

# CLINICAL AND MORPHOLOGICAL ASPECTS OF THE COURSE OF ARTERIAL HYPERTENSION

### Ergasheva Gulshan Tokhirovna

Assistant of the Clinical sciences department Asia International University, Bukhara, Uzbekistan E-mail: ergashevagulshantoxirovna@oxu.uz

**Resume.** The article discusses new aspects of the European recommendations for the management of patients with arterial hypertension (AH). A new version of the stratification of patients with hypertension according to the level of cardiovascular risk, the latest data on the prognostic value of asymptomatic damage to target organs, recommendations on the choice of antihypertensive therapy are presented. The issues of using outpatient methods of blood pressure registration are discussed.

**Keywords:** arterial hypertension, blood pressure, cardiovascular risk, antihypertensive therapy

In particular, drug antihypertensive therapy was recommended for patients with high and very high risk, including the elderly, regardless of blood pressure (BP), as well as patients with diabetes mellitus (DM), established cardiovascular diseases (CVD) or kidney diseases with high normal blood pressure. The version contained significant changes in the target blood pressure level: all patients with high and very high risk were recommended to achieve a target blood pressure of less than 130 and 80 mmHg, which implied a very wide use of combined treatment regimens.

The appearance of the third version of the recommendations [3] was preceded by an important document that has no analogues in the modern era of evidence-based cardiology. The document prepared by experts of the European Society for the Study of Arterial Hypertension contained information on the critical revision of data in the field of evidence-based hypertension [4]. Experts noted that on many important issues of managing patients with hypertension, doctors are forced to make decisions, and experts make recommendations in the absence of convincing evidence. The document formulated highly significant practical problems, which required intensive analytical and research activity.

In this regard, the main activity of the expert group was analytical work on the results of new research on existing databases. The data from randomized trials and



their meta-analyses had an absolute advantage. But the experts did not ignore the results of observational and other studies of proper scientific caliber, especially considering the diagnostic aspects.

The main distinguishing feature of the new version of the document was the introduction of a gradation of recommendations for the examination and treatment of patients with hypertension by classes and levels of evidence. This approach gives a clear idea of the hierarchy of value/evidence of recommendations for practitioners. Class I recommendations, especially those with levels of evidence A and B, should be given unconditional preference. It is unacceptable to use Class III items. Particular attention should be paid to the recommendations of Class II, which is assigned in cases with conflicting evidence and/or in situations of disagreement about the benefits/effectiveness of an intervention or procedure. An analogy with the colors of a traffic light seems justified: green (class I) – permissive, yellow (class II) – warning, red (class III) – forbidding

51% of the recommendations belong to Class I. Among the recommendations of Class I, 45% of recommendations have the maximum level of evidence of A. 11% of the recommendations are classified as Class III. Thus, an unambiguous treatment strategy is defined for the absolute majority of positions and is 62%. These statistics confirm that the problems of managing patients with hypertension are among the most studied. But 38% of the recommendations are classified as Class II and require further research. It should be noted that all recommendations of Class IA relate to the strategy and tactics of treatment. The remaining Class I recommendations have proof levels of B and C (40 and 15%, respectively). 28% of the recommendations have a level of evidence C, they are based on the agreed opinion of experts and/or data from small studies, retrospective analysis, registers. In the light of attempts to revise some of the fundamental provisions according to the registers (for example, the place of beta-blockers in the treatment of hypertension), it is important to emphasize that the data of the registers, due to the methodology of collecting material, are attributed by experts to the minimum level of evidence. The most important general principle of medical activity is the principle of "do no harm". Interventions or procedures that are unprofitable, ineffective, and in some cases harmful, belong to Class III and should not be used. Data on Class III interventions and procedures are summarized in Table.

3. Attention should be paid to the different levels of evidence. The data classified as IIIA (54%) are based on the results of many randomized clinical trials (RCTs) or meta-analyses, they should be considered final, whereas data with



evidence levels B and C may be revised as new data become available. When making decisions about the priority of an intervention, it is important for the doctor to imagine which positions of the recommendations are less justified in terms of the benefit/effectiveness indicator. These recommendations should be considered as backup methods of examination and treatment in the presence of absolute and relative contraindications to the use of recommendations of classes I and IIa. The less well-founded recommendations of Class IIb are summarized in the table.

4. Below are some new aspects of the recommendations Methods of measuring blood pressure Clinical measurement of blood pressure Clinical measurement of blood pressure on repeat visits is still the basis for the diagnosis of hypertension, and the recommendations pay great attention to its methodology. In the new version of the recommendations, the position of preferential use of non-mercury sphygmomanometers (auscultative and oscillometric) has become even more distinct, which must be validated in accordance with standard accuracy assessment protocols and regularly undergo metrological verification and calibration. The advantage is still given to measuring blood pressure on the shoulder using cuffs of the appropriate size. The new version of the recommendations reflects recently obtained data on the relationship of differences in SAD between hands >10 mmHg. with an increased cardiovascular (CC) risk [15], which makes it more reasonable to recommend measuring blood pressure on both hands during the first visit and using a hand with a higher level of SAD in the future. Attention is drawn to an important methodological aspect of such an assessment of blood pressure: differences in blood pressure levels between the right and left hands are important if they are detected during simultaneous measurement of blood pressure, since when performing successive measurements, these differences may be a consequence of variability in blood pressure.

The updated version of the recommendations more clearly highlights the position regarding the measurement of blood pressure in the standing position, provides criteria for orthostatic hypotension and methodological recommendations. In elderly patients with diabetes and some other conditions, orthostatic hypotension may be observed or suspected, and therefore it is recommended to measure blood pressure 1 and 3 minutes after moving to an upright position. Orthostatic hypotension is defined as a decrease in SBP >20 mmHg or DBP >10 mmHg. 3 minutes after the transition to an upright position, it is associated with a deterioration in the prognosis for mortality and CC events [16, 17]. For the first time, the recommendations indicate the possibility of repeated automatic measurements of clinical blood pressure when



the patient is in an isolated room. At the same time, performing a sufficiently large number of measurements, despite being less informative in general, can be considered as a means of improving the reproducibility of measurements and brings the values of clinical blood pressure closer to the daily values obtained with SMAD or SCAD [18, 19]. Blood pressure measurement should always be accompanied by heart rate measurement, since heart rate at rest is an independent predictor of CC morbidity and mortality [20, 21]. Outpatient blood pressure measurement in the new version, the recommendations on outpatient blood pressure monitoring have been prepared by the Working Group on Blood Pressure Monitoring of the European Society for Arterial Hypertension. This has led to great attention to the methodology of performing both types of outpatient measurement – daily monitoring (SMAD) or home measurement (SCAD) using validated devices and careful oral and written instruction of the patient. The recommendations given in the document on the use of outpatient blood pressure registration methods reflect the increased use of SCUD. Experts clearly indicate that SMAD and SCAD provide different information about the status of blood pressure in a patient, which is why these methods should be considered complementary, and not mutually exclusive or alternative. This provision is reflected in the formulation of indications for the implementation of SMAD and SCAD: unlike the previous version of the recommendations, the new document highlights general indications for outpatient methods of blood pressure registration, when methods can be used as alternatives, and specific indications for SMAD. Outof-office blood pressure measurement should be performed to confirm the diagnosis of hypertension, determine its type, episodes of hypotension, and improve the prediction of CC risk (IIaB). For off-site measurements, SMAD or SCAD can be selected depending on indications, accessibility, ease of execution, cost and, if necessary, patient preferences (IIaC).

Conclusion. The presented recommendations give the doctor the opportunity to understand and understand which of them are based on the opinion of experts, and which are based on real evidence. It should be remembered that the interpretation of the same evidence may differ by different expert groups (for example, drugs of choice for secondary prevention of cerebrovascular disease). Recommendations should not be taken as a set of strict prescriptions. Their adaptation to the capabilities of institutions and patients is required. The situation in the field of management of patients with hypertension differs favorably from typical medical practice, in which in a large number of cases there is no evidence and decisions are made based on common sense and personal experience. We live in a time of continuous updating of



knowledge. Traditionally, the recommendations formulate and summarize unresolved issues, the answers to which may be received and presented in the next version of the recommendations.

#### Literature:

- 1. Togaydullaeva, D. D. (2022). ARTERIAL GIPERTONIYA BOR BEMORLARDA KOMORBIDLIK UCHRASHI. TA'LIM VA RIVOJLANISH TAHLILI ONLAYN ILMIY JURNALI, 2(11), 32-35.
- 2. Togaydullaeva, D. D. (2022). Erkaklarda yurak ishemik kasalligining kechishida metabolik sindrom komponentlarining ta'siri. Fan, ta'lim, madaniyat va innovatsiya, 1(4), 29-34.
- 3. Ergasheva Gulshan Toxirovna. (2023). QANDLI DIABET 2-TUR VA SEMIZLIKNING O'ZARO BOG'LIQLIK SABABLARINI O'RGANISH. Ta'lim Innovatsiyasi Va Integratsiyasi, 10(3), 168–173. Retrieved from http://web-journal.ru/index.php/ilmiy/article/view/1788
- 4. Dilmurodovna, T. D. (2023). MORPHOLOGICAL ASPECTS OF THE THYROID GLAND IN VARIOUS FORMS OF ITS PATHOLOGY. American Journal of Pediatric Medicine and Health Sciences (2993-2149), 1(8), 428-431.
- 5. Ergasheva Gulshan Tokhirovna. (2023). Study of clinical characteristics of patients with type 2 diabetes mellitus in middle and old age. Journal of Science in Medicine and Life, 1(4), 16–19. Retrieved from https://journals.proindex.uz/index.php/JSML/article/view/288
- 6. Dilmurodovna, T. D. (2023). Morphological Signs of the Inflammatory Process in the Pancreas in Type I and Ii Diabetes Mellitus. EUROPEAN JOURNAL OF INNOVATION IN NONFORMAL EDUCATION, 3(11), 24-27.
- 7. Dilmurodovna, Т. D. (2023). КЛИНИКО-МОРФОЛОГИЧЕСКИЕ ОСОБЕННОСТИ ТЕЧЕНИЕ ВОСПАЛИТЕЛЬНОГО ПРОЦЕССА В ПОДЖЕЛУДОЧНОЙ ЖЕЛЕЗЕ ПРИ САХАРНОМ ДИАБЕТЕ І И ІІ ТИПА. ОБРАЗОВАНИЕ НАУКА И ИННОВАЦИОННЫЕ ИДЕИ В МИРЕ, 33(1), 173-177.
- 8. Ergasheva Gulshan Toxirovna. (2023). QANDLI DIABET 2-TUR VA SEMIZLIKNING O'ZARO BOG'LIQLIK SABABLARINI O'RGANISH. Ta'lim Innovatsiyasi Va Integratsiyasi, 10(3), 168–173.
- 9. Ergasheva Gulshan Tokhirovna. (2023). Study of clinical characteristics of patients with type 2 diabetes mellitus in middle and old age. Journal of Science in Medicine and Life, 1(4), 16–19.
- 10. Saidova, L. B., & Ergashev, G. T. (2022). Improvement of rehabilitation and rehabilitation criteria for patients with type 2 diabetes.
- 11. Ergasheva, G. (2023). METHODS TO PREVENT SIDE EFFECTS OF DIABETES MELLITUS IN SICK PATIENTS WITH TYPE 2 DIABETES. International Bulletin of Medical Sciences and Clinical Research, 3(10), 104-108.



- 12. Ergasheva, G. T. (2022). QANDLI DIABET BILAN KASALLANGANLARDA REABILITATSIYA MEZONLARINI TAKOMILASHTIRISH. TA'LIM VA RIVOJLANISH TAHLILI ONLAYN ILMIY JURNALI, 2(12), 335-337.
- 13. ГТ, Э., & Саидова, Л. Б. (2022). СОВЕРШЕНСТВОВАНИЕ РЕАБИЛИТАЦИОННО-ВОССТАНОВИТЕЛЬНЫХ КРИТЕРИЕВ БОЛЬНЫХ С СД-2 ТИПА. ТА'LIM VA RIVOJLANISH TAHLILI ONLAYN ILMIY JURNALI, 2(12), 206-209.
- 14. Toxirovna, E. G. (2023). O'RTA VA KEKSA YOSHLI BEMORLARDA 2-TUR QANDLI DIABET KECHISHINING KLINIKO-MORFOLOGIK XUSUSIYATLARI. ОБРАЗОВАНИЕ НАУКА И ИННОВАЦИОННЫЕ ИДЕИ В МИРЕ, 33(1), 164-166.
- 15. Эргашева, Г. Т. (2023). Изучение Клинических Особенностей Больных Сахарным Диабетом 2 Типа Среднего И Пожилого Возраста. Central Asian Journal of Medical and Natural Science, 4(6), 274-276.
- 16. Kayumova, G. M., & Dustova, N. K. (2023). Significance of the femoflor test in assessing the state of vaginal microbiocenosis in preterm vaginal discharge. Problems and scientific solutions. In International conference: problems and scientific solutions. Abstracts of viii international scientific and practical conference (Vol. 2, No. 2, pp. 150-153).
- 17. Каюмова, Г. М., Мухторова, Ю. М., & Хамроев, Х. Н. (2022). Определить особенности течения беременности и родов при дородовом излитии околоплодных вод. Scientific and innovative therapy. Научный журнал по научный и инновационный терапии, 58-59.
- 18. Уроков, Ш. Т., & Хамроев, Х. Н. (2018). Клинико-диагностические аспекты механической желтухи, сочетающейся с хроническими диффузными заболеваниями печени (обзор литературы). Достижения науки и образования, (12 (34)), 56-64.
- 19. Хамроев, Х. Н., & Ганжиев, Ф. Х. (2023). Динамика структурнофункциональных нарушение печени крыс при экспериментальном алгоколние циррозе. Pr oblemsofmodernsurgery, 6.
- 20. Хамроев, Х. Н., & Тухсанова, Н. Э. (2022). НОВЫЙ ДЕНЬ В МЕДИЦИНЕ. НОВЫЙ ДЕНЬ В МЕДИЦИНЕ Учредители: Бухарский государственный медицинский институт, ООО" Новый день в медицине", (1), 233-239.
- 21. Хамроев, Х. Н., & Уроков, Ш. Т. (2019). ВЛИЯНИЕ ДИФФУЗНЫХ ЗАБОЛЕВАНИЙ ПЕЧЕНИ НА ТЕЧЕНИЕ И ПРОГНОЗ МЕХАНИЧЕСКОЙ ЖЕЛТУХИ. Новый день в медицине, (3), 275-278.
- 22. Nutfilloevich, H. K., & Akhrorovna, K. D. (2023). COMPARATIVE CLASSIFICATION OF LIVER MORPHOMETRIC PARAMETERS IN THE



- LIVER AND IN EXPERIMENTAL CHRONIC ALCOHOLISM. International Journal of Cognitive Neuroscience and Psychology, 1(1), 23-29.
- 23. Хамроев, Х. Н., & Хасанова, Д. А. (2023). Жигар морфометрик кўрсаткичларининг меъёрда ва экспериментал сурункали алкоголизмда киёсий таснифи. Медицинский журнал Узбекистана Medical journal of Uzbekistan, 2.
- 24. Хамроев, Х. Н., Хасанова, Д. А., Ганжиев, Ф. Х., & Мусоев, Т. Я. (2023). Шошилинч тиббий ёрдам ташкил қилишнинг долзарб муаммолари: Политравма ва ўткир юрак-қон томир касалликларида ёрдам кўрсатиш масалалари. XVIII Республика илмий-амалий анжумани, 12.
- 25. Хамроев, Х. Н. (2023). Провести оценку морфологических изменений печени в норме и особенностей характера ее изменений при хронической алкогольной интоксикации. In Republican scientific and practical conference with international participation (Vol. 30).
- 26. Khamroyev, X. N. (2022). TOXIC LIVER DAMAGE IN ACUTE PHASE OF ETHANOL INTOXICATION AND ITS EXPERIMENTAL CORRECTION WITH CHELATE ZINC COMPOUND. European Journal of Modern Medicine and Practice, 2(2), 12-16.
- 27. Каюмова, Г. М., Хамроев, Х. Н., & Ихтиярова, Г. А. (2021). Причины риска развития преждевременных родов в период пандемии организм и среда жизни к 207-летию со дня рождения Карла Францевича Рулье: сборник материалов IV-ой Международной научнопрактической конференции (Кемерово, 26 февраля 2021 г.). ISBN 978-5-8151-0158-6.139-148.
- 28. Halimova, Y. S. (2023). Morphological Aspects of Rat Ovaries When Exposed to Caffeine Containing Drink. BEST JOURNAL OF INNOVATION IN SCIENCE, RESEARCH AND DEVELOPMENT, 2(6), 294-300.
- Шокиров, 29. Халимова, Ю. C., & Б. C. (2022).МОРФОФУНКЦИОНАЛЬНЫЕ ООБЕННОСТИ ВНУТРЕННИХ ОРГАНОВ ПРИ ХРОНИЧЕСКОМ АЛКОГОЛИЗМЕ. Scientific progress, 3(2), 782-789.
- 30. Халимова, Ю. С. (2021). MORPHOFUNCTIONAL ASPECTS OF THE HUMAN BODY IN THE ABUSE OF ENERGY DRINKS. Новый день в медицине, 5(37), 208-210.
- 31. Халимова, Ю. С. (2022). МОРФОФУНКЦИОНАЛЬНЫЕ ОСОБЕННОСТИ ЯИЧНИКОВ КРЫС ПРИ ВОЗДЕЙСТВИИ КОФЕИН СОДЕРЖАЩИХ НАПИТОК. Gospodarka i Innowacje., 23, 368-374.
- 32. Salokhiddinovna, X. Y. (2023). INFLUENCE OF EXTERNAL FACTORS ON THE MALE REPRODUCTIVE SYSTEM. EUROPEAN JOURNAL OF MODERN MEDICINE AND PRACTICE, 3(10), 6-13.



- 33. Halimova, Y. S., Shokirov, B. S., & Khasanova, D. A. (2023). Reproduction and Viability of Female Rat Offspring When Exposed To Ethanol. Procedia of Engineering and Medical Sciences, 32-35.
- 34. Salokhiddinovna, H. Y. (2023). Morphological Features of the Human Body in Energy Drink Abuse. EUROPEAN JOURNAL OF INNOVATION IN NONFORMAL EDUCATION, 3(5), 51-53.
- 35. Халимова, Ю. С., & Шокиров, Б. С. (2022). СОВРЕМЕННЫЕ ДАННЫЕ О МОРФО-ФУНКЦИОНАЛЬНЫХ АСПЕКТОВ ЧЕЛОВЕЧЕСКОГО ОРГАНИЗМА ПРИ ЗЛОУПОТРЕБЛЕНИЕ ЭНЕРГЕТИЧЕСКИМИ НАПИТКАМИ. PEDAGOGS jurnali, 4(1), 154-161.
- 36. Хамроев, Х. Н., & Туксанова, Н. Э. (2021). Characteristic of morphometric parameters of internal organs in experimental chronic alcoholism. Тиббиётда янги кун, 2, 34.
- 37. Kayumova, G. M., & Nutfilloyevich, K. K. (2023). CAUSE OF PERINATAL LOSS WITH PREMATURE RUPTURE OF AMNIOTIC FLUID IN WOMEN WITH ANEMIA. AMALIY VA TIBBIYOT FANLARI ILMIY JURNALI, 2(11), 131-136.
- 38. Nutfilloyevich, K. K. (2023). STUDY OF NORMAL MORPHOMETRIC PARAMETERS OF THE LIVER. American Journal of Pediatric Medicine and Health Sciences (2993-2149), 1(8), 302-305.
- 39. Латипов, И. И., & Хамроев, Х. Н. (2023). Улучшение Резултат Диагностике Ультразвуковой Допплерографии Синдрома Хронической Абдоминальной Ишемии. Central Asian Journal of Medical and Natural Science, 4(4), 522-525.
- 40. Sh T, U., IK, S., Kh N, H., & Sh I, S. (2023). IMPROVING THE IMMEDIATE RESULTS OF SURGICAL TREATMENT OF ACUTE CHOLECYSTITIS IN PATIENTS WITH LIVER CIRRHOSIS. Journal of Pharmaceutical Negative Results, 14(2).
- 41. Khamroev, B. S. (2022). RESULTS OF TREATMENT OF PATIENTS WITH BLEEDING OF THE STOMACH AND 12 DUO FROM NON-STEROIDAL ANTI-INFLAMMATORY DRUGS-INDUCED OENP. Journal of Pharmaceutical Negative Results, 1901-1910.
- 42. Хамроев, Х. Н. (2022, October). ФУНКЦИОНАЛЬНОЕ СОСТОЯНИЕ ЖЕЛУДКА ДО И ПОСЛЕ РЕЗЕКЦИИ ЖЕЛУДКА ПРИ "ТРУДНЫХ" ДУОДЕНАЛЬНЫХ ЯЗВАХ. In PROBLEMS OF MODERN SURGERY, INTERNATIONAL SCIENTIFIC AND PRACTICAL CONFERENCE WITH THE PARTICIPATION OF FOREIGN SCIENTISTS MATERIALS. Andijan State Medical Institute.
- 43. Xamroyev, X. N. (2022). The morphofunctional changes in internal organs during alcohol intoxication. EUROPEAN JOURNAL OF MODERN MEDICINE AND PRACTICE, 2(2), 9-11.



- 44. Khamroyev, X. N. (2022). TOXIC LIVER DAMAGE IN ACUTE PHASE OF ETHANOL INTOXICATION AND ITS EXPERIMENTAL CORRECTION WITH CHELATE ZINC COMPOUND. European Journal of Modern Medicine and Practice, 2(2), 12-16.
- 45. Nutfilloevich, K. K., & Akhrorovna, K. D. (2024). MORPHOLOGICAL CHANGES IN THE LIVER IN NORMAL AND CHRONIC ALCOHOL POISONING. ОБРАЗОВАНИЕ НАУКА И ИННОВАЦИОННЫЕ ИДЕИ В МИРЕ, 36(3), 77-85.
- 46. Nutfilloyevich, K. K. (2024). NORMAL MORPHOMETRIC PARAMETERS OF THE LIVER OF LABORATORY RATS. ОБРАЗОВАНИЕ НАУКА И ИННОВАЦИОННЫЕ ИДЕИ В МИРЕ, 36(3), 104-113.
- 47. Halimova, Y. S. (2023). Morphofunctional Aspects of Internal Organs in Chronic Alcoholism. AMALIY VA TIBBIYOT FANLARI ILMIY JURNALI, 2(5), 83-87.
- 48. Shokirov, B. S. (2021). Halimova Yu. S. Antibiotic-induced rat gut microbiota dysbiosis and salmonella resistance Society and innovations.
- 49. Халимова, Ю. С., & Шокиров, Б. С. (2021). Репродуктивность и жизнеспособность потомства самок крыс при различной длительности воздействия этанола. Іп Актуальные вопросы современной медицинской науки и здравоохранения: Материалы VI Международной научнопрактической конференции молодых учёных и студентов, посвященной году науки и технологий, (Екатеринбург, 8-9 апреля 2021): в 3-х т.. Федеральное государственное бюджетное образовательное учреждение высшего образования «Уральский государственный медицинский университет» Министерства здравоохранения Российской Федерации.
- 50. Khalimova, Y. S. BS Shokirov Morphological changes of internal organs in chronic alcoholism. Middle European scientific bulletin, 12-2021.
- 51. Шокиров, Б. С., & Халимова, Ю. С. (2022). ДИСБИОЗ ВЫЗВАННЫЙ АНИБИОТИКАМИ КИШЕЧНОЙ МИКРОБИОТЫ КРЫС И УСТОЙЧИВОСТЬ К САЛМОНЕЛЛАМ. Scientific progress, 3(2), 766-772.
- 52. Salokhiddinovna, X. Y. (2023). Clinical Features of the Course of Vitamin D Deficiency in Women of Reproductive Age. EUROPEAN JOURNAL OF INNOVATION IN NONFORMAL EDUCATION, 3(11), 28-31.
- 53. Шокиров, Б., & Халимова, Ю. (2021). Антибиотик-индуцированный дисбиоз микробиоты кишечника крыс и резистентность к сальмонеллам. Общество и инновации, 2(4/S), 93-100.
- 54. Salokhiddinovna, X. Y. (2023). MORPHOLOGICAL CHANGES IN PATHOLOGICAL FORMS OF ERYTHROCYTES. EUROPEAN JOURNAL OF MODERN MEDICINE AND PRACTICE, 3(11), 20-24.



- 55. Saloxiddinovna, X. Y. (2023). ERITROTSITLAR PATOLOGIK SHAKLLARINING MORFOLOGIK O'ZGARISHLARI. ОБРАЗОВАНИЕ НАУКА И ИННОВАЦИОННЫЕ ИДЕИ В МИРЕ, 33(1), 167-172.
- 56. Шокиров, Б., & Халимова, Ю. (2021). Antibiotic-induced rat gut microbiota dysbiosis and salmonella resistance. Общество и инновации, 2(4/S), 93-100.
- 57. Шокиров, Б. С., & Халимова, Ю. С. (2021). Пищеварительная функция кишечника после коррекции экспериментального дисбактериоза у крыс бифидобактериями. Іп Актуальные вопросы современной медицинской науки и здравоохранения: Материалы VI Международной научнопрактической конференции молодых учёных и студентов, посвященной году науки и технологий, (Екатеринбург, 8-9 апреля 2021): в 3-х т.. Федеральное государственное бюджетное образовательное учреждение высшего образования «Уральский государственный медицинский университет» Министерства здравоохранения Российской Федерации.
- 58. Salokhiddinovna, X. Y. (2023). Anemia of Chronic Diseases. Research Journal of Trauma and Disability Studies, 2(12), 364-372.
- 59. Salokhiddinovna, X. Y. (2023). MALLORY WEISS SYNDROME IN DIFFUSE LIVER LESIONS. Journal of Science in Medicine and Life, 1(4), 11-15.
- 60. Salohiddinovna, X. Y. (2023). SURUNKALI KASALLIKLARDA UCHRAYDIGAN ANEMIYALAR MORFO-FUNKSIONAL XUSUSIYATLARI. Ta'lim innovatsiyasi va integratsiyasi, 10(3), 180-188.