

Summary of the working program of the academic discipline

« Innovative technologies in therapeutic dentistry »

(name of the academic discipline)

General Educational Program of higher education (specialist's degree programs)

31.05.03 Dentistry

code, name of the specialty

Department: Therapeutic Dentistry.

1. The purpose of mastering the discipline (*participation in the formation of relevant competencies – specify the codes*):

the program of elective disciplines is aimed at an in-depth study of therapeutic dentistry - the leading among dental disciplines, since the main place in it is occupied by the problems of not only treatment, but also the prevention of major dental diseases.

The purpose of teaching therapeutic dentistry as a discipline of choice is an in-depth study of the causes, mechanisms of development, modern methods of diagnosis and treatment of diseases of the teeth, periodontium and oral mucosa.

Able to carry out a critical analysis of problem situations based on a systematic approach, to develop an action strategy (UC-1).

Ability and readiness to conduct preventive medical examinations, medical examinations of various categories of citizens and the implementation of dispensary observation of patients with dental pathology (PC-2).

Willingness to collect and analyze complaints and other information from the patient (relatives / legal representatives), his medical history, interpretation of examination results, laboratory, instrumental, pathoanatomical and other studies in order to recognize the condition or establish the presence or absence of a dental disease, symptoms, syndromes of dental diseases, the establishment of nosological forms in accordance with the International Statistical Classification of Diseases and Related Health Problems, and other regulatory documents of the Ministry of Health of the Russian Federation (Procedure for the provision of medical care, Standard of Medical Care, Clinical Recommendations on the provision of medical care, etc.) (PC -6).

Willingness to participate in scientific research, analysis and public presentation of medical information based on evidence-based medicine and to participate in the implementation of new methods and techniques aimed at protecting public health and reducing dental morbidity (PC-12).

2. Position of the academic discipline in the structure of the General Educational Program (GEP).

2.1. The discipline "Innovative technologies in therapeutic dentistry" refers to the obligatory part of Block 1 of the OOP HE, is studied in the 10th semester.

2.2. To study the discipline, knowledge, skills and abilities are necessary, formed by the previous disciplines:

2.2.1. pathological physiology.

Knowledge - Inflammation. Pathology of thermoregulation. Fever. Tumors. Allergy.

Skills - to identify the presence of inflammation, an allergic reaction, a tumor.

Skills - to determine the severity and severity of the inflammatory process

2.2.2. Pathological anatomy.

Knowledge - Inflammation. Necrosis. Regeneration. Tumors. Injuries.

Skills - to take material for cytological examination (scrapings, prints) from the area under study;

Skills - to distinguish various pathological processes from each other.

2.2.3. Pharmacology.

Knowledge - Antiseptics in the clinic of therapeutic dentistry.

Enzymes. Antibiotics. Antimicrobial and antiparasitic agents. Means that affect tissue metabolism.

Antidotes and complexones.

Tranquilizers and sedatives. Narcotic and non-narcotic analgesics. Local anesthetic drugs.

Skills - the choice of the necessary drug depending on the pathology

Skills - write prescriptions for drugs.

2.3. And the study of the discipline is necessary for the knowledge, skills and abilities formed by subsequent disciplines/practices:

Department of Therapeutic Dentistry - graduating department.

3. Deliverables of mastering the academic discipline and metrics of competence acquisition

The study of the discipline is aimed at developing the following universal (UC), general professional (OPC) and professional (PC) competencies among students:

No. p / p	Competence code	The content of the competence (or its part)	Code and name of the competence acquisition metric	As a result of mastering the discipline, the students should:		
				Know	Be able to	Own
1.	UC-1	Able to carry out a critical analysis of problem situations based on a systematic approach, develop an action strategy	IET 1.1 Knows: methods of critical analysis and evaluation of modern scientific achievements; basic principles of critical analysis IUK 1.2 Able to: gain new knowledge based on analysis, synthesis, etc.; collect data on complex scientific problems related to the professional field; search for information and solutions based on action, experiment and experience IUK 1.3 Has practical experience: researching the problem of professional activity using analysis, synthesis and other methods of intellectual activity; developing an action strategy to solve professional problems	Principles and methods of search, analysis and synthesis of information.	Apply the principles and methods of searching, analyzing and synthesizing information ; Competently, logically, reasonably form their own judgments and assessments.	Practical skills of searching, analyzing and synthesizing information.
2	PC-2	the ability and willingness to conduct preventive medical examinations, medical examinations of various categories of citizens and the implementation of dispensary observation of patients with dental pathology	IPC 2.1 Knows: Normative legal acts regulating the procedures for conducting preventive medical examinations and medical examinations The main criteria for a healthy lifestyle and methods for its formation Socio-hygienic and medical aspects of alcoholism, drug addiction, substance abuse, the basic principles of their prevention Forms and methods of sanitary and hygienic education among	pathological anatomy, clinic, differential diagnosis, methods of treatment and prevention of caries; pulpitis, periodontitis, periodontal diseases and oral mucosa; methods and means used in the medical examination	prescribe and conduct training in rational oral hygiene; carry out therapeutic measures for enamel remineralization in order to prevent and treat caries and non-cariou lesions of the teeth; carry out comprehensive measures for the prevention	methods of preparation, mechanical and drug treatment and filling of carious cavities; remotherapy techniques ; methods of mechanical and drug treatment of root canals; root canal filling techniques; methods of treatment of periodontal diseases;

		<p>patients (their legal representatives), medical workers</p> <p>Features of specific and non-specific prevention of dental diseases</p> <p>The main hygienic measures of a health-improving nature that promote health and prevent the occurrence of dental diseases</p> <p>Etiology, pathogenesis, prevention of dental diseases</p> <p>Fundamentals of Preventive Medicine</p> <p>Stages of planning and implementation of community programs for the prevention of dental diseases</p> <p>IPC 2.2 Able to:</p> <p>Conduct health and hygiene education among children and adults (their legal representatives) and medical workers in order to form a healthy lifestyle and prevent dental diseases</p> <p>Carry out health education among children and adults with dental diseases in order to form a healthy lifestyle and prevent dental diseases</p> <p>To form in children and adults (their legal representatives) behavior aimed at maintaining and improving the level of somatic and dental health</p> <p>Develop and implement healthy lifestyle programs, including programs to reduce alcohol and tobacco consumption, prevent and combat the non-medical use of narcotic drugs and psychotropic substances</p> <p>Develop a plan of preventive measures and implement</p>	<p>, dispensary groups depending on the dental disease</p>	<p>of caries; determine the index of oral hygiene according to Fedorov - Volodkina , according to Green-Vermillion; determine the type of plaque on the teeth, tartar, its color, consistency; carry out therapeutic manipulations to eliminate complications associated with the treatment of caries and its complications; remove dental deposits: plaque, supra- and subgingival tartar; polish teeth after tartar removal</p>	<p>methods of treatment of diseases of the oral mucosa; methods of treatment of non-carious lesions of hard dental tissues; methods of injection and non-injection local anesthesia; methods of treatment of pulpitis, apical periodontitis and caries; methods of professional oral hygiene; fissure sealing techniques .</p>
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		<p>methods of group and individual prevention of major dental diseases</p> <p>Conduct preventive medical dental examinations of the population</p> <p>Assign preventive measures to patients, taking into account risk factors for the prevention and early detection of diseases, including cancer</p> <p>Conduct the selection and prescription of drugs and non-drug methods for the prevention of dental diseases in children and adults</p> <p>Carry out dispensary supervision of children and adults with dental diseases</p> <p>IPC 2.3 Has practical experience:</p> <p>Promotion of a healthy lifestyle and prevention of dental diseases</p> <p>Carrying out health education among children and adults with dental diseases</p> <p>Formation in children and adults (their legal representatives) of behavior aimed at maintaining and improving the level of somatic health</p> <p>Formation of healthy lifestyle programs, including programs to reduce alcohol and tobacco consumption, prevent and combat the non-medical use of narcotic drugs and psychotropic substances</p> <p>Development of a plan of preventive measures and the implementation of methods for group and individual prevention of dental diseases</p> <p>Carrying out preventive medical dental examinations of the population, taking into account age</p>			
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			<p>Prescribing preventive measures for children and adults with dental diseases, taking into account risk factors, oncological and hygienic prevention in accordance with the procedures for providing medical care, clinical recommendations, taking into account the standards of medical care</p> <p>Selection and prescription of drugs and non-drug methods for the prevention of dental diseases in children and adults</p> <p>Conducting a dispensary examination of children and adults with dental diseases</p> <p>Monitoring compliance with dental preventive measures</p>			
3.	PC-6	<p>readiness to collect, analyze complaints and other information from the patient (relatives/legal representatives), data from his anamnesis, interpretation of examination results, laboratory, instrumental, pathological and other studies, incl. diagnostic studies using modern technical means and digital technologies, in order to recognize the state or establish the presence or absence of a dental disease, symptoms, syndromes of dental diseases, the establishment of nosological forms in accordance with the International Statistical Classification of Diseases and Related Health Problems, and other regulatory documents of the</p>	<p>IPC 6.1 Knows: The methodology for collecting complaints and anamnesis from patients (their legal representatives). Methods of physical examination of patients (examination, palpation, percussion, auscultation). The procedure for providing medical care to the adult population with dental diseases The procedure for providing medical care to children with dental diseases Clinical guidelines on the provision of medical care to patients with dental diseases Standards of care</p> <p>IPK 6.2. Can: interpret the results of examination, laboratory, instrumental, pathological and other studies, incl.</p>	<p>pathological anatomy, clinic, differential diagnosis, methods of treatment and prevention of caries; classification, etiology, pathogenesis, pathological anatomy of pulpitis; clinic, differential diagnostics, methods of inflammation of the pulp; classification, etiology, pathogenesis, pathological anatomy of periodontitis ;</p>	<p>conduct examination of patients in order to diagnose caries, pulpitis, periodontitis , non-carious lesions of the teeth, periodontal diseases and oral mucosa, take a smear for cytological, bacterioscopic , bacteriological examination of the contents of the pocket; perform palpation of regional lymph nodes of the facial skeleton,</p>	<p>methods of treatment of periodontal diseases; methods of treatment of diseases of the oral mucosa; methods of treatment of non-carious lesions of hard dental tissues; methods of treatment of pulpitis, apical periodontitis and caries</p>

		<p>Ministry of Health of the Russian Federation (Procedure for the provision of medical care, Standard of medical care, Clinical recommendations on the provision of medical care, etc.)</p>	<p>diagnostic studies using modern technical means and digital technologies, in order to recognize the state or establish the fact of the presence or absence of a dental disease, symptoms, syndromes of dental diseases, the establishment of nosological forms in accordance with the International Statistical Classification of Diseases and Related Health Problems, and other regulatory documents of the Ministry of Health of the Russian Federation (Procedure for the provision of medical care, Standard medical care, Clinical recommendations on the provision of medical care, etc.)</p> <p>Develop a plan for the treatment of children and adults with dental diseases in accordance with the procedures for the provision of medical care, clinical guidelines, taking into account the standards of medical care.</p> <p>IPC 6.3 Has practical experience: interpretation of the results of examination, laboratory, instrumental, pathoanatomical and other studies, incl. diagnostic studies using modern technical means and digital technologies, in order to recognize the state or establish the fact of the presence or absence of a dental disease, symptoms, syndromes of dental diseases, the establishment of nosological forms in accordance with the International Statistical Classification of</p>	<p>classification, etiology, pathogenesis, pathological anatomy of dental lesions of non-carious origin. Clinic, differential diagnosis, methods of prevention and treatment of lesions of hard tissues of the tooth of non-carious origin; clinic, differential diagnostics, methods of treatment of periodontal inflammation; classification, etiology, pathogenesis, pathological anatomy of diseases of the oral mucosa. Clinic, differential diagnosis, methods of prevention and treatment of diseases of the oral mucosa</p>	<p>soft tissues of the face; palpation of the oral mucosa; determine the morphological elements of the lesion; probe deep ulcers, fistulas; take material for cytological examination (scrapings, prints); take material for direct microscopy for fungi, fusospirochetes ; to carry out therapeutic measures in case of damage to the oral mucosa with arsenic salts; local treatment of lesions of the mucous membrane - removal of plaque, necrotic tissues, washing, irrigation, applications; inject drugs under the elements of the lesion; eliminate local traumatic factors</p> <p>determine the index of oral hygiene according to Fedorov - Volodki</p>	
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			<p>Diseases and Related Health Problems, and other regulatory documents of the Ministry of Health of the Russian Federation (Procedure for the provision of medical care, Standard medical care, Clinical recommendations on the provision of medical care, etc.)</p> <p>Development of a treatment plan for children and adults with dental diseases, taking into account the diagnosis, age and clinical picture in accordance with the current procedures for the provision of medical care, clinical recommendations, taking into account the standards of medical care</p>		<p>na , according to Green-Vermillion;</p> <p>describe radiographs; determine the degree of tooth mobility (I, II , III);</p>	
4	PC-7	<p>the ability to determine the tactics of managing patients with various dental diseases in accordance with the Clinical Guidelines and other regulatory documents of the Ministry of Health of the Russian Federation on an outpatient basis and in a day hospital, taking into account the age of the patient.</p>	<p>IPC 7.1 Knows:</p> <p>Methods of drug and non-drug treatment, medical indications for the use of medical devices for dental diseases</p> <p>Groups of drugs used to provide medical care in the treatment of dental diseases; the mechanism of their action, medical indications and contraindications to the appointment; compatibility, possible complications, side effects, adverse reactions, including serious and unexpected</p> <p>Principles, techniques and methods of anesthesia, selection of the type of local anesthesia in the treatment of dental diseases</p> <p>Ways to prevent or eliminate complications, side effects, adverse reactions, including serious and unforeseen, that occurred during the</p>	<p>clinic, differential diagnostics, methods of treatment of inflammation of the pulp; periodontal, periodontal and diseases of the oral mucosa, classification, etiology, pathogenesis, pathological anatomy. Methods of treatment, indications, contraindications to methods of treatment.</p>	<p>choose and carry out a rational method of treating caries, pulpitis, periodontitis , periodontal diseases, oral mucosa, depending on the clinical manifestations and the state of the body as a whole; apply paste for pulp devitalization ; open the cavities of all anatomical groups of teeth, prepare the crowns of intact teeth;</p> <p>remove the pulp after devitalization</p>	<p>methods of treatment of non-carious lesions of hard dental tissues; methods of preparation, mechanical and drug treatment and filling of carious cavities; methods of treatment of pulpitis, apical periodontitis and caries, methods of professional hygiene, removal of dental deposits, methods of treatment of diseases of the oral mucosa</p>

		<p>examination or treatment of patients with diseases of the teeth, pulp, periodontium, periodontium, oral mucosa and lips</p> <p>Materials science, technologies, equipment and medical products used in dentistry</p> <p>Anatomy of the head, maxillofacial region, features of blood supply and innervation; the structure of the teeth; histology and embryology of the oral cavity and teeth, the main violations of embryogenesis</p> <p>IPK 7 .2. Able to:</p> <p>Develop a plan for the treatment of children and adults with dental diseases in accordance with the procedures for the provision of medical care, clinical guidelines, taking into account the standards of care</p> <p>Select and prescribe medicines, medical devices (including dental materials), dietary nutrition, medical and recreational regimen for the treatment of children and adults with dental diseases in accordance with the current procedures for the provision of medical care, clinical recommendations, taking into account the standards of medical care</p> <p>Determine medical indications and contraindications for local anesthesia techniques in the maxillofacial region</p> <p>Perform local anesthesia (application, infiltration, conduction) in children and adults with dental diseases</p>		<p>n from the root canal; to carry out instrumental , drug treatment of the root canal, its drying, determining the degree of its patency; seal root canals with pastes and sealants without using and using pins; remove fragments of instruments from the root canal; carry out the removal of supra- and subgingival dental deposits, applications on the oral mucosa, blockade under the elements of the lesion take a smear for cytological, bacterioscop ic , bacteriologi cal examination of the contents of the pocket; perform palpation of regional lymph nodes of the facial skeleton, soft tissues of the face; palpation of the oral mucosa; determine the morphologic al elements</p>	
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		<p>Perform medical interventions, including therapeutic ones, in children and adults with dental diseases on an outpatient basis (excluding repeated endodontic treatment):</p> <ul style="list-style-type: none"> - individual training in oral and dental hygiene, selection of means and items for oral hygiene - controlled brushing of teeth - professional oral and dental hygiene - injection of drugs in the maxillofacial area - local application of remineralizing drugs in the area of the tooth - deep fluoridation of tooth enamel - sealing the fissure of the tooth with a sealant - professional teeth whitening - grinding of hard tissues of the tooth - restoration of a tooth with a filling using dental cements, chemical curing materials, photopolymers - restoration of teeth with a violation of the contact point - tooth restoration with filling material using anchor pins - application of devitalizing paste - pulpotomy (amputation of the coronal pulp) - pulp extirpation - instrumental and medical treatment of a well-passable root canal - temporary filling of the root canal with a drug - filling the root canal of the tooth with paste, gutta-percha pins - removal of supragingival and subgingival plaque in the tooth area (manual 		<p>of the lesion; probe deep ulcers, fistulas; take material for cytological examination (scrapings, prints); take material for direct microscopy for fungi, fusospirochetes ; to carry out therapeutic measures in case of damage to the oral mucosa with arsenic salts; local treatment of lesions of the mucous membrane - removal of plaque, necrotic tissues, washing, irrigation, applications; inject drugs under the elements of the lesion; eliminate local traumatic factors</p>	
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		<p>method)</p> <ul style="list-style-type: none"> - ultrasonic removal of supragingival and subgingival dental deposits in the tooth area - closed curettage for periodontal diseases in the tooth area - application of a medical dressing for periodontal diseases in the area of one jaw - prescription of drug therapy for diseases of the oral cavity and teeth - appointment of dietary therapy for diseases of the oral cavity and teeth <p>Perform medical interventions, including surgical ones, in children and adults with dental diseases on an outpatient basis (excluding the extraction of impacted and dystopic teeth):</p> <ul style="list-style-type: none"> - removal of a tooth - removal of a temporary tooth - permanent tooth extraction - opening and drainage of odontogenic abscess <p>Carry out phased sanitation of the oral cavity (excluding sanitation of the oral cavity in children under anesthesia)</p> <p>Perform medical interventions, including orthopedic, in adults with dental diseases on an outpatient basis (excluding prosthetics on dental implants, technologies for automated production of orthopedic structures, complete removable lamellar and clasp dentures):</p> <ul style="list-style-type: none"> - obtaining anatomical and functional impressions - restoration of a tooth with a crown - restoration of the 			
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		<p>integrity of the dentition with fixed bridges</p> <ul style="list-style-type: none">- prosthetics with partial removable lamellar dentures- correction of a removable orthopedic structure- removal of a fixed orthopedic structure <p>Interpret the results of X-ray studies of the maxillofacial region</p> <p>Conduct counseling for children and adults with diseases of the mucous membranes of the mouth and lips, determine indications for referral for a consultation with specialist doctors</p> <p>Prevent or eliminate complications, side effects, adverse reactions, including unforeseen ones, resulting from diagnostic or therapeutic manipulations, the use of drugs and (or) medical devices, non-drug treatment</p> <p>IPC 7.3 Has practical experience:</p> <p>Selection and prescription of medicines, medical devices (including dental materials) for the treatment of dental diseases in children and adults in accordance with the current procedures for the provision of medical care, clinical guidelines, taking into account the standards of medical care</p> <p>Prescribing dietary nutrition, health-improving regimen in the treatment of dental diseases in children and adults in accordance with the current procedures for the provision of medical care, clinical recommendations, taking into account the standards of medical</p>			
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		<p>care</p> <p>Performing medical interventions in children and adults with dental diseases in accordance with the current procedures for the provision of medical care, clinical guidelines, taking into account the standards of medical care</p> <p>Evaluation of the results of medical interventions in children and adults with dental diseases</p> <p>Selection of the type and conduct of local anesthesia (application, infiltration, conduction) in children and adults with dental diseases</p> <p>Evaluation of the efficacy and safety of the use of drugs, medical devices and non-drug treatment in children and adults with dental diseases</p> <p>Counseling children and adults with diseases of the mucous membranes of the mouth and lips, determining indications for referral for a consultation with specialist doctors</p> <p>Selection and prescription of medicines and medical devices, taking into account the diagnosis, age and clinical picture of a dental disease in accordance with the procedures for providing medical care, clinical recommendations, taking into account the standards of medical care</p> <p>Definitions of routes of administration, regimen and dosage of drugs</p> <p>Selection and prescription of non-drug treatment for children and adults with dental diseases in</p>			
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			<p>accordance with the procedures for providing medical care, clinical guidelines, taking into account the standards of medical care</p> <p>Prevention and treatment of complications, side effects, adverse reactions, including unforeseen ones, resulting from diagnostic or therapeutic procedures, the use of drugs and (or) medical devices, non-drug treatment at a dental appointment</p> <p>Providing medical care to children and adults with sudden acute diseases, conditions, exacerbation of chronic diseases without obvious signs of a threat to the life of the patient in an emergency form</p> <p>The use of medicines and medical devices in the provision of medical care in an emergency form</p>			
5	PC-12	<p>willingness to participate in scientific research, analysis and public presentation of medical information based on evidence-based medicine and to participate in the implementation of new methods and techniques aimed at protecting public health and reducing dental morbidity.</p>	<p>IPC 12.1 Knows: Fundamentals of evidence-based medicine; the main sources of medical information based on evidence-based medicine; methods and forms of public presentation of medical information; basic principles of medical research</p> <p>IPC 12.2 Can: Search for medical information based on evidence-based medicine; interpret the data of scientific publications; critically evaluate modern methods of diagnosis, prevention and treatment of diseases from the perspective of evidence-based medicine;</p>	<p>Scientific literature, educational and methodical publications, scientific journals and collections of works. Methods of medical statistics.</p>	<p>Analyze scientific literature and statistical reviews, conduct statistical analysis, present the resulting statistics, and interpret them.</p>	<p>Methods of medical statistics, determination of the Student's criterion, non-parametric methods, comparison of independent and dependent groups, methods for describing qualitative features.</p>

			justify your choice of methods for diagnosing, preventing and treating dental diseases; prepare a presentation for the public presentation of medical information, the results of scientific research IPC 12.3 Has practical experience: Development of algorithms for examination and treatment of adults and children with dental diseases in accordance with the principles of evidence-based medicine; search and interpretation of medical information based on evidence-based medicine; public presentation of medical information based on evidence-based medicine; partial participation in scientific research			
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4. Volume of the academic discipline and types of academic work

The total complexity of the discipline is 2 credits . units (72 academic hours)

Type of study work	Labor intensity		Labor intensity by semesters (ACH)		
	volume in credit units (CU)	volume in academic hours (AH)	6	7	10
classroom work, including	2	72			72
Lectures (L)		10			10
Laboratory workshops (LP)					
Practical exercises (PE)					
Clinical Practice (CPP)		34			34
Seminars (C)					
Student Independent Work (SIW)		28			28
Intermediate certification					
test/exam (<i>specify type</i>)		<i>exam</i>			
TOTAL		2			72

5. Sections of the academic discipline and competencies that are formed

p / no.	Competency Code	Name of the discipline section	The content of the section in didactic units
1.	UC-1,	Prevention of caries; non-carious lesions of hard tissues of teeth, periodontal diseases and oral mucosa. Methods of	Etiology, pathogenesis, pathological anatomy, clinic, diagnostics, differential diagnostics, methods of caries treatment and prevention; pulpitis, periodontitis, non-carious lesions of

	PC-2	treatment of diseases of hard tissues of teeth in patients of different ages	hard dental tissues, periodontal diseases and oral mucosa
2.	PC-6, PC-7, PC-12	Diagnosis of caries; pulpitis, periodontitis, non-carious lesions of hard dental tissues, periodontal diseases and oral mucosa. Endodontic treatment of pulp and periodontal diseases in patients of different ages	Etiology, pathogenesis, pathological anatomy, clinic, diagnostics, differential diagnostics, methods of caries treatment and prevention; pulpitis, periodontitis, non-carious lesions of hard dental tissues, periodontal diseases and oral mucosa