ECS SURGERY – SYLLABUS

The ECSSurg syllabus comprehensively describes "Knowledges " and "Knowledges and Skills" (= basis for an individual "Log-book") mandatory for the qualification as F.E.B.S./ECSSurg.

The syllabus is at that time is not a complete curriculum that gives a structured educational plan but provides a crude orientation and a framework around which preparation for the qualification as F.E.B.S./ECSSurg can be structured.

The syllabus should not be viewed as static but will be continuously revised and updated by the members of the committee. It is noted, that research and changes in medicine may lead to significant changes in theory and clinical practice and by that will influence the content of the syllabus. New topics will be introduced and obsolete topics may be deleted. The candidates are expected to update their level according to the recent surgical practice and scientific literature.

To achieve the qualification as F.E.B.S./ECSSurg "Knowledges" have to be documented and provided for Eligibility and are assessed by Examination.

"Knowledges and Skills" have to be documented and proved in the log-book for Eligibility and may be additionally assessed by examination. For pragmatical reasons the individual log-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 ECSSurg in a distinct country, the candidate may omit this section in "Knowledges 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 ECS surgeon is the expert from the highly specialized centres within gastric, cardia and oesophageal surgery. Thus 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 the the ECS specialist has sufficient knowledge of newest developments in the field, concerning diagnostic work-up, indications for surgery, surgical technique, including early endoscopical treatment of premalignant diseases, minimal invasive techniques and he/she must be proficient in open procedures.

Within the acute surgery the ECS surgeon must be capable of receiving, resuscitating, diagnose and treat the acute upper gastrointestinal diseases in an evidence based manner.

Within treatment of benign diseases (in highly specialized centres) the ECS surgeon must be able to diagnose, work up and treat benign illnesses in esophagus, transition zone and stomach in an evidence based manner.
Within treatment of malignant diseases (in highly specialized centres the ECS 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 esophagus, transition zone, and stomach in an evidence based manner.

It is expected that the ECS 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 ECS surgical field and competences in diagnostics and treatment in the continuation of competences attained during the board certification must be secured.

Furthermore the ECS surgeon is supposed to master advanced endoscopic surgery in the upper gastrointestinal tract (oesophagus, transition zone and stomach).

The competence for these procedures (could be e.g., ablative procedures, stent treatments, EMR 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 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 and by
- Visual observation of Operative Technique (VOT).

**Knowledges**

ECS Surgery requires documented knowledge in (DOPS):

**Preoperative Management (KO)**
- Physical examination
- Tests of respiratory, cardiac, renal and endocrine function
- Patient information and documentation of informed consent
- Assessment of fitness for anaesthesia and surgery
- Premedication and sedation

**Intraoperative Care (KO)**
- Patient positioning
- Prevention of nerve and other injuries in the anaesthetised 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 trombosis
- Pancreatitis, acuta 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

Esophagus
**Conditions** (KO)
Zenker’s diverticulum
Epiphrenic diverticulum
Hiatal hernia
Gastroesophageal reflux and Barrett’s esophagus
Dysphagia
Schatzki’s ring
Achalasia
Nutcracker esophagus
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 esophagus
- Total esophagectomy
- Esophagogastrectomy
- Open and laparoscopic achalasia operations

**Stomach**

**Conditions (KO)**
- Upside down stomach
- Upper gastrointestinal bleeding
- Gastric carcinoma
- 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

**Procedures** (VOT)
- Percutaneous endoscopic gastrostomy
- Open gastrostomy
- Partial/total gastrectomy
- Open and laparoscopic gastric resection
- Repair of duodenal perforation
- Pyloroplasty
- Open and laparoscopic operation for morbid obesity
- Revisional procedures for postgastrectomy syndromes

**Flexible Endoscopy**
- Handling of endoscopes and hygienic measures (KO)

**Procedures** (VOT)
- Flexible diagnostic esophago-gastro-duodenoscopy
- Intervventional 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
- Hemothorax
- Pleural effusion/empyema
- Mediastinitis
- Chylothorax
- Superior vena cava syndrome
- Complications of thoracic operations
- Complications of thoracic operations
- 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
- Bronchoscopy, thoracoscopy,
- Exploratory thoracotomy
- Thoracoscopy with or without biopsy
- Transthoracic repair diaphragmatic hernia
- Open drainage of empyema
- Paediatric (KO)
- Correctable life-threatening congenital abnormalities
Conditions (KO)
- 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).

Esophagus – Cardia (GE junction)
- Optimization of patients to oesophagus- 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 oesophagus (DOPS)
- Techniques and the extent of R0 resection of malignant tumours in oesophagus, GEJ and stomach(DOPS;VOT)
- Techniques used for bariatric surgery (by-pass, gastric sleeve) (knowledge of)
- Techniques used in reflux surgery (knowledge of)
- Techniques used in surgery for para oesophageal 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 oesophagus- 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) (knowledge of)

Techniques used for reflux surgery (knowledge of)

Techniques used for surgery for para oesophageal hernias (DOPS)

Basic techniques in laparoscopic resection of above mentioned illnesses (knowledge of)

Treatment of complications: abscesses, bleeding, anastomotic leakage, leakage of the duodenal stump and infections (DOPS)

Perioperative care (DOPS)

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