

**BEST OF
MALADIES INFECTIEUSES**



**INFECTIONS
OSTEO-ARTICULAIRES**

Louis BERNARD

Paris, 14 octobre 2005



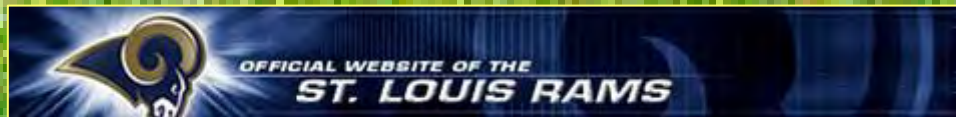
The NEW ENGLAND
JOURNAL of MEDICINE

A Clone of Methicillin-Resistant
Staphylococcus aureus among Professional
Football Players

58 Saint Louis Rams Players
5 (9%) infections cutanées MRSA
35 (42%) : portage MRSA

qMRSA

- clonal mec type IVa
- leucocidine de Panton Valentine



SV. Kazakova, N Engl J Med 2005;352:468-75.





The NEW ENGLAND
JOURNAL of MEDICINE

Necrotizing Fasciitis Caused by
Community-Associated Methicillin-Resistant
Staphylococcus aureus in Los Angeles

Harbor-UCLA Medical Center

15 janvier 2003-15 avril 2004

843 cultures cutanées (+) MRSA

14 MRSA - DHN (DermoHypodermite Nécosante)

qMRSA

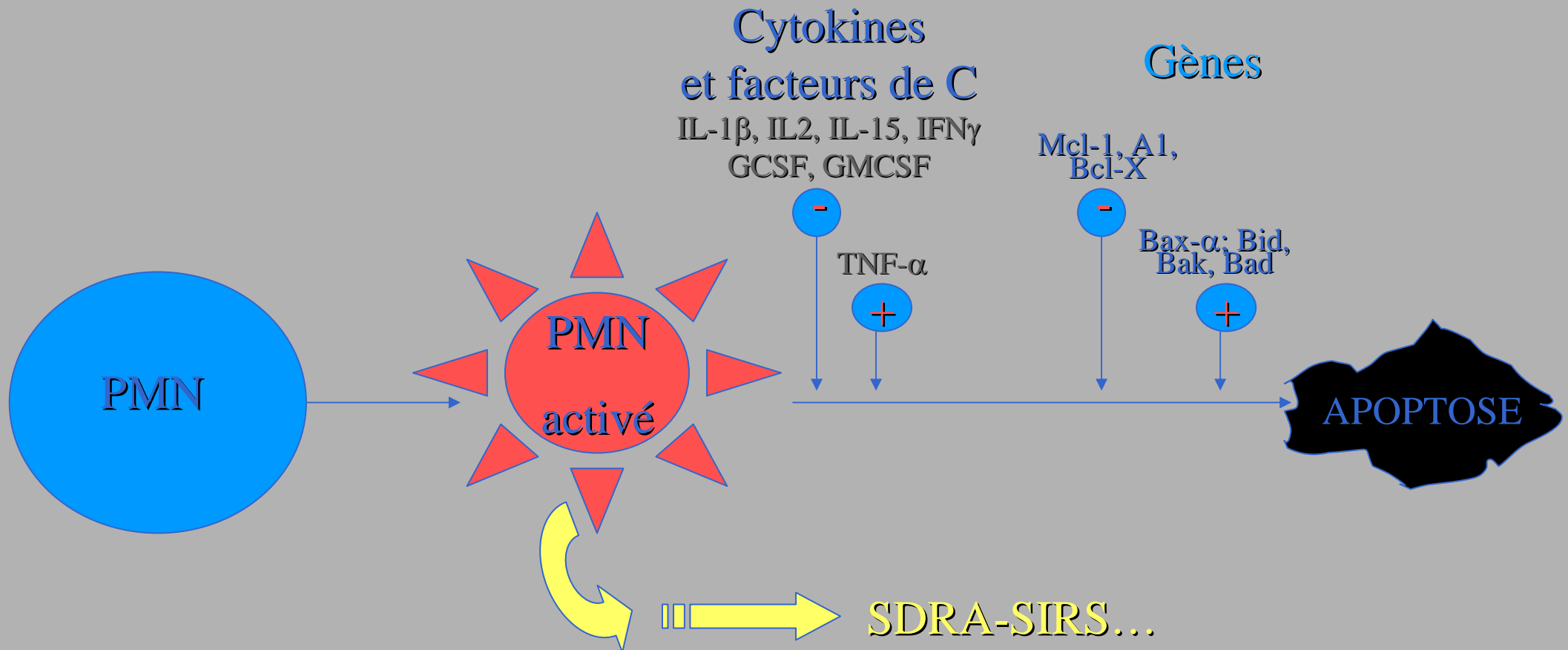
-clonal mec type IVa

-leucocidine de Panton Valentine



LG. Miller, N Engl J Med 2005;352:1445-

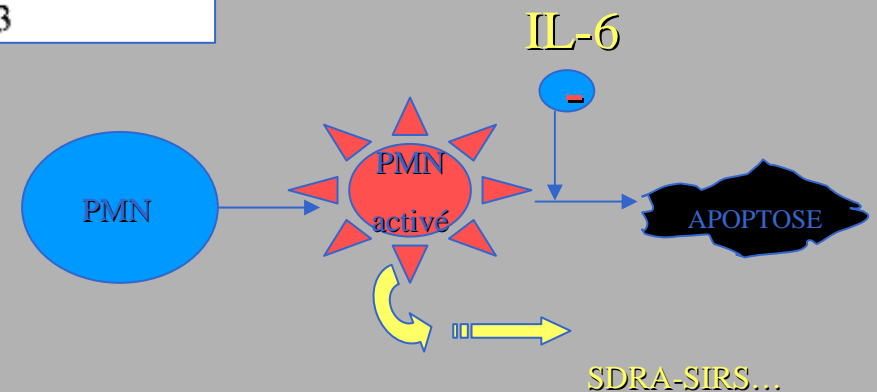
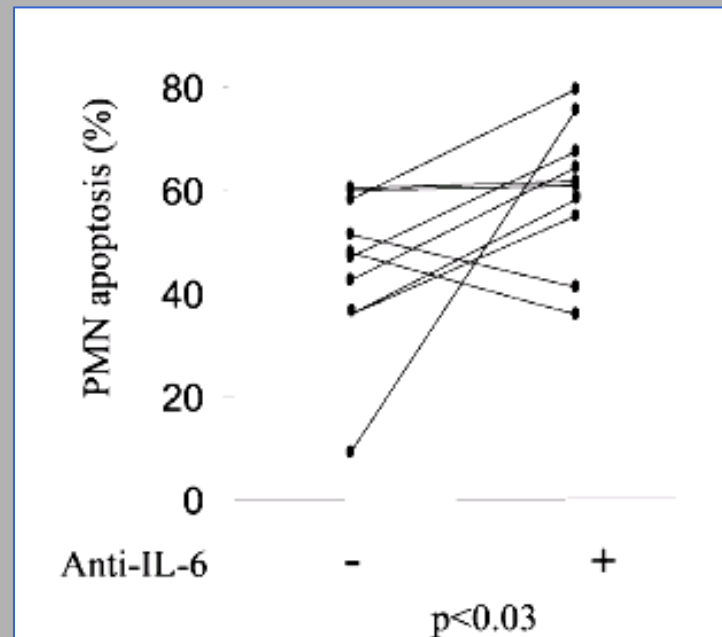
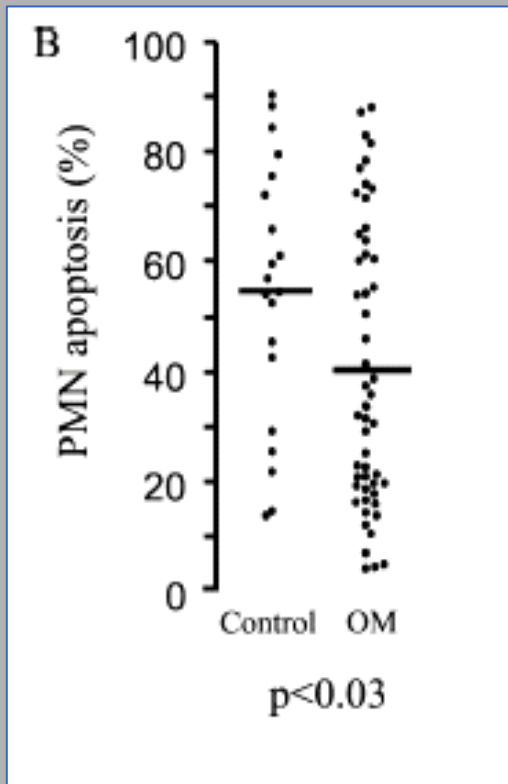
In Vivo Interleukin-6 Protects Neutrophils from Apoptosis in Osteomyelitis



In Vivo Interleukin-6 Protects Neutrophils from Apoptosis in Osteomyelitis

52 Patients-
ostéomyélites

Sérum Patients-OM
+ anti-IL-6



Asensi, *Infection and immunity* 2004;72: 3823–

3828

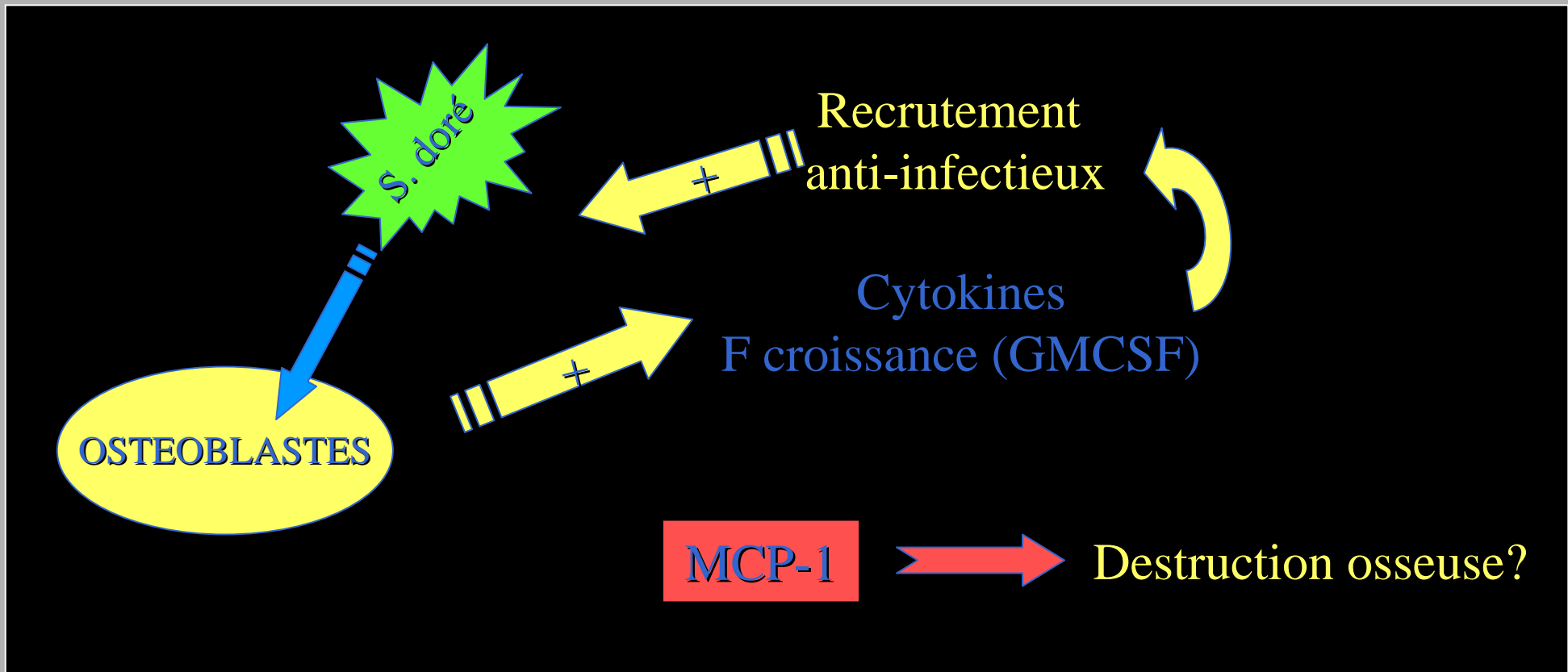
TABLE 1. Concentrations of proinflammatory cytokines and CRP in sera from osteomyelitis patients and controls^a

Group	IL-6 (pg/ml)	IL-1 α (pg/ml)	TNF- α (pg/ml)	CRP (μ g/ml)	No. of patients
Controls	1.8 \pm 1.2	1.0 \pm 2.2	2.4 \pm 0.62	3.3 \pm 0.4	20
Osteomyelitis patients	8.8 \pm 11.9	3.8 \pm 6.4	8.7 \pm 11.7	33.7 \pm 39.8	52
<i>P</i> value	0.004	0.02	0.6	0.0001	

^a IL-6, IL-1 α , and TNF- α were measured by ELISA, and CRP was measured by nephelometry. Results are expressed as means and standard deviations.

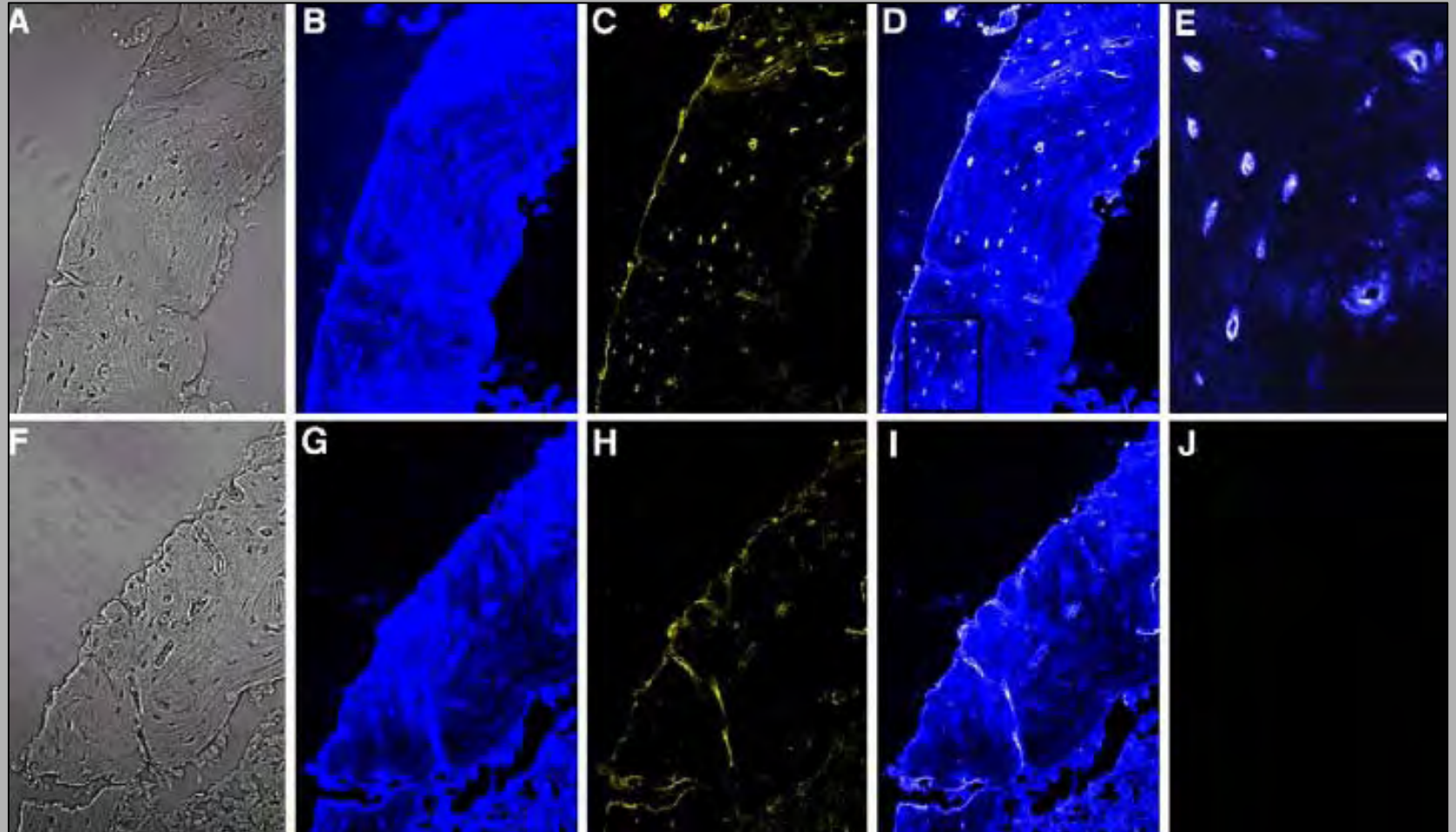
Osteoblasts produce monocyte chemoattractant protein-1 in a murine model of *S. aureus* osteomyelitis

and infected human bone tissue



Ostéocalcine (bleu)

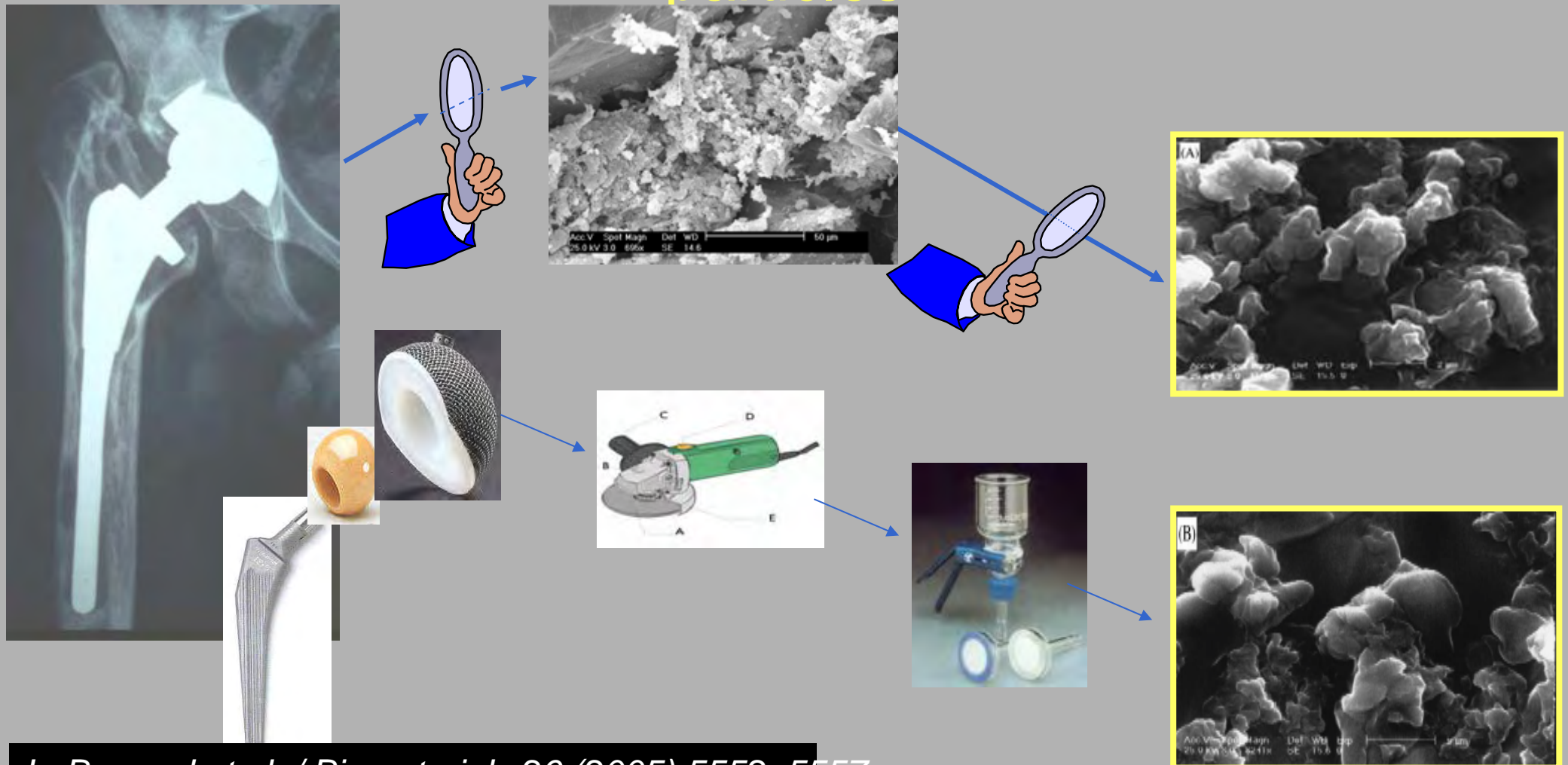
Ostéomyélite



Trauma.

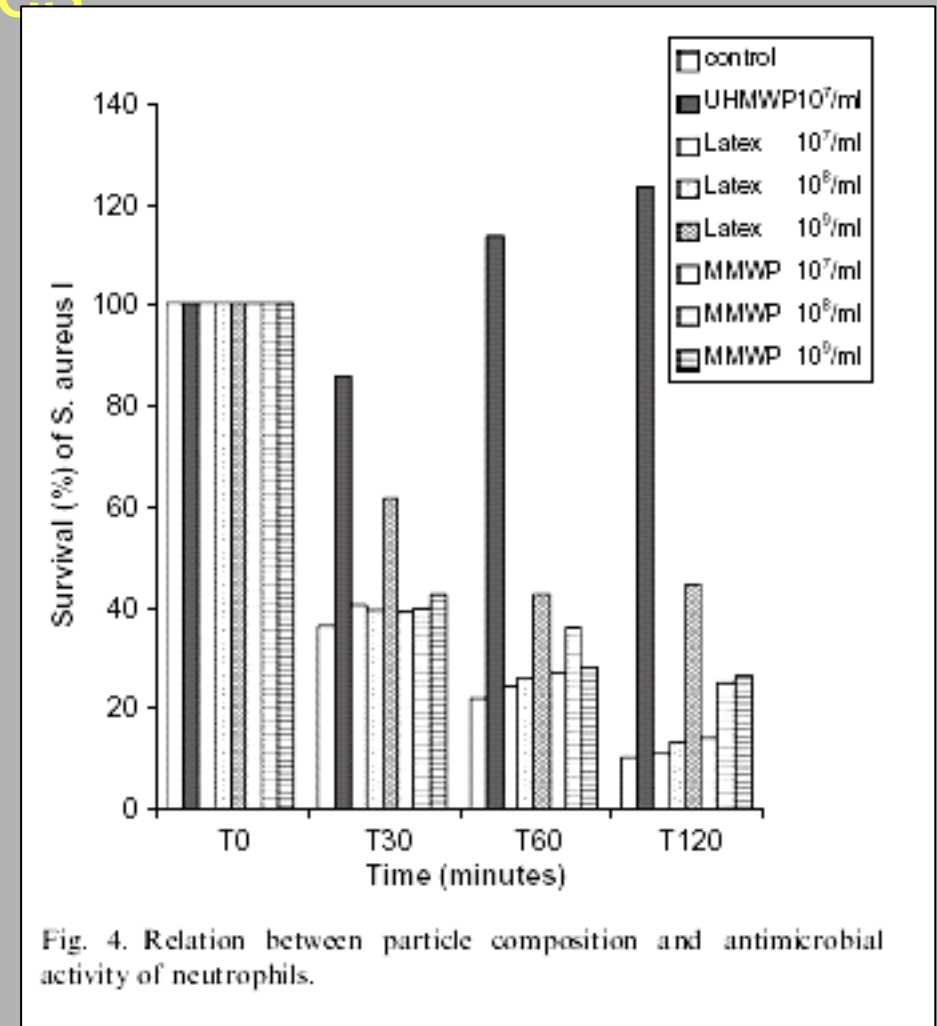
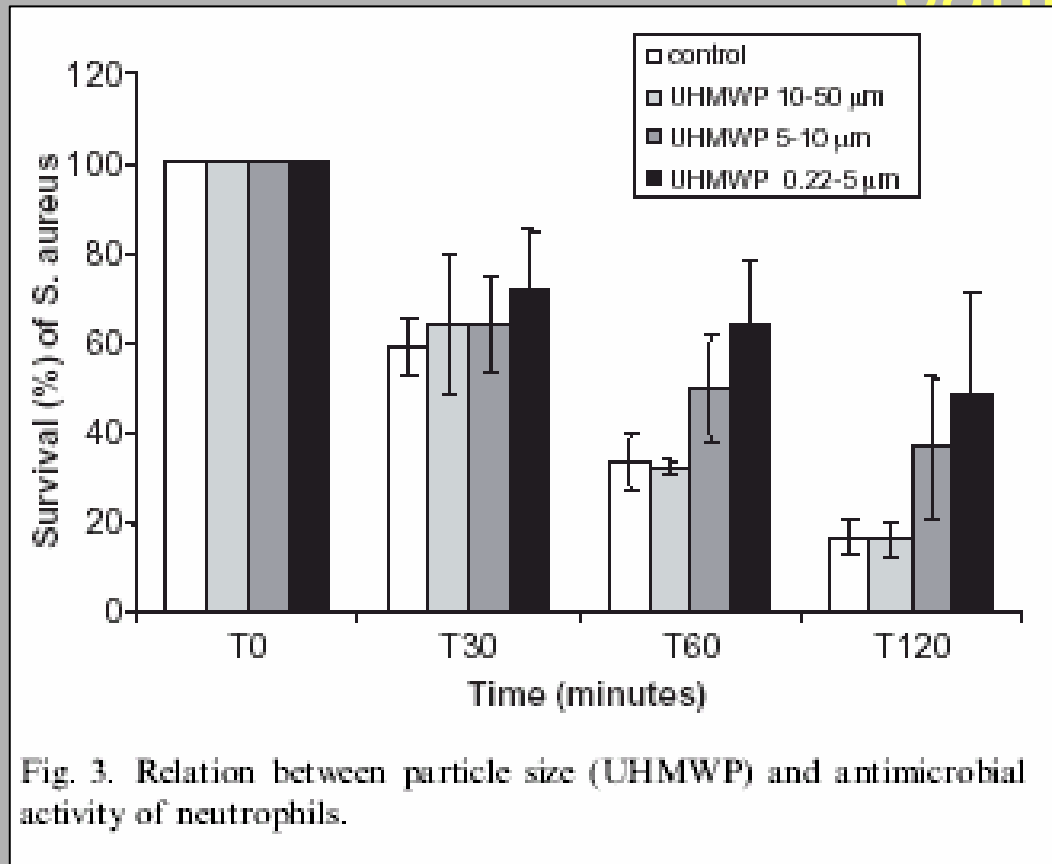
**MCP-1 Monocyte chemoattractant protein-1
(jaune)**

The inhibition of neutrophil antibacterial activity by ultra-high molecular weight polyethylene particles



The inhibition of neutrophil antibacterial activity by ultra-high molecular weight polyethylene particles

particles



In Vitro and In Vivo Bactericidal Activities of Vancomycin Dispersed in Porous Biodegradable Poly(Σ -Caprolactone) Microparticles

Microparticules

200 μ m

50% de vanco.

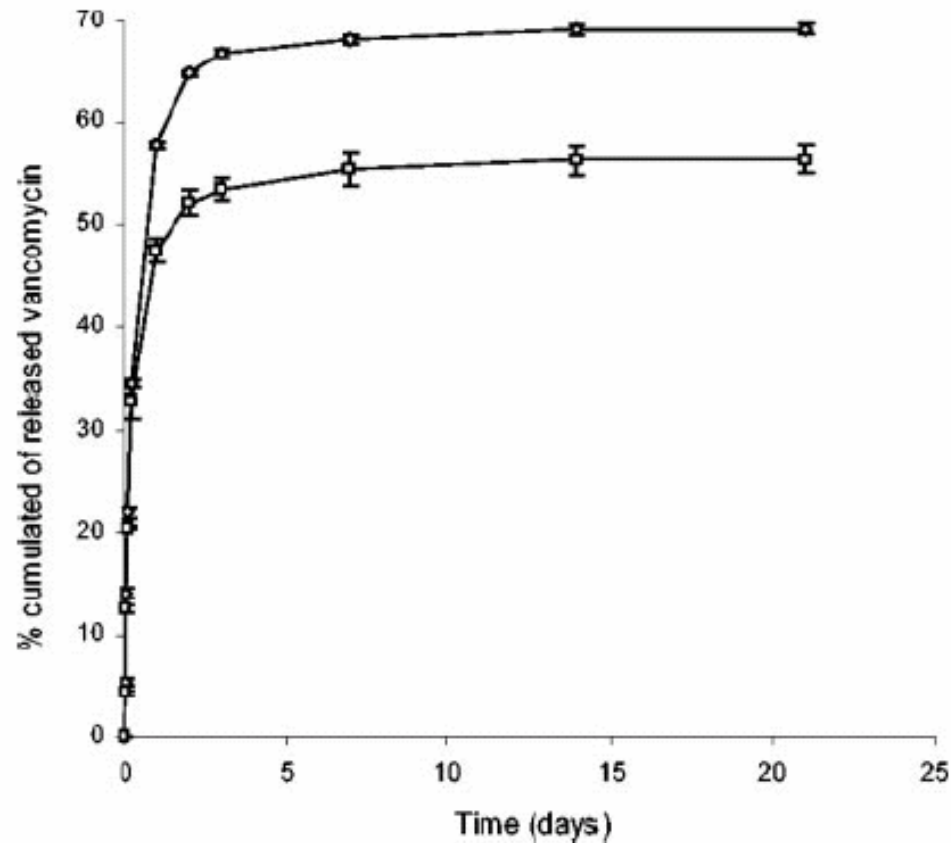
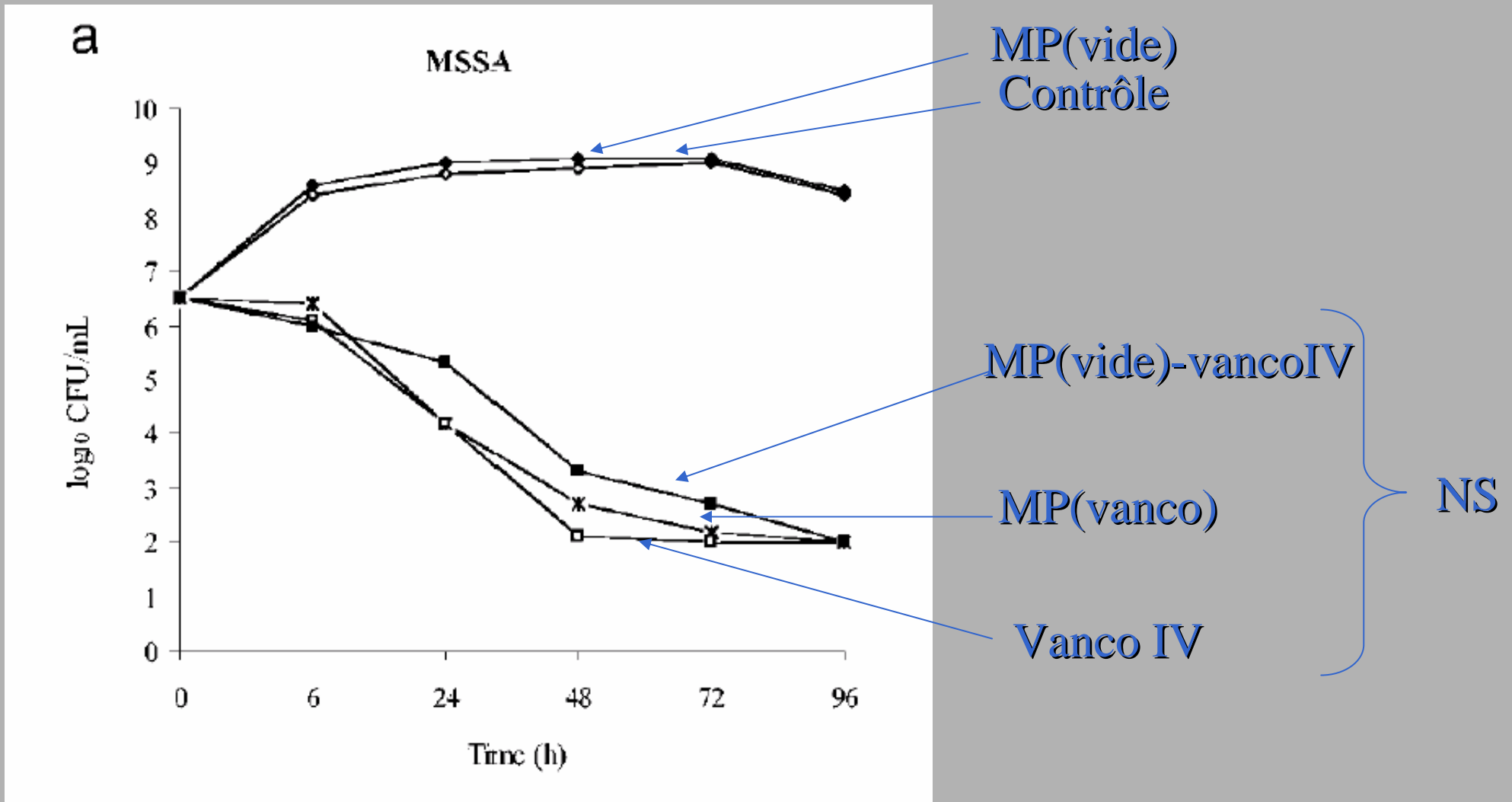


FIG. 1. Cumulated release rates of vancomycin after dissolution test. \diamond , microbiological assay; \square , HPLC assay. Error bars represent standard deviations.

In Vitro and In Vivo Bactericidal Activities of Vancomycin Dispersed in Porous Biodegradable Poly(Σ -Caprolactone) Microparticles



LINEZOLIDE / OSTEOMYELITIS

— Etude compassionnelle : 89 pts puis 55 puis 48

Rayner et al, Infection, 2004 ; 32 : 8

– Etude rétrospective : 20 patients (10 prothèses, 5 omc, 5 autres)

Razonable et al, Mayo Clin Proc, 2004 ; 79 : 1337 – 44

– Facteurs de risque d'anémie : 45 patients

Senneville et al, JAC ; 2004

– Etude rétrospective : 20 patients(prothèse), 7 s

Bassetti et al, JAC 2005; 55: 387-90

– Etude rétrospective : 11 patients(2 PT, 6 omc, 3 pieds diabétiques)

Rao et al, Clin Ortho Rel Res 2004; 427: 67-71

LINEZOLIDE

EFFETS INDESIRABLES (1)

- Digestifs
- Cutanés
- Hématologiques
- Neuropathie
- Syndrome sérotoninergique
- Acidose lactique

LINEZOLIDE

EFFETS INDESIRABLES (6)

Neuropathie+++

- Optique et/ou Périphérique
> 2-4 s de traitement
- pas tjrs réversible++
parfois lentement réversible

Saijo T, Am J Ophthalmol. 2005;139(6):1114-6.

Ferry T, Infection. 2005;33(3):151-4.

Hernandez Med Clin (Barc). 2005 28;124(20):797-8.

McKinley SH, J Neuroophthalmol. 2005;25:18-21.

Zivkovic SA, Neurology. 2005;64(5):926-7.

Spellberg B, JAC. 2004;54(4):832-5.

Frippiat F, CID 2004;39(3):439.

Bressler AM, Lancet Infect Dis. 2004;4(8):528-31.

Rho JP, Mayo Clin Proc. 2004;79(7):927-30.

Legout L CID 2004;38(5):767-8.

Lee E, CID 2003 15;37(10):1389-91.

Acidose lactique

- nausées, vomissements
- décès (2 cas)
- > 15 jours, mitochondropathie ?
- dosage bicarbonates (CO 2 total)

Apodoca, NEJM 2003 ; 348 : 86-87

Bernard, CID 2003 ; 36 : 1197

Kopterides P, Scand J Infect Dis. 2005;37(2):153-4.

Palenzuela, CID. 2005 ;40(12):e113-6.

Nagiec. AAC. 2005;49(9):3896-902.

Vacuum-Assisted Closure for the Treatment of Complex Chest Wounds



J O'Connor, Ann Thorac Surg 2005;79:1196–200)

REVUES

1 Zimmerli W, Trampuz A, Ochsner PE. Prosthetic-joint infections. *N Engl J Med*. 2004;351:1645-54. Review.

2 Ader F, Bernard L. Pathophysiology of infection on orthopedic biomaterials. *Presse Med*. 2005;34:533-6. Review.

3 Berendt T, Byren I. Bone and joint infection. *Clin Med*. 2004;4:510-8. Review.