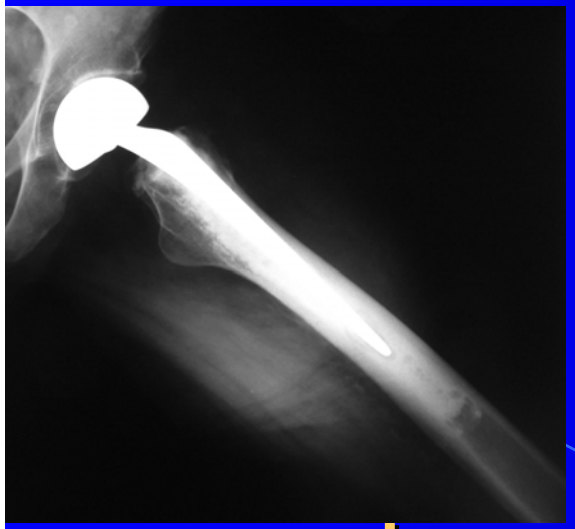


Le protesi articolari di anca le nuove tecniche le nuove interfacce

www.fisiokinesiterapia.biz

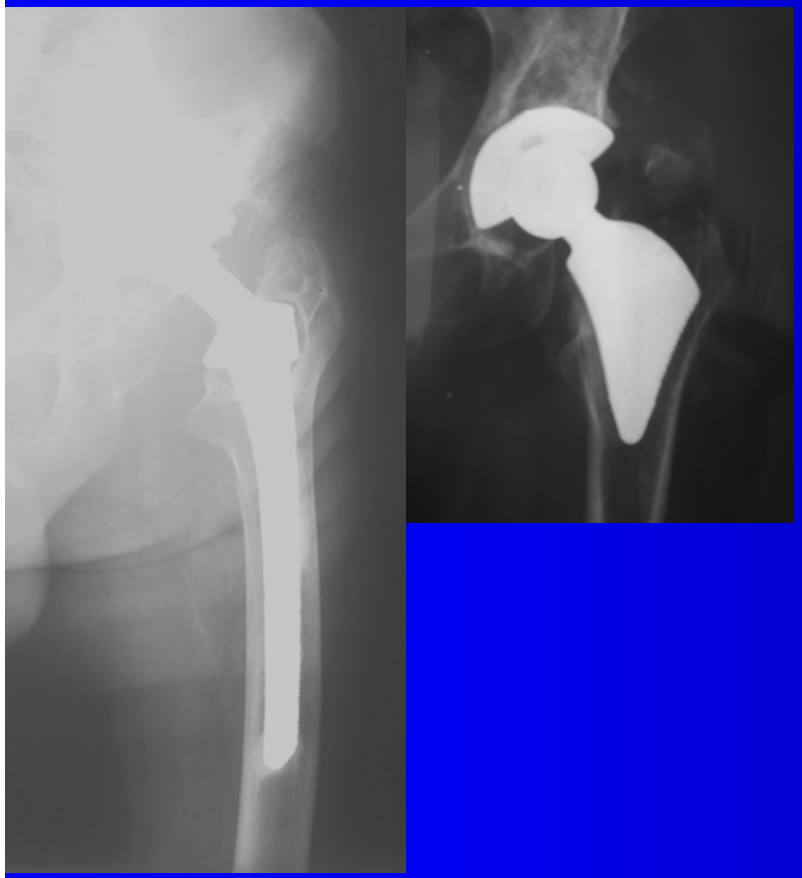
premessa

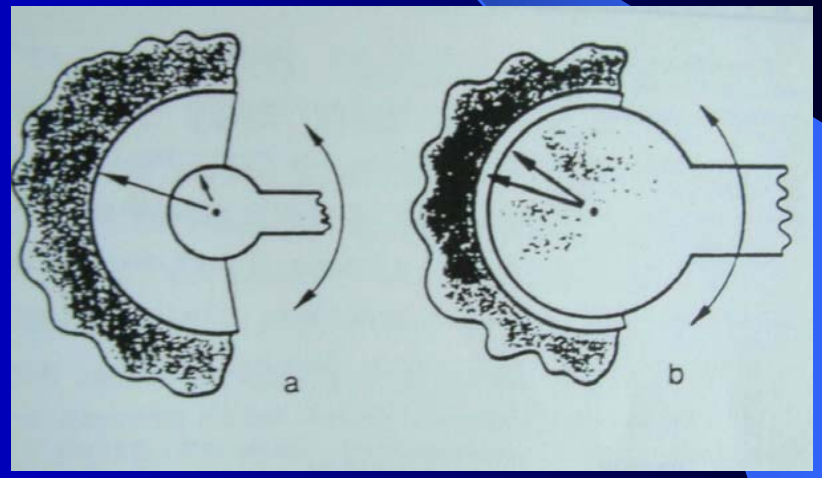
L’argomento vasto

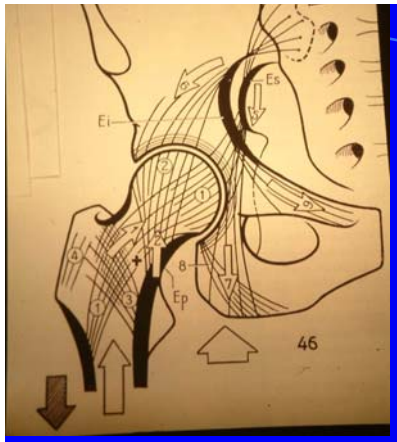
Chiarire le idee

Lanciare alcuni spunti di lavoro

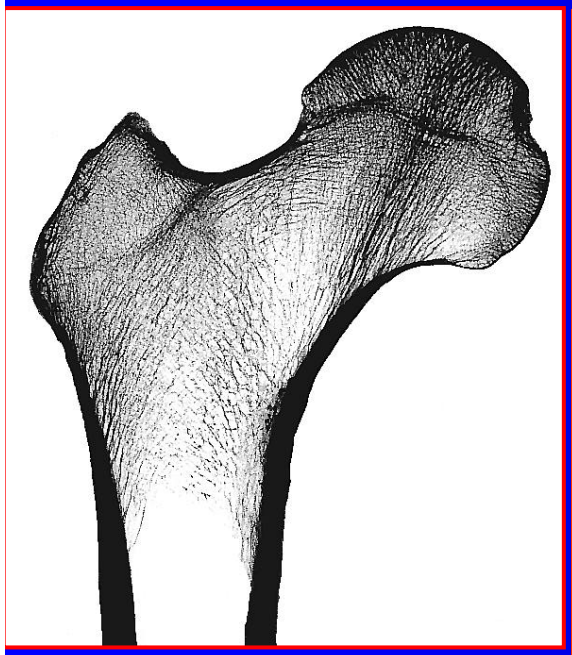
La protesica articolare e' a tutti gli effetti una scienza
In continua evoluzione

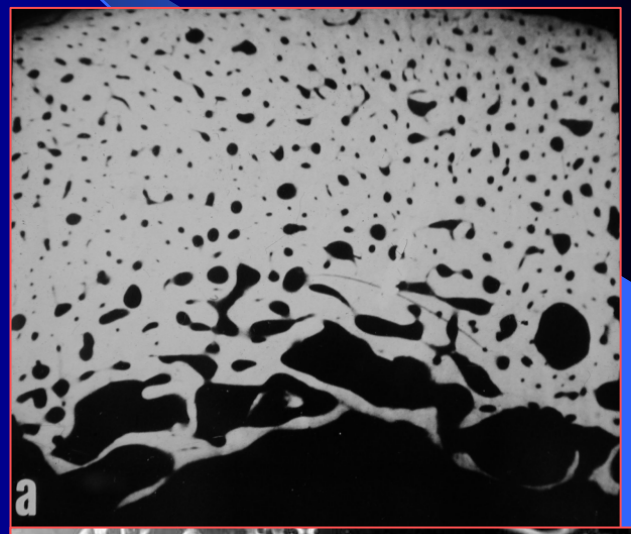


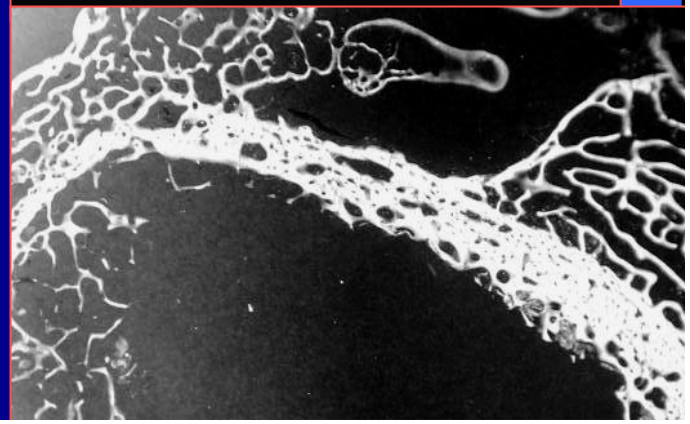




I principi fondamentali







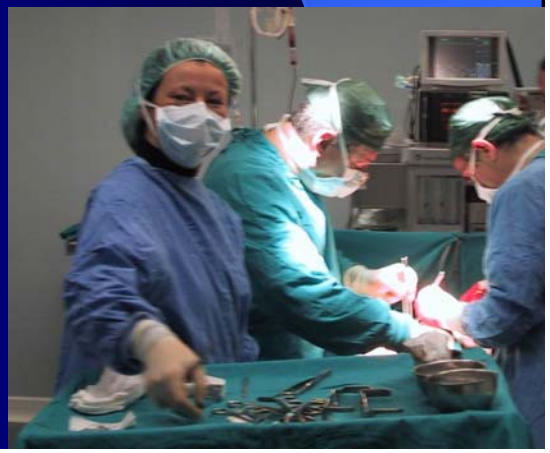
Sottoporre l'osso ad un carico controllato
che ne permetta l'apposizione ed il trofismo

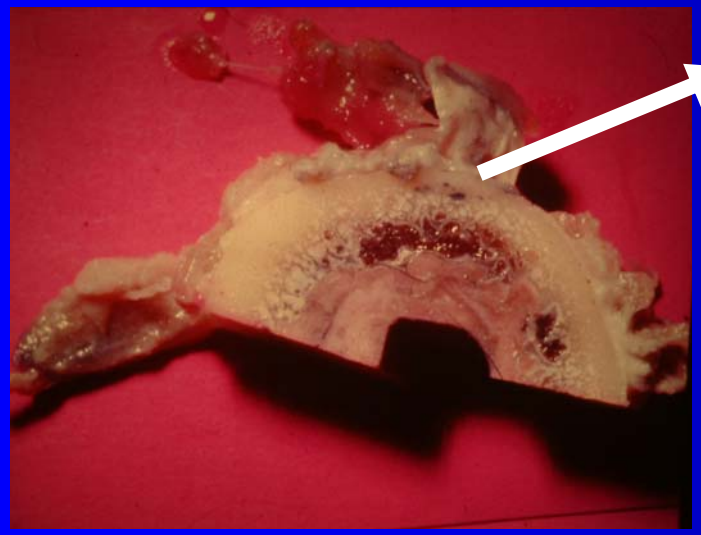
Protesi parziale = endoprotesi

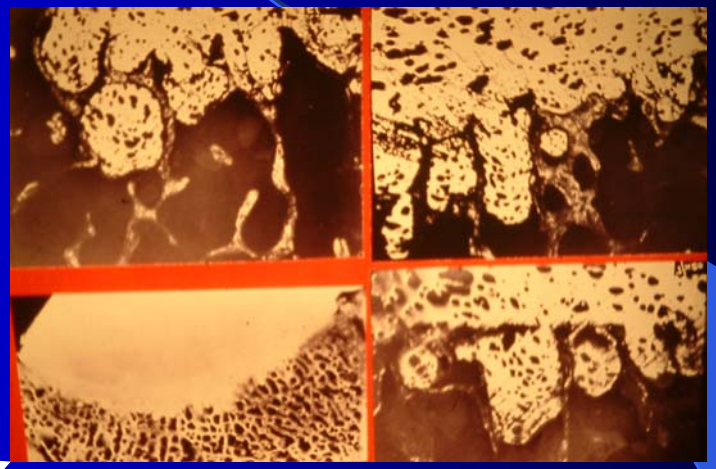
Protesi totale = artroprotesi

Cemented implants

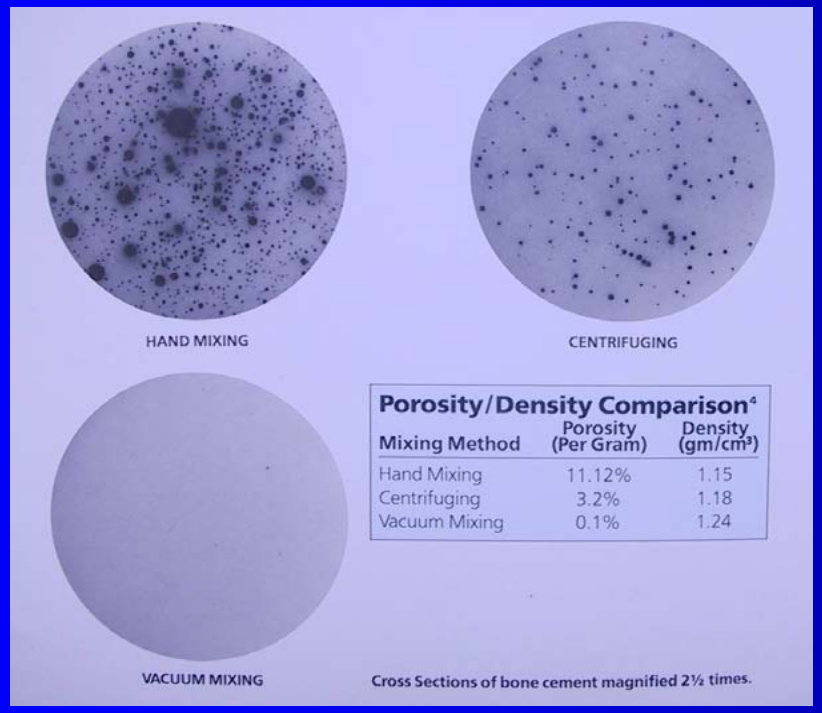
- Shock absorber
- Distributore dei carichi su ampia superficie





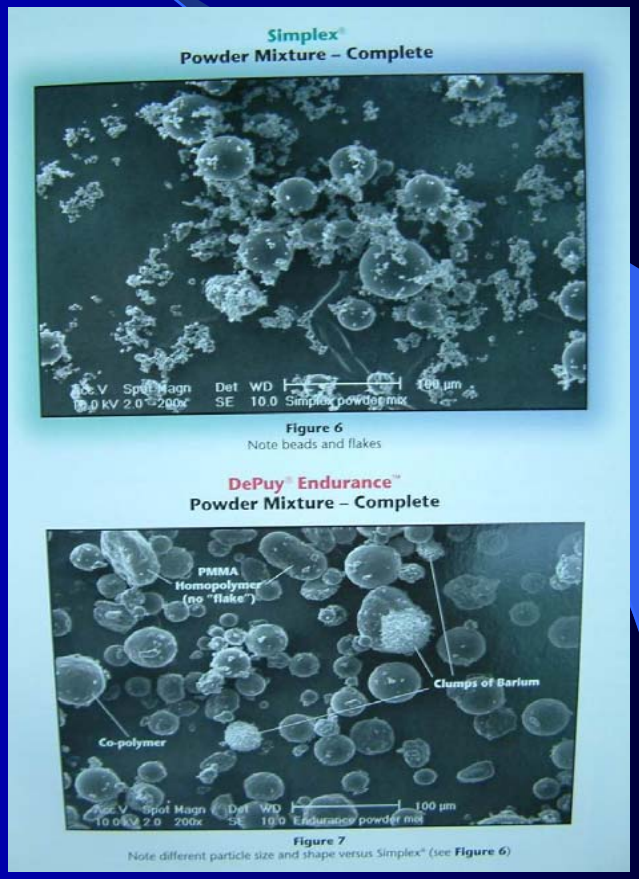


Mescolazione del cemento sottovuoto



Porosity/Density Comparison[4]

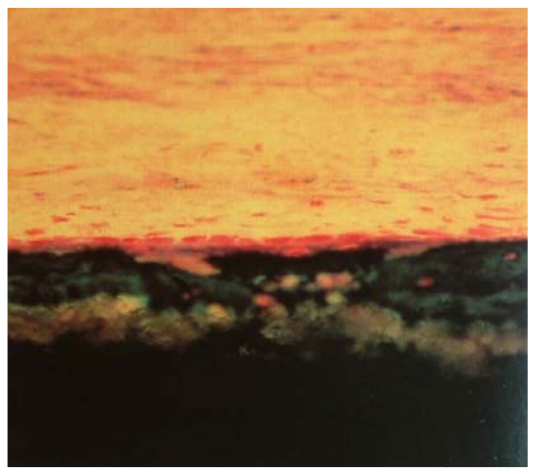
Mixing Method	Porosity (Per Gram)	Density (gm/cm³)
Hand Mixing	11.12%	1.15
Centrifuging	3.2%	1.18
Vacuum Mixing	0.1%	1.24

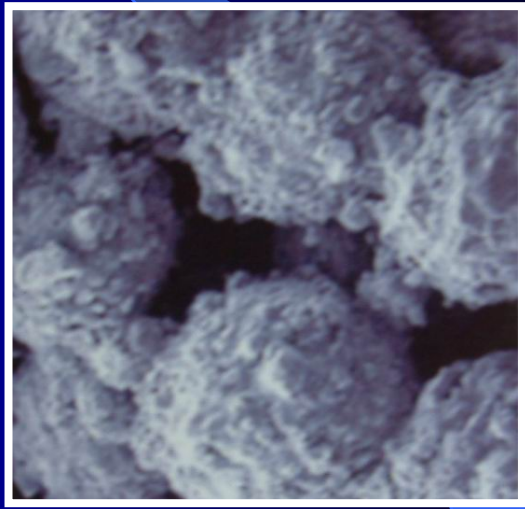


Increased Efficacy
New "lock-down" lid and improved charcoal filter lock in and evacuate 99.99% of harmful PMMA fumes.
Improved ACM Blades
Increased surface area of the ACM Blades combined with the Vertex mixing action results in porosity levels below 0.1%.
One, two or three batch capacity.
Additional Ease of Use
New disposable base eliminates tracking, cleaning, and sterilization of additional hardware.
Incorporates a Built-in charcoal filter.

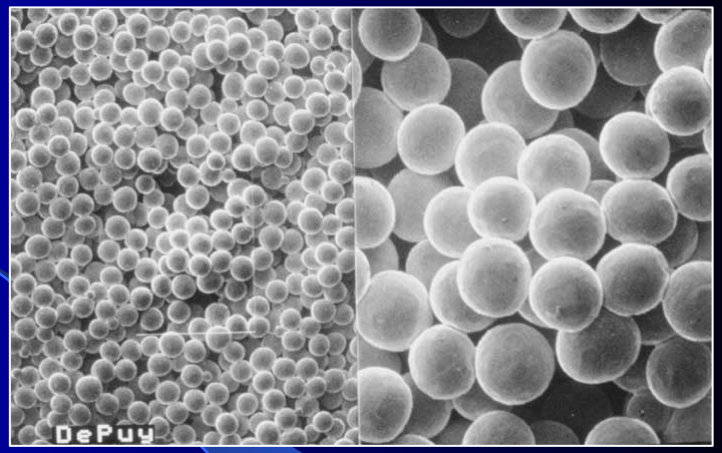
Protesi non cementate

La protesi contatta direttamente l’osso





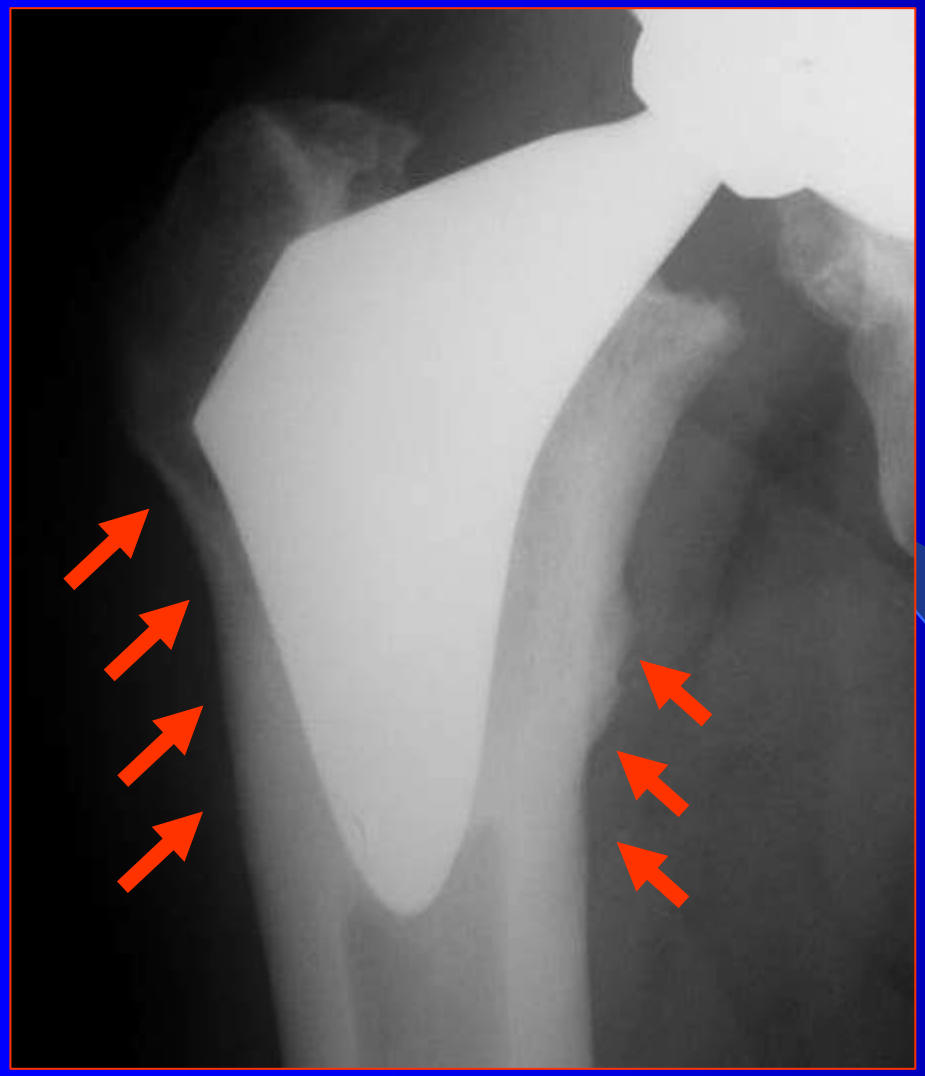
POROCOAT®
POROUS COATING

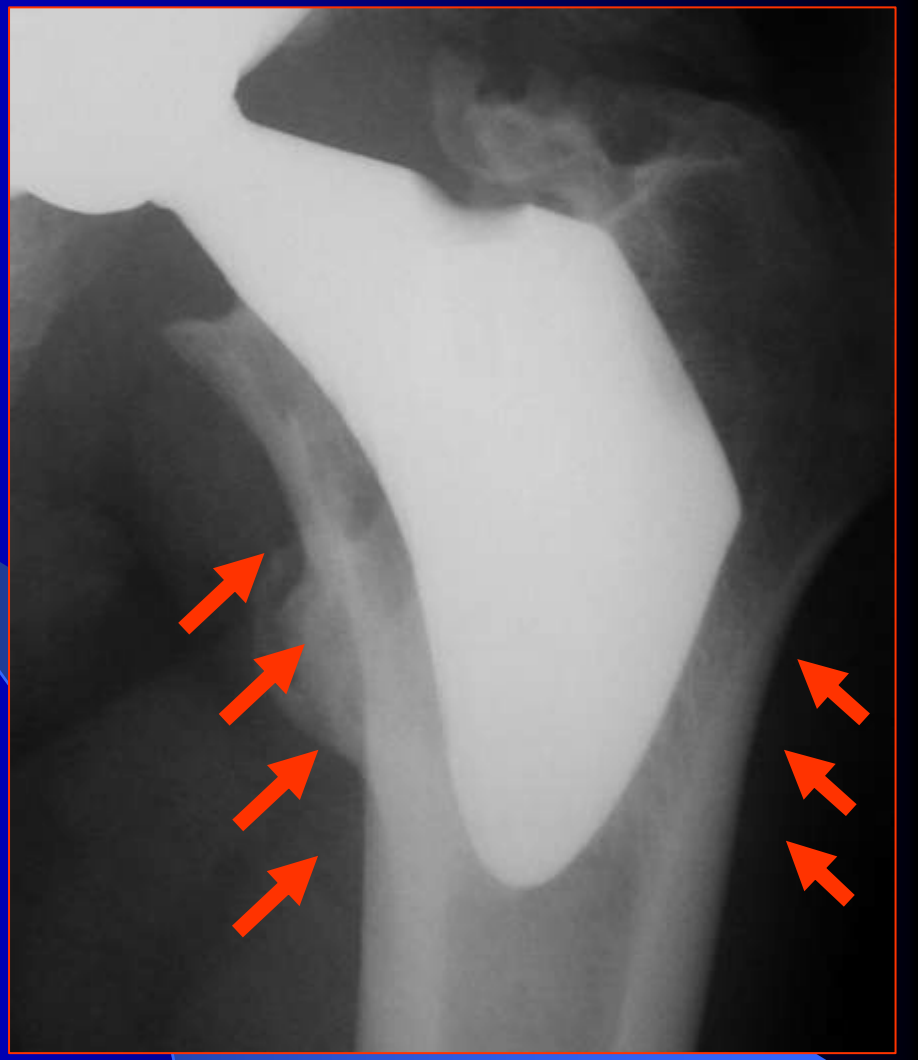


- Clinical Experience from 1977 (AML, Duraloc, Pinnacle)
- "Scratch Fit" allows immediate fixation
- Porosity 250 microns: (50-400)

  for a sound and quick fixation (8 weeks)

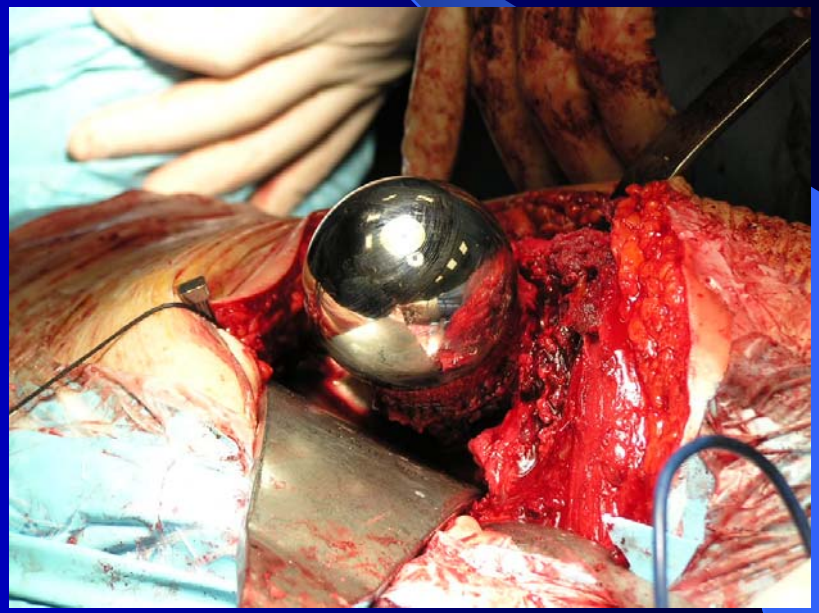
•The Optimum Pore Size for the Fixation of Porous Surfaced Metal Implants by the Ingrowth of Bone" J.D. Bobyn, Ph.D., R. M. Pillar, Ph.D., , H. U. Cameron, M.D. and G. C. Weatherly, Ph.D. BasicScience and Pathology Section III October 1979





resurfacing

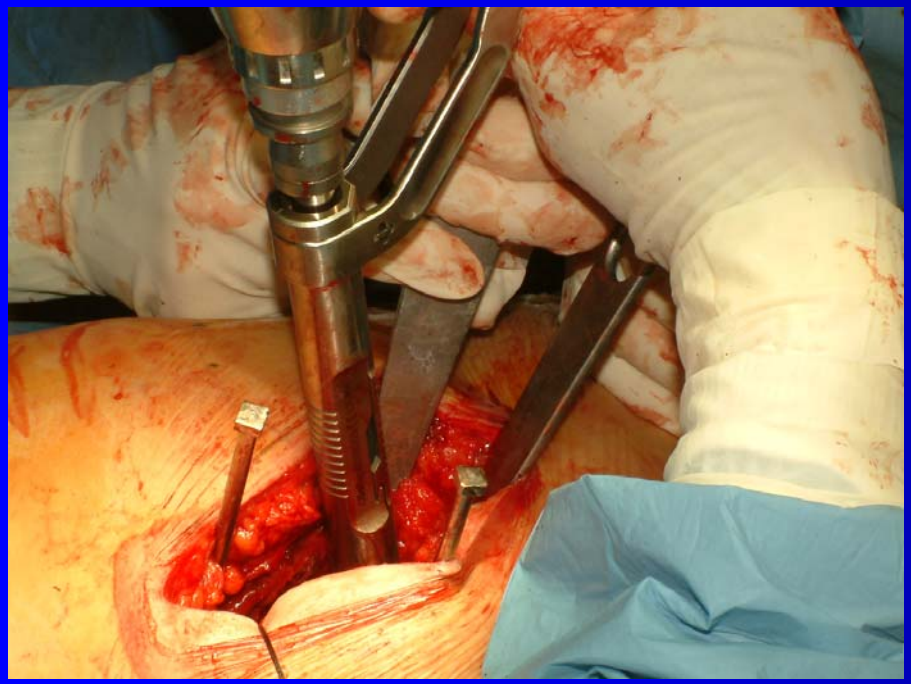
- Paziente giovane attivo artrosico

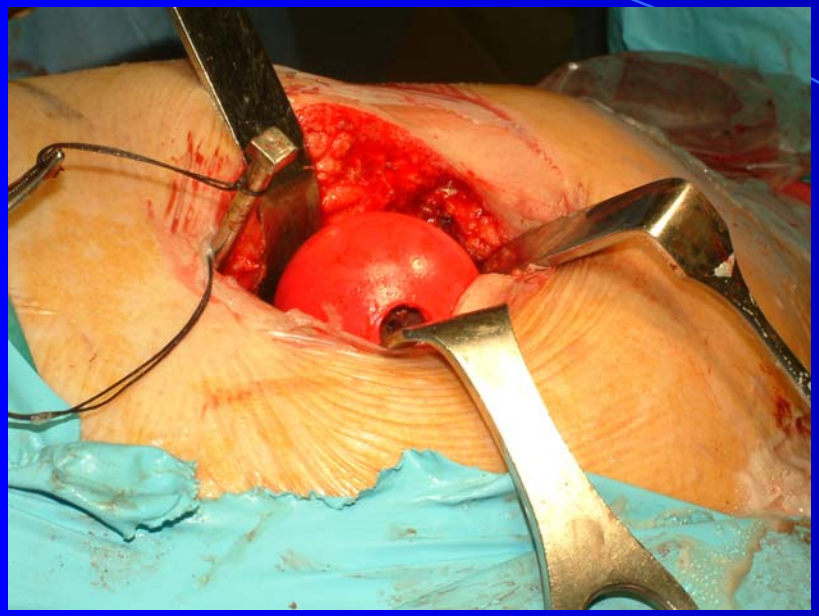


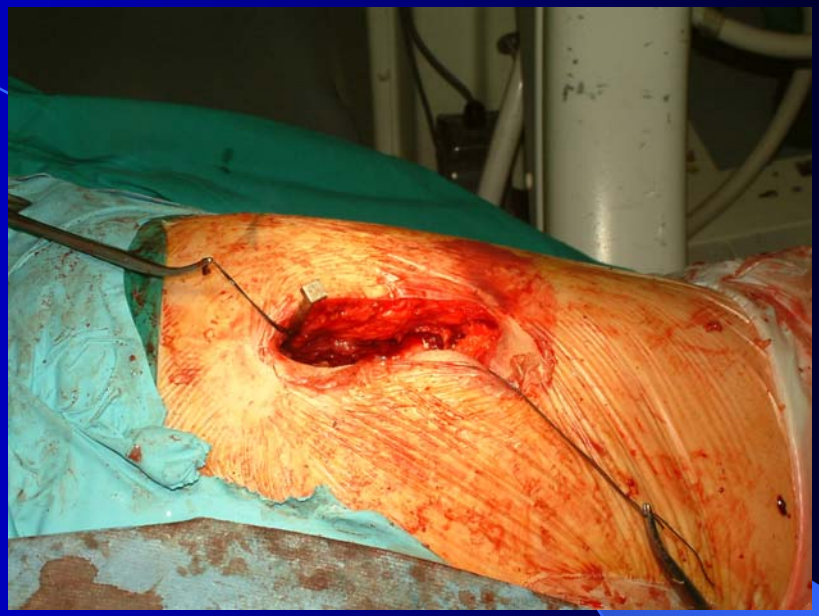
Protesi di superficie (di rivestimento)

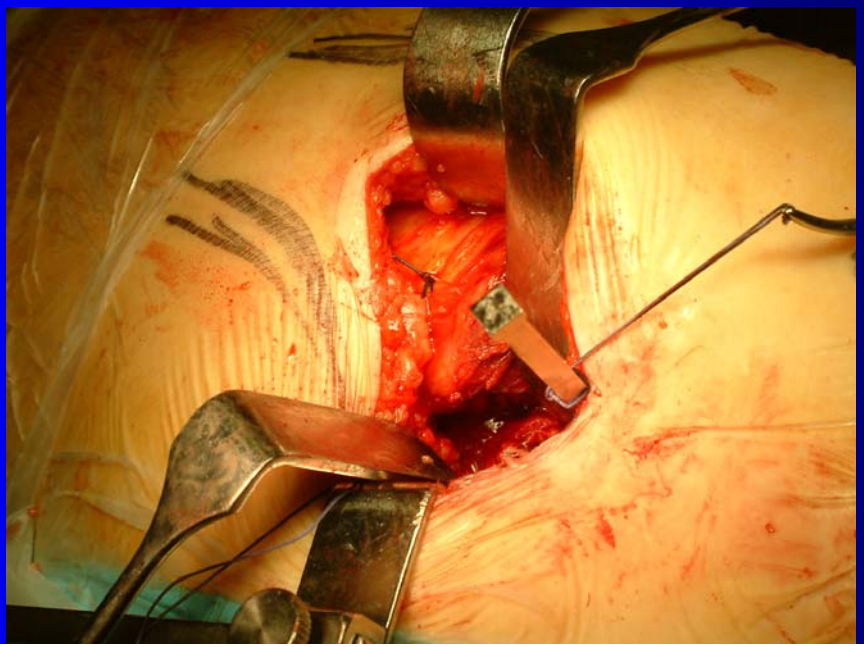
Inaccettabile % complicazioni (frattura e neck narrowing)

Le nuove tecniche prevedono l’impiego di nuovi strumenti



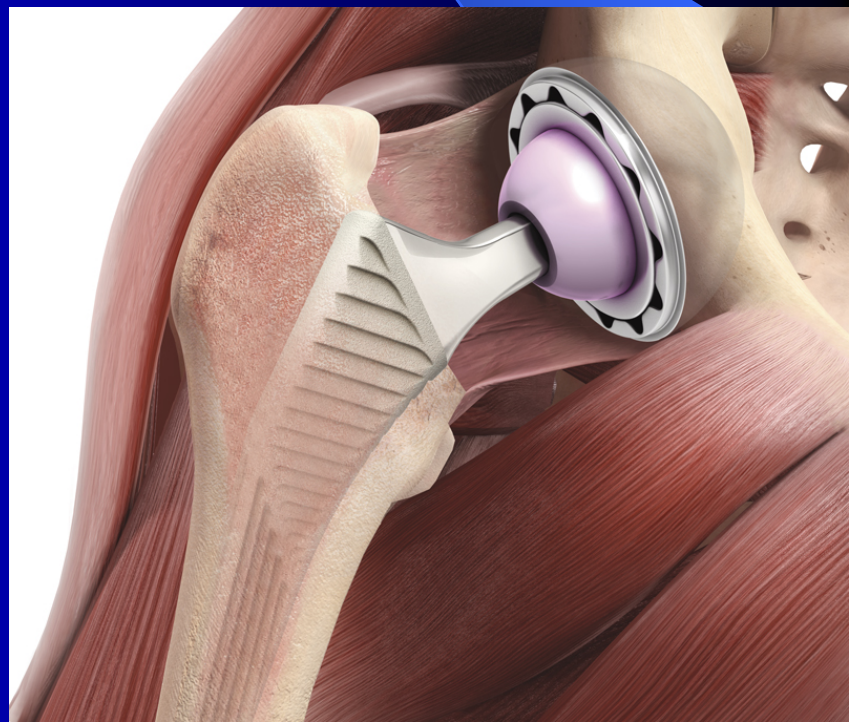




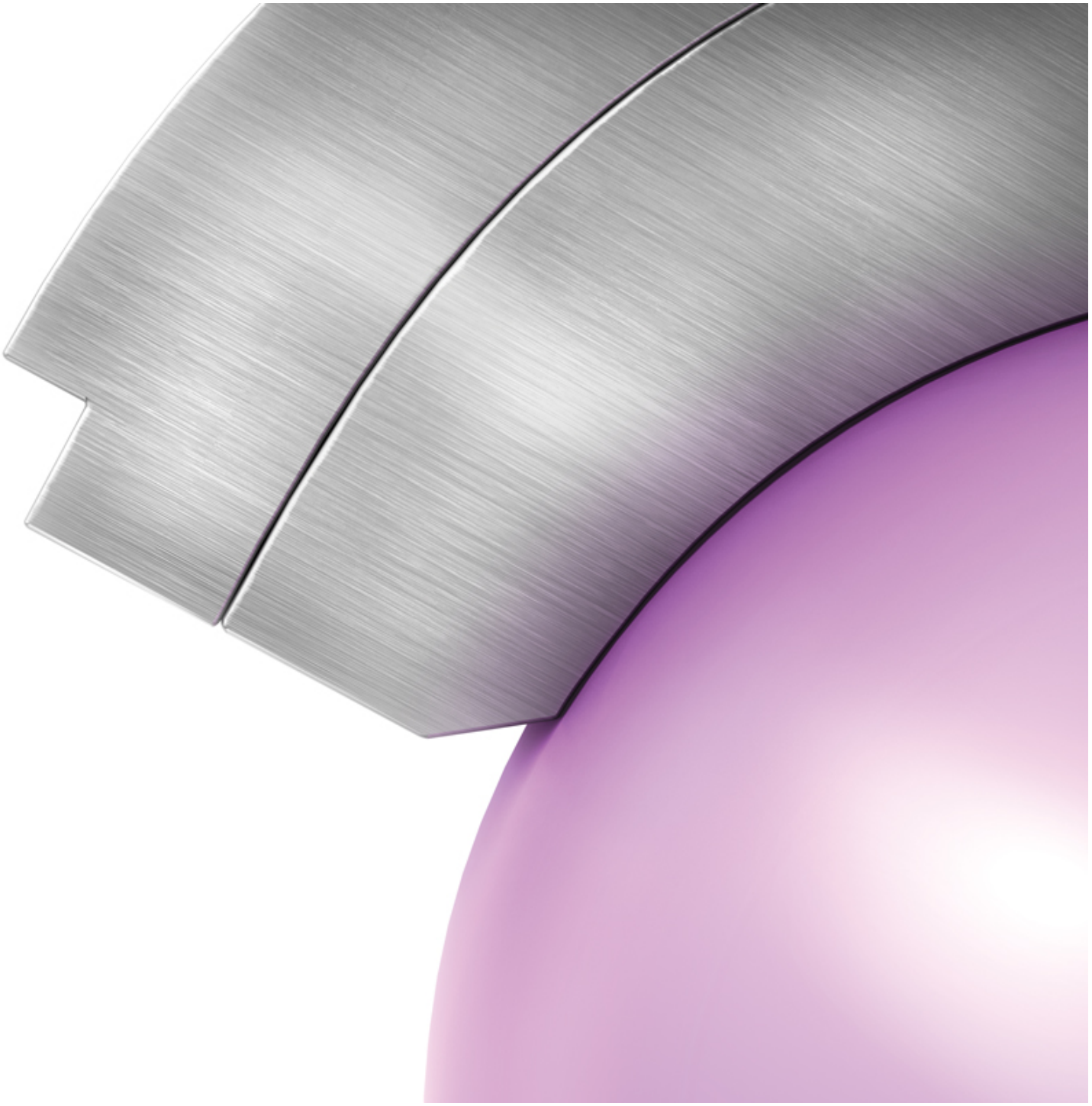


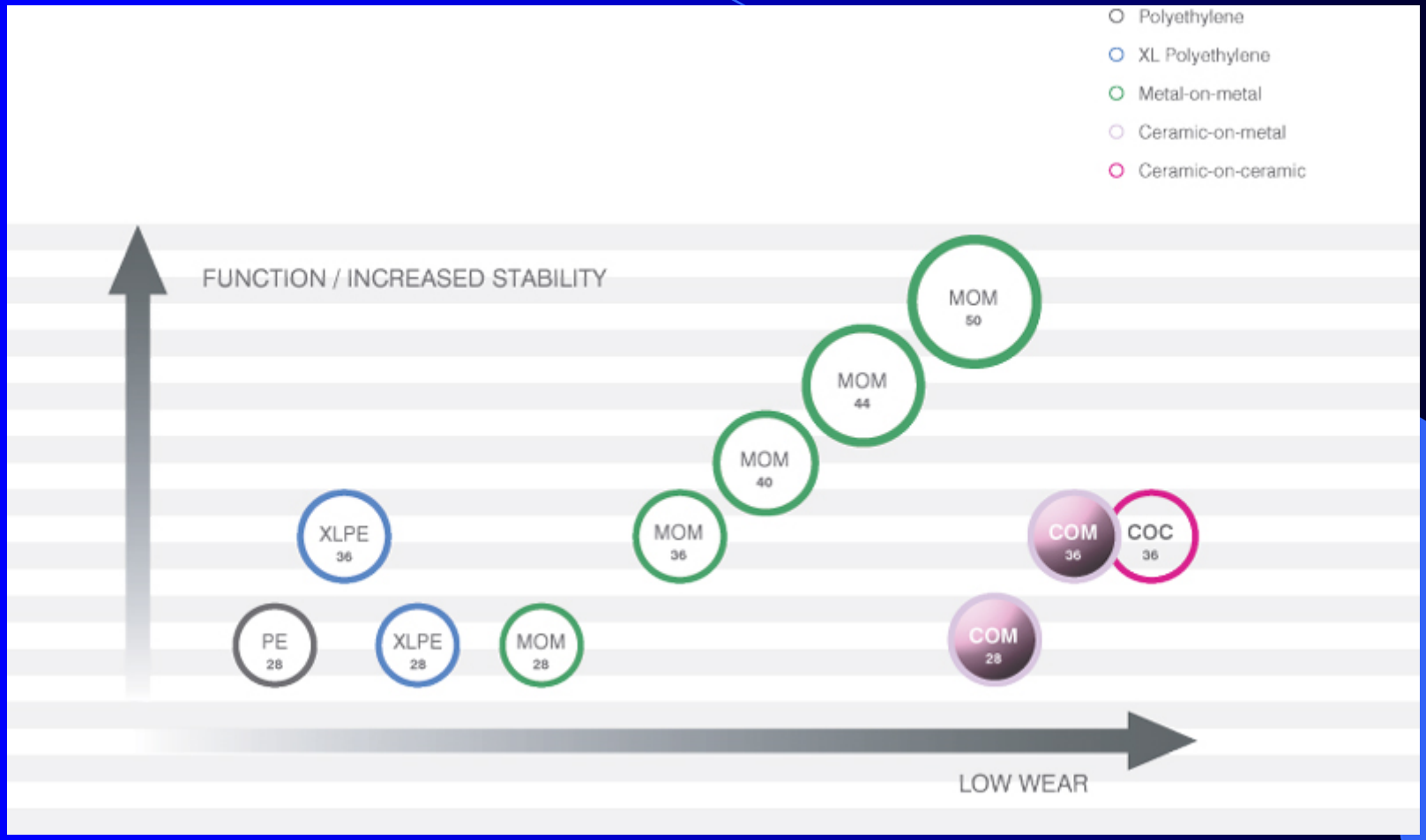
Prospettive future

- Nuove interfacce
  - Ceramica ceramica
  - Ceramica metallo

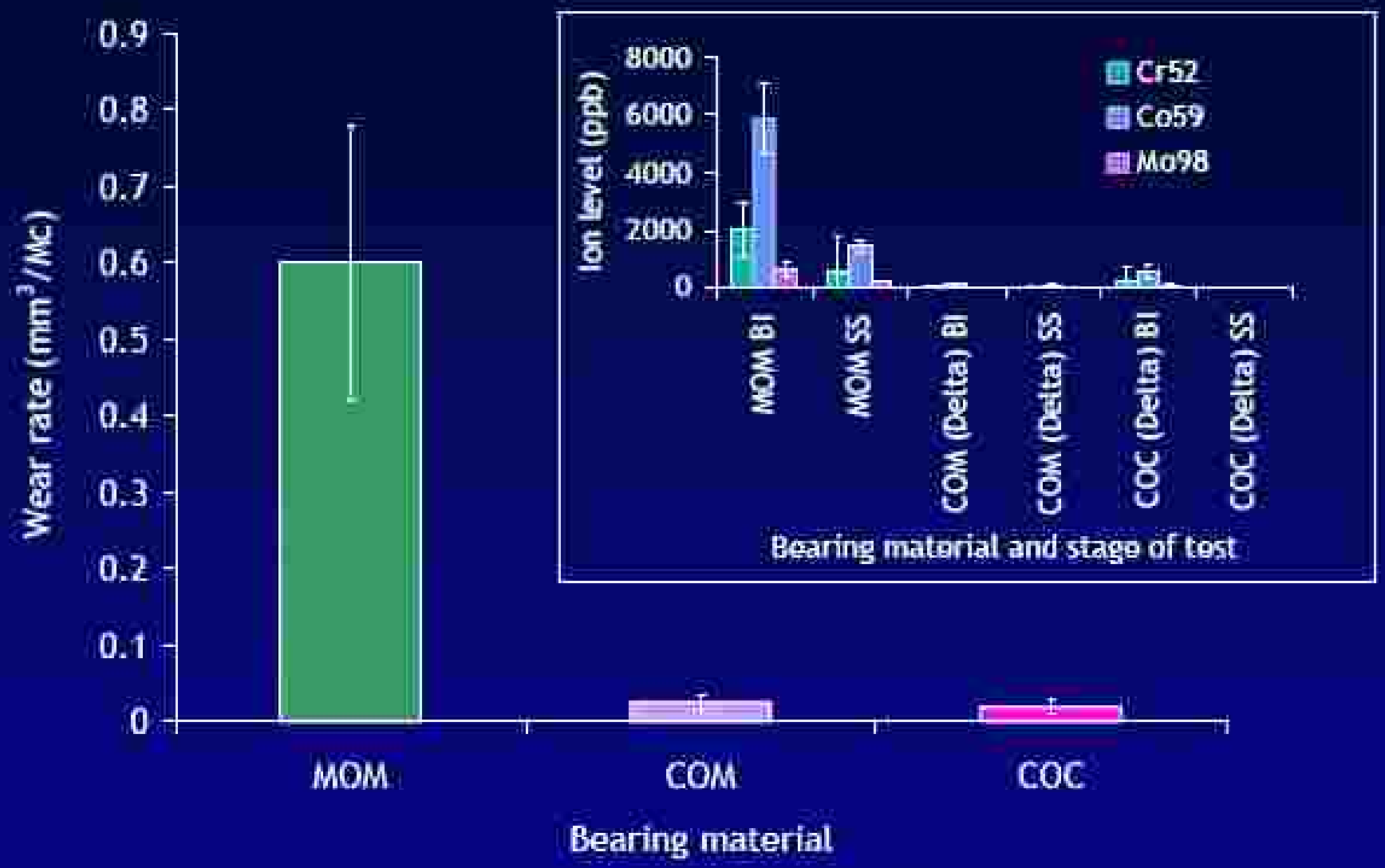
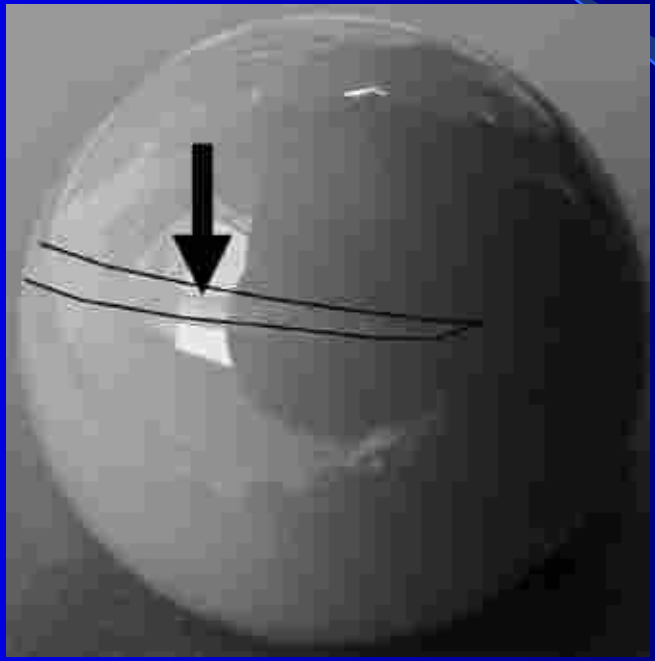


- Si configurano scelte multiple delle interfacce




Polyethylene
XL Polyethylene
Metal-on-metal
Ceramic-on-metal
Ceramic-on-ceramic
FUNCTION / INCREASED STABILITY
LOW WEAR
PE 28
XLPE 28
XLPE 36
MOM 28
MOM 36
MOM 40
MOM 44
MOM 50
COM 28
COM 36
COC 36

Results - Wear and ion levels (Biolox Delta)



- Mean wear rate per million cycles (± 95% confidence limits)
- 36mm diameter