

AMSSM Sample Sports Ultrasound Objective Structured Clinical Exam (OSCE)  
Revised 2020

Date: \_\_\_\_\_

Examinee: \_\_\_\_\_

Examiner: \_\_\_\_\_

**GENERAL PRINCIPLES**

- Transducer selection
- Image optimization (presets, depth, focus, gain, etc.)
- Appropriate use of transducer movement to fully evaluate structures and reduce anisotropy
- Use of Doppler imaging
- Ergonomics
- Patient comfort (transducer pressure, appropriate draping, positioning, etc.)

**TRAUMA**

- eFAST (extended Focused Assessment of Sonography in Trauma)
  - Hepatorenal recess
  - Perisplenic recess
  - Retro-vesicular or retro-uterine pouch
  - Subxiphoid pericardial space
  - Lung sliding

**SHOULDER**

- Biceps tendon including evaluation for instability
- Subscapularis
- Acromioclavicular joint
- Infraspinatus muscle and tendon
- Teres minor muscle and tendon
- Glenohumeral Joint recess (posterior)
- Spinoglenoid notch
- Supraspinatus muscle and tendon
- Subacromial/Subdeltoid bursa
- Coracoacromial ligament
- Dynamic evaluation of impingement

**ELBOW**

- Anterior
  - Brachialis muscle and tendon
  - Brachial artery and vein
  - Median nerve
  - Pronator teres muscle and tendon
  - Radial nerve (including posterior interosseous nerve and superficial radial nerve)
  - Brachioradialis muscle
  - Anterior humeroradial joint and recesses
  - Anterior humeroulnar joint and recesses
  - Biceps tendon and muscle
- Medial
  - Common flexor/pronator tendon and muscles

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- Ulnar collateral ligament including dynamic valgus stress views as indicated
- Humeroulnar joint
- Ulnar nerve including assessment of instability with flexion/extension views
- Lateral
  - Common extensor tendon and muscles
  - Radial collateral ligament
  - Humeroradial joint
  - Radial nerve from mid-arm to the bifurcation
  - Posterior interosseus nerve through supinator muscle
  - Brachioradialis
  - Extensor carpi radialis longus
- Posterior
  - Triceps tendon and muscles
  - Olecranon fossa and posterior joint recess
  - Olecranon process
  - Olecranon bursa
  - Ulnar nerve including assessment of instability with flexion/extension views

**WRIST/HAND/FINGER**

- Volar wrist
  - Carpal tunnel including dynamic evaluation of tendon and nerve motion
  - Flexor retinaculum/Transverse carpal ligament
  - Median nerve
  - Flexor pollicis longus tendon
  - Flexor digitorum profundus and superficialis tendons
  - Palmaris longus tendon
  - Flexor carpi radialis longus tendon
  - Radial artery
  - Joints (radiocarpal, ulnocarpal, midcarpal, carpometacarpal) including assessment of volar ganglion cyst
  - Ulnar nerve within Guyon's canal
  - Ulnar artery
  - Flexor carpi ulnaris tendon
- Dorsal Wrist
  - Extensor tendons and muscles (6 dorsal compartments)
  - Dynamic assessment of extensor carpi ulnaris instability
  - Extensor retinaculum
  - Dorsal scapholunate ligament including dynamic stress views
  - Joints (radiocarpal, ulnocarpal, midcarpal, carpometacarpal) including evaluation of dorsal synovial recesses and assessment of dorsal ganglion cyst
  - Superficial radial nerve
- Hand and finger
  - Metacarpophalangeal (MCP) and interphalangeal joints
  - Volar plates
  - Collateral ligaments
  - Flexor tendons and sheaths

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- A1 and A2 pulleys
- Extensor tendons
- Ulnar collateral ligament of 1<sup>st</sup> MCP joint including dynamic stress views

#### HIP/PELVIS

- Anterior
  - Femoral head, neck, capsule, and anterior synovial recess
  - Hip joint assessment for effusion
  - Anterior labrum
  - Femoral vessels and nerve
  - Iliopsoas muscle, tendon, and bursa
  - Sartorius and tensor fascia latae tendons and muscles
  - Rectus femoris tendon(s) and muscles
  - Dynamic scanning for snapping hip
- Medial
  - Adductor muscle origins (Adductor longus/brevis/magnus and gracilis) and tendons
  - Pubic bone and symphysis including dynamic assessment as indicated
  - Pectineus muscle
  - Distal rectus abdominis muscle and tendon
  - Rectus abdominis-adductor longus aponeurosis
  - Obturator nerve (including anterior and posterior branches)
- Lateral
  - Greater trochanter of femur (including identification of anterior, lateral, posterior, and superoposterior facets)
  - Gluteus minimus tendon and muscle
  - Gluteus medius tendon and muscle (anterior and posterior bands)
  - Greater trochanteric (subgluteus maximus) bursa
  - Superficial arch at greater trochanter (Gluteus maximus muscle – iliotibial band – tensor fasciae latae muscle)
  - Dynamic scanning for snapping hip
- Posterior
  - Gluteus maximus muscle and insertion onto iliotibial band
  - Piriformis muscle and tendon
  - Quadratus femoris muscle
  - Proximal hamstring tendon complex (conjoint tendon and semimembranosus)
  - Proximal biceps femoris, semimembranosus, and semitendinosus muscles
  - Ischial tuberosity and bursal region
  - Sciatic nerve
  - Posterior hip joint

#### THIGH

- Anterior
  - Anterior thigh muscles
    - Rectus femoris
    - Vastus medialis
    - Vastus lateralis

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- Vastus intermedius
  - Sartorius
  - Femoral nerve
  - Femur
  - Medial
    - Medial thigh muscle bellies and tendons
      - Adductor longus
      - Adductor brevis
      - Adductor magnus
      - Gracilis
      - Sartorius
    - Femoral nerve
    - Obturator nerve
    - Femur
  - Posterior
    - Posterior thigh muscles
      - Biceps femoris
      - Semitendinosus
      - Semimembranosus
      - Adductor magnus
    - Sciatic nerve
    - Femur
- KNEE**
- Anterior
    - Distal quadriceps muscles
    - Quadriceps tendon
    - Suprapatellar recess of knee joint
    - Patella and prepatellar bursa
    - Patellar tendon and tibial tubercle
    - Hoffa's fat pad
    - Superficial infrapatellar bursa
    - Deep infrapatellar bursa
    - Vastus medialis and medial retinaculum including the medial patellofemoral ligament and dynamic assessment of stability
    - Vastus lateralis and lateral retinaculum
    - Trochlear cartilage
    - Anterior horns of medial and lateral menisci
  - Medial
    - Medial collateral ligament (superficial and deep portions) with valgus stress testing
    - Medial meniscus (anterior and posterior horns)
    - Tibiofemoral joint space
    - Pes anserine tendons and bursa
    - Medial patellar retinaculum and medial patellofemoral ligament
    - Medial patellofemoral joint
  - Lateral

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- Iliotibial band
- Lateral synovial recess of the knee
- Lateral meniscus anterior and posterior horns
- Tibiofemoral joint space
- Lateral collateral ligament with varus stress testing
- Biceps femoris tendon and muscles
- Popliteus tendon and muscle
- Lateral patellar retinaculum
- Lateral patellofemoral joint
- Proximal tibiofibular joint including assessment of instability
- Common fibular nerve at fibular tunnel
- Posterior
  - Popliteal artery and vein
  - Semimembranosus, semitendinosus, and biceps femoris (long and short heads) muscles and tendons
  - Medial & lateral gastrocnemius muscles and tendons
  - Evaluation for Baker's cyst at interval between semimembranosus and medial gastrocnemius
  - Sciatic, tibial, and common fibular nerves
  - Posterior horns of medial and lateral menisci
  - Posterior tibiofemoral joint
  - Posterior cruciate ligament
  - Popliteus muscle

**LEG AND ANKLE**

- Anterior
  - Anterior leg compartment muscles and tendons (tibialis anterior, extensor digitorum longus, extensor hallucis longus, peroneus tertius)
  - Anterior tibiotalar joint
  - Talar dome cartilage
  - Sinus tarsi
  - Anterior inferior tibiofibular ligament including dynamic assessment
  - Superficial fibular nerve at exit from crural fascia through division into medial and intermediate dorsal cutaneous nerves
  - Deep fibular nerve
  - Distal anterior tibial artery and dorsalis pedis artery
- Medial
  - Medial gastrocnemius muscle
  - Soleus muscle
  - Flexor retinaculum
  - Deep posterior compartment muscles (tibialis posterior, flexor digitorum longus, and flexor hallucis longus)
  - Deltoid ligament
  - Medial tibiotalar joint
  - Medial aspect of posterior subtalar joint
  - Tarsal tunnel (tibial, medial plantar, and lateral plantar nerves)

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- Posterior tibial artery and veins
  - Lateral
    - Lateral gastrocnemius muscle
    - Soleus muscle
    - Fibularis longus and brevis muscles and tendons
    - Superior fibular retinaculum
    - Dynamic assessment for fibular subluxation/dislocation
    - Fibular trochlea (peroneal tubercle)
    - Fibula for acute traumatic or stress fracture
    - Anterior talofibular ligament including dynamic stress views
    - Calcaneofibular ligament including dynamic stress views
    - Anterior tibiofibular ligament including dynamic stress views
    - Lateral recess of tibiotalar joint including dynamic assessment of impingement
    - Lateral recess of posterior subtalar joint
    - Sinus tarsi
    - Sural nerve and lateral calcaneal nerve
  - Posterior
    - Medial and lateral gastrocnemius muscles
    - Soleus muscle
    - Achilles tendon and paratenon
    - Retrocalcaneal bursa
    - Retro-Achilles/Superficial/Subcutaneous bursa
    - Plantaris tendon
    - Posterior tibiotalar joint
    - Posterior subtalar joint
- FOOT**
- Hindfoot
    - Plantar fascia (central and lateral cords)
    - Plantar fat pad including dynamic assessment of compression
    - Tarsal tunnel (tibial, medial plantar, and lateral plantar nerves)
    - Sural nerve and lateral calcaneal nerve
    - Achilles tendon and paratenon
    - Plantaris tendon
    - Retro-Achilles/Superficial Achilles/Subcutaneous bursa
  - Midfoot
    - Talonavicular joint
    - Calcaneocuboid joint
    - Tarsometatarsal joints
    - Dorsal Lisfranc ligament including dynamic assessment of stability
    - Deep fibular nerve
    - Anterior tibialis tendon insertion
    - Posterior tibialis tendon insertion
    - Spring ligament
    - Flexor digitorum longus and flexor hallucis longus at the Knot of Henry
    - Medial plantar nerve

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- Plantar fascia lateral cord insertion at 5th metatarsal base
- Fibularis brevis insertion at 5th metatarsal base
- Forefoot
  - Metatarsophalangeal and interphalangeal joints
  - Metatarsals and phalanges for acute traumatic or stress fracture as indicated
  - Metatarsal interspace evaluation for Morton's neuroma and intermetatarsal bursitis
  - Plantar plate including dynamic assessment
  - Flexor tendons
  - Great toe sesamoids including dynamic assessment

Signature (completed and reviewed)

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Fellow

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Faculty evaluator