

Procedure	Level	Nonoperative/Preoperative	Intraoperative	Postoperative
Image-guided core biopsy	1: Limited Participation Demonstrates basic understanding of how the tools operate. Has very basic skills. Framework: What a learner directly out of medical school should know. The attending shows and tell during the procedure.	-Demonstrates an understanding of the procedural indications but may not understand contraindications. -Able to identify relevant finding on imaging but may not be able to determine a safe approach to performing the biopsy -Obtains an H&P inclusive of basic focused exam -Aware of SIR guidelines for preprocedural labs and medication holds -Respectfully communicates basic facts of the procedure but inconsistently discusses potential complications or alternatives	-assists with preparation of sterile procedural field -maintains a sterile field -identifies relevant anatomy on intraprocedural imaging -follows intraprocedural directions but handles tools inefficiently -in cases performed under moderate sedation, learner is not familiar with typical medication dosages and needs direction from the attending	-Explains the procedure basics to the patient but needs prompting to cover post-procedure expectations and warning signs of serious complications -In the setting of post biopsy complication, not familiar with next steps and needs attending direction
	2: Direct Supervision Demonstrates an understanding of the steps of the procedure but requires direction to accomplish in a safe manner Framework: The learner can use the tools but may not know exactly how, what or where to do it. The attending actively helps throughout the case to maintain forward progression.	-Able to identify a safe approach for biopsy on pre-procedural imaging with minimal attending direction -Demonstrates an understanding of the indications, contraindications and potential complications -Respectfully communicates facts of procedure and discusses potential complications or alternatives for straightforward cases but may need direction for more complicated cases	-able to prepare a sterile field and position the patient appropriately only needing minimal direction from the attending -identifies biopsy target on intraprocedural imaging and identifies a safe approach on intraprocedural imaging, needing only minimal attending direction -familiar with the tools and able to perform the beginning of the case but needs significant intraprocedural direction to visualize the needle tip and complete biopsy safely -in cases performed under moderate sedation, learner is familiar with typical medication dosages	-Explains the procedure basics to the patient and discusses post-procedure expectations and warning signs of serious complications with minimal prompting -In the setting of post biopsy complication, demonstrates an understanding of next steps in management but needs attending direction for forward progression
	3. Indirect Supervision Can do a basic, straightforward biopsy but may not recognize abnormalities or nuances of a more advanced case Framework: The learner can perform straightforward biopsies. The attending gives passive help. This passive help may be given with the attending scrubbed in for more advance biopsies or during a check-in for more routine biopsies.	-Able to identify a safe approach for biopsy on pre-procedural imaging independently -Demonstrates an understanding of the indications, contraindications and potential complications -Respectfully communicates facts of procedure and discusses potential complications or alternatives with the patient or family member	-able to prepare sterile field and position patient independently -identifies biopsy target and safe biopsy approach independently -familiar with the tools and able to perform straight-forward cases from beginning to end in a safe manner but may need some attending direction in more complex biopsies -in cases performed under moderate sedation, learner is familiar with typical medication dosages and sedates patient appropriately	-Explains the procedure basics to the patient and discusses post-procedure expectations and warning signs of serious complications independently -In the setting of post biopsy complication, demonstrates an understanding of next steps in management with minimal attending direction

	4. Practice Ready Can perform more advanced biopsy cases and manage post-biopsy complications Framework: The learner can perform all straightforward biopsies and most advanced cases and can manage post-biopsy complications independently The attending is available as needed but is not routinely needed	-Able to identify a safe approach for biopsy on pre-procedural imaging independently -Demonstrates an understanding of the indications, contraindications and potential complications -Respectfully communicates facts of procedure and discusses potential complications or alternatives with the patient or family member	-able to prepare sterile field and position patient independently -identifies biopsy target and safe biopsy approach independently -familiar and dexterous with the tools and able to perform advanced cases from beginning to end in a safe manner -in cases performed under moderate sedation, sedates patient appropriately	-Explains the procedure to the patient and discusses post-procedure expectations and warning signs of serious complications -Manages post biopsy complications independently -identifies gaps in knowledge or technical skill and creates/revises a learning plan based on a review of biopsy outcomes/complication rates (ie: diagnostic sampling rate, bleeding rates, etc)
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