

Deficiency of iron-containing enzymes	hypochromic anemia, has splitting and loss of hair, increased nail brittling and taste alteration
IgE and IgG	allergic reaction
Concentr. bouillons, vegetable decoctions	stimulation of gastrin production by G-cells (hypersecretion of the gastric juices)
Gametocytes (stage of development Plasmodium is infective for anopheles-female)	Tropical malaria - body temperature has sharply increased in the morning three weeks after his mission in India, accompanied with shivering and bad headache. A few hours later the temperature decreased. The attacks began to repeat in a day.
Enterobins vermicularis	child complains of weakness, nausea, irritability, Helminthes of white color and 5-10 mm long were found on the underwear. On microscopy of the scrape from the perianal folds achromic ova of unsymmetrical form
Blood examination	malaria, has been ill for 1,5 weeks. The sudden illness began with the increase of body temperature up to 39,90C. In 3 hours the temperature decreased and hypopnoea began Attacks repeat rhythmically in 48 hours. visited African country
Balantidium	Slime, blood and protozoa 30-200 microns of length have been revealed in a man's feces. The body is covered with cilia and has correct oval form with a little bit narrowed forward and wide round shaped back end. On the forward end a mouth is visible. In cytoplasm there are 2 nucleuses and 2 short vacuoles
Galactose-1-phosphate uridylyltransferase	Galactosemia, concentration of glucose in the blood has not considerably changed
Methionine	can enhance the process of methylation during phospholipids synthesis
Down's syndrome	rounded face, broad forehead, a mongolian type of eyelid fold, flattened nasal bridge, permanently open mouth, projecting lower lip, protruding tongue, short neck, flat hands, and stubby fingers
Autoimmune inflammation	mechanism of development of postinfarction Dressler's syndrome (pericarditis, pleuritis, pneumonia)
Delayed type hypersensitivity	Allergic stomatitis, complaints of redness and edema of his mouth mucous membrane in a month after dental prosthesis
Tromboembolism	trombophlebitis of deep veins - died, freely lying red friable masses with dim crimped surface in the trunk and bifurcation of the pulmonary artery
Endotoxic shock	Purulent endometritis developed in a woman after delivery. Treating with antibiotics inhibitors of murein synthesis was ineffective. Wide spectrum bactericidal antibiotic was administered to her. In 6 hours temperature rapidly increased up to 40° C with shiver. Muscle pains have appeared. BP dropped down to 70/40 mmHg. Oliguria has developed.
Fibroblasts function	Synthesis intercellular substance
Hinder mononucleotide synthesis	Methotrexate (structural analogue of the folic acid which is competitive inhibitor of the dihydrofolatreductase)
Decreased parathyroid glands	convulsions because of lowering calcium ions concentration in the blood plasma
Phage conversion	process can this microorganism become toxigenic
Indole	substances created in the intestines can cause endotoxemia - encephalopathy
Lipoma	A 50-year-old man has felt vague abdominal discomfort within past 4 months. Physical examination revealed no lymphadenopathy, and no abdominal masses or organomegaly at palpation. Bowel sounds are heard. An abdominal CT scan shows a 20 cm retroperitoneal soft tissue mass obscuring the left psoas muscle. A stool specimen tested for occult blood is negative.
Teratoma	A 40-year-old woman has had a feeling of abdominal discomfort for the past 8 months. On pelvic examination, there is the right adnexal mass. Abdominal CT scan demonstrates a 7 cm cystic mass involving the right ovary with small areas of calcification. The uterus is normal in size. The right fallopian tube and ovary have been removed surgically. Grossly, the mass on sectioning is filled with abundant hair and sebum. Microscopically, the mass has glandular spaces lined by columnar epithelium, squamous epithelium with hair follicles, cartilage, and dense connective tissue.
Diphtheritic	Dysentery, a thickened wall of the sigma and rectum, fibrinous membrane on the surface of mucous membrane. There is a deep necrosis of mucous membrane with infiltration of necrotic masses with fibrin
Regeneration - pathological processes	A patient has undergone an amputation of lower extremity. Some time later painful nodules appeared in a stump. Amputations neuromas were found
A large arterial (Botallo's) duct	Pulmonary trunk and aorta
Granulomas with Mikulicz's cells	nasal rhinoscleroma - heavy nasal breathing, thickened mucous membrane, a lot of mucus and nodular infiltrates without erosions in the nose
Carbenicillin disodium	Pseudomonas aeruginosa which is sensitive to penicillin antibiotics

Glandular-cystic hyperplasia of endometrium	dysfunctional metrorrhagia, was made a diagnostic abortion. Histologically in the scrape there were a lot of small stamped glandulars covered with multirowed epithelium. The lumens of some glandulars were cystically extended.
Ketotifen	prevention allergic seasonal coryza caused by the ambrosia blossoming
Alveocytes type II	Produce surfactant
M.latissimus dorsi	pronation and adduction functions upper extremity
Spironolacton	Antagonist aldosterone
Scleroma	Mikulich cells, storage of epithelioid cells, plasmocytes, lymphocytes, hyaline balls of the nose thickening.
Butamin	stimulates B-cells of Langergans' islets
Immunofluorescence	to diagnose influenza the expressdiagnosis, based on revealing of specific viral antigen in the examined material (nasopharyngial lavage), is carried out
Macrophages, monocytes	antigen-presentation to the immunocompetent cells
Na+	Movement of what ions through the membrane caused depolarisation
Sinu-atrial node is blocked	absence of P-wave in all the leads
2,0 L/min	Alveolar ventilation of the patient is 5 L/min, the breath frequency is 10 per/min, and the tidal volume is 700 ml. What is the patient's dead space ventilation?
Pyloric part	Stomach, very small amount of pariental cells or they were totally absent
Plasmocytes and lymphocytes	Increasing activity when live vaccine is injected into the human body
Posterior central gurus	to distinguish displacement of an object on the skin
Physiological poikilocytosis	18% (to 25%) of erythrocytes of the spherical, ballshaped, flat and thorn-like shape have been revealed
Acrihine - the structural analogue of vit B2	Inhibits synthesis FAD-dependent dehydrogenases
GIF	Stomach releases peptide that acts in paracrine fashion to inhibit gastrin release (when pH decreases to less than 3)
-OH	the group that is able to form ester bond
HNO3 - can't carry out this function	The conjugated protein necessarily contains special component as a nonprotein part.
Urea	the substance that is used for the incomplete denaturation of hemoglobin:
Anaphase	Moving of the daughter chromatids to the poles of the cell
Dihydrouracil	Choose the minor nitrogenous base
Ketone bodies	The patient with diabetes mellitus has acidosis
pH medium	factor can influence the charge of amino acid radicals in the active centre of enzyme
Myocardial infarction	Increase of LDH-1 and LDH-2 in a patient's blood plasma
Competitive inhibition	Succinate dehydrogenase catalyses the dehydrogenation of succinate. Malonic acid HOOC — CH2 — COOH is used to interrupt the action of this enzyme
Vitamin C	Hydroxylation of endogenous substrates and xenobiotics requires a donor of protons
Lactate	is utilized in gluconeogenesis after intensive physical trainings
Glycerol	the substance that is unable to be a secondary mediator
Melatonin	neurohormone
Detachment of blood culture	enteric fever, complaints of 3-day-long fever, general weakness, loss of appetite
Method of Ziel-Neelsen	selected for finding out the tubercle (Koch's) bacillus
Virus of hepatitis B	blood must be checked to find antigens of some disease.
Atrioventricular node	A person has steady HR not exceeding 40 bpm
Dry-heat sterilization	Petri dishes and pipettes
Atropine	A 50 farm worker has been brought to the emergency room. He was found confused in the orchard and since then has remained unconscious. Heart rate is 45 and his blood pressure is 80/40 mm Hg. He is sweating and salivating profusely.
Fluids and Dobutamine infusion	has undergone surgery for necrotic bowel, on postoperative day 5, she develops symptoms (fever, hypotension, tachycardia, declining urine output, and confusion) consistent with septic shock. What hemodynamic support?
Diazepam	His blood alcohol level on admission is 250 mg/dL. Hospital records show a prior hospitalization for alcohol related seizures
Salbutamol	drug to reverse the bronchoconstriction rapidly
Allopurinol	by inhibiting uric acid synthesis
(R)CFT- Reiter's complement fixation test	to reveal latent toxoplasmosis and chronic gonorrhoea
Adrenal glands	organ of the internal secretion is affected on aldosteronism
Appearance of adrenal insufficiency	taking glucocorticoids for a long time - developed the symptoms of disease aggravation, decreased blood pressure and weakness
Anulus lymphaticus cardiae	Regional lymphatic nodes of thoracic part of esophagus

Central paralysis	after hypertension stroke does not have voluntary movements in his right arm and leg with the increased muscle tone in these extremities
Uroporphyrinogen I	A patient, who suffers from congenital erythropoietic porphyria, has skin photosensitivity. The accumulation of what compound in the skin can cause it?
Epidemic typhus	A sick man with high temperature and a lot of tiny wounds on the body has been admitted to the hospital. Lice have been found in the folds of his clothing
Lice	may be a carrier of the pathogen of epidemic typhus
As a result of bug's bites	to India from South America sleeping-sickness. What was the way of invasion?
Decreased brain blood supply	is the direct cause of loss of consciousness at the heat stroke
Deficiency vitamine K	There is an inhibited coagulation in the patients with bile ducts obstruction, bleeding due to the low level of absorption of a vitamin.
HIV-virus	Cells that contain receptor T4 (T-helpers)
Preventive radioprotector	Inhibition of free radicals formation
Fat embolism	patient with opened fracture of the hip
Acute posthemorrhagic anemia	Patient 54 year-old, 5th day after surgical operation. Blood count: Erythrocytes $3,6 \cdot 10^{12}/l$ , Hemoglobin 95 g/l, Erythrocyte's hemoglobin content (color index) 0,78; Leukocytes $16 \cdot 10^9/l$ , Platelets $450 \cdot 10^9/l$ Blood picture: anisocytosis, poikilocytosis, reticulocytes-3,8%.
Polycythemia	disease is accompanied with decreased ESR (erythrocyte's sedimentation rate)
Decreased lungs elasticity - emphysema	is the reason of short breath development in this case
Intestinal disbiosis development	was treated with antibiotics for a long period. After treatment patient complains of frequent and watery stool, abdominal pain
Decreased hydrostatic pressure in glomerular capillaries	A 16 year-old patient got numerous traumas in automobile accident. Now the patient is having a shock. AP - 80/60 mm Hg. daily urine volume 60-80 ml. What pathogenic mechanism leads to kidneys function violation?
Cartilaginous tissue proliferation under growth hormone influence	is the main reason of such disproportional enlargement of different parts of the body
Medial group of femoral muscles	adduction of femur
Esophageal atresia	A mother of a newborn complains of her baby's constant belching with undigested milk. Which developmental anomaly is it an evidence of?
Descendent part	a major papilla of the duodenum and of bile secretion were
Nasal limen	is the boundary between the vestibule and nasal cavity proper?
Bartholin's glands	Located in the labia major
The cerebellum	deregulation of walking and balance, trembling of arms
The middle cerebral artery	on the lateral hemispheres surfaces
Bleeding of the facial artery	The mandible's edge has to be pressed to stop bleeding
The ileocolic artery	must be fixed to stop bleeding during the surgical operation ablating appendix
Polycystic kidney	kidneys are enlarged, surface is large-granular because of multiple cavities with smooth wall, which are filled with clear fluid
The neck of the thigh	acute pain, edema in the right hip joint; the movements in the joint are limited
Knee-cap	A 45-year-old man fell on the right knee and felt the acute pain in the joint. severe edema on the anterior surface of the knee joint. Crunching sounds are heard while moving the joint. Which bone is destroyed?
The head of the thigh	During the operation on the hip joint of a child her ligament was damaged which caused bleeding
Membrane injured	traumatized soft tissues between tibia and fibula
Meningococcal meningitis	soft arachnoid membrane of the upper parts of cerebral hemisphere is plethoric, of yellowish-green color, soaked with purulent and fibrous exudate, it looks like a cap.
Aponeurosis of biceps muscle	intravenous injection is done into median cubital vein because it is slightly movable due to fixation by the soft tissues. What does it fix in the cubital fossa?
The anticholinergic effect of procainamide would aggravate glaucoma	A 55-year-old patient with continuing ventricular arrhythmias was admitted to the hospital. The patient is taking timolol drops for glaucoma, daily insulin injections for diabetes mellitus, and an ACE inhibitor for hypertension. You have decided to use phenytoin instead of procainamide. What is the reason?
Pyrazinamide	antituberculosis drugs are known for causing high uric acid levels
Precipitation test	can identify food substance "homemade pork" sausages
Procaine	woman with red and itchy eczematoid dermatitis visits your office. She had a dental procedure one day earlier with administration of a local anesthetic

Adenosine receptors	The CNS stimulation produced by methylxanthines, such as caffeine, is most likely due to the antagonism of one of the following receptors
Ulnar nerve damage	elbow joint trauma with avulsion of medial epicondyle of humerus
External inhibition	When his groupmates begin talking the quality of the summarising worsens greatly
Absence of cell immunity to the tuberculosis	The test Mantu's result is negative
Previous hepatitis B	donor who had not donated the blood for a long time was examined with IFA method. Anti-HBs antibodies were revealed
Reciprocal inhibition	Inhibition of alpha-motoneuron of the extensor muscles was noticed after stimulation of omotoneuron of the flexor muscles during the experiment on the spinal column
Lactate	decreased buffer capacity of blood due to exhausting muscular work
Sickle-cell anemia	Substitution of the glutamic acid on valine was revealed while examining initial molecular structure
Mixed edema	Inflammation is characterised by increasing penetration of vessels of microcirculation stream, increasing of their fluid dynamic blood pressure. Increasing of the osmotic concentration and dispersi-ty of protein structures can be found in the intercellular fluid
Favus	Scraps of the mycelium of a fungus, spores, air bubbles and fat drops were discovered on microscopy of the patient's hair excluded
Fibrinoid swelling	mitral valve is deformed, thickened, does not totally close. Microscopically: centers of collagen fibers are eosinophilic, have positive fibrin reaction
Autolysis and decay in the cells	Autolysis and decay in the cells
Contrycal	Acute pancreatitis: vomiting, diarrhea, bradycardia, hypotention, weakness, dehydration of the organism
Tuberculoma	the focus of carnification 5 cm in diametre enclosed in a thin capsule was revealed in the second segment of the right lung . The focus consists of a tough dry friable tissue with a dim surface
Cheyne-Stockes respiration	There is evident progression of deep and frequent breath that turns into reduction to apnoea and the cycle repeats
Platelets disfunction	Punctata hemorrhage was found out in the patient after application of a tourniquet
Sinusoidal capillares	In the microspecimen of red bone marrow multiple capillares were revealed through the walls of which mature blood cells penetrated
Hyperacidity hypersecretion	Zollinger-Ellison syndrom because of rapid increase of gastrin level in the blood serum
Goblet cells	What of respiratory tract epithelial cells participate in mucousa moistening?
Columnar-shaped follicular cells	thyrotoxicosis symptoms of vegetoasthenic syndrome was revealed. What of the following would show the histological appearance of a thyroid gland being stimulated by thyroid-stimulating hormone (TSH)?
Uraemia	→ glomerulonephritis → fibrinogenous inflammation of serous and mucous capsules, dystrophic changes of parenchymatous organs, brain edema.
Oral cavity is connected with structural peculiarities of its mucous membrane	No muscularis mucosa, stratified squamous epithelium
Ectodermal epithelium of a tooth plate and mesenlime	What embrionic tissues are the sources of formation of permanent teeth tissues?
B cells damaged	The content of sugar increases
Color blindness, Hemophilia	X-linked recessive
Phenocopy	A woman who was sick with rubella during the pregnancy gave birth to a deaf child with hare lip and cleft palate. This congenital defect is an example of:
Mitochondria	Oval and round organelles with double wall. The outer membrane is smooth, the inner membrane folded into cristae contain enzyme ATPase synthetase
Ribosomes	Small (15-20 nm) spherical bodies, consisting of 2 unequal subunits
Teratogenesis	during the pregnancy has a child with multiple congenital defects (toxoplasmosis)
Phagocytosis	Neutrophile leukocytes engulfed and digested bacterial cells
Miocardial infarction	increase of activity of MB-forms of CPK (creatinephosphokinase) and LDH-1
Waved tetanus	Every next impulse is in a period of relaxation from the previus contraction
Ammonia	cerebrotoxic substances which accumulate in blood under hepar insufficiency
Neutrophils	Appendectomy, infiltration by what of the following cells is the most typical for the process occuring here
Thyroxine	suffers from tachycardia in rest condition, weight loss, excessive sweating, exophtalmos and irritability

Maintaining the oncotic blood pressure	The concentration of albumins in human blood sample is lower than normal
III - Vila - Xa	the right sequence of extrinsic pathway activation
Natrium chloride	She is diagnosed with bromizm
Amphibian	ventricles are not separated, a single arterial trunk originates from the right part
Interchangeable hemotransfusion has to be done	If strong oxidizers get into the bloodstream, a methemoglobin is formed. It is a compound, where iron (II) becomes iron (III). What has to be done to save the patient?
Enterobins vermicularis	Helminthes of white color and 5-10 mm long have been found on the underwear. of the scrape from the perianal folds achromic ova of the unsymmetrical form have been revealed
In the collecting duct	Wat is the most distant part of nephron where concentration of secondary urine takes place?
Alcoholic poisoning	The gluconeogenesis velocity in liver is decreased
The rejection of food	hypothalamic lateral nuclei stroke
Prolonged relaxation	on the influence of chemical substances in the muscles the reaction of Ca <sup>2+</sup> -pump is weakened
Rest potential of cardiomyocytes	what myocardium parameter is the most important?
Decreased rate and force of heart beat	The calcium canals of cardiomyocytes have been blocked
Violation of the automatism of a Kiss-Fleck node	After the trauma, the patient's right n.vagus was damaged
Liver cirrhosis	liver biopate has revealed an affected beamlobule structure, part of hepatocytes has signs of fat dystrophy, port-portal connective tissue septa with formation of pseudo-lobules, with periportal lympho-macrophage infiltrations
Lymphogranulomatous	Cell constitution of the node is polymorphous, lymphocytes, eosinophi-les, atypical cells of the large size with multiple-lobule nuclei (Beresovsky-Shternberg cells) and onucleus large size cells are observed.
Lymphopenia	A damage of the atomic power plant reactor resulted in the runout of radioelements. People in the superstandard radiation zone were radiated with approximately 250-300 r. and were immediately hospitalized. What changes in the blood count would be typical?
Hepatopancreatic ampulla	Obturbative jaundice developed because of malignant tumour of the big papillary of the duodenal.
Secondary alteration	Necrosis focus was observed in the area of hyperemia and skin edema in a few hours after burn.
Lobeline hydrochloride	H-cholinomimetics group was given to the patient for restoration of breathing after poisoning with carbon monoxide
Forced inspiration	In what phase does a person hold his breath if the pressure is - 25 cm H <sub>2</sub> O?
Increased contents of leukocytes	After food intake
70 bpm	Examination of a person revealed that minute volume of heart is 3500 mL, systolic volume is 50 mL. What is the frequency of cardiac contraction?
Decrease of oncotic pressure of blood plasma - cause	Glomerular filtration rate (GFR) increased by 20% due to prolonged starvation of the person
Primary follicle	follicle is determined where cubics shaped follicle epithelium cells are placed in 1-2 layers, and scarlet covering is seen around ovocyte
Prostate	A patient complains of frequent and difficult urination
Teres major damage	there are no extension, adduction or pronation functions of the arm
Hemiplegia	can not move her upper and lower right extremities after stroke. Muscle tone of these extremities and reflexes are increased. There are pathological reflexes.
Inversion	Part of the DNA chain turned about 180 degrees
Adrenal gland	Medulla consists of chromaffinocytes and venous sinusoids
Ephedrine	caused insomnia, headache, increased blood pressure
Dysentery	colon mucos membrane was thickened and covered with a fibrin film, isolated ulcers penetrated at different depth. mucous membrane necrosis, leukocytes infiltration with hemorrhages focuses
Hypercalcemia	hyperparathyroidizm. Ultrasonic examination revealed small stones in the kidneys
The ovarial ligament	ligament should be extracted by the surgeon to disconnect the ovary and the uterus?
Fibroadenoma	atypical tissue with disorder of parenchyma stroma proportion with domination of the last, gland structures of different size and shape, lined with singlelayer proliferative epithelium.
Venous sinus	Injury of what structure of the eyeball caused the disorder of flow-out from the anterior chamber?

Proteinuria	caused the edema
1,5 mmol/L concentration of sugar	Patient with diabetes mellitus experienced loss of consciousness and convulsions after an injection of insulin
Additive glycosaminoglycans	Diagnosis of rheumatoid arthritis
Polypus-ulcerative endocarditis	An autopsy revealed large (1-2 cm) brownish-red, easy crumbling formations covering ulcerative defects on the external surface of the aortic valve.
Escherichia	Red colonies spread in the large quantity in the Endo culture medium were revealed on bacteriological stool examination with the symptoms of acute bowel infection.
Inherited insufficiency of catalase	Wound wash 3% hydrogen peroxide be clean from the pus. Foam was not observed
Satellite-cells	reparative regeneration of the muscle fibers and restoration of the muscle function possible
Hypertrichosis	Y-linked chromosome
The effect of endotoxin agent	caused the complication
Diffuse lung capacity reduction	thickened alveolar membrane
To the left venous corner	Where should the catheter for evacuation of the lymph from the thoracic lymph duct be inserted?
Hyperpolarization	The penetration of the irritable cell membrane for potassium ions
Juxtaglomerular	afferent glomerular arteriole, which has giant cells under its endothelium, containing secretory granules
Sleep	energy inputs were less than the main exchange
Vasopressin	A man after 1,5 litre blood loss has suddenly reduced diuresis. The increased secretion of what hormone caused such diuresis alteration?
Vitamin K insufficiency	cause of hemorrhage of the child
Ketamine	To anaesthetize the manipulation related to burn surface treatment, a patient was intravenously injected a medication for short-acting narcosis. 1 minute later the patient being under anaesthesia had increased blood pressure, tachycardia, increased tone of skeletal muscles; reflexes remained. After awakening the patient had desorientation and visual hallucinations.
Urinary bladder damage	labour the symphysis pubis ruptured
Myocardial infarction	Heart revealed the necrotized section in myocardium of the left ventricle, which was separated from undamaged tissue by the zone of hyperemic vessels, small hemorrhages and leukocytic infiltration
Fibrosarcoma	an unpainfull formation without marked borders in the soft tissues of his thigh. On the tissue bi-optate the formation looks like flesh of fish and consists of immature fibroblastlike cells with multiple mitosis growing through the muscles.

Osmoreceptors of hypothalamus	thirsty
Synthesis of m-RNA	RNA-polymerase B(II) is blocked due to amanitine poisoning (poison of death-cup). It disturbs
Iduodenum removal	Decreases iduodenum removal
Bacillus anthracis	to remain in the ground for such a long time
Follicle-stimulating	Secretion is inhibited while taking oral contraceptives with sex hormones
Metronidasol	systemic amebiasis with involvement of intestines, liver, lungs
Unithiol	poisoned with mercury dichloride
Tonsilla pharyngea	excessive development of lymphoid tissue of pharyngeal mucous membrane
Start immunisation with rabies vaccine	who was bitten by the unknown dog
Reduction of haematocrite rate	woman was admitted to the admission-diagnostic department with uterine bleeding
Perception of high-frequency sounds	Main membrane of cochlea near the oval window
Hypovitaminosis vitamin C	often experiences acute respiratory infections with multiple punctate haemorrhages in the places of clothes friction
Tr. pyramidalis	neoplasm in the white substance of cerebral hemispheres with localization in the knee and frontal part of posterior crus of internal capsule. Fibres of what conductive tract of the brain will be disrupted
Atrioventricular node	HR not exceeding 40 bpm, pacemaker of this person's heart rhythm
Popliteal artery	tissue ischemia below the knee joint accompanied with intermittent claudication
Endonuclease	Restore the native DNA structure
Prozerin	Skin is hyperemic, dry, pupils are dilated, tachycardia. Poisoning with belladonna alkaloids was diagnosed on further examination
Croupous pneumonia	right lung is enlarged, solid, there are fibrin layers on the pleura. Lung tissue is light grey color on incision with muddy liqued exudates
Anticyclooxygenase	A patient with rheumatoid arthritis who had been treated with indometacin has got signs of gastropathy. What activity of the drug can this complication be connected with?
Superoxide dismutase	Inactivate superoxide anion radical
Nuclear receptors	Testosterone and it's analogs increase the mass of skeletal muscles that allows to use them for treatment of dystrophy.
With domination of carbohydrates	respiratory coefficient. It was determined that it was equal 1. What have the patient been keeping to?
Hydroxylation of proline	Increased fragility of vessels, enamel and dentine destruction resulting from scurvy are caused by disorder of collagen maturation. What stage of procollagen modification is disturbed under this avitaminosis?
Vena porta disfunction	enlarged liver, varicose veins in the stomach and esophagus.
Hypersecretion aldosterone	has reduced diuresis, hypernatremia, hypokalemia
Neuroparalytic arterial hyperemia	Upper neck node of sympathetic trunk was removed from the rabbit on experiment. Reddening and increased temperature of the skin of head is observed
ATP synthesis is totally blocked in a cell	value of membrane rest potential change? It will disappear
Tocopherol acetate	has marked radioprotective action caused by antioxidant activity
Fatty parenchymatous degeneration	died from chronic cardiovascular collapse revealed "tiger heart". Sideways of endocardium a yellowish-white banding can be seen; myocardium is dull, darkyellow
Visceral leishmaniasis	They had been working in one of Asian countries The child has sallow skin, loss of appetite, laxity, enlarged liver, spleen, peripheral lymph nodes.
Biochemical method	Healthy parents have got a fairhaired, blue-eyed girl. Irritability, anxiety, sleep and feeding disturbance developed in the first months of the infant's life. Neurological examination revealed developmental lag
Myogenic dilatation	Dystrophic alterations of heart are accompanied with dilation of heart cavities, decreased force of heart contractions, increased blood volume that remains during systole in the heart cavity, vein overflow.
Thyroidal hormones	Disconnect oxidation and oxidative phosphorylation
Lens	While shifting the gaze to the closely situated object the refracting power of eye's optical mediums will increase by 10 diopters
Degenerative left shift	A patient operated on complicated appendicitis has the following changes of blood count: erythrocytes - $4,0 \cdot 10^{12}/l$ , Hb - 120 g/l, color index - 0,9, leukocytes - $18 \cdot 10^9/l$ , basophils - 0, eosinophils - 0, myelocytes - 0, juvenile - 0, stab neutrophils - 20, segmentonuclear neutrophils - 53, lymphocytes - 21, monocytes - 5.
B-adrenoreceptors block	Stop spasm of smooth muscles of bronchi

Allopurinol	Competitive inhibitor xanthine oxidase
In the right main bronchus	A child has inhaled a button. Where is it likely to be?
Creatinine	serious damage of muscular tissue was admitted to the traumatological department. What biochemical urine index will be increased in this case?
T-lymphocytes	Donor skin transplantation was performed to a patient with extensive burns. On the 8-th day the graft became swollen and changed colour; on the 11-th day graft rejection started.
Cerebellum injured	Intention tremor, dysmetry, adiadochokinesis, dysarthria
Glucocorticoids	Immunosuppressive action
Meningococemia	multiple cutaneous hemorrhages (mostly into the skin of buttocks, lower extremities), serous and mucous membrane hemorrhages, cerebral hemorrhages. Adrenal glands show focal necrosis and massive hemorrhages; kidneys show necrotic nephrosis, suppurative arthritis, iridocyclitis, vasculitis
Scurvy	general weakness, subcutaneous hemorrhages, falling of teeth, gingival hemorrhages
Agglutinins	A large-scale reaction with paraptussis and pertussis diagnosticums was made in order to make serological diagnostics of the whooping cough. At the bottom of the test-tubes with diagnosticum of Bordetella paraptussis a granular sediment formed. What antibodies did this reaction reveal?
Stage of expiratory dyspnea on asphyxia	While having the dinner the child choked and aspirated the food. Meavy cough has started, skin and mucose are cyanotic, pulse is rapid, respiration is infrequent, expiration is prolonged
Excretory alkalosis	A pregnant woman had been having toxicosis with severe repeated vomiting for 24 hours. In the end of the day there appeared tetanic convulsions and fluid loss.
Arçus palmaris profundus	had a rupture of left palm muscle tendons and of the superficial blood vessels. After operation and removal of the most part of the necrotically changed muscle tissue the bloodstream was normalized. What vessels have helped to restore the bloodstream?
Syphilis	has enlarged inguinal lymphnodes, they are painless, thickened on palpation. In the area of genital mucous membrane there is a small-sized ulcer with thickened edges and "laquer"bottom of greyish colour.
Hyperplasia glandulocystica	Diagnostic scraping was performed to the woman with dysfunctional uterine bleeding. Multiple convoluted glands, ganglially dilated lumens of some glands were revealed histologically in the scrape. Name the type of general pathological process in endometry:
Cell cytotoxicity	Tuberculine - hyperemia, tissue infiltration developed on the place of injection in 24 hours
Antidiphtheric antitoxic serum	with suspected diphtheria
Anaerobic glycolysis	Laboratory examination revealed pyruvate kinase deficiency in erythrocytes. What process disturbance plays the main role in anemia development?
Exudative-catharral	often falls ill with respiratory diseases has eczematous appearances after consumption of some food products, tendency to prolonged course of inflammatory processes
Granular endoplasmatic reticulum	Synthesis peptide
Lambliia	piriform bodies, 4 pairs of filaments, two symmetrically located nuclei in the broadened part of body
Increased production of glucocorticoids	is the main pathogenetic mechanism of obesity
Hyperammonemia	Disorder of ammonia neutralization in ornithinic cycle
Phenilalanine	Albinos can't stand sun impact - they don't acquire sun-tan but get sunburns.
Pupil narrowing muscle, ciliary	Accommodation disorders, dilated pupil, lack of reaction for the light were revealed on examination
Timaline	for improvement of immune state
Proper nucleus of the anterior horn	Its neurons form motor endings in the skeletal muscles
Minor bronchs	a tubular organ has low epithelium, well developed muscular tunic, glands and cartilage are absent
Hiatus saphenus	inguinal hernia through penetrate into the skin?
Catecholamines hyperproduction	intensive heartbeats, sweating, nausea, visual impairment, arm tremor, hypertension. pheochromocytoma
Decreased glomerular filtration	with acute cardiac insufficiency has decreased volume of daily urine - oliguria. What is the mechanism of this phenomenon?
Reticular formation damage	old man felt asleep after cerebral hemorrhage for a long time
Rifampicin	inhibits transcription of RNA into DNA in mycobacteria



Intermittent temperature profile	A patient experienced a sudden temperature rise up to 39°C. After 6 hours the temperature normalized. On the 2 <sup>nd</sup> day the attack recurred: in the period of paroxysm the temperature reached 41°C, afebrile period began after 8 hours
Glutamic	takes part in removal of ammonia from cerebral tissue
Ascariasis	Microscopic examination of the sputum of a patient with pneumonia occasionally revealed some larvae. Eosinophiles were detected on blood examination.
Spatium subarachnoideum	A spinal cord puncture was made. What anatomic formation was punctured?
Hypospadias	revealed a cleft of urethra that opens on the inferior surface of his penis
Genetic insufficiency of glucose 6-phosphate dehydrogenase	was prescribed primaquine. On the 3 <sup>rd</sup> day from the begin of treatment there appeared stomach and heart pains, dyspepsia, general cyanosis, hemoglobinuria. What caused side effects of the preparation?
Catarrhal inflammation	fell seriously ill, body temperature rose up to 38.5°C, there is cough, rhinitis, lacrimation, nasal discharges
Autosomal recessive	A genetics specialist analyzed the genealogy of a family and found that both males and females may have the illness, not across all the generations, and that healthy parents may have ill children.
Parametrium	Inflammatory process of modified subserous layer around cervix of the uterus
Development of female fetus	result of amniocentesis (puncture of amniotic sac) revealed cells the nuclei of which contain sex chromatin (Barr's body).
Dysentery	revealed multiple brown-and-green layers and hemorrhages on the mucous membrane of rectum and sigmoid colon; slime and some blood in colon lumen; histologically - fibrinous colitis. In course of bacteriological analysis of colon contents S.Sonne
Reagin reaction	Histologic lung examination revealed: lumen of bronchioles and small bronches contain a lot of mucus with some eosinophils, there is sclerosis of alveolar septums, dilatation of alveole lumen.
Carnitine	Transporting of fatty acids to mitochondria
Acetaldehyde	Disulfiram - to prevent alcoholism. It inhibits aldehyde dehydrogenase. Increased level of what metabolite causes aversion to alcohol?
Parathormone	increased resorption of calcium ions and decreased resorption of phosphate ions
Sinoatrial node	automatically generates excitation impulses with frequency 60 times per minute
Left ventricle	the pressure changed during one heart cycle from 0 to 120 mm Hg
By surfactant introduction	Part of alveoles of a preterm infant didn't spread because of enhanced elastic recoil of lungs
Daltonism	Recessive, sex-linked
Respiratory constitutional type	slender figure, big skull, highly developed frontal region of face, short extremities
Atopy	bronchial asthma, revealed mucus accumulation in bronchial lumen, a lot of fat cells (lipocytes) in the wall of bronches, many of them are in the state of degranulation, there are also a lot of eosinophils
Metabolic acidosis	Diabetes mellitus causes ketosis as a result of activated oxidation of fatty acids
Recessive epistaxis	A woman with 0 (I) blood group has born a child with AB blood group. This woman's husband has A blood group
Insufficiency of exocrine function of pancreas	Hydrolysis disturbed - Proteins, fats, carbohydrates
Paget's disease	39-year-old woman has maturation in the region of mamilla, a small ulcer with inflammatory hyperemia and cutaneous edema. Histologic examination of tissue sampling from this area revealed in the malpighian layer of thickened epidermis atypical cells with light and optically empty cytoplasm, with no intracellular bridges. Such cells were also found in the orifice of big mammary gland ducts.

Pseudocholinesterase	Dithylinum, Which enzyme deficit prolongs the action of muscle relaxant?
Glycated hemoglobin	The level of what blood plasma protein allows to estimate the glycemia rate retrospectively (4-8 weeks before examination)?
Moist gangrene	diabetes mellitus, foot thumb is black, foot tissues are edematous, there are foci of epidermis desquamation, stinking discharges
Antegastric bursa	with a stab wound of the anterior stomach wall is in surgical care. What formation of abdominal cavity did the stomach contents get into?
Reduced synthesis of albumins	a cause of edemata development
Empyema	revealed 900 ml of turbid greenish-yellow liquid in the right pleural cavity
Translation disturbance	revealed reduced contents of magnesium ions that are necessary for attachment of ribosomes to the granular endoplasmatic reticulum
Cellular breakdown	increase of alanine aminotransferase and aspartate aminotransferase level
Physical exercise	Power inputs of a boy increased from 500 to 2000 kj pro hour
In the heart muscle (initial stage of myocardium infarction)	high activity of LDH1, aspartate aminotransferase, creatine phosphokinase
Anopheles	Range of malaria spread falls into the areal of the following mosquitoes:
Gene mutation	sickle-shaped cell anemia, in which erythrocytes have shape of a sickle as a result of substitution of glutamin by valine in the hemoglobin molecule
Nutmeg liver	cardiovascular insufficiency. Postinfarction cardiosclerosis, myocardium hypertrophy and dilatation of its cavities, especially of its right ventricle. Liver is enlarged, its surface is smooth, incision revealed that it was plethoric, with dark-red specks against the background of brownish tissue. Histologically: plethora of central parts of lobules; perithelial parts around portal tracts contain hepatocytes in a state of adipose degeneration
Holotetanus	type of muscle contraction will arise, if every subsequent impulse comes in the period of shortening of the previous single muscle contraction
Glutamic acid	takes the most active part in ammonia detoxication in brain tissues
Leptospira interrogans	jaundice, muscle aching, chill, nose bleedings, performed dark-field microscopy of the patient's blood drop
Respiration will stay unchanged	has a transverse disruption of spinal cord below the IV thoracic segment
Heat radiation (emit heat)	A lightly dressed man is standing in a room, air temperature is +14°C, windows and doors are closed
Rheumatoid arthritis	a structure alteration of a connective tissue protein collagen
Heart rate fall	a peripheral segment of vagus nerve on a dog's neck was being stimulated
Hyperglycemic coma	Objectively: grave condition, unconscious, adynamy. Cutaneous surfaces are dry, eyes are sunken, face is cyanotic. There is tachycardia and smell of acetone from the mouth. Analysis results: blood glucose -20,1 micromole/l (standard is 3,3-5,5 micromole/l), urine glucose - 3,5% (standard is - 0).
Paraproteinemia	myelomatosis (plasmocytoma).
Metabolic imbalance Tyrosine	Nappies of a newborn have dark spots that witness of formation of homogentisic acid.
Neutrophilic leukocytosis	Changes in leukocytes quantity can be expected 10 hours after irradiation
Obstructive alveolar ventilation disturbance	bronchial asthma has an acute attack: evident expiratory dyspnea, skin pallor
Thiamine deficite	polyneuritis (beriberi).
Hepatitis virus E	connected with water factor
Parietal exocrinocytes	Produce HCl
To perform BCG vaccination	Scheduled Mantoux test revealed that the boy had negative reaction
Obturation of biliary tracts	of frequent diarrheas, especially after consumption of fattening food, and of body weight loss. Laboratory examination revealed steatorrhea; hypocholic feces
Metronidazole	lambliosis
Hyperventilation	A group of mountain climbers went through the blood analysis at the height of 3000 m. It revealed decrease of HCO <sub>3</sub> to 15 micromole/l (standard is 22-26 micromole/l).
Prednisolone	can result in osteoporosis, erosion of stomach mucous membrane, hypokaliemia, retention of sodium and water, reduced content of corticotropin in blood
Low (absent) activity of glycogene phosphorylase in liver	Child is languid, apathetic. Liver is enlarged and liver biopsy revealed a significant excess of glycogene. Glucose concentration in the blood stream is below normal
Noradrenaline	Activation of $\alpha$ -adrenoreceptors
Palmitic acid	has been given excessive amount of carbon-labeled glucose
Candida	some whitish spots looking like coagulated milk on the mucous membrane of his cheeks and tongue. gram-positive oval yeast-like cells.

Estimation of toxigenic properties	What study should be conducted in order to draw a conclusion that this is a pathogenic diphtheria bacillus?
Bile acids lack of	After intake of rich food a patient feels nausea and sluggishness; with time there appeared signs of steatorrhea
Lack of linoleic acid, vitamins A, D, E, K	hadn't been consuming fats
Interleukin-I	high body temperature
Hippuric acid	can characterize the state of antitoxic function of liver
Disturbance of microcirculation	Inflammation of a patient's eye was accompanied by accumulation of turbid liquid with high protein at the bottom of anterior chamber that was called hypopyon
Salmonella	food poisoning - gramnegative movable bacillus that grows in the Endo's medium in form of colourless colonies.
Isoniazid	A patient was diagnosed with active focal pulmonary tuberculosis
HIV infection	Examination of a young man in the AIDS centre produced a positive result of immune-enzyme assay with HIV antigens. Patient's complaints about state of his health were absent
Intensified secretion of testosterone	Parents of a 10 y.o. boy consulted a doctor about extension of hair-covering, growth of beard and moustache, low voice
Hyperkaliemia	Cardiac arrest in diastole
Diffuse cardiosclerosis	atherosclerotic calcific plaques that close vessel lumen by 1/3. The muscle has multiple whitish layers of connective tissue
Being a potential carrier of typhoid bacilli	Reaction of passive hemagglutination conducted with erythrocytic typhoid Vi-diagnosticum helped to reveal some antibodies in the dilution of the patient's serum at a ratio of 1:80 that exceeds the diagnostic titer.
Thymus	Restoration of normal hemogram is possible due to the functioning
Long peroneal	cut wound of his right foot sole, has limited elevation of the lateral foot edge. In course of wound management the injury of a muscle tendon was revealed
Hydrodynamic edema	suffers from heart failure has enlarged liver, edemata of lower extremities, ascites
Caryotype analyze:	Klinefelter's syndrome
Limitation of respiratory surface of lungs	revealed pulmonary fibrosis accompanied by disturbance of alveolar ventilation
Functional residual capacity	took a quiet expiration-name an air volume that is meanwhile contained in his lungs
Ventricles	didn't generate excitation impulses automatically
Vestibular receptors stimulation	A man who went for a ride on a roundabout had amplification of heart rate, sweating and nausea
Precipitation gel reaction	In order to estimate toxigenity of diphtheria agents obtained from patients the cultures were inoculated on Petri dish with nutrient agar on either side of a filter paper strip that was put into the centre and moistened with antidiphtheric antitoxic serum. After incubation of inoculations in agar the strip-like areas of medium turbidity were found between-separate cultures and the strip of filter paper.
Quiet inspiration	A man's intrapleural pressure is being measured. In what phase did the man hold his breath, if his pressure is 7,5 cm Hg?
Atrioventricular block	heart rate is 50/min, PQ is extended, QRS is unchanged, P wave quantity exceeds quantity of QRS complexes
Quadriceps muscle of thigh	has disturbed flexion of thigh as well as disturbed crus extension in the knee joint
Trisomy of the 13th chromosome	Patau's syndrome
Allergic reaction IV	A woman has been applying a new cosmetic preparation for a week that resulted in eye-lid inflammation accompanied by hyperemia, infiltration and painfulness
Morphine	extremely myotic pupils, sleepiness, infrequent Chain-Stoke's respiration, urinary retention, slowing-down of heart rate, enhancement of spinal reflexes
Disjunction, oxydation and phosphori-lation	mechanism of thyroid hormones action underlies the development of hypoxia
Loratadine	H1 -histamine blocker
Vertebra VI	to press the carotid artery to the tubercle of a cervical vertebra
M.tibialis anterior	has intense painfulness and edema of the anterior crus surface; dorsal flexion of foot is hindered
Mantoux test	tuberculosis
Reserpine	hypotensive medications, but the patient started complaining of flaccidity, sleepiness, indifference.
Chorioepithelioma	In the uterine cavity a dark-red tissue with multiple cavities that resembled of "sponge". revealed some atypic light epithelial Langhans cells and giant cells of cyneytotrophoblast in blood lacunas.
Thyreotoxicosis	Tissue hypoxia

Trichomonas vaginalis	big monocellular, pear-shaped organisms with the pointed spike at the posterior end of body, big nucleus and undulating membrane
Ventricular extrasystoles	has extrasystole. ECG shows no P wave, QRS complex is deformed, there is a full compensatory pause
Lingual artery	has an intense bleeding as a result of affection of dorsal lingual artery by the tumour. What vessel should be ligated to stop bleeding?
Age involution	Histological examination of a 40 y.o. man's thymus revealed decreased share of parenchymatous gland elements, increased share of adipose and loose connective tissue, its enrichment with thymus bodies
Inhibited regeneration macrophags	In course of an experiment a big number of stem cells of red bone marrow was in some way destructed.
Carboxylation of glutamin acid	post-translational changes of blood coagulation factors that will be activated by vicasol:
Spinothalamic	pain and temperature sensitivity
Potassium permanganate	antiseptic action is provided by free oxygen
Through the auditory tube	flu, there appeared complaints about ear ache. A doctor revealed hearing impairment and inflammation of the middle ear. How did the infection penetrate into the middle ear?
Digoxin	chronic cardiac insufficiency and tachyarrhythmia
Ulcerophlegmonous	removed appendix revealed an edema, diffuse neutrophilic infiltration of appendix wall along with necrosis and defect of mucous membrane with affection of its muscle plate
Tubal pregnancy	Uterine tube that was enlarged and a part of an ovary with a big cyst. Histological examination of a tube wall revealed decidual cells, chorion villi
Hyperammoniemia	Disturbed neutralization of ammonia in liver
Aldosteron low secretion	hyperkaliemia and hyponatremia
Metaphyseal plate	is formed between epiphyseal and diaphyseal ossification centres that provides further lengthwise growth of bones.
Deep femoral artery	After resection of the middle third of femoral artery obliterated by a thromb the lower extremity is supplied with blood due to the surgical bypass. Name an artery that plays the main role in reestablishment of blood flow
Femoral nerve	knee joint doesn't extend, there is no knee-jerk reflex
Passive hemagglutination	For the purpose of retrospective diagnostics of recent bacterial dysentery it was decided to perform serological examination of blood serum in order to determine antibody titer towards Shiga bacilli
Reduced synthesis of erythropoietins	anephric patient revealed anemia symptoms
Posterior wall of the right and left ventricles	the posterior interventricular branch of the right coronary artery
Cellular cytotoxicity	tuberculin test (Mantoux test)
Of bile acids deficite	has a disturbed absorbtion of fat hydrolysates
Thyroxin	adaptive thermoregulatory hormone
Acute renal insufficiency	calomel intoxication. Two days later the daily diuresis was 620 ml. A patient experienced headache, vomiting, convulsions, dyspnea, moist rales in lungs.
Nongaseous alkalosis	newborn child with pylorostenosis has often repeating vomiting accompanied by apathy, weakness, hypertonicity, sometimes convulsions
GABA	inhibitory transmitter in CNS
Histamine	biogenic amin is formed that has powerful vasodilatating effect
Prostaglandins	Utilization of arachidonic acid via cyclooxygenase pathway results in formation
Quadritubercular bodies	orientation reflexes
Epispadia	that urethra is split on top and urine runs out of this opening
Opisthorchosis	pain in the area of his liver. Duodenal intubation revealed yellowish, oval, narrowed at the poles eggs with an operculum at the end. Size of these eggs is the smallest among all helminth eggs.
Fibrinous dysenteric collitis:	mucous membrane of his large intestine is hyperemic, edematic, its surface was covered with grey-and-green coats
Amplification of leukopoiesis	after appendectomy
Activation of sympathoadrenal system	have caused the rise of arterial pressure
From the cells to the intercellular liquid	A hypertensive glucose solution was introduced to a patient. It will intensify water movement
Pyracetam introduction	Intravenous

Scraping from perianal folds	general weakness, loss of appetite, a troubled sleep, itching in the perianal area. enterobiasis
Hypercoagulation	stage of DIC syndrome can be suspected if it is known that the patient's blood coagulates in less than 3 minutes
Lisosomes	stained blood smear of a mouse with bacteria phagocytosed by leukocytes
Chronic posthemorrhagic anemia	having continuous cyclic uterine hemorrhages for a year, weakness, dizziness. Examination revealed skin pallor. Hemogram: Hb- 70 g/l, erythrocytes - $3,2 \cdot 10^{12}/l$ , color index - 0,6, leukocytes - $6,0 \cdot 10^9/l$ , reticulocytes - 1%; erythrocyte hypochromia
Middle part of helix	perception of medium-frequency sounds
Decarboxylation	Serotonin is formed of tryptophane aminoacid
Undifferentiated leucosis	complains of weakness, temperature rise up to 38 — 40°C. Objectively: liver and spleen are enlarged. Hemogram: Hb- 100 g/l, erythrocytes - $2,9 \cdot 10^{12}/l$ , leukocytes - $4,4 \cdot 10^9/l$ , thrombocytes - $48 \cdot 10^9/l$ , segmentonuclear neutrophils - 17%, lymphocytes - 15%, blast cells - 68%. All cytochemical reactions are negative
Isadrin	less frequent attacks of bronchial asthma, but stenocardia attacks became more frequent
Material cumulation	digoxin, appeared symptoms of drug overdose.
Galactosemia	high content of galactose, glucose concentration is low. There are such presentations as cataract, mental deficiency, adipose degeneration of liver
Pyridoxal phosphate	Transamination and decarboxylation of aminoacids
Bronchopulmonary segment	part of a lung that was ventilated by a tertiary bronchus accompanied by branches of pulmonary artery and other vessels
Decrease of T-lymphocytes rate	loss of cells that form rosettes with erythrocytes of a ram
Cushing's syndrome - steroid diabetes	Gluconeogenesis activated
Vein of non-muscular type	a vessel the wall of which consists of endothelium, basal membrane and loose connective tissue
Disturbance of pumping ability of heart	cardiogenic shock - the under-mentioned pathogenetic mechanisms plays the main part in shock development
Renewal of filtration in nephrons	Diuresis intensification at the beginning of polyuria stage of acute renal insufficiency is caused by
Increase of ESR	Long-term starvation cure of a patient resulted in diminished ratio of albumines and globulines in plasma.
Immediate hypersensitivity	This injection resulted in the development of a fibrinous inflammation with alteration of vessel walls, basal substance and fibrous structures of connective tissue in form of mucoid and fibrinoid swelling and necrosis
Amicacin sulfate	severe postoperative pseudomonadous infection
Early rickets	A 9 m.o. child has delayed dentition, it is also out of order. Upper jaw configuration is horizontal ("high" palate); microscopically - irregular mineralization of tooth enamel, wrinkled enamel prisms, some of them are vacuolized. Predentin zone is extended; there are solitary denticles.
Pterygopalatine fossa	To the orbit
Subacute glomerulonephritis	in the glomerules proliferation of capsule nephrothelium as well as of podocytes and phagocytes accompanied by formation of "crescents", capillary loop necrosis, fibrinous thrombs in their lumens; sclerosis and hyalinosis of glomerules, atrophy of tubules and fibrosis of renal stroma.
Trichina	Two days after consumption of smoked pork a patient got face and eyelid edemata, gastrointestinal disturbances, abrupt temperature rise, muscle pain, eosinophilia.
Nitroglycerin	felt persistent pain behind his breast bone. After sublingual intake of an antianginal drug the pain behind the breast bone disappeared, but the patient complained of headache and dizziness
Dithylinum	After intravenous introduction of muscle relaxant there arose short fibrillar contractions of the patient's facial muscles
Ischemic stroke	revealed in the right temporal part of brain a big focus of softened grey matter that was semiliquid and light grey. Arteries of cerebral tela contain multiple whitish-yellow thickenings of intima that abruptly narrow the lumen.
Rod receptor cell	the cells that have the above-mentioned photoreceptor function
V.emissariae mastoideae	has cut an abscess off in the area of mammiform process during shaving. Two days later he was admitted to the hospital with inflammation of arachnoid membranes. How did the infection penetrate into the cavity of skull?
Leidig cells	produce male sex hormone testosterone

Toxoplasms	Examination of the stained specimen (Romanovsky's stain) revealed some crescent bodies with pointed end, blue cytoplasm and red nucleus
Phlegmatic	strong, balanced, inert type of higher nervous activity according to Pavlov
Skin and proprioceptive	posterior central gyrus
Glibenclamid	revealed hyperglycemia and glucosuria. administered a medication for internal use.
Relative hyperproteinemia	had been working hard under conditions of elevated temperature
Flaccid peripheral	has no tendon and cutaneous reflexes, muscle tone is decreased, but muscles of the affected extremity maintain their ability to react with excitation to the direct action of continuous current
Metoclopramide	A liquidator of a breakdown at a nuclear power plant who was irradiated complained about vomiting that occurs all of a
Pseudomonas aeruginosa	Gramnegative bacilli. Inoculation resulted in growth of colonies of mucous nature that formed green soluble pigment
Basalioma	tumorous cells of round and oval form with thin ring of basophilic cytoplasm that resemble of cells of basal epidermal layer
Superficial inguinal lymph nodes	A patient has pain, edema and reddening of his skin in the anterosuperior area of his thigh and his foot's thumb.
Bacteriological	Gaseous gangrene
Tay-Sachs disease	cell culture got from a patient with lysosomal pathology revealed accumulation of great quantity of lipids in the lysosomes
N.abducens	got a craniocerebral trauma that resulted in right-side convergent strabismus
Ligamentum hepatogastricum	In case of a penetrating wound of the anterior abdominal wall the wound tract went above the lesser curvature of stomach
Arterial neuroparalytic hyperemia	Nerve that innervates the right ear was cut + its right superior cervical ganglion was removed. Immediately after operation the temperature of ear skin was measured.
Influenza, severe form	with acute tracheitis and bronchitis accompanied by bronchial pneumonia. On the 10th day the patient died from cardiopulmonary insufficiency. Autopsy revealed fibrinous hemorrhagic laryngotracheobronchitis; lungs were enlarged, their incision revealed the "coal-miner's" effect caused by interlacing of sections of bronchial pneumonia, hemorrhages into the pulmonary parenchyma, acute abscesses and atelectases.
Serous diffuse myocarditis	died from influenza revealed that his heart was slightly enlarged, pastous, myocardium was dull and had specks. Microscopical examination of myocardium revealed signs of parenchymatous adipose and hydropic dystrophy; stroma was edematous with poor macrophagal and lymphocytic infiltration, vessels were plethoric; perivascular analysis revealed petechial hemorrhages.
Panangin	to correct potassium exchange
Scarlet fever	Nasolabial triangle is pale. Examination of oropharyngeal surface revealed localized bright-red hyperemia; tonsils are swollen, soft, lacunas contain pus, tongue is crimson.
Cells of sebaceous glands	Seborrhea - of dryness of head skin, itching, fragility and loss of hair
Phagotyping	examination shall be conducted to find out the source of this causative agent among the department personnel
Proprioceptors of active muscles	Short-term physical activity resulted in reflex amplification of heart rate and raise of systemic arterial pressure
Partial tetanus	type of muscle contraction will arise, if every subsequent impulse comes in the period of relaxation of single muscle contraction

Phenobarbital	Induction of enzymes of microsomal oxidation in liver caused by phenobarbital
Isoenzyme	Catalyzation of the same reaction
Processing	translation is normally preceded by
Tachyphylaxis	At first the effect was positive but on the second day stenocardia attacks resumed
Posterior	Inflammation of the tympanic cavity (purulent otitis media) was complicated by inflammation of mammillary process sockets. What wall of tympanic cavity did the pus penetrate into the sockets through?
Lysozyme	a thermostable protein occurring in tears, saliva, mother's milk, a factor of natural resistance of an organism
Activation Sympathoadrenal system	An aged man had raise of arterial pressure under a stress
5 l/m	Blood minute volume of a 30 year old woman at rest is 5 l/m. What blood volume is pumped through the pulmonary vessels per minute?
Fall of oncotic pressure of blood plasma	As a result of long-term starvation
Unconjugated bilirubin in the blood serum	has yellow skin colour, dark urine, dark-yellow feces
Nicotinamide	symmetric dermatitis of open skin areas, meat, milk and eggs
Strengthened concentration of uric acid	intensified disintegration adenosine monophosphate
C-reactive protein	of diagnostic rheumatism
R — R interval	showed heart hurry
Antidiphtheritic antitoxic serum	Revealed bacilli with volutine granules
Vitamin D	wil stimulate Ca absorption through the bowels wall
Operation on account of extrauterine (tubal) pregnancy	should ligate the branches Uterine and ovarian arteries
Shadow of thymus gland on X-ray	The above-mentioned condition is a normal variant for this age
Staphylococcus aureus	in the blood agar roundish yellow middle-sized colonies surrounded by haemolysis zone. Smears from the colonies contain irregularshaped clusters of gram-positive cocci. The culture is oxidase- and catalasepositive, ferments mannitol and synthesizes plasmocoagulase
Uric acid	renal calculi
Candidosis	Gram-stained scrape from patient's tongue revealed oval, round, elongated chains of dark-violet gemmating cells
Streptococci	into blood agar caused growth of small transparent round colonies surrounded by hemolysis zone, revealed gram-positive cocci in form of long chains
Microcytes	2 years ago a patient underwent resection of pyloric part of stomach. He complains ofweakness, periodical dark shadows beneath his eyes, dyspnea. In blood: Hb - 70 g/l, erythrocytes - $3,0 \cdot 10^{12}/l$ , colour index - 0,7 What changes of erythrocytes?
Anthraxis	working as a miner for many years and died from cardiopulmonary decompensation revealed that his lungs were airless, sclerosed, their apex had emphysematous changes, the lung surface was greyish-black, the incised lung tissue was coal-black
Tuberculous bacillus	Acid resistance
Diffusive cardiosclerosis	Examination of coronary arteries revealed atherosclerotic calcified plaques closing vessel lumen by 1/3. The muscle has multiple whitish layers of connective tissue
DNA on the matrix of virus mRNA	HIV. Virus enzyme -reverse transcriptase (EVA-dependent DNA polymerase)
Superficial finger flexor	cut wound of palmar surface of left hand; middle phalanxes of II-V fingers don't bend
Lepra	f a skin tissue sampling revealed granulomas consisting of macrophagal nodules with lymphocytes and plasmatic cells. There are also some big macrophages with fatty vacuoles containing causative agents of a disease packed up in form of spheres (Virchow's cells)
Effect potentiating	taking clonidine for essential hypertension treatment was using alcohol that caused intense inhibition of central nervous system. What may it be connected with?
To repeat the examination with serum taken 10 days later	Hemagglutination-inhibition reaction helped to reveal antibodies to the causative agent of tick-borne encephalitis in the dilution 1:20 which is not diagnostic
Actinomycosis	a reddening and an edema of skin in the area of his neck that later developed into a small abscess. The incised focus is dense, yellowish-green. The pus contains white granules - drusen of a fungus, plasmatic and xanthoma cells, macrophages.
Mutagenic effect	the risk of giving birth to a child with genetic defects
Chroniosepsis	with a wound of his limb that had been suppurating for a long time died from intoxication. Autopsy revealed extreme emaciation, dehydration, brown atrophy of liver, myocardium, spleen and cross-striated muscles as well as renal amyloidosis
Calcium accumulated	local contractures
Androgen hypersecretion	adrenogenital syndrome (pseudohermaphroditism)

Heat conduction	way of heat emission in water is much more efficient
Neurogenetic essential hypertension	At the end of working day he usually hears ear noise, feels slight indisposition that passes after some rest
Metaphase	maximally spirialized chromosomes of human karyotype the process of cell division
Ileum	Meckel's diverticulum
Hypospadias	an urethral hiatus that opens on the underside of his penis
Aldosterone reduction	decreased reabsorption of sodium ions in the renal tubules
Anterior tubercles of quadrigeminal plate	Orientative reflexes in response to strong photic stimuli
Pyruvate	dissolved metabolites of glucose oxidation
Doxacycline - teratogenic effect	incisor destruction, yellow enamel, brown rim around the dental cervix
After stress - stenocardia	High catecholamine concentration in blood
Reinfection	recovered from Sonne dysentery and was once more infected with the same causative agent.
B12-folate deficient	In the past he underwent resection of forestomach. In blood: Hb- 80 g/l; erythrocytes - $2,0 \cdot 10^{12}/l$ ; colour index - 1,2, leukocytes - $3,5 \cdot 10^9/l$ .
Superior nasal turbinate	olfactory receptors
Brainstem	disturbed cerebral circulation has problems with deglutition
Thiamine pyrophosphate	oxidative decarboxylation of $\alpha$ -ketoglutaric acid
Incomplete starvation	A chemical burn caused esophagus stenosis. Difficulty of ingestion led to the abrupt loss of weight. In blood: $3,0 \cdot 10^{12}/l$ , Hb - 106 g/l, crude protein - 57 g/l.
Nephrotic syndrome	has face edemata. revealed proteinuria (5,87 g/l), hypoproteinemia, dysproteinemia, hyperlipidemia.
Spotted fever	died from cardiac insufficiency has an eruption in form of spots and specks. There are also bedsores in the area of sacrum and spinous vertebral processes/ CNS, skin, adrenal glands revealed in the vessels of microcirculatory bed and in small arteries destructive-proliferative endothrombovasculitis with Popov's granulomas; interstitial myocarditis
Acute hematogenous osteomyelitis	died from the sepsis in his femoral bone revealed phlegmonous inflammation that affected the marrow, haversian canals and periosteum. Under the periosteum there are multiple abscesses, adjoining soft tissues of thigh also have signs of phlegmonous inflammation
Ventilative dysregulatory respiratory failure	inhibition of respiratory centre
Common bile duct	Ductus hepaticus communis et ductus cysticus
Filtration will be increased, reabsorption - decreased	A patient is 44 years old. Laboratory examination of his blood revealed that content of proteins in plasma was 40 g/l.
L III-L IV	site is the lumbal puncture safe
Axillary nerve	suffering from osteochondrosis felt acute pain in humeral articulation that became stronger when she abducted shoulder
Triceps muscle of arm	posterior surface of shoulder
Demodicosis	porrect vermiform arthropoda 0,2-0,5 mm large with four pairs of short extremities in the front part of their bodies
Traumatization of peripheral nerve	neurodystrophy pathogenesis
Basal cell carcinoma	a plaque-like formation on his neck. clusters of round and oval tumour cells with a narrow border of basophilic cytoplasm resembling of cells of basal epidermal layer
Heparin	prevents thrombosis
30%	Packed cell volume of a man was 40% before the trauma. What packed cell volume will be observed 24 hours after blood loss of 750 ml?
Redistribution of leukocytes in the organism	Two hours after an exam a student had a blood count done and it was revealed that he had leukocytosis without significant leukogram modifications
Exocytosis	Golgi complex exports substances from a cell due to the fusion of the membrane saccule with the cell membrane. The saccule contents flows out
Karakurt spider	it is 2 cm long, has roundish black abdomen with two rows of red spots on its dorsal side; four pairs of jointed limbs are covered with small black hairs
Niacin deficiency	revealed inherited disturbance of neutral amino acid transporting in the bowels
Kreatine in urine	diagnosis "progressing muscular dystrophy"
Absolute hypoalbuminemia	being treated for viral hepatitis type B got symptoms of hepatic insufficiency
Pseudounipolar	sensitive neural ganglion consists of roundish neurocytes with one extension that divides into axon and dendrite at some distance from the perikaryon
Rachitis	1,25 [OH]-dihydroxycholecalciferol deficiency
Derma	process of dorsal mesoderm segmentation and somite formation



Transcription	ENA-polymerase
Cyprofloxacin 7 year old	drug of fluoroquinolone group is CONTRAINDICATED at this age
Coxsackie A	culture of monkey cells (Vero) "enterovirus infection"
Fibrosing alveolitis	Revealed diffused pulmonary lesion together with interstitial edema, infiltration of tissue by lymphocytes, macrophages, plasmocytes; pulmonary fibrosis, panacinar emphysema
M-cholinoreceptors should be blocked	an attack of bronchospasm
Enzyme inhibition	processes are stimulated by proteinic damage mechanisms
DiGeorge immunodeficient syndrome	revealed aorta defects and reduced number of T-lymphocytes in blood.
Drop of arterial pressure (main pathogenetic factor)	driver who got a trauma in a road accident and is shocked has reduction of daily urinary output down to 300 ml
Bowels	vasoconstriction will be maximal in the following organ
Inherited, dominant	12 year old boy with developmental lag revealed achondroplasia: disproportional constitution with evident shortening of upper and lower limbs as a result of growth disorder of epiphyseal cartilages of long tubal bones
Modified receptors of cell membranes	What substances are antigens in II type allergic reactions?
A.axillaris	has to define an arterial vessel surrounded by fascicles of brachial plexus
Hydrochlorothiazide	What diuretic increase digoxin toxicity due to the intensified excretion of K + ions?
Gluconeogenesis in liver	During starvation muscle proteins break up into free amino acids
Gastromucoprotein	factor is necessary for absorption of this vitamin B12
Myocardium hypertrophy	revealed changes of cardiovascular fitness which was indicative of cardiac insufficiency at the compensation stage
Reverse polarization	stage of action potential did the membrane potential equal +30 mV
Respiration will come to a standstill	complete disruption of spinal cord at the level of the first cervical segment
Vagus	Heart rate fall
Fat embolism	examination of pulmonary and cerebral vessels stained with Sudan III revealed orange drops occluding the vessel lumen – multiple traumas
Myocarditis	Heart was sluggish, with significant cavity dilatation. Myocardium revealed plephora of microvessels, diffuse infiltration of stroma by lymphocytes, histiocytes
Spores	A specimen stained by Ozheshko
Acute viral hepatitis	revealed disseminated dystrophy, hepatocyte necrosis, Councilman's bodies
M.trapezius	dorsal area of his neck
Right extensors amyotonia	a toad's right labyrinth was destroyed
Septicopyemia	died from intoxication 8 days after artificial illegal abortion performed in her 14-15th week of pregnancy. Autopsy of the corpse revealed yellowish colour of eye sclera and of skin, necrotic suppurative endometritis, multiple pulmonary abscesses, spleen yhyperplasia with a big number of neutrophils in its sinuses
Vestibulocochlear nerve is damaged	dizziness and hearing loss
Tay-Sachs disease	high rate of ganglioside glycometide
Parasternal metastases	an induration in form of a node in the inferior medial quadrant mammary gland
Of primary infection	Blood serum contained IgM to the rubella virus
Myelotoxic	3 year old child have been giving him antibiotics with purpose of preventing enteric infections for a long time. A month later the child's condition changed for the worse. Blood examination revealed apparent leukopenia and granulocytopenia
Basal cells	regenerate bronchial epithelium
Acute cavernous tuberculosis	revealed a cavity 5 cm in diameter communicating with lumen of a segmental bronchus. On the inside cavity walls are covered with caseous masses with epithelioid and Langhans cells beneath them
Evaporation	temperature is +37oC, relative humidity is 90%, air speed is 0,2 m/s.
Hypo-osmolar hypohydration	massive diarrhea has low water rate in the extracellular space, high water rate inside the cells and low blood osmolari-ty
Autotransplantation	was injected with embryonal stem cells derived from this very patient by means of therapeutic cloning
Smooth muscular tissue	development of mesenchyma cells
Vagi were cut on both sides	Respiration will become deep and infrequent
Low-density lipoproteins excess	atherosclerosis pathogenesis
Proserin	for stimulation of gastrointestinal tract
Atropine sulfate	reduce salivation during tooth filling
Heart overload caused by high pressure	A patient ill with essential arterial hypertension had a hypertensive crisis that resulted in an attack of cardiac asthma.

Abstinence	syndrome of different disturbances caused by drug discontinuation
Antishock phase	under stress have muscular hypertonia and high arterial pressure, high glucose concentration in blood and intensified secretion of corticotropin and corticosteroids
Granular endoplasmic reticulum	Synthesis of blood plasma proteins
Acetylcholine	autoimmune disease that causes disorder of functional receptor condition in neuromuscular synapses
Histamine	high acidity of gastric juice
Neurinoma	revealed a node-like, soft and elastic homogenous tumour of pinkish-white colour along the acoustic nerve. The tumour contains cell bundles with oval nuclei. Cellular fibrous bundles form rhythmic structures made up by parallel rows of regularly oriented cells arranged in form of a palisade with cell-free homogenous zone (Verocay bodies)
Mechanic insufficiency lymphatic circulation	left arm has symptoms of lymphatic system insufficiency - limb edema, lymph node enlargement
Hypophysis	Epithelial trabecules have two types of cells: chromophilic and chromophobic.
Funiculus spermaticus	inguinal canal
Loratadine	an allergic reaction in form of itching skin eruptions
Corglycon	acute cardiac insufficiency: paleness, acrocyanosis, frequent shallow respiration
Redistribution of leukocytes in bloodstream	man is in the torpid shock phase as a result of a car accident. In blood: $3, 2 \cdot 10^9/l$ . leukopenia
Constrictor	Inhibite Kallikrein
Benzylpenicillin	Inhibition of synthesis of microorganism wall
Pleiotropy	mutation of only one gene which results in disturbance of tryptophane absorption in the bowels and its resorption in the renal tubules.
Sodium bromide	for a long time got the following complication: cough, rhinitis, epiphora
Diphtheria corynebacteria	growth of grey, radially striated (in form of rosettes) colonies 4-5 mm in diameter. Grampositive bacilli with clublike thickenings on their ends placed in form of spread wide apart fingers are visible by microscope
Monoamine oxidase	catalyzing biogenic amines noradrenaline and serotonin in the mi-tochondrions
Methotrexate	change of gene expression of Dehydrofolate reductase
Magnesium sulfate	anti- hypertensive drug - salt of an alkaline-earth metal
Naloxone	acute morphine poisoning
Greater psoas muscle	Knife injured one of muscles of renal pelvis
N. axillaris damaged?	unable to draw his arm aside from his body
Stromal-vascular carbohydrate dystrophy	Autopsy of a man ill with severe hypothyroidism revealed that connective tissue, organ stroma, adipose and cartilaginous tissues were swollen, semitransparent, mucus-like. Microscopic examination of tissues revealed stellate cells having processes with mucus between them

Red bone marrow	a macrophagic cell with erythrocytes at different stages of differentiation located along its processes
Infectious mononucleosis, AIDS	propagate directly in the cells of immune system and destroy it
Fibroma	revealed a dense, movable skin tumour that is standing out distinctly from the surrounding tissues. found to be white and composed of fibrous tissue. Microscopic examination revealed interlacing collagen fibers and few cells.
Activation of fibrinolytic system	cyst on pancreas. After developed haemorrhagic syndrome with apparent disorder of blood coagulation
Erythropoietic porphyria	develops erythemas, vesicular rash and skin itch under the influence of sun. decreased iron concentration in the blood serum, increased uroporphyrinogen I excretion with the urine
Dehydrogenase of branched-chain alpha-keto acids	Urine smells of "brewer's yeast" or "maple syrup"
Syphilis	Stained by Romanovsky-Giemsa method a physician revealed some light-pink thin microorganisms with 12-14 regular spiral coils and pointed ends, up to 10-13 micrometer long
Decrease in the haematocrite index	an uterine haemorrhage lasting for 2 days
Pharmacokinetic, absorption stage of drug incompatibility	A patient suffering from stomach ulcer has been treated with an antacid drug amagel. For acute bronchitis treatment he was prescribed the antibiotic methacycline. However within next 5 days the fever didn't fall, cough and sputum nature remained unchanged. A physician came to the conclusion that the drugs were incompatible
Thrombocyte adhesion	cause of the thrombosis origin
Heart overload by volume	the tricuspid valve insufficiency
Gonorrhoea	revealed gram-negative bacteria looking like coffee beans. They were localized in the leukocytes and could decompose glucose and maltose to acid
Indirect functional antagonism	is the nature of proserin and halothane interaction
Glycosylation	type of protein modification is observed in case of diabetic cataract
Catecholamines	The minute blood volume in a patient with transplanted heart has increased as a result of physical activity. What regulative mechanism?
Diphyllobothriasis	drastic decrease in hemoglobin concentration. It is known from the anamnesis that while living in the Far East the patient used to eat freshly-salted caviar
Receptor adaptation	has normal sensitivity of his finger skin, however he doesn't sense his wedding ring around the finger
Yellow (flaval)	During the puncture the needle went through the following ligament
Repolarization	ECG study showed that the T-waves were positive in the standard extremity leads, their amplitude and duration were normal
The clinical diagnosis was confirmed	with catarrhal presentations and skin rash a pediatrician suspected scarlet fever. The child was given intracutaneously a small dose of serum antibody to the streptococcal erythrogenic toxin; on the site of injection the rash disappeared
Transversal laceration in the spinal cord	Respiration will present no significant changes
Ceruloplasmin	Wilson's degeneration – Blood plasma analysis revealed an abrupt decrease in the copper concentration, urine analysis revealed an increased copper concentration.
Myeloma	Bence Jones protein in the patient's urine
Purulent necrotic	scarlet fever. mucous membrane of pharynx is apparently hyperaemic and edematic, the tonsils are enlarged and have dull yellowish-grey foci with some black areas
Tyrosine metabolic disorder	have dark spots being the evidence of homogentisic acid formation.
Acoustic organ	sensoepithelial sense organ. Cells are placed upon the basal membrane and include the following types: external and internal receptor cells, external and internal phalangeal cell, stem cells, external limiting cells and external supporting cell
Small bronchi alterations	asphyxia attack provoked by a spasm of smooth muscles of the respiratory tracts
Hypokaliemia	muscle hypotonia, flaccid paralyzes, weakened peristaltic activity of the bowels
Expiratory dyspnea under asphyxia	severe cough, cyanotic skin and mucous membranes, rapid pulse, infrequent respiration, prolonged expiration
Leptospira	(stained by Romanovsky-Giemsa method) revealed some convoluted bacteria looking like C and S letters
Reduced production of parathormone	resection of the thyroid gland
Acetylsalicylic acid	Reduction of thrombocyte aggregation
47, XXY	eunuchoid body proportions, gynecomastia, female pattern of pubic hair distribution. The boy had also fat deposits on the thighs, no facial hair, high voice, subnormal intelligence quotient

Rectouterine pouch	was diagnosed with liver rupture resulting from a blunt abdominal injury. The escaped blood will be assembled in the following anatomic formation
V. saphena parva	edemata of legs, skin cyanosis, small ulcers on one side of the lateral condyle. Examination revealed a swelling, enlarged veins, formation of nodes
General chronic venous congestion	coronary heart disease along with cardiac insufficiency for a long time revealed - nutmeg liver, brown induration of lungs, cyanotic induration of kidneys and spleen
Sodium hydrocarbonate	suffering from chronic hyperacidic gastritis takes an antacid drug for heartburn elimination. After its ingestion the patient feels better but at the same time he has a sensation of stomach swelling.
Fascial adrenal cortex zone atrophy	high doses of hydrocortisone for a long time
Carbamoyl phosphate synthetase decreased	Inhibition of urea synthesis and accumulation of ammonia in blood and tissues
Unithiol	for treatment of bismuth intoxication
WPW syndrome (Wolff-Parkinson-White)	P-wave is normal, P — Q-interval is short, ventricular QRST complex is wide, R-wave is double-peak or two-phase
Spleen	lymphoid tissue that forms lymph nodes; the latter are arranged in a diffuse manner and enclose a central artery
Atrioventricular delay enables	Sequence of atrial and ventricular contractions
Macula densa	kidney shows a part of the distal tubule going between the afferent and efferent arteriole Cells building the tubule wall have dense nuclei; basal membrane is absent
Proopiomelanocortin (POMC)	Li-potropin, corticotropin, melanotropin and endorphins are synthesized in the hypophysis of the
Proteinuria	with acute glomerulonephritis
Lymphoid leukosis	lymph node revealed blurring of its structure, absence of lymphoid follicles; all the microscopic fields showed cells with roundish nuclei and thin limbus of basophil cytoplasm. It is known from the clinical data that other groups of lymph nodes are also enlarged as well as spleen and liver.
Long flexor muscle of thumb injured	cut wound in the region of the thenar eminence on the right hand; distal phalanx of the I finger cannot be flexed
Respiratory volume	indices of the external respiration is much higher than in a state of rest
Vestibular ampullar	who is riding the carousel presents with increased heart rate, sweating, nausea
Anthrax	enlarged, hyposthenic spleen of dark-cherry colour when dissected; excessive pulp scraping. At the base and fornix of brain pia maters are edematous, soaked with blood, dark-red ("scarlet hat"). Microscopic examination revealed serous haemorrhagic inflammation of brain tissues and tunics along with destruction of small vessel walls.
Atrioventricular block	heart rate - 50/min, PQ-interval is prolonged, QRS- complex is unchanged, the number of P-waves exceeds the number of QRS-complexes
Organic nitrates	Blood has increased concentration of methemoglobin
Itsenko-Cushing's syndrome	suffering from arterial hypertension, hyperglycemia, glycosuria for a long time and died from the cerebral haemorrhage. Pathologic examination revealed pituitary basophil adenoma, adrenal cortex hyperplasia
Adrenal glands	man went to a foreign country because he had been offered a job there
Toxoplasmosis	a dead child with multiple developmental defects
Hyperosmolar	has significantly put off weight within 3 months; glucose concentration rose up to 50 millimole! He fell into a coma.
Electrolytic osmotic - mechanism of erythrocyte damage	As a result of increased permeability of the erythrocyte membrane in a patient with microspherocytic anaemia (Minkowsky-Shauffard disease) cells receive sodium ions and water. Erythrocytes take form of spherocytes and broken down
Muscular-type artery	a blood vessel. Its inner coat is composed by endothelium, subendothelium and internal elastic membrane. The middle coat is enriched with smooth myocytes
Region of the medial eye angle	Anastomosis a. carotis externa et a. carotis interna
Injection of concentrated albumin solution	From the intercellular fluid to the capillaries water movement
Acute purulent bronchopneumonia	with a malignant stomach tumour who had died from cancer intoxication revealed in the posteroinferior lung fields some dense, grayish-red irregular foci protruding above the section surface. revealed exudate containing a large amount of neutrophils in the lumen and walls of small bronchi and alveoles
Bile acids	Fat emulsification
Passive haemagglutination	serological analysis of blood serum intended for determination of antibody titre
Transcription started after	The operator gene has been released from the repressor gene
Sensitivity loss	the dorsal roots of the spinal cord of an animal have been cut

Vasopressin	A patient has osmotic pressure of blood plasma at the rate of 350 mOsmol/l (norm is 300 mOsmol/l). This will cause hypersecretion
Muscle hypoxia	Accumulation lactate
Urogenital schistosomiasis	about pain during urination. Analysis of his urine taken in the daytime revealed eggs with a characteristic sharp point, returned from Australia
Papillae vallatae	on the border of the median and posterior third of the back of tongue
Hypersecretion of the somatotrophic hormone	revealed overgrowth of facial bones and soft tissues, tongue enlargement, wide interdental spaces in the enlarged dental arch
Secondary amyloidosis	had been suffering from the multiple bronchiectasis for 5 years and died from chronic renal insufficiency, revealed that kidneys were dense and enlarged, with thickened cortical layer of white colour with greasy lustre
Systemic lupus erythematosus	died from chronic renal insufficiency, revealed: kidneys were dense, reduced, multicoloured, with haemorrhagic areas. revealed some hematoxylin bodies in the nuclei of the renal tubule epithelium; "wireloop" thickening of the glomerular capillary basement membrane; here and there in the capillaries some hyaline thrombi and foci of fibrinoid necrosis were present
Eubiotics	be used in order to normalize intestinal microflora
Higher than throughout the population	The husband suffers from the insulindependant diabetes, the wife is healthy. What is the probability that this couple will have an insulin-dependant child?
Prolactin	When the absence of lactation after parturition
Mammary gland tumor	revealed an enlarged lymph node of metastatic origin on the medial wall of the left axillary crease
Iliohypogastric nerve affection	diagnosticated increased pain sensitivity of skin in the hypogastric region.
Embryonal form of urinary tracts of a kidney	X-ray photo showed a renal pelvis with minor calyces only (major calyces absent)
Pseudoerosion uterine cervix	some brightred lustrous spots that easily bleed when touched. Biopsy showed that a part of the uterine cervix was covered with cylindrical epithelium with papillary outgrowths; in the depth of tissue the growth of glands was present
Ichthyosis	to have thickened skin resembling of the tortoise shell, underdeveloped auricles. revealed hyperkeratosis, atrophy of the granular epidermis layer;
Retinol acetate	When twilight vision impairment
Celecoxib	nonsteroid anti-inflammatory drugs, patient has a history of chronic gastroduodenitis
Acute phlegmonous appendicitis	received a vermiform appendix up to 2,0 cm thick. Its serous membrane was pale, thick and covered with yellowish-green films. The wall was flaccid, of grayish-red colour. The appendix lumen was dilated and filled with yellowish-green substance, appendix wall was infiltrated with neutrophils
Haemolytic jaundice	Blood plasma the total bilirubin is increased, stercobilin is increased in feces, urobilin is increased in urine
Erectile shock phase	has developed traumatic shock that led to the following disorders: AP is 140/90 mm Hg, Ps is 120 bpm. The patient is fussy, talkative, pale.
M. triceps brachii	elbow extension
Dermis	of dorsal mesoderm segmentation and somite formation
Muscle spindles dysfunction	After extension in a skeletal muscle its reflectory contraction was absent.
Filariasis	revealed helminths 30-50 mm long with elongated filiform body, eye ache, eyelid edema, lacrimaton and temporary visual impairment
Systemic constriction of the venous vessels	In response to a change in body position from horizontal to vertical blood circulation system develops reflectory pressor reaction.
Type B haemophilia	deficit factor IX of blood coagulation
Gyrus supramarginalis injury	lost the ability to execute learned purposeful movements (apraxia)
Levodopa	Parkinson's disease
Metoprolol	B-adrenoceptor blockers
Triple X syndrome	Analysis of the sex chromatin revealed 2 Barr's bodies in most somatic cells
Muscarinic cholinoreceptor block	the dryness of oral mucous membrane and mydriatic pupils
Dithylinum	must be administered a depolarizing drug from the myorelaxant group for the purpose of a short-time surgery
Acetylcysteine	chronic bronchitis takes a synthetic mucolytic drug that facilitates the sputum thinning
Reduction of renal blood flow	with massive burns developed acute renal insufficiency characterized by a significant and rapid deceleration of glomerular filtration
Haemolytic streptococci	indicate the direct epidemic danger
Vestibulospinal	tonus of extensor muscles

Haemorrhagic infarction	A section of the left lung was found to have an area of dense red tissue. The area was cone shaped, stood out distinctly from the healthy tissue, with its base directed to the pleura. The dissected tissue was granular, dark-red
T-lymphocytes-killers	a lot of mutant cells
Ornithinic cycle	to have reduced intensity of sucking, frequent vomiting, hypotonia. Urine and blood exhibit increased concentration of citrulline
NAD	tuberculosis is treated with isoniazid preparation - that is an antitubercular able to penetrate into the tuberculosis bacillus. Tuberculostatic effect is induced by the interference with replication processes and oxidation-reduction reactions due to the buildup of pseudo-coenzyme:
Vicasolum	for haemorrhage prevention
Diazepam	suffers from neurosis characterized by irritability, sleeplessness, motiveless anxiety
Nongaseous acidosis	developed repeated episodes of diarrhea, decreased arterial pressure, tachycardia, extrasystole. Blood pH is 7,18
Isometric muscle contraction	will be observed in the upper extremity during holding (not moving) a load in a certain position
Medial brachial cutaneous nerve	sensitivity in the region of the medial surface of shoulder
Droperidol	neuroleptics is the most suitable for neuroleptanalgesia
Brown bread	stimulate peristalsis of the bowels
Diphtheria corynebacteria	onto the blood-tellurite agar, grey colonies could be observed. They were 4-5 mm in diameter, radially striated (in form of rosettes). Revealed gram-positive bacilli with clavate swollen ends arranged in form of wide-spread fingers
Muscular tissue	submandibular salivary gland shows some basketshaped cells concentrated around the acines and excretory ducts. These cells surround bases of the serous cells and are called myoepitheliocytes
Colon descendens	in the left lateral region of abdomen
N. ulnaris damaged	an injury of the medial epicondyle of humerus
Desmoid	revealed a tumour-like formation that arose on the spot of a tumour that was removed two years ago. The neoplasm was well-defined, dense, 2x1 cm large. Histological examination revealed that the tumour was composed of differentiated connective tissue with prevailing collagen fibres

Narcotic analgetics	skin is cold, pupils are myotic, he has laboured Cheyne-Stokes respiration, arterial pressure is low, urinary bladder is full
Hypoglycemia	Glycogen phosphorylase congenital deficiency
Butyrylcholin esterase	muscle relaxant dithylinum
Xanthine oxidase defect	low concentration of uric acid and accumulation of xanthine and hypoxanthine
Nitrazepam	a hypnotic drug with tranquillizing effect
Chingamin	for individual chemoprophylaxis of malaria
Gluconeogenesis activation	revealed high rate of sugar in his blood
Conditioned sympathetic	Students who are taking examinations often have dry mouth
Collagenosis	increase urine index hydroxyproline
Disturbed metabolism of purines	high concentration of urates
Choline disturbed generation	was kept on protein-free diet developed fatty liver infiltration, in particular as a result of deficiency of methylating agents
Metaplasia	a pathological process that preceded formation of the tumour
Facial nerve	Close his eyes, raise his eyebrows, bare his teeth
Obturator artery is damaged	was diagnosed with fracture of left femoral neck accompanied by disruption of ligament of head of femur
Interosseous muscles	to adduct and abduct fingers in the metacarpophalangeal articulations towards and away from the 3rd finger
Semiconservative way of replication	it was established that one of chains would not be lost during replication and the second chain would be synthesized complementary to the first one
Promedol	Bone fragments reposition requires preliminary analgesia
Chronic right-ventricular insufficiency	had been suffering from chronic diffuse obstructive disease, pulmonary mphysema, for 15 years died from cardiac insufficiency. Autopsy revealed nutmeg liver cirrhosis, cyanotic induration of kidneys and spleen, ascites, edemata of lower limbs
Trans-retinoic acid	form of vitamin A
Precipitin lines	If the microbial culture under examination produces exotoxin, this wil result in formation
Adrenaline hydrochloride	After the regular insulin injection his condition grew worse: there appeared anxiety, cold sweat, tremor of limbs, general weakness, dizziness.
Digitus minimus damaged?	revealed inflammation of common synovial sheath of flexor muscles. It is known from the patient's anamnesis that he got a stab wound of finger a week ago.
Gonorrhoea	Microscopy of pathological material
Necrotic nephrosis	revealed brain edema, liver enlargement as well as enlargement of kidneys with wide light-grey cortical layer and plethoric medullary area, necrosis of tubules of main segments along with destruction of basal membranes, intersti-cium edema with leukocytic infiltration and haemorrhages
Furosemide	should be administered for forced diuresis
Natriuretic hormone	were superdistended by blood that resulted in decreased reabsorption of Na <sup>+</sup> and water in renal tubules. This can be explained by the influence of the following factor upon kidneys:
Anaphylactic reactions	atopic bronchial asthma. IgE level was increased
Rise of hydrostatic pressure in venules	cardiac insufficiency, is the leding mechanism of edema pathogenesis
Neutralization	botulinic toxin
Digoxin	chronic cardiac insufficiency
The patient has typhoid fever	was noticed that the ratio of antibody titers and O-antigens S.typhi in the patient's serum had increased from 1:100 to 1:400
Combinative variability form	blood groups according to ABO
Pars superior	initial part of duodenum
Aldosterone reduction	decreased reabsorption of sodium ions in the renal tubules
Cyclic adenosine monophosphate	Emotional stress causes activation of hormon-sensitive triglyceride lipase in the adipocytes. What secondary mediator takes part in this process?
Interleukin-1	cause synthesis of protein of acute phase
Neurotonic arterial hyperemia	with neuralgia of trifacial nerve complains about periodical reddening of the right part of her face and neck, sense of warmth gush, increased skin sensitivity
Primary tuberculosis	revealed a small area of caseous necrosis in the inferior lobe of the right lung, and occurences of caseous necrosis in the bronchopulmonary, bronchial and bi-furcational lymph nodes
Decreased vasopressin synthesis	Reduced tubular reabsorption of water

Calcium deficiency	reduced density of dental tissue, high fragility of teeth during eating solid food
Expiratory dyspnea	Pulmonary emphysema accompanied by reduced elasticity of pulmonary tissue
Inflammation	complained of pain during deglutition, indisposition. Objectively: palatine arches and tonsils are moderately edematous and hyperemic, there are greyish-white films up to 1 mm thick closely adhering to the subjacent tissues
Polycyclic aromatic carbohydrates	cause of tumour development
Cross adaptation	During influenza epidemic 40% of pupils who didn't go in for sports were affected by the disease, and among the pupils who regularly did physical exercises this index was only 20%. What adaptive mechanisms determined such a low sickness rate of pupils participating in the sports?
Study antigenic properties of the causative agent	In order to identify isolated causative agent it is necessary to, (of intestinal infection with signs of colienteritis was registered)
Basal cell carcinoma	a skin biopsy revealed clusters of round and oval tumour cells with a narrow border of basophilic cytoplasm resembling of cells of basal epidermal layer
Atrioventricular extrasystole	negative P wave overlaps QRS complex, diastolic interval is prolonged after extrasystole
Influenza	Direct and indirect immunofluorescence test
Balantidiasis	at a pig farm complains about paroxysmal abdominal pain, liquid feces with admixtures of mucus and blood, headache, weakness, fever. Examination of large intestine revealed ulcers from 1 mm up to several cm large, feces contained oval unicellular organisms with cilia.
Cerebellum affection	hypomyotonia of arm and leg muscles, staccato speech.
46	number of cells' chromosomes is typical for G1 period
Aminoglycosides	hearing impairment and vestibular disorders
Increased vessel permeability - mechanism of edema development	revealed that his left hand was hot, pink, edematous, there was a big red blister on the site of sting
O-streptolysin	streptococcal angina - provisional diagnosis will be most probably confirmed by presence of antibodies to the following streptococcal antigen
Fibrocavernous tuberculosis	in the upper part of the right lung there was a cavity 5 cm in diameter with dense grey walls, the cavity contained liquid blood and blood clots
Adrenal hyperglycemia	suffering pheochromocytoma complains of thirst, dry mouth, hunger hyperglycemia
Pertussis bacillus	suffering from elevated temperature and attacks of typical cough for 10 days. Doctor administered inoculation of mucus from the patient's nasopharynx on the agar
Intensification of ATP resynthesis	Intracellular mechanism provides restoration of energy supply of insulted cells
Gametopathy	Down's disease
Parathyroid osteodystrophy	patient has been taking treatment thrice for the last 6 months because of fractures caused by domestic accidents. Microscopical examination of bony tissue revealed foci of lacunar resorption, giant-cell granulomas in the tumour-like formations, cysts. Bony tissue was substituted by fibrous connective tissue. Examination revealed also adenoma of parathyroid gland and hypercalcemia
40-50 mm/h	Examination of a pregnant woman revealed twice as much concentration of fibrinogen in blood plasma. What ESR can this woman have?
Water loss with sweat *	A man weighs 80 kg, after long physical activity his circulating blood volume is reduced down to 5,4 l, hematocrit makes up 50%, whole blood protein is 80 g/l. These blood characteristics are determined first of all by:
Bruton's disease	IgA and IgM reduced, showed also lack of B-lymphocytes and plasmocytes
Dilatation of resistance vessels	big dose of histamine
Cushing's disease	revealed a tumour of adenohypophysis. Objectively: the patient's weight is 117 kg, he has moon-like hyperemic face, red-blue striae of skin distension on his belly. Osteoporosis and muscle dystrophy are present. AP is 210/140 mm Hg
Potassium ion	Vagus
Fascicle of Goll and cuneate fascicle	Tactile sensation, posture sense, vibration sense
Simple unbranched alveolar exocrine glands	an exocrine gland that has unbranched excretory duct with a terminal part in form of a saccule opening into the duct
Colon sigmoideum	branch of inferior mesenteric artery.
Aerobic glycolysis	When blood circulation in the damaged tissue is restored, then lactate accumulation comes to a stop and glucose consumption decelerates.
Dithylinum	for trachea intubation
Isoniazid	pulmonary tuberculosis. During treatment neuritis of visual nerve arose



Hypophysis tumor	revealed enlargement of sellar cavity, thinning of anterior clinoid processes, destruction of different parts, destruction of different parts of sella turcica
Impaired synthesis of calcitriol	child with hereditary renal lesion has signs of rickets, vitamin D concentration in blood is normal. What is the most probable cause of rickets development?
Myotic pupils	intoxicated with mushrooms - muscarine
Neutrophilic leukocytosis	are induced by necrotic changes in the myocardium
T-lymphocytes reduction index:	disorder of cellular immunity
Hard fibroma	tumour of large intestine wall. it presents itself as fascicles of divergent collagen fibers of different thickness and form and some monomorphous fusiform cells that are irregularly distributed among the fibers. Cellular atypia is not evident.
Polyploidy mutation	A cell at the stage of mitosis anaphase was stimulated by colchicine that inhibits chromosome separation to the poles
Medulloblastoma	revealed in the area of vermis of cerebellum a soft greyish-pink node 2 cm in diameter with areas of haemorrhage. Histologically this tumour consisted of atypical monomorphous small roundish cells with big polymorphous nuclei
Increased tension of CO <sub>2</sub> in blood	increase of respiration depth and frequency
Transverse fascia	posterior wall of inguinal canal
Prolongation of P — Q interval	has delayed conduction of excitement through the atrioventricular node
Vestibuloreceptors of utricle and saccule	Surface with an intact toad on it was inclined to the right. Tone of extensor muscles became reflectory higher due to the activation of the following receptors:
T-killers	transplant rejection
Clostridia	revealed fusiform sporeforming microorganisms that get violet-blue Gram's stain
Homogenization method	received sputum sample of a patient suffering from tuberculosis. Bacterioscopic examination of smears and detection of tuberculosis bacillus can be realized by one of enrichment methods that involves processing of sputum only with solution of caustic soda.
It produces surfactant	pulmonary alveole's wall presents a big cell. Its cytoplasm has a lot of mitochondria, developed Golgi apparatus, osmiophil lamellated corpuscle
Immunosuppressors	transplantation immunity. It is usually prevented
Lymphohypoplastic diathesis	child is pale, pastose, muscular tissue is bad developed, lymph nodes are enlarged. He often suffers from angina and pharyngitis, blood has signs of lymphocytosis. The child is also predisposed to autoallergic diseases
Cholera	profuse diarrhea and vomiting for 2 days. He died from acute dehydration. Autopsy revealed that the intestinal wall was edematic and hyperemic, with multiple haemorrhages in the mucous membrane. Intestine lumen contains whitish fluid resembling of rice water
Myelomatosis	revealed a lytic tumour in the locus of pathological rib fracture. tumour consists of atypical plasmoblasts. osteoporosis in the bones of vertebral column and pelvis
Acute ulcers	gastrointestinal haemorrhage. Examination of mucous membrane of stomach revealed some defects reaching myenteron; their edges and bottom were mostly even and loose, some of them contained dark-red blood
Inferior part of precentral gyrus	motor centres regulating activity of head muscles.
Bilateral polycystic renal disease	died from uraemia. Autopsy revealed enlarged kidneys weighing 500,0 each and consisting of multiple cavities 0,5-2 cm in diameter. The cavities were full of light-yellow transparent liquid. Renal pelvis and ureters had no peculiarities
Hemadsorption reaction	Viruses containing hemagglutinins
Surfactant deficiency	have areas of atelectasis (pulmonary collapse).
Alcohol syndrome child	Teratogenic
To increase phosphorus content	Dietary intake of a 30 year old nursing woman contains 1000 mg of calcium, 1300 mg of phosphorus and 20 mg of iron per day. It is necessary to change content of these mineral substances in the following way
Hepatocytes damaged?	viral infection has damaged cells that form walls of bile capillaries. This stimulated conditions for inflow of bile into the blood of sinusoidal capillaries
Iron-deficient anemia	has pale skin, glossitis, gingivitis. Blood count: erythrocytes -3, 3 cot 1012/l, hemoglobin - 70 g/l, colour index - 0,5. Examination of blood smear revealed hypochromia, microcytosis, poi-kilocytosis.
Potassium permanganate	Burned skin surface was treated with a certain preparation. Its antiseptic properties are provided by atomic oxygen that is formed in presence of organic substances
Calcium phosphate	Cardinal symptoms of primary hyperparathyroidism are osteoporosis and renal lesion along with development of urolithiasis. What substance makes up the basis of these calculi in this disease?

Tr. cortico-nuclearis damaged?	paralysis of facial and masticatory muscles. The haematoma is inside the genu of internal capsule
Monocytosis	A 5 year old child is ill with measles. Blood analysis revealed increase of total number of leukocytes up to $13 \cdot 10^9/l$ . Leukogram: basophils - 0, eosinophils - 1, myelocytes - 0, juvenile neutrophils - 0, band neutrophils - 2, segmented neutrophils - 41, lymphocytes - 28, monocytes - 28.
Isoosmotic hypohydration	dry skin, decreased skin turgor, rice-water stool. was diagnosed with cholera
Apical, posterior, anterior	right superior lobar bronchus
Endothelium	Artery - one of the membranes of its wall has flat cells lying on the basal membrane
Large lips of pudendum	bartholinitis (inflammation of greater vulvovaginal glands) localized
Cytochrome P-450	microsomal oxydation
Recurrent laryngeal was constricted	revealed aneurism in the area of aortic arch that caused alteration of vocal function of larynx.
Irritant receptors	bronchospasm.
Cortex of cerebrum	has layerwise arrangement of neurocytes. Among them there are cells of the following forms: stellate, fusiform, horizontal, pyramidal
Dawn's disease	Dermopapillary layer of skin determines individuality of fingerprints
Acyclovir	herpetic rash
Mosaicism	Cytogenetic examination of a patient with reproductive dysfunction revealed normal karyotype 46 XY in some cells, but most cells have karyotype of Klinefelter's syndrome - 47 XXY. Such cell heterogeneity is called
Activation of sodium channels of membrane	It was established that the threshold of stimulation force became significantly lower
Streptococcus mutans	of a patient a dentist revealed a lot of "white spots zones of enamel demineralization
Jugular venous arch	Surgical approach to the thyroid gland from the transverse (collar) approach involves opening of interaponeurot suprasternal space. What anatomic structure localized in this space is dangerous to be damaged?
Wohlfahrt fly	revealed tissues injury on patient's scalp with localized suppurations and diagnosed his disease as myiasis.
Narcotic analgetic	interaction with opiate receptors
Increase of rate Tripsin	caused increase of rate of proteolytic enzymes of pancreatic juice
Olfactory	thalamocortical tracts
Midbrain	red nucleus
Accomodative damaged	contractive activity of muscles that contract and dilate eye pupil (paralytic state)
Keeled chest	Transverse dimensions were too small and the sternum was strongly protruding
Focal pneumonia	had acute respiratory viral infection and died from cardiopulmonary decompensation. revealed that his right lung was hyperemic; in the 2nd, 6th and 10 <sup>th</sup> segments and on the incision there were airless yellowish foci of irregular form, from several mm up to 1 cm large. revealed exudate consisting mainly of neutrophils in the given areas of pulmonary tissue in the alveoles, bronchioles and bronchial tubes

Sinoatrial node	Heart rate under emotional stress reached 112 bpm
Muscular (Duchenne's) dystrophy	Creatine phosphokinase
Septic bacterial endocarditis	Extensive thromboembolic infarction of the left cerebral hemispheres, large septic spleen, immunocomplex glomerulonephritis, ulcers on the edges of the aortic valves, covered with polypous thrombus with colonies of staphylococcus
Sympathoadrenal system	stress.
Fatty parenchymatous degeneration	"tiger heart". Sidewards of endocardium a yellowish-white banding can be seen; myocardium is dull, darkyellow
Septicemia	Blood, sugar broth - material should be taken for analysis
Toxic lesions of myocard, liver and kidney	revealed greyish films on the pharyngeal tonsils. Their removal provoked moderate haemorrhage. Bacterioscopy revealed gram-positive clublike bacteria
N. medianus damaged	difficult pronation, weakening of palmar flexor muscles and altered skin sensitivity of 1-3 fingers
Amino-acid metabolism abnormality	phenylpyruvic acid in urine
Vanishing of elastic fibers	pathological process caused weakness of aortic wall, its dilatation and rupture
Vitamin U (cabbage and potato juice)	help to heal and prevent the ulcers
Azithromycin	causative agent is resistant to penicillin, but it is sensitive to macrolides
Cystinuria	Urine reveals high concentration of all aliphatic amino acids with the highest excretion of cystine and cysteine
Trypsin hyposecretion	disorder of cavitory protein digestion
A. facialis	A victim of an accident has bleeding from the soft tissues anterior to the mandibular angle. Which vessel should be ligated for the bleeding arrest?
Gonadotropic hormone	Secretion will be inhibited after taking oral contraceptives containing sex hormones
Lisinopril	with essential hypertension has a high rate of blood renin
Potassium channels activation	the rest potential of an excitable cell has greatly increased
Dobutamine	with cardiogenic shock, hypotension, asphyxia and edemata was given an injection of non-glycosidic cardiotonic
Spironolactone	WILL NOT have diuretic effect on a patient with Addison's disease
Chingamin	treatment and prevention of such diseases as malaria, amebiasis, interstitial disease
Hereditary enzymopathy	A child suffers from drug idiosyncrasy. What is the cause of such reaction?
Silicosis	worked a stone grinder for 9 years revealed small dense roundish nodules consisting of connective tissue. The nodules were found to have peripheral macrophages.
Liquid evaporation	temperature of 36°C degrees and relative humidity of 70%
Glibenclamid	Examination of a 70-year-old patient revealed insulin-dependent diabetes
Thrombocytopenia	developed hemorrhagic syndrome on the background of acute radiation disease
Hepatoduodenal ligament	common hepatic duct is located between the leaves of
Left half of both eyes retina defect	complaints of visual impairment has been delivered to the ophthalmologic department. revealed a brain tumor in area of the left optic tract
Damage of specific membrane pumps	the leading mechanism of cardiac myocyte damage in this case
5-6 p.m.	A man is being measured power inputs on an empty stomach, in the lying position, under conditions of physical and psychic rest at a comfortable temperature. Power inputs will reach the maximum at:
0,8 respiratory coefficient	1000 ml oxygen consumption and 800 ml carbon dioxide liberation per minute.
Alkaptonuria	Homogentisic acid oxidase deficiency
Reduction of descending inhibitory influence	Muscular tonus of left hand and leg is overstrained and spasmodic, local tendon reflexes are strong, pathological reflexes are presented
Graft immunity	pregnant woman having Rh-negative blood revealed high level of antierythrocytic antibodies. For its reduction she was implanted with her husband's Rhpositive skin graft. The graft was rejected in two weeks. Its microscopic examination revealed circulatory disturbance, edema and cellular infiltration with lymphocytes, neutrophils and macrophages predominance.
Sodium hydrocarbonate injected for	For increasing renal excretion of phenobarbital
Corestenoma	Increased tonus of parasympathetic centres
Melanoma	had a bulging dark macula on skin that caused no discomfort. With time it began to increase in size and became painful. It turned dark brown and there was a nodule on palpation. revealed spindle and polymorphous cells with multiple mitoses. Their cytoplasm contained brown pigment
In the region of aortic hiatus injury	has a disruption of thoracic lymphatic duct as a result of lifting a weight
Estrogen synthesis be inhibited	presents with endocrine dysfunction of follicular cells of the ovarian follicles resulting from an inflammation

Metoclopramide	A liquidator of a breakdown at a nuclear power plant who was irradiated complained about vomiting that occurs all of a sudden
Protamine sulfate	Heparin antagonist should be injected in order to manage the complication
Neurohypophysis dysfunction	hydruria (7 liters per day) and polydipsia
Autoimmune renal affection	systemic lupus erythematosus for three years. He was diagnosed with diffuse renal affection accompanied by massive edemata and expressive proteinuria. What is the most likely cause of proteinuria development?
Partial oxygen pressure	800 m above the sea. What is the life limiting factor in this case?
Parasympathetic unconditioned reflexes	had a cardiac arrest as a result of a hard blow to the upper region of anterior abdominal wall
Restrictive respiratory failure	pulmonary tuberculosis
GABA inhibited	dizziness, memory impairment, periodical convulsions
Heart	Vasoconstriction will be minimal
Helicobacter pylori	gastric ulcer. revealed small colonies of gram-negative, oxide reductase-positive flexibacteria that grew on the chocolate agar on the fifth day
Anterior longitudinal ligament damage	has a considerable increase in curvature of the lumbar lordosis
Accumulation of Na <sup>+</sup> and Ca <sup>2+</sup> ions in the myocardium cells	developed acute heart failure while running for a long time What changes in ionic composition can be observed in the cardiac muscle?
Hereditary abnormality of immune system	After an immunoassay a child was diagnosed with immunodeficiency of humoral immunity. What is the reason for the primary immunodeficiency development?
Achondroplasia	Inherited, dominant
Septicemia	after labour a woman developed shock along with DIC syndrome that caused her death. revealed purulent endomyometritis, regional purulent lymphangitis, lymphadenitis and purulent thrombophlebitis. There were also dystrophic alterations and interstitial inflammation of parenchymal organs
Secondary agents (mediators)	Calcium ion liberation from cellular depot
Amiodarone	Blocks potassium channels and prolongs the action potential
Abdominal muscles	a patient to breath out fully after taking a normal breath. What muscles contract during such exhalation?
Nucleosoma	a structure formed by eight histone proteins and a part of DNA molecule which makes about 1,75 revolutions around the molecules
Reduction of renal blood flow	with massive burns developed acute renal insufficiency characterized by a significant and rapid deceleration of glomerular filtration – mechanism?
Rotaviruses	Diarrhea, revealed bilayer pseudocovered capsid viruses that looked like small spoke wheels
Adolescaria	stage of fasciola life cycle is invasive for humans
C. perfringens	food poisoning. revealed culture of anaerobic grampositive spore-forming bacteria.
Temporal lobe of cerebral cortex	hearing
Atrophic arthritis	acute coronary insufficiency. He had knee joint swelling, gonycampsis and gonalgia during his lifetime. Pathomorphologic examination of the deformed joints and synovial membranes revealed membrane hyperaemia with multiple perivascular inflammatory infiltrations made by lymphocytes, plasmocytes and macrophagocytes. There was an accumulation of organized fibrin covering some areas of synovium membrane and looking like rice grains in the articular liquid
Phase-contrast microscopy	Cholera, "hanging drop" specimen
Until 3 months	delay in closure of the occipital fontanelle
5-oxytryptofane	likely cause of platelet serotonin reduction is the disturbed metabolism
Medial membranous artery damaged	in the temporal region epidural hematoma
Decrease in thrombin production	is the reason for the haemorrhagic syndrome
Turner's syndrome	Sex chromosomes of a woman didn't separate and move to the opposite poles of a cell during gametogenesis (meiosis). The ovum was impregnated with a normal spermatozoon
Cephalosporin	Disturbance microbial wall formation
Collapse	After taking antipyretic drugs. His consciousness is confused, AP is 80/50 mm Hg, Ps is 140/m, body temperature dropped down to 35,8oC
Glossopharyngeal	taste sensitivity on the tongue root
Femoral neck fracture	hip is adduced inwards, hip joint movements are impaired
Aminazine	has alcoholic psychosis with evident psychomotor agitation
Vestibulocochlear nerve damaged	a sensation of imbalance which appeared after a trauma
Sodium bromide caused	taking a sedative for a long time: cough, rhinitis, epiphora

Retinol acetate	to accelerate healing of a radiation ulcer
Diphtheria corynebacteria	blood-tellurite agar, grey colonies could be observed. They were 4-5 mm in diameter, radially striated (in form of rosettes). revealed gram-positive bacilli with clavate swollen ends arranged in form of wide-spread fingers
Mental	fracture in the region of the frontal third of mandible accompanied by a haematoma in the region of chin
Trigeminal nerve	pain and temperature sensitivity of the frontal 2/3 of his tongue
M.deltoideus	abduct his arm into horizontal position
Ductus choledochus compressed	developed mechanic jaundice resulting from compression of a bile-excreting duct
Rectouterine	diagnosed with extrauterine pregnancy complicated by the fallopian tube rupture. The blood is most likely to penetrate the following peritoneal space
Dysenteric amoeba	weakness, pain in the intestines, disorder of GIT. four nucleus cysts
Fibrinoid swelling	revealed that bicuspid valve was deformed, thickened and unclosed. Microscopically: foci of collagen fibrilla are eosinophilic, react positively to fibrin
Erythropoiesis	in the red bone marrow the cells of one of the cellular differons demonstrate a gradual decrease in cytoplasmic basophilia as well as an increase in oxyphilia, the nucleus is being forced out
Function of heart contractions	rectangular cells from 50 to 120 micrometers large with central position of nucleus, developed myofibrils. The cells are connected by intercalated discs
Cholecystokinin-pancreozymin ↓	subnormal concentration of enzymes in the pancreatic juice
Inspiratory reserve volume decrease	trauma of sternocleidomastoid muscle
Angiotensin-II	constriction renal artery the considerable increase of systematic arterial pressure
Lymphogranulomatosis	revealed destruction of the tissue structure of the node, absence of the lymph follicles, sclerotic areas and necrosis foci, cell constitution of the node is polymorphous, lymphocytes, eosinophiles, big atypical cells with multilobular nuclei (Beresovsky-Sternberg cells) and mononuclear cells of the large size are present
Central synapses	disorder of movement coordination but the force of muscle contractions remained the same
Nerve centres	After a long training session a sportsman developed fatigue accompanied by abrupt performance decrement. What link of the reflex arch was the fatigue initiated in?
Superior vena cava	is pressed with tumour thymoma
Hypothalamus	Vegetative abnormalities in the sleep, heat regulation, all kinds of metabolism, diabetes insipidus are developing in the patient due to growth of the tumour in the III ventricle of brain. Irritation of the nucleus of what part of the brain can cause this symptoms?
Ascorbic acid and rutin	numerous subcutaneous hemorrhages, gingivitis, carious cavities in teeth
Translocation	One of the 15th pair of chromosomes is longer than usual due to connected chromosome from the 21 pair.
Insulin	glucose transported from the extracellular space through the plasmatic membrane inside them
Calcitonin	stimulates tooth mineralization and inhibits tissue resorption
Increase in urea concentration	A child has an acute renal failure. What biochemical factor found in saliva can confirm this diagnosis?
Prothrombin	After implantation of a cardiac valve a young man constantly takes indirect anticoagulants. His state was complicated by hemorrhage. What substance content has decreased in blood?
Mass decrease of active nephrons	chronic glomerulonephritis presents with azotemia, oliguria, hypoand isosthenuria, proteinuria
Eosinophilia	bronchial asthma
Protopathic kind of pain	complaining of acute, dull, poorly-localized pain in gingiva, body temperature rise up to 37.5°C. alveolitis.
Acute left-ventricular failure	essential hypertension. After a physical stress he experienced muscle weakness, breathlessness, cyanosis of lips, skin and face. Respiration was accompanied by distinctly heard bubbling rales.
Substitution of haemoblast	chronic myeloleukemia has got the following symptoms of anemia: decreased number of erythrocytes and low haemoglobin concentration, oxyphilic and polychromatophilic normocytes, microcytes
Brain tunics - organs of the child are most likely to be affected	Nasopharyngitis revealed grampositive diplococci looking like coffee grains
Streptococcus pneumoniae	gram-positive diplococci with somewhat pointed opposite ends

Glandular hyperplasia of endometrium	of uterus mucous membrane revealed twisting glands, serrated and spinned, they were extended by stroma growth with proliferation of its cells
Agglutination reaction	serological reaction that underlies adhesion of microorganisms when they are affected by specific antibodies in presence of an electrolyte
HIV has gp41 and gp120	CD 4 human lymphocyte antigens is gp120 complementary
To withhold digitoxin	general health aggravation, arrhythmia, nausea, reduced diuresis, insomnia - Taking digitoxin in self-administered dosages for a long time
Vasopressin	diabetes insipidus
Fibrinolysis activators	has myocardial infarction with thrombosis of the left coronary artery
Glucose	injected a nearly double dose of insulin to a patient with diabetes mellitus
Methyluracil	used to accelerate formation of connective tissue matrix
High concentration of nitrates	Insufficiency of met-Hb-reductase
Damaged anterior roots of spinal cord	Axons of motoneurons and axons of neurons of lateral horns
Paschen bodies	contents of vesicles that appeared on the mucous membrane of patient with variola
Chronic right-ventricular insufficiency	revealed nutmeg liver cirrhosis, cyanotic induration of kidneys and spleen, ascites, edemata of lower limbs
Microaerophilic ability	heli-cobacteriosis - property of the bacteria found in this patient had to be obligatory taken into account during their cultivation
Karyolysis	revealed myocardial infarction in the posterior wall of the left ventricle
Bladder floor	mucous membrane of urinary bladder normally makes folds except for a single triangular area with smooth mucosa. This triangle is located
Spasm of coronary arteries	psychoemotional stress
Haemorrhage	erythrocytes - $2,8 \cdot 10^{12}/l$ , leukocytes - $8 \cdot 10^9/l$ , Hb- 90 g/l. pain in the epigastral area, vomiting; vomit masses have the colour of "coffee-grounds", the patient has also melena
Mechanism of edema pathogenesis	Rise of hydrostatic pressure in venules
Combinative variability form	the gene responsible for development of blood groups according to ABO system has three allele variants. If a man has IV blood group, it can be explained
Cyclic adenosine monophosphate	Emotional stress causes activation of hormon-sensitive triglyceride lipase in the adipocytes. What secondary mediator takes part in this process?
Volume overload of the left ventricular	The patient with acute miocardi-al infarction was given intravenously different solutions during 8 hours with medical dropper 1500 ml and oxygen intranasally. He died because of pulmonary edema. What caused the pulmonary edema?
Bronchopulmonary segment	a part of a lung that was ventilated by a tertiary bronchus accompanied by branches of pulmonary artery and other vessels
Co-trimoxazole	for toxoplasmosis treatment
Immune complex	acute glomerulonephritis that developed after he had had streptococcal infection. It is most likely that the affection of basal glomerular membrane is caused by an allergic reaction
Bisacodyl	large intestine hypotonia
Non-specific resistance	lysozymes in saliva
Sodium valproate	A patient with epilepsy and depressive reaction has been administered a drug that reduced epilepsy manifestations and improved the patient's psychic condition.
Addiction	Repetitive use of a drug may result in tolerance to its effect
Scabies	complains of skin itch, especially between fingers, in the inguinal creases, on the lower abdomen. Examination of these regions revealed there some small vesicles. Laboratory diagnostics allowed to establish that this condition had been caused by a representative of Arthropoda
Fibrinous suppurative peritonitis	stomach ulcer, revealed that peritoneal leaves were dull, plephoric, covered with massive yellow greenish films, the peritoneal cavity contained for about 300 ml of thick yellow-greenish liquid
Dysfunction digestive enzyme of saliva	the disturbance of primary hydrolysis Carbohydrates
Vitamin B12 deficiency anaemia	atrophic gastritis gave the following results: RBCs - $2,0 \cdot 10^{12}/l$ , Hb- 87 g/l, colour index - 1,3, WBCs - $4,0 \cdot 10^9/l$ , thrombocytes - $180 \cdot 10^9/l$ .
Atherocalcinosis	revealed constriction and deformation of coronary arteries, tuberos intima whose section appeared to be white and petrosal
Lysyl oxidase low activity	Osteolaterism is charcterized by a decrease in collagen strength caused by much less intensive formation of crosslinks in collagen fibrils
Renal corpuscle	specimen of kidney shows a structure consisting of a glomerulus of fenestrated capillaries and a bilayer epithelial capsule
Calcium chloride	ntagonist of magnesium sulfate and can eliminate symptoms of its overdose

Hypoparathyroidism	tonic convulsions. Examination revealed coarse hair, thinned and fragile nails, pale and dry skin. In blood: calcium - 1,5 millimole/l, phosphor - 1,9 milli-mole/l
Chronic bronchitis	a bronchial tissue sample revealed atrophy of mucous membrane, cystic degeneration of glands, focal metaplastic changes of lining prismatic epithelial cells into multilayer squamous cells; increase in goblet cell number; in some parts of bronchial wall and especially in the mucous membrane there was marked cellular inflammatory infiltration and growth of granulation tissue bulging into the bronchial lumen in form of a polyp
Thymus	behind the presternum
Metronidazole	trichomonal gingivostomatitis
Parietal cell	proper gastric gland shows a big irregular round-shaped cell. There are a lot of intracellular tubules and mitochondria in the cytoplasm
Reflexory apnea	When water affects mucous membrane of the inferior nasal meatuses, this causes "diver reflex" that provokes
Action potential	register a potential following "all-or-none" law and being able of undecremental spreading
Promedol	diagnosed with transmural myocardial infarction. to prevent cardiogenic shock
Cycle of tricarboxylic acids	pathways is amphibolic
Extrasystole arrhythmia	periodic heart ache, dyspnea during light physical activities. ECG reveals extraordinary contractions of heart ventricles
Nitroglycerine	anti-anginal drug that reduces the myocardial oxygen consumption and improves blood supply of myocardium
Abdominal muscles contract	patient to breath out fully after taking a normal breath
Impaired synthesis of calcitriol	most probable cause of rickets development
STI live vaccine	was a record of some anthrax cases
Hepatitis virus parenchymatous jaundice	Increase in ALT and AST rate
Gamma-amino butyric acid - epileptic	a biogenic amine synthesized from glutamate and responsible for central inhibition
Absolute hypoproteinemia	Toxic affection of liver results in dysfunction of protein synthesis
Lambliia	pyriform protozoa with twin nuclei and four pairs of flagella, two supporting filaments between the nuclei and a suckorial disc on the ventral side
Lingual artery	located within Pirogov's triangle
Echinococcosis	pain in his right subcostal area, nausea, vomiting. Roentgenoscopy revealed a tumour-like formation
Magnesium sulfate	From antihypertensive effect has also sedative, spasmolytic and anticonvulsive effect. The drug was taken parenterally. When it is taken enterally it acts as a laxative and cholagogue
Glibenclamide	with diabetes mellitus complicated by angiopathy has been recommended a drug which is a sulphonyl urease derivate of the second generation. It improves microcirculation and is known for its relatively good toleranc
Polycythemic hypovolemia	After a continuous attack of vomiting she was found to have reduced volume of circulating blood

Takes insulin	Inhibition of glycogenolysis
DNA ↓	Pterin derivatives (aminopterin and methotrexate) are the inhibitors of dihydrofolate reductase, so that they inhibit the regeneration of tetrahydrofolic acid from dihydrofolate
Mantoux test	Mononuclear cells, T-lymphocytes and lymphokines
Transferrin (siderophilin)	Hemoglobin catabolism results in release of iron which is transported to the bone marrow by a certain transfer protein and used again for the synthesis of hemoglobin
Escherichia coli EXCLUDED	on the Endo agar, which resulted in growth of a large number of colorless colonies
* Apneustic	Respiration is characterized by prolonged convulsive inspiration followed by a short expiration
Internal mechanism of prothrombinase activation - impaired	with pronounced hemorrhagic syndrome doesn't have antihemophilic globulin A (factor VIII) in the blood plasma
Causalgic mechanism of pain	got a gunshot wound of hip which damaged the sciatic nerve. Any impact on the affected limb causes severe, excruciating pain
It reduces the activity of cyclooxygenase	is the mechanism of antiplatelet action of acetylsalicylic acid
Hypochromic anemia	Release of immature red blood cells from the bone marrow
Loratadine	allergic dermatitis
Increase in natural killer level (NK-cells)	defense mechanism can prevent the development of a tumor
Liposclerosis	Microscopy of the coronary artery of a dead 53-year-old patient revealed luminal occlusion due to a fibrous plaque with some lipids
Chronic myelogenous leukemia	revealed bone marrow hyperplasia of tubular and flat bones (pyoid marrow), splenomegaly(6 kg) and hepatomegaly(5 kg), enlargement of all lymph node groups
Beta rhythm on the EEG	man sitting with his eyes closed, undergoes electroencephalography
γ-globulins	blood serum sample, taken from the patient with pneumonia, revealed an increase in one of the protein fractions
Turner's syndrome	Monosomy X
Medial malleolus	has a fracture in the region of the inner surface of the left ankle
Sulfanilamides	They are antivitamin of para-amino benzoic acid
Axillary nerve damaged	atrophy of the deltoid muscle
Cushing pituitary basophilism - obesity	general weakness, cardiac pain, increased appetite, no menstruation. Objectively: the height is 166 cm, weight 108 kg, the patient has moonshaped face, subcutaneous fat is deposited mainly in the upper body, torso and hips. There are also blood-red streaks. Ps- 62/min, AP-160/105 mm Hg.
Focal cardiosclerosis	long history of atherosclerosis and a previous myocardial infarction developed an attack of retrosternal pain. 3 days later the patient was hospitalized and then died of progressive cardiovascular insufficiency. a white fibrous depressed area about 3 cm in diameter with clear boundaries was found in the posterior wall of the left ventricle and interventricular septum
Respiratory hypoxia	Measurements of the arterial pCO <sub>2</sub> and pO <sub>2</sub> during an attack of bronchial asthma revealed hypercapnia and hypoxemia respectively
Withdrawal syndrome	with bronchial asthma had taken prednisolone tablets (1 tablet 3 times a day) for 2 months. Due to a significant improvement of her condition the patient suddenly stopped taking it.
Bacteriological method	dysentery
Compensated respiratory acidosis	with respiratory failure has blood pH of 7.35. pCO <sub>2</sub> test revealed hypercapnia. Urine pH test revealed an increase in the urine acidity
Abducent nerve damaged	to have medial strabismus, the inward deviation of the eyeball and inability to abduct the eyeball outwards
Cruciate ligaments damaged	knee joint a patient shows a drawer sign, that is the anterior and posterior displacement of the tibia relative to the femur
Round foramen	the second branch of the trigeminal nerve
Gonorrhea	purulent discharges from the urethra revealed some gramnegative beanshaped bacteria located in the leukocytes
Tuberculosis	of a cervical lymph node revealed a change of its pattern due to the proliferation of epithelioid, lymphoid cells and macrophages having nuclei in form of a horseshoe. In the center of some cell clusters there were non-structured light-pink areas with fragments of nuclei
Klinefelter syndrome	Revealed sex chromatin (single Barr body) in 30% of cells
Hemophilia	has been admitted to a hospital for hemarthrosis of the knee joint. From early childhood he suffers from frequent bleedings



V cordis magna	patient with ischemic heart disease revealed the impaired venous blood flow in the territory of the cardiac vein running in the anterior interventricular sulcus of heart
V umbilicalis	use the round ligament of liver. This manipulation involves bougienage (lumen dilatation) of the following vessel
Persistent temperature curve	had body temperature of 39°C with daily temperature fluctuation of no more than 1°C for 9 days
Sweat evaporation	The temperature in a production room is 36°C. Relative air humidity is 80
Anti-rabies vaccine	patient bitten by a rabid animal has an avulsive wound of shin
Cyst on the site of a hemorrhage	At autopsy the occipital lobe of brain was found to have a cavity 2,5x1,5 cm large filled with a transparent liquid. The cavity had smooth brownish walls
Mantoux test negative.	No cell-mediated immunity to tuberculosis
Atherosclerosis	revealed that retroperitoneal tissue was soaked with blood, the abdominal aorta had a sacciform protrusion including a defect with irregular edges. The wall of the aorta was here and there of stone-like density
UDP-glucose	The immediate donor of glucose residues during the glycogenesis is
Esophagus	revealed that the tumor had affected an organ whose lymphatic vessels drain directly into the thoracic duct
Idiosyncrasy	that individuals with genetically caused deficiency of glucose-6-phosphate dehydrogenase may develop RBC hemolysis in response to the administration of some antimalarial drugs.
Chronic osteomyelitis	with the progressing staphylococcal purulent periodontitis developed purulent inflammation of bone marrow spaces of the alveolar process, and then of the body of mandible. Microscopy revealed thinning of bone trabeculae, foci of necrosis, bone sequesters surrounded by the connective tissue capsule
Curariform - relaxation of all skeletal muscles	Blockade of N-cholinergic receptors of the synaptic membrane
A. brachialis	with a cut wound of the anteromedial region of shoulder and arterial bleeding
Skeletal tissues	somite. The zone was located close to the endoderm and the notochord
Gram staining method	reagents: solution of gentian violet, Lugol's solution, 96° alcohol, water magenta
Fat absorption disturbance	has normally coloured stool including a large amount of free fatty acids
Local hyalinosis	removed stomach revealed a deep roundish defect with regular edges at the lesser curvature of the antrum. The defect reached the muscular tunic and was 1,5 cm in diameter. Within the defect floor there was a translucent dense area resembling of a hyaline cartilage
Convection	the clothes reduce the heat loss through
Nonmuscular vein	vessel whose wall doesn't have the tunica media, the tunica externa is adherent to the surrounding tissues, the intima is composed of a basement membrane and endothelium
Burn toxemia stage of burn disease	with extensive burns of torso skin exhibits signs of severe intoxication
Crystalline lens	the eyeball shows a biconvex structure connected to the ciliary body by the fibers of the Zinn's zonule and covered with a transparent capsule
Aethimizolum	In order to stimulate breathing in a child born with asphyxia, the doctor gave him a drug injection into the umbilical vein
Colon ascendens	pain in the right lateral abdomen. Palpation revealed a dense, immobile, tumor-like formation.
Primary syphilis	biopsy of the soft palate arches for a suspected tumor (macroscopy revealed an ulcer with a dense floor). Study of the biopsy material revealed mucosal necrosis with infiltration of lymphocytes, epithelioid cells, plasma cells, single neutrophils in the submucosa. There were also apparent signs of endovasculitis and perivasculitis
Abnormal gametogenesis	revealed the trisomy 13 in the somatic cells (Patau syndrome).
Lymph node	organ covered with the connective tissue capsule with trabeculae radiating inward the organ. There is also cortex containing some lymph nodules, and medullary cords made of lymphoid cells
Trasyol (contrycal, gordox) inhibitor of:	Trypsin
Stomach	the injury of the upper third of the kidney
Normal (incomplete process of ossification)	X-ray examination of the hip joint. Examination revealed a 3 mm wide radiolucent zone between the head and the shaft of femur
Non-purulent interstitial myocarditis	myocardium revealed hyperemia, the stroma was found to have lymphohistiocytic infiltrates with degeneration of cardiomyocytes.
Promedol	To prevent pain shock, he has been given an injection of atropine along with a narcotic analgesic having antispasmodic effect

Developed edemata of the lower extremities	Increased hydrostatic pressure at the venous end of the capillary
Parasympathetic unconditioned reflexes	During the fight, a man had a cardiac arrest due to the strong blow to the upper region of the anterior abdominal wall
Indole	impaired digestion of proteins and their increased degradation
Aschner aschner	An attack of tachycardia that occurred in a patient was stopped by pressing on his eyeballs
Monoamine oxidase (MAO) enzyme	Oxidative deamination
Neutrophil granulocytes	are the first to get into the focus of inflammation caused by pyogenic bacteria
Reduced heat transfer	At the end of the working day a worker of a hot work shop has been delivered to a hospital. The patient complains of a headache, dizziness, nausea, general weakness. Objectively: the patient is conscious, his skin is hyperemic, dry, hot to the touch. Heart rate is of 130/min. Respiration is rapid, superficial
Alveolar macrophages	Alveolar space of the acinus was invaded by some bacteria which interacted with the surfactant. This led to the activation of the cells that are localized in the alveolar walls and on the surface.
Monotony of work	peculiarity of work in this workshop causes the greatest stress for the workers
Pediculus humanus humanus	had recently returned from a summer camp found some small whitish insects up to 3 mm long on the child's clothing.
Non-keratinizing squamous cell carcinoma	removed skin neoplasm revealed clusters and cords of atypical cells of stratified squamous epithelium, growing into the underlying tissue
Electrophoresis	serum albumins and globulins can be separated
Capsule formation	stained by Burri-Gins technique
Meningioma	revealed a dense well-circumscribed node of 6 cm in diameter in the cranial cavity. The node was attached to the dura mater and histologically consisted of clusters and micro-concentric structures of endothelial cells, psammoma bodies
Glycosaminoglycans excessive urinary excretion	Inherited diseases, such as mucopolysaccharidoses, are manifested in metabolic disorders of connective tissue, bone and joint pathologies
Liver	parenchymal organ shows poorly delineated hexagonal lobules surrounding a central vein, and the interlobular connective tissue contains embedded triads
Serological and gene diagnostics	viral hepatitis B
Fibrinous gastritis	examination the stomach of a patient with renal failure was found to have a yellow-brown coating on the thickened mucosa. The coating was firmly adhering to its surface and had significant thickness. Microscopy revealed congestion and necrosis of mucosal and submucosal layers, fibrin presence.
Translation inhibit	antibiotics (streptomycin, erythromycin, chloramphenicol).
Air embolism	During the intravenous transfusion of the saline the patient's condition deteriorated dramatically, and the patient died from asphyxiation. Autopsy revealed acute venous congestion of internal organs with the dramatic right heart dilatation. When the right ventricle was punctured underwater, the bubbles escaped.
Cervix part of the bladder	tumor of the prostate. was revealed that the tumor invaded the bladder.
Sinoatrial block arrhythmia	ECG revealed the missing of several PQRST cycles. The remaining waves and complexes are not changed
Ventricles	ECG of a patient displays an abnormally long R wave (up to 0,18 s). This is caused by a decrease in the conduction velocity
Glucuronidation	the function of detoxification by the production of a metabolite glucose
Depolarization threshold	It is required to evaluate the level of tissue excitability
The indicator of functional residual capacity	Expiratory reserve volume and residual volume
Filtration disturbed	he urine was found to contain macromolecular proteins
Aspirin	that blocks the action of cyclooxygenase
Pathogenetic principle of therapy	pneumonia patient been administered acetylcysteine as a part of complex therapy
Doxycycline	broad spectrum antibiotic as a causal treatment drug.
Bezredka method	Binding of IgE fixed to the mast cells
Rheumatic heart disease	died from heart failure revealed foci of fibrinoid necrosis located diffusely in the interstitial stroma, and often around the vessels. Such foci were surrounded by lymphocytes, macrophages, histiocytes. Pericardium was found to have signs of sero-fibrinous pericarditis
Pyruvate carboxylase deficiency	Citric acid cycle and gluconeogenesis is inhibited
Eicosanoids	linoleic and linolenic acids
Complete atrioventricular heart block	myocardial infarction, atria and ventricles contract independently from each other with a frequency of 60-70 and 35-40 per minute
Secretory IgA	development of local post-vaccination immunity

Hyperlipoproteinemia type IIa *	cholesterol - 12,3 mmol/l, total lipids - 8,2 g/l, increased low-density lipoprotein fraction (LDL).
Endonuclease	repair enzyme DNA
Malaria	Microscopy of blood smears
Atopy (local anaphylaxis)	ate some seafood. 5 hours later the trunk and the distal parts of limbs got covered with small itchy papules which were partially fused together
Hypochloremic alkalosis	hydrochlorothiazide for a long time
Ancylostomiasis	loss of appetite, bloating, duodenal pain, frequent bowel movements, dizziness. Ovosopic probes of feces and duodenal contents revealed some eggs covered with a transparent membrane through which 4-8 germinal cells could be seen
Lesch-Nyhan syndrome	hyperuricemia accompanied by the formation of tophi, urate calculi in the urinary tracts, as well as serious neuro-psychiatric disorders - reduced activity of the Hypoxanthine-guanine phosphoribosyltransferase
Erythropenia	injured and lost a lot of blood. What changes in peripheral blood are most likely to occur on the 2nd day after the injury?
Bacilli and clostridia	the autoclave reached only 100°C instead of the due 120°C. What microorganisms can stay viable under these conditions?
Schwann cells	glial cells will participate in regeneration, provide the trophism of the injured limb
Oxytocin	to stimulate the labor
Tranquilizers	attacks of epileptic seizures
Celecoxib	and varicose veins has been taking a non-steroidal anti-inflammatory drug for a long time, which caused thrombosis of skin veins.
Metaphase of the second division	a cell having a haploid number of chromosomes, and each chromosome consists of two chromatids. The chromosomes are located in the equatorial plane of the cell
Metaphase	the fully condensed chromosomes are located in the equatorial plane making the monaster
Left principal bronchus is affected	tumor of the bronchus which borders on the aorta
Adipose embolism	multiple fractures of the lower extremities
Chronic purulent bronchitis	revealed atrophy of the mucosa, metaplastic change from columnar to squamous epithelium, an increase in the number of goblet cells, diffuse infiltration of the bronchial wall with lymphoplasmacytic elements with a large number of neutrophilic granulocytes, pronounced sclerosis
Exotoxin effects	food poisoning caused by <i>C. botulinum</i> are double vision, abnormal functioning of the swallowing and breathing
mRNA codons	The sequence of amino acids in a polypeptide corresponds to the sequence of:
Intermittent administration of allergen	been diagnosed with pollinosis. Specific desensitization can be performed by:
Testosterone overproduction	virilism (growth of body hair, balding temples, menstrual disorders).
Iontophoresis with the use of iodine solution	Substitution of hydrogen atoms when the protein amino group contains a nitrogen atom
Reduction in the mass of functioning myocardiocytes	Pathogenetic mechanism contributed to the development of heart failure
Hyperkalemia	had been continuously taking drugs blocking the production of angiotensin II developed bradycardia and arrhythmia. A likely cause of these disorders is
Amlodipine - arterial hypertension	long-acting drug from the group of calcium channel blockers
Unformed dense connective tissue	Human skin has a high breaking strength. It is known that the skin consists of epithelial tissue and two kinds of connective tissue
Adrenaline, vasopressin	Rapid blood pressure recovery after the blood loss is provided by
Renin-angiotensin activation	stenosis of one of the renal arteries
Low density lipoproteins	hereditary familial hypercholesterolemia
Doxycycline hydrochloride cause	Dysbacteriosis
Microangiopathy	complication of diabetes can cause vision impairment
HDL	atherosclerosis. revealed an increase in the antiatherogenic lipoprotein fraction in the blood plasma. The treatment efficacy is confirmed by the increase in:
Decreased force of respiratory muscle contraction	revealed a decrease in tidal volume and respiratory amplitude compared to the situation of ten years ago
Tracheostomy	reduction of the anatomical dead space is typical for the following situation
Tetanus	A patient consulted a dentist about limited mouth opening (trismus). He has a history of a stabwound of the lower extremity
Autosomal dominant	Van der Woude syndrome (cleft lip and palate, lip pits regardless of gender).

Cerebral cortex	A patient complains that at the bare mention of the tragic events that once occurred in his life he experiences tachycardia, dyspnea and an abrupt rise in blood pressure. What structures of the CNS are responsible for these cardiorespiratory reactions in this patient?
Vitamin B2 (riboflavin).	FAD-dependent dehydrogenase
Carbohydrates	the minute oxygen uptake and carbon dioxide emission equalled to 1000 ml. What substrates are oxidized in the cells of his body?
Unconditioned sympathetic reflexes	sportsman spontaneously held breath for 40 seconds, which resulted in an increase in heart rate and systemic arterial pressure
Pagget's disease - disintegration of Collagen	The concentration of oxyproline in daily urine is sharply increased
Papilloma	gray-white larynx tumor with papillary surface has been detected. Microscopic investigation has shown the following: growth of connective tissue covered with multilayer, strongly keratinized pavement epithelium, no cellular atypia.
Fibrinopurulent peritonitis	2,0 liters of pus have been found in the abdominal cavity of the corpse. Peritoneum is lustreless and has grayish shade, serous tunic of intestines has grayishcolored coating that is easily removable
Myocardial infarction	died from pulmonary edema revealed a large yellow-grey nidus in the myocardium, and a fresh thrombus in the coronary artery
Cytochrome oxidase (aa3)	affected by cyanide
Isometric contraction	All the heart valves are closed
They remove cholesterol from tissues	mechanism of HDL antiatherogenic action
Pyruvate dehydrogenase complex impaired	blocks lipoic acid
Colienteritis	the strain of intestinal rod-shaped bacteria of antigen structure 0-111.
Phosphatidylcholine disruption of synthesis	hepatic steatosis
Obturation of bile duct	Feces contain high amount of undissociated fats and have grayish-white color
Mebendazole	Ascarid
Pseudomonas	urine of the patient with pyelonephritis revealed microorganisms that produced yellow-green pigment and a characteristic odor in meatpeptone agar
Taeniarhynchus saginatus	stool with white flat moving organisms resembling noodles. Laboratory analysis revealed proglottids with the following characteristics: long, narrow, with a longitudinal channel of the uterus with 17-35 lateral branches on each side
A. dorsalis pedis	a large artery running in the separate fibrous channel in front of articulatio talocruralis between the tendons of long extensor muscles of hallux and toes
Hyperfunction of the medulla	recurrent attacks of heartbeats (paroxysms), profuse sweating, headaches, hypertension, hyperglycemia, increased basal metabolic rate, and tachycardia.
Diffusing lung capacity reduction	increased thickness of alveolar-capillary membrane caused by a pathologic process
Long head of m. triceps brachii	A comminuted fracture of infraglenoid tubercle caused by shoulder joint injury
Pirenzepine	has chronic gastritis with increased secretion
Exudative inflammation	acute pain, redness, swelling of her right index finger. A few minutes later, there appeared a blister filled with a transparent liquid of straw-yellow color
Palmar interosseous muscles impaired	a lesion of the ulnar nerve is unable to flex the II and V fingers to the midline
Leffler	diphtheria was found to contain blue bacilli with a thickening at the poles
Aethimizolum	newborn to stimulate breathing
Anaerobic glycolysis	red blood cells do not contain mitochondria
Basedow's disease	thyroidectomy. Histological study of thyroid gland found the follicles to be of different size and contain foamy colloid, follicle epithelium is high and forms papillae, there is focal lymphocytic infiltration in stroma
Eukinetic arterial hypertension	has arterial hypertension caused by an increase in cardiac output and general peripheral resistance
Virus B hepatitis	Immune-enzyme analysis
Acquired hemolytic anemia	revealed a decrease in the amount of red blood cells and an increase in free hemoglobin in the blood plasma (hemoglobinemia). Color index is 0,85
Renal filter permeability	high levels of protein and erythrocytes in urine
Development of tissue lesion	main difference between the immune and allergic reactions
Tractus rubrospinalis disorder	As a result of a continuous chronic encephalopathy, a patient has developed spontaneous motions and a disorder of torso muscle tone
Febris internuttens	body temperature takes turns with drops down to normal levels during the day. The rise in temperature is observed periodically once in four days

Reduction of active nephron mass	pancreatic diabetes. The velocity of glomerular filtration is 9 ml/min
Bursa omentalis	has ulcer perforation in the posterior wall of stomach. What anatomical structure will blood and stomach content leak to?
Thromboplastin formation	hereditary coagulopathy that is characterised by factor VIII deficiency.
Ramus circumflexus	revealed constriction of a vessel located in the left coronary sulcus of the heart
Peroxidase and catalase	can break hydrogen peroxide down
Radiating kind of pain	pain in the left shoulder-blade region has been diagnosed with myocardial infarction
Stapedius muscle	has facial neuritis that has caused mimetic paralysis and hearing impairment. Hearing impairment results from the paralysis of the following muscle
Epithelium of the filiform papillae	white coating of the tongue
Olfactory receptors:	provide transfer of information to the cortex without thalamic involvement
Acetoacetate	diabetic ketoacidosis
Reticular formation damaged?	Deep prolonged sleep
Takes cholagogues	Intestinal motility stimulated
«2-macroglobulin, ai-antitrypsin - inhibit these processes	acute pancreatitis was likely to develop pancreatic necrosis, while active pancreatic proteases were absorbed into the blood stream and tissue proteins broke up.
Decreasing venous return	has fainted after quickly changing her body position from horizontal to vertical one. Which process from the ones listed below has caused the loss of consciousness in the first place?
Cholelithiasis	revealed scleral icterus. Laboratory tests revealed increased ALT activity, and stercobilin was not detected in the stool
Glaucine hydrochloride	has dry cough. non-narcotic antitussive drug
Linea terminalis	acute pain attacks in the right lumbar region. thenephrolithic obturation of the right ureter in the region between its abdominal and pelvic segments has been detected. What anatomical boundary exists between those two segments?
Depolarization threshold	When measuring total muscle action potential it was revealed that it was subject to the powerlaw relationship The reason for this is that individual muscle fibers differ in
Failure to assimilate iron leading to iron accumulation in tissues	with iron- deficiency sideroachrestic anemia, progression of which is characterised by skin hyperpigmentation, pigmentary cirrhosis, heart and pancreas affection. Iron level in the blood serum is increased
Calcium ion entry	stimulation of the sympathetic nerve branches that innervate the heart caused an increase in force of heart contractions because the membrane of typical cardiomyocytes permitted an increase in:
Decreased activity of glucose reabsorption enzymes	diagnosed with renal diabetes. What renal changes cause glucosuria in this case?
Closure of right interventricular foramen	As a result of past encephalitis, a male patient has developed an increase in cerebrospinal fluid pressure in the right lateral ventricle
X-linked hypogammaglobulinemia (Bruton type agammaglobulinemia)	revealed the following: absence of immunoglobulins of any type, and naked cells are absent from the lymph nodes punctate
Infectious mononucleosis	Enzyme-linked immunosorbent assay revealed antigen of Epstein-Barr virus
Simple branched alveolar gland	gland composed of several secretory saccule-shaped parts that open in the common excretory duct
True hermaphroditism	both male and female gonades revealed, with male structure of external genitals.
Pleiotropy	Marfan syndrome
Supraorbital	second branch trigeminal nerve What cranial foramen does this branch go through?
Benadryl	has antihistamine and hypnotic effect (insomnia induced by allergic rash and itch)
Destruction of the vestibular nuclei Deiters	decerebrate rigidity the muscle tone is to be decreased
Obstructive pulmonary disease	pulmonary ventilation, reduction of forced expiratory volume has been detected
Sternal lymph nodes	tumor superior lobe of the right lung. There is a probability of metastases spread to
Brill's disease	characteristic rash, fever, dizziness has been admitted to a hospital. He has been provisionally diagnosed with typhus. No similar cases have been reported. In his youth (15 years old) the patient suffered typhus in a boarding school
Neisseria meningitidis	Gram-stained smear of cerebrospinal fluid contained many neutrophils and Gram-positive diplococci
Epinephrine hydrochloride	anaphylactic shock
Myelin	Degenerative changes in posterior and lateral columns of spinal cord (funicular myelosis) caused by methylmalonic acid accumulation occur in patients with B12 - deficiency anemia.
5 segments	inferior lobe of the left lung
Tropic hormones deficiency	adenohypophysis of an animal has been removed. The resulting

	atrophy of thyroid gland and adrenal cortex has been caused
Axons of motor neurons	anterior spinal cord root
Diclofenac sodium	Inhibition Cyclooxygenase-1 (COX-1)
Trichinosis	was an outbreak of helminthiasis manifested by cramps and facial edema. The developed preventive measures in particular included ban for eating infested pork even after heat processing
Uroporphyrinogen III cosynthase deficient	erythropoietic porphyria (Gunther's disease) have teeth that fluoresce with bright red color when subjected to ultraviolet radiation; their skin is light-sensitive, urine is red-colored
Left middle ear disease	During the air and bone conduction tests it was revealed that in the left ear the tones were louder by bone conduction.
Duodenojejunal flexure	to locate the origin of the mesenteric root
Ethanol	methanol intoxication
Filtration disturbed	autoimmune renal injury
S2 - S4 damaged	victim developed urinary incontinence
Paracetamol	Teratogenicity
Increased proteolysis	disorder of protein metabolism that is manifested by aminoacidemia in the laboratory blood test values, and clinically by the delayed wound healing and decreased synthesis of antibodies
Tryptophan deficiency	Symptoms of pellagra (vitamin PP deficiency)
Metoprolol	B -adrenoreceptor blocker
Modification variability	female suffered rubella during pregnancy. The child was born with developmental abnormalities, namely cleft lip and palate. The child's genotype is normal
Desmosome	cell-to-cell adhesion consisting, in each cell, of an attachment plaque. The intercellular space is filled with electron-dense substance including transmembrane fibrillar structures
Viscerovisceral reflex	pain in the heart area during acute attack of gastric ulcer
Potassium permanganate	acute morphine hydrochloride intoxication
Immune rejection	biopsy of transplanted kidney the following has been revealed: diffuse infiltration of stroma by lymphocytes and plasmocytes and necrotic arteritis
Helicase	DNA replication occurs by a signal from the cytoplasm, and a certain portion of the DNA helix unwinds and splits into two individual strands. What enzyme facilitates this process?
Dimercaprol - contains two active sulfhydryl groups	acute intoxication caused by salts of high-density metals (lead, most probably).
Glibenclamide	Synthetic hypoglycemic long-acting drug that is sulfonylurea derivative.
Glaucoma	A patient has been given atropine sulfate for rapid relief of spastic colon symptoms. The use of this drug is contraindicated during the following disease:
Anthropozoonoses	Specific human parasites cause the diseases
Increased prothrombin time	Production of gamma-carboxyglutamate disorder
Cholinomimetics	hypohydration, salivation, diarrhea, muscle spasms
Chronic pyelonephritis	chronic renal disease has revealed the following: sclerosis, lymphocytic and plasmocytic infiltration of renal pelvis and calices walls, dystrophy and atrophy of tubules. Remaining tubules are enlarged and stretched with colloid masses, epithelium is flattened out ("scutiform" or "shield-shaped" kidney).
Periosteum	cortical shaft, basophilic cells with developed synthesis organelles can be seen on the bone surface under the layer of fibers. These cells take part in bone tissue regeneration
Adenocarcinoma	dense gray-white nodule in form of a nodule 2 cm in diameter in the subpleural portion of the upper right lobe. The pleura in this region was thickened, in the pleural cavity there was a small amount of serous hemorrhagic fluid. region revealed some glandular structures with signs of cellular atypia and abnormal mitoses, which were found within the fibrous connective tissue
Polymerase chain reaction	Hepatitis B is diagnosed through laboratory tests that determine the presence of HBA-DNA in blood serum
Clean ulcer	Peritonitis, revealed, with numerous ulcers covering the colon mucosa and reaching as deep as muscular and, in places, serous tunic. The ulcers have smooth edges and even floor. The intestinal wall is perforated

Cytomegalovirus	revealed interstitial pneumonia, alveolocyte desquamation and their metamorphoses: alveolocyte enlargement, large intranuclear inclusions surrounded by lightly-colored areas. Transformed cells resemble <i>owl's eye</i> .
Eukaryotes	have a nucleus surrounded by a nuclear membrane. Genetic material is concentrated predominantly in the chromosomes which consist of DNA strands and protein molecules. These cells divide mitotically
Pathological hypo-regeneration	developed pseudoarthrosis after a closed fracture of the femur
rRNA	Nucleolar organizers of the 13-15, 21, 22 human chromosomes contain about 200 cluster genes that synthesize RNA. These regions of chromosomes bear the information on the following type of RNA
Down syndrome	Trisomy 21
Methionine, B6, B12	lipotropics prevent the development of steatosis, decrease in the utilization of VLDL neutral fat
Iso-osmolar dehydration	has severe blood loss caused by an injury
Succinate	ABA is converted into a metabolite of the citric acid cycle, that is:
Essential hypertension	shrunken kidneys weighing 50 mg, with finegrained surface and uniformly thinned substance. Microscopic investigation has shown the thickening of arteriole walls due to accumulation of homogeneous anhistc pink-coloured masses in them. Glomerules were undersized, sclerotic, with atrophied tubules
Dagnini-Aschner reflex	sudden and expressed attack of tachycardia. A doctor has managed to slow down his heart rate by pressing upon the eyeballs and thus causing the following reflex
Scirrhus undifferentiated carcinoma	biopsy samples taken from the thickened edges of a gastric ulcer revealed small clusters of small, markedly atypical hyperchromatic epithelial cells that were localized in the overdeveloped stroma
Vicarious hypertrophy	congenital hypoplasia of the left kidney. Ultrasound examination revealed that the right kidney was markedly enlarged and had regular shape. No functional disorders were revealed
Basophil function	Participation of heparin and histamine in metabolism
Myotropic antispasmodics	intestinal colic against the background of essential hypertension
Peripheral vasodilation	The fever up to 38,5oC had lasted for a week, presently there is a decrease in t down to 37,0oC. Specify the leading mechanism in the 3rd stage of fever:
Anthrax agent antigens	laboratory animal skins are analyzed by means of Ascoli precipitaion test.
Flavin coenzymes deficiency	specific symptoms (epithelial, mucosal, cutaneous, corneal lesions)
Osmotic haemolysis	0,3% solution of NaCl
Adrenal gland	cortical and medullary substances separated by connective tissue layer in the endocrine gland specimen. Parenchyma cells make up three zones in cortical substance, with rounded masses in the superficial zone, parallel chords in the middle one, reticular structure of cell chords in the deep one
Embryonic shield	the structure that separates the amni-otic cavity from the yolk sac
Rod receptor cell	neural origin. The terminal portion of the cell dendrite has cylindrical shape and consists of 1000 closed membrane disks
Sphingolipids	Disruption of nerve fiber myelinogenesis causes neurological disorders and mental retardation
Chronic abscess	removal of a cavitory liver lesion 2 cm in diameter. the cavity wall was formed by dense fibrous connective tissue; the cavity contained muddy, thick, yellowish-greenish fluid with an unpleasant odor. fluid consisted mainly of olymorphonuclear leukocytes
Retinol acetate	vitamin that affects photoreception processes by producing rhodopsin, the photosensitive pigment
Croupous	diphtheria. the mucosa of the larynx, trachea and bronchi had thickened, edematous, lusterless appearance and was covered with gray films which could be easily removed
Gierke disease	Glucose-6-phosphatase
Hemic hypoxia	hydrogen sulfide intoxication.
Genocopy	child with a normal karyotype is diagnosed with cleft lip and hard palate, defects of the cardiovascular system, microcephaly. The child's mother suffered rubella during pregnancy
A1 -proteinase inhibitor deficiency	pulmonary emphysema caused by splitting of alveolar septum by tissular tripsin
Lig.inguinale	During a surgery for femoral hernia a surgeon operates within the boundaries of femoral trigone. What structure makes up its upper margin?
Investing layer of cervical fascia	forms a sheath for trapezius muscle

Doxycycline hydrochloride	Avoid long stay in the sun - recommendations
Increasing blood viscosity	In a dysentery patient undergoing treatment in the contagious isolation ward, a significant increase in packed cell volume has been observed (60%). What other value will be affected by this change?
Sinus tachycardia	after stress. The pulse is 104 bpm, P-Q=0,12 seconds, there are no changes of QRS complex.
Allotransplantation	has undergone keratoplasty in the transplantation center, cornea has been taken from a donor, who died in a road accident
V jugularis externa	bleeding. During the initial debridement of the wound the surgeon revealed the injury of a vessel found along the lateral edge of the sternocleidomastoid muscle
Trachea	organ with walls comprised of mucous, submucous, fibrous-cartilaginous and adventitial membranes. Epithelium is multirowed and ciliated, muscular layer of mucous membrane is absent, submucous membrane contains serousmucous glands, hyaline cartilage forms open circles.
Insulin	It inhibits GP and activates GS
Alkalosis, hypocapnia, temperature drop	oxyhemoglobin dissociation curve shifted to the left
Dysbacteriosis	doxycycline hydrochloride caused imbalance of the symbiotic intestinal microflora.
Nitrazepam	GABA-ergic system activation
Inferior colliculi of corpora quadrigemina	the orienting response to auditory signals.
Chronic bronchitis, pneumosclerosis	Squamous cell carcinoma of bronchus with keratinization
Function of heart contractions	rectangular cells from 50 to 120 micrometers large with central position of nucleus and developed myofibrils. The cells are connected by intercalated discs.
Respiratory arrest	Poisoning caused by botulinum toxin that prevents calcium ions from entering axone nerve endings of motoneurons is life-threatening because it can lead to:
HDL antiatherogenic action	They remove cholesterol from tissues
Antrectomy	Gastrin disrupted
Premenstrual	Atretic bodies and developed yellow body can be observed along with follicles of various orders in an ovary specimen. What stage of ovarian and menstrual cycle
Melanocytes	has white nonpigmented spots on the skin. The spots appeared after the patient became 10 years old, and they constantly grow
Leishmania tropica major	from Samarqand was bringing with them gerbils. During examination in customs office ulcers were detected on the skin of the animals
Uric acid	kidney stones
Lobe apexes converge towards nipples	mammary gland
Amebiasis	African country and had recurrent cases of acute gastrointestinal disturbance
Contraction of arteriole muscles	Angiotensin pressor effect is based on:
Medulla oblongata	Electrical activity of neurons is being measured They fire prior to and at the beginning of inhalation. Where are these neurons situated?
Acute renal failure	Poisoning caused by mercury (II) chloride (corrosive sublimate) occurred in the result of safety rules violation. In 2 days the patient's diurnal diuresis became 620 ml. The patient developed headache, vomiting, convulsions, dyspnea; moist crackles are observed in the lungs
HbS	Pathological hemoglobin
Promedol	For pain shock prevention he was administered an antispasmodic narcotic analgesic along with atropine
Ammonia - hepatic coma	patient was found to present no reflexes, periodical convulsions, irregular breathing
Tonsils affected	peripheral immunogenesis organs
Destruction of the vestibular nuclei of Deiters	In a cat with decerebrate rigidity the muscle tone is to be decreased. This can be achieved by:
Vestibuloreceptors of utricle and saccule	one of extensor muscles became reflectory higher due to the activation of the following receptors
Inferior part of precentral gyrus	regulating activity of head muscles
Digoxin	has cumulative action
Gene amplification	polymerase chain reaction
Melanoma	removed eye retina and choroid revealed clusters of atypical cells with marked polymorphism of cells and nuclei, with a moderate number of mitoses including the pathological ones. The cell cytoplasm and intercellular medium contained brown pigment resulting in positive DOPA reaction. Perls' reaction was negative.
Absolute refractoriness	During ventricular systole the cardiac muscle does not respond to additional stimulation



Gonorrhoea	from vaginal secretion revealed gramnegative bean-shaped diplococci.
Uric acid salt in the urine	recurrent pain attacks in his hallux joints and their swelling. Urine analysis revealed its marked acidity and pink colour
Subclinical diabetes mellitus	plasma glucose level 4,8 mmol/l, one hour after glucose challenge it becomes 9,0 mmol/l, in 2 hours it is 7,0 mmol/l, in 3 hours it is 4,8 mmol/l.
A. Ileocolica	During appendectomy a patient had the a. appendicularis ligated. This vessel branches from the following artery
K vitamin deficiency	by disruption of posttranslational modification of blood-coagulation factors II, VII, IX, and X in the liver
Distántia cristarum	measure the distance between the two iliac crests
Ganglion ciliare damaged	Disruption of accommodation and pupil constriction is observed
Interferon	Lymphocytes and other cells of our body synthesize universal antiviral agents as a response to viral invasion
Fasciculus gracilis	damaged spinal cord white matter in the middle area of the posterior white column, disrupted proprioceptive sensibility of the lower limb joints and muscles
Sphygmography	elderly person the change in heart force and vessels physical properties were detected; they can be clearly observed on graphic recording of carotid pulse waves
Lidocaine hydrochloride	antiarrhythmic drug should be chosen to avoid lowering cardiac output
Hypersthenic body type	reveals deviation of his electrical axis of heart to the left
Neoplastic erythroid hyperplasia	erythrocyte count is $6 \cdot 10^{12}/l$ , hemoglobin is $10,55 \text{mmo}^b/l$ . Vaquez's disease was diagnosed
Ischemia	increasing pain in his leg muscles occurring during walking and forcing him to make frequent stops. Objectively: skin of legs is pale, no hair-covering, toenails are with trophic changes, no pulsation of pedal arteries
Subfebrile	body temperature varying from $36,9^{\circ}\text{C}$ to $37,9^{\circ}\text{C}$ .
L-thyroxin	Prolonged treatment of hypothyroidism has caused general dystrophy, dental caries, tachycardia, tremor of extremities. What drug is the cause of these side effects?
Triacylglycerol lipase	intracellular lipolysis
Streptococci	diagnosed with glomerulonephritis based on her clinical symptoms and the results of urine analysis. Anamnesis states chronic tonsillitis
Cholera	Bacteria with the following properties were detected in his feces: gramnegative curved mobile monotrichous bacilli that do not produce spores or capsules. They are undemanding to nutrient medium but require alkaline reaction (pH 8,5-09,5).
IgM	Indicate recent infection
Increased pressure in portal vein system	developed ascites. What is the main mechanism
Restrictive extrapulmonary ventilatory impairment	has sustained an injury to his thorax in a traffic incident, which caused disruption of his external respiration
Furuncle	suffering from diabetes mellitus has developed a painful conical induration, bluish-red with yellow center, on the skin of his neck
Hemolytic anemia	revealed evident glutathione peroxidase deficiency and low concentration of reduced glutathione
Meningococcosis	Hemorrhagic rash is observed on the skin and mucosa. Bean-shaped gramnegative microorganisms situated in pairs are detected in the blood.
Hyperpolarization	Membrane potential equals 90 mV Its initial rest potential was 85 mV
Substantia nigra	dopamine synthesis
Iodine solution	alogen-containing antiseptic with fungicidal properties, to treat dermatomycosis
Morphine	narcotic analgesic
White adipose tissue	spherical cells, each of them containing a large fat drop covered with thin cytoplasm layer in its center
Temporal summation	was aimed at testing flexor reflex in a spinal frog, which was initiated by simultaneous stimulation with isolated pre-threshold electrical impulses. The frequency of those impulses was such, that the reflex occurred
Feces	with acute dysentery has been treated for 3 days in an infectious diseases hospital. On admission there were complaints of high temperature, stomachache and fluid excrements with mucus as often as 8-10 times a day. What sample should be taken for analysis?
9 regions abdomen	
Varicella zoster virus (chickenpox virus) *	treated for shingles in a neurology unit
Adsorbents	to decrease absorption and introduction of the poison to her body
Bedsore	neck fracture, who for a long time had to remain in bed in a forced (supine) position, has developed dark-brown lesions along the backbone; soft tissues are swollen, in the areas of maceration there is a foul-smelling liquid

Fluconazole	candidiasis
Thymus agenesis	9-month-old girl's body, who died due to severe pneumonia complicated with sepsis, lack of thymus is observed. In the lymph nodes the lymphoid follicles and cortical substance are absent; follicles of spleen are reduced in size with no light zones and plasma cells.
Tuncus coeliacus - acute circulatory disturbance	A patient with suspected necrosis of the upper abdominal cavity organs was delivered to a surgical department.
Leprosy	Among macrophages there are large cells with fat inclusions, which contain microorganisms in spheric packages (Virchow's cells).
Gout (podagra)	X-ray has revealed metatarsophalangeal joint space narrowing, erosion, periarticular calcification of the both joints, osteoporosis. Microscopy has revealed inflammatory granulomatous reaction surrounding necrotizing masses in the area of the first metatarsophalangeal joint
Furosemide	risk of cerebral edema.
Codominance	A person with the fourth blood group (genotype IAIB) has in erythrocytes both antigen A controlled by allele IA and antigen B controlled by allele IB.
Contraction of m. tensor tympani	revealed his tympanic membrane to be intact. What defense reflex prevented the tympanic membrane from rupturing?
Hypovolemic shock	lost approximately 30% of the blood volume. blood pressure is 60/40 mm Hg, heart rate is 140/min., respiratory rate is 30/min., conscious.
Thoracic cavity - anterior mediastinum	anterior to trachea (previsceral space).
The water is safe for consumption	total bacterial count in 1,0 ml of water is 80, coli index is 3.
Isometric	muscle contraction occurs in an upper limb during an attempt to lift a load beyond one's strength
Respiratory acidosis	disrupted patency of the airways at the level of small and medium-sized bronchial tubes.
Botulism	culture inoculated in Kitt-Tarozzi medium revealed microorganisms resembling a tennis racket
Ectoderm	microcephaly.- the mother had been taking actinomycin D during her pregnancy. What germinal layers have been affected by this teratogen?
Alveolar tendency to recede	demonstrates sharp decrease of pulmonary surfactant activity
Rapid-acting insulin	diabetic coma. Blood sugar is 18,44 mmol/l.
Cholera	Initial inoculation of water in 1% peptone water resulted in growth of a thin film on the medium surface in 6 hours
Translocation	One chromosome of the 15th pair was abnormally long, having a part of the chromosome belonging to the 21st pair attached to it
Serous inflammation	suffered a thermal burn, developed painful boils filled with turbid liquid in the skin
Right-hand side of the spinal cord damaged	has developed muscle paralysis of the extremities on the right, lost pain and thermal sensitivity on the left, and partially lost tactile sensitivity on both sides.
Tropical type of adaptive	elongated body, height variability, decreased volume of muscle mass, increased length of limbs, decreased size and volume of rib cage, increased perspiration, decreased indices of base metabolism and fat synthesis
Radial nerve is damaged	revealed a displaced humeral shaft fracture on the right in the middle one-third of the humerus; the patient cannot extend the fingers of his right hand
Secondary systemic	suffering from chronic fibrous-cavernous pulmonary tuberculosis for 24 years, has been delivered to a nephrology department with uremia. Intravital diagnostic test for amyloid in the kidneys was positive
Viral hepatitis type B	detected HBs antigen in blood serum
Malaria	suffering from wasting fever for a long time, revealed enlarged blackened liver and spleen. Bone marrow was hyperplastic and blackcolored as well. Cerebral cortex was smoky grey.
Ciprofloxacin	treatment of gonorrhea
Carbohydrate starvation of the brain	insulin. After a certain period of time the patient developed fatigue, irritability, excessive sweating
Anterior quadrigeminal bodies	Orientation reflexes in response to strong light stimuli
Renal filter permeability	Urine analysis has shown high levels of protein and erythrocytes in urine
Elastic artery	from 40 to 60 fenestrated elastic membranes within the middle coat of vessel
Acute necrotic nephrosis	due to mercury intoxication presents with the following processes in the kidneys: focal necrotic changes of tubules of major renal regions, edema, leukocyte infiltration and hemorrhages in the interstitial tissue, venous congestion
Ventilatory disregulation	respiration is slow and shallow due to suppression of the respiratory center

Erythrocytes exit from depot	10 minutes after the beginning of heavy physical work a person demonstrates increase of erythrocyte number in blood from $4,0 \cdot 10^{12}/l$ to $4,5 \cdot 10^{12}/l$ .
Lymph node	organ covered with the connective tissue capsule with radiating trabeculae. There is also cortex containing lymph nodules, and medullary cords made of lymphoid cells.
Superior parietal lobule	the ability to recognize shapes of objects by touch (stereognosis)
Anthrax	the spleen is enlarged, flaccid, dark cherry-red in the section, yields excessive pulp scrape. Soft meninges of fornix and base of the brain are edematous and saturated with blood ("cardinal's cap").
Biceps muscle of the arm	Flexing function was disrupted in the shoulder and elbow joints
Salbutamol	bronchial asthma and prolonged tachycardia
Acetyl-CoA	The key reaction of fatty acid synthesis is production of malonyl-CoA. What metabolite is the source of malonyl-CoA synthesis?
Telophase	At a certain stage of cell cycle chromosomes reach cellular poles, undergo despiralization; nuclear membranes are being formed around them; nucleolus is restored
Statokinetic reflex during movements with angular acceleration disappear	Vestibular receptors of semicircular canals of an animal have been destroyed
Ileum	Meckel's diverticulum
Cancer metastases	A patient died of cancerous cachexia with primary localization of cancer in the stomach. Autopsy revealed acutely enlarged liver with uneven surface and numerous protruding nodes; the nodes had clear margins in the section, rounded shape, gray-pink color, varying density, sometimes contained necrotic foci. Histologically: there are atypical cells in the nodes. What pathologic process occurred in the liver?
Progesterone	ovary demonstrates a spherical structure composed of large glandular cells containing lutein
Extrasystole	ECG reveals extraordinary contractions of heart ventricles
Sympathetic unconditioned reflex	Pupil dilation occurs when a person steps from a light room into a dark one
Repair	the damaged interval of DNA molecule has been restored to its initial structure with a specific enzyme
Optic chiasm	functional loss of nasal halves of the retinas. What area of visual pathways is affected?
Folic acid	macrocytic anemia
Histamine	stung by a bee. Immediately after she developed pain in the stung area. In a few minutes there developed a vesicle, erythema and intense itch; later - urticaria and expiratory dyspnea
Granulomatous	suffering from rheumatism and died of heart failure, revealed pancarditis. Histological investigation of myocardium of the left ventricle posterior wall and interventricular septum detected perivascular cellular focal infiltrates composed of macrophages and creating palisade structures surrounding areas of fibrinoid necrosis
Hypoxic hypoxia	top of Elbrus, a mountain climber experiences oxygen starvation, dyspnea, palpitations, and numbness of the extremities
Coma	due to massive cerebral hemorrhage. Blood pressure is 70/30 mm Hg, heart rate is 120/min., respiratory rate is 4/min., unconscious, no response to external stimuli
Sphingomyelinase	A 3-year-old girl with mental retardation has been diagnosed with sphingomyelin lipidosis (Niemann-Pick disease).
Membrane ionic	Local anesthetics (novocaine, lidocaine and others) decreases pain sensitivity of tissues by blocking $Na^+$ and $K^+$ ions from permeating membranes of nerve fibers and endings. Such mechanism of drug action is called:
Retinol acetate	dry peeling skin, frequent cases of acute respiratory diseases, xerophthalmia.
Spinal ganglion	Parenchyma of an organ is composed of pseudounipolar neurons localized under the capsule of connective tissue. Central place belongs to nerve fibers
Ascariasis	chest pain, cough, fever. Roentgenography of lungs revealed eosinophilic infiltrates that were found to contain larvae
Gamma-carboxyglutamic acid	Activation of a number of hemostatic factors occurs through their joining with calcium ions. What structural component allows for adjoining of calcium ions?
Mixed infection	Material obtained from a patient contains several types of microorganisms (staphylococci and streptococci) causative of the patient's disease
Sinus tachycardia	palpitations after stress. Pulse is 104/min., P-Q=0,12 seconds, there are no changes in QRS complex

DLM	A laboratory has been investigating virulence of a diphtheria agent. In the process of the experiment the infection was introduced intraperitoneally into test animals. The dosage of bacteria resulting in 95% mortality of test animals was found. What unit of virulence measurement was determined?
Pumping ability of the left heart	Patient's systolic blood pressure is 90 mm Hg, diastolic - 70 mm Hg. Such blood pressure is caused by decrease
Ulnar nerve damaged	complaints of lost sensitivity of the skin of the little finger
Neoplastic erythroid hyperplasia	revealed the following: erythrocyte count is $6 \cdot 10^{12}/l$ , hemoglobin is 10,55 mmol/l. Vaquez's disease was diagnosed
Fructose 1-phosphate	Fructosuria is known to be connected with inherited deficiency of fructose 1-phosphate aldolase. What product of fructose metabolism will accumulate in the organism resulting in toxic action?
Cardiac volume overload	An athlete (long-distance runner) during a contest developed a case of acute cardiac insufficiency. This pathology resulted from:
Amyloidosis	renal investigation of a patient, who for a long time had been suffering from osteomyelitis and died of progressing renal failure, the following was revealed: deposits of homogeneous eosinophilic masses in glomerular mesangium, arterial and arteriolar walls, and stroma, which colored red when stained with Congo red
Temporal lobe on both sides	conditioned digestive reflex in response to a sound stimulus
Pantothenic acid	Coenzym A derivative
Celecoxib	anti-inflammatory selective COX-2 inhibitor
Disruption of protein metabolism regulation	with diabetes mellitus suffers from persistently nonhealing surgical wound, which is a sign of disrupted tissue trophism. What is the cause of such disorder?
Bacteriological	pseudotuberculosis.
Uterus	organ with its wall consisting of three membranes. The inner membrane has tubular glands and undergoes cyclic changes
Acute undifferentiated leukemia	complaints of fatigue, fever up to 38°C - 40°C. Objectively: the liver and spleen are enlarged, lymph nodes on palpation are slightly enlarged, dense, painless. Blood test: Hb- 100 g/l; erythrocytes - $2,9 \cdot 10^{12}/l$ ; leukocytes - $4,4 \cdot 10^9/l$ . Leukogram: 68% of blast cells. Cytochemical investigation of blast cells revealed negative reactions to glycogen, peroxidase, non-specific esterase, lipids
Helicobacter	urease activity test was positive
A. occipitalis	child has a wound located posterior to the mastoid process. Bright red blood flows from the wound. Damaged are the branches of the following artery:
Starch	investigating human saliva it is necessary to assess its hydrolytic properties

Chingamin	was prescribed a histoschi-zontocidal antimalarial drug as a personal means of disease prevention
Systolic and diastolic pressure will decrease	Due to blood loss the circulating blood volume of a patient decreased
Metoprolol	chemic heart disease and cardiosclerosis with hypertensive syndrome
Plasma oncotic pressure decreased:	with glomerular filtration rate of 180 ml/min., while norm is 125±25 ml/min
Ulcer disease	with polyarticular rheumatoid arthritis was prescribed a non-steroidal antiinflammatory drug - diclofenac sodium. After the patient has been taking it for some time, her concomitant disease exacerbated, which forced the doctor to cancel the prescription of this drug. What concomitant disease could necessitate cancellation of this drug prescription?
Secondary fibro-cavitary tuberculosis	of tuberculosis in the corrective labor camp. Autopsy of the body revealed deformation and diminishing of both lung apices; in the both upper lobes there are multiple cavities with dense walls 2-3 mm thick; in the lower lung lobes there are disseminated foci of caseous necrosis varying from 5 mm to 2 cm in diameter
Acute lymphoblastic leukemia	died of acute posthemorrhagic anemia caused by profuse hemorrhage in the gastrointestinal tract. Postmortem study revealed the following: macroscopically there were acutely enlarged various groups of the lymph nodes, thymomegaly, hepatosplenomegaly, and bright red bone marrow; microscopically there was hypercellular bone marrow with monomorphic infiltrations composed of blasts and diffuse-focal tumor infiltrations in the liver, spleen, lymph nodes, brain substance and tunics
Acute radiation sickness	served on a nuclear submarine, revealed the following pathologies: bone marrow atrophy (panmyelophthisis), anemia, leukopenia, thrombocytopenia, lymphocytes disintegration in the lymph nodes, spleen, gastrointestinal lymphatic system, and hemorrhages into the adrenal glands
Phlegmatic	to have strong, balanced, inert type of higher nervous activity according to Pavlov's classification
Rabies	revealed an edema, hyperemia, and small hemorrhages in the medulla oblongata. chromatolysis, hydropia and nerve cell necrosis are observed; within the cytoplasm of hippocampal nerve cells there are eosinophilic structures (Negri bodies) detected.
Celecoxib	Rheumatoid arthritis.
Filtration barrier	the kidney shows fenestrated endothelium lying on the basement membrane; the external surface of the membrane has adjacent dendritic epithelial cells
Mediastinum posterius	from tonsillitis complicated with retropharyngeal abscess that is localized in the spatium retrovi-scerale
Ambroxol	mucolytic action
Histamine H2-receptor antagonists	Stomach with hyperacidity
Influenza	Direct and indirect immunofluorescence (IF)
B lymphocytes and plasma cells	IgA, IgM
Proprioceptors of the working muscles	receptor activation was the most contributory to inducing the pressor reflex
Incomplete tetanus	muscular contraction will develop, if each following impulse occurs within the relaxation period after the previous single contraction of the muscle
Teniasis	During dehelminthization there was a 3,5-meter-long tapeworm produced from the patient's intestine. There are 4 suckers and hooks on the tapeworm's scolex. Mature segments of the tapeworm are immobile and have up to 12 uterine branches
Cytochrome oxidase	Transfer of reduced equivalents to molecular oxygen
Decreased venous return	to quickly change her position from horizontal to vertical
Massive progressive necrosis	acute hepatic failure leading to his death. On autopsy the liver is diminished, flaccid; the capsule is wrinkled; the tissue is ochreyellow on section. fatty degeneration of hepatocytes, necrotic central segments of the hepatic lobes
Closure of the right interventricular foramen	As a result of past encephalitis, a man has developed an increase in cerebrospinal fluid pressure in the right lateral ventricle. What can be the cause of this condition?
Monocytes	main producers of endogenous pyrogen that had caused such temperature rise
Clostridium perfringens	Cultivation on a blood-glucose agar resulted in growth of the colonies surrounded with hemolysis zone
Depolarization	ECG shows that in the second standard lead from the extremities the P waves are positive, their amplitude is 0,1 mV (norm is 0,05-0,25 mV), duration -0,1 seconds (norm is 0,07-0,10 seconds).
Abscess	bilateral bronchopneumonia, shows in the left lung lower lobe a cavity 5 cm in diameter, filled with liquid yellowish-white substance
Counteraction to lipid peroxidation	pentose-phosphate pathway actively functions in the erythrocytes

Exocrine parietal cells	gastric mucosa. In the sample there are numerous cells with oxyphilic cytoplasm in the glandular epithelium
Semidominance	Cystinuria manifests itself in a human as cystine stones in the kidneys (homozygous individuals) or increased cystine content in the urine (heterozygous individuals). Cystinuria is a monogenic disorder. Determine the type of interaction between the genes of cystinuria and normal urine cystine excretion:
Undifferentiated small cell carcinoma	polypoid growth 1,0 cm in diameter with ulcer in its center in the upper lobe of the right lung. Histological investigation revealed a tumor composed of lymphocyte-like cells with hyperchromic nuclei, the cells form layers and bands
Middle meningeal artery damaged	The fracture line crosses the spinous foramen of the sphenoid
Rod cells	cells that fulfill this photoreceptor function
Thyroid gland	an organ consisting of sacculle-shaped rounded structures of varying size. Inside these structures there is a gel-like non-cellular substance - colloid; structure walls are composed of one layer of cuboidal cells that lay on the basement membrane. Between the sacculles there is connective tissue with vessels
Reflex apnea	Water affects the mucosa of lower nasal passages resulting in diving reflex
Translation initiation in procaryotes effect	Streptomycin and other aminoglycosides prevent the joining of formyl-methionyl-tRNA by bonding with the 30S ribosomal subunit
Penicillin G Sodium Salt	a beta-lactam antibiotic. Its mechanism of action is based on inhibition of murein production, which results in death of the causative agent
Partial or complete cell destruction	Ionizing radiation or vitamin E deficiency affect the cell by increasing lysosome membrane permeability. What are the possible consequences of this pathology?
Sodium chloride	solution can be used as a simple blood substitute
Ulcerative polypoid endocarditis	acute deformation of the aortic valve: it is shortened, thickened, ulcerated, has areas of stone-like density. On its external surface there are large, up to 2 cm in diameter, thrombotic plaques. Left ventricle wall is 2,2 cm thick. Cardiac muscle is dull, matt, and flaccid.
Triatomine bug	In the South and Central America there can be found a species of trypanosomes that is the causative agent of Chagas disease. What animal is the infection carrier specific to this disease?
C. botulinum	Exotoxin action - double vision, abnormal functioning of the swallowing and breathing
Umbilical cord	significant amount of mucous connective tissue (Wharton's jelly), vessels, as well as residual yolk and allantois
Stimulation of parasympathetic nerves	During the sports competition a boxer received a strong blow to the abdomen, which caused a knockout due to a brief drop in blood pressure
Glucocorticoids	decreased number of eosinophils
Complementary interaction	Deaf parents with genotypes DD <sup>ee</sup> and dd <sup>EE</sup> gave birth to a child with normal hearing. Specify the interaction of D and E genes
Corticoliberin	activates the hypothalamo-pituitary-adrenal axis
Renal disorder	during examination presents with glucosuria and blood glucose of 3,0 mmol/l,
Adrenocorticotropic hormone	adrenocorticotropic hormones synthesis
Decrease of fibrinogen content in blood	extract a tooth. After the tooth had been extracted, bleeding from the tooth socket continued for 15 minutes
Decrease of O <sub>2</sub> partial pressure	into mountains a person develops increased respiration rate and rapid heart rate.
Calcium chloride - direct coagulant	During introduction of the solution the patient was complaining of pain along the vein, hot sensation, and palpitations
Lack of information	the primary cause that induced leading mechanism of emotional tension in this case
Hyperuricemy	with fever and pain in the joints. Both of his first metatarsophalangeal articulations are deformed, swollen, and reddened. Blood urea is high. diagnosed with <u>gout</u>
Round ligament of the liver	located ligament of liver stretching from anterior abdominal wall (navel) to inferior surface of liver
Allergy diagnostics	tularin
Decreased pulmonary ventilation	increased blood content of HCO <sup>-</sup> against the background of repeated and uncontrollable vomiting - compensation
Wiskott-Aldrich syndrome	with eczematous rashes on his shins and torso. Anamnesis states cases of otitis, pneumonia, and furuncles in the patient. Blood test: platelets - 70 • 10 <sup>9</sup> /l, low activity of T helper and T suppressor cells, low IgM, with normal IgA and IgG.
V jugularis anterior	anterior cervical region presents with hemorrhage
N. petrosus minor	function of the parotid gland

Autoinfection	developed pyoinflammatory process of periodontal tissues caused by activation the microorganisms inherent in the body, which are a part of oral mucosal microflora
Triiodothyronine excess leads	intensified basal metabolic rate
Rheumatism	focal cardiosclerosis and "blooming" Aschoff nodules in the myocardium
Melanocyte-stimulating hormone	developed "bronzed" skin discoloration characteristic of Addison's disease. Hyperpigmentation mechanism in this case is based on increased secretion of:
Ovarian failure	girl presents with no hair on the pubis and in the armpits, her mammary glands are underdeveloped, no menstruations
Transferrin	In the process of hemoglobin catabolism iron is released and then as a part of special transport protein is returned to the bone marrow, to be used again for hemoglobin synthesis
Transverse colon	ain in the upper umbilical region. On palpation there is a mobile painful intestine
Arterial hyperemia	with hepatic cirrhosis and ascites underwent drainage of 5 liters of fluid from his abdominal cavity, which resulted in development of syncopal state due to insufficient blood supply to the brain
Neutrophils	cells are the first to transfer from vessels to tissues during inflammation
Main exocrinocytes	During the first year of life an infant presents with disturbed process of breast milk curdling. What cells of the proper gastric glands are functionally disturbed?
Middle lobe right lung	Segmentum laterale et segmentum mediate
Aorta and pulmonary trunk	non-closure of the arterial canal
Canalis musculotubarius	purulent inflammation of the middle ear was brought to the otolaryngology department. The disease started with the inflammation of the nasopharynx. It was determined that the infection had reached the tympanic cavity through the Eustachian tube that is located in the
Interstitial fluid inflow to the vessels	lost 25% of circulating blood volume
Trigeminal nerve was damaged	revealed disturbed pain and thermal sensitivity in the right half of the face
Osteoclasts	indicates local areas of hard bone tissue resorption in some of the patient's bones.
Negative reaction to stercobilin	acute attack of cholelithiasis. Laboratory examination patient's feces will show
Bronchiectases	due to renal amyloidosis, in the lungs (mainly in the lower lobes) the pathologist detected multiple bronchial dilations filled with purulent masses accumulated in the bronchial lumen. Surface of the lungs section has fine-meshed pattern and resembles a honeycomb. Histologically there is a chronic inflammation detected in the bronchial wall, muscle fibers are replaced with connective tissue
Increased permeability of the vessel wall	right, general weakness. Body temperature is 38.9°C. Objectively the right side of the chest lags behind the left side during respiration. Pleurocentesis yielded exudate
Hemorrhagic infarction	a dense dark red tissue with clear margins in the upper lobe of the right lung. Histological examination detected there necrosis of the alveolar walls; the alveolar lumen is tightly packed with erythrocytes
Antigen stimulation	shows increased number of macrophages, lymphocytes, and lymphatic follicles, as well as a large amount of plasma cells, in the cortical layer of the lymph nodes
Adrenocortical hyperfunction	hirsutism, moon-shaped face, stretch marks on the abdomen. BP is 190/100 mm Hg, blood glucose is 176 mmol/L
Axillary, parasternal	woman presents with breast cancer. Metastases can spread in this case to
IgM antibodies to Epstein-Barr virus were detected	infectious diseases unit on the 2nd day after the disease onset; the patient is suspected to have infectious mononucleosis
Gentamicin	Its antibiotic sensitivity was determined to be as follows: penicillin growth inhibition zone - 8 mm; oxacillin - 9 mm, ampicillin - 10 mm, gentamicin - 22 mm, lincomycin - 11 mm. What antibiotic should be chosen for treatment in this case?
V saphena magna	anterior medial surface of the lower leg
Accumulation of lactic acid in muscles	pain in the muscles
Iris sphincter muscle, ciliary muscle disturbed	revealed disturbed eye accommodation, the pupil is dilated and unresponsive to light
Glibenclamide	Stimulation of B-cells of islets of Langerhans
Arterial and venous constriction	the sympathetic nerve
Hypoxemia	The carotid bodies on both sides were removed in a test animal. Which of the listed factors WILL NOT be able to cause hyperventilation in the test animal?
Erythropoietins	Due to prolonged stay in the mountains at the altitude of 3000 m
Type 2 alveolar cells	that carry out respiratory function
Increased arteriolar tone	After a psychic trauma a woman developed periodical increases in her blood pressure accompanied by headache, palpitations, and general weakness. What mechanism of hypertension development

Proximal tubule	nephron segment shows cuboidal cells with ciliated lining on their apical surfaces; their basal surfaces have basal striation with mitochondria located between the cytolemma invaginations
Acquired tolerance	several weeks later the aperient effect of the drug diminished
Alterative myocarditis	died of diphtheria due to heart failure, shows fatty degeneration, multiple foci of cardiomyocytes necrosis, and small foci of cellular infiltrates in the interstitium
Antipsychotic	aminazine.
Blood serum	on 11th day since the disease onset and provisionally diagnosed with typhoid fever
Organic nitrates overdose	detects cyanosis of skin and mucosa, sharp drop of blood pressure, tachycardia, and respiratory depression. Blood methemoglobin is high
Natriuretic hormone	General structure of eukaryotic genes is as follows: exon-intron-exon. Such functional structure of a gene leads to certain specifics of the transcription process. What sequence will correspond with precursor mRNA (immature)?
Alanine	transportation of ammonia to the liver and participates in gluconeogenesis reactions
Acute pyelonephritis	Renal examination shows the kidney to be swollen and plethoric, with easily removable capsule. Renal pelvis and calyces dilated and filled with turbid urine; their mucosa is dull and has hemorrhagic foci. On section renal tissue is variegated, there are yellow-gray areas surrounded with plethoric and hemorrhagic zone
Deletion	number of nucleotide pairs changed from 290 to 250
Loss of sensitivity	dorsal root of the spinal nerve
Anatoxin - vaccination.	preparation was first used by Gaston Ramon for diphtheria prevention
Intensification of leukopoiesis	24 hours after an appendectomy
Disturbed conduction of stimulation	The right leg of a 40-year-old woman measured at the shin level is by 2 cm smaller in the diameter than the left leg. Ankle-jerk (Achilles) and knee-jerk reflexes are absent on the right. What is the most likely mechanism of hyporeflexia development during peripheral paralysis?
Increased level of blood catecholamines	a business manager, developed intense burning retrosternal pain that irradiates to the left arm. The pain occurred in the evening after the tax audit. 15 minutes later the patient's condition normalized
Caseous pneumonia	shows lobar affection of the lungs: the upper lobe of the right lung is enlarged, dense, yellow on section, crumbling, with pleural fibrin deposition
Hypoplastic anemia	general weakness, dizziness, and dyspnea. Recently taking levomycetin for prevention of enteric infection. Blood test: erythrocytes - $1.9 \cdot 10^{12}/L$ , hemoglobin - 58 g/L, color index - 0.9, leukocytes - 2.2 G/L, reticulocytes - 0.3%.
Benzympenicillin	with $\beta$ -lactam ring in its structure - streptococcal infection
Ectoderm	epidermis
Hydroxylation	Neutralization of xenobiotics and active endogenous metabolites often occurs via introduction of an oxygen atom into the substrate molecule
Arterioles	highest resistance
Ascoli's thermo precipitation	to test the raw leather for presence of <i>B. anthracis</i>
Dobutamine	Increase the force of heart contractions
Liver	Gluconeogenesis is the most intensive
Paroxysmal tachycardia	suffers from periodical palpitations that last several minutes. Her heart rate is 200/min., rhythmic
Mature type of urinary tract	Kidney X-ray image obtained by means of pyelography shows that the minor calyces converge to form 2 major calyces that adjoin to the renal pelvis, from which the ureter exits
Hyperosmolar dehydration	hypophyseal diabetes insipidus developed a water-mineral imbalance
Sensory threshold	In an experiment it is necessary to assess neuromotor and muscle excitability. What value should be measured to make the assessment?
Wohlfahrtia magnifica	has an open facial wound with undermined edges; tissue necrosis with gradually developing partial gangrene that nearly reaches the bone tissue is observed. On close examination the wound contains live larvae. The patient is diagnosed with tissue myiasis
Vitamin B <sub>12</sub>	can decrease homocysteine production
Autosomal dominant	myotonic dystrophy
Papillary carcinoma	thyroid tumor. Histologically the tumor is made up of papillary structures varying in size that emerge from the inner surface of dilated cystic follicles and are covered with atypical epithelium



Schistosomiasis	from Tehran, has made an appointment with the urologist. She complains of the sensation of heaviness in her lower abdomen and a small amount of blood being excreted with urine at the end of each urination. Microscopy of urine detects the presence of parasite eggs, approximately 140x70 micron in size, with a terminal spike
Poliomyelitis	Oral vaccination with live vaccine
Levodopa	Stimulation of dopamine synthesis
Phenylketonuria	content of phenyl pyruvate in urine (normally it is practically absent). Blood phenylalanine level is 350 mg/L (norm -15 mg/L).
Inferior mesenteric artery	descending colon
Lymphoblastic leukemia	cervical lymph nodes. Other lymph nodes and internal organs are without changes. Peripheral blood test results are normal. Histological examination of biopsy material taken from the cervical lymph node shows smoothed-out pattern, absent follicles, homogeneous cell composition represented by lymphoblasts
Retinal pigment epithelium	layer was tightly adherent to the vascular tunic of the eye and did not detach
Aldosterone excess	High calcium was detected in his secondary urine
Pancreatic lipases disturbed	in the patients feces a large amount of undigested fats
Lymph capillary	shows a small vessel with endothelial layer but without basement membrane and pericytes; anchoring fibrils are present
Glucocerebrosidase deficient	diagnosed with glucocerebrosidase lipidosis (Gaucher's disease) that manifests as splenomegaly, liver enlargement, affected bone tissue, and neuropathies
Anulus superficialis canalis inguinalis	has an inguinal hernia. The hernial sac exits through the following opening
Pachynema	Genetic recombination is achieved via several mechanisms. One such mechanism is crossingover. It occurs at the following stage of prophase in the first meiotic division
Increased period of ventricular excitation	ECG of the patient shows increased duration of the QRS complex
Glucose-6-phosphate dehydrogenase ↓	low concentration of NADPH and reduced glutathione
Hashimoto's thyroiditis (chronic lymphocytic thyroiditis)	thyroid gland, the pathologist discovered lymphocyte infiltration of the thyroid tissues and destruction of the parenchymal elements. Diffuse lymphocyte infiltration with lymphoid follicles was detected in the stroma
Nitrogen oxide	potent vasodilator synthesized from L-arginine
Hemorrhagic shock	25-40% blood was lost
Antinociceptive system	person becomes less receptive to pain in physically or emotionally straining situations due to activation of
Shock	was received by the intensive care unit. The patient is in a grave condition that can be characterized as a severe pathologic process that leads to exhaustion of vital functions and puts the patient into the marginal state between life and death due to critical reduction of capillary circulation in the affected organs
Metabolic disorder of cholesterol and cholesterol esters	revealed yellow spots and streaks in the aortic intima and white-yellow protruding plaques in the area of aortic bifurcation. Microscopy (with hematoxylin and eosin staining) shows round cavities in the thickened aortic intima. The cavities color orange when stained with sudan 3 and are surrounded with overgrown connective tissue.
IgM, IgG	postvaccinal immunity
Teratogenic effect	During pregnancy a woman has been taking an antiepileptic drug - sodium valproate. It resulted in her child developing a vertebral column malformation - spina bifida
Diazepam	status epilepticus
Complete atrioventricular block	ECG shows deformed QRS complexes unconnected with P waves, atrial contractions are approximately 70/min., ventricular contractions -25-30/min
Angiotensin 2	In human organism significant blood loss leads to decreased blood pressure, tachycardia, and weakness. Eventually the sensation of thirst appears
N. musculocutaneus	skin sensitivity on the lateral surface of his forearm
M. opponens pollicis	After a hand fracture the man has lost the ability to touch his little finger with the thumb on the affected hand. Examination of the palmar surface shows one of the palmar muscles to be atrophied

Thiamine deficiency	Pyruvic acid avitaminosis
Unilateral right side spinal cord injury	Right-sided paralyses and disturbed pain sensitivity (on the left side no paralyses are observed, but pain and thermal sensitivity is disturbed)
Acute gangrenous appendicitis	Appendix was acutely distended and gray black through its whole length. In the distal segment a defect of the appendix wall was detected, through which a foul-smelling grey-brown substance was being discharged from the appendix kimen. Necrotization of the appendix wall with hemorrhagic foci, <b>lumen of the mesenteric artery is filled with a trombus</b>
Decrease of CO <sub>2</sub> pressure	After hyperventilation
Tubocurarin intoxication	Cholinesterase inhibitors
Hepatitis B	Solid phase enzyme-linked immunosorbent assay
Middle lobe of right lung	Segmentum laterale et segmentum laterale
Corpora quadrigemina	Orienting reflex
Decrease of albumin content	Toxic damage of hepatic cells
Intensification of leukopoiesis	24 hours after an appendectomy – neutrophili leukocytosis with a regenerative shift
Detoxication of harmful substances	Hypertrophy of agranular endoplasmatic reticulum in liver
Back	Patches of skin have the highest sensitivity threshold
Submandibular lymph node	When periodontitis of the lower molar came
Adrenaline	Adrenal gland shows large cells that can be impregnated with a potassium dichromate solution
<b>Gasping respiration</b>	Asphyksia – after a brief respiratory arrest developed single infrequent respirations with passive expiration, after which he stopped breathing completely
Benzylpenicillin	Penicillin antibiotic, allergic reactions
Acetone bodies (diabetes melliteus)	These bodies are used as a source of energy and are synthesized from Acetyl-CoA
Concept of Active rest	That is tired limb restores its working capacity faster if during its period of rest another limb works
Bronchial asthma	Eosinophilia
Glycated hemoglobin	
Folic acid deficiency	Decreased leucocyte and erythrocyte count and low hemoglobin levels in peripheric blood, as well as appearance of large cells ( <b>megaloblasts</b> )
Calcium chloride	Increased cardiac contraction force and frequency
Aspirin	synthesized from Arachidonic acid
Goblet cells	Some diseases of large intestine lead to the changes in the quantitative ratio between mucosal epithelial cells. What cell type are normally predominant in the cryptal epithelium of the large intestine?
Enterokinase	Disturbed activity of trypsin and chymotrypsin leads to disturbed protein breakup in the small intestine. Activity of these enzymes depends on the presence of the following factor
Peroneus longus muscle	an incised wound on the palmar surface of the left foot was brought to the traumatology department. Lifting on the lateral side of the foot is limited
Chronic myeloleukemia	
Glucose-6-phosphate dehydrogenase	With elevated body temperature has taken aspirin and developed increased hemolysis of erythrocytes
Acute hypertension	14 year has diphtheria. During the peak of the disease against the background of acute drop in body temperature and tachycardia the blood pressure is 70/50 mm Hg
Prescribe a-adrenoreceptors bloklers	When a patient has elevated blood pressure due to increased vascular tone
Malaria	Visited African country, died in a comatose state. Developed periodical jaundice attacks, dense enlarged spleen with slate black pulp, enlarged plethoric liver, gray-black on section: cerebral gray matter is brown-gray; cerebral white matter contains numerous small hemorrhages
Morphine	Analgesic, with inoperable lung cancer with unbearable pain, after (due) therapy developed signs of intestinal obstruction
Thiamine deficiency	Wernicke-Korsakoff syndrome develops in chronic alcoholics, decreased transketolasae activity
Genetic recombination	Mechanism leads to formation of new genes that ensure the synthesis of such a number of antibodies
Lidocaine hydrochloride (local anesthetic)	A certain drug for relief of cardiac rhythm disturbance
Gluconeogenesis	When elevated blood glucose level
Peyer's patches	are small masses of lymphatic tissue (nodule) found throughout the <b>ileum</b>

