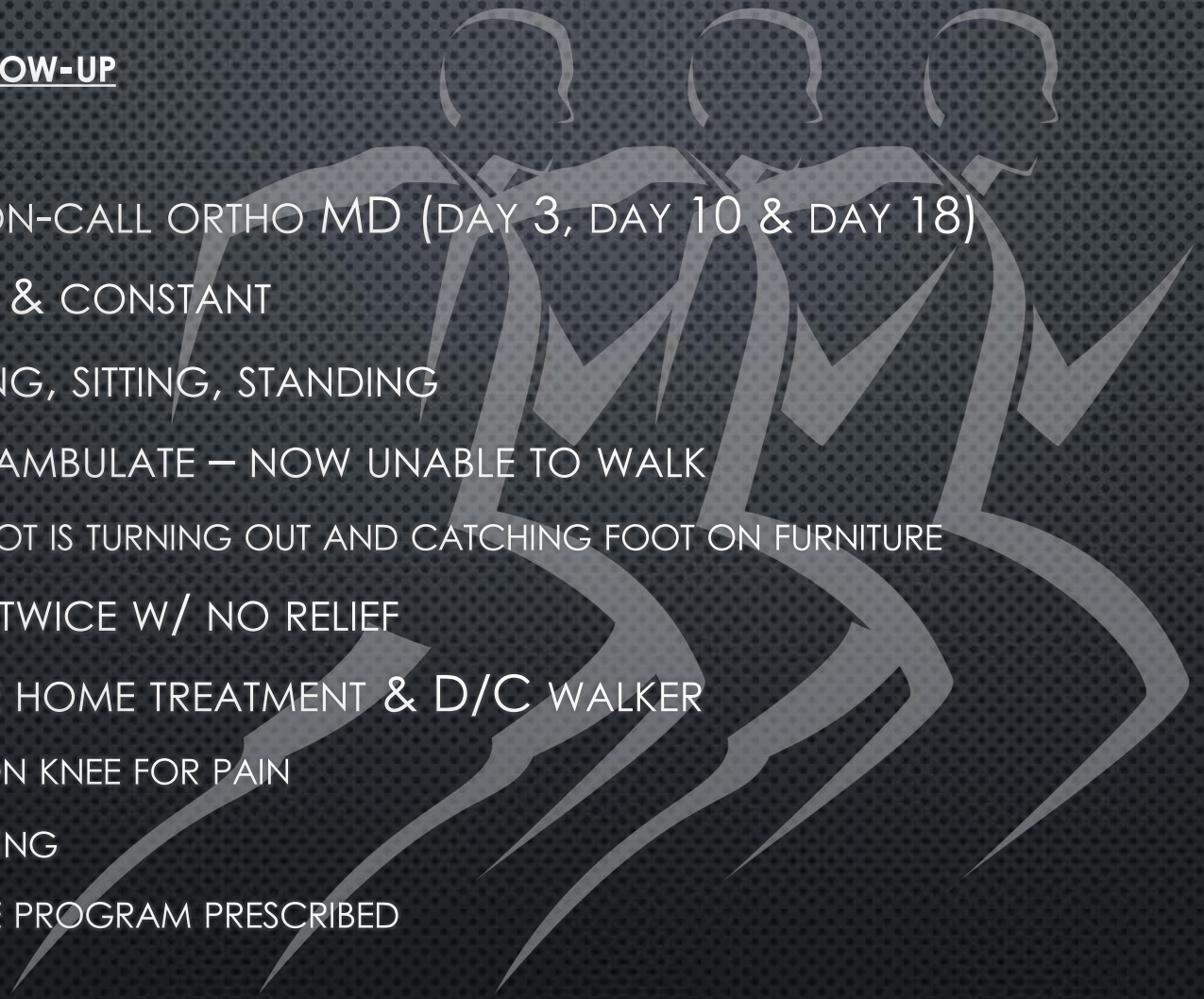


ON-CALL ORTHOPAEDIC FOLLOW-UP

- **HPI**
  - SEEN 3 TIMES BY ON-CALL ORTHO MD (DAY 3, DAY 10 & DAY 18)
  - PAIN ESCALATING & CONSTANT
  - DIFFICULTY SLEEPING, SITTING, STANDING
  - INITIALLY ABLE TO AMBULATE – NOW UNABLE TO WALK
    - COMPLAINS FOOT IS TURNING OUT AND CATCHING FOOT ON FURNITURE
  - REFILL PAIN MEDS TWICE W/ NO RELIEF
  - TOLD TO IMPROVE HOME TREATMENT & D/C WALKER
    - HEATING PAD ON KNEE FOR PAIN
    - INCREASE WALKING
    - HOME EXERCISE PROGRAM PRESCRIBED

KNEE PAIN AFTER A FALL

ORTHOPAEDIC FOLLOW-UP

- PHYSICAL EXAMINATION: R KNEE
  - GEN: WNWD, NAD
  - MSK:
    - NO KNEE EFFUSION, NO SKIN LESION OR BURSING, NO DEFORMITIES
    - UNABLE TO WT BEAR
    - ROM- -5 -0-90 DEGREES (PAINFUL)
    - NO TENDERNESS KNEE OR THIGH
    - NO LIGAMENT LAXITY
    - NOTICEABLE LEG LENGTH DIFFERENCE
    - EXTERNAL ROTATED RIGHT FOOT
    - NV, NS INTACT

KNEE PAIN AFTER A FALL

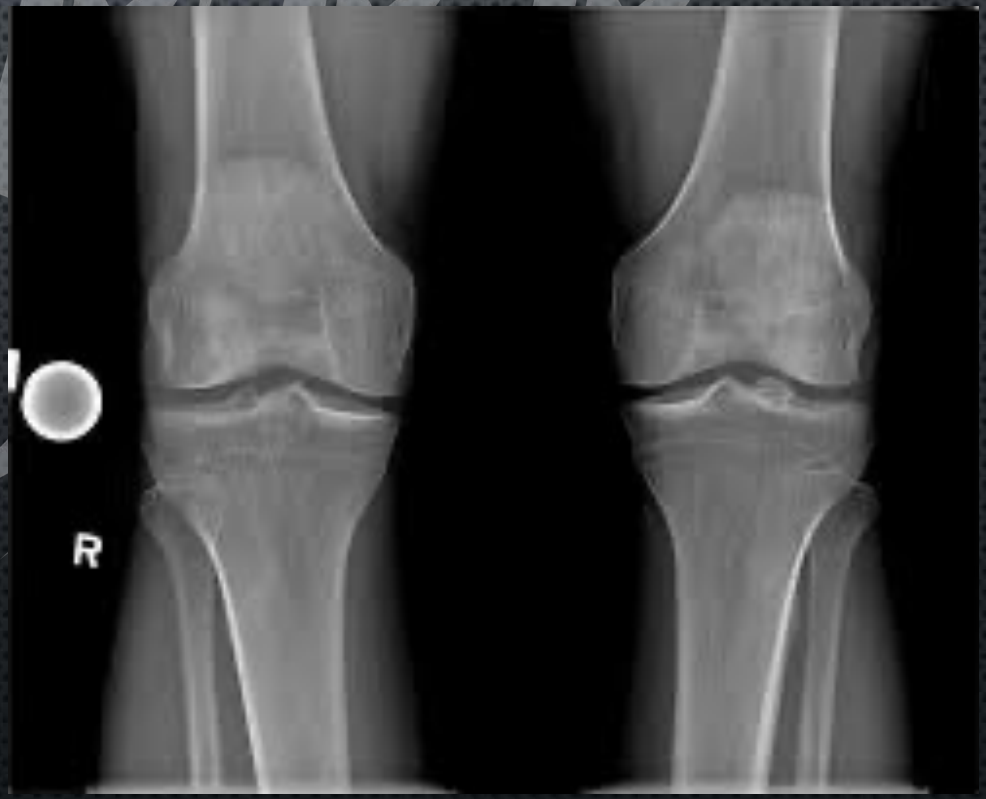
2ND OPINION ORTHOPAEDIC FOLLOW-UP

- **HPI**
  - PRESENTED 3 WEEKS AFTER INITIAL INJURY OCCURRED TO OUR CLINIC
  - PAIN UNCONTROLLABLE WITH NARCOTIC ANALGESICS
  - DIFFICULTY SLEEPING, SITTING, STANDING
  - WHEELCHAIR OR BED BOUND
  - PT STATES ON-CALL ORTHO X-RAYED KNEE TWICE WITH NEG.
  - HOME TREATMENT MAKING PAIN WORSE

KNEE PAIN AFTER A FALL

ORTHOPAEDIC FOLLOW-UP

- X-RAY EXAMINATION
  - AP, LAT & SKYLINE



KNEE PAIN AFTER A FALL

WHAT IS YOUR DIAGNOSIS?

DIAGNOSIS: FEMORAL NECK FX

- CAUSE
  - 2ND FALLS OR TRAUMA
  - OSTEOPOROSIS
  - TUMOR
- SYMPTOMS
  - AGE
  - FALL
  - PAIN
  - INABILITY TO WT-BEAR
  - LEG LENGTH INEQUALITY
  - ROTATION DEFORMITIES

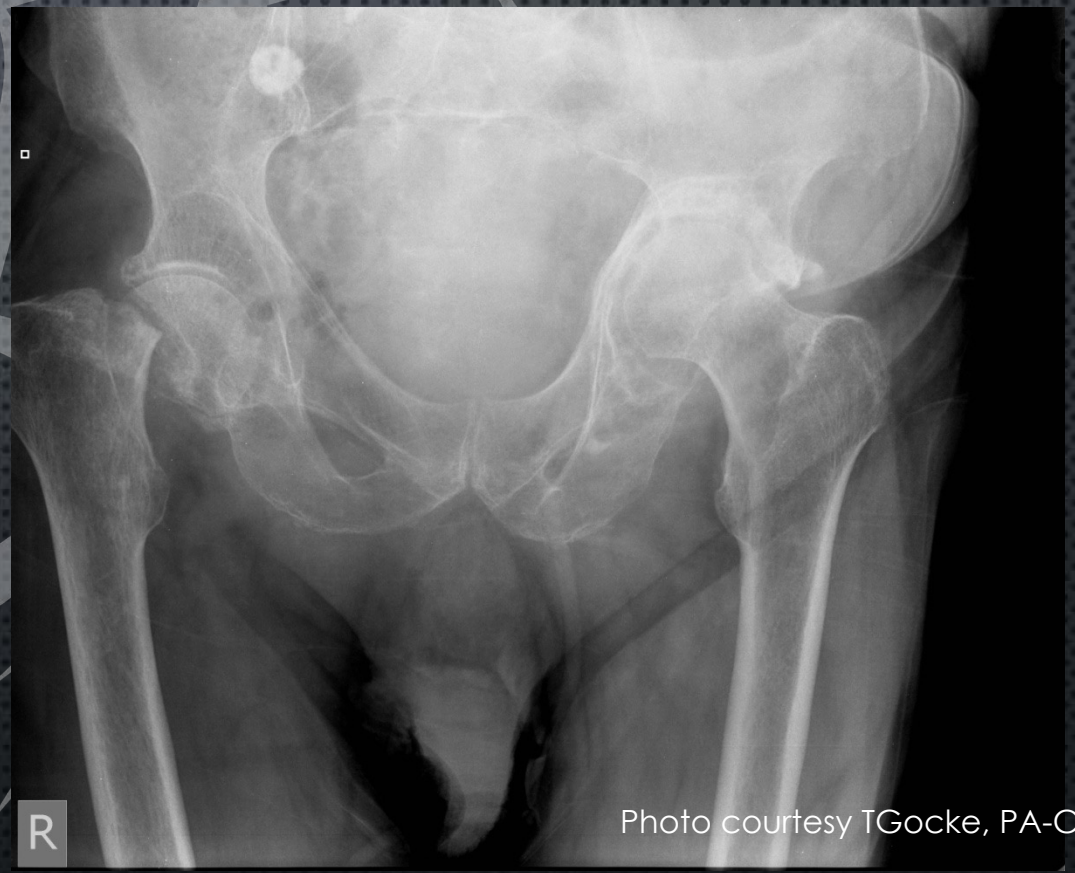


Photo courtesy TGocke, PA-C

TAKE HOME POINTS

- Hip Injuries provide referred pain to the knee
- Key points overlooked
  - 2 negative knee x-rays
  - Unable to wt- bear
  - Escalating symptoms
  - Foot turning out
- Consider
  - Lumbar/Pelvic fx
  - Hip Fx
  - Knee fx (Tibial plateau)

Proficient Physical Exam & Skeletal x-ray review

HIP PAIN

- **HPI:**
  - 73 yo female had Total hip surgery and has been relatively sedentary for the past 3 months
  - She has trouble getting in/out chairs, sitting, buttocks pain
  - She is a large body habitus, general body deconditioning
  - Trouble sleeping on her sides
  - Changes position frequently and has trouble with stairs

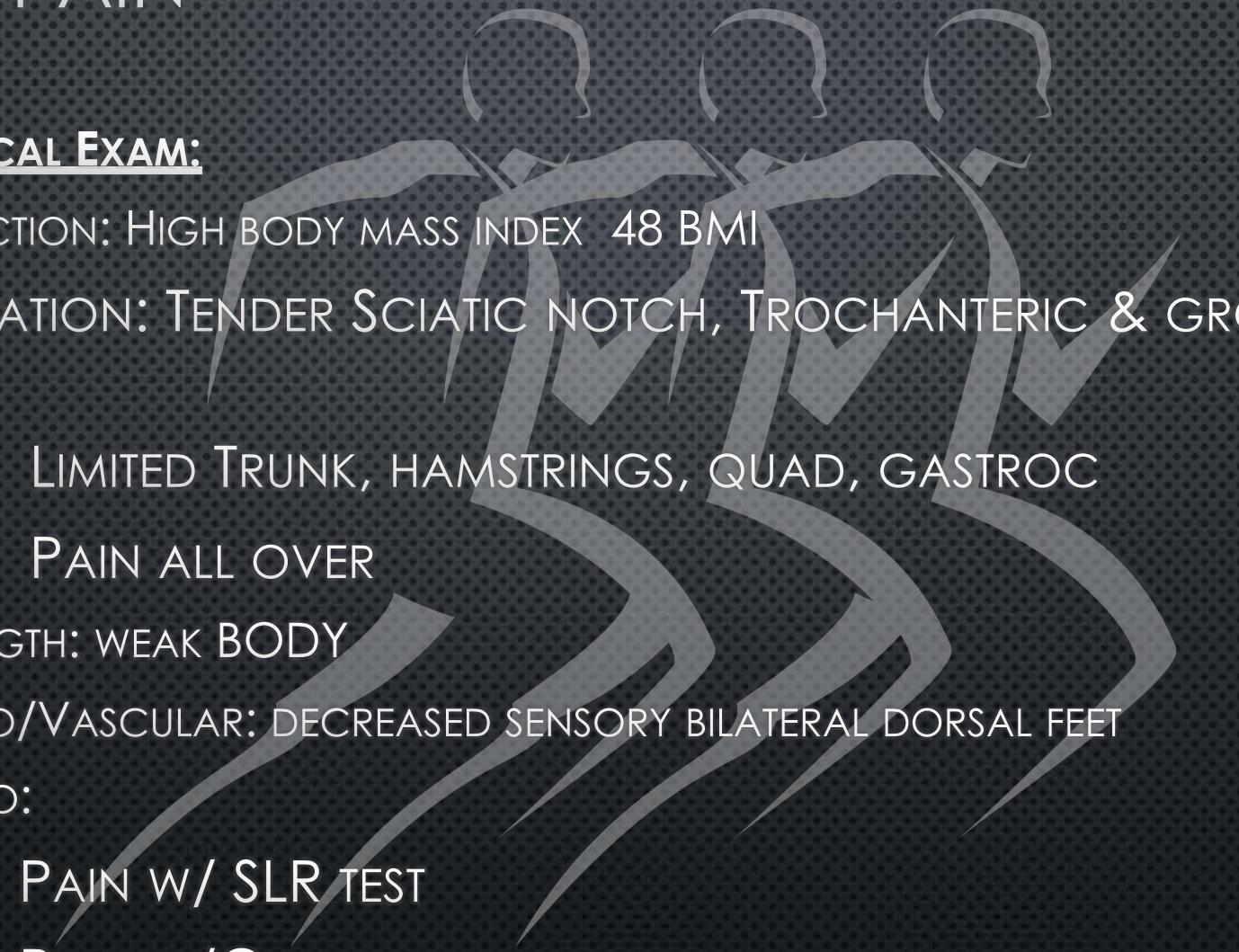
NKDA

PMHx: DM, HTN, Anxiety

SocHx, FamHx: Negative

Meds: Atenolol, Metformin, Lasix, Wellbutrin

HIP PAIN



Physical Exam:

Inspection: High body mass index 48 BMI

Palpation: Tender Sciatic notch, Trochanteric & groin

ROM:

- Limited Trunk, hamstrings, quad, gastroc
- Pain all over

Strength: weak BODY

Neuro/Vascular: decreased sensory bilateral dorsal feet

Ortho:

- Pain w/ SLR test
- Pain w/Ober test

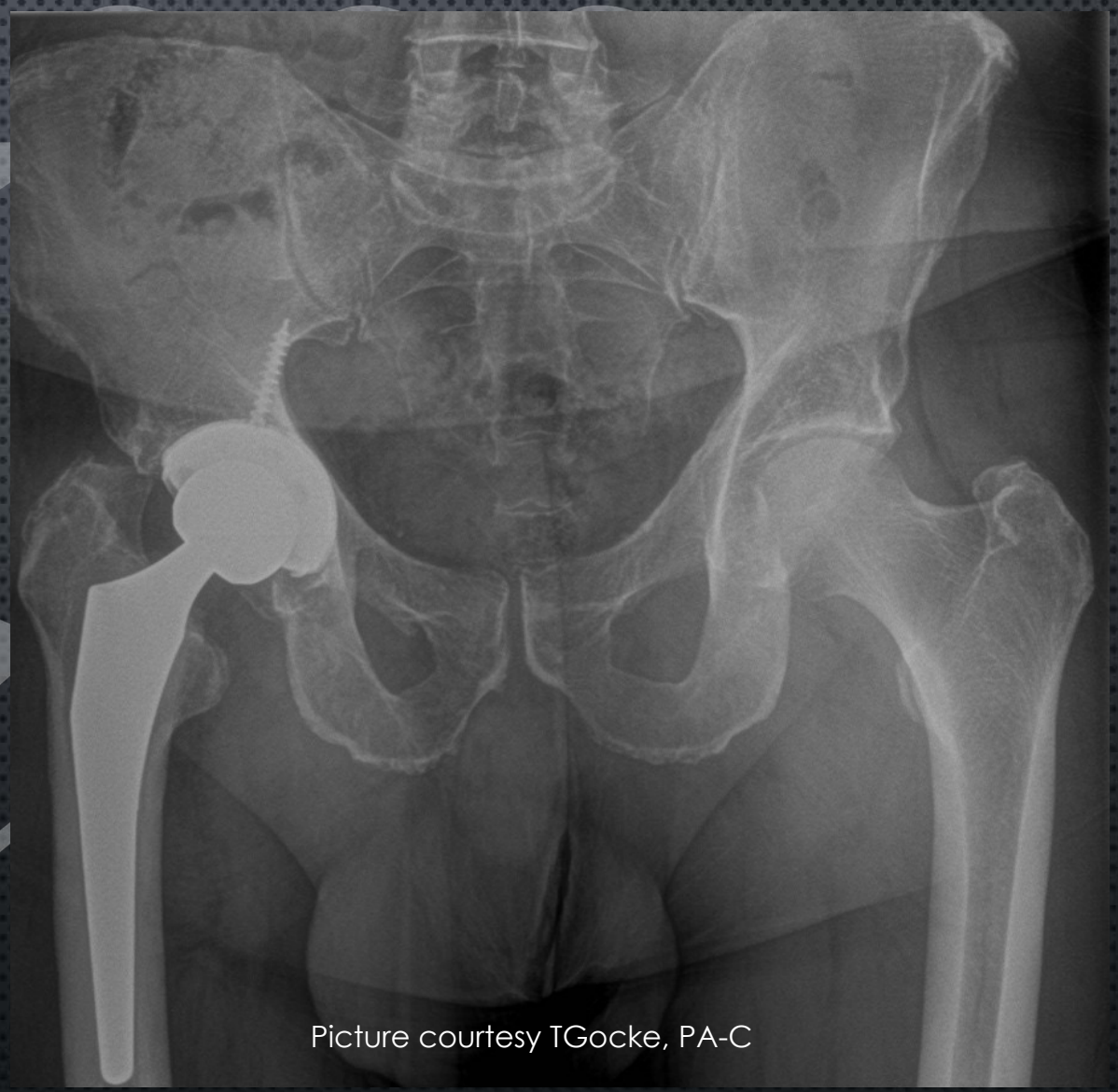
HIP PAIN

X-RAY:

- WHAT DO YOU SEE?

DIAGNOSIS

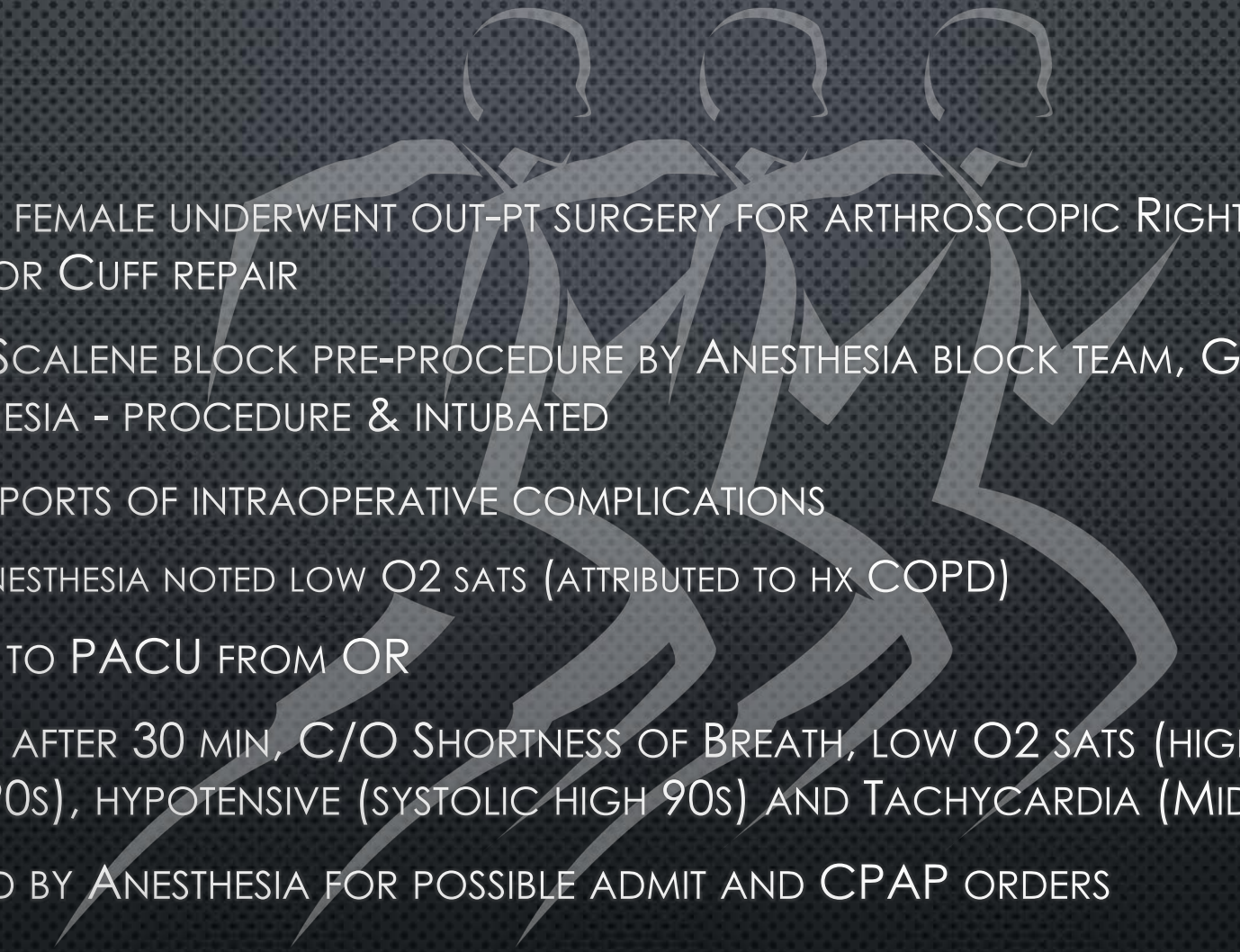
- AVN
- HIP OA
- TROCHANTERIC BURSITIS
- HERNIATED LUMBAR DISC
- SACROIILITIS



Picture courtesy TGocke, PA-C

RIGHT ROTATOR CUFF REPAIR

ROTATOR CUFF REPAIR



HPI:

- 62 YO female underwent out-pt surgery for arthroscopic Right Rotator Cuff repair
- Intra-Scalene block pre-procedure by Anesthesia block team, General anesthesia - procedure & intubated
- NO reports of intraoperative complications
  - Anesthesia noted low O2 sats (attributed to hx COPD)
- Stable to PACU from OR
- PACU after 30 min, C/O Shortness of Breath, low O2 sats (high 80s-low 90s), hypotensive (systolic high 90s) and Tachycardia (Mid-90's)
- Called by Anesthesia for possible admit and CPAP orders

ROTATOR CUFF REPAIR

- Allergies: Sulfa
- PMH: Asthma, HTN, Barrett's esophagitis, OSA, AVNRT, surgical thyroidectomy, DM
- Meds: HTN meds, Asthma meds, Thyroid meds, Metformin
- SocHx: ETOH - occas, NO tobacco/drugs
- Exam:
  - GEN: WNWD NAD
  - HEENT: PERRLA EOMI, NO JVD, TRACHEA MIDLINE
  - CHEST: CLEAR ALL LOBES LEFT, DIMINISHED RLL
  - HEART: RRR, NO EDEM
  - MSK: SUGICLA DRESSING INTACT, NO MOTOR/SENSORY 2ND TO BLOCK

ROTATOR CUFF REPAIR

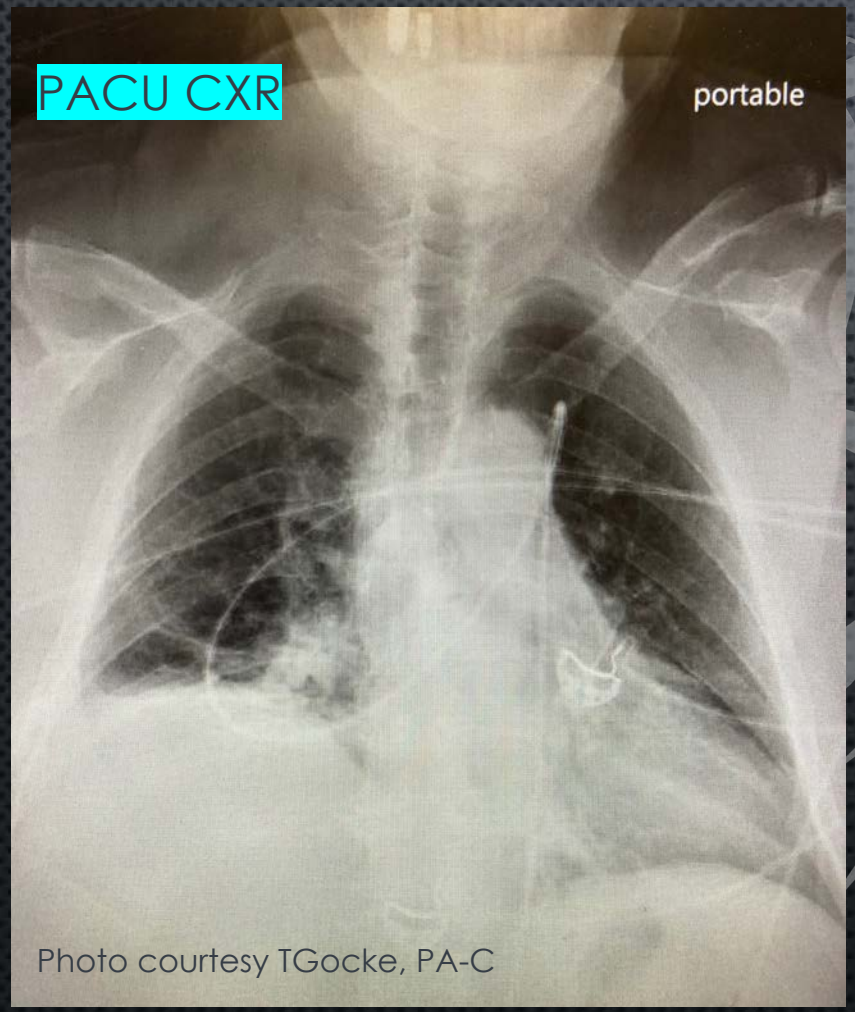


Photo courtesy TGocke, PA-C

What is your Diagnosis?

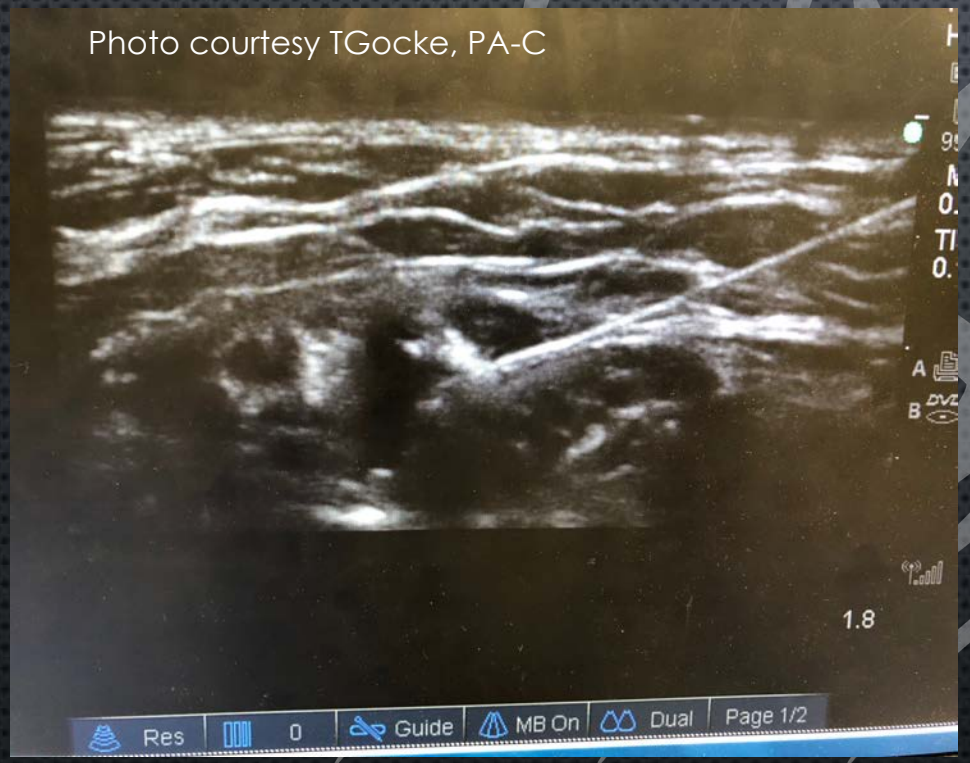
Aspiration Pneumonia
Acute Myocardial Infarction
Exacerbation OSA
Phrenic Nerve paresis
Pulmonary embolus
Pneumothorax

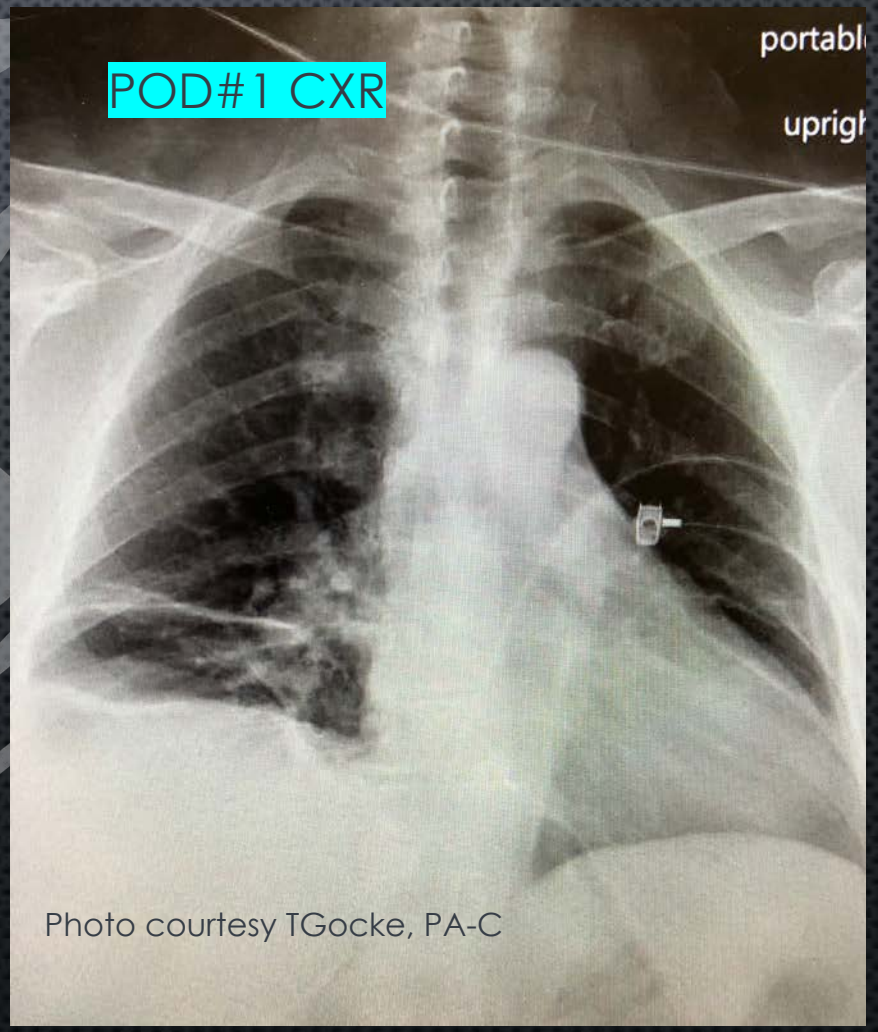
ANSWER

Phrenic Nerve paresis(1,2)

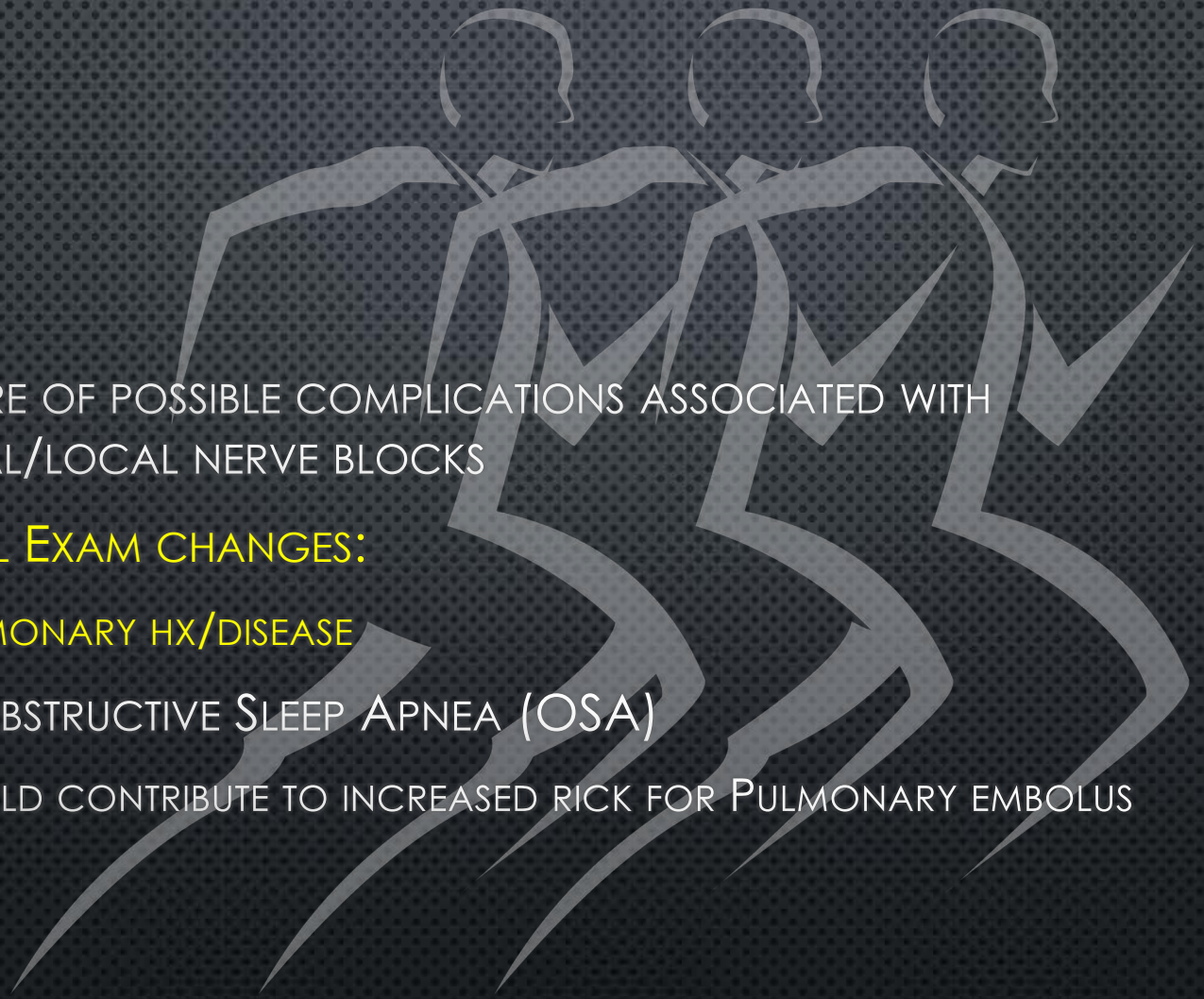
- **Interscalene** brachial plexus (ISB) **block** is often associated with **phrenic nerve block** and **diaphragmatic paresis.**
- Increasing popularity with out-pt surgery and pain mgmt
- Causes
  - C3-C4-C5 nerve root block 2nd to cranial spread of anesthetic agent (blind injection & Large volume)
  - **Direct Phrenic nerve block with anterior Scalene Fascia injection**
- **Not recommended for pts with Pulmonary function impairment**

ROTATOR CUFF REPAIR





TAKE HOME POINTS



- Be aware of possible complications associated with regional/local nerve blocks
- Physical Exam changes:
  - Pulmonary hx/disease
- PMH: Obstructive Sleep Apnea (OSA)
  - Could contribute to increased rick for Pulmonary embolus

Blue Ridge Parkway
Ashe Co., NC
Picture courtesy TGocke, PA-C