

# Topical Opioids and Antimicrobials for the Management of Pain, Infection, and Infection-Related Odors in Malignant Wounds: A Systematic Review

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**Problem Identification:** Patients with malignant wounds report pain, distress from odor and exudate, decreased self-esteem, and poor quality of life. This systematic review explores topical opioids, antimicrobials, and odor-reducing agents for preventing or managing malignant wound pain, infection, and odor.

**Literature Search:** MEDLINE<sup>®</sup>, EMBASE, the Cochrane Library, CINAHL<sup>®</sup>, and reference lists were searched to identify relevant studies.

**Data Evaluation:** Eligible study designs included interventions with pre- and postintervention data. Data extraction and risk-of-bias assessments were conducted using the Cochrane approach.

**Synthesis:** No studies evaluated opioid use. Five studies (four randomized, controlled trials) evaluated topical antimicrobials for infection and odor. All studies reported clinically (but generally not statistically) significant improvements in outcomes.

**Conclusions:** Although not as prevalent as before, 5%–10% of tumors, particularly in breast cancer, sarcoma, and melanoma, are expected to fungate. Gaps in the literature exist for use of topical opioids and antimicrobials for managing pain, odor, and infection control in malignant wounds.

**Implications for Research:** Current recommendations for topical control of malignant wounds are based on case reports and observational studies in patients with breast cancer. Robust, controlled trials of topical opioid and antimicrobial use are warranted in patients with melanoma, breast, or head and neck cancer.

**A** fungating cancer is any cancer-related skin lesion characterized by ulcerations (breaks on the skin or surface of an organ) and necrosis (death of living tissue) (National Cancer Institute, 2015). Cancer registries do not report the rate of fungating cancers. In the authors' clinical experience, advances in chemotherapy and radiation therapy mean that they are not as prevalent as they once were. Now considered relatively uncommon, fungating cancers are nonetheless still encountered in patients with melanoma, breast cancer, and squamous cell carcinomas (particularly in head and neck cancer), and in those with more advanced disease. Retrospective reviews of large hospital databases undertaken from 1990–2007 indicate that 5%–10% of such cancers are likely to fungate (Alexander, 2009). In Europe, an estimated 5% or greater of patients with cancer develop a fungating wound (European Oncology Nursing Society, 2015).

Fungating lesions develop rapidly; if their exuberant growth is not controlled, they can damage local skin and vascular and lymph structures. If the lesion undergoes necrosis, it also provides a favorable medium for bacterial growth and subsequent infection (da Costa Santos, de Mattos Pimenta, & Nobre, 2010) and infection-related odor. Although current cancer therapy can usually help debulk