Appendix 1 to Balayla J, Bergman S, Ghitulescu G, et al. Knowing the operative game plan: a novel tool for the assessment of surgical procedural knowledge. *Can J Surg* 2012.

DOI: 10.1503/cjs.015411

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PROCEDURAL STEPS

Indirect inguinal hernia mesh repair in men

O Incise the skin in the groin for 5–6 cm within a Langer line to expose the internal ring

O Deepen the incision through the subcutaneous tissue to expose the external oblique fascia

O Open the external oblique aponeurosis and free its lower leaf from the spermatic cord

O Free the upper leaf of the external oblique aponeurosis from the underlying muscle

O Separate the spermatic cord and encircle it with a Penrose drain

O Incise the cremasteric sheath to explore the internal ring for an indirect hernia sac

O Free, if present, the indirect hernia sac from the cord to a point beyond the neck of the sac

O Verify that the sac is empty, then suture ligate the sac and transect it

O Invert the indirect hernia sac into the peritoneal space

O Select a mesh to insert, retract the spermatic cord

O Suture the mesh to the insertion of the rectus sheath to the pubic bone

O Continue the suture to attach the lower edge of the patch to the inguinal ligament up to a point just lateral to the internal ring

O Suture the upper edge of the mesh to Cooper's ligament

O Place the spermatic cord between the mesh tails

O Wrap the tails around the cord and place a suture to secure them there

O Tuck the excess mesh underneath the external oblique aponeurosis

O Close the external oblique aponeurosis over the cord with an absorbable suture

O Close the skin with an absorbable suture

Committed: ___
Omitted: _____
Total: _______/18

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Laparoscopic cholecystectomy

○ Incise the skin 2-cm length above or below the umbilicus

○ Incise the linea alba to enter the abdomen and place stay sutures in the fascia

○ Place a primary 10-mm Hasson trocar through the umbilicus

○ Begin gas insufflation and pass a laparoscope through Hasson

○ Place a second 5-mm trocar in the epigastrium under direct vision, at the level of the inferior liver edge just to the right of the falciform ligament, angling toward the gallbladder

○ Place a third 5-mm trocar just below the costal margin in the midclavicular line

○ Place a fourth trocar in a variable position, generally in the anterior axillary line, several centimeters below the fundus of the gallbladder

○ Elevate the gallbladder by placing a clamp on the fundus of the gallbladder and elevate the fundus

○ Dissect the peritoneum at the interface between Hartman's pouch and periportal fat toward the common duct until the cystic duct, cystic artery, or lymph node of Calot is identifiable

○ Circumferentially dissect the cystic duct as it enters the gallbladder to achieve the critical view of safety. Ligate and divide the cystic duct

○ Circumferentially dissect the cystic artery as it crosses onto the gallbladder to achieve the critical view of safety. Ligate and divide the cystic artery

○ Dissect the gallbladder off the liver bed using traction and cautery, ensuring hemostasis

○ Move the laparoscope to the epigastric trocar and place the gallbladder into an endobag introduced through the Hasson trocar

○ Remove both the trocar and the gallbladder

○ Remove trocars (under direct vision)

○ Close fascia and skin

Committed: ___
Omitted: _____

Total: _______/16

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Open right hemicolectomy for malignancy

O Make a midline incision

O Perform a full laparotomy

O Locate the site of the malignancy

O Open the retroperitoneum along the white line of Toldt to separate the retroperitoneal structures from the terminal ileum and colon

O Incise the medial and inferior attachments to the cecum and terminal small bowel toward the junction of the third and fourth portions of the duodenum

O Continue the lateral dissection up and around the hepatic flexure, retracting the midtransverse colon inferiorly

O Dissect the thin plane between the mesocolon and the gastrocolic ligament to complete the flexure mobilization.

O Ligate and divide vessels as needed

O Place a gentle traction on the transverse colon and complete the remaining mobilization of the proximal transverse colon.

O Retract the right colon superio-medially, exposing the duodenum and head of the pancreas

O Incise the peritoneum overlying the mesenteric vasculature

O Clamp, divide and ligate the ileocolic and right branch of the middle colic vessels at their base

O Clamp and divide the marginal branches to the ileum at the proximal margin of resection

O Divide the terminal ileum (using stapling device or clamp and sharp incision)

O Divide the colon (using stapling device or clamp and sharp incision)

O Send the specimen for pathologic evaluation

O Align the bowel and perform the anastomosis

O If hand sawn → 2 layers closure

O If stapled → GIA between colon and small bowel with mesenteric border

O Close with T-A stapler after aligning with Alice clamps or 2-layer closure

O Check the abdomen for adequate hemostasis

O Close abdomen at fascia and skin

Committed: ___
Omitted: _____

Total: _______/19