QUESTIONS FOR PRACTICAL LESSONS

Section 1. Introduction. Topographic anatomy and operative surgery of the limbs.

Topic 1. Introduction. Subject and tasks of topographic anatomy and operative surgery. General surgical technique.

1. Subject of study of topographic anatomy and operative surgery.
2. Basic terms and concepts of TA (area, landmark, projection, projection line, fascia, cellular spaces, neurovascular bundle, osteofibrous sheaths, muscle groups, etc.).
3. Brief history of the development of science. Individual variability. Variant anatomy. The most important names: N.I. Pirogov, V.N. Shevkunenko, Yu.M. Lopukhin. Prospects.
4. Traditional and modern methods of studying topographic and clinical anatomy.
5. Surgery - definition, classification, main stages.
6. Online access – definition, requirements.
7. Operative technique – definition, types.
8. Organization of a modern operating room (in a clinic, hospital).
9. Surgical instruments - definition, requirements, classification, rules of use.
10. Rules for separating tissues.
11. Rules for joining fabrics.
12. Surgical suture - definition, classification, requirements.
13. Suture material - definition, types, requirements, rules of use.
14. Anesthesia - definition, types of local anesthesia.
15. The concept of primary surgical treatment of a wound. Stages of the implementation of PHO.
16. General principles of organ and tissue transplantation.

Topic 2. Topographic anatomy of the upper limb. Part 1

1. Subclavian region: boundaries, external landmarks, layer-by-layer structure.
2. Superficial and deep subpectoral cellular spaces
3. Deltoid region - landmarks, boundaries, layer-by-layer topography, neurovascular bundle.
4. Subdeltoid cellular space and its connection with other areas.
5. Scapular region, musculoskeletal landmarks, osteofibrous beds and their contents.
6. The main neurovascular bundles of the scapular region.
7. Scapular arterial circle and its role in the development of collateral circulation during ligation of the axillary artery.
8. Paths of spread of inflammation from the scapular region.
9. Axillary region: external landmarks, boundaries, layered structure.
10. Topographic anatomy of the axillary artery and its relationship with the branches of the brachial plexus along the triangles.
11. The nature of the structure of fiber and the characteristics of the course of phlegmon in the armpit. Five groups of lymph nodes.
12. Shoulder joint – structure, main and auxiliary elements, axes of movement, muscles acting on the joint, sources of blood supply and innervation, lymphatic drainage. Projection of the joint space, weak points. Features of the shoulder joint.

Topic 3. Topographic anatomy of the upper limb. Part 2

1. Topographic anatomy of the anterior ulnar region.
2. Topographic anatomy of the cubital fossa.
3. Projections of the neurovascular formations of the anterior ulnar region.
4. Topographic anatomy of the posterior ulnar region.
5. Projections of the neurovascular formations of the posterior ulnar region.

6. Elbow joint - structure, main and auxiliary elements, axes of movement, muscles acting on the joint, sources of blood supply and innervation, lymphatic drainage. Projection of the joint space. Features of the elbow joint.
7. Blood supply to the elbow area and elbow joint.
8. Topographic anatomy of the anterior region of the forearm.
9. Projections of the neurovascular formations of the anterior forearm.
10. Topographic anatomy of the posterior forearm.
11. Projections of the neurovascular formations of the posterior forearm.
12. Topographic anatomy of the palmar surface of the hand.
13. Topographic anatomy of the wrist joint.
14. Topographic anatomy of osteofibrous formations in the area of the wrist joint and hand.
15. Topographic anatomy of the dorsum of the hand.
16. Topographic anatomy of the synovial sheaths of the hand.
17. Topographic anatomy of the fascial beds of the hand.
18. Topographic anatomy of the finger area.
19. Osteofibrous canals of the fingers.

Topic 4. Topographic anatomy of the lower limb. Part 1

1. Topographic anatomy of the gluteal region - boundaries, landmarks, layered structure.
2. Topographic anatomy of the supragiriform foramen - boundaries, contents, communications.
3. Topographic anatomy of the infrapiriform foramen - boundaries, contents, messages.
4. Topographic anatomy of the hip joint - structure, main and auxiliary elements, axes of movement, muscles acting on the joint; sources of blood supply, innervation and lymphatic drainage. Weak spots. Puncture points.
5. Topographic anatomy of the anterior thigh - boundaries, landmarks, layered structure, muscle groups. Topography of the elements of the neurovascular bundle.
6. Topography of muscle and vascular lacunae.
7. Topography of the obturator canal.
8. Topography of the femoral canal.
9. Topography of the adductor (Gunter's) canal.
10. Topographic anatomy of the posterior thigh region - boundaries, landmarks, layered structure, muscle groups. Topography of the elements of the neurovascular bundle.
11. Topographic anatomy of the popliteal fossa.
12. Topographic anatomy of the sacral and lumbar plexuses.

Topic 5. Topographic anatomy of the lower limb. Part 2

1. Topographic anatomy of the anterior region of the leg - boundaries, landmarks, layer-by-layer structure. Topography of the elements of the neurovascular bundle.
2. Topographic anatomy of the posterior region of the leg - boundaries, landmarks, layer-by-layer structure. Topography of the elements of the neurovascular bundle.
3. Topography of the ankle-popliteal (Gruber's) canal.
4. Topographic anatomy of the knee joint - structure, main and auxiliary elements, axes of movement, muscles acting on the joint; sources of blood supply, innervation and lymphatic drainage. Weak spots. Puncture points.
5. Topographic anatomy of the anterior ankle region.
6. Area of the medial malleolus.
7. Topographic anatomy of the posterior ankle region.

8. Topographic anatomy of the ankle joint - structure, main and auxiliary elements, axes of movement, muscles acting on the joint; sources of blood supply, innervation and lymphatic drainage. Weak spots. Puncture points.
9. Topographic anatomy of the dorsum of the foot.
10. Topographic anatomy of the plantar surface of the foot.

Topic 6. Operations on blood vessels, nerves and tendons.

1. Vessels as hollow organs – wall structure, morphofunctional characteristics of the membranes.
2. General principles of surgical interventions on blood vessels. Special tools.
3. Operative access to vessels: (direct, roundabout). Topographical and anatomical rationale for the choice of surgical access.
4. Indications and technique for ligating blood vessels in the wound and throughout.
5. Puncture of a vein (venepunctio). Opening a vein (venesectio). Intra-arterial infusions.
6. Vascular suture. Carrel vascular suture technique. Lateral suture of the artery. Mechanical suture of blood vessels.
7. Vascular surgeries: vessel bypass, stenting, endarterectomy, vessel plastic surgery (auto-, allo-, xeno-, prosthetics), indirect embolectomy with a Fogarty catheter. Operations for pulsating hematomas and aneurysms.
8. Collateral circulation. Pathways of collateral circulation during ligation of the axillary, brachial, and femoral arteries.
9. Operative access to the blood vessels of the upper limb:
    - Exposure of the subclavian artery (a. subclavia). Operational access according to Dzhanelidze. Operational access according to Petrovsky.
    - Exposure of the axillary artery (a. axillaris).
    - Exposure of the brachial artery (a. brachialis).
    - Exposure of the radial and ulnar arteries (aa. radialis and ulnaris).
10. Operative access to the blood vessels of the lower limb:
    - Exposure of the external iliac artery (a. iliaca externa).
    - Exposure of the femoral artery (a. femoralis).
    - Exposure of the popliteal artery (a. poplitea).
    - Exposure of the posterior tibial artery (a. tibialis posterior).
    - Exposure of the anterior tibial artery (a. tibialis anterior). in the middle third of the leg.
11. Operations for varicose veins of the lower limb.
12. Vascular suture: indications, types, classification, requirements, complications.
13. The concept of reconstructive operations on blood vessels.
14. Peripheral nerves - structure of nerve fiber, classification of peripheral nerves by topography and function, etc.
15. Releasing the nerve from scar pinching (neurolysis).
16. Nerve suture: indications, types, classification, requirements, complications. Types of nerve regeneration. Special tools.
17. Access to the nerve trunks of the upper limb:
    - Exposure of the brachial plexus (plexus brachialis).
    - Exposure of the radial nerve (n. radialis).
    - Exposure of the axillary nerve (n. axillaris).
    - Exposure of the median nerve (n. medianus).

- Exposure of the ulnar nerve (n. ulnaris).
- Kanavela restricted area.
- Exposure of the superficial palmar arch.
- Exposure of the deep palmar arch.

17. Access to the nerve trunks of the lower limb:
    - Exposure of the sciatic nerve (n. ischiadicus).
    - Exposure of the tibial nerve (n. tibialis).
    - Exposure of the common peroneal nerve (n. peroneus communis).
    - Exposure of the deep peroneal nerve (n. peroneus profundus).
    - Exposure of the femoral nerve (n. femoralis).
    - Exposure of the obturator nerve (n. obturatorius).
18. Implantation of a healthy nerve into a damaged one.
19. Connective tissue (fascia, aponeuroses, tendons) – structure, main characteristics.
20. Tendon suture: indications, types, classification, requirements, complications. Special tools.
21. Operations on tendons: tendotomy, tendoplasty, resection, shortening, lengthening.

Topic 7. Operations for purulent diseases of soft tissues and joints of the extremities.

1. Basic principles of opening purulent foci of soft tissues of the extremities.
2. The location of the incisions when opening phlegmon in the area of the upper limb. Topographic-anatomical justification of the incisions.
3. The location of the incisions when opening phlegmon in the area of the lower limb. Topographic-anatomical justification of the incisions.
4. Incisions for various types of panaritium.
5. Puncture of the shoulder, elbow, wrist, hip, knee and ankle joints - technique, stages of surgery, instruments, complications.
6. Indications and principles of joint surgery: puncture, arthrotomy, resection, arthroplasty, arthrodesis, arthrorrhiza. Arthroscopy.
7. Methods of pain relief for purulent diseases of the soft tissues of the extremities - indications, mechanism of action, technique, complications.

Topic 8. Bone operations. Amputations.

1. Bone as an organ. Main characteristics of tubular bones, age and gender characteristics.
2. Bone operations (osteotomy, resection) – indications, types, classification, instruments, complications. Features in children.
3. Methods of connecting bones: extra- and intramedullary osteosynthesis, distraction-compression method of treating fractures. Characteristics of methods, indications, technique, instruments, complications.
4. Amputation of a limb: classification, indications, stages and their characteristics. Indications and technique for applying a tourniquet. Special instruments for amputation and their use. Methods for treating vessels, nerves, bone and periosteum.
5. Principles of forming an amputation stump. Methods of covering the amputation stump (fascio-, myo-, osteoplastic). Complications. Reamputation.
6. Disarticulation of a limb: classification, indications, stages. Complications.
7. The concept of prosthetics and replantation of limbs.

Section 2. Topographic anatomy and operative surgery of the head

Topic 9. Topographic anatomy and operative surgery of the brain.

1. General characteristics of the head area. Bones of the brain section of the skull - structure, features.
2. Topographic anatomy of the frontal, parietal, occipital and temporal regions - boundaries, landmarks, layered structure, communications. Sources of blood supply and innervation, lymphatic drainage.
3. Blood supply to the brain: carotid and vertebral-basilar basins, extra- and intracranial sections of the cerebral arteries, venous outflow pathways.
4. Liquor. Circulation of cerebrospinal fluid. Hydrocephalus.
5. Scheme of the Krenlein-Bryusova cranial topography.
6. Topographic anatomy of the mastoid region. Shipo Triangle.
7. Topographic anatomy of the internal base of the skull.
8. Inner and outer base of the skull. Places of exit of cranial nerves from the cranial cavity.
9. Venous system of the head, anastomoses of the superficial veins with intracranial venous sinuses and their practical significance.
10. Surgical treatment of head wounds (penetrating, non-penetrating). Methods for stopping bleeding from soft tissues, diploic veins and venous sinuses. Ligation of the middle artery of the dura mater.
11. Craniotomy (osteoplastic, decompression).
12. Antrotomy.
13. The concept of the stereotactic method in neurosurgery.

Topic 10. Topographic anatomy and operative surgery of the facial part of the head.

1. Bones of the facial part of the skull - structure, features. Buttresses.
2. Paranasal sinuses.
3. Orbital area – cavity walls, contents, messages. Sources of blood supply, innervation, venous and lymphatic drainage of the organ of vision.
4. Nose area: outer nose; nasal cavity - walls, nasal passages, areas, messages. Sources of blood supply, innervation, venous and lymphatic drainage of the nasal area.
5. Oral area: vestibule of the mouth; the oral cavity itself - walls, contents, messages. Tongue – structure, sources of blood supply, innervation, venous and lymphatic drainage. Teeth.
6. Topographic anatomy of the areas of the lateral region of the facial region of the head, parotid-masticatory, deep region of the face - boundaries, landmarks, layered structure, projections, messages.
7. Topographic anatomy of the parotid salivary gland.
8. Topographic anatomy of the trigeminal nerve.
9. Topographic anatomy of the facial nerve.
10. Topographic anatomy of the facial artery and vein.
11. Topographic anatomy of the deep region of the face.
12. Characteristics and topographic-anatomical rationale for surgical approaches on the face, incisions for purulent processes on the face.
13. Surgical treatment of purulent parotitis.
14. The concept of plastic and reconstructive operations on the facial part of the skull.

Section 3. Topographic anatomy and operative neck surgery

Topic 11. Topographic anatomy and operative neck surgery.

1. Topographic-anatomical areas and triangles of the neck - boundaries, landmarks, layer-by-layer structure, projections, communications.
2. Fascia of the neck. Classification of fascia according to V.N. Shevkunenko.

3. Cellular spaces of the neck - boundaries, contents, messages.
4. Topographic anatomy of the larynx - structure (cartilage, joints, ligaments), sources of blood supply, innervation, venous and lymphatic drainage.
5. Topographic anatomy of the cervical trachea - structure, sources of blood supply, innervation, venous and lymphatic drainage.
6. Topographic anatomy of the pharynx - structure, sources of blood supply, innervation, venous and lymphatic drainage.
7. Topographic anatomy of the cervical esophagus - structure, sources of blood supply, innervation, venous and lymphatic drainage.
8. Topographic anatomy of the thyroid and parathyroid glands - structure, sources of blood supply, innervation, venous and lymphatic drainage.
9. Anatomical and surgical characteristics of approaches in the neck area.
10. Tracheostomy. Tracheotomy. Indications, types, techniques, complications and their prevention.
11. Surgeries on the thyroid gland - indications, types. Subtotal subfascial resection of the thyroid gland according to Nikolaev (indications, technique, complications).
12. Indications and technique of ligation of the common carotid and external carotid arteries.
13. Indications and technique of vagosympathetic blockade according to Vishnevsky.
14. Brachial plexus anesthesia according to Kulenkampf.

Section 4. Topographic anatomy and operative surgery of the thoracic wall and thoracic cavity

Topic 12. Topographic anatomy and operative surgery of the thoracic wall

1. Thoracic wall - boundaries, division into areas, vertical orientation lines, constitutional features of the shape. Sources of blood supply, innervation, venous and lymphatic drainage.
2. Layer-by-layer topography of the thoracic areas.
3. Topographic anatomy of intercostal spaces.
4. Subperiosteal and transperiosteal resection of the rib.
5. Primary surgical treatment of a penetrating chest wound.
6. Pneumothorax: definition, classification, surgical treatment.
7. Pleural puncture – indications, technique, complications.
8. Subpectoral cellular spaces – boundaries, contents, messages.
9. Topographic anatomy of the mammary gland. Pathways for lymph outflow.
10. Mastitis – definition, types, principles of surgical treatment.
11. Radical and organ-preserving operations on the mammary gland - indications, approaches, stages of surgery, complications. Introduction to plastic and reconstructive operations of the mammary gland.
12. Congenital deformities of the chest wall. Surgery.

Topic 13. Topographic anatomy and operative surgery of the thoracic cavity. Part 1

1. Pleura – properties, pleural cavities, pleural sinuses.
2. Interpleural spaces - topography, clinical significance.
3. Thoracotomy: types, technique, complications.
4. Topographic anatomy of the lungs. Root of the lung. Lobar and segmental structure of the lungs.
5. Operative approaches to the lungs - indications, types, characteristics, complications.
6. Radical and organ-preserving operations on the lungs - indications, approaches, stages of surgery, complications.
7. Topographic anatomy of the diaphragm: structure, blood supply, innervation, weak points.

8. Principles of operations for hiatal hernias.

Topic 14. Topographic anatomy and operative surgery of the thoracic cavity. Part 2

1. Mediastinum - definition, classification, contents, messages. Displacement of mediastinal organs during pathological processes.
2. Topographic anatomy of the thymus.
3. Operative approaches to the mediastinal organs.
4. Topographic anatomy of the heart and pericardium.
5. Open heart operations - conditions and their implementation. Suturing a heart wound.
6. Operations for coronary circulatory disorders (coronary bypass surgery, stenting of coronary arteries).
7. Pericardial puncture, pericardiotomy, drainage of the pericardial cavity.
8. Heart defects – types, principles of surgical correction.
9. Topographic anatomy of the thoracic esophagus.
10. Principles of performing operations on the thoracic esophagus - approaches, stages of surgery, complications.

Section 5. Topographic anatomy and operative surgery of the abdominal wall and abdominal cavity.

Topic 1. Topographic anatomy of the anterolateral abdominal wall

1. Belly. Abdominal, peritoneal cavities and retroperitoneal space - definition, boundaries, contents.
2. Anterolateral wall of the abdominal cavity – external landmarks, boundaries, division into areas.
3. Peritoneum – properties, contents, folds of the peritoneum and fossae on the inner surface of the anterior abdominal wall.
4. Muscles of the anterolateral abdominal wall.
5. The anterolateral wall of the abdominal cavity – sources of blood supply, innervation, venous and lymphatic drainage.
6. Projections of organs onto the anterior abdominal wall.
7. Layer-by-layer structure of the areas of the anterolateral abdominal wall.
8. “Weak spots” of the anterolateral abdominal wall – features of the layered structure, clinical significance.
9. Inguinal canal – formation, walls, contents.
10. Femoral canal – formation, walls, contents.
11. Malformations of the anterolateral abdominal wall and navel.
12. Features of the topographic anatomy of the anterolateral abdominal wall in children.
13. The upper and posterior walls of the anterolateral abdominal wall - features, “weak spots” and their clinical significance.

Topic 2. Operations for external abdominal hernias.

1. Surgical anatomy of hernias - causes, classification, main elements of a hernia. Complications of external hernias.
2. Inguinal hernias - classification, methods of open (Bassini, Martynov, Girard, Lichtenstein, McVeigh, Shouldice) and minimally invasive methods of hernioplasty, stages, complications. Operations for congenital inguinal hernia.
3. Femoral hernias – open (Bassini, Ruggi, Parlavecchio) and minimally invasive methods of hernioplasty and their indications, stages, complications.

4. Umbilical and hernias of the white line of the abdomen (Lexer, Sapezhko, Mayo) - methods of open and minimally invasive methods of hernioplasty and their indications, stages, complications. Operations for omphalocele.
5. Strangulated and sliding hernias – features of surgical procedure, complications.

Topic 3. Topographic anatomy of the upper abdominal cavity

1. General characteristics of the upper abdominal cavity, boundaries, landmarks, projections, communications.
2. Upper section (floor) of the abdominal cavity – boundaries, landmarks, projections, contents, messages.
3. The course of the peritoneum in the upper abdominal cavity. Greater and lesser omentum, omental, pregastric, hepatic bursae, right and left subdiaphragmatic spaces - boundaries, contents, messages. Ways of spread of hematomas and inflammatory processes.
4. Topographic anatomy of the abdominal part of the esophagus.
5. Topographic anatomy of the stomach. Ligaments of the stomach.
6. Topographic anatomy of the duodenum. Duodenal ligaments.
7. Topographic anatomy of the liver. Lobar and segmental structure. Ligaments of the liver.
8. Topographic anatomy of the gallbladder and extrahepatic bile ducts.
9. Topographic anatomy of the portal vein, portocaval anastomoses, branches of the celiac trunk.
10. Topographic anatomy of the pancreas.
11. Topographic anatomy of the spleen.
12. Additional instrumental methods for studying the esophagus, stomach, liver and extrahepatic biliary tract, pancreas and vessels of the upper abdominal cavity.
13. Features of topographic anatomy of the organs of the upper abdominal cavity in children.

Topic 4. Topographic anatomy of the lower abdominal cavity

1. General characteristics, boundaries, landmarks, projections, content, messages.
2. The course of the peritoneum in the lower abdominal cavity. Mesenteric sinuses, paracolic grooves, recesses.
3. Topographic anatomy of the small intestine.
4. Topographic anatomy of the colon.
5. Topographic anatomy of the duodenojejunal flexure, ileocecal angle.
6. Topographic anatomy of the appendix. Variants of the anatomical location of the appendix.
7. Blood vessels, nerves and lymph nodes of the lower section (floor) of the abdominal cavity.
8. Additional instrumental methods for studying the small and large intestines.

Topic 5. Intestinal operations

1. Operations on the small and large intestines - terminology.
2. Operative approaches to the parts of the small and large intestines - traditional and minimally invasive.
3. Wounds of the abdominal cavity (penetrating and non-penetrating). Inspection of the abdominal cavity for penetrating wounds.
4. Intestinal operations – classification, types.
5. Intestinal suture - definition, indications, classification, requirements, principles and technique of application. Suture material, special surgical instruments.
6. Technique for performing basic sutures (Lambert, purse-string suture, Schmiden, Multanovsky, Pirogov-Mateshuk).
7. Enterotomy, enterostomy. Suturing wounds of the small and large intestines.
8. Resections of the small intestine - approaches, technique, complications.

9. Resections of the colon - approaches, technique, complications.
10. Types and techniques of gastrointestinal and interintestinal anastomoses.
11. Appendectomy – approaches, technique, complications.
12. Fistula application to the small and large intestines - types, approaches, technique, complications. Unnatural anus.
13. Acute violation of mesenteric circulation - causes, methods of surgical treatment.
14. Additional instrumental methods for studying the small and large intestines.

Topic 6. Stomach operations

1. Stomach operations - terminology.
2. Surgical approaches to the stomach – traditional and minimally invasive.
3. Gastrotomy - technique, complications.
4. Gastrostomy (according to Witzel, Kader, Topver) - types, technique, complications.
5. Perforated gastric ulcer – suturing methods, technique, complications.
6. Gastric resection - methods: 1. according to the Billroth-1 method, Haberer modification, 2. Billroth-2, modifications according to Hoffmeister-Finsterer, complications.
7. Gastrointestinal anastomoses (gastroenterostomy) - methods, techniques, complications. «Vicious circle».
8. Drainage operations on the stomach - types, techniques, complications.
9. The concept of plastic and reconstructive operations on the stomach.
10. Vagotomy – types, technique, complications.
11. Surgeries for hiatal hernia.
12. Additional methods for examining the stomach.

Topic 7. Operations on organs of the hepatobiliopancreatoduodenal zone

1. Surgical approaches to the liver, gall bladder, duodenum, spleen, pancreas - traditional and minimally invasive.
2. Bleeding from injuries of parenchymal organs (liver, pancreas, spleen) - features, methods and techniques of stopping, complications.
3. Types of hemostatic sutures (Kuznetsov-Pensky, Oppel, Varlamov, Bregadze), technique, complications.
4. Diagnostic and organ-preserving operations on the liver (biopsy, puncture, resection, drainage) - types, technique, complications.
5. Operations on the gallbladder and extrahepatic bile ducts (choledochotomy, choledochoduodenostomy, drainage of the gallbladder, cholecystectomy) - types, techniques, complications.
6. Splenectomy - types, technique, complications.
7. Surgeries on the pancreas. Papillosphincterotomy.
8. Portal hypertension. Topographic-anatomical justification. Operations for portal hypertension.
9. The concept of liver transplantation.
10. Methods of additional instrumental diagnostics of organs of the hepatobiliopancreatoduodenal zone.

Section 6. Topographic anatomy and operative surgery of the lumbar region and retroperitoneum

Topic 8. Topographic anatomy and operative surgery of the lumbar region and retroperitoneum

1. Topographic anatomy of the lumbar region - boundaries. landmarks, projections, layered structure, “weak points”, messages.

2. Retroperitoneal space – boundaries. landmarks, projections, layered structure, “weak points”, cellular spaces, contents, messages.
3. Topographic anatomy of the kidneys.
4. Topographic anatomy of the adrenal glands.
5. Topographic anatomy of the ureters.
6. Topographic anatomy of the abdominal aorta. Classification of branches, zones of blood supply.
7. Topographic anatomy of the inferior vena cava and its tributaries.
8. Autonomic nerve ganglia and plexuses of the retroperitoneal space.
9. Surgical approaches to the kidneys and adrenal glands – traditional and minimally invasive.
10. Perinephric blockade according to the method of A.V. Vishnevsky.
11. Operations on the kidneys and renal pelvis (nephrotomy, nephrostomy, nephropexy, pyelotomy, resection, nephrectomy) - indications, types, technique, special surgical instruments, complications.
12. Requirements and features of the ureteral suture. Reconstructive operations on the ureter.
13. Abscesses and phlegmons of the lumbar region and retroperitoneal space - sources, localization, principles of surgical treatment, complications.
14. Topographic anatomy of the spinal column. Operative access to the cervical column. Lumbar puncture.
15. Reconstructive and stabilizing operations on the spinal column.

Section 7. Topographic anatomy and operative surgery of the small pelvis.

Topic 9. Topographic anatomy of the pelvis and perineal area

1. Borders, floors of the pelvis and their contents.
2. Fascia and fibrous spaces of the pelvis. Ways of spread of purulent-inflammatory processes.
3. Vessels, nerves and lymph nodes of the pelvis.
4. Topographic anatomy of the prostate gland.
5. Topographic anatomy of the uterus and appendages.
6. Topographic anatomy of the bladder.
7. Topographic anatomy of the rectum.
8. Topographic anatomy of the perineum and its gender differences.
9. Features of the topography of the pelvic organs in children.

Topic 10. Surgeries on the pelvic organs

1. Surgeries on the pelvic organs. Trauma to the pelvic organs - approaches, types of surgical suture, technique for draining purulent-urinary leaks, complications.
2. Pudendal nerve block – indications, technique, complications.
3. Puncture of the abdominal cavity through the posterior vaginal fornix, colpotomy, colporrhaphy - indications, technique, complications.
4. Bladder surgeries (cystostomy, cystotomy) – approaches, technique, complications.
5. Adenomectomy - approaches, methods, techniques, complications.
6. Operations for hydrocele of the testicle - approaches, methods, techniques, complications.

Topic 11. Topographic anatomy and operative surgery of the rectum

1. Topographic anatomy of the rectum. Sphincters of the rectum.
2. Methods of surgical treatment of hemorrhoids – technique, complications.
3. Surgical treatment of rectal prolapse.
4. Surgeries for rectal cancer.
5. Additional methods of instrumental diagnostics of the rectum.