

Global Evaluative Assessment of Robotic Skills (GEARS)*

Trainee:

Date of Surgery:

Evaluator:

Please circle the number corresponding to the candidate's performance in each category, irrespective of training level.

Depth Perception:

	1	2	3	4	5
Constantly overshoots target, wide swings, slow to correct					
Some overshooting or missing of target, but quick to correct					
Accurately directs instruments in correct plane to target					

Bimanual Dexterity:

	1	2	3	4	5
Uses only one hand, ignores non-dominant hand, poor coordination					
Uses both hands, but does not optimize interactions between hands					
Expertly uses both hands in a complementary way to provide best exposure					

Efficiency:

	1	2	3	4	5
Inefficient efforts; many uncertain movements; constantly changing focus or persisting without progress					
Slow, but planned movements are reasonably organized					
Confident, efficient and safe conduct, maintains focus on task, fluid progression					

Force Sensitivity:

	1	2	3	4	5
Rough moves, tears tissue, injures nearby structures, poor control, frequent suture breakage					
Handles tissues reasonably well, minor trauma to adjacent tissue, rare suture breakage					
Applies appropriate tension, negligible injury to adjacent structures, no suture breakage					

Autonomy:

	1	2	3	4	5
Unable to complete entire task, even with verbal guidance					
Able to complete task safely with moderate guidance.					
Able to complete task independently without prompting.					

Robotic Control:

	1	2	3	4	5
Consistently does not optimize view, hand position, or repeated collisions even with guidance					
View is sometimes not optimal. Occasionally needs to relocate arms. Occasional collisions and obstruction of assistant.					
Controls camera and hand position optimally and independently. Minimal collisions or obstruction of assistant					

Use of Third Arm:

	1	2	3	4	5
N/A					
Consistently does not use it, or does not use it well when required, even with verbal guidance.					
Mostly uses 3 rd arm in a safe and efficient manner with moderate guidance.					
Consistently uses 3 rd arm in a safe and efficient manner without prompting.					

***RATE THE LEARNERS PERFORMANCE: circle the number that best describes their performance on this case:**

1: requires significant practice/needs improvement 2: good/at appropriate level 3: excellent/established

*Modified from rubric previously published: Goh et al. J of Urol. 2012