

Appendix 1. Preliminary interpretation checklist for ED residents

Patient review –	
1. Chief complaint:	Identification number (not patient number)
2. Physical related first impression and the reason for ordering CT:	
Abdomen CT finding – mark V in <input type="checkbox"/>	
1. Liver - Parenchyma <input type="checkbox"/> Cyst <input type="checkbox"/> Mass <input type="checkbox"/> Abscess <input type="checkbox"/> Periparenchymal enhancement color change (<input type="checkbox"/> Hepatitis <input type="checkbox"/> Fatty liver) surface (<input type="checkbox"/> Regular <input type="checkbox"/> Irregular) - Hepatic duct <input type="checkbox"/> Dilatation <input type="checkbox"/> Stone <input type="checkbox"/> Pneumobiliary duct	9. Uterus and adnexa - Uterus <input type="checkbox"/> Mass <input type="checkbox"/> Abscess - Ovary and tubule <input type="checkbox"/> Abdomal cyst <input type="checkbox"/> Mass <input type="checkbox"/> Abscess - <input type="checkbox"/> Perifluid collection <input type="checkbox"/> Infiltration
2. Biliary tract - GB sac <input type="checkbox"/> Mass <input type="checkbox"/> Stone <input type="checkbox"/> Polyp - GB wall <input type="checkbox"/> Thickening <input type="checkbox"/> Enhancement <input type="checkbox"/> Peri wall infiltration - Common bile duct <input type="checkbox"/> Duct dilatation <input type="checkbox"/> Stone <input type="checkbox"/> Mass <input type="checkbox"/> Duct enhancement	10. Other Peritoneum, mesentery and abdominal wall - <input type="checkbox"/> Mass <input type="checkbox"/> Peritoneum thickening - <input type="checkbox"/> Mesentery or fat infiltration - <input type="checkbox"/> LN enlargement : site () - <input type="checkbox"/> Fluid collection <input type="checkbox"/> Air Prostate - <input type="checkbox"/> Mass <input type="checkbox"/> Abscess <input type="checkbox"/> Enlargement Adrenal gland - <input type="checkbox"/> Cyst <input type="checkbox"/> Mass
3. Pancreas - <input type="checkbox"/> Cyst <input type="checkbox"/> Mass <input type="checkbox"/> Abscess - <input type="checkbox"/> Peri Pancreatic infiltration <input type="checkbox"/> Fluid collection - <input type="checkbox"/> Pancreatic duct dilatation	
4. Kidney, Ureter and Bladder - Kidney size (<input type="checkbox"/> Normal <input type="checkbox"/> Abnormal) - Renal <input type="checkbox"/> Cyst <input type="checkbox"/> Mass <input type="checkbox"/> Stone <input type="checkbox"/> Abscess <input type="checkbox"/> Wedge multiple patch (APN) <input type="checkbox"/> Peri wall infiltration <input type="checkbox"/> Fluid collection - Hydronephrosis (<input type="checkbox"/> renal calyces <input type="checkbox"/> Renal pelvis) - Ureter <input type="checkbox"/> Mass <input type="checkbox"/> Stone <input type="checkbox"/> Wall thickening <input type="checkbox"/> Enhancement <input type="checkbox"/> Hydro ureter - Bladder <input type="checkbox"/> Mass <input type="checkbox"/> Wall thickening <input type="checkbox"/> Enhancement	11. Vessel check list <input type="checkbox"/> Aorta <input type="checkbox"/> IVC <input type="checkbox"/> Femoral artery <input type="checkbox"/> Femoral vein <input type="checkbox"/> SMA <input type="checkbox"/> IMA <input type="checkbox"/> Renal artery <input type="checkbox"/> Renal vein <input type="checkbox"/> Splenic artery <input type="checkbox"/> Splenic vein <input type="checkbox"/> Celiac trunk <input type="checkbox"/> Portal vein - <input type="checkbox"/> Aneurysm <input type="checkbox"/> Thrombus <input type="checkbox"/> Dissection
5. Spleen - Size (<input type="checkbox"/> Normal <input type="checkbox"/> Abnormal) <input type="checkbox"/> Infarction	Any other description ->
6. Stomach - <input type="checkbox"/> Mass <input type="checkbox"/> Wall thickening <input type="checkbox"/> Perforation <input type="checkbox"/> Diverticulum <input type="checkbox"/> Herniation Duodenum - <input type="checkbox"/> Mass <input type="checkbox"/> Wall thickening <input type="checkbox"/> Perforation	Impression in ED (after CT reading): <input type="checkbox"/> R1 <input type="checkbox"/> R2 <input type="checkbox"/> R3 <input type="checkbox"/> R4
7. Small intestine - <input type="checkbox"/> Mass <input type="checkbox"/> Wall thickening <input type="checkbox"/> Perforation <input type="checkbox"/> Bowel dilatation - <input type="checkbox"/> Bowel wall enhancement <input type="checkbox"/> Ischemia Large intestine - <input type="checkbox"/> Mass <input type="checkbox"/> Wall thickening <input type="checkbox"/> Perforation <input type="checkbox"/> Bowel dilatation - <input type="checkbox"/> Bowel wall enhancement <input type="checkbox"/> Ischemia <input type="checkbox"/> Diverticulum - <input type="checkbox"/> Internal hernia <input type="checkbox"/> Inguinal hernia - <input type="checkbox"/> Obstruction	
8. Appendix - <input type="checkbox"/> Dilatation (size mm) - <input type="checkbox"/> Not identified - <input type="checkbox"/> Wall enhancement <input type="checkbox"/> Wall thickening <input type="checkbox"/> Appendicolith	

ED, emergency department; CT, computed tomography; GB, gallbladder; LN, lymph node; IVC, inferior vena cava; SMA, superior mesenteric artery; IMA, inferior mesenteric artery.

Appendix 2. Protocol for assessing the two final reports

	PGY-1 ED resident	Radiologist final report	Decision
1	Acute appendicitis	Acute appendicitis	Correct
2	No acute appendicitis	No acute appendicitis	Correct
3	Acute appendicitis	No acute appendicitis	Incorrect
4	No acute appendicitis	Acute appendicitis	Incorrect

PGY-1, postgraduate year 1; ED, emergency department.