PRISM QUICK GUIDE

An imaging-first algorithm for chronic wound assessment & management

KENT IMAGING

What PRISM is

A published, structured algorithm that organizes chronic wound care into **five sequential components**. Like a prism resolving light, it separates the complex wound into discrete, addressable barriers — each decided by **measured physiology, not clinical impression**.

What it does

Replaces subjective judgment where care most often derails — **perfusion and bioburden** — and reads the two together, so antimicrobials aren't escalated in a hypoxic field and good perfusion doesn't hide occult bacteria.

Who it's for

Wound centers, podiatric and vascular surgeons, and limb-preservation teams — especially for **diabetic lower-extremity wounds**. The same wound, imaged the same way, gets the **same stage and action** at any site.

The five components — and where each device fits

P · R · I every encounter · **S · M** activated by imaging findings

P — Perfusion Imaging

Maps tissue oxygenation, detects hypoxia and screens for PAD.

SnapshotNIR
Every visit, first

R — Regional Bacterial Status

Detects, localizes and grades bacterial burden before hygiene.

SnapshotGLO
Every visit, pre-hygiene

I — Infection Staging

Turns fluorescence into Stage 0–V with escalating antimicrobial steps.

GLO data
Read with NIR context

S — Structural Correction

Surgical correction of deformity that drives recurrence.

Imaging-triggered
Persistent findings

M — Maintenance & Monitoring

Offloading, glycemic control, education, follow-up.

Serial NIR + GLO
2–4 wk · weekly · 24–48 h

How SnapshotNIR and SnapshotGLO power PRISM

SnapshotNIR

Near-infrared spectroscopy · Component P

How it works: near-infrared light (700–1000 nm) reads oxygenated vs. deoxygenated hemoglobin to ~2–3 mm depth.

What you see: RGB, StO_2, HbO_2 and DeOxyHb maps of wound bed and periwound.

Why it matters: non-contact; works over open wounds and calcified vessels where ABI and TCOM fall short. The plantar-palmar index screens for PAD.

SnapshotGLO

Bacterial autofluorescence · Components R + I

How it works: violet light (~405 nm) makes bacterial porphyrins fluoresce, flagging loads ≥10^4 CFU/g.

What you see: **red** = general bacteria; **cyan** = *Pseudomonas* — in real time, no contact, no culture delay.

Why it matters: reveals occult burden, guides debridement, confirms clearance and supports antimicrobial stewardship.

Every encounter, imaging first

1. **Clinical evaluation** — measure, characterize tissue, RGB image.
2. **SnapshotNIR (P)** — perfusion maps before manipulation.
3. **SnapshotGLO (R)** — fluorescence map before cleansing.
4. **Stage & treat (I)** — assign Stage 0–V; re-image to confirm clearance.
5. **Structural check (S)** — activate if a driver is found.
6. **Set monitoring (M)** — cadence and follow up.

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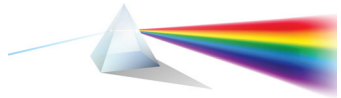
PRISM CLINICAL DECISION ALGORITHM

Combined StO2 (NIRS) x BAF findings: 8 point of care scenarios of image guided therapy



> ***Like a prism resolving light into its wavelengths,*** *PRISM separates the complex wound into five discrete, individually addressable barriers — anchoring every decision in measured physiology, not clinical impression.*

Begin PRISM Assessment ▶ **Assess StO_2 · Perfusion Imaging**

> 70% OPTIMIZED

Perfusion supports healing

Assess BAF

A ○

BAF · MINIMAL

Maintain

Moist wound care + offloading. Re-image in 2–4 weeks.

B ●

BAF · SIGNIFICANT

Cleanse

Fluorescence-guided debridement; stage-matched antimicrobials.

41–69% COMPROMISED

Borderline perfusion

Assess BAF

F ○

BAF · MINIMAL

Monitor

Standard care; vascular referral if deterioration.

E ●

BAF · SIGNIFICANT

Cautious Cleanse

Antimicrobial dressings; refer if no progress.

< 40% CRITICAL

Significant hypoxia

Assess BAF

C ○

BAF · MINIMAL

Revascularize

Urgent vascular consult; consider HBO. Avoid aggressive debridement.

D ●

BAF · SIGNIFICANT

Urgent Dual Intervention

Systemic antibiotics + conservative debridement; vascular + ID consult.

ACTIVATED AT ANY StO_2 LEVEL

S Structural Pathway

Any StO_2 · persistent findings

Vascular optimization → infection control → deformity correction → reconstruction → closure.

⚠ Systemic Emergency

Any StO_2 · spreading infection

IV antibiotics, tissue sample, ID / vascular consult, imaging — immediate escalation.

SEVERITY Optimized · Compromised · Critical · ○ BAF minimal · ● BAF significant

PRISM: Incorporating Advanced Imaging Technologies into a Comprehensive Strategy for Hard-to-Heal Wound Assessment and Management

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