# GEORGIAN MEDICAL NEWS

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# ЕЖЕМЕСЯЧНЫЙ НАУЧНЫЙ ЖУРНАЛ

Медицинские новости Грузии საქართველოს სამედიცინო სიახლენი

# **GEORGIAN MEDICAL NEWS**

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**GMN:** Georgian Medical News is peer-reviewed, published monthly journal committed to promoting the science and art of medicine and the betterment of public health, published by the GMN Editorial Board since 1994. GMN carries original scientific articles on medicine, biology and pharmacy, which are of experimental, theoretical and practical character; publishes original research, reviews, commentaries, editorials, essays, medical news, and correspondence in English and Russian.

GMN is indexed in MEDLINE, SCOPUS, PubMed and VINITI Russian Academy of Sciences. The full text content is available through EBSCO databases.

**GMN: Медицинские новости Грузии -** ежемесячный рецензируемый научный журнал, издаётся Редакционной коллегией с 1994 года на русском и английском языках в целях поддержки медицинской науки и улучшения здравоохранения. В журнале публикуются оригинальные научные статьи в области медицины, биологии и фармации, статьи обзорного характера, научные сообщения, новости медицины и здравоохранения. Журнал индексируется в MEDLINE, отражён в базе данных SCOPUS, PubMed и ВИНИТИ РАН. Полнотекстовые статьи журнала доступны через БД EBSCO.

GMN: Georgian Medical News – საქართველოს სამედიცინო სიახლენი – არის ყოველთვიური სამეცნიერო სამედიცინო რეცენზირებადი ჟურნალი, გამოიცემა 1994 წლიდან, წარმოადგენს სარედაქციო კოლეგიისა და აშშ-ის მეცნიერების, განათლების, ინდუსტრიის, ხელოვნებისა და ბუნებისმეტყველების საერთაშორისო აკადემიის ერთობლივ გამოცემას. GMN-ში რუსულ და ინგლისურ ენებზე ქვეყნდება ექსპერიმენტული, თეორიული და პრაქტიკული ხასიათის ორიგინალური სამეცნიერო სტატიები მედიცინის, ბიოლოგიისა და ფარმაციის სფეროში, მიმოხილვითი ხასიათის სტატიები.

ჟურნალი ინდექსირებულია MEDLINE-ის საერთაშორისო სისტემაში, ასახულია SCOPUS-ის, PubMed-ის და ВИНИТИ РАН-ის მონაცემთა ბაზებში. სტატიების სრული ტექსტი ხელმისაწვდომია EBSCO-ს მონაცემთა ბაზებიდან.

# WEBSITE www.geomednews.com

# к сведению авторов!

При направлении статьи в редакцию необходимо соблюдать следующие правила:

1. Статья должна быть представлена в двух экземплярах, на русском или английском языках, напечатанная через полтора интервала на одной стороне стандартного листа с шириной левого поля в три сантиметра. Используемый компьютерный шрифт для текста на русском и английском языках - Times New Roman (Кириллица), для текста на грузинском языке следует использовать AcadNusx. Размер шрифта - 12. К рукописи, напечатанной на компьютере, должен быть приложен CD со статьей.

2. Размер статьи должен быть не менее десяти и не более двадцати страниц машинописи, включая указатель литературы и резюме на английском, русском и грузинском языках.

3. В статье должны быть освещены актуальность данного материала, методы и результаты исследования и их обсуждение.

При представлении в печать научных экспериментальных работ авторы должны указывать вид и количество экспериментальных животных, применявшиеся методы обезболивания и усыпления (в ходе острых опытов).

4. К статье должны быть приложены краткое (на полстраницы) резюме на английском, русском и грузинском языках (включающее следующие разделы: цель исследования, материал и методы, результаты и заключение) и список ключевых слов (key words).

5. Таблицы необходимо представлять в печатной форме. Фотокопии не принимаются. Все цифровые, итоговые и процентные данные в таблицах должны соответствовать таковым в тексте статьи. Таблицы и графики должны быть озаглавлены.

6. Фотографии должны быть контрастными, фотокопии с рентгенограмм - в позитивном изображении. Рисунки, чертежи и диаграммы следует озаглавить, пронумеровать и вставить в соответствующее место текста в tiff формате.

В подписях к микрофотографиям следует указывать степень увеличения через окуляр или объектив и метод окраски или импрегнации срезов.

7. Фамилии отечественных авторов приводятся в оригинальной транскрипции.

8. При оформлении и направлении статей в журнал МНГ просим авторов соблюдать правила, изложенные в «Единых требованиях к рукописям, представляемым в биомедицинские журналы», принятых Международным комитетом редакторов медицинских журналов -

http://www.spinesurgery.ru/files/publish.pdf и http://www.nlm.nih.gov/bsd/uniform\_requirements.html В конце каждой оригинальной статьи приводится библиографический список. В список литературы включаются все материалы, на которые имеются ссылки в тексте. Список составляется в алфавитном порядке и нумеруется. Литературный источник приводится на языке оригинала. В списке литературы сначала приводятся работы, написанные знаками грузинского алфавита, затем кириллицей и латиницей. Ссылки на цитируемые работы в тексте статьи даются в квадратных скобках в виде номера, соответствующего номеру данной работы в списке литературы. Большинство цитированных источников должны быть за последние 5-7 лет.

9. Для получения права на публикацию статья должна иметь от руководителя работы или учреждения визу и сопроводительное отношение, написанные или напечатанные на бланке и заверенные подписью и печатью.

10. В конце статьи должны быть подписи всех авторов, полностью приведены их фамилии, имена и отчества, указаны служебный и домашний номера телефонов и адреса или иные координаты. Количество авторов (соавторов) не должно превышать пяти человек.

11. Редакция оставляет за собой право сокращать и исправлять статьи. Корректура авторам не высылается, вся работа и сверка проводится по авторскому оригиналу.

12. Недопустимо направление в редакцию работ, представленных к печати в иных издательствах или опубликованных в других изданиях.

## При нарушении указанных правил статьи не рассматриваются.

# REQUIREMENTS

Please note, materials submitted to the Editorial Office Staff are supposed to meet the following requirements:

1. Articles must be provided with a double copy, in English or Russian languages and typed or compu-ter-printed on a single side of standard typing paper, with the left margin of 3 centimeters width, and 1.5 spacing between the lines, typeface - Times New Roman (Cyrillic), print size - 12 (referring to Georgian and Russian materials). With computer-printed texts please enclose a CD carrying the same file titled with Latin symbols.

2. Size of the article, including index and resume in English, Russian and Georgian languages must be at least 10 pages and not exceed the limit of 20 pages of typed or computer-printed text.

3. Submitted material must include a coverage of a topical subject, research methods, results, and review.

Authors of the scientific-research works must indicate the number of experimental biological species drawn in, list the employed methods of anesthetization and soporific means used during acute tests.

4. Articles must have a short (half page) abstract in English, Russian and Georgian (including the following sections: aim of study, material and methods, results and conclusions) and a list of key words.

5. Tables must be presented in an original typed or computer-printed form, instead of a photocopied version. Numbers, totals, percentile data on the tables must coincide with those in the texts of the articles. Tables and graphs must be headed.

6. Photographs are required to be contrasted and must be submitted with doubles. Please number each photograph with a pencil on its back, indicate author's name, title of the article (short version), and mark out its top and bottom parts. Drawings must be accurate, drafts and diagrams drawn in Indian ink (or black ink). Photocopies of the X-ray photographs must be presented in a positive image in **tiff format**.

Accurately numbered subtitles for each illustration must be listed on a separate sheet of paper. In the subtitles for the microphotographs please indicate the ocular and objective lens magnification power, method of coloring or impregnation of the microscopic sections (preparations).

7. Please indicate last names, first and middle initials of the native authors, present names and initials of the foreign authors in the transcription of the original language, enclose in parenthesis corresponding number under which the author is listed in the reference materials.

8. Please follow guidance offered to authors by The International Committee of Medical Journal Editors guidance in its Uniform Requirements for Manuscripts Submitted to Biomedical Journals publication available online at: http://www.nlm.nih.gov/bsd/uniform\_requirements.html http://www.icmje.org/urm\_full.pdf

In GMN style for each work cited in the text, a bibliographic reference is given, and this is located at the end of the article under the title "References". All references cited in the text must be listed. The list of references should be arranged alphabetically and then numbered. References are numbered in the text [numbers in square brackets] and in the reference list and numbers are repeated throughout the text as needed. The bibliographic description is given in the language of publication (citations in Georgian script are followed by Cyrillic and Latin).

9. To obtain the rights of publication articles must be accompanied by a visa from the project instructor or the establishment, where the work has been performed, and a reference letter, both written or typed on a special signed form, certified by a stamp or a seal.

10. Articles must be signed by all of the authors at the end, and they must be provided with a list of full names, office and home phone numbers and addresses or other non-office locations where the authors could be reached. The number of the authors (co-authors) must not exceed the limit of 5 people.

11. Editorial Staff reserves the rights to cut down in size and correct the articles. Proof-sheets are not sent out to the authors. The entire editorial and collation work is performed according to the author's original text.

12. Sending in the works that have already been assigned to the press by other Editorial Staffs or have been printed by other publishers is not permissible.

Articles that Fail to Meet the Aforementioned Requirements are not Assigned to be Reviewed.

## ᲐᲕᲢᲝᲠᲗᲐ ᲡᲐᲧᲣᲠᲐᲦᲦᲔᲑᲝᲦ!

რედაქციაში სტატიის წარმოდგენისას საჭიროა დავიცვათ შემდეგი წესები:

1. სტატია უნდა წარმოადგინოთ 2 ცალად, რუსულ ან ინგლისურ ენებზე,დაბეჭდილი სტანდარტული ფურცლის 1 გვერდზე, 3 სმ სიგანის მარცხენა ველისა და სტრიქონებს შორის 1,5 ინტერვალის დაცვით. გამოყენებული კომპიუტერული შრიფტი რუსულ და ინგლისურენოვან ტექსტებში - Times New Roman (Кириллица), ხოლო ქართულენოვან ტექსტში საჭიროა გამოვიყენოთ AcadNusx. შრიფტის ზომა – 12. სტატიას თან უნდა ახლდეს CD სტატიით.

2. სტატიის მოცულობა არ უნდა შეადგენდეს 10 გვერდზე ნაკლებს და 20 გვერდზე მეტს ლიტერატურის სიის და რეზიუმეების (ინგლისურ, რუსულ და ქართულ ენებზე) ჩათვლით.

3. სტატიაში საჭიროა გაშუქდეს: საკითხის აქტუალობა; კვლევის მიზანი; საკვლევი მასალა და გამოყენებული მეთოდები; მიღებული შედეგები და მათი განსჯა. ექსპერიმენტული ხასიათის სტატიების წარმოდგენისას ავტორებმა უნდა მიუთითონ საექსპერიმენტო ცხოველების სახეობა და რაოდენობა; გაუტკივარებისა და დაძინების მეთოდები (მწვავე ცდების პირობებში).

4. სტატიას თან უნდა ახლდეს რეზიუმე ინგლისურ, რუსულ და ქართულ ენებზე არანაკლებ ნახევარი გვერდის მოცულობისა (სათაურის, ავტორების, დაწესებულების მითითებით და უნდა შეიცავდეს შემდეგ განყოფილებებს: მიზანი, მასალა და მეთოდები, შედეგები და დასკვნები; ტექსტუალური ნაწილი არ უნდა იყოს 15 სტრიქონზე ნაკლები) და საკვანძო სიტყვების ჩამონათვალი (key words).

5. ცხრილები საჭიროა წარმოადგინოთ ნაბეჭდი სახით. ყველა ციფრული, შემაჯამებელი და პროცენტული მონაცემები უნდა შეესაბამებოდეს ტექსტში მოყვანილს.

6. ფოტოსურათები უნდა იყოს კონტრასტული; სურათები, ნახაზები, დიაგრამები - დასათაურებული, დანომრილი და სათანადო ადგილას ჩასმული. რენტგენოგრამების ფოტოასლები წარმოადგინეთ პოზიტიური გამოსახულებით tiff ფორმატში. მიკროფოტოსურათების წარწერებში საჭიროა მიუთითოთ ოკულარის ან ობიექტივის საშუალებით გადიდების ხარისხი, ანათალების შეღებვის ან იმპრეგნაციის მეთოდი და აღნიშნოთ სურათის ზედა და ქვედა ნაწილები.

7. სამამულო ავტორების გვარები სტატიაში აღინიშნება ინიციალების თანდართვით, უცხოურისა – უცხოური ტრანსკრიპციით.

8. სტატიას თან უნდა ახლდეს ავტორის მიერ გამოყენებული სამამულო და უცხოური შრომების ბიბლიოგრაფიული სია (ბოლო 5-8 წლის სიღრმით). ანბანური წყობით წარმოდგენილ ბიბლიოგრაფიულ სიაში მიუთითეთ ჯერ სამამულო, შემდეგ უცხოელი ავტორები (გვარი, ინიციალები, სტატიის სათაური, ჟურნალის დასახელება, გამოცემის ადგილი, წელი, ჟურნალის №, პირველი და ბოლო გვერდები). მონოგრაფიის შემთხვევაში მიუთითეთ გამოცემის წელი, ადგილი და გვერდების საერთო რაოდენობა. ტექსტში კვადრატულ ფჩხილებში უნდა მიუთითოთ ავტორის შესაბამისი N ლიტერატურის სიის მიხედვით. მიზანშეწონილია, რომ ციტირებული წყაროების უმეტესი ნაწილი იყოს 5-6 წლის სიღრმის.

9. სტატიას თან უნდა ახლდეს: ა) დაწესებულების ან სამეცნიერო ხელმძღვანელის წარდგინება, დამოწმებული ხელმოწერითა და ბეჭდით; ბ) დარგის სპეციალისტის დამოწმებული რეცენზია, რომელშიც მითითებული იქნება საკითხის აქტუალობა, მასალის საკმაობა, მეთოდის სანდოობა, შედეგების სამეცნიერო-პრაქტიკული მნიშვნელობა.

10. სტატიის პოლოს საჭიროა ყველა ავტორის ხელმოწერა, რომელთა რაოდენოპა არ უნდა აღემატეპოდეს 5-ს.

11. რედაქცია იტოვებს უფლებას შეასწოროს სტატია. ტექსტზე მუშაობა და შეჯერება ხდება საავტორო ორიგინალის მიხედვით.

12. დაუშვებელია რედაქციაში ისეთი სტატიის წარდგენა, რომელიც დასაბეჭდად წარდგენილი იყო სხვა რედაქციაში ან გამოქვეყნებული იყო სხვა გამოცემებში.

აღნიშნული წესების დარღვევის შემთხვევაში სტატიები არ განიხილება.

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#### COMPARISON OF THE RESULTS OF STUDYING BY THE STUDENTS OF THE "CLINICAL ANATOMY AND OPERATIVE SURGERY" MODULE WITH DIFFERENT FORMS OF THE EDUCATIONAL FORMS OF THE EDUCATIONAL PROCESS IN CONDTIONS OF SOCIAL SHOCKS IN UKRAINE

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#### Abstract.

To evaluate the peculiarities of training and the influence of external factors on the training process in higher medical institutions, we have analyzed and compared the results of training in the conditions of social shocks that have occurred in Ukraine. We compared the results of the study of the discipline "Clinical Anatomy and Operative Surgery" in the traditional form of education and in the distance form of education in the conditions of the COVID-19 pandemic and during military operations. The analysis was carried out on the example of the results of the study of the module "Clinical Anatomy and Operative Surgery" by students of the II year of the Faculty of Medicine, specialty "Medicine", Ivano-Frankivsk National Medical University. As the results of the analysis showed, students and teachers adapted to different conditions and forms of education, despite the danger and uncertainty at the beginning of the pandemic, and later the war from Russia. Active mastery of the modern technical possibilities of "studentteacher" communication by the participants of the educational process helped to ensure the continuity of the educational process, although technical support and the Internet require further improvement for their use in the educational process. The results of studying the module "Clinical Anatomy and Operative Surgery" showed that in the conditions of pandemic and war, the final points for the module were not lower, and sometimes they were higher. Researchers from Croatia, who studied the impact of the war in Croatia (1991-1995) on the educational process at the medical school of the University of Zagreb, obtained a partially similar result from the "Surgery" discipline. This indicated, on the one hand, the mobilization and organization of students when studying the discipline, and on the other hand, the quality of conducting practical classes in the conditions of martial law is decreasing. The mastering of practical skills by students in the discipline and their passing by students during the final modular control in the conditions of distance education remains an unsolved task.

**Key words.** Traditional form of education, distance form of education, final modular control.

#### Introduction.

In recent decades, higher medical education in Ukraine has undergone not only reform, but also a test of its viability. Such social shocks as the COVID-19 pandemic and the war in Ukraine especially affected the educational process in higher medical institutions of education. This caused the educational process to be carried out both distance in the conditions of a pandemic, and in a blended form in the conditions of wartime. University teachers and students had to master modern communication technologies for continual learning. It should be noted that the remote or mixed form of education in peacetime and in conditions of great shocks (pandemic, war) are not identical. The distance form of education was characterized by the fact that the education was not simply transferred to the distance method using computer technologies, but was complicated by additional emotional experiences of the participants of the educational process for their own health, safety, etc. In the conditions of martial law, which was introduced in Ukraine in connection with the war on the part of Russia, teachers and students were initially exposed to stress, uncertainty, and danger [1-4]. In addition, the war causes mental distraction [5,6] in the participants of the educational process. Although, foreign authors point out that in the conditions of war, students get a positive experience. Students become more resourceful and less cynical, have better emotional contact with the patient [7]. If in the case of distance learning (COVID-19) students were in their homes and were in contact with the teacher, then in the conditions of martial law the practical lesson could be stopped at any moment due to an air alert. In this case, teachers and students had to go a shelter. The duration of air alarms was from a few minutes to an hour or more. The introduced distance form of education in universities helped not only to continue the educational process, but also to find new methods and means for its improvement. Especially active implementation of distance learning took place during the COVID-19 pandemic in many countries of the world. Among the advantages of distance education, students are noted for their personal autonomy, which leads to creative thinking, innovation, spurring them to seek, to understand meaning and have a genuine curiosity in the subject, which is essential to pursue studies through distance learning [8,9].

At the same time, distance learning medical students need the formation of an educational environment that they experience during live on-campus sessions [10]. Such an educational environment is necessary for medical students for their education and training [11]. Not infrequently, there are problems with technical support and disruption of Internet bandwidth during practical classes with distance education. There are often power outages in times of war [12,13]. All this complicates conducting practical classes, the educational material is considered superficially, the subjectivity of evaluation increases, etc.

Therefore, in the conditions of distance and blended forms of education, it is important to provide adequate methods and forms of both current and final control knowledge of students [14]. Verification and control of learning material by students is one of the components of the educational process [15]. Mastery of practical skills by medical students is important in the conditions of distance education. Even if a student can tell how to perform a practical skill, this does not mean that he can perform it correctly. Distance learning, at this stage, does not provide an answer to the acquisition of such competencies by medical students [16].

Some authors [17] point out, that it is too early to draw conclusions about the effectiveness of forced distance learning. Online educational platforms and resources have become mechanisms to support medical education. Therefore, distance education can be considered as a further roadmap for improving organizational and educational deficiencies that arose in the process of organizing education in crisis situations [17,18].

The aim of the study is to analyze and compare the results of students studying the discipline "Clinical Anatomy and Operative Surgery" in the traditional and distance form of education in the conditions of the COVID-19 pandemic and war.

#### Methods of research.

An analysis of the final results of studying the module "Clinical Anatomy and Operative Surgery" by II-year students of the Faculty of Medicine, specialty "Medicine", Ivano-Frankivsk National Medical University was conducted. Students studied in the traditional form of education (2018-2019 academic year), in the distance form of education during the COVID-19 pandemic (2020-2021 academic year) and in the blended form of education during the war (2021-2022 academic year). In the 2018-2019 academic year, 215 students studied the discipline "Clinical Anatomy and Operative Surgery" in 8 groups, in 2020-2021, 222 students studied the discipline "Clinical Anatomy and Operative Surgery" in 8 groups, and in the 2021-2022 academic year, the discipline "Clinical Anatomy and Operative Surgery" was studied by 184 students in 8 groups. The discipline "Clinical Anatomy and Operative Surgery" was presented by one module and was studied by students in the spring semester.

## Results.

The analysis of the results of studying the discipline "Clinical Anatomy and Operative Surgery" included: the assessment of the average current point by student groups, the assessment of the average final module control by student groups (the average point on the final module tests, the average point for passing practical skills, the average point for the oral part of the module) and the average point by student groups for the module from the discipline "Clinical Anatomy and Operative Surgery".

After completion of the study of the discipline "Clinical Anatomy and Operative Surgery", the teacher calculated the total current point for each of the students. As the final results showed, with the traditional form of education, the average current point for the course was 82.0. The maximum number of points that a student could score while studying the discipline is 108 points and taking into account independent extracurricular work (additional 12 points) - 120 points. The lowest average group point was 68.7, and the highest point was 96.

In distance education, after completion of the Clinical Anatomy and Operative Surgery module, the average current point for the course was 87.7. The lowest average current point in groups was 75.9 and the highest average current point was 101.7.

In connection with the war in Ukraine (2021-2022 academic year), the educational process was characterized by a blended

form of education. However, the final module control in the discipline was conducted in distance mode. The average current point in the discipline "Clinical Anatomy and Operative Surgery" during this period of the course was 87.3. The lowest average point by group was 76.9, and the highest point was 102.1. During the final test in the discipline "Clinical Anatomy and Operative Surgery" with the traditional form of education, the average point on the final test by group was 29.9. The maximum number of points that a student could score during the final test is 35 points. The lowest average group point for the final test during traditional form education was 28.3, and the highest point was 31.8. From the first time, 53 (24.7%) students did not pass the final tests of the final module in the discipline at the traditional form of education. During the final testing in the discipline "Clinical Anatomy and Operative Surgery" in the conditions of distance learning during the COVID-19 pandemic, the average point for the final testing by groups was 31.1. The lowest average point by group for the final test during distance education was 28.9, and the highest point was 33.7. From the first time through distance education, 56 (25.2%) students did not pass the tests of the final module in the discipline.

During the final test in the discipline "Clinical Anatomy and Operative Surgery" during the wartime period, the average point for the final test by group was 34.4. The lowest average group point for the final test during the war period was 34, and the highest score was 35. All students passed the tests of the final module in the discipline the first time. We noted that the results of the final test of students with a traditional form of education or a distance form of education in pandemic period COVID-19.

As the results of the analysis showed during the passing of the final practical skills in the discipline at traditional form of education, the average point for groups of students was 3.93. The maximum number of points that a student could score during a practical skill is 5 points. The lowest average point by group for passing a practical skill during the traditional form of education was 3.1, and the highest point was 4.9. At the distance form of education, there are difficulties in providing the conditions for students' mastery of practical skills and their evaluation on the final modular control. Therefore, points for practical skills were added to the points for solving the situational problem in the conditions of distance passing of the final module.

After passing the oral part of the final module in the discipline "Clinical Anatomy and Operative Surgery" with the traditional form of education, the average point in student groups was 25.2. The maximum number of points that a student could score during his answer on the final module is 40 points. The lowest average group point for the oral part of the final module during the traditional form of education was 21.6, and the highest point was 30.6. It should be noted that 43 (20%) students did not pass the oral part of the final module the first time.

After passing the oral part of the final module in the distance form of education in the period of COVID-19 in the discipline "Clinical Anatomy and Operative Surgery", the average point on the groups was 29.7. The maximum number of points that a student could score during his answer on the final module is 45 points. The lowest average point on groups for passing the oral part of the final module during distance education was 27.3, and the highest point was 35.8. Higher points for the oral part of the final module control are explained by additional points that were added to the main points for solving the situational problem. It should be noted that 26 (11.7%) students did not pass the oral part of the final module in the discipline "Clinical Anatomy and Operative Surgery" first time during distance education. If we consider the final results of the oral part of the module during the war period, the average score on groups was 34.4 out of 45 points. The lowest average point on groups for the oral part of the final module was 27.8, and the highest point was 40. It should be noted that only 6 (3%) students did not pass the oral part of the final module the first time.

The average sum of points for the final module control in the discipline "Clinical Anatomy and Operative Surgery" at the traditional form of study on groups of students was 59.3. The maximum number of points that a student could score for the final module control is 80 points. The lowest average group point for passing the final module control during the traditional form of education was 53.6, and the highest point was 65.1. In the conditions of the COVID-19 pandemic, the average sum of points for the final modular control in the discipline "Clinical Anatomy and Operative Surgery" on groups of students was 61.5 out of 80 points. The lowest average point on groups for passing the final module control during distance education was 54, and the highest score was 68. In the conditions of the war period, the average sum of points for the final module control in the discipline "Clinical Anatomy and Operative Surgery" on student groups was higher and amounted to 68.8 from 80 points. The lowest average group score for passing the final module control in the war of learning was 62.3, and the highest point was 74.6.

After calculating the average point for the module by groups of students, we obtained the following results (Figure 1).

At traditional form of education as a whole the average sum of points per module (the average sum of points for the final module control and the average current score) was 141.0. The lowest average point for the discipline "Clinical Anatomy and Operative Surgery" in student groups was 122.3, and the highest average point for the discipline in student groups was 158.9. The maximum number of points that a student could get after



Figure 1. Average point (with maximum and minimum point) for the module "Clinical Anatomy and Operative Surgery" by groups of students.

completing the discipline is 200 points. A slightly higher result was found in distance learning in the conditions of COVID-19. So, as a whole the average sum of points for the module (the average sum of points for the final module control and the average current point) was 148.86. The lowest average point for the discipline "Clinical Anatomy and Operative Surgery" in student groups was 136, and the highest average point for the discipline in student groups was 168.7 from 200 points. During martial law, as a whole, the average module score (average sum of points for the final module control and average current point) was 158.9. This point was higher compared to traditional and distance learning during the COVID-19 period. The lowest average point for the discipline "Clinical Anatomy and Operative Surgery" in student groups was 140.5, and the highest average point for the discipline in student groups was 173.3 from 200 points.

Comparing different forms of education, it can be noted that with the traditional form of education in practical classes and during the oral part of the module, the teacher communicated with the student on the main issues of the topic and objectively assessed the student's level of knowledge. The teacher monitored the students use the additional educational materials during student answer or passing the tests. This objectified the student's assessment. One of the advantages of the traditional form of education is the availability of conditions for students to master practical skills, which play an important role in the medical practice of every doctor. The teacher assesses how much the student has learned and can perform a practical skill in a practical lesson, and then in the final module control. At the end of the practical lesson, the teacher gave each student a point for the current practical lesson. Similarly, during the oral part of the final module, the teacher assessed the level of theoretical knowledge based on the answers to the questions that the student chose blindly. Distance education, which was introduced due to the COVID-19 pandemic and used during the war, in particular during passing the module, distanced the teacher from the student. After having mastered the TEAMS platform, students and teachers conducted practical classes, lectures and final modular control of the discipline in on-line mode. A teacher who communicates with a student in on-line mode during a practical lesson or at the final module control cannot completely objectively evaluate a student who is on the other side of the screen. As noted by the authors [7], there are difficulties in organizing the control of students' knowledge, since the teacher and the student are separated by space. The teacher is not sure whether the student is using additional educational materials during his answer or testing. Therefore, in the conditions of distance education, the problem of academic dishonesty [7] arises, and this affects the final result. At distance form of education, there were difficulties with the mastering of practical skills by students. The future doctor must know basic practical skills. Therefore, in practical classes, study hours are given for mastering practical skills. Distance learning can provide a theoretical component rather than a practical one now.

#### Conclusion.

Thus, modern technologies and technical support make it possible to study students in various crisis conditions. The

obtained final results for the discipline in different periods can demonstrate both the good adaptation and organization of students to the educational process, and not deny the decrease in the quality of education in periods of crisis. The distance form of education at this stage cannot completely solve the mastering of all competencies, especially practical skills by medical students. The introduction of distance and blended forms of education requires the search for fundamentally new and modern methods of monitoring students' knowledge, which will help in the formation of future highly qualified specialists.

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