

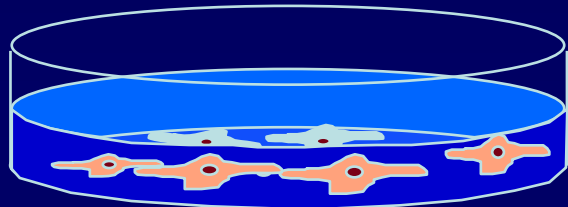


Collège Hospitalier et Universitaire
de Chirurgie Pédiatrique

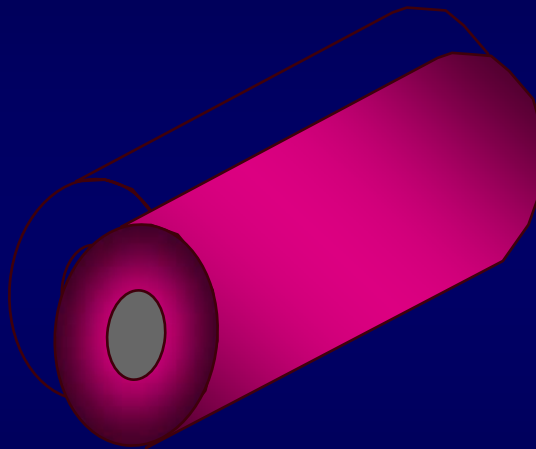
DESC de Chirurgie Pédiatrique
Session de mars 2009 - PARIS

Thérapie cellulaire en Orthopédie

Les acteurs



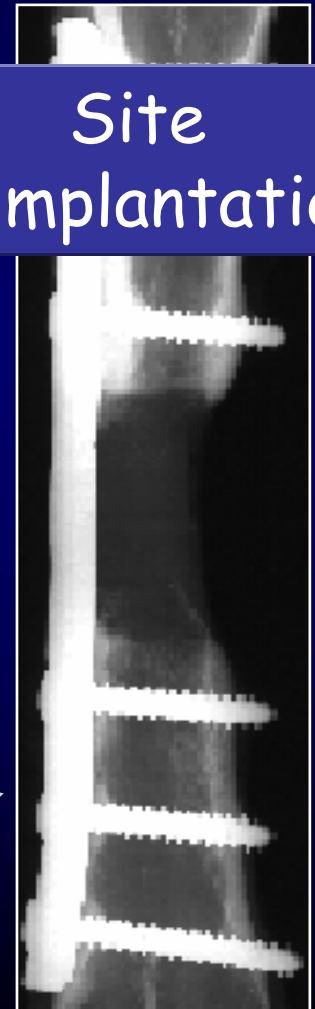
Cellules de moelle



Support

Ostéosynthèse

Site
d'implantation

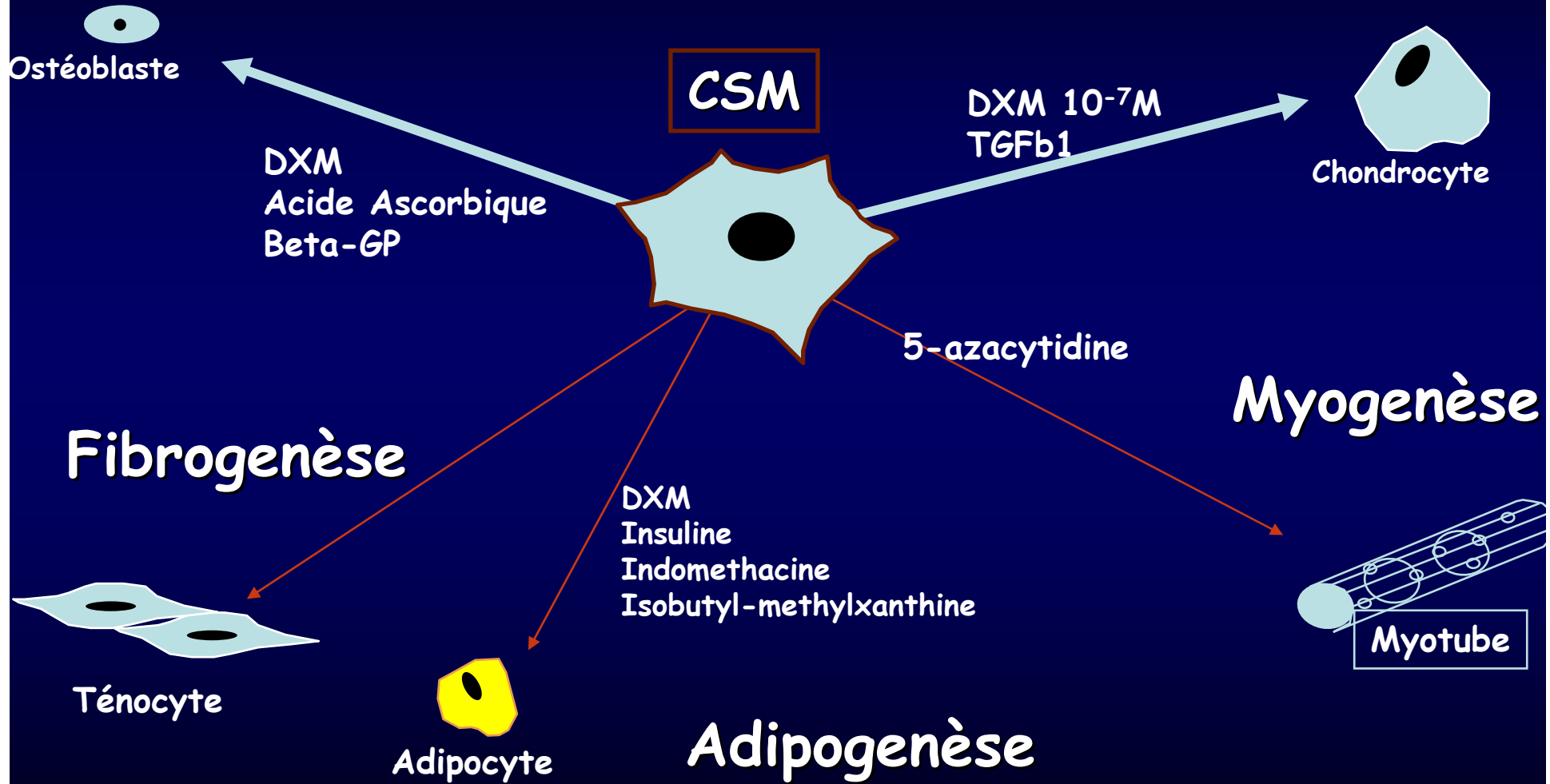


Cellules souches mésenchymateuses

- Isolement simple en culture (adhésion)
- Prolifération in vitro sans différenciation
- Capacités importantes de prolifération :
 - 30 passages
 - phénotype stable
 - pas de perte pluri-potentialité

Ostéogénèse

Chondrogénèse

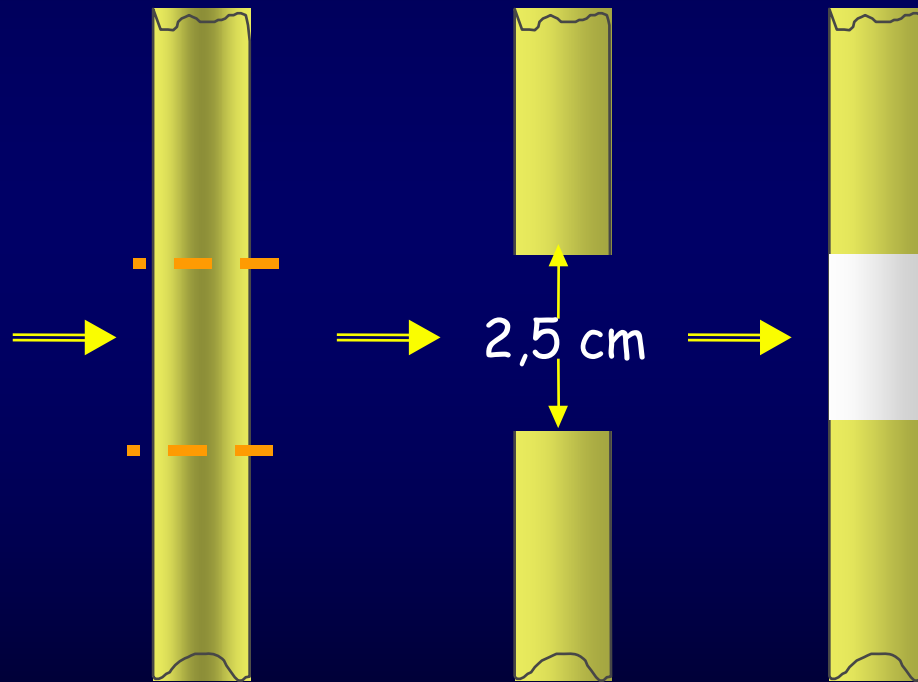


Pittenger, Science, 1999, 284 (5411)

Use of artificial bone for filling large bone defects.

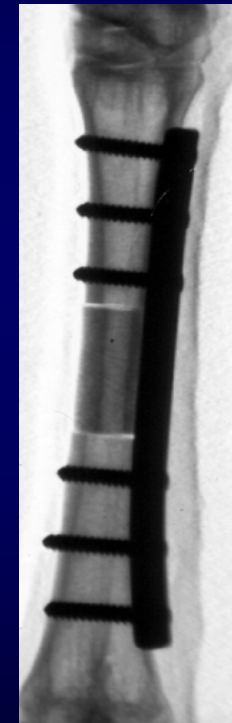
Groupe 1	n = 4
Groupe 2	n = 6
Groupe 3	n = 7
Groupe 4	n = 7

Technique chirurgicale



Métatarsien
de brebis

*Durée d'implantation = 4 mois



*Petite et al
Nature Biotechnology
Sept 2000*

Groupe 1
Défaut vide

Groupe 2
Corail seul

Groupe 3
Co. + M.F.

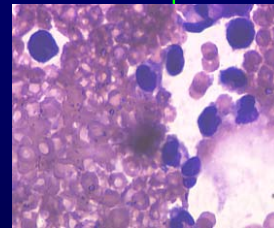
Groupe 4
Co. + CSM



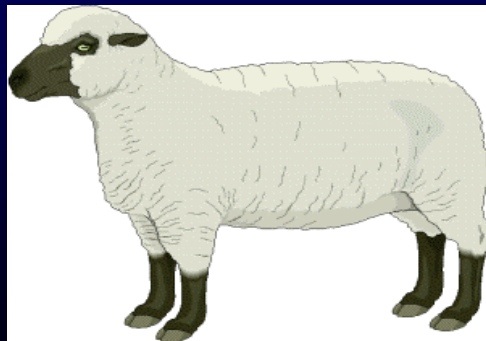
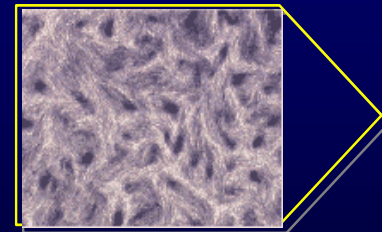
Ponction
de
moelle



Crête
iliaque



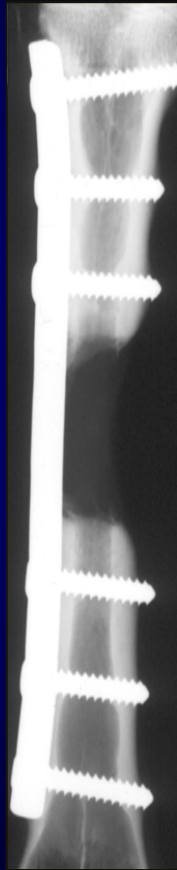
Imprégnation



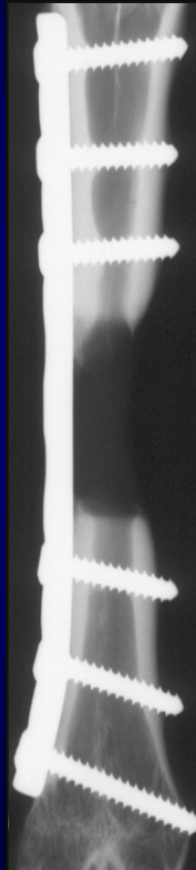
1,6 ml / implant

$3 \cdot 10^7$ cellules

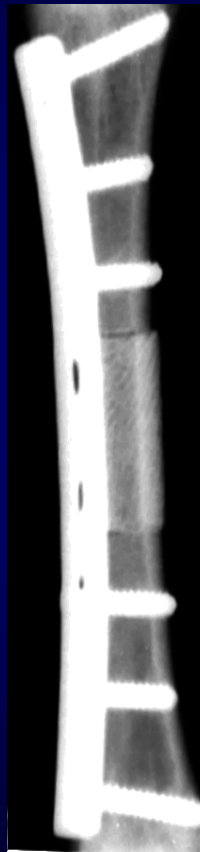
Résultats Radiographiques



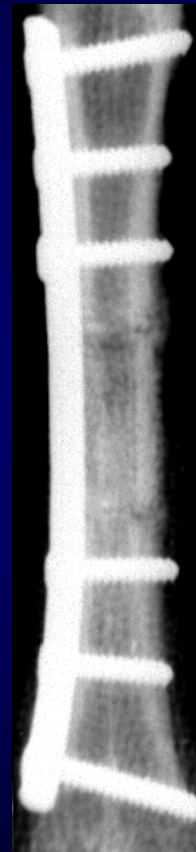
16 weeks



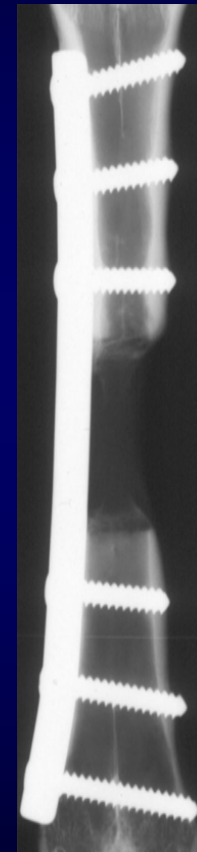
16 weeks



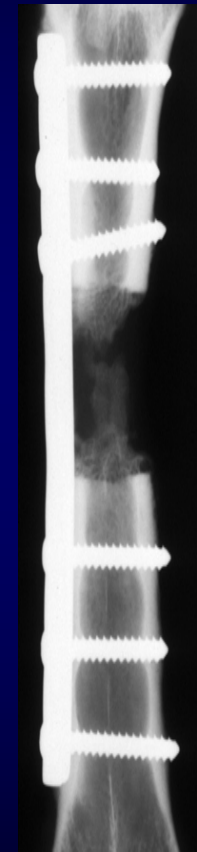
Post-operative



4 weeks



16 weeks

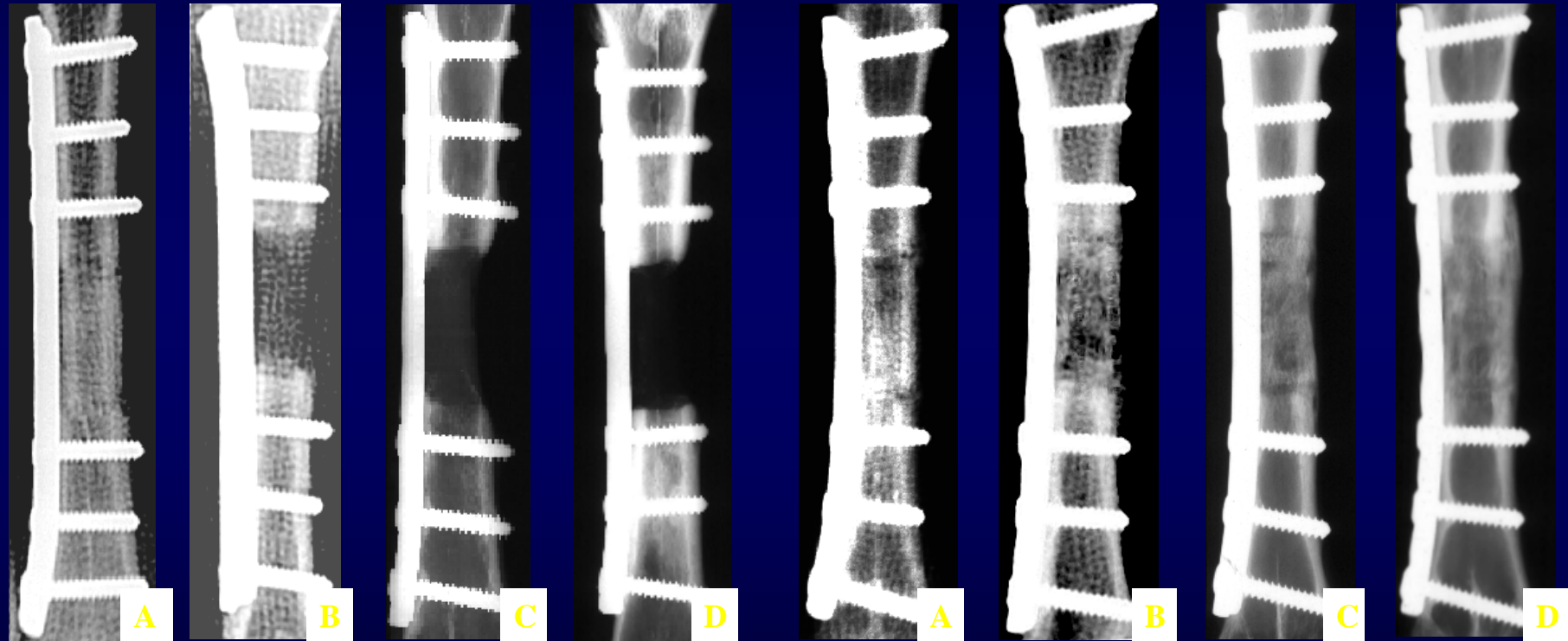


16 weeks

Contrôle

Corail seul

Résultats Radiographiques



Post-operative

4 weeks

16 weeks

16 weeks

Post-operative

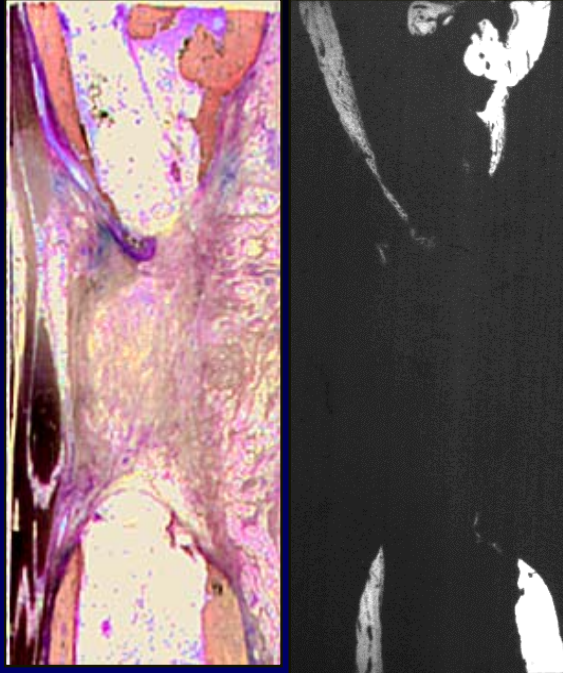
4 weeks

16 weeks

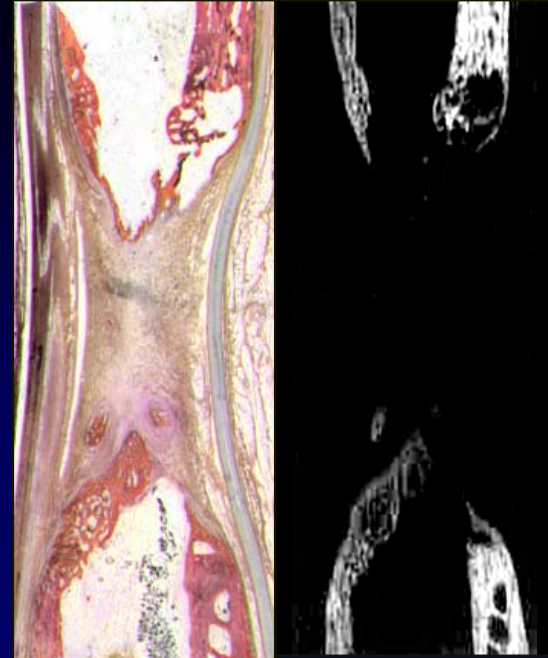
16 weeks

Corail +
MOF

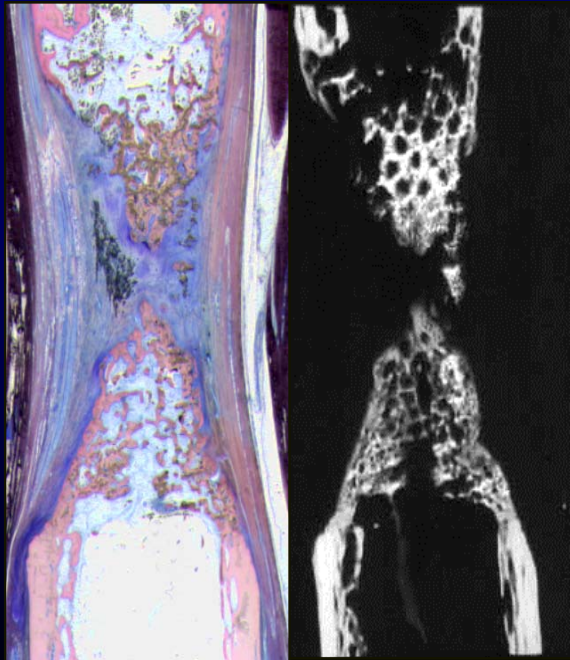
Corail +
CSM



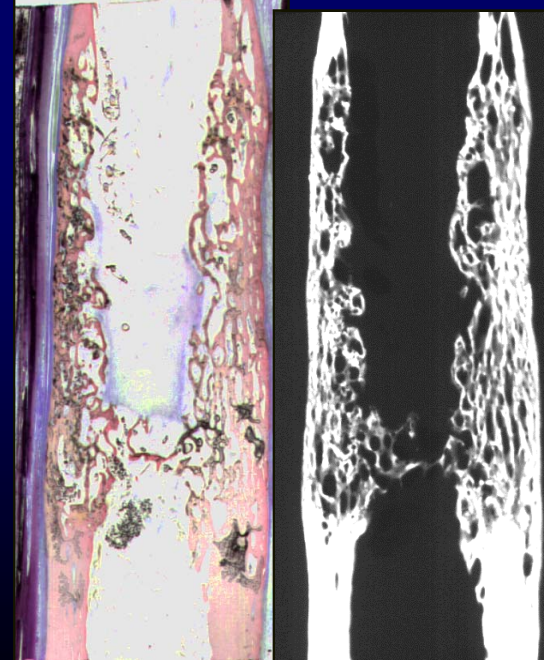
Témoin



**Corail
+ MF**



Corail



**Corail
+ CSM**