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Latin America Cutaneous Oncology Management (LACOM) I: The Role of Skin Care in Oncology Patients and Survivors

Daniel Alcalá Pérez MD,[a] Ana Sofia Acosta Madiedo MD ,[b] Sebastian Andreani MD,[c] Anneke Andriessen PhD,[d] Hebert Cárdenas MD,[e] Marcela Moreno MD,[f] Daniel Motola Kuba MD,[g] Julia Riganti MD,[h] José Enrique Ollague MD,[i] Mario Lacouture MD FAAD,[j] Alejandra Toquica MD[k]

[a]Mexican Society of Dermatology, Mexico City, Mexico ; Centro Dermatológico Dr. Ladislao de la Pascua, Mexico City, Mexico
[b]Mount Sinai Medical Center, Miami Beach, FL, USA
[c]Dermatology Department, Universidad del Desarrollo, Facultad de Medicina Clínica Alemana, Santiago, Región Metropolitana, Chile
[d]Radboud UMC, Andriessen Consultants, Malden, The Netherlands
[e]Instituto Peruano de Energia Nuclear, Peru
[f]Jefe Oncodermatologia instituto oncologico Alexander Fleming, Argentina
[g]Medica Sur Hospital, Onology Center, Mexico City, Mexico
[h]Hospital General Guasmo Sur, Ministry of Health. Guayaquil, Ecuador
[i]Hospital General Guasmo Sur, Ministry of Health. Guayaquil, Ecuador
[j]NYU- Langone, Long Island, NY, USA
[k]Oncodermatology Department, Hospital Universitario San Ignacio, Fundacion CTIC, Bogotá, Colombia

ABSTRACT

Background: Cancer-treatment-related cutaneous adverse events (cAEs) are common and may severely impact quality of life (QoL) and decrease treatment outcomes. The Latin American Cutaneous Oncology Management (LACOM) project provides clinical insights into cancer-treatment-related cAEs, offering tools for preventing and managing cAEs.

Methods: LACOM I focuses on integrating education, prophylactic measures, and skincare in cancer treatment to improve treatment adherence, outcomes, and patients' and survivors' QoL.

Results: The LACOM panel provides evidence and opinion-based best practice recommendations for oncology skincare programs to support all stakeholders in the Latin American healthcare setting (Argentina, Chili, Colombia, Ecuador, Panama, Peru, and Mexico) working with oncology patients throughout the entire continuum of care to achieve optimal outcomes, improving cancer patients and survivors' QoL. Oncology skincare programs comprise hygiene, moisturization, and sun protection with products that should be safe and help to minimize cAEs and improve skin conditions.

Conclusions: Integrating education, general measures, and skincare programs into cancer treatment should encourage the adoption of a proactive role of skincare from the beginning of treatment and ongoing, supporting optimal outcomes and improving cancer patients' and survivors' QoL.

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INTRODUCTION

Socioeconomic development is associated with cancer's prevalence and distribution. According to the GLOBOCAN Estimates of Incidence and Mortality Worldwide, the estimated incidence rate (ASR) for males and females in South America and the Caribbean in 2020 was 199.1 and 178.8, respectively, and 186.5 combined. The age-standardized mortality rate was 98.1, 78.2, and 86.5 for males, females, and both sexes combined.[1] The 5 most common types of cancers, excluding Non-melanoma skin cancer, for women were breast, colorectal, cervical, thyroid, and lung, and prostate, colorectal, lung, stomach, and bladder for men.[1] For females in Argentina, Chile, Colombia, Panama, and Mexico, breast cancer was the most common type, whereas for Peru and Ecuador, cervical cancer leads.[1] Argentina's estimated ASR is 215 cases per 100,000 people, 211 for Chile, 153 for Colombia, 125 for Ecuador, 135 for Panama, 126 for Peru, and 139 for Mexico.[1] Cultural differences in diet, smoking, obesity, behavior and lifestyle, and socioeconomic factors have all been reported to differ by ethnicity and have significant effects on cancer incidence and mortality rates.[1] Although incidence continues to increase, advancements in therapy have contributed to an increase in survival and prevalence; now, more than ever, patients are living with cancer.[1] The increase in survival has led to a rise in patients living with cutaneous adverse events (cAEs) or sequelae of cancer treatments.[2-10] Several treatment

options are available depending on the disease type and stage, including surgery, radiation, transplantation, chemotherapy, immunotherapy, hormonal therapy, or combinations. Many cancer treatments can be related to cAEs, including pruritus, xerosis, papulopustular eruptions, paronychia, periungual inflammation, palmoplantar lesions, changes in tactile exchange, and alopecia.[2-10] Almost 70% of patients report that cAEs are worse than their initial beliefs.[7] Cancer treatment-related cAEs can alter a patient's self-image, affect interpersonal relationships, and be disfiguring.[2-10] Some cAEs are severe enough to warrant temporary or permanent discontinuation of cancer treatment.[2-10] Despite high prevalence, cAEs often do not get the medical attention needed to prevent their recurrence, as physicians may focus on the tumor's clinical response and life-threatening AEs.[3,4]

Attention to prevention, and early and correct diagnosis ruling out life-threatening cAEs can improve patients' QoL, cancer treatment adherence, and outcomes.[2-10] Studies have shown that early education on preventive measures and using skincare products benefits patients and significantly reduces cAEs.[5,6]

Why This Project?

The LACOM project provides clinical insights into cancer-treatment-related cAEs. The LACOM panel aims to provide evidence and opinion-based best practice recommendations for oncology skincare programs to support all stakeholders in LATAM healthcare settings (Argentina, Chili, Columbia, Ecuador, Panama, Peru, and Mexico) working with oncology patients throughout the entire continuum of care to achieve optimal outcomes, improving cancer patients and survivors' QoL. The LACOM project is supported by a member of the US Cutaneous Oncodermatology Management (USCOM) project to share experience.

MATERIALS AND METHODS

The LACOM project used a modified Delphi technique for interactive decision-making. The LACOM panel of 9 dermatologists/ clinicians who treat cAEs developed, discussed, and reached a consensus on evidence and opinion-based best practice recommendations for oncology skincare programs aiming to support all stakeholders in the LATAM healthcare setting working with oncology patients and cancer survivors such as Medical oncologists, Radiation Oncologists, Family practice/internal medicine specialists, Dermatologists, Oncology nurses, Advanced Practice Providers (Nurse Practitioners/ Physician Assistants), Pharmacists.

The process entailed preparing the project, selecting the panel, and conducting scoping literature searches. The panel met on December 16, 2023, in Mexico City to discuss the literature review results addressing non-prescription skincare for prevention, treatment, and maintenance of cAEs and discussed, adopted, and agreed on 5 statements using evidence coupled with the expert opinion and experience of the panel. Online, the panel finetuned, prepared, and reviewed the publication.

Literature Review

The LACOM panel explored clinical insights in addressing cAEs in oncology patients focusing on skincare regimens involving hygiene, moisturization, sun protection, and camouflage products. AA searched PubMed and Google Scholar (secondary source) for articles in the English and Spanish languages published from 2010 to November 2023 describing current best practices for cAEs using skincare in LATAM countries. We included clinical studies, reviews, consensus papers, guidelines, algorithms, and reviewed titles and abstracts, followed by the complete publication. Publications not dealing with skin care for cAEs or published in a language other than English or Spanish were excluded; for search terms, see Table 1. First, we searched the LATAM population (group 1), which resulted in little information on cAEs; followed by searches expanded beyond the LATAM population (Group 2). N=120 papers were included (Group 1: n=12 LATAM* epidemiology papers) and (Group 2: n=108 papers). The n=39 clinical studies included case series from LATAM countries that did not include skincare (Figure 1).

Clinical Evidence and Opinion-Based Recommendations

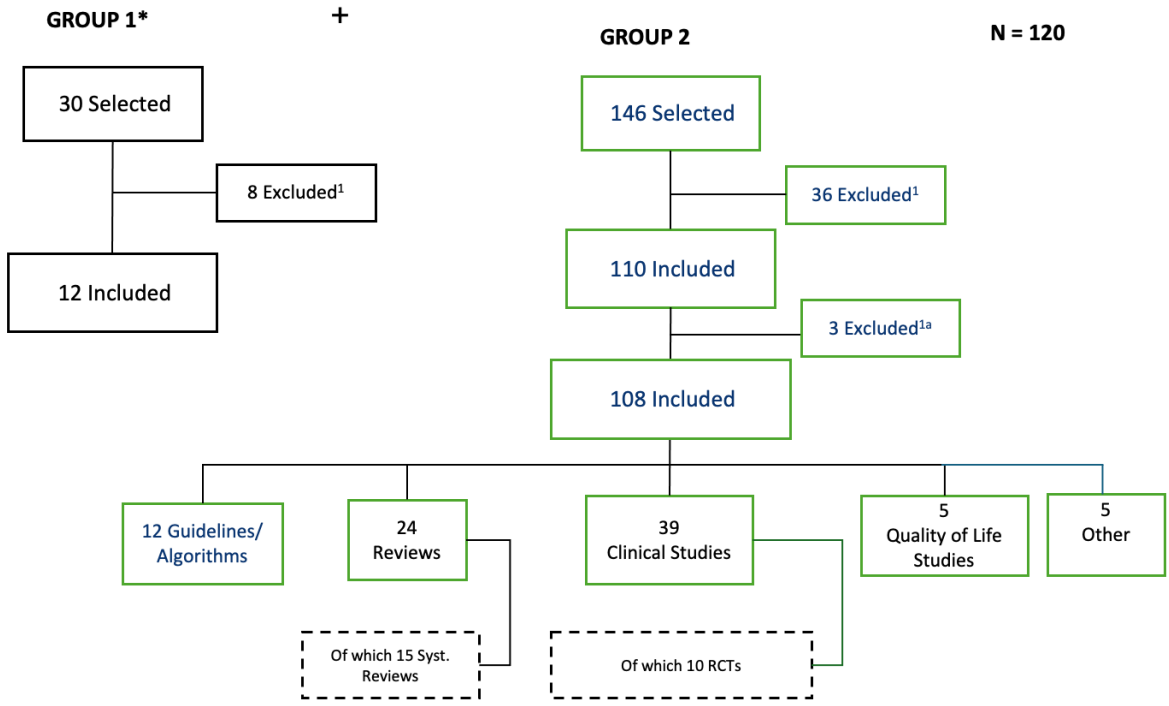
The literature review results informed fifteen statements drafted by AA and MLC before the meeting. During the meeting, the LACOM advisors set and finetuned 5 statements to explain to their peers the importance of detecting cAEs early and using

TABLE 1.

Terms Used for the Literature Searches	
Group 1	**Group 2**
Incidence of cancer in the Latin American population* Types of cancer and their treatment (radiotherapy, chemotherapy, targeted therapy, immunotherapy, hormonal therapy) Cancer-treatment-related cutaneous adverse events (cAEs) Mortality rates and 5-year survival.	cAEs* AND Radiation treatment; OR* chemotherapy; OR* targeted therapy; OR* immunotherapy; OR* Hormonal treatment; OR* Health-related quality of life; OR* skincare and prevention; OR* skincare and treatment; OR* adjunctive skincare; OR* non-prescription skincare; OR* skincare adherence, concordance; OR* skincare efficacy, safety, tolerability, skin irritation OR* staff and patient education.

*Argentina, Chili, Columbia, Ecuador, Panama, Peru, and Mexico
Cutaneous adverse events (cAEs)

FIGURE 1. Literature search results.



*Group 1:LATAM population, Group 2: General population. Systematic reviews (Syst reviews), Randomized controlled trials (RCTs).

a skincare regime to improve patient outcomes through the prevention and management of cancer treatment-related cAEs.

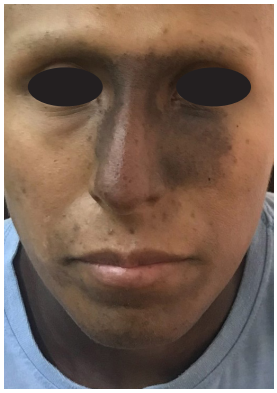
Statement 1: *An increasing number of patients are living with cancer and are suffering from skin changes or sequela of cancer treatments, which can severely impact patients' QoL and interfere with cancer treatment outcomes.*

With the increase in survival rates over the past decades for breast and prostate cancer due to early diagnosis, effective treatment, and enhanced preventative measures, not only are more patients living with cancer, but also surviving the treatment AEs, which can be disabling.[11-15] The cAEs depend on the cancer and treatment type, with xerosis and pruritus commonly reported in all oncology treatments.[2-10] Radiation therapy causes direct damage (acute radiation dermatitis [ARD]) to the area where it is administered, affecting 1 in 4 patients and depending on the dose administered and the schedule.[3] Mild ARD presents with desquamation, erythema, and pruritus; moderate ARD has more intense erythema with desquamation, particularly in skin folds and creases, easy bleeding, and pruritus (Figure 2); severe ARD shows spontaneous bleeding, with severe pain and ulceration.[10] Chronic RD presents severe dermatitis, altered pigmentation, telangiectasia, and necrosis.

FIGURE 2. Patient with head and neck cancer presenting with acute radiation dermatitis.

Chemotherapy disrupts cell cycle phases in the rapidly dividing cancer cells; AEs are systemic and are not limited to the area treated but occur on uninvolved organs.[7] The most common chemotherapy-related cAEs are reversible or permanent alopecia (Figure 3).[7] A study found that 58% of patients considered chemotherapy-induced hair loss to be the most distressing side effect, and 8% of patients would refuse chemotherapy due to

FIGURE 3. Patient with head and neck cancer presenting with targeted therapy-related seborrheic dermatitis.



their fear of losing their hair.[7] Other chemotherapy-related cAEs are hand and foot syndrome (HFS), onycholysis, periarticular thenar erythema, oychomelanosis, and phototoxicity.[3] These reactions can take a toll on the patient's well-being due to physical and emotional discomfort, especially the loss of hair and the appearance of the nails.[7]

Targeted therapies interfere with regulatory molecules involved in cancer cell growth; these include trametinib, cobimetinib, vemurafenib, and dabrafenib.[3-5,7,12] Those that target BCR-ABL can cause edema, hypopigmentation, morbilliform rashes, and dermatitis, whereas those that target VEGF/PDGF cause HFS, stomatitis, hair changes, seborrheic dermatitis, splinter hemorrhages and for sorafenib, squamous cell carcinomas.[3-5,7,12] EGFR/MEK targeted immunotherapy causes papulopustular eruptions, paronychia, pruritus, and xerosis, Hedgehog targeted therapy causes alopecia, muscle spasms, and dysgeusia, and RAF targeted therapies can cause keratinocytes or melanocytes proliferation, HSF, KP-like eruptions, and photosensitivity (Figure 3).[3-5,7,12] HFS can be categorized into 3 grades: grade 1 comprises erythematous palms, especially around finger pads, or yellow hyperkeratotic plaques on pressure-bearing areas of the soles; grade 2 involves erythematous palms with desquamation and tense bullae; finally, grade 3 shows painful and severe skin abnormalities with significant limitations in self-care and daily activities. HFS and hyperkeratosis may be treated with vaseline and betamethasone ointment in the evening, and moisturizers and skin-repairing balms should be prioritized.[3-5,7,12]

Papulopustular eruptions caused by EGFR/MEK targeted therapy can occur in up to 45-100% of patients. It usually occurs on the scalp, face, and upper trunk, characterized by follicular-based papules and pustules that become crusted, with an onset at 8-10 days and a resolution after 8-10 weeks post-treatment.[3-5,7,12] Cancer treatment may be stopped by 32% of oncologists due to rash alone interfering with treatment efficacy.[12] Papulopustular eruptions should be treated with corticosteroids in the absence

FIGURE 4. Patient with head and neck cancer presenting with targeted therapy-related seborrheic dermatitis.

of bacterial infection; tetracyclines may be warranted, and non-occlusive moisturizers are encouraged.[3-7,9,12]

Immunotherapy activates the patient's immune mechanism by blocking immune suppressing pathways; these include Anti PD1, PD-L1, LAG-3 and Anti CTLA-4.[13-15] Common immunotherapy-related cAEs include eczematoid, lichenoid, psoriasiform, eruptions, vitiligo, and bullous pemphigoid.[13-15] Several other conditions like pyoderma gangrenous diseases, non-specific rashes, Grover's disease, dermatitis herpetiformis, prurigo nodularis, vasculitis, dermatomyositis, sarcoidosis, sweet's syndrome keratoacanthomas, squamous cell carcinomas, erythema nodosum like panniculitis, urticaria, AGEP, DRESS, SJS and TEN have also been reported (Figure 4).[13,14]

Hormonal therapy, ie, for breast and prostate cancer, may cause flushing, xerosis, vulvovaginal dryness, atrophy, and alopecia.[3] Xerosis and pruritus are frequently occurring cAEs, and can be devastating for patients and potentially lead to secondary infection; treatment with second-generation antihistamines and non-occlusive moisturizers and photoprotection is encouraged. Avoiding corticosteroids and focusing on moisturizers and ethyl-cyanoacrylate adhesives for cracks on soles is recommended. Clinicians may minimize cAEs by using adequate skincare to maintain a healthy skin barrier.

Statement 2: *Effective management of cAEs is a multidisciplinary effort involving medical oncologists, radiation oncologists, dermatologists, and oncology nurses. It should also include the patient, family, and palliative care teams.*

Providing a multispecialty approach to treatment, including dermatologic care, is effective, but despite this knowledge, up to 84% of cancer survivors with cAEs are not referred to dermatologists.[15] Timely intervention by a dermatologist trained in treating cAEs for cancer patients is critical to prevent cancer treatment interruptions.[3] Tools that can facilitate this include telemedicine or virtual consultations, which connect patients in need with trained dermatologists through portals, remote monitoring, and patient education, particularly useful for LATAM, where access to a specialized dermatologist is scarce.

Statement 3: *Evidence and opinion-based best practice recommendations about education and proper skin care may help optimize skin health and quality of life in patients undergoing active cancer treatment and cancer survivors.*

Evidence supports that optimizing skin health in conjunction with cancer treatment improves QoL and adherence to treatment.[4,6,9,16-18,21] Non-adherence to treatment leads to suboptimal results and prognosis.[4,6,9,16-18,21] Skincare products comprise ingredients that improve skin condition beyond the vehicle effects by restoring barrier function and alleviating symptoms.[16] A study evaluated the use of skincare regimens in preventing and treating cAEs during chemotherapy in 147 patients, in which cAEs were statistically significantly more frequent in those who did not use the regimen daily.[17] The literature shows that soap-free cleansers and moisturizing help restore skin barrier function.[18] Sun exposure can worsen associated conditions, so photoprotection is always recommended.[19] The daily use of a mobile application for reminders on skincare use was associated with reduced radiation dermatitis.[20] Skincare should be started before oncology treatment and continued after that.[18]

Statement 4: *Skin cleansing, skin hydration, and photoprotection that is safe, effective, and free of additives and fragrances should be considered to prevent and manage cutaneous side effects before, during, and after cancer therapy.*

In addition to dermatologic treatment of cAEs, skincare tested on reactive skin, avoiding perfumes, allergens, preservatives, scents, and herbal extracts is recommended to improve adherence to cancer treatment, reducing side effects.[18] Elevated skin pH can trigger inflammation and dysbiosis of the skin microbiome; soaps, surfactants, and detergents with an alkaline pH (>7) should be avoided.[21]

Statement 5: *Supportive care includes:*

a. *Provide detailed patient education on cancer-treatment-related cAEs that may occur due to the treatment.*
b. *Give patient contact information and explain whom to contact, when, and why.*
c. *Explain to the patients that they should always report their skin changes regardless of severity.*
d. *The verbal information should be supported by printed or digital material to allow the patient to clarify and process the information.*
e. *Multidisciplinary management.*

The LATAM panel agrees that early education of patients on their cancer treatment and treatment-related cAEs, preventative measures using skincare, is crucial. It is highly encouraged that oncologic patients are cared for by a multidisciplinary team focusing on a skin care regimen tailored to cancer therapy, starting before treatment. The team should address the treatment protocol and elucidate possible cAEs prevention and management. The skincare regimen should always include a gentle cleanser (pH<7), moisturizer products, sunscreen (SPF >50), and skin repair balms.[2-10] Patients should be encouraged to report skin changes regardless of severity to enable prompt management and avoid suboptimal cancer treatment results.[2-10] Some patients wait until cAEs appear to start moisturizing; clinicians should educate patients on proactive and prophylactic moisturization. Verbal information should be supported by printed material for patients to reference when at home (Table 2).[3]

Call to Action

Clinicians are committed to better managing cancer treatment-related cAEs by spreading awareness through publications, congresses, webinars, media, and companies that manufacture products aiding these conditions. In LATAM, nurses can aid in wound care and assist in oncology patient care but cannot prescribe medications. Appropriate knowledge of non-prescription products such as skincare that are a part of a preventative skin care regimen is critical. Although data is scarce to support the prevention of cAEs for cancer patients and survivors, the LACOM panel agreed that early education on preventive measures using skincare is beneficial to patients. Given the lack of insurance coverage, sunscreen, cleansers, and moisturizers are often an out-of-pocket cost to patients. These products should be provided or made more readily available through sampling to patients undergoing cancer treatment. Providing algorithms on cAEs for LATAM will help improve access of physicians to information on the prevention and treatment of cAEs.

Limitations

More data are needed regarding cAEs in LATAM. LATAM patients should be included in US trials to improve diversity and access to care, considering the epidemiological differences between LATAM and North American patients.

CONCLUSION

The impact on QoL of cAEs related to cancer treatments is significant and can be directly proportional to prognosis. By educating, prophylactic measures, and integrating skincare into cancer treatment, patient QoL, treatment adherence and outcomes may improve.

TABLE 2.

Common Terminology Criteria for Cutaneous Adverse Events (CTCAE)				
CTCAE Term	**Grade 1**	**Grade 2**	**Grade 3**	**Grade 4**
Alopecia	Hair loss of <50% of normal, visible on close inspection	Hair loss of >50% of normall, visible to others	--	--
Bullous Dermatitis	Asymptomatic; blisters <10% BSA	Blisters 10 - 30% BSA; painful; limiting instrumental AD	Blisters >30% BSA; limiting self-care ADL	Blisters >30% BSA; fluid or electrolyte abnormalities; ICU care or burn unit indicated
Dry Skin	30% BSA and pruritus	10 - 30% BSA and erythema or pruritus; limiting instrumental ADL	>30% BSA and pruritus; limiting self-care ADL	--
Eczema	Asymptomatic or mild symptoms; additional medical intervention over baseline not indicated	Moderate; topical or oral intervention indicated; additional medical intervention over baseline indicated	Severe or medically significant but not life-threatening; IV intervention indicated	--
Erythema Multi-forme	Target lesions <10% BSA and no skin tenderness	Target lesions 10 - 30% BSA and skin tenderness	Target lesions >30% BSA and oral or genital erosions	Target lesions >30% BSA; fluid or electrolyte abnormalities; ICU care or burn unit indicated
Erythroderma	--	Erythema >90% BSA without symptoms; limiting instrumental ADL	Erythema >90% BSA with symptoms (eg, pruritus or tenderness); limiting self-care ADL	Erythema >90% BSA, fluid or electrolyte abnormalities; ICU care or burn unit indicated
Hyperhidrosis	Limited to 1 site (palms, soles, or axillae); self-care interventions	Involving >1 site; patient seeks medical intervention; associated with psychosocial impact	Electrolyte/hemodynamic imbalance	--
Hyperkeratosis	Present	--	Limiting self-care ADLs	--
Nail Changes	Present	--	--	--
Nail Discoloration	Asymptomatic; clinical or diagnostic observations only	--	--	--
Nail Loss	Asymptomatic separation of the nail bed from the nail plate or nail loss	Symptomatic separation of the nail bed from the nail plate or nail loss; limiting instrumental ADL	--	--
Pain of Skin	Mild pain	Moderate pain; limiting instrumental ADL	Severe pain; limiting self-care ADL	--
Palmar-plantar Erythrodysesthesia Syndrome	Minimal skin changes or dermatitis (eg, erythema, edema, or hyperkeratosis) without pain	Skin changes (eg, peeling, blisters, bleeding, fissures, edema, or hyperkeratosis) with pain; limiting instrumental ADL	Severe skin changes (eg, peeling, blisters, bleeding, fissures, edema, or hyperkeratosis) with pain; limiting self-care ADL	--
Photosensitivity	Painless erythema and erythema <10% BSA	Tender erythema 10 - 30% BSA	Erythema >30% BSA and erythema with blistering; photosensitivity; oral corticosteroid therapy indicated; pain control indicated (eg, narcotics or NSAIDs)	Life-threatening consequences; urgent intervention indicated
Pruritus	Mild or localized; topical intervention indicated	Widespread and intermittent; skin changes from scratching (eg, edema, papulation, excoriations, lichenification, oozing/crusts); oral intervention indicated; limiting instrumental ADL	Widespread and constant; limiting self-care ADL or sleep; systemic corticosteroid or immunosuppressive therapy indicated	--
Purpura	Combined area of lesions <10% BSA	Combined area of lesions 10 - 30% BSA; bleeding with trauma	Combined area of lesions >30% BSA; spontaneous bleeding	--
Rash Acneiform	Papules and/or pustules <10% BSA which may or may not present pruritus or tenderness	Papules and/or pustules 10 - 30% BSA, which may or may not present pruritus or tenderness; psychosocial impact; limiting instrumental ADL; papules and/or pustules > 30% BSA with or without mild symptoms	Papules and/or pustules >30% BSA with moderate or severe symptoms; limiting self-care ADL; local superinfection with oral antibiotics indicated	Life-threatening; papules and/or pustules covering any % BSA, which may or may not present pruritus or tenderness, extensive superinfection with IV antibiotics indicated

TABLE 2. (CONTINUED)

Common Terminology Criteria for Cutaneous Adverse Events (CTCAE)				
CTCAE Term	Grade 1	Grade 2	Grade 3	Grade 4
Rash Maculopapular	Macules/papules <10% BSA with or without symptoms (eg, pruritus, burning, tightness)	Macules/papules 10 - 30% BSA with or without symptoms (eg, pruritus, burning, tightness); limiting instrumental ADL; rash > 30% BSA with or without mild symptoms	Macules/papules >30% BSA with moderate or severe symptoms; limiting self-care ADL	--
Skin Ulceration	Combined area of ulcers <1cm; nonblanchable erythema of intact skin with associated warmth or edema	Combined area of ulcers 1 - 2 cm; partial thickness skin loss involving skin or subcutaneous fat	Combined area of ulcers >2 cm; full-thickness skin loss involving damage to or necrosis of subcutaneous tissue that may extend down to fascia	Any size ulcer with extensive destruction, tissue necrosis, or damage to muscle, bone, or supporting structures with or without full-thickness skin loss
Telangiectasia	Telangiectasias covering	Telangiectasias covering >=10% BSA; associated with psychosocial impact	--	--
Urticaria	Urticarial lesions covering <10% BSA topical intervention indicated	Urticarial lesions covering 10 - 30% BSA; oral intervention indicated	Urticarial lesions covering >30% BSA; IV intervention indicated	--

Table adapted with permission from Lacouture et al. 20213
Grade 1: Mild, Grade 2: Moderate, minimal, local or noninvasive intervention indicated, Grade 3: Severe, medically significant, not life-threatening, Grade 4: Life-threatening, urgent intervention indicated.[3]
Adverse Event (AE) unfavorable, unintended sign or disease temporally associated with medical treatment or procedure that may or may not be considered related to the medical treatment or procedure. Activities of Daily Living (ADL) *Instrumental ADL refers to preparing meals, shopping for groceries or clothes, using the telephone, managing money, etc. **Self-care ADL refers to bathing, dressing, undressing, feeding self, using the toilet, taking medications, and not being bedridden.[3]

DISCLOSURES

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REFERENCES

1. Sung H, Ferlay J, Siegel RL, et al. Global Cancer Statistics 2020: GLOBOCAN estimates of incidence and mortality worldwide for 36 cancers in 185 countries. *CA Cancer J Clin.* 2021;71(3):209-249. doi: 10.3322/caac.21660. PMID: 33538338
2. Deutsch A, Lacouture M, Andriessen A, et al. USCOM algorithm for the prevention and management of cutaneous immunotherapy-related adverse events. *J Drugs Dermatol.* 2023; 1;22(11):SF389716s3-SF389716s10.
3. Lacouture ME, Choi J, Ho A,et al. US Cutaneous Oncodermatology Management (USCOM): a practical algorithm. *J Drugs Dermatol.* 2021;20(9):3ss-s19.
4. Lee J, Lim J, Park JS et al. The impact of skin problems on the quality of life in patients treated with anticancer agents: A cross-sectional study. *Cancer Res Treat.* 2018 Oct;50(4):1186-1193.
5. Lacouture M E. et al. Skin toxicity evaluation protocol with panitumumab (STEPP), a phase II, open-label, randomized trial evaluating the impact of a pre-emptive skin treatment regimen on skin toxicities and quality of life in patients with metastatic colorectal cancer. *J Clin Oncol.* 2010;28(8):1351-7
6. Aizman L, Nelson K, Sparks AD, et al. The influence of supportive oncodermatology interventions on patient quality of life: a cross-sectional survey. *J Drugs Dermatol.* 2020;19(5):477-482.
7. Sauder MB, Addona M, Andriessen A, et al. The role of skin care in oncology patients. *Skin Ther Letter.* 2020;(10):1-12.
8. Alessy SA, Alhajji M, Rawlinson J, et al. Factors influencing cancer patients' experiences of care in the USA, United Kingdom, and Canada: A systematic review. E*Clinical Medicine.* 2022;47:101405.
9. Girnita A, Bjerring P, Kauppi S, et al. NECOM Skincare Algorithm for Patients With Cancer and Survivors. *J Drugs Dermatol.* 2023;22(1):3595573-359557310.
10. Leventhal J, Young MR. Radiation dermatitis: recognition, prevention, and management. O*ncology (Williston Park).* 2017;31(12):885-894.
11. Biswal SG, Mehta RD. Cutaneous adverse reactions of chemotherapy in cancer patients: A clinicoepidemiological study. *Indian J Dermatol.* 2018;63(1):41-6.
12. Li T, Perez-Soler R. Skin toxicities associated with epidermal growth factor receptor inhibitors. *Target Oncol.* 2009;4(2):107-19.
13. Curry JL, Tetzlaff MT, Nagarajan P, et al. Diverse types of dermatologic toxicities from immune checkpoint blockade therapy. *J Cutan Pathol.* 2017;44(2):158-176.
14. Sibaud V. Dermatologic reactions to immune checkpoint inhibitors: skin toxicities and immunotherapy. Am J Clin Dermatol. 2018;19(3):345-361.
15. Gandhi M, Oishi K, Zubal B, et al. Unanticipated toxicities from anticancer therapies: survivors' perspectives. *Support Care Cancer.* 2010;18(11):1461-1468.
16. Dreno B, Khosrotehrani K, De Barros Silva G, et al. The role of dermocosmetics in the management of cancer-related skin toxicities: international expert consensus. *Support Care Cancer.* 2023;31(12):672.
17. Lüftner D, Dell'Acqua V, Selle F, et al. Evaluation of supportive and barrier-protective skin care products in the daily prevention and treatment of cutaneous toxicity during systemic chemotherapy. *Onco Targets Ther.* 2018;11(9):5865-5872.
18. Dreno B, Bensadoun RJ, Humbert P, et al. Algorithm for dermocosmetic use in the management of cutaneous side-effects associated with targeted therapy in oncology. *J Eur Acad Dermatol Venereol.* 2013;27(9):1071-80.
19. Luu M, Lai SE, Patel J, et al. Photosensitive rash due to the epidermal growth factor receptor inhibitor erlotinib. *Photodermatol Photoimmunol Photomed.* 2007;23(1):42-5.
20. Rades D, Zwaan I, Cacicedo J, et al. Impact of a mobile application (reminder app) on acute toxicity during radiotherapy of head-and-neck cancer - results of a randomized phase III trial (RAREST-02). *BMC Cancer.* 2022;22(1):989.
21. Girnita A, Lorentzen H, Kauppi S et al. Skincare for cancer patients in Scandinavia. *J Drugs Dermatol.* 2021;20:Ss4-s14.

AUTHOR CORRESPONDENCE

Anneke Andriessen PhD
E-mail:..... anneke.a@tiscali.nl