



UPPER GI SURGERY – SYLLABUS

"**Knowledge and Skills**" have to be documented and proved in the UGI-book for Eligibility and may be additionally assessed by examination. For pragmatical reasons the individual UGI-books are scrutinized in the Eligibility process taking into consideration the various national requirements and local situations.

By that provisional arrangements are provided: if e.g. "flexible endoscopy" is not part of UGI Surg in a distinct country, the candidate may omit this section in "**Knowledge and Skills**" without consequences for the Eligibility process, but approval of "Knowledge" in e.g. "flexible endoscopy" will be mandatory for the Examination. This procedure is also valid for e.g. "bariatric surgery" or "diaphragmatic surgery" and others.

The UGI surgeon is the expert from the highly specialised centres within gastric, cardia and oesophageal surgery. This knowledge includes benign surgical diseases, elective as acute, traumas and cancer diseases.

Due to considerable diversity of the diseases encompassed within the subspeciality, it is important that the UGI specialist has sufficient knowledge of newest developments in the field, concerning diagnostic work-up, indications for surgery, surgical technique, including early endoscopic treatment of premalignant diseases, minimal invasive techniques and he/she must be proficient in open procedures.

Within the acute surgery, the UGI surgeon must be capable of receiving, resuscitating, diagnosing, and treating the acute upper gastrointestinal diseases in an evidence-based manner.

Within treatment of benign diseases (in highly specialised centres), the UGI surgeon must be able to diagnose, work up and treat benign illnesses in oesophagus, transition zone and stomach in an evidence-based manner.

Within treatment of malignant diseases (in highly specialised centres), the UGI surgeon must cooperate with the Multi-Disciplinary Team (MDT) to be able to diagnose, work up and treat malignant and pre malignant illnesses in the oesophagus, transition zone, and stomach in an evidence based manner.

It is expected that the UGI surgeon has a thorough knowledge concerning the different radiological diagnostic modalities and invasive radiological treatment methods, ultrasonography and endoscopic methods.

Endoscopy on an advanced level is relevant for the UGI surgical field and knowledge in diagnostics and treatment in the continuation of competences attained during the board certification must be secured.

Furthermore, the UGI surgeon is supposed to have a high degree of knowledge in advanced endoscopic surgery in the upper gastrointestinal tract (oesophagus, transition zone and stomach).

Scientific knowledge and research capability is mandatory.

The competence for these procedures (could be e.g., knowledge of ablative procedures, stent treatments, EMR, ESD etc.) should be attained by education in departments with a large volume and high expertise in the field. It should furthermore be documented that the competence is being maintained by exposure to a sufficient number of procedures per year.

Assessment of skills should be done by mentor/rater judgement as

- Knowledge of (KO)
- Direct Observation of Practical Skills (DOPS): performance in different situations, ex. Surgical teamleader, MDT conference team leader ex.
- Visual observation of Operative Technique (VOT).
- In the following the text is mandatory skills for both WGs. Some aspects are supplementary knowledge members of the two WGs (red text Thoracic surgery, green text visceral surgery).

Knowledge

UGI Surgery requires documented knowledge in (DOPS):

Preoperative Management (KO)

- Embryological, anatomical and physiological knowledge of thoracic and abdominal organs
- Surgical, endoscopic and radiological anatomy of chest and abdomen
- Relevant pharmacology
- Relevant symptoms and physical signs of upper GI disease
- Relevant non-invasive diagnostic tools; as ex. CECT / PET –CT, isotop scintigraphical investigations, upper GI contrast studies aso
- Relevant invasive tools and their place in staging work-up, ex. Bronchocscopy, endoscopy, laparoscopy, thoracoscopy, esophageal functional assessment, FNA, EBUS, EUS aso.
- Tests of respiratory, cardiac, renal and endocrine function. Patient information and documentation of informed consent
- Assessment of fitness for anesthesia and surgery
- Premedication and sedation

Intraoperative Care (KO)

- Patient positioning
- Prevention of nerve and other injuries in the anaesthetized patient

Postoperative Management (KO)

- Pain control
- Post-operative monitoring
- Post-operative complications
- Prevention, recognition and management of complications
- Respiratory failure-recognition and treatment
- Nutritional support-indications, techniques, total parenteral nutrition

Pancreas

Conditions (KO)

- Pancreatic cysts
- Splenic vein thrombosis
- Pancreatitis, acute as chronic

Procedures (VOT)

- Open and laparoscopic pancreatectomy (distal)

Spleen

Conditions (KO)

- Postsplenectomy sepsis
- Hemolytic anemias
- Idiopathic thrombocytopenic purpura
- Secondary hypersplenism and splenomegaly
- Neoplasms of spleen
- Splenic cysts

Procedures (VOT)

- Open and laparoscopic splenectomy
- Partial splenectomy/splenorrhaphy

Oesophagus

Conditions (KO)

- Zenker's diverticulum
- Epiphrenic diverticulum
- Hiatal hernia
- Gastroesophageal reflux and Barrett's oesophagus
- Dysphagia
- Schatzki's ring
- Achalasia
- Nutcracker oesophagus
- Foreign bodies
- Mallory-Weiss syndrome
- Diffuse esophageal spasm
- Spontaneous esophageal perforation
- Iatrogenic esophageal perforation
- Chemical burns
- Scleroderma connective tissue disorders
- Benign neoplasms
- Adenocarcinoma
- Squamous cell carcinoma

Procedures (DOPS, VOT)

- Diagnosis of gastroesophageal reflux (e.g. pH-metry)
- Diagnosis of esophageal and gastric motility disorders (e.g. manometry)
- Open and laparoscopic antireflux procedure
- Open and laparoscopic repair of paraesophageal hernia
- Repair/resection of perforated oesophagus
- Total esophagectomy
- Oesophagogastrrectomy: Open and laparoscopic, achalasia operations
- Endoscopical procedures, see later

Stomach

Conditions (KO)

- Upside down stomach
- Upper gastrointestinal bleeding
- Gastric carcinoma (acquired as well as hereditary)
- Duodenal ulcer with bleeding, perforation or obstruction
- Gastric ulcer with bleeding, perforation or obstruction
- Gastric polyps
- Gastric lymphoma
- Gastric carcinoid tumor
- Stress gastritis
- Morbid obesity
- Bezoars and foreign bodies
- Gastroparesis
- Postgastrectomy syndromes
- GIST
- MALT

Procedures (VOT)

- Percutaneous endoscopic gastrostomy
- Jejunostomy
- Open gastrostomy
- Partial/total gastrectomy
- Open and laparoscopic gastric resection
- Repair of duodenal perforation
- Haemostatic operations for bleeding ulcer
- Pyloroplasty
- Open and laparoscopic operation for morbid obesity
- Revisional procedures for post-gastrectomy syndromes

Flexible Endoscopy

- Handling of endoscopes and hygienic measures (KO)

Procedures (VOT)

- Flexible diagnostic esophago-gastroduodenoscopy
- Interventional endoscopy (e.g. stenting, polypectomy, mucosectomy, RF treatment)
- Endoscopical ultrasonography with advanced procedures, including biopsies
- Therapeutic endoscopic interventions (e.g. polypectomy, dilatation)
- Sclerotherapy and banding of esophageal varices
- Treatment of gastrointestinal bleeding sites (injection, clipping, electrofulguration)
- Endoscopic mucosectomy

Minimal Invasive Surgery (VOT)

- Techniques of establishing access for MIS (e.g. laparoscopy, SILS, NOTES, robotic assisted)
- Detection and treatment of MIS complications
- Instruments and technical devices (e.g. stapling)
- Patient selection and indication for MIS (KO)
- Suturing and stapling in MIS

Metabolic and Bariatric Surgery (DOPS, VOT)

- Principles of metabolic and bariatric surgery (KO)
- Pathophysiology and epidemiology of morbid obesity (KO)
- Patient selection and indication for bariatric surgery (KO)
- Surgical techniques in bariatric surgery
- Detection and treatment of complications

Thorax

The surgical anatomy and pathology of the heart, great vessels, air passages, chest wall, diaphragm and thoracic viscera and the applied cardio-respiratory physiology relevant to clinical examination, interpretation of special investigations and understanding of disorders of cardio-respiratory function caused by disease, injury and surgical intervention.

Conditions (KO)

- Pneumothorax/tension pneumothorax
- Anastomotic insufficiency
- Gastric conduit necrosis
- Cardiac tamponade
- Hemothorax
- Pleural effusion/empyema
- Mediastinitis
- Chylothorax
- Superior vena cava syndrome
- Esophageal foreign bodies
- Esophageal disruption
- Empyema thoracis
- Complications of thoracic operations
- Tracheo et bronchoesophageal fistula
- Malignant disease of the lungs and bronchi

Procedures (DOPS, VOT)

- Chest tube placement
- Techniques of thoracotomy (muscle-sparing lateral and standard postero-lateral)
- Techniques for resection of esophagus and reconstruction
- Cervicotomies
- Bronchoscopy, thoracoscopy, endoscopy
- Exploratory thoracotomy
- Thoracoscopy with or without biopsy
- Transthoracic repair diaphragmatic hernia
- Drainage of empyema
- Sternotomy
- Clam-shell incision

Paediatric (KO)

Conditions (KO)

- Correctable life-threatening congenital abnormalities
- Hypertrophic pyloric stenosis
- Esophageal atresia
- Tracheoesophageal fistula
- Foreign bodies of the trachea/esophagus
- Congenital diaphragmatic hernia

Procedures (DOPS, VOT)

- Pyloromyotomy
- Open and laparoscopic antireflux procedure
- Repair diaphragmatic hernia

Oncology

The applied basic sciences relevant to the understanding of the clinical behaviour, diagnosis and treatment of neoplastic disease (KO)

- Clinico-pathological staging of cancer and premalignant states (DOPS)
- Principles of cancer treatment by: surgery, radiotherapy, chemotherapy, immunotherapy, hormone therapy
- Pain therapy management
- Terminal care of cancer patients and palliation

Radiology (DOPS,VOT)

- Diagnostic and therapeutic interventional radiological methods (KO)
- Interventional radiological assisted implantation of prostheses and stents into organs and other structures
- X-ray guided detection of foreign bodies
- Sonographically guided identification and treatment of unpalpable lesions

Evaluation & Quality (DOPS)

- Decision-making in surgery
- Clinical audit
- Statistics and computing in surgery
- Documentation
- Principles of research and design and analysis of clinical trials
- Critical evaluation of innovations-technical and pharmaceutical
- Health Service management and economic aspects of surgical care
- Medical/legal ethics and medico-legal aspects of surgery
- Psychological effects of surgery and bereavement
- Rehabilitation
- Screening programs
- Quality control and quality management
- CIRS (Critical Incident Reporting System)
- Implementation of clinical studies
- Legal aspects
- Communication with patients, relatives and colleagues

Level of knowledge (DOPS and VOT)

Assessment of skills should be done by rater judgment as Direct Observation of Practical Skills (DOPS) and by observation of Operative Technique (VOT).

Oesophagus – Cardia (GE junction)

- Optimization of patients to esophagus- GE resection including selection and diagnostic work-up of the patient (DOPS)
- Evaluation and decision making concerning surgical resectability (DOPS)
- Strategies in order to increase the resectability (KO)
- Techniques and the extent of endoscopic treatment of acute, premalignant and malignant diseases in the esophagus (DOPS)
- Techniques and the extent of R0 resection of malignant tumours in esophagus, GEJ and stomach (DOPS;VOT)
- Techniques used for bariatric surgery (by-pass, gastric sleeve) (KO)
- Techniques used in reflux surgery (KO)
- Techniques used in surgery for para-esophageal hernias (DOPS)
- Techniques used at surgery/endoscopy of achalasia (lap Heller myotomy, POEM) (DOPS)
- Treatment of complications; abscesses, bleeding, anastomosis insufficiency and infections (DOPS)
- Perioperative care (DOPS)

Stomach

- Optimization of patients for esophagus- cardia resection including selection and diagnostic work up of the patient (DOPS)
- Evaluation and decision making concerning surgical resectability. (DOPS)
- Strategies in order to increase the resectability. (KO)
- Techniques and the proportion of endoscopic treatment for acute, premalignant and malignant diseases in the stomach (DOPS)
- Techniques and the extent of R0 resection of malignant tumours in the stomach (DOPS;VOT)
- Techniques used for bariatric surgery (by-pass, gastric sleeve) (KO)
- Techniques used for reflux surgery (KO)
- Techniques used for surgery for para oesophageal hernias (DOPS)
- Basic techniques in laparoscopic resection of above-mentioned illnesses (KO)
- Treatment of complications: abscesses, bleeding, anastomotic leakage, leakage of the duodenal stump and infections (DOPS)
- Perioperative care (DOPS)