

# Radiation-Induced Skin Dermatitis

## Treatment with CamWell® Herb to Soothe® cream in patients with head and neck cancer receiving radiation therapy

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**BACKGROUND:** Radiation-induced skin dermatitis (RISD) is a common outcome experienced by adult patients with head and neck cancer (HNC) who have undergone radiation therapy. There is no standardized recommended agent for the prevention or management of RISD.

**OBJECTIVES:** The primary objective of this study was to retrospectively evaluate for effectiveness of a botanical topical agent, CamWell® Herb to Soothe® cream, on RISD.

**METHODS:** 112 patients with HNC undergoing radiation therapy self-reported their RISD topical skin care agent during treatment as standard of care, CamWell used prophylactically, or CamWell use started after the first week of treatment. The primary endpoint was impact of RISD on the patient, as measured by mean Skindex-16 score throughout treatment. Measures were completed weekly.

**FINDINGS:** The mean Skindex score was statistically significantly lower for the prophylactic group than for the standard-of-care group. CamWell may have played a role in managing RISD when compared to standard-of-care agents.

### KEYWORDS

head and neck neoplasm; radiation therapy; radiation-induced skin dermatitis

### DIGITAL OBJECT IDENTIFIER

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**RADIATION-INDUCED SKIN DERMATITIS (RISD)** is a dose-dependent, irritating acute skin reaction experienced by more than 90% of patients who receive oncologic radiation therapy treatment. Among those receiving radiation therapy, patients with head and neck cancer (HNC) are particularly subject to developing RISD because the anterior of the neck and face are highly sensitive to radiation and because skin folds (as seen in the neck) are susceptible to worse injury (Wolf & Hong, 2019). Erythematic or dry skin at the treatment site may present as the earliest physically appreciable sign of RISD but may progress to moist, peeling desquamation or ulceration as radiation therapy continues. Negative outcomes, such as pain, itching, undesirable aesthetic appearance, time invested in symptom management, potential for infection, and late development of radiation-induced fibrosis, often result; consequently, the patient's quality of life (QOL) may also be impaired (Villaquiran, 2015).

Current standard-of-care practice recommendations for RISD include washing the area being treated with warm soap and water, gently patting the area dry, and applying a topical hydrating lotion (Backler et al., 2020; Memorial Sloan Kettering Cancer Center, 2018). A systematic review of the scientific literature by Salvo et al. (2010) assessed 39 clinical trials using various agents (topical, IV, and oral) for the prevention and/or management of RISD, concluding that there is not compelling, statistically significant evidence to recommend an exclusive agent for the effective prevention and/or management of RISD. This review further validated that there is a lack of rigorous evidence for standard-of-care agents currently in use. The most used assessment tools from this analysis were the Radiation Therapy Oncology Group criteria and the National Cancer Institute's (NCI's) Common Terminology Criteria for Adverse Events (CTCAE) scale. Both tools lack fine granularity and are clinician-based, making them inadequate to capture the symptoms and experience of the patient (Salvo et al., 2010).

The findings of Salvo et al. (2010) are further substantiated by Oncology Nursing Society (ONS) recommendations against any specialty creams because they often are more expensive and have not been established as having any additional benefits over standard-of-care agents. A systematic review and meta-analysis by Backler et al. (2020) found that although various