

MINISTRY OF HEALTH OF UKRAINE
ODESA NATIONAL MEDICAL UNIVERSITY
Department of OTORHINOLARYNGOLOGY



CONFIRMED BY

Acting vice-rector for scientific and pedagogical work

Eduard BURACHKIVSKIY

September 1st, 2023

**WORKING PROGRAM IN THE ELECTIVE DISCIPLINE
«ENT-ONCOLOGY»**

Level of higher education: second (master's degree)

Field of knowledge: 22 «Health care»

Specialty: 222 «Medicine»

Educational and professional program: Medicine

2023

The working program is compiled on the basis of the educational and professional program "Medicine" for the training of specialists of the second (master's) level of higher education in the specialty 222 "Medicine" of the field of knowledge 22 "Health care", approved by the Academic Council of ONMedU (minutes No. 8 dated 29/06/2023).

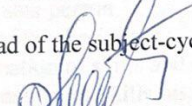
Authors:
PhD in Otorhinolaryngology, Professor Yevchev Fedor
Assistant Yevcheva Anhelina.

The working program is approved at the meeting of the Department of Otorhinolaryngology
Minutes No. 1 dated 30/08/2023.


Head of the department  Sergiy Pukhlik

Approved by the guarantor of the educational and professional program  Valeriia MARICHEREDA

Approved by the subject-cycle methodological commission for surgery of ONMedU
Minutes No. 1 dated 30/08/2023.

Head of the subject-cycle methodological commission for surgery of ONMedU
 Vasil Mishchenko

Revised and approved at the meeting of the Department of Otorhinolaryngology
Minutes No. 1 dated 29/08/2024

Head of the department  Sergiy Pukhlik

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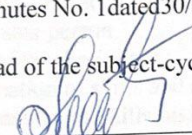
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Minutes No. 1 dated 28/08/2024

Head of the department  Sergiy Pukhlik

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Head of the department _____ Sergiy Pukhlik

1. Description of the discipline:

Name of indicators	Field of knowledge, specialty, specialization, level of higher education	Characteristics of the discipline
Total number:	Field of knowledge 22 «Health care»	<i>Full-time (day) education</i> <i>Elective discipline</i>
Credits of ECTS: 3	Specialty 222 «Medicine»	<i>Course: 6</i>
Hours: 90		<i>Semester: XI - XII</i>
Content modules: 1	Level of higher education second (master's degree)	<i>Lectures (0 hours)</i>
		<i>Seminars (0 hours)</i>
		<i>Practical classes (30 hours)</i>
		<i>Laboratories (0 hours)</i>
		<i>Independent work (60 hours)</i>
		<i>including individual tasks (0 hours)</i>
		<i>Form of final control – Credit</i>

2. The purpose and tasks of the educational discipline, competencies, program learning outcomes

Purpose: acquisition by the student of additional knowledge and mastery of professional competences and skills of observation and management of ENT patients; communication skills, taking into account the peculiarities of communication between a family doctor and a healthy and sick person.

Tasks of the discipline:

1. Formation of skills and communication skills with an onco-otorhinolaryngological patient.
2. Formation of skills and communication skills with the patient in the most common onco-ENT diseases.
3. Improving the skills of substantiation of clinical diagnosis, differential diagnosis, drawing up a plan for laboratory and instrumental research in the most common localizations of onco-ENT diseases.
4. Mastery of the ability to determine the tactics of emergency care, management, treatment and prevention of onco-ENT diseases.

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

Integral competence (level 7) according to the requirements of the NRC. The ability to solve typical and complex problems, including those of a research and innovation nature in the field of medicine. Ability to continue learning with a high degree of autonomy.

General competences according to the requirements of the NRK

GC1. Ability to abstract thinking, analysis and synthesis

GC3. Ability to apply knowledge in practical situations

GC4. Knowledge and understanding of the subject area and understanding of professional activity

GC5. Ability to adapt and act in a new situation

GC6. Ability to make informed decisions

GC7. Ability to work in a team

GC10. Ability to use information and communication technologies

Special (professional, subject) competences

SC1. Ability to collect medical information about the patient and analyze clinical data

SC2. Ability to determine the necessary list of laboratory and instrumental studies and evaluate their results

SC3. Ability to establish a preliminary and clinical diagnosis of the disease

- SC4. The ability to determine the necessary regime of work and rest in the treatment and prevention of diseases
- SC5. The ability to determine the nature of nutrition in the treatment and prevention of diseases
- SC6. Ability to determine the principles and nature of treatment and prevention of diseases
- SC7. Ability to diagnose emergency conditions
- SC8. Ability to determine tactics and provide emergency medical care help
- SC9. Ability to carry out medical evacuation measures
- SC11. Ability to solve medical problems in new or unfamiliar environments in the presence of incomplete or limited information, taking into account aspects of social and ethical responsibility, including early intervention systems
- SC17. The ability to assess the impact of the environment, socio-economic and biological determinants on the state of health of an individual, family, population
- SC25. Adherence to professional and academic integrity, to be responsible for the reliability of the obtained scientific results
- SC26. The ability to determine the management tactics of persons subject to dispensary supervision
- SC27. The ability to diagnose and determine the management tactics of patients with extrapulmonary and widespread forms of tuberculosis, including co-infection of TB/HIV with a chemoresistant course

Program learning outcomes (PLO):

- PLO1. Have thorough knowledge of the structure of professional activity. To be able to carry out professional activities that require updating and integration of knowledge. To be responsible for professional development, the ability for further professional training with a high level of autonomy.
- PLO2. Understanding and knowledge of fundamental and clinical biomedical sciences, at a level sufficient for solving professional tasks in the field of health care.
- PLO3. Specialized conceptual knowledge that includes scientific achievements in the field of health care and is the basis for conducting research, critical understanding of problems in the field of medicine and related interdisciplinary problems, including the system of early intervention.
- PLO4. Identify and identify leading clinical symptoms and syndromes (according to list 1); according to standard methods, using preliminary data of the patient's history, data of the patient's examination, knowledge about the person, his organs and systems, establish a preliminary clinical diagnosis of the disease (according to list 2).
- PLO5. Collect complaints, anamnesis of life and diseases, assess the psychomotor and physical development of the patient, the state of organs and systems of the body, based on the results of laboratory and instrumental studies, evaluate information regarding the diagnosis (according to list 4), taking into account the age of the patient.
- PLO6. To establish the final clinical diagnosis by making a reasoned decision and analyzing the received subjective and objective data of clinical, additional examination, carrying out differential diagnosis, observing the relevant ethical and legal norms, under the control of the head physician in the conditions of the health care institution (according to the list 2).
- PLO7. Assign and analyze additional (mandatory and optional) examination methods (laboratory, functional and/or instrumental) (according to list 4), patients with diseases of organs and body systems for differential diagnosis of diseases (according to list 2).
- PLO8. Determine the main clinical syndrome or symptom that determines the severity of the condition of the victim/injured person (according to list 3) by making a reasoned decision about the person's condition under any circumstances (in the conditions of a health care facility, outside its borders), including in conditions of emergency and hostilities, in field conditions, in conditions of lack of information and limited time.
- PLO9. Determine the nature and principles of treatment (conservative, operative) of patients with diseases (according to list 2), taking into account the age of the patient, in the conditions of a health care institution, outside its borders and at the stages of medical evacuation, including in field conditions, on the basis of a preliminary clinical diagnosis, observing the relevant ethical and legal norms, by making a reasoned decision according to existing algorithms and standard schemes, in case of the need to expand the standard scheme, be able to substantiate personalized recommendations under the control of the head physician in the conditions of a medical institution.
- PLO10. Determine the necessary mode of work, rest and nutrition on the basis of the final clinical diagnosis, observing the relevant ethical and legal norms, by making a reasoned decision according to

existing algorithms and standard schemes.

PLO14. Determine tactics and provide emergency medical care in emergency situations (according to list 3) in limited time conditions according to existing clinical protocols and standards of treatment.

PLO17. Perform medical manipulations (according to list 5) in the conditions of a medical institution, at home or at work based on a previous clinical diagnosis and/or indicators of the patient's condition by making a reasoned decision, observing the relevant ethical and legal norms.

PLO18. To determine the state of functioning and limitations of a person's vital activities and the duration of incapacity for work with the preparation of relevant documents, in the conditions of a health care institution, based on data about the disease and its course, peculiarities of a person's professional activity, etc. Maintain medical documentation regarding the patient and the contingent of the population on the basis of regulatory documents.

PLO21. Search for the necessary information in the professional literature and databases of other sources, analyze, evaluate and apply this information.

PLO32. The ability to diagnose and determine the management tactics of patients with extrapulmonary and common forms of tuberculosis, including co-infection of TB/HIV with a chemoresistant course.

As a result of studying the discipline, the student has to

Know:

As a result of studying the academic discipline, the student of higher education should know: basic concepts of fundamental and clinical oncology;

- basic theories of carcinogenesis;
- biology of tumor growth;
- human genome and molecular markers during diagnosis malignant neoplasms;

- the main areas of fundamental and applied research biological material (hematological, biochemical, immunological, cytomorphological, molecular biological, etc.);

- basic diagnostic research methods for diagnosis and monitoring of oncological diseases;
- modern trends in the development of oncology;

be able:

- to conduct a subjective and objective examination of the patient;
- assess the patient's condition;
- formulate a preliminary diagnosis;
- to analyze the results of laboratory studies and on their basis
- evaluate information about the patient's diagnosis;
- work independently with scientific and educational literature;
- search and generalize scientific information;
- prepare the patient for diagnostic and therapeutic manipulations;
- prepare the patient for instrumental examinations;
- fill out medical documentation;
- to carry out sanitary and educational work;

3. The content of the educational discipline

Topic 1. Organization of cancer care. Types of preventive examinations - features of conducting, importance for early diagnosis of tumors.

Organization of oncology care in Ukraine. Structure of oncology service in Ukraine.

Types of preventive examinations - features of conducting, importance for early diagnosis of tumors.

Topic 2. Modern methods of diagnosis of benign and malignant tumors of the ENT organs. Classification of oncological diseases.

Endoscopic studies of ENT organs. Computed tomography (CT), magnetic resonance imaging (MRI), ultrasound. Methods of morphological (histological, immunohistochemical, molecular genetic) and cytological verification of material obtained by tumor biopsy. Classifications of oncological diseases

According to the TNM system. Clinical and statistical classification. Classification of tumors according to the clinical course. Classification of tumors according to histogenesis.

Topic 3. Precancerous diseases of the ENT organs.

Precancerous diseases of the nasal cavity - papillomas, cysts and polyps.

Precancerous diseases of the larynx: chronic hypertrophic laryngitis, dyskeratoses (leukoplakia, pachydermia), papillomatosis. Bowen's disease. Warty precancer of the red border of the lips. Limited precancerous hyperkeratosis of the red border of the lips.

Keratoacanthoma.

Topic 4. Benign tumors of the ENT organs.

Benign tumors of the nose and paranasal sinuses (osteoma, papilloma, angiofibroma). Benign tumors of the pharynx (juvenile angiofibroma of the base of the skull). Benign tumors of the larynx (fibroma, papilloma). Glomus tumors of the ENT organs. Acoustic neuroma.

Topic 5. Malignant diseases of the outer, middle, and inner ear.

Malignant tumors of the ear, classification. Early and late signs of malignant tumors of the external, middle, and inner ear, stages of the disease, clinic, diagnosis, including the principles of early diagnosis. The choice of treatment method depends on the histological structure, localization and stage of the tumor.

Topic 6. Malignant diseases of the nasopharynx, nasal cavity, paranasal sinuses.

Malignant tumors of the nasopharynx, nasal cavity, PPN; classification. Early and late signs of malignant tumors of the skin of the nose, nasal cavity, nasopharynx, paranasal sinuses. Stages of the disease, clinic, diagnosis, including the principles of early diagnosis. The choice of treatment method depends on the histological structure, localization and stage of the tumor. Indications for radiation, surgical and chemotherapeutic methods of treatment.

Topic 7. Malignant diseases of neck localization (pharynx, larynx, trachea, esophagus)

Malignant tumors of the pharynx, larynx, trachea, esophagus. Classification. Early and late signs of malignant tumors of the above projections. Stages of the disease, clinic, diagnosis, including the principles of early diagnosis. The choice of treatment method depends on the histological structure, localization and stage of the tumor. Indications for radiation, surgical and chemotherapeutic methods of treatment.

Topic 8. Malignant diseases of neck localization (thyroid gland, submandibular and parotid glands).

Malignant tumors of the salivary glands, thyroid gland. Classification. Early and late signs of malignant tumors of the above projections. Stages of the disease, clinic, diagnosis, including the principles of early diagnosis. The choice of treatment method depends on the histological structure, localization and stage of the tumor. Indications for radiation, surgical and chemotherapeutic methods of treatment.

Topic 9. Metastasis of malignant tumors of ENT organs

Regional metastasis of cancer of the ear, nose, pharynx, PPN, larynx, thymus gland, salivary glands, esophagus. Distant metastases of cancer of the ENT organs. Diagnostic methods. Evaluation of the properties of Mts - lymph nodes.

Topic 10. Surgical treatment of oncological diseases of ear, nose, paranasal sinuses.

Radical operations for oncological diseases of the ear, nose, PPN. Orbitosinusalexenteration. Moore's operation. Palliative and symptomatic surgical interventions and manipulations.

Surgical interventions for benign diseases of the ear, nose, PPN due to tumors.

Topic 11. Surgical treatment of oncological diseases of pharynx, larynx, trachea.

Biopsy of a tumor of the larynx. Organ-preserving operations. Radical operations for oncological diseases of the larynx and pharynx. Tracheostomy.

Topic 12. Surgical treatment of oncological diseases of thyroid gland, salivary glands, esophagus.

Organ-preserving operations of the neck. Oropharyngoesophagostomy. Resection of the lobe of the thyroid gland, complete removal of the thyroid gland. Circular resection of the esophagus. Palliative and symptomatic surgical interventions and manipulations.

Topic 13. Urgent care for patients with oncological diseases (bleeding, stenosis) of the nose, larynx, trachea localization.

Anterior and posterior tamponade of the nasal cavity, indications for carrying out. Tracheotomy, types, indications for surgery. Ligation of the external carotid artery.

Topic 14. Treatment of malignant tumors of the ENT organs (chemo therapy, radiation therapy). Chemoradiation treatment in neoadjuvant and adjuvant mode. PCT. Remote radiation therapy. Radiation therapy with a linear accelerator.

Indications, preparation for chemoradiation treatment. Management of patients during special treatment. Chemoradiation treatment in the management of palliative cancer patients.

Topic 15. Management of patients after operations for tumors of the ENT organs. Rehabilitation of patients with malignant diseases of the ENT organs (adaptation to a physical defect). Concept of clinical groups.

Management of patients with oropharyngoesophagostomy, management of patients with temporary tracheostomy, permanent tracheostomy. Rehabilitation of patients after surgical intervention for tumors of the ENT organs.

Credit. It is evaluated on a two-point scale: the grade "credited" is given to a higher education applicant who has completed the curriculum of the discipline, has no academic debt; the level of competence is high (creative); the grade "failed" is given to a student of higher education who has not completed the curriculum of the discipline, has academic debt (average grade below 3.0 and/or missed classes); the level of competence is low (receptive-productive).

4. The structure of the educational discipline

Theme	Hours					
	Total	including				
		lectures	Seminars	Practical	Laboratory	ISW
Topic 1. Organization of cancer care. Types of preventive examinations - features of conducting, importance for early diagnosis of tumors.	6	0	0	2	0	4
Topic 2. Modern methods of diagnosis of benign and malignant tumors of the ENT organs. Classification of oncological diseases.	6	0	0	2	0	4
Topic 3. Precancerous diseases of ENT organs.	6	0	0	2	0	4
Topic 4. Benign tumors of the ENT organs.	6	0	0	2	0	4
Topic 5. Malignant diseases of the outer, middle, and inner ear.	6	0	0	2	0	4
Topic 6. Malignant diseases of the nasopharynx, nasal cavity, paranasal sinuses.	6	0	0	2	0	4
Topic 7. Malignant diseases of neck localization (pharynx, larynx, trachea, esophagus)	6	0	0	2	0	4
Topic 8. Malignant diseases of neck	6	0	0	2	0	4

localization (thyroid gland, submandibular and parotid glands).						
Topic 9. Metastasis of malignant tumors of the ENT organs	6	0	0	2	0	4
Topic 10.Surgical treatment of oncological diseases of ear, nose, paranasal sinuses.	6	0	0	2	0	4
Topic 11.Surgical treatment of oncological diseases of pharynx, larynx, trachea.	6	0	0	2	0	4
Topic 12.Surgical treatment of oncological diseases of thyroid gland, salivary glands, esophagus.	6	0	0	2	0	4
Topic 13.Urgent care for patients with oncological diseases (bleeding, stenosis) of the nose, larynx, trachea localization.	6	0	0	2	0	4
Topic 14.Treatment of malignant tumors of the ENT organs (chemo therapy, radiation therapy).	6	0	0	2	0	4
Topic 15. Management of patients after operations for tumors of the ENT organs. Rehabilitation of patients with malignant diseases of the ENT organs (adaptation to a physical defect). Conceptofclinicalgroups.	6	0	0	2	0	4
Credit	0	0	0	0	0	0
<i>Individual task</i>	0	0	0	0	0	0
Total	6	0	0	30	0	60

5. Themes of lectures / seminars / practical classes/ laboratories

5.1. Themes of lectures -lectures are not provided

5.2. Themes of seminars-Seminars are not provided.

5.3. Themes of practical classes

№	TOPIC	Number of hours
1.	Organization of cancer care. Types of preventive examinations - features of conducting, importance for early diagnosis of tumors.	2
2.	Modern methods of diagnosis of benign and malignant tumors of the ENT organs. Classification of oncological diseases.	2
3.	Precancerous diseases of ENT organs.	2
4.	Benign tumors of the ENT organs.	2
5.	Malignant diseases of the outer, middle, and inner ear.	2
6.	Malignant diseases of the nasopharynx, nasal cavity, paranasal sinuses.	2
7.	Malignant diseases of neck localization (pharynx, larynx, trachea, esophagus)	2
8.	Malignant diseases of neck localization (thyroid gland, submandibular and parotid glands).	
9.	Metastasis of malignant tumors of the ENT organs	2
10.	Surgical treatment of oncological diseases of ear, nose, paranasal sinuses.	2
11.	Surgical treatment of oncological diseases of pharynx, larynx, trachea.	2

12.	Surgical treatment of oncological diseases of thyroid gland, salivary glands, esophagus.	2
13.	Urgent care for patients with oncological diseases (bleeding, stenosis) of the nose, larynx, trachea localization.	2
14.	Treatment of malignant tumors of the ENT organs (chemo therapy, radiation therapy).	2
15.	Management of patients after operations for tumors of the ENT organs. Rehabilitation of patients with malignant diseases of the ENT organs (adaptation to a physical defect). Concept of clinical groups.	2
	credit	
	In general	30

5.4. Themes of laboratories Laboratories are not provided.

6. Independent work of the student

No.	Theme	Hours
1.	Topic 1-15. Preparation for practical classes	4
	Total	60

7. Teaching methods

Practical classes: conversation, solving clinical situational problems, practicing patient examination skills, practicing skills, instructing and practicing skills on simulation dummies, training exercises on differential diagnosis of the most common hearing defects.

Independent work: independent work with recommended basic and additional literature, with electronic information resources, independent mastering of communication algorithms with ENT patients.

8. Forms of control and assessment methods

(including criteria for evaluating learning outcomes)

Current control: oral survey, testing, assessment of class activity.

Final control: Credit. It is evaluated on a two-point scale: the grade "credited" is given to a higher education applicant who has completed the curriculum of the discipline, has no academic debt; the level of competence is high (creative); the grade "failed" is given to a student of higher education who has not completed the curriculum of the discipline, has academic debt (average grade below 3.0 and/or missed classes); the level of competence is low (receptive-productive).

Evaluation of the current educational activity in a practical session:

1. Evaluation of theoretical knowledge on the subject of the lesson:

- methods: survey, solving a situational clinical problem
- maximum score – 5, minimum score – 3, unsatisfactory score – 2.

The grade for one practical lesson is the arithmetic average of all components and can only have a whole value (5, 4, 3, 2), which is rounded according to the statistical method.

Criteria of ongoing assessment at the practical class

Score	Assessment criterion
Excellent «5»	The student is fluent in the material, takes an active part in discussing and solving a situational clinical problem, confidently demonstrates practical skills during the examination of a patient and the interpretation of clinical, laboratory and instrumental research data, expresses his opinion on the topic of the class, demonstrates clinical thinking.
Good «4»	The student has a good command of the material, participates in the discussion and solution of a situational clinical problem, demonstrates practical skills during the examination of a patient and the interpretation of clinical, laboratory and instrumental research data with some errors, expresses his opinion on the topic of the class, demonstrates clinical thinking.
Satisfactory «3»	The student does not have sufficient knowledge of the material, is unsure of participating in the discussion and solution of the situational clinical problem, demonstrates practical skills during the examination of the patient and the interpretation of clinical, laboratory and instrumental research data with significant errors.

Unsatisfactory «2»	The student does not possess the material, does not participate in the discussion and solution of the situational clinical problem, does not demonstrate practical skills during the examination of the patient and the interpretation of clinical, laboratory and instrumental research data.
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The student is admitted to the differentiated assessment on the condition that the requirements of the educational program are met and if he received at least 3.00 points for the current educational activity.

9. Distribution of points, obtained by the student

The grade for the discipline consists of 50% of the grade for the current academic performance.

The average grade in the discipline is converted to the national grade and converted to points on a multi-point scale (200-point scale).

Conversion of traditional assessment into 200-point is carried out by the information and technical department of ONMedU by the special program by the formula:

$$\text{Average score (current academic performance)} \times 40.$$

Conversion table of traditional to multi-point

National score for the discipline	The sum of scores for the discipline
Excellent («5»)	185 – 200
Good («4»)	151 – 184
Satisfactory («3»)	120 – 150
Unsatisfactory («2»)	Less than 120

According to the ECTS rating scale, students' achievements in educational discipline, who study on the same course of one specialty, according to their scores, are assessed by means of rank, namely:

Conversion of the traditional evaluation and ECTS scores

Score on the ECTS scale	Statistical indicator
A	The best 10% students
B	Next 25% students
C	Next 30% students
D	Next 25% students
E	Next 10% students

10. Methodological support

- Working program in the discipline
- Syllabus
- Methodological recommendations for the practical classes in the discipline
- Methodological recommendations for the individual work of students
- Multimedia presentations
- Situational tasks (including calculation)

Educational and methodical literature:

1. R. Corbridge, N. Steventon. Oxford Handbook of ENT and Head and Neck Surgery//Paperback, 2020. - 496 p.
2. M. M Paparella. Paparella'S Otolaryngology Head & Neck Surgery (2 Volumes)// Hardcover, 2020. – 460p.
3. Заболотний Д.І., Тімен Г.Е., Лайко А.А. [та ін.]. Ангіофібромаоснови черепа. - К.: Логос, 2017. – 144 с.
4. Leonidas C. Plataniias, M.D., Ph.D, Director, Robert H. Lurie Comprehensive Cancer Center, Northwestern University Professor of Medicine (Hematology and Oncology) and Biochemistry and Molecular Genetics Advances in Oncology, 2021, 1st Edition.

11. Questions for the final control

1. Organization of cancer care. Modern methods of diagnosis of benign and malignant tumors of the ENT

organs.

2. Types of preventive examinations - peculiarities of conducting, importance for early diagnosis of tumors.
3. Precancerous diseases. Benign tumors of the ENT organs
4. Malignant diseases of the outer, middle, and inner ear.
5. Malignant diseases of the nasopharynx, nasal cavity, PPN.
6. Malignant tumors of the oropharynx, larynx, larynx. Clinical anatomy of the tympanic membrane. Features of the location and structure of the tympanic membrane in young children.
7. Clinical anatomy of the tympanic cavity.
8. Clinical anatomy, physiology of the auditory tube. Peculiarities of its structure in childhood.
9. Clinical anatomy of the inner ear.
10. The structure of the spiral organ. Adequate stimulus of the auditory analyzer.
11. Clinical anatomy of the nasal cavity.
12. Blood supply and innervation of the nasal cavity.
13. Clinical significance of sacral cavities. Clinical anatomy of the maxillary sinus.
14. Clinical anatomy of the frontal and ethmoid sinuses.
15. Clinical anatomy of the main sinus.
16. Clinical physiology of the nasal cavity and paranasal sinuses.
17. Clinical anatomy of the pharynx, its departments.
18. Anatomy of lymphadenoid pharyngeal ring, structure of palatine tonsils. Age characteristics of lymphadenoid tissue of the pharynx.
19. Juvenile angiofibroma of the nasopharynx: clinic, diagnosis, methods of removal.
20. Classification of tumors of the upper respiratory tract.
21. Malignant tumors of the nose and paranasal sinuses: diagnosis, treatment.
22. Precancerous diseases of the larynx.
23. Cancer of the larynx: etiology, localization, clinic, stages of disease development.
24. Principles of treatment of malignant tumors of the upper respiratory tract.
25. Nosebleeds: causes, symptoms, methods of stopping.
26. Stages of laryngeal stenosis, principles of treatment (medication, prolonged intubation, tracheotomy).
27. Tracheostomy: indications, its options, performance technique.
28. Surgical interventions on the ear, nose, PPN due to tumors.
29. Surgical interventions on the pharynx, larynx, and neck.
30. Types of special treatment of malignant tumors of the ENT organs.
31. Management of patients after operations for tumors of the ENT organs
32. Rehabilitation of patients with malignant diseases of the ENT organs (adaptation to a physical defect).
33. Dispensary observation of patients with tumors of the ENT organs after treatment. Concept of clinical groups. Occupational examination and rehabilitation of patients after treatment.

12. Recommended literature

Basic:

1. R. Corbridge, N. Steventon. Oxford Handbook of ENT and Head and Neck Surgery//Paperback, 2020. - 496 p.
2. M. M Paparella. Paparella'S Otolaryngology Head & Neck Surgery (2 Volumes)// Hardcover, 2020. – 460p.
3. Заболотний Д.І., Тімен Г.Е., Лайко А.А. [та ін.]. Ангіофібромаоснови черепа. - К.: Логос, 2017. – 144 с.
4. Leonidas C. Plataniias, M.D., Ph.D, Director, Robert H. Lurie Comprehensive Cancer Center, Northwestern University Professor of Medicine (Hematology and Oncology) and Biochemistry and Molecular Genetics Advances in Oncology, 2021, 1st Edition.

Additional:

1. Leonidas C. Plataniias, M.D., Ph.D, Director, Robert H. Lurie Comprehensive Cancer Center, Northwestern University Professor of Medicine (Hematology and Oncology) and Biochemistry and Molecular Genetics Advances in Oncology, 2021, 1st Edition. John E. Niederhuber & James O. Armitage & James H Doroshow & Michael B. Kastan & Joel E. Tepper Abeloff's Clinical Oncology, 6th Edition Mar 2019.
2. S.N.Kumar. Clinical Cases In Otolaryngology// Paperback, 2016. – 260p.

3. R.Pasha, J.S.Golub. Otolaryngology-Head and Neck Surgery : Clinical Reference Guid// Paperback, 2017. - 800 p.
4. J. A.Seikel, D.G.Drumright, D.J.Hudock. Anatomy and Physiology for Speech, Language, and Hearing //Format Hardback, 2019. - 700 p.
5. K.S.Helfer, E.L.Bartlett, A.N.Popper, R.R.Fay. Aging and Hearing: Causes and Consequences// Hardback< 2020. – 326p.
6. A.Al-Qahtani, H.Haidar, A.Larem. Textbook of Clinical Otolaryngology// Hardback, 2020. - 1155 p.
7. Z.Mu, J.Fang. Practical Otorhinolaryngology, Head and Neck Surgery: Diagnosis and Treatment// Hardback, 2020. - 314 p.
8. H.H.Ramadan, F.M.Barody. Pediatric Rhinosinusitis// Paperback, 2020. - 300 p.
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5. <http://bma.org.uk>– [British Medical Association](http://bma.org.uk)
6. www.gmc-uk.org- [General Medical Council \(GMC\)](http://www.gmc-uk.org)
7. www.bundesaerztekammer.de – [German Medical Association](http://www.bundesaerztekammer.de)