

AMPLIFY

The Pickleball Boom: Is Your Urgent Care Ready for the Injuries

Tatiana Havryliuk, MD

Shelley Janssen, MD-MBA



The Pickleball Boom



Tatiana Havryliuk, MD

Founder, Hello Sono

NERUCA Education Committee Member

Pickleball Enthusiast

The Pickleball Boom



Shelley Janssen, MD-MBA

CMO Klamath Health Partnership, Klamath Falls,
Oregon

UCA Board of Directors

Pickleball Enthusiast

Financial Disclosures

- Hello Sono
- Clarius

Agenda

- Stats
- Common injuries
- Serious injuries
- POCUS
- Prevention



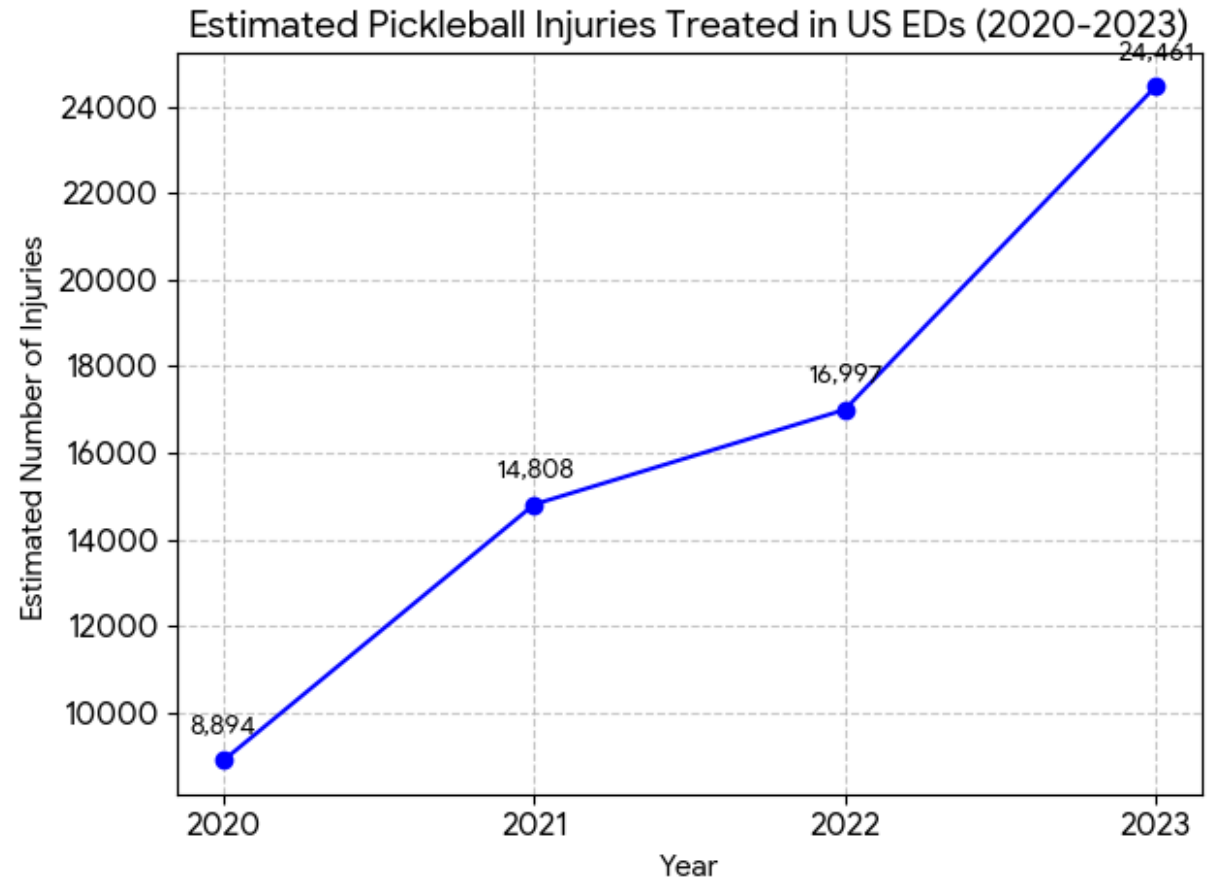
Participation Trends

- Fastest growing sport
- Average player age declining



Understanding the Injury Landscape

- High-Risk Demographic
- Rising Incidence
- Most Common Diagnoses



Sex and Age-Specific Disparities

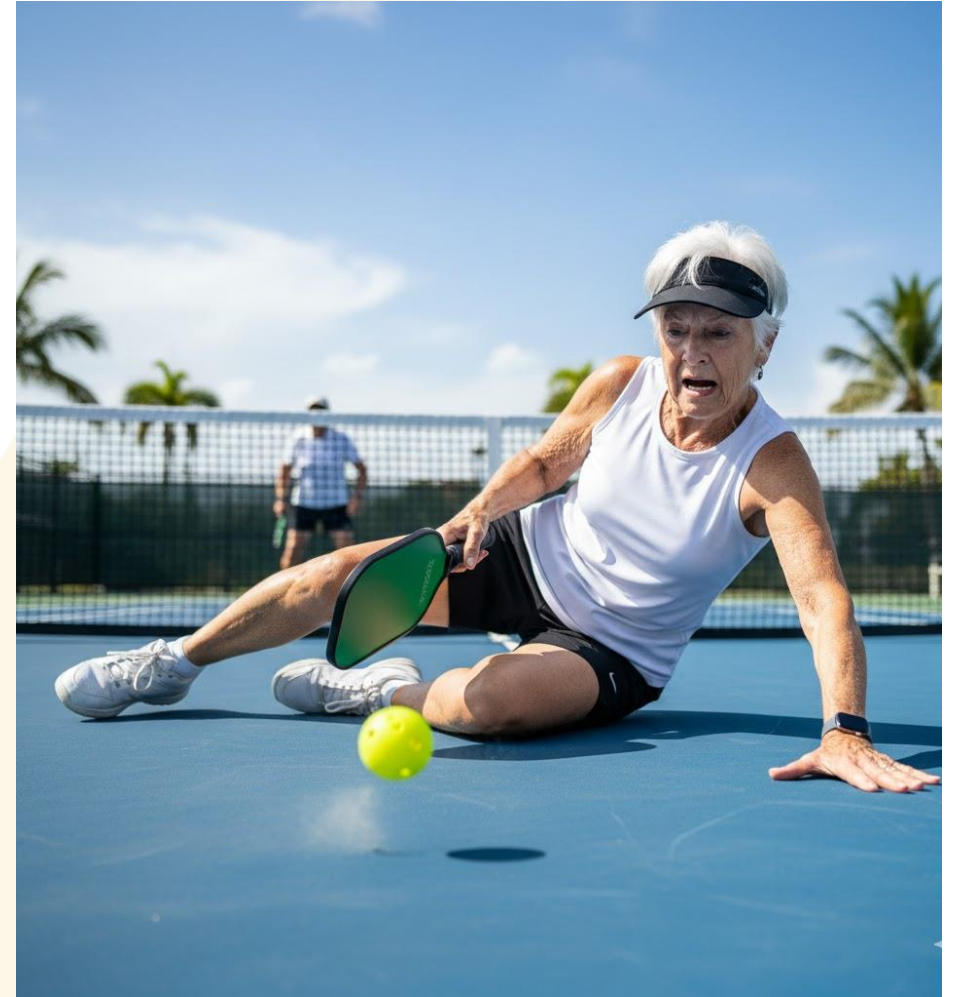
- Injury Type
- Location
- Mechanism



Common Injuries

Upper Extremity Injuries

- Wrist and Forearm Fractures
- Rotator Cuff/Shoulder Impingement
- Lateral Epicondylitis



Distal Radius Fractures

Mechanism: FOOSH

Exam pearls

- Check for snuffbox tenderness
- Good neurovascular exam

Imaging

- Low threshold for X-ray & POCUS

Management

- Reduce if not a surgical candidate
- Splint: volar or sugar-tong
- Follow-up: Ortho 5 days

Surgical Candidate

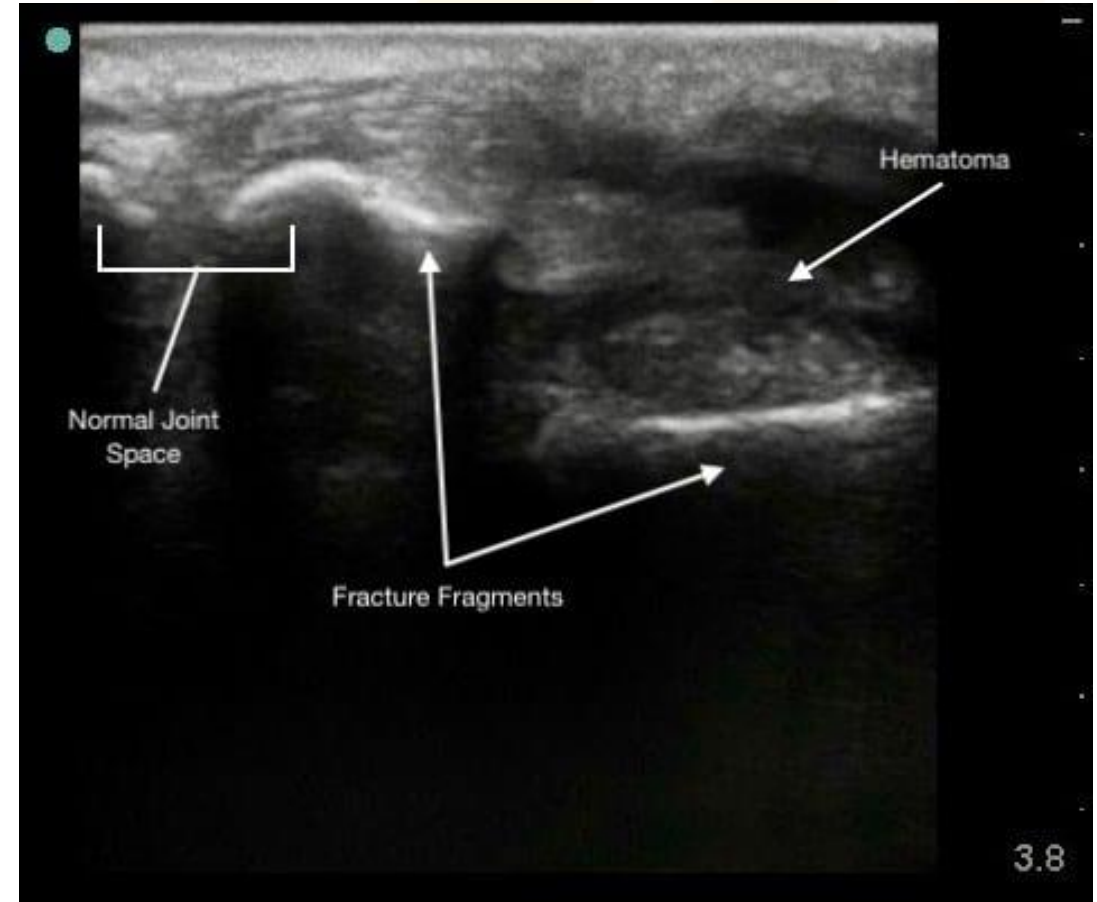
- Age <65 years AND any of the following:
 - Radial shortening >3mm
 - Dorsal tilt >10 degrees
 - Intraarticular step-off >2mm or gap >3mm
- Concurrent dislocations or carpal fractures
- Open fractures
- Neurovascular compromise



https://wikem.org/wiki/File:Displaced_distal_radius_fracture.jpg

POCUS for Distal Radius Fractures

- 97% sensitivity & 95% specificity
- Guides hematoma block
- Assesses reduction adequacy
- Cortical discontinuity



Douma-den Hamer D, Blanker MH, Edens MA, et al. Ultrasound for Distal Forearm Fracture: A Systematic Review and Diagnostic Meta-Analysis. *PLoS One*. 2016;11(5):e0155659. Published 2016 May 19. doi:10.1371/journal.pone.0155659

<https://www.acep.org/sonoguide/basic/msk>

Shoulder Pain



Mechanism

- Repetitive overhead serving and volleys
- Sudden forceful reach or fall

Overuse Spectrum

- Impingement -> Tendinopathy → Partial tear → Full-thickness tear

Shoulder Pain

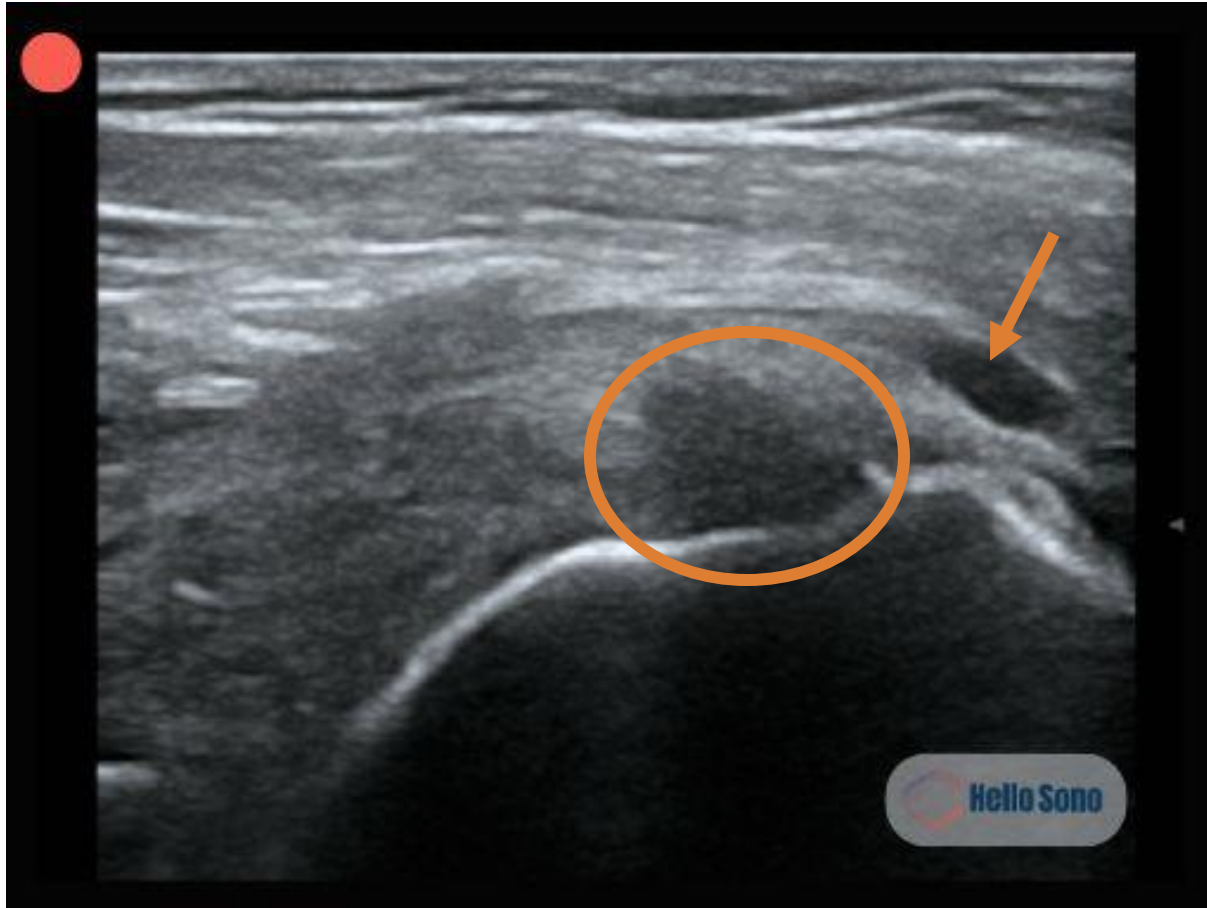
Exam Pearls

- Painful arc (60–120° abduction)
- > impingement
- Pain with preserved strength → overuse
- True weakness (not pain-limited) → tear
- Inability to actively abduct after trauma → tear

When to Refer Urgently

- Acute traumatic onset + weakness
- Significant functional deficit in an active patient

POCUS for Rotator Cuff Tear



- 90-91% sensitivity for full tears
- 52% sensitivity for partial tear

What to Look For

- Bursal fluid
- Tendon thickening
- Focal hypoechoic defect
- Tendon discontinuity

Laur O et al. ACR Appropriateness Criteria® Acute Shoulder Pain: 2024 Update
Journal of the American College of Radiology, 22, S36-S47.

Simon LM et al. Acute Shoulder Injuries in Adults. *Am Fam Physician*. 2023;107(5):503-512.

Lateral Epicondylitis (“Pickleball Elbow”)

Mechanism

- Repetitive gripping + wrist extension during volleys

Key Exam Findings

- Lateral elbow pain
- Pain with resisted wrist extension & middle finger extension
- Tenderness over lateral epicondyle



Lateral Epicondylitis (“Pickleball Elbow”)

Clinical Pearl

Pain with preserved strength →
tendinopathy, not tear

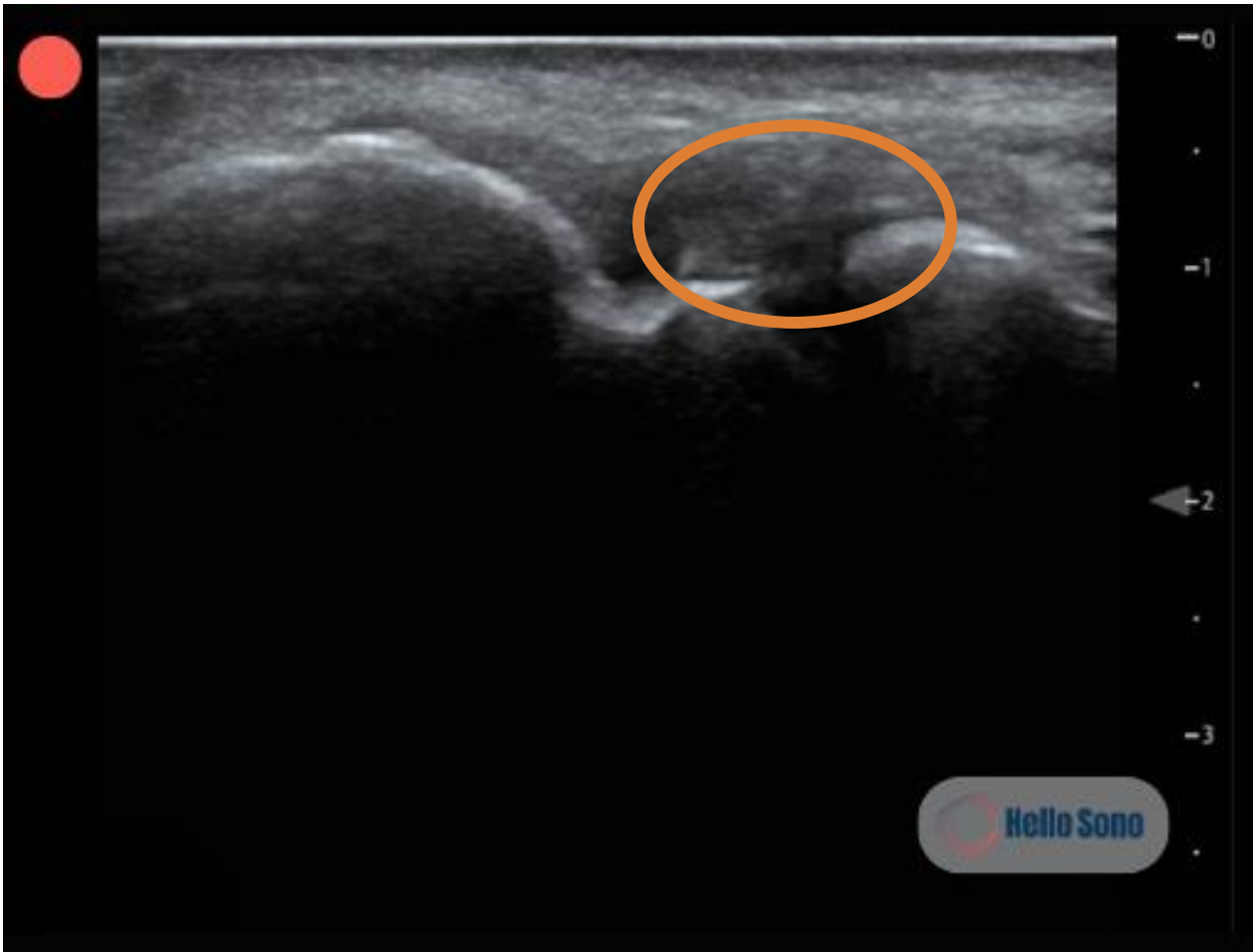
Management

- Activity modification
- Counterforce brace
- NSAIDs / topical diclofenac
- Consider a PT referral

Imaging:

- X-ray & POCUS for alternate diagnoses only

POCUS for Lateral Epicondylitis



- Low specificity -> not a primary diagnostic modality

What to Look For

- Tendon thickening
- Hypoechoic degeneration
- Loss of normal fibrillar pattern

Lower Extremity Injuries

- Knee Injuries
- Ankle Sprains and Strains
- Achilles Tendinopathy
- Plantaris Muscle Rupture



Knee Pain

Mechanism

- Frequent lunging
- Sudden stops
- Lateral pivoting

Etiologies

- Acute Traumatic Injuries
- Overuse/Chronic Conditions

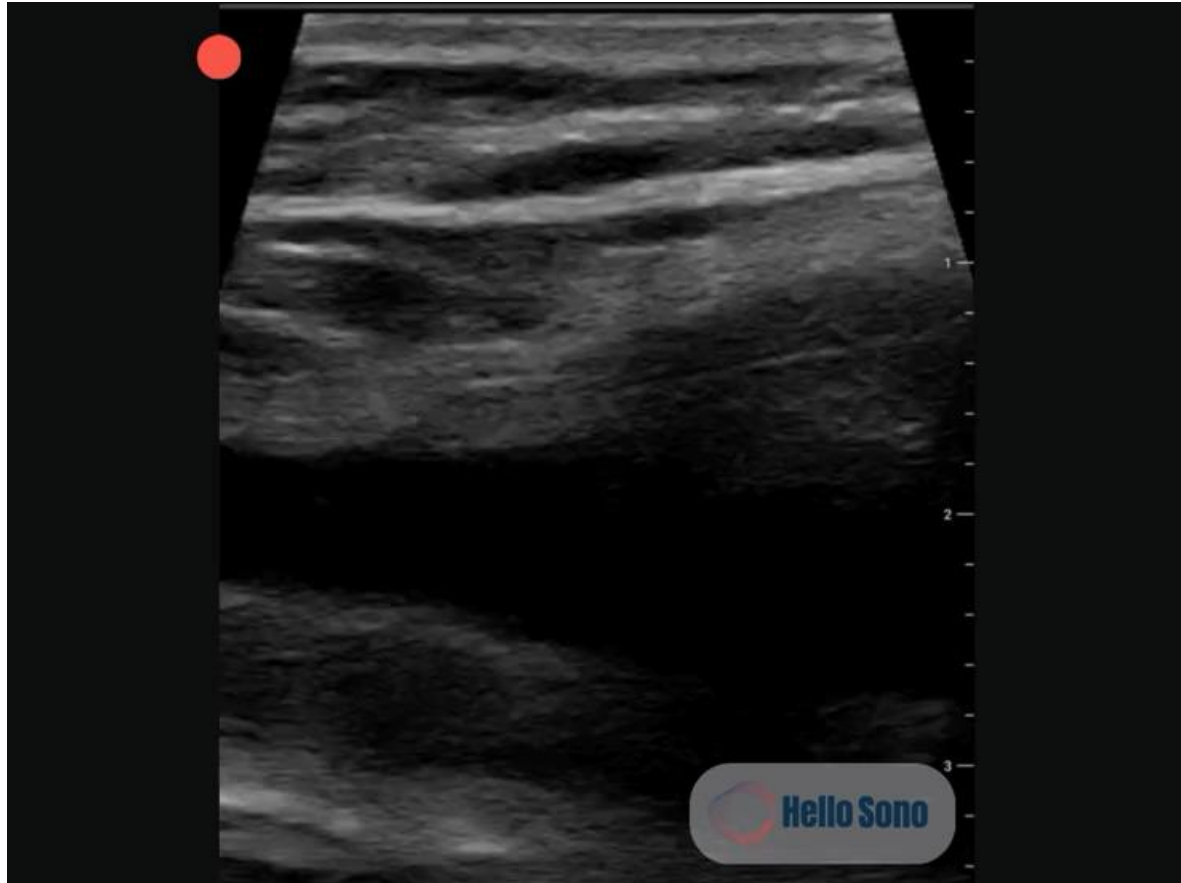
Exam Pearls

- Thessaly → Meniscus Tear
- Lachman/Pivot Shift → ACL Tear
- Valgus/Varus Stress → MCL/LCL

When to Refer Urgently

- Inability to bear weight
- Locked knee
- Gross instability

POCUS for Knee Pain



Knee effusion

- 90% sensitivity
- Compressible anechoic fluid collection

Other diagnoses

- Patellar tendinopathy
- Meniscal and ACL tears

Liu K, Li X, Weng Q, et al. Diagnostic Accuracy of Ultrasound for Assessment of Synovial Abnormalities Among Patients With Knee Pain: A Meta-Analysis. *Arthritis Care Res (Hoboken)*. 2024;76(2):295-303. doi:10.1002/acr.25205



Achilles Tendon Injuries

Mechanism

- Sudden push-off, sprint, or lunge

Clinical Pearls

- Activity-related posterior heel pain -> tendinopathy
- Increased pain + weakness, normal Thompson -> partial tear
- Sudden "pop", palpable gap, +Thompson -> full tear



Achilles Tendon Injuries

Imaging

- POCUS (preferred)
- X-ray (Ottawa rules)
- MRI (not indicated acutely)

Management of Achilles Tears

- Splint in plantarflexion
- Non-weight bearing
- Analgesia
- Ortho referral:
 - 24-72 hours for rupture
 - 1-2 weeks for a significant partial tear

POCUS for Achilles Tendon



- 94 - 100% sensitivity for full and partial tears

What to look for

- Tendon thickening
- Focal hypoechoic defect
- Tendon discontinuity \pm retraction

Aminlari A, Stone J, McKee R, et al. Diagnosing Achilles Tendon Rupture with Ultrasound in Patients Treated Surgically: A Systematic Review and Meta-Analysis. *J Emerg Med.* 2021;61(5):558-567. doi:10.1016/j.jemermed.2021.09.008

Harterink P, Fessell DP, Jacobsen JA, van Holsbeeck MT. Full- versus partial-thickness Achilles tendon tears: sonographic accuracy and characterization in 26 cases with surgical correlation. *Radiology.* 2001;220(2):406-412. doi:10.1148/radiology.220.2.r01au41406

Other Common Injuries

- Lower Back
- Groin/Hip



Back Pain

Mechanism

- Sudden twisting movements
- Overuse/Repetitive motions
- Weak core muscles
- Improper footwear

Etiologies

- Strains and Sprains
- Herniated Discs
- Compression Fractures

Back Pain



Exam Pearls

- Neurologic Screening → Strength, Reflexes, Sensation
- Provocative Maneuvers → SLR
- Palpation → Midline Tenderness

When to Refer Urgently

- New Neurological Deficit
- Prior Osteoporotic Fracture
- Pain after fall or high-impact collision

Groin/Hip Pain

Mechanism

- Lateral movement, sudden pivot, overextension

Muscle Strain (Most Common)

- Localized groin pain
- Pain with resisted adduction or flexion

Intra-articular (Labrum / OA flare)

- Deep anterior hip pain
- Pain with internal rotation/FADIR

Fracture

- Pain with weight-bearing
- Limited ROM
- Older patient or fall

Groin/Hip Pain

Imaging

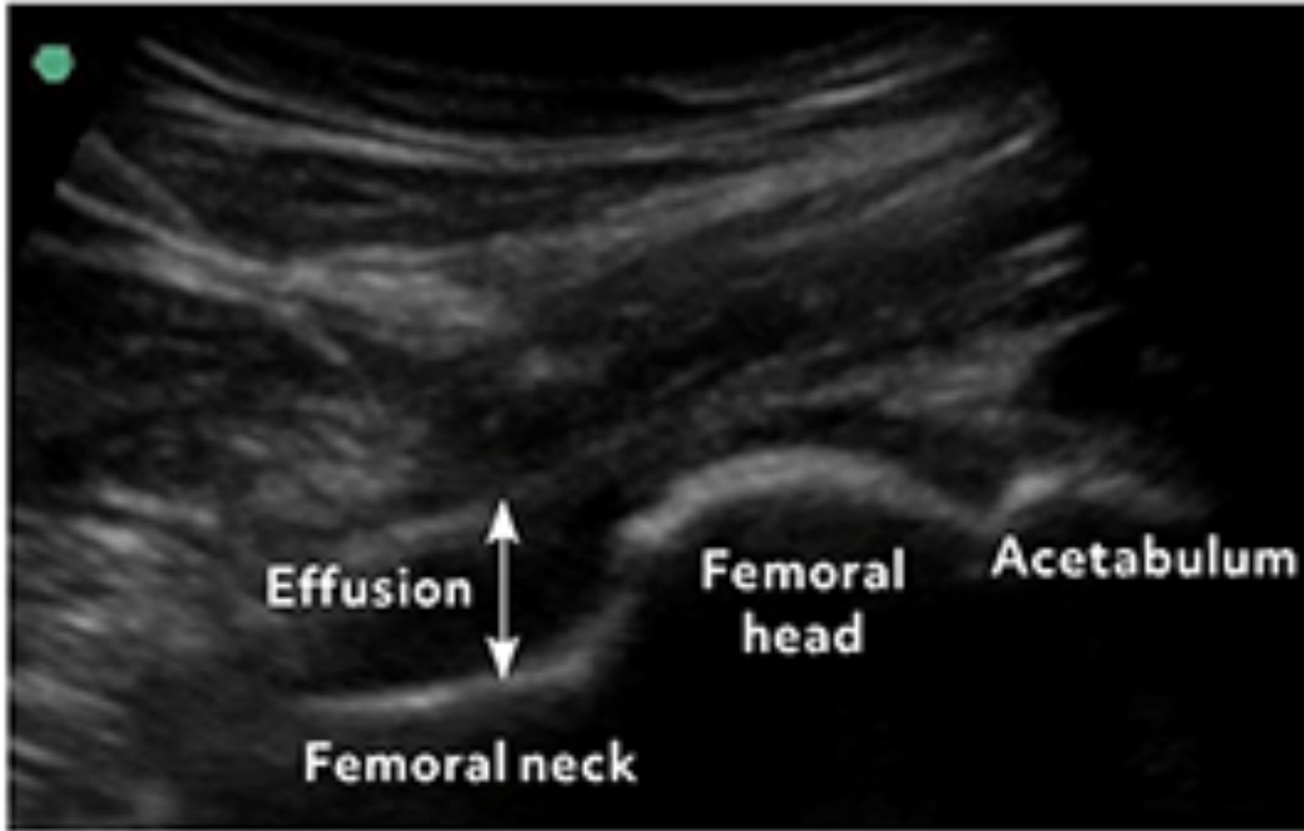
- X-ray – fx, OA
- CT – occult fx
- MRI
- POCUS

Management

- Strain
 - NSAIDS
 - Rest -> gradual return to activity

- Intra-articular
 - Activity modification + PT
 - Consider ortho referral
- Fracture
 - Non-weight bearing
 - Urgent ortho/ED referral

POCUS for Hip Pain



What to Look For

- Joint effusion
- Muscle or tendon injury
- Hematoma

Image credit: Swisher J, Sitton Z, Burbank K, Nelson C. Acute Monoarthritis: Diagnosis in Adults. *Am Fam Physician*. 2025;111(6):497-506.

High Acuity Injuries

High Acuity Injuries

- Head injury
- Ocular trauma
- Unstable fractures with neurovascular compromise
- ACS (5 deaths reported)



McMillan P, Lake LP, Burkhart A, Reddy E, Hale IC, Grawe BM. The Epidemiology of Pickleball Injuries Presenting to US Emergency Departments. *Sports Health*. Published online July 13, 2025. doi:10.1177/19417381251350671

Ocular Injuries

Mechanism

- Direct strike with paddle or ball

Etiologies

- Periocular lacerations (35%)
- Corneal abrasion(16%)
- Hyphema (5%)
- Globe rupture (3%)
- Retinal detachment (3%)
- Retrobulbar hematoma



Lacher CR, Koc I, Tsui JC. Pickleball-Related Ocular Injuries Among Patients Presenting to Emergency Departments. *JAMA Ophthalmol.* 2025;143(11):938-944. doi:10.1001/jamaophthalmol.2025.3577

Ocular Injuries

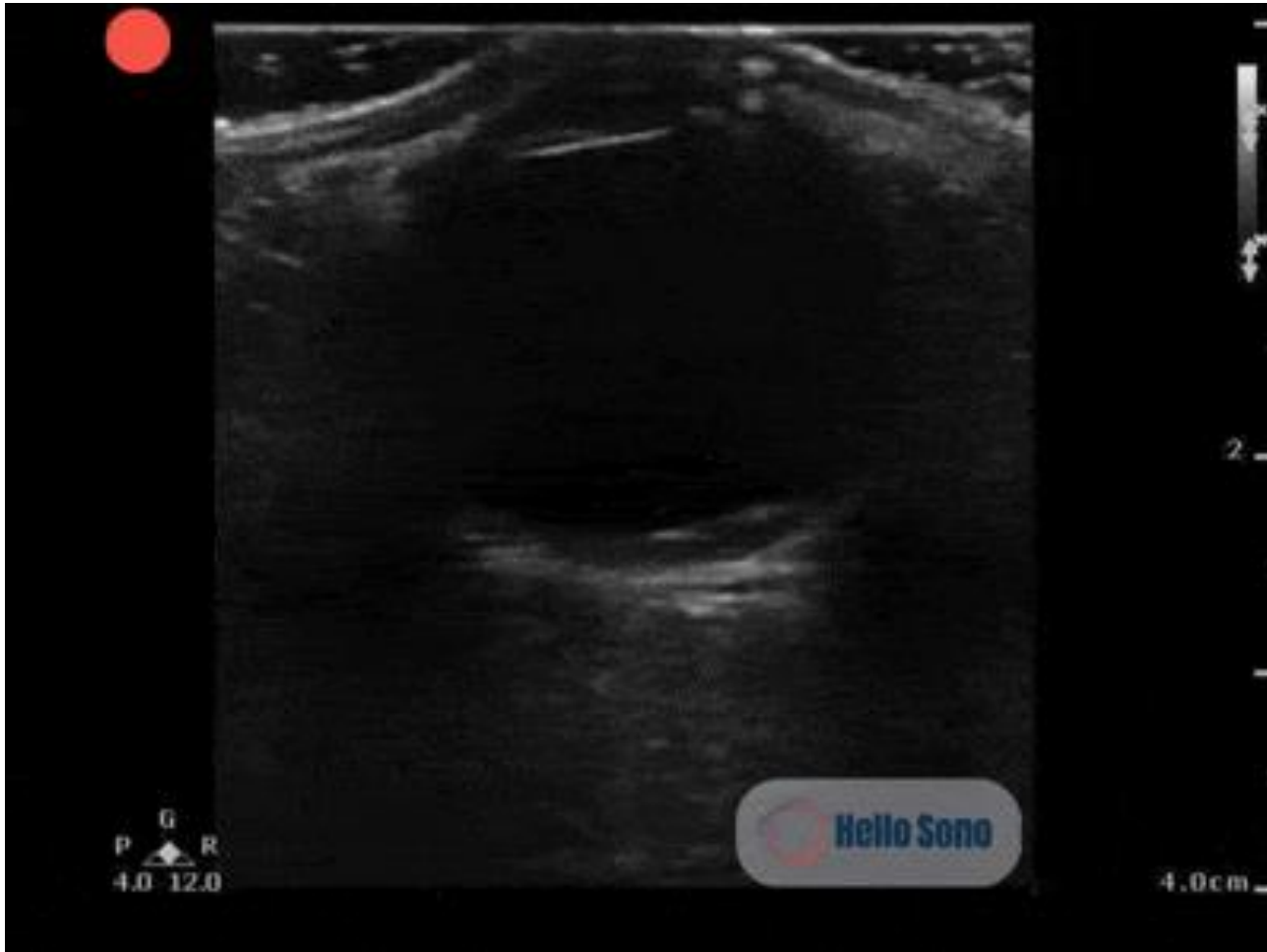
Exam Pearls

- Visual acuity first
- Irregular pupil → globe injury
- Proptosis → retrobulbar hematoma
- Pain/limited EOM → orbital pathology
- Fluorescein: abrasion vs Seidel sign

Red Flags → ED Transfer

- Decreased visual acuity
- Irregular pupil
- Proptosis
- Hyphema
- Severe pain or vision loss

POCUS for Ocular Injuries



- Contraindicated in suspected globe rupture & retrobulbar hematoma
- 94-97% sensitivity for retinal detachment
- Hyperechoic “ribbon” in the posterior chamber

Gottlieb M, Holladay D, Peksa GD. Point-of-Care Ocular Ultrasound for the Diagnosis of Retinal Detachment: A Systematic Review and Meta-Analysis. *Acad Emerg Med.* 2019;26(8):931-939. doi:10.1111/acem.13682

Injury Prevention

- Train/Condition
- Warm-Up/Cool Down
- Stay Hydrated
- Wear Proper Footwear
- Wear Eye Protection
- Improve Court Awareness



Takeaway



- Pickleball injuries are rising & these patients are coming to you
- Most are benign, but missing the serious ones is critical
- POCUS is an emerging tool that can enhance bedside decision-making

We Need Your Feedback



Prefer paper?

On the form in front of you, please score me and the content I shared with you today.

AFTER THE CONVENTION

You may claim CME here www.urgentcareassociation.org/learning-center/cme/