

SAGES POSITION STATEMENT ON ENDOSCOPIC ULTRASOUND

This position statement is intended as a guide on the use of endoscopic ultrasound (EUS) in practice. It is not intended as a standard of care, nor is it meant to advocate or discourage any modality. The final decision on imaging remains the prerogative of the treating physician.

Endoscopic ultrasonography incorporates high-frequency ultrasound into the tip of the endoscope to visualize the gastrointestinal (GI) wall and surrounding structures. Using endoscopy, ultrasound probes are placed close to the target anatomy, thereby enhancing the resolution of the GI wall and adjacent structures. Tissue samples can be obtained, and therapy can be performed by passing instruments under ultrasonographic guidance.

Several different EUS devices are available. Most are like standard endoscopic instruments in that they have biopsy channels and video or fibreoptic endoscopic capability. They differ from normal endoscopes by having ultrasound transmission and reception capability at the tip of the instrument.

GI indications for EUS, amongst others, include:

1. Diagnosis of choledocholithiasis
2. Evaluation of biliary tree abnormalities
3. Evaluation of GI tract wall or adjacent structure abnormalities
4. Evaluating abnormalities of the pancreas
 - a. Masses
 - b. Pseudocysts
 - c. Chronic pancreatitis
5. Evaluating peri-intestinal adenopathy and masses
6. Gallbladder drainage for acute cholecystitis
7. Staging and marking of GI malignancies (oesophagus, stomach, colon, rectum, pancreas, liver, and biliary tree)
8. Surveillance of certain gastric subepithelial masses (asymptomatic glomus tumours or small (less than 3 cm) gastrointestinal stromal tumours).
9. Endoscopic therapy under ultrasonographic guidance
 - a. Pancreatic cyst drainage
 - b. Coeliac plexus block, e.g., chronic pancreatitis or pancreatic cancer
 - c. Biliary drainage (EUS-BD)
 - d. Liver biopsies
 - e. Stent placement
10. Sampling tissue of lesions by fine needle aspiration (FNA) within or adjacent to, the GI tract wall (EUS-FNA)

EUS-FNA Indications:

 - a. Upper GI tract lesions - oesophageal or gastric wall thickening, sub-epithelial lesions, e.g., GI stromal tumours (GISTs)
 - b. Lower GI tract lesions - suspected GISTs, perirectal mass lesions
 - c. Pancreas - solid pancreatic lesions, pancreatic neuroendocrine tumours, cystic pancreatic lesions

- d. Lymphadenopathy - mediastinal adenopathy, Hodgkin, and non-Hodgkin lymphoma
- e. Other lesions - bile duct strictures and gallbladder masses, suspected cholangiocarcinoma, in candidates not eligible for liver transplantation (biopsy tract seeding), solid liver lesions, adrenal lesions, and paracentesis.

Contraindications to EUS-FNA

- a. Patients who cannot tolerate sedation, monitored anaesthetic care (MAC), or general anaesthesia.
- b. Hemodynamically unstable patients.
- c. Gastrointestinal obstruction
- d. Abnormal coagulation studies (platelet count $\leq 50,000/\mu\text{L}$; international normalized ratio [INR] >1.5)

Therapeutic EUS should be performed by a suitably qualified endoscopist with sufficient clinical experience, preferably under expert supervision, and where support from surgeons and radiologists is available. Training is required to use this technology effectively, incorporating the number of cases required to gain and maintain expertise. While there is no formal local accreditation or training for practitioners wanting to use EUS, it has become an important imaging tool for the evaluation of a variety of GI disorders. As the demand for EUS continues to increase, training guidelines must be developed and optimised so that the procedure is practiced in a safe, ethical, and clinically effective manner while being affordable and cost-effective.

Established guidelines for EUS from the AGA, ASGE, and recently (December 2021) the ESGE are acknowledged, and with the local support of the HPBASA, we concur with the recommendations of these guidelines.

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Author: Dr WM Simmonds

Contributors: Prof M Brand, Dr CL Gounden, Dr VG Naidoo, and Prof GA Watermeyer

SAGES Guidelines Sub-Committee

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