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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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FEATURES OF DISTRIBUTION OF INTRATUMORAL LYMPHOCYTES IN OVARIAN EPITHELIAL TUMOURS OF DIFFERENT HISTOLOGICAL TYPES AND DEGREE OF MALIGNANCY

Rusudan Devadze[1]*, Arsen Gvenetadze[2], Shota Kepuladze[3], Giorgi Burkadze[4].

[1]*PhD Student at Ivane Javakhishvili Tbilisi State University, Georgia.*

[2]*Associate Professor at Ivane Javakhishvili Tbilisi State University, Georgia.*

[3]*PhD Student at Tbilisi State Medical University, MD, Pathologist, Georgia.*

[4]*Professor at Tbilisi State Medical University, Head of the Department of Molecular pathology, Georgia.*

Abstract.

Ovarian cancer is the leading cause of death from gynaecological cancers worldwide. In Georgia, ovarian cancer ranks fourth in terms of prevalence, and third in terms of mortality rate. According to the latest epidemiological data, there will be 21,421 new cases of ovarian cancer and 13,770 deaths from ovarian cancer in the United States in 2021. Due to the lack of early screening methods and asymptomatic clinical courses, most ovarian cancer is diagnosed at an advanced stage, when the prognosis of the disease is already poor. Despite the advances in modern medical treatment and surgery, ovarian carcinoma remains the most lethal gynaecological cancer. The 5-year survival rate is 46% for all stages combined. The microenvironment of ovarian carcinomas is mainly represented by macrophages, dendritic cells, neutrophils and lymphocytes. Epithelial ovarian carcinoma-infiltrating lymphocytes (TIL) have attracted much interest in the last five years. Ovarian cancer is a heterogeneous disease concerning tumour-infiltrating lymphocytes and TILs. In terms of histological subtypes, most studies include only high-grade serous carcinomas of the ovary, and studies on other histological types are scarce. The results of our study show that the quantitative evaluation of T lymphocytes and their subpopulations does not show a statistically reliable correlation between different histological types of tumours, which may be due to the intratumoral heterogeneity and individual specificity of tumours.

Key words. Ovarian cancer, microenvironment of the ovary, tumor infiltrating lymphocytes, TIls.

Literature review.

Ovarian cancer is the leading cause of death from gynaecological cancers worldwide [1]. In Georgia, ovarian cancer ranks fourth in terms of prevalence, and third in terms of mortality rate. According to the latest epidemiological data, there will be 21,421 new cases of ovarian cancer and 13,770 deaths from ovarian cancer in the United States in 2021 [1-3]. Due to the lack of early screening methods and asymptomatic clinical courses, most ovarian cancer is diagnosed at an advanced stage, when the prognosis of the disease is already poor. Despite the advances in modern medical treatment and surgery, ovarian carcinoma remains the most lethal gynecological cancer. The 5-year survival rate is 46% for all stages combined [3,4].

According to histological type ovarian tumors are divided into epithelial, germ and stromal tumors. Almost 90% of primary ovarian tumors it is of epithelial origin [5,6]. According to classification of World Health Organization (WHO) ovarian tumors are classified into the following types: serous, mucinous, endometrial, clear cell, transitional cell, mixed epithelial, undifferentiated unclassified. Of these types the most common is ovarian serous carcinoma. In accordance with FIGO classification, serous carcinoma is classified as low-grade and high grade ones, which bears meaningful prognostic value. Besides, ovarian serous tumor subtype is classified as the borderline, with the histological signs of benign serous cystadenoma a malignant serous carcinoma as well [3,7,8].

Microenvironment of the ovarian carcinoma is generally represented by macrophages, dendritic cells, neutrophils and lymphocytes. Macrophages may relate to development and progression of the ovarian carcinoma. Ovarian epithelial carcinoma infiltrating lymphocytes (TIL), it attracted a lot of interest last five year.

The International Immuno-Oncology Biomarkers Working Group specified “intraepithelial” (iTILs), as the lymphocytes, directly observed in a tumor and “stroma” (sTILs), as TILs, located 1mm lower of the epithelial layer in 2017. sTILs and iTILs are expressed in percentage or median to assess the inflammatory infiltrate [5,9].

The recommendation has been given as per particular studies about the way of assessment of the TILs presence 3-10 vision area should be inspected in x200 or x400 high power field of preparation. TIL in particular studies for tumors of various organs are assessed using diverse antibodies by H&E and IHC as well [10].

There are no universal approach and recommendation in studies, accordingly, we may find model of assessment in four grades in some studies (low - 1-2; average – 3-9; and high ≥20), whereas according to the other authors, if TIL-s >5 or 10 HPF was specified as positive iTILs and only positive an negative cases were distinguished.

Ovarian epithelian tumors may reveal various subtypes of T cells: CD8+ T cytotoxic and CD4+ T helper lumphocytes are revealed by means of molecules, existing on the surface or molecule produced cytokines. Helper CD+ cells are subdivided into the subtypes: Th1 cells, producing interleukin 2 (IL02) and interferon y γ (INF-γ) (acting on CD8+ cells); Th2 cells, which stimulate IL- 4, 5, 6, 10 and 13n(Humoral immunity); Th17 cells, stimulating IL-17; and T follicular helper (TFH) interacting with B lumphocytes [11-13].

Tumor Infiltrating B Lymphocytes (B-TILs) were revealed in some of the solid tumors, including ovarian epithelial

carcinoma. Regulatory T cells (TREG) produce cytokines by immune suppressing, including IL-10 and TGFβ. By expressing FOXP3 and CD25, TREG, existing in tumor microenvironment are often identified. All types of immune cells are detected in the tumor and around it [13].

Ovarian tumor serves as heterogenic illness with regards to the Tumor Infiltrating Lymphocytes. Considering the histological subtypes, majority of the studies involve high grade serous carcinoma only, whereas the studies with regards to the other histological types are scarce.

Research methodology.

In accordance with our research, cohort retrograde study has been conducted, for which the archive material of the Laboratory of Teaching, Scientific and Diagnostic in pathology of Tbilisi State Medical University, non-personified paraffin blocks have been utilized. The patients have been diagnosed in the same unit over the course of 2019 to 2022. Research supported by Ethics Commission of Tbilisi State Medical University by (N2-2022/95). The samples were randomly selected for every single diagnosis in equal amount. The study involved 75 cases as a whole, accordingly split into the following subtypes:

1. Ovarian serous borderline tumors (n=15).
2. Ovarian mucinous borderline tumors (n=15).
3. Ovarian mucinous carcinoma (n-15).
4. Law- grade ovarian serous carcinoma (n=15).
5. High- grade ovarian serous carcinoma (n=15).

Immunohistochemical study was planned in the respective groups and the following were performed considering the steps. FFPE tissue samples were deparaffinized in xylene, rehydrated using serial dilutions of ethanol (96%, 80%, 70%) and an antigen retrieval procedure was performed.

Immunohistochemical study has been conducted using Leica Autostainer Bond-Max, Monoclonal ready-made antibodies CD3 (clone: LN10) and CD4 (clone: 4B12), CD8 (clone: 4B11) (manufacturer: Novocastra). Visualization has been performed by means of Bond polymer refine detection system. Hematoxylin-Eosin stained sections have been assessed by two independent pathologist anatomist (G.B. and Sh.K).

Quantitative data of histopathologic and immunohistochemical study results have been processed using relevant static methods: correlation has been specified in accordance to Spearman rank test, whereas, Mann-Whitney and Kruskal-Wallis tests have been used for comparative analysis among the groups. Sensitivity and specificity have been assessed by 95% credibility interval. P digit <0.05 has been reviewed statically reliable. SPSS statistical software V20.0 have been used for all types of statical process.

Results.

Having interpreted the immunohistochemical study results, relevant subtypes have been detected in every group based on percentage expression of immunocompetent cells, the percentage distribution of the expression grade of markers in CD3, CD4, CD8 subtypes took place as follows:

- Marker expression in low grade (0-2%).
- Mean grade (3-8%).
- High grade - (9>).

Out of the studied ovarian serous borderline tumor (n=15), CD3 low expression was observed in 46.6% of the cases; moderate expression was observed in 53.5%; no high expression was revealed. Low expression of CD4 was observed in 40% of the cases; moderate expression in 60%; no high expression was revealed. Low expression of CD8 was observed in 80% of the cases; moderate expression in 20%; no high expression was revealed.

Out of the cases of low-grade ovarian serous carcinoma (n=15) low expression of CD3 was revealed in 33.3% of the cases; moderate expression in 46.6%; high expression in 53.3%-□□. Low expression of CD4 was observed in 40.0% of the cases; moderate expression in 53.3%; no high expression was revealed. Low expression of CD8 was seen in26.6% of the cases, moderate expression in 53.3%; high expression in 20-%.

Out of the studied high-grade ovarian serous carcinoma (n=15) No low expression of CD3 was observed; moderate expression was revealed in 53.3% of the cases, high expression in 53.3%. Low expression of CD4 was observed in 66.6% of the cases; moderate expression in 33.3%; no high expression was observed. No low expression of CD8 was observed in any cases; moderate expression in 46.6%; high expression in 53.3-%.

The studied ovarian mucinous borderline tumors (n=15) showed low expression of CD3- in 73.6% of the cases; moderate expression in 26.6%; No high expression was observed. Low expression of CD4 was shown in 60% of the cases; moderate expression in 40%; No high expression was observed. Low expression of CD8 was observed in 80% of the cases; moderate expression in 20.0%. No high expression was observed.

Out of the studied ovarian mucinous carcinoma (n=15) Low expression of CD3was observed in 33.3% of the cases; moderate expression in 66.6%; No high expression was observed. Low expression of CD4 was observed in 73.3% of the cases; moderate expression in 26.6%; No high expression was observed. Low expression of CD8 was observed in 20% of the cases; moderate expression in 33.3%; high expression in 46.3% (Figure 1).

Comparison of research results.

In cases of serous borderline tumor of the ovary with a low level of CD3 (0-2%) expression is 1.57 times lower compared to ovarian mucinous borderline tumor; Moderate degree (3-8%) expression is 2 times higher; Low level (0-2%) expression of CD4 0-66 times less compared to ovarian mucinous tumor. Moderate quality (3-8%) expression is 0.6 times higher; Low and moderate expression of CD8 is similar to mucinous borderline tumor. Moderate (3-6%) expression is 0.6 times higher.

In serous borderline tumors of the ovary – low level of expression of CD3 0,7 times more compared to low-grade serous carcinoma of the ovary. Moderate expression is twice as high. Low expression of CD4 in the serous borderline tumors is 1.1 time less then low-grade ovaries serous carcinomas. Moderate expression is 1.1 times higher; CD8 low expression is 3.0 times higher in cases of serous borderline tumors compared to low-grade serous carcinomas of the ovary. Moderate expression 2,6 yet less (Figure 2).

Low CD3 in cases of low-grade serous carcinoma of the ovary high expression is observed in 33.3%, while there was no low expression in high-grade serous carcinomas. Moderates

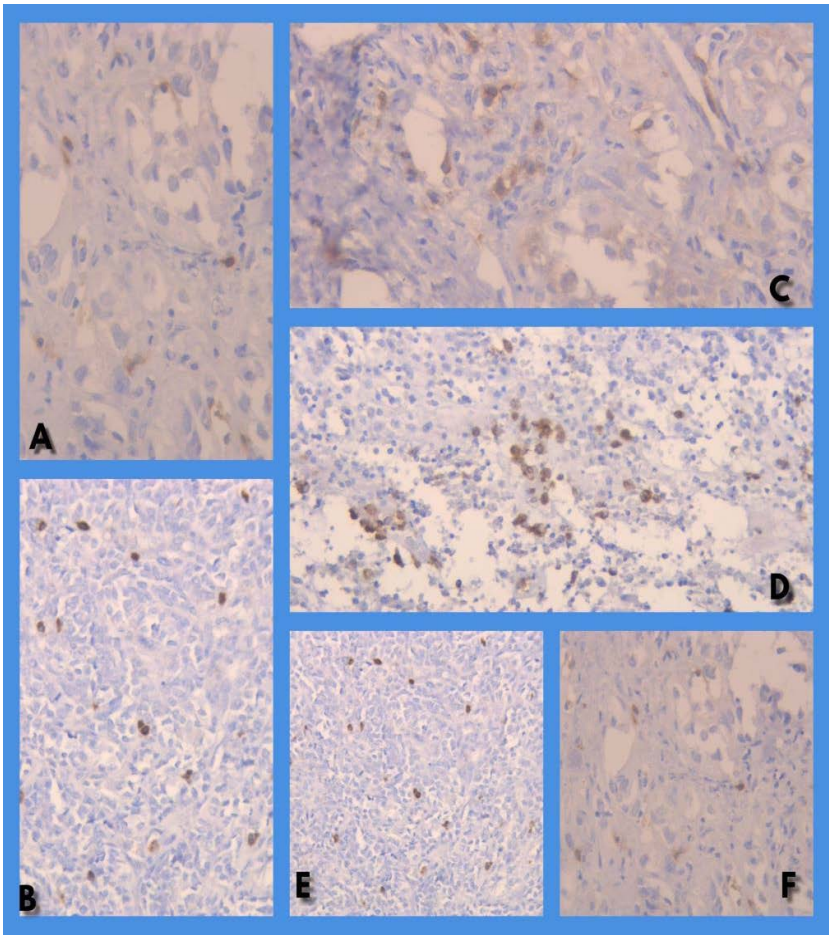

Figure 1. *Ovarian mucinous carcinoma.*
A. IHC/200x: of CD3 moderate expression in High- grade ovarian serous carcinoma.
B. IHC/200x: of CD8 high expression in High- grade ovarian serous carcinoma.
C. IHC/200x: of CD4 moderate expression in Ovarian mucinous carcinoma.
D. IHC/200x: of CD8 high expression in Law- grade ovarian serous carcinoma.
E. IHC/200x: of CD3 moderate expression in Law- grade ovarian serous carcinoma.
F. IHC/200x: of CD3 moderate expression in Ovarian mucinous carcinoma.

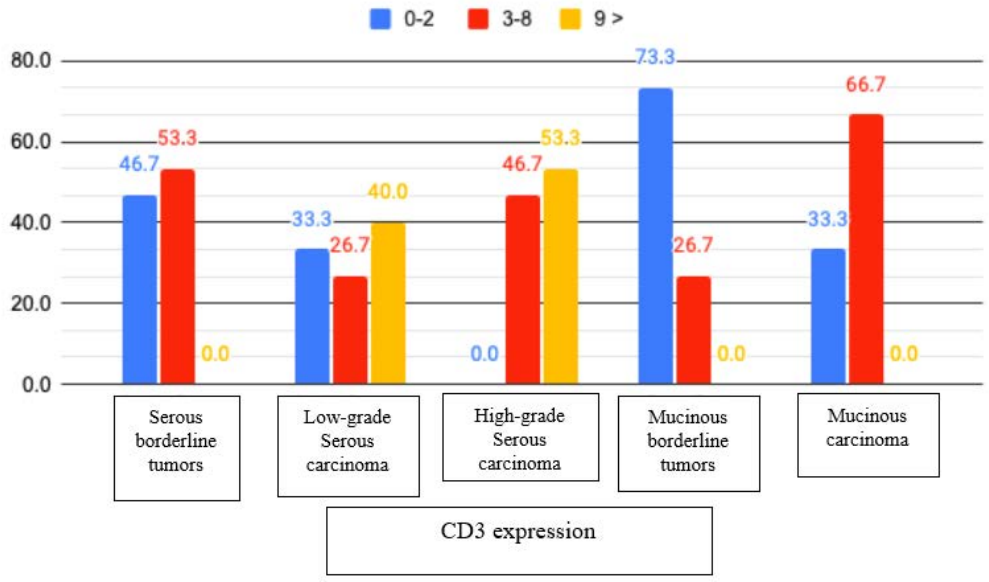

Figure 2. *CD3 expression in Ovarian mucinous carcinoma.*

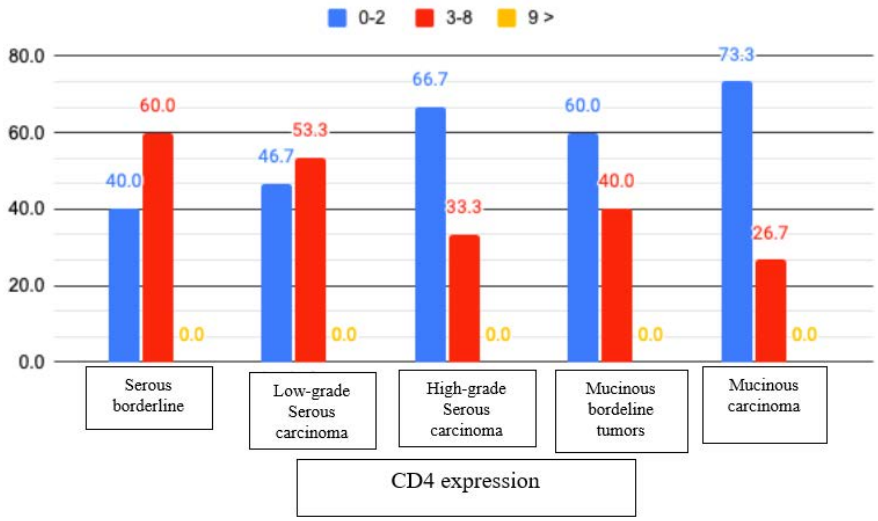

Figure 3. *CD4 expression in Ovarian mucinous carcinoma.*

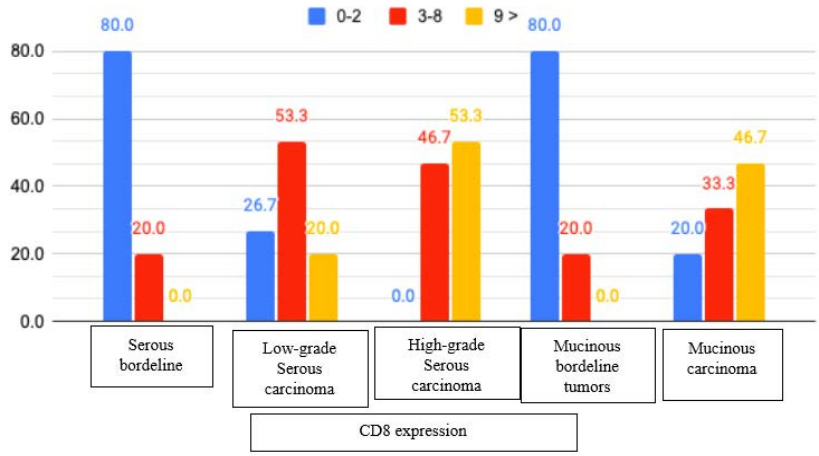

Figure 4. *CD8 expression in Ovarian mucinous carcinoma.*

Table 1. *Percentage distribution of cases in accordance with the expression of markers in CD3, CD4, CD8 subtypes.*

	CD3	**CD3**	**CD3**	**CD4**	**CD4**	**CD4**	**CD8**	**CD8**	**CD8**
	0-2	3-8	9>	0-2	3-8	9>	0-2	3-8	9>
Ovarian serous borderline tumors	46.7	53.3	0.0	40.0	60.0	0.0	80.0	20.0	0.0
Law- grade ovarian serous carcinoma	33.3	26.7	40.0	46.7	53.3	0.0	26.7	53.3	20.0
High- grade ovarian serous carcinoma	0.0	46.7	53.3	66.7	33.3	0.0	0.0	46.7	53.3
Ovarian mucinous borderline tumors	73.3	26.7	0.0	60.0	40.0	0.0	80.0	20.0	0.0
Ovarian mucinous carcinoma	33.3	66.7	0.0	73.3	26.7	0.0	20.0	33.3	46.7

expression is 1.7 times higher in high-grade serous carcinomas. High expression was noted 1.3 in more cases, high-grade serous carcinomas are low-grade unlike carcinomas. Low expression of CD4 in the ovary in low-grade serous carcinomas it is 0.6 times less than in high-grade serous carcinomas compared to carcinomas. Moderate expression is 1.6 more than low-grade in serous carcinomas. Moderate expression of CD8 is 1.1 times higher than serous in low-grade carcinomas compared to high-grade carcinomas. High expression is 0.3 times less than in low-grade serous carcinomas in contrast to high-grade serous carcinoma (Figure 3).

In cases of mucinous tumor of the ovary, low expression of CD3 is 2.2 times more compared to ovarian mucinous carcinoma. Moderate expression in mucinous borderline tumor it is 0.3 less than in mucinous carcinoma. Low expression of CD4 is 1.2 times higher in cases of mucinous carcinoma. Moderate expression is 1.5 times higher in mucinous tumors than in mucinous carcinomas. Low level of CD8 expression in mucinous borderline tumors 4 times it is higher compared to mucinous carcinoma. In mucinous carcinomas moderate expression is 1.6 times more than in mucinous borderline tumors (Figure 4).

Conclusion.

The research results show that T lymphocytes and it's subpopulations quantitative assessment of statistically reliable correlation of different tumors it does not show in relation to histological type which could be the reason tumor intratumor heterogeneity and individual specificity.

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