DANYLO HALYTSKY LVIV NATIONAL MEDICAL UNIVERSITY
DEPARTMENT OF THE LATIN AND FOREIGN LANGUAGES

TERMS IN ONCOLOGY

2020

UDC 811.111:616-06] (07)
S70

B. I. Shunevych – DSc in Pedagogy, Professor, Department of Foreign languages, Lviv National Agrarian University

M. P. Dilai – PhD in Philology, Associate Professor, Department of Applied Linguistics, Lviv Polytechnic National University

Terms in Oncology: Student's Guide / **P. A. Sodomora, L. V. Gutor, A. O. Syvak**. – Danylo Halytsky LNMU, 2020. – 36 p.

Discussed and approved by the Department of the Latin and Foreign Languages, Danylo Halytsky Lviv National Medical University (Minutes No 6, dated 5 February, 2020).

Approved by the Methodical Board of the Faculty of Foreign Students, Danylo Halytsky Lviv National Medical University (Minutes No 2, dated 31 March, 2020).

Terms in Oncology is designed for the students, postgraduate students, and health care professionals with the aim of meeting the requirement for improving the knowledge of English oncologic terms. The Guide primarily intends to fulfill the learning purposes of the students at Danylo Halytsky LNMU and can be incorporated within curriculum subjects in particular "English for professional purposes (Terms in Oncology)", "Oncology" and other relevant disciplines.

Terms in Oncology covers basic professional vocabulary and includes explanatory notes and tasks to facilitate learning and encourage memorizing professional terminology. The Guide also contains information on the objectives and structure of the subject, assessment criteria and requirements for group- and self-study, plans of practical classes, texts and tasks for self-study.

CONTENTS

INTRODUCTION

1. Structure of the Guide

Terms in Oncology: Student's Guide is designed in accordance with the syllabus of the academic discipline "English for Professional Purposes (elective course)" for the 5th year medical students (Specialties: 222 "General Medicine", 228 "Pediatrics"). The Guide intends to fulfill the learning purposes of the students at Danylo Halytsky LNMU and can be incorporated within curriculum subjects in particular "Oncology" and other relevant disciplines. *Terms in Oncology* can be useful for the students, postgraduate students, and health care professionals with the aim of meeting the requirement for improving the knowledge of English oncologic terms.

In addition, the Guide aims at facilitating the study process through suggesting learning objectives, tips, and recommendations for practical classes and self-study. The *Terms in Oncology: Student's Guide* covers basic professional vocabulary and includes explanatory notes and tasks to facilitate learning and encourage memorizing professional terminology. The Guide also contains information on the objectives and structure of the subject, assessment criteria and requirements for group- and self-study, plans of practical classes, texts, and training exercises for self-study and control questions.

2. Description of the subject "English for Professional Purposes (elective course)", the 5th year of medical faculty

Medical students learn *English for Professional Purposes* during the 5th year of study. As a subject it is based on its integration with other theoretical and clinical disciplines, namely: Latin, biology, anatomy, physiology, biophysics, biochemistry, biopharmacy, pharmacology, physiology, pathology, etc.

The aim of the subject is to obtain the knowledge of English medical terminology and to review the material of professional matters; to form the ability to apply obtained skills in further studying at higher medical educational institutions and a future work-placing; to develop and train basic lexical and grammar skills required for the effective performance during the Medical Licensing Examinations and the exam in English as the part of State Qualification Examination. Thus, practical classes are directed at learning fundamental terminology based on the original medical texts in English from the authentic sources; developing skills of effective reading and listening comprehension as well as translation skills; practicing oral and written communication skills.

Medical students are recommended to take motes of explained matters, complete written tasks, make reports, perform translation activities, participate in discussions and dialogues.

The final objectives of the subject are:

- to acquire the knowledge of English medical terminology
- to demonstrate proper knowledge of medical English during the exam in English as the part of State Qualification Examination
- to know Greek and Latin lexical and semantic structures (words and word combinations)
- to interpret the content of medical texts in English
- to communicate in English in oral and written forms
- to be able to discuss professional issues in English

3. Structure of the subject

English for Professional Purposes for the 5th year medical students as a subject is planned for 30 academic (1 credit) hours and ends with a credit control. The course of study includes two types of academic activity, namely: practical classes and self-study (Table 1). An ECTS credit equals 30 academic hours.

Table 1.
Structure of the subject

Total hours, including				**Year of study**	**Type of control**
Total	Classroom		Self-study		
	Lectures	Practical classes			
30 academic hours / 1 ECTS credit*	-	10	20	5	credit

Table 2.
Thematic plan of practical classes and self-study

No.	**Topic**	**Lectures**	**Practical classes**	**Self-study**
1	Types and causes of cancer	-	2	2
2	Oncology: Combining forms and abbreviations	-	2	2
3	Diagnostic terms in oncology. Grading	-	2	2
4	Treatment of cancer. Surgical and pharmacological terms	-	2	2
5	Oncology: final review and revision	-	2	2
6	Alternative methods for cancer treatment	-	-	2
7	Immunotherapy in oncology	-	-	2
8	Genetic therapy in oncology	-	-	2
9	Chemotherapy	-	-	2
10	Prevention of cancer	-	-	2
Total hours – 82		-	10	20
Final control – **(credit)**		-	-	-

4. Assessment

Assessment is one of the final stages of the formative academic activity and the indicator of academic performance. The student's knowledge is assessed with traditional marks – "5", "4", "3", "2", the average being transferred into points at the end of the course. Students receive marks for every theme of the course. Teachers evaluate students' communicative, lexical, and grammar skills by means of oral conversation on the theme studied or written tests aimed at controlling related terminology and grammar.

Self-guided work included in the theme of practical class together with classroom activities is estimated during the formative control of the theme during the corresponding classroom lesson. The knowledge of themes planned only for self-study is controlled during the *transitive (semester)* or *final credit test* as "*passed*".

The discipline ends with the *final credit test* and is based on the results of students' formative assessment for the discipline (both first and second terms). It is estimated as "*passed*" or "*not passed*". This control is based on the results of formative assessment and self-study. To pass the *credit test* students should primarily make up all missed classes, receive the minimum average mark ("3") for the term and submit the materials of self-study to the lecturer. This mark is not transferred into points.

Students, who attended all classes and received more than a minimum number of points for the discipline, are admitted to the *final credit test*. The students who missed the classes on plausible excuses can have corrections in their individual plans and can be permitted to make up academic debts in the determined term.

The points for the discipline are determined as the average of the marks for all classes structured by the academic discipline which are later transferred into points according to the following table:

4-point scale	200-point scale	4-point scale	200-point scale	4-point scale	200-point scale	4-point scale	200- point scale
5	200	4.45	178	3.92	157	3.37	136
4.97	199	4.42	177	3.89	156	3.36	134
4.95	198	4.4	176	3.87	155	3.32	133
4.92	197	4.37	175	3.84	154	3.3	132
4.9	196	4.36	174	3.82	153	3.27	131
4.87	195	4.32	173	3.79	152	3.25	130
4.85	194	4.3	172	3.77	151	3.22	129
4.82	193	4.27	171	3.74	150	3.2	128
4.8	192	4.24	170	3.72	149	3.17	127
4.77	191	4.22	169	3.7	148	3.15	126
4.75	190	4.19	168	3.67	147	3.12	125
4.72	189	4.17	167	3.65	146	3.1	124
4.7	188	4.14	166	3.62	145	3.07	123
4.67	187	4.12	165	3.57	143	3.02	121
4.65	186	4.09	164	3.55	142	3	120
4.62	185	4.07	163	3.52	141	Less than 3	Not enough
4.6	184	4.04	162	3.5	140		
4.57	183	4.02	161	3.47	139		
4.52	181	3.99	160	3.45	138		
4.5	180	3.97	159	3.42	137		
4.47	179	3.94	158	3.4	136		

The minimum number of points that the student should receive to pass the credit is 120 (60 per cent from the total number). The maximum number of points received by the student during the course is 200.

5. Requirements for self-study

Students complete the tasks of the themes for self-study and submit the materials to their teacher either in a written/printed form or digital form via e-mail. After studying the material for self-study students must know active vocabulary and answer the questions on the themes for self-study.

The students should submit the following materials on each theme for self-study to their teacher:

1) The exercise book with fulfilled exercises for self-study;
2) Written summaries of the main texts of the themes;
3) List of active vocabulary of the themes with phonetic transcription and translation;
4) Optional*: Presentations on the suggested themes (a teacher may choose one to be presented during the credit control).

*A lecturer can make changes in the suggested list of control tasks.

6. Expected outcomes of the course

The students must:

- ✓ **know active vocabulary and terminology related to the themes:**
  1) Types and causes of cancer
  2) Oncology: Combining forms and abbreviations
  3) Diagnostic terms in oncology. Grading
  4) Treatment of cancer. Surgical and pharmacological terms
  5) Alternative methods for cancer treatment
  6) Immunotherapy in oncology
  7) Genetic therapy in oncology
  8) Chemotherapy
  9) Prevention of cancer

- ✓ **know the following grammar basics:**
  1) Verb tense forms
  2) Adjectival suffixes
  3) Prefixes, roots, and suffixes of Latin origin
  4) Prefixes, roots, and suffixes of Greek origin
  5) Passive voice
  6) Imperative mood
  7) Infinitive
  8) Perfect infinitive
  9) Participle I
  10) Participle II
  11) Gerund
  12) Complex object
  13) Complex Subject
  14) Objective infinitive construction

Terms in Oncology

1. Types of tumors

Oncology is the study, diagnosis, and treatment of tumors. **Tumors** or **neoplasms** are growths made up of cells that miss the mechanism telling them either to stop reproducing or to die. The death of normal cells in a normal time cycle is called **apoptosis.**

Tumors can be **benign** (=massed but containing cells that resemble the site of origin) or **malignant** (=consisting of abnormal or mutated cells). Tumors can be **encapsulated** or they may reproduce in uncontrolled patterns.

Carcinoma	The most common type of cancer. It originates from epithelial tissue. Also called **solid tumors,** carcinomas make up about 90 percent of all tumors. Common sites are in the skin, lungs, breasts, colon, stomach, mouth, and uterus. Carcinomas spread by way of the lymphatic system.
Sarcoma	It is a fairly rare type of tumour which originates in muscle or connective tissue and lymph.
Teratoma	A *mixed-tissue tumor* derives from tissue that is capable of separating into either epithelial or connective tissue because it is composed of several types of cells. Such a tumor can be found in the kidneys, ovaries, or testes. Mixed-tissue tumors which can be**,** growths containing bone, muscle, skin, and glandular tissue as well as other types of cells.

Benign tumors are made up of **differentiated** cells that reproduce abnormally. Some benign tumors can cause pain from pressure exerted on an organ or tissue. Often, removal cures the problem. Malignant tumors are **invasive,** extending beyond the tissue to infiltrate other organs. They can be life-threatening. These tumors are made up of **dedifferentiated** cells, which lack the normal orderly arrangement of the cells from which they arise. This loss of cell differentiation is called **anaplasia.**

Any abnormal tissue development is known as **dysplasia** or **heteroplasia.** The first stages of cancer development may be classified as dysplasia because they represent the beginning of abnormal tissue development. The next stage may be a *carcinoma in situ,* a tumor in one place that affects all layers of tissue. Finally, a *malignancy* occurs when the cells break loose and become invasive to surrounding tissue. The spread of a malignancy to other areas of the body is called **metastasis.** While *homeostasis,* the maintaining of balance throughout the body, metastasis is a state of imbalance, with cells spreading uncontrollably.

2. Causes of Cancer

Tumors appear under a number of different circumstances or a combination of circumstances. One such is the exposure to **carcinogens**, cancer-causing agents. Another cause of cancer is from an inherited defect transmitted from parent(s) to child in the genetic material of the cell, **DNA** (*deoxyribonucleic acid*). Breast cancer and ovarian cancer are examples of largely **inherited cancers**. People with a **family history of cancers** are more likely to develop cancer.

Viruses heighten cancer risk (such as Kaposi's sarcoma from HIV). A virus that causes cancer is known as an *oncogenic* agent. An **oncogene** is a DNA fragment that converts normal cells into malignancies.

3. Combining forms

COMBINING FORM	MEANING	EXAMPLE
blast(o)	immature cell	*blastoma*, tumor arising from an immature cell
carcin(o)	cancer	*carcinogen*, cancer-causing agent
muta	genetic change	*mutation*, process of genetic change
mutagen(o)	genetic change	*mutagenic*, causing genetic change
onc(o)	tumor	*oncology*, treatment and study of tumors
radi(o)	radiation, X rays	*radiation*, process of exposure to or treatment with above-normal levels of radiation
-blast	immature cell	*leukoblast*, immature
-oma (*pl.*, -omata)	tumor	*fibroma*, benign tumor arising from connective tissue
-plasia	formation (as of cells)	*dysplasia*, abnormal tissue development
-plasm	formation (as of cells)	*neoplasm*, abnormal tissue formed by abnormal cell growth
-plastic	formative	*neoplastic*, growing abnormally (as a neoplasm)

4. Abbreviations

ALL	acute lymphocytic leukemia	**ER**	estrogen receptor
AML	acute myelogenous leukemia	**METS, mets**	metastases
bx	biopsy	**NHL**	non-Hodgkin's lymphoma
CA	carcinoma	**PSA**	prostate-specific antigen
CEA	carcinogenic embryonic antigen	**rad**	radiation absorbed dose
chemo	chemotherapy	**RNA**	ribonucleic acid
CLL	chronic lymphocytic leukemia	**RT**	radiation therapy
CML	chronic myelogenous leukemia	**TNM**	tumor, nodes, metastasis
DES	diethylstilbestrol	**Tx**	treatment
DNA	deoxyribonucleic acid	**XRT**	x-ray or radiation therapy

5. Diagnostic terms

Normal adult checkups usually include auscultation of the lungs, palpation of the abdomen, an inspection of the rectum and an occult stool test, and a discussion of any symptoms that may need further investigation. Routine medical checkups often include tests for cancer:

Pap smear	Adult females usually have this test for cervical and uterine cancer, along with a breast examination, including palpation of the breasts for lumps.
PSA (prostate-specific antigen)	Adult males usually have this blood test that can detect prostate cancer.
Digital rectal exam (DRE)	a prostate cancer screening method.

Some blood tests indicate a particular type of cancer. Imaging techniques now provide a detailed picture of various parts of the body. MRIs, CAT scans, mammograms, and the insertion of lighted instruments to view various body parts have advanced diagnostic techniques.

6. Grading

Tumors are categorized by **grade,** the maturity of the tumor, and **stage,** the degree of spread or metastasis of the tumor. A common method for grading is the **TNM system** (tumor, node, metastasis), which numbers the extent of the tumor, the extent of lymph nodes affected, and the degree of metastasis.

Some of the **classifications of tumors** are:

Alveolar	forming small sacs shaped like alveoli
Anaplastic	reverting to a more immature form
Carcinoma in situ	contained at a site without spreading
Diffuse	spreading evenly
Dysplastic	abnormal in cell appearance
Epidermoid	resembling epithelial cells
Follicular	containing glandlike sacs
Hyperchromatic	intensely colored
Hyperplastic	excessive in development (of cells)
Hypoplastic	underdeveloped as tissue
Nodular	formed in tight cell clusters
Papillary	having small papillae projecting from cells
Pleomorphic	having many types of cells
Scirrhous	made up of hard, densely packed cells
Undifferentiated	lacking a defined cell structure

Tumors can be described as:

- **cystic,** filled with fluid
- **fungating,** projecting from a surface in a mushroomlike pattern
- **inflammatory,** having an inflamed appearance (swollen and red)
- **medullary,** large and fleshy
- **necrotic,** containing dead tissue
- **polypoid,** containing polyps
- **ulcerating,** having open wounds
- **verrucous,** having wartlike, irregular growths

7. Treatment

Once a tumor is confirmed as malignant, doctor and patient discuss and agree on a **protocol,** a course of treatment. One of the possible treatments is **radiation,** the bombarding of the tumor with rays that damage the DNA of the tumor cells. Radiation can cause many unpleasant side effects, such as hair loss, nausea, and skin damage. Some cancerous tumors will respond to radiation better than others. A *radiosensitive tumor* will absorb the damaging radiation and respond by dying or shrinking. With a *radioresistant tumor,* the radiation has little effect on the growth of the tumor. The use of a drug called a *radiosensitizer* prior to the radiation treatments will increase the radiosensitivity of the tumor.

Among the other possible treatments are the use of drugs (=chemotherapy) and surgery.

8. Surgical Terms

Many cancers can be diagnosed and treated with surgery. First, however, the tissue is usually examined in a *biopsy,* the removal of a small amount of living tissue for diagnosis. There are many types of biopsies depending on the type of cancer suspected:

An **incisional biopsy** is the removal of a part of a tumor for examination.
An **excisional biopsy** is one in which the tumor is removed and surrounding tissue is examined for the spread of the tumor.
A **brush biopsy** is the passing of a catheter with bristles on it into the ureter or other areas to remove cells for examination.
A **needle biopsy** is any biopsy in which cells are aspirated through a needle.
An **exfoliative biopsy** is one in which cells are scraped off of the skin for examination.

If a tumor is found to be malignant, the tumor is usually removed to an established *surgical margin* or to the point where it abuts normal tissue. A localized tumor can be removed in a **lumpectomy** or **tylectomy.** Some surgeries involve **resectioning,** removal of the tumor and a large amount of the surrounding tissue, including lymph nodes; others involve **exenteration,** removal of an organ, tumor, and surrounding tissue. Other surgical procedures are **cryosurgery,** destruction by freezing; **electrocauterization,** destruction by burning; or **fulguration,** destruction by high-frequency electrical current.

9. Pharmacological Terms

Aside from surgery and radiation, cancer treatment includes three other **modalities**:

Chemotherapy	use of drugs to treat cancer
Biological therapy	use of agents that enhance the body's own immune response in fighting tumor growth
Gene therapy	use of cells from a laboratory to change the course of a disease (much of this is still experimental)

Both chemotherapy and biological therapy have side effects, such as hair loss, nausea, and so on. Gene therapy is just in its beginning stages and long-term results are not known yet. The four cancer treatments may be used together or separately during the course of a protocol.

There are many researchers working on new cancer therapies, such as the inhibition of *angiogenesis,* the process in the body of supplying blood to tumors.

**Adapted from: Medical terminology: language for healthcare/Nina Thierer . . . [et al.]. —3rd ed.*

EXERCISES

Task 1. Write the word from this list that matches each statement:

benign	deoxyribonucleic acid	teratoma	carcinogen	metastasis
differentiated	malignant	invasive	sarcoma	oncogene

1. Lacking in normal orderly cell arrangement _____
2. Encapsulated, not malignant _____
3. Infiltrating other organs; spreading _____
4. Growing uncontrollably _____
5. Genetic material of a cell _____
6. DNA fragment that causes malignancies _____
7. Growth containing several types of tissue and various types of cells _____
8. Tumor that originates in muscle, connective tissue, and lymph; fairly rare _____
9. Spread of malignant cells _____
10. Cancer-causing agent _____

Task 2. Match the terms describing tumor appearance with definitions:

1	verrucous	a	filled with fluid
2	polypoid	b	wartlike in appearance
3	inflammatory	c	containing glandular sacs
4	cystic	d	having open wounds
5	follicular	e	large and fleshy
6	ulcerating	f	containing dead tissue
7	medullary	g	containing polyps
8	necrotic	h	having a red and swollen appearance

Task 3. Using the combining forms and suffixes write a term for each definition:

1. Therapy using radiation _____ radiotherapy
2. Bone tumor _____ osteoma
3. Immature red blood cell _____ erythroblast
4. Fluid-filled glandular carcinoma _____ cystoadenocarcinoma
5. Tumor of the meninges _____ meningioma
6. Cancer of the lymph system _____ lymphoma

Task 4. Use the combining forms to complete the following words:

1. tumor consisting of immature cells: _____ oma
2. treatment of tumors: _____ therapy
3. agent that promotes a genetic change: _____ gen
4. impenetrable by radiation: _____ opaque
5. destructive to cancer cells: _____ lytic

Task 5. Give the definitions of the words:

Androblastoma _____
Arcinogenesis _____
Mutagenesis _____
Oncogene _____
Radiotherapy _____
Radionecrosis _____
Hypernephroma _____
Leiomyosarcoma _____
Adenocarcinoma _____
Oncologist _____
Oncocyte _____
Adenoma _____
Astrocytoma _____
Chondrosarcoma _____
Liposarcoma _____
Lymphoma _____

Task 6. Write the body part being tested for cancer by each of the following procedures:

1. mammogram: _____
2. DRE: _____
3. PSA: _____
4. pap smear: _____

Task 7. Complete the sentences by filling in the blanks:

1. A tumor filled with liquid is referred to as _____ .
2. Some melanomas are _____ , or intensely colored.
3. Chemotherapy is one _____ for treatment of cancer.
4. Tissue that is dead is referred to as _____ .
5. Some cancers are _____, or wartlike in appearance.

Task 8. Define the following terms:

Carcinogenic _____
Carcinolytic _____
Carcinoma _____
Carcinophobia _____
Mutagen _____
Oncogenesis _____
Oncogenic _____
Oncogenous _____
Oncofetal _____
Oncology _____
Oncolysis _____
Oncosis _____
Radioactive _____
Radiodiagnosis _____
Radiograph _____
Radiographer _____
Radiographic _____
Radiogram _____
Radiography _____
Radiology _____
Radiologist _____
Radiometer _____
Radiopaque _____
Radiopathology _____
Radioresistant _____
Radiopharmaceutical _____
Radiosensitive _____
Radiotoxiemia _____
Genoblast _____
Glioblastoma _____
Glioma _____
Fibrosarcoma _____
Medulloblastoma _____
Melanoma _____
Nephrosarcoma _____
Neuroblastoma _____
Osteosarcoma _____
Retinoblastoma _____
Rhabdomyosarcoma _____
Sarcoma _____

Task 9. Match the correct term in the right-hand column with its definition in the left-hand column:

1	____ removal of part of a tumor for examination	**a**	fulguration
2	____ removal of a tumor and surrounding tissue for examination	**b**	cryosurgery
3	____ form of surgery using freezing	**c**	electrocauterization
4	____ form of surgery using burning	**d**	incisional biopsy
5	____ form of surgery using high-frequency current	**e**	excisional biopsy

Task 10. Choose the term that best describes the *italicized* description of the correct answer:

1. The patient was treated with *a bombarding of tumors with rays that damage the DNA of cells* and had a positive result after the treatment was completed.

- chemotherapy
- protocol
- radiation

2. The physician remarked that the lesion appeared *to be formed in tight clusters* and was found to be abnormal.

- necrotic
- nodular
- verrucous

3. A biopsy revealed that the tumor was *hard and densely packed* just as the pathologist suspected.

- scirrhous
- papillary
- pleomorphic

4. Dr. Jacobs noted that the dysplastic lesion appeared *intensely colored* and this concern warranted further evaluation.

- hyperplastic
- hypoplastic
- hyperchromatic

5. One of the purposes of the TNM system of categorizing tumors is to determine *the degree of tumor spread* within the body.

- carcinoma in situ
- stage
- grade

SUGGESTED PLANS OF PRACTICAL CLASSES

Suggested lesson plan on the theme**: TYPES AND CAUSES OF CANCER**

Time: 90 min.
Type of the class: combined practical class

Aims and objectives:

Knowledge objectives:

- to learn new vocabulary and terms on the theme "Types and causes of cancer"
- to practise essential vocabulary while reading explanatory notes on "Types and causes of cancer"
- to develop communication skills by discussing the types and causes of cancer and the influence of cancer on the patient and his/her relatives
- to acquire translation skills
- to use relevant terminology while completing exercises

Behavioural objectives:

- to practise memory and attention
- to train communication skills
- to develop listening skills

Developmental learning goals:

- to motivate cognitive and creative thinking
- to improve reading skills
- to develop English lexicon
- to improve the ability to discuss a topic in English

Teaching methods: communication approach, explaining, visualization, collaboration, discussions, listening comprehension, learning through homework, Socratic method.

Tools/required materials: Student's Guide "Terms in Oncology", a computer, the Internet, a white board, didactic material, pictures, tables and images related to the topic of the class

Types of assignments: group discussions, whole-class activities, workshops, independent work, peer learning

Evaluation methods: checking verbal communication skills and the knowledge of relevant terminology by means of oral reports on the theme and an online test

Relation to other subjects: English for medical students as a subject is based on its integration with other theoretical or clinical disciplines, namely: Latin, biology, chemistry, anatomy, physiology, pharmacology, pathology, and primarily oncology. The theme "Types and causes of cancer" integrates with oncology, bioethics, anatomy, physiology, and pathology. During the practical class, students learn new vocabulary including professional medical terminology of oncology, and thus they may implement obtained knowledge during the Medical Licensing Examination and in the professional media.

Procedure of the Class

1. Lead-in (10 min.)

1.1 Greeting

1.2 Checking presence

1.3 Introducing the subject (as this is the first class)

1.4 Presenting the topic and the aim of the class

2. Speaking and reading activities (35 min)

2.1 Getting acquainted with the students

2.2 Discussion on the theme "*When someone has cancer, the whole family and everyone who loves them does too*"

2.3 Making up a list of active vocabulary on the basis of explanatory notes and post-text exercises, p. 9)

2.4 Reading, translating and discussing theoretical data on "Types and causes of cancer" (p. 9)

3. Vocabulary, grammar and writing activities (20 min)

3.1. Vocabulary practice (tasks 1, 2; p. 13)

3.2. Practicing new terms while roleplaying a medical encounter in the form of a dialogue between a physician and a patient

4. Listening (15 min): watch, take notes and discuss the YouTube video "Doctor Patient Communication: The Universal Upset Patient Protocol in Healthcare Communications" available at: https://www.youtube.com/watch?v=C1YsNGupQhI&t=128s

5. Consolidation (5 min)

6. Home-work (1 min)

- ✓ learn new vocabulary and get ready for the online test
- ✓ take an online test
- ✓ prepare a presentation on the types and causes of cancer

7. Summary and analysis of a class (3 min)

8. Evaluation (1 min)

Recommended literature and links:

1. Terms in Oncology: Student's Guide / P. A. Sodomora, L. V. Gutor, A. O. Syvak. – Danylo Halytsky LNMU, 2020. – 36 p.
2. Medical terminology: language for healthcare/Nina Thierer . . . [et al.]. —3rd ed.
3. Kuchumova N. V., Manyuk L. V., Vasylenko O. H. English for Medical Students. Step 1: Anatomy: Textbook / N. V. Kuchumova, L. V. Manyuk, O. H. Vasylenko; edited by P. A. Sodomora. – Danylo Halytsky Lviv National Medical University, 2019. – 91 p.
4. Oxford Online Dictionaries. Available at: http://www.oxforddictionaries.com/, 2019.
5. Medical Encyclopedia: MedlinePlus. Available at: http://m.medlinepus.gov/encyclopedia.html
6. Dorland's Ukrainian-English illustrated medical dictionary. – Lviv, Nautilus. – 2 vol. – 2007.
7. Dorland's English- Ukrainian illustrated medical dictionary. – Lviv, Nautilus. – 2 vol. – 2002.

Suggested lesson plan on the theme**:**

ONCOLOGY: COMBINING FORMS AND ABBREVIATIONS

Time: 90 min.
Type of the class: combined practical class

Aims and objectives:

Knowledge objectives:

- to learn new vocabulary and terms on the theme "Oncology: Combining forms and abbreviations"
- to practise essential vocabulary while reading explanatory notes on "Oncology: Combining forms and abbreviations"
- to develop communication skills by discussing the ways of providing an effective medical encounter
- to acquire translation skills
- to use relevant terminology while completing exercises

Behavioural objectives:

- to practise memory and attention
- to train communication skills
- to develop listening skills

Developmental learning goals:

- to motivate cognitive and creative thinking
- to improve reading skills
- to develop English lexicon
- to improve the ability to discuss a topic in English

Teaching methods: communication approach, explaining, visualization, collaboration, discussions, listening comprehension, learning through homework, Socratic method.

Tools/required materials: Student's Guide "Terms in Oncology", a computer, the Internet, a white board, didactic material, pictures, tables and images related to the topic of the class

Types of assignments: group discussions, whole-class activities, workshops, independent work, peer learning

Evaluation methods: checking verbal communication skills and the knowledge of relevant terminology by means of oral reports on the theme and an online test

Relation to other subjects: English for medical students as a subject is based on its integration with other theoretical or clinical disciplines, namely: Latin, biology, chemistry, anatomy, physiology, pharmacology, pathology, and primarily oncology. The theme "Oncology: Combining forms and abbreviations" integrates with oncology, bioethics, anatomy, physiology, and pathology. During the practical class, students learn new vocabulary including professional medical terminology of oncology, and thus they may implement obtained knowledge during the Medical Licensing Examination and in the professional media.

Procedure of the Class

1. Lead-in (10 min.)

1.1 Greeting

1.2 Checking presence

1.3 Presenting the topic and the aim of the class

2. Speaking and reading activities (35 min)

2.1 Discussion on the theme "*You never know how strong you are until being strong is the only choice you have*"

2.2 Making up a list of active vocabulary on the basis of explanatory notes and post-text exercises, p. 10)

2.3 Reading, translating and discussing theoretical data on "Oncology: Combining forms and abbreviations" (p. 10)

3. Vocabulary, grammar and writing activities (20 min)

3.1. Vocabulary practice (tasks 3, 4; p. 13)

3.2. Practicing new terms while roleplaying a medical encounter in the form of a dialogue between a physician and a patient

4. Listening (15 min): watch, take notes and discuss the YouTube video "Reaffirming the Doctor-Patient Relationship by Stephen Sanders (TED, SaintLouisUniversity)" available at: https://www.youtube.com/watch?v=lMpkRFw0ZA0

5. Consolidation (5 min)

6. Home-work (1 min)

- ✓ learn new vocabulary and get ready for the online test
- ✓ take an online test
- ✓ prepare a presentation on the types and causes of cancer

7. Summary and analysis of a class (3 min)

8. Evaluation (1 min)

Recommended literature and links:

1. Terms in Oncology: Student's Guide / P. A. Sodomora, L. V. Gutor, A. O. Syvak. – Danylo Halytsky LNMU, 2020. – 36 p.
2. Medical terminology: language for healthcare/Nina Thierer . . . [et al.]. —3rd ed.
3. Kuchumova N. V., Manyuk L. V., Vasylenko O. H. English for Medical Students. Step 1: Anatomy: Textbook / N. V. Kuchumova, L. V. Manyuk, O. H. Vasylenko; edited by P. A. Sodomora. – Danylo Halytsky Lviv National Medical University, 2019. – 91 p.
4. Oxford Online Dictionaries. Available at: http://www.oxforddictionaries.com/, 2019.
5. Medical Encyclopedia: MedlinePlus. Available at: http://m.medlinepus.gov/encyclopedia.html
6. Dorland's Ukrainian-English illustrated medical dictionary. – Lviv, Nautilus. – 2 vol. – 2007.
7. Dorland's English- Ukrainian illustrated medical dictionary. – Lviv, Nautilus. – 2 vol. – 2002.

Suggested lesson plan on the theme**:**

DIAGNOSTIC TERMS IN ONCOLOGY. GRADING

Time: 90 min.
Type of the class: combined practical class

Aims and objectives:

Knowledge objectives:

- to learn new vocabulary and terms on the theme "Diagnostic terms in oncology. Grading"
- to practise essential vocabulary while reading explanatory notes on "Diagnostic terms in oncology. Grading"
- to develop communication skills by discussing common diagnostic procedures in oncology and the ways of professional support of a patient with cancer
- to acquire translation skills
- to use relevant terminology while completing exercises

Behavioural objectives:

- to practise memory and attention
- to train communication skills
- to develop listening skills

Developmental learning goals:

- to motivate cognitive and creative thinking
- to improve reading skills
- to develop English lexicon
- to improve the ability to discuss a topic in English

Teaching methods: communication approach, explaining, visualization, collaboration, discussions, listening comprehension, learning through homework, Socratic method.

Tools/required materials: Student's Guide "Terms in Oncology", a computer, the Internet, a white board, didactic material, pictures, tables and images related to the topic of the class

Types of assignments: group discussions, whole-class activities, workshops, independent work, peer learning

Evaluation methods: checking verbal communication skills and the knowledge of relevant terminology by means of oral reports on the theme and an online test

Relation to other subjects: English for medical students as a subject is based on its integration with other theoretical or clinical disciplines, namely: Latin, biology, chemistry, anatomy, physiology, pharmacology, pathology, and primarily oncology. The theme "Diagnostic terms in oncology. Grading" integrates with oncology, bioethics, anatomy, physiology, and pathology. During the practical class students learn new vocabulary including professional medical terminology of oncology, and thus they may implement obtained knowledge during the Medical Licensing Examination and in the professional media.

Procedure of the Class

1. Lead-in (10 min.)

1.1 Greeting

1.2 Checking presence

1.3 Presenting the topic and the aim of the class

2. Speaking and reading activities (35 min)

2.1 Discussion on the theme "*Once you chose hope anything is possible*"

2.2 Making up a list of active vocabulary on the basis of explanatory notes and post-text exercises, p. 11)

2.3 Reading, translating and discussing theoretical data on "Diagnostic terms in oncology. Grading" (p. 11)

3. Vocabulary, grammar and writing activities (20 min)

3.1. Vocabulary practice (tasks 5-8; p. 14)

3.2. Practicing new terms while roleplaying a medical encounter in the form of a dialogue between a physician and a patient

4. Listening (15 min): watch, take notes and discuss the YouTube video "The Patient Doctor Tango by Sarah Krüg (TED, Brussels)" available at: https://www.youtube.com/watch?v=lBcMYGdrTMU

5. Consolidation (5 min)

6. Home-work (1 min)

- ✓ learn new vocabulary and get ready for the online test
- ✓ complete an online test
- ✓ prepare a presentation on the types and causes of cancer

7. Summary and analysis of a class (3 min)

8. Evaluation (1 min)

Recommended literature and links:

1. Terms in Oncology: Student's Guide / P. A. Sodomora, L. V. Gutor, A. O. Syvak. – Danylo Halytsky LNMU, 2020. – 36 p.
2. Medical terminology: language for healthcare/Nina Thierer . . . [et al.]. —3rd ed.
3. Kuchumova N. V., Manyuk L. V., Vasylenko O. H. English for Medical Students. Step 1: Anatomy: Textbook / N. V. Kuchumova, L. V. Manyuk, O. H. Vasylenko; edited by P. A. Sodomora. – Danylo Halytsky Lviv National Medical University, 2019. – 91 p.
4. Oxford Online Dictionaries. Available at: http://www.oxforddictionaries.com/, 2019.
5. Medical Encyclopedia: MedlinePlus. Available at: http://m.medlinepus.gov/encyclopedia.html
6. Dorland's Ukrainian-English illustrated medical dictionary. – Lviv, Nautilus. – 2 vol. – 2007.
7. Dorland's English- Ukrainian illustrated medical dictionary. – Lviv, Nautilus. – 2 vol. – 2002.

Suggested lesson plan on the theme**:**

TREATMENT OF CANCER. SURGICAL AND PHARMACOLOGICAL TERMS

Time: 90 min.
Type of the class: combined practical class

Aims and objectives:

Knowledge objectives:

- to learn new vocabulary and terms on the theme "Treatment of cancer. Surgical and pharmacological terms"
- to practise essential vocabulary while reading explanatory notes on "Treatment of cancer. Surgical and pharmacological terms"
- to develop communication skills by discussing a proper physician-patient communication model for discussing the treatment plan
- to acquire translation skills
- to use relevant terminology while completing exercises

Behavioural objectives:

- to practise memory and attention
- to train communication skills
- to develop listening skills

Developmental learning goals:

- to motivate cognitive and creative thinking
- to improve reading skills
- to develop English lexicon
- to improve the ability to discuss a topic in English

Teaching methods: communication approach, explaining, visualization, collaboration, discussions, listening comprehension, learning through homework, Socratic method.

Tools/required materials: Student's Guide "Terms in Oncology", a computer, the Internet, a white board, didactic material, pictures, tables and images related to the topic of the class

Types of assignments: group discussions, whole-class activities, workshops, independent work, peer learning

Evaluation methods: checking verbal communication skills and the knowledge of relevant terminology by means of oral reports on the theme and an online test

Relation to other subjects: English for medical students as a subject is based on its integration with other theoretical or clinical disciplines, namely: Latin, biology, chemistry, anatomy, physiology, pharmacology, pathology, and primarily oncology. The theme "Treatment of cancer. Surgical and pharmacological terms" integrates with oncology, bioethics, anatomy, physiology, and pathology. During the practical class, students learn new vocabulary including professional medical terminology of oncology, and thus they may implement obtained knowledge during the Medical Licensing Examination and in the professional media.

Procedure of the Class

1. Lead-in (10 min.)

1.1 Greeting

1.2 Checking presence

1.3 Presenting the topic and the aim of the class

2. Speaking and reading activities (35 min)

2.1 Discussion on the theme "*Turn your face towards the sun and the shadows fall behind you*"

2.2 Making up a list of active vocabulary on the basis of explanatory notes and post-text exercises, p. 12)

2.3 Reading, translating and discussing theoretical data on "Treatment of cancer. Surgical and pharmacological terms" (p. 12)

3. Vocabulary, grammar and writing activities (20 min)

3.1. Vocabulary practice (tasks 9, 10; p. 15)

3.2. Practicing new terms while roleplaying a medical encounter in the form of a dialogue between a physician and a patient

4. Listening (15 min): watch, take notes and discuss the YouTube video "Modern day doctor patient relationship. by Dr K. K. Aggarwal (TED, MansaroverPark)" available at: https://www.youtube.com/watch?v=i9ml1vKK2DQ

5. Consolidation (5 min)

6. Home-work (1 min)

- ✓ learn new vocabulary and get ready for the online test
- ✓ complete an online test
- ✓ prepare a presentation on the types and causes of cancer

7. Summary and analysis of a class (3 min)

8. Evaluation (1 min)

Recommended literature and links:

1. Terms in Oncology: Student's Guide / P. A. Sodomora, L. V. Gutor, A. O. Syvak. – Danylo Halytsky LNMU, 2020. – 36 p.
2. Medical terminology: language for healthcare/Nina Thierer . . . [et al.]. —3rd ed.
3. Kuchumova N. V., Manyuk L. V., Vasylenko O. H. English for Medical Students. Step 1: Anatomy: Textbook / N. V. Kuchumova, L. V. Manyuk, O. H. Vasylenko; edited by P. A. Sodomora. – Danylo Halytsky Lviv National Medical University, 2019. – 91 p.
4. Oxford Online Dictionaries. Available at: http://www.oxforddictionaries.com/, 2019.
5. Medical Encyclopedia: MedlinePlus. Available at: http://m.medlinepus.gov/encyclopedia.html
6. Dorland's Ukrainian-English illustrated medical dictionary. – Lviv, Nautilus. – 2 vol. – 2007.
7. Dorland's English- Ukrainian illustrated medical dictionary. – Lviv, Nautilus. – 2 vol. – 2002.

Suggested lesson plan on the theme**:**

TERMS IN ONCOLOGY: FINAL REVIEW AND REVISION

Time: 90 min.
Type of the class: combined practical class

Aims and objectives:

Knowledge objectives:

- to revise vocabulary and terms in oncology
- to practise essential vocabulary
- to develop communication skills by discussing social and psychological challenges affecting cancer patients and their relatives
- to acquire translation skills
- to use relevant terminology during writing and speaking activities

Behavioural objectives:

- to practise memory and attention
- to train communication skills
- to develop listening skills

Developmental learning goals:

- to motivate cognitive and creative thinking
- to improve reading skills
- to develop English lexicon
- to improve the ability to discuss a topic in English

Teaching methods: communication approach, explaining, visualization, collaboration, discussions, listening comprehension, learning through homework, Socratic method.

Tools/required materials: Student's Guide "Terms in Oncology", a computer, the Internet, a white board, didactic material, pictures, tables and images related to the topic of the class

Types of assignments: group discussions, whole-class activities, workshops, independent work, peer learning

Evaluation methods: checking verbal communication skills and the knowledge of relevant terminology by means of oral reports on the theme and an online test

Relation to other subjects: English for medical students as a subject is based on its integration with other theoretical or clinical disciplines, namely: Latin, biology, chemistry, anatomy, physiology, pharmacology, pathology, and primarily oncology. The theme "Final review and revision" integrates with oncology, bioethics, anatomy, physiology, and pathology. During the practical class, students learn new vocabulary including professional medical terminology of oncology, and thus they may implement obtained knowledge during the Medical Licensing Examination and in the professional media.

Procedure of the Class

1. Lead-in (5 min.)

1.1 Greeting

1.2 Checking presence

1.3 Presenting the topic and the aim of the class

2. Listening (25 min): watch, take notes and discuss the YouTube video "What's helping me become a better doctor by Amie Woods (TED, GeorgeMasonU)" available at: https://www.youtube.com/watch?v=hoDGXalawyM&t=78s

3. Vocabulary, grammar and speaking activities (45 min)

3.1 Discussion on the theme "*Life isn't about waiting for the storm to pass, it's about learning to dance in the rain* "

3.2 Revising vocabulary and terms in oncology

3.3 Presenting self-study notes and research projects (reports, presentation)

4. Consolidation (5 min)

5. Summary and analysis of a class (5 min)

6. Evaluation (both a class and a subject) (5 min)

Recommended literature and links:

1. Terms in Oncology: Student's Guide / P. A. Sodomora, L. V. Gutor, A. O. Syvak. – Danylo Halytsky LNMU, 2020. – 36 p.
2. Medical terminology: language for healthcare/Nina Thierer . . . [et al.]. —3rd ed.
3. Kuchumova N. V., Manyuk L. V., Vasylenko O. H. English for Medical Students. Step 1: Anatomy: Textbook / N. V. Kuchumova, L. V. Manyuk, O. H. Vasylenko; edited by P. A. Sodomora. – Danylo Halytsky Lviv National Medical University, 2019. – 91 p.
4. Oxford Online Dictionaries. Available at: http://www.oxforddictionaries.com/, 2019.
5. Medical Encyclopedia: MedlinePlus. Available at: http://m.medlinepus.gov/encyclopedia.html
6. Dorland's Ukrainian-English illustrated medical dictionary. – Lviv, Nautilus. – 2 vol. – 2007.
7. Dorland's English- Ukrainian illustrated medical dictionary. – Lviv, Nautilus. – 2 vol. – 2002.

SELF-STUDY

Topic 1:
ALTERNATIVE METHODS FOR CANCER TREATMENT

Time: 2 hours
Aims and objectives:

Knowledge objectives:
- to learn new vocabulary of the theme "Alternative methods for cancer treatment"
- to name and describe alternative methods for cancer treatment
- to practise active vocabulary and grammar discussing pros and cons of alternative methods for cancer treatment
- to improve speaking, writing and translation skills

Behavioural objectives:
- to practise memory and attention;
- to train self-discipline;

Developmental learning goals:
- to improve reading skills
- to practise writing a summary
- to improve the ability of presenting a topic in English

Teaching methods: contractual work (students have an agreed with a teacher deadline to complete the task), learning through self-study, incorporating television/video/radio/Internet, problem-based learning

Tools/required materials: a student's guide "Terms in Oncology", a computer, the Internet, an exercise-book

Types of assignments: lexical exercises, reading tasks, writing tasks, tasks improving critical thinking, tasks improving understanding of the current content, self-control assignments

Evaluation methods: self-control, final oral and written test control

Relation to other subjects:

English for medical students as a subject is based on its integration with other theoretical or clinical disciplines, namely: Latin, anatomy, physiology, biology, physics, chemistry, pharmacology, and primarily oncology. Students learn new vocabulary including professional medical terminology on the current topic, and thus they may implement obtained knowledge in the professional media.

LIST OF TASKS

1. Google for the information on alternative methods for cancer treatment.

2. Analyze at least five sources with relevant information.

3. Summarise studied data in a written form (70-100 words for each source).

4. Make up a list of relevant terminology.

5. Memorize essential vocabulary and expressions on the theme.

6. Improve your communication skills. Prepare a report on alternative methods for cancer treatment.

Recommended sources:

1. Terms in Oncology: Student's Guide / P. A. Sodomora, L. V. Gutor, A. O. Syvak. – Danylo Halytsky LNMU, 2020. – 36 p.
2. Kuchumova N. V., Manyuk L. V., Vasylenko O. H. English for Medical Students. Step 1: Anatomy: Textbook / N. V. Kuchumova, L. V. Manyuk, O. H. Vasylenko; edited by P. A. Sodomora. – Danylo Halytsky Lviv National Medical University, 2019. – 91 p.
3. Кучумова Н.В. English for medical students. Module 1: Посібник з англійської мови для студентів першого курсу медичного факультету / Н.В. Кучумова. – ЛНМУ ім. Данила Галицького. – Львів, 2010. – 141 с.
4. Oxford Online Dictionaries. Available at: http://www.oxforddictionaries.com/, 2019.
5. Medical Encyclopedia: MedlinePlus. Available at: http://m.medlinepus.gov/encyclopedia.html
6. Dorland's Ukrainian-English illustrated medical dictionary. – Lviv, Nautilus. – 2 vol. –2007.
7. Dorland's English- Ukrainian illustrated medical dictionary. – Lviv, Nautilus. – 2 vol. –2002.

Topic 2:

IMMUNOTHERAPY IN ONCOLOGY

Time: 2 hours
Aims and objectives:

Knowledge objectives:

- to learn new vocabulary of the theme "Immunotherapy in oncology"
- to describe the state of implementing immunotherapy for the treatment of oncologic diseases
- to practise active vocabulary and grammar discussing the mechanism of immunotherapy in oncology
- to improve speaking, writing and translation skills

Behavioural objectives:

- to practise memory and attention;
- to train self-discipline;

Developmental learning goals:

- to improve reading skills
- to practise writing a summary
- to improve the ability to present a topic in English

Teaching methods: contractual work (students have an agreed with a teacher deadline to complete the task), learning through self-study, incorporating television/video/radio/Internet, problem-based learning

Tools/required materials: a student's guide "Terms in Oncology", a computer, the Internet, an exercise-book

Types of assignments: lexical exercises, reading tasks, writing tasks, tasks improving critical thinking, tasks improving understanding of the current content, self-control assignments

Evaluation methods: self-control, final oral and written test control

Relation to other subjects:

English for medical students as a subject is based on its integration with other theoretical or clinical disciplines, namely: Latin, anatomy, physiology, biology, physics, chemistry, pharmacology, and primarily oncology. Students learn new vocabulary including professional medical terminology on the current topic, and thus they may implement obtained knowledge in the professional media.

LIST OF TASKS

1. Google for the information on immunotherapy in oncology.

2. Analyze at least five sources with relevant information.

3. Summarise studied data in a written form (70-100 words for each source).

4. Make up a list of relevant terminology.

5. Memorize essential vocabulary and expressions on the theme.

6. Improve your communication skills. Prepare a report on immunotherapy and its use for the treatment for cancer.

Recommended sources:

1. Terms in Oncology: Student's Guide / P. A. Sodomora, L. V. Gutor, A. O. Syvak. – Danylo Halytsky LNMU, 2020. – 36 p.
2. Kuchumova N. V., Manyuk L. V., Vasylenko O. H. English for Medical Students. Step 1: Anatomy: Textbook / N. V. Kuchumova, L. V. Manyuk, O. H. Vasylenko; edited by P. A. Sodomora. – Danylo Halytsky Lviv National Medical University, 2019. – 91 p.
3. Кучумова Н.В. English for medical students. Module 1: Посібник з англійської мови для студентів першого курсу медичного факультету / Н.В. Кучумова. – ЛНМУ ім. Данила Галицького. – Львів, 2010. – 141 с.
4. Oxford Online Dictionaries. Available at: http://www.oxforddictionaries.com/, 2019.
5. Medical Encyclopedia: MedlinePlus. Available at: http://m.medlinepus.gov/encyclopedia.html
6. Dorland's Ukrainian-English illustrated medical dictionary. – Lviv, Nautilus. – 2 vol. –2007.
7. Dorland's English- Ukrainian illustrated medical dictionary. – Lviv, Nautilus. – 2 vol. –2002.

Topic 3:

GENETIC THERAPY IN ONCOLOGY

Time: 2 hours
Aims and objectives:

Knowledge objectives:

- to learn new vocabulary of the theme "Genetic therapy in oncology"
- to describe the advance in the use of genetic therapy in oncology
- to practise active vocabulary and grammar discussing genetic therapy in oncology
- to improve speaking, writing and translation skills

Behavioural objectives:

- to practise memory and attention;
- to train self-discipline;

Developmental learning goals:

- to improve reading skills
- to practise writing a summary
- to improve the ability of presenting a topic in English

Teaching methods: contractual work (students have an agreed with a teacher deadline to complete the task), learning through self-study, incorporating television/video/radio/Internet, problem-based learning

Tools/required materials: a student's guide "Terms in Oncology", a computer, the Internet, an exercise-book

Types of assignments: lexical exercises, reading tasks, writing tasks, tasks improving critical thinking, tasks improving understanding of the current content, self-control assignments

Evaluation methods: self-control, final oral and written test control

Relation to other subjects:

English for medical students as a subject is based on its integration with other theoretical or clinical disciplines, namely: Latin, anatomy, physiology, biology, physics, chemistry, pharmacology, and primarily oncology. Students learn new vocabulary including professional medical terminology on the current topic, and thus they may implement obtained knowledge in the professional media.

LIST OF TASKS

1. Google for the information on genetic therapy in oncology.

2. Analyze at least five sources with relevant information.

3. Summarise studied data in a written form (70-100 words for each source).

4. Make up a list of relevant terminology.

5. Memorize essential vocabulary and expressions on the theme.

6. Improve your communication skills. Prepare a report on genetic therapy in oncology.

Recommended sources:

1. Terms in Oncology: Student's Guide / P. A. Sodomora, L. V. Gutor, A. O. Syvak. – Danylo Halytsky LNMU, 2020. – 36 p.
2. Kuchumova N. V., Manyuk L. V., Vasylenko O. H. English for Medical Students. Step 1: Anatomy: Textbook / N. V. Kuchumova, L. V. Manyuk, O. H. Vasylenko; edited by P. A. Sodomora. – Danylo Halytsky Lviv National Medical University, 2019. – 91 p.
3. Кучумова Н.В. English for medical students. Module 1: Посібник з англійської мови для студентів першого курсу медичного факультету / Н.В. Кучумова. – ЛНМУ ім. Данила Галицького. – Львів, 2010. – 141 с.
4. Oxford Online Dictionaries. Available at: http://www.oxforddictionaries.com/, 2019.
5. Medical Encyclopedia: MedlinePlus. Available at: http://m.medlinepus.gov/encyclopedia.html
6. Dorland's Ukrainian-English illustrated medical dictionary. – Lviv, Nautilus. – 2 vol. –2007.
7. Dorland's English- Ukrainian illustrated medical dictionary. – Lviv, Nautilus. – 2 vol. –2002.

Topic 4:
CHEMOTHERAPY

Time: 2 hours
Aims and objectives:

Knowledge objectives:

- to learn new vocabulary of the theme "Chemotherapy"
- to describe the therapeutic action and side effects of chemotherapy
- to practise active vocabulary and grammar discussing the side effects of chemotherapy
- to improve speaking, writing and translation skills

Behavioural objectives:

- to practise memory and attention;
- to train self-discipline;

Developmental learning goals:

- to improve reading skills
- to practise writing a summary
- to improve the ability of presenting a topic in English

Teaching methods: contractual work (students have an agreed with a teacher deadline to complete the task), learning through self-study, incorporating television/video/radio/Internet, problem-based learning

Tools/required materials: a student's guide "Terms in Oncology", a computer, the Internet, an exercise-book

Types of assignments: lexical exercises, reading tasks, writing tasks, tasks improving critical thinking, tasks improving understanding of the current content, self-control assignments

Evaluation methods: self-control, final oral and written test control

Relation to other subjects:

English for medical students as a subject is based on its integration with other theoretical or clinical disciplines, namely: Latin, anatomy, physiology, biology, physics, chemistry, pharmacology, and primarily oncology. Students learn new vocabulary including professional medical terminology on the current topic, and thus they may implement obtained knowledge in the professional media.

LIST OF TASKS

1. Google for the information on chemotherapy.

2. Analyze at least five sources with relevant information.

3. Summarise studied data in a written form (70-100 words for each source).

4. Make up a list of relevant terminology.

5. Memorize essential vocabulary and expressions on the theme.

6. Improve your communication skills. Prepare a report on chemotherapy and its side effects.

Recommended sources:

1. Terms in Oncology: Student's Guide / P. A. Sodomora, L. V. Gutor, A. O. Syvak. – Danylo Halytsky LNMU, 2020. – 36 p.
2. Kuchumova N. V., Manyuk L. V., Vasylenko O. H. English for Medical Students. Step 1: Anatomy: Textbook / N. V. Kuchumova, L. V. Manyuk, O. H. Vasylenko; edited by P. A. Sodomora. – Danylo Halytsky Lviv National Medical University, 2019. – 91 p.
3. Кучумова Н.В. English for medical students. Module 1: Посібник з англійської мови для студентів першого курсу медичного факультету / Н.В. Кучумова. – ЛНМУ ім. Данила Галицького. – Львів, 2010. – 141 с.
4. Oxford Online Dictionaries. Available at: http://www.oxforddictionaries.com/, 2019.
5. Medical Encyclopedia: MedlinePlus. Available at: http://m.medlinepus.gov/encyclopedia.html
6. Dorland's Ukrainian-English illustrated medical dictionary. – Lviv, Nautilus. – 2 vol. –2007.
7. Dorland's English- Ukrainian illustrated medical dictionary. – Lviv, Nautilus. – 2 vol. –2002.

Topic 5:

PREVENTION OF CANCER

Time: 2 hours
Aims and objectives:

Knowledge objectives:

- to learn new vocabulary of the theme "Prevention of cancer"
- to describe the ways of cancer prevention
- to practise active vocabulary and grammar discussing the ways of cancer prevention
- to improve speaking, writing and translation skills

Behavioural objectives:

- to practise memory and attention;
- to train self-discipline;

Developmental learning goals:

- to improve reading skills
- to practise writing a summary
- to improve the ability of presenting a topic in English

Teaching methods: contractual work (students have an agreed with a teacher deadline to complete the task), learning through self-study, incorporating television/video/radio/Internet, problem-based learning

Tools/required materials: a student's guide "Terms in Oncology", a computer, the Internet, an exercise-book

Types of assignments: lexical exercises, reading tasks, writing tasks, tasks improving critical thinking, tasks improving understanding of the current content, self-control assignments

Evaluation methods: self-control, final oral and written test control

Relation to other subjects:

English for medical students as a subject is based on its integration with other theoretical or clinical disciplines, namely: Latin, anatomy, physiology, biology, physics, chemistry, pharmacology, and primarily oncology. Students learn new vocabulary including professional medical terminology on the current topic, and thus they may implement obtained knowledge in the professional media.

LIST OF TASKS

1. Google for the information on prevention of cancer.

2. Analyze at least five sources with relevant information.

3. Summarise studied data in a written form (70-100 words for each source).

4. Make up a list of relevant terminology.

5. Memorize essential vocabulary and expressions on the theme.

6. Improve your communication skills. Prepare a report on preventive measures for cancer.

Recommended sources:

1. Terms in Oncology: Student's Guide / P. A. Sodomora, L. V. Gutor, A. O. Syvak. – Danylo Halytsky LNMU, 2020. – 36 p.
2. Kuchumova N. V., Manyuk L. V., Vasylenko O. H. English for Medical Students. Step 1: Anatomy: Textbook / N. V. Kuchumova, L. V. Manyuk, O. H. Vasylenko; edited by P. A. Sodomora. – Danylo Halytsky Lviv National Medical University, 2019. – 91 p.
3. Кучумова Н.В. English for medical students. Module 1: Посібник з англійської мови для студентів першого курсу медичного факультету / Н.В. Кучумова. – ЛНМУ ім. Данила Галицького. – Львів, 2010. – 141 с.
4. Oxford Online Dictionaries. Available at: http://www.oxforddictionaries.com/, 2019.
5. Medical Encyclopedia: MedlinePlus. Available at: http://m.medlinepus.gov/encyclopedia.html
6. Dorland's Ukrainian-English illustrated medical dictionary. – Lviv, Nautilus. – 2 vol. –2007.
7. Dorland's English- Ukrainian illustrated medical dictionary. – Lviv, Nautilus. – 2 vol. –2002.

NOTES

REFERENCES

1. Brown T. A. , Bracken S. J. . USMLE Step 1 Secrets in Colour, Fourth Edition / T. A. Brown, S. J. Bracken. - Elsevier Inc., 2017.
2. David Austin, Tim CrosfieldBCB English for nurses : Посібник для студентів і медсестер. ВСВ «МЕДИЦИНА», 2011. – 176 с.
3. English for Medical Students = Іноземна мова для студентів-медиків: textbook / A.H. Sabluk, L.V. Levandovska. – 4th edition, revised. – Kyiv : AUS Medicine Publishing, 2018. – 576 p.
4. English for Professional Purposes: Medicine: textbook / O.O. Pisotska, I.V. Znamenska, V.G. Kostenko, O.M. Bieliaieva. — Kyiv : AUS Medicine Publishing, 2018. — 368 p.
5. Kuchumova N. V., Manyuk L. V., Vasylenko O. H. English for Medical Students. Step 1: Anatomy: Textbook / N. V. Kuchumova, L. V. Manyuk, O. H. Vasylenko; edited by P. A. Sodomora. – Danylo Halytsky Lviv National Medical University, 2019. – 91 p.
6. Marie McCullagh, Ros Wright. Good Practice. Communication Skills in English for medical Practitioner. – Cambridge University Press, 2008. – 176 p.
7. Medical terminology: language for healthcare/Nina Thierer . . . [et al.]. —3rd ed.
8. More English for Medical Students : Textbook / L. V. Manyuk. –Lviv : Danylo Halytskyi Lviv National Medical University, 2014. –160 p.
9. Oxford Dictionaries. Online. Available at: http://www.oxforddictionaries.com/
10. Sam McCarter. Oxford English for Careers. Medicine 1. Student's book. – Oxford University Press, 2009. – 143 p.
11. Sam McCarter. Oxford English for Careers. Medicine 2. Student's book. – Oxford University Press, 2010. – 143 p.
12. Аврахова Л, Я., Паламаренко І. О., Яхно Т. В. English for medical student. – ВСВ «Медицина», 2017. – 448 с.
13. Іноземна мова за професійним спрямуванням для студентів-медиків: Підручник / Ісаєва О.С., Аврахова Л.Я., Прокоп І.А., Шумило М.Ю. та ін. – Львів, 2013. – 546 с.
14. Кучумова Н. В. English for Clinical Pharmacists: Посібник з іноземної мови для клінічних фармацевтів / Н.В. Кучумова. – Львів : ЛНМУ імені Данила Галицького, 2014. – 555 с.
15. Кучумова Н. В. English For Medical Students. Module 1: Посібник з іноземної мови для студентів першого курсу медичного факультету / Н.В. Кучумова. – ЛНМУ ім. Данила Галицького. – Львів, 2010. – 141 с.
16. Кучумова Н. В. English For Medical Students. Module 1: Посібник з іноземної мови для студентів першого курсу медичного факультету / Н.В. Кучумова. – ЛНМУ ім. Данила Галицького. – Львів, 2010. – 141 с.
17. Професійна іноземна мова для медичних психологів : Підручник для студентів другого курсу медичних факультетів вищих навчальних закладів III-IV рівнів акредитації за спеціальністю «Медична психологія» / Н. М. Соловйова, Н. І. Войткович, О. М. Рак та ін. – Чернівці, 2014. – 304 с.
18. Центр Тестування при Міністерстві Охорони Здоров'я [Електронний ресурс]. Режим доступу: https://www.testcentr.org.ua/sbt/Str_Krok1_M.zip.