Workshop 9

1. What vessels and nerves are identified in subcutaneous cellular tissue of subclavian region?
2. What is acute thrombophlebitis of subcutaneous veins of the anterior chest wall called?
3. Where is superficial subpectoral space identified?
4. What anatomical formations delimit superficial and deep subpectoral space of breast?
5. Where is deep subpectoral space identified?
6. What vessels and nerves are identified in the cellular tissue of superficial subpectoral space?
7. What incision can expose subpectoral abscess?
8. What is the passage of v. axillaris in relation to the elements of neurovascular fascicule in trigonum clavipectorale?
9. What is the passage of plexus brachialis in relation to the elements of neurovascular fascicle in trigonum clavipectorale?
10. Identify the branches of a. axillaris in trigonum clavipectorale:
11. Identify the branches of a. axillaris in trigonum pectorale?
12. What is the frequency of usage of subclavian vein catheterization?
13. What is the reason of the puncture of right subclavian vein below the clavicle?
14. Determine the most appropriate point for v. subclavia puncture?
15. Where is Abaniak’s point identified?
16. Where is Yoffe’s point identified?
17. What is acute thrombophlebitis of subcutaneous veins of the anterior chest wall called?
18. Characterize the technique of subclavian vein catheterization by Seldinger method?
19. What symptoms develop at subclavian vein compression in costoclavicular interspace?
20. What is Paget-Schroetter syndrome characterized by?
21. What are the methods of surgical treatment of Paget-Schroetter’s syndrome?
22. What is Write’s syndrome caused by?
23. What vessels participate in the collateral blood circulation creating “scapular arterial circle” when subclavian artery is ligated?
24. What are the sources of blood supply of mammary gland?
25. What lymphatic nodes are more likely to metastasize in case of breast cancer?
26. What is the major surgical method to treat benign tumors of mammary gland?
27. What incision is used to expose intramammary abscesses?
28. What incision is used to expose retromammary abscesses?
29. Who is the author of the most frequently used and typical incision at radical mastectomy?
30. Name the author of arciform incision to approach the subclavian artery?
31. Name the author of T-like incision to approach the subclavian artery:
32. What vessels and nerves run in deep subpectoral space?
33. Name the author of radical mastectomy when only minor thoracic muscle is removed?
34. Who is the author of radical mastectomy, when major and minor thoracic muscles are removed?
35. Name the authors of supraradical mastectomy?
36. Where is the ligature at subclavian artery ligation performed?
37. What is the aim of usage Fogarty catheter during operations on vessels?
38. Where is cellular tissue that becomes damaged at retromammary mastitis localized?
39. Identify the localization of Zorgius lymph node, which is first damaged by metastasis at breast cancer?
40. What fascia creates a capsule of mammary gland?
41. What is supporting ligament of mammary gland attached to?
42. Within what triangle are superficial and deep subpectoral spaces joined?
43. In what layer is retromammary cellular space identified?
44. What incision at suppurative subareolar mastitis is more reasonable from the anatomic point of view?
45. What incision at suppurative retromammary mastitis is more reasonable from the anatomic point of view?
46. What incision at suppurative intramammary (interstitial or parenchymatous) mastitis is more reasonable from the anatomic point of view?
47. Identify the direction of incision to expose intramammary (parenchymatous and interstitial) mastitis:
48. How long do external intercostal muscles extend?
49. How long do internal intercostal muscles extend?
50. How are elements of neurovascular fascicle posted from above to below?
51. What arteries supply intercostal interspaces with blood?
52. What is the passage of right intercostal arteries?
53. Where do left intercostal arteries pass?
54. What is identified behind aa.intercostales posteriores on the way from the head to the angle of the rib?
55. What is identified in front of aa.intercostales posteriores on the way from the head to the angle of the rib?
56. Where do posterior intercostal arteries run on the way from from scapular to the medial inguinal line?
57. Where do posterior intercostal arteries run on the way between the head and the angle of the rib?
58. Where does a.thoracica interna run and what does it branch off?
59. What branches is internal thoracic artery divided into?
60. Where does the blood from anterior intercostal veins flow?
61. Where does the blood from posterior right intercostal veins flow?
62. Where does the blood from posterior left intercostal veins flow?
63. What is intercostal nerve on the way from intervertebral opening to the costal angle covered by?
64. Where it is necessary to make a puncture of the thorax?
65. Where is the superior boundary of the right cupula of diaphragm identified?
66. Where is the superior boundary of the left cupula of diaphragm identified?
67. What runs through hiatus aorticus of the diaphragm?
68. What runs through esophageal opening of the diaphragm?
69. What runs between muscle fascicles crus dexter et sinister of the right and left crura of the diaphragm?
70. What runs through foramen of vena cava of the diaphragm?
71. What is posted between sternal and costal part of the diaphragm to the left from xiphoid process?
72. What is identified between sternal and costal part of the diaphragm to the right from xiphoid process?
73. What transmits pus from the cellular tissue of mediastinum to retroperitoneal cellular tissue?
74. What is identified in front of and to the right from esophageal opening of the diaphragm?
75. What runs through trigonum sternocostale?
76. What is identified behind esophageal opening of the diaphragm?
77. What is identified in front of esophageal opening of the diaphragm?
78. Where transmits blood from the superior surface of the diaphragm in anterior inferior part of the diaphragm flow?
79. Where does venous blood from inferior surface of the diaphragm flow?
80. What is observed at paraesophageal hernia?
81. What operation is most effective at paraesophageal hernia with reflux-esophagitis?
82. What is identified behind cervical pleura?
83. What is identified externally and in front of cervical pleura?
84. What is identified externally from cervical pleura?
85. What is identified medially to the right from cervical pleura?
86. What is identified medially to the left from cervical pleura?
87. What is identified in front and superiorly from cervical pleura?
88. What is identified in front of cervical pleura?
89. What is identified behind and medially from cervical pleura?
90. What is identified behind mediastinal pleura in anterior inferior part of the pleura?
91. Where is the right anterior boundary of the pleura to the right identified?
92. Where is the left anterior boundary of the pleura to the left identified?
93. What is identified below IV rib between anterior boundaries of costal pleura?
What vessels and nerves are identified in subcutaneous cellular tissue of subclavian region?
nn. supraclaviculares, rr. cutanei anteriores, 
rr. cutanei laterales, v. thoracoepigastrica, v. cephalica
# a. thoracica lateralis, n. thoracicus longus, n. musculocutaneus, a. et v. thorocodorsalis, nn. intercostobrachiales
nn. pectorales medialis, nn. pectorales lateralis, a. thoracica lateralis, a. thoracica suprema, n. thoracicus longus
nn. supraclaviculares, rr. cutanei anteriores, v. basilica

What is acute thrombophlebitis of subcutaneous veins of the anterior chest wall called?
Mondor’s disease
# Paget-Schroetter’s Syndrome
Write’s syndrome
Grave’s disease

Where is superficial subpectoral space identified?
between the deep leaf of fascia pectoralis and fascia clavipectoralis
# between the superficial leaf of fascia pectoralis and fascia clavipectoralis
between the leaves of superficial fascia
between posterior surface of m. pectoralis minor and thoracic wall

What anatomical formations delimit superficial and deep subpectoral space of breast?
minor thoracic muscle and deep leaf of proper fascia of breast (clavicular costal fascia)
# minor thoracic muscle and superficial leaf of proper fascia
major thoracic muscle and superficial leaf of proper fascia
major thoracic muscle and superficial fascia

Where is deep subpectoral space identified?
between posterior surface of m. pectoralis minor and paries of chest
# between deep leaf of fascia pectoralis and fascia clavipectoralis
between leaves of proper fascia
between deep leaf of fascia pectoralis and fascia clavipectoralis

What vessels and nerves are identified in the cellular tissue of superficial subpectoral space?
Branches of a. thoracoacromialis, nn. pectorales medialis, 
nn. pectorales lateralis
# a. thoracica lateralis, a. thoracica suprema, n. thoracicus longus
a. circumflexa humeri anterior, v. cephalica
branches of a. thoracica lateralis, a. thoracica suprema

What incision can expose subpectoral abscess?
along inferior margin of major thoracic muscle
# along superior margin of minor thoracic muscle
Along the margin of the widest muscle of the back
along superior margin of major thoracic muscle

What is the passage of v. axillaris in relation to the elements of neurovascular fascicule in trigonum clavipectoralis?
v. axillaris - inferiorly, medially and anteriorly from a. axillaris
# v. axillaris - inferiorly, laterally and anteriorly from a. axillaris
v.axillaris – superiorly and posteriorly from a.axillaris
v.axillaris - medially and anteriorly from plexus brachialis

What is the passage of plexus brachialis in relation to the elements of neurovascular fascicle in trigonum clavipectoreale?

plexus brachialis – superiorly and posteriorly from a.axillaris
plexus brachialis - inferiorly, medially and anteriorly from a.axillaris
plexus brachialis - superiorly and posteriorly from a.axillaris
plexus brachialis - medially and anteriorly from v.axillaris

Identify the branches of a.axillaris in trigonum clavipectoreale:

a.thoracica suprema, a.thoracoacromialis
a.thoracica lateralis
a.thoracica interna, a.transversa colli
a. circumflexa humeri anterior et posterior

Identify the branches of a.axillaris in trigonum pectorale?

a.thoracica lateralis
a.thoracica suprema, a.thoracoacromialis
a. circumflexa humeri anterior et posterior
a.thoracica interna, a.transversa colli

What is the frequency of usage of subclavian vein catheterization?

All the mentioned below
constant placement, strict topographic-anatomic orienteer
has a significant lumen, does not stick
has high rate of blood circulation

What is the reason of the puncture of right subclavian vein below the clavicle?

All the mentioned below
large veins and thoracic lymphatic duct enter the upper wall of v. subclavia
above the clavicle located near the cupola of the pleura
below the clavicle the cupola of the pleura is separated from the vein by I rib

Determine the most appropriate point for v.subclavia puncture?

Abaniak’s point
Yoffe’s point
Erb’s point
Gedneau de Mussy’s point

Where is Abaniak’s point identified?
1 cm below the boundary of medial and internal third of the clavicle
1 cm upper the boundary of medial and internal third of the clavicle
1 cm below the middle of the clavicle
a bit upper the apex of the angle created by lateral crus of sternocleidomastoid muscle and superior margin of the clavicle

Where is Yoffe’s point identified?
a bit upper the apex of the angle created by lateral crus of sternocleidomastoid muscle and superior margin of clavicle
between crura of sternocleidomastoid muscle
1 cm below the border of medial and internal third of clavicle  
1 cm below the middle of clavicle

What is the adequate technique of subclavian vein puncture by Abaniak’s method? 
The needle is injected at an angle of 45 degrees to clavicula, at an angle 30 degrees to the surface of the thorax, the cut is turned forward and down, the needle is directed back and upward, to the middle of superior margin of costal clavicular conjunction 
#the needle is injected focusing on the edge of the patient’s nose, the needle is injected at an angle of 45 degrees to clavicula, the needle is injected at an angle of 45 degrees to the surface of the chest, the cut is turned forward and down 
all the mentioned above 
#a bit upper the apex of the angle created by the lateral crus of sternocleidomastoid muscle and superior margin of clavicle, to the middle of superior margin of sternoclavicular conjunction

What symptoms develop at subclavian vein compression in costoclavicular interspace? 
Paget-Schroetter’s syndrome 
#Mondor’s disease 
Grave’s disease 
Takayasu syndrome

What is Paget-Schroetter syndrome characterized by? 
progressive swelling resulting in disturbances of blood circulation in limbs, severe pain and cyanosis of the limb 
#dizziness, sonitus, reduction of visual acuity, headaches, paraesthesia 
neurotrophic disturbances in minor thoracic muscle 
all the mentioned above

What are the methods of surgical treatment of Paget-Schroetter’s syndrome? 
All the mentioned below 
#thrombectomy with the help of Fogarty catheter 
decompression of vein by excision of subclavian muscle and I rib 
a shunt between subclavian vein and internal jugular vein, or direct anastomosis between external jugular vein and subclavian vein

What is Write’s syndrome caused by? 
neurotrophic disturbances in minor thoracic muscle 
Compression of neurovascular fascicle beneath minor thoracic muscle 
#compression of neurovascular fascicle in the intramuscular fissure 
Compression of neurovascular fascicle when I rib is broken
What vessels participate in the collateral blood circulation creating “scapular arterial circle” when subclavian artery is ligated?

r.profundus a.transversa colli -> a.suprascapularis -> a.circumflexa scapulae
#a.circumflexa humeria -> a.thoracica lateralis -> a.thoracica interna
a.thoracica suprema -> a. axillaris -> a.suprascapularis
a.cervicalis superficialis -> a.suprascapularis-> a.circumflexa scapulae

What are the sources of blood supply of mammary gland?

a.thoracica interna, a.thoracica lateralis, aa.intercostales
#a.thoracoacromialis, a.thoracica suprema, a.epigastrica
superior
a.suprascapularis, a.circumflexa scapulae, a. axillaris
a. circumflexa humeri anterior et posterior

What lymphatic nodes are more likely to metastasize in case of breast cancer?

nodi lymphatici pectorales (Zorgius nodes), nodi lymphatici axillares
#nodi lymphatici parasternales, nodi lymphatici intercostales
deep cervical lymphatic nodes

What is the major surgical method to treat benign tumors of mammary gland?

sectoral resection
# Patey’s mastectomy
Halsted-Meyer mastectomy
Urban- Holdin mastectomy

What incision is used to expose intramammary abscesses?

Angerer’s incision
# Bardenheuer-Morestin incision
Gosse incision
Orr’s incision

What incision is used to expose retromammary abscesses?

Bardenheuer Morestin
# Angerer
Gosse
Orr

Who is the author of the most frequently used and typical incision at radical mastectomy?

Gosse
# Angerer
Orr
Bardenheuer Morestin

Name the author of arciform incision to approach the subclavian artery?

Dzhanelidze'
# Petrovsky
Bardenheuer
Langenbeck
Name the author of T-like incision to approach the subclavian artery:
Petrovsky
#Dzhanelidze
Kocher
Langenbeck

What vessels and nerves run in deep subpectoral space?
a. et v.thoracica lateralis, n.thoracicus longus
#v.cephalica, a. et v.axillaris
plexus brachialis
a.thoracica interna, aa.intercostales

Who is the author of radical mastectomy, when major and minor thoracic muscles are removed?
Halsted and Meyer
# Urban and Holdin
Patey
Holdin

Name the author of radical mastectomy when only minor thoracic muscle is removed?
Patey
#Halsted
Meyer
Urban

Name the authors of supraradical mastectomy?
Urban and Holdin
#Patey
Halsted and Meyer
Petrovsky Dzhanelidze

Where is the ligature at subclavian artery ligation performed?
distally from truncus thyreocervicalis
#proximally from truncus thyreocervicalis
distally from truncus costocervicalis
proximally from truncus costocervicalis

What is the aim of usage Fogarty catheter during operations on vessels?
for thrombectomy
#for prolonged intravenous infusion of medication
for intravenous urography
for the puncture of subclavian vein

Where is cellular tissue that becomes damaged at retromammary mastitis localized?
Behind the capsule of mammary gland
#subcutaneously
Between the leaves of suspensory ligament of mammary gland
beneath minor thoracic muscle
Identify the localization of Zorgius lymph node, which is first damaged by metastasis at breast cancer?
Beneath the external margin of major thoracic muscle at the level of III rib
above the clavicle behind the external margin
along the passage of internal thoracic artery
in the center of fovea inguinalis

What fascia creates a capsule of mammary gland?
superficial fascia of the breast
superficial leaf of proper fascia of the breast
clavicular costal fascia
visceral fascia

What is supporting ligament of mammary gland attached to?
to the clavicle
to the coracoid process of scapula
to the big tubercle of humeral bone head
to the acromion process of scapula

Within what triangle are superficial and deep subpectoral spaces joined?
clavicular costal triangle
thoracic triangle
subcostal triangle
the spaces are not joined

In what layer is retromammary cellular space identified?
between superficial fascia and superficial leaf of proper fascia of breast
between major thoracic muscle and clavicular costal fascia
under minor thoracic muscle
under clavicular costal fascia

What incision at suppurative subareolar mastitis is more reasonable from the anatomic point of view?
By the outer peripapillary circle
radial behind the peripapillary circle
By the transitional plicae of mammary gland
Radial with the cut on peripapillary circle

What incision at suppurative retromammary mastitis is more reasonable from the anatomic point of view?
by the transitional plicae, under the mammary gland
By the outer peripapillary circle
radial behind the peripapillary circle
radial with the cut on peripapillary circle

What incision at suppurative intramammary (interstitial or parenchymatous) mastitis is more reasonable from the anatomic point of view?
radial behind the peripapillary circle
By the outer peripapillary circle
transverse incision above the inflamed organ
radial with the incision of peripapillary circle
Identify the direction of incision to expose intramammary (parenchymatous and interstitial) mastitis:
- radial direction
- semicircular direction
- oblique direction
- vertical direction

How long do external intercostal muscles extend?
- From the head of the rib to the cartilaginous part of the rib
- From the costal angle to the costal margin
- From the head of the rib to the costal angle
- From the costal margin to costal angles

How long do internal intercostal muscles extend?
- From the costal margin to costal angles
- From the head of the rib to the cartilaginous part of the rib
- From the vertebral column to the cartilaginous part of the rib
- From the head of the rib to the costal margin

How are elements of neurovascular fascicle posted from above to below?
- Vein, artery, nerve
- Artery, vein, nerve
- Artery, nerve, vein
- Nerve, vein, artery

What arteries supply intercostal interspaces with blood?
- Aa. intercostales anteriores, a. intercostalis suprema, a. thoracica suprema, a. musculophrenica
- Aa. epigastrica superior, a. phrenica inferior, a. lumbales, truncus celiacus, a. suprascapularis
- No right answer

What is the passage of right intercostal arteries?
- Behind the esophagus, thoracic duct, v. azygos and truncus sympathetic
- In front of truncus sympathetic, esophagus, thoracic duct, v. hemiazygos
- Laterally from truncus sympathetic, esophagus, thoracic duct
- Medially from thoracic duct, v. hemiazygos

Where do left intercostal arteries pass?
- Behind v. hemiazygos and truncus sympathetic
- In front of esophagus and thoracic duct
- In front of thoracic duct and v. hemiazygos

What is identified behind aa. intercostales posteriores on the way from the head to the angle of the rib?
- Mm. intercostales externi
- Mm. intercostales interni
- Fascia endothoracica, subpleural cellular tissue, parietal pleura
**mm.transversus thoracis**

*What is identified in front of aa.intercostales posteriores on the way from the head to the angle of the rib?*
- fascia endothoracica, subpleura cellular tissue, parietal pleura
- mm.intercostales externi
- mm.intercostales interni
- mm.transversus thoracis

*Where do posterior intercostal arteries run on the way from scapular to the medial inguinal line?*
- In the costal sulcus, between intercostal muscles
- Below the proper rib
- Above the proper rib
- In front of the proper rib

*Where do posterior intercostal arteries run on the way between the head and the angle of the rib?*
- Below the rib, lying on the internal surface of
  - mm.intercostales externi, covered by fascia endothoracica,
  - covered by subpleural cellular tissue, covered by parietal pleura
- In costal groove, between intercostal muscles
- Above the rib
- In front of the rib

*Where does a.thoracica interna run and what does it branch off?*
- lower semicircle of a.subclavia in trigonum scalenovertebrale
- a.subclavia in spatium antescalenum
- a. carotis communis in trigonum caroticum pars descendens aortae in the chest

*What branches is internal thoracic artery divided into?*
- a.epigastrica superior and a.musculophrenica
- a.epigastrica inferior and a.pericardiacophrenica
- aa.intercostales posteriores and aa.mediastinales
- aa. phrenicae superiores and rr. sternalis

*Where does the blood from anterior intercostal veins flow?*
- into v.thoracica interna
- into v.azygos
- into v.hemiazygos
- into v.hemiazygos accessoria

*Where does the blood from posterior right intercostal veins flow?*
- into v.azygos
- into v.thoracica interna
- into v.hemiazygos and v.hemiazygos accessoria
- v. portae
Where does the blood from posterior left intercostal veins flow?
into v.hemiazygos and v.hemiazygos accessoria
#into v.azygos
into v.thoracica interna
v. portae

What is intercostal nerve on the way from intervertebral opening to the costal angle covered by?
intrathoracic fascia, subpleural cellular tissue, parietal pleura
#between mm.intercostales externi and mm.intercostales interni it covers fascia endothoracica, runs behind the costal cartilages
behind mm.intercostales interni

Where it is necessary to make a puncture of the thorax?
in VII-VIII costal interspace, between scapular and medial axillary lines, along superior margin of the rib
#in V-VII costal interspace, along inferior margin of the rib, between scapular and vertebral lines
in IV-V costal interspace, between scapular and medial axillary lines, along superior margin of the rib
between mm.intercostales externi and mm.intercostales interni

Where is the superior boundary of the right cupula of diaphragm identified?
IV rib
#V rib
III rib
VI rib

Where is the superior boundary of the left cupula of diaphragm identified?
V rib
#IV rib
III rib
VI rib

What runs through hiatus aorticus of the diaphragm?
aorta, ductus thoracicus
#esophagus, recurrent nerves
Major and minor abdominal nerves
azygus and hemiazygus veins

What runs through esophageal opening of the diaphragm?
esophagus, vagus nerves
#recurrent nerves and sympathetic trunk
Major and minor abdominal nerves
Azygus and hemiazygus veins

What runs between muscle fascicles crus dexter et sinister of the right and left crura of the diaphragm?
truncus sympathetic, abdominal nerves, azygus and hemiazygus veins
#recurrent nerves, vagus nerves, aorta, ductus thoracicus
vena cava inferior
esophagus, vena azygos and hemiazygos

! What runs through foramen of vena cava of the diaphragm?
Inferior vena cava, branch of right phrenic nerve
#superior vena cava, branch of right phrenic nerve
sympathetic trunk, recurrent nerves
major and minor abdominal nerves

! What is posted between sternal and costal part of the diaphragm to the left from xiphoid process?
Larrey's fissure
#Bochdalek foramen
Morgagni fissure
trigonum lumbocostale

! What is identified between sternal and costal part of the diaphragm to the right from xiphoid process?
Morgagni fissure
#Larrey's fissure
Bochdalek foramen
trigonum lumbocostale

! What passes through trigonum sternocostale?
vasa thoracica interna
#a. et v.musculophrenica
a. et v.pericardiacophrenica
v.azygos and v.hemiazygos

! What is identified behind esophageal opening of the diaphragm?
aorta
#pericardium
v.cava inferior
esophagus

! What is identified in front of esophageal opening of the diaphragm?
pericardium and heart
#aorta
v.cava inferior
stomach

! What is identified in front of and to the right from esophageal opening of the diaphragm?
v.cava inferior
# pericardium
heart
aorta

! What transmits pus from the cellular tissue of mediastinum to retroperitoneal cellular tissue?
hiaitus esophageus, Bochdalek foramen, hiatus aorticus
#Larrey's fissure, Morgagni fissure, v.cava inferior
esophagus
cupula of diaphragm

! What is attached to retroperitoneal part of the diaphragm?
pancreas, duodenum, kidneys and adrenal glands
#stomach, heart, liver, gall bladder, spleen, lungs
#v.azygos, liver, gall bladder, spleen, v.hemiazygos
spleen, bottom of the stomach, left lobe of the liver

! What is attached to the right cupula of diaphragm from below?
liver
#stomach
spleen
pancreas, duodenum, kidneys and adrenal glands

! What is attached to the left cupula of diaphragm from below?
spleen, bottom of the stomach, left lobe of the liver
#gall bladder
pancreas, duodenum, left kidney and adrenal gland
right kidney

! What is attached to the diaphragm from above?
pericardium, base of the lungs
#stomach
Gall bladder, spleen
Kidneys and adrenal glands, liver

! What arteries penetrate the diaphragm superiorly and anteriorly?
amusculophrenica, a.pericardiacophrenica
#a.phrenica superior
a.phrenica inferior
a.vertebralis

! What arteries penetrate the diaphragm superiorly and posteriorly?
a.phrenica superior
#a.musculophrenica, a.pericardiacophrenica
a.phrenica inferior
a.vertebralis

! What is the main vessel that nourishes the diaphragm?
a.phrenica inferior
#a.phrenica superior
amusculophrenica, a.pericardiacophrenica
a.vertebralis
Where does the venous blood from superior surface of the diaphragm flow?
- into v.azygos et v.hemiazygos
- into v.cava inferior
- into v.portae
- into v.cava superior

Where does venous blood from inferior surface of the diaphragm flow?
- into v.cava inferior
- into v.azygos et v.hemiazygos
- into v.portae
- into vv.vertebralis

What is observed at paraesophageal hernia?
- Cardial part of the stomach goes upward the diaphragm,
- The closing function of cardio is damaged,
- Hiss’s angle is straightened, reflux esophagitis occurs
- Cardial part of the stomach goes upward the diaphragm,
- Hiss’s angle becomes less, achalasia cardia develops
- The bottom of the stomach goes upward the diaphragm,
- The closing function of the pyloric canal (duct) is damaged
- Gastroesophageal reflux develops
- All the mentioned above

What operation is most effective at paraesophageal hernia with reflux-esophagitis?
- Nissen fundoplication is applied
- Heller’s cardiotomy
- Kocher’s mobilization
- Cardiolysis by Reno

What is identified behind cervical pleura?
- A.vertebralis, ganglion stellatum, ductus thoracicus (to the left), the head and neck of I rib, m.longus colli
- #mm.scaleni
- Truncus brachiocephalicus
- Plexus brachialis

What is identified externally and in front of cervical pleura?
- #mm.scaleni
- #A.vertebralis, ganglion stellatum, ductus thoracicus (to the left), head and neck of the I rib, m.longus colli
- Truncus brachiocephalicus
- Plexus brachialis

What is identified externally from cervical pleura?
- Plexus brachialis
- #mm.scaleni
- Truncus brachiocephalicus
- Plexus brachialis
What is identified medially to the right from cervical pleura?
- truncus brachiocephalicus
- #a.carotis communis
- trachea, esophagus
- plexus brachialis

What is identified medially to the left from cervical pleura?
- a.carotis communis
- #truncus brachiocephalicus
- ductus thoracicus
- v.subclavia

What is identified in front and superiorly from cervical pleura?
- a.subclavia
- #v.subclavia
- plexus brachialis
- ganglion stellatum

What is identified in front of cervical pleura?
- v.subclavia
- #a.subclavia
- trachea, esophagus
- ductus thoracicus, to the left

What is identified behind and medially from cervical pleura?
- trachea, esophagus
- #a.subclavia
- plexus brachialis
- a.vertebralis

What is attached to mediastinal pleura in anterior inferior part?
- pericardium, a. et v.pericardiacophrenicae, n.phrenicus
- #n.vagus, a.carotis communis, v.jugularis interna
- trachea, esophagus
- plexus brachialis

Where is the right anterior boundary of the pleura to the right identified?
- from minor supraclavicular fossa to the sternoclavicular junction, and further via manubrium and body of sternum, at the level of cartilage of II rib
goes behind the medial line, approaches the anterior boundary of the left pleura at the level of III-IV costal cartilages and ends at the point of attachment of VI rib to the breastbone
- from minor supraclavicular fossa to the sternoclavicular junction, further along the right costal margin from minor supraclavicular fossa to the place of attachment to IV rib
- from minor supraclavicular fossa to the sternoclavicular junction, then goes downward behind the left costal margin to the cartilage of IV rib, circumflexes the heart to the medial cartilage of VI rib

Where is the left anterior boundary of the pleura to the left identified?
- from minor supraclavicular fossa to sternoclavicular
junction, goes downward behind the left costal margin
to the cartilage of IV rib, circumflexes the heart and descends
to the medial cartilage of VI rib
from minor supraclavicular fossa to sternoclavicular junction,
further via manubrium and body of sternum, and at the level of
II rib cartilage goes behind the medial line, then
approaches the anterior boundary of left pleura at the level of
III-IV vertebral cartilages and ends at the place of attachment of
VI rib to the breastbone
From minor supraclavicular fossa to the place of attachment of IV rib
From major supraclavicular fossa to the breastbone, then goes to the middle of
V rib cartilage

! What is identified below IV rib between anterior boundaries
of costal pleura?
triangle of safety of Voynich-Syanojentskii
thymus area
area interpleurica superior
recessus costomediastinalis