

**MINISTRY OF HEALTHCARE OF THE REPUBLIC OF BELARUS**  
Educational Institution  
**BELARUSIAN STATE MEDICAL UNIVERSITY**

Контрольный  
экземпляр

**APPROVED**  
by First Vice Rector, Professor  
I.N.Moroz  
Reg. No. UD-п. 641/2023/elect.

**CONTEMPORARY ASPECTS OF DIAGNOSIS AND TREATMENT IN  
MAXILLOFACIAL SURGERY**

**Elective Higher Education Program  
in the academic discipline "Oral and Maxillofacial Surgery",  
for the specialty 1-79 01 07 "Dentistry"**

Curriculum of the elective is based on the educational program "Oral and Maxillofacial Surgery ", held on 08.10.2018, registration No. UD-L .641/1819/edu.

**COMPILERS:**

A.S. Lastovka, Head of the Department of Maxillofacial Surgery of the Educational Establishment "Belarusian State Medical University", Doctor of Higher Sciences, Professor;

A.V. Glinnik, associate professor of the department of maxillofacial surgery of the Educational Institution «Belarusian State Medical University», candidate of medical sciences, associate professor;

O.M. Pavlov, associate professor of the department of maxillofacial surgery of the Educational Institution «Belarusian State Medical University», candidate of medical sciences, associate professor.

**RECOMMENDED FOR APPROVAL:**

by the Department maxillofacial surgery of the Educational Institution «Belarusian State Medical University» (protocol No. 1 dated 30.08.2022);

by the Council of the Faculty of Dentistry of the Educational Institution "Belarusian State Medical University"  
(protocol No. 6 dated 22.09.2022)

## EXPLANATORY NOTE

**"Contemporary Aspects of Diagnosis and Treatment in Oral and Maxillofacial Surgery"** is an elective course within the academic discipline "Oral and Maxillofacial Surgery", which includes determining the possibilities for assessing the quality of diagnosis and treatment of a surgical problem of the maxillofacial region, as well as in dentistry surgeon using contemporary high-precision methods.

The program of the elective course " Contemporary aspects of diagnosis and treatment in maxillofacial surgery " is aimed at studying contemporary scientific data on the sections of diagnosis and treatment in maxillofacial surgery, surgical dentistry. The study of students of this course of choice allows you to master the most important and practice-oriented groups of the population in identifying issues of Oral and maxillofacial surgery.

The purpose of teaching and studying the elective course " Contemporary aspects of diagnosis and treatment in maxillofacial surgery " is to deepen student qualifications, assess and master scientific knowledge about contemporary high-precision diagnostic methods: cone beam computed tomography (CBCT), multispiral computed tomography (MSCT), magnetic resonance computed tomography (MRI), surgical diagnostics in the maxillofacial region, as well as the systematization of surgical treatment methods, the reliability of detection and detection of identified diagnoses.

During the study of an elective course, students participate in the acquisition of academic competencies, which are based on the ability to independently search for educational and information resources, master the methods of acquiring and comprehending knowledge:

- basic concepts, crimes in Oral and maxillofacial surgery;
- causes and mechanisms of development of typical nosological group diseases in the maxillofacial region;
- manifestations of typical pathological processes, such as inflammation, and at advanced stages of surgical diseases in dentistry;
- risk factors that significantly aggravate the course of surgical dental disease;
- preventive focus in their work, as well as visits to traumatic surgical interventions.

The tasks of teaching elective courses in the totality of social, personal and professional competencies, which are based on certain knowledge and application:

- fundamental academic knowledge that contributes to the formation of clinical knowledges in accordance with the norms of medical ethics and deontology;
- methods for conducting high-precision diagnostics, such as CBCT, MSCT, MRI;
- methods of low-traumatic and minimal invasive surgery.

Teaching and successful study of the elective course " Contemporary aspects of diagnosis and treatment in maxillofacial surgery " are carried out on the basis of the knowledge and skills acquired by the student in such sections of the academic disciplines "Oral and maxillofacial surgery", as Surgical methods of treatment of

diseases of marginal periodontal disease. Traumatology of the maxillofacial region  
 Oncology of the maxillofacial region and jaw. Fundamentals of restorative and  
 reconstructive surgery of the maxillofacial region. Surgical preparation of the oral  
 cavity for prosthetics. Selected sections of surgical dentistry and maxillofacial  
 surgery.

**As a result of studying the elective course "Contemporary aspects of  
 diagnosis and treatment in maxillofacial surgery" the student must**

**know:**

basic concepts and directions of scientific research in the field of oral and  
 maxillofacial surgery;

etiology, pathogenesis, clinic, diagnostics, differential diagnostics of the most  
 important pathological processes and diseases of the dental system;

methods for examining dental diseases, clinical symptoms and the formulation of a  
 clinical diagnosis based on the emergence of a nosological form of detection of the  
 dentoalveolar system, elimination of the detection of surgical methods of treatment;

surgical methods currently used in periodontology;

classification of precancerous processes, tumor-like processes, benign tumors,  
 cancerous tumors, including TNM - classification;

methods for diagnosing precancerous processes, tumor-like processes, benign  
 tumors, cancerous tumors;

methods of treatment of precancerous processes, tumor-like processes, benign  
 tumors, cancerous tumors;

methods for diagnosing traumatic injuries in the maxillofacial region, including  
 combined and multiple injuries;

methods of treatment of traumatic injuries in the maxillofacial region, including  
 combined and multiple injuries;

methods of pre-protection employment;

methods of surgical preparation of the oral cavity for orthodontic purposes;

methods of tissue transplantation in the maxillofacial region and for them;

methods of plastic and reconstructive surgery and presentations for them;

**be able to:**

to conduct observations in case of suspicion in patients for precancerous  
 processes, tumor-like processes, benign tumors, malignant tumors;

definition, tactics and place of treatment of patients with precancerous  
 processes, tumor-like processes, benign tumors, malignant tumors;

carry out random transmission with traumatic injuries in the maxillofacial  
 region, including with combined and multiple injuries;

selective method of treatment for traumatic injuries in the maxillofacial  
 region, including combined and multiple injuries;

selective surgical method of treatment in pre-prosthetic training of personnel;  
 the selected surgical method of preparation for orthodontic examination of  
 patients;

definitions for tissue transplantation in the maxillofacial region;

research to determine the methods of plastic and reconstructive surgery in the  
 maxillofacial region;

**master:**

methods of providing surgical care for precancerous processes, tumor-like processes, benign tumors, malignant tumors;

methods of providing surgical care for traumatic injuries in the maxillofacial region, including combined and multiple injuries;

methods of periodontal surgery;

methods of surgical preprosthetic preparation;

methods of surgical preparation before orthodontic treatment;

methods of emergency care for patients with pathology of the maxillofacial region;

cone-beam computed tomography (CBCT), multislice computed tomography (MSCT), magnetic resonance imaging (MRI);

skills of computer processing of researches and planning of surgical treatment.

The structure of the elective Program includes three sections.

**Total number** of hours for the study of the elective is 42 academic hours. Classroom hours according to the types of studies: practical classes - 28 hours; student independent work (self-study) - 14 hours.

Intermediate assessment is carried out according to the syllabus of the specialty in the form of a credit (10 semester).

**THEME PLAN**

Title of section (topic)	Number of classroom hours
	practical
1. Neoplasm of the maxillofacial region	7
2. Traumatic injuries of the maxillofacial region	7
3. Outpatient oral surgery	7
1. 4. Dental implantation. Complications of dental implantation. Surgical training for orthodontic appointment in permanent occlusion. Surgical interventions on the periodontium	7
<b>Total hours</b>	<b>28</b>

## CONTENT OF THE TRAINING MATERIAL

### 2. NEOPLASM OF THE MAXILLOFACIAL REGION

**Precancerous diseases of the skin of the maxillofacial region. Contemporary approaches to diagnostics and personal treatment of the oral mucosa**

Factors in the development of precancerous diseases of the skin of the maxillofacial region . Classification, clinical picture, diagnosis, differential diagnosis and treatment of precancerous diseases of the skin of the maxillofacial region . Surgical treatment of precancerous diseases of the skin of the maxillofacial region : indications, contraindications, methods of implementation, optimal timing of surgical treatment, possible complications, postoperative management of the patient.

Factors contributing to the development of precancerous diseases in the workplace. Classification, clinical picture, diagnosis, differential diagnosis and treatment of precancerous diseases of the oral cavity skin. Surgical treatment of precancerous diseases of the oral mucosa: prescriptions, contraindications, methods of implementation, optimal surgical treatment, possible complications, postoperative management of the patient.

#### **Jaw cysts. Differential diagnosis**

Etiology, pathogenesis of non-odontogenic and odontogenic jaw cysts. Clinical picture of jaw cysts. Differential diagnosis of jaw cysts with cystic forms of neoplasms. Interpretation of the data of radiation methods of diagnostics. Preoperative preparation of patients with non-odontogenic and odontogenic jaw cysts. Surgical methods of treatment for the disease: indications, procedures, optimal surgical treatment, postoperative complications, postoperative patient management.

**Contemporary possibilities of treatment of tumors of the maxillofacial region. Medical rehabilitation of patients with tumors of the maxillofacial region**

Contemporary options for internal, palliative, symptomatic treatment of cancerous tumors. Indications and contraindications for combined, complex, combined treatment of malignant tumors of the maxillofacial region. Principles and methods of radiation therapy, surgical treatment, chemotherapy (adjuvant and neoadjuvant chemotherapy). Clinical protocols for the treatment of malignant tumors.

Medical rehabilitation of patients with tumors of the maxillofacial region. Groups of dispensary observation of patients. Dental care for patients with cancer before, during and after radiation therapy and / or chemotherapy, surgical treatment. Features of providing orthopedic care to patients with tumors, features of the manufacture of prostheses.

### 3. TRAUMATIC INJURIES OF THE MAXILLOFACIAL REGION

**Multiple and combined trauma of the maxillofacial region. Contemporary methods and evaluation of surgical treatment of fractures of the bones of the facial skeleton**

Classification of the maxillofacial region. Features of the development of multiple and combined injuries. Therapeutic and diagnostic tactics for combined and multiple injuries, including the maxillofacial region. Diagnosis of latent liquorrhea. Prevention is recommended and specialized comprehensive medical care with doctors of other specialties for combined and multiple injuries. Optimal timing of surgical treatment of injuries of the maxillofacial region.

Classification of fractures and deformities of the bones of the facial part of the skull. Evaluation of anthropometric data, planning of operations. Operations on the bones of the facial part of the skull. Operations for traumatic injuries and improperly fused fractures of the lower and upper jaws, zygomatic bone and arch, orbital bone fractures: indications, optimizer methods, emergency treatment, possible complications, postoperative management of the patient.

#### **Bone grafting in maxillofacial surgery.**

Types of bone grafts. Selection of a donor site for the collection of split autografts with a cortical layer. Auto- and allotransplantation of bone structures in maxillofacial surgery. Indications for reliable surgical treatment, methods of implementation, optimal timing of surgical treatment, possible complications, postoperative management of patients.

#### **4. OUTPATIENT ORAL SURGERY**

##### **Odontogenic sinusitis of the maxillary sinuses. Local plastic surgery in the oral cavity**

Etiology, pathogenesis, classification, clinical presentation, diagnosis, differential diagnosis of odontogenic sinusitis maxillary sinus. Treatment of patients with odontogenic sinusitis in outpatient and inpatient settings. Prevention of odontogenic sinusitis. Features of dental diseases in odontogenic sinusitis in the chronic stage and the stage of exacerbation.

Drawing up a plan for local plastic surgical treatment in the oral cavity. Identification of patients in need of local plastic surgery in the workplace. Preoperative preparation of patients, choice of method of surgical treatment. operations on the mucous membrane of the alveolar process (frenulotomy, plasty of the short frenulum of the lips and tongue, vestibuloplasty, closure of isolated gum recessions); on the alveolar mucosa and on the bone tissue of the alveolar process (Widmann flap operations; Neumann flap operations; modified Kirkland, Ramfjord, Nissl flap operations; operations of the apical case of the flap): surgical techniques, postoperative management of the patient.

##### **5. DENTAL IMPLANTATION. Complications of dental implantation. Surgical training for orthodontic appointment in permanent occlusion. Surgical interventions on the periodontium**

Types of Contemporary dental implants. Indications and contraindications for dental implantation and the choice of types of implants. Examination of patients and studies using CBCT cone beam computed tomography to determine the depth of bone structure assessment. The study of the features of the installation of dental implants, depending on the location on the jaw and the presence of a different volume of the musculoskeletal structure.



Studying errors in brief cases and performing one-stage and two-stage dental implant procedures. Early and late complications of dental implantation. Drug treatment in the development of inflammatory diseases in dental implantation. Drug complex correction of pain syndrome and sensitivity disorders in the area of observation of the innervation of the branches of the trigeminal nerve.

Alveoloplasty, removal of osteophytes, palatine torus, increase in height (augmentation) of the alveolar processes. Examination and planning of complex orthodontic surgical treatment. Indications and technique of surgical operations before orthodontic treatment.

Drawing up a plan for the surgical treatment of a patient with a properly functioning periodontium. Identification of signs of appearance, diagnosis, complex treatment of patients with the appearance of periodontal disease . Preoperative preparation of patients, choice of method of surgical treatment. Operations within the free and attached gums (curettage (open/closed), gingivotomy, gingivectomy (simple, radical)); alveolar mucosa and on the bone tissue of the alveolar process: indications, surgical techniques, postoperative management of the patient.

**METHODOLOGICAL CARD OF THE COURSE OF CHOICE "**  
**CONTEMPORARY ASPECTS OF DIAGNOSTICS AND TREATMENT IN**  
**MAXILLOFACIAL SURGERY"**

Section number, topic	Section name, topic	Number of classroom hours	Student's independent work	Forms of knowledge control
		practical		
1	Neoplasms of the maxillofacial region	7	4	Interviews, evaluation based on a business game, reports, abstracts, offset
2	Traumatic injuries of the maxillofacial region	7	4	Reports, evaluation based on a business game, interviews, offset
3	Outpatient Oral Surgery	7	3	Interviews, abstracts, offset
4	Dental implantation. Complications of dental implantation. Surgical training for orthodontic appointment in permanent occlusion. Surgical interventions on the periodontium	7	3	Reports, evaluation based on a business game, interviews, offset
<b>Total hours</b>		<b>28</b>	<b>14</b>	

## INFORMATIONAL AND METHODOLOGICAL PART

### LITERATURE

#### Basic (relevant):

1. Oral and maxillofacial surgery : textbook/ Ed. by prof. V. Malanchuk/ part. 1. – 2<sup>nd</sup> ed., 2018. – 440 p.
2. Oral and maxillofacial surgery : textbook/ Ed. by prof. V. Malanchuk/ part. 2., – 2<sup>nd</sup> ed., 2018. – 440 p.

#### Additionally:

3. Surgical treatment of marginal periodontal diseases on attached gums: textbook.-method. allowance / A.V. Glinnik [and others]. – Minsk : BSMU, 2015. - 35 p. Scientific publication.
4. Lenkova, I. I. Differential diagnosis of benign kidney formations : studies.-method. allowance – Minsk : BSMU, 2017. - 20 p.
5. Pavlov, O.M. Fractures of the zygomatic bone, zygomatic-orbital and zygomatic -maxillary complexes: study method – Minsk : BSMU, 2019. - 34 p.
6. Kakhanovich, T.V. General complications of the maxillofacial region : study guide. allowance – Minsk : BSMU, 2019. - 30 p.

#### Normative regulatory acts:

7. On health care : Law of the Republic of Belarus dated 06/18/1993 No. 2435-XII : as amended by the Law of the Republic of Belarus dated 06/20/2008 No. 363-Z : as amended. and additional
8. About the incident of the clinical protocol "Diagnostics and treatment of patients with departments of the Extremely facial area ": meeting of the Ministry of Health of the Republic of Belarus dated 08/04/2019. 2017 No. 80.

### LIST OF DIAGNOSTIC TOOLS

For competency diagnostics use possible forms:

#### Oral form:

interviews;  
reports.

#### Written form:

abstracts;  
evaluation based on a business game.

#### Oral and written form:

offset.

## **LIST OF AVAILABLE TEACHING METHODS**


Traditional method (lecture, laboratory practicals);  
Active (interactive) methods:  
Problem-Based Learning (PBL);  
Team-Based Learning (TBL);  
others.

## **LIST OF PRACTICAL SKILLS**

1. Work with educational, reference, educational and methodical and scientific literature;
2. Filling out accounting and reporting medical documentation;
3. Examination of patients with surgical pathology of the maxillofacial region;
4. Diagnosis in accordance with international terminology and classification of diseases (ICD-10) , preparation of a treatment plan;
5. Use of Contemporary diagnostic methods: cone-beam computed tomography, multislice computed tomography;
6. The use of a large number of scientific studies in the field of Oral and maxillofacial surgery;
7. Carrying out surgical treatment in the group of the maxillofacial region;
8. Evaluation of the results of surgical treatment;
9. Carrying out medical treatment after surgical treatment.

## COMPILERS/AUTHORS:

Head of the department of maxillofacial surgery of educational institution «Belarusian State Medical University», doctor of medical sciences, professor




A.S.Lastovka

Associate professor department of Maxillofacial Surgery of educational institution «Belarusian State Medical University», candidate of medical sciences, associate professor



A.V. Glinnik

Associate professor department of Maxillofacial Surgery of educational institution «Belarusian State Medical University», candidate of medical sciences, associate professor



O.M.Pavlov

Registration of the elective course and accompanying documents complies with the established requirements.

Dean of the Faculty of Dentistry of the Educational Institution "Belarusian State Medical University

07 10 2022



T.L.Shevela

Methodologist of the educational institution "Belarusian State Medical University

07 10 2022



N.A.Kukashynava

## Information about the authors ( compilers) elective course

Full Name	Lastovka Alexander Sergeevich
Position, academic degree, academic title	Head of the Department of Maxillofacial Surgery, Doctor of Medical Sciences, Professor
☎official	212-51-54
Email :	facesurge@bsmu.by

Full Name	Glinnik Alexander Vladimirovich
Position, academic degree, academic title	Associate Professor of the Department of Maxillofacial Surgery, Candidate of Medical Sciences, Associate Professor
☎official	225-88-24

Full Name	Pavlov Oleg Mikhailovich
Position, academic degree, academic title	Associate Professor of the Department of Maxillofacial Surgery, Candidate of Medical Sciences, Associate Professor
	225-88-24