УДК 616.12-008.46-036.12-039.3:001.4
https://doi.org/10.20538/1682-0363-2025-4-132-142

Terms Used to Characterize the Course of Chronic Heart Failure: Are All the Points on the Board?

Kalyuzhin V.V.[1], Teplyakov A.T.[2], Bespalova I.D.[1], Kalyuzhina E.V.[1], Chernogoryuk G.E.[1], Terentyeva N.N.[3], Garganeeva N.P.[1], Sibireva O.F.[1], Usov V.Yu.[4], Timofeeva K.S.[1], Smirnova I.N.[1, 5]

[1] Siberian State Medical University
2 Moskovsky trakt, 634050 Tomsk, Russian Federation

[2]Cardiology Research Institute, Tomsk National Medical Research Center (Tomsk NRMC), Russian Academy of Sciences (RAS)
111a Kievskaya St., 634012 Tomsk, Russian Federation

[3] Surgut State University
1 Lenin Ave., 628412 Surgut, Russian Federation

[4] E. Meshalkin National Medical Research Center of the Ministry of Health of the Russian Federation
11 Krasny Av., 630007 Novosibirsk, Russian Federation

[5] Tomsk Scientific Research Institute of Balneology and Physiotherapy, Branch of the Federal Scientific and Clinical Center for Medical Rehabilitation and Balneology of the Federal Medical and Biological Agency (TSRIBP)
1 Rosa Luxemburg St., 634009 Tomsk, Russian Federation

ABSTRACT

The natural course of almost any chronic pathology, if its latent forms are excluded, is cyclic with alternating periods of exacerbation and remission. Chronic heart failure (CHF) is no exception – periods of stable (sometimes seeming stable) course are followed by episodes of worsening of clinical symptoms, leading to a decrease in quality of life and an increased risk of premature death. In turn, in a patient with decompensated heart failure, various changes in the clinical severity of CHF are possible: resolution of symptoms (including remission), persistence of heart failure, and, unfortunately, further worsening. The characteristic of CHF course should become an integral part of the clinical diagnosis based on the appropriate classification. The latter can be an effective instrument in clinical practice only if the terms it provides have an unambiguous meaning and clearly delineated boundaries of their correct usage. The authors of the lecture reviewed the main terms used to characterize the course of CHF. Unfortunately, despite the almost permanent discussion of the problem of concept demarcation and repeated attempts to formulate agreed positions, experts from reputable cardiological communities in the Old and New Worlds cannot reach consensus, and the definitions of terms used to describe the CHF course differ in a number of guidelines.

Keywords: chronic heart failure, classification, worsening, exacerbation, decompensation, resolution of symptoms and signs, remission, persistence, hospitalized heart failure

Conflict of interest. The authors declare no obvious or potential conflicts of interest related to the publication of this article.

Source of financing. The authors declare no funding for the study.

For citation: Kalyuzhin V.V., Teplyakov A.T., Bespalova I.D., Kalyuzhina E.V., Chernogoryuk G.E., Terentyeva N.N., Garganeeva N.P., Sibireva O.F., Usov V.Yu., Timofeeva K.S., Smirnova I.N. Terms used to characterize

✉ *Kalyuzhin Vadim V.,* kalyuzhinvv@mail.ru

the course of chronic heart failure: are all the points on the board? *Bulletin of Siberian Medicine.* 2025;24(4):132–142. https://doi.org/10.20538/1682-0363-2025-4-132-142.

Термины, применяющиеся для характеристики течения хронической сердечной недостаточности: все ли точки над i расставлены?

Калюжин В.В.[1], Тепляков А.Т.[2], Беспалова И.Д.[1], Калюжина Е.В.[1], Черногорюк Г.Э.[1], Терентьева Н.Н.[3], Гарганеева Н.П.[1], Сибирева О.Ф.[1], Усов В.Ю.[4], Тимофеева К.С.[1], Смирнова И.Н.[1, 5]

[1] Сибирский государственный медицинский университет (СибГМУ)
Россия, 634050, г. Томск, Московский тракт, 2

[2] Научно-исследовательский институт (НИИ) кардиологии Томского национального исследовательского медицинского центра (НИМЦ) Российской академии наук
Россия, 634012, г. Томск, ул. Киевская, 111а

[3] Сургутский государственный университет (СурГУ)
Россия, 628412, Сургут, пр. Ленина, 1

[4] Национальный медицинский исследовательский центр (НМИЦ) им. акад. Е.Н. Мешалкина
Россия, 630007, г. Новосибирск, Красный пр., 11

[5] Томский научно-исследовательский институт курортологии и физиотерапии (НИИКиФ), филиал Федерального научно-клинического центра медицинской реабилитации и курортологии (ФНКЦ МРиК)
Россия, 634009, г. Томск, ул. Розы Люксембург, 1

РЕЗЮМЕ

Естественное течение практически любой хронической патологии, если исключить ее латентные формы, характеризуется цикличностью со сменой периодов обострения и ремиссии. Хроническая сердечная недостаточность (ХСН) не является исключением, периоды стабильного (иногда кажущегося) течения сменяются эпизодами нарастания клинической симптоматики, приводящими к снижению качества жизни и повышению риска преждевременной смерти. В свою очередь, у пациента с декомпенсированной сердечной недостаточностью возможны различные траектории изменений клинической выраженности ХСН: разрешение симптомов (в том числе ремиссия), персистирование сердечной недостаточности и, к сожалению, дальнейшее ухудшение. Характеристика течения ХСН должна стать неотъемлемой частью клинического диагноза, основанного на соответствующей классификации. Последняя может быть эффективным инструментом клинической практики только в случае, если предусмотренные в ней термины имеют однозначное значение и четко очерченные границы их корректного применения. Авторы лекции рассмотрели основные термины, применяющиеся для характеристики течения ХСН. Несмотря на практически перманентную дискуссию по проблеме демаркации понятий и неоднократные попытки сформулировать согласованные позиции, эксперты авторитетных кардиологических сообществ в Старом и Новом Свете не могут прийти к полному консенсусу, и определения терминов, используемых для описания течения ХСН, в ряде рекомендаций отличаются.

Ключевые слова: хроническая сердечная недостаточность, классификация, ухудшение, обострение, декомпенсация, разрешение симптомов и признаков, ремиссия, персистирование, сердечная недостаточность, требующая госпитализации

Конфликт интересов. Авторы декларируют отсутствие явных и потенциальных конфликтов интересов, связанных с публикацией настоящей статьи.

Источник финансирования. Авторы заявляют об отсутствии финансирования при проведении исследования.

Для цитирования: Калюжин В.В., Тепляков А.Т., Беспалова И.Д., Калюжина Е.В., Черногорюк Г.Э., Терентьева Н.Н., Гарганеева Н.П., Сибирева О.Ф., Усов В.Ю., Тимофеева К.С., Смирнова И.Н. Термины, применяющиеся для характеристики течения хронической сердечной недостаточности: все ли точки над i расставлены? *Бюллетень сибирской медицины.* 2025;24(4):132–142. https://doi.org/10.20538/1682-0363-2025-4-132-142.

INTRODUCTION

A comprehensive clinical diagnosis is used to solve a wide range of fundamental problems: from an expanded description of a disease in a particular patient and justification of the choice of methods of personalized treatment/prevention and rehabilitation to the assistance in the assessment of working capacity and fitness for military service, as well as occupational health check and medical monitoring in sports [1-3]. It is no coincidence that people say: “His Majesty the Diagnosis” [4]. In this case, in accordance with paragraph 5 of Article 70 of the Federal Law dated November 21, 2011 No. 323-FZ “On the Foundations of Healthcare for Citizens in the Russian Federation” (revised edition of December 28, 2024 amended on March 1, 2025), a medical report based on the results of a thorough examination of the patient’s health status, their diseases (injuries) or the cause of death is expressed in terms provided by the current classifications [5].

The less primitive the classification used, the better the diagnosis will be and the more information it will contain for clinical practice[6]. The thoughts reflected in 1993 by Chazov in the lead article in the journal Therapeutic Archive [7] remain fully relevant [7]. It says that the high need for detailed grouping is dictated not by theoretical calculations and ambitions of some scientists or individual clinical schools, and not even by the desire to unite patients by the nature and degree of pathologic changes, but by the desire to create the most effective differentiated therapy and determine the prognosis of the disease. Only the logical rigor of the classification features taken as a basis, on the one hand, and the use of terms with unambiguous meaning and clearly delineated boundaries of their correct usage, on the other hand, can guarantee the success of effective fulfillment of the key functions of clinical diagnosis, which is a product of the classification procedure, outlined by Chazov [8-10].

Many people probably remember the axiom “Logic is never odd: it is either there or it is not” expressed in the feature film “The Oligarch” (directed by Lungin, 2002), and a good scientific classification that obviously fulfills the given functions is not conceivable without observing the rules that are formed in logic [11]. Nevertheless, clinical classifications often deviate from the ideal described by the theory, in particular, from the observance of strict rules of division, when, for example, a single feature (or a set of features) chosen at the beginning as a basis is replaced by another classification criterion in the course of division. For example, when determining the first two stages of chronic heart failure (CHF), Strajesko and Vasilenko suggested relying on the presence and severity of hemodynamic disorders, and when justifying the third stage - on the identified severe (irreversible) structural changes of target organs [12]. We have to accept this because establishing a diagnosis, a doctor pursues certain goals (one of the most important ones is to justify the choice of methods of personalized treatment/prevention and rehabilitation), and, based on practical expediency, the choice or change of the classification basis is dictated by these goals.

It is clear that not everything that is used in everyday life corresponds to the requirements of high theory and meets the standards of perfect logic [11]. In everyday life, it is quite acceptable to divide shoes into men’s, women’s and rubber (children’s) shoes because, despite the fact that from the point of view of logic such classification is not good (the rules are violated: “division should be carried out only on one basis” and “the members of the division should mutually exclude each other”), it can nevertheless satisfactorily serve practical purposes in a shoe store [11]. However, allowing in clinical classification some deviation from the rules of logical operation, when instead of strict division simple grouping is applied, examples of which are numerous, we cannot tolerate a violation of common sense. It is necessary to proceed from the fact that the diagnosis is the basis for the choice of therapeutic tactics and not to allow in clinical classification the reverse situation when abuse of discretion by doctors associated with a decision on hospitalization, prescription, continuation or discontinuation of any therapy, etc. is taken into account as a basis for determining the type (form), stage, and phase of the disease or syndrome.

It may seem that the latter statement does not need special argumentation, but in clinical classifications, when determining the basis for division, everything is often put “upside down” and when justifying the diagnosis doctors begin to rely not only on important

characteristics of the disease, but also largely on subjective criteria. For example, the refusal (maybe erroneous) to conduct cardioversion by a doctor who convinced the patient of this fact may allow to justify the diagnosis of permanent (in Russia it is referred to as constant) form of atrial fibrillation [13–15], ongoing antimicrobial chemotherapy – active infective endocarditis [16, 17], and the decision on emergency hospitalization of a patient with CHF and intravenous administration of loop diuretics – acute decompensated heart failure (ADHF) [18]. Here is one example of the opposite situation, when sometimes misplaced persistence in repeated restoration of sinus rhythm turns permanent atrial fibrillation into long-term persistent atrial fibrillation [19]. Due to the lack of clear demarcation of concepts, perhaps the most critical issue regarding terminology arises in the classification of CHF, since the definitions of terms used to describe this syndrome differ in a number of guidelines [20, 21].

The aim of this lecture is to discuss the terms used to characterize the course of chronic heart failure.

HEART FAILURE EXACERBATION

The natural course of almost any chronic pathology, if we exclude its latent forms, is cyclic with periods of exacerbation and remission. CHF is not an exception - periods of a stable (sometimes only seeming stable) course are followed by episodes of worsening of clinical symptoms, leading to a decrease in the quality of life and an increase in the risk of premature death [21-23].

Despite the fact that the description of the syndrome phase in the clinical diagnosis was not provided in Russian CHF classifications of the late 20th - early 21st century, they say the idea was in the air. So, Sidorenko during the roundtable discussion "Issues of Classification of Chronic Heart Failure", held in 1993 at the Cardiology Research Center as part of the scientific session of the Russian Academy of Medical Sciences, made a proposal, which is recorded in the transcript as follows: "the classification should also somehow provide for the possibility of temporary exacerbation and aggravation of heart failure"[1]. This proposal, the fairness of which no one disputed, is very logical because the exacerbation of CHF caused by the progression of the underlying disease and/or so-called immediate causes of decompensation (in particular, infections, anemia, arrhythmia, and instability of blood pressure) requires the activation of etiotropic, pathogenetic, and symptomatic therapeutic actions. On the other hand, fortunately, optimal drug therapy is often able to achieve cardiac compensation that justifies treatment de-escalation.

The discussed idea is still in the air, as the classification of CHF proposed by the Russian Society of Cardiology in 2023 did not include the term "exacerbation", and this term is not used in examples of diagnosis formulation: "Major[2]: CHD: postinfarction cardiosclerosis (myocardial infarction in 2019). Complications: HFmrEF stage 1. 2 FC. Pulmonary hypertension 1 FC WHO." (CHD - coronary heart disease; HFmrEF – heart failure with mildly reduced ejection fraction; FC - functional class; WHO - World Health Organization). The 2024 version excluded the description of the risk of heart failure development and replaced the term "pre-heart failure" with "pre-stage of heart failure" [18].

Apparently, the exacerbation of CHF in the diagnostic report can be described using the equivalent term "decompensation", an example of the application of which is presented by Boytsov in the leading article "Chronic Heart Failure: Evolution of Etiology, Prevalence and Mortality over the Past 20 Years" in the journal "Therapeutic Archive" [26]: "CHD. PICS (I25.2[3]); CHF IV FC, decompensation (I50.0)" (PICS stands for postinfarction cardiosclerosis). As the author rightly emphasizes, such a diagnosis well explains the reason for hospitalization or patient's appeal to the polyclinic, on the one hand, and the fact that decompensation of cardiac activity will be taken as a subject of diagnosis and treatment, on the other hand. Nevertheless, the 2023 classification of CHF by experts of the Russian Society of Cardiology

1 Classification Issues of Chronic Heart Failure. Therapeutic Archive. 1993; 65(9): 7–18 (In Russ.).

[2] Correct title of the diagnosis section - "Underlying disease".

[3] The term "old myocardial infarction" (I25.2) is used by experts from the World Health Organization only to describe cases of myocardial infarction that were detected accidentally, retrospectively, and had no clinical manifestations at the time of detection and observation of the patient, and should be distinguished from the term "postinfarction cardiosclerosis" ("Other forms of chronic ischemic heart disease") (I25.8) [25].

[18] does not provide the term “decompensation” and does not use it in the examples of diagnosis formulation.

Experts of the Heart Failure Association of the European Society of Cardiology in 2023 announced that a consensus was reached on the key issues (definition, classification, pathogenesis, epidemiology and outcomes, and treatment and prevention) of exacerbation (worsening) of CHF [27]. According to the latter, deterioration of CHF can be defined as an increase in symptoms and signs of previously diagnosed syndrome, which requires intensification of treatment, most often diuretic therapy. Unfortunately, the authors of the consensus refrained from describing clear criteria for an increase in symptoms and signs, in particular, the severity of congestion, as well as a decrease in exercise tolerance. Obviously, the magnitude of exacerbation may vary. We can only guess what the authors suppose, speaking about an increase in clinical severity of CHF.Within one functional class (FC) or one FC higher, or when CHF symptoms appear at rest, the severity of symptoms associated with hypervolemia even within the IV FC can vary significantly, ranging from complaints about swelling of the back of the feet to complaints of massive generalized swelling of subcutaneous fatty tissue. It should be added that the increasing severity of symptoms and signs of CHF is described without any reference to time frames (the rate of progression of heart failure): does the patient feel worse than a day, a week, a month or a year ago? However, symptoms and signs of decompensation in any case require optimization of CHF drug therapy aimed at achieving euvolemia [27-30].

The experts of the Heart Failure Association of the European Society of Cardiology believe that rather than providing an exhaustive description of CHF characteristics that leaves no questions unanswered and allows one to outline the boundaries of correctly applying the term “worsening of chronic heart failure”[1] it is sufficient to indicate the need to intensify therapy in this situation (an essential component of the concept definition) [27]. Considering the significant variability declared in the cited document, both in patient routing (ranging from an unconditional need for emergency hospitalization to recognizing the possibility of therapy in outpatient settings or emergency departments) and in choosing the optimal diuretic administration method (the cornerstone of therapy for patients with decompensated CHF, either intravenously or through intensified oral diuretic therapy), it can be said that the essential component of the term definition is described without particular details.

The discussed definition does not include patients with a newly diagnosed CHF [27]. This exclusion is logical since any exacerbation implies decompensation in a patient with an established CHF diagnosis. However, it is more difficult to understand why episodes of CHF deterioration associated with comorbid factors (including comorbid diseases) and noncompliance with therapy recommendations are also excluded. The direct causes of CHF decompensation (regardless of the underlying cardiovascular lesion) can be various conditions, such as infection, systemic arterial hypertension, pregnancy, anemia, heart rhythm disorders, or noncompliance with treatment or diet [23, 31]. In any case, exacerbation is exacerbation! Identifying the direct cause of CHF is important because timely diagnosis and adequate treatment can save the patient’s life. Some of the aforementioned conditions usually do not lead to heart failure, but their development in persons with cardiovascular diseases can figuratively be called the last straw contributing to the clinical manifestation of systolic and/or diastolic cardiac dysfunction [31-34].

Finally, the Heart Failure Association of the European Society of Cardiology introduces another exception: the definition of “worsening of chronic heart failure” does not include cases of exacerbation that do not require changes in heart failure treatment [27]. Once again, we note the assumption of medical arbitrariness, to which we have already expressed our attitude. In a clinical situation with increasing symptoms and signs of CHF, the diagnostic conclusion will depend on the doctor’s decision to correct the heart failure therapy. For us, it is axiomatic that, in such a situation, the doctor cannot refrain from doing something but must change the treatment in the hope of improving the patient’s condition, at least clinically.

[1] In our opinion, the best translation into Russian is “exacerbation of heart failure”.

REMISSION AND PERSISTENCE OF HEART FAILURE

The 2022 treatment guidelines for heart failure from the American College of Cardiology, the American Heart Association, and the American Heart Failure Society [35] detail the main development patterns of clinically significant heart failure, aligning closely with real clinical practice. In addition to worsening symptoms and signs of the syndrome, American experts distinguished variants with symptom resolution (including remission) and heart failure persistence. As the terms imply, a patient with resolution of symptoms and signs of CHF is said to have an absence of clinical manifestations of the syndrome [35]. The authors rightly pointed out that complete elimination of structural and functional cardiac abnormalities, labeled as remission, is rarely observed. Accordingly, the term "persistent heart failure" is proposed to denote a clinical situation in which symptoms and signs of the syndrome are preserved, as well as those of a functional activity limit.

This approach should be rated well and the Russian CHF classification should include a description of the development pattern. We believe that the severity of heart failure should be considered in the context of ongoing treatment and assessment of its effectiveness. Clearly, the probability of improvement in clinical status is much higher for a patient with the same severity of symptoms who did not receive optimal drug therapy or medical assistance in implant arrhythmology and cardiac surgery than for a treated patient [37].

ACUTE DECOMPENSATOIN OF HEART FAILURE

The course of decompensation of CHF can vary. In most cases, the clinical picture develops gradually over a few weeks. However, it can also have a rapid onset, with progression of symptoms and signs within a few hours [38]. In the latter case, when the rapid increase in severity of heart failure symptoms becomes the reason for urgent medical attention and emergency hospitalization of a CHF patient, it is recommended to use the term ADHF [18, 39].

ADHF is considered as the most common form of acute heart failure (50–70%), and it should be distinguished from pulmonary edema, cardiogenic shock, and acute right ventricular failure [18, 39]. However, this approach contradicts the provision enshrined in the duly approved industry standard (OST 91500.11.0002-2002, "Standardization System in Healthcare of the Russian Federation. Protocol for the Management of Patients. Heart Failure (I50)"), according to which : "The terms "heart failure" and "chronic heart failure" are essentially synonymous since, when discussing acute heart failure, it is customary to specify its form, such as acute (cardiogenic) pulmonary edema or cardiogenic shock." We agree with A. Xanthopoulos et al. [40] that ADHF should not be considered a form of acute heart failure.

The term ADHF has been proposed to describe patients with mild acute heart failure symptoms that do not meet the criteria for cardiogenic shock, pulmonary edema, or hypertensive crisis [41], this raises the question of the criteria indicating the transition from stable CHF to ADHF [38]. Those who advocate for viewing ADHF as a distinct phenotype of acute heart failure syndrome argue that CHF decompensation is only part of this syndrome when it manifests as a clinical picture that poses an immediate threat to life, necessitating emergency hospitalization [38]. Given the severity of clinical manifestations of the so-called classical forms of acute heart failure, it is not surprising that even senior medical students know how to diagnose pulmonary edema or cardiogenic shock, which justifies the need for emergency hospitalization [23], however, it is difficult to understand what specific clinical manifestations are hidden behind the phrase "poorly expressed symptoms of acute heart failure that do not meet the criteria for cardiogenic shock or pulmonary edema".

Russian experts rightly raise questions: Where is the boundary between progressive CHF and ADHF? Is a patient's transition from class II to class III or class III to class IV heart failure a proof of the development of ADHF? These questions would be inevitably asked by emergency room internists when deciding how to route patients with decompensation [38]. The authors of the agreed position acknowledge the absence of definitive answers to the posed questions and stress the importance of defining the criteria for ADHF development as precisely as possible (these criteria include clinical symptoms and signs of stasis

and/or hypoperfusion, as well as laboratory and instrumental markers of decompensation suitable for differential diagnosis).

Considering that the term ADHF does not always accurately reflect the timing of this condition's development [42], it is difficult to disagree with S.N. Tereshchenko et al. [20] and V.Yu. Mareev et al. [38] about the uncertain boundary between CHF, CHF exacerbation (progressive CHF), and ADHF. What basis should an emergency room physician use to decide whether to hospitalize or manage on an outpatient basis a patient with symptoms and signs of CHF decompensation? Clearly, a significant proportion of patients with CHF decompensation should be treated in outpatient settings [38, 43], with the aim of achieving and maintaining euvolemia through the use of diuretics alongside combined therapy with neurohormonal modulators and sodium-glucose cotransporter type 2 inhibitors [44-47].

What are the criteria for a life-threatening condition that requires immediate hospitalization? This question is relevant unless we are talking about pulmonary edema or cardiogenic shock, conditions that cannot be replaced by the term ADHF in the diagnostic report. We searched for the answer to this question in the ADHF registry materials, including large registries with more than 10,000 patients and smaller ones [48-53]. Despite the description of the design invariably emphasizing the need for emergency hospitalization due to the intensity of heart failure symptoms and signs, the protocols of the discussed registries often allowed for the inclusion of data on patients with heart failure whose severity at hospitalization corresponded to functional class III (up to one third of cases) or even II according to the New York Heart Association (NYHA) classification. Many people may not doubt that all CHF FC IV patients require immediate hospitalization, but one should try to convince oneself that heart failure with a severity corresponding to classes II-III according to the New York Heart Association classification (remember, patients have no symptoms at rest) is an indication for emergency hospitalization.

Since the need for emergency hospitalization is unclear for many reasons and is the only substantial criterion for recognizing ADHF, attempts are being made to replace the term ADHF as one of the form of acute heart failure with "heart failure requiring hospitalization". However, leading cardiologists have reasonable objections to the introduction of this term not only because of the aforementioned lack of clear indications for hospitalization, but also because the latter depends on clinical practice and the capabilities of medical institutions in different regions [20, 54]. The decision to hospitalize a patient with heart failure depends on the characteristics of the patient, physician, hospital, and insurance policy, but the practice of hospitalization differs by region and is gradually changing; recently, the provision of medical care has become increasingly common in alternative settings, such as outpatient or emergency departments [54, 55].

The same arguments can be used against the use of the term ADHF itself or, at the very least, against using the location as an essential criterion for recognizing it [55]. The decision to hospitalize should be based on a clinical diagnosis and an evaluation of important characteristics of heart failure. Again, the decision to hospitalize patients, prescribe, continue, or discontinue therapy should not be considered as a basis for determining the type, stage, or phase of the disease or syndrome. Heart failure will not fundamentally change; an exacerbation will remain an exacerbation, even if the physician manages decompensation on an outpatient basis or optimization of therapy with diuretics, without the use of intravenous drugs, is sufficient [27].

In any case, patients should be evaluated after therapy initiation for ADHF to determine decompensation trajectory (improvement, worsening, or persistence), which affects therapeutic tactics and prognosis [36, 42]. Due to the absence of consistent guidelines for hospitalization and/or emergency care, as well as precise time criteria for distinguishing between scenarios with rapid and gradual CHF progression, the authors of the universal heart failure definition and classification system appropriately opt for the term "decompensated heart failure" (without the term "acute") to describe a condition characterized by escalating symptoms and/or signs of heart failure, regardless of CHF progression rate [56].

CONCLUSION

The characterization of CHF should be an integral part of clinical diagnosis based on appropriate classification. This classification can be an effective

clinical tool only if its terms have unambiguous meanings and clearly defined application boundaries. Despite the ongoing discussion about the demarcation of concepts and repeated attempts to reach an agreement, experts from authoritative cardiology communities in the Old and New Worlds cannot reach a consensus, and the definitions of terms used to describe CHF differ in a number of guidelines.

REFERENCES

1. Lifshits A.M. Akhmedzhanov M.Yu. The Present Problem of Diagnosis. *Therapeutic Archive.* 1980;52(9):91-97 (In Russ.).
2. Kalyuzhin V.V., Teplyakov A.T., Bespalova I.D., Kalyuzhina E.V., Ostanko V.L., Terentyeva N.N. et al. Correct Diagnostic Conclusion in Patients with Chronic Heart Failure: a Reality of a Pipe Dream? *Bulletin of Siberian Medicine*. 2020;19(3):128-136. (In Russ.). DOI: 10.20538/1682-0363-2020-3-128-136.
3. Vetshev P.S., Vetshev F.P., Orlov Yu.N. Diagnosis: Significance in Clinical Practice, Types, and Modern Rules of Registration. *Endoscopic Surgery.* 2024;30(1):5–11. (In Russ.). DOI: 10.17116/endoskop2024300115.
4. Vertkin A.L., Zairatyants O.V. His Majesty the Diagnosis: a Dialogue of a Therapist and a Pathologist. The Foundation of the Basics (1st Edition). Moscow, 2020:99. (In Russ.).
5. Klevno V.A., Zairantyants O.V., Zabozlaev F.G., Kakturskу L.V., Kakorina E.P., Lysenko O.V. et al. Rules for the Formulation of Forensic and Pathoanatomic Diagnoses, Selection and Coding of Causes of Death According to ICD-10: Guidelines. Moscow: GOETAR-Media, 2024:656. (In Russ.).
6. Kalyuzhin V.V., Teplyakov A.T., Bespalova I.D., Kalyuzhina E.V., Chernogoryuk G.E., Terentyeva N.N. et al. New Draft Classification of Chronic Heart Failure of the Russian Society of Cardiology: Are There any Obvious Advantages over the Current Ones?*Bulletin of Siberian Medicine*. 2024;23(1):144-155. (In Russ.). DOI: 10.20538/1682-0363-2024-1-144-155.
7. Chazov E.I. Debatable Issues Regarding the Chronic Heart Failure. *Therapeutic Archive.* 1993;65(9):4–7.
8. Galyavich A.S., Nedogoda S.V., Arutyunov G.P., Belenkov Yu.N. About the Classification of Heart Failure. *Russian Journal of Cardiology*. 2023;28(9):13-18. (In Russ.). DOI: 10.15829/1560-4071-2023-5584.
9. Kalyuzhin V.V., Teplyakov A.T., Bespalova I.D., Kalyuzhina E.V., Chernogoryuk G.E., Terentyeva N.N. et al. Diastolic Heart Failure: Boundaries of Term Application. *Bulletin of Siberian Medicine*. 2023;22(1):113-120. (In Russ.). DOI: 10.20538/1682-0363-2023-1-113-120.
10. Volkova N.I., Volkov A.V. Medical Diagnosis and its Nature. *Medical Herald of the South of Russia*. 2023;14(3):16-23. (In Russ.). DOI: 10.21886/2219-8075-2023-14-3-16-23.
11. Ivin A.A. Logic: a Textbook and Practical Course for Universities. Moscow: Yurait Publishing House, 2020:387. (In Russ.).
12. Vasilenko V.Kh. Circulatory Insufficiency. In Big Encyclopedia of Medicine. 2nd Edition; editor Bakulev A.N. Moscow: Soviet Encyclopedia, 1960;14: 543-604. (In Russ.).
13. Joglar J.A., Chung M.K., Armbruster A.L., Benjamin E.J., Chyou J.Y., Cronin E.M. et al. 2023 ACC/AHA/ACCP/HRS Guideline for the Diagnosis and Management of Atrial Fibrillation: A Report of the American College of Cardiology/American Heart Association Joint Committee on Clinical Practice Guidelines. *J. Am. Coll. Cardiol.* 2024;83(1):109-279. DOI: 10.1016/j.jacc.2023.08.017.
14. Van Gelder I.C., Rienstra M., Bunting K.V., Casado-Arroyo R., Caso V., Crijns H.J.G.M. et al. 2024 ESC Guidelines for the management of atrial fibrillation developed in collaboration with the European Association for Cardio-Thoracic Surgery (EACTS). *Eur. Heart J.* 2024;45(36):3314-3414. DOI: 10.1093/eurheartj/ehae176.
15. Tzeis S., Gerstenfeld E.P., Kalman J., Saad E.B., Shamloo A.S., Andrade J.G. et al. 2024 European Heart Rhythm Association/Heart Rhythm Society/Asia Pacific Heart Rhythm Society/Latin American Heart Rhythm Society expert consensus statement on catheter and surgical ablation of atrial fibrillation. *Heart Rhythm.* 2024;21(9):e31-e149. DOI: 10.1016/j.hrthm.2024.03.017.
16. Demin A.A., Kobalava Zh.D., Skopin I.I. Tyurin V.P., Boitsov S.A., Golukhova E.Z. et al. Infectious endocarditis and infection of intracardiac devices in adults. Clinical guidelines 2021. *Russian Journal of Cardiology*. 2022;27(10):5233. (In Russ.). DOI: 10.15829/1560-4071-2022-5233.
17. Delgado V., Ajmone Marsan N., de Waha S., Bonaros N., Brida M., Burri H. et al. 2023 ESC Guidelines for the management of endocarditis. *Eur. Heart J.* 2023;44(39):3948-4042. DOI: 10.1093/eurheartj/ehad193.
18. Galyavich A.S., Tereshchenko S.N., Uskach T.M., Ageev F.T., Aronov D.M., Arutyunov G.P. et al. 2024 Clinical Practice Guidelines for Chronic Heart Failure. *Russian Journal of Cardiology*. 2024;29(11):6162. (In Russ.). DOI: 10.15829/1560-4071-2024-6162.
19. Arakelyan M.G., Bokeriya L.A., Vasilieva E.Yu., Golitsyn S.P., Golukhova E.Z., Gorev M.V. et al. 2020 Clinical Guidelines for Atrial Fibrillation and Atrial Flutter. *Russian Journal of Cardiology*. 2021;26(7):4594. (In Russ.). DOI: 10.15829/1560-4071-2021-4594.
20. Tereshchenko S.N., Nasonova S.N., Zhirov I.V. Acute

Heart Failure Decompensation. *Clinical Pharmacology and Therapy.* 2016;25(4):11-16. (In Russ.).
21. Larina V.N., Kokorin V.A., Larin V.G., Lunev V.I., Suvorova N.A., Skiba I.K. et al. Decompensated Heart Failure: a Reconceptualization in the Light of Updated Consensus Statement of the European Society of Cardiology. *Russian Journal of Cardiology.* 2023;28(12):5581. (In Russ.). DOI: 10.15829/1560-4071-2023-5581
22. Zhirov I.V., Nasonova S.N., Tereshchenko S.N. Acute Heart Failure Decompensation: Problem Status. *Therapeutic Archive*. 2022;94(9):1047–1051. (In Russ.). DOI: 10.26442/00403660.2022.09.201839.
23. Fonseca C., Baptista R., Franco F., Moura B., Pimenta J., Moraes Sarmento P. et al. Worsening heart failure: progress, pitfalls, and perspectives. *Heart Fail. Rev.* 2025;30(4):715-734. DOI: 10.1007/s10741-025-10497-z.
24. Zairatyants O.V., Vasilieva E.Yu., Mikhaleva L.M., Olenev A.S., Cherkasov S.N., Chernyaev A.L. et al. Rules for the Formulation of Pathoanatomical Diagnosis, Selection and Coding of ICD-10 Causes of Death. Class IX. Circulatory Diseases. Moscow, 2019:66. (In Russ.).
25. Barbarash O.L., Karpov Yu.A., Panov A.V., Akchurin R.S., Alekyan B.G., Alekhin M.N. et al. 2024 Clinical Practice Guidelines for Stable Coronary Artery Disease. *Russian Journal of Cardiology*. 2024;29(9):6110. (In Russ.). DOI: 10.15829/1560-4071-2024-6110.
26. Boitsov S.A. Chronic Heart Failure: Evolution of Etiology, Prevalence and Mortality over the Past 20 Years. *Therapeutic Archive.* 2022;94(1):5–8. (In Russ.). DOI: 10.26442/00403660.2022.01.201317.
27. Metra M., Tomasoni D., Adamo M., Bayes-Genis A., Filippatos G., Abdelhamid M. et al. Worsening of chronic heart failure: definition, epidemiology, management and prevention. A clinical consensus statement by the Heart Failure Association of the European Society of Cardiology. *Eur. J. Heart Fail.* 2023;25(6):776-791. DOI: 10.1002/ejhf.2874.
28. Kalyuzhin V.V., Teplyakov A.T., Bespalova I.D., Kalyuzhina E.V., Terentyeva N.N., Sibireva O.F. et al. Advanced Heart Failure. *Bulletin of Siberian Medicine*. 2021;20(1):129-146. (In Russ.). DOI: 10.20538/1682-0363-2021-1-129-146.
29. Kalyuzhin V.V, Teplyakov A.T., Bespalova I.D., Kalyuzhina E.V., Terentyeva N.N., Livshitz I.K. et al. Diuretic Resistance in Patients with Chronic Heart Failure: Mechanisms, Prevention, and Treatment. *Bulletin of Siberian Medicine*. 2022;21(2):152-167. (In Russ.). DOI: 10.20538/1682-0363-2022-2-152-167.
30. Mocan D., Jipa R., Jipa D.A., Lala R.I., Rasinar F.C., Groza I. et al. Unveiling the Systemic Impact of Congestion in Heart Failure: A Narrative Review of Multisystem Pathophysiology and Clinical Implications. *J. Cardiovasc. Dev. Dis.* 2025;12(4):124. DOI: 10.3390/jcdd12040124.
31. Kalyuzhin V.V., Teplyakov A.T., Kalyuzhin O.V. Heart Failure. Moscow: Medical Information Agency, 2018:376. (In Russ.).
32. Kalyuzhin V.V., Teplyakov A.T., Solovtsov M.A. The Role of Systolic and Diastolic Left Ventricular Dysfunction in the Clinical Manifestation of Chronic Heart Failure in Patients with Myocardial Infarction. *Therapeutic Archive*. 2002;74 (12):15−18. (In Russ.).
33. Kalyuzhin V.V., Teplyakov A.T., Ryazantseva N.V., Vechersky Yu.Yu., Khlapov A.P., Kolesnikov R.N. Diastole of the Heart. Physiology and Clinical Pathophysiology. Tomsk, TPU Publishing House, 2007:212. (In Russ.).
34. Levene J., Voigt A., Thoma F., Mulukutla S., Bhonsale A., Kancharla K. et al. Patient Outcomes by Ventricular Systolic and Diastolic Function. *J. Am. Heart Assoc.* 2024;13(4):e033211. DOI: 10.1161/JAHA.123.033211.
35. Heidenreich P.A., Bozkurt B., Aguilar D., Allen L.A., Byun J.J., Colvin M.M. et al. 2022 AHA/ACC/HFSA Guideline for the Management of Heart Failure: Executive Summary: A Report of the American College of Cardiology/American Heart Association Joint Committee on Clinical Practice Guidelines. *Circulation*. 2022;145(18):e895−e1032. DOI: 10.1161/CIR.0000000000001063.
36. Hollenberg S.M., Stevenson L.W., Ahmad T., Bozkurt B., Butler J., Davis L.L. et al. 2024 ACC Expert Consensus Decision Pathway on Clinical Assessment, Management, and Trajectory of Patients Hospitalized With Heart Failure Focused Update: A Report of the American College of Cardiology Solution Set Oversight Committee. *J. Am. Coll. Cardiol.* 2024;84(13):1241−1267. DOI: 10.1016/j.jacc.2024.06.002.
37. Sidorenko B.A., Preobrazhensky D.V. Diagnosis and Management of Chronic Heart Failure. 3rd Ed. Moscow: Miklosh, 2004:352. (In Russ.).
38. Mareev V.Yu., Arutyunov G.P., Astashkin E.I., Vertkin A.L., Glezer M.G., Lopatin Yu.M. et al. Acute Decompensated Heart Failure. Consensus of Russian Experts, 2014. *Russian Heart Failure Journal.* 2014;15(5):321–336. (In Russ.).
39. McDonagh T.A., Metra M., Adamo M., Gardner R.S., Baumbach A., Böhm M. et al. 2021 ESC Guidelines for the diagnosis and treatment of acute and chronic heart failure. *Eur. Heart J.* 2021;42(36):3599−3726. DOI: 10.1093/eurheartj/ehab368.
40. Xanthopoulos A., Butler J., Parissis J., Polyzogopoulou E., Skoularigis J., Triposkiadis F. Acutely decompensated versus acute heart failure: two different entities. *Heart Fail. Rev.* 2020;25(6): 907−916. DOI: 10.1007/s10741-019-09894-y.

41. Chazov E.I., Tereshchenko S.N., Golitsyn S.P. Emergency Cardiology. Moscow: Eksmo, 2011:224. (In Russ.).
42. Lala A., Hamo C.E., Bozkurt B., Fiuzat M., Blumer V., Bukhoff D. et al. Standardized Definitions for Evaluation of Acute Decompensated Heart Failure Therapies: HF-ARC Expert Panel Paper. *JACC Heart Fail.* 2024; 12 (1): 1−15. DOI: 10.1016/j.jchf.2023.09.030.
43. Bahar J., Rahman A., Wong G.W.Y., Sankaranarayanan R., Ahmed F.Z., Taylor R. et al. Outpatient treatment of decompensated heart failure: A systematic review and study level meta-analysis. *ESC Heart Fail.* 2025; 12 (2): 761−769. DOI: 10.1002/ehf2.14841.
44. Teplyakov A.T., Popov S.V., Kalyuzhin V.V., Garganeeva A.A., Kurlov I.O., Nilogov V.L. et al. Evaluation of the Effect of Carvedilol, Atenolol and Their Combination with Fosinopril on Heart Rate Variability, Clinical and Functional Status and Quality of Life in Patients with Postinfarction Left Ventricular Dysfunction. *Therapeutic Archive.* 2004;76(9):62−65. (In Russ.).
45. Haghighat L., DeJong C., Teerlink J.R. New and future heart failure drugs. *Nat. Cardiovasc. Res.* 2024;3(12):1389-1407. DOI: 10.1038/s44161-024-00576-z.
46. Lima I.G.C.V., Nunes J.T., Godoy L.C., McDonald M., Bocchi E.A. Novel Therapies to Reduce Rehospitalization Risk in Worsening Heart Failure: Systematic Review and Network Meta-Analysis. *JACC Adv.* 2024;4(1):101451. DOI: 10.1016/j.jacadv.2024.101451.
47. Bertaina M., Galluzzo A., Carbonaro C., Marzulli A., Calcagnile C., Sbarra P. et al. SGLT2 inhibitors across the acute cardiac care spectrum: insights and perspectives. *Future Cardiol.* 2025;21(7):515-525. DOI: 10.1080/14796678.2025.2503666.
48. Adams K.F. Jr., Fonarow G.C., Emerman C.L., LeJemtel T.H.,Costanzo M.R., Abraham W.T. et al. Characteristics and outcomes of patients hospitalized for heart failure in the United States: rationale, design, and preliminary observations from the first 100,000 cases in the Acute Decompensated Heart Failure National Registry (ADHERE). *Am. Heart J.* 2005;149(2):209-216. DOI: 10.1016/j.ahj.2004.08.005.
49. Ling H.S., Chung B.K., Chua P.F., Gan K.X., Ho W.L., Ong E.Y.L. et al. Acute decompensated heart failure in a non cardiology tertiary referral centre, Sarawak General Hospital (SGH-HF). *BMC Cardiovasc. Disord.* 2020;20(1):511. DOI: 10.1186/s12872-020-01793-7.
50. Ide T., Kaku H., Matsushima S., Tohyama T., Enzan N., Funakoshi K. et al. Clinical characteristics and outcomes of hospitalized patients with heart failure from the large-scale Japanese Registry Of Acute Decompensated Heart Failure (JROADHF). *Circ. J.* 2021;85(9):1438-1450. DOI: 10.1253/circj.CJ-20-0947.
51. Tigabe M., Fentahun A., Getawa S., Gelaye K.A., Gebreyohannes E.A. Clinical characteristics and in-hospital outcome of acute heart failure patients admitted to the Medical Ward of University of Gondar Comprehensive Specialized Hospital, Northwest Ethiopia. *Vasc. Health Risk Manag.* 2021;17:581-590. DOI: 10.2147/VHRM.S322493.
52. Harikrishnan S., Bahl A., Roy A., Mishra A., Prajapati J., Manjunath C.N. et al. Clinical profile and 90 day outcomes of 10 851 heart failure patients across India: National Heart Failure Registry. *ESC Heart Fail*. 2022;9(6):3898-3908. DOI: 10.1002/ehf2.14096.
53. Georges G., Fudim M., Burkhoff D., Leon M.B., Généreux P. Patient Selection and End Point Definitions for Decongestion Studies in Acute Decompensated Heart Failure: Part 1. *J. Soc. Cardiovasc. Angiogr. Interv.* 2023;2(6 Part B):101060. DOI: 10.1016/j.jscai.2023.101060.
54. Butler J., Braunwald E., Gheorghiade M. Recognizing worsening chronic heart failure as an entity and an end point in clinical trials. *JAMA.* 2014;312(8):789−790. DOI: 10.1001/jama.2014.6643.
55. Halaseh R., Sun G.K., Bhatt A.S., Chang A.J., Svetlichnaya J., Adatya S. et al. Outpatient worsening heart failure: innovative decongestion strategies and health equity implications. *Heart Fail. Rev.* 2025;30(5):831−841. DOI: 10.1007/s10741-025-10509-y.
56. Bozkurt B., Coats A.J.S., Tsutsui H., Abdelhamid C.M., Adamopoulos S.., Albert N. et al. Universal definition and classification of heart failure: a report of the Heart Failure Society of America, Heart Failure Association of the European Society of Cardiology, Japanese Heart Failure Society and Writing Committee of the Universal Definition of Heart Failure: Endorsed by the Canadian Heart Failure Society, Heart Failure Association of India, Cardiac Society of Australia and New Zealand, and Chinese Heart Failure Association. *Eur. J. Heart Fail.* 2021;23(3):352−380. DOI: 10.1002/ejhf.2115.

Author Information

Kalyuzhin Vadim V. – Dr. Sci. (Med.), Professor, Head of the Advanced Therapy Division with a Course in Rehabilitation Training, Physiotherapy and Sports Medicine, Siberian State Medical University, Tomsk, kalyuzhinvv@mail.ru, http://orcid.org/0000-0001-9640-2028

Teplyakov Alexander T. – Dr. Sci. (Med.), Professor, Chief Researcher, Cardiology Research Institute, Tomsk NRMC RAS, Tomsk, vgelen1970@gmail.com, http://orcid.org/0000-0003-0721-0038

Bespalova Inna D. – Dr. Sci. (Med.), Head of the Propaedeutics of Internal Diseases Division Therapy Course of the Pediatrics Department, Siberian State Medical University, Tomsk, innadave@mail2000.ru, http://orcid.org/0000-0002-4513-6329

Kalyuzhina Elena V. – Dr. Sci. (Med.), Professor, Advanced Therapy Division with a Course in Rehabilitation Training, Physiotherapy and Sports Medicine, Siberian State Medical University, Tomsk, kalyuzhina.e@mail.ru, http://orcid.org/0000-0002-7978-5327

Chernoryuk Georgy E. – Dr. Sci. (Med.), Professor, Advanced Therapy Division with a Course in Rehabilitation Training, Physiotherapy and Sports Medicine, Siberian State Medical University, Tomsk, chernogoryuk@yandex.ru, http://orcid.org/0000-0001-5780-6660

Terentyeva Nadezhda N. – Cand. Sci. (Med.), Associate Professor, Department of Internal Disease, Surgut State University, Surgut, nadiater@mail.ru, http://orcid.org/0000-0002-0462-3526

Garganeeva Natalia P. – Dr. Sci. (Med.), Professor, General Medical Practice and Outpatient Therapy Division, Siberian State Medical University, Tomsk, garganeeva@gmail.com, http://orcid.org/0000-0002-7353-7154

Sibireva Olga F. – Dr. Sci. (Med.), Associate Professor, Biochemistry and Molecular Biology Division with Clinical Laboratory Diagnostics Course, Siberian State Medical University, Tomsk, sibireva.of@ssmu.ru, http://orcid.org/0000-0002-5651-8875

Usov Vladimir Yu. – Dr. Sci. (Med.), Professor, Chief Researcher, E.N. Meshalkin National Research Medical Center, Novosibirsk, ussov1962@yandex.ru, http://orcid.org/0000-0001-7978-5514

Timofeeva Kseniya S. – Assistant, Advanced Therapy Division with a Course in Rehabilitation Training, Physiotherapy and Sports Medicine, Siberian State Medical University, Tomsk, timofeevaks@inbox.ru , https://orcid.org/0009-0008-6096-0579

Smirnova Irina N. – Dr. Sci. (Med.), Professor, Advanced Therapy Division with a Course in Rehabilitation Training, Physiotherapy and Sports Medicine, Siberian State Medical University, Tomsk, Head of the Laboratory of Planning and Development of Medical Technologies, TSRIBP, Tomsk, irin-smirnova@yandex.ru , https://orcid.org/0000-0002-9010-2419

(✉) **Kalyuzhin Vadim V.,** kalyuzhinvv@mail.ru

Received on August 6, 2025;
approved after peer review on August 20, 2025;
accepted on September 9, 2025