Practitioner

Rose Raizman RN-EC, MSc, with over 19 years of experience, leads the Save Our Skin (SOS) team at Scarborough & Rouge Hospital located in Toronto, Canada, to combat pressure ulcers of hospital inpatients. She also oversees the wound care clinic for inpatients and outpatients.

Patient Condition

78-year-old female patient with a venous leg ulcer received local wound care and negative pressure wound therapy. Against the clinician's orders, home care nurses stopped using a prescribed antimicrobial paste. After guided fluorescence visualization of the wound, the clinician added larger silver dressings and antimicrobial cream to the patient's treatment.

US FDA De Novo approval pending – the MolecuLight *i:X*™ Imaging Device is not available in the US.

MolecuLight
LOOK TO HEAL®

Optimize *Pseudomonas Aeruginosa* Treatment with MolecuLight ***i:X***™

Pseudomonas aeruginosa is a significant contributor to hospital acquired infections where delay of targeted treatment, including antimicrobial therapies, is associated with increased morbidity and mortality.[1]

Unlike porphyrin-producing bacteria which are visualized by a red fluorescence signal on the MolecuLight ***i:X***, *Pseudomonas aeruginosa* uniquely produces a cyan color fluorescence signal due to intrinsic pyoverdine pigments.

In this case study, the clinician used MolecuLight ***i:X*** to confirm the presence and location of *Pseudomonas aeruginosa* in a venous leg ulcer. As seen in Figure 3, the white/cyan color suggests heavy microbial levels of *Pseudomonas aeruginosa* pre-debridement (the white/cyan color is due to signal oversaturation), which would otherwise be invisible to the unaided eye. The clinician used this information to guide debridement of the wound to remove bacteria-colonized tissues, and subsequently re-imaged the wound after debridement to assess effectiveness of the procedure. Figure 4 indicates a reduction in overall wound bioburden post-debridement, but not the complete eradication of *Pseudomonas aeruginosa* in the wound.

The MolecuLight ***i:X*** images (Figure 4) provided important evidence that *Pseudomonas aeruginosa* was still present after debridement, which helped the clinician make the decision at the point of care to select antimicrobial (silver) cream and dressings as well as applying a larger dressing to fully manage the remaining bacterial load. This example shows how the MolecuLight ***i:X*** may provide important insights about the location of bacteria so clinicians can target debridement and treat wounds more effectively, compared to the standard of care.

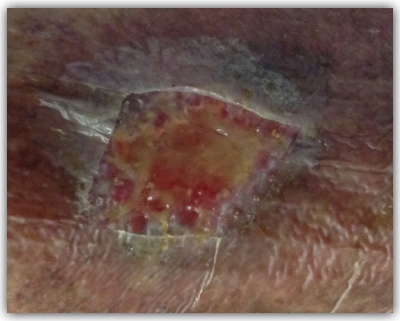

Figure 1: Standard Imaging Mode™
Venous leg ulcer pre-debridement.

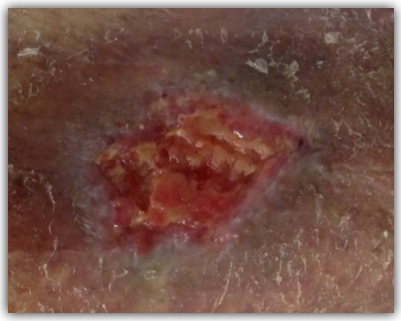

Figure 2: Standard Imaging Mode™
Venous leg ulcer post-debridement.

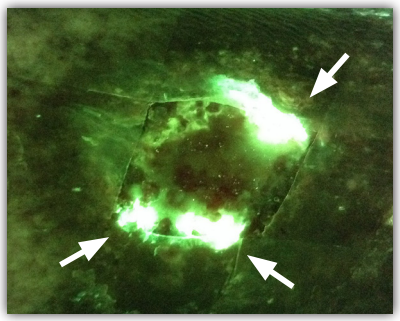

Figure 3: Fluorescence Imaging Mode™
Venous leg ulcer pre-debridement.
White/cyan regions suggest heavy levels of *Pseudomonas aeruginosa.*

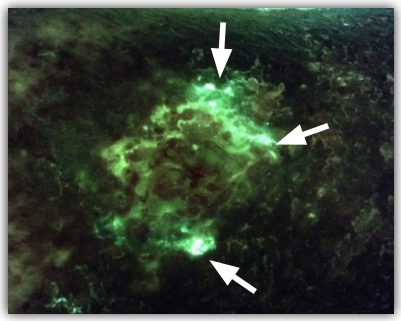

Figure 4: Fluorescence Imaging Mode™
Venous leg ulcer post-debridement.
Less white observed, cyan fluorescence suggests *Pseudomonas aeruginosa.*

MolecuLight *i:X*™

Wound Intelligence Device

The MolecuLight ***i:X*** allows clinicians to quickly, safely and easily visualize bacteria[2] and measure wounds[3] at the point of care so they have maximum insights for accurate treatment selection and accelerated healing.[2]

Testimonial

"I suspected colonization, and MolecuLight ***i:X*** guided me to efficiently target debridement and topical therapy application to ensure maximum removal of the bacterial load and prevent further contamination."

— Rose Raizman RN-EC, MSc

View MolecuLight ***i:X***™ in action.
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Bacteria appear white/cyan in image

References:
Images provided by Rose Raizman, RN-EC, MSc, Scarborough & Rouge Hospital, ON, Canada
MolecuLight Clinical Case 0048.

1. Sader HS *et al*. *Pseudomonas aeruginosa* Antimicrobial Susceptibility Results from Four Years (2012 to 2015) of the International Network for Optimal Resistance Monitoring Program in the United States. Antimicrob. Agents Chemother. March 2017; 61(3):e02252-16.
2. DaCosta RS *et al*. Point-of-care autofluorescence imaging for real-time sampling and treatment guidance of bioburden in chronic wounds: first-in-human results. PLoS One. 2015 Mar 19;10(3).
3. MolecuLight Inc. Case Study 0051 Track Wound Size and Bacterial Presence with the MolecuLight ***i:X***. 2016.

The MolecuLight ***i:X***™ Imaging Device is approved by Health Canada (Medical License #95784) and has CE marking (Certificate #G1160292355002) for sale in Canada and the European Union.
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