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MASTER'S THESIS
on the topic of
Medical terms in the English language

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Assignment

To the master's thesis of the student Vladimir Dmitrievich Popov

1. The topic of the thesis: Medical terms in the English language

(approved by the order from _____ № _____)

2. The date of the thesis final version submission 11 June 2025

3. The thesis baseline information: The phenomenon of a term, methodologies of describing terms, structural-semantic features of medical terminological vocabulary

4. The contents of the thesis (the objectives necessary to achieve): 1) analysis of the scientific literature on the research topic; 2) consideration of key concepts, as well as approaches and classifications existing in the theory of term; 3) analysis of medical terminology on the basis of sampled terminological corpus; 4) generalization and systematization of the information received.

5. Appendix list (schemes, graphics, tables and other illustrative material): Appendix A

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Academic supervisor: Bazhenova Ekaterina Yurievna assistant professor, candidate of philological sciences

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ABSTRACT

The thesis is comprised of 78 p., 4 figures, 3 tables, 1 appendix, 102 references and includes an introduction, two chapters and a conclusion.

TERM, MEDICAL TERM, METHODS OF TERMS DESCRIPTION, THEMATIC GROUPS OF MEDICAL TERMS, STRUCTURAL TYPES OF MEDICAL TERMS, BORROWINGS

The paper examines the phenomenon of medical term in the English language on the basis of a sampled terminological corpus.

The purpose of the master's work is to study and analyze English medical terminology on the basis of the list of medical terminological units sampled from the «Concise medical dictionary (10ed)» and «Stedman's Medical Dictionary».

The paper provides a definition of a term and classifications of terms. The paper examines different methodologies of describing terms and defines a concept of medical term. The research identifies peculiarities of medical terminology and conducts a comprehensive analysis of medical terms, based on various methodologies. The main research methods are: descriptive, random sampling method, method of generalization and estimation, interpretative method, quantitative estimation method.

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INTRODUCTION

At the present time, the issue of the analysis of terms is quite relevant. Due to the fact that the pace of technological development is steadily growing, every year there emerges a large number of new phenomena and objects that did not exist before and, accordingly, were not defined. The same applies to the medical field of study. Since the official language of medicine has always been Latin, linguists have not previously experienced a great need in the analysis of medical terms.

The processes of globalization, scientific progress, and active contact between various scientific branches have led to the fact that medicine, like other areas of scientific knowledge, has undergone globalization and has begun to utilize the English language for international communication.

Over the last years, not least due to the Covid-19 pandemic, there has been an increase in the number of scientific articles and other studies of medical orientation. Thus, the term as the main nominative unit of any special language has become highly demanded.

Medical discourse is saturated with specialized terminology, which, due to its rapid renewal, is a complex problem for analysis. The increase in the volume of the bank of medical terms poses an important task for modern linguists to linguistically comprehend new lexical units in order to improve the quality of scientific medical discourse.

Research in the field of medical specialized vocabulary analysis has important practical and theoretical significance in the context of active scientific and technical development. Studying the features of medical terms in English is significant within the framework of modern linguistics.

The relevance of this research is proved by the fact that medicine is an essential field of human activity and a well-developed professional and academic sphere with its own discourse and terminology. Its careful study helps to get the image of English medical term system which can be further applied for medical studies and didactic analysis of medical vocabulary. Thorough examination of a

medical term and its terminology system will allow specialists in various fields to deepen their understanding of medical vocabulary: translators, linguists and medical practitioners.

The scientific novelty of this study consists in the comprehensive analysis of medical terminology sampled from the medical vocabulary, particularly from the «Concise medical dictionary (10ed)» and «Stedman's Medical Dictionary». This analysis is approached from various perspectives, offering a fresh exploration in the field.

The aim of the work is to study medical term system on the basis of dictionaries of English medical terminology.

The objectives of the research work are:

- 1) to study the definitions of the concept of «term» and the typology of terms;
- 2) to consider the methodologies of term description based on the analysis of scientific literature;
- 3) to identify thematic groups of medical terms in the selected corpus of terminological units;
- 4) to conduct the etymological, structural and semantic analysis of the sampled material;
- 5) to generalize and systematize the information received.

The object of the study is medical terms in the English language.

The subject of the study is medical term as an element of medical term system constructed on the basis of dictionaries of English medical terminology.

The hypothesis is that the English medical terminology is simultaneously conservative, utilizing the terms of classical languages such as Latin and Greek, and at the same time it is extremely dynamic, reflecting the development of medicine as a subject area of science.

Theoretic significance of the work is that the conducted study generalizes and complements the study of linguistic peculiarities of the English medical terms.

The practical value of the work is that the obtained research results allow us to apply them in the process of teaching English, as well as during lectures and seminars in Linguistics, practical English and Intercultural communication.

The methods of the study include: descriptive, random sampling method, method of generalization and estimation, interpretative method, quantitative estimation method.

The **material** of the study is following: 300 medical terms sampled from «Concise medical dictionary (10ed)» and «Stedman's Medical Dictionary».

Approbation. The thesis key points were presented at the scientific conference «Current issues of linguistics and intercultural communication» (AmSU, Blagoveshchensk). Two scientific articles were prepared: Popov, V. D. Approaches to describing terms // Collection of materials of the III National (All-Russian) scientific and practical conference with international participation, 2025 and Popov, V. D. Structural types of English medical terms // Flagman Nauki: Scientific Journal. June 2025. – St. Petersburg, Published by GNIIG «National Development» – 2025. No. 6(29).

Provision submitted for defence:

1. Medical terms in the English language are various and subject to categorization on different grounds.
2. Medical terms can be divided into distinct thematic groups, by their etymology and word-building formula.
3. Despite their diversity, English medical terms constitute a structured terminological system. This system exhibits thematic organization and is characterized by both traditional roots and ongoing dynamic evolution.

Theoretical background of the research is comprised of the works in the fields of medical terminology of various linguists, such as I. V. Arnold, G. L. Bannay, M. N. Chernyasvsky, V. M. Leychik, A. A. Reformatsky, V. A. Tatarinov, N. V. Tsaregorodtseva, et.al.

1 TERM AS A LINGUISTIC PHENOMENON

1.1 The concept of term

In the context of the scientific and technological revolution that began during World War II and continues to this day a tendency for a significant increase in what is known as specialized vocabulary is undeniable. Rapid modern advancements in science and technology have resulted in a phenomenon now referred to as «terminological explosion», i.e., mass emergence of new terminological units, terminological fields and entire terminological systems.

Scientific and technical revolution causes an increase of specialized lexical units to address the solution of at least three critically important challenges:

- 1) The definition of newly discovered phenomena and common factors in nature and society;
- 2) Automatic processing of considerable volumes of scientific, technical, economic and other specialized information.
- 3) Functioning of automated management systems at various levels that rely on semiotic systems, which include units of natural language.

Term functions as an object across the entire continuum of theoretical and applied dimensions. This fact is equally true for the medical area of expertise.

With that said, it is important to acknowledge the fact, that a term is a multi-layered entity. Which is why, for the following analysis, it is essential to formulate a definition for the concept of «term» itself.

It is challenging to unambiguously define the concept of a «term». According to V. M. Leychik¹, this difficulty is premised on the fact that a term corresponds to a large variety of scientific fields. Given that a term is particularly «multifaced» phenomenon, its adequate definition is determined by the context in which it operates.

¹ Leichik, V. M. Terminology. Subject, Methods, Structure. Moscow, 2014. P. 20.

There are a large number of definitions which underscore the multifaceted nature of a term. Abildaeva² argues, that the main feature of the term is to encapsulate meanings that have a vital significance for communicating process in various specialized fields. Terminological units become vessels which convey intricate ideas and essential information. Different experts in various fields rely upon these vessels to have successful interactions within their domains of expertise. It is important to note, that terms carry a very specific meanings that generally are understood quite universally by various professionals in specific fields, but may not be easily recognized by the general public. It is exactly this specificity, that sets terms apart from our everyday language.

A great many scholars such as Arnold³ put the emphasis on the fact that the process of formation of terms very often follows specific systematic patterns which reflect the complexities of the fields that terms represent. A well-rounded term not only is able to reveal its meaning by its components, but also can reflect different conceptual relationships between various phenomena.

According to E. A. Misuno⁴, term is a word or phrase that denotes a concept, process or object of some specialized field of knowledge, sphere of action or branch of industry.

O. S. Akhmanova⁵ points out that a term is «a word or phrase of a special (scientific, technical, etc.) language, coined (adopted, borrowed, etc.) for the precise expression of special concepts and definition of special objects».

D. S. Lotte⁶, the founder of the Russian terminological school, suggests that the linguistic definition of the term can be categorized into two groups. The first group considers terms as special words within the vocabulary of a natural lan-

² Abildaeva, G. A. On the theoretical aspects of the translation of medical terms // Scientific Research of the 21st Century. 2021. No. 9. Pp. 322-326.

³ Arnold I. V. Lexicology of Modern English. M.: Flinta: Nauka, 2012. P. 37.

⁴ Misuno E. A. Written Translation of Specialized Texts. Moscow, 2015. P. 27.

⁵ Akhmanova O. S. Dictionary of linguistic terms. Moscow: Editorial URSS. 2004. P. 474.

⁶ Lotte D. S. Fundamentals of Constructing Scientific and Technical Terminology. Issues of Theory and Methodology. Moscow, 1961. P. 19.

guage. The second group, on the other hand, views terms not just as special words, but as words that serve a specific function.

Having a complex internal semantic structure, a term is a monolithic and individual unit of denomination.

A. A. Reformatsky⁷ characterizes terms as «unambivalent words devoid of expressiveness».

D. S. Lotte⁸, formulated a number of features of the term: unambiguity; systematicity; accuracy; laconism; consistency; simplicity; agreement with other terms involved in term formation within a certain term system.

M. M. Glushko⁹ acknowledges that «a term is a word or phrase used to express concepts and denote object, which due to the fact of its precise definition, has strict semantic boundaries and is therefore unambiguous within the relevant classification system».

From the definitions it follows at once, that a term is an integral part of the lexical system of the standard language, which is characterized by its information richness. A term succinctly and adequately defines a scientific concept.

While a term undoubtedly belongs to the general lexical system of a language, it possesses certain characteristic features that set it apart from other lexical units.

A term operates as an integral unit of language, but exists only within the framework of particular terminological system. According to N. F. de Keizer et al¹⁰. terminological system relates concepts of a particular field of study and provides their terms and, possibly, their definitions. Thus, the specific terminology serves as an intermediary between the term and language itself.

⁷ Reformatsky, A. A. What is a Term and Terminology? Issues of Terminology. M: Publishing House of the Academy of Sciences, 2000. P. 19.

⁸ Lotte D. S. Fundamentals of building scientific and technical terminology: Issues of theory and methodology. Moscow: Publishing House of the Academy of Sciences of the USSR, 1961. P. 36.

⁹ Glushko M. M. The Functional Style of Public Language and Methods of Its Research. Moscow, 2004. P. 37.

¹⁰ de Keizer, Nicolette & Abu-Hanna, Ameen & Schonk, Johanna. Understanding Terminological Systems, I: Terminology and Typology. Methods of information in medicine. 2000. P. 18.

L. A. Kapandze¹¹ identifies two categories of terms: 1) general scientific and general technical terms, and 2) specialized (nomenclature) terms. General scientific and general technical terms express broad concepts in science and technology. As noted earlier, terms do not exist merely within the language; they belong to a specific terminology. Terminology, as a system of scientific terms, constitutes a subsystem within the overall lexical system of the language.

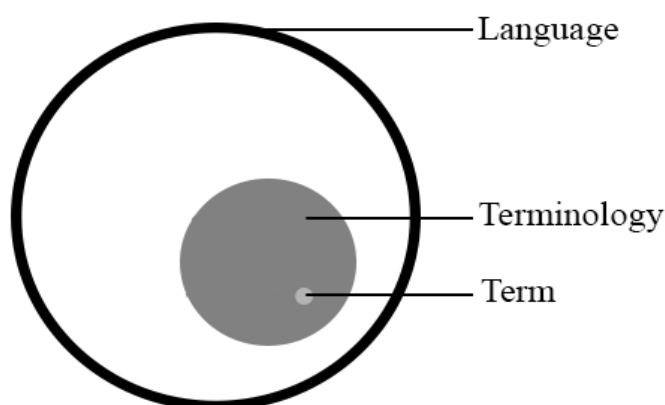


Figure 1 – The place of the term in the language system

This concept is evidently illustrated in Figure 1. If we visualize language as a large circle, we can see that terminology is contained within its borders in the form of a smaller circle. The term in this visualization is represented as a small point. It becomes evident that, although the term is undoubtedly an integral part of the language (as its existence is possible only within a circle), term only exists in the framework of a specific terminology. Thus, the term is a subject of the language and terminological system of which it is a part, and it also complies with the rules of the language.

¹¹ Kapandze L. A. On the Concepts of «Term» and «Terminology». Development of the Vocabulary of Modern Russian Language. Moscow, 2005. pp. 75-86.

According to A. A. Reformatsky¹², terminology is a system of concepts specific to a certain field of science, which is expressed through corresponding verbal expressions. In other words, a word can be polysemous in general everyday language, however, within the realm of terminology, it becomes monosemous.

The unambiguity of a term, according to D. S. Lotte¹³, means that it does not require a context, unlike a common word, because:

- 1) it belongs to a specific terminology that acts as a substitute for context;
- 2) it can be used independently, out of context and still convey its meaning clearly.

An important question is what parts of speech the terms are represented by. A. A. Reformatsky¹⁴ notes that the main feature of a term is its nominativity, i.e., the ability to name a scientific concept or category.

A similar opinion is shared by O. S. Akhmatova and A. I. Moiseev¹⁵, who point out that only nouns and phrases based on nouns can be considered as terms.

This conclusion stems from the fact that it is nouns that fulfill the nominative function in the language, while words coined from noun-terms are considered their derivatives.

Additionally, it is imperative to recognize, that specialized vocabulary, apart from the terms, may also encompass slightly different concepts such as preterms and professionalisms.

E. A. Misuno¹⁶ defines non-terms as specific lexemes that are used as terms in the language to denote newly coined concepts, but do not satisfy the primary criteria for being full-fledged terms. These non-term units differ from terms by their

¹² Reformatsky, A. A. What is a Term and Terminology? Issues of Terminology. M: Publishing House of the Academy of Sciences, 2000. P. 121.

¹³ Lotte, D. S. Formation of a System of Scientific and Technical Terms. Basics of Building Scientific and Technical Terminology. Moscow, 2001. P. 73.

¹⁴ Reformatsky, A. A. What is a Term and Terminology? Issues of Terminology. M: Publishing House of the Academy of Sciences, 2000. P. 123.

¹⁵ Moiseev A. I. On the Linguistic Nature of the Term // Linguistic Problems of Scientific and Technical Terminology. Moscow, 1970. Pp. 133-135.

¹⁶ Misuno E. A. Written Translation of Specialized Texts. Moscow, 2015. Pp. 29-30.

temporary nature, instability in structure, inability to meet requirements for brevity and general acceptance by public, and their lack of stylistic neutrality.

Professionalisms also possess a complex status. According to E. A. Misuno¹⁷, some specialists may equate professionalisms with terms; however, this is inaccurate, as professionalisms often lack a nominative character and are not presented as a nominative part of speech, specifically as nouns. Additionally, they do not fulfill all the criteria of a term, as they may carry emotionally-expressive connotations and are not widely accepted.

Now it can be seen that, the primary characteristics of terms include their nominative nature, unambiguity, devotion of emotional expressiveness, occurrence solely within a specific terminological system of language, succinctness, general acceptance and stylistic neutrality.

Previously it was discussed that the role of context in the process of studying a term is undeniable. The precise definition of a term is determined by the context in which the term is used, but on the other hand, since the term is an integral part of a certain terminological system, this system can act as a substitute for the context itself. V. A. Levina¹⁸ for instance, argues that in the field of linguistical study, many researchers consider context as a terminological field. Thus, the function of a term and its precise definition is determined specifically by their context, that for the terminological units is their terminological field.

Context helps us to shape our understanding of terminological units. Context not only dictates the meanings of the particular terms, but also influences their appropriate usage in text. The very same term may have completely different implications within borders of varied contexts. For example, the term «Virus», can refer to an infectious agent in medical context, but in the context of information technologies virus has completely different meaning, which is a malicious program. As we can see, the same terminological unit might serve vastly different functions in

¹⁷ Misuno E. A. Written Translation of Specialized Texts. Moscow, 2015. Pp. 29-30.

¹⁸ Levina V. A. The role and significance of the term in context and meaning-making. Modern Pedagogical Education. 2023. No. 6. P. 215.

different discourses or fields of study. Therefore, the understanding of a term is often multilayered, requiring of the receptor to be familiar with the specific jargon typical of each field. Thus, the role of context lies outside the realm of just shaping our interpretation of the term, but also in shaping the term's relevance within specific discourses.

Aside from term definitions and the role of context in its conceptualization, other important property is the systematicity of a term. T. K Kornievskaya¹⁹ states, that systematicity can be considered as one of the most important properties of a terminological unit. Context shapes the perception of a term and, as we have previously stated, the certain terminology functions as a context for the certain terms. Thus, the terminology of a particular science is not just a collection of completely random terminological units that express specific concepts of this science; rather terms constitute an organized system. Therefore, this purposeful organization of specialized vocabulary in its terminology defines the systematicity of terms.

Furthermore, another significant feature of the terms is their ability to carry cultural connotations that influence their understanding. R. G. Piotrovsky²⁰ adheres to this position, noting that, despite its complex structure and inherent meaning, the term can convey the speaker's personal attitude to a certain topic, his emotional mood. For instance, terms like «Obesity» can be perceived very differently depending on cultural perception of various body types. CA. Martin-Wagar²¹ in his paper states, that the term «obese» lacks a solid meaning and application of the definition of «obesity» in modern medical discourse. Moreover, this term conveys massive stigma. As we can see, in modern western medical tradition, it is preferable to avoid the usage of such terms in doctor-patient communication. Thus, interpretation of different terms must also be viewed through so-called «sociocultural

¹⁹ Korniyevskaya, T. K. «The Term as an Object of Study in Linguistics». ISOM. 2015. No. 5-1. P. 2.

²⁰ Piotrovsky R. G. Linguistic Synergetics: Initial Positions, First Results, Prospects. St. Petersburg, 2006. P. 106.

²¹ Martin-Wagar CA. Does terminology matter when measuring stigmatizing attitudes about weight? Validation of a brief, modified attitudes toward obese person's scale. Obes Sci Pract. 2024. P. 7.

lenses», that can help us to comprehend broader context of values and societal norms, which circulate in a culture of a given language.

Another important aspect of the development of concept of term is the influence of technological advancements. The emergence of new technologies in different spheres of scientific study is leading to the creation of new terminological units or to the evolution of existing ones. A. Zartashya²², in his study states that, the process of technological advancement has largely contributed to the evolution of English language vocabulary, introducing a plethora of new terminological units. Moreover, as it was stated, this rapid technological development not only leads to the coinage of new terms, but also causes the redefinition of existing ones. Such evolution of special vocabulary indicates that terminology is far from static, but rather is dynamic system of language. Thus, the terms must not only be understood according to their conventional definitions, but also must be interpreted correctly in-real time, reflecting their fluctuating nature in the context of vibrant technological and scientific advancement.

Previously, it was established that a term is an extremely multifaceted and ambiguous phenomenon. This multifaceted nature is manifested not only in the difficulty of defining the concept of a term, but also in the diverging classifications of terms.

In the process of applying various methods of organizing terms, it becomes apparent that they can be classified based on different criteria, such as content, function, linguistic form, and both intralinguistic and extralinguistic features.

Based on their relation to specific fields of activity, terms can be categorized into scientific, industrial-technical, economic, administrative-political, linguistic, and other types.

Terms can also be categorized by meaning. Corresponding classification is primarily utilized in philosophy, where a distinction is made between observational

²² Zartashya, A. Technological Advancements and Their Impact on English Lexicon: A Study of Digital Communication. 2025. P. 3.

terms and theoretical terms. Observational terms define a class of objects, whereas theoretical terms describe abstract phenomena.

Additionally, terms can be classified according to the logical category of the concept they define. This classification identifies terms as referring to objects, processes, attributes, properties, magnitudes, and their respective units.

Moreover, it is evident, that different classifications of terms highlight their varying characteristics and functions within different discourses. For example, D. V. Golovacheva et.al²³, categorize medical terms into groups based on structural features, that are applicable only to the particular field (e.g., monolexic, poly-semantic and multi-word terms). Thus, certain classifications of specialized vocabulary are conditional on certain fields of study.

E. A. Misuno²⁴ classifies terms on the basis of their structure into the following categories:

1. simple terms – terms that consist of a single root word;
2. complex terms – terms made up of more than one part;
3. multi-phrase terms;
4. terms-abbreviations;
5. clippings – terms consisting of syllabic abbreviations that have become independent words.

This classification is ultimately comprehensive and applicable to all types of terms and all fields. It facilitates a deeper understanding of the concept of a term and its characteristics. Additionally, this classification also helps to identify the various forms that a linguistic unit, such as term, can take.

On the basis of the foregoing, it can be stated that, terminological units serve as key nouns that define specific concepts, processes or objects in various specialized fields. Terms convey precise and unambiguous meanings, as their main role is to ensure clarity in communicating process. Terms, unlike common words of lan-

²³ Golovacheva, D. V. Features of Translating Medical Terms / D. V. Golovacheva, I. V. Novitskaya // *Juvenis Scientia*. 2018. No. 2. Pp. 30-33.

²⁴ Misuno E. A. *Written Translation of Specialized Texts*. Moscow, 2015. Pp. 29-30.

guage, lack emotional expressiveness, allowing for the objective view of defined concepts. The meanings of the terms can change based on the context in which they operate. Terminological units are interconnected within their terminological systems. Terms condense complex ideas into concise shapes, which reinforces receptors' comprehension.

Terms must remain unbiased and clear and be accepted within various professional communities. Terms are not static, but dynamic, evolving in lockstep with new technological discoveries.

Having established the intricate concept of a term, the further research requires to delve into the methods, that are employed in the description of specialized vocabulary.

1.2 Methods of describing terms

In the multifarious realm of linguistic research, the study of specialized vocabulary is extremely pivotal for understanding how language reflects knowledge within various specific domains. The word «terminology» refers not only to the different specialized units or phrases that are used in a particular field of study, but also encompasses the rich network of relationships which are constituent of this complex system. Terms serve as the building blocks of professional communication, and thus, require precise methods of description in order to elucidate their numerous meanings and variations across different contexts. Proceeding from this assumption, it is necessary to distinguish diverse methods for describing terms.

As the first step of the analysis of different methods employed in describing various terminological systems, it is essential to take in consideration the previous achievements of researchers developing various approaches to solving this problem. One prominent scholar in this field of study, V. M. Leychik²⁵, identifies three groups of methods: linguistic methods, methods of related sciences (logic, philosophy etc.) and terminological methods properly so called. The expediency of addressing to three scientific fields is premised on the following reasons:

²⁵ Leichik V. M. Terminology: Subject, Methods, Structure. Moscow: Librocom, 2012. Pp. 140-156.

1. The system of terminology is treated as an expression of complex meta-linguistic theory. The specific character of relations among theory (concept), terminology system (terminological units) and described reality (the object of theoretical study) stress the importance of logical-philosophical approach.

2. The terminology system is an integral part of the language system. Terms are the lexical units that in their semantic structure have certain features. These features can be described through linguistic methods.

3. The applicability of terminological methods is closely aligned to the specificity of terminological system as an entity that functions according to certain rules, and as a complex of elements that possesses certain characteristics that are not typical for common lexis.

As can be noted, based on the Leychik's²⁶ classification of terminology methodologies, within an umbrella of featured scientific fields, terminology is studied through the lens of several different approaches. Now, the further study requires to turn to the special aspects of synchronic analysis of terminology system.

Synchronic approach, also called «descriptive» or «static», deals with states of terminology systems. Componential analysis as a part of synchronic approach, is a fundamental method used in the study of terms. According to M. A. Borodina²⁷, the method of componential analysis is employed for the examination of the semantic features of elements within the borders of terminology system of linguistic theories.

Componential analysis at its heart aims to segmentate terms into the smallest meaningful units, called semantic components or semes. Each term as a component of the terminological system can be considered as a set of these components, which determines its overall meaning.

For instance, let's take a closer look to the term «bachelor». By applying the method of componential analysis, we can segmentate this word into its semantic

²⁶ Leichik V. M. Terminology: Subject, Methods, Structure. Moscow: Librocom, 2012. Pp. 140-156.

²⁷ Borodina M. A., Gak V.G. Typology and methods of historical-semantic research (based on the data of the French language). Leningrad: Nauka, 1979. P. 86.

components: noun, human, animal, male, unmarried, young etc. Further we can analyze each component independently and deduce the inference of how this term functions within the language or the broader context of social and natural relationships. Each sense carries certain assumption, that allows us to have a better grasp on the functions of this terminological unit.

The method of componential terminological analysis is particularly effective in the domain of the various specialized fields such as science, technology etc., as in this fields terms often carry precise meanings only within the framework of specific contexts.

Furthermore, researchers like O. A. Makarihina²⁸ have suggested more «optimized» variant of this method to study the semantics of a term: the method of componential analysis of terminological definition that provides the means to analyze the features of process in which a term captures the scientific concept.

Diving deeper into semantic analysis of a term, it is worth touching on the issue of studying the meanings of the term and its terminology. T. L. Kandelaki²⁹ states that the system of meanings of any terminology is characterized by: a) a certain sequence of meanings and b) hierarchical relationships of meanings within each of its categories. The position of each meaning is fixed, firstly, by its connections within the category to which it belongs, and secondly, by its connections with the meanings of other categories. Each type of category has characteristic connections with the meanings of other categories. Thus, it is logical to conduct a semantic analysis of a term on the basis of its meaning and in the framework of a system to which it belongs.

Another aspect of a term semantic analysis is the role of various semantic processes operating in language. According to V. M. Leichik³⁰, the functioning of terms that can be considered as the elements of the general literary language leads

²⁸ Makarihina O. A. Analysis and modeling notional structure of human sciences terms. Nizhnij Novgorod Journal, 2007. P. 4.

²⁹ Kandelaki T. L. Semantics and motivation of terms. Moscow: Nauka, 1977. 167 p. P. 10.

³⁰ Leichik V. M. New Developments in Soviet Science on Terms (Review of Thematic Collections of the Institute of Linguistics of the Academy of Sciences of the USSR) // Language Issues. 1983. No. 5. P. 120.

to the phenomena of hyponymy, synonymy, and other semantic processes inherent in language. The study of these semantic processes helps to analyze the semantic features of terms and terminology.

Terminological units can change over time. One can observe shifts not only in the meaning and usage of terms, but also in their structure. As stated earlier, a term can have many or only one meaning depending on the form of change. As these changes occur, they create many new terms or new forms in the language. This fact underscores the importance of referring to the method of morphological analysis of terms. According to E. B. Geert³¹, morphology is a section of linguistics that studies the internal structure of words. In the context of terminological description, morphological or morphemic analysis is the process of identifying individual units of meaning, called morphemes, within a term. Morphemes can be prefixes, suffixes, or root words, and each has its own meaning. Morphology is important because it allows linguists to understand the structure of terms and how they are formed. A solid foundation of morphemic analysis can help linguists study terminology system and changes within it. E. B. Geert³² states, that morphology is the grammar of natural language at the word level, and it is therefore appropriate to call morphology the «grammar of words» or in the context of or study «grammar of terms».

In modern linguistics, terminological systems are considered as models of scientific theory, that is, the terms at the cognitive level contain information about human scientific activity. The popularity of the cognitive approach is associated with the necessity of studying this phenomenon. However, since a description of the role of a term in the thought process of human consciousness is required, the main principles of such an analysis should be based on the achievements of scholars in the field of logical-philosophical research.

Subject to the above provision underscores the need for turning to the methods of logical analysis, in particular the method of cognitive terminological analy-

³¹ Booi, Geert. *Morphological Analysis*. 2015. P. 449.

³² Booi, Geert. *Morphological Analysis*. 2015. P. 450.

sis, that helps us to map the networks between the process of cognition of the studied object, and the corresponding definition of such cognition in a form of terminological unit in language.

The cognitive method underscores the synergies between the language and cognition process. This method is built on the assumption that terminological units are a reflection of conceptual structures that arises in human mind. According to this method, language serves not only as an instrument for the information transmission, but also as a sort of «prism», that shapes our environmental perception.

Within the framework of cognitive method, it is possible to distinguish aspect of mental representation or, to put it differently the aspect of frame. Frame is a unit associated with terms. M. M. Latu³³ notes, that information of a specific scientific worldview contained within a term, can be represented schematically in the form of a frame. V. E. Bringevidch³⁴ states, that viewing a terminology system as a cognitive entity enables the application of frame analysis to construct a structured conceptual model. This approach suggests that terminology systems are amenable to structuring, allowing the terms within them to be grouped into categories.

The reconstruction of historical developments falls within the competence of diachronic approach, also called «historical, dynamic, or evolutionary». The significance of diachronic approach stems from the fact that scholarly knowledge (or theories) is in the process of continuous evolution. Therefore, terminology systems equally evolve.

S. Ullmann³⁵ in his work describes the shifts in the linguistic terminology system and identifies three main types of terms' semantic evolution: extension of meaning, narrowing of meaning and shift of meaning.

On this stage of current research, it is worth noting the fact that synchronic and diachronic approaches of describing terminology systems do not oppose each

³³ Latu M. N., Razduev A. V. Terminology: particular problems of developing terminologies. Pjatigorsk: Pjatigorsk State University Journal, 2011. P. 19.

³⁴ Bringevidch V. E. The main approaches to the construction of terminological systems. Pjatigorsk: Pjatigorsk State linguistic university Journal, 2010. P. 2.

³⁵ Ullmann S. Précis de sémantique française. Bern: A. Francke AG Verlag, 1959. P. 38 (inFr.)

other. Previously described synchronic method of componential analysis can be utilized from the diachronic perspective. The process of identifying semes in the meanings of terminological units in various synchronic sections and comparing the obtained results allow us to capture quantitative (a number of semes) and qualitative (degree of expressional meaning of a term) changes in diachrony.

The significance of the diachronic approach in the analysis of terminological systems is emphasized in the works of V.M. Leychik³⁶, who examines the historical-descriptive method within the framework of the linguistic approach. V.M. Leychik³⁷ identifies epistemological, logical, and psychological factors as driving forces behind the semantic transformations of terminological systems.

The utilization of historical-descriptive method facilitates a more systematic research of the historical trajectories of terminological units. This approach allows researchers to formulate correlations between changes in terminology and broader scientific drifts.

B. N. Rahimberdiev's³⁸ research illustrates, that examination of term's meanings from the point of view of diachronic method, enables us to determine fluctuations or shifts in three significant aspects:

1) In the signifier, which according to B. N. Rahimberdiev³⁹ is primary in the structure of term's meaning, as it is not always correct to indicate the presence of denotation in linguistic terms that possess a higher level of abstraction;

2) In the denotata: A. V. Lemov⁴⁰ identifies shifts associated with proximate transformation of denotative signified by the term and shifts associated with the development of researcher's knowledge about a given subject (denotation itself remains stable); N. V. Bugorskaya⁴¹ points out the logical regression of term's cor-

³⁶ Leichik V. M. Terminology: Subject, Methods, Structure. Moscow: Librocom, 2012. P. 145.

³⁷ Ibid., p. 197

³⁸ Rahimberdiev B. N. The semantic evolution of the Russian economic terminology in XX century. Moscow, 2003. P. 11.

³⁹ Ibid.

⁴⁰ Lemov A. V. System and structure of a scientific term functioning. Saransk: Mordovsky university Journal, 2000. P. 137.

⁴¹ Bugorskaja N. V. Methodological problems of the terminological systems description. Barnaul, 2009. Pp. 287-310.

relation with expressed subject, which can be attributed to the abstractedness of specific objects of reality;

3) In the connotation, where N. V. Bugorskaya⁴² distinguishes these shifts as the reason for term's «intellectual purity» violation; original meaning of a term encompasses the conception of reality object, from the perspective of a specific begetter and their research expertise, philosophical views etc. Thus, it is essential to ensure the consistent approach to the concept study, when utilizing terms of the particular terminology system. According to scholar E. G. Vyshkin⁴³, it is often necessary to determine the peculiarities of interrelation among methods of object understanding in various linguistic conceptions. Scholars of language, in this regard, should address not only to the analysis of the object, but also to the consideration of its interpretation in different theories. Therefore, there is a «meta-theoretical formation».

Particularly interesting is the systemic genetic method, suggested by N. V. Bugorskaya⁴⁴. The scholar investigates foundations for the emergence and development of terms in F. de Saussure's theory. N. V. Bugorskaya⁴⁵ suggests the identification of methods of concept formations as a major procedure of a terminological analysis. The application of systemic genetic methods for the description of F. de Saussure's language concept allowed the researcher to establish logical relationships among terminological units in the Saussure's terminology system and consider the nature of methods of creating the «theory framework».

The systemic genetic method in diachronic approach stresses the origin and development of terminology systems. This method traces the entire process whereby concepts are formed and coinage of the specialized vocabulary to define those concepts.

⁴² Bugorskaja N. V. Methodological problems of the terminological systems description. Barnaul, 2009. Pp. 287-310.

⁴³ Vyshkin E. G. Systematization problems of language knowledge. Samara, 1992. P. 4.

⁴⁴ Bugorskaja N. V. Methodological problems of the terminological systems description. Barnaul, 2009. P. 12.

⁴⁵ Ibid.

One of the aspects of diachronic method is the study of the origin of a lexical unit, or its etymology in other terms. According to A. E. Yesemuratov⁴⁶, etymology is a special section of linguistic discipline. It studies the origin of words, historical development and etymons, and is sharply different from other sections of linguistics. And etymological analysis, in its turn, clearly shows the origin of words and onomastic units, including toponyms, and also demonstrates their appearance and formation in the historical process of development. As seen from above, etymology is the process of identifying the original meanings of words and the patterns of their evolution through the study of their origin, development and changes at different historical stages. Thereby, etymological analysis, makes it possible to trace the original meaning of words and understand their use and changes in different cultures, which is of great importance for linguistics, history and cultural studies. In the framework of the method of etymological analysis, Y. Zi⁴⁷ highlights the following aspects:

1) tracing the origins of words: by analyzing the historical origins of words, we can understand their original meanings and contexts of use;

2) analysis of word evolution: Words evolve over the course of history, and their meanings change accordingly. The study of etymology allows us to understand these processes of change and their causes.

Thus, etymology and etymological analysis have an important practical significance for the study of terminological units; it can reveal the deep meaning and cultural subtext of terms, tracing their origin and evolution.

D. Zolotukhin⁴⁸ argues, that a significant proportion of methodological basis for modern terminology science, emerged on the basis of linguistic and logico-philosophical sciences' methods.

⁴⁶ Yesemuratov A. E. On the Question of Etymology and Etymological Analysis // Academy. 2017. No. 3 (18). P. 52.

⁴⁷ Yan Zi Etymological analysis as a method of comparative analysis of concept // International Journal of Humanities and Natural Sciences. 2024. No. 5-6 (92). P. 52.

⁴⁸ Zolotukhin D. (2015). General approaches to describing the sets of terms in linguistics. Historical and social educational idea. P. 29.

Therefore, drawing upon the significance of logical-philosophical basis for terminological analysis, emerges a method of a great value, specifically the method of comprehensive historical analysis, suggested by O. V. Borhvald⁴⁹. His methodology encompasses four stages of terminological systems' description:

- 1) determining the circumstances and period of term emergence;
- 2) recognizing terms' origins;
- 3) analyzing the processes involved in term coinage;
- 4) outlining the semantic and functional shifts.

It is noteworthy, that this method requires further clarification. Each stage of historical analysis method corresponds with a specific aim of terminology system study. The achievement of objectives in its turn, largely depends on application of linguistical methods described above.

On the basis of the above, it is possible to compile a framework of comprehensive categorization of methods for analyzing terms:

Table 1 – Research of terminology systems

№	Terminology system research objectives	Research methods
1.	Recognizing terms' origins	<ul style="list-style-type: none"> • Systemic genetic method, etymological research
2.	Outlining word-building patterns of terms	<ul style="list-style-type: none"> • Morphological analysis
3.	Term system analysis	<ul style="list-style-type: none"> • Logical analysis, thematic grouping • Semantic analysis

Each stage of comprehensive terminological analysis corresponds with a specific aim of terminology system study. Consequently, the achievement of objectives largely depends on application of linguistical methods presented in the table.

Proceeding from the foregoing it becomes evident that from the perspective of a modern linguistic science there exist several approaches to studying of terminology systems and their evolution. However, it is a combination of methods that allows us to analyze terminological system comprehensively.

⁴⁹ Borhvaldt O. V. Theory and praxis of the Historical terminology. Krasnojarsk: Krasnojarsk University Journal, 2001. P. 53.

Nevertheless, in view of the fact that further research involves the analysis of medical terminology system it is essential to establish the features of medical terminological units.

1.3 Medical term as a linguistic unit

Today, medical terms are often being denoted with the word «medicalese». Merriam-Webster medical dictionary⁵⁰ defines it as specialized terminology of the medical profession. The term is being widely used as modern authors are applying it to research medical terminology: G. Norman et al.⁵¹ in their article «The privileged status of prestigious terminology: Impact of «Medicalese» on clinical judgments», M. E. Young⁵² in the article «The role of medical language in changing public perceptions of illness» and others.

According to S. M. Velichkova⁵³, medical terminology is «a set of word or phrases employed by practitioners to define scientific concepts in the field of medicine and healthcare». Consequently, medical terminology incorporates definitions, denoting physiological conditions, diseases, diagnostic and treatment methods, medical facilities, medicinal products etc.

Another definition articulated by S. M. Velichkova⁵⁴ states, that medical terminology is a set of definitions denoting the concepts of medicine as a field of professional activity.

From the definitions it is evident that medical terminology system is highly complex and comprehensive.

Medical terminology is a component of medical vocabulary, which in its turn is a part of a standard language. Therefore, medical terms fall within medical

⁵⁰ «Medicalese». Merriam-Webster Medical Dictionary [Electronic source], Merriam-Webster, URL: <https://www.merriam-webster.com/medical/medicalese> 1.06.2025.

⁵¹ Norman, Geoffrey & Arfai, Babak & Gupta, Arun & Brooks, Lee & Eva, Kevin. (2003). The privileged status of prestigious terminology: Impact of «Medicalese» on clinical judgments. *Academic medicine: journal of the Association of American Medical Colleges*.

⁵² Young, Meredith & Norman, Geoffrey & Humphreys, Karin. (2008). The Role of Medical Language in Changing Public Perceptions of Illness. *PloS one*. P. 1.

⁵³ Velichkova, S. M. Structural-Semantic Features of Medical Terminological Vocabulary (Based on the German Language). *Scientific Bulletin. Series: Humanities*. 2012. No. 18 (137). Issue 15. Pp. 47-54.

⁵⁴ Velichkova, S. M. Processes of Borrowing in Medical Terminology in the Field of Dentistry. *Scientific Bulletin. Series: Humanities*. 2013. No. 20. Issue 19. Pp. 88-92.

terminology, which for its part is a subsystem of general terminology. This characteristic is schematically depicted in Figure 2.

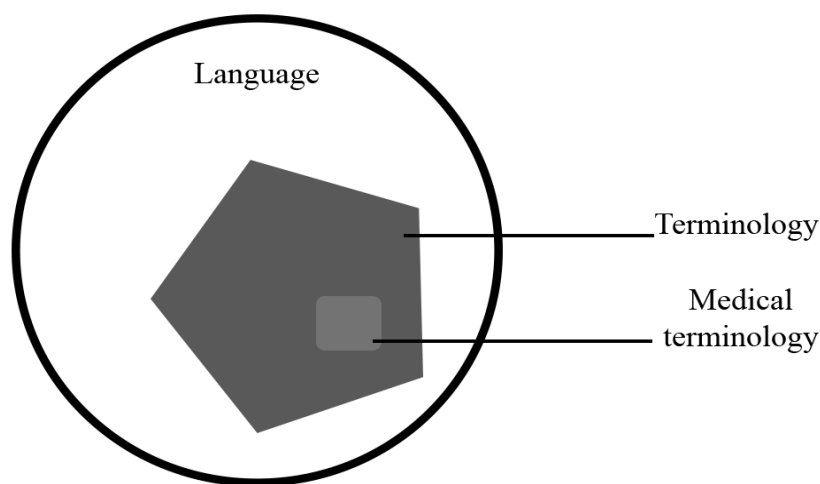


Figure 2 – Place of a medical terminology in the language

Medical terms are specialized lexical units employed in the medical field of study. Such terms consist of one or several words, have a complex meaning and can be specific for a certain area of medical expertise.

Naturally, medical terminology possesses specific peculiarities. M. N. Chernyavsky⁵⁵ distinguishes the following specificities of medical terminology:

- 1) medical terminology is non-metaphorical and devoid of the large quantities of specific stylistic devices;
- 2) medical terms are often based on the words of Greek or Latin origin;
- 3) considerable proportion of medical terms are the international words, since they are based on the Greek-Latin roots;
- 4) medical terms have a neutral connotation and are unambiguous.

Modern medical terminology is a huge layer of special lexis resulting from the centuries-long work of medic-theoreticians and medic-practicians throughout

⁵⁵ Chernyavsky M. N. Latin language and foundations of medical terminology. M., 1996. Pp. 15-18.

the world. Medical and healthcare problems have always troubled humanity, thus medical subject field managed to accumulate a large number of special lexical units to denote the concepts attributable to medical field of study.

It is entirely obvious, that regardless of what language you use for the analysis of medical terminology, the composition of medical term will be saturated with lexical units that are very common in their origin.

However, the rapid development of scientific and technological progress in our time leads to the fact that, despite the processes of globalization and close contact between different countries, the rate of absorption of medical specialized vocabulary in national natural languages is not so rapid, which leads to the fact that the most relevant concepts of the medical field, which were defined by means of the language of the country in which they were discovered, are not always represented in other languages.

Medical specialized vocabulary is similar in its features to the terminologies of other scientific fields however, it has specific features characteristic of it, formed as a result of a special historical formation, different from other scientific subject areas of knowledge. Medical terminology is distinguished by its internationality, formed as a result of adherence to the traditions of the ancient medical school, as well as a significant influence of Greek and Latin, not only on established lexical units, but also on the formation of new medical specialized vocabulary.

Thus, the analysis of scientific sources allows us to say that medical terms as lexical units have a number of features. These include non-metaphorical nature, Latin and Greek origin of these terms, internationality and stylistic neutrality.

Medical specialized vocabulary has certain features, which include the origin of terms from Latin or Greek, the desire for high precision, standardization, specificity for individual areas of medicine, and systemicity. In this regard, it is necessary to be especially careful when using medical terms in order to avoid errors that can harm human health.

In addition, in recent times, the development of the medical field has become possible due to the contribution of other sciences, such as mathematics, chemistry, biology, etc. In connection with this fact, medical terminology has begun to be actively replenished with a large number of terms from the terminologies of other scientific fields.

Conclusions. This chapter examines the definition of the concept of a term. This chapter emphasizes the diversity of different approaches to the definition of the term. The main types of terms were considered. The classification of terms by structural principle was taken as a basis of further analysis. The definition of a medical term was given. The features of medical terminology were described. Based on the review of scientific literature, approaches and methods for describing term were listed and described.

2 TERMS OF MEDICINE IN THE ENGLISH LANGUAGE

On the basis of the prior research, it can be postulated, that medical terminology system is indistinguishable from a conventional scientific terminology system. Thus, methods of describing generical terminology are applicable to the medical specialized vocabulary. Therefore, as has previously been established, medical terminology can be examined in many domains of linguistics. Of particular interest to this work are the approaches and consequential methodologies of linguistic analysis of terminology.

The material of the study consists of 300 medical terminological units registered in a corpus compiled by the author. The source of the material is «Concise medical dictionary (10ed)»⁵⁶ and «Stedman's Medical Dictionary»⁵⁷.

An itemized list of studied medical terms is presented in Appendix A.

Each terminological unit selected by the technique of random sampling was studied according to the following criteria:

- 1) thematic principle;
- 2) etymological principle;
- 3) morphological principle;
- 4) semantic principle.

The results of the conducted research will be demonstrably presented in the subsequent sections.

2.1 Etymology of the English medical terms

As has previously been established, terminology system is a very dynamic entity. This fact is equally true for the medical terminology system. The ongoing and significant expansion of English medical terminology system is a profound ground to believe that medical terminology system has a special status of a rapidly evolving entity, that ignites scholarly and practical curiosity within a society. Thus,

⁵⁶ Law, J. Martin, E. Concise Medical Dictionary (10ed). Oxford University Press. 2020. 896 p.

⁵⁷ Stedman's Medical Dictionary / Ed. Thomas Lathrop Stedman. – Philadelphia: Lippincott Williams & Wilkins, 2006. – 1144 p.

it is entirely logical that there is a serious need for comprehensive etymological study of English medical specialized vocabulary.

L. S. Lavochnikova and E. V. Varnavskaya⁵⁸ quote the words of the professor at the Michigan State University, Dr. John Dirkx, according to which, medical etymology brings us into contact with the history of medicine, of human ideas, and of the human struggle to understand the forces of nature that determine human destiny and mortality.

Therefore, the subsequent stage of this research, pursues the objective of conducting a comprehensive etymological analysis of the selected corpus of medical terminological units.

It is a commonly known fact that a significant portion of medical vocabulary traces its roots in Greek and Latin languages. Y. V. Lysanets and O. M. Bieliaieva⁵⁹ argue that while medical terms originate from various languages, a significant portion was derived from Greek and Latin. Consequently, the further study aims to confirming or refuting this well-established in scientific community position, via conducting etymological analysis of the selected medical terminological units.

In order to facilitate this analysis, a selected set of medical specialized units (300 units) was examined to identify terms' sources of borrowings. Over the course of current etymological study of medical terms, a set of different tools and resources were used to help us in identification of terms origins. The used sources of etymological analysis included the following: «Oxford English Dictionary (OED)»⁶⁰, «Online etymology dictionary»⁶¹ and «Metymology»⁶². The findings of this research are summarized in Table 2.

⁵⁸ Lavochnikova L. S., Varnavskaya E.V. Etymological study of medical terms // Youth Innovation Journal. 2013. Vol. 2. N. 1. P. 232.

⁵⁹ Lysanets, Y. V., Bieliaieva, O. M. (2018). The Use of Latin Terminology in Medical Case Reports: Quantitative, Structural, and Thematic Analysis. Journal of Medical Case Reports, 12(1), P. 45

⁶⁰ Oxford University Press. Oxford English Dictionary. [Electronic source]. 2025 URL: <https://www.oed.com/>. 26.05.2025.

⁶¹ Online Etymology Dictionary. [Electronic source]. 2025. URL: <http://www.etymonline.com/> 21.04.2025.

⁶² Metymology. [Electronic source]. 2025. URL: <https://metymology.ch/> 16.03.2025.

Table 2 – Etymological analysis of English medical terms

Source of borrowing	Number of terms	Percentage of total
Borrowing from Latin	108	36%
Borrowing from Greek	61	20.3%
Borrowing from French	21	7%
Borrowing from German	8	2.7%
Borrowing from Italian	1	0.3%
Coined in English	54	18%
Other (internationalisms, ep-onyms, etc.)	47	15.7%

As follows from the above-presented results, Latin and Greek borrowings account for the majority of medical terminological units. However, borrowings from other languages are also stamped their presence in English medical specialized vocabulary. It is noteworthy, that in the framework of present research, it is precisely the etymology of a terms not words, that is being considered. It is not surprising that a huge amount of English vocabulary is borrowed. Zh. N. Sarangaeva and L. V. Darzhinova⁶³ argue, that in the vocabulary of modern English, the number of native words is about 30%. Thus, approximately 70% of modern English vocabulary can be considered as the loanwords. The English language has borrowings from more than 50 languages (Latin, French, Italian, Spanish, Dutch, Russian, German, Eastern and other languages). However, our study focuses on the etymological analysis of medical terms not regular words. And, as evident from the previously stated information, medicalese or medical terminology possesses significantly distinct peculiarities. Thus, etymological analysis of English medical terminological units will differ from such analysis of regular English vocabulary.

The etymological investigation of practical material contributed to the categorization of medical terms to seven distinct groups, exhibiting different sources of borrowings.

⁶³ Zh. N. Sarangaeva, L. V. Darzhinova The Role of Borrowings in the English Language // Vestnik Kalmyk State University. 2015. No. 3 (27). P. 26.

The first extensive terminological group comprises medical vocabulary borrowed from Latin. This group includes medical terminological units that have entered the English medical terminology system through direct borrowing from the Latin language. This category is the largest, consisting of 108 terminological units, which accounts for 36% of the total terminology database. For example: *Abdomen*, *Abscess*, *Candidiasis*, *Cellulitis*, *Diphtheria*, *Eclampsia*, *Ischemia*, *Osteogenesis imperfecta*, *Pancreatitis*, *Xeroderma Pigmentosum*. The absolute prevalence of the Latin borrowings seems obvious, as Latin for a long time (until the early 18th century) served as the language of science and a lingua franca for the medical field of study. Throughout the Middle Ages and Renaissance, Latin was extensively utilized in the medical field, giving rise to a large number of various terminological units. Even despite the fact, that in modern medical paradigm it is the English language that serves as a lingua franca for the medical scientific field, the influence of Latin is still remains unwavering.

The subsequent group of borrowed medical vocabulary is comprised of terms derived from the Greek language. The terminological units in this group have been integrated into the English terminology system through direct borrowing from Greek. This category represents the second largest source of borrowings, containing 61 terminological units, which accounts for 20.3% of the overall corpus of terms. For instance: *Acromegaly*, *Anaphylaxis*, *Cholecystitis*, *Dermatitis*, *Hematemesis*, *Keratoconus*, *Meningitis*, *Sphenopalatine ganglioneuralgia*, *Thrombocytopenia*, *Toxoplasmosis*. The wide spread occurrence of Greek borrowings in English medical terminology system is not surprising, as the Ancient Greek language served as the foundation of medical vocabulary. Ancient Greek civilization had a great influence on western medical science. L. S. Lavochnikova and E. V. Varnavskaya⁶⁴ provide the example of Asclepius, the Greek god of medicine and healing, who was presented with a stick with the snake coiled around it. This stick became a symbol of medicine which is used nowadays. Furthermore, ancient physi-

⁶⁴ Lavochnikova L. S., Varnavskaya E.V. Etymological study of medical terms // Youth Innovation Journal. 2013. Vol. 2. N. 1. P. 231.

cians and philosophers such as Hippocrates and his followers were pioneers in describing different diseases based on observational methods, and coined many terms which are still in use today. Greek language was linguistically stable and was perfectly suitable for the construction of new complex words. Thus, the widespread use of classical Greek roots remains common across many languages, further contributing to the development of international medical vocabulary.

The next significant group of borrowings consists of terms derived from the French language. This group includes terminological units that originate from French lexical items. It comprises 21 terminological units, accounting for 7% of the overall terminology corpus. For example: *Biopsy, Café au lait spots, Fatigue, Gout, Jaundice, Lesion, Obesity, Stethoscope, Surgery, Thermometer*. A considerable presence of French borrowings is attributable mainly to the Norman conquest. This historic moment significantly molded the specialized lexicon of English medical science, by introducing various elements of the French language. Throughout the Norman dominion, English was supplanted by French language in the scientific realm of medicine, becoming the predominant language utilized by the English aristocracy and intelligentsia in commerce, legal and other practices.

The next group of borrowings consists of terms derived from the German language. This group comprises terminological units that have been borrowed from German lexical items. It ranks as the fourth largest group, encompassing 8 terminological units, which accounts for 2.3% of the overall term corpus. For example: *Bronchoscopy, Chemotherapy, Dyslexia, Electrocardiogram (ECG), X-ray*. The presence of German borrowings in English medical terminology system can be easily explained by the history of English language development. English, being a part of West-Germanic language family group, shares a large number of common lexical elements with its “sister” languages. Moreover, German language has significantly satiated modern international medical lexical system through the groundbreaking discoveries of German scientists and physicians in late 19th and early 20th centuries.

Another group of borrowings is comprised of terms derived from the Italian language. This group includes terminological units that have been integrated into the English terminology corpus through direct borrowing from Italian. It consists of a single unit, representing 0.3% of the total terminology corpus. For example: *Malaria*. The relatively small number of Italian borrowings in English medical terminology signifies minimal linguistical contribution of modern Italian language to contemporary English terminology system. The reason for this is that modern Italian language can be considered as a direct derivative of Latin. Without a doubt, almost all Indo-European languages utilize Latin linguistic systems, however, Italian is probably the closest linguistic relative of Latin. Therefore, the influence of a modern Italian language is diminished by the influence of its more significant in scientific field predecessor.

The next terminological group consists of terms that were originally coined in the English language using existing English lexical units. This group is characterized by terminological units that have been developed without borrowing from other languages. It comprises 54 terms, accounting for 18% of the overall terminology corpus. For example: *Blood pressure, Blood transfusion, Bone, Bone fracture, Brain scan, Caliper, Cat-scratch disease, Chronic pain, Cough, Dizziness*. The significant amount of specialized vocabulary originally coined in English, acknowledges the fact of international status of modern medical English, as a lingua franca for all medical professionals across the world. This group is significantly composed of so-called native terms. According to L. S. Lavochnikova and E. V. Varnavskaya⁶⁵, native terms are those that derive from Old English (450AD-1100 AD). The Angles, Saxons and Jutes invaded the British Isles from northern Germany, Denmark and northern Holland and began to populate the area. The Anglo-Saxons displaced the original Celtic-speaking inhabitants of what is now known as England into Scotland, Wales, Cornwall and Ireland, leaving behind a few Celtic words. The language they spoke, Anglo-Saxon, was mutually intelligi-

⁶⁵ Lavochnikova L. S., Varnavskaya E.V. Etymological study of medical terms // Youth Innovation Journal. 2013. Vol. 2. N. 1. P. 231.

ble and developed into Old English. Old English further evolved to Modern English. Furthermore, the considerable influence of modern English language on international medical system is indisputable, as many advanced discoveries were made in English-speaking countries, and a large number of newly emerged concepts were defined by the means of English language.

The final group of terms includes those units that do not fit the criteria established for this study. This group encompasses a variety of terminological units, including internationalisms, eponyms, brand names, and terms of unknown origin. This category is quite substantial, consisting of 47 terminological units, accounting for 15.7% of the overall terminology database. For example: *Addison's disease*, *Bell's Palsy*, *Caldwell–Luc operation*, *Charcot-Marie-Tooth disease*, *Decadron*, *Depo-Provera*, *Friedländer's bacillus*, *Ibuprofen*, *Korotkoff's method*, *Zika virus*. Modern medical English specialized units often derive their names from people, places, and mythological figures, forming the concept what is now known as eponym. Furthermore, it is worth considering the fact, that in the current days, many brand names are frequently coined to define various concepts and phenomena, particularly drugs and equipment. The significant amounts of terms belonging to this group also distinctively reflects the international status of a medical field of study, as medical vocabulary is committed to lexical homogeneity regardless of a language to foster the international cooperation in medical scientific field and ensure the fruitful knowledge exchange in this substantive subject field of study.

Thus, on the basis of the conducted etymological research it can be postulated that modern English medical terminology system is an evolving entity, encompassing the rich diversity of terminological units, derived from various sources. The main derivational source for the English medical specialized vocabulary is Latin and Greek languages (108 and 61 units respectively). Linguists, such as G. L. Banay⁶⁶ generally estimate, that approximately three-quarters of medical terminological units has Greek or Latin roots. Our analysis of practical material

⁶⁶ Banay, G. L. An Introduction to Medical Terminology I. Greek and Latin Derivations. Bulletin of the Medical Library Association, 1948. 36(1), P. 27.

showed, that 169 medical terms out of the selected corpus of 300 terms were derived from Greek or Latin languages. This number accounts for the 56.3% of total number of the selected material. Given number of terms does not completely align with the previously suggested by the linguists, quantity of Latin or Greek borrowings, but still is quite approximated to it. Therefore, it can be concluded, that our etymological research reconfirmed the firmly established point of view, that a significant portion of medical vocabulary traces its roots in Greek and Latin languages.

Among other facts, it has been established, that a significant portion of medical terminological units (54) were originally coined in English language. This outcome underscores the international status of English language, as a *lingua franca* for the medical field of study, and confirms considerable influence of English language on medical discoveries.

It was also revealed, that a substantial number of medical terminological units (47) in English medical terminology system does not have a specific source, as these terms include internationalisms, eponyms, names of various brands, and terms of unknown origin.

Furthermore, it is noteworthy that the conducted etymological analysis still requires further development, since as previously was noted, medical terminology system is constantly evolving and influence of classical languages of medicine such as Greek or Latin is gradually fading away.

2.2 The structural aspect of English medical terms

Turning to the morphological aspect of medical terminology system, it can be stated that, medical terminology exhibits a remarkably structured morphology. Consistent prefixes and suffixes help to convey meanings across various roots. It is evident from the foregoing discussion, that these roots, prefixes and suffixes are frequently derived from Greek or Latin origins. The relatively regular morphology of English medical terms significantly simplifies comprehension of complex terms, since mastering a certain number of morphemes allows medical professionals to understand complex terms constructed from these morphemes.

According to I. V. Arnold⁶⁷, the most productive method of word formation in English language is an affixal derivation. i.e., the creation of new words by adding certain word-formation elements to the root – affixes. Since English medical terminology system is an integral part of general lexical system of language, it is logical to assume, that derivation should also be the most productive word-formation method of English medical terms. However, medical terminology has its own unique features, thus, it is necessary to conduct a structural analysis of English medical terminology system.

The structural analysis of the medical specialized vocabulary corpus allowed to identify six structural groups of medical terms:

- 1) root words;
- 2) derivations;
- 3) compound word;
- 4) multi-word phrases;
- 5) abbreviations.

The first terminological group comprises root-based terms. This group includes terminological units that consist of a single root word. It contains a total of 32 terms, which constitutes 10.67% of the overall terminology bank. For example: *Aorta, Bone, Cough, Cyst, Edema, Fungi, Gout, Jaw, Shock, Stent*. In the framework of medical terminology, root words can be considered as a foundational lexicon, since root words, especially root words of Greek or Latin origin, often serve as a basis for derivational process. Root words used to encapsulate various core medical concepts and thus, provide the basis for further word-formation process.

The second terminological group consists of terms coined through the process of derivation. This group includes medical terminological units that contain various prefixes and suffixes, often of Latin or Greek origin. This group is the largest, comprising 118 lexical units, which accounts for 39.3% of the overall terminology bank. For example: *Adhesion, Amenorrhea, Bacteremia, Candidiasis,*

⁶⁷ Arnold, I. V. Leksikologiya sovremennogo angliyskogo yazyka. Vysshaya Shkola. 1995. P. 27.

Coagulation, Dermatitis, Jaundice, Pericarditis, Sarcoidosis, Vasopressor. Taking into consideration a significant number of terminological units, constituting this structural group, it is possible to further divide this group into three smaller subgroups, namely:

1. Suffixes. This subgroup encompasses terms that are derived through the addition of a suffix to the root word. It comprises 63 terminological units in total. For example: *Acid/osis, Arthr/itis, Cellul/itis, Dizzi/ness, Ischem/ia, Malar/ia, Melan/oma, Neph/itis, Screen/ing, Sinus/itis*. The use of 62 distinct suffixes demonstrates the complexity of changing root words into different forms. Suffixes can often carry a semantic load. For example, suffixes like «-itis» (inflammation), «-ectomy» (surgical removal). Thus, suffixes are critical in the medical terminology system, as they often identify certain semantic implications.

2. Prefixes. This subgroup includes units that are formed by adding a prefix to the root base. It consists of 17 terminological units in total. For example: *Abs/cess, A/menorrhea, Deca/dron. Ile/ectomy, Pan/creas, Patho/gen, Sclero/derma. Syn/cope, Trans/plant, Vas/ectomy*. As we can see, this subgroup is the smallest out of all three. This leads us to the conclusion, that prefixation is the least productive subtype of affixation in the process of the formation of medical terms.

3. Prefixes + Suffixes. This subgroup consists of terms that are formed through the addition of both a prefix and a suffix. It comprises a total of 38 terminological units. For example: *A/rrhythm/ia, An/esthes/ia, De/fibrillat/or, Dys/lex/ia, Hyper/thyroid/ism, Hypo/glycem/ia, In/flammation. In/toxicat/ion, Osteo/arthr/itis, Xero/stom/ia*.

With 118 out of 300 terms classified as derivations (comprising 62 suffixes, 17 prefixes, and 38 combinations of prefixes and suffixes), we see that derived terms form the significant bulk of medical vocabulary.

The subsequent terminological group consists of compound terms. This group is defined by terms that are formed from two or more root bases. It comprises a total of 33 terminological units, accounting for 11% of the overall terminology bank. For example: *Acromegaly, Bronchoscopy, Cardiomyopathy, Chemotherapy,*

Depo-Provera, Immunodeficiency, Immunotherapy, Kinesiotherapy, Mammogram, Thrombocytopenia. According to Džuganová and Božena⁶⁸, composition seems to be older than derivation from a diachronic viewpoint because the word-forming affixes developed from independent words.

The subsequent group includes terminological units that are structurally composed of word combinations. This group comprises 96 terms, accounting for 32% of the overall terminology bank. For example: *Abdominal pain, Abductor muscle, Bell's Palsy, Blood transfusion, Café au lait spots, Cat-scratch disease, Differential diagnosis, Friedländer's bacillus, Graft-versus-host disease, Kimmelstiel-Wilson disease, Osteogenesis imperfecta*. The wide spread occurrence of multi-word phrases in English medical terminology system is not surprising. B. Džuganová⁶⁹ states that, while derivation and compounding prevailed in the past and preferred Latin and Greek roots and affixes, nowadays a syntactic way prevails – the forming of multi-word phrases.

However, many multi-word phrases have a tendency for undergoing the process of abbreviation because they are too long and uneconomical. English medical language is committed to brevity thus, the next significant group of terminological units comprises abbreviations. This group consists of various types of abbreviations that function as nominative units. It encompasses a total of 21 terminological units, representing 7% of the overall terminology corpus. For example: *Acquired Immunodeficiency Syndrome (AIDS), Cardiopulmonary resuscitation (CPR), Chronic obstructive pulmonary disease (COPD), Deep vein thrombosis (DVT), Gastroesophageal reflux disease (GERD), Human Immunodeficiency Virus (HIV), MRI (Magnetic Resonance Imaging), Obstructive sleep apnea (OSA), Post-traumatic stress disorder (PTSD), Sacral nerve stimulation (SNS), SLE (Systemic Lupus Erythematosus)*. An abbreviation is a shortened form of a word or phrase.

⁶⁸ Džuganová, B. (2013). English medical terminology – different ways of forming medical terms. JAHR. 4. P. 58.

⁶⁹ Ibid.

There are many ways to form abbreviations. They usually, but not always, consist of a letter or group of letters taken from a word or phrase.

The results of a conducted structural research are presented in Table 3.

Table 3 – Structural analysis of English medical terms

Structural category	Number of terms			Percentage (%)
Root words	32			10.67
Derivations	Suffixes	63	118	39.33
	Prefixes	17		
	Prefixes+Suffixes	38		
Compound words	33			11
Multi-word phrases	96			32
Abbreviations	21			7

As can be seen, the largest structural group of English medical terms consists of terms coined through the process of derivation (118 units). Therefore, it can be concluded, that our structural research reconfirmed the point of view, that the most productive method of word formation in English medical language is an affixal derivation. This fact indicates that medical English in general, and medical terminology system in particular correlate with general (or coded) English lexical system. Moreover, medical terms as lexical units can also be formed utilizing other different means of word formation, such as clipping and abbreviation.

To sum up, new medical lexemes can be formed in various ways often reflecting the diversity of meanings of terms. Moreover, different means of term coinage may result in the emergence of the phenomena of hyponymy and synonymy.

2.3 Thematic groups of English medical terms

As has previously been stated, terminological units enter the composition of certain terminology system. Medical terms are not exceptions. Structural and etymological analysis of medical terms as separated specialized units of medical vocabulary has been conducted in the preceding subchapters of current research, therefore, it is logical to turn to analysis of medical terminology system.

In this regard, the subsequent phase of this study involves identifying the most relevant thematic groups of medical terms. In the process of establishing thematic classification of medical terms, the definition of the «thematic group» concept, given by the Russian Humanitarian Encyclopedic Dictionary, was taken as a basis for the further research. According to the RHED⁷⁰, a thematic group is a lexical grouping, identified within a specific semantic field or independently of it, in which vocabulary is united by a denotative feature, i.e., by designating the fundamentals of reality. Thematic groups classify all elements of reality.

Thus, we can conclude that thematic groups function within the framework of the lexical-semantic field, which is, according to the Linguistic Encyclopedic Dictionary⁷¹, understood as «a set of linguistic (mainly lexical) units united by common content (sometimes also by common formal indicators) and reflecting the conceptual, subject or functional similarity of the denotated phenomena».

An analysis of the practical material allowed to identify eight distinct thematic groups of medical terminological units, namely:

- 1) names of diseases;
- 2) disease symptoms;
- 3) therapeutic and treatment terms;
- 4) diagnostic processes and medical procedures;
- 5) anatomical terms;
- 6) causes of diseases;
- 7) medical equipment;

⁷⁰ Russian Humanitarian Encyclopedic Dictionary (RHED) / Vol. III / Published by St. Petersburg State University. Moscow. St. Petersburg, 2002. P. 112.

⁷¹ Linguistic Encyclopedic Dictionary / Edited by V.I. Yartseva. Moscow, 2002. P. 176.

8) names of medications.

The results of conducted thematical analysis are provided in Figure 3.

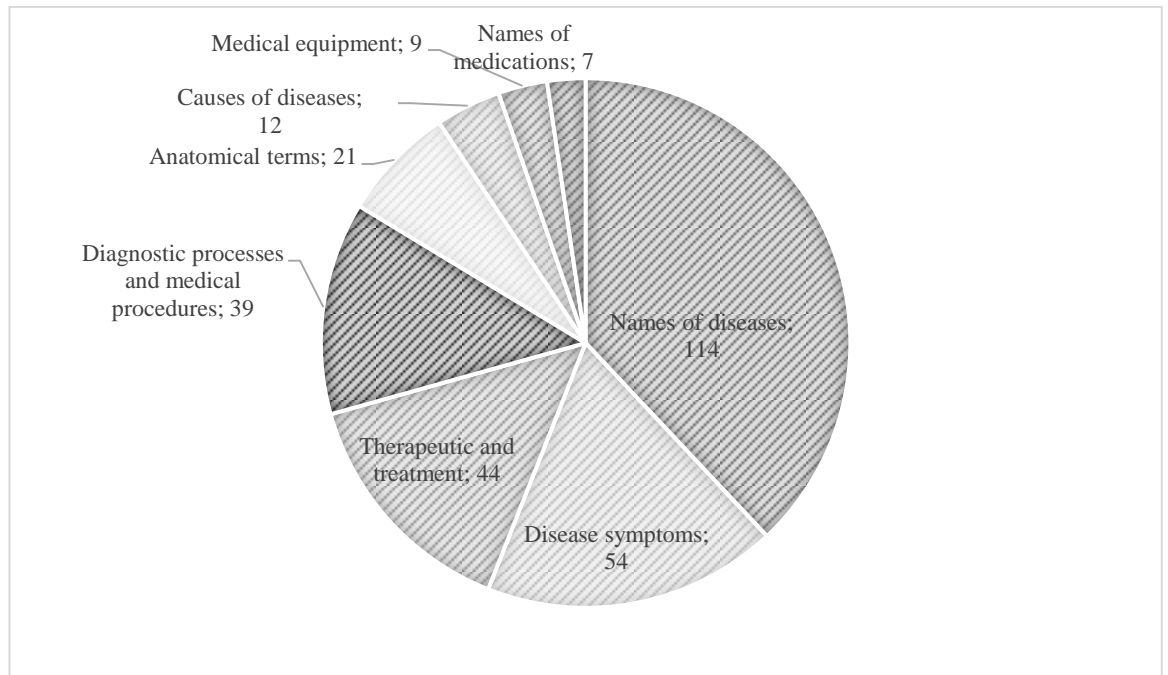


Figure 3 – The distribution of thematic groups of medical terms

The first thematic group encompasses the names of diseases. Terms within this group denote various medical conditions. For example: *Acquired Immunodeficiency Syndrome (AIDS)*, *Sarcoidosis*, *Cirrhosis*, *Dyslipidemia*, *Fibromyalgia*, *Hyperthyroidism*, *IBD (Inflammatory bowel disease)*, *Osteogenesis imperfecta*, *Parkinson's disease*, *Schizophrenia*. This thematic group is the largest, comprising 114 terminological units, which accounts for 38% of the total corpus of terms. The prevalence of the terms, pertaining to the thematic group of «Diseases' names» seems obvious, as the main focus of the medical field of study is to identify and treat various diseases. The absolute prevalence of this thematic group demonstrates that modern medical discourse is significantly influenced by the pathological study and that the need for precise disease-related terminology in medical field is indisputable.

Additionally, it is worth noting that the given group of names of diseases can be further divided into several thematic subgroups as follows:

- 1) nomination according to a characteristic sign of disease (*Acute bronchitis, Chronic fatigue syndrome*);
- 2) nomination according to the location of the disease (*Atrial fibrillation, Bone fracture, Brain tumor, Deep vein thrombosis*);
- 3) nomination based on the reference to the name of the scientist, who is believed to discover or study the disease (*Addison's disease, Bell's palsy, Freiberg's disease*);

The second thematic group consists of names for various symptoms. This group includes terminological units that denote different symptomatic conditions associated with the progression of various diseases. It is the second largest group, containing 54 terminological units, which constitutes 18% of the overall corpus of terms. For example: *Abdominal pain, Acidosis, Acidosis, Café au lait spots, Cough, Dizziness, Edema, Hypertension, Palpitations, Thyroid storm*. The relatively high number of terminological units in this groups signals the profound linguistic relationship between the names of diseases and their subsequent symptomatic manifestations. This thematic group includes such subgroups:

- 1) names for the designations of symptoms (*Abdominal pain, Ocular hypertension*);
- 2) names for the general manifestations across various diseases (*Chronic pain, Cough, Dizziness, Fatigue, Nausea*);
- 3) names for the specific clinical manifestations peculiar to particular disease (*Café au lait spots, Metastasis, Ventricular fibrillation*).

The third thematic group comprises therapeutic terms and those related to the treatment process. The medical terminological units in this group designate various therapeutic procedures as well as entities associated with medical treatment. This thematic group is the third largest, consisting of 44 terminological units, which represents 14.7% of the total corpus of terms. For example: *Blood transfusion, Caldwell–Luc operation, Catheterization, Dialysis, Gilliam's operation, Immunotherapy, Kinesiotherapy, Occupational therapy, Psychotherapy, Surgery*. The multiplicity of this thematic group highlights the importance of treatment

process in the medical field of study and stresses the crucial need for lexical units denoting related procedures. This group can further be divided into subsequent subgroups:

- 1) names for the surgical interventions (*Arthroplasty, Caldwell-Luc operation, Ileectomy, Lumbar laminectomy*);
- 2) names for the pharmacological methods of treatment (*Antibiotics, Chemotherapy, Immunization, Pain killers*);
- 3) names for the non-surgical and non-pharmacological methods of treatment (*Occupational therapy, Quarantine, Rehabilitation, Psychotherapy*).

The fourth thematic group includes names for diagnostic processes as well as medical procedures. The terms within this group refer to the processes associated with disease diagnosis and the accompanying medical procedures. This terminological group ranks fourth in size, comprising 39 terminological units, which accounts for 13% of the overall corpus of terms. For example: *Biopsy, Brain scan, Cystoscopy, Kahn test, Lumbar puncture, Scintigraphy, Urinalysis, Venipuncture, Viral Load, Wellness check*. This thematic group is closely semantically associated with the previous one. Thus, it is hardly surprising that these two groups comprise approximately identical number of medical terminological units. This thematic group can be divided into the following subgroups:

- 1) terms denoting different imaging techniques (*Brain scan, MRI, X-ray*);
- 2) terms denoting laboratory and biopsy tests and assessments (*Lumbar puncture, Skin biopsy, Urinalysis*).

The fifth significant thematic group consists of anatomical terminological units. This group includes terms that designate parts of the human body, internal and external organs, tissues, and various systems of the organism. According to the analysis of the studied material, this thematic group ranks fifth in size. It comprises 21 terminological units, which accounts for 7% of the total corpus of terms. For example: *Cornea, Tricuspid valve, Frontal lobe, Lumbar spine, Aorta, Gallbladder, Coccyx, Bone, Glisson's capsule, Pancreas*. This thematic group further divides into a couple of subgroups as follows:

- 1) definitions for the external structure of a human's body (*Abdomen, Cornea*);

- 2) definitions for the internal structure of a human's body (*Aorta, Gallbladder, Mitral valve, Thymus*).

The sixth thematic group comprises terms related to the causes of diseases. This group includes terms that designate various causes and pathogens that lead to the onset of specific diseases. It ranks sixth in size, consisting of 12 terminological units, which represents 4% of the total corpus of terms. For example: *Coagulation, Delta virus, Friedländer's bacillus, Fungi, Human Immunodeficiency Virus (HIV), Infectious agent, MRSA (Methicillin-resistant Staphylococcus aureus), Parasites, Pathogen, Zika virus*. This group can be further divided into the following subgroups:

- 1) terms denoting general categories of infectious agents (*Pathogen, Fungi, Parasites*);

- 2) terms denoting specific infectious organisms (*Delta virus, HIV, Friedländer's bacillus, Zika virus*);

The seventh thematic terminological group consists of terms related to equipment. The terminological units that make up this group designate various medical equipment used by healthcare professionals in the process of diagnosing and treating various diseases. This thematic group of medical terms ranks seventh in size, comprising 9 terms, which account for 3% of the overall corpus of terms. For example: *Catheter, Stent, Scalpel, Defibrillator, Cannula*. The thematic group of medical equipment includes several subgroups, as follows:

- 1) names for the surgical tools (*Scalpel, Stent*);

- 2) names for the diagnostic devices (*Stethoscope, Thermometer*);

- 3) names for general therapeutic equipment (*Defibrillator*).

The eighth thematic group of selected medical terms consists of terms related to the names of medications. This small group includes medical terminological units that designate various registered medicinal products. It is the smallest among all identified thematic groups of medical terms, comprising 7 terminological units,

which accounts for 2.3% of the total corpus of terms. For example: *Decadron*, *Depo-Provera*, *Fybogel*, *Ibuprofen*, *Lassar's paste*. Due to the low number of terms comprising this thematic group and by the reason of its specificity this group cannot be divided into the tangible subgroups.

In the course of thematic analysis of medical terms, it was found that, the thematic group «Names of diseases» is undoubtedly the most dominant group (38%) in the terminological system of medical vocabulary. The thematic group of “Names of medications” is the smallest group (2.3%).

Due to the fact, that the thematic analysis of the English medical terminology system conducted in this subchapter is based on the semantic principle, it is logical to carry out a further, more in-depth semantic analysis within the framework of this subchapter based on the concepts of synonymy, antonymy and hypernymy.

The development of medical science determines certain changes in the terminology system of medical language. The emergence of new terms, the reinterpretation of old ones, as well as the acquisition of more precise and sometimes even new meanings by old terms are seen as the conditions of synonymy and variability.

In studies conducted within the framework of the cognitive paradigm, terminologists (such as L. M. Alekseeva, S. V. Grinev, V. M. Leichik, etc.) indicate that the processes of synonymy and variability belong to actively operating processes and testify to the developing nature of the language of science.

In the paradigm of cognitive science, synonymy is viewed positively. Synonymous relations are considered by Y. V. Slozhenikina⁷² as «system-forming», and according to V. A. Tatarinov⁷³, the ability of synonyms to denote the same special concept, highlighting its individual features from different sides, is necessary in the scientific process. Tatarinov⁷⁴ also states, that the scientist considers

⁷² Slozhenikina, Y. V. Terminological variability: semantics, form, function. 2nd ed., revised. Moscow: LKI Publishing House, 2010. P. 128.

⁷³ Tatarinov, V. A. General Terminology: Encyclopedic Dictionary. – Russian Terminological Society RosTerm. Moscow: Moscow Lyceum, 2006. Pp. 172-173.

⁷⁴ Ibid.

synonymy as the exclusivity of a term, which is born «at the junction of two phenomena (lability and dynamism)».

L. M. Alekseeva⁷⁵ suggests, that synonyms are «identical or similar in meaning units of language of the same level (words, phrases, syntactic constructions)». According to V. V. Vinogradov's⁷⁶ classification of synonyms, a distinction is made between ideographic synonyms, differentiating «shades of semantic differences», and stylistic synonyms, revealing various stylistic shades. From the definition of ideographic and stylistic synonyms, it is clear that the main feature of synonyms is identity and difference in semantics or stylistics. Thus, it can be concluded, that synonyms come in two types: Absolute (or total) synonyms, which are substitutable in all possible contexts in all possible (semantic, grammatical, etc.) ways, and partial (or quasi) synonyms, which are similar, but have certain (semantic, grammatical etc.) differences.

From a sample of medical terms with a total volume of 300 units, 4 terms have synonyms, thus, it can be concluded that 1.3% of terms enter into synonymous relationships. For example: *Zoonosis* – *Zoonotic disease*. As can be noted, synonyms relations are not characteristic for the medical term system, since their quantity in the studied material is extremely insignificant. Thus, medical terms tend to be hierarchically organized based on thematic principle, but do not possess clearly defined linear relationships between components within this hierarchical system.

Concerning the issue of antonyms, it can be stated that nomination is a complex cognitive process that involves a number of cognitive mechanisms, such as analogy, opposition, conceptual compression, detailing, and others. Opposition is one of the basic cognitive mechanisms involved in the nomination process. Its essence lies in identifying opposite concepts within a single terminological field. At the semantic level, opposition is expressed by the existence of antonyms.

⁷⁵ Alekseeva, L. M. Metaphorical term formation and functions of terms in the text: diss. ... Doctor of Philology / L. M. Alekseeva. Perm, 1998. P. 321.

⁷⁶ Vinogradov, V. V. On some issues of Russian historical lexicology. Selected works: lexicology and lexicography. Moscow: Nauka, 1977. P. 92.

The analysis of sampled medical terminology has revealed 4 antonymic pairs (8 units) of terms, which accounts for 2.7% of the total number of selected terms (300 units). An analysis of the quantitative composition of antonymic pairs allowed us to establish that there are only two-member series of antonyms. For example: *Hypertension* – *Hypotension*, *Acidosis* – *Alkalosis*. The results of the study allow us to state that antonymy is not very characteristic of the selected terminological corpus, despite the fact noted above that the mechanism of opposition is one of the basic cognitive mechanisms involved in the nomination process.

Nevertheless, the presence of antonymic relations allows us to conclude that antonyms exist in any language, in any terminology system, and serve as linguistic means of representing mental oppositions in the consciousness of speakers. This fact aligns with the opinion of many linguists, such as N. V. Tsaregorodtseva⁷⁷, who states that antonyms “complement each other, mutually determine each other, simultaneously interpenetrate and mutually deny and mutually exclude each other”. As a result, they provide an opportunity to obtain a more complete understanding of the object.

As for the homonymous relations, medical terms enter into hyper-hyponymous relationships, deepening our understanding of the medical thematic hierarchy. For example: *Cancer* – *Lymphoma* – *Melanoma* – *Metastasis* – *Myeloma*. N. Usman defines hyponymy as a process in which term used to refer to a specific word that comes from a larger class of words. However, due to the fact, that within our sampled practical material, hyper-hyponymous relations among medical terms occur exceedingly rarely, this data will be considered insignificant for current research.

To sum up this section of a given research, it is necessary to acknowledge that further considerations are essential in order to draw more precise conclusions. The reason for this is the fact, that thematic groups can overlap, and a significant number of terminological units can belong to several thematic groups simultane-

⁷⁷ Tsaregorodtseva, N. V. Antonymic correlations in the ideographic aspect (based on English proverbs): abstract of the dissertation ... Candidate of Philological Sciences. Yekaterinburg, 2013. P. 9.

ously. Additionally, applying different criteria to the semantic sorting of medical term, may result in a different number of groups, subgroups and their configurations.

2.4 Features of English medical term system

As mentioned previously, English medical terms cannot operate in vacuum. Medical terminological units form part of English medical terminology system. Medical terms serve as a building blocks of complex organization. Therefore, in the analysis of medical terms as linguistic units, it is essential to also consider certain features of medical terminology system, to which medical terminological units belong.

As follows from the above, English medical terminology system possesses a remarkably complicated structure. M. N. Chernyavsky⁷⁸ believes that modern medical terminology is one of the most extensive and complex systems in terms of concepts and content. G. A. Abramova⁷⁹ defines medicine as a complex of actively developing sciences, the names of which reflect the convergence of sciences: medical-biological, medical-technical, medical-chemical, medical-preventive, expressed in new medical concepts and terms. Therefore, it seems impossible to compile a complete list of words and expressions that form modern medical vocabulary. A. A. Zavyalov⁸⁰ explains that the terminological system primarily serves practical purposes and is also reflected in the presentation of the theory. Therefore, it is essential to study medical terminological units in the context of medical terminology system.

On the basis of comprehensive analysis of medical terminology system, conducted in the prior subchapters, it can be postulated that the English medical terminology system is an integral part of the general terminology system of the language. Medical terminology, being a significant layer of specialized vocabulary

⁷⁸ Chernyavsky M. N. *Latin Language and the Foundations of Medical Terminology* / M. N. Chernyavsky. Moscow, 1996. 336 p.

⁷⁹ Abramova G. A. *Medical Vocabulary: Main Properties and Development Trends: Dissertation ... for the degree of Doctor of Philological Sciences: 10.02.01: Krasnodar, 2003. 312 p. P. 5.*

⁸⁰ Zavyalov A. A. *The Terminological Dictionary of International Relations as a Lexicographic Task* // *Language and Culture*. 2011. No. 3 (15). P. 45.

within the general terminology system, in turn includes many subsystems of its own. These subsystems are extremely diverse, both semantically and quantitatively.

The presence of macro thematic groups and their micro thematic groups confirms the systemic nature of the medical terminology system, since the terminology in question consist of a multitude of linguistic elements, links and relationships, which forms a linguistic integrity of medical vocabulary.

Therefore, the medical terminology system of the English language builds a certain hierarchical structure based on the thematic or semantic principle. This structure possesses a complex and interrelated framework. The structure is a set of categories and cognitive features, hierarchically united and expressed by terms. In medical terminology, hierarchical organization is critical for effective communication and data management. Scholars such as K. E. Campbell⁸¹ argue that medical concepts within medical terminology system must be accessible through all reasonable hierarchical paths (i.e., they must have multiple semantic parents). Each subsystem of medical terminology structure contains certain terminological units that specify the medical definition, indicate the location, symptoms and other characteristics. The structure allows for a clearer presentation of the purpose of each medical terminological unit and assists two groups: medical professionals and linguists in better organization of medical terms with the aim of greater understanding of these medical entities and their more efficient implication in the contexts of medicine and healthcare.

Moreover, English medical terminology system demonstrates a remarkably conservative structure. Medical terminology demonstrates a strongly systematic morphology. The use of consistent prefixes and suffixes effectively conveys meaning through various root words. As emphasized in the previous discussion, it is clear that these root words, prefixes, and suffixes are primarily derived from Greek and Latin. The relatively regular morphology of English medical terms greatly en-

⁸¹ Campbell KE, Musen MA. Representation of clinical data using SNOMED III and conceptual graphs. Proc 16th Annu Symp Comput Appl Med Care. 1992: 354-8.

hances the comprehension of complex terminology, since mastery of a certain set of forms enables medical professionals to interpret complex terms built from these elements. As may be noted, medical terminology system is stable, as it heavily relies on lexical basis of traditional ancient languages such as Latin and Greek. A large number of English medical terminological units were coined by the means of the derivational process, utilizing addition of affixes to the Latin or Greek root words. Furthermore, a great number of affixes used in the process of derivational coinage of English medical terms trace its roots to the ancient languages (Latin and Greek).

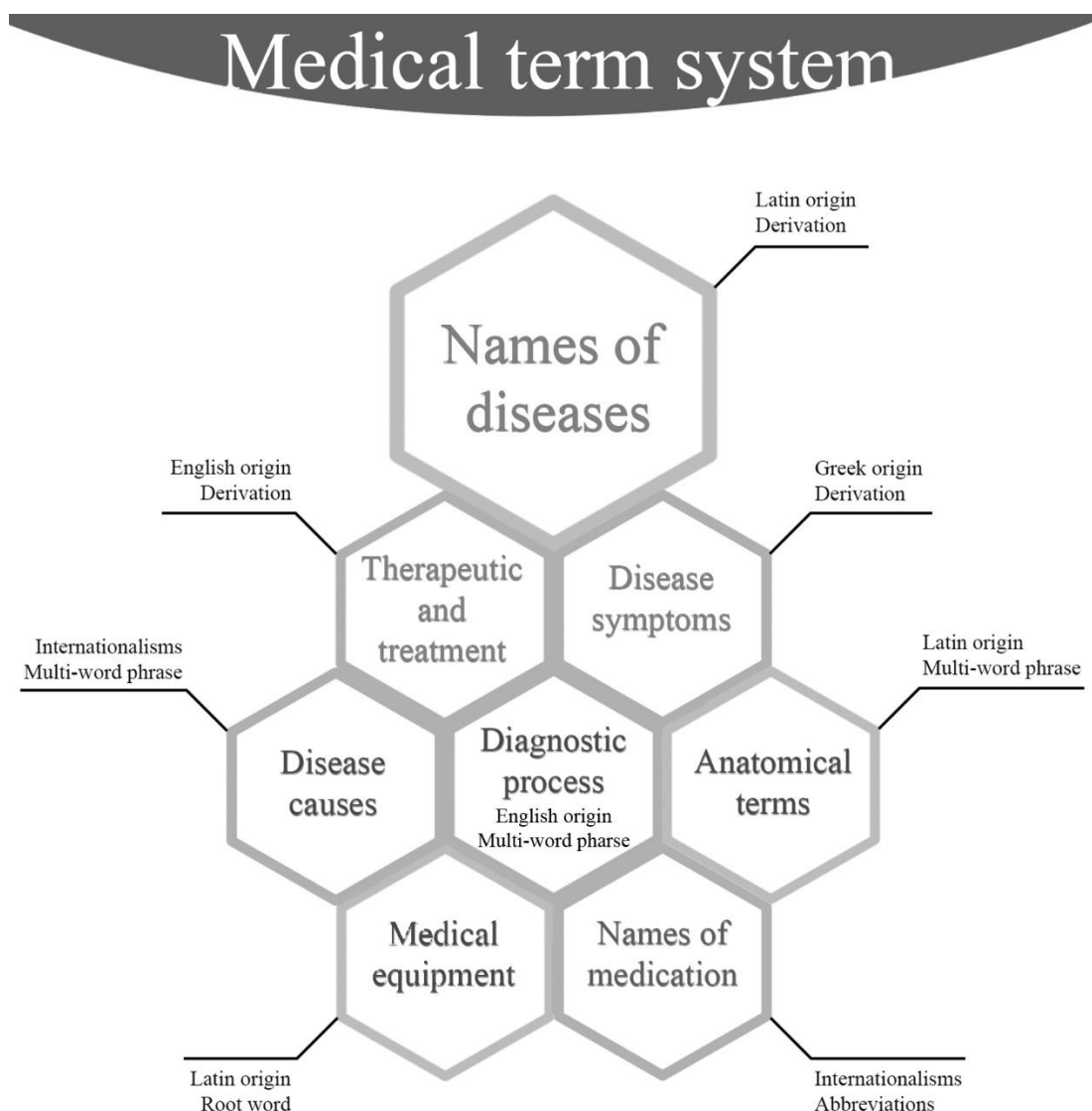


Figure 4 – The structure of the English medical term system

Nevertheless, despite its conservative and stable nature, English medical terminology system appears to be extremely dynamic. It is evident in the strong presence of medical terms originally coined by the means of English language. In the modern medical paradigm, it is specifically English language, that serves as a lingua franca of medical field of study. The rapid development of medical science cannot but affects modern English system of terminology. Many new medical scientific, theoretical and practical discoveries that are made in the Western world dominated by English language, utilize the means of this language in the defining of newly emerged medical concepts. Moreover, a significant portion of medical terminological units, constituting medical terminology system can be considered as internationalisms, which is evident in the presence of Eponymic names and brand terms in the modern system of terminology. Thus, despite the strong influence of ancient traditional languages such as Latin and Greek, in the modern medical framework there is a trend to deviation of terminology system from these traditional languages in order to search for new means of medical definition. This fact reflects the dynamic and fluctuating nature of English medical terminology system.

Above given features of medical terminology system are supported by various scholars. For example, A. V. Ivanov⁸² states, that modern English-language medical terminology is a heterogeneous combination of names from native national and borrowed words. Thus, despite being conservative and stable, English medical terminology exhibits peculiarities of a dynamic system. S. V. Grinev⁸³ argues that, old and new, medical terms are the words created on the basis of general literary and specialized models of terminological word formation. Such heterogeneity in the characteristics of medical terms testifies to complex conservative and simultaneously dynamic nature and the long history of the formation of the terminological

⁸² Ivanov A. V. On the issue of the status of Greco-Latin roots in the morphological structure of general language units and units of special nomination // Bulletin of Nizhny Novgorod University N.I. Lobachevsky. 2011. No. 6 (2). P. 193–198.

⁸³ Grinev S. V. Methodological foundations of medical terminology (current state and future prospects) // Problems of Ordering Medical Terminology. Moscow: Moscow State University, 1989. P. 80.

system, which reflects the features of the formation of the medical subsystem of the English language in different eras.

Conclusions. This chapter conducts a thematic, structural, etymological and semantic analysis of medical terms in English. Terminological units are characterized by semantic processes characteristic of literary language. Chapter identified, that medical terms are divided into eight distinct thematic groups, that form a hierarchical structure within medical vocabulary. Chapter showed, that the main source of borrowing for medical terminology is Latin language (108 units). Chapter concluded, that the main structural type of English medical terms is derivation (117 units). Chapter demonstrated, that the processes of synonymy and antonymy are not characteristic for English medical terminology system.

CONCLUSION

The increase in the number of specialized vocabularies caused by the scientific and technological revolution makes it necessary to study the methods of its description and characterization. Analysis of medical terms is an important problem, since medical terms participate in the exchange of medical information, mediate scientific communication in this area. It should be emphasized that the analysis of medical terms requires special care and accuracy, since it can have consequences for the health and life of people.

Based on the analysis of scientific literature on the topic of the work, the following conclusions can be drawn:

Terms are special words or phrases that denote a concept from a specific area.

Medical terms are special words and phrases used by specialists to denote objects and phenomena from the medical scientific and professional field. Their features are internationality, Greek or Latin origin, stylistic neutrality and non-metaphorality. The most frequent structural type of medical terms is a derivative, which indicates the complex nature of the concepts expressed by the terms.

From the perspective of a modern linguistic science there exist several approaches to studying of terminology systems and their evolution. Combination of logical analysis, etymological research, semantic and morphological analysis provides with a comprehensive picture of the features of the medical terms of the English language.

On the basis of medical dictionaries, the terminological corpus of 300 medical terms was sampled. This corpus was analyzed from various perspectives. The conducted study of practical material leads to the following conclusions:

The science of medicine, having a long and extensive history of development, has accumulated a significant number of terminological units in its terminology. Thus, modern English medical terminology is saturated with terms of foreign origin. It was revealed that the most relevant source of borrowing in the English

medical terminology is borrowing from Latin. Borrowings from the Greek language are of not less importance. Thus, the point of view that the most popular source of borrowing in the English medical language is borrowing from Latin and Greek has been reconfirmed. Moreover, it was discovered that a significant part of the terminological units from the selected corpus of terms was originally coined in the English language. This confirms the status of modern English as a *lingua franca* of the medical sphere. Some terms from the selected corpus have an undetermined source, which is confirmed by the presence of eponyms, trade mark names, internationalisms and words of unknown origin.

Medical terminology demonstrates a fairly structured morphology. The most frequent structural type of English medical term from the selected material is an affixal derivative. This fact resonates with the opinion of many linguists on this issue. In general, from a morphological point of view, medical terminology does not differ much from terminology systems of other sciences.

Medical terms divide into several distinct thematic groups: Names of diseases; Disease symptoms; Therapeutic and treatment terms; Diagnostic processes and medical procedures; Anatomical terms; Causes of diseases; Medical equipment; Names of medications. The most frequent thematic group is names of diseases (114 units, 38%). The less-frequent thematic group of medical terms is names of medications (7 units, 2.3%). The thematic groups of medical English form connections and create a certain hierarchical structure in order to facilitate the perception of terms in medical discourse.

Antonymy is present in the selected corpus of medical vocabulary, but is not widespread. Of the selected corpus of medical terms, only 8 terms enter into antonymous relations. Thus, antonymy is not characteristic of English specialized vocabulary. Moreover, medical language tends to strive for maximum homogeneity and precision, since precision is of key importance in medical discourse.

Medical terminology is a complex interrelated system that builds a solid hierarchical structure. This structure is very conservative and stable, as English medical terminology is heavily based on the lexical material of traditional languages

such as Latin and Greek. However, medical terminology structure can also be considered as a dynamic system, which is evident in strong saturation of this system with words of relatively modern coinage by the means of present English language. Moreover, a significant portion of international terms such as internationalisms, eponyms and trade mark names in the structure of medical terminology system also indicates this. Thus, despite the significant influence of classical languages such as Latin and Greek on the modern medical lexicon, there is a noticeable tendency to divergence of the terminological system from these traditional languages, aimed at exploring new ways of defining medical terms.

This study does not exclude the issues of analyzing medical specialized vocabulary of the English language. However, this study touched upon the main aspects of medical terms that are of particular interest to linguists and medical professionals. The data obtained during the study will allow specialists in various fields to deepen their understanding of medical vocabulary: translators, linguists and medical practitioners.

This study paves ways for further analysis of the processes of term formation and the functioning of terms in medical discourse from the standpoint of anthropocentrism.

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APPENDIX A

List of medical terms

1. Abdomen
2. Abdominal pain
3. Abductor muscle
4. Abscess
5. Acidosis
6. Acquired Immunodeficiency Syndrome (AIDS)
7. Acromegaly
8. Acute bronchitis
9. Addison's disease
10. Adhesion
11. Alkalosis
12. Amenorrhea
13. Anaphylaxis
14. Anemia
15. Anesthesia
16. Aneurysm
17. Angina pectoris
18. Antibiotics
19. Aorta
20. Aphasia
21. Appendicitis
22. Arrhythmia
23. Arthralgia
24. Arthritis
25. Arthroplasty
26. Asthma
27. Astigmatism
28. Atrial fibrillation

APPENDIX A CONTINUATION

List of medical terms

29. Autopsy
30. Bacteremia
31. Basal metabolic rate
32. Bell's Palsy
33. Biopsy
34. Blood pressure
35. Blood transfusion
36. Bone
37. Bone fracture
38. Bone marrow
39. Bowen's disease
40. Brachialis muscle
41. Brain scan
42. Brain tumor
43. Bronchoscopy
44. Café au lait spots
45. Caldwell–Luc operation
46. Caliper
47. Cancer
48. Candidiasis
49. Cannula
50. Cardiac arrest
51. Cardiomyopathy
52. Cardiopulmonary resuscitation (CPR)
53. Carpal tunnel syndrome (CTS)
54. Cataract
55. Catheter
56. Catheterization
57. Cat-scratch disease

APPENDIX A CONTINUATION

List of medical terms

58. Cellulitis
59. Centrifuge
60. Chagas Disease
61. Charcot-Marie-Tooth disease
62. Chemotherapy
63. Cholecystectomy
64. Cholecystitis
65. Cholera
66. Chronic fatigue syndrome (CFS)
67. Chronic obstructive pulmonary disease (COPD)
68. Chronic pain
69. Cirrhosis
70. Clinical trial
71. Coagulation
72. Coccyx
73. Colitis
74. Comorbidity
75. Concussion
76. Congestive heart failure
77. Conjunctivitis
78. Constipation
79. Convalescence
80. Cornea
81. Cough
82. Craniotomy
83. Crohn's disease
84. CT scan
85. Cyst
86. Cystic fibrosis

APPENDIX A CONTINUATION

List of medical terms

87. Cystoscopy
88. Decadron
89. Deep vein thrombosis (DVT)
90. Defibrillator
91. Delta virus
92. Depo-Provera
93. Dermatitis
94. Detoxification
95. Diabetes
96. Dialysis
97. Differential diagnosis
98. Diphtheria
99. Dizziness
100. Dyslexia
101. Dyslipidemia
102. Dysphagia
103. Eclampsia
104. Edema
105. Electrocardiogram (ECG)
106. Endoscopy
107. Epilepsy
108. Epiphysis
109. Fatigue
110. Fecal testing
111. Fibromyalgia
112. Formication
113. Freiberg's disease
114. Friedländer's bacillus
115. Frontal lobe

APPENDIX A CONTINUATION

List of medical terms

116. Fungi
117. Fybogel
118. Gallbladder
119. Gastroenteritis
120. Gastroesophageal reflux disease (GERD)
121. Gaucher's disease
122. Genetic disorder
123. Gilliam's operation
124. Glasgow coma scale (GCS)
125. Glaucoma
126. Glisson's capsule
127. Gout
128. Grafting
129. Graft-versus-host disease
130. Hematemesis
131. Hives
132. Human Immunodeficiency Virus (HIV)
133. Hyperlipidemia
134. Hypertension
135. Hyperthermia
136. Hyperthyroidism
137. Hypertrophy
138. Hypoglycemia
139. Hyponatremia
140. IBD (Inflammatory bowel disease)
141. Ibuprofen
142. Ileectomy
143. Immunization
144. Immunodeficiency

APPENDIX A CONTINUATION

List of medical terms

145. Immunotherapy
146. Infectious agent
147. Inflammation
148. Insomnia
149. Insulin resistance
150. Intermittent fasting
151. Intoxication
152. Intubation
153. Ischemia
154. Jaundice
155. Jaw
156. Joint injection
157. Kahn test
158. Keratoconus
159. Kidney disease
160. Kidney stones
161. Kimmelstiel-Wilson disease
162. Kinesiotherapy
163. Klinefelter Syndrome
164. Korotkoff's method
165. Laparoscopy
166. Lassar's paste
167. Lesch-Nyhan disease
168. Lesion
169. Leukemia
170. Lipid panel
171. Lumbar laminectomy
172. Lumbar puncture
173. Lumbar spine

APPENDIX A CONTINUATION

List of medical terms

- 174. Lymphoma
- 175. Malabsorption
- 176. Malaria
- 177. Mammogram
- 178. Marfan Syndrome
- 179. Mastectomy
- 180. Medication
- 181. Melanoma
- 182. Meningitis
- 183. Meningococcal vaccine
- 184. Metastasis
- 185. Mitral valve
- 186. MMR
- 187. MRI (Magnetic Resonance Imaging)
- 188. MRSA (Methicillin-resistant Staphylococcus aureus)
- 189. Myeloma
- 190. Nausea
- 191. Nephritis
- 192. Neurogenic bladder
- 193. Neuropathy
- 194. Nutritional deficiency
- 195. Obesity
- 196. Oblique views
- 197. Obstructive sleep apnea (OSA)
- 198. Occupational therapy
- 199. Ocular hypertension
- 200. Oliguria
- 201. Osteoarthritis
- 202. Osteogenesis imperfecta

APPENDIX A CONTINUATION

List of medical terms

- 203. Osteomyelitis
- 204. Osteoporosis
- 205. Otitis media
- 206. Pain killers
- 207. Pain scale
- 208. Palliation care
- 209. Palpitations
- 210. Pancrea
- 211. Pancreatitis
- 212. Pap smear
- 213. Parasites
- 214. Parkinson's disease
- 215. Passive immunity
- 216. Pathogen
- 217. Pericarditis
- 218. Peripheral artery disease (PAD)
- 219. Phlebitis
- 220. Phlebotomy
- 221. Plague
- 222. Plural effusion
- 223. Pneumonia
- 224. Polycystic Ovary Syndrome (PCOS)
- 225. Polyuria
- 226. Post-traumatic stress disorder (PTSD)
- 227. Prevalence
- 228. Prophylaxis
- 229. Psychotherapy
- 230. Pulmonary embolism
- 231. Quarantine

APPENDIX A CONTINUATION

List of medical terms

- 232. Radiation therapy
- 233. Raynaud's Disease
- 234. Rehabilitation
- 235. Renal failure
- 236. Rhinorrhea
- 237. Sacral nerve stimulation (SNS)
- 238. Salivary glands
- 239. Sarcoidosis
- 240. Scalpel
- 241. Schizophrenia
- 242. Scintigraphy
- 243. Scleroderma
- 244. Scoliosis
- 245. Screening
- 246. Sepsis
- 247. Shock
- 248. Sialorrhea
- 249. Sickle cell disease
- 250. Sinusitis
- 251. Skin biopsy
- 252. SLE (Systemic Lupus Erythematosus)
- 253. Sphenopalatine ganglioneuralgia
- 254. Sputum
- 255. Statins
- 256. Stent
- 257. Stethoscope
- 258. Stroke recovery
- 259. Subluxation
- 260. Surgery

APPENDIX A CONTINUATION

List of medical terms

- 261. Syncope
- 262. TAB
- 263. Tachycardia
- 264. Thermometer
- 265. Thrombocytopenia
- 266. Thrombus
- 267. Thymus
- 268. Thyroid
- 269. Thyroid storm
- 270. Tinnitus
- 271. Toxoplasmosis
- 272. Transfusion reaction
- 273. Transplant
- 274. Tremors
- 275. Tricuspid valve
- 276. Trypanosoma cruzi
- 277. Tuberculosis
- 278. Tumor markers
- 279. Ulcerative colitis
- 280. Ultrasound
- 281. Ureteroscopy
- 282. Urinalysis
- 283. Vaccination
- 284. Varicose veins
- 285. Vasculitis
- 286. Vasectomy
- 287. Vasopressor
- 288. Venipuncture
- 289. Ventricular fibrillation

APPENDIX A CONTINUATION

List of medical terms

- 290. Vertigo
- 291. Viral Load
- 292. Vital signs
- 293. Wellness check
- 294. Wilson's disease
- 295. Xeroderma Pigmentosum
- 296. Xerostomia
- 297. X-ray
- 298. Zika virus
- 299. Zoonosis
- 300. Zoonotic disease