

EFSUMB Common Course

Syllabus Final Abdominal Course

Setting:

Total number of hours is 16, of which more than 50% are practical lessons. The maximum number of participants per ultrasound device is 4. There is one tutor per each US-device. The practical exercises with patients should be performed in one-hour sequences. To allow for a more varied practical experience, the groups should be rotated every 30 minutes. An examination period less than 30 minutes brings with it unnecessary rush and the feeling of having insufficient time for the investigation. A clear division of participants into their respective groups helps them focus more intensely and precisely on the work.

Learning Content:

Repetition of ultrasound examination: intestine, neck, abdominal wall, thorax: Demonstration

- Systematic investigation intestine (linear probe)
 - Stomach
 - Small Intestine
 - Terminal ileum
 - Appendix
 - Ascending, transverse, descending colon
- Systematic neck examination (linear probe)
 - Thyroid transversal cuts
 - Thyroid longitudinal cuts
 - Thyroid volume measurement (convex probe)
 - Thyroid CCDS examination
 - Salivary glands: eq. submandibular / sublingual and parotid gland
 - Search lymph nodes: along carotid artery to jaw angle, and sternocleidomastoideus muscle
 - Representation of the tonsils in the angle of the jaw
 - Measurements of intima media thickness (IMT) in the common carotid artery, formation of plaques
- Systematic examination of the chest (convex and linear probe)
 - Sitting position, dorsal, lateral ventral cuts
 - Lying position, oblique cuts (diaphragm)
- Systematic abdominal wall examination (linear probe)
 - Lying position, checking abdominal wall layer for hernia and other abnormalities
 - Inguinal region lying + standing, check with palpation, valsalva maneuver and cough under ultrasound control view
 - Location of the inferior epigastric artery (delineation of direct and indirect inguinal hernia) and the femoral vessels (medial to it femoral hernia search)

Gastrointestinal System:

- Stomach changes

- Pyloric stenosis
- Gastric retention
- Gastric ulcer
- Gastric lymphoma
- Stomach cancer
- Rare tumors (leiomyoma, sarcoma)
- Small bowel changes
 - Acute gastroenteritis
 - Sprue
 - Small bowel obstruction
- Changes in the right lower abdomen
 - Appendicitis
 - Right side diverticulitis
 - Ileocolitis
 - Crohn's disease
- Changes in the left abdomen
 - Diverticulitis
 - Ulcerative colitis
- Further changes
 - Intestinal cancer
 - Intestinal lymphoma
 - Intestinal bleeding
 - Ileus
 - Ileopsoas muscle syndrome
 - Peritonitis
 - Peritoneal carcinosis

Changes in the abdominal wall:

- Hernias
 - Inguinal hernias
 - Femoral hernia
 - Spiegel's hernia
 - Incisional hernia
- Other abdominal wall lesions
 - Cicatricial changes
 - Hematoma
 - Inflammatory lesions (abscesses)
 - Tumors (lipomas)
 - Metastases
 - Bypass circulation in liver cirrhosis

Changes in lymph nodes and scrotum:

- Lymph node changes
 - Reactive
 - Lymphoma
 - Metastases
- Scrotal changes
 - Anechoic changes

- Hydrocele
- Seroma
- Spermatocele
- Testicular cyst
- Varicocele
- Hypoechoic changes
 - Scrotal hematoma
 - Scrotal edema
 - Testicular torsion
 - Testicular rupture
 - Epididymitis
 - Orchitis
 - Testicular abscess
 - Testicular tumours
 - Seminoma
- Hyperechoic and complex changes
 - Testicular calcifications
 - Microlithiasis
 - Dystrophic calcification
 - Corpus librum
 - Calcified testicular atrophy
 - Epidermoid cyst

Thyroid and other neck organs:

- Diffuse thyroid changes
 - Pyramidal lobe
 - Aplasia, hypoplasia
 - Diffuse goiter
 - Basedow's Goiter
 - Thyroiditis
 - Acute thyroiditis
 - Subacute thyroiditis de Quervain
 - Hashimoto's thyroiditis
- Focal thyroid changes
 - Multinodal Goiter (MNG)
 - Hyperechoic node
 - Hypoechoic nodes
 - Microfollicular adenoma
 - Papillary carcinoma
 - Rare changes
- Changes in the salivary glands
 - Inflammatory changes
 - Warthin tumour
 - Pleomorphic adenoma
 - Rare changes
- Carotid artery: intima media thickness
 - Correct measurement
 - Importance of the intima media thickness
 - Plaques

Chest:

- Bony chest wall
 - Rib fracture
 - Rib metastases
- Soft tissue chest wall
 - Lipoma
 - Metastases
- Pleural changes
 - Pneumothorax
 - Pleural effusion
 - Transudate
 - Exudate
 - Pleurisy
 - Tbc
 - Pleural carcinosis
 - Pleural Mesothelioma
- Peripheral pulmonary consolidation
 - Pneumonia
 - Carcinoma
 - Pulmonary contusion
 - Pulmonary infarction
 - Atelectasis
- Mediastinum
- Aortic aneurysms (ascending aorta, aortic arch)

Deep vein thrombosis (DVT):

- Anatomy of leg veins
- Examination technique of leg veins under inclusion of CDUS
- Physical examination and laboratory testing in DVT
- Ultrasound findings in DVT
- Ultrasound findings in deep venous insufficiency

Soft tissue changes:

- Hematoma
- Edema
- Muscle tear
- Abscess
- Perianal fistula
- Sacral dermoid
- Baker`s cyst and other ganglions
- Subcutaneous and musculoskeletal tumors

Contrast enhanced Ultrasound (CEUS):

- Technical principles
- CEUS in hepatic lesions

- CEUS in non-hepatic applications
 - CEUS in urogenital tract
 - CEUS in GIT and pancreas
 - CEUS in lymph nodes, thorax, MSK-System
 - CEUS in other applications

Elastography:

- Technical principles
- Hepatic elastography
- Elastography of thyroidea
- Elastography in MSK disease
- Elastography in other applications

Ultrasound examination: Report, visual documentation, billing

- Country specific lectures

3. Schedule examples:

Final abdominal ultrasound course:

Day 1):

- 08.00-08.15 Introduction
- 08.15-08.45 Examination technique: intestine, neck, thorax, abdominal wall: demonstration
- 08.45-09.15 Bowel disease
- 09.15-10.15 Practical investigations
- 10.15-10.45 Break
- 10.45-11.15 Abdominal wall, hernia
- 11.15-11.45 Lymph node changes, scrotum
- 11.45-12.15 Neck- thyroid, salivary glands
- 12.15-13.30 Lunch
- 13.30-14.30 Practical investigations
- 14.30-15.00 Chest
- 15.00-16.00 Practical investigations
- 16.00-16.30 Break
- 16.30-17.00 Diagnosis of deep vein thrombosis
- 17.00-18.00 Practical investigations

Day 2:

- 08.00-08.15 Wake-up Quiz (repetition of the previous day)
- 08.15-08.45 Soft tissue changes
- 08.45-09.45 Practical investigations
- 09.45-10.15 Break
- 10.15-10.45 CEUS part 1 hepatic applications
- 10.45-11.15 CEUS part 1 non-hepatic applications
- 11.15-12.15 CEUS live scanning
- 12.15-13.30 Lunch
- 13.30-14.00 Elastography part 1: strain elastography
- 14.00-15.00 Practical investigations

15.30-15.30 Elastography part 2: shear wave elastography

15.30-16.00 Break

16.00-17.00 Practical investigations

17.00-17.30 Report, photographic documentation, billing

17.30-18.30 Quiz, course evaluation