



# Extent of Injury Workshop



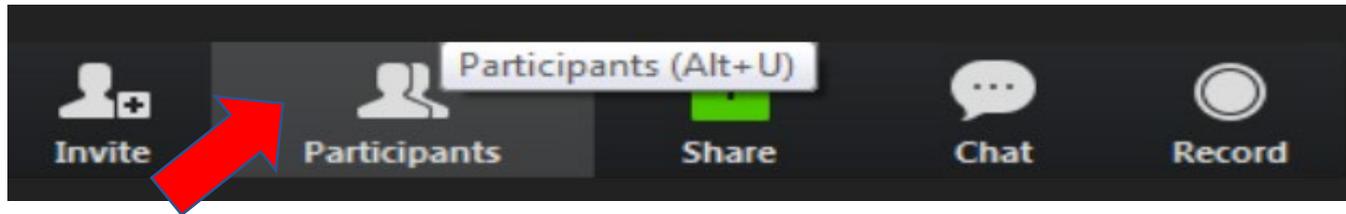
# Disclaimer

The material presented in this presentation is made available by the TDI-DWC for educational purposes only. The material is not intended to represent the only method or procedure appropriate for the medical situations discussed. Rather, it is intended to present an approach, view, statement, or opinion of the faculty, which may be helpful to others who face similar situations.



# Housekeeping

At the bottom of your screen, click to turn on the participant list:



Ensure your name (not phone # or initials) is shown on the Participant List for CME and attendance purposes. If not, do the following to rename:

Hover over your current sign in and two boxes appear

Click on the Rename box

Type in your first and last name



# Asking questions

Please mute your phone/VOIP audio connection

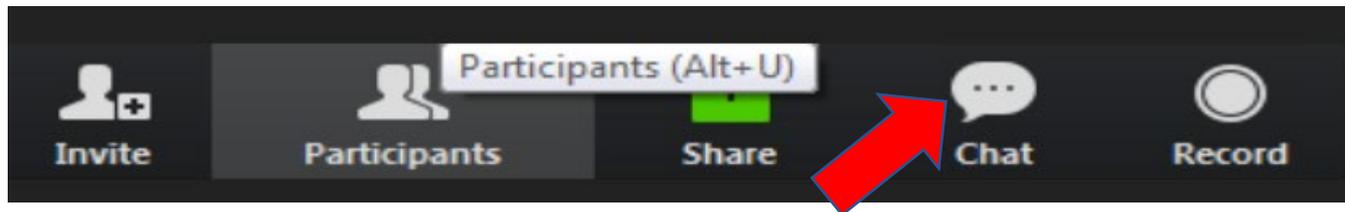
All attendees will be muted during the presentation and submit questions via Chat

Attendees may be unmuted at the request of the monitor or instructor for clarification or further discussion



# Asking questions

You will find the Chat feature to the right of the participants list.



As the instructor goes through the course they will ask for questions via chat at the end of a case, or after a concept has been explained.

You may type your questions into Chat. The Chat monitor may answer your question in Chat, or have the instructor answer the question verbally.



# Dispute Resolution – Designated Doctors (DD) System

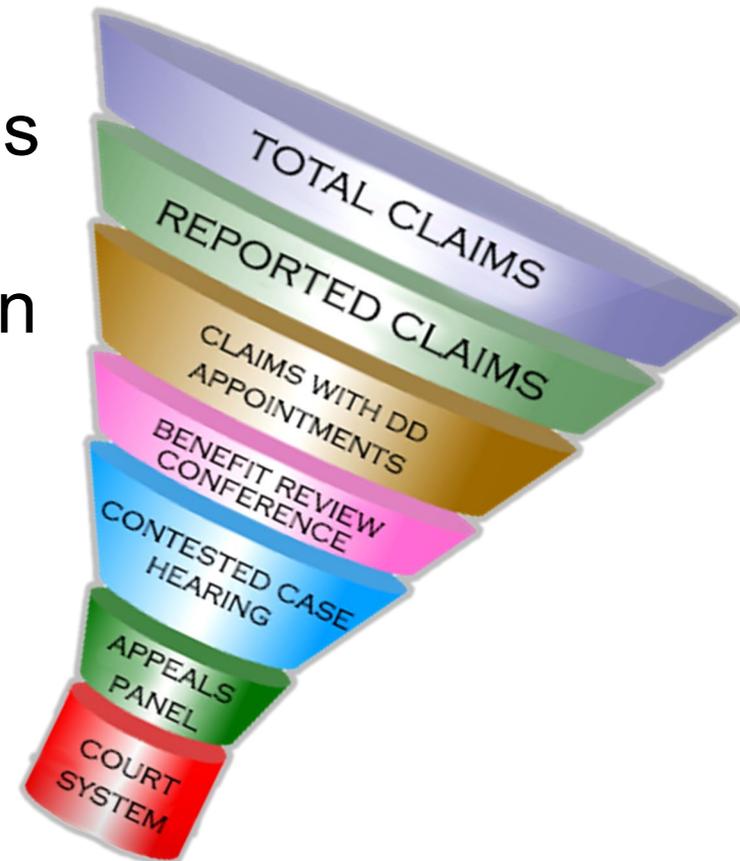
- **Designated Doctor's role is to assist in Dispute Resolution**
  - Impartial, objective medical expert selected and ordered by DWC
  - Answer specific questions
  - Does not recommend or provide treatment
  - One of the dispute questions for the DD is Extent of Injury

# Importance of DD Opinion

- The report of DD is given **presumptive weight** in dispute resolution unless the preponderance of evidence is to the contrary
- Insurance Carrier (*IC*) is required to pay income and medical benefits based on opinion of DD during pending dispute

# DD Reports in Dispute Resolution

- The DD report may facilitate informal resolution of many issues
- In event parties cannot resolve issues in dispute based on DD's report, they may pursue issues through DWC dispute resolution process
  - Benefit Review Conference
  - Contested Case Hearing
  - Appeals Panel
  - Courts



# Dispute Resolution – Designated Doctors (DD) System

- Most disputes arise after the first several months from the DOI.
- To have a Designated Doctor be appointed to resolve a dispute, a *Request for Designated Doctor Examination* (DWC Form-32) must be completed.



# Dispute Resolution – Designated Doctors (DD)

**Texas Labor Code §408.0041** states questions to be addressed by DD:

- Attainment of Maximum Medical Improvement (*MMI*);
- Impairment as a result of the compensable injury (*IR*);
- **Extent of employee's compensable injury (*EOI*);**
- Whether disability is a direct result of the compensable injury (*DDR*);
- Ability to return to work (*RTW*); and
- Issues similar to those described above.



# Dispute Resolution Designated Doctors (DD)

- **Some reasons an insurance carrier (IC) may initiate dispute resolution:**
  - When there appears to be delayed recovery
  - There is concern as to what diagnoses are caused by the events on the date of injury
  - There are multiple ICD-10 diagnoses used on the claim
- Dispute may occur after the insurance carrier has requested a peer review to review the records to assist in defining the compensable diagnosis.

# Dispute Resolution Designated Doctors (DD)

**Some reasons an injured employee may initiate dispute resolution:**

- there is a notice (PLN-11) disputing a diagnosis, condition or symptom; or
- treatment ordered by the treating or consulting doctor is denied.

# Dispute Resolution

## **Designated Doctors (DD)**

**Who can complete a *Request for Designated Doctor Examination* (DWC Form-32) to request resolution of Extent of Injury?**

- Insurance carrier
  - \* Adjuster
  - \* Carrier attorney representative
- Injured employee
- Injured employee's representative
  - \* Ombudsman
  - \* Attorney
- Benefit Review Officer (BRO) / Administrative Law Judge (ALJ)



# Dispute Resolution

## Designated Doctors (DD)

- Who can complete a **Presiding Officer's Directive** (POD) to Order a Designated Doctor Exam?
  - DWC Benefit Review Officer (BRO)
  - DWC Administrative Law Judge (ALJ)



# Dispute Resolution

## Designated Doctors (DD)

### Presiding Officer's Directive (POD)

- This may be generated after a hearing at some level (BRO or ALJ). Specific diagnoses / conditions may have been stipulated by the parties or adjudicated by ALJ
- The DD **MUST** consider **ONLY** the questions posed in the POD
- Do not add other diagnoses / opinions unless specifically asked to.



# Changes

## Designated Doctor and MMI and IR Doctor Rules

**Amendments to the §127.1-127.25 and §180.23 have been adopted and are effective 6/05/2023.**

**Amendments include changes that :**

- **Qualify chiropractors to examine some additional fractures and some multiple fractures.**
- **Add additional MD and DO board certifications as qualified for TBI exams**
- **Remove the requirement to provide multiple certifications when addressing EOI, MMI and IR in one exam.**

**For more information see:**

**<https://www.tdi.texas.gov/wc/rules/2023rules.html>**

# DISPUTE RESOLUTION - EOI

We will start with the DWC-32.

There are changes effective 6/5/2023 to the DWC-32 that will be important for you to be aware of.

# Dispute Resolution - EOI

## DWC Form-032

# REQUEST For DESIGNATED DOCTOR EXAMINATION

DWC032



**Division of Workers' Compensation**  
PO Box 12050 | Austin, TX 78711 | 800-252-7031 | tdi.texas.gov/wc

Complete, if known:  
DWC claim #  
Insurance carrier claim #

**Request for designated doctor examination**  
Este formulario está disponible en español en el sitio web de la División en [www.tdi.texas.gov/forms/dwc/dwc045brcs.pdf](http://www.tdi.texas.gov/forms/dwc/dwc045brcs.pdf)  
Para obtener asistencia en español, llame a la División al 800-252-7031.

**Part 1. Injured employee information**

1. Employee's name (first, middle, last)	2. Social Security number
3. Employee's address (street or PO box, city, state, ZIP code)	4. Employee's county
5. Employee's primary phone number	6. Employee's alternate phone number
7. Employee's date of birth (mm/dd/yyyy)	8. Date of injury (mm/dd/yyyy)
9. Representative's name (first, middle, last)	10. Representative's phone number
11. Representative's email address	12. Representative's fax number
13. Employer's name	14. Employer's phone number
15. Employer's address (street or PO box, city, state, ZIP code)	

**Part 2. Insurance carrier information**

16. Insurance carrier's name	
17. Insurance carrier's address (street or PO box, city, state, ZIP code)	
18. Adjuster's name (first, middle, last)	19. Adjuster's email
20. Adjuster's phone number	21. Adjuster's fax number
22. Does the claim have medical benefits provided through a certified workers' compensation health care network? <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, provide the name of the network.	
23. Does the claim have medical benefits provided through a political subdivision according to Labor Code Section 504.053(b)(2), directly contracting with health care providers or contracting through a health benefits pool? <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, provide the name of the health care plan.	
Employee's name:	[bar code]
DWC claim number:	For DWC use only

DWC032 Rev. XX/23
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# Dispute Resolution Designated Doctors (DD)

## ***Box 37 has been removed from DWC-32***

- ***Previously*** this box was provided for the requester to enter all injuries “*accepted as compensable*” by the insurance carrier. This information on the Form-32 was not a final legal determination of the *compensable* injuries
- The Designated Doctor determines the compensable injuries and conditions after a thorough review of records, certifying examination and evidence-based research.

### [TAC §130.1 \(c\)\(3\)](#)

***Assignment of impairment rating for the current compensable injury shall be based on the injured employee’s condition on the MMI date considering the medical record and the certifying examination.”***



# Dispute Resolution Designated Doctors (DD)

## **Box 38 has been removed from the DWC-32**

- ***Previously*** this box was provided for the requester to list all injuries legally determined to be compensable by:
  - Approved DWC Form-024,
  - DWC decision & order,
  - DWC Appeals Panel decision, or
  - Final court order

The DWC-32 Form will now provide a box for the requester to check, to indicate if the compensable injury has been legally determined by one of these means.

If so, information on the determined compensable injury will be provided to the DD with the Commissioner's Order for the examination.



# DWC 32, Box 31C

## C. Extent of Injury

List all injuries (diagnoses/body parts/conditions) in question, claimed to be caused by, or naturally resulting from the accident or incident **and** describe the accident or incident that caused the claimed injury.



# Extent of Injury (EOI): DWC Form-032, Box 31C

- Lists all injuries I/ conditions in dispute, as per either the carrier or IE / IE Representative.
- Gives a description of the accident/incident that caused the claimed injury in question/in dispute.
- DD must address EACH injury (diagnosis/body part/condition) listed in Box 31C.
- Failure to do so may result in your opinion not being adopted.

**28 TAC §127.1(b)(11)(C) Revised 12/06/18**

# Extent of Injury (EOI): DWC Form-032, Box 31C

- Continue to refer to the injury or condition using the **same terms** as listed in Box 31C
- If referring to injury or condition by different medical term or grade of condition than listed in Box 31C, this must be explained
  - Do you view these terms as synonymous? If so, state that these are same and provide evidence
- If there are injuries that can be **grouped together** as the same, or part of the same medical process, explain diagnoses / conditions in a grouping



# **Extent of Injury Question for the Designated Doctor**

**Discussion of the definition of**

**Extent of Injury**

**and how this impacts your analysis**



# Extent of Injury Question for the Designated Doctor

Was the accident or incident giving rise to the compensable injury a **substantial factor** in bringing about the additional claimed injuries or conditions, and **without it, the additional injuries or conditions would not have occurred?**

**Include an explanation of the basis for your opinion, NOT just your opinion.**

# Extent of Injury Question for the Designated Doctor

## What IS Substantial Factor?

- No legal definition in DWC system
- **Substantial factor is relative**
- Consider the mechanism of injury
- Co-morbidities

**Substantial factor is not the same as sole cause.**

**May be more than one substantial factor**



# Extent of Injury Question for the Designated Doctor

## “Injury”

- Damage or harm to the physical structure of the body
- Disease or infection naturally resulting from the damage or harm
- Includes occupational disease

[Texas Labor Code §401.011\(26\)](#)



# Extent of Injury Question for the Designated Doctor

## Appeals Panel Interpretation of AGGRAVATION

- Claimed injury that causes additional damage or harm to the physical structure of the body
  - May include any naturally resulting disease or infection
  - Can include an enhancement, acceleration or worsening of an underlying condition\*
- \* Not just increase in subjective symptoms.

[Appeals Panel Decision 002967](#)



# EOI Analysis: Understanding the Question of EOI

- Important medical/legal question in workers' compensation
- **You** give your opinion and rationale as to which conditions are caused by events of the DOI and which are not
- Support your opinion, from a medical perspective, within the legal framework
- You provide medical expertise to inform those reading your report, including an Administrative Law Judge

**Do not assume the reader of your report has any medical knowledge**



# EOI Analysis: Understanding the Question of EOI

- Keep in mind the **legal concepts** of injury and aggravation
- Explain the injury using medical terminology
- **Give thorough explanation.**
- **[See the next slide.]**



# EOI Analysis: Understanding the Question of EOI

**Give thorough explanation. Describe:**

- Terms of the additional claimed diagnoses / conditions
- How the injury in question typically occurs
- The pertinent positives and negatives in the records that support your opinion
- The consistencies or any inconsistencies of the MOI, subjective complaints (SC), objective findings (OF) in the medical records.
- IF the MOI, SC, OF consistent with the injury model



# **EOI Evaluation Steps for Success**

**The revised DWC-32 as of June 2023 WILL NOT have a "Carrier Compensable" but will have the Additional Claimed Conditions. Provide:**

- A Forensic Exam that captures all the necessary information
- Research and Literature Review
- Causation Analysis
- Producing a Narrative Report that is legally sufficient

# EOI Evaluation

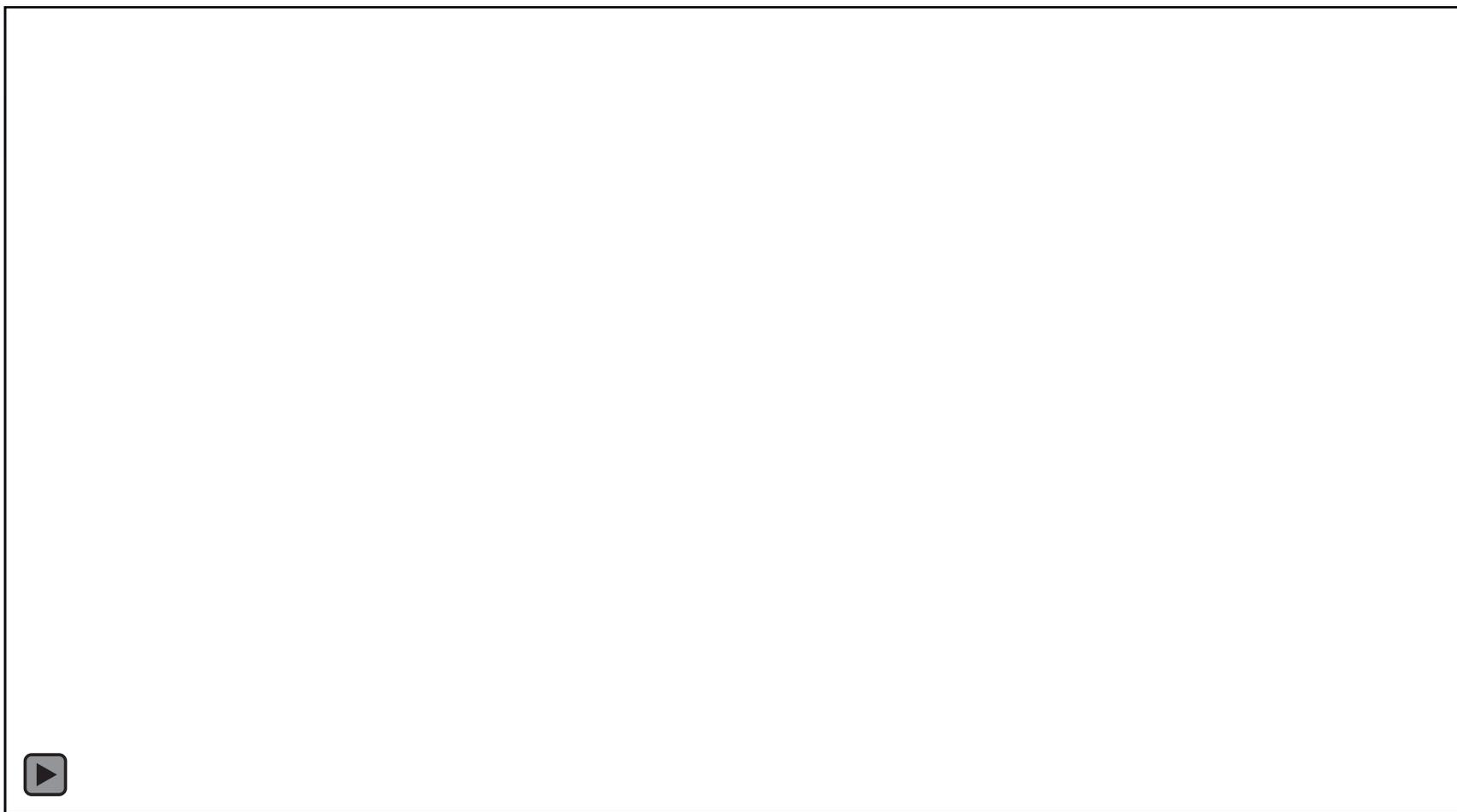
## Insufficient Causation Analysis

- Provide an **EXPLANATION**
- **DO NOT** provide **CONCLUSIONS**, rather than **explanation**
  - Only listing diagnoses or ICD-10 codes
  - General statements that the condition was not present until after accident – the Ergo Proptor Hoc fallacy

All parties, including Administrative Law Judge, need explanation as to ***why*** you reached your ***conclusion***, ***not just a conclusion***



# EOI Evaluation - LEGALLY SUFFICIENT DESIGNATED DOCTOR REPORT





# Extent of Injury Template

[www.tdi.texas.gov//wc/dd/documents/ddcauseanalysis.pdf](http://www.tdi.texas.gov//wc/dd/documents/ddcauseanalysis.pdf)

## Extent of Injury Analysis Section of a Designated Doctor Report

In addition to the basic requirements of a designated doctor narrative report in 28 TAC Rule 127.220, a narrative on extent of injury may include the following information:

### I. Injury in Question (Box 31C of the DWC Form-032)

*State injuries in question as listed in Box 31C, and define and describe each injury in medical terms.*

Note: Extent of Injury is a specific question as to a specific injury as listed in Box 31C. Failure to use the exact terms as listed in Box 31C to refer to the injury may result in a letter of clarification, or a report not being adopted. If there are other medical terms used in the report to refer to the injury in question as listed in Box 31C, explain or clarify that to the reader by stating these terms are synonyms, one is inclusive of the other, etc. If there are injuries that can be grouped together as the same, or part of the same medical process, explain such grouping.



# Extent of Injury Template

## II. Accident/Incident (Mechanism of Injury)

Describe the accident/incident (mechanism of injury). Include any account described and who gave it. (i.e. Claimant told me during the exam, or treating doctor describes in the notes on 1/1/2023.)

# Extent of Injury Template

## III. Clinical Findings and Timeline in Support of Causation Analysis

*Provide the relevant findings contained in the medical records, history and physical exam. Where applicable, detail symptom onset relative to the timeline of the medical history.*

In your review and detail of the above, pay particular attention to the following in relation to the injury in question (Box 31C):

- a. Did the injury in question exist prior to the work-related accident or incident (mechanism of injury)?
- b. Was the injury in question present during the physical examination?

# Extent of Injury Template

## IV. Analysis of Clinical Findings and Timeline

*Provide an analysis based on the findings from Sections II and III above, and any other relevant supporting factors to explain the basis for the opinion regarding the injury in question (Box 31C).*

Pay particular attention to the following in relation to the causation analysis for the injury in question (Box 31C), and explain all that are applicable:

- a. Consider whether the timeline of symptom onset was consistent with the work-related injury, including relevant medical records prior to the injury, proximate to the time of injury, as well as post-injury treatment and testing.
- b. Is this type of work-related accident/incident (mechanism of injury) consistent or inconsistent with the injury in question?

If evidence-based medicine is available, then explain how it supports that the work-related accident/ incident (mechanism of injury) caused or did not cause the injury in question (Box 31C).

# Extent of Injury Template

## v. Medical/Legal Causation Opinion Statement

### **SAMPLE CONCLUSION TEXT**

"Based on the above referenced reasons, it is my medical opinion, based upon my education, training, and experience, and within reasonable medical probability that (the work-related accident/incident/ mechanism of injury) caused or did not cause the injury in question (Box 31C). I find that the compensable injury of (mm/dd/yyyy) was/ was not a substantial factor in bringing about the additional claimed injury or condition (Box 31C), and without it, the additional injury or condition (Box 31C) would not have occurred. Specifically, it does or does not extend to include (Box 31C)."

*\*\*DWC does not require use of this form, and additionally, this form is not applicable in all cases. DDs must adhere to all applicable rules regarding reporting requirements and this form is neither a substitute nor an addendum to those requirements. This form is an example of expert causation analysis where extent of injury is an issue, and is not a comment on whether expert testimony is required to establish causation as to this, or any other specific injury. Whether expert testimony is required to establish causation for an injury is a determination that is made at the hearings level on a case by case basis.*



# QUESTIONS about Extent of Injury Template?





# Extent of Injury Evaluation

## HOW DO WE START OUR ANALYSIS?

- **This next section covers:**
  - **Basic science of injury patterns / types**
  - **Mechanism of injury**
- **You should be very familiar with these concepts. If time allows, this will be covered.**
- **It is otherwise available in PDF format in the DD training portion of the DWC website.**

DD Training page:

<https://www.tdi.texas.gov//wc/dd/training.html>



# Extent of Injury Evaluation

## HOW DO WE START OUR ANALYSIS?

Understand each of these areas of

### **BASIC SCIENCE:**

1. **Basic ANATOMY (including neuroanatomy) and PHYSIOLOGY of the diagnoses / conditions you will be analyzing,**
2. **What is the Natural History of Biologic Tissue with time / age,**
3. **Tissue Injury Model,**
4. **Tissue Healing Model**

# **Extent of Injury Evaluation**

## **Understand Tissue Injury Model**

What is the Natural History of Biologic Tissue?

### **ALL TISSUES AGE**

- Tendons and muscles
- Ligaments
- Chondral / hyaline cartilage
- Fibrocartilage of the joints
- Nerves and Blood vessels (arteries and veins)
- Skin
- Bone



# Extent of Injury Evaluation

## Understand Tissue Injury Model

### What is the Natural History of Biologic Tissue?

- Biochemical changes occur with the aging process, no matter how healthy the individual.
- Connective tissues lose:
  - elasticity;
  - water content;
  - volume;
  - Other degenerative changes
- THIS IS WHY WE SEE A GREAT DEGREE OF TISSUE CHANGES ON MRIs in ASYMPTOMATIC INDIVIDUALS

# Extent of Injury Evaluation Tissue Injury

## Evidence-based medicine demonstrates:

- There is a natural timeline for the appearance of objective CLINICAL or IMAGING correlates of tissue injury.
- The MAJORITY of soft tissue injuries are lower grade and will resolve spontaneously with limited intervention.



# Extent of Injury Evaluation Tissue Injury

- **Connective tissue responds to injury with:**

Edema

Inflammation,

Hemorrhage,

- **These processes are also the body's mechanism to initiate repair of the structure**

# Extent of Injury Evaluation

## Tissue Injury

- The greater the trauma, the more objective evidence of acute tissue changes should be present on the clinical exam or imaging.
- The corollary is the lesser the trauma, less edema / inflammation / hemorrhage expected.
- **USE LOGIC!** Does the MOI described make sense with the objective clinical findings in the initial hours to days after the injury event?



# Extent of Injury Evaluation Tissue Injury

## Why is this important?

Type and degree of injury will determine

- Recovery time
- Prognosis
- Recommended treatment



# Extent of Injury Evaluation Tissue Injury

## Why is this important?

Type and degree of injury will determine:

### **COMPENSABLE DIAGNOSES**

These can the be applied to:

ODG for MMI

MDG for RTW

EBM for EOI



# Extent of Injury Evaluation

## Tissue Injuries and Changes

- Not ALL structural changes in connective tissues are synonymous with an injury.
- While structural changes can occur as a result of trauma but are most often degenerative.
- Since several of the "tissue injury" terms can be degenerative, there should be some acute, objective findings or structural change in a tissue if it is proposed to be due to an injury
- The term TEAR has a connotation of trauma, but most of these changes are degenerative, resulting from the slow, insidious breakdown of tissue over time.



# Extent of Injury Evaluation **CLASSIFICATION OF TISSUE INJURY:**

**While the following may seem elementary,**

Lack of basic understanding  
of tissue injury model

will limit success of providing a

**LEGALLY SUFFICIENT**

**EXTENT OF INJURY ANALYSIS**



# **Extent of Injury Evaluation Tissue Injury Model**

## **TISSUE CHANGES / POTENTIAL INJURY**

**Strain**

**Sprain**

**Tendinopathy / Tendinitis**

**Abrasion**

**Contusion**

**Bruise**

**Neuropathy**

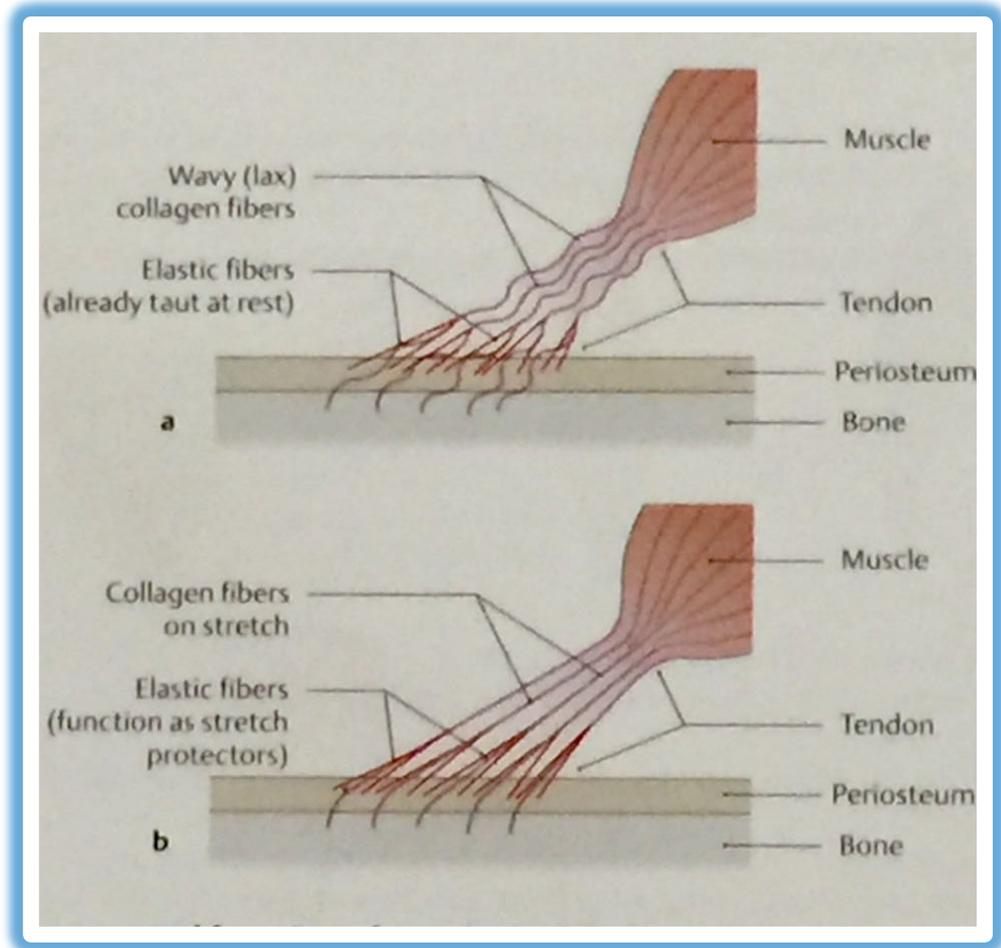
# Extent of Injury Evaluation

## Tissue Changes and Injury

- These terms are often used interchangeably
- While some may co-exist, they are generally not synonymous.
- ALL these terms demonstrate a continuum of tissue changes or disruption.

# Extent of Injury Evaluation Strains

- A **strain** occurs when the fibers of a muscle or tendon overextend / stretch / *tear* due to mechanical stress.
- Can occur as a result of:
  - repetitive contraction
  - excessive eccentric load
  - age and time





# Extent of Injury Evaluation Sprains

A **sprain** is a stretching of the ligaments of a joint.

- Ligaments are tough, semi-elastic bands of fibrous tissue that connect one bone to another in a joint.
- Sprains occur after mechanical stress to a joint, disrupting some or **all** the fibers of the ligament.
- Sprains are usually traumatic but **may** be due to chronic attrition (i.e. ACL of knee in the face of OA).
- Sprains of ligaments can heal uneventfully, **BUT** when more significant, due to residual lengthening or disruption of the ligament fibers, it can result in instability of the joint.



# Extent of Injury Evaluation

## Sprains and Strains

Sprains are graded by the degree of fiber disruption.

Grade I = Mild (stretching)

Grade II = Moderate

Grade III = Severe

(Grade II and III usually with some macroscopic changes)

*Further information is available in the  
Official Disability Guidelines (ODG) and the  
Medical Disability Guidelines (MDG).*

# Extent of Injury Evaluation

## Sprains and Strains

### Grade I = Mild

- Stretching of the muscle tendon unit
- Typically, microscopic or minimal disruption of the muscle, tendon or ligaments

# Extent of Injury Evaluation

## Sprains and Strains

### Grade I = Mild

#### Clinical Findings:

- Some localized swelling
- Stretching of the ligament or contraction of the muscle may be painful
- No instability
- Resolve uneventfully within weeks

# Extent of Injury Evaluation

## Sprains and Strains

### Grade II = Moderate

- Some macroscopic disruption or tearing of the fibers
- Tendons and ligaments have a height, width and length, so PARTIAL tears can have a variable degree of involvement of those dimensions
- The muscle or tendon has not been completely disrupted

# Extent of Injury Evaluation

## Sprains and Strains

### Grade II = Moderate

#### Clinical Findings:

- Loss of strength (often due to pain inhibition)
- Local swelling or joint effusion
- Limitation in active motion
- Some degree of joint instability on clinical exam (especially if a SPRAIN)

# Extent of Injury Evaluation

## Sprains and Strains

### Grade III = Severe

- Complete rupture in the muscle tendon unit or ligament at mid-point or avulsion
- Mechanism is usually much more substantial IF the grade III disruption is traumatic.
- Often other associated tissue injuries
- Individual will often report hearing a loud pop or snap when the injury occurred (although “pops and snaps” may occur without tissue disruption)

# Extent of Injury Evaluation

## Sprains and Strains

### Grade III = Severe

#### Clinical findings:

- Very painful at the location of injury.
- May be a palpable defect in the muscle or tendon.
- Grade III muscle strain / ligament sprain will often have very serious bruising and swelling and pain with movement of the tissue.
- Grade III ligament injury results in significant joint effusion and substantial joint instability with or without bone contusions that are evident on MRI.
- Once a large effusion established, clinical instability may be masked

# Extent of Injury Evaluation

## Sprains and Strains

### Tendinopathy:

Any dysfunction of a tendon, manifest as tendon damage involving overuse, microtears and collagen degeneration.

- Broad terms encompassing conditions occurring in and around tendons usually in response to overuse or age.
- Typically, chronic conditions of a tendon.

# Extent of Injury Evaluation Tendonitis vs. Tendinopathy

## Tendinopathy:

- Recent basic science research suggests little or no inflammation is present in tendons exposed to overuse.
- Many of the biochemical changes in tendinopathy are pathologic and result in tendon degeneration, whereas others appear to be beneficial or protective.
- Many of the initial anatomic changes to a tendon are sub-clinical (no symptoms) or produce only intermittent brief periods of “soreness.”



# Extent of Injury Evaluation

## Sprains and Strains

**Tendonitis:** An "inflammatory" process within a tendon. Not always due to an acute event.

**Tendinosis:** Appearance of a tendon on imaging after the fibers of the tendon start breaking down and there are breakdown products / mucinous replacement. The tendon often actually appears "thicker" for a period before more macroscopic tears appear.

**"Tear":** An area of tendon where there are visible defects in the width, length or depth of a tendon.

# Extent of Injury Evaluation

## Contusions & Bruises & Abrasions

**Bruises & Contusions are somewhat interchangeable but are due to blunt trauma.**

- A **bruise** requires injury to tissues, resulting in extravasation of blood out of broken blood vessels in a diffuse pattern.
- As the blood accumulates under the skin or the heme in the blood breaks down, the colors change.
- When there is breakage of the skin, this is called an **abrasion**, which can have surrounding bruising.

# Extent of Injury Evaluation

## Contusions & Bruises & Abrasions

(continued)

- The depth of a bruise / contusion can vary; what is below the surface can be greater than what is visible at the surface.
- Contusions can also occur at the level of the bone
- These usually require greater force or degree of injury (i.e. “kissing lesions” of the femur and tibia after a grade III sprain of the ACL)

# Extent of Injury Evaluation

## Hematoma & Seroma

### Other terms related to blunt trauma.

A **HEMATOMA** is a pocket or localized area of collected blood.

- Often due to a larger blood vessel with injury.
- These can present with more swelling from the underlying collection of blood.

A **SEROMA** is a mass caused by the accumulation of serum within a tissue or an organ.

- Seromas may accumulate as a complication of surgery or after other traumatic injuries to soft tissues.

These may require more specific treatment to remove the collection.

# Extent of Injury Evaluation Neuropathy

## Other terms related to trauma.

**NEUROPATHY:** These are more often related to diseases.

- When due to trauma, severity progresses from blunt trauma, stretch or laceration.
- **NEUROPRAXIA:** Swelling within a nerve
- **AXONOTMESIS:** When there is disruption of some or all the axons within a nerve, but preservation of the external connective tissue support
- **NEUROTOMESIS:** Transection of the axons and the connective tissue support.

# Extent of Injury Evaluation Neuropathy

## **NEUROPATHY:** due to trauma

- **NEUROPRAXIA:** Usually 100 % reversible over time as swelling dissipates. Most common form of trauma
- **AXONOTMESIS:** The external connective tissue support is intact, so after the initial 1 – 2 weeks, recovery is ~ 1 – 5 mm / day. Prognosis variable.
- **NEUROTOMESIS:** The connective tissue support is damaged, so the nerve **WILL NOT** regenerate unless the connective tissue tube is reapproximated. Prognosis guarded

# Extent of Injury Evaluation

## Analysis of Injury

**Mechanism of injury (MOI) is an important concept in the analysis of an injury.**

- **The MOI is defined by the principal direction of force in relation to the injured segment.**
- **Tissues fail due to local stress *and* can be affected by:**
  - **Factors that alter stress distribution; joint position or muscle tension**
  - **Systemic factors that affect the health of the tissue.**



# Extent of Injury Evaluation

## Analysis of Injury

- Tissue injury occurs when a force exceeds the tissue's ability to tolerate that force and is disrupted.
  - ***Make your MOI statement more detailed than the preceding statement***
- The degree of injury will be determined by clinical and radiologic findings.

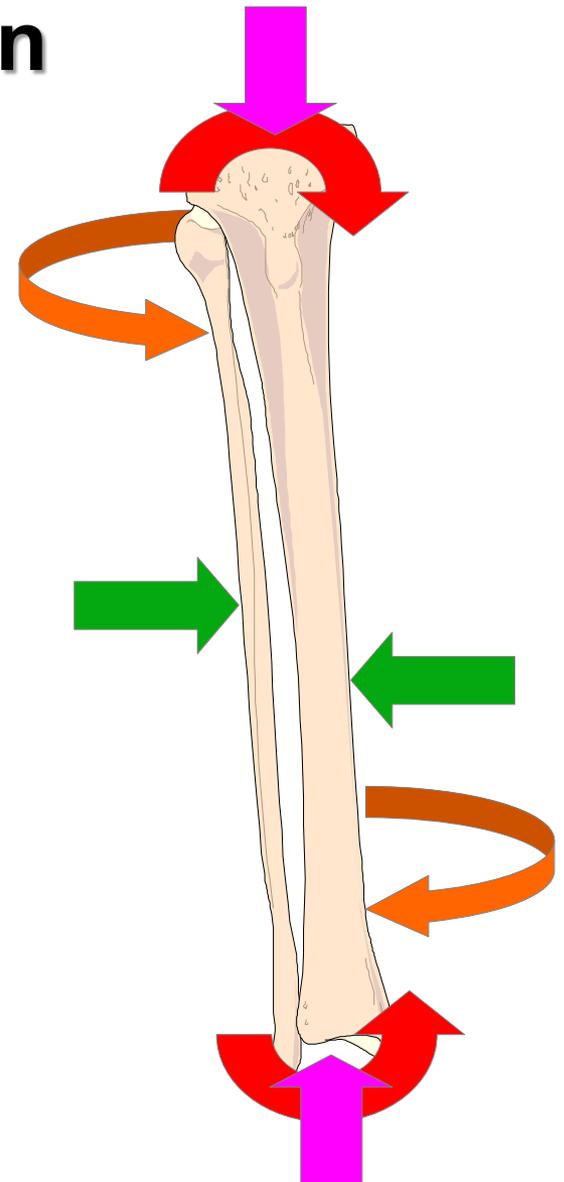
Grades I, II, III

(and higher for some joints or fractures)

# Extent of Injury Evaluation Mechanism

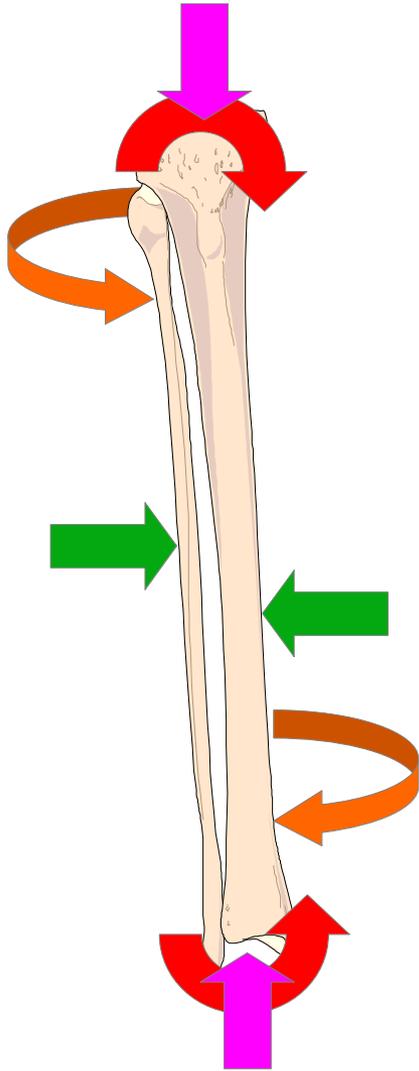
## Forces that cause tissue injury

- Axial Load = Compression (Pink)
  - Bending (Red)
  - Shear (Green)
  - Torsion (Orange)
    - Distraction



# Extent of Injury Evaluation

## Tissue Injury



- **Effects of of the applied force are dependent upon:**
  - age
  - gender
  - body mass
  - bone density
  - individual variations in tissue health
- **Factors affecting local stress:**
  - joint position
  - muscle tension



# Extent of Injury Evaluation Tissue Injury

## Evidence-based medicine demonstrates:

- More significant injuries require more intervention and minor injuries should require less.
- With appropriate treatment, the injury should result in limited residual effect.
- On-the-job injuries can result in greater cost and length of treatment and greater “*Disability*” than other injuries. **Refer to the ODG and other EBM.**



# Extent of Injury Evaluation

## Alternate Explanations

Doctors must be cognizant of alternate explanations for the continued perceived or claimed symptoms and disability:

- A different musculoskeletal or neurologic “*usual disease of life*” mimicking the proposed work-related injury.
- **Non-Injury related factors:**
  - Misattribution of symptoms to an injury event
  - Subconscious secondary gain
  - Conscious manipulation



# QUESTIONS about the Basic Science Section?





# **Designated Doctor Evaluation Case Study #1**

**LET'S TEST OUR SKILLS**

**WITH A CASE THAT CORELATES**

**THE MOI / HX / PE / IMAGING / EBM**

# Designated Doctor Evaluation Case Study #1

Insurance carrier requests DD exam to determine  
**MMI and IR.**

Remember, DWC -32 no longer lists conditions currently accepted by the insurance carrier.

For this case, your review of the medical records indicate that there is at least a diagnosis of:

**Right shoulder strain**



# Designated Doctor Evaluation Case Study

## Before the evaluation, the DD reviews:

- medical records;
- additional questions asked in the history based on records;
- relevant anatomy and clinical examinations in the records; and
- evidence-based medicine regarding the condition or diagnosis.

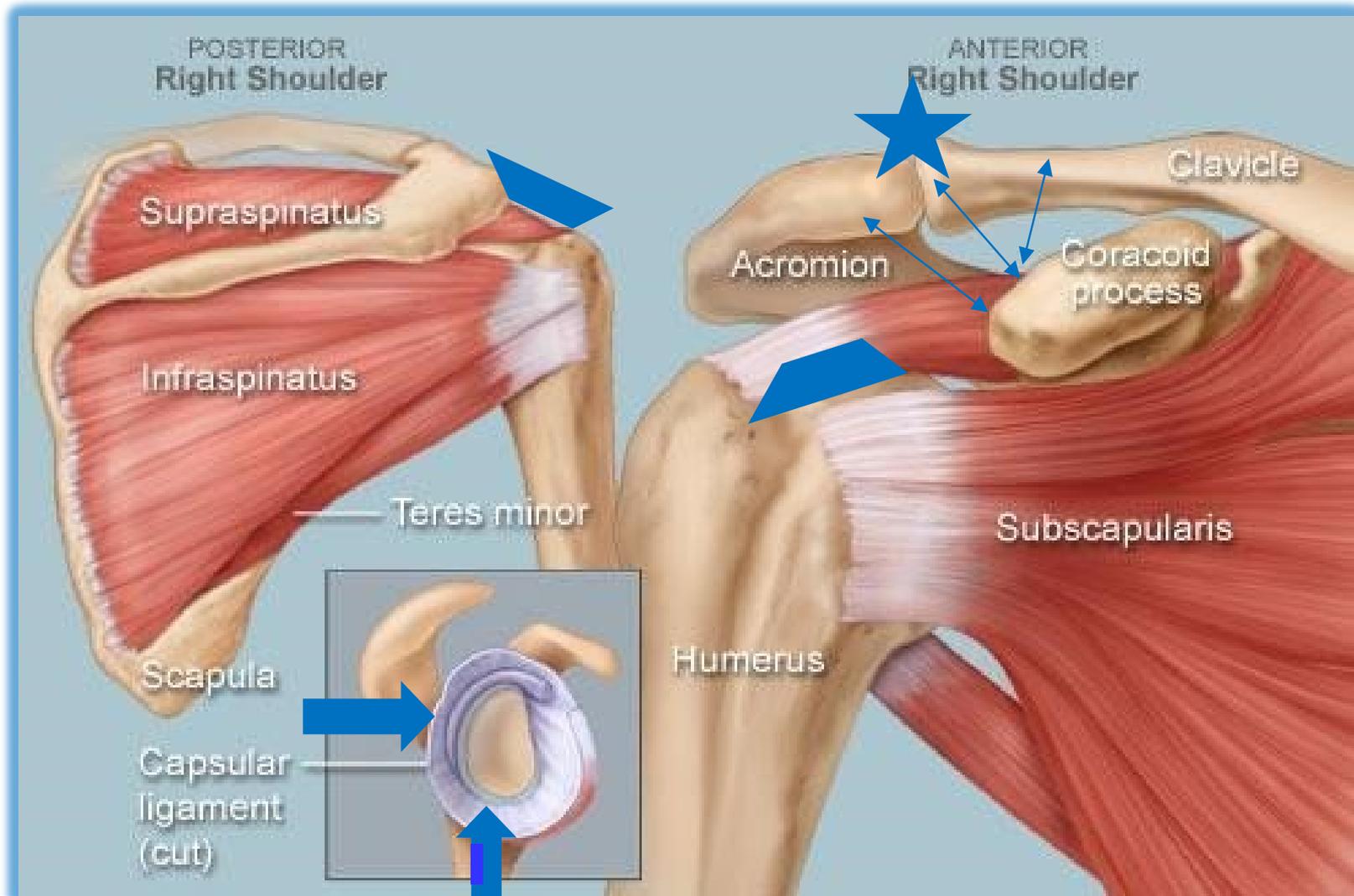
# Extent of Injury Evaluation Case Study

**For this case study, let's review:**

- Relevant anatomy
- How that relates to imaging studies & EBM

# Designated Doctor Evaluation - Case Study

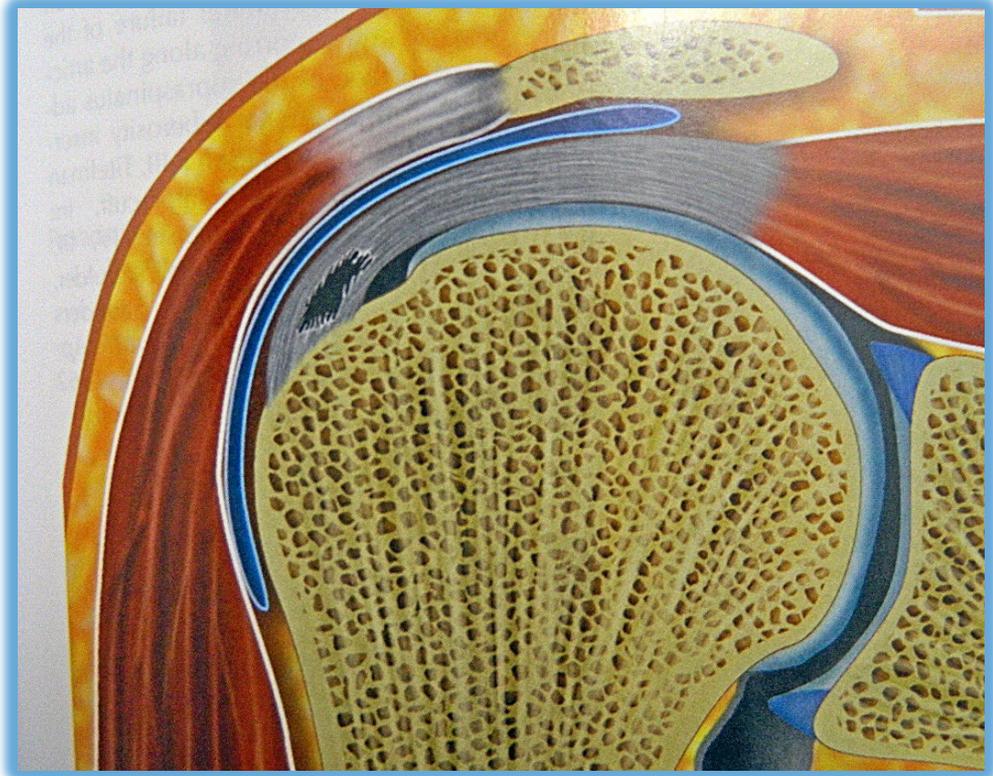
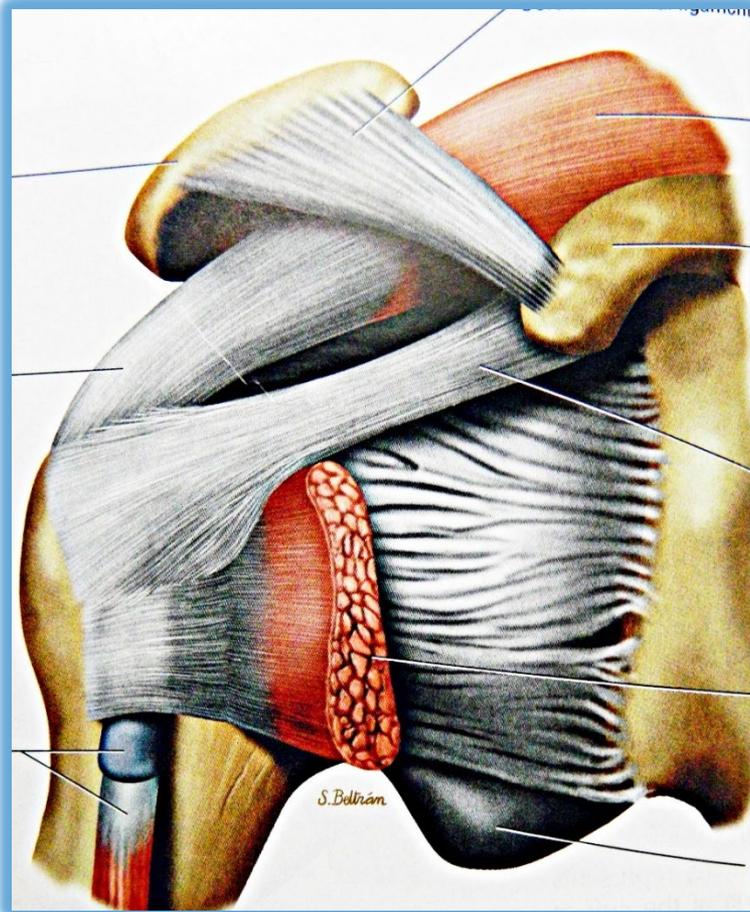
## Landmarks of the Shoulder





# Designated Doctor Evaluation Case Study

## Schematic Frontal View of Right Shoulder



**Coronal Cross-Section**  
**Example of Interstitial Tear**



# Designated Doctor Evaluation MRI of the Shoulder - Rotator Cuff Tears

- **Complete** Rotator Cuff Tear (CRCT)  
Full thickness and full width
- **Full thickness** rotator cuff tear (FTRCT)  
Vertical with a connection from joint to bursa,  
NOT involving the whole width of tendon
- **Partial thickness** rotator cuff tear (PTRCT)  
Bursal surface,  
Articular surface,  
Intrasubstance



# Designated Doctor Evaluation MRI of the Shoulder - Rotator Cuff Tears

## Complete Rotator Cuff Tear (CRCT) – in general

- Extend from articular to bursal surface, most commonly in supraspinatus tendon.
- Most direct sign of rotator cuff tear is presence of tendon defect filled with fluid>
- Tendon retraction may also be present.
- Indirect signs of complete RCT on MRI are:
  - subdeltoid bursal effusion; medial dislocation of the biceps; fluid along the biceps tendon; and diffuse loss of tendon volume.



# Designated Doctor Evaluation MRI of the Shoulder - Rotator Cuff Tears

## Full thickness partial tear:

- Hyperintense signal area within the tendon on T2W, fat-suppressed and GRE sequences (fluid signal). These may appear as:
  - Extending to either the bursal or articular surface.
  - Intrastance or interstitial due to delamination of the intrastance fibers.
  - Retraction of tendinous fibers from the distal insertion onto the greater tuberosity may also be considered partial tear.



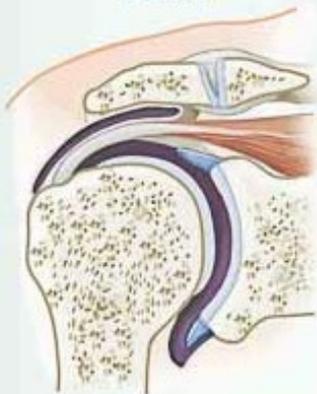
# Designated Doctor Evaluation MRI of the Shoulder - Rotator Cuff Tear

## Signs of Chronicity:

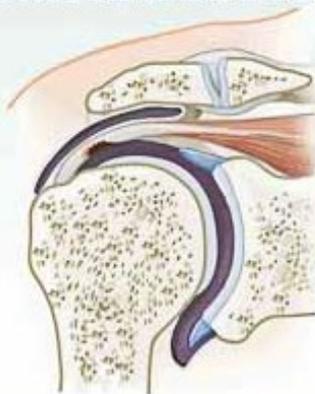
- Degenerative changes at acromioclavicular (AC) joint; and
- AC joint cysts
- Muscle atrophy and fatty replacement in the muscle of the torn tendon. This is a process that takes some time. This can be graded using:
  - Goutallier classification; or
  - Tangent sign or scapular ratio

# Designated Doctor Evaluation Rotator Cuff Tear Classification

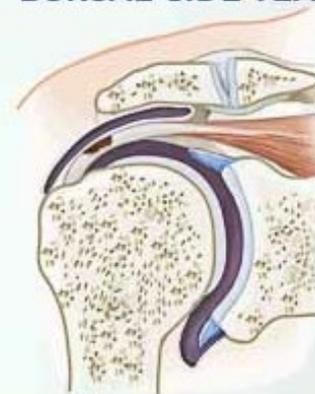
**NORMAL  
CUFF**



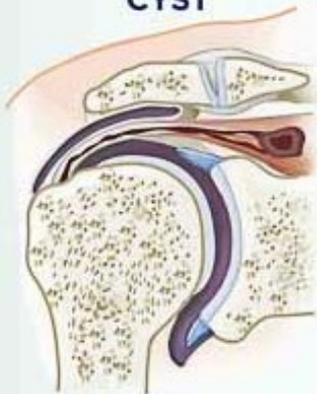
**PARTIAL-THICKNESS  
ARTICULAR SIDE TEAR**



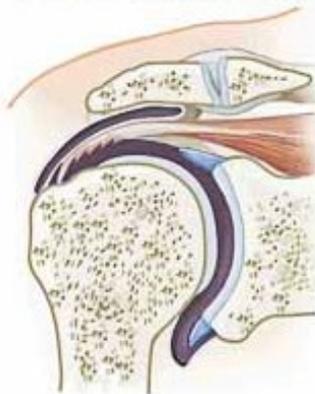
**PARTIAL-THICKNESS  
BURSAL-SIDE TEAR**



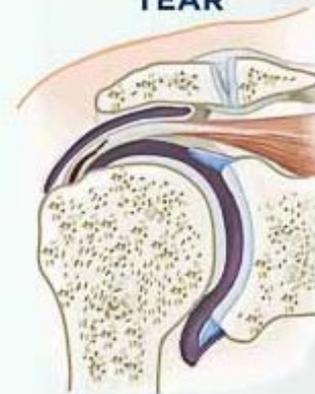
**INTRAMUSCULAR  
CYST**



**PASTA PARTIAL-THICKNESS  
AVULSION OF SST**

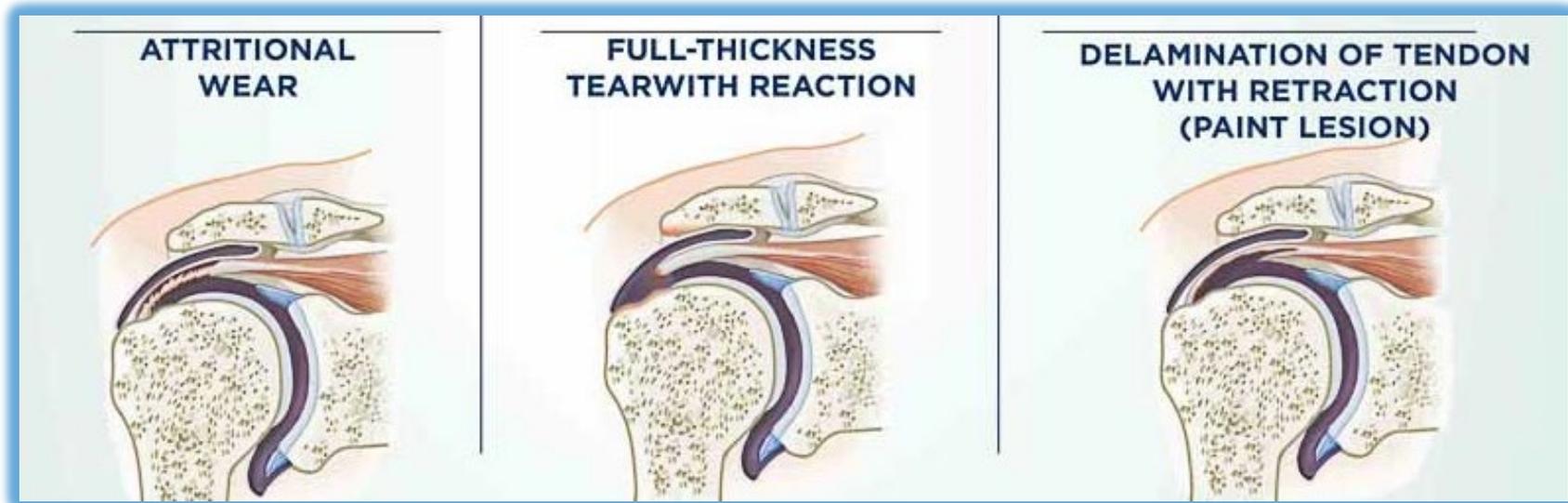


**INTERSTITIAL  
TEAR**





# Designated Doctor Evaluation Rotator Cuff Tear Classification





# Designated Doctor Evaluation MRI Imaging

## Ordering of Imaging:

- Should be based on a ***presumptive diagnosis***.
- Should meet **INDICATIONS** for testing; “*a valid reason to use a certain test*”.
- Should be no **CONTRAINDICATIONS** for testing; “*a risk of a procedure or test that outweighs the benefits*”.
  - What is net benefit?
  - Cost?
  - Will it result in unnecessary treatment of incidental findings?



# Designated Doctor Evaluation Correlation of Imaging to Clinical Examination

- Imaging is a “snapshot” of the anatomic structure.
- Imaging cannot convey the biomechanics or function of the area, and certainly not what clinical symptoms may be present.
- A good clinical examination will help to tease out what imaging findings are relevant.
- **A doctor must rely upon the mechanism of injury, other historical information and evidence-based medicine to make a causation analysis.**

# Designated Doctor Evaluation

## Rotator Cuff Tear

### Case Study - History

- 52 year old right hand dominant male with a reported date of injury of March 9, 2019.
- Loading a full heavy lumber carrier, which started to tip, causing the lumber to shift. He tried to catch the wood load with his right arm and hold the carrier with his left arm.
- Felt a sudden and heavy pull to his right arm as it was away from his side (abduction / distraction force).
- The injured employee described that he had an immediate pain and an audible and palpable pop at his superior lateral right shoulder.

# Designated Doctor Evaluation Rotator Cuff Tear

## Case Study - History

- Within hours the claimant had difficulty lifting his right arm to the front or to the side.
- After a few weeks of resting the shoulder, his pain diminished.
- It hurt worse to lift the right arm away from his body than in front of the body
- Records demonstrate consistent location of pain at the anterolateral superior shoulder and not his AC joint

# Designated Doctor Evaluation Rotator Cuff Tear

## Case Study - History

- Current pain is at the leading edge of supraspinatus of the right shoulder
- Worse with range of motion of 80 to 100 degrees of abduction.
- Pain can radiate to the right side of the neck; but doesn't worsen with head or neck movements.
- Pain can ache to the upper arm but denies pain or paresthesias into his right forearm and hand

# Designated Doctor Evaluation Rotator Cuff Tear

## Case Study - History

- Initial x-rays of the right shoulder were negative except for some AC joint arthrosis.
- Had initial 6 visits of PT with limited response with persistent / consistent findings on exam
- Due to history and clinical findings, the treating doctor developed a presumptive diagnosis of an acute rotator cuff tear

# Designated Doctor Evaluation

## MRI of the Shoulder

### CASE STUDY:

#### MRI of the Right Shoulder:

- Completed ~ 6 weeks after the date of injury
- 1.5 T magnet and trauma sequences

#### Findings:

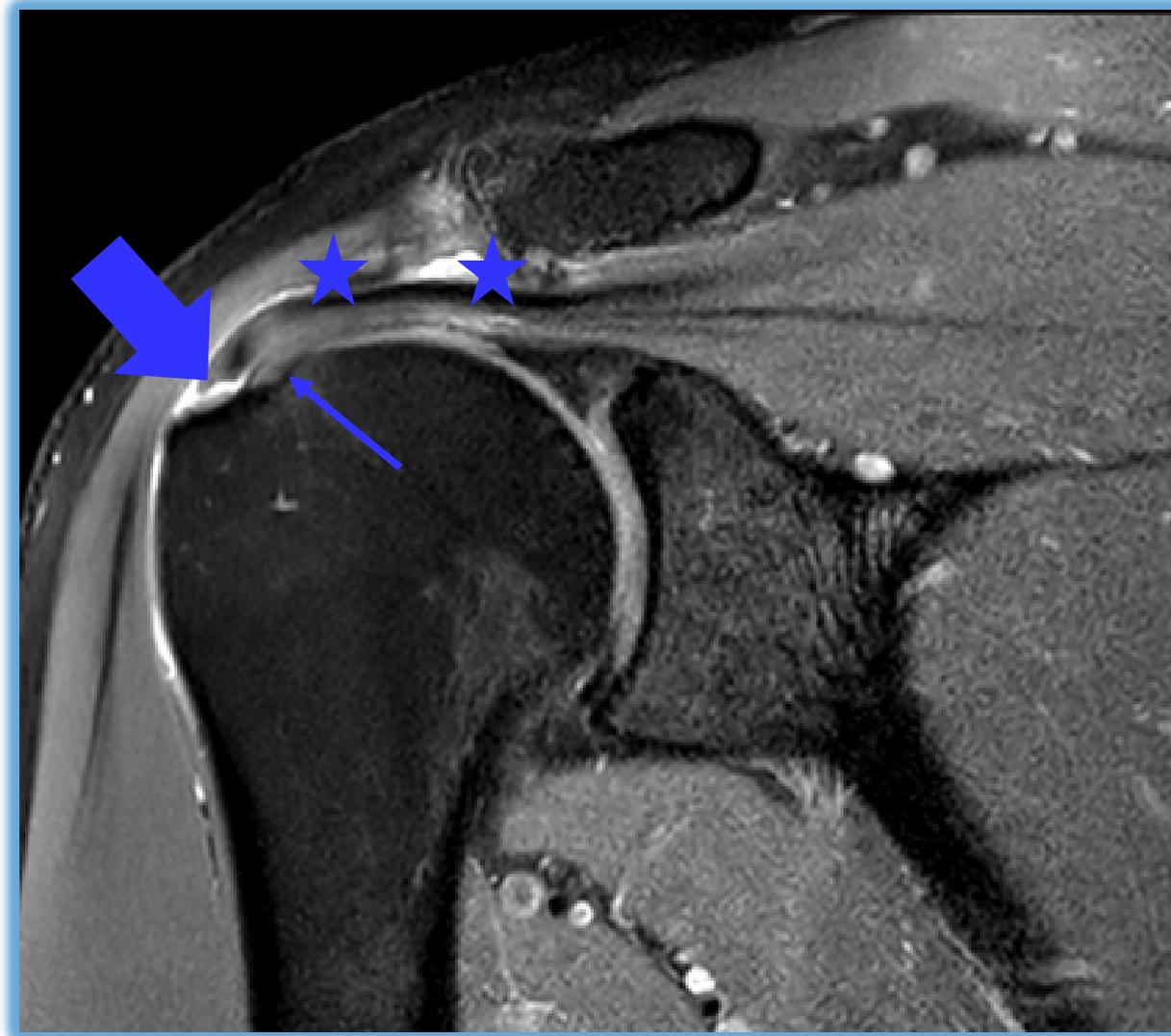
- High grade partial thickness supraspinatus rotator cuff tear
- Tendinosis of the supraspinatus
- Mild AC joint arthritis
- No fatty infiltration of the supraspinatus muscle



# DD

## Evaluation: Case Study

- Coronal oblique STIR MRI of the shoulder
- Partial rotator cuff tear at bursal surface with tendinosis
- Large arrow = tear
- Skinny arrow = intact fibers
- Stars = Above zone of tendinosis



# Designated Doctor Evaluation Rotator Cuff Tear

## Case Study – Treating doctor

- Provides a subacromial injection
- Additional 6 visits of PT with some improvements in strength and function below shoulder level, but persistent pain when training above shoulder level necessary for his job.
- Additional treatment denied as he has had all appropriate treatment per the ODG for a shoulder “strain”



# Designated Doctor Evaluation Rotator Cuff Tear

## Case Study - DD Examination

- No evidence of deformity or atrophy involving the right shoulder girdle.
- “Popeye’s sign” was negative.
- No winging of the scapula.
- No muscle atrophy in the upper arms or forearms by measurement nor suprascapular/infrascapular fossa.
- Tenderness was present at the anterolateral greater tuberosity at the supraspinatus insertion.
- No tenderness over the AC joint.



# Designated Doctor Evaluation Rotator Cuff Tear

## Case Study - DD Examination

- Active left shoulder ROM was full in all planes.
- Passive ROM of the right shoulder was full.
- Active right shoulder ROM in degrees: flexion 150 and abduction 145, both with a significant positive impingement interval from 85 to 110 degrees.
- Extension 35, adduction 15.
- Internal rotation from 90 degrees abduction was to 15 degrees and painful at area of maximal tenderness.
- External rotation from 90 degrees abduction was to 60 degrees.



# Designated Doctor Evaluation Rotator Cuff Tear

## Case Study - DD Examination

- Manual muscle testing 4/5 at the supraspinatus and infraspinatus due to pain near the greater tuberosity.
- No other C5 or C6 innervated muscles with “weakness” and no C5 or C6 dermatomal sensory loss
- Partially positive drop arm test, a positive Hawkins-Kennedy test and a mildly positive Yergason’s test.
- Crossed adduction/ Scarf test was negative at the AC joint. Negative lift off test for subscapularis pain. Negative apprehension test in supine.

# Designated Doctor Evaluation Rotator Cuff Tear

## Case Study – Imaging

- Already Reviewed



# Designated Doctor Evaluation Rotator Cuff Tear

## Case Study – Evidence-based Medicine

Appearance on MRIs of asymptomatic individuals occur with increased frequency with each decade of life:

- rotator cuff tendinosis
- partial rotator cuff tears
- complete rotator cuff tears
- AC joint arthrosis
- labral tears and degeneration

# Designated Doctor Evaluation DD Examination for MMI and IR

- **To determine MMI (and IR), the DD must determine the compensable diagnoses**
- **Similar to an EOI analysis, DD should consider:**
  - mechanism of injury;
  - timing of complaints / findings;
  - clinical examination;
  - imaging; and
  - evidence-based medicine
- **Once compensable diagnoses determined, those may be APPLIED to the ODG.**



# Designated Doctor Evaluation DD Examination for MMI and IR

## Case Study

- DD determines the diagnosis based on the review of records and the certifying examination.
- The DD's opinion is that the events of the DOI produced or caused:  
Right shoulder strain  
AND  
Right Shoulder – High grade partial thickness supraspinatus rotator cuff tear

*#Must explain with a process similar to EOI analysis*



# Designated Doctor Evaluation DD Examination for MMI and IR

**The DD stated that the claimant was  
NOT at MMI:**

*“Based on the records, my certifying exam, the clinical diagnoses and the ODG, including Appendix D, there is reasonable medical probability that additional treatment would be anticipated to result in further material recovery”.*

# Designated Doctor Evaluation Rotator Cuff Tear

## Case Study DWC Form-69

S39.012A = Shoulder strain,  
right

S46.01 = Strain of the  
muscle(s) and tendon(s) of  
the rotator cuff of the  
shoulder

M75.01 = Unspecified  
rotator cuff tear or rupture

DWC069



**Texas Department of Insurance**  
Division of Workers' Compensation  
7551 Metro Center Drive, Suite 100 • MS-94  
Austin, TX 78744-1645  
(800) 252-7031 phone • (512) 490-1047 fax

Complete if known:  
DWC Claim #  
Carrier Claim #

### Report of Medical Evaluation

<b>I. GENERAL INFORMATION</b>			4. Injured Employee's Name (First, Middle, Last)		9. Certifying Doctor's Name and License Type		
1. Workers' Compensation Insurance Carrier		5. Date of Injury		6. Social Security Number		10. Certifying Doctor's License Number and Jurisdiction	
2. Employer's Name		7. Employee's Phone Number		11. Certifying Doctor's Phone and Fax Numbers (Ph) (Fax)			
3. Employer's Address (Street or PO Box, City State Zip)		8. Employee's Address (Street or PO Box, City State Zip)		12. Certifying Doctor's Address (Street or PO Box, City State Zip)			

**II. DOCTOR'S ROLE**

13. Indicate which role you are serving in the claim in performing this evaluation. Only a doctor serving in one of the following roles is authorized to evaluate MMI/impairment and file this report [28 Texas Administrative Code (TAC) §130.1 governs such authorization]:

Treating Doctor     Doctor selected by Treating Doctor acting in place of the Treating Doctor     Designated Doctor selected by DWC  
 Insurance Carrier-selected RME Doctor approved by DWC to evaluate MMI and/or permanent impairment after a Designated Doctor examination

**NOTE:** If you are not authorized by 28 TAC §130.1 to file this report, you will not be paid for this report or the MMI/impairment examination.

**III. MEDICAL STATUS INFORMATION**

14. Date of Exam	15. Diagnosis Codes
/ /	<span style="color: blue; font-weight: bold; font-size: 1.2em;">S39.012A</span> <span style="color: blue; font-weight: bold; font-size: 1.2em;">S46.011</span> <span style="color: blue; font-weight: bold; font-size: 1.2em;">M75.01</span>

16. Indicate whether the employee has reached Clinical or Statutory MMI based upon the following definitions:

**Clinical Maximum Medical Improvement (Clinical MMI)** is the earliest date after which, based upon reasonable medical probability, further material recovery from or lasting improvement to an injury can no longer reasonably be anticipated.

**Statutory MMI** is the later of: (1) the end of the 104th week after the date that temporary disability benefits (TIBs) began to accrue; or (2) the date to which MMI was extended by DWC pursuant to Texas Labor Code §408.104.

a)  Yes, I certify that the employee reached  STATUTORY /  CLINICAL (mark one) MMI on           /          /           (may not be a prospective date) and have included documentation relating to this certification in the attached narrative. - OR -

b)  No, I certify that the employee has NOT reached MMI but is expected to reach MMI on or before           /          /          . The reason the employee has not reached MMI is documented in the attached narrative.

**NOTE:** The fact that an employee reaches either Clinical MMI or Statutory MMI does not signify that the employee is no longer entitled to medical benefits.

**IV. PERMANENT IMPAIRMENT**

17. If the employee has reached MMI, indicate whether the employee has permanent impairment as a result of the compensable injury.

"Impairment" means any anatomic or functional abnormality or loss existing after an injury that results from a compensable injury and is reasonably presumed to be permanent. The finding that impairment exists must be made by a physician based upon objective clinical or laboratory findings meaning a medical finding of impairment resulting from a compensable injury, based upon competent objective medical evidence that is independently confirmable by a doctor, including a designated doctor, without reliance on the subjective symptoms perceived by the employee.

a)  I certify that the employee does not have any permanent impairment as a result of the compensable injury. - OR -

b)  I certify that the employee has permanent impairment as a result of the compensable injury. The amount of permanent impairment is \_\_\_\_\_%, which was determined in accordance with the provisions of the Texas Labor Code and Texas Administrative Code. The attached narrative provides explanation and documentation used for the permanent impairment rating assigned using the appropriate tables, figures, or worksheets from the following edition of the *Guides to the Evaluation of Permanent Impairment* published by the American Medical Association (AMA):

third edition, second printing, February 1989 - OR -  
 fourth edition, 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, or 4<sup>th</sup> printing, including corrections and changes issued by the AMA prior to May 16, 2000.

**NOTE:** A finding of no impairment is not equivalent to a 0% impairment rating. A doctor can only assign an impairment rating, including a 0% rating, if the doctor performed the examination and testing required by the AMA Guides.

# Designated Doctor Evaluation Rotator Cuff Tear

## Case Study DWC Form-69

MMI = Not at MMI;

ODG would support additional treatment for these diagnoses, AND would be anticipated to result in further material recovery.

DWC069



**Texas Department of Insurance**  
Division of Workers' Compensation  
7551 Metro Center Drive, Suite 100 • MS-94  
Austin, TX 78744-1645  
(800) 252-7031 phone • (512) 490-1047 fax

Complete if known:  
DWC Claim #  
Carrier Claim #

### Report of Medical Evaluation

<b>I. GENERAL INFORMATION</b>			<b>4. Injured Employee's Name</b> (First, Middle, Last)	<b>9. Certifying Doctor's Name and License Type</b>
<b>1. Workers' Compensation Insurance Carrier</b>	<b>5. Date of Injury</b>	<b>6. Social Security Number</b>	<b>10. Certifying Doctor's License Number and Jurisdiction</b>	
<b>2. Employer's Name</b>	<b>7. Employee's Phone Number</b>		<b>11. Certifying Doctor's Phone and Fax Numbers</b> (Ph) (Fax)	
<b>3. Employer's Address</b> (Street or PO Box, City State Zip)	<b>8. Employee's Address</b> (Street or PO Box, City State Zip)		<b>12. Certifying Doctor's Address</b> (Street or PO Box, City State Zip)	

**II. DOCTOR'S ROLE**

**13. Indicate which role you are serving in the claim in performing this evaluation. Only a doctor serving in one of the following roles is authorized to evaluate MMI/impairment and file this report [28 Texas Administrative Code (TAC) §130.1 governs such authorization]:**

Treating Doctor     Doctor selected by Treating Doctor acting in place of the Treating Doctor     Designated Doctor selected by DWC  
 Insurance Carrier-selected RME Doctor approved by DWC to evaluate MMI and/or permanent impairment after a Designated Doctor examination

**NOTE:** If you are not authorized by 28 TAC §130.1 to file this report, you will not be paid for this report or the MMI/impairment examination.

**III. MEDICAL STATUS INFORMATION**

<b>14. Date of Exam</b> / /	<b>15. Diagnosis Codes</b> <b>S39.012A S46.011 M75.01</b>
--------------------------------	--

**16. Indicate whether the employee has reached Clinical or Statutory MMI based upon the following definitions:**

**Clinical Maximum Medical Improvement (Clinical MMI)** is the earliest date after which, based upon reasonable medical probability, further material recovery from or lasting improvement to an injury can no longer reasonably be anticipated.

**Statutory MMI** is the later of: (1) the end of the 104th week after the date that temporary income benefits (TIBs) began to accrue; or (2) the date to which MMI was extended by DWC pursuant to Texas Labor Code §408.104.

a)  Yes, I certify that the employee reached  STATUTORY /  CLINICAL (mark one) MMI on \_\_\_\_/\_\_\_\_/\_\_\_\_ (may not be a prospective date) and have included documentation relating to this certification in the attached narrative. - OR -  
 No, I certify that the employee has NOT reached MMI but is expected to reach MMI on or about \_\_\_\_/\_\_\_\_/\_\_\_\_. The reason the employee has not reached MMI is documented in the attached narrative. **6 months after DD exam**

**NOTE:** The date that an employee reaches either Clinical MMI or Statutory MMI does not signify that the employee is no longer eligible for all benefits.

**IV. PERMANENT IMPAIRMENT**

**17. If the employee has reached MMI, indicate whether the employee has permanent impairment as a result of the compensable injury.**

"Impairment" means any anatomic or functional abnormality or loss existing after MMI that results from a compensable injury and is reasonably presumed to be permanent. The finding that impairment exists must be made based upon objective clinical or laboratory findings meaning a medical finding of impairment resulting from a compensable injury, based upon competent objective medical evidence that is independently confirmable by a doctor, including a designated doctor, without reliance on the subjective symptoms perceived by the employee.

a)  I certify that the employee does not have any permanent impairment as a result of the compensable injury. - OR -  
b)  I certify that the employee has permanent impairment as a result of the compensable injury. The amount of permanent impairment is \_\_\_\_%, which was determined in accordance with the requirements of the Texas Labor Code and Texas Administrative Code. The attached narrative provides explanation and documentation used for the calculation of the impairment rating assigned using the appropriate tables, figures, or worksheets from the following edition of the *Guides to the Evaluation of Permanent Impairment* published by the American Medical Association (AMA):  
 third edition, second printing, February 1989 - OR -  
 fourth edition, 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, or 4<sup>th</sup> printing, including corrections and changes issued by the AMA prior to May 16, 2000.

**NOTE:** A finding of no impairment is not equivalent to a 0% impairment rating. A doctor can only assign an impairment rating, including a 0% rating, if the doctor performed the examination and testing required by the AMA Guides.



# Designated Doctor Evaluation DD Examination for **EXTENT OF INJURY**

## Case Study #1

- DD Exam for MMI and IR results in a request for a Second Exam.
- Injured employee's representative requests **Extent of Injury** to be addressed, so that it can be formally adjudicated.



# Second DD Exam

## Extent of Injury Evaluation

2nd DWC-32

31C. Extent of Injury

**Additional claimed diagnoses / conditions:**

Right Shoulder –

- High grade partial thickness supraspinatus rotator cuff tear
- Tendinosis of the supraspinatus
- Mild AC joint arthritis
- No fatty infiltration of the supraspinatus muscle

***(ALL from the MRI report)***



# Extent of Injury Evaluation

## DWC-32 V. Purpose for Examination

DWC032

### Part 5. Purpose of examination

**31. Requester:** Check boxes A through G next to the issues you want the designated doctor to address and provide the requested information.

<input type="checkbox"/>	<b>A. Maximum medical improvement (MMI)</b> - Has the injured employee reached MMI? If so, on what date?      Statutory MMI date (if any) _____ (mm/dd/yyyy)
<input type="checkbox"/>	<b>B. Impairment rating (IR)</b> - What is the injured employee's percentage of permanent impairment?      MMI Date* _____ (required only if Box A is <b>not</b> checked) (mm/dd/yyyy)      xx/xx/xx
*The MMI date determined valid by a final DWC decision, court, or agreement of the parties.	
<input checked="" type="checkbox"/>	<b>C. Extent of injury</b> List all injuries (diagnoses, body parts or conditions) in question, claimed to be caused by, or naturally resulting from the accident or incident <b>and</b> describe the accident or incident that caused the claimed injury. The designated doctor will answer whether they were a substantial factor in bringing about the additional claimed injuries or conditions, and without it, the additional injuries or conditions would have not occurred.

**Right Shoulder –**  
**High grade partial thickness supraspinatus rotator cuff tear,**  
**Tendinosis of the supraspinatus,**  
**Mild AC joint arthritis,**  
**No fatty infiltration of the supraspinatus muscle**

# Second DD Exam

## Extent of Injury Evaluation

**Follow the same process as DEFINING the COMPENSABLE INJURY, but with more detail and provision of evidence-based medicine for the EOI evaluation.**

- Look for any interim changes in condition over time. Does this make sense with other historical facts?
- Are your first and 2<sup>nd</sup> exam consistent with one another?
- Are there evolving non-injury related factors>
- Are there any developing usual disease of life that affect your compensable diagnosis decision OR would affect treatment options?

**As long as there are no significant changes in the condition, then the DD analysis would be the same.**

# EOI – Case #1: Report

- Address ***Extent of Injury***, with a causation analysis that the events of the DOI **were** a substantial factor in producing or aggravating.
- In this case the DD opinion is that the compensable diagnosis **does** extend to:  
**Right Shoulder Strain**  
*AND from additional claimed injuries*  
**Right Shoulder**  
**High grade partial thickness supraspinatus rotator cuff tear**



# EOI – Case #1 - Report

- Address ***Extent of Injury***, with a causation analysis that that explains the events on the date of injury **were not** a substantial factor in producing or aggravating and therefore the compensable injury **does not** extend to:

**Right shoulder**

**Tendinosis of the supraspinatus,**

**Mild AC joint arthritis,**

**No fatty infiltration of the supraspinatus muscle**



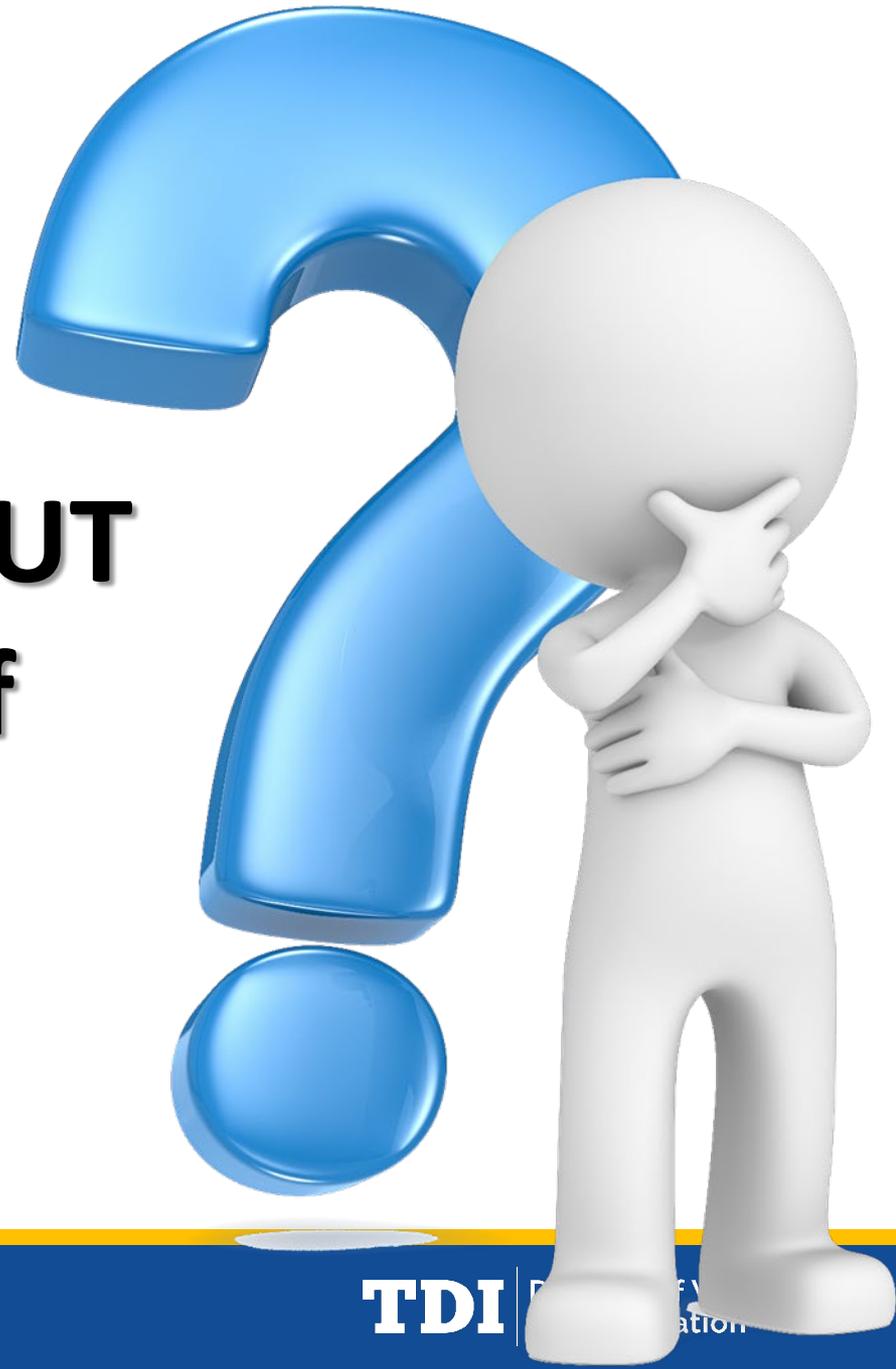
# Second DD Exam

## Extent of Injury Evaluation

- The **DWC-68** would give details as to WHICH of the additional claimed injuries were and were not determined to be compensable by the DD
- The **narrative report** would EXPLAIN which of the additional claimed diagnoses were and were not considered to be compensable, following a structured analysis.



# **QUESTIONS ABOUT MMI / EXTENT of INJURY CASE 1?**





# POD for MMI, IR and EOI - Case #2

This will be a case where you receive a **Presiding Officer Directive (POD)** for:

You are asked to address  
**MMI, IR and EOI** and provide  
**Multiple Certifications**



# MMI, IR and EOI Case #2

## History of Injury:

- 45-year-old male warehouse worker with acute onset left sided low back pain four months ago after lifting a 150-lb toolbox.
- His lumbar spine was flexed and twisted awkwardly to the right at onset of lifting this heavy load.
- He felt and heard a pop on the left just below the waistline.

# MMI, IR and EOI - Case #2

## History of Injury (cont'd)

- Medical records and history consistently document immediate left sided low back pain just below the waistline.
- Examination demonstrated tenderness focally on the left at the L5S1 level, in the lower lumbar paraspinal muscles on the left, with a lumbar list to the right.
- This was accompanied by tenderness in the left sciatic notch and proximal radicular pain four days after DOI.



# MMI, IR and EOI – Case #2

## History of Injury (cont'd)

- Between 3 – 10 days after the DOI there was evolving pain, proximal to distal in the left leg with decreased sensation in the left S1 dermatome, slightly decreased left Achilles reflex and consistent sciatic nerve root tension signs demonstrated by left SLR in seated and supine.
- By 2 - 3 weeks after the DOI, there was evidence of weakness in the left hamstring, weak ankle and toe plantar flexors.

# MMI, IR and EOI – Case #2

## History of Injury (cont'd)

- Lumbar MRI scan at 6 weeks demonstrated:
  - L4/L5 disc degeneration;
  - L5/S1 disc desiccation;
  - L5/S1 with 6 mm left posterolateral disc herniation to the left with impingement on the exiting left S1 nerve root.
  - No other significant changes of spondylosis

# MMI, IR and EOI - Case #2

## History of Injury (cont'd)

- Signs and symptoms persist despite 10 visits of PT, NSAIDS, muscle relaxants and narcotic pain medication.
- ESI and surgery denied because any diagnoses other than a lumbar sprain/strain was disputed.



# MMI, IR and EOI – Case #2

- **You see the claimant as a DD 4 months post injury.**
- The POD specifies that the Insurance Carrier has accepted the compensable injury to be lumbar sprain/strain
- You are directed to provide multiple certifications:
  1. The carrier accepted conditions
  2. The carrier accepted conditions plus all the disputed conditions
  3. Your opinion as to the compensable conditions, if different from both 1 and 2



# MMI, IR and EOI Case #2

## EOI Disputed conditions

The POD lists additional injuries (diagnoses/body parts/conditions) in question, claimed to be caused by, or naturally resulting from accident or incident as:

- L4/L5 disc degeneration
- Disc desiccation at L5/S1 lumbar spine
- L5/S1 disc herniation with impingement on exiting left S1 nerve root



# MMI, IR and EOI - Case #2

The **DD's opinion** regarding the compensable injury MAY be:

- **The Carrier Compensable**
- **The Carrier Compensable PLUS ALL additional claimed injuries** (diagnoses/body parts/conditions)
- **Or, a certification that includes:**
  - The injuries/diagnosis(es) All the Carrier Compensable;
  - None / Some / All the additional claimed injuries (diagnoses/body parts/conditions)
  - An ADDED diagnosis (es) that you determine after your review of the case specific information in the records (Mechanism / Timeline / Imaging / EBM)



# MMI, IR and EOI – Case #2

- **In this case, the DD defines the compensable injury for certifying their opinion of MMI and IR as:**
  - **Lumbar sprain/strain** (carrier accepted per POD)
  - **L5-S1 disc herniation with impingement on exiting left S1 nerve root** (from POD list of additional claimed/disputed conditions)
  - **Left S1 radiculopathy** (determined from medical records and the DD exam.)



# MMI, IR and EOI – Case #2

- Explain in your report the basis of your opinions regarding what you define as the compensable injury from the medical records and your certifying exam with a causation analysis.
- Explain your conclusion, not just provide a conclusion.
- May use the EOI template to ensure you cover all the important points to substantiate your opinion.



# MMI, IR and EOI – Case #2

- Address ***Extent of Injury***, with a causation analysis that the events of the DOI **were** a substantial factor in producing or aggravating.
- In this case the DD opinion is that the compensable diagnosis **does** extend to:
  - Lumbar sprain/strain, and Left S1 radiculopathy (neither in box 31C on 32)
  - L5-S1 disc herniation with impingement on exiting left S1 nerve root (one of the conditions on 32)



# MMI, IR and EOI – Case #2

- Address ***Extent of Injury***, with a causation analysis that the events of the date of injury **was not** a substantial in producing or aggravating and therefore the composable injury **does not** extend to:
  - Disc degeneration at L4/L5
  - Disc desiccation at L5/S1 lumbar spine

# MMI, IR and EOI Case - #2

- **Designated Doctor's Opinion – Transmit the information as to your opinions to the DWC-69**
  - Lumbar sprain/strain
  - L5-S1 disc herniation with impingement on exiting left S1 nerve root
  - Left S1 radiculopathy

# Certification- DD Opinion

Label the Correct ICD-10 For the Diagnoses Included On your certification clearly in the appropriate box on the DWC-69

DWC069



**Texas Department of Insurance**  
**Division of Workers' Compensation**  
 7551 Metro Center Drive, Suite 100 • MS-94  
 Austin, TX 78744-1645  
 (800) 252-7031 phone • (512) 490-1047 fax

Complete if known:  
 DWC Claim #  
 Carrier Claim #

### Report of Medical Evaluation

<b>I. GENERAL INFORMATION</b>			<b>4. Injured Employee's Name</b> (First, Middle, Last)		<b>9. Certifying Doctor's Name and License Type</b>	
<b>1. Workers' Compensation Insurance Carrier</b>			<b>5. Date of Injury</b>		<b>6. Social Security Number</b>	
<b>2. Employer's Name</b>			<b>7. Employee's Phone Number</b>		<b>10. Certifying Doctor's License Number and Jurisdiction</b>	
<b>3. Employer's Address</b> (Street or PO Box, City State Zip)			<b>8. Employee's Address</b> (Street or PO Box, City State Zip)		<b>11. Certifying Doctor's Phone and Fax Numbers</b> (Ph) (Fax)	
					<b>12. Certifying Doctor's Address</b> (Street or PO Box, City State Zip)	

**II. DOCTOR'S ROLE**

13. Indicate which role you are serving in the claim in performing this evaluation. Only a doctor serving in one of the following roles is authorized to evaluate MMI/impairment and file this report [28 Texas Administrative Code (TAC) §130.1 governs such authorization]:

Treating Doctor     Doctor selected by Treating Doctor acting in place of the Treating Doctor     Designated Doctor selected by DWC  
 Insurance Carrier-selected RME Doctor approved by DWC to evaluate MMI and/or permanent impairment after a Designated Doctor examination

**NOTE:** If you are not authorized by 28 TAC §130.1 to file this report, you will not be paid for this report or the MMI/impairment examination.

**III. MEDICAL STATUS INFORMATION**

14. Date of Exam: \_\_\_\_\_ 15. Diagnosis Codes: **S33.5XXA, S39.012A, M54.17, M51.27**

16. Indicate whether the employee has reached Clinical or Statutory MMI based upon the following definitions:

**Clinical Maximum Medical Improvement (Clinical MMI)** is the earliest date after which, based upon reasonable medical probability, further material recovery from or lasting improvement to an injury can no longer reasonably be anticipated.

**Statutory MMI** is the later of: (1) the end of the 104th week after the date that temporary income benefits (TIBs) began to accrue; or (2) the date to which MMI was extended by DWC pursuant to Texas Labor Code §408.104.

a)  Yes, I certify that the employee reached  STATUTORY /  CLINICAL (mark one) MMI on \_\_\_ / \_\_\_ / \_\_\_\_\_. (may not be a prospective date) and have included documentation relating to this certification in the attached narrative. - OR -

b)  No, I certify that the employee has NOT reached MMI but is expected to reach MMI on or about \_\_\_ / \_\_\_ / \_\_\_\_\_. The reason the employee has not reached MMI is documented in the attached narrative.

**NOTE:** The fact that an employee reaches either Clinical MMI or Statutory MMI does not signify that the employee is no longer entitled to medical benefits.

**IV. PERMANENT IMPAIRMENT**

17. If the employee has reached MMI, indicate whether the employee has permanent impairment as a result of the compensable injury.

# Certification- DD Opinion

Complete the DWC Form 68 - **New as of 6/5/23**

a) Extent of injury

List all items that were included on DWC Form-032 Part 5, Box 31C and any other additional diagnoses or conditions you found to be a part of the compensable injury. Did you determine that the accident or incident giving rise to the compensable injury was a substantial factor in bringing about the additional claimed diagnoses or condition? Provide your answer below by checking Yes or No for each additional claimed diagnosis or condition. Assign the most reasonable corresponding diagnosis codes for each additional claimed diagnosis/condition. **Attach additional pages, if necessary.**

Additional claimed diagnosis or condition	Yes	No				
			Diagnosis code 1	Diagnosis code 2	Diagnosis code 3	Diagnosis code 4
1) Lumbar sprain/strain	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
2) L4/5 Disc degeneration	<input type="checkbox"/>	<input checked="" type="checkbox"/>				
3) Disc desiccation at L5/S1	<input type="checkbox"/>	<input checked="" type="checkbox"/>				
4) L5/S1 disc / impingement at S1	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
5)	<input type="checkbox"/>	<input type="checkbox"/>				
6)	<input type="checkbox"/>	<input type="checkbox"/>				
<b>Additional compensable diagnoses or conditions found by the designated doctor</b>			Diagnosis code 1	Diagnosis code 2	Diagnosis code 3	Diagnosis code 4
7) Left S1 radiculopathy						
8)						

# DD EOI Narrative - Define

A **lumbar sprain/strain** is a collective “diagnosis” to explain common spinal soft tissue injuries.

As per the MDG, the event associated with the onset of back pain are *“low force (low violence) activities the person has done multiple times in the past without injury.”*

*Physicians have historically diagnosed back "strain" as if muscles were torn, or back "sprain" as if ligaments were torn, although MRI studies in the first 48 hours after pain onset in patients who experience the acute onset of back pain have not shown either strained muscles or sprained ligaments to be present (Modic)”.*

# DD EOI Narrative - Define

**Lumbar sprains / strains** *“have been used historically and are still used by many physicians along, with the associated ICD-10-CM code”*. It is an easy way to diagnose and label the cause of low back pain.

In general, it is easier to strain a muscle than tendon, and more difficult to sprain a ligament, based on the amount of durability of their respective connective tissues.

# DD EOI Narrative - Define

- The evidence-based medicine in the MDG demonstrates that *"the reason adults get episodes of low back pain is not scientifically established, and the exact structure in the back responsible for the pain cannot be determined"*, however, **these diagnoses are reasonable to explain the back pain event.**
- A lumbar sprain / strain is a reasonable and medically probable diagnosis to explain the symptoms and complaints early in the claim.
- Other EBM may list such an episode as low back pain or mechanical back pain – and not necessarily an INJURY event.



# DD EOI Analysis - Define

A **disc herniation** is a change in the annular fibers of a disc that results in an outward deformation of the disc posteriorly, usually less than 180 degrees of the posterior disc if generalized or less than 90 degrees if it is focal.

Imaging findings of disc herniations are usually due to a slow degenerative process along with other changes of spondylosis.



# DD EOI Analysis - Define

## Disc herniation (continued).

- If they uncommonly occur due to trauma, evidence-based medicine supports that these require super physiologic loads of axial compression and hyperflexion (and may involve twisting).
- Experimental studies have used finite element modeling to demonstrate that the bone is the most vulnerable structure in the spine and will often fail before the disc”.



# DD EOI Analysis - Explain

The Designated Doctor explained

*"The mechanism in this case was consistent with a MOI that had potential to result a traumatic herniation. While there was no evidence of endplate injury, the disc herniation was at a single level and the early complaints and exam findings were consistent with the location and side of the additional claimed injury on imaging."*

# DD EOI Analysis - Explain

*I am aware of the EBM that discusses that disc herniations can be present in MRIs of asymptomatic individuals, but in this case, the mechanism and specific complaints and findings are consistent with the focal **left L5-S1 disc herniation with impingement on the exiting left S1 nerve root.**”*

# DD EOI Analysis - Define

**Radiculopathy** is pain that arises from a nerve root that results in a specific nerve root distribution of pain / abnormal sensation, (dermatome), with potential weakness (myotome), reflex changes and atrophy.

If due to trauma, rather than disease, there should be a corresponding anatomic lesion on imaging to cause nerve root compression or deflection.

# DD EOI Analysis - Explain

A **left S1 radiculopathy** is a specific side and nerve root level of involvement. The claimant complained of radicular symptoms within days of the injury event.

The clinical examination demonstrated neurologic findings consistent with an S1 radiculopathy that evolved proximal to distal within weeks of the injury event, consistent with the timeframe for a traumatic radiculopathy to develop.

A left S1 radiculopathy correlates with the lumbar MRI findings of L5-S1 disc herniation with impingement on exiting left S1 nerve root.



# When Determining MMI

- Your determination of MMI **MUST** consider the injury / diagnoses / conditions **for EACH** certification.
- Then establish what the ODG or other EBM would recommend about the injury / diagnoses / conditions **for that** certification?
  - Example: If a lumbar sprain / strain, don't recommend treatments that would only be appropriate for a clinical radiculopathy

# When Determining Impairment Rating

## EACH certification must:

Rate the injury / diagnosis / condition you are considering based on the claimant's condition as of the date of MMI (**Rule 130.1**)

- Must find some information in the records or EBM that would allow you to render a medically probable IR that is consistent with the injury / diagnosis / condition you are considering.

# When Determine Impairment Rating

## Each certification must:

Rate the injury / diagnosis / condition you are considering based on the claimant's condition as of the date of MMI (**Rule 130.1**)

- If the condition is the “same” or similar between an earlier date of MMI and your exam, **EXPLAIN** that the condition was the same / similar and you will use your examination findings because they are more complete than those on MMI date.

# When Determining Impairment Rating

- **The IR must be consistent with the injury / diagnosis / condition you are considering.**
  - **Example:** Don't rate a lumbar sprain / strain as a DRE III (for spine fracture or ratable radiculopathy). A sprain strain should only ever be a DRE I or DRE II
  - **Example:** If the diagnosis is lumbar radiculopathy, then the IR could be a DRE I, DRE II or DRE III, **dependent on the differentiators present as of the chosen MMI date.**

# If a determination for a certification is NOT at MMI...

- If any of the certifications include any injury / diagnosis / condition where the claimant is not yet at MMI, then you cannot determine an impairment rating for that combination
- Address it by explaining that you cannot assign an impairment rating as the claimant is not at MMI for that injury / diagnosis / condition



**Questions  
About - POD  
ordered exams for  
MMI, IR and EOI  
with Multiple  
certifications?**





# MMI/IR/Extent Of Injury (MMI/IR/EOI)

All of the changes to the **§127.1-127.25 and §180.23** rules are effective 6/5/2023 and can be viewed at:

<https://www.tdi.texas.gov/wc/rules/2023rules.html>



# QUESTIONS ABOUT EXTENT OF INJURY BASICS?

