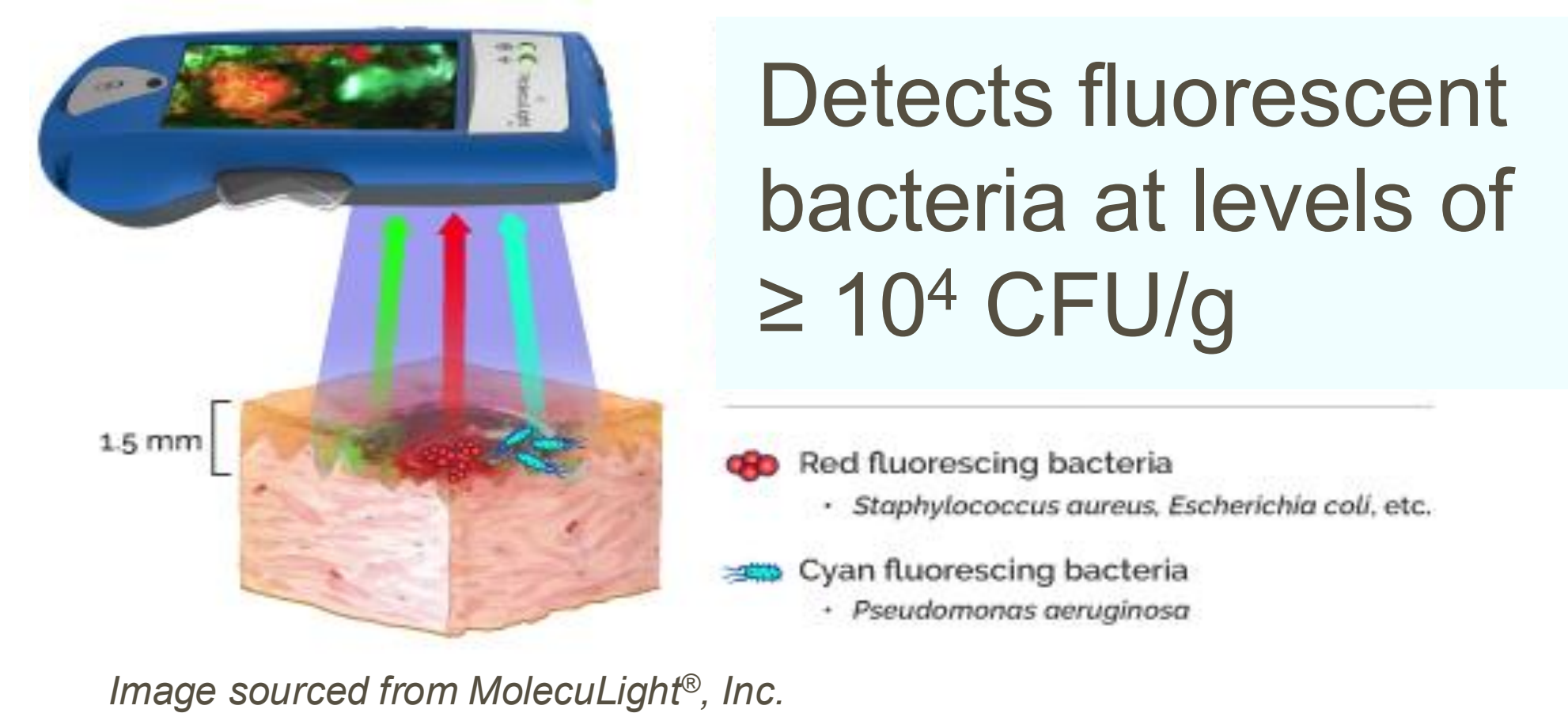


# Addressing Infection Risk and Pain in Hard-to-Heal Wounds with a Bioresorbable Antimicrobial Matrix Containing Lidocaine HCl

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## Introduction

- Individuals with diabetes are prone to wound-healing challenges.
- Fully synthetic, bioresorbable antimicrobial matrix containing metallic and ionic silver can enhance healing of diabetic foot ulcers and potentially reduce surgical site infection risk.
- Its thin, porous architecture conforms closely to the wound surface, which could enhance microbial disruption compared with conventional antimicrobial dressings, which we measured in this series via fluorescent imaging device.



- Recently, lidocaine HCl was added to provide initial pain relief, addressing another costly aspect of chronic wound care. This three-patient case series reports on the use of this matrix to mitigate infection risk and alleviate pain in nonhealing diabetic foot ulcers.

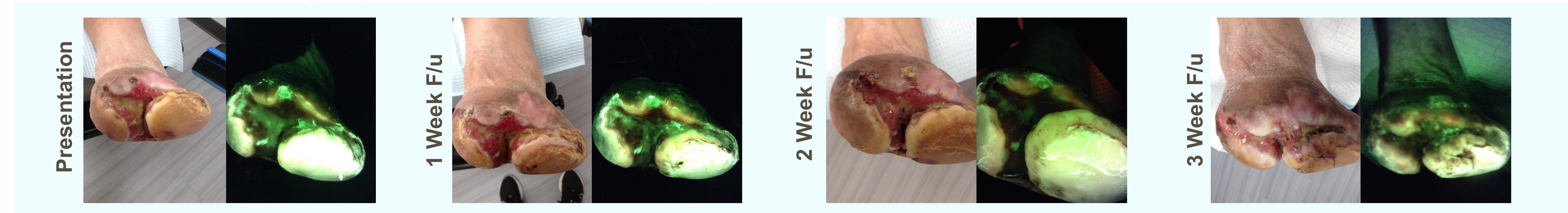
## Conclusions

Over a three-week period, the bioresorbable antimicrobial matrix with lidocaine HCl supported wound improvement in high-risk diabetic patients, while addressing both microbial burden and early pain. These initial clinical observations suggest that this technology may offer a dual-benefit approach for managing chronic ulcers where both infection risk and patient discomfort hinder recovery.

## Cases

### 1 53-year-old male w/ T2DM, HF, HTN; hx of diabetic neuropathy and tobacco use; on anticoagulant

Nonhealing surgical site ~71 days post-amputation w/ tissue transfer; Wagner grade 3. Bacteria load reduced below fluorescent imaging threshold in 2 weekly applications, with 32% wound size reduction in 3 weeks; went on to heal.



### 2 53-year-old male w/ T2DM, HF, HTN; hx of diabetic neuropathy, macular degeneration, HLD, CVI; on anticoagulant

Wagner grade 3 nonhealing plantar wound. 42% wound size reduction in 3 weekly applications, with no infection noted.



### 3 63-year-old male w/ T2DM and associated neuropathy

Wagner grade 2 nonhealing wound w/ exposed tendon. Patient-reported pain reduced from initial 5/10 to 2/10 at 45 mins and 3 hrs post-matrix application. 23% wound size reduction in 3 weekly applications; went on to heal.

