

OSTEOMYELITIS IN THE DOG

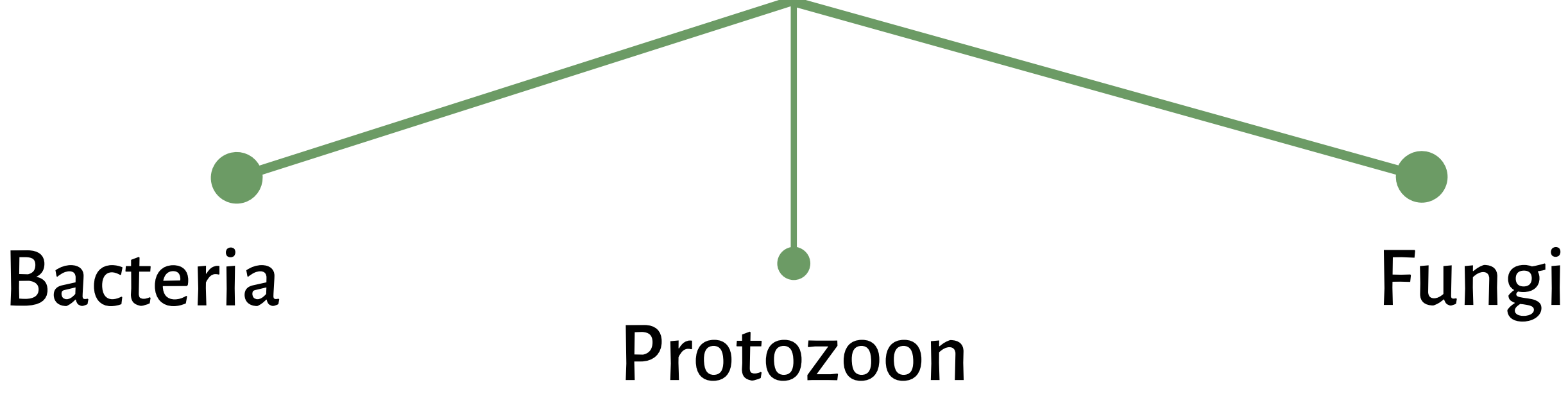
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June 2020

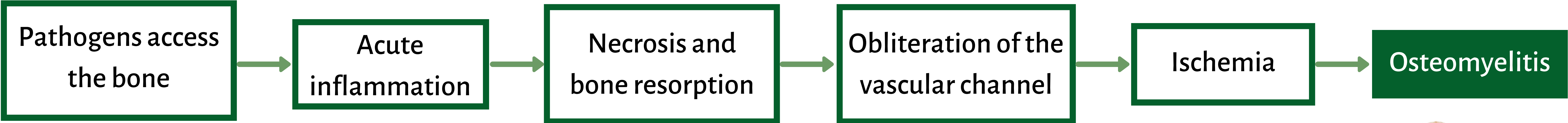
OBJECTIVES

- Understand the pathogenesis of osteomyelitis in order to make easier its diagnose.
- Emphasize the importance of performing an adequate and early treatment to avoid the establishment of chronic osteomyelitis.
- Enumerate all the important factors in the development of the disease with the aim of preventing it.

Osteomyelitis is an inflammatory condition of the bone caused by an infectious agent.



PATHOPHYSIOLOGY



CLASSIFICATION

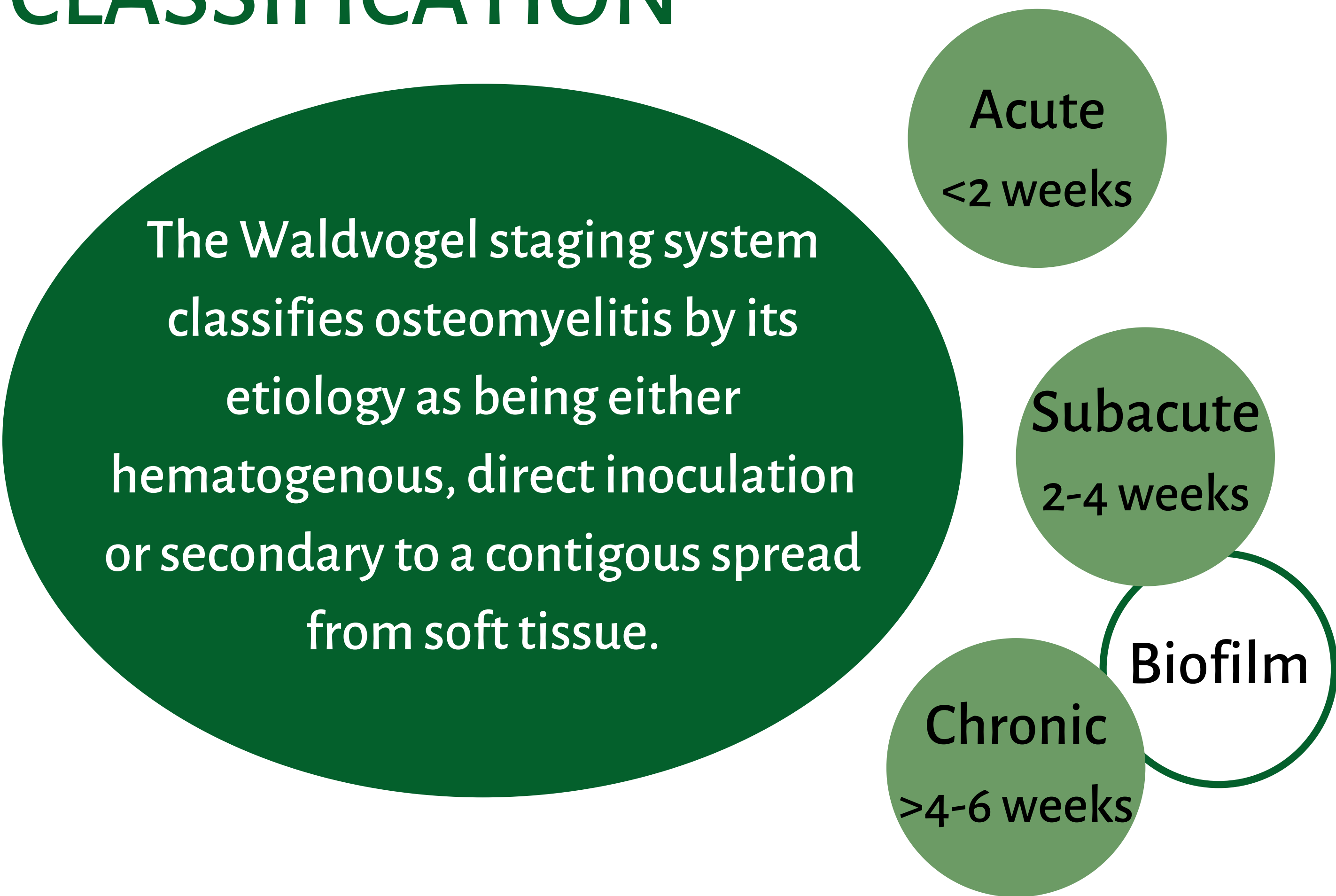


Figure 1. Types of osteomyelitis

HAEMATOGENOUS OSTEOMYELITIS	Polyostotic	Metaphysis or diaphysis	Young
POST-TRAUMATIC OSTEOMYELITIS	Monostotic	Anywhere	Variable
FUNGAL OSTEOMYELITIS	Polyostotic	Metaphysis	Young-adult

DIAGNOSE

- Hystory and clinical signs
- Conventional radiography
- Sinography
- Ultrasound
- Computed tomography
- Magnetic resonance imaging
- Bone biopsy / needle aspiration

TREATMENT

- Prolonged course of antibiotics based on culture and sensitivity test. Start with a broad spectrum antibiotic.
- Perform surgical debridement, biofilm disruption and destruction, and fracture stabilization.
- Distraction osteogenesis - Ilizarov method.

CONCLUSIONS

Prevention of osteomyelitis should be the main objective.

Fast and aggressive treatment is imperative when infection has established.

Biocompatible surfaces that allow fibroblast and osteoblast cells to adhere and proliferate while preventing bacterial adhesion, would be a way of preventing the development of osteomyelitis.

When vascularization can not be preserved, non-vascular osteogenesis is an option if new bone regeneration is necessary for fracture resolution.

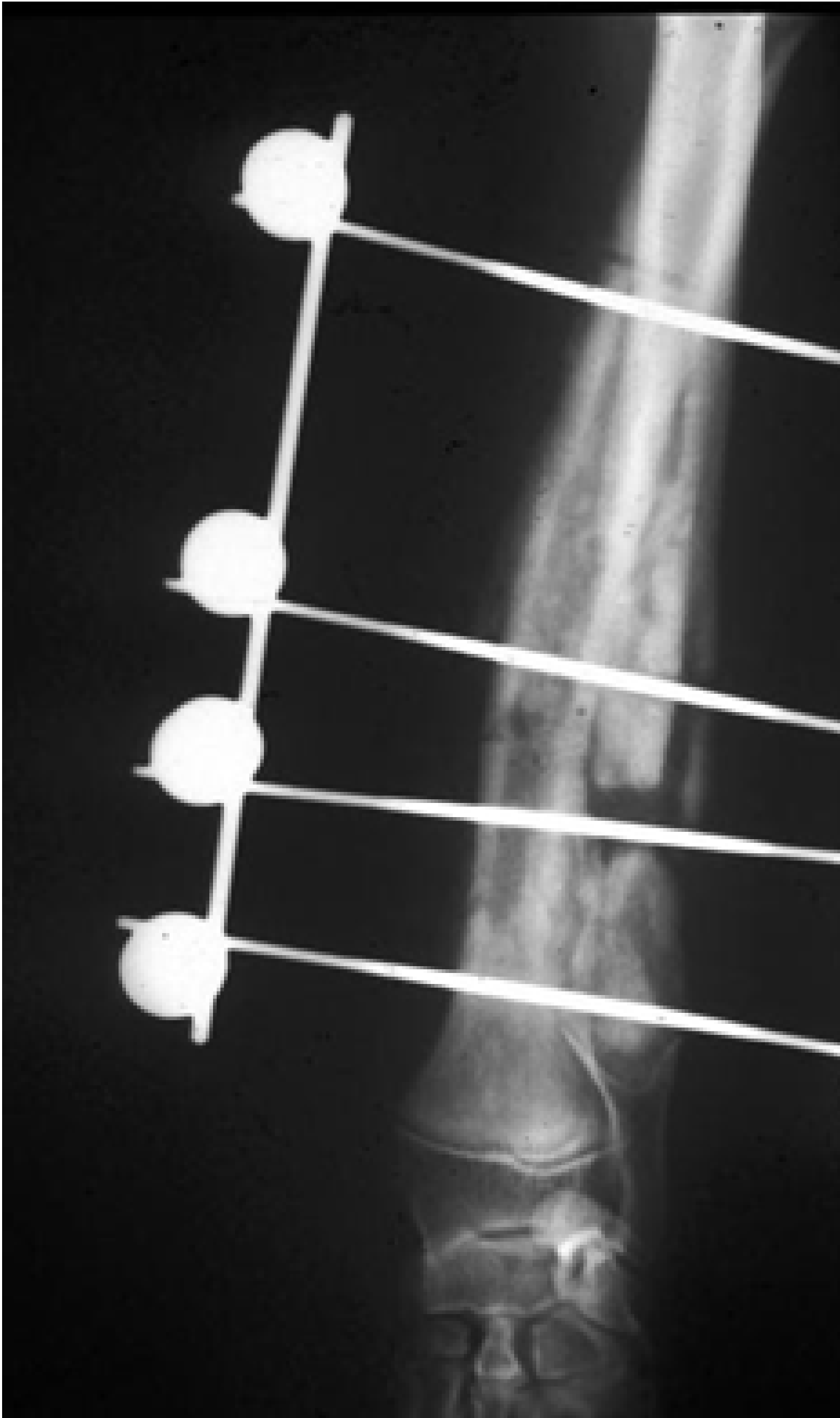


Figure 2. Osteomyelitis in a dog after fracture stabilization.
Courtesy of Dra. C. Díaz-Bertrana.