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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 საყურადღებოდ!

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 ბოლოს საჭიროა ყველა ავტორის ხელმოწერა, რომელთა რაოდენობა არ უნდა აღემატებოდეს 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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EPIDEMIOLOGICAL INDICATORS OF ULCERATIVE COLITIS IN THE CITY OF SEMEY

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Abstract.

Ulcerative colitis (UC) is a chronic somatic disease requiring long-term treatment and associated with unfavorable outcomes. While global incidence and prevalence of UC are reported to be increasing, epidemiological data for Kazakhstan, particularly for the central city of the Semey region (Abai Region), remain scarce.

Objective: To determine the trends in prevalence and other epidemiological characteristics of ulcerative colitis in the central city of the Semey region — Abai Region.

Materials and Methods: A cross-sectional study was conducted using primary medical records (inpatient, outpatient, and electronic medical records from Integrated medical information system) collected between 2014 and 2023. Data on incidence, prevalence, patient loss to follow-up, disease exacerbations, severity, activity level, age, and gender structure were analyzed. A total of 1,539 primary medical records were reviewed. Statistical analysis involved Pearson's chi-square test and Fisher's exact two-tailed test, with a significance level set at $p<0.05$.

Results: The study revealed an overall increasing trend in the average annual number of registered UC patients per 100,000 population, rising from 23.7 in 2014 to 45.4 in 2023 (trend magnitude: 9.0% per year). Newly diagnosed cases showed a general increase, but with a noticeable decrease during the COVID-19 pandemic. The disease structure was dominated by patients with moderate severity (Grade 2) (58.5% average) and Grade 2 activity (57.5% average). A significant finding was the consistent upward trend in the proportion of patients with Grade 1 activity (4.7% per year increase), likely due to improved diagnosis. The age distribution showed two peaks, in the 31–40 years and 51–60 years categories. Females moderately predominated throughout the study period, accounting for 54.9% to 58.1% of the cohort.

Conclusion: The burden of UC on the healthcare system in the Semey region is growing, driven by both increasing incidence and improved diagnostic efficiency. The identified epidemiological characteristics, including the dual age peaks and moderate female predominance, largely align with international findings. Data collection during the COVID-19 pandemic suggests a potential issue with case detection during healthcare restrictions, hypothesizing increased mortality requiring further verification. These data are crucial for forecasting future trends and planning necessary healthcare resources for UC management in Kazakhstan.

Key words. Ulcerative colitis (UC), prevalence, incidence, epidemiology, Abai Region, Semey, Kazakhstan, epidemiological indicators, disease structure, age distribution, gender structure, COVID-19 pandemic, disease activity, disease severity.

Introduction.

Ulcerative colitis (UC) is a severe chronic somatic disease that usually requires long-term treatment and, even when managed appropriately, may result in unfavorable outcomes [1-5]. Moreover, the necessary therapy is often administered using methods and medications associated with a high risk of complications [6,7].

It is well known that the prevalence of UC can vary significantly across different geographic regions and ethnic groups [8-12].

A number of recent publications report an increase in the incidence and prevalence of UC in some countries, as well as globally [13,14]. The trends in this pathology are of great interest in terms of their association with population lifestyle, living standards, and the accessibility and quality of healthcare services [15].

In Kazakhstan, the prevalence of ulcerative colitis and the dynamics of its epidemiological indicators have not been thoroughly studied. There are only a few isolated studies on the topic, which do not provide a comprehensive overview [16].

Objective of the Study. To determine the trends in prevalence and other epidemiological characteristics of ulcerative colitis in the central city of the Semey region — Abai Region.

Materials and Methods.

The study of the incidence and prevalence of UC in the city of Semey, along with some of its epidemiological parameters, was carried out over the period from 2014 to 2023. The data were obtained from the reports of the Regional Health Department, clinics, and outpatient facilities managing patients with this disease.

In total, 1,539 primary medical records (inpatient and outpatient charts, and from 2021 onward — electronic medical records from the KMIS system) were reviewed.

Missing data were supplemented using healthcare institution reports from 2014 to 2020.

The collected data were entered into a database for statistical analysis. Data validation was performed to exclude erroneous entries. Pearson's chi-square test was used to compare frequency data. In cases where any subgroup included fewer than 10 individuals, Fisher's exact two-tailed test was applied [17]. A posteriori analysis of categorical variables was performed using the Scheffé criterion [18].

A statistical significance level of $p<0.05$ was considered sufficient to reject the null hypothesis.

Results.

Ulcerative colitis is not among the most widespread diseases; however, the lack of curative treatment options and the relatively long-life expectancy of patients following disease onset led to its accumulation in the population.

We conducted an assessment of several epidemiological

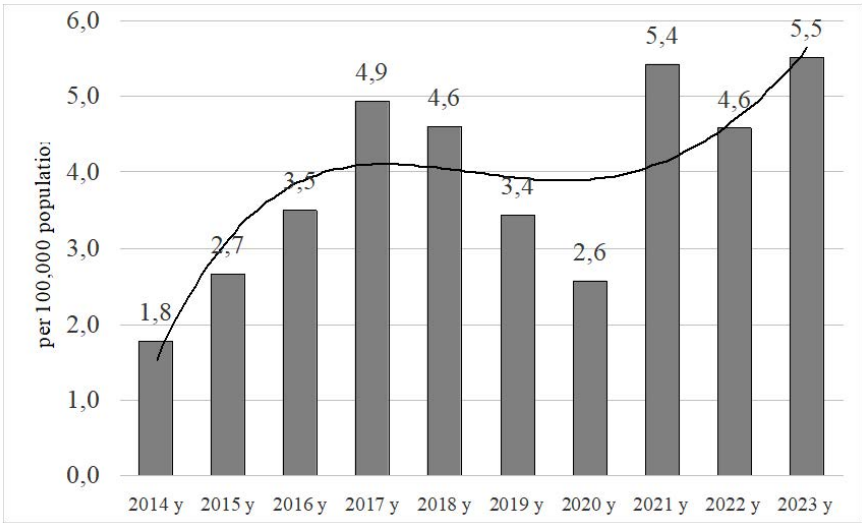

Figure 1. *Newly Diagnosed Cases per 100,000 population.*

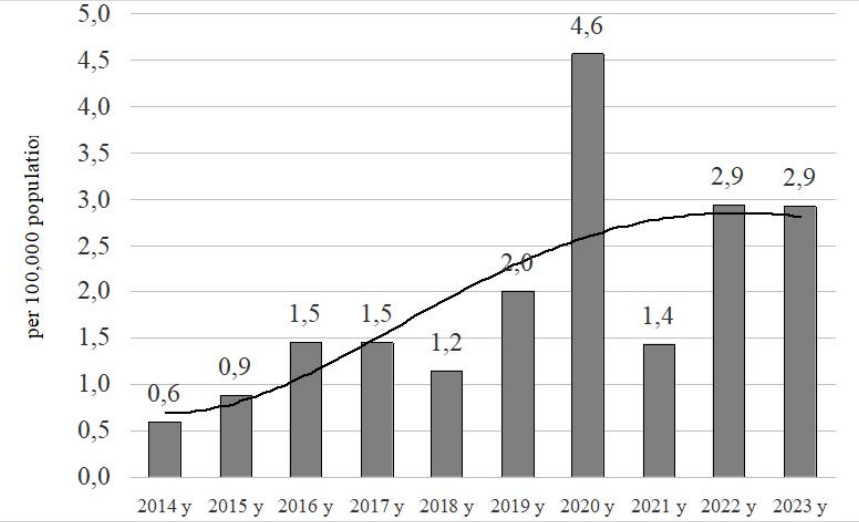

Figure 2. *Number of Patients Lost to Follow-Up per 100,000 population.*

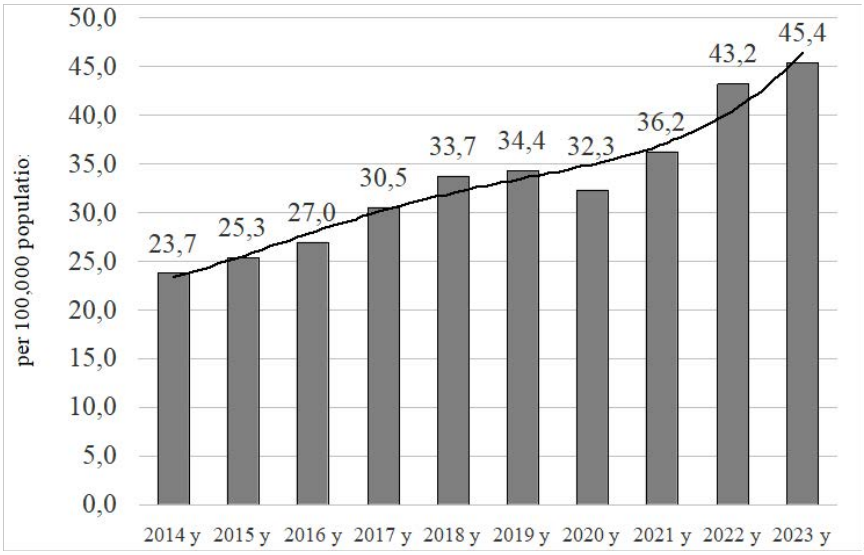

Figure 3. *Average Annual Number of Patients per 100,000 population.*

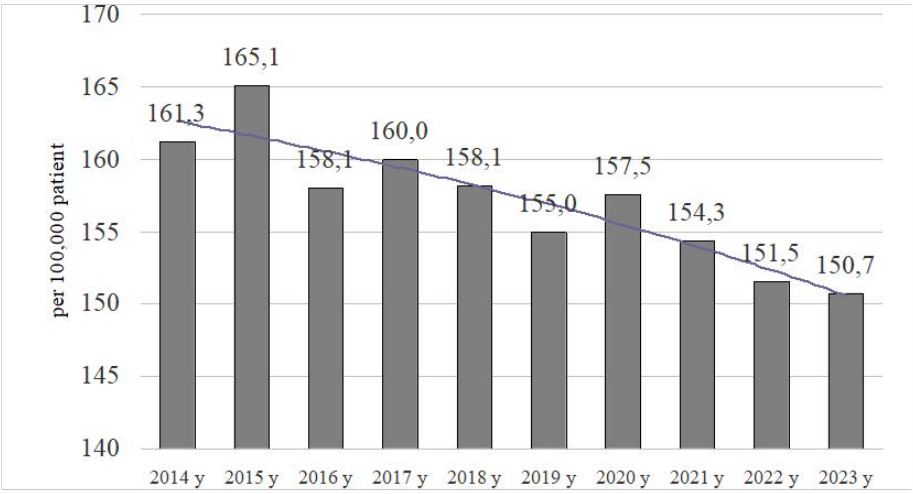

Figure 4. *UC Exacerbations (per 100 patients).*

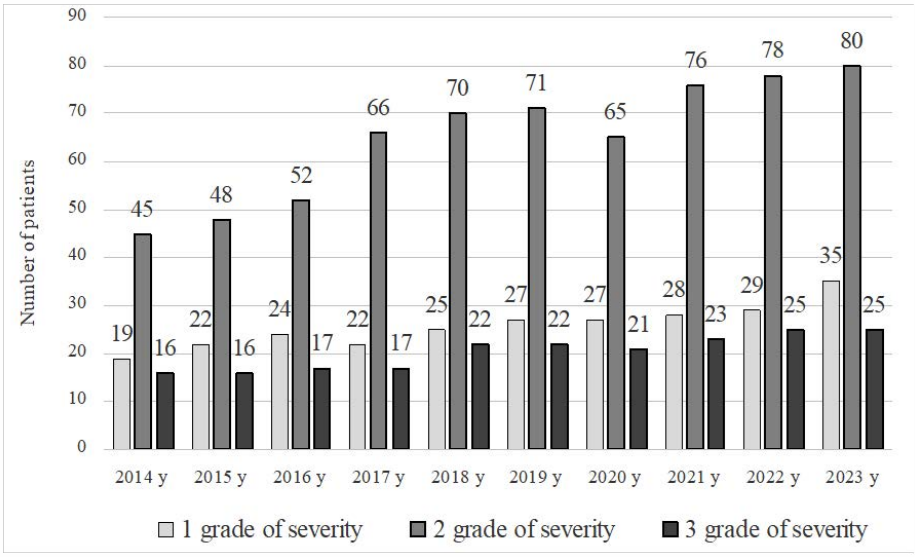

Figure 5. *Distribution of Examined Patients by Severity Level.*

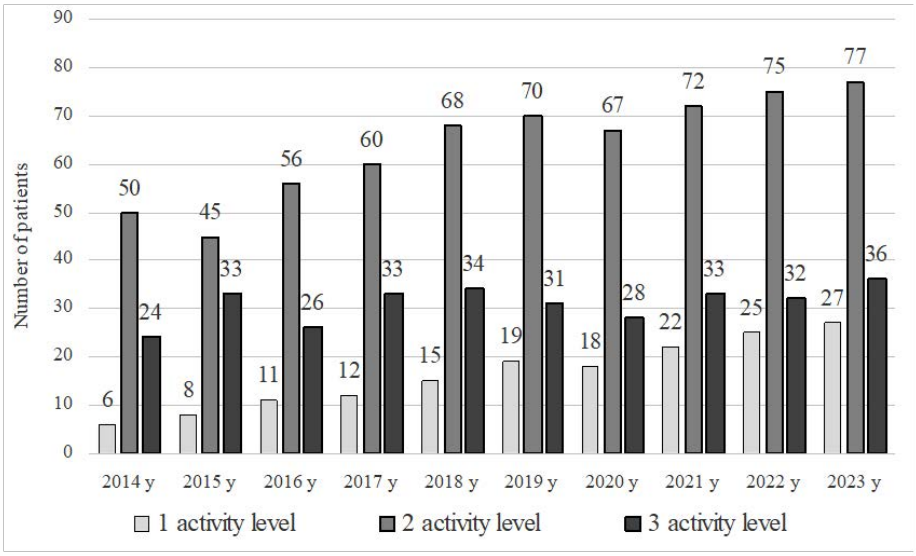

Figure 6. *Distribution of Examined Patients by Activity Level.*

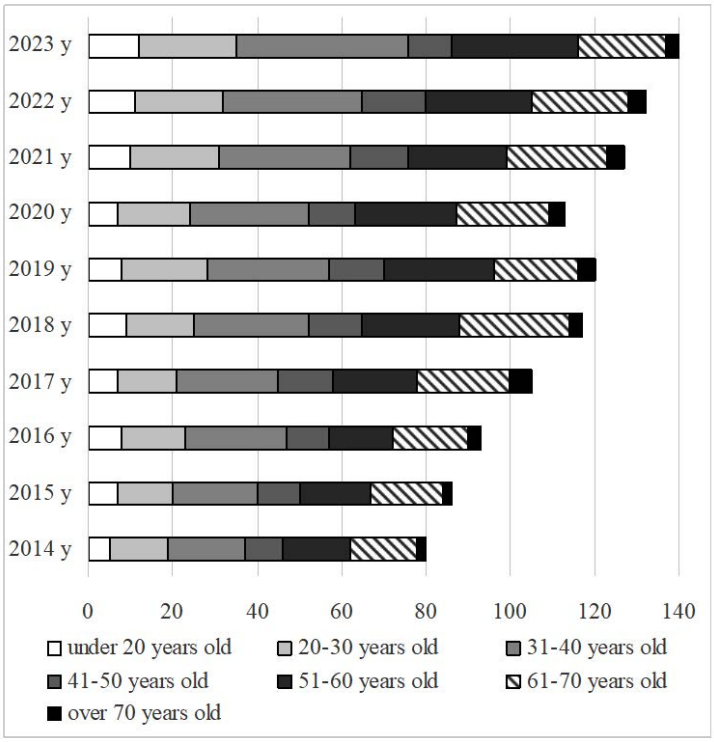

Figure 7. *Distribution of the Average Annual Patient Cohort by Age.*

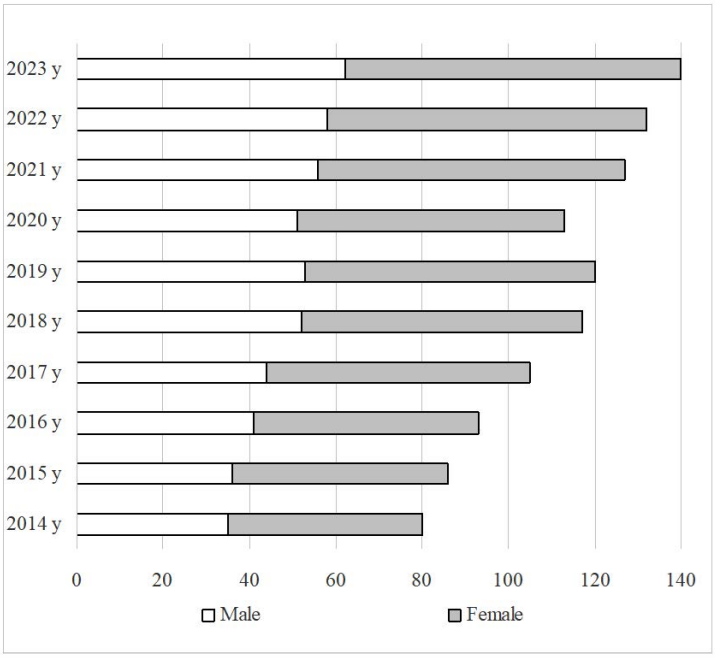

Figure 8. *Distribution of the Average Annual Patient Cohort by Gender.*

indicators of UC in the study population. The results are presented in Figures 1–8 and discussed in the corresponding analysis.

The number of newly diagnosed cases of ulcerative colitis over the 10-year study period (2014–2023) ranged from 6 to 19 per year. The average annual number was 12.9, with an average of 12.0 in the first five-year period and 13.8 in the second. The incidence trend is generally increasing, with a noticeable decrease during the COVID-19 pandemic period.

When determining the number of cases per 100,000 of the examined population, the indicator ranged from 1.8 to 5.5. Its minimum value occurred at the beginning of the observation period, with a second minimum during the quarantine period, while the maximum was recorded at the end of the study.

The number of patients lost to follow-up for various reasons ranged from 2 to 16 per year. The average value was 6.5, with 3.6 in the first five-year period and 9.2 in the second, which may be attributed to improvements in patient record-keeping. No clear trend could be determined for this indicator due to the wide range of possible influencing factors.

A corresponding analysis per 100,000 population similarly revealed a sharp increase in the indicator in 2020 (Figure 2).

An analysis of the average annual number of patients per 100,000 population showed an increase throughout the entire period (from 23.7 in 2014 to 45.4 in 2023). The trend magnitude amounted to 9.0% per year.

An analysis of the frequency of UC exacerbations among registered patients was also carried out (Figure 4).

The number of complications per 100 patients showed a moderate downward trend. There were no significant differences in this indicator throughout the entire study period.

Figures 5 and 6 present the distribution of examined patients by severity and activity level of UC.

Throughout the study period, the majority of examined patients had moderate severity (Grade 2). The frequency of this category of patients ranged between 56.3% and 62.9% in different years, averaging 58.5% over the entire observation period.

Patients with mild disease (Grade 1) were less common. Their relative number ranged from 21.0% to 25.8%, with an average of 23.2%.

Patients with severe disease (Grade 3) were observed relatively rarely, ranging from 16.2% to 20.0%, with an average of 18.3%.

Patients with Grade 2 disease activity predominated in the disease structure throughout the entire study period. Their relative proportion in individual years ranged from 55.0% to 62.5%. The average value was 57.5%.

The second largest group consisted of patients with Grade 3 disease activity, ranging from 24.2% to 30.0% in specific years. The average proportion of patients with Grade 3 UC activity was 27.9%.

The number of patients with Grade 1 UC activity was the smallest. This is likely due to incomplete coverage of this patient category, as those with absent or minimal symptoms may not have sought medical care. The proportion ranged from 7.5% to 19.3% (average 14.6%). There was a consistent upward trend in both the absolute number and relative frequency of patients with Grade 1 activity (increasing by 4.7% per year), which may be associated with improved diagnosis of colorectal diseases and screening programs.

Figures 7 and 8 present the age and gender structure of patients by year.

In the age structure, the 31–40 years category predominated, comprising on average one-quarter of all patients under observation (minimum 22.5% in 2014, maximum 29.3% in 2023). The second largest group was usually the 51–60 years category, ranging from 16.1% in 2016 to 21.7% in 2019. A nearly equal number of cases was observed in the 61–70 years category, ranging from 15.0% to 22.2%.

Following these were the age groups 20–30 years, 41–50 years, and under 20 years. The smallest number of cases throughout the analysis period was in the over 70 years category, ranging from 21.1% to 4.8% of the total structure.

In the gender structure of patients with UC throughout the entire analysis period, females predominated. Their proportion ranged from 54.9% to 58.1%. No significant differences between individual years or clear trends in changing the gender balance were identified.

Discussion.

Nowadays, there are many factors contributing to an increase in both the actual and especially the registered incidence of UC in various populations. Among these factors are dietary habits, particularly in developing countries and among populations with relatively low-income levels [19,20]. Causes may include changes in diet structure, an increase in fat content in consumed food, and a decrease in dietary fiber intake [21,22], as well as additional chemical components used to modify taste, appearance, and stabilize food products [23,24]. All these processes have also affected the population of the Republic of Kazakhstan, which traditionally had dietary preferences thought to contribute to the development of this disease [25].

Our study was aimed at analyzing epidemiological indicators in a specific region of Kazakhstan characterized by a mixed ethnic population with a predominance of the indigenous group and shared major risk factors across all groups, over a 10-year period (2014–2023), i.e., under practically modern conditions.

Overall, there was an increasing trend in the number of UC patients under observation in the study area, driven by the number of newly diagnosed cases exceeding the number of patients lost to follow-up. This is likely due to two processes: an actual increase in UC prevalence in the population, consistent with epidemiological data from other countries [26,27], and improvements in diagnostic efficiency, particularly amid colorectal cancer screening programs [28]. This is supported by an increase in the proportion of patients with mild disease, whose symptoms may have previously gone unnoticed or ignored.

Certain characteristics of ulcerative colitis (UC) identified in our study included a moderate predominance of women in prevalence data. Only a small number of studies have examined the gender distribution of the disease. Nevertheless, it has been observed that women are affected slightly more often than men [1,29], which is consistent with our findings.

Another aspect influencing the medical and social significance of chronic diseases, including UC, is the age distribution of patients. In our study, two age peaks were identified — 31–40 years and 51–60 years. It should be noted that a similar age distribution has been reported in several studies [30,31], meaning that these specific findings of our study cannot be considered new or impactful for the overall analysis.

Conclusion.

Until now, no studies have been conducted in the Republic of Kazakhstan to determine the epidemiological characteristics of ulcerative colitis (UC). At the same time, the data forming this characteristic are of great importance for the healthcare system, since the disease is progressive and can lead to disability, while effective treatment is capable of ensuring long-term control.

The analysis of UC prevalence and structure in the population has positive clinical significance, since considering the

progressive nature of UC, early detection leads to substantially better outcomes in treatment and prevention of potential complications.

As part of this work, a study was conducted on the numerical indicators of individuals newly diagnosed with this condition and those registered with it. However, their actual composition may differ from what is presented in the study, since a significant proportion of patients with minimal symptoms, as well as medically marginalized individuals, can only be identified through active screening. At the same time, for the healthcare system, the leading role is played by patients with pronounced symptoms, as they are the ones who primarily determine the need for inpatient and prolonged outpatient care.

Special attention was paid to the incidence and prevalence rates of UC during the COVID-19 pandemic. A sharp decline in case detection was observed, and analysis in the following year showed a significant decrease in the number of patients compared to previous years. While the former can be explained by restricted patient access to healthcare facilities, the latter suggests, as a hypothesis requiring verification, increased mortality among such patients during the pandemic.

Trends in the number of registered patients indicate an increase in the number of individuals with UC, including in relation to the total population. Although this trend may be attributed to both rising incidence and improved diagnostics, the undeniable fact is the growing burden on the healthcare system due to the increasing number of UC patients.

In addition, we obtained certain characteristics of the age and gender structure of UC prevalence in the study region that warrant interpretation. In particular, when determining the relative frequency of women and men, data showed a moderate predominance of women. In recent years, this issue has received limited attention in the global literature, and in most cases, the gender factor has not been included in review publications.

The data what we have determined regarding the prevalence and dynamics of UC allow forecasting future trends and planning the necessary healthcare resources for disease detection, prevention, and treatment.

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REFERENCES

1. Akiyama S, Cohen NA, Steinberg JM, et al. Rare and Well Done: Endoscopic Control of Colonic Hemorrhage in Severe Ulcerative Colitis. Dig Dis Sci. 2022;67:805-809.
2. Czubkowski P, Osiecki M, Szymańska E, et al. The risk of cardiovascular complications in inflammatory bowel disease. Clin Exp Med. 2020;20:481-491.
3. Han YD, Al Bandar MH, Dulskas A, et al. Prognosis of ulcerative colitis colorectal cancer vs. sporadic colorectal cancer: propensity score matching analysis. BMC Surg. 2017;17:28.
4. Le Berre C, Honap S, Peyrin-Biroulet L. Ulcerative colitis. Lancet. 2023;402:571-584.
5. Ungaro R, Mehandru S, Allen PB, et al. Ulcerative colitis. Lancet. 2017;2:340-341.
6. George LA, Cross RK. Treatment of Ulcerative Colitis with Steroids (in Whom, How Long, What Dose, What Form). Gastroenterol Clin North Am. 2020;49:705-716.
7. Pabla B.S, Schwartz D.A. Assessing Severity of Disease in Patients with Ulcerative Colitis. Gastroenterol. Clin. N. Am. 2020;49:671-688.
8. Liu JZ, van Sommeren S, Huang H, et al. International IBD Genetics Consortium. Association analyses identify 38 susceptibility loci for inflammatory bowel disease and highlight shared genetic risk across populations. Nat Genet. 2015;47:979-986.
9. Moller FT, Andersen V, Wohlfahrt J, et al. Familial risk of inflammatory bowel disease: a population-based cohort study 1977–2011. Am J Gastroenterol. 2015;110:564-571.
10. Ng SC, Tang W, Ching JY, et al. Incidence and phenotype of inflammatory bowel disease based on results from the Asia-Pacific Crohn's and colitis epidemiology study. Gastroenterology. 2013;145:158-165.
11. Ng SC, Tang W, Leong RW, et al. Asia-Pacific Crohn's and Colitis Epidemiology Study ACCESS Group. Environmental risk factors in inflammatory bowel disease: a population-based case-control study in Asia-Pacific. Gut. 2015;64:1063-1071.
12. Sharara AI, Al Awadhi S, Alharbi O, et al. Epidemiology, disease burden, and treatment challenges of ulcerative colitis in Africa and the Middle East. Expert Rev Gastroenterol Hepatol. 2018;12:883-897.
13. Abelson JS, Michelassi F, Mao J, et al. Higher surgical morbidity for ulcerative colitis patients in the era of biologics. Ann Surg. 2018;268:311-317.
14. Yu YR, Rodriguez JR. Clinical presentation of Crohn's, ulcerative colitis, and indeterminate colitis: symptoms,

extraintestinal manifestations, and disease phenotypes. Semin Pediatr Surg. 2017;26:349-355.
15. Ng SC, Shi HY, Hamidi N, et al. Worldwide incidence and prevalence of inflammatory bowel disease in the 21st century: a systematic review of population-based studie. Lancet. 2017;390:2769-2778.
16. Ualieva A.E. Epidemiology of Inflammatory Bowel Diseases in the Republic of Kazakhstan: PhD Dissertation. Almaty. 2021:115.
17. Abdullin K.D, Bolbachan O.A. Medical Statistics. Textbook. Edited by K.D. Abdullin. Kyrgyz-Russian Slavic University. Bishkek. 2005:111.
18. Gorlenko O.A. Analysis of Variance of Experimental Data: A Textbook for Universities. 2nd ed. Moscow: Yurayt. 2021:132.
19. Lo CH, Lochhead P, Khalili H, et al. Dietary Inflammatory Potential and Risk of Crohn's Disease and Ulcerative Colitis. Gastroenterology. 2020;159:873-883.e1.
20. Majumder A, Bano S. How the Western Diet Thwarts the Epigenetic Efforts of Gut Microbes in Ulcerative Colitis and Its Association with Colorectal Cancer. Biomolecules. 2024;14:633.
21. Fritsch J, Garces L, Quintero MA, et al. Low-fat, high-fiber diet reduces markers of inflammation and dysbiosis and improves quality of life in patients with ulcerative colitis. Clin Gastroenterol Hepatol. 2020;S1542-3565:30685-30686.
22. Lewis JD, Abreu MT. Diet as a trigger or therapy for inflammatory bowel diseases. Gastroenterology. 2017;152:398-414.
23. Christensen C, Knudsen A, Arnesen EK, et al. Diet, Food, and Nutritional Exposures and Inflammatory Bowel Disease or Progression of Disease: an Umbrella Review. Adv Nutr. 2024;15:100219.
24. Alatab S, Sepanlou SG, Ikuta K, et al. GBD 2017 Inflammatory Bowel Disease Collaborators. The global, regional, and national burden of inflammatory bowel disease in 195 countries and territories, 1990–2017: a systematic analysis for the Global Burden of Disease Study 2017. Lancet Gastroenterol Hepatol. 2020;5:17-30.
25. Ananthakrishnan AN, Khalili H, Konijeti GG, et al. Long-term intake of dietary fat and risk of ulcerative colitis and Crohn's disease. Gut. 2014;63:776-784.
26. Buie MJ, Quan J, Windsor JW, et al. Global Hospitalization Trends for Crohn's Disease and Ulcerative Colitis in the 21st Century: A Systematic Review with Temporal Analyses. Clin Gastroenterol Hepatol. 2023;21:2211-2221.
27. Kotze PG, Steinwurz F, Francisconi C, et al. Review of the epidemiology and burden of ulcerative colitis in Latin America. Therap Adv Gastroenterol. 2020;13:1756284820931739.
28. Zorina O.S. Screening for Early Detection of Colorectal Cancer in the Republic of Kazakhstan. Rostov Scientific Journal. 2019;2:319-326.
29. Pascholatto KA, Santos LR, Skare TL, et al. Sex differences in a Brazilian sample of patients with inflammatory bowel disease. Rev Assoc Med Bras (1992). 2024;70:e20240963.
30. Souza MH, Troncon LE, Rodrigues CM, et al. Trends in the occurrence (1980-1999) and clinical features of Crohn's disease and ulcerative colitis in a university hospital in southeastern Brazil, Arq Gastroenterol. 2002;39:98-105.
31. Xu F, Carlson SA, Liu Y, et al. Prevalence of Inflammatory Bowel Disease Among Medicare Fee-For-Service Beneficiaries - United States, 2001-2018. MMWR Morb Mortal Wkly Rep. 2021;70:698-701.