# Assessing wound progression and tolerability of εὖSKIN<sup>®</sup> products for cancer patients: Insights from multiple case studies. REVOLUTIONARY

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## BACKGROUND

Understanding and confronting the treatment challenges of chronic wounds lead to an improved quality of life for oncology patients. Effective wound management is vital for oncology patients, especially those with concurrent conditions like diabetes and immobility. Assessing the effectiveness of skincare interventions, such as the **ɛũSKIN**<sup>®</sup> products composed of bioactive ingredients including Atelocollagen peptides<sup>1</sup>, Hyaluronic acid, Gynura procumbens<sup>2</sup> and Aloe vera<sup>3</sup> involved in inflammation, reduction and wound healing, which is crucial for enhancing patient outcomes.

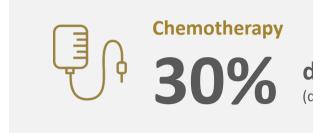
### man V man Treatment-related skin toxicities Oncology treatments like chemotherapy and targeted therapy can cause various skin issues, such as inflammation, dermatitis, and nail problems<sup>4</sup>. Malignant wounds Advanced cancer can penetrate the skin, causing chronic wounds that have poor healing capabilities. These wounds worsen, becoming fungating and disrupting skin integrity. Closing them poses significant challenges and distress for patients and caregivers<sup>5</sup>. Palliative care wounds

Patients receiving palliative care for advanced cancers often experience symptoms like chronic wounds and pressure ulcers. These issues are commonly overlooked, leading to inadequate symptom management and patient protection<sup>6</sup>.

**Common skin conditions during oncology treatment** 

Atopic dermatitis, Radiation dermatitis, Chemotherapy extravasation

Skin inflammation, Brittle nails and cracking cuticles, Stomatitis, Malignant wounds







Immunotherapy

## **OBJECTIVES**

This multi-case study aims to evaluate the efficacy and tolerability of εὖSKIN<sup>®</sup> products in wound management among oncology patients with various clinical profiles, focusing on observable improvements in wound appearance and patient adherence. Participants include oncology patients with suffering from radiation dermatitis, malignant wounds and pressure ulcers undergoing chemotherapy and/or radiotherapy cycles <sup>10,11</sup>. The study assesses efficacy based on observable improvements in wound appearance, patient adherence to the treatment regimen, and the overall tolerability of εύSKIN<sup>®</sup> products. The findings will highlight improvements in wound appearance progression and product tolerability.

## **METHODS & MATERIALS**

Eight oncology patients aged 52 to 92 (both male and female) with various wound aetiologies participated in this study. Wound management protocols involved the application of an antiseptic wash and solution, followed by **eussian** Recovery oil, εὖSKIN<sup>®</sup> Intensive Cream, and εὖSKIN<sup>®</sup> Intensive Gel, with or without gauze or foam dressing based on wound characteristics. Patients were administered the regimen twice daily, with increased frequency for cleanliness. Written informed consent was obtained from the patients in accordance with GDPR regulations.

**Key ingredients in our products** The choice of each bioactive component in our products has been meticulously made, with thorough consideration of scientific evidence.

We develop products based on natural ingredients such as

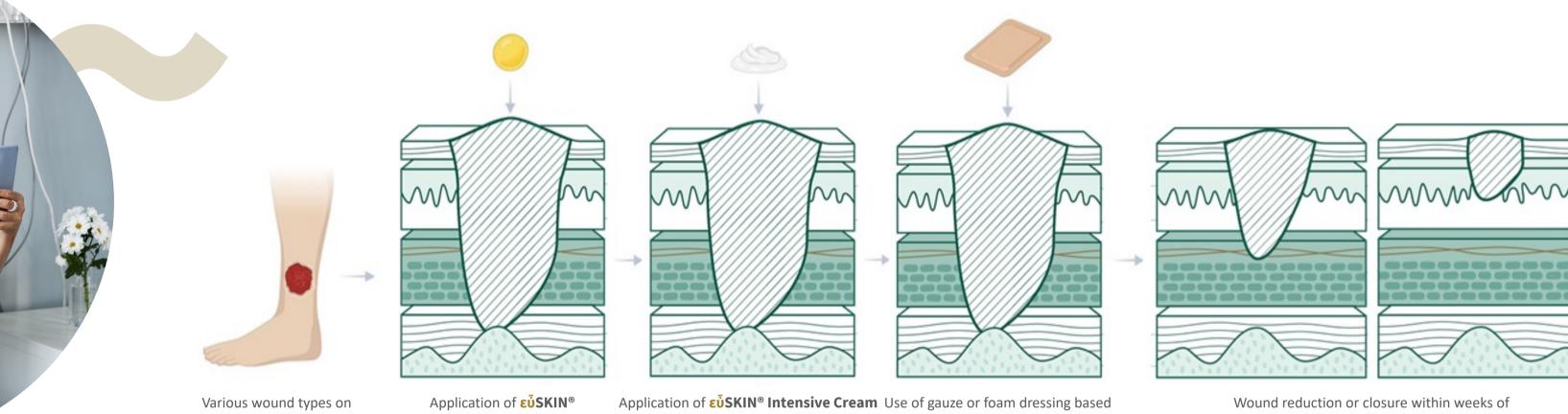




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of patients who received treatment<sup>9</sup>

Gynura procumbens, Aloe vera, Calendula officinalis, Cucumber extract, Balsam oil, and Ganoderma lucidum. These ingredients are rich in vitamins, minerals, and naphthoquinones, serving as natural antioxidants<sup>12</sup> and being rich in Gly-Pro-Hyp, while also possessing excellent anti-inflammatory properties<sup>13</sup>. Additionally, we incorporate highly bioactive molecular ingredients such as Hyaluronic acid and Atelocollagen to enhance wound healing and improve skin health.



**Recovery Oil** oncology patients e.g. bed sores, epidermolysis, dermatitis

or Gel based on wound characteristics on wound characteristics

### treatment initiation

## RESULTS

Patients exhibited improvements in wound reduction or closure within weeks of treatment initiation. In addition, during the treatment the presence of xerosis and erythema is reduced and in some cases the occurrence of hyperpigmentation as well. Despite diverse comorbidities and wound aetiologies, all patients reported no adverse reactions to the **ɛũSKIN**<sup>®</sup> products, indicating good tolerability.

### **Radiation dermatitis**

Example of characteristic radiation dermatitis after radiotherapy in post-operative site of sarcoma, in a 52 y.o. female patient, with breast cancer. Results shown improvement and complete skin regeneration by day 22 after application of **ɛũSKIN® Starter Duo products** 3 times daily.



### Pressure ulcer Grade II

Pressure ulcer accompanied with skin damage, cellulitis and open wound; also presenting rectal prolapse (haemorrhoids) and epidermolysis in a 71 y.o. cancer bed-ridden male patient with uncontrolled diarrheal episodes. Application of **ɛũSKIN® Starter Duo** (twice daily in a clean wound) for 2 weeks resulted in reduction of the skin damage and haemorrhoidal shrinkage.





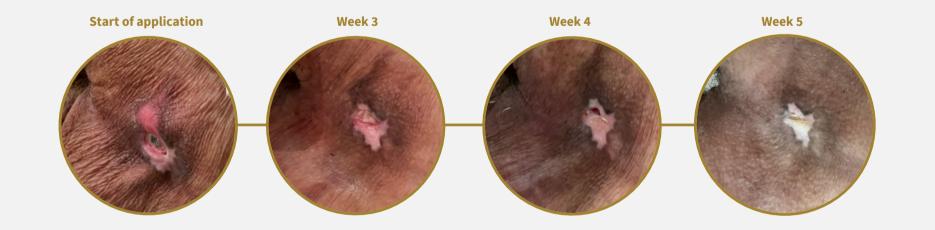
#### Unhealing malignant wound

Example of a 14-month unhealing malignant wound in a 62 y.o. female cancer and diabetic patient. The wound was repeatedly infected. Results shown vast improvement and dryness at the wound site by week 3 and skin regeneration by week 16 with application of εὖSKIN<sup>®</sup> Starter Duo products combined with gauze (twice daily in a clean wound) for 16 weeks.



#### Pressure ulcer Grade III

Bed sore in a 92 y.o. cancer and diabetic female patient under palliative care with evident necrosis and damage to the skin patch, limited to the skin layers. Application of **ɛũSKIN® Starter Duo products** combined with gauze (twice daily in a clean wound) for 5 weeks showed skin site rescue and dermoregeneration.



#### **Pressure Ulcer Grade I**

Bed sores, accompanied with skin discolourisation, cellulitis (inflammation of body tissue, causing swelling and redness) and skin sensitivity in a 68 y.o. male patient with cancer and diabetes. Application **the**  $\epsilon \tilde{v}$ SKIN<sup>®</sup> Starter Duo products (twice daily in a clean wound) combined with gauze for 18 weeks.



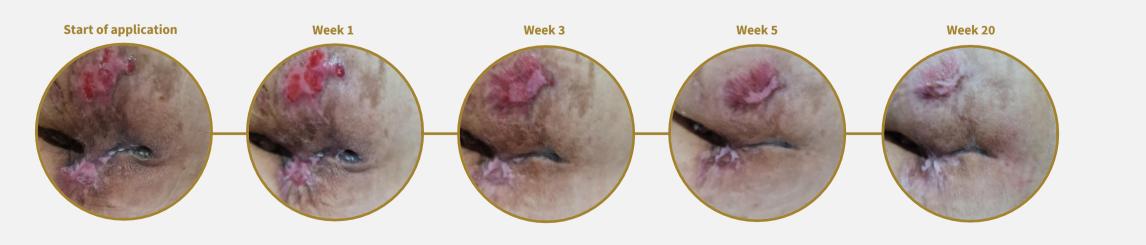
#### Pressure ulcer Grade IV

Deep bed sore at a grade IV stage, characterized by severe tissue damage, with a reddish enlarged crater (~15cm) in a 84 y.o. female cancer patient with gastrostomia and Alzheimer disease. Application of  $\tilde{v}$ SKIN<sup>®</sup> Recovery Oil and Intensive Gel for the first 3 weeks (twice daily in a clean wound) and application of the  $\epsilon \tilde{v}$ SKIN<sup>®</sup> Starter Duo products (twice daily in a clean wound) combined with foam dressing to reduce pressure for 14 weeks. The affected area showed signs of tissue regeneration, absent of infection and a vastly reduced crater of 3cm.



#### Pressure ulcer Grade II

Bed sores in a 71 y.o. female non-diabetic cancer patient under chemotherapy protocols. The patient showed some skin loss and damage involving the top-most skin layers together purple and black skin discolouration. Application of **ɛṽSKIN® Recovery Oil and Intensive Gel for the first 3 weeks and** then application of the εὖSKIN<sup>®</sup> Starter Duo products (twice daily in a clean wound) combined with foam dressing to reduce pressure for 20 weeks.



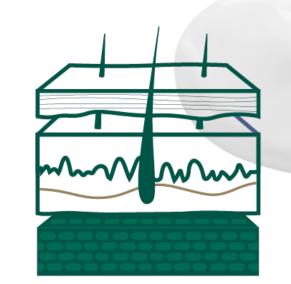
CONCLUSION

#### **Pressure ulcer Grade IV**

Pressure ulcer grade IV in a hospitalised bedridden diabetic male patient under palliative care. The patient showed localised necrosis and extended damage to the skin patch and underlying bone structure. Application of εὖSKIN<sup>®</sup> Starter Duo products combined with zinc paste was used twice daily in a clean wound for 17 weeks, after removing the necrotic tissue using sharp debridement method.



The development of an effective wound care protocol for oncology patients is crucial. These case studies provide valuable insights into the efficacy and tolerability of **ɛúSKIN**<sup>®</sup> products in wound management for this patient population. Cases of radiation dermatitis showed rapid healing and complete skin regeneration by day 22. Significant improvements were observed in unhealed malignant wounds, with notable progress evident by week 3. Epidermal ulcers reduced within the initial three weeks of using  $\varepsilon \delta SKIN^{\circ}$  products. Encouraging results were also noted in Grade IV pressure ulcers, suggesting the potential of  $\varepsilon \delta SKIN^{\circ}$  products as valuable tools in the healing process of challenging wounds. The enhancements in wound healing and patient comfort highlight the potential benefits of integrating **e**<sup>3</sup>SKIN®</sup> products into comprehensive wound care regimens. Further research is necessary to validate these findings and refine treatment protocols for diverse patient populations.





#### VISIT RSL WEBSITE References

[1] Woodrow, T., Chant, T. & Chant, T. & Chant, H. Treatment of diabetic foot wounds with acellular fish skin graft rich in omega-3: a prospective evaluation. J. Wound Care 28, 76–80 (2019). [2] Yam, M. F., Sadikun, A., Asmawi, M. Z. & Rosidah. Antioxidant Potential of Gynura procumbens. Pharm. Biol. 46, 616–625 (2008). [3] Liang, J. et al. Aloe vera: A Medicinal Plant Used in Skin Wound Healing. Tissue Eng. - Part B Rev. 27, 455–474 (2021). [4] Wiley K et al, (2020). 'Skin Toxicity: Clinical summary of the ONS Guidelines TM for Cancer Treatment-Related Skin Toxicity' Clin. J Oncol Nurs., 24(5):561-565. [5] Tsichlakidou, A, et al (2019). 'Intervention for symptom management in patients with malignant fungating wounds-a systematic review'. Journal of B.U.O.N.: official journal of the Balkan Union of Oncology, 24(3), 1301-1308. [6] Basch E et al, (2016). 'Symptom Monitoring With Patient-Reported Outcomes During Routine Cancer Treatment: A Randomized Controlled Trial.'J. Clin. Oncol., 34(6):557-565. [7] Cury-Martins J, Eris APM, Abdalla CMZ, Silva GB, Moura VPT, Sanches JA. Management of dermatologic adverse events from cancer therapies: recommendations of an expert panel. An Bras Dermatol. 2020 Mar-Apr;95(2):221-237. doi: 10.1016/j.abd.2020.01.001. Epub 2020 Feb 15. PMID: 32165025; PMCID: PMC7175407. [8] Salvo N, Barnes E, van Draanen J, Stacey E, Mitera G, Breen D, Giotis A, Czarnota G, Pang J, De Angelis C. Prophylaxis and management of acute radiation-induced skin reactions: a systematic review of the literature. *Curr Oncol.* 2010 Aug;17(4):94-112. doi: 10.3747/co.v17i4.493. PMID: 20697521; PMCID: PMC2913836. [9] Nikolaou V, Tsimpidakis A, Stratigos A. Cutaneous Adverse Reactions of Immunotherapy in Patients with Advanced Melanoma. *Cancers (Basel).* 2023 Mar 31;15(7):2084. doi: 10.3390/cancers15072084. PMID: 37046745; PMCID: PMC10093334. [10] Jackson-Rose, et al. (2017). 'Chemotherapy Extravasation: Establishing a National Benchmark for Incidence Among Cancer Centers', *Clinical journal of oncology nursing*, 21(4), 438–445. [11] Tsichlakidou A., Govina O., Vasilopoulos, G., Kavga A., Vastardi M., Kalemikerakis I., (2019). 'Intervention for symptom management in patients with malignant fungating wounds - a systematic review', Journal of B.U.ON.: official journal of the Balkan Union of Oncology, 24(3), 1301–1308. [12] Rosidah, Y. M, Mun Yam, Amirin Sadikun & Mohd. Asmawi. (2008). 'Antioxidant potential of Gynura procumbens', Pharmaceutical Biology, 46(9), 616–625. [13] Quereshi S., Pandey A. K., Sandhu S. S. (2010). Evaluation of antibacterial activity of different Ganoderma lucidum extracts. J. Scientific Research Vol 3(1).