### Musculoskeletal Sonography (RMSK) Content Outline

#### General Sonographic Anatomy  26%

<table>
<thead>
<tr>
<th>Section</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td><strong>Abdominal wall</strong></td>
<td>Perform general ultrasound of the ligaments, neurovascular system, and tendons of the abdominal wall</td>
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</tbody>
</table>
| **Ankle and foot** | Perform general ultrasound of the bones, bursae, cartilage, and joints of the ankle and foot  
Perform general ultrasound of the fascia, ligaments, and tendons of the ankle and foot  
Perform general ultrasound of the neurovascular system of the ankle and foot |
| **Chest wall**    | Perform general ultrasound of the bones, bursae, cartilage, muscles, neurovascular system, and tendons of the chest wall |
| **Elbow**         | Perform general ultrasound of the bones, bursae, cartilage, and joints of the elbow  
Perform general ultrasound of the tendons of the elbow  
Perform general ultrasound of the cartilage, joints, and ligaments of the hand and wrist  
Perform general ultrasound of the neurovascular system of the hand and wrist  
Perform general ultrasound of the tendons of the hand and wrist |
| **Hand and wrist** | Perform general ultrasound of the bones, bursae, cartilage, and joints of the hand and wrist  
Perform general ultrasound of the tendons of the hand and wrist  
Perform general ultrasound of the neurovascular system of the hand and wrist  
Perform general ultrasound of the tendons of the hand and wrist |
Perform interventional procedures (e.g., aspirations, biopsies, injections) on the neurovascular system of the hand and wrist.

**Hip and groin**
- Perform interventional procedures (e.g., aspirations, biopsies, injections) on the bursae and joints of the hip and groin.
- Perform interventional procedures (e.g., aspirations, biopsies, injections) on the tendons of the hip and groin.
- Perform interventional procedures (e.g., aspirations, biopsies, injections) on the neurovascular system of the hip and groin.

**Knee**
- Perform interventional procedures (e.g., aspirations, biopsies, injections) on the bursae and joints of the knee.
- Perform interventional procedures (e.g., aspirations, biopsies, injections) on the ligaments and tendons of the knee.
- Perform interventional procedures (e.g., aspirations, biopsies, injections) on the neurovascular system of the knee.

**Shoulder**
- Perform interventional procedures (e.g., aspirations, biopsies, injections) on the bursae, joints, and ligaments of the shoulder.
- Perform interventional procedures (e.g., aspirations, biopsies, injections) on the neurovascular system of the shoulder.
- Perform interventional procedures (e.g., aspirations, biopsies, injections) on the tendons of the shoulder.

**Integration of Data** 7%
- Incorporate outside data (e.g., clinic assessment, history and physical, lab values).
- Assess anatomy as it relates to trauma.
- Assess joints with dynamic scanning.
- Correlate information with previous tests.
- Correlate sonographic findings with clinical presentation.
- Report results of the exam.

**Physics and Instrumentation** 26%
- **Imaging instruments**
  - Adjust beam angle to correct for anisotropy.
  - Adjust imaging depth.
  - Adjust overall gain.
  - Adjust power output.
  - Adjust pulse repetition frequency (PRF).
  - Adjust sound beam and needle angle for proper visualization of needle.
  - Evaluate acoustic shadowing and refractile shadowing and identify artifacts.
  - Evaluate Doppler artifacts.
  - Focus the image.
  - Identify artifacts (e.g., through transmission, shadowing).
  - Identify potential risks related to performing the exam.
  - Manipulate transducer position for optimal image acquisition.
  - Perform image measurements.
  - Select appropriate transducer.
  - Select proper ultrasound imaging mode for examination.
  - Use color Doppler.
  - Use curvilinear array transducer.
  - Use dynamic range.
  - Use linear array transducer.
  - Use phased array transducer.
  - Use power Doppler.
  - Use pulsed wave Doppler.
  - Use time gain compensation (TGC).
  - Use two-dimensional, real-time, gray-scale imaging (e.g., B-mode).

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