CE Symptom Management Series
2.1 ANCC Contact Hours

Management of Fungating Tumors and Pressure Ulcers in a Patient With Stage IV Cutaneous Malignant Melanoma

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People with advanced disease often face many distressing symptoms. These symptoms can be further compounded and complicated by the presence of a wound or wounds. This article presents a case involving a patient being cared for at home with fungating tumors secondary to stage IV cutaneous malignant melanoma and pressure ulcers. The goal of care was to offer symptom management options for the distressing symptoms that he and his family faced with regard to these wounds: pain, odor, bleeding, and excessive drainage.

KEY WORDS

fungating tumors, malignant melanoma, pressure ulcers, skin cancer, wounds

Patients with advanced disease often have distressing symptoms that can be confounded and further complicated by the presence of a wound or wounds. The wounds can be a constant physical reminder of the patient's illness. The wound etiology in a patient with advanced disease can include pressure-related ulcers, vascular-related ulcers, a primary skin cancer, metastasis from another malignancy, a Kennedy terminal ulcer, or a Marjolin ulcer (malignant transformation of a chronic wound).[1]

The skin is the largest organ in the body, and when major complications occur in the skin, this can be 1 of the most devastating concerns to both patients and caregivers. Patients may develop a Kennedy terminal ulcer, which is a complication of the dying process resulting from multiple-system organ failure.[2] It usually develops in the sacrococcygeal region and is pear or butterfly shaped (Photo 1). Loved ones may feel a sense of failure or blame when a pressure ulcer develops despite their best caregiving efforts.

Malignant wounds may present as either fungating or ulcerating. A fungating malignant wound grows outward and appears fungus or cauliflower-like (Photo 2). An ulcerating malignant wound develops as a crater as the cancer erodes through the skin into deeper tissue layers (Photo 3). Some malignant wounds can have a combination of these features. These types of wounds are very vascular and are at a high risk for bleeding. They are also often painful as the tumor progresses through the tissue layers, cutting off blood and lymph supply, leading to further necrosis, inflammation, and tissue destruction. Along with the tissue destruction and the overgrowth of bacteria and fungus, odor can be a major distressing symptom. Leaking exudate may also cause pruritus. Patients with these types of wounds may also experience social isolation because of the extensive disfigurement and embarrassment.

The following is a case study of a patient with fungating tumors at his anterior chest from recurrent malignant cutaneous melanoma and 2 unstageable pressure ulcers. His distressing symptoms included pain, bleeding, and a large amount of exudate and odor. This article reviews the options of care.

CASE STUDY

Mr J was a 70-year-old white, married man with 2 children. He worked as a sailor spending much time in the open sun. He was diagnosed with stage III cutaneous melanoma of his right shoulder 5 months ago after presenting with a mole that had changed. His wife noted the size had increased, and Mr J noted some bloody exudate on his shirt.

BACKGROUND: SKIN CANCER

Skin cancer is cited as 1 of the most common malignancies in the elderly, and the incidence is growing.[3] The Skin Cancer Foundation estimates skin cancer diagnoses in the United States each year as follows: squamous cell carcinoma, 700 000; basal cell carcinoma, 2.8 million; and deaths from melanoma, 8790.[4] The American Cancer Society estimated 76 690 new melanoma cases in the United States

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PHOTO 1. Kennedy ulcer.

for 2013.[5] Melanoma is the most aggressive of the 3 most deadly skin cancers, which include squamous cell carcinoma and basal cell carcinoma.[3] Melanoma is a cancer of the melanocytes, which are the cells that give skin its color and are located at the lower part of the epidermis (Figure 1); tumors are brown or black as the cells continue to make melanin.[6] According to the American Cancer Society, the 5- and 10-year survival estimates for stage IA melanoma are 97% and 95%, respectively, and for stage IV melanoma, 15% to 20% and 10% to 15%, respectively.[5] In 2013, the American Academy of Dermatology echoed that the incidence of melanoma is growing and pointed out that it is very treatable if found early.[7] According to the National Cancer Comprehensive Network, risk factors include

PHOTO 2. Fungating wound.

PHOTO 3. Ulcerating wound.

ultraviolet radiation exposure from sun/tanning beds, fair complexion, multiple moles or atypical moles, xeroderma pigmentosum, older age, and immune suppression.[8] See Figure 2 for the ABCDEs of melanoma from the American Academy of Dermatology.[7]

Although cutaneous melanoma most commonly appears on the obvious sun-exposed areas of the skin, it can also occur between toes, in the groin, on the plantar surface of feet (Photo 4), and under the fingernails, according to the Melanoma Research Foundation.[9] According to Bergstrom,[10] 5% of patients with cancer and 10% with metastatic disease will develop a fungating wound. Bergstrom[10]

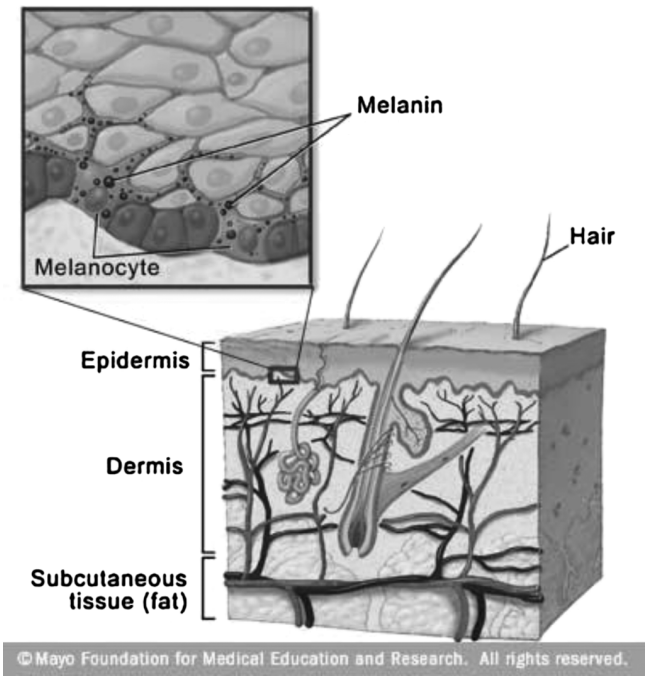


FIGURE 1. Skin layers. Reprinted with permission, Mayo Foundation for Medical Education and Research, Rochester, Minnesota.

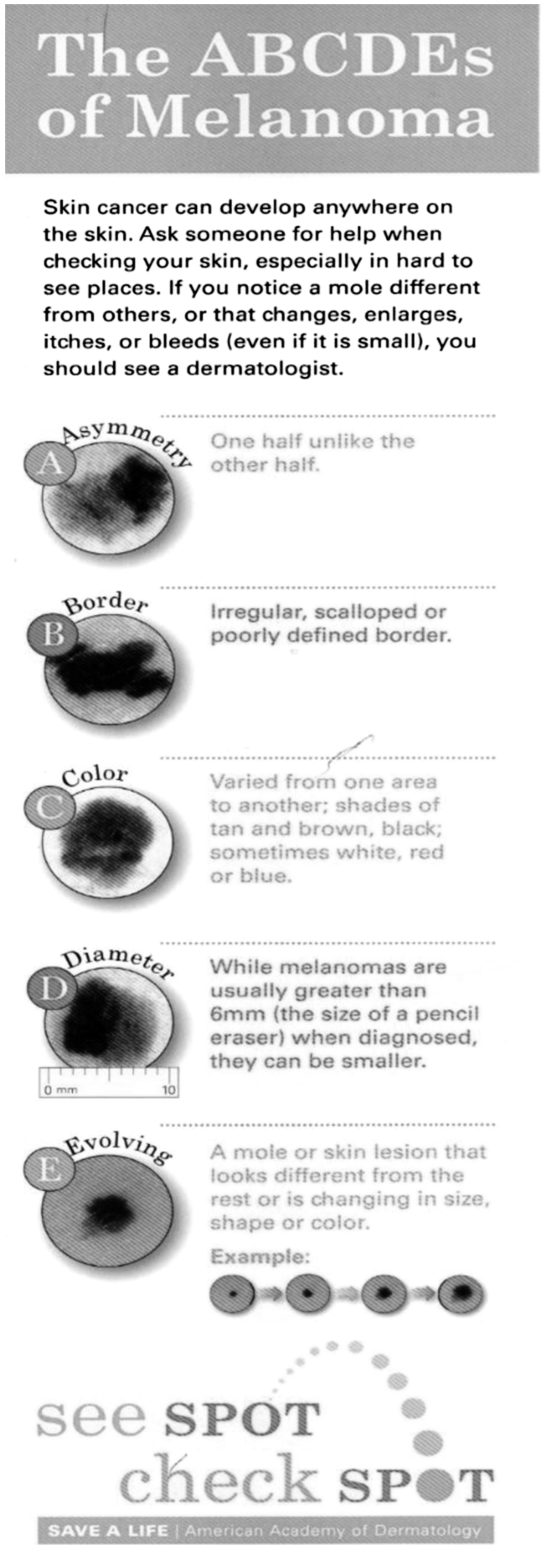


FIGURE 2. Assessing for melanoma. Reprinted with permission, American Academy of Dermatology.

further states that although metastatic fungating wounds can develop with any cancer, they are most commonly found with breast, lung, gastrointestinal tract, and skin cancer.

CASE STUDY (CONTINUED)

Mr J underwent surgical resection, targeted chemotherapy, and immunotherapy. He did well until 3 months ago, when he began experiencing headaches. He also noticed new lesions on his anterior chest that continued to grow. Biopsy revealed recurrence of the melanoma. Further work-up revealed metastases to the lung, liver, and brain; the cancer had now progressed to stage IV. He underwent palliative whole-brain radiation. He opted for comfort care after experiencing intolerable adverse effects from chemotherapy and was then referred to a local hospice. The hospice nurse took a multidisciplinary approach and consulted the medical team; certified wound, ostomy, and continence nurses; social work; spiritual care; physical therapy; the nutritionist; and music therapist, as well as volunteer support.

Mr J had multiple fungating tumors at his anterior chest (Photo 2). He reported pain at the sites that was burning, shooting, sharp, and exacerbated with wound care. He rated the pain severity as 10 of 10 at its worst and 5 of 10 at its best on a pain scale of 0 to 10 (0 being no pain and 10 being worst pain imaginable). His goal was a pain severity of 3 of 10. He wanted to enjoy time with family and friends, so he did not want to be overly sedated. He was taking oxycodone/acetaminophen 5/325 mg 2 tablets by mouth 4 to 6 times daily with relief for only 2 hours after administration. He was agreeable to trial methadone for a long-acting opioid and to use oxycodone immediate release 10 mg by mouth for breakthrough pain to avoid the risk of acetaminophen toxicity from the combination medication, especially in light of his liver metastases. He was started on methadone 5 mg (10 mg/mL) twice daily by mouth with oxycodone 10 mg every 2 hours crushed and taken orally as needed for breakthrough pain or shortness of breath. The oxycodone was not initially rotated to morphine so that the team could evaluate his response to the methadone before making an additional change.

Methadone was chosen because of its cost effectiveness and because Mr J's swallowing was becoming more difficult

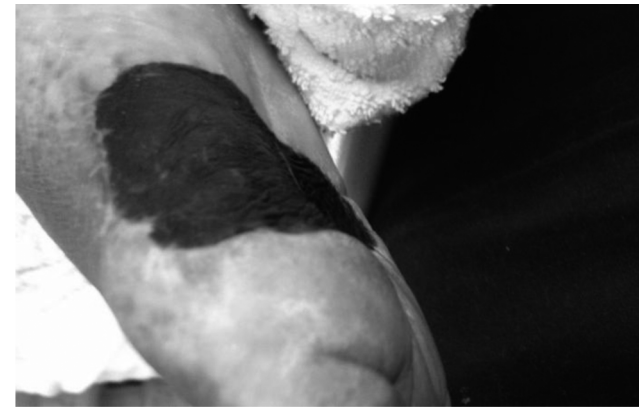


PHOTO 4. Melanoma on plantar surface of foot.

and the team had access to methadone intensol on formulary. Methadone was also considered because of the suspected neuropathic component of the pain from Mr J's pain descriptors of burning and shooting pain. Although a Cochrane review found it no more effective for neuropathic pain than morphine,[11] in these authors' experiences, methadone has been effective for neuropathic pain.[12-14] Mr J and his family kept a record of his daily breakthrough medication needs to allow for aggressive titration of the opioids as needed. He did well on this regimen requiring 2 to 3 breakthrough pain medication doses daily, including a dose 30 to 60 minutes before the wound care. He reported a pain level of 3 both overall and during wound care, which was acceptable to him. As his swallowing worsened, he was rotated to morphine sulfate 15 mg (20 mg/mL) by mouth with good results. Morphine is considered the standard initial opioid of use.[15] The oxycodone intensol is more costly, and because Mr J had no contraindications to morphine, such as advanced renal disease, the transition was made without any problems. The team reevaluated his pain regularly during visits and over the telephone.

Mr J and his family were also upset by the odor, the bleeding, and the large amount of exudate from the fungating wound at his chest and from the sacral pressure ulcer. This led to the need for frequent clothing and linen changes. He became more withdrawn and embarrassed by the odor and had a poor body image. His spouse was fatigued and worried he would become depressed. They were both frightened by the amount of bleeding occurring during the wound care.

He was spending more time in bed and eating very little. He had developed unstageable pressure ulcers to his right heel and his sacrum despite optimal care (see Photos 5 and 6). They were considered unstageable because of the presence of necrotic tissue obscuring the view of the wound base.[16] The illustrations and definitions of all pressure ulcer stages are shown in Table 1.[16] He was turned and positioned as tolerated, and pillow bridging was used to relieve pressure at his boney prominences and support surfaces were in place on his bed and chair.

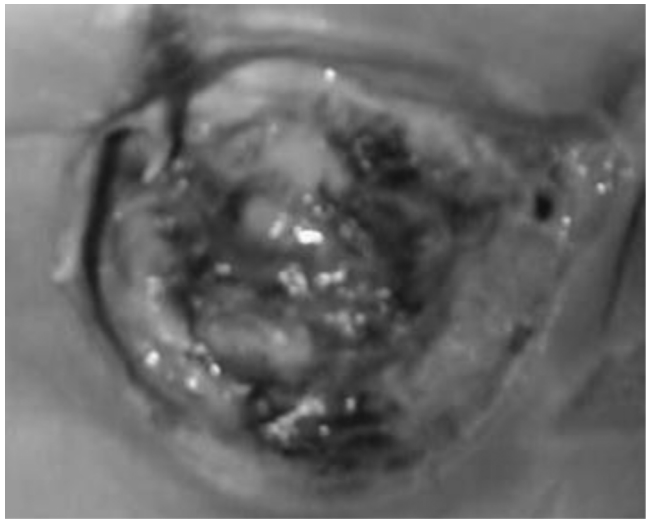


PHOTO 5. Sacral unstageable pressure ulcer.

PHOTO 6. Heel unstageable pressure ulcer.

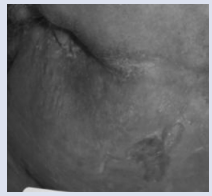
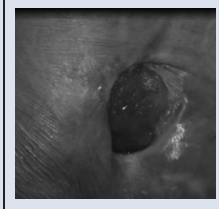
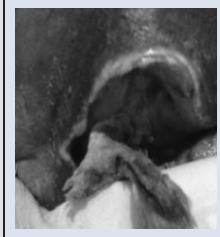
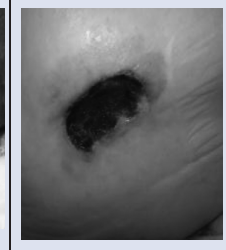
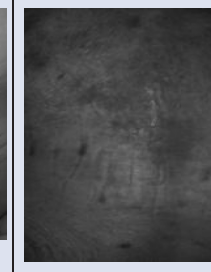
CARE SETTING

Caring for patients in the home is quite different from caring for patients in a hospital setting. Patients are in the comfort of their home as opposed to being in a controlled setting such as a hospital, being cared for by trained professionals. They do not have 24-hour care being provided by nursing staff but receive care from family members and other caregivers. They have made an active decision to be cared for in their home, and health care professionals must understand and respect their wishes. This is an integral part of palliative care. Once the patient and caregiver's concerns (ie, pain, odor, privacy, and body image) are understood, the palliative care or hospice team can develop a realistic wound management plan that addresses these issues and improves quality of life.

Palliative principles facilitate the accommodation of both patient and family needs, shifting priorities as changes occur. A care plan that prioritizes relief from suffering and provides for optimal quality of life is the aim. Once the probability of healing has been identified, decisions regarding local wound care can be made realistically and appropriately for each patient. It is important that the patient/family understand the reasons when complete healing cannot be achieved. This will minimize patient/family and health care provider frustrations.

The wound care directions should be as easy, simple, and pain free as possible. Because the patient/family will be performing the wound care, it is imperative to achieve 2 goals that will promote compliance: keep the wound care simple and cost effective. Caregivers will have more confidence in completing a task if the directions and steps are

TABLE 1 Pressure Ulcer Stages

Stage I	Stage II	Stage III	Stage IV	Unstageable Pressure Ulcer	Suspected Deep Tissue Injury
					
Nonblanchable erythema. In persons with darker skin tones, the area may appear darker, warmer, cooler than the surrounding skin or may feel boggy or indurated.	Partial-thickness skin loss exposing dermis. May also present as a clear fluid-filled blister.	Full-thickness skin loss. Subcutaneous fat may be visible, but not bone, tendon, or muscle.	Full-thickness tissue loss with exposed bone, tendon, or muscle. Slough or eschar may be present.	Full-thickness tissue loss where wound base is covered with necrotic tissue obscuring view of full depth. Once necrotic tissue is removed, it can be staged and will be a stage III or IV.	Purple or maroon discolored intact skin or may present as a blood-filled blister.

simple and straightforward. A dressing that manages exudate and protects the wound from contamination is the best option. Wound care compliance is enhanced when procedures involve as few steps as are necessary. A task that is considered burdensome is not likely to be followed on a long-term basis.

TREATMENT RECOMMENDATIONS

Palliative wound care focuses on minimizing pain, odor, exudate, bleeding, or other distressing symptoms the patient and family may be experiencing, with the hope of minimizing overall suffering. The goal is to preserve the patient's dignity and to help promote quality of life. The following are recommendations that may minimize the distressing symptoms and improve quality of life. Implementation of the following palliative wound treatment interventions can also prevent infection and further skin breakdown.

1. Wound exudate can be caustic to the wound perimeter or the periwound, extending the wound margins and causing an area of painful denuded skin. Patients are less likely to agree to have wound care performed if they experience pain at the site. The goal of any wound dressing is to keep the wound bed tissue moist and to protect the surrounding skin. Uncontained exudate is related to protein loss and may lead to embarrassment, social isolation, pruritus, and depression. See Table 2 for interventions.
2. Wound odor may be a sign of infection and should always be investigated. It also denies patients social contact and dignity (Table 3).
3. Wound pain etiology must be identified. Cyclic acute wound pain is associated with the manipulation of the wound, usually because of treatment itself or related position changes. Palliative wound care can help to shift the priorities to provision of comfort care over

TABLE 2 Exudate Control Interventions[17-19]

Infection should always be ruled out.
Identify and address etiology.
Cleanse wound thoroughly with 0.9% sodium chloride, soap/water, or wound cleanser spray as tolerated to agitate and wash away bacteria.
Dressings such as alginates, foams, or hydrofibers have high absorbent capacity, and disposable diapers or sanitary napkins, which are considered superabsorbent, can be used.
Short-term use of antimicrobial dressings, such as cadexemor iodine, dressings that are silver or honey based, or topical antibiotics can be used to address the bioburden, which can increase the exudate.
Protect the periwound with a moisture barrier ointment, such as petroleum jelly, zinc oxide, Cavilon, or dimethicone, to prevent maceration or overgrowth of candida.
Highly exudative wounds can be pouched to contain the exudate and odor.

TABLE 3 Odor Control Interventions[17-20]
Cleanse wound as previously noted.
Use short-term topical antimicrobial dressings as previously mentioned.
Debridement if appropriate.
Contain the exudate as previously noted.
Odor-specific dressings such as charcoal dressings or baking soda sprinkled between layers of gauze can be used.
Short-term Dakin's solution or metronidazole (as a gel or solution, or 500 mg crushed tablets twice daily applied topically) can be used.
Environmental products such as peppermint oil or an open container of charcoal, kitty litter, or coffee grounds under the bed, Fresh Wave spray, or gel odor eliminator can be used.

the demands of aggressive wound management (Table 4).

4. Wound bleeding can be a major distress. See Table 5 for options of interventions.

CASE STUDY (CONTINUED)

Mr J's malignant wound was managed by cleansing gently with wound cleanser, patting dry, spraying lightly with 1% metronidazole spray, and then applying a hydrofiber silver dressing. This dressing was selected for its increased absorbency capacity and to decrease the microbial count and, consequently, the odor. As a secondary dressing, abdominal pads were applied, and the dressing was secured with a mesh net dressing retainer to avoid tape on his fragile skin. The periwound was protected with a moisture barrier ointment. The dressing was done 3 times a week and as needed if it was soiled. Afrin nasal spray was used topically as needed to the tumor to control bleeds during the wound care.

TABLE 4 Pain Control Interventions[17-19,21-23]
Evaluate and revaluate pain with a validated pain assessment tool.
Assess for infection, which can cause increased pain.
Administer an effective short-acting oral analgesic 30 to 60 min before dressing change. Rapid-acting oral opioids such as a fentanyl lozenge or buccal tablet or intravenous/subcutaneous opioids can be given 15 min before the wound care.
Avoid painful antiseptics.
Cleanse gently as noted above.
Use appropriate dressing for less frequent dressing changes.
Use of a hydrogel is best in a clean wound with minimal exudate; it is soothing, prevents friction, and can be left in place for several days.
Use moisture retentive dressings to decrease frequency of changes.
Apply topical 2% lidocaine jelly[22] 3-5 minutes before wound care.
Topical morphine-based hydrogel: 10 mg (10 mg/mL) of morphine injection in 8 g of Intrasite hydrogel 1-3 times daily.[21] There is limited research available. There is some evidence that topical morphine may impair wound healing if healing is the goal.[23]

TABLE 5 Wound Bleeding Control Interventions[17-19]
Saturate dressing before removal with sodium chloride or wound cleanser or in shower with tepid water.
Cleanse gently as noted above.
Prevent dressing adherence/desiccation with nonadherent dressing (eg, Telfa or an oil-emulsion dressing).
Assess benefits of adjunct therapy: local or systemic hemostatic agents.
Provide systemic support where appropriate.
Use hemostatic dressings (Calcium-alginate). There is some concern that alginates may increase the bleeding in fragile malignant wounds.
Use silver nitrate sticks for local bleeds or adrenaline (Epinephrine), aminocaproic acid (Amicar), or oxymetazoline (Afrin nasal spray) off-label to wound to vasoconstrict the tissue.
Use dark towels in case of hemorrhage.

His sacral pressure ulcer was managed with conservative bedside sharps debridement of the loose necrotic tissue. It was also irrigated with wound cleanser, covered with a hydrofiber silver dressing, and secured with a waterproof composite dressing to protect from incontinence. This dressing change was also done 3 times weekly and as needed. Skin prep was used to protect the periwound from both the drainage and the adhesive and to increase the dressing wear time. The same dressing was used for both wounds for consistency and to manage the large amount of drainage and odor from both of the sites.

To ease the burden on the patient and family, the intact eschar at his right heel was kept clean and dry. Stable, dry, intact eschar, without signs of infection, serves as a protective barrier and should not be removed as the risk of pain and limb loss is increased by opening the wound.[16] Occasionally, in palliative care, wounds with intact eschar are painted with povidone-iodine (Betadine) to decrease the bacterial burden and to keep the wound dry when the arterial circulation is poor and there is an increased risk of infection. An option of painting with Betadine 3 times weekly was considered for Mr J but not used because the area was dry and intact and there is limited evidence of the benefit.[24] Thus, less time was spent doing wound care and more time was spent enjoying quality time with his family and friends. Mr J died peacefully 5 months after his admission to hospice.

CONCLUSION

The palliative management of fungating wounds and pressure ulcers can improve patient quality of life. It is important to establish mutual goals of care with the patient and caregivers. Wound healing may not be an option given the advanced stage of the disease. However, aggressive pain management, appropriate dressing selection, and measures to minimize odor, drainage, and bleeding can decrease the distressing symptoms for those with advanced disease and wounds at the end of life.

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