

# MODIFYING THE LOCAL ENVIRONMENT FOR THE PREVENTION AND TREATMENT OF OSTEOMYELITIS

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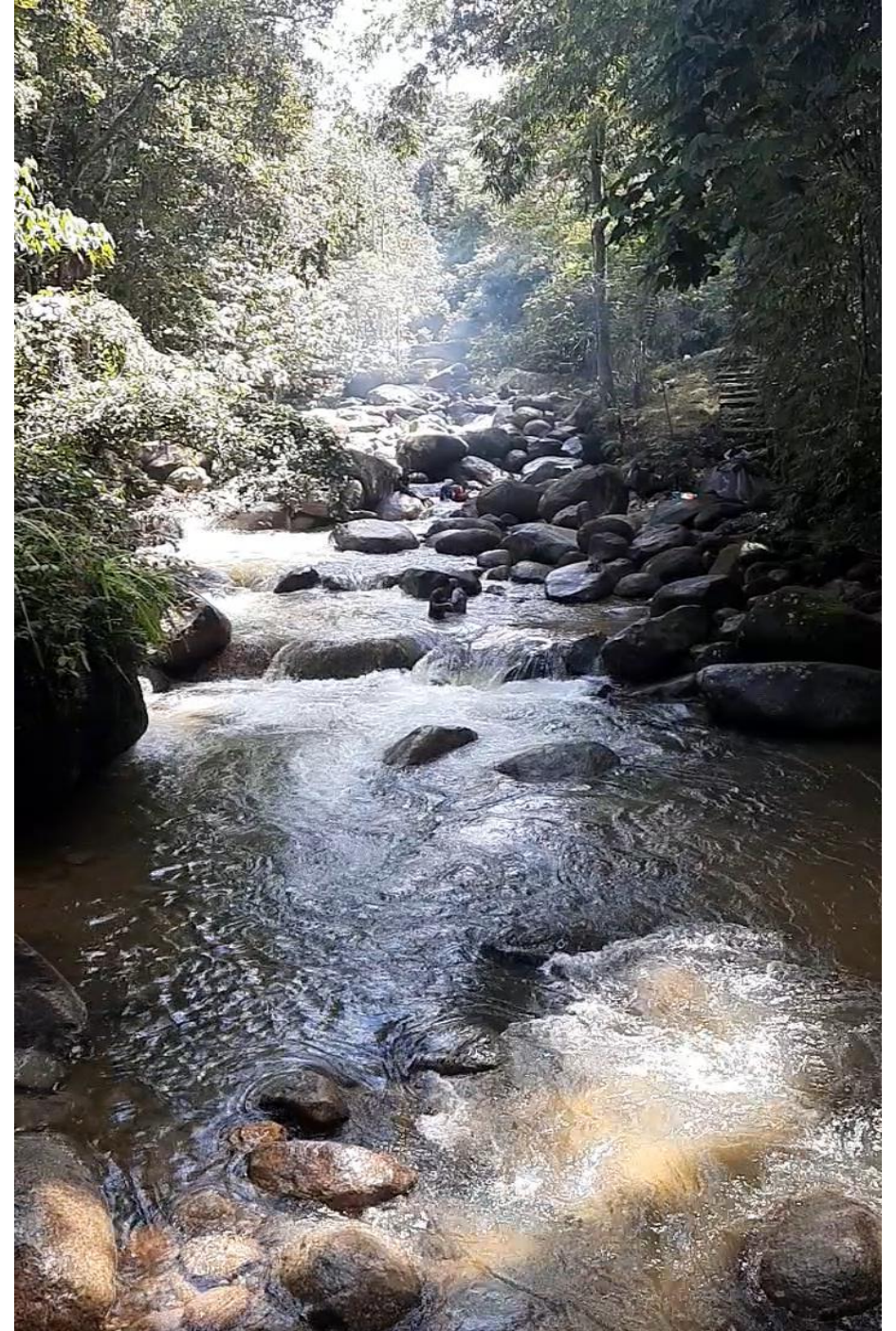
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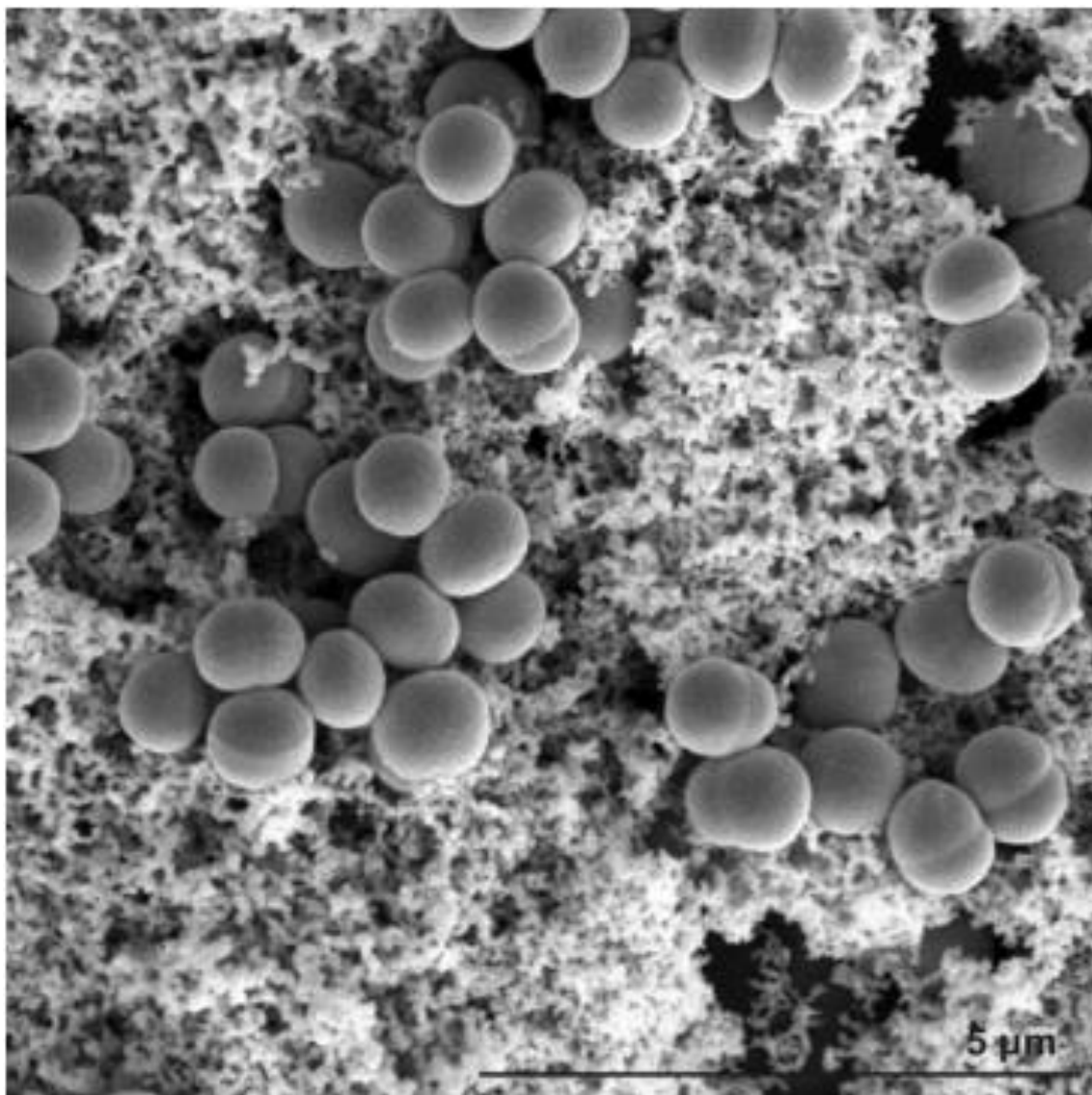


# Environment

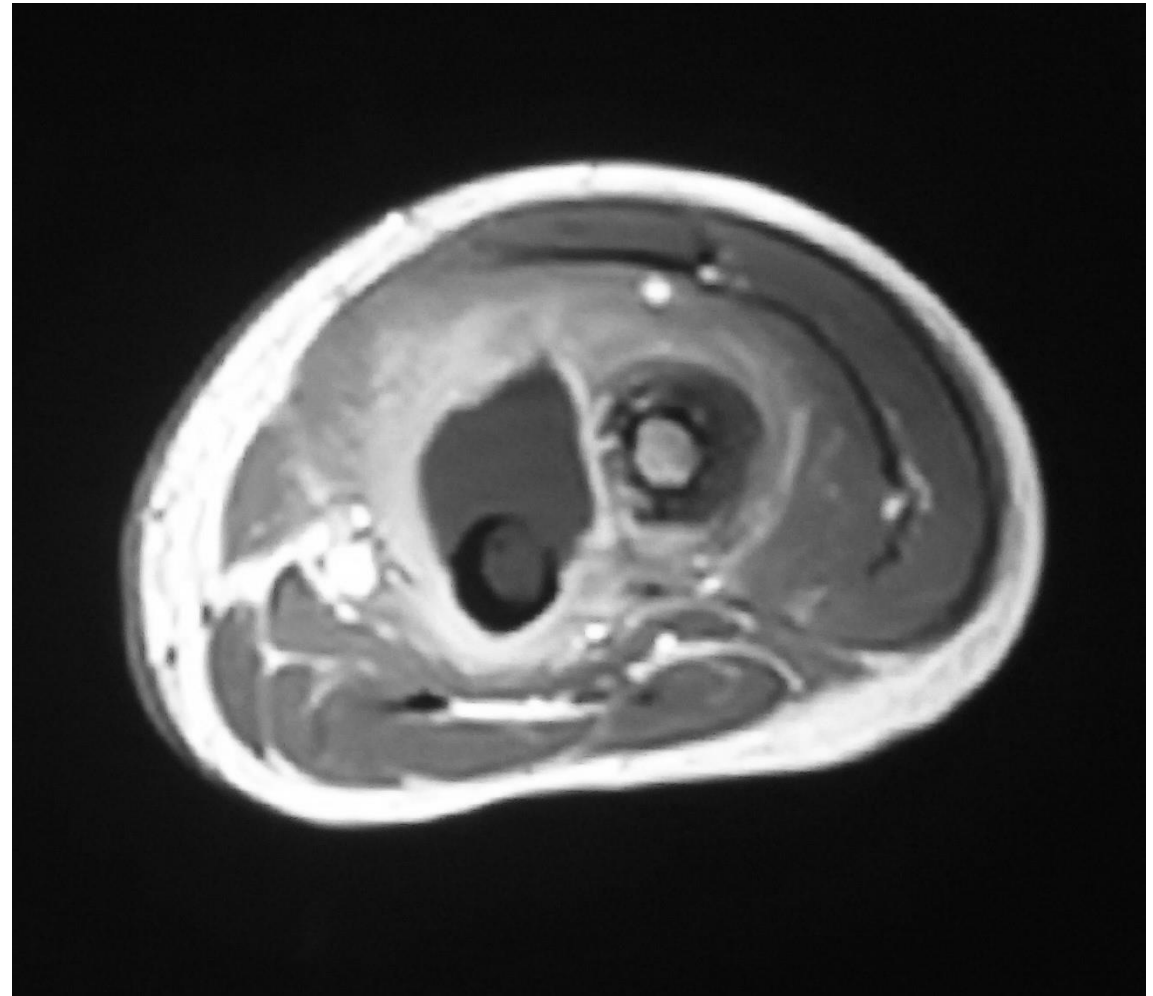




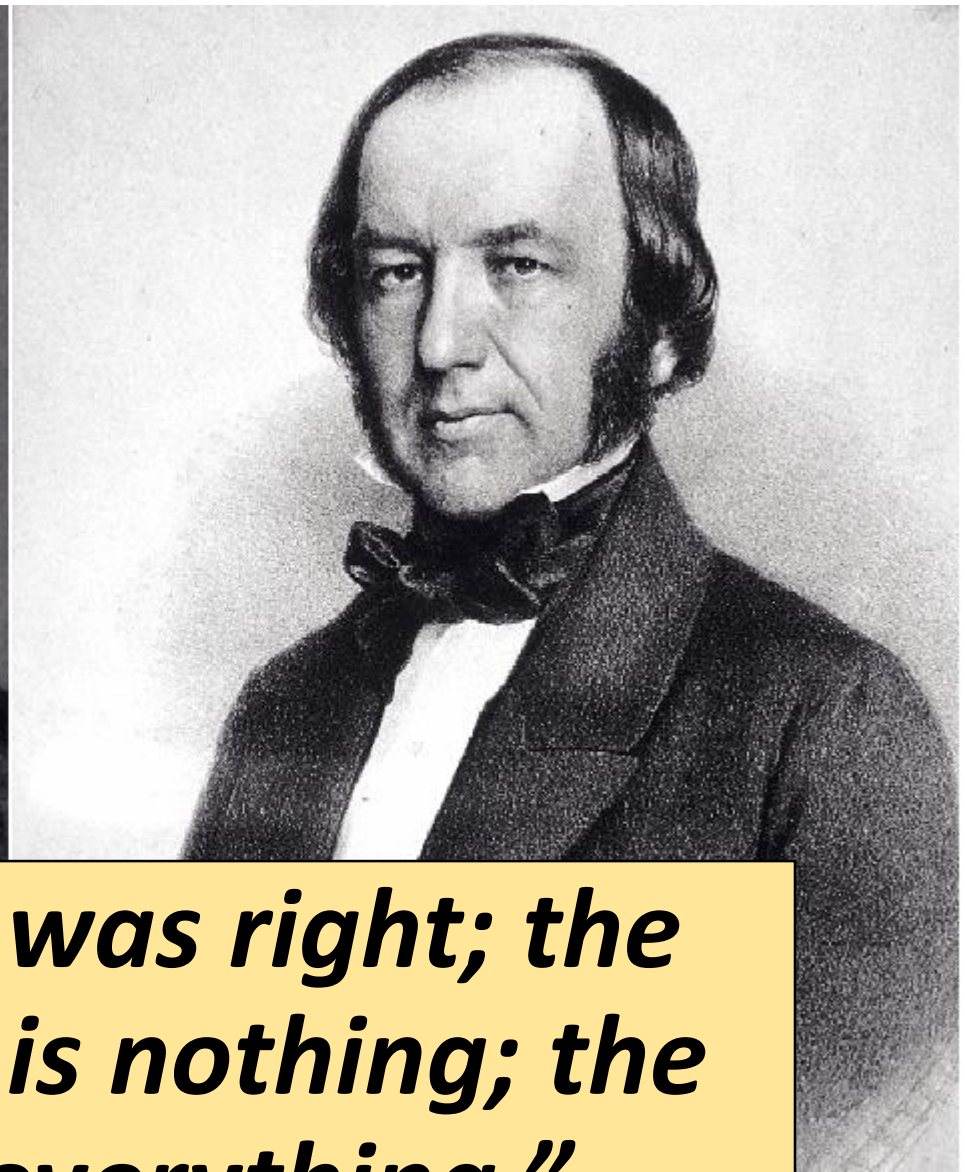
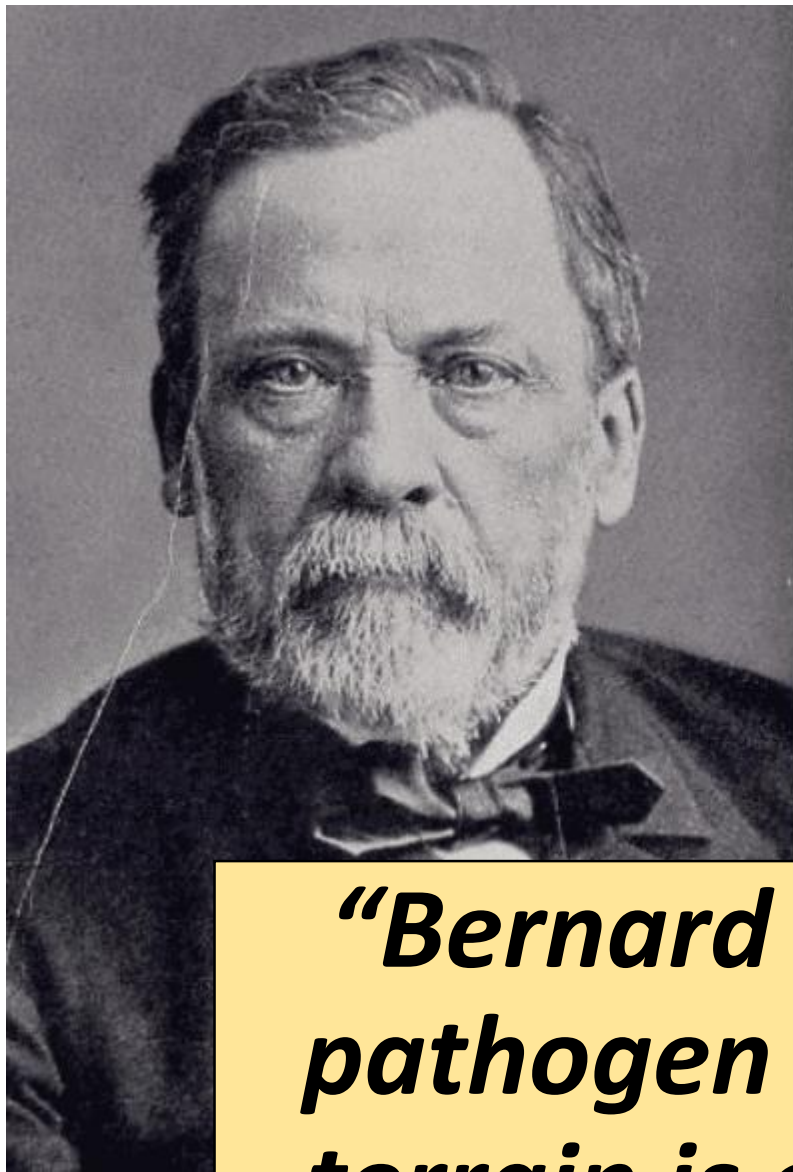
# Biofilm



# Internal environment





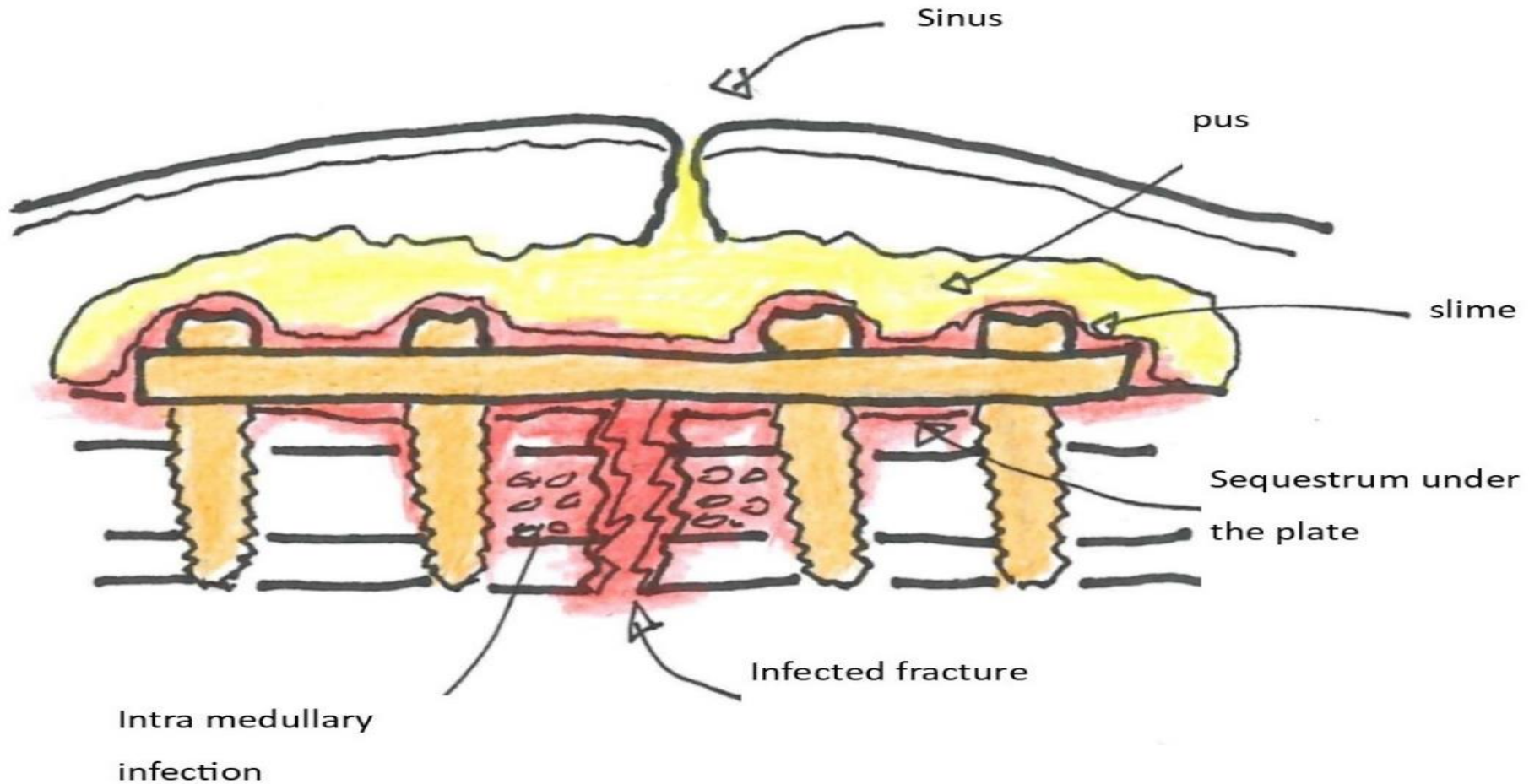


***“Bernard was right; the pathogen is nothing; the terrain is everything.” — Louis Pasteur’s***

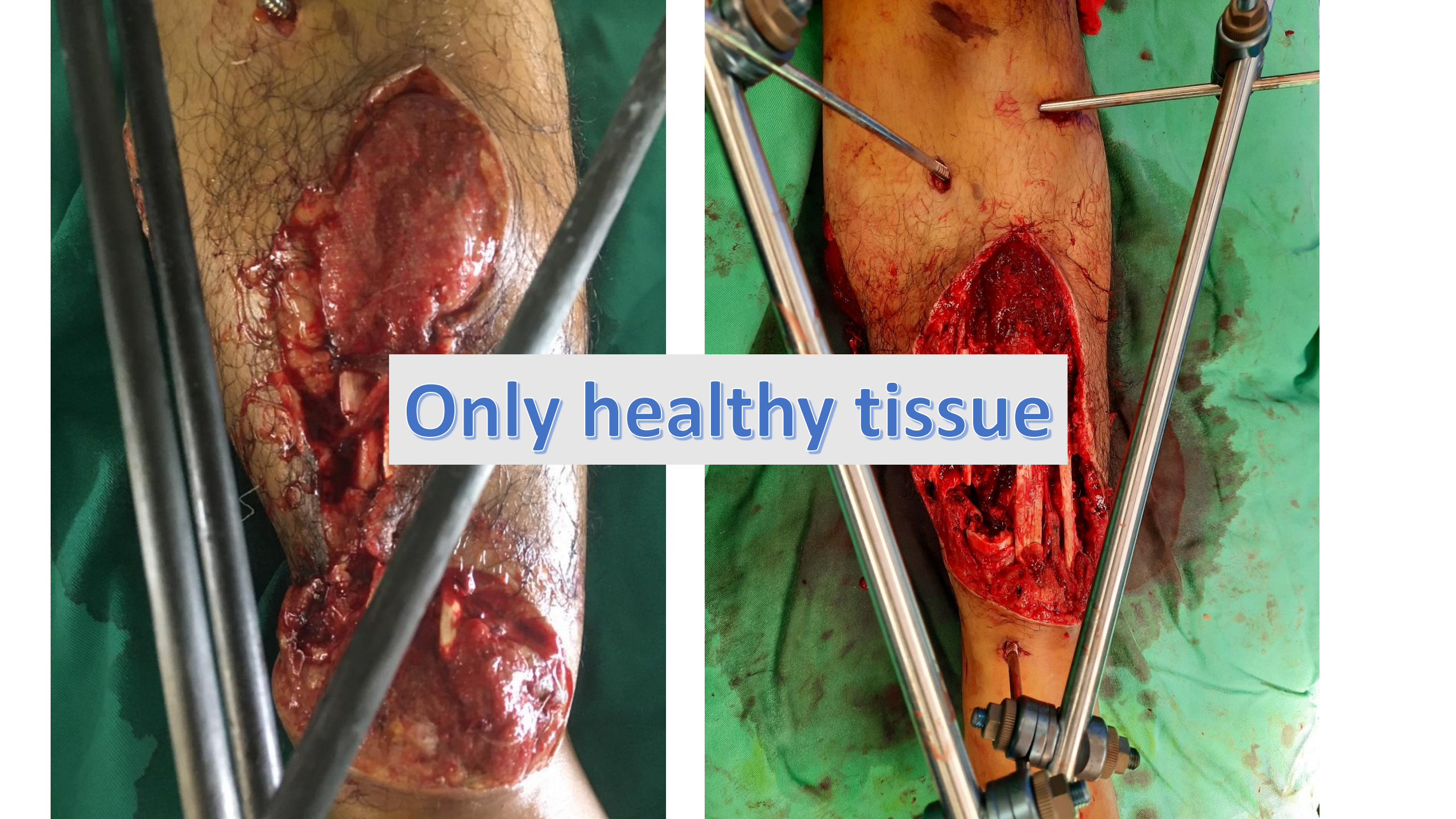
*The **virulence of bacteria** placed locally at an injury site affected the incidence of **infection** adversely but that the effect surprisingly was relatively **minor**. Placing **dead autologous bone** in the wound site, however, had a **profound** effect on the incidence of osteomyelitis.*

**Richard P. Evans et al. *The Effect of Wound Environment on the Incidence of Acute Osteomyelitis* CORR; 2005: 4-9**

# The infected environment







The image is a composite of four panels showing an orthopedic surgical procedure on a human leg. The top-left panel shows a large, deep incision on the anterior aspect of the leg, revealing the underlying bone and soft tissue. The top-right panel shows the same leg with an intramedullary nail inserted into the shaft of the bone. The bottom-left panel shows the leg with the nail in place, and the bottom-right panel shows the leg with the nail in place and the incision closed. The text "Only healthy tissue" is overlaid in the center of the image.

Only healthy tissue



Removed and covered

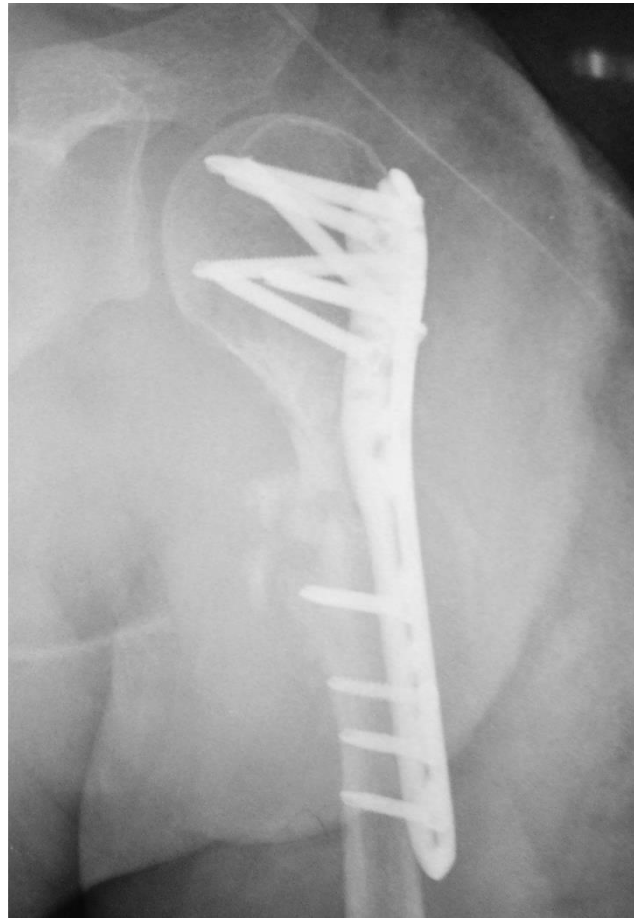




# Gastrocnemius flap covering knee joint









# Barrier dressing





# Drainage





RIGHT KNEE AP/LATERAL  
KNEE AP Right  
10/15/11  
10/15/11

RUM MEDICAL CENTER  
Study Date: 10/15/2011  
Study Name: 11-5071

5

10/15/2011 10:00:00

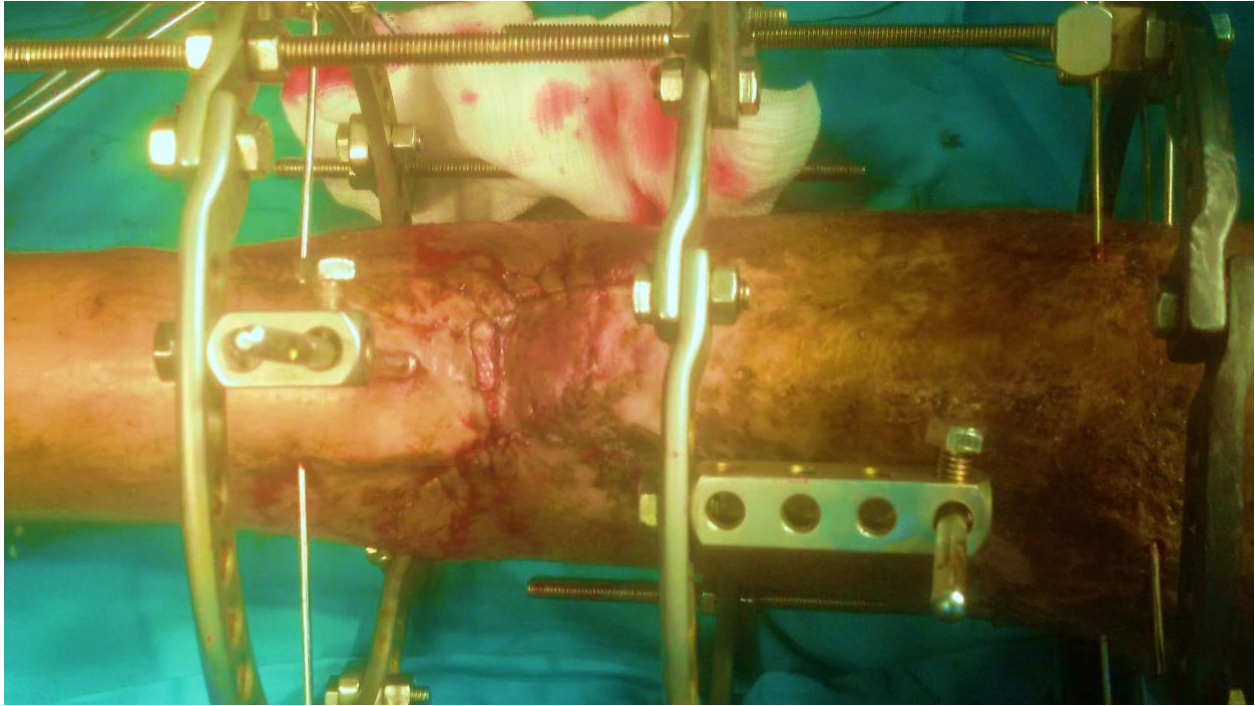
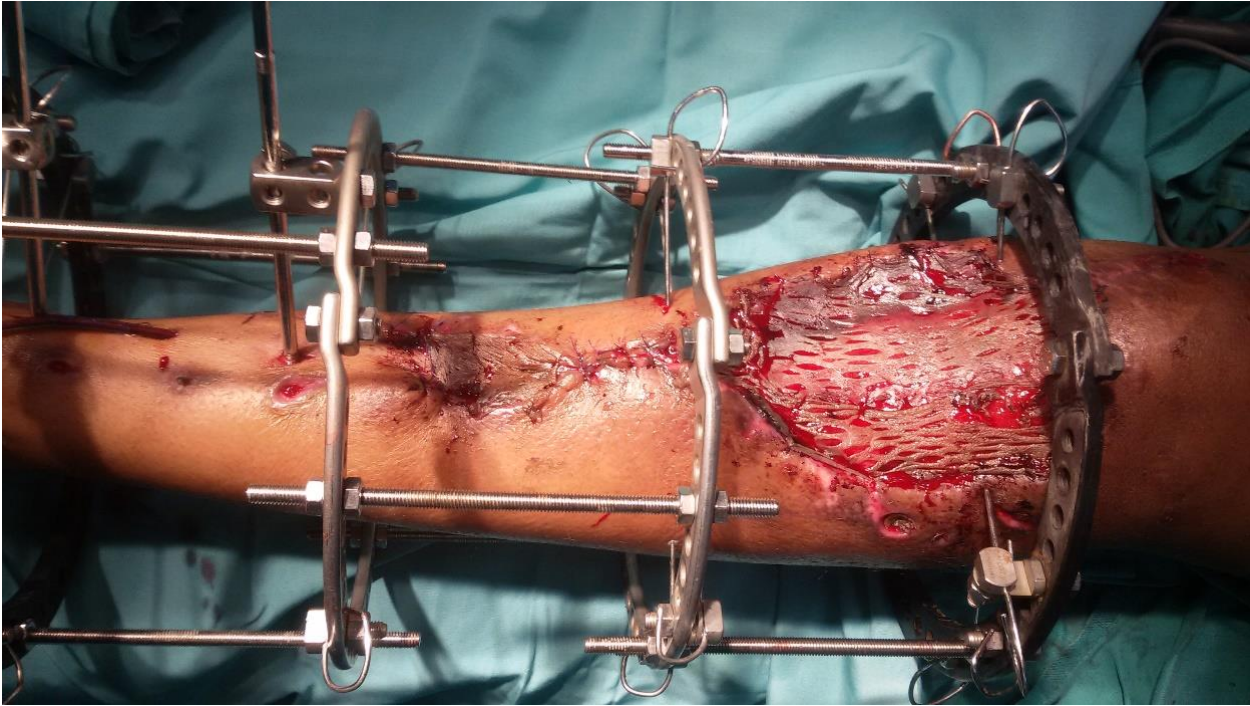




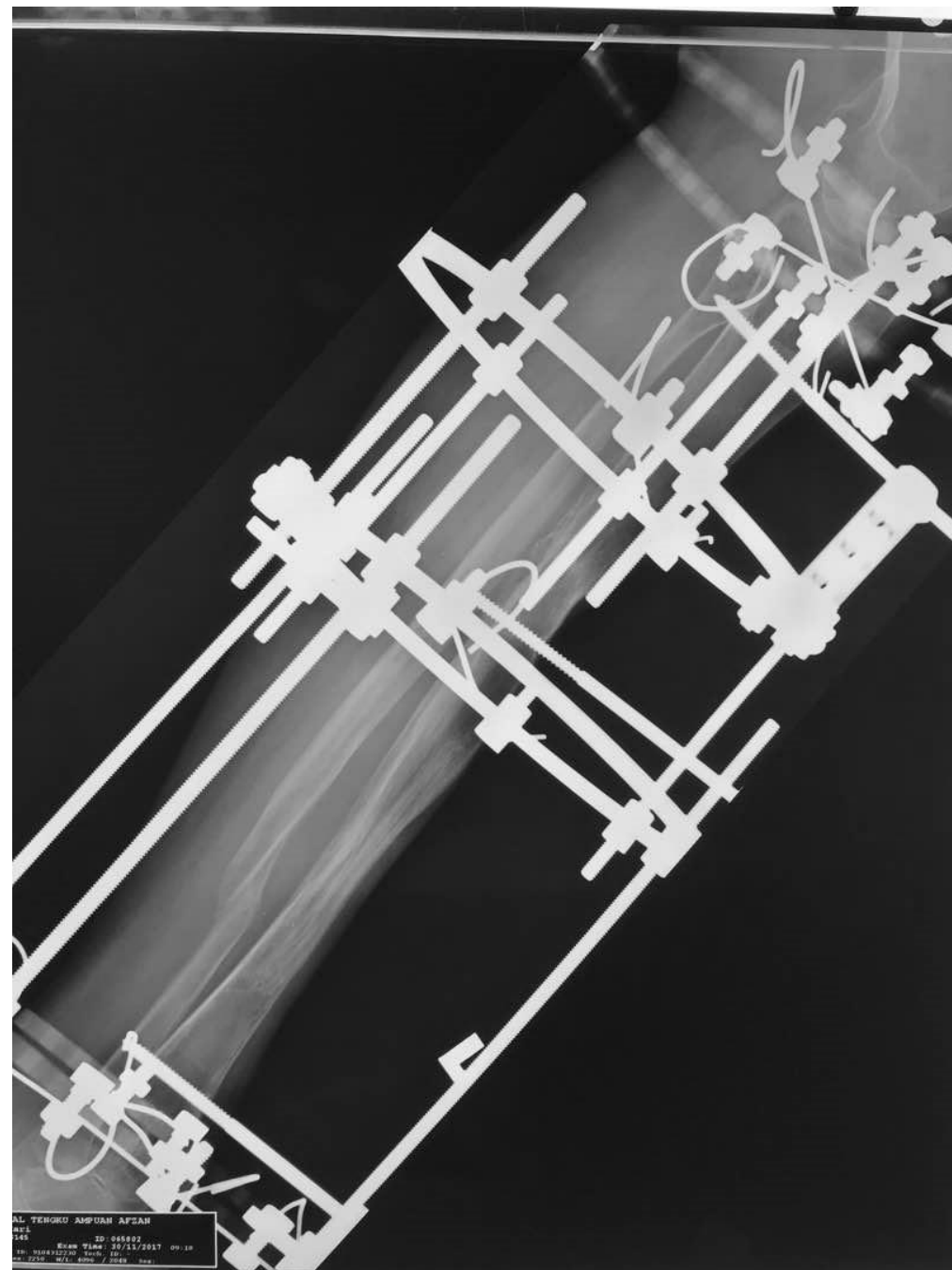


**Bone Transport**

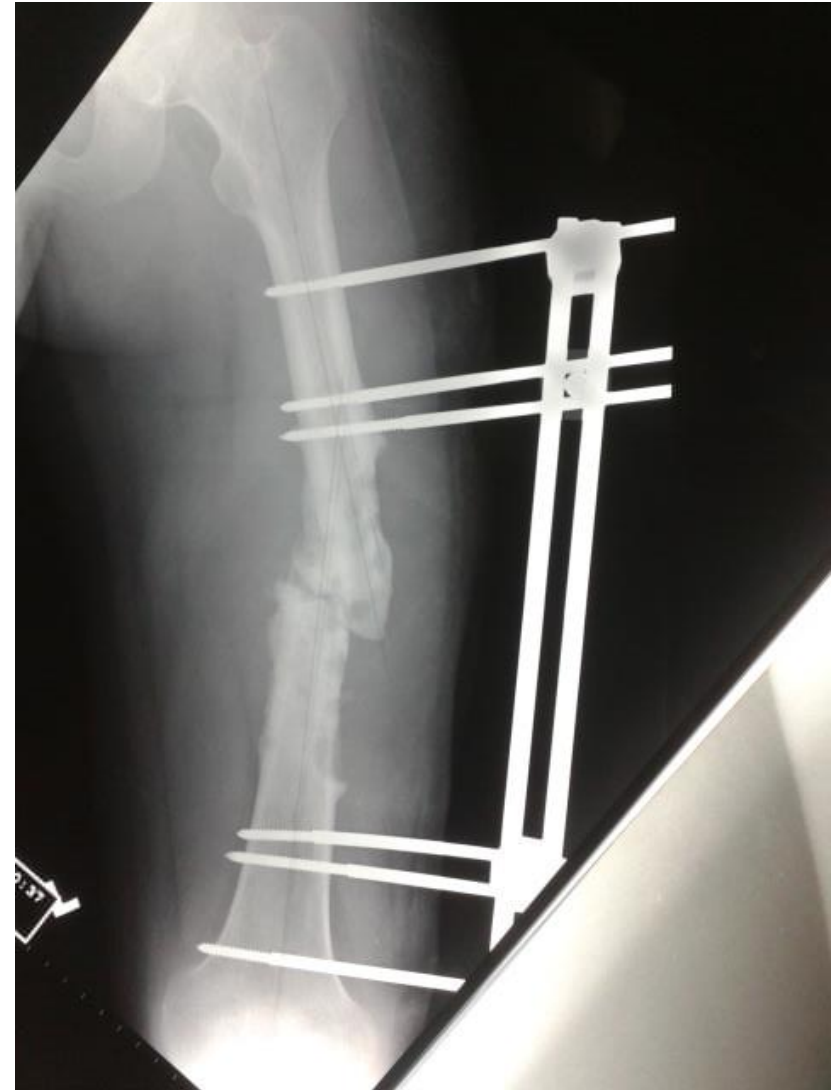




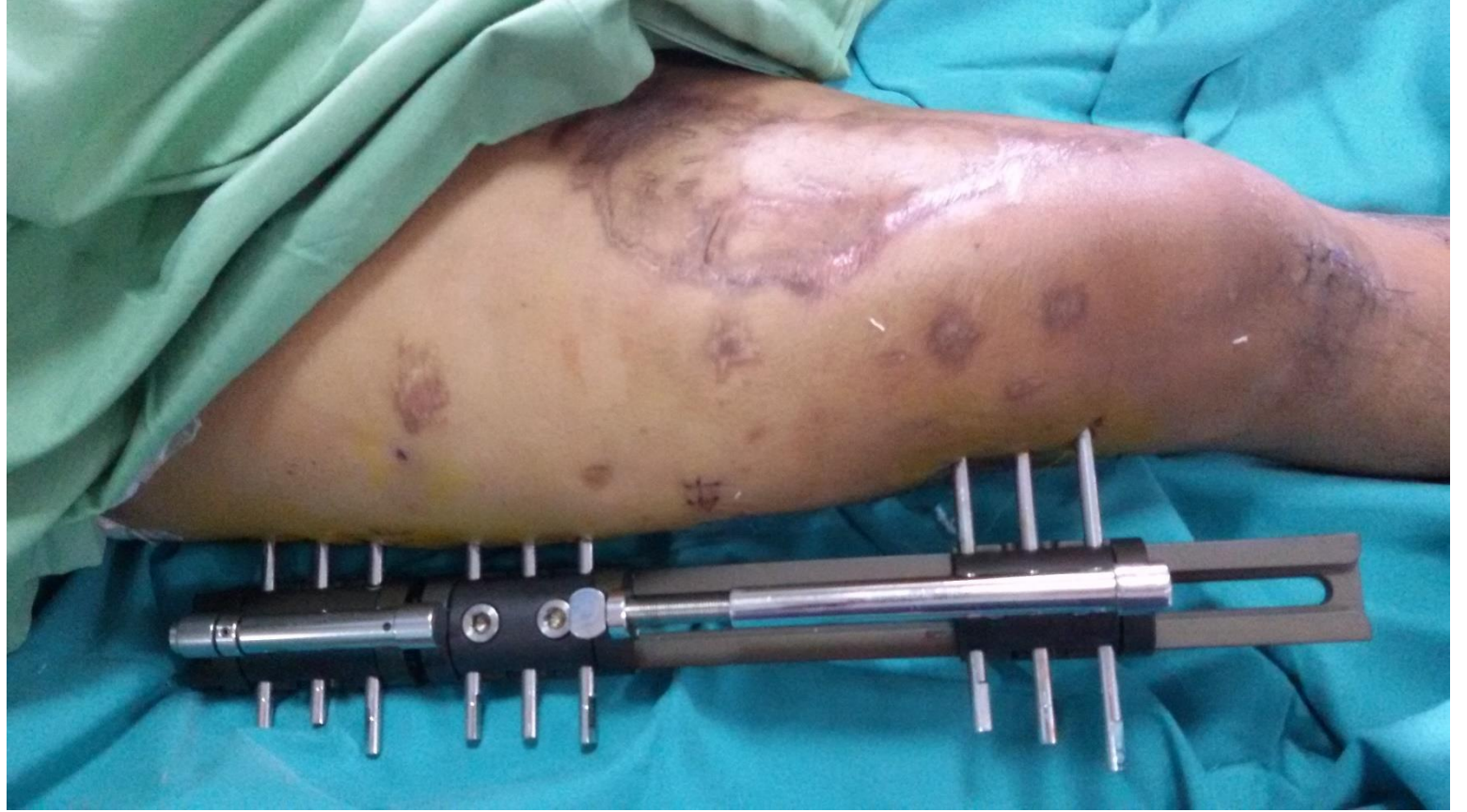




# Mechanical environment





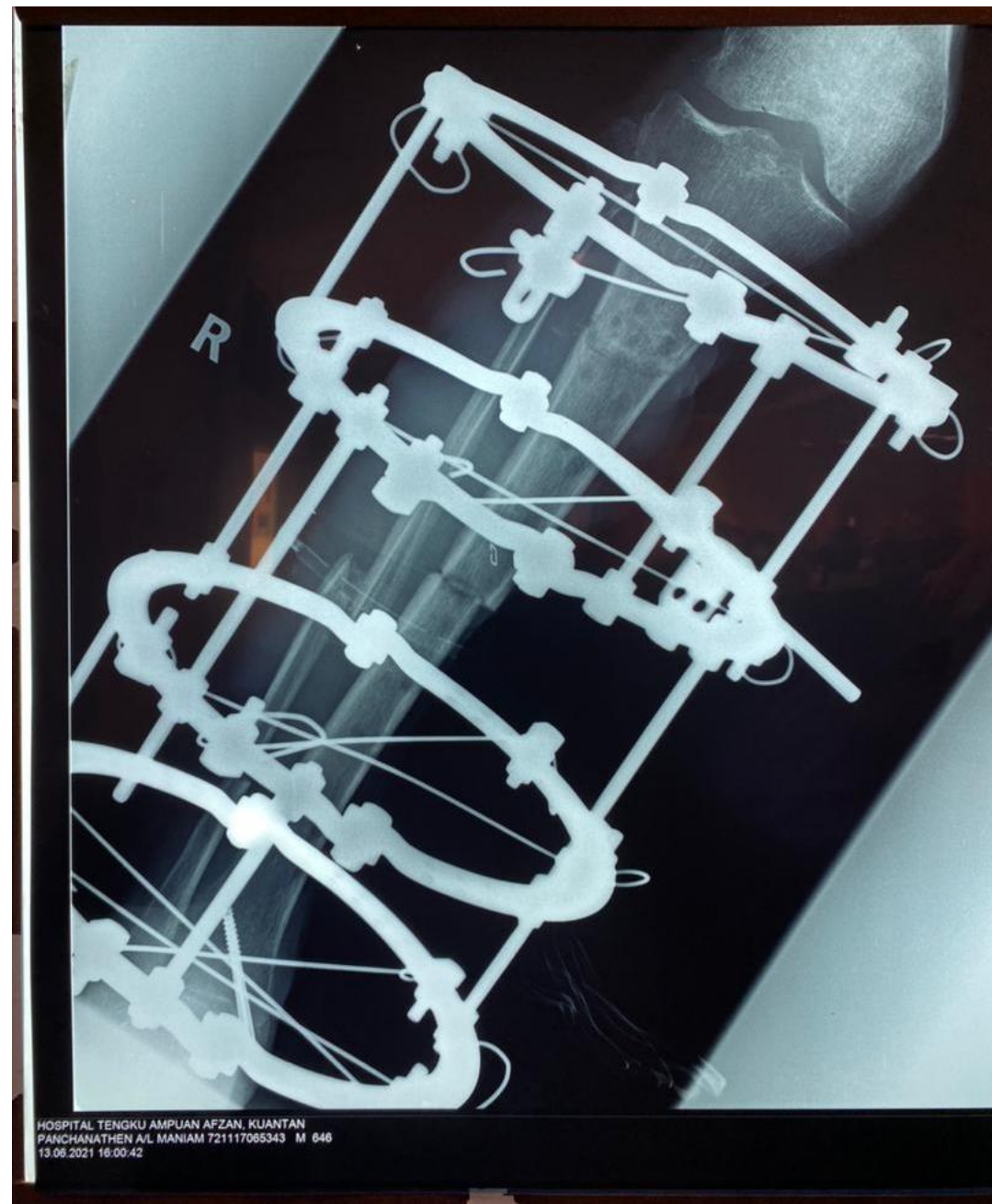




# Stability improve wound healing

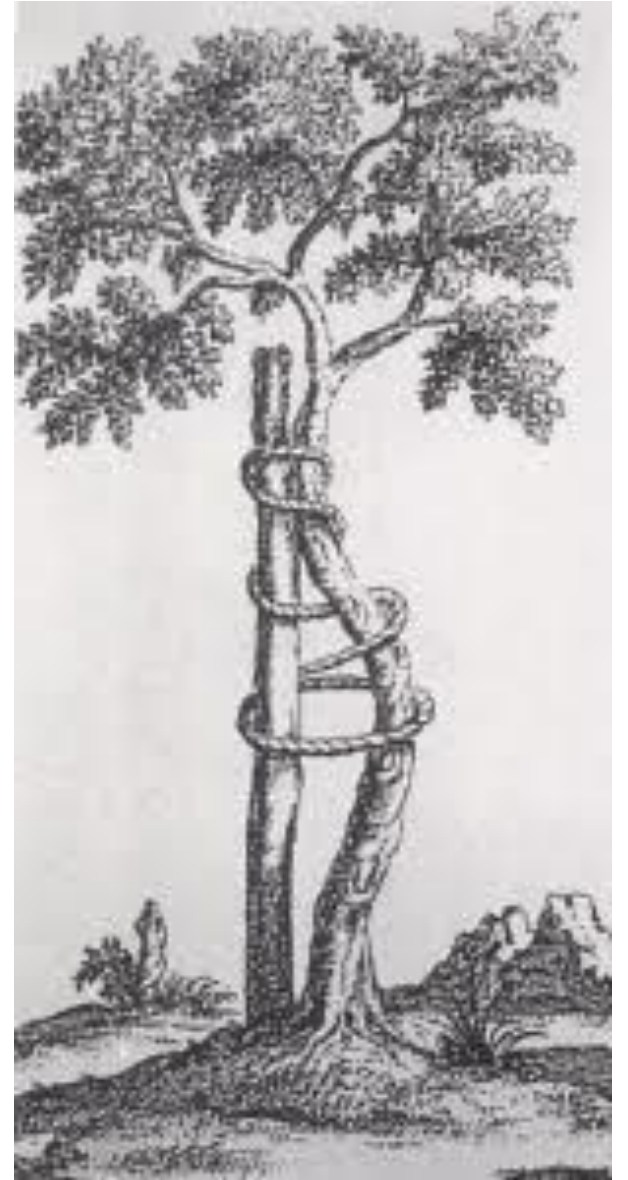






# Take home message

- Focus on the patient
- Improve the general condition of patient
- Improve the local environment of the wound
- Think bone as a tree
- Insya Allah we will win





Thank you