



Clinician Profile

Rosemary Hill, BSN, CWOCN, CETN(C), with over 12 years of wound care experience, oversees wound care for inpatients and outpatients at Lions Gate Hospital, Vancouver Coastal Health, located in North Vancouver, Canada. Rosemary is a past President of the Canadian Association for Enterostomal Therapy (CAET).



Patient Condition

63-year-old lymphoma patient's large, untreated sacral pressure injury was discovered by the outpatient chemotherapy unit.

Publication

Learn more about this case study published in *Ostomy Wound Management*

Hill, R *et al.* Using bacterial fluorescence imaging and antimicrobial stewardship to guide wound management practices: a case series *Ostomy Wound Management* 2018



MolecuLight®

Real-time Detection of Asymptomatic Bioburden with the MolecuLight *i:X*® Revealed Need for Systemic Antibiotics and Immediate Hospitalization

Accurate wound assessment is essential when determining the treatment plan for a wound. And yet, studies have repeatedly demonstrated the unreliability and subjectivity of clinical signs and symptoms in detecting wounds with uncontrolled bacterial burden^{1,2}.

Clinical Synopsis:

During a routine outpatient chemotherapy appointment, this patient mentioned a "large blister" that had developed on her bottom. This turned out to be a large, untreated sacral pressure injury (6 cm x 6 cm, 100% slough) and the hospital wound care specialist was called in for a thorough assessment. Standard assessment based on clinical signs and symptoms of infection did not suggest an infection in this wound. However, the clinician proceeded to image the patient's wound under fluorescence with the MolecuLight *i:X*, which showed extensive red fluorescence (indicative of bacterial loads of $>10^4$ CFU/g) within and around the wound bed (Figure 2). This resulted in immediate hospital admission for treatment including systemic antibiotics. Swabs taken from these regions of red fluorescence were later confirmed to be heavy growth of *Staphylococcus aureus* and *Escherichia coli*. Throughout the patient's treatment, the MolecuLight *i:X* was also used to guide debridement of this patient's wound, targeting areas of red fluorescence and sparing the areas of healthy tissues.

After 7 days of antibiotic treatment and NPWT, the red fluorescence in the wound bed was notably decreased (Figure 4). Hospital-based wound care treatment continued for 2 months before transferring the patient to a residential care setting. Six months after discovering the wound, it had decreased in size to 2 cm x 1.3 cm x 1.5 cm with 100% granulation tissue.

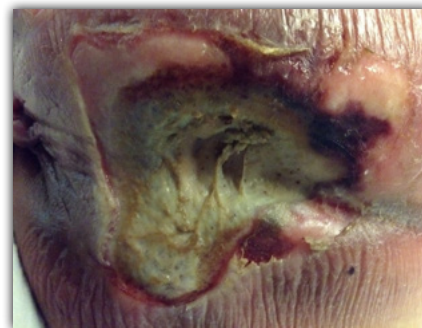


Figure 1: Standard Image.

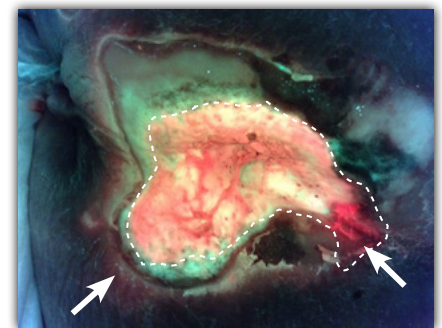


Figure 2: Fluorescence Image. The red/blush pink color in this image indicates bacteria ($>10^4$ CFU/g)³.



Figure 3: Standard Image.

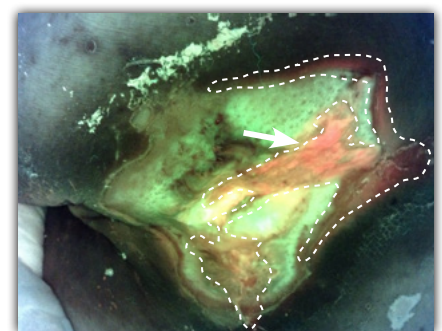


Figure 4: Fluorescence Image. The red/blush pink color in this image indicates bacteria ($>10^4$ CFU/g)³.

MolecuLight *i:X*[®]

The MolecuLight *i:X* allows clinicians to quickly, safely and easily identify wounds with bacteria³⁻⁶ (at loads of $>10^4$ CFU/g, in combination with CSS) and measure wounds^{4,6} at the point of care to provide them with valuable information to inform treatment and monitor progress^{5,6}.

Testimonial

“My standard wound assessment revealed no signs and symptoms of infection. But the fluorescence images taken with my MolecuLight *i:X* told a different story. It was the images that led to this patient receiving the in-patient and antibiotic care that she required.”



— Rosemary Hill, BSN, CWOCN, CETN(C)

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References:

Images provided by Rosemary Hill, BSN, CWOCN, CETN(C), Vancouver Coastal Health, North Vancouver, BC, Canada.
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Red color in this image indicates bacteria ($>10^4$ CFU/g)^{3,4}.