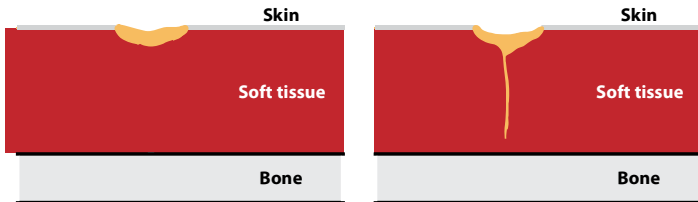


# DIAGNOSING OSTEOMYELITIS USING WOUND CHARACTERISTICS AND RESPONSE TO MPPT

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A wound is an injury limited to the soft tissue.

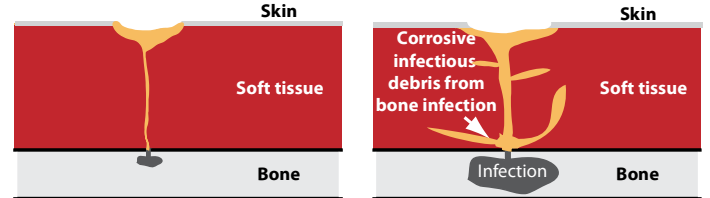
It should close.



Wounds Can heal.

A draining fistula is created by the body to transport the infective debris generated in the primary focus of infection through the soft tissue to the surface.

It should not close.



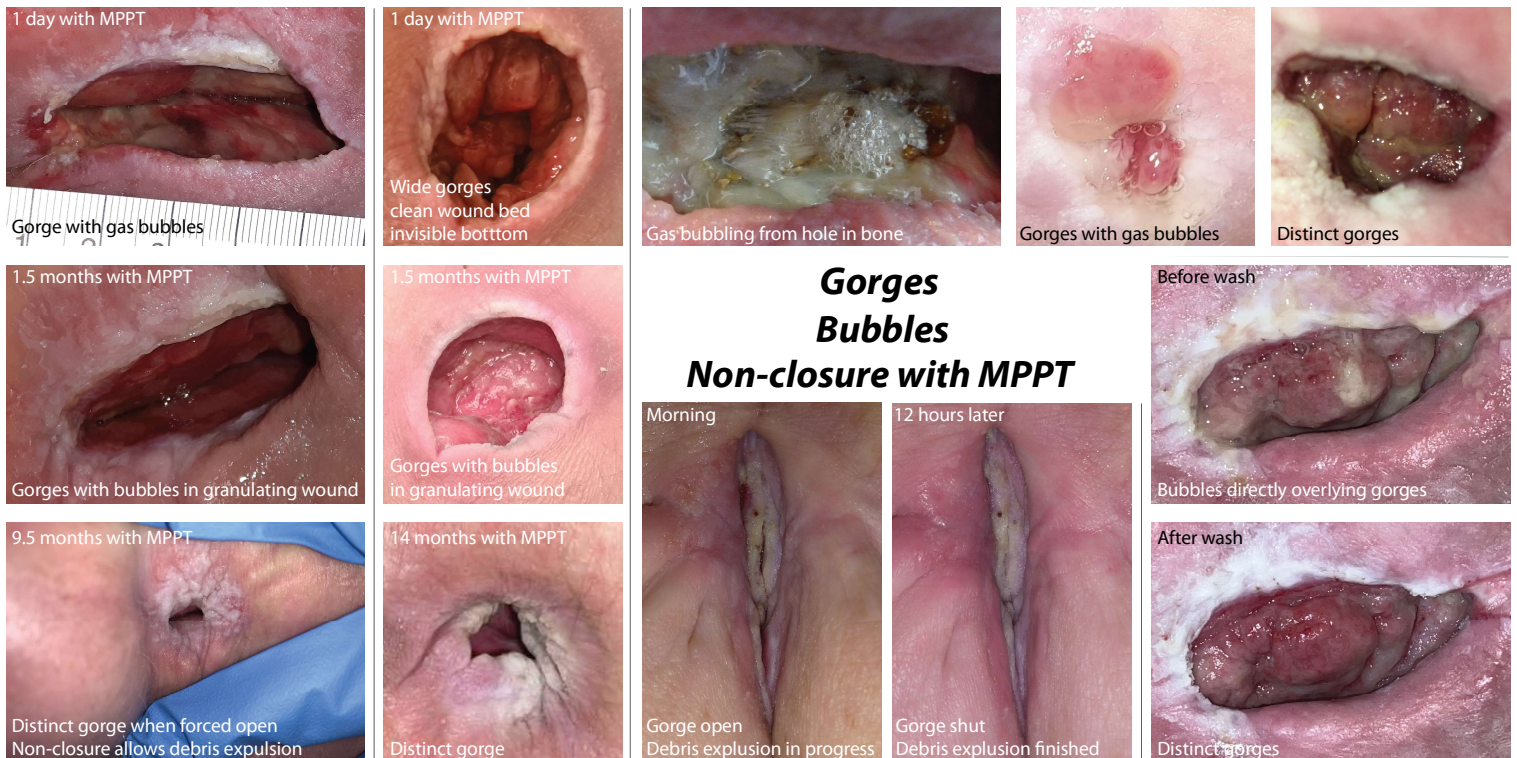
Draining fistulas Can only heal if root cause (e.g. osteomyelitis) is removed.

Wounds and draining fistulas require different treatment approaches, making correct diagnosis essential.

*"MRI cannot be considered a reliable diagnostic technique for the diagnosis of osteomyelitis [in SCI]."*

Rossella et al. (2019)

## How is it possible to distinguish between a wound and a draining fistula in clinic? Are there markers on the surface?



Confirmed osteomyelitis in all pictures

Gas-producing species typical in osteomyelitis: *S. aureus*, *P. aeruginosa*, *K. pneumoniae*, *E. coli*, *C. perfringens*, *P. mirabilis* - and many others!

### Clinical study with MPPT

Acute grade 1-4 pressure ulcers: 100% closure rate.  
 Chronic grade 3-4 pressure ulcers: 100% closure rate.  
 Draining fistula: 100% improvement rate without full closure.

### Conclusion

Gorges, gas bubbles, and non-closure are rooted in the physiology of osteomyelitis.

MPPT enables the identification of these markers and can be a diagnostic tool.

This facilitates early bedside diagnosis.

