Aromatic approaches to Integrative Oncology Skin Health

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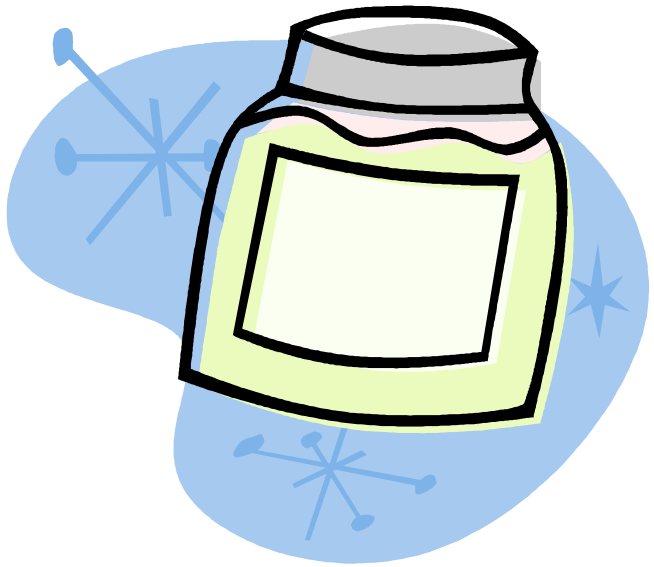
- Clinical aromatherapist with more than 35 years experience
- Area of special interest: clinical aromatherapy in cancer and palliative care
- Educator and author
- Former editor of the International Journal of Clinical Aromatherapy
- Host of the International Clinical Aromatherapy Network (ICAN)
- Organiser of international conference events in clinical aromatherapy
- Passionate about making a difference at the bedside using evidence-based aromatic interventions

Fiona Murphy

- Multi-award-winning Skin & Scar Therapist
- First Oncology Skincare Specialist in a UK Hospital (London)
- Founder of Sparkle Through Chemo – Supporting skin health during cancer treatment
- 20+ years in skin health, 10+ years in oncology skincare
- Expertise in oncology-safe skincare, scar management & post-treatment recovery
- Collaborates with leading oncologists & dermatologists
- Passionate about improving patient care through specialised skin therapies

Aims for the session

- Provide insights into skin and nail toxicities experienced by patients.
- Demonstrate the potential benefits of a range of aromatic strategies.
- Combine evidence-base with practitioner experience to provide pragmatic guidance.
- Encourage further education in the specialty of oncology skin care.



Learning points

- Appreciate the diverse roles of essential oils and related products that are pertinent to oncology skin care.
- Emphasize the importance of researching the patient's specific treatment / drug regime for optimizing a personalized skin care protocol.
- Clarify the role of an oncology skin care specialist and their place in integrative care.

Subjects covered

1. Overview of the physical and psychological toll of skin toxicities.
2. Key roles and actions of essential oils.
3. The importance of base selection for therapeutic efficacy.
4. The consultation process for optimizing outcomes.
5. Understanding drug treatments to plan effective care.
6. Three case examples for skin and nail toxicities and their management.
7. Conclusion, issues for safe practice and final guidelines.

Overview

- The cancer patient is especially vulnerable to skin and nail toxicities of varying severity.
- When skin integrity is breached, this may halt treatment altogether or lead to reduced doses given.
- Immunocompromised patients are especially at risk of infection.

Chemotherapy

Immunotherapy

Targeted therapy

Radiation therapy

Stem cell transplant

Invasive procedures

Surgery

Health decline

Comorbidities

Overview

Skin dryness	Itch	Peeling
Redness and rashes	Oedema	Pigmentation changes
Broken capillaries	Loss of skin elasticity	Reactive skin
Oral mucositis	Acneic eruptions	Sores and ulcers
Phototoxicity	Prolonged skin reactivity	Bruising
Nail changes	Palmar-Plantar syndrome	Graft Versus Host Disease

- Skin and nail toxicities alter the person's appearance.
- They cause significant psychological and psychosocial distress.
- Their impact may be under-reported by the patient.
- They may be an ongoing reminder of the disease journey.

Stress and the skin

The skin is an important target for systemic and local stress responses.

The skin responds to the ‘stress soup’ by…

- being more reactive,
- more likely to be inflamed
- with diminished skin healing times.

- Levels of pro-inflammatory chemicals are elevated.
- Psychological stress disturbs skin homeostasis and increases the likelihood of reactivity.
- The cancer patient has localised oxidative, chemical and mechanical stress in the skin coupled with significant psychological stress.

Essential oil roles & actions

General roles of essential oils & related products

- Provide calming and stress relieving effects.
- Promote skin integrity and prevent skin breakdown.
- Provide physical and pharmacological benefits to cells of the epidermis and dermis.
- Alter the intercellular environment to maximise tissue recovery.
- Modify the skin microbiome.
- Accelerate wound repair and reduce scarring.
- Provide a pleasant fragrance to the topical product to enhance adherence to treatment.

The importance of fragrance

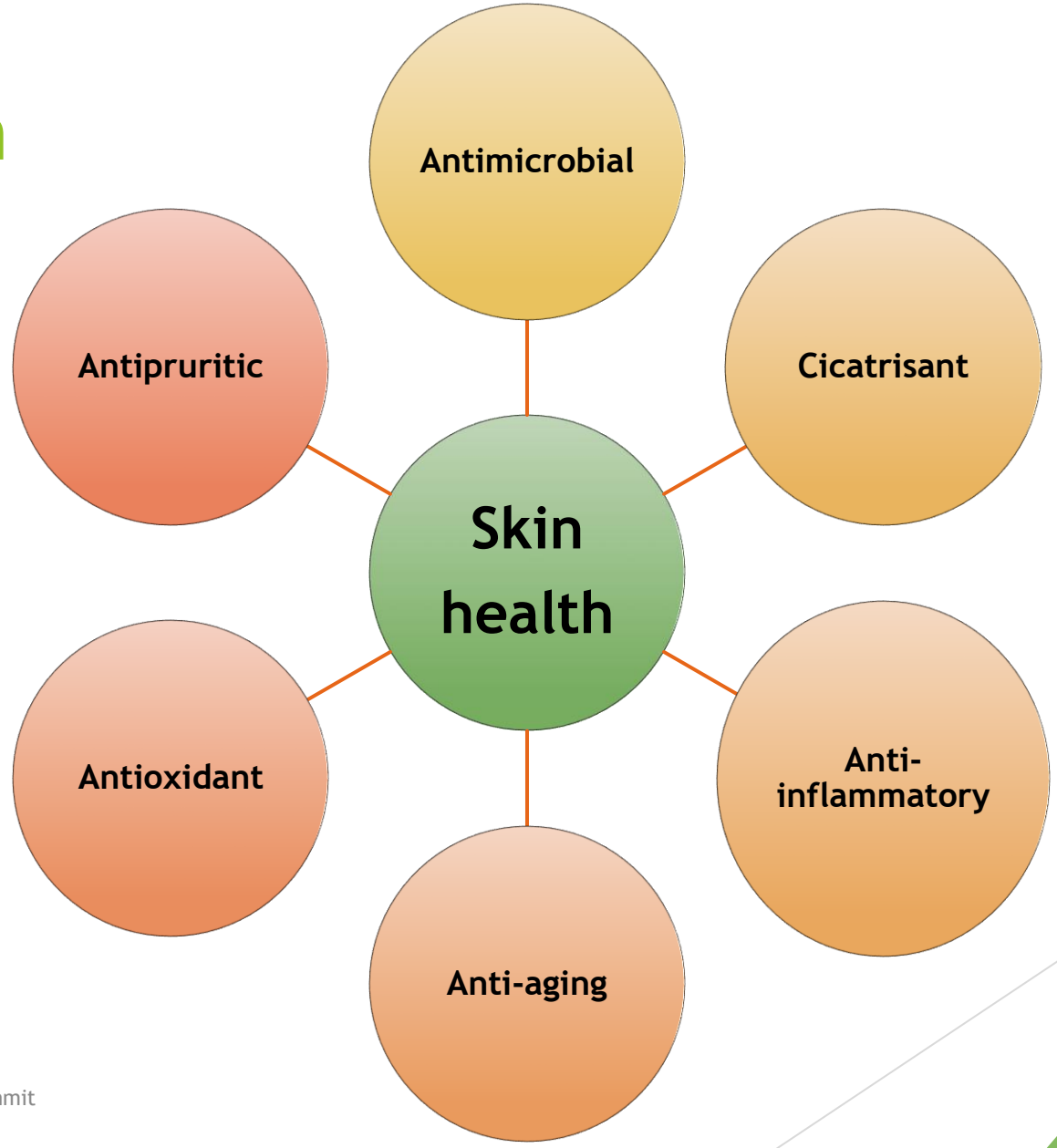
- Even if skin application is not possible, simply inhaling a pleasant blend may impact the skin!
- Research shows improved skin healing times and reduced skin sensitivity with calming aromas.
- A fragranced topical product also helps with adherence to the skin treatment protocol.

Hosoi J, Tsuchiya T. Regulation of cutaneous allergic reaction by odorant inhalation. J Invest Dermatol. 2000 Mar;114(3):541-4.

Denda M, Tsuchiya T, Shoji K, Tanida M. Odorant inhalation affects skin barrier homeostasis in mice and humans. Br J Dermatol. 2000 May;142(5):1007-10.

Hosoi J. Stress and the skin. Int J Cosmet Sci. 2006 Aug;28(4):243-6.

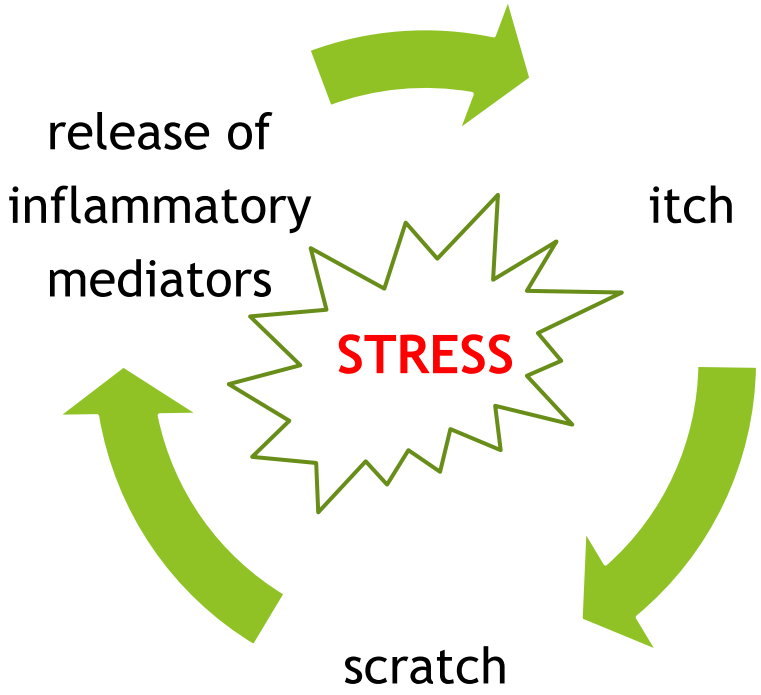
Six actions to promote skin health & repair in oncology skin care



Anti-pruritic

Itch is a common symptom of several skin challenges. It has several causes:

- drug therapy
- dry skin
- oedema
- immobility
- poor nutrition
- dehydration
- renal, liver, thyroid disease…
- psychological stress



The itch-scratch-itch cycle is difficult to break and can lead to superimposed infection.

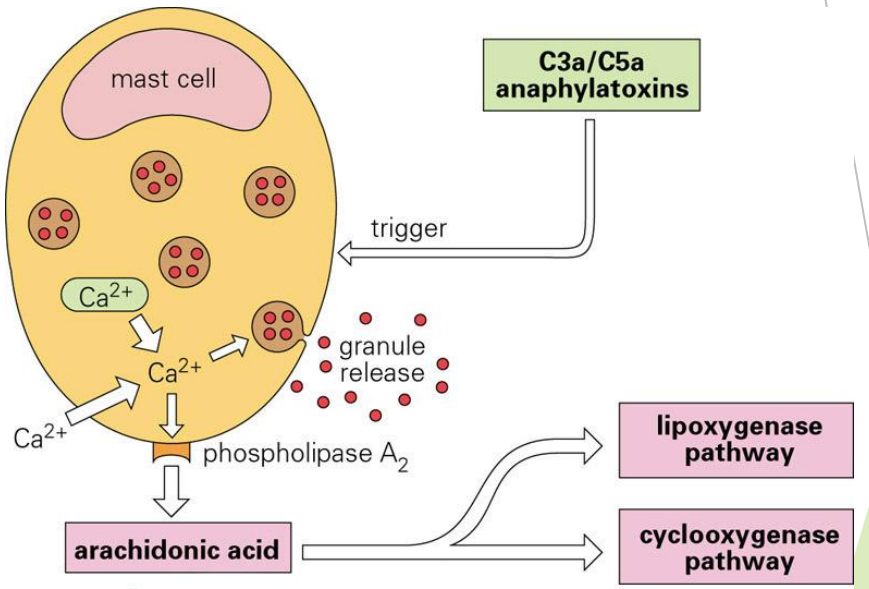
One key mediator of itch - Histamine

BASAL CELLS and MAST CELLS

In response to cell injury, oxidative stress, psychological stress or phagocyte stimulation…

release HISTAMINE into interstitial fluid. This causes

- vasodilatation
- increased vascular permeability
- itch

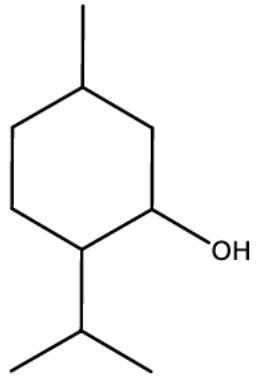


Essential oils & components for itch

- Lavender
- Spike lavender
- Lavandin
- Peppermint
- Cornmint
- Geranium
- Bergamot mint
- Palmarosa
- Rose
- Coriander
- Ho wood
- Copaiba balsam
- Tea tree

Menthol
Linalol
Terpinen-4-ol
Geraniol
Menthol
Menthone
Eugenol

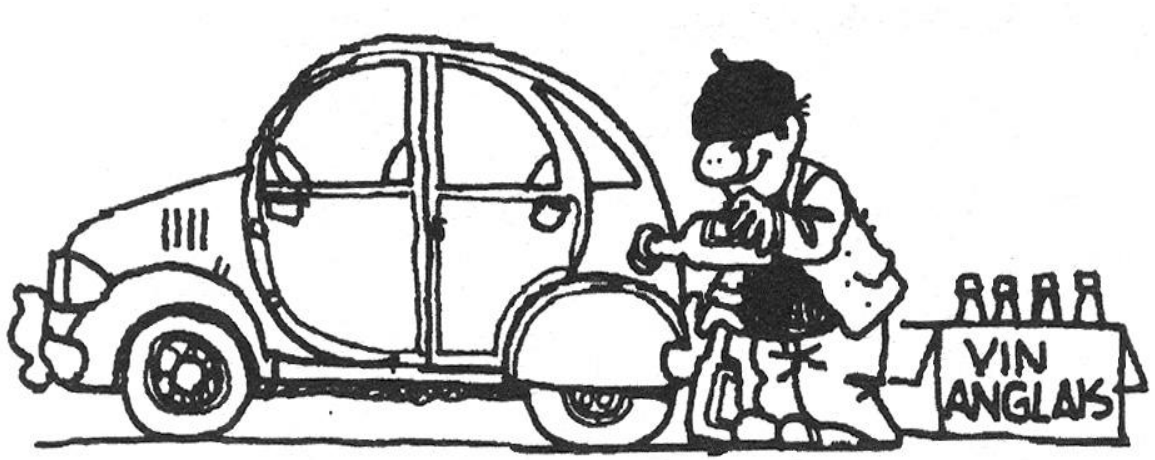
The component **Menthol** is the most researched for reducing the itch sensation. Found in Peppermint, Cornmint and Bergamot Mint essential oils.



Liu B, Jordt SE. Cooling the Itch via TRPM8. J Invest Dermatol. 2018 Jun;138(6):1254-1256.

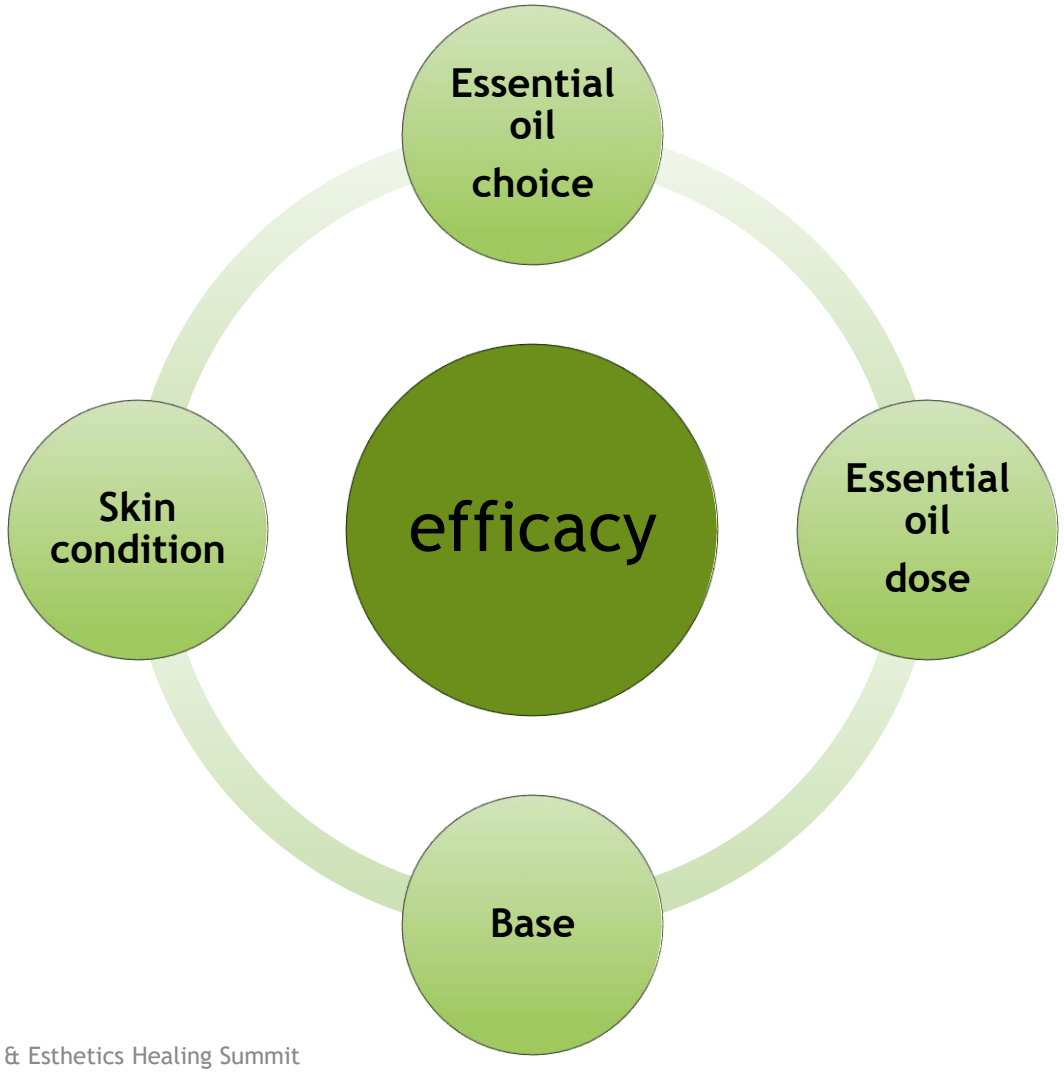
Butler DC, Berger T, Elmariah S, Kim B, Chisolm S, Kwatra SG, Mollanazar N, Yosipovitch G. Chronic Pruritus: A Review. JAMA. 2024 Jun 25;331(24):2114-2124.

The importance of base selection



- Selecting the right medium to deliver essential oils to the skin is important.
- A good essential oil formulation can be rendered ineffective with an inappropriate base.

Factors to take into account



Which base is best?

Essential oils require dilution in bases prior to topical application.
There are a range of bases to choose from that complement essential oil efficacy and that can be adapted to the patient's individual skin challenge.

They include:

- Fixed /vegetable oils
- Macerated/ infused oils
- Hydrolats/ Hydrosols
- Emulsions/lotions/creams
- Ointments & pastes
- Gels

Fixed/vegetable oils

- Therapeutic choices often made on the fatty acid composition of different fixed oils.
- Oils rich in saturated fatty acids:
  physical barriers and emollients, protect and prevent drying
- Oils rich in polyunsaturated fatty acids:
  anti-inflammatory, skin repair, reducing scarring
- Oils rich in monounsaturated fatty acids:
  softening, enrich lipid barrier, supportive of the skin lipid structure

Tamanu oil has multiple skin benefits in oncology skin care.

Image:
https://commons.wikimedia.org/wiki/File:AlexandrianLaurel_pj.JPG

Macerated/ infused oils

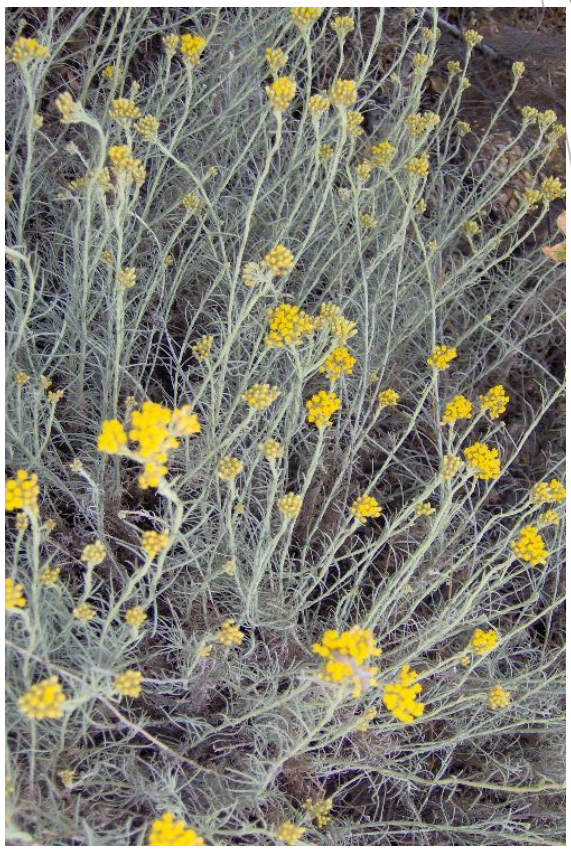
- **Calendula**
- Chickweed
- St John’s wort
- Arnica
- Carrot root
- Meadowsweet
- Lavender
- German Chamomile

Calendula has the most research concerning oral mucositis and radiation dermatitis.

Pommier P, Gomez F, Sunyach MP, D'Hombres A, Carrie C, Montbarbon X. Phase III randomized trial of Calendula officinalis compared with trolamine for the prevention of acute dermatitis during irradiation for breast cancer. J Clin Oncol. 2004 Apr 15;22(8):1447-53.

Hydrolats/ Hydrosols

- Cooling
- Anti-inflammatory
- Analgesic
- Cicatrisant
- Antioxidant
- Used in compresses and sprays
- In mouth rinses, gargles
- For fragile, bleeding skin
- For soothing itch, swelling and heat in the skin



Helichrysum hydrolat has multiple benefits in oncology skin care.

Balm formulation example (Polybalm®)

Bases

- Beeswax
- Cocoa butter
- Shea butter
- Olive oil

Polybalm® | For the protection and repair of nails

Essential oils

- *Tarchonanthus camphoratus*
- *Eucalyptus globulus*
- *Lavandula angustifolia*
- *Gaultheria procumbens*

Balm applied 3 x daily starting ahead of the chemotherapy regime and continued throughout treatment.

Thomas R, Williams M, Cauchi M, Berkovitz S, Smith SA. A double-blind, randomised trial of a polyphenolic-rich nail bed balm for chemotherapy-induced onycholysis: the UK polybalm study. Breast Cancer Res Treat. 2018 Aug;171(1):103-110..

Gels

- Protective film on the skin
- Maintain skin moisture
- Cooling
- Soothing to skin and mucosae
- Anti-itch
- Antioxidant
- Cicatrisant

Aloe vera gel has the most research evidence for oral mucositis and radiation dermatitis.

Wang T, Liao J, Zheng L, Zhou Y, Jin Q, Wu Y. Aloe vera for prevention of radiation-induced dermatitis: A systematic review and cumulative analysis of randomized controlled trials. Front Pharmacol. 2022 Sep 29;13:976698.

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The Importance of a Full Oncology Skin Health Consultation and why a Comprehensive Consultation Matters

Clinical Benefits of a Pre-Treatment Skin Consultation

✅ Mitigation of Dermatologic Adverse Effects

- Proactively strengthens the skin barrier to reduce the incidence and severity of treatment-induced dermatitis, xerosis, and hand-foot syndrome.

✅ Optimised Patient Comfort & Tolerance

- Prepares the skin for therapy, reducing inflammation, pruritus, and discomfort, thereby improving adherence to treatment protocols

✅ Reduction in Treatment Interruptions

- Prevention and early management of dermatologic toxicities decrease the likelihood of dose reductions, treatment delays, or discontinuation.

✅ Evidence-Based Skincare Protocols

- Provides guidance on oncologist-approved, non-irritating skincare formulations to minimise hypersensitivity reactions and maintain skin integrity.

✅ Psychosocial & Quality of Life Benefits

- Addresses visible skin changes to support patient confidence and mental well-being during treatment.

✅ Long-Term Dermatologic Protection

- Establishes a post-treatment skincare regimen to promote recovery and reduce the risk of chronic skin complications.

Conclusion:

- A pre-treatment oncology skin consultation is a critical component of supportive care, enhancing treatment tolerance, improving clinical outcomes, and maintaining patient quality of life.

Chemotherapy Drugs – Mechanism of Action & Dermatologic Effects

1. Antimetabolites (e.g., 5-FU, Methotrexate, Capecitabine)

- Mechanism: Interfere with DNA/RNA synthesis in rapidly dividing cells
- Skin Effects: Hand-foot syndrome, photosensitivity, xerosis, nail changes

2. Alkylating Agents (e.g., Cyclophosphamide, Ifosfamide)

- Mechanism: Cross-links DNA to prevent cell replication
- Skin Effects: Skin hyperpigmentation, alopecia, delayed wound healing

3. Anthracyclines (e.g., Doxorubicin, Epirubicin)

- Mechanism: Inhibit topoisomerase II, causing DNA damage
- Skin Effects: Severe radiation recall dermatitis, hyperpigmentation, mucositis

4. Taxanes (e.g., Paclitaxel, Docetaxel)

- Mechanism: Disrupt microtubules, preventing cell division
- Skin Effects: Nail dystrophy, hand-foot syndrome, alopecia, edema

5. Platinum Compounds (e.g., Cisplatin, Carboplatin, Oxaliplatin)

- Mechanism: Form DNA cross-links, inhibiting replication
- Skin Effects: Photosensitivity, hypersensitivity reactions, acral erythema

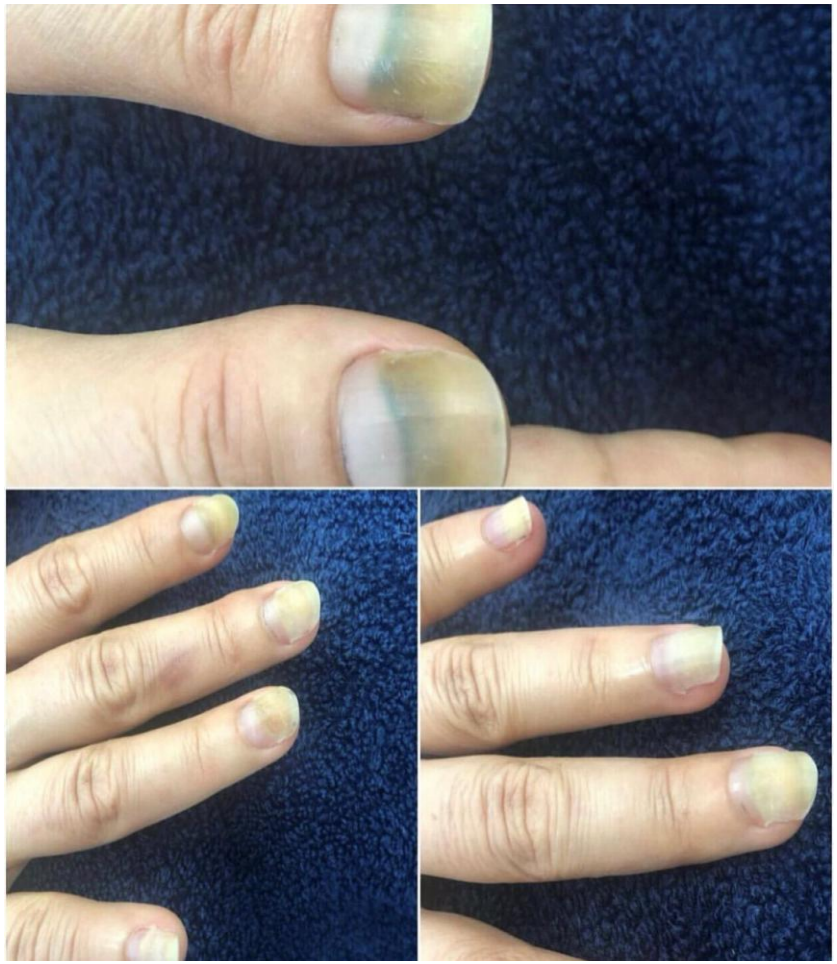
6. Targeted Therapy (e.g., EGFR Inhibitors, VEGF Inhibitors, BRAF Inhibitors)

- Mechanism: Block specific cancer growth pathways
- Skin Effects: Acneiform rash, paronychia, delayed wound healing, severe dryness

Conclusion:

- Understanding chemotherapy-specific skin toxicities enables early intervention, reducing severity and improving patient quality of life.

Case Study: Chemotherapy-Induced Nail Toxicity



Diagnosis: Chemotherapy-induced nail toxicity

Presentation:

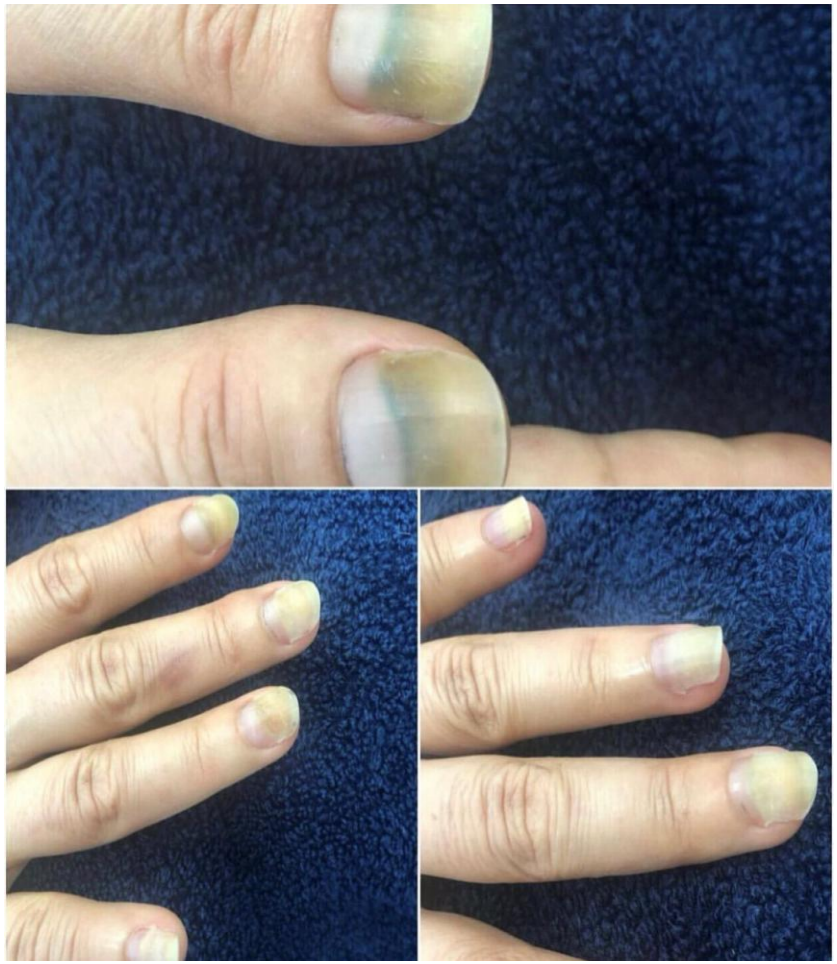
- Complete nail detachment and elevation from the nail bed in both hands
- Severe nail bed inflammation causing significant pain
- Impaired daily functioning (difficulty with personal care, fastening buttons, typing, and writing)

Intervention & Treatment

1. Initial Management

- Nail Therapy Initiation:
- Application of dark nail polish
- Use of magnesium flakes and 1–2 drops of oregano oil
- First Symptom Reduction:
- Noted within 4 days of therapy initiation
- Decreased nail bed inflammation
- Prevention of secondary infections

Case Study: Chemotherapy-Induced Nail Toxicity



2. Clinical Progression

- 5 weeks post-therapy:
- Growth of healthy, fully attached nails
- Visible delineation between pre-treatment and post-treatment nail growth
- Persistent Green Discoloration on Thumbs:
- Not due to photosensitivity or infection
- Attributed to chemotherapy-related toxin deposition

Case Study: Chemotherapy-Induced Nail Toxicity

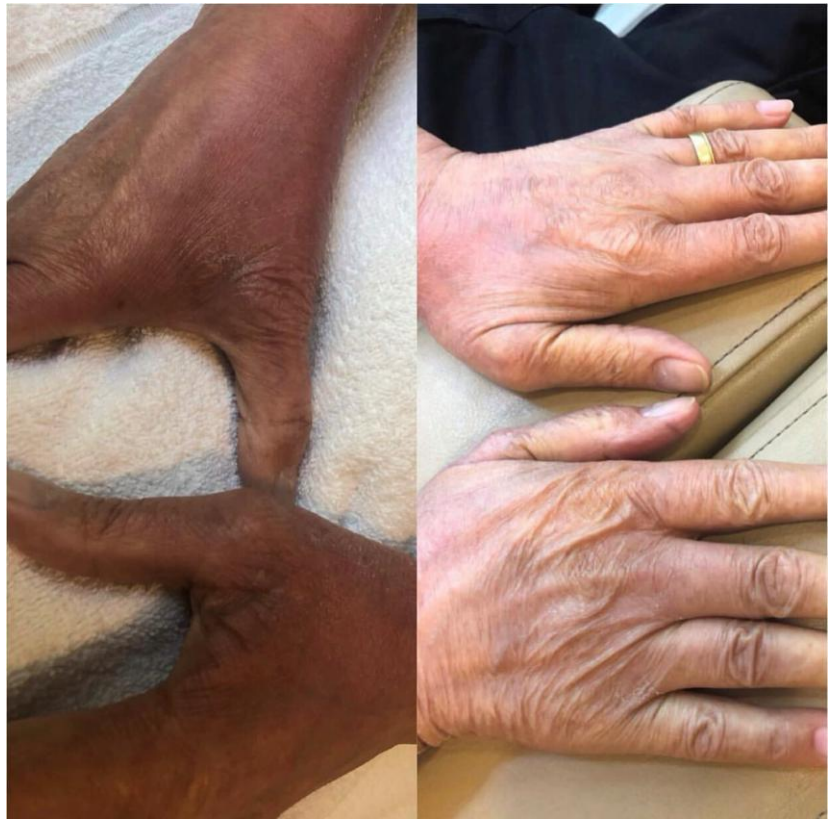
Clinical Insights

- Delayed Nail Toxicity:
- Can manifest up to 8 months post-final chemotherapy infusion
- Potential Role of Nail Therapies:
- Dark nail polish may have provided UV protection and structural support
- Magnesium and oregano oil likely contributed to anti-inflammatory and antimicrobial effects

Conclusion

- This case highlights the significant impact of chemotherapy-induced nail toxicity on quality of life and the potential benefits of early supportive interventions to reduce inflammation, prevent infections, and promote nail regrowth.
- Further studies are needed to evaluate the role of nail therapies in managing chemotherapy-induced nail damage.

Chemotherapy-Induced Photosensitivity: Clinical Overview and Management



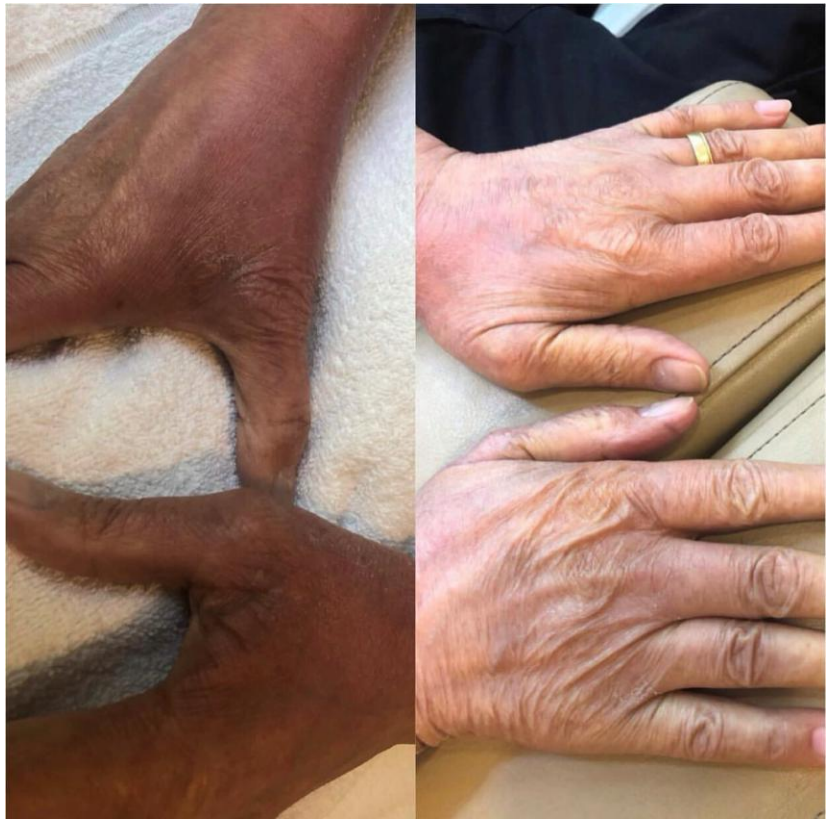
Clinical Case Overview

- Patient Symptoms: Burning pain, inflammation, sensory loss, and functional impairment (difficulty with self-care tasks such as buttoning clothing or typing).
- Treatment Duration: Six days from initial presentation to improvement.

Management Strategies Implemented:

- Skin Therapy Treatment: Emphasis on barrier repair and hydration.
- UV Protection: Use of fingerless UV-protection gloves to prevent further phototoxic reactions.
- Topical Support: MooGoo Udder Cream was prescribed to improve skin elasticity, reduce inflammation, and repair damaged skin. This formulation is available via GP prescription in some healthcare settings.
- Natural Desquamation Approach: Avoidance of exfoliation, allowing the skin to heal naturally, reducing further irritation and secondary infections.

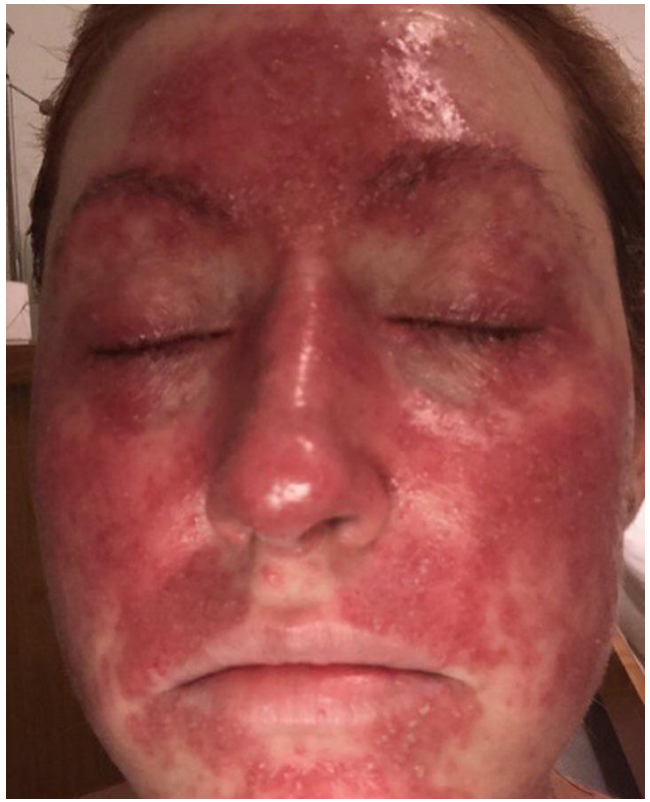
Chemotherapy-Induced Photosensitivity: Clinical Overview and Management



Outcome and Clinical Significance

- Quality of Life Restored: The patient regained comfort and improved functional ability.
- Chemotherapy Continuation: No need for dose reduction or treatment interruption.
- Reduced Infection Risk: Proactive skincare and UV protection minimized complications.

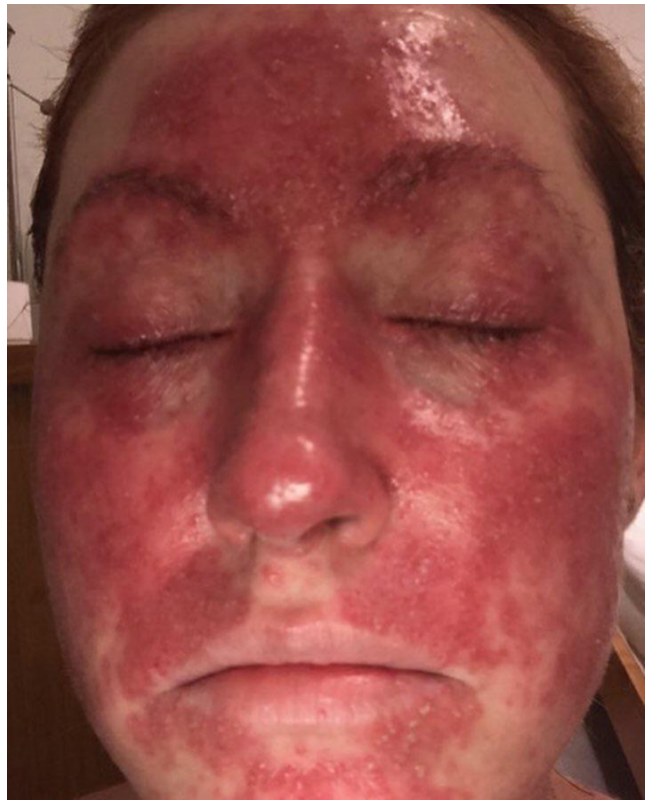
Case Study: Folfox-Induced Cutaneous Reaction



Patient Background

- Chemotherapy Regimen: FOLFOX (5-Fluorouracil, Leucovorin, Oxaliplatin)
- Presentation: Severe erythematous facial dermatitis with inflammation, irritation, and peeling skin
- Primary Concern: Skin barrier disruption, pain, and potential risk of secondary infection

Case Study: Folfox-Induced Cutaneous Reaction



Why Does FOLFOX Cause This Skin Reaction?

- FOLFOX chemotherapy is commonly used for colorectal cancer and contains 5-Fluorouracil (5-FU), a pyrimidine analog that interferes with DNA synthesis. The skin toxicity seen in this case is most likely due to:

1. 5-Fluorouracil-Induced Photosensitivity & Toxicity:

- Mechanism: 5-FU interferes with epidermal cell proliferation, causing inflammatory dermatitis and increased photosensitivity.
- Clinical Features: Erythema, peeling, burning sensation, and skin hypersensitivity, particularly in sun-exposed areas.
- • Onset: Can appear within days to weeks of starting treatment and may worsen with UV exposure.

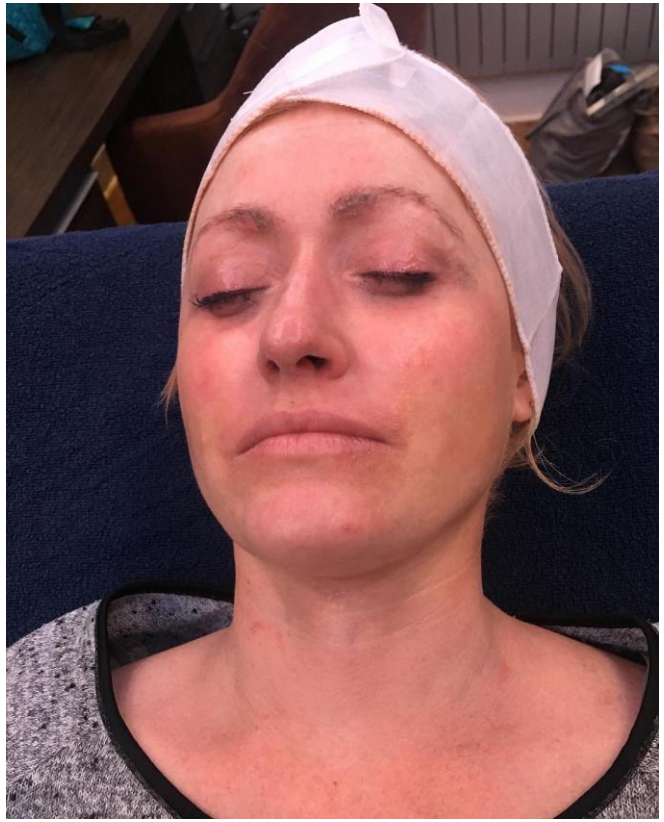
2. Oxaliplatin-Related Hypersensitivity & Neuropathy:

- • Mechanism: Oxaliplatin causes immune-mediated inflammatory responses, which can exacerbate skin irritation.
- • Exacerbation Factors: Cold sensitivity (cold-induced urticaria and flushing) and cumulative toxicity over multiple cycles.

3. Leucovorin's Role in Enhancing 5-FU Toxicity:

- • Leucovorin potentiates the cytotoxic effects of 5-FU, increasing epithelial and mucosal damage.
- • This can lead to severe skin irritation, peeling, and mucositis in some patients.

4-Week Skin Recovery Using Tamanu Oil and MooGoo Products



Treatment Duration: 4 weeks of topical therapy with Tamanu Oil and MooGoo skincare products.

- Outcome: Significant reduction in redness, improved skin hydration, and restored barrier function.

Mechanism of Action of Tamanu Oil & MooGoo Products

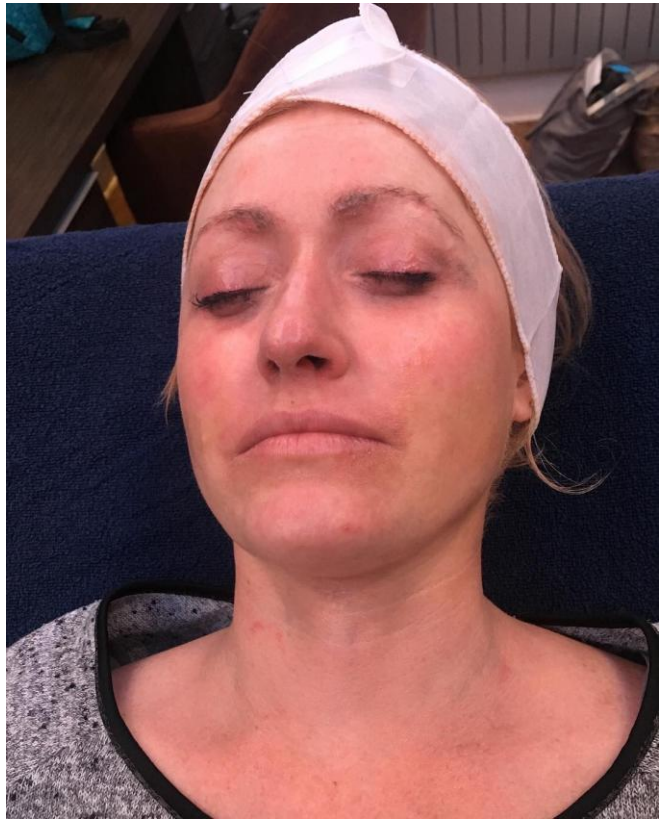
Tamanu Oil: Wound Healing & Anti-Inflammatory Effects

- Rich in Calophyllolide & Xanthones: Provides anti-inflammatory and antioxidant effects, reducing redness and irritation.
- Enhances Wound Healing: Stimulates collagen production, accelerating skin regeneration.
- Antimicrobial Properties: Protects compromised skin from secondary infections.

MooGoo Skincare: Barrier Repair & Hydration

- • Contains Natural Emollients (Shea Butter, Aloe Vera, Coconut Oil): Restores skin hydration and prevents desquamation.
- • pH-Balanced & Fragrance-Free: Minimizes further irritation, essential for chemotherapy-damaged skin.
- • Lactic Acid & Ceramides: Promote epidermal renewal, aiding in the recovery of the acid mantle.

4-Week Skin Recovery Using Tamanu Oil and MooGoo Products



2025 Virtual Oncology Massage & Esthetics Healing Summit

Clinical Outcomes After 4 Weeks

- Visible Improvement: Reduction in erythema and inflammation.
- Restored Skin Barrier: Hydration levels improved, reducing peeling and sensitivity.
- Increased Comfort: Patient reported a significant reduction in burning and discomfort.

Key Clinical Takeaways

- • Tamanu oil's anti-inflammatory and antimicrobial properties are beneficial in post-chemotherapy skin recovery.
- • MooGoo skincare products support hydration, barrier repair, and protect against further irritation.
- • Early intervention with natural-based emollients can accelerate skin healing without harsh chemicals.

Clinical Impact of Skin Toxicities in Oncology

Incidence of Dermatologic Adverse Events

Taxanes (e.g., Paclitaxel, Docetaxel):

- Nail dystrophy in 44-80% of patients
- Hand-foot syndrome in 30-50% of cases
- Alopecia in >80% with docetaxel

EGFR Inhibitors: Acneiform rash in up to 90% of patients

Chemotherapy: Xerosis and pruritus in 50-60% of patients

Radiation Therapy: Radiation dermatitis in 95% of patients

✅ **Impact on Treatment Outcomes**

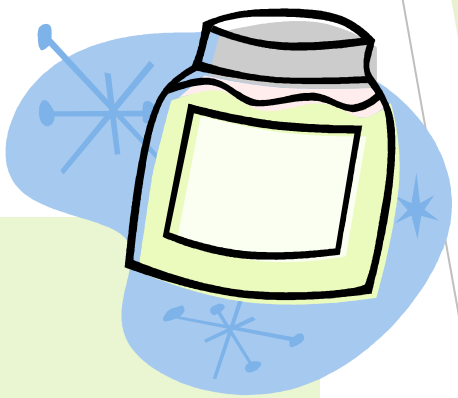
- Severe skin toxicities lead to dose reductions or treatment delays in 30-40% of cases
- 15-20% of patients discontinue targeted therapy due to intolerable skin reaction

✅ **Psychosocial & Emotional Consequences**

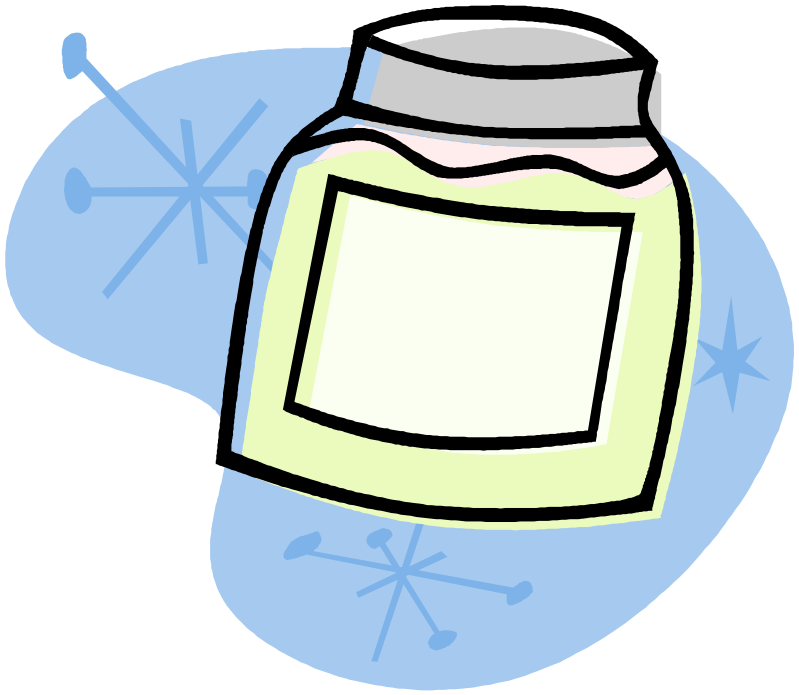
- 45% of patients report decreased quality of life due to visible skin changes
- 30% experience anxiety or depression related to dermatologic side effects
- Skin toxicities negatively impact treatment adherence and overall well-being

Final comments

Proactive skin management reduces toxicity severity, improves treatment adherence and enhances patient quality of life.



- Patience! 28-112 days for real results
- Safety first!
- Dose!
- Flexibility!
- Holistic and personalised approach!
- Boundaries and limitations!



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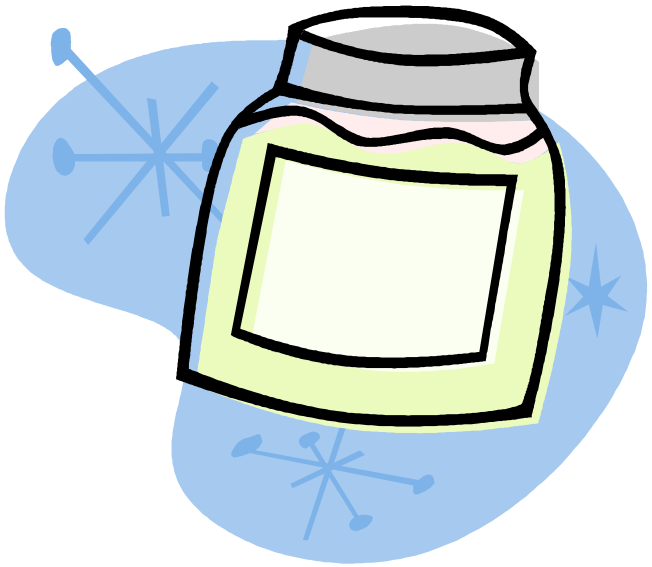

Aromatic approaches to Integrative Oncology Skin Health

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Thank you for you time!
We look forward to your questions!