Journal of Surgery
Muto G. J Surg 11: 11634
www.doi.org/10.29011/2575-9760.11634
www.gavinpublishers.com
Case Report

Efficacy of Fitostimoline® Plus Gauze in the Treatment of a Post-Radical Resection Lesion of Scalp Squamous Cell Carcinoma: A Clinical Case Report

Giovanna Muto*

Azienda ULSS N. 4 Veneto Orientale, Italy

***Corresponding Author:** Giovanna Muto, Azienda ULSS N. 4 Veneto Orientale, Italy

Citation: Muto G (2026) Efficacy of Fitostimoline® Plus Gauze in the Treatment of a Post-Radical Resection Lesion of Scalp Squamous Cell Carcinoma: A Clinical Case Report. J Surg 11: 11634 DOI: 10.29011/2575-9760.011634.

Received Date: 25 May 2026; **Accepted Date:** 26 May 2026; **Published Date:** 28 May 2026

Abstract

Background: Surgical lesions following the resection of cutaneous squamous cell carcinoma (cSCC) of the scalp can exhibit delayed healing, particularly in patients presenting with comorbidities.

Case Presentation: We present the case of a 75-year-old male patient affected by epilepsy and hypercholesterolemia who underwent radical resection of a scalp cSCC. Clinical evaluation was performed using the Visual Analog Scale (VAS) for pain, the PUSH Tool 3.0, and the EQ-5D-5L questionnaire.

Intervention: Treatment involved the application of Fitostimoline® Plus gauze directly onto the lesion and Fitostimoline® Plus spray on the perilesional skin. Dressings were initially changed every 24 hours and subsequently every 48 hours. The wound was cleansed with polyhexanide (PHMB)-containing products prior to each dressing application.

Results: A progressive reduction in the lesion area was observed, accompanied by an improvement in the PUSH score and a reduction in pain (VAS score decreased from 5 to 0). No adverse events were reported.

Conclusions: Treatment with Fitostimoline® Plus, preceded by wound cleansing with PHMB-containing products, proved to be effective and well-tolerated. It successfully promoted the healing of the complex surgical lesion and significantly improved the patient's quality of life.

Introduction

Cutaneous squamous cell carcinoma (cSCC) accounts for 20% to 25% of all skin cancers [1]. However, the exact incidence rates of this malignancy remain poorly defined due to limited statistical data and because it is frequently grouped together with mucosal forms [1]. In Italy, unified national incidence data for non-melanoma skin cancers are currently unavailable. Incidence estimates of cSCC provided by a single "Skin Cancer Registry" in the Trentino region reported 29 cases per 100,000 inhabitants between 1993 and 1998 [2]. Furthermore, 2015 AIRTUM data indicated an annual incidence of head and neck squamous cell carcinoma, including cutaneous variants, of 19.46 per 100,000 [3]. Italian Cancer Registry data estimated that approximately 19,000 new cases of cSCC would be diagnosed in 2018, with a higher incidence among males, particularly after 65 years of age, showing a typical North-South geographical gradient [4,5]. Post-surgical lesions resulting from radical resection can present severe healing difficulties, especially in the presence of comorbidities. In this context, the use of advanced medical devices capable of promoting tissue regeneration while preventing microbial contamination represents a highly relevant therapeutic option.

Case Description

The patient is a 75-year-old man suffering from epilepsy and hypercholesterolemia, with functional gait limitations secondary to a previous trauma. He underwent a radical surgical resection of

a moderately differentiated squamous cell carcinoma of the scalp.

Clinical Assessment

The clinical evaluation was structured using validated assessment tools:

- **VAS (Visual Analog Scale):** Initial pain score of 5/10 [6,7].
- **PUSH Tool 3.0:** Initial score of 15/17.
- **EQ-5D-5L:** Utilized to evaluate health-related quality of life [8].

Intervention

The management protocol consisted of:

1. Application of Fitostimoline® Plus gauze onto the lesion.
2. Application of Fitostimoline® Plus spray on the perilesional skin.
3. Wound cleansing using products containing polyhexanide (PHMB).

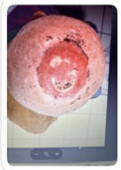
Dressings were changed according to the following schedule:

- **Initial phase:** Every 24 hours.
- **From day 40 (T40) to complete healing:** Every 48 hours.

Prior to each dressing change, the wound was cleansed with PHMB-containing products, and any slough was mechanically removed using sterile gauze.

Results

At baseline (T0), the lesion appeared cavitary, with the presence of slough and partial exposure of the cranial bone. The overall area was 18.6cm^2 (length: 5.38 cm; width: 4.51 cm). The lesion was treated with a sterile gauze compress soaked in PHMB products for approximately 20 minutes, followed by the application of Fitostimoline® Plus gauze and Fitostimoline® spray on the perilesional area. This procedure was repeated every 24 hours (Figure 1). At day 40 (T40), a significant reduction in the wound was observed, characterized by the formation of healthy granulation tissue and the division of the lesion into two distinct areas separated by newly re-epithelialized tissue. After approximately 40 days of daily treatment, the wound area decreased by approximately 27% from its initial size, achieving a PUSH Tool score of 15 and a VAS pain score of 2 (Figure 2). At this stage, since the exudate had notably diminished, the dressing change frequency was adjusted to every 48 hours. The protocol still included a 20-minute PHMB compress and the mechanical removal of biofilm using sterile cotton gauze before applying the Fitostimoline® Plus gauze and perilesional spray. By month 3 (T90), the lesion showed an overall area reduction of approximately 35% compared to baseline. The wound bed presented no slough and was entirely covered by granulation tissue. The PUSH Tool score dropped to 13, and the VAS pain score remained at 2 (Figure 3). After approximately 8 months of treatment repeated every 48 hours, the patient achieved complete clinical healing. No adverse events were recorded throughout the entire treatment period (Figure 4,5) (Tables 3).



Area (cm²)	70,24
Circonferenza (cm)	34,04
Lunghezza (cm)	11,02
Larghezza (cm)	9,19

Figure 1

Figure 2

Figure 3

Figure 4

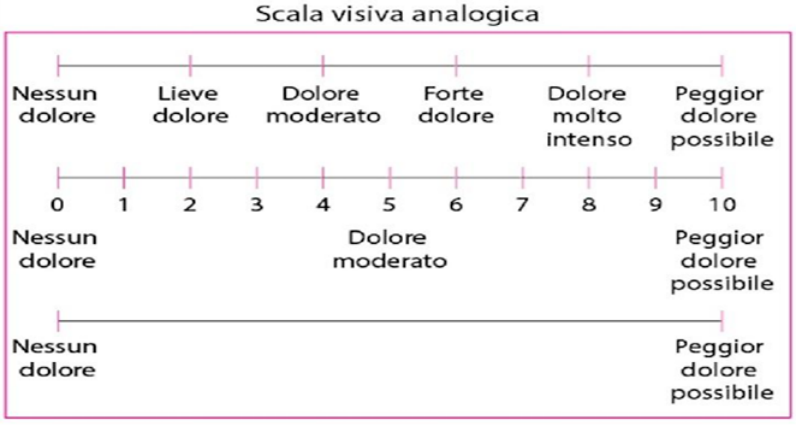


Figure 5 (a)

	0	1	2	3	4	5	
Lunghezza X Larghezza	0 cm_2	< 0.3 cm_2 6 3.1-4.0 cm_2	0.3-0.6 cm_2 7 4.1-8.0 cm_2	0.7-1.0 cm_2 8 8.1-12.0 cm_2	1.1-2.0 cm_2 9 12.1-24.0cm_2	2.1-3.0 cm_2 10 >24.0 cm_2	Punteggio parziale ----------
Quantità di Essudato	0 Assente	1 scarso	2 moderato	3 abbondante			Punteggio parziale ----------
Tipo di Essudato	0 integro	1 epiteliale	2 granulazione	3 slough	4 escara		Punteggio parziale ----------
							Punteggio totale ----------

Figure 5 (b)

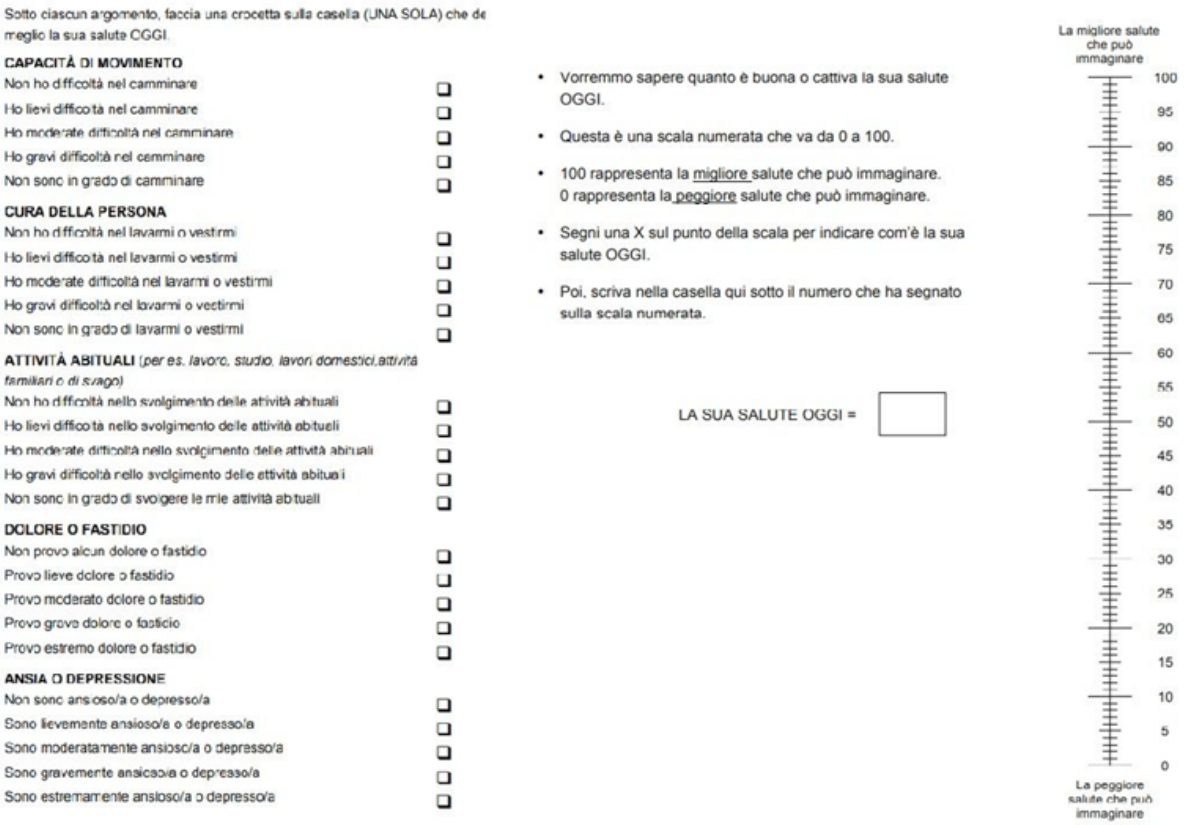


Figure 5 (c)

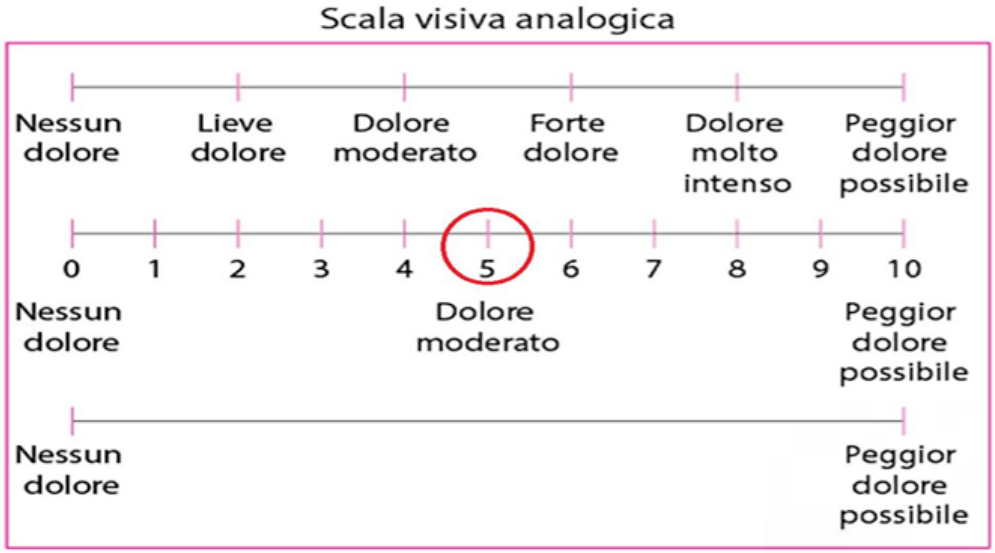


Table 1a

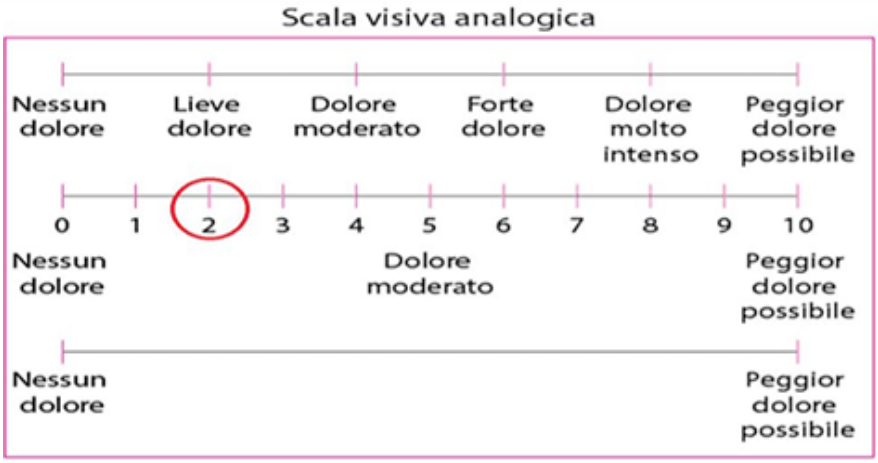


Table 1b

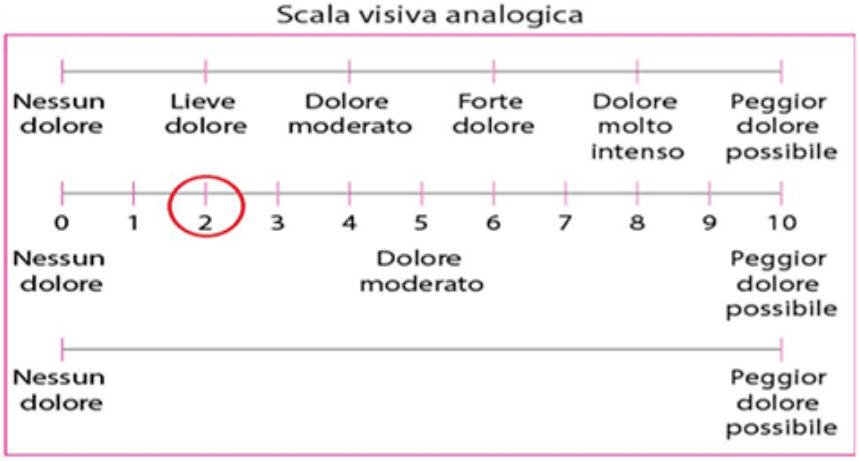


Table 1c

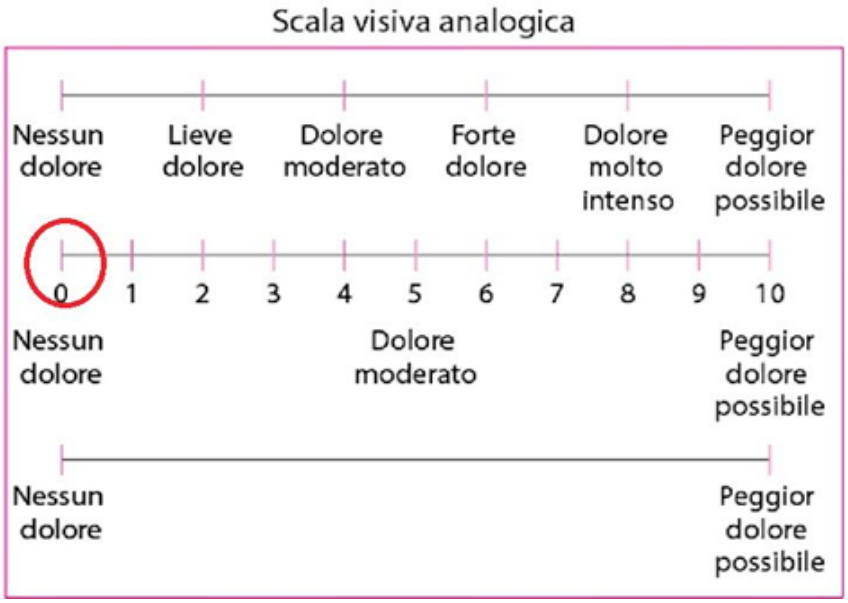


Table 1d

	0	1	2	3	4	5	
Lunghezza X Larghezza	0 cm_2	< 0.3 cm_2 6 3.1-4.0 cm_2	0.3-0.6 cm_2 7 4.1-8.0 cm_2	0.7-1.0 cm_2 8 8.1-12.0 cm_2	1.1-2.0 cm_2 9 12.1-24.0cm_2	2.1-3.0 cm_2 10 >24.0 cm_2	Punteggio parziale 10
Quantità di Essudato	0 Assente	1 scarso	2 moderato	3 abbondante			Punteggio parziale 3
Tipo di Essudato	0 integro	1 epiteliale	2 granulazione	3 slough	4 escara		Punteggio parziale 3
							Punteggio totale 16

Table 2a

	0	1	2	3	4	5	
Lunghezza X Larghezza	0 cm_2	< 0.3 cm_2 6 3.1-4.0 cm_2	0.3-0.6 cm_2 7 4.1-8.0 cm_2	0.7-1.0 cm_2 8 8.1-12.0 cm_2	1.1-2.0 cm_2 9 12.1-24.0cm_2	2.1-3.0 cm_2 10 >24.0 cm_2	Punteggio parziale 10
Quantità di Essudato	0 Assente	1 scarso	2 moderato	3 abbondante			Punteggio parziale 2
Tipo di Essudato	0 integro	1 epiteliale	2 granulazione	3 slough	4 escara		Punteggio parziale 3
							Punteggio totale 15

Table 2b

	0	1	2	3	4	5	
Lunghezza X Larghezza	0 cm_2	< 0.3 cm_2 6 3.1-4.0 cm_2	0.3-0.6 cm_2 7 4.1-8.0 cm_2	0.7-1.0 cm_2 8 8.1-12.0 cm_2	1.1-2.0 cm_2 9 12.1-24.0cm_2	2.1-3.0 cm_2 10 >24.0 cm_2	Punteggio parziale 10
Quantità di Essudato	0 Assente	1 scarso	2 moderato	3 abbondante			Punteggio parziale 1
Tipo di Essudato	0 integro	1 epiteliale	2 granulazione	3 slough	4 escara		Punteggio parziale 2
							Punteggio totale 13

Table 2c

	0	1	2	3	4	5	
Lunghezza X Larghezza	0 cm_2	< 0.3 cm_2 6 3.1-4.0 cm_2	0.3-0.6 cm_2 7 4.1-8.0 cm_2	0.7-1.0 cm_2 8 8.1-12.0 cm_2	1.1-2.0 cm_2 9 12.1-24.0cm_2	2.1-3.0 cm_2 10 >24.0 cm_2	Punteggio parziale ☐
Quantità di Essudato	0 Assente	1 scarso	2 moderato	3 abbondante			Punteggio parziale ☐
Tipo di Essudato	0 integro	1 epiteliale	2 granulazione	3 slough	4 escara		Punteggio parziale ☐
							Punteggio totale ☐

Table 2d

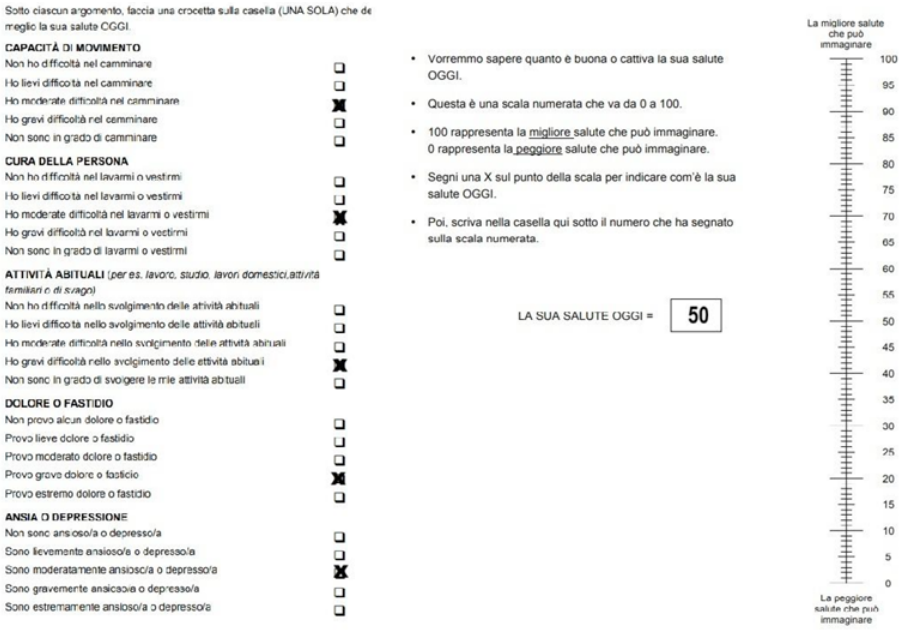


Table 3

Discussion

Managing surgical wounds in patients presenting with multiple comorbidities-particularly vascular conditions-remains highly challenging, as these factors can negatively impact healing times. Supported by photographic evidence and validated clinical scales, this case report documents a progressive reduction in pain perception alongside a continuous improvement in wound status at 40 days, 3 months, and up to complete closure. Satisfactory clinical resolution was achieved in just 8 months using Fitostimoline® Plus advanced dressings, an excellent outcome considering the initial size of the wound and the patient's systemic comorbidities. Notably, systemic antibiotic therapy was never required, despite the considerable size of the wound and the prolonged exposure of the underlying tissues to potential pathogens. The biological rationale underlying these results is linked to **Rigenase®** (Triticum vulgare extract), a specific

aqueous extract that exerts a scavenger effect against free radicals, demonstrating significant antioxidant activity [9-11]. Furthermore, it maximizes tissue regeneration by enhancing chemotaxis, fibroblast proliferation, and cellular maturation [12-14]. These properties are mediated by an increase in protein synthesis, proline uptake, and the upregulation of key tissue-remodeling factors such as MMP-2, MMP-9, collagen type I, and elastin [11]. Rigenase® is widely indicated for pressure ulcers, venous leg ulcers, burns, delayed wound healing, and dystrophic conditions [12].

In Fitostimoline® Plus devices, Rigenase® is combined with **polyhexanide (PHMB)**, an antiseptic agent that controls the microbial load and prevents wound colonization, thereby minimizing infection risks without cytotoxicity [9,13]. These findings align with current literature supporting advanced wound care devices. Based on our clinical evidence, we hypothesize that the efficacy of Fitostimoline® Plus gauze and spray significantly accelerates the healing of complex surgical wounds in comorbid patients. Furthermore, the intrinsic antimicrobial action of the PHMB contained within the gauze may have been synergistically enhanced by the preliminary cleansing phase with PHMB products, allowing complete healing without antibiotics. According to recent consensus guidelines from 'Wound Hygiene Italia', while PHMB shows clear antibiofilm activity *in vitro*, its clinical efficacy must be integrated into a comprehensive wound hygiene strategy rather than used as an isolated intervention [10]. While this remains a clinical hypothesis, the avoidance of antibiotic therapy in a lesion of this magnitude is an undeniable benefit. If confirmed by larger studies, this approach could represent a valuable weapon in terms of cost-benefit ratios, especially in the current era of global antibiotic resistance. Finally, this protocol offers practical advantages for both clinicians and caregivers. It enables safe and straightforward wound management across various settings, including local outpatient clinics, home care environments managed by integrated home care (Assistenza Domiciliare Integrata - ADI) nurses, or directly by trained caregivers.

Conclusions

Treatment with Fitostimoline® Plus demonstrated high efficacy and safety in the management of a complex post-radical resection wound of scalp squamous cell carcinoma, promoting tissue repair and improving all objective clinical parameters. We acknowledge that this study has inherent limitations, as it is a single-case report without a control group and features a focused follow-up. Nevertheless, it serves as a promising framework for future large-scale, controlled clinical trials required to definitively validate these outcomes.

Informed Consent Statement: Informed consent was obtained from the subject involved in this study.

References

1. Green AC, Olsen CM (2017) Cutaneous squamous cell carcinoma: an epidemiological review. British Journal of Dermatology 177: 373-381.
2. Boi S, Cristofolini M, Micciolo R, Polla E, Dalla Palma P (2003) Epidemiology of skin tumors: data from the Cutaneous Cancer Registry in Trentino. Journal of Cutaneous Medicine and Surgery 7: 188-197.
3. AIRTUM Working Group, Busco S, Buzzoni C, Mallone S, Trama A, et al. (2016) Italian cancer figures--Report 2015: The burden of rare cancers in Italy. Epidemiologia e Prevenzione 40: 33-37.
4. AIOM, AIRTUM, Fondazione AIOM, PASSI (2018) I numeri del cancro in Italia 2018. Il Pensiero Scientifico Editore 2018.
5. Registri Tumori Italiani (2018). I numeri del cancro in Italia per operatori 2018.
6. Barad M (2022) Visual Analog Scale Evaluation. Stanford Health Care Clinical Reports 2022.
7. Aggarwal A (2023) Pain Assessment Methodologies. Stanford University School of Medicine Research Manual 2023.
8. Devlin N, Pickard S, Busschbach J (2022) The Development of the EQ-5D-5L and its Value Sets. In N. Devlin, B. Roudijk, & K. Ludwig (Eds.), Value Sets for EQ-5D-5L: A Compendium, Comparative Review & User Guide (Chap. 1). Springer, Cham 2022.
9. Koburger T, Hübner NO, Braun M, Siebert J, Kramer A (2010) Standardized comparison of antiseptic efficacy of triclosan, PVP-iodine, octenidine dihydrochloride, polyhexanide and chlorhexidine digluconate. Journal of Antimicrobial Chemotherapy 65: 1712-1719.
10. Scalise A, Bassetto F, Ceci D, et al. (2026) Implementing Wound Hygiene in the Italian Healthcare Context: Expert Recommendations for the Management of Venous Leg Ulcers. International Wound Journal 23: e70835.
11. Antonucci I, Fiorentino G, Contursi P, Minale M, Riccio R, et al. (2018) Antioxidant capacity of Rigenase®, a specific aqueous extract of Triticum vulgare. Antioxidants 7: 67.
12. Kramer A, Dissemond J, Kim S, Willy C, Mayer D, et al. (2018) Consensus on wound antisepsis: update 2018. Skin Pharmacology and Physiology 31: 28-58.
13. Koburger T, Hübner NO, Braun M, Siebert J, Kramer A (2010) Confronto standardizzato dell'efficacia antisettica di triclosan, PVP-iodio, octenidina dicloridrato, poliesanide e clorexidina digluconato. Journal of Antimicrobial Chemotherapy 65: 1712-1719.
14. Fiore L, Scapagnini U, Riccio R, Canonico PL (1993) Differential activities of Triticum vulgare extract and its fractions in mouse fibroblasts. Acta Therapeutica 19: 151-162.