ACADEMIC PROGRAM of the discipline
«Surgery»

Higher education level: second (master's)

Field of knowledge: 22 Health

Specialty: 222 "Medicine"

Educational and professional program: "Medicine"
The working program is drawn up by professor Tkachenko OI, docent Kryzhanivsky VV, on the basis of the educational-professional program of the second level of higher education for the preparation of masters in the specialty 221 "Dentistry" ONMedU, approved by the Academic Council of ONMedU from 04.06.2020 (Minutes №11)

Developers: Ph.D., docent, V. V. Kryzhanivskiy

The program was discussed and approved at the meeting of the Department of Surgery №3 30.08.2021 (Protocol №1)
Vice Head of the department, doctor of medical sciences, Ph.D., docent, V. V. Kryzhanivskiy

The program was approved at the meeting of the subject cycle commission on surgical disciplines of ONMedU 30.08.2021 (Protocol №1)

Chairman of the subject cycle methodical commission on surgical disciplines, MD, prof. V.V. Mishchenko

The program was approved at a meeting of the Central Coordination and Methodological Council of ONMedU 30.08.2021 (Protocol №1)
1. Description of the discipline:

<table>
<thead>
<tr>
<th>Name of indicators</th>
<th>Characteristics of the discipline</th>
</tr>
</thead>
<tbody>
<tr>
<td>The total number of:</td>
<td>Full-time education</td>
</tr>
<tr>
<td>Credits - 4.5</td>
<td>Year of preparation 5</td>
</tr>
<tr>
<td>Hours - 135</td>
<td>Semester IX-X</td>
</tr>
<tr>
<td>Content sections - 2</td>
<td>Lectures 12hrs</td>
</tr>
<tr>
<td></td>
<td>Practical 58 hrs</td>
</tr>
<tr>
<td></td>
<td>Independent work of the student 65 hrs</td>
</tr>
<tr>
<td></td>
<td>Including individual tasks 0</td>
</tr>
<tr>
<td></td>
<td>Form of final control Exam</td>
</tr>
</tbody>
</table>

1. The purpose and objectives of the discipline

**Purpose:** The student's mastery of knowledge and the formation of elements of professional competencies in the field of patient care, and the improvement of skills and competencies acquired in the study of previous disciplines.

**Tasks:**
1. demonstrate the ability for abstract thinking, analysis and synthesis;
2. demonstrate the ability to learn and master modern knowledge;
3. demonstrate the ability to apply knowledge in practical situations;
4. demonstrate the ability to plan and manage time;
5. demonstrate knowledge and understanding of the subject area and understanding of professional activities;
6. master the skills of using information and communication technologies;
7. demonstrate the ability to adapt and act in a new situation;
8. Demonstrate the ability to make informed decisions;
9. demonstrate the ability to work in a team;
10. master the skills of interpersonal interaction;
11. demonstrate certainty and perseverance in the tasks and responsibilities assumed;

**The process of studying the discipline is aimed at forming elements of the following competencies:**

- **IK** - the ability to solve complex problems and problems in a specific area of professional activity or in the learning process, involves research and / or innovation and is characterized by the complexity and uncertainty of conditions and requirements.
- **3K1** - the ability for abstract thinking, analysis and synthesis.
- **3K2** - the ability to know and understand the subject area and professional activity.
- **3K3** - the ability to communicate in the state language.
- **3K4** - the ability to learn and master modern knowledge, use information and communication technologies; the ability to search, process and analyze information from various sources.
- **3K5** - the ability to adapt and make informed decisions in a new situation.
- **3K6** - the ability to work in a team.
- **3K8** - the ability to assess and ensure the quality of work performed.
- **3K9** - Ability to act ethically, socially, responsibly and consciously.
- **CK1** - communication skills and clinical examination of the patient during diagnosis and treatment.
- **CK2** - the ability to determine the required list of clinical, laboratory and instrumental studies and evaluate their results during diagnosis and treatment.
- **CK3** - the ability to establish a preliminary and clinical diagnosis.
- **CK4** - the ability to determine the principles of treatment, the required mode of work and rest, and the nature of the diet.
- **CK5** – the ability to diagnose emergency conditions
- **CK6** - the ability to determine tactics and provide emergency medical assistance.
Expected learning outcomes. As a result of the study, the student must:

**know:**
- modern concepts of domestic and foreign theoretical and practical surgery;
- basic principles of organizing surgical care for the population of Ukraine;
- basic principles of organizing surgical care for the population of Ukraine;
- clinical, laboratory and additional methods for diagnosing the surgical pathology of the body;
- etiology, pathogenesis, clinic, diagnostics and methods of treatment of surgical diseases (within the curriculum);
- etiological, pathogenetic factors, clinical manifestations and diagnosis of emergency conditions;
- tactics of rendering emergency surgical aid;
- organization of medical and evacuation measures

**be able to:**
- demonstrate proficiency in the moral and deontological principles of a medical specialist and the principles of professional subordination in general surgery;
- to determine the most common clinical symptoms and syndromes in the clinic of surgical diseases;
- analyze the results of examination of dental patients with general surgical pathology;
- apply methods of statistical analysis of biomedical data;
- carry out the basic methods of general clinical examination of the patient (survey, examination, palpation, percussion, auscultation), determine a certain amount of additional studies and analyze the data obtained to establish a preliminary diagnosis;
- perform general medical manipulations (dressings, injections, gastric and intestinal lavage, stopping bleeding, transport and medical immobilization for dislocations and bone fractures, local infiltration and conduction anesthesia, blood and blood substitutes transfusion) and decide on the patient's referral to a specialist;
- provide the necessary assistance in case of short-term loss of consciousness, collapse, shock, coma, allergic reactions, asphyxia, acute abdomen, trauma, bleeding, burns, frostbite;
- carry out resuscitation measures in terminal conditions and send patients to a specialized department;
- fill in medical records.

**Master skills:**
- Communication and clinical examination of the patient.
- fill in medical records for common diseases.

3. CONTENT OF THE PROGRAM

**Subsection 1: "THORACAL, CARDIAC, ENDOCRINE SURGERY".**

**Topic 1:**
**Topic 2**

**Topic 3**

**Topic 4**

**Topic 5**
Hernia of the esophageal opening of the diaphragm

**Topic 6**

**Topic 7**

**Subsection 2 "Vascular surgery"**

**Topic 8**

**Topic 9**

**Topic 10**

**Topic 11**

**Topic 12**

**Topic 13**

**Topic 14**
**Topic 15**

**Topic 16**

**Topic 17**

**Topic 18**

**Topic 19**

**Topic 20**
Patient examination & Case history.

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**EXAM**

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### 4. STRUCTURE OF THE DISCIPLINE

<table>
<thead>
<tr>
<th>Topic</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Subsection 1: &quot;THORACAL, CARDIAC, ENDOCRINE SURGERY&quot;.</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Theme 1.</strong> Chest trauma.</td>
<td>9</td>
</tr>
<tr>
<td><strong>Theme 2.</strong> Purulent diseases of the lungs and pleura.</td>
<td>5</td>
</tr>
<tr>
<td><strong>Theme 3.</strong> Diseases of the mediastinum.</td>
<td>5</td>
</tr>
<tr>
<td><strong>Theme 4.</strong> Diseases and injuries of the esophagus.</td>
<td>9</td>
</tr>
<tr>
<td><strong>Theme 5.</strong> Hernia of the esophageal opening of the diaphragm</td>
<td>5</td>
</tr>
<tr>
<td><strong>Theme 6.</strong> Euthyroid and toxic goiter.</td>
<td>7</td>
</tr>
<tr>
<td><strong>Theme 7.</strong> Cancer of the colon and rectum Diseases of the breast (dyshormonal, tumors).</td>
<td>5</td>
</tr>
</tbody>
</table>

| **Subsection 2 "VASCULAR SURGERY"** | |
| **Theme 8.** Arterial thrombosis and embolism | 5 | | 2 | 3 |
| **Theme 9.** Chronic ischemia of the lower extremities | 9 | 2 | 4 | 3 |
| **Theme 10.** Diabetic foot | 5 | | 2 | 3 |
| **Theme 11.** Pulmonary embolism | 5 | | 2 | 3 |
| **Theme 12.** Aneurysm of the aorta and peripheral arteries | 5 | 2 | 3 |
| **Theme 13.** Abdominal ischemic syndrome | 6 | 1 | 2 | 3 |
| **Theme 14.** Mesentery thrombosis. | 6 | 1 | 2 | 3 |
5. Topics of lectures

<table>
<thead>
<tr>
<th>№</th>
<th>Topic</th>
<th>Amount of hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Surgical pathology of the respiratory system</td>
<td>2</td>
</tr>
<tr>
<td>2</td>
<td>Diseases and injuries of the esophagus: Benign tumors and cysts, Achalasia of the cardia, Diverticula of the esophagus, Gastroesophageal reflux, Burns, Injuries, Foreign bodies, BARRETT Esophagus.</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>Euthyroid and toxic goiter. Diseases of the parathyroid glands</td>
<td>2</td>
</tr>
<tr>
<td>4</td>
<td>Clinical picture, diagnosis and treatment of acute and chronic ischemia of the lower extremities.</td>
<td>2</td>
</tr>
<tr>
<td>5</td>
<td>Abdominal ischemic syndrome. Mesenteriothrombosis</td>
<td>2</td>
</tr>
<tr>
<td>6</td>
<td>Diagnostics and treatment of acute and chronic diseases of the peripheral veins of the upper and lower extremities</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>12</strong></td>
</tr>
</tbody>
</table>

6. Topics of practical lessons

<table>
<thead>
<tr>
<th>№</th>
<th>Topic</th>
<th>Practical classes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>THORACIC, CARDIAC, ENDOCRINE SURGERY.</strong></td>
<td><strong>Amount of hours</strong></td>
</tr>
<tr>
<td>1</td>
<td>Chest trauma. Classification. Early and late complications. Differential diagnosis. First aid and treatment tactics.</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>Hernia of the esophageal opening of the diaphragm</td>
<td>2</td>
</tr>
<tr>
<td>№</td>
<td>Subject</td>
<td>Course Details</td>
</tr>
<tr>
<td>----</td>
<td>------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>8</td>
<td><strong>Vascular surgery</strong></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Chronic ischemia of the lower extremities. Obliterating atherosclerosis and endarteritis. Classification of chronic ischemia and occlusion levels of the aorta and lower limb arteries.</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Diabetic foot. Diagnostics. Special methods of research. Treatment methods.</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Pulmonary embolism. Clinics, diagnostics, treatment. Prevention means.</td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>Postthrombophlebeitic syndrome. Classification. The Clinical picture.</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>Postthrombophlebic syndrome. Diagnostics. Conservative and surgical methods of treatment.</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>Patient examination &amp; Case history</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Exam</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td></td>
</tr>
</tbody>
</table>

### 7. Independent study.

<table>
<thead>
<tr>
<th>№</th>
<th>Subject</th>
<th>Number of hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Preparation for practical training</td>
<td>15,0</td>
</tr>
<tr>
<td>2</td>
<td>Mastering the practical skills given in the student’s practical training plan</td>
<td>25,0</td>
</tr>
<tr>
<td></td>
<td><strong>Total hours</strong></td>
<td>40</td>
</tr>
</tbody>
</table>
8. Individual tasks

Not provided.

9. Teaching methods

Practical classes: conversation, solving clinical situational problems, practicing skills of examination of patients, demonstration and practice of manipulation skills and practice of skills on simulation models, training exercises for the differential diagnosis of the most common surgical skin diseases

Independent study: independent study with a textbook, independent study with a bank of test tasks KROK-2, independent solution of clinical problems.

10. Methods of control and criteria for assessing learning outcomes

Current control: oral questioning, testing, assessment of the implementation of practical skills, solution of situational clinical tasks, assessment of activity in the classroom.

Final control: exam.

The structure of the current assessment in a practical lesson.

1. Assessment of theoretical knowledge on the topic of the lesson:
   - methods: survey;
   - maximum mark - 5, minimum mark - 3, unsatisfactory mark - 2.
2. Assessment of practical skills and manipulations on the topic of the lesson:
   - methods: assessment of the correctness of the implementation of practical skills
   - maximum mark - 5, minimum mark - 3, unsatisfactory mark - 2;
3. Evaluation of work with the patient on the topic of the lesson:
   - methods: assessment: a) communication skills of communication with the patient;
   - maximum mark - 5, minimum mark - 3, unsatisfactory mark - 2;

CRITERIA FOR CURRENT ASSESSMENT IN A PRACTICAL LESSON

- mark "excellent" is given to the student who systematically studied during a semester, showed various and deep knowledge of a program material, is able to successfully carry out tasks which are provided by the program, has mastered the basic and additional literature, has understood interrelation of separate sections of discipline, importance for the future profession, showed creative abilities in understanding and using educational material, showed the ability to independently update and replenish knowledge; level of competence - high (creative);
- mark "good" is given to a student who has shown full knowledge of the program material, successfully completes the tasks provided by the program, mastered the basic literature recommended by the program, showed a sufficient level of knowledge of the discipline and is able to independently update during further study and professional activity; level of competence - sufficient (constructive-variable);
- mark "satisfactory" is given to the student who has shown knowledge of the basic educational program material in the volume necessary for the further training and the subsequent work on a profession, copes with performance of the tasks provided by the program, has made separate mistakes in answers and at performance of tasks, but has the necessary knowledge to overcome mistakes under the guidance of a research and teaching staff; level of competence - average (reproductive);
- mark "unsatisfactory" is given to the student who did not show sufficient knowledge of the basic educational and program material, made fundamental mistakes in performance of the tasks provided by the program, cannot use the knowledge at the further training without the teacher's
help, failed to master skills of independent study; level of competence - low (receptive-productive).

11. Distribution of points received by applicants for higher education

Current academic performance
Evaluation of the success of the study of each topic of the discipline is carried out on a traditional 4-point scale.
At a practical lesson, at least 50% of students should be interviewed, and at a seminar - at least 30%. At the end of the semester, the average number of students' grades in the group should be the same.
At the end of the study of the discipline, the current academic performance is calculated as the average grade point, that is, the arithmetic average of all the student's grades on the traditional scale, rounded to 2 (two) decimal places.
At the last practical lesson, the teacher announces to students the results of their exact academic performance, academic debt (if any).
Only those students who do not have academic debt and have an average score for current educational activities of at least 3.00 are allowed for exam.

Exam on the discipline.
The grade for the discipline is 50% of the current academic performance (the arithmetic mean of all the student's exact grades) and 50% is the grade of the exam.
To assess the discipline on a 4-point traditional (national) scale, the average score for the discipline is calculated as the arithmetic mean of two components:
1) the average current score as the arithmetic of all current grades (calculated as a number rounded to 2 (two) decimal places);
2) traditional assessment for offset.
The average score for the discipline is transferred to the traditional assessment in the discipline on a 4-point scale and is regarded as the ratio of this arithmetic mean to the percentage of assimilation of the required amount of knowledge in this subject.
A multi-point scale characterizes the actual performance of each student with the mastery of the academic discipline. Conversion of a traditional grade in a discipline into a 200-point grade is carried out by the information and computing center of the university by the "Contingent" program according to the formula:

Conversion table for traditional assessment to multi-point:

<table>
<thead>
<tr>
<th>National mark</th>
<th>points</th>
</tr>
</thead>
<tbody>
<tr>
<td>“5”</td>
<td>185 - 200</td>
</tr>
<tr>
<td>“4”</td>
<td>151 - 184</td>
</tr>
<tr>
<td>“3”</td>
<td>120 - 154</td>
</tr>
</tbody>
</table>

Discipline scores are independently converted to both the ECTS scale and the four-point scale. ECTS scores on a 4-point scale are NOT converted and vice versa. Further accounts are carried out by the Information and Computing Center of the University.

Conversion of traditional discipline grade and ECTS scores

<table>
<thead>
<tr>
<th>ECTS score</th>
<th>Statistical indicator</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Top 10% of students</td>
</tr>
<tr>
<td>B</td>
<td>The next 25% of students</td>
</tr>
<tr>
<td>C</td>
<td>The next 30% of students</td>
</tr>
<tr>
<td>D</td>
<td>The next 25% of students</td>
</tr>
<tr>
<td>E</td>
<td>The next 10% of students</td>
</tr>
</tbody>
</table>

An assessment on the ECTS scale is given by the educational unit of ONMedU or the dean's office after ranking the grades in the discipline among students who study at one course and in
one specialty. The ranking of students - citizens of foreign countries is recommended by the decision of the Academic Council to be carried out in one array.

13. Methodological support:
- The work program of the academic discipline
- Syllabus of the academic discipline
- Multimedia presentations
- Methodical development of practical lessons

8. The list of required skills

1) Patient examination technique: examination of lymph nodes (cervical, axillary, inguinal), peripheral arteries and veins.
2) Methods for examining the mammary glands.
3) Methods for examining the thyroid gland.
4) Methods for restoring patency of the upper respiratory tract. Artificial lung ventilation (ALV) methods
5) Heart massage.
6) Interpretation of Clinical blood and urine tests.
7) Interpretation of biochemical blood tests: bilirubin, its fractions; urea, nitrogen, creatinine; blood proteins, acid-base state, blood electrolytes, coagulogram, urea.
8) Reading radiographs: overview, chest x-ray (pneumothorax, hydro - or hemothorax).
9) Reading radiographs: radiopaque studies of the esophagus

List of questions for the for the exam.

1. Surgical aspects of the anatomy of the anterior mediastinum.
3. Treatment of acute mediastinitis.
4. Etiology, pathogenesis, Clinics of the superior vena cava syndrome. Diagnostics of the superior vena cava syndrome.
5. Surgical approaches for operations on the organs of the mediastinum.
6. Tactics of treatment of patients with iatrogenic lesions of the esophagus.
7. Treatment of iatrogenic perforation of the lower thoracic esophagus.
8. Classification of hernia of the esophageal opening of the diaphragm.
10. X-ray signs of sliding hiatal hernia.
12. Treatment of paraesophageal hiatal hernia.
15. Clinical forms of gangrene of the lungs.
18. Additional methods of examination of patients with suppurative lung diseases.
27. Differential diagnosis of pleural empyema and pyopneumothorax.
29. Indications for puncture of the pleural cavity. Technique for performing a puncture of the pleural cavity.
30. Indications for pleural drainage. Technique for pleural drainage.
32. Therapeutic tactics for closed chest trauma complicated by large hemothorax
33. Signs of intrapleural bleeding. Indications for thoracotomy.
34. Therapeutic tactics for collapsed hemothorax.
35. Diagnostics and treatment of penetrating heart wounds.
37. Types of aspiration systems for pleural drainage.
40. Therapeutic tactics for tense (valve) pneumothorax.
41. Types of novocaine blockade with closed chest trauma.
43. Early complications of closed chest trauma. Late complications of closed chest trauma
44. Anatomical and physiological narrowing of the esophagus
46. Differential diagnosis of esophageal achalasia and esophageal cancer.
47. Treatment of achalasia of I-II stages.
48. Classification of the diverticulum of the esophagus
52. Clinical stages of esophageal burn.
54. Treatment of cicatricial esophageal strictures.
55. Euthyroid and toxic goiter. Classification. Special methods of research.
57. Euthyroid and toxic goiter. Treatment.
65. Causes of embolism and acute thrombosis of the great arteries.
66. Clinical characteristics of embolism and acute thrombosis of the great arteries.
67. Differential diagnosis of embolism and acute thrombosis of the great arteries.
68. Surgical tactics and methods of surgical treatment of embolism and acute thrombosis of the main arteries.
69. Peculiarities of postoperative management after surgery for embolism and acute thrombosis of the main arteries.
70. Indications for conservative treatment, drugs used for embolism and acute thrombosis of the great arteries.
71. Etiology, pathogenesis of obliterating atherosclerosis and endarteritis of the lower extremities.
72. Classification of chronic ischemia and the level of occlusion of the main arteries in obliterating atherosclerosis.
73. Modern theory and risk factors for the development of atherosclerosis.
74. Methods of examination of the arterial system.
75. Complications of obliterating atherosclerosis of the arteries of the lower extremities and methods of their prevention.
76. Clinical characteristics and methods of surgical treatment of Leriche syndrome.
77. Indications and contraindications for surgical treatment of obliterating atherosclerosis of the main arteries of the lower extremities.
78. Indications and contraindications for surgical treatment of obliterating endarteritis of the lower extremities.
79. Early postoperative complications of reconstructive operations on the main arteries of the lower extremities in obliterating atherosclerosis and methods for their prevention.
80. Indications and contraindications for conservative treatment of obliterating diseases of the arteries of the lower extremities.
81. Modern methods of aortoarteriography.
82. Factors providing normal venous hemodynamics.
84. Clinical characteristics of varicose veins of the lower extremities,
85. Clinical characteristics of chronic venous insufficiency of the 1st century.
86. Clinical characteristics of chronic venous insufficiency II century.
87. Clinical characteristics of chronic venous insufficiency III century.
88. Complications of varicose veins.
89. Functional tests to determine the state of the valves of the superficial, communicating and deep veins of the lower extremities. Methods and indications for phlebography.
90. Differential diagnosis of varicose veins of the groin and femoral hernia.
91. Conservative treatment of varicose veins of the lower extremities.
92. Treatment of trophic ulcers caused by chronic venous insufficiency.
93. Indications and contraindications for surgical treatment of varicose veins of the lower extremities.
94. The sequence of performing the operation of saphenectomy.
95. Reasons for recurrent varicose veins of the lower extremities after saphenectomy. Treatment of recurrent varicose veins of the lower extremities after saphenectomy.
96. Prevention of varicose veins of the lower extremities.
97. Etiology of thrombophlebitis of the saphenous veins of the lower extremities. The causes of thrombophlebitis are dilated saphenous veins.
98. Pathogenesis and clinic of migratory thrombophlebitis of the saphenous veins.
99. Clinical manifestations of acute thrombophlebitis of the saphenous veins of the lower extremities.
100. Differential diagnosis of thrombophlebitis of the saphenous and deep veins of the lower extremities.
101. Differential diagnosis of thrombophlebitis of the saphenous veins of the lower extremities and erysipelas.
102. Differential diagnosis of thrombophlebitis of the saphenous veins of the lower extremities and lymphangitis.
103. Indications and contraindications for surgical treatment of acute thrombophlebitis of the saphenous veins of the lower extremities. Technique of operations for acute thrombophlebitis of the saphenous veins of the lower extremities.
104. Etiological and pathogenetic factors of deep vein thrombosis of the lower extremities.
106. Clinical characteristics of white phlegmasia.
107. Clinical characteristics of blue phlegmasia.
108. Etiology, clinical characteristics and treatment of Paget-Schroeter syndrome.
110. Differential diagnosis of phlegmasia and femoral embolism.
111. Conservative treatment of deep vein thrombosis of the lower extremities.
112. Features of surgical treatment of ileofemoral thrombosis.
113. Ways to prevent PE in the surgical treatment of ileofemoral thrombosis.
114. The sequence of performing the operation of saphenectomy.
115. Reasons for recurrent varicose veins of the lower extremities after saphenectomy.
116. Treatment of recurrent varicose veins of the lower extremities after saphenectomy.
117. Prevention of varicose veins of the lower extremities.
118. Etiology of thrombophlebitis of the saphenous veins of the lower extremities. The causes of thrombophlebitis are dilated saphenous veins.
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121. Differential diagnosis of thrombophlebitis of the saphenous and deep veins of the lower extremities.
122. Differential diagnosis of thrombophlebitis of the saphenous veins of the lower extremities and erysipelas.
123. Differential diagnosis of thrombophlebitis of the saphenous veins of the lower extremities and lymphangitis.
124. Indications and contraindications for surgical treatment of acute thrombophlebitis of the saphenous veins of the lower extremities. Technique of operations for acute thrombophlebitis of the saphenous veins of the lower extremities.
125. Etiological and pathogenetic factors of deep vein thrombosis of the lower extremities.
127. Clinical characteristics of white phlegmasia.
128. Clinical characteristics of blue phlegmasia.
129. Etiology, clinical characteristics and treatment of Paget-Schroeter syndrome.
130. Differential diagnosis of deep vein thrombosis of the lower extremities and lymphostasis.
133. Features of surgical treatment of ileofemoral thrombosis.
134. Ways to prevent PE in the surgical treatment of ileofemoral thrombosis.
135. Prevention of deep vein thrombosis of the lower extremities in the early postoperative period.
135. Etiology, pathogenesis of post thrombophlebitic syndrome. Features of venous hemodynamics in patients with PTFS.
136. Clinical characteristics of the sclerotic form of post thrombophlebitic syndrome.
137. Clinical characteristics of the varicose form of post thrombophlebitic syndrome.
138. Clinical characteristics of the edematous-painful form of post thrombophlebitic syndrome.
139. Clinical characteristics of the ulcerative form of post thrombophlebitic syndrome.
140. Features of clinical symptoms in patients with ileofemoral PTFS.
141. Differential diagnosis of PTFS and congenital angiodysplasia.
142. Conservative treatment of PTFS.
143. Surgical treatment of patients with ileofemoral PTFS.
144. Etiology of lymphostasis. Pathogenesis of lymphostasis.
145. Clinical characteristics of the stage of lymphedema.
146. Clinical characteristics of the stage of fibredema.
147. Differential diagnosis of lymphedema and edema in heart disease.
149. Methods of examination of the lymphatic system. Indications and methods for performing lymphography.
150. Indications and methods of conservative treatment of lymphostasis.
151. Types of surgical interventions aimed at restoring the outflow of lymph.
152. Clinical picture, diagnosis and treatment of diseases of the pericardium.

10. List of educational methodical literature.
Basic literature.

2. Цигикало О. В. Clinical Anatomy and Operative Surgery=Клінічна анатомія і оперативна хірургія.. Підручник для ВМНЗ IV р.а.: Рекомендовано МОЗ: 2020/528 с.
7. JANE C. ROTHROCK// Alexander's Care of the Patient in Surgery. 16th Ed. 2019
10. Braunwald’s Heart Disease: A Textbook of Cardiovascular Medicine, 11th Ed. Copyright © 2019 by Elsevier Inc.
11. SEIDEL’S GUIDE TO PHYSICAL EXAMINATION: AN INTERPROFESSIONAL APPROACH. Copyright © 2019 by Elsevier, Inc.
14. James Chalmers, Eva Polverino, Stefano Aliberti//Bronchiectasis. 2018

Additional literature.
1. Breast Surgery: A Companion to Specialist Surgical Practice
   Edited by J. Michael Dixon
   • Format Mixed media product | 340 pages
   • Publication date 15 Aug 2013
   • Publisher Elsevier Health Sciences
   • Publication City/Country London, United Kingdom

2. Endocrine Surgery: A Companion to Specialist Surgical Practice
   Edited by Thomas W. J. Lennard
   • Format Mixed media product | 244 pages
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