GEORGIAN MEDICAL NEWS

ISSN 1512-0112

NO 1 (370) Январь 2026

ТБИЛИСИ - NEW YORK

ЕЖЕМЕСЯЧНЫЙ НАУЧНЫЙ ЖУРНАЛ

Медицинские новости Грузии

საქართველოს სამედიცინო სიახლენი

GEORGIAN MEDICAL NEWS

Monthly Georgia-US joint scientific journal published both in electronic and paper formats of the Agency of Medical Information of the Georgian Association of Business Press. Published since 1994. Distributed in NIS, EU and USA.

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.

GEORGIAN MEDICAL NEWS
NO 1 (370) 2026

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GEORGIAN MEDICAL NEWS
No 1 (370) 2026

THE ROLE OF SURGICAL INTERVENTION IN THE MULTIMODAL TREATMENT OF BREAST CANCER IN OLDER WOMEN

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Abstract.

Breast cancer is a leading cause of cancer morbidity and mortality among women, with an increasing proportion of older patients. This population exhibits significant heterogeneity in health status, complicating treatment decisions. Surgical intervention remains a cornerstone of multimodal therapy for localized disease. This narrative review aims to clarify its role in older patients by synthesizing and discussing key contemporary evidence from the literature (2015-2025). Findings indicate that chronological age alone is not a contraindication to surgery. With careful patient selection, including comprehensive geriatric assessment (CGA), surgical treatment can be performed safely with acceptable outcomes. For biologically favorable tumors, de-escalation strategies (e.g., breast-conserving surgery, limited axillary procedures) are viable. Conversely, unjustified omission of surgery in aggressive disease worsens survival. Thus, treatment must be individualized, integrating CGA, comorbidity burden, functional status, and tumor biology rather than relying on age.

Key words. Breast cancer, older age, surgical treatment, comorbidity, geriatric assessment, treatment de-escalation.

Introduction.

Breast cancer incidence is highest among older women, a demographic expanding due to increased life expectancy and population aging [1-3]. This group is markedly heterogeneous in terms of functional capacity, comorbidity burden, tumor biology, and life expectancy, which poses significant challenges in selecting an optimal therapeutic strategy.

Traditional challenges in treating older patients include a high prevalence of comorbidities, increased risk of therapy toxicity, and underrepresentation in clinical trials. This often results in either overtreatment, disregarding frailty, or unjustified treatment de-intensification, potentially compromising oncologic outcomes.

Despite advances in systemic and radiation therapy, surgery remains a key component of curative-intent treatment for localized breast cancer. However, clinical practice often shows a decrease in surgical utilization with advancing age without robust justification. Contemporary evidence suggests that with appropriate preoperative risk assessment, surgery can be safe and effective even in very old patients [4,5]. Concurrently, the concept of individualized treatment de-escalation is evolving, aiming to reduce invasiveness without sacrificing oncologic efficacy for suitable candidates [6-11].

Thus, defining the optimal role of surgery in the multimodal treatment of older women with breast cancer, balancing radicality and safety, is a critical task in modern oncology. This review aims to synthesize current evidence to guide surgical strategy selection in this population.

Aim of the study. To define the optimal role and strategies for surgical intervention within the multimodal treatment of breast cancer in older women through a narrative literature review.

Materials and Methods.

This work is a narrative (descriptive) review of the literature. Its purpose is to analyze and summarize current knowledge and debates regarding the role of surgical intervention in the multimodal treatment of breast cancer in older women.

To identify relevant publications, a focused search was conducted in the PubMed/MEDLINE, Scopus, and Web of Science databases for the period from January 2015 to January 2025. The search utilized key terms and their combinations: "breast cancer," "elderly," "older women," "geriatric oncology," "surgical treatment," "geriatric assessment," "CGA," and "de-escalation."

Priority in selection was given to original studies (cohort studies, clinical trials), authoritative reviews, and seminal papers that most comprehensively address the core themes of this review: survival outcomes, the impact of age-related biases on treatment selection, surgical de-escalation strategies, quality of life, and the role of comprehensive geriatric assessment (CGA).

To provide a clear and structured comparative analysis, four recent and methodologically robust studies were selected as illustrative examples. These studies cover distinct age subgroups and central aspects of the problem, offering a representative snapshot of the current research landscape [1,3-5]. Their comparative analysis is presented in Table 1. The findings and conclusions of this review are further supported and contextualized by the analysis of other relevant publications identified during the search.

Main Section.

To structure the discussion and facilitate comparison of different perspectives, we focus on four key illustrative studies that represent major themes in contemporary research [1,3-5]. Their comparative analysis is presented in Table 1. The following synthesis is based on the analysis of these and other relevant publications identified for this review.

Survival and Oncological Outcomes:

The study by Di Lascio et al. (2021) provides crucial insights into managing very old patients (≥89 years) [1]. In their retrospective analysis of 58 women, surgery was performed in 85% of cases, with a median overall survival of approximately 76 months. Survival differed drastically based on disease stage: 14 months for metastatic versus about 50 months for non-metastatic

Table 1. *Comparative analysis of key studies illustrating different approaches to surgical treatment in older breast cancer patients.*

Aspect of Comparison	Di Lascio et al., 2021	Balachandran & Kalsi, 2022	Kosáč et al., 2024	Burgmann et al., 2025	Comparative Insight / Trend
Age Group	≥89 years (oldest old)	≥65–70 years (review, "older patients")	≥80 years ("very old")	>60 years ("older and elderly")	Covers the entire spectrum of older age, from "young old" to the oldest old, highlighting specific considerations for each subgroup.
Design & Primary Focus	Retrospective cohort; survival outcomes	Narrative review; impact of age on treatment selection	Retrospective cohort; surgical management and outcomes	Retrospective cohort; health-related quality of life (HRQoL)	Combines original outcome data with a conceptual review, allowing assessment of both real-world results and systemic challenges (e.g., ageism).
Key Finding on Surgery	Surgery is feasible and effective even at age ≥89.	Treatment decisions should be based on status, not age.	De-escalation (breast-conserving surgery) is safe with proper selection.	Emphasizes balancing treatment efficacy with quality of life.	Consensus: Surgery remains a cornerstone. Its extent and aggressiveness should be guided by a comprehensive assessment (CGA, tumor biology, comorbidities), not chronological age.
Role of CGA	Not explicitly evaluated.	Recommended as the foundation for decision-making.	General patient status considered.	Instrumentally applied (validated indices).	Shows an evolution: from no explicit mention to strong recommendation and practical application in the most recent studies.
De-escalation Approach	De facto (low rate of adjuvant therapy).	Central theme discussed.	Implemented surgical and adjuvant de-escalation.	Considered through the lens of treatment tolerability.	De-escalation is a central modern paradigm but requires strict patient selection criteria.
Quality of Life Assessment	No.	No.	No.	Primary endpoint of the study.	Quality of life is emerging as a critically important outcome measure in the latest research.

disease. Notably, most patients did not receive adjuvant therapy, yet 14% experienced recurrence. This underscores the complexity of balancing treatment efficacy and tolerability in advanced age and highlights the necessity of an individualized approach that integrates functional status, comorbidities, and patient preferences to avoid adverse outcomes.

Impact of Age on Treatment Selection:

Balachandran and Kalsi (2022) emphasize that chronological age should not be the primary determinant of therapy in the absence of objective clinical contraindications [3]. Their review identifies biases leading to the underutilization of standard treatments and exclusion from clinical trials for older patients. The authors argue that many older women can tolerate and benefit from standard therapies, including surgery, provided a careful risk assessment is conducted. They advocate for treatment decisions guided by comprehensive geriatric assessment (CGA) and multidisciplinary discussion, focusing on functional and cognitive status rather than age alone.

Surgical Approaches and Treatment De-escalation:

Kosáč et al. (2024) analyzed surgical management in patients aged ≥80 years [4]. In their cohort of 102 very old patients, breast-conserving surgery was performed in 63 cases, with sentinel lymph node biopsy as the predominant axillary procedure. Most tumors were of luminal molecular subtypes. Adjuvant therapy was used cautiously: endocrine therapy in 82 patients, radiotherapy in 49, and chemotherapy in only 9. Local recurrence rates were low. Of 37 deaths, only 10 were breast cancer-related, with cardiovascular disease being a common cause. This study illustrates that tailored surgical de-escalation is safe and effective in selected very old patients with favorable tumor biology, while comorbidity management remains paramount.

Quality of Life and Geriatric Assessment:

Burgmann et al. (2025) evaluated health-related quality of life (HRQoL) in patients >60 years [5]. Their retrospective analysis of 276 patients demonstrated that chemotherapy significantly worsened HRQoL, whereas endocrine therapy was better tolerated. The application of geriatric assessment tools (Barthel Index, Charlson Comorbidity Index) provided valuable insights into treatment tolerability. This study underscores that integrating HRQoL assessment and CGA into clinical decision-making is essential for optimizing the balance between treatment efficacy and preservation of well-being in older patients.

This table provides a side-by-side comparison of four recent, illustrative studies that highlight central considerations in the management of older patients, such as age subgroups, treatment strategies, and the role of geriatric assessment.

Conclusion.

The management of breast cancer in older women necessitates a highly personalized strategy. Comprehensive Geriatric Assessment (CGA) is an indispensable tool for this purpose, moving beyond chronological age to evaluate biological

reserve, functional independence, comorbidity burden, and socio-cognitive factors.

Surgical intervention maintains a pivotal role in the multimodal treatment of localized disease. CGA helps identify patients who will benefit from standard surgical approaches with acceptable risk, as well as those for whom de-escalation strategies (e.g., breast-conserving surgery, omission of axillary dissection) are oncologically safe. Crucially, unjustified avoidance of surgery in patients with aggressive tumor biology should be avoided, as it compromises survival outcomes.

Ultimately, integrating CGA into routine oncologic practice enables a nuanced balance between achieving optimal cancer control and preserving quality of life. Treatment decisions should be guided by a synthesis of tumor biology, geriatric status, and patient preferences, ensuring that older women receive neither excessive nor insufficient therapy.

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