
# The "Schneck":
# Is it the shoulder or is it the neck?

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# Disclosures:

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

# Objectives

- Better identify and treat the “Shneck”
- Differentiate between
  - Axial (mechanical) neck pain
  - Cervical radiculopathy
  - Shoulder Pain
  - Repetitive Motion Injuries (RMI)
- Identify ‘red flags’ to evaluate for serious medical problems.
- Understand criteria for appropriate diagnostic tests, imaging, and treatment referral.

# GOALS:

- GAME PLAN:
  - Strategically apply a ‘game plan’ to become more time efficient.
  - Pain diagrams, focused history and exam
- CONFIDENCE:
  - Feel confident when ruling-out red flags, ordering labs and imaging studies or referring to a specialist.
- COMMUNICATE:
  - Improve patient’s understanding of their diagnosis and treatment plan with a clear/concise explanation.

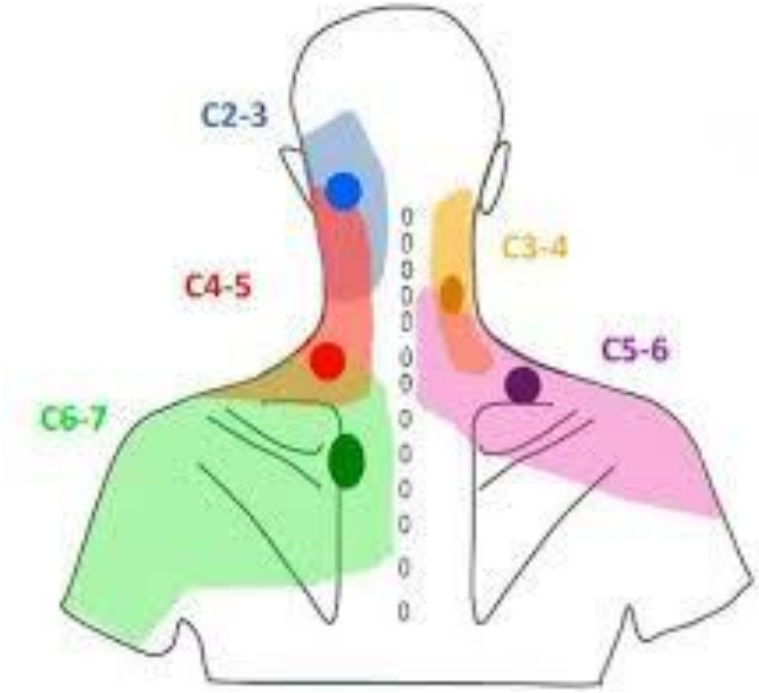
# Differential Diagnosis of Neck/UE Pain

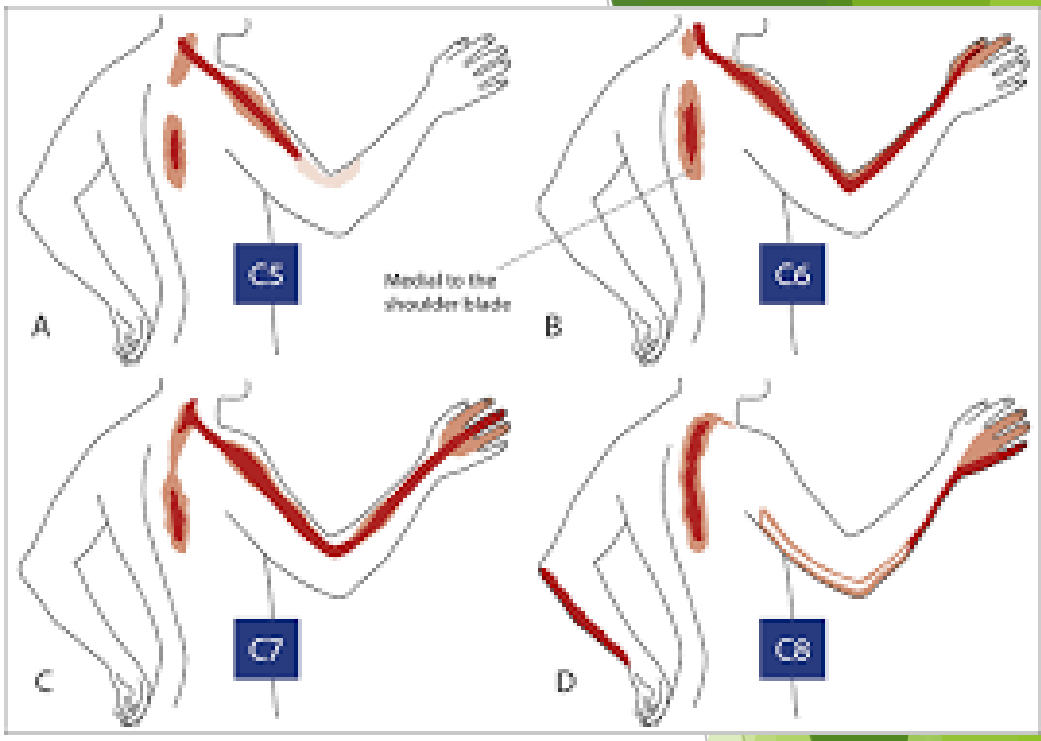
- Muscular strain
- Whiplash injury
- Facet or zygapophysial joint arthropathy
- Degenerative disc disease
- Disc herniation
- Cervical spinal stenosis
- Cervical radiculopathy
- Cervical myelopathy
- Thoracic Outlet Syndrome
- Brachial Plexus injury
- CTD/RMI
- Fibromyalgia
- Myofascial pain
- Referred pain from shoulder
- Cancer
- Infection
- Brachial Plexus
- Rotator cuff/impingement

“Where does it hurt?”

My ‘shoulder’…

The“Shneck”



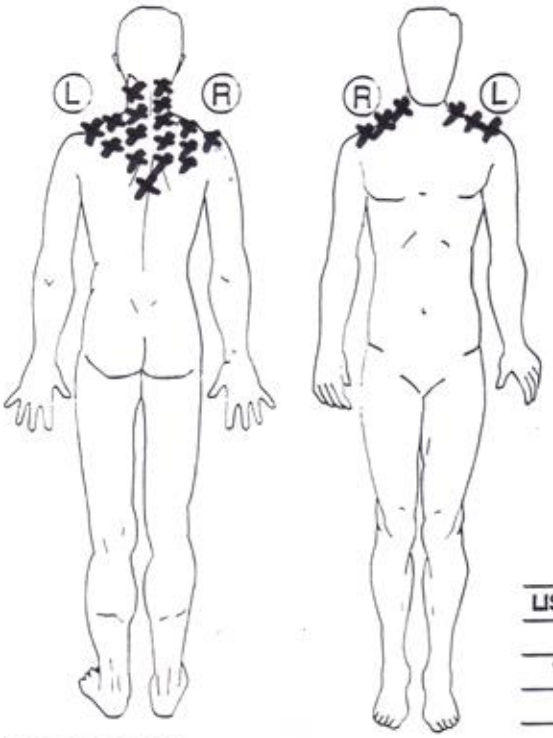



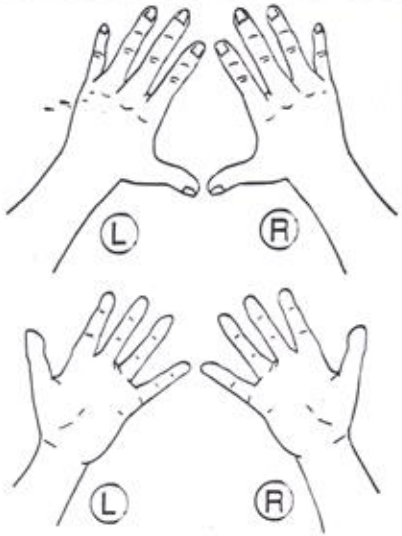

# Cervical Radiculopathy Pain Referral Patterns

PAIN DIAGRAM *Please use a pen*

IMPRINT AREA

PATIENT'S NAME | DATE | MR#




Dominant hand: ☐ Left ☐ Right

**DRAW YOUR PAIN**

Using a pen - mark in the areas on the diagrams where you have pain/numbness.

X = Pain
o = Numbness

**RATE YOUR PAIN ON THIS SCALE.** (Mark with an X)

0 = No Pain 10 = Worst possible pain

PAIN TODAY
0 ——— X ——— 10

LEAST (pain in last 2 weeks)
0 ——— X ——— 10

WORST (pain in last 2 weeks)
0 ——— X ——— 10

**LIST ALL DRUG, ENVIRONMENTAL, AND FOOD ALLERGIE**

Sulfas

**LIST ALL MEDICATIONS YOU TAKE** (including nonprescriptior
(Check the box for those meds that you take for this problem.)

| | Medication | Dosage |
|---|---|---|
| ✓ | ibuprofen | 3 |
| ✓ | flexeril | 1-2 |
| ☐ | | |
| ☐ | | |
| ☐ | | |
| ☐ | | |
| ☐ | | |
| ☐ | | |
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| ☐ | | |

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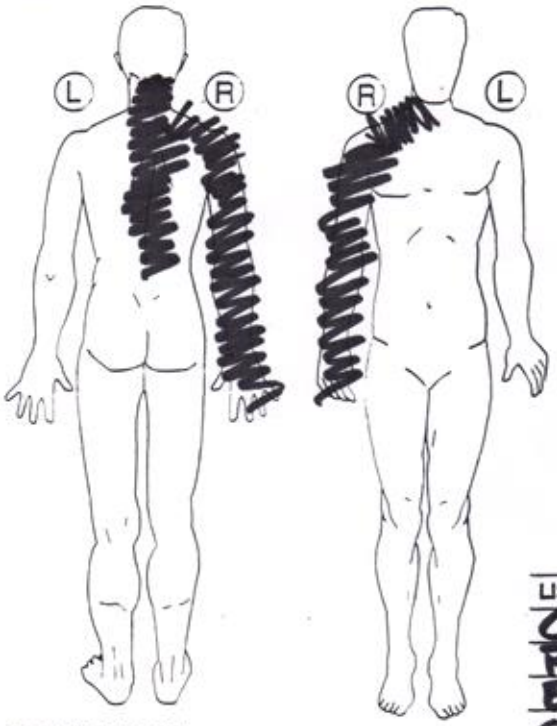


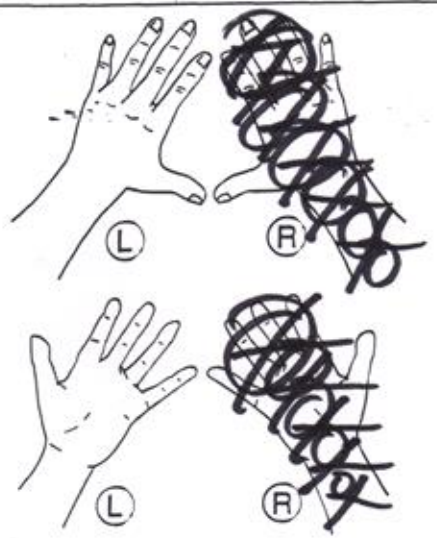


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0 — 10

LEAST (pain in last 2 weeks)
0 — 10

WORST (pain in last 2 weeks)
0 — 10

**LIST ALL DRUG, ENVIRONMENTAL, AND FOOD ALLERGIE**

| | |
|---|---|
| Cipro | All NSAIDs |
| PCN | iodine |
| ECN | Codiene |
| Sulfas | |

**LIST ALL MEDICATIONS YOU TAKE** (Including nonprescription
(Check the box for those meds that you take for this problem.)

| | Medication | Dosage |
|---|---|---|
| ☑ | Norco | |
| ☑ | Vicodin | |
| ☑ | Paxil | |
| ☑ | Morphine sulfate | |
| ☐ | | |
| ☐ | | |
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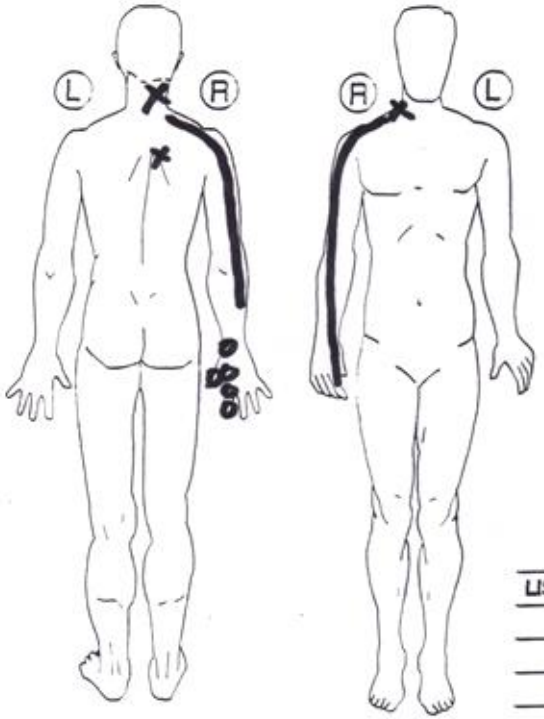


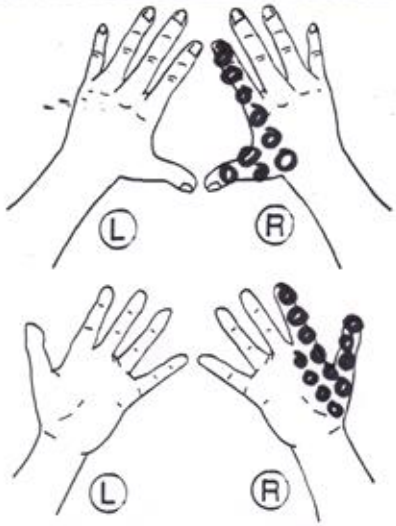


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LEAST (pain in last 2 weeks)
0 — X — 10

WORST (pain in last 2 weeks)
0 — X — 10

**LIST ALL DRUG, ENVIRONMENTAL, AND FOOD ALLERGIE**

None

**LIST ALL MEDICATIONS YOU TAKE** (Including nonprescription
(Check the box for those meds that you take for this problem.)

| Medication | Dosage |
|---|---|
| ☒ ibuprofen | as needed |
| ☐ | |
| ☐ | |
| ☐ | |
| ☐ | |
| ☐ | |
| ☐ | |
| ☐ | |
| ☐ | |
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| ☐ | |

# Definition of Terms for Neck Pain

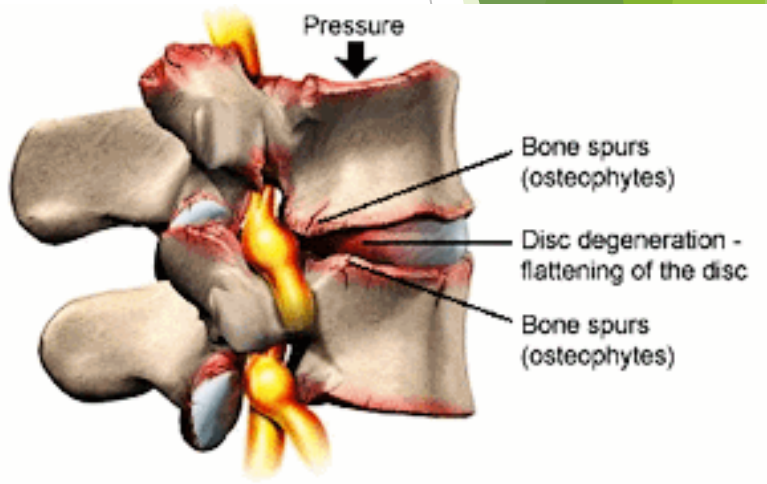
- **Axial (mechanical) neck pain**
  - Pain localized to the cervical spine and surrounding tissues, usually involving the intervertebral disc, vertebral body, facet/zygapophysial joints, joint capsules, ligaments, or muscles.
- **RMIs of the neck or upper extremity** (UE)
  - Repetitive Motion Injuries (RMI), often the result of rapid, repetitive movements of the hands/arms, commonly occurring in the occupational medicine setting.
- **Cervical Radiculopathy**
  - Pain and neurologic symptoms in the UE arising from compression or inflammation/irritation of the cervical nerve roots.

# History

- Onset? Duration? Trauma?
- Recurrence? Previous similar episode?
- Aggravating and relieving factors?
- Pain, numbness, weakness
  - (pain diagram, visual analog scale)?
- Bowel or Bladder incontinence?
- Saddle paresthesias?
- Imbalance, difficulty walking/standing?
- Previous treatments?

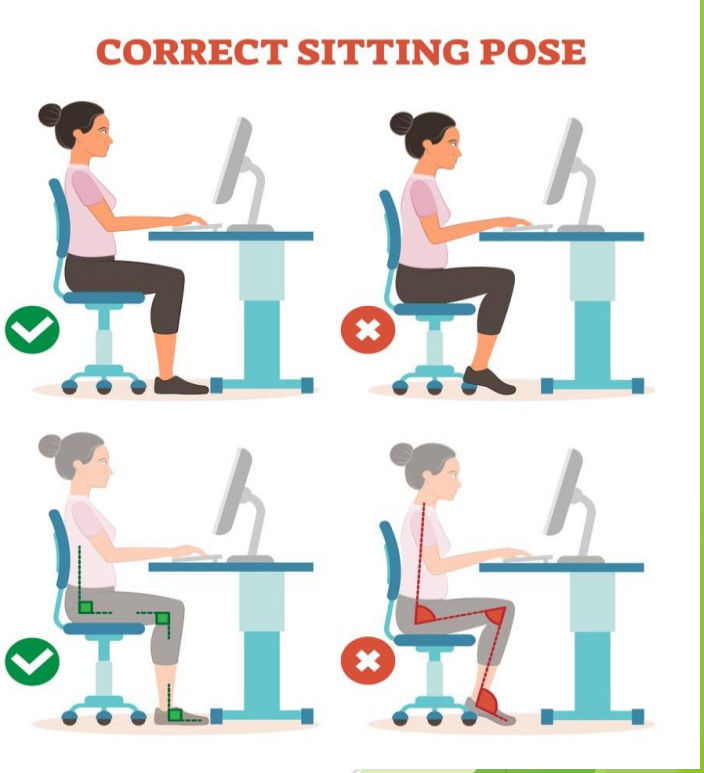
# Axial Neck Pain, Historical Pearls

- Often preceded by trauma, acute event.
- May develop slowly, hours to days after acute event.
- Pain localized to cervical spine.
- Pain reproducible with specific movements.
- Often recurrent episode.



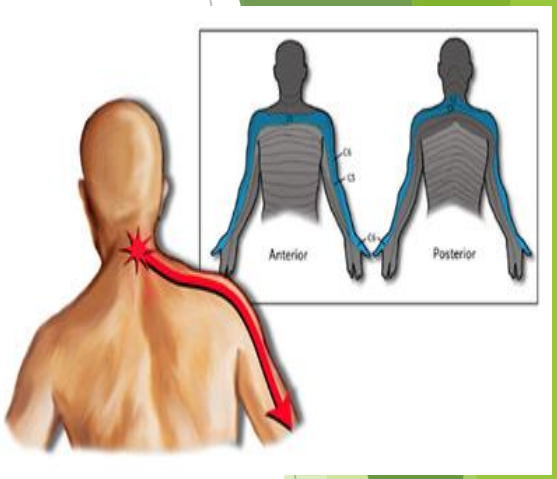
# Repetitive motion injury, Historical Pearls

- Pain initially localized, then becomes widespread.
- Often associated w/ repetitive tasks.
- May describe symptoms as numbness, tingling, cold, swelling, or cramping sensations in non-dermatomal distribution.
- Varying degrees of associated psychological distress?
- Occupational?



# Cervical Radiculopathy, Historical Pearls

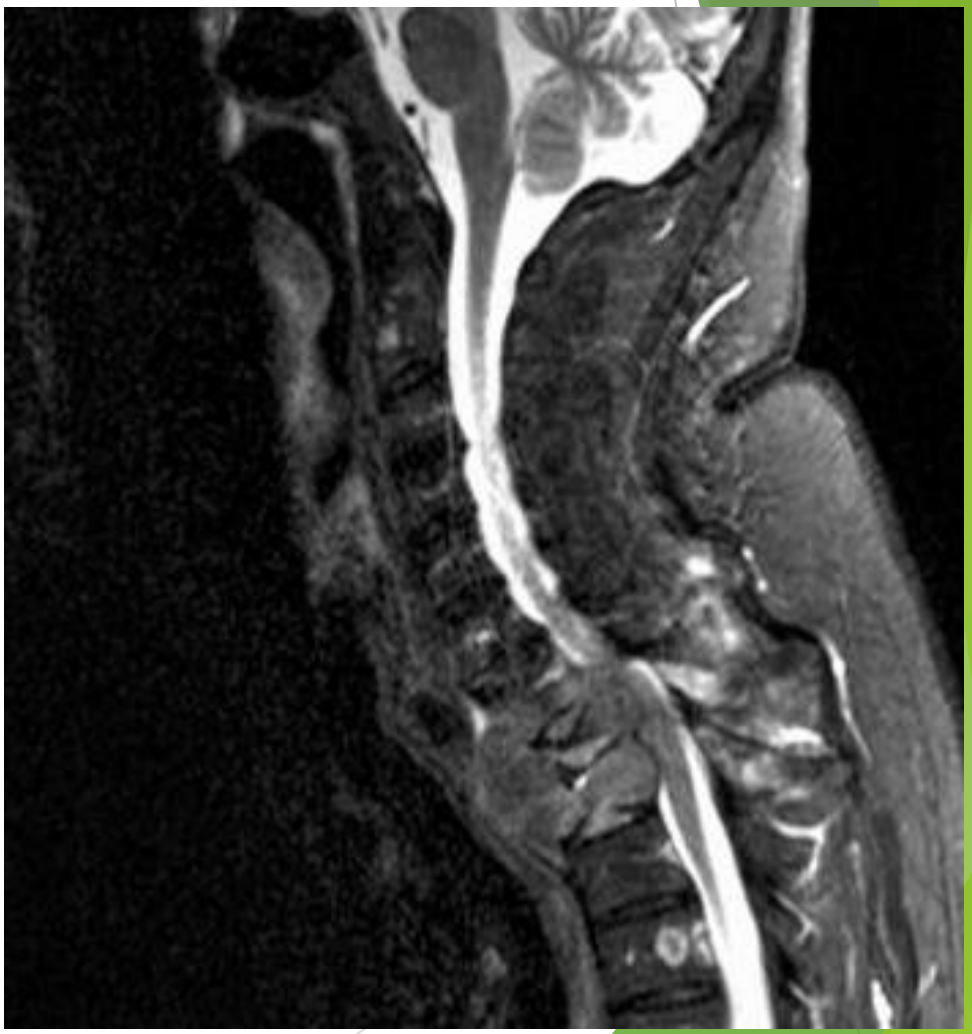
- Insidious onset of neck pain and arm discomfort, ranges from dull ache to severe burning pain.
- Often progresses from neck, to shoulder blade, then down arm into hand.
- Positional; worse w/ ext.+lat.bend+rotation to affected side.
- May have associated numbness/tingling in dermatomal distribution.
- May have associated weakness.



# We don’t want to miss something ‘bad’!

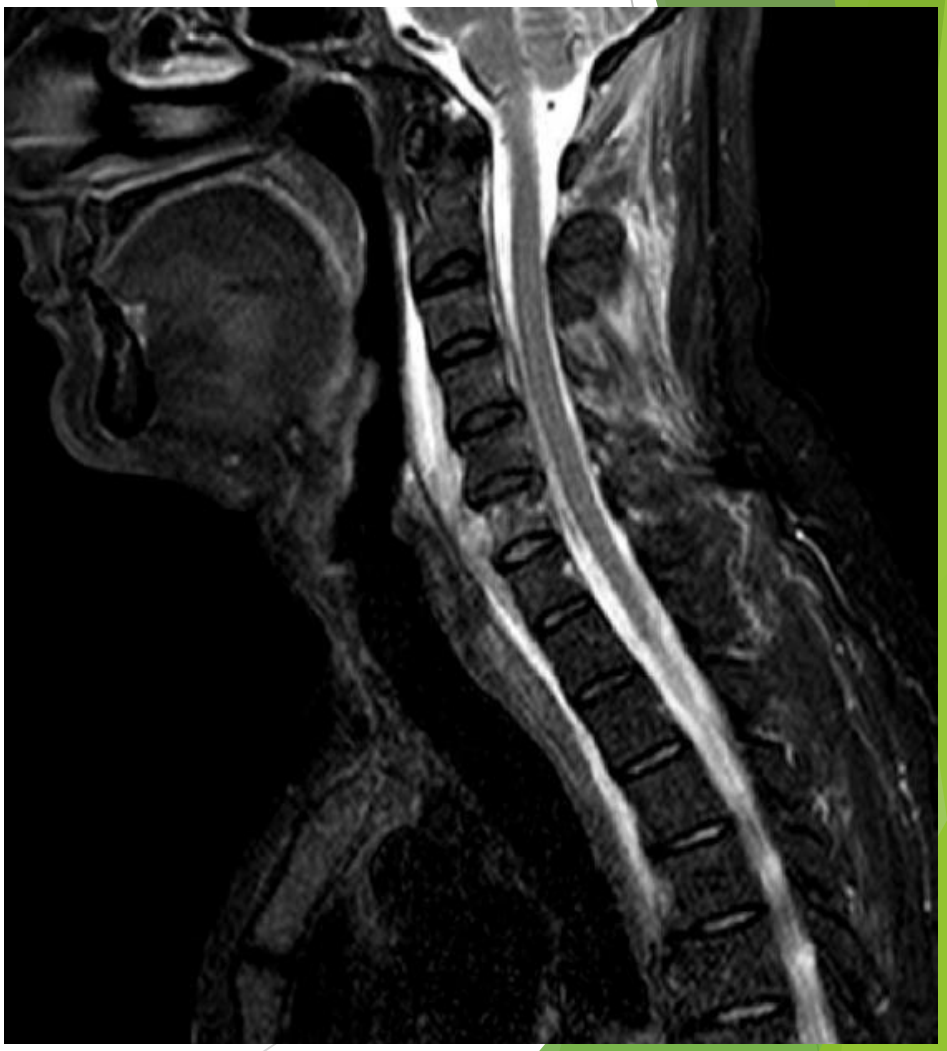
# Red Flag: Cancer

- Prior history of cancer?
- Unexplained weight loss?
- Age greater than 50 y.o.?
- Pain greater than 12 weeks?
- Night Pain?
- Failure to improve?



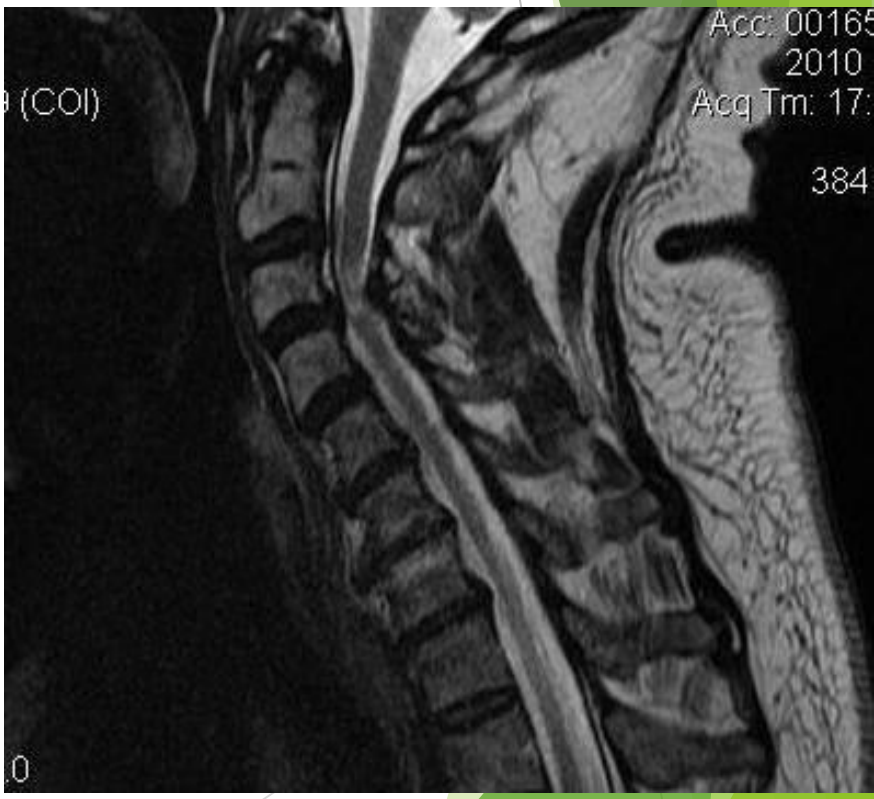
# Red Flag : Infection

- Fever?
- Previous history of I.V. drug use?
- Recent bacterial infection?
  - (ie. UTI, cellulitis, pneumonia)
- Immunocompromised?
  - Chemo, transplant, AIDS
  - Steroids
  - Diabetes
- Rest pain?



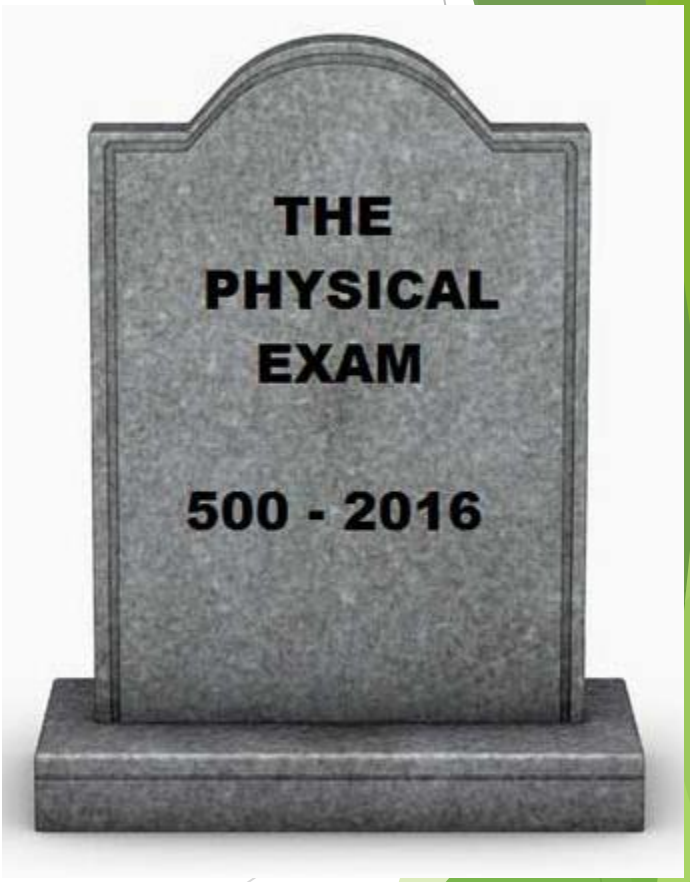
# Red Flag: Myelopathy

- Symmetric neurologic deficits
- Upper Extremities:
  - Decreased sensation
  - **Hypo-reflexia**
  - Weakness
  - Lower Motor Neuron signs
- Lower Extremities:
  - Decreased sensation
  - **Hyper-reflexia**
  - Weakness
  - Upper Motor Neuron Signs
- Bowel/bladder symptoms
- Abnormal gait, **ATAXIA**



# Focused Physical Examination

- Formulate a focused differential based on the pain diagram and history.
- Your examination should allow you to key in on your diagnosis.



# Physical Examination 1

- Passively observed movements
- Shirt removed, gown
- Alignment, asymmetry, deformity, atrophy
- Active ROM (AROM)
- Passive ROM (PROM)
- Spurling's test

# Physical Exam 2

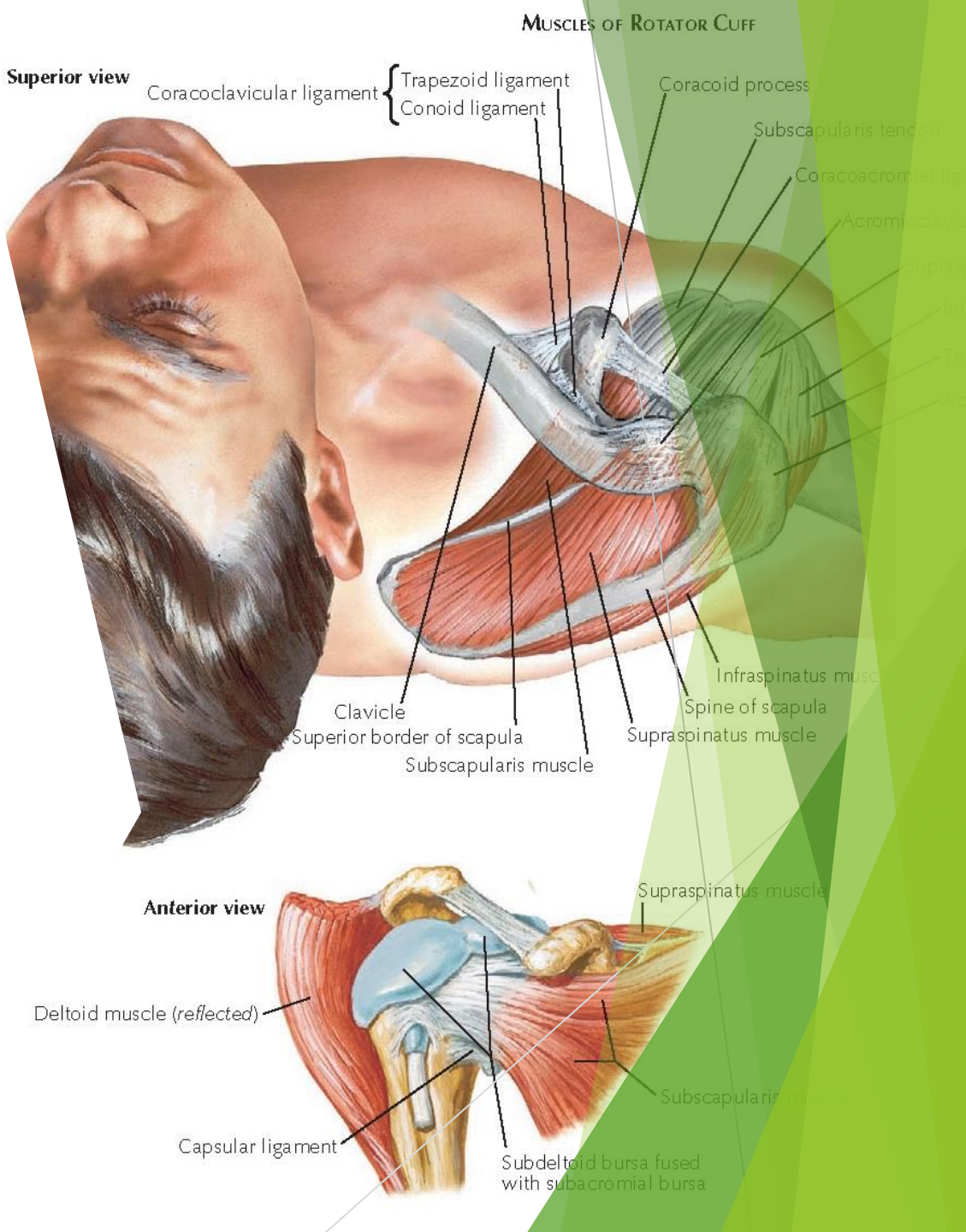
- Palpation: *"Touch them where it hurts!"*
  - Bone:
    - Spinous process, occiput, SC/AC joints, acromion
  - Soft Tissue:
    - Cervical paraspinals, trapezius, parascapular, deltoid muscles
  - Tender points
  - Trigger points

# Physical Exam 3

- Upper Extremity
  - Shoulder:
    - AROM, painful arc? Limitation of motion?
    - Impingement
    - Rotator cuff strength
  - Elbow:
    - Lateral and medial epicondyle
    - Extensor and flexor muscle compartments
    - Ulnar neural tension? Ulnar Tinel's?
  - Wrist/Hand:
    - Carpal tunnel compression test?
    - Phalen's?
    - Finkelstien's?
    - 1st CMC joint tenderness, Grind Test?, Watson's stress test?

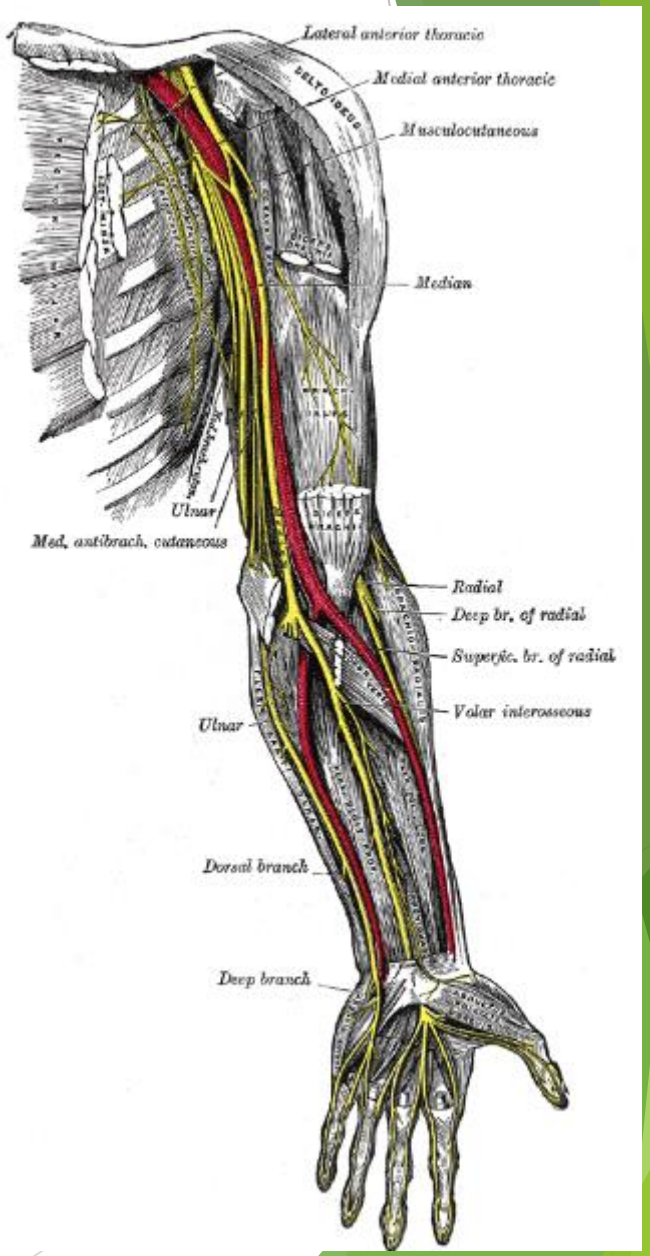
# Shoulder Exam, Pearls

- Inspection
  - Swelling, atrophy, winging
- Active Range of Motion (AROM)
- Drop Arm Test
- Passive Range of Motion (PROM)
- Provocative Test's
  - Impingement
- Rotator Cuff strength testing



# PEx: Neurologic Exam[4]

- Manual Muscle Testing (MMT):
  - C5 Deltoid/Biceps
  - C6 Wrist extension
  - C7 Triceps
  - C8 Finger flexion
  - T1 Finger abduction
- Sensation:
  - C5 Lateral antebrachial fossa
  - C6 Thumb/index finger
  - C7 Middle finger
  - C8 Little finger
  - T1 Medial antebrachial fossa
- Muscle Stretch Reflexes (MSR):
  - C5 Biceps
  - C6 Brachioradialis
  - C7 Triceps
- Long Tract signs:
  - Hoffman's sign



# Axial Neck Pain, PEx Pearls

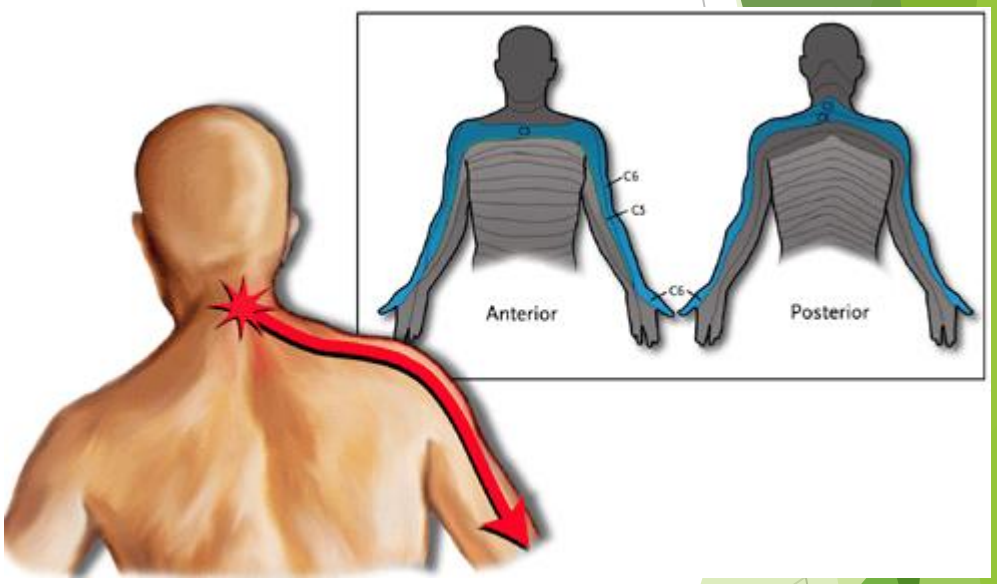
- Specific, reproducible movements reproduce patient's pain.
- Focused palpation reproduces patient's pain.
- Neurologically intact.
- Negative shoulder/UE screening exam.

# Repetitive motion injury, PEx Pearls

- + Upper Limb Tension Test
- Diffuse tenderness
- Hypersensitivity
- Tender points +/- trigger points
- Painful, limited AROM of neck and UE
- Diagnosis of exclusion

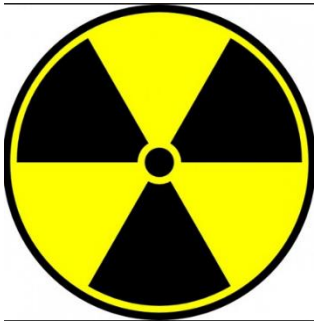
# Cervical Radic, PEx Pearls

- Pain in upper extremity > neck.
- Positive Spurling's Test.
- Negative shoulder/UE screening exam.
- Focal neurologic findings in reproducible neuro-anatomic distribution.



# Zebra = TOS
# Thoracic Outlet Syndrome

# Medical Imaging



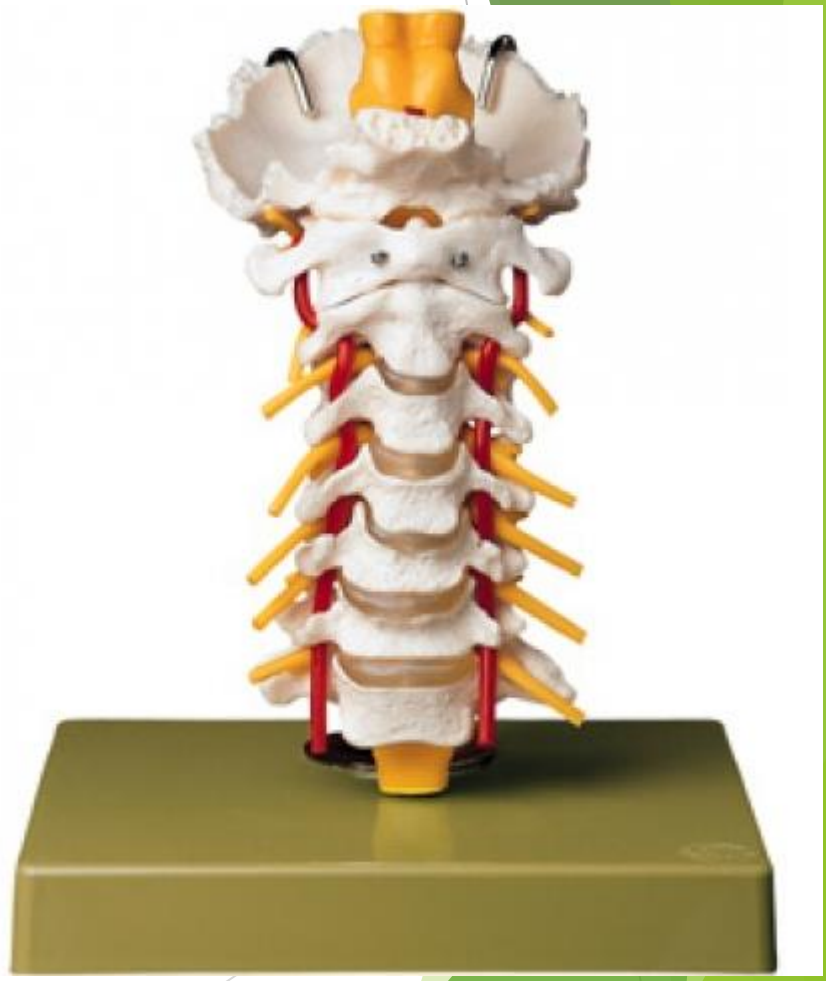
- X Rays
  - May be useful to identify fracture (trauma), degenerative changes (pain > 6 weeks), or when red flags present (tumor/infection).
  - Not recommended for axial neck pain or CTD in absence of red flags (pain < 6 weeks).
- Advanced Imaging, MRI/CT:
  - Recommended in presence of neurologic deficit or suspicion of tumor/infection in consultation w/ Spine Specialist.

# Lab Studies

- If malignancy or infection is suspected:
  - CBC with differential
  - ESR
  - CRP
  - CCP

# Treatment Axial Neck Pain

- Educate, review diagnosis, and reassure.
- Define source of pain, anatomically yet simplistically.
- Provide reassuring explanation as to why additional studies and referral are not indicated.
- Ice/Heat, rest, activity modification
- NSAIDs, narcotic analgesics, muscle relaxants.
- Physical Therapy program



# Treatment RMI

- Longer problem untreated, longer time required for improvement
  - Prompt recognition and intervention
- Self care and active participation critical
- Limit immobilization
- Ergonomics, biomechanics, micro-breaks
- Psychosocial issues must be addressed

# Treatment Cervical Radiculopathy

- **No Neurologic Deficit:**
  - Educate/define/re-assure/outline treatment
  - Ice/rest/activity modification
  - Oral prednisone taper
  - NSAIDs, narcotic analgesics, muscle relaxants
  - PT program
- If improved at 2-4 weeks, then advance home program, PT neck class.
- If not improved at 2-4 weeks, then Spine Consult referral.

# Treatment Cervical Radiculopathy

- Positive Neurologic deficits:
  - If progressive, or in presence of cervical myelopathic symptoms, then urgent consult, contact spine specialist on-call directly.
  - Cervical spine X-rays
  - Cervical Spine MRI
  - Document careful neurologic examination
  - Discuss w/ spine specialist need for MRI, initiating course or oral prednisone, possible cervical epidural steroid injection.

# Conclusion

- GAMEPLAN:
  - Utilization of a pain diagram, a focused history and a focused physical examination will help you identify the appropriate diagnosis for neck/UE pain in a timely, effective manner.
- CONFIDENCE:
  - Identification of ‘red flags’ and knowing what studies to order will improve outcome and facilitate timely and appropriate coordination of care with your spine specialist.
- COMMUNICATE:
  - An accurate diagnosis will increase patient understanding, satisfaction, and compliance with treatment.

# Thank you;)

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