Operative Competency Evaluation

Trainee Identification: _____   Date: __ __/__ __/__ __ __ __

Program: _____   Evaluator Identification: _____

Global Assessment for Laparoscopic Right Hemicolectomy

Instructions: Please read each action highlighted in grey. Evaluate the performance of each action according to the 1-5 scale listed below the stated action. Then write the corresponding score in the column labeled "score". Please review the form before utilizing, as certain sections apply only to specific approaches used.

E	Exposure	Score
E1	**Demonstrates knowledge of optimum skin incision/portal/access** **1** Does not extend an incision when struggling for access **2** **3** Makes an incision clearly too small or too large **4** **5** Verbally states or marks with a pen the anatomical landmarks prior to making the incision Extends incision if necessary for exposure.	
E2	**Achieves an adequate exposure through purposeful dissection in correct tissue planes and identifies all structures correctly** **1** Describes the structure encountered in the dissection in the wrong location. Rough blind palpation of abdominal contents causing damage **2** **3** Tries to maintain the standard approach despite the fact that access is proving difficult. Forgets to examine some of the abdominal contents **4** **5** Is able to give a running commentary to the trainer of the structures encountered. Makes a cautious entry through peritoneum. Systematic inspection of contents of abdomen	
E-T	**Total Score for Exposure**	

Trainee Identification: _____   Date: __ __/__ __/__ __ __ __

LRHC-IT	Laparoscopic Right Hemicolectomy	Score
RHC-IT1	**Port Placement, Trocar pattern**	
	1 Careless placement causing damage and/or inadequate pattern	
	2	
	3 Ports placed with some disregard for safety and/or suboptimal pattern	
	4	
	5 Safe placement without injury to abdominal wall structures and allowing for ergonometrically optimal pattern with alignment of the surgeon camera and monitor	
RHC-IT2	**Abdominal exploration**	
	1 Fails to adequately identify liver, small bowel, pelvis and colon	
	2	
	3 Identifies some but not all of the organs or identifies all organs but not in systematic manner	
	4	
	5 Identifies liver, small bowel, pelvis and colon in a systematic manner	
RHC-IT3	**Appropriate mesenteric/bowel manipulation**	
	1 Causes mesenteric or bowel injury such as large hematoma and/or significant bleeding and/or enterotomy	
	2	
	3 Suboptimal manipulation without causing injury or with causing serosal or peritoneal injury, small hematomas or minimal bleeding	
	4	
	5 Gentle precise manipulation of mesentery and bowel without hematoma, bleeding or injury	
	If using lateral to medial approach, continue. If using medial to lateral approach, skip to question RHC-IT19. If using the inferior/posterior approach, skip to question RHC-IT	
RHC-IT8	**Lateral to medial (along the right gutter starting at the cecum): Gains exposure, identifies planes and incises lateral peritoneal attachments**	
	1 Fails to gain exposure or identify appropriate plane	
	2	
	3 Exposes with difficulty, Slow or inadequate identification of appropriate plane, incises attachments with difficulty	
	4	
	5 Easily and quickly gains exposure and identifies appropriate plane, incises attachments easily	

RHC-IT9	**Dissection of the right colon from the retroperitoneum while pulling the colon toward the midline**	
	1 Fails to dissect right colon from retroperitoneum or damages retroperitoneum while dissecting	
	2	
	3 Dissect right colon from retroperitoneum with difficulty and/or sustains minor injury	
	4	
	5 Easily dissects right colon from retroperitoneum	
RHC-IT10	**Protects the ureter, gonadal vessels and retroperitoneal structures**	
	1 Fails to protect one or more of these structures from significant injury	
	2	
	3 Has difficulty protecting structures resulting in minor injury to one or more structures	
	4	
	5 Protects all of these structures	
RHC-IT11	**Releases the mesocolon from the anterior surface of the duodenum (1st and 2nd)**	
	1 Fails to release mesocolon or causes damage while releasing duodenum or pancreas	
	2	
	3 Incompletely or only with difficulty releases mesocolon	
	4	
	5 Easily and completely releases mesocolon	
RHC-IT12	**Mobilization of hepatic flexure: Position of patient in reverse Trendelenburg**	
	1 Fails to utilize appropriate patient position to facilitate hepatic flexure mobilization	
	2	
	3 Inadequate use of appropriate patient position to facilitate hepatic flexure mobilization	
	4	
	5 Routinely utilizes appropriate patient position to facilitate hepatic flexure mobilization	
RHC-IT13	**Mobilization of hepatic flexure: Omental attachments division**	
	1 Fails to divide the omental attachments as dictated by oncologic principles or clinical scenario	
	2	

	3 Safely but insufficiently divides the omental attachments as dictated by oncologic principles clinical scenario	
	4	
	5 Safely and efficiently divides the omental attachments as dictated by oncologic principles and clinical scenario	
RHC-IT14	**Mobilization of hepatic flexure: Entry to lesser sac**	
	1 Fails to enter the lesser sac at a point distal to the fusion of the omentum and mesocolon	
	2	
	3 Safely but inefficiently enters the lesser sac at a point distal to the fusion of the omentum and mesocolon	
	4	
	5 Safely and efficiently enters the lesser sac at a point distal to the fusion of the omentum and mesocolon	
RHC-IT15	**Mobilization of hepatic flexure: Identifies duodenum (1st and 2nd)**	
	1 Fails to identify duodenum and/or causes duodenal injury	
	2	
	3 Identifies duodenum with difficulty or fails to anticipate its location	
	4	
	5 Correctly and easily identifies duodenum without injury	
RHC-IT16	**Identification of Ileocolic vessels: Cecal traction to identify ileocolic vascular pedicle**	
	1 Fails to identify ileocolic pedicle or traumatizes the bowel	
	2	
	3 Appropriately identifies ileocolic pedicle without traumatizing the bowel, but fails to apply appropriate degree and direction of traction	
	4	
	5 Appropriately identifies ileocolic pedicle and applies appropriate degree and direction of traction without traumatizing the bowel	
RHC-IT17	**Identifies the avascular planes through the windows on each side of ileocolic vessels**	
	1 Fails to identify appropriate plane	
	2	
	3 Slow or inadequate identification of appropriate plane	
	4	
	5 Easily and quickly identifies appropriate plane	

RHC-IT18	**Division of vessels**	
	1 Fails to ligate vessels securely by any method, resulting in pulsatile bleeding	
	2.	
	3. Ligates vessels, but fails to perform a high ligation, or ligation results in nonexpanding hematoma.	
	4.	
	5. Performs a secure high ligation by any method with no hematoma in one attempt.	
	If doing lateral to medial approach, skip to RHC-IT39	
	Start of medial to lateral approach	
RHC-IT19	**Medial to lateral (along the mesenteric artery): Gains exposure and identifies ileocolic pedicle**	
	1 Fails to gain exposure and cannot identify pedicle correctly or traumatizes the bowel	
	2	
	3 Exposure gained with difficulty, slow or inadequate identification of ileocolic pedicle, or fails to apply appropriate degree and direction of traction	
	4	
	5 Easily and quickly gains exposure and identifies ileocolic pedicle and applies appropriate degree and direction of traction without traumatizing the bowel	
RHC-IT20	**Identifies the avascular planes through the windows on each side of ileocolic vessels**	
	1 Fails to identify appropriate plane	
	2	
	3 Slow or inadequate identification of appropriate plane	
	4	
	5 Easily and quickly identifies appropriate plane	
RHC-IT21	**Division of vessels (one from each group: none listed?**	
	1 Fails to ligate vessels securely by any method, resulting in pulsatile bleeding	
	2.	
	3. Ligates vessels, but fails to perform a high ligation, or ligation results in nonexpanding hematoma.	
	4.	
	5. Performs a secure high ligation by any method with no	

	hematoma in one attempt.	
RHC-IT22	**Mobilizes the right colon mesocolon to release the colon and mesentery from the retroperitoneum and duodenum safely** **1** Fails to identify appropriate plane **2** **3** Slow or inadequate identification of appropriate plane **4** **5** Easily and quickly identifies appropriate plane	
RHC-IT23	**Protects the ureter, gonadal vessels and retroperitoneal structures** **1** Fails to protect one or more of these structures from significant injury **2** 3 Has difficulty protecting structures resulting in minor injury to one or more structures **4** **5** Protects all of these structures	
RHC-IT24	**Identifies plane and incises lateral peritoneal attachments to hepatic flexure** **1** Fails to identify plane or incise attachments **2** **3** Identifies plane or incises attachments with difficulty **4** **5** Easily identifies plane and incises attachments	
RHC-IT25	**Mobilization of hepatic flexure: Position of patient in reverse Trendelenburg** **1** Fails to utilize appropriate patient position to facilitate hepatic flexure mobilization 2 **3** Inadequate use of appropriate patient position to facilitate hepatic flexure mobilization 4 **5** Routinely utilizes appropriate patient position to facilitate hepatic flexure mobilization	
RHC-IT26	**Mobilization of hepatic flexure: Omental attachments division** 1 Fails to divide the omental attachments as dictated by oncologic principles or clinical scenario 2 3 Safely but insufficiently divides the omental attachments as	

	dictated by oncologic principles clinical scenario 4 5 Safely and efficiently divides the omental attachments as dictated by oncologic principles and clinical scenario	

RHC-IT27	**Mobilization of hepatic flexure: Entry to lesser sac**
	
	    1Fails to enter the lesser sac at a point distal to the fusion of the omentum and mesocolon
	
	    2
	
	    3 Safely but inefficiently enters the lesser sac at a point distal to the fusion of the omentum and mesocolon
	
	    4
	
	    5 Safely and efficiently enters the lesser sac at a point distal to the fusion of the omentum and mesocolon	

RHC-IT28	**Mobilization of hepatic flexure: Identifies duodenum (1st and 2nd)**
	
	    1 Fails to identify duodenum and/or causes duodenal injury
	
	    2
	
	    3 Identifies duodenum with difficulty or fails to anticipate its location
	
	    4
	
	    5 Correctly and easily identifies duodenum without injury	

	If doing medial to lateral, skip to question RHC-IT39	

RHC-IT29	**Inferior/posterior approach: (small bowel mesentery attached to retroperitoneum along right common iliac artery): Gains exposure, identifies planes and incises terminal ileal mesenteric attachments**
	
	    1. Fails to gain exposure and cannot identify terminal ileal mesentery or traumatizes the bowel
	
	    2.
	
	    3. Exposure gained with difficulty, slow or inadequate identification of terminal ileal mesentery, or fails to apply appropriate degree and direction of traction
	
	    4.
	
	    5 Easily and quickly gains exposure and identifies terminal ileal mesentery and applies appropriate degree and direction of traction without traumatizing the bowel	

RHC-IT30	**Dissects the right colon and mesentery from the retroperitoneum beginning with the small bowel mesentery** **1**. Fails to dissect right colon from retroperitoneum or damages the retroperitoneum while dissecting	

	2	
	3. Dissects right colon from retroperitoneum with difficulty and/or sustains minor injury	
	4	
	5. Easily dissects right colon from retroperitoneum	
RHC-IT31	**Protects the ureter, kidneys, gonadal vessels and duodenum**	
	1. Fails to protect one or more of theses structures from significant injury	
	2.	
	3. Has difficulty protecting structures resulting in minor injury to one or more structures	
	4.	
	5. Protects all of these structures.	
RHC-IT32	**Releases the mesocolon from the anterior surface of the duodenum (1st and 2nd)**	
	1Fails to release mesocolon or causes damage while releasing duodenum or pancreas	
	2	
	3Incompletely or only with difficulty releases mesocolon	
	4	
	5 Easily and completely releases mesocolon	
RHC-IT33	**Mobilization of hepatic flexure: Position of patient in reverse Trendelenburg**	
	1Fails to utilize appropriate patient position to facilitate hepatic flexure mobilization	
	2	
	3 Inadequate use of appropriate patient position to facilitate hepatic flexure mobilization	
	4	
	5 Routinely utilizes appropriate patient position to facilitate hepatic flexure mobilization	
RHC-IT34	**Mobilization of hepatic flexure: Omental attachments division**	
	1 Fails to divide the omental attachments as dictated by oncologic principles or clinical scenario	
	2	
	3 Safely but insufficiently divides the omental attachments as	

	dictated by oncologic principles clinical scenario 4 5 Safely and efficiently divides the omental attachments as dictated by oncologic principles and clinical scenario	
RHC-IT35	**Mobilization of hepatic flexure: Entry to lesser sac** 1 Fails to enter the lesser sac at a point distal to the fusion of the omentum and mesocolon **2** 3 Safely but inefficiently enters the lesser sac at a point distal to the fusion of the omentum and mesocolon **4** 5 Safely and efficiently enters the lesser sac at a point distal to the fusion of the omentum and mesocolon	
RHC-IT36	**Identification of Ileocolic vessels: Cecal traction to identify ileocolic vascular pedicle** 1 Fails to identify ileocolic pedicle or traumatizes the bowel 2 3 Appropriately identifies ileocolic pedicle without traumatizing the bowel, but fails to apply appropriate degree and direction of traction 4 5 Appropriately identifies ileocolic pedicle and applies appropriate degree and direction of traction without traumatizing the bowel	
RHC-IT37	**Identifies the avascular planes through the windows on each side of ileocolic vessels** 1 Fails to identify appropriate plane **2** 3 Slow or inadequate identification of appropriate plane **4** 5 Easily and quickly identifies appropriate plane	
RHC-IT38	**Division of vessels** 1 Fails to ligate vessels securely by any method, resulting in pulsatile bleeding 2. **3**. Ligates vessels, but fails to perform a high ligation, or ligation results in nonexpanding hematoma. 4. **5.** Performs a secure high ligation by any method with no hematoma in one attempt.	

	Continue below for all three approaches	
RHC-IT39	**Exteriorization, bowel resection and anastomosis: Protection of extraction wound** **1** Fails to employ a wound protector **2** **3** Employs an appropriately sized wound protector with difficulty or selects incorrect sized wound protector **4** **5** Easily employs a wound protector	
RHC-IT40	**Exteriorization, bowel resection and anastomosis: Choice of transection site appropriate for disease process** **1** Fails to appropriately choose and identify transection site of small and large bowel based upon disease process (e.g., inflammatory bowel disease, ischemia, neoplasia) **2** **3** Appropriately chooses transection site of small and large bowel based upon disease process (e.g., inflammatory bowel disease, ischemia, neoplasia), but fails to accurately identify site **4** **5** Appropriately selects transaction site of small and large bowel based upon disease process (e.g., inflammatory bowel disease, ischemia, neoplasia)	
RHC-IT41	**Exteriorization, bowel resection and anastomosis: Transection of bowel to ensure blood supply** **1** Fails to transect bowel area at well vascularized area **2** **3** Appropriately transects bowel to optimize blood supply, but fails to ensure adequate supply identifier ischemia bowel but recognizes problem **4** **5** Appropriately transects bowel to optimize and assure blood supply	
RHC-IT42	**Exteriorization, bowel resection and anastomosis: Alignment of proximal and distal bowel segments for anastomosis** **1** Fails to align and orient bowel **2** **3** Appropriately aligns and orients bowel but with difficulty **4** **5** Appropriately and easily aligns and orients bowel	

RHC-IT43	**Exteriorization, bowel resection and anastomosis: Construction of patent anastomosis**	
	1 Fails to construct a widely patent anastomosis	
	2	
	3 Constructs a widely patent anastomosis, with difficulty	
	4	
	5 Routinely and easily constructs and verifies a widely patent anastomosis	
RHC-IT44	**Exteriorization, bowel resection and anastomosis: Containment / avoidance of spillage**	
	1 Major contamination or spillage	
	2	
	3 Minor contamination or spillage	
	4	
	5 No contamination or spillage	
	## Closure	**Score**
C1	**Completes a sound wound repair where appropriate**	
	1. Ties very tight sutures, clearly strangulating soft tissue	
	2	
	3 Leaves too large a gap between sutures so that sutures are not properly opposed	
	4.	
	5 Closes each layer without tension	
C2	**Protects the wound with dressings, splints and drains where appropriate**	
	1 Walks away from the operating table without briefing the assistant or the nurse about required dressing	
	2	
	3 Fails to specify required dressing	
	4	
	5 Personally supervises the application of the wound dressing	
C-T	**Total Score for Closure**	

RHC-TS	Laparoscopic right hemi-colectomy technical skills	Score
RHC-TS1	**Dissection techniques to preserve structures, avoid blood loss, define planes: Sharp dissection** **1** Fails to practice meticulous careful dissection **2** **3** Dissection accomplished with more blood loss and/or more trauma than desired **4** **5** Careful meticulous dissection	
RHC-TS2	**Dissection techniques to preserve structures, avoid blood loss, define planes: Blunt dissection** **1** Fails to practice meticulous careful dissection **2** **3** Dissection accomplished with more blood loss and/or more trauma than desired **4** **5** Careful meticulous dissection	
RHC-TS3	**Traction and counter traction** **1** Use of excessive or inadequate force **2** **3** Variably has difficulty maintaining three point traction and counter traction for exposure **4** **5** Applies adequate atraumatic traction and counter traction	
RHC-TS4	**Identification of planes** **1** Consistently fails to identify proper planes **2** **3** Inconsistent recognition of proper planes **4** **5** Consistently and easily identifies proper planes	
RHC-TS5	**Selection of appropriate instruments** **1** Demonstrates little knowledge of or regard for appropriate type and number of instruments **2** **3** Requires some guidance to the appropriate type or number of instruments	

	4	
	5 Readily uses appropriate type and number of instruments	
RHC-TS6	**Reduction of blood loss/management of small vessels**	
	1 Fails to recognize or manage small vessels that are actively bleeding	
	2	
	3 Recognizes and manages small vessels that are actively bleeding, but fails to anticipate and control vessels that are likely to bleed	
	4	
	5 Readily recognizes and manages small vessels that are actively bleeding, and anticipates and controls vessels that are likely to bleed and quickly	
RHC-TS7	**Instrument change**	
	1 Fails to recognize the need for an instrument change	
	2 Recognizes the need for and timing of instrument changes, but fails to minimize the number of required instrument changes	
	3 Recognizes the appropriateness of instrument changes, and effectively minimizes the number of required changes	
RHC-TS8	**Instrument change**	
	1 Fails to perform hand to hand transfer	
	2	
	3 Intermittently performs hand to hand transfer	
	4	
	5 Consistently performs hand to hand transfer	
RHC-TS9	**Hand Movements**	
	1 Fails to consistently demonstrate quick, error-free, or economical movement with either hand	
	2	
	3 Inconsistently demonstrates quick, error-free, and/or economical movement only with dominant hand	
	4	
	5 Always demonstrates quick, error-free, and economical movement with both hands	

RHC-TS10	**Use of electrocautery**	
	1 Unsafe use of electrocautery resulting in significant risk for or causing damage	
	2	
	3 Intermittent unsafe use of electrocautery introducing minimal risk for damage or bleeding	
	4	
	5 Safe use of electrocautery with no risk for damage or bleeding	
RHC-TS11	**Use of bipolar or ultrasonic devices**	
	1 Unsafe use of bipolar or ultrasonic devices too close to healthy tissue or with too much tissue introducing significant risk for or causing damage	
	2	
	3 Intermittent unsafe use of bipolar or ultrasonic devices introducing minimal risk for damage or bleeding	
	4	
	5 Safe use of bipolar or ultrasonic devices with no risk for damage or bleeding	

RHC-IT-T	**Total for Laparoscopic Right Hemicolectomy Intraoperative Technique**	

	Exposure	RHC Intra-op Technique	Closure	RHC Technical Skills	
Total					

GLOBAL RATING SCALE OF OPERATIVE PERFORMANCE

Domain of Surgical Performance	Notes	UNSAT	GEN SURG	BRD CR SURG	COMP CR SURG	CR Surg
Respect for Tissue	Appropriate handling of tissue, minimizes tissue damage through appropriate use of instruments and appropriate force	☑	☑	☑	☑	☑
Time and Motion	Efficient and economic movement	☑	☑	☑	☑	☑
Instrument Handling	Competent use of instruments, fluid movements without stiffness or awkwardness	☑	☑	☑	☑	☑

Trainee Identification: _____   Date: __ __/__ __/__ __ __ __

Knowledge of Instruments	Familiar with names and uses of instrument required for this procedure, does not ask for wrong instrument or use incorrect names when asking for instruments	☑	☑	☑	☑	☑
Flow of Operation	Demonstrates forward planning; course of operation demonstrated through effortless flow from one move to the next	☑	☑	☑	☑	☑
Use of Assistant (if applicable)	Strategically used assistants to the best advantage at all times	☑	☑	☑	☑	☑
Knowledge of Specific Procedure	Demonstrated familiarity with all steps of the operation /procedure	☑	☑	☑	☑	☑
Quality of Final Product		☑	☑	☑	☑	☑
Based on the **OVERALL** performance, the candidate's current competence	**Unsatisfactory** – Below the level of a general surgeon. **Gen SURG** – Could function as a general surgeon. Basic competence in technical skills. **BRD CR SURG**– Borderline CR surgeon. **COMP CR SURG** – Competent as an independent CR surgeon. More advanced competence in technical skills. **CR SURG**– Could practice without supervision as a colorectal surgeon. Could function as an independent practitioner. Professionally sophisticated. At an exemplary level would also imply the person is competent enough to act as a resource to other health care professionals.	☑	☑	☑	☑	☑

Comments