GEORGIAN MEDICAL MEWS

ISSN 1512-0112

NO 9 (354) Сентябрь 2024

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 computer-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. მიკროფოტო-სურათების წარწერებში საჭიროა მიუთითოთ ოკულარის ან ობიექტივის საშუალებით გადიდების ხარისხი, ანათალების შეღებვის ან იმპრეგნაციის მეთოდი და აღნიშნოთ სუ-რათის 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 7-8 (352-353) 2024

Содержание:

USAGE OF SILVER NANOPARTICLES TO RESTORE MOXIFLOXACIN EFFICACY FOR FLUOROQUINOLONE-RESISTANT M.TUBERCULOSISCULTURES
Kien Tran, Hung Kieu DInh, Ha Duong Dai, Tan Hoang Minh, Van Hoang thi Hong, Trang Nguyen Thi Huyen, Mai Bui Thi. EFFECTIVENESS IN INDIRECT DECOMPRESSION USING MINIMALLY INVASIVE SURGERY – TRANSFORAMINAL LUMBAR INTERBODY FUSION IN SINGLE-LEVEL LUMBOSACRAL SPONDYLOLISTHESIS
Yuriy Prudnikov, Olha Yuryk, Mykhailo Sosnov, Anatoliy Stashkevych, Stepan Martsyniak. USE OF ARTIFICIAL INTELLIGENCE IN THE DIAGNOSIS AND TREATMENT OF ORTHOPEDIC DISEASES: LITERATURE REVIEW
Blerta Latifi-Xhemajli. EFFECTIVENESS OF XYLITOL TOOTHPASTE IN CARIES PREVENTION: A REVIEW ARTICLE
Bukia Nato, Machavariani Lamara, Butskhrikidze Marina, Svanidze Militsa, Siradze Mariam. ELECTROMAGNETIC STIMULATION REGULATES BLOOD CORTICOSTERONE LEVELS IN IMMOBILIZED RATS: GENDER DIFFERENCES
Arnab Sain, Urvashi Ghosh, Jack Song Chia, Minaal Ahmed Malik, Nauman Manzoor, Michele Halasa, Fahad Hussain, Hamdoon Asim, Kanishka Wattage, Hoosai Manyar, Ahmed Elkilany, Anushka Jindal, Justin Wilson, Nadine Khayyat, Hannah Burton, Wilam Ivanga Alfred, Vivek Deshmukh, Zain Sohail, Nirav Shah.
RECENT TRENDS IN THE USE OF CELL SALVAGER FOR ORTHOPAEDIC TRAUMA AND ELECTIVE SURGERIES-A NARRATIVE REVIEW
Yu.V. Boldyreva, D.G. Gubin, I.A. Lebedev, E.V. Zakharchuk, I.V. Pashkina. ANALYSIS OF BLOOD PARAMETERS IN TYUMEN RESIDENTS WITH COVID-19 IN CATAMNESIS AND/OR VACCINATED AGAINST A NEW CORONAVIRUS INFECTION. 45-48
Abuova Zh.Zh, Buleshov M.A, Zhaksybergenov A.M, Assilbekova G, Mailykaraeva A.A. THE STUDY OUTCOMES OF THE NEGATIVE IMPACT OF HEXACHLOROCYCLOHEXANE ON VEGETOVASCULAR REGULATION OF NEWBORNS' CARDIAC RHYTHM
Rostomov Faizo E, Sashkova Angelina E, Kruglikov Nikita S, Postnova Elina V, Nasirov Said F.O, Barinova Olga V, Repina Anastasiia F, Kodzokova Farida A, Abdulmanatov Magomedemin K, Dzhamalova Asiiat M. THE ROLE OF PSYCHOLOGICAL STRESS IN THE DEVELOPMENT OF ESSENTIAL ARTERIAL HYPERTENSION IN ELDERLY PEOPLE
Hamdoon Asim, Arnab Sain, Nauman Manzoor, Marium Nausherwan, Minaal Ahmed Malik, Fahad Hussain, Mohammad Bilal, Haris Khan, Amir Varasteh, Anushka Jindal, Mohammad Zain Sohail, Nadine Khayyat, Kanishka Wattage, Michele Halasa, Jack Song Chia, Justin Wilson. THE PREVALENCE OF SARCOPENIA AND ITS EFFECTS ON OUTCOMES IN POLYTRAUMA
Sergo Kobalava, Mikheil Tsverava, Eteri Tsetskhladze. CHRONIC HEART FAILURE WITH PRESERVED LEFT VENTRICLE EJECTION FRACTION (HFPEF) AND RIGHT VENTRICLE INVOLVEMENT IN PATIENTS WITH NORMAL SINUS RHYTHM AND ATRIAL FIBRILLATION; A SMALL OBSERVATIONAL STUDY: RELEVANCE OF THE PROBLEM, DIAGNOSTIC APPROACH, ECHOCARDIOGRAPHIC EVALUATION OF RIGHT VENTRICLE
Sergey V. Osminin, Fedor P. Vetshev, Ildar R. Bilyalov, Marina O. Astaeva, Yevgeniya V. Yeventyeva. PERIOPERATIVE FLOT CHEMOTHERAPY FOR GASTRIC CANCER: A RETROSPECTIVE SINGLE-CENTER COHORT TRIAL75-81
Iskandar M. Alardi, Abbas AA. Kadhim, Ali SM. Aljanabi. PERONEUS LONGUS (PL) AUTOGRAFT IN ANTERIOR CRUCIATE LIGAMENT RECONSTRUCTION AS ALTERNATIVE GRAFT OPTION
Chayakova Akerke, Aiman Musina, Aldanysh Akbolat. TRENDS IN EMERGENCY MEDICAL CALLS BEFORE AND AFTER COVID-19 IN KAZAKHSTAN
Lipatov K.V, Komarova E.A, Solov'eva E.I, Kazantcev A.D, Gorbacheva I.V, Sotnikov D.N, Voinov M.A, Avdienko E.V, Shevchuk A.S, Sarkisyan I.P. MORE ON DEEP HEMATOMAS IN PATIENTS WITH COVID-19: CASE SERIES
Ling-Ling Zhou, Chu-Ying Gao, Jing-Jin Yang, Yong Liang, Lian-Ping He. CURRENT SITUATION AND COUNTERMEASURES OF TALENT TEAM CONSTRUCTION IN THE FIELD OF GRASSROOTS PUBLIC HEALTH
Arnab Sain, Urvashi Ghosh, Michele Halasa, Minaal Ahmed Malik, Nauman Manzoor, Jack Song Chia, Hamdoon Asim, Nadine Khayyat, Kanishka Wattage, Hoosai Manyar, Ahmed Elkilany, Anushka Jindal, Justin Wilson, Fahad Hussain, Hannah Burton, Wilam Ivanga Alfred, Vivek Deshmuk, Zain Sohail, Nirav Shah.
USE OF TANTALUM CUP IN TOTAL HIP ARTHROPLASTY-A NARRATIVE REVIEW

Oula E. Hadi, Eman Hashim Yousif. HISTOLOGICAL EXAMINATION OF THE EFFECT OF URANIUM ON UDDER CELLS
Tchernev G, Pidakev I, Lozev I, Warbev M, Ivanova V, Broshtilova V. DERMATOLOGIC SURGERY: ROTATION ADVANCEMENT FLAP AS FIRST LINE TREATMENT FOR HIGH-RISK SQUAMOUS CELL CARCINOMAS OF THE PERIOCULAR/PERIORBITAL ZONE- PRESENTATION AND DISCUSSION ABOUT 2 NEW CASES
Osminina M.K, Podchernyaeva N.S, Khachatryan L.G, Shpitonkova O.V, Velikoretskaya M.D, Chebysheva S. N, Polyanskaya A.V, Gugueva E. A. STROKE AS A LIFE-THREATENING COMPLICATION IN CHILDREN WITH LINEAR SCLERODERMA OF FACE
D. Elgandashvili, Al. Kalantarov, T. Gugeshashvili. MAYER–ROKITANSKY–KUSTER–HAUSER SYNDROME. LAPAROSCOPIC SIGMOID VAGINOPLASTY FOR THE TREATMENT OF VAGINAL AGENESIS - SINGLE CENTER EXPERIENCE IN GEORGIA-CASE REPORT
Gocha Chankseliani, Merab Kiladze, Avtandil Girdaladze, Omar Gibradze. SUCCESSFUL EMERGENCY ARTERIAL EMBOLIZATION FOR MASSIVE GASTRODUODENAL BLEEDING IN HIGH-RISK PATIENT: CASE REPORT
Dildar MM. Mostafa, Mohammed T. Rasool. PREVALENCE OF OSTEOPOROSIS IN PATIENTS WITH RHEUMATOID ARTHRITIS IN IRAQI KURDISTAN /DUHOK GOVERNORATE
Arustamyan Makich, Guseynova Susanna V, Tyulekbayeva Diana, Tkhakokhova Liana A, Krivosheeva Yana V, Vasilev Semen A, Abbasova Zeinab I, Ponomareko Nadezhda O, Ismailova Sabina Z, Zakaev Israpil I. COMPARATIVE ANALYSIS OF HEPATOPROTECTORS IN WISTAR RATS WITH EXPERIMENTALLY INDUCED METABOLICALLY ASSOCIATED FATTY LIVER DISEASE
Jin Wu, Lan-Xi Wu, Kun Yan, Jun-You Li, Tao-Xiang Niu. ALOPECIA AREATA PROFILING SHOWS LNCRNAS REGULATE THE SUPPRESSED EXPRESSION OF KERATIN
Chkhaidze B, Loria L. EVALUATION OF THE FUNCTIONAL CHARACTERISTICS OF THE UNIVERSAL HEALTHCARE PROGRAM BY MEDICAL PERSONNEL IN TBILISI
Osminina M.K, Podchernyaeva N.S, Khachatryan L.G, Shpitonkova O.V, Polyanskaya A.V, Chebysheva S.N, Velikoretskaya M.D. JOINT LESIONS – COMMON EXTRACUTANEOUS MANIFESTATION IN JUVENILE LOCALIZED SCLERODERMA165-172
Haval J. Ali, Zeki A. Mohamed, Dana A. Abdullah. HEALTH-RELATED QUALITY OF LIFE IN CHRONIC MYELOID LEUKAEMIA PATIENTS RECEIVING LONG-TERM THERAPY WITH DIFFERENT TYROSINE KINASE INHIBITORS IN KURDISTAN REGION
Arnab Sain, Ahmed Elkilany, Minaal Ahmed Malik, Nauman Manzoor, Nadine Khayyat, Hoosai Manyar, Michele Halasa, Jack Song Chia, Fahad Hussain, Hamdoon Asim, Kanishka Wattage, Anushka Jindal, Justin Wilson, Hannah Burton, Wilam Ivanga Alfred, Vivek Deshmukh, Zain Sohail.
THE USE OF ANKLE BLOCK FOR ACUTE ANKLE FRACTURE REDUCTION: A REVIEW OF CURRENT LITERATURE181-183
Megrelishvili Tamar, Mikadze Ia, Kipiani Nino, Mamuchishvili Nana, Bochorishvili Tea, Imnadze Tamar, Pachkoria Elene, Ratiani Levan. CLINICAL MANIFESTATION AND EPIDEMIOLOGICAL PECULIARITIES OF LEPTOSPIROSIS AT THE MODERN STAGE IN GEORGIA
Raikhan Bekmagambetova, Zulfiya Kachiyeva, Zhanat Ispayeva, Ildar Fakhradiyev, Maia Gotua, Roza Kenzhebekova, Aiganym Tolegenkyzy, Kristina Kovaleva, Gulbarash Turlugulova, Aigerim Zhakiyeva, Nazgul Janabayeva, Kunsulu Rysmakhanova. GENETIC ASSOCIATIONS WITH ASTHMA IN THE KAZAKH POPULATION: A CASE-CONTROL STUDY FOCUSING ON ACTN3 AND TSBP1 POLYMORPHISMS
Farah Saleh Abdul-Reda, Mohammed AH Jabarah AL-Zobaidy. EFFECTIVENESS AND TOLERABILITY OF APREMILAST IN TREATMENT OF A SAMPLE OF PATIENTS WITH PSORIASIS195-198
Emma Gevorkyan, Ruzanna Shushanyan, Karine Hovhannisyan, Marietta Karapetyan, Anna Karapetyan. ASSESSMENT OF CHANGES IN HEART RATE VARIABILITY INDICES OF STUDENTS AFTER COVID-19 LOCKDOWN: A COHORT STUDY
Alharbi Badr, Alwashmi Emad, Aloraini Abdullah Saleh, Almania Ali Ibrahim, Alsuhaibani Ali Abdullah, Aloraini Husam Yosuf, Alhwiriny Abdullah Nasser, Altwairgi Adil Khalaf. PERCEPTION OF UROLOGY SPECIALTY AND FACTORS INFLUENCE ITS CONSIDERATION AS A CAREER CHOICE AMONG MEDICALSTUDENTS
Tamuna Dundua, Vladimer Margvelashvili, Manana Kalandadze, Sopio Dalalishvili. THE ORAL HEALTH STATUS AND PREVENTIVE MEASUREMENTS FOR CANCER PATIENTS213-217

DERMATOLOGIC SURGERY: ROTATION ADVANCEMENT FLAP AS FIRST LINE TREATMENT FOR HIGH-RISK SQUAMOUS CELL CARCINOMAS OF THE PERIOCULAR/PERIORBITAL ZONE- PRESENTATION AND DISCUSSION ABOUT 2 NEW CASES

Tchernev G^{1,2}, Pidakev I³, Lozev I³, Warbev M³, Ivanova V³, Broshtilova V⁴.

¹Onkoderma- Clinic for Dermatology, Venereology and Dermatologic Surgery, General Skobelev 26, 1606 Sofia, Bulgaria.

²Department of Dermatology and Venereology, Medical Institute of Ministry of Interior, General Skobelev 79, 1606, Sofia, Bulgaria.

³Department of Common, Abdominal and Vascular Surgery, Medical Institute of Ministry of Interior, General Skobelev 79, 1606, Sofia, Bulgaria.

⁴Department of Dermatology and Venereology, Medical Military Academy, Sofia, Bulgaria.

Abstract.

Rotation advancement flaps are a challenge for dermatosurgery and in particular the severe clinical cases, mainly affecting skin tumors in the facial area or the so-called "high risk areas". The proximity of these areas to important vital structures (such as nerves and blood vessels) also determines the need for more precision when performing this type of manipulation. Teamwork and preoperative planning are crucial and provide a number of advantages in terms of the timely achievement of the therapeutic endpoints. We present two cases of patients with squamous cell carcinomas in the periocular and periorbital areas treated by rotation advancement flaps. The problems that may arise within these interventions and the prerequisites for the latter to be successful are discussed.

Key words. Dermatologic surgery, high risk areas, rotation advancement flap, skin cancer, cemiplimab, squamous cell carcinoma.

Introduction.

The surgical treatment of scalp and forehead located cutaneous tumors remains a major challenge for dermatosurgeons and plastic reconstructive surgeons [1-3]. This is mainly due to the limited possibilities of defect closure due to the lack of sufficient skin and skin elasticity, which necessitates the application of more serious reconstructive flaps of rotation, rotation-advancement or transposition type [4-6].

Complementary or adjuvant options such as radiotherapy [7], preoperative therapy with cemiplimab/ pembrolizumab and cetuximab [8,9] or vismodegib [10], and chemotherapy [11] remain an alternative option that could lead to tumour shrinkage and facilitate the tasks of dermatosurgeons subsequently. However, these options are not mandatory but could be thoroughly discussed with the treating staff and tailored to the patients' wishes.

We present an interesting case of a patient with an epithelial skin tumor in the area of the right eyebrow treated surgically by rotation-advancement flap.

A second case is presented with periorbital/peri- and palpebral located keratinocyte cancer, treated surgically again.

Case report 1.

We report a 66-year-old patient presenting for the first time to the Dermatosurgery Unit of our Hospital for a skin formation localized in the area immediately above the right eyebrow (Figure 1a). Approximately one month ago, the same lesion was operated on in another clinic, and histopathological results were suggestive of a squamous, non-keratinizing carcinoma with a high degree of malignancy: immunohistochemical testing for cytokeratins, p63 and EMA was positive, G3. Resection margins laterally and in depth were involved. Clinically, the tumor formation is endophytic/exophytic in growth and 3 cm by 1.5 cm in size, soft elastic in consistency, not adherent to the underlying tissues, but poorly mobile on attempted displacement in either direction (Figure 1a). Without secretion, very painful on pressure. The patient was admitted for surgical treatment due to suspected locoregional recurrence of squamous cell carcinoma of the skin in the facial area (Figure 1b).

Regarding the anamnestic data there were no comorbidities and concomitant medication. Laryngeal carcinoma was operated a year ago and there is additional clinical/ anamnestic/ evidence of familial lipomatosis involving mainly the upper extremities and partly the trunk area.

The laryngeal carcinoma was operated by total laryngectomy/ in toto, without lymph node involvement (disectio colli bilateralis selectiva), and a tracheostomy was available at the time of hospitalization. Histopathological findings of laryngeal carcinoma were suggestive of a well-differentiated squamous cell carcinoma with abundant keratin formation, G1, infiltrating the laryngeal cartilage. On this occasion, the patient was under regular follow-up in an oncology unit.

After disinfection of the surgical field, an oval excision of 0.6 cm of the tumor formation in depth to the periosteum (Figure 1c) was performed under general anesthesia. After careful haemostasis, it was decided to undermine initially and after that rotate the flap, the upper edge of which was 7 cm from the right eyebrow, and the lower edge running parallel to 1 cm above the upper left eyebrow, with the incision actually reaching its lateral margin (Figures 1d & 1e). The arc of the upper edge of the flap extended to the upper helix of the left auricle. After thorough undermining of the flap, its transposition forward and slight rotation followed to cover the defect created within the tumor excision (Figure 1d). The excess skin tissue was resected and the edges adapted by single skin sutures (Figure 1f). An optimal aesthetic result was achieved (Figure 1g).

Histopathological findings were confirmatory of the initial diagnosis, with tumour size determined to be 45mm by 20mm. Lateral resection lines clear, single tumor cells reaching the muscle fascia, stage 3 (pT3N0M0).

Case report 2.

We report an 85-year-old female patient with a history of complaints for about a year, the most recent being the appearance and relatively rapid growth of a tumor formation around her right eye (Figure 2a). During the emergency examination, a

© *GMN* 116



Figure 1a. Tumor recurrence of histologically proven SCC in the area above the right eyebrow.

- Figure 1b. Preoperative preparation- marking of resection lines.
- Figure 1c. Defect in the forehead area occurring after oval excision of the tumor.
- Figure 1d. Upper arc of the surgical incision when performing advancement rotation flap.
- Figure 1e. Staged undermining of the scalp and stoppage of bleeding.
- Figure 1f. Postoperative finding after placement of the advancement rotation flap and 2 drains.

Figure 1g. Postoperative day 4 after drain removal.

periorbital/peripalpebral localized tumor formation measuring 5.8 by 6 cm, circumscribing the orbicularis oculi as a belt, as well as the upper eyelid area beyond the orbit (Figure 2a) was found. There was also a centrally localized area with a small ulceration and a mild necrotic area with dried bloody discharge present as a tract from the center of the tumor at 15:00 (Figure 2a). Clinical findings were suggestive of an epithelial cutaneous tumor with periorbital/periocular localization (Figure 2a). As comorbidities, non-insulin-dependent diabetes mellitus, arterial hypertension, aortic aneurysm (from previous epicrises) and permanent dyspnea were known.

Paraclinical data war mostly in reference values, CT scan (performed on an emergency basis) with evidence of a soft tissue tumour measuring approximately 55 by 65mm, with an uneven surface, patchy structure and small gas collections ventrally consistent with tissue degradation. After contrast enhancement, the formation increases inhomogeneously in density. The right eyebulb was normal in shape and size and preserved in structure. In conclusion, it is a tumour formation with evidence of upper eyelid tissue disintegration, without evidence of infiltration of the eye bulbus and orbital structures as well as of the cranial bones. A normal CT image of the brain corresponding to age.

Surgical intervention under intravenous anaesthesia was undertaken. The tumor lesion was removed as an oval excision, and bleeding was stopped with an electrocautery and single subcutaneous resorbable sutures (Figure 2b). The entire right eyebrow and upper eyelid were resected, and the eyebulbus and cartilage were carefully prepared (Figure 2b). Similarly to the case presented above (case 1), an arc-shaped incision was made starting from the right temporal area and directed towards the scalp, with a 6 cm turn reaching the preauricular area on the left (Figures 2c & 2d).

The second incision was made starting at the medial orbital angle, across the back of the nose (transversal) and just above the right eyebrow, with its end reaching 1 cm below the lateral orbital angle on the left (Figure 2e). The skin flap between these 2 arches was carefully flapped in a stepwise fashion, and bleeding (from the peripheral areas, but also from the flap itself) was stopped with an electrocautery knife. The flap was gently rotated and transposed anteriorly (Figure 2e), with the left portion fixed with single skin sutures to the skin of the right temporal area (Figures 2f & 2g). This was followed by a stepwise adaptation of the skin with single skin sutures along each of the two arches (resection arches of the flap: superior and inferior) (Figures 2f & 2g).



Figure 2a. Tumor recurrence of histologically proven SCC in the area above the right eyebrow.

- Figure 2b. Preoperative preparation- marking of resection lines.
- Figure 2c. Defect in the forehead area occurring after oval excision of the tumor.
- Figure 2d. Upper arc of the surgical incision when performing advancement rotation flap.
- Figure 2e. Staged undermining of the scalp and stoppage of bleeding.
- Figure 2f. Postoperative finding after placement of the advancement rotation flap and 2 drains.

Figure 2g. Postoperative day 4 after drain removal.

An area in the shape of a triangle was cut in the lateral part of the flap for better adaptation, rotation/transposition of the skin and decrease in tension during fixation/adaptation of the skin over the right eyelid/right ocular bulbus (Figure 2e). Scalpel reduction of the tissue / thickness of the flap / was carried out for better fit over the upper eyelid / periocular area (Figure 2f). Two drains were installed and fixed.

A good postoperative result was achieved (Figures 2f & 2g). The histopathological result showed: Skin, subcutaneous and soft tissue involved by keratinizing highly differentiated (G1) squamous cell carcinoma infiltrating deep to the adnexae and fascia, stage 2 (T3N0M0R1). An oncology committee discussion

was planned regarding the subsequent discussion about the additional diagnostic and therapeutic options. A systemic therapy with Cemiplimab/pembrolizumab was planned.

Discussion.

Defects in the forehead and periorbital area are extremely difficult to correct, adapt and obtain a satisfactory final aesthetic result. Facial asymmetry, proximity of the resection lines to the angular veins, necrosis of a particular transposed area/flap or postoperative permanent paralysis, infection or even mortality occurring within the surgical interventions are some of the main factors that make the dermatosurgeon as cautious as possible [12,13].

Mohs surgery is one of the options for adequate treatment of skin cancer in facial areas [14]. This type of surgery requires certain preparation [15]. The first step in this type of surgery is to remove the tumor and ensure tumor cell-free resection areas [14,15]. The second step involves reconstruction of the face to achieve an optimal aesthetic result [16]. Most often, these steps are performed by plastic reconstructive surgeons and/or experienced dermatosurgeons [14-16].

The correction of defects by a certain type of plastic surgery largely overlaps with cosmetic surgery as a technique, the differences being mainly due to the fact that in the direct performance of skin flap, the rapid intraoperative evaluation of the resection lines is lacking [17,18].

The volume of the surgery, the total duration and the type of anaesthesia are all determining factors for the number of people involved. Attention should also be paid to the fact that a major surgical intervention in the facial area could change the very appearance of the patient in one direction or another, his visual identity [19]. The efforts after such rotation, transposition, advancement or combination flaps should be directed to a large extent to the preservation of the patient's individual vision [20,21]. The final result after this kind of surgery requires sometimes up to a year to obtain a real final evaluation of the vision postoperatively. Within this period, it is possible to carry out a variety of additional corrections: from minor surgical manipulations in the form of adaptation of the edges, to intralesional application of corticosteroids or laser resurfacing for keloids for example [21-23]. This depends on the individual patient's wishes, general clinical condition, age and general prognosis according to the stage of the disease (with or without evidence of dissemination).

Corrections of postoperative defects are corrected depending on the localization and volume and range from: primary repair, healing by secondary intention, skin grafting, to - flap reconstruction for a specific area [24,25].

The periocular, periorbital and orbito-palpebral areas are dangerous due to the high risk of complications [26-29].

Locoregionally advanced or not advanced cutaneous tumors in high-risk facial areas, such as the periocular and oculopalpebral zones, for example, require a rapid therapeutic/ surgical response [30-32] because tumor progression occurs unexpectedly rapidly [33,34] or similarly to the patients we presented.

The good news in the patients we have presented is that 1) there is no involvement of the cartilage that makes up the eyelids, as well as the nerves in the immediate vicinity (permanent neurological deficits/need for an eye surgeon) (Figure 2a) and 2) there is no involvement of the frontal bone below the tumor, in the forehead area (need for a neurosurgeon on the team) (Figure 1a). These facts largely give freedom to the surgical team in choosing one or another technique and reduce the degree of complexity of the intervention.

Relapses in squamous cell carcinomas of the skin could be multifactorial. Perineural and lymphovascular invasion, poor tumor cell differentiation, tumor size greater than 2 cm, tumor invasion beyond the dermis, and immunosuppression could be reported as determinants of local recurrence and metastasis [35-38]. Locally advanced or locoregionally

advanced inoperable squamous cell carcinomas of the skin raise again the question: would postoperative therapy with pembrolizumab and cemiplimab [39] not be a good solution? In PD-L1-positive tumors, there was an objective response rate (ORR) of 55% to pembrolizumab, while PD-L1- staining tumors had an ORR of only 17% to pembrolizumab [40,41]. This makes immunohistochemical evaluation of infiltrates extremely important, especially when dealing with patients whose resection lines are not clear of tumor cells.

Rotation flaps remain a major challenge for dermatosurgeons and dermatologists in general. Preservation of flap circulation along the course of the artery temporalis superficialis, frontal branch, is and remains crucial. It is because of this factor that it is important that the superior arc of the incision is well situated (Figures 1f,1g & 2f,2g), so as not to disrupt the integrity of the artery. The latter should supply blood to the flap or, preferably, the surgical incision should pass over the artery. The advancement flap should contain the artery within itself, and this is ensured by the wider arc of the upper surgical incision. The ramus frontalis of the arteria temporalis superficialis should be preserved.

The non-involvement of this branch within the operation ensures the good postoperative results seen in patient 1 (1g,1g).

A similar result was achieved in patient 2 (2f,2g), but followup of the final aesthetic result was not possible.

Immunohistochemical testing for the marker (PD-L1) was recommended at another institution with a view to possibly starting systemic therapy with pembrolizumab or cemiplimab.

Expression of this marker (PD-L1) 1) on the one hand correlates with disease progression/risk of developing local metastases, nodal recurrence, tumor diameter, histological grade and tumor thickness [42-44].

On the other hand, 2) the identification of similar histologic markers in the tissue could have tremendous prognostic value regarding future targeted therapy [45,46].

Cemiplimab and pembrolizumab are in fact a new such advanced option in locally advanced squamous cell carcinomas of the skin, including periocularly localized ones [46-48]. With good PD-L1 expression in the patient we described in number 2, the drugs (cemiplimab/ pembrolizumab) could also be considered as a good therapeutic alternative to avoid reoperation.

The rotation advancement flaps remain a priority option for scalp reconstruction after removal of heterogeneous skin tumors even in cases where Mohs surgery is used [49].

Although rare, this type of flap repair could be applied repeatedly and simultaneously, in different combinations, in order to correct defects in the scalp area in a single surgical session [50].

Rotational advancement flaps remain one of the most reliable treatment options for defects in the forehead, brow and around the periorbital area.

The rapid and adequate performance of this type of manipulation requires the presence of several dermatologists/surgeons, with or without the presence of a plastic surgeon as well, in order to 1) minimize profuse blood loss, 2) reduce the duration of general anesthesia, and 3) demonstrate an acrybic knowledge of the anatomy of the region.

REFERENCES

- 1. Cherukuri S, Zheng E, Guerin J, et al. Accuracy of Preoperative Imaging in Assessing the Positivity of the Deep Periosteal Margin in Dermatofibrosarcoma Protuberans of the Scalp. J Craniofac Surg. 2024
- 2. Çağli HB, Ateşşahin FB, Menderes A, et al. Question Mark Reconstruction Method for Synchronous Multiple Tumor Defects in the Scalp. J Craniofac Surg. 2024.
- 3. Faenza M, Molle M, Mazzarella V, et al. Functional and Aesthetic Comparison between Grafts and Local Flaps in Non-Melanoma Skin Cancer Surgery of the Face: A Cohort Study. JPRAS Open. 2024;42:97-112.
- 4. Boro S, Bannoth S, Rahman T, et al. Patient Reported Outcomes of Scalp and Forehead Reconstruction for Defects Following Oncological Resections (North-East Indian Tertiary Cancer Centre Study). Indian J Otolaryngol Head Neck Surg. 2022;74:449-455.
- 5. Ebrahimi A, Nejadsarvari N, Ebrahimi A. Reconstructions of Small Scalp Defects with Step Flap. J Cutan Aesthet Surg. 2017;10:106-108.
- 6. Cöloğlu H, Ozkan B, Sener M, et al. The management of non-melanocytic skin malignancies of the scalp and calvarium. Indian J Plast Surg. 2014;47:36-42.
- 7. Xing D, Hettige S, Chee LYS, et al. Curative Radiotherapy for Locally Advanced Scalp Squamous Cell Carcinoma. Cureus. 2021;13:e18514.
- 8. Stratigos AJ, Garbe C, Dessinioti C, et al. European consensus-based interdisciplinary guideline for invasive cutaneous squamous cell carcinoma: Part 2. Treatment-Update 2023. Eur J Cancer. 2023;193:113252.
- 9. Potestio L, Scalvenzi M, Lallas A, et al. Efficacy and Safety of Cemiplimab for the Management of Non-Melanoma Skin Cancer: A Drug Safety Evaluation. Cancers (Basel). 2024;16:1732.
- 10. Sol S, Boncimino F, Todorova K, et al. Therapeutic Approaches for Non-Melanoma Skin Cancer: Standard of Care and Emerging Modalities. Int J Mol Sci. 2024;25:7056.
- 11. Denic S. Preoperative treatment of advanced skin carcinoma with cisplatin and bleomycin. Am J Clin Oncol. 1999;22:32-4.
- 12. Woodard CR. Complications in facial flap surgery. Facial Plast Surg Clin North Am. 2013;21:599-604.
- 13. Hatef DA, Weathers WM, Wolfswinkel EM, et al. Avoidance and management of complications in soft tissue facial reconstruction. Semin Plast Surg. 2013;27:121-5.
- 14. Prickett KA, Ramsey ML. Mohs Micrographic Surgery. [Updated 2023 Jul 25]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2024.
- 15. Vuyk HD, Lohuis PJ. Mohs micrographic surgery for facial skin cancer. Clin Otolaryngol Allied Sci. 2001;26:265-73.
- 16. Cumberland L, Dana A, Liegeois N. Mohs micrographic surgery for the management of nonmelanoma skin cancers. Facial Plast Surg Clin North Am. 2009;17:325-35.
- 17. Tchernev G, Kordeva S, Lozev I. Giant basal cell carcinoma of the scalp: rotation advancement flap as a successful dermatosurgical approach. Dermatol Reports. 2023;15:9664.
- 18. Lozev I, Pidakev I, Batashki I, et al. Karapandzic flap as most adequate surgical approach for squamous cell carcinoma of the lower lip. Dermatol Reports. 2022;14:9439.

- 19. Lee EH, Klassen AF, Lawson JL, et al. Patient experiences and outcomes following facial skin cancer surgery: A qualitative study. Australas J Dermatol. 2016;57:e100-4.
- 20. Vaidya TS, Mori S, Dusza SW, et al. Appearance-related psychosocial distress following facial skin cancer surgery using the FACE-Q Skin Cancer. Arch Dermatol Res. 2019;311:691-696.
- 21. van Egmond S, Wakkee M, Hoogenraad M, et al. Complex skin cancer treatment requiring reconstructive plastic surgery: an interview study on the experiences and needs of patients. Arch Dermatol Res. 2022;314:25-36.
- 22. Cohen JL. Minimizing skin cancer surgical scars using ablative fractional Er:YAG laser treatment. J Drugs Dermatol. 2013;12:1171-3.
- 23. Trisliana Perdanasari A, Lazzeri D, Su W, et al. Recent developments in the use of intralesional injections keloid treatment. Arch Plast Surg. 2014;41:620-9.
- 24. Boyce DE, Shokrollahi K. Reconstructive surgery. BMJ. 2006;332:710-2.
- 25. Chhabra S, Chhabra N, Kaur A, et al. Wound Healing Concepts in Clinical Practice of OMFS. J Maxillofac Oral Surg. 2017;16:403-423.
- 26. Laplant J, Cockerham K. Primary Malignant Orbital Tumors. J Neurol Surg B Skull Base. 2021;82:81-90.
- 27. Goh LY, Downie C, Morley AMS. A novel integrated practice unit approach to peri-ocular skin cancer management. Eye (Lond). 2024;38:1779-1780.
- 28. Prídavková Z, Bieliková A, Ferková N, et al. RECURRENT PERIOCULAR BASAL CELL CARCINOMA. CASE REPORT. Cesk Slov Oftalmol. 2021;77:208-213.
- 29. Moran JM, Phelps PO. Periocular skin cancer: Diagnosis and management. Dis Mon. 2020;66:101046.
- 30. Tchernev G, Ivanov L. MUSTARDE ROTATION FLAP AS ADEQUATE OPTION FOR HIGH-RISK BCC NEAR THE LOWER EYE LID: THE ADDITIONAL INTAKE OF N-NITROSO-FOLIC-ACID AND N-NITROSO-RIVOROXABAN AS COFACTORS/TRIGGERS OF THE METABOLIC REPROGRAMMING OF THE FUTURE CANCER CELL. Georgian Med News. 2024;351:131-137.
- 31. Tchernev G, Dimova D. PERIOCULAR HIGH RISK BCCS AFTER ADDITIONAL/PARALLEL INTAKE OF TORASEMIDE, MOXONIDINE AND MIRABEGRON: IMPORTANT LINKS TO SKIN CANCER RELATED (PHOTO-) NITROSOGENESIS IN THE CONTEXT OF PHARMACO-ONCOGENESIS. Georgian Med News. 2024;347:70-76.
- 32. Tchernev G, Lozev I, Pidakev I, et al. High-Risk BCC Of the Lower Eyelid in Patient with Presternal Located Cutaneous Melanoma and BCC Of the Shoulder: Melolabial Advancement Flap Combined with Undermining Surgical Approach As Promising Complex One Step Treatment Option! Open Access Maced J Med Sci. 2018;6:2147-2151.
- 33. Tchernev G, Lotti T, Lozev I, et al. Peri and Intraocular Mutilating Advanced Squamous Cell Carcinoma: "Monsters Inside Your Body"? Open Access Maced J Med Sci. 2018;6:132-133.
- 34. Tchernev G, Lotti T, Lozev I, et al. Locally Advanced Basal Cell Carcinoma with Intraocular Invasion. Open Access Maced J Med Sci. 2018;6:126-127.

- 35. Brantsch KD, Meisner C, Schönfisch B, et al. Analysis of risk factors determining prognosis of cutaneous squamous-cell carcinoma: a prospective study. Lancet Oncol. 2008;9:713-20.
- 36. Clayman GL, Lee JJ, Holsinger FC, et al. Mortality risk from squamous cell skin cancer. J Clin Oncol. 2005;23:759-65.
- 37. Mullen JT, Feng L, Xing Y, et al. Invasive squamous cell carcinoma of the skin: defining a high-risk group. Ann Surg Oncol. 2006;13:902-9.
- 38. Rowe DE, Carroll RJ, Day CL Jr. Prognostic factors for local recurrence, metastasis, and survival rates in squamous cell carcinoma of the skin, ear, and lip. Implications for treatment modality selection. J Am Acad Dermatol. 1992;26:976-90.
- 39. Yan F, Schmalbach CE. Updates in the Management of Advanced Nonmelanoma Skin Cancer. Surg Oncol Clin N Am. 2024;33:723-733.
- 40. Jiang R, Fritz M, Que SKT. Cutaneous Squamous Cell Carcinoma: An Updated Review. Cancers (Basel). 2024;16:1800.
- 41. Maubec E, Boubaya M, Petrow P, et al. Phase II Study of Pembrolizumab As First-Line, Single-Drug Therapy for Patients With Unresectable Cutaneous Squamous Cell Carcinomas. J Clin Oncol. 2020;38:3051-3061.
- 42. Slater NA, Googe PB. PD-L1 expression in cutaneous squamous cell carcinoma correlates with risk of metastasis. J Cutan Pathol. 2016;43:663-70.
- 43. García-Pedrero JM, Martínez-Camblor P, Diaz-Coto S, et al. Tumor programmed cell death ligand 1 expression correlates with nodal metastasis in patients with cutaneous squamous cell carcinoma of the head and neck. J Am Acad Dermatol. 2017;77:527-533.

- 44. Kamiya S, Kato J, Kamiya T, et al. Association between PD-L1 expression and lymph node metastasis in cutaneous squamous cell carcinoma. Asia Pac J Clin Oncol. 2020;16:e108-e112.
- 45. Lobl M, Grinnell M, Phillips A, et al. The Correlation Between Immunohistochemistry Findings and Metastasis in Squamous Cell Carcinoma: A Review. Dermatol Surg. 2021;47:313-318.
- 46. Hughes BGM, Munoz-Couselo E, Mortier L, et al. Pembrolizumab for locally advanced and recurrent/metastatic cutaneous squamous cell carcinoma (KEYNOTE-629 study): an open-label, nonrandomized, multicenter, phase II trial. Ann Oncol. 2021;32:1276-1285.
- 47. Potestio L, Scalvenzi M, Lallas A, et al. Efficacy and Safety of Cemiplimab for the Management of Non-Melanoma Skin Cancer: A Drug Safety Evaluation. Cancers (Basel). 2024;16:1732.
- 48. Proietti I, Filippi L, Tolino E, et al. Supraorbital Basosquamous Carcinoma Treated with Cemiplimab Followed by Sonidegib: A Case Report and Review of the Literature. Biomedicines. 2023;11:2903.
- 49. Lindemann CB, Miladi A, Ortiz K. Dermatofibrosarcoma Protuberans in "Slow Mohs-tion": Multidisciplinary Approach of A Pediatric Dermatofibrosarcoma Protuberans of the Scalp with Slow Mohs Micrographic Surgery and A Double Rotational-Advancement Scalp Flap. J Craniofac Surg. 2024;35:e479-e480.
- 50. Lozev I, Chernin S, Kandathil LJ, et al. Giant advanced SCC of the scalp with cranial bone invasion: Surgical removal and simultaneous defect closure with several rotation advancement flaps. J Eur Acad Dermatol Venereol. 2022;36:e791-e792.