

| Procedure                           | Level                                                                                                                                                                                                                                                                                                                                                                 | Nonoperative/Preoperative                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Intraoperative                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Postoperative                                                                                                                                                                                                                                                                                     |
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| Joint procedures (Shoulder and Hip) | <p>1: Limited Participation</p> <p>Demonstrates basic understanding of how the tools operate. Has very basic skills.</p> <p>Framework:<br/>What a learner directly out of medical school should know. The attending shows and tell during the procedure.</p>                                                                                                          | <p>-Demonstrates an understanding of the procedural indications but may not understand contraindications.</p> <p>-Able to identify relevant finding on imaging but may not be able to determine a safe approach to performing the aspiration</p> <p>-Obtains an H&amp;P inclusive of basic focused exam</p> <p>-Aware of SIR guidelines for preprocedural labs and medication holds</p> <p>-Respectfully communicates basic facts of the procedure but inconsistently discusses potential complications or alternatives</p> | <p>-assists with preparation of sterile procedural field</p> <p>-maintains a sterile field</p> <p>-identifies relevant anatomy on intraprocedural imaging</p> <p>-follows intraprocedural directions but handles tools inefficiently</p>                                                                                                                                                                                                                                                                                                                                                                                                            | <p>-Explains the procedure basics to the patient but needs prompting to cover post-procedure expectations and warning signs of serious complications</p> <p>-In the setting of post aspiration/ injection complication, not familiar with next steps and needs attending direction</p>            |
|                                     | <p>2: Direct Supervision</p> <p>Demonstrates an understanding of the steps of the procedure but requires direction to accomplish in a safe manner</p> <p>Framework:<br/>The learner understands use of the tools, but requires step by step guidance for safe and effective joint access. The attending may actively participate to maintain forward progression.</p> | <p>-Able to identify a safe approach for aspiration on pre-procedural imaging with minimal attending direction for normal native anatomy</p> <p>-Demonstrates an understanding of the indications, contraindications and potential complications</p> <p>-Respectfully communicates facts of procedure and discusses potential complications or alternatives for straightforward cases but may need direction for more complicated cases</p>                                                                                 | <p>-able to prepare a sterile field and position the patient appropriately only needing minimal direction from the attending</p> <p>-identifies the joint space and landmarks on intraprocedural imaging and identifies a safe approach on needing only minimal attending direction for cases of normal anatomy.</p> <p>-Recognizes technical and anatomic causes of a "Dry tap" but needs attending intervention to diagnose with arthrography or lavage</p> <p>-familiar with the tools and able to perform the beginning of the case but needs significant intraprocedural direction to direct the needle tip and complete aspiration safely</p> | <p>-Discusses post-procedure expectations and warning signs of serious complications with minimal prompting</p> <p>-In the setting of post aspiration/injection complication, demonstrates an understanding of next steps in management but needs attending direction for forward progression</p> |

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|  | <p>3. Indirect Supervision</p> <p>Can do a basic, straightforward aspiration/ joint access but may not recognize abnormalities or nuances of a more advanced case</p> <p>Framework:<br/>The learner can perform straightforward shoulder and hip aspiration. The attending gives passive help. This passive help may be given with the attending scrubbed in for more advance aspirations or during a check-in for more routine procedures.</p> | <p>-Able to identify a safe approach for aspiration on pre-procedural imaging independently</p> <p>Able to identify a safe approach for aspiration on pre-procedural imaging with minimal attending direction for normal native anatomy, but may require direct supervision for post surgical or prosthetic joint cases.</p> <p>-Demonstrates an understanding of the indications, contraindications and potential complications</p> <p>-Respectfully communicates facts of procedure and discusses potential complications or alternatives with the patient or family member</p> | <p>-able to prepare a sterile field and position the patient appropriately only needing minimal direction from the attending</p> <p>-identifies the joint space and landmarks on intraprocedural imaging and identifies a safe approach needing only minimal attending direction for cases of normal anatomy.</p> <p>-Recognizes technical and anatomic causes of a "Dry tap" but needs attending intervention to diagnose with arthrography or lavage</p> | <p>-Manages post-procedure expectations and warning signs of serious complications independently</p> <p>-In the setting of post aspiration/injection complication, demonstrates an understanding of next steps in management with minimal attending direction</p>            |
|  | <p>4. Practice Ready</p> <p>Can perform more advanced aspiration cases and manage complications</p> <p>Framework:<br/>The learner can perform all straightforward hip and shoulder aspirations and most advanced cases and can manage complications independently</p> <p>The attending is available as needed but is not routinely needed</p>                                                                                                   | <p>-Able to identify a safe approach for aspiration/ joint access on pre-procedural imaging independently for native, post surgical and prosthetic anatomy.</p> <p>-Demonstrates an understanding of the indications, contraindications and potential complications</p> <p>-Respectfully communicates facts of procedure and discusses potential complications or alternatives with the patient or family member</p>                                                                                                                                                              | <p>-identifies the joint space and landmarks on intraprocedural imaging and identifies a safe approach independently for normal and postoperative or prosthetic anatomy</p> <p>-Recognizes technical and anatomic causes of a "Dry tap" and independently troubleshoots with arthrography or lavage.</p>                                                                                                                                                   | <p>-Manages post-procedure expectations and warning signs of serious complications</p> <p>-Manages post aspiration/injection complications independently</p> <p>-Communicates findings/outcomes with referring service and/or provides clinical follow-up independently.</p> |