

# BIOMECCANICA

# SPALLA GOMITO

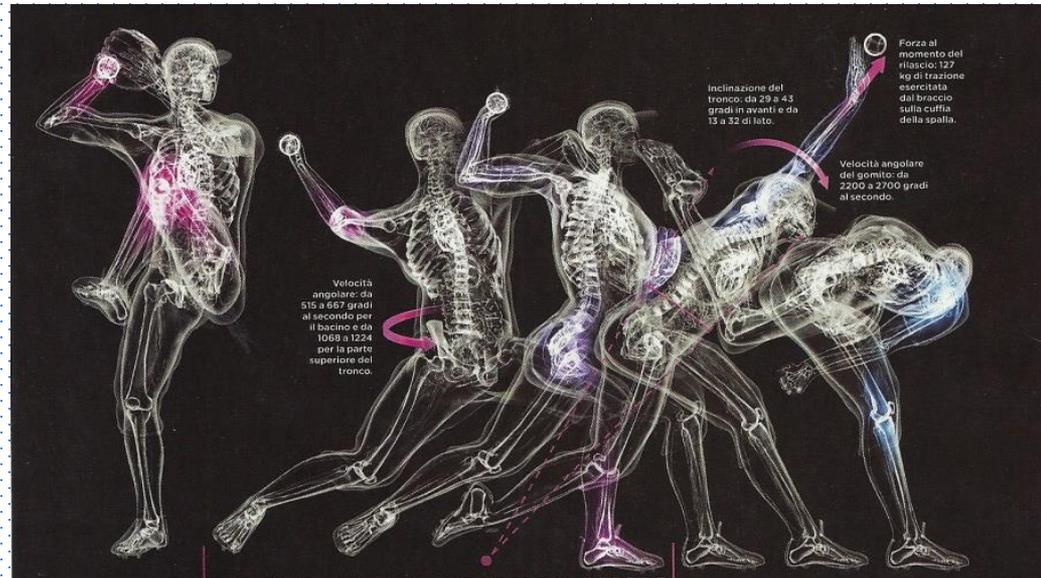
**Roberto Rotini**

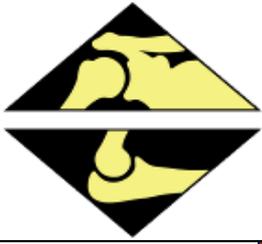
**SC Chirurgia della Spalla  
e del Gomito  
Istituto Ortopedico Rizzoli**



## LE COMPLICANZE IN ORTOPEDIA E TRAUMATOLOGIA

PROBLEMATICHE CLINICHE, CONSIDERAZIONI MEDICO LEGALI E  
CONTROVERSIE GIURIDICHE

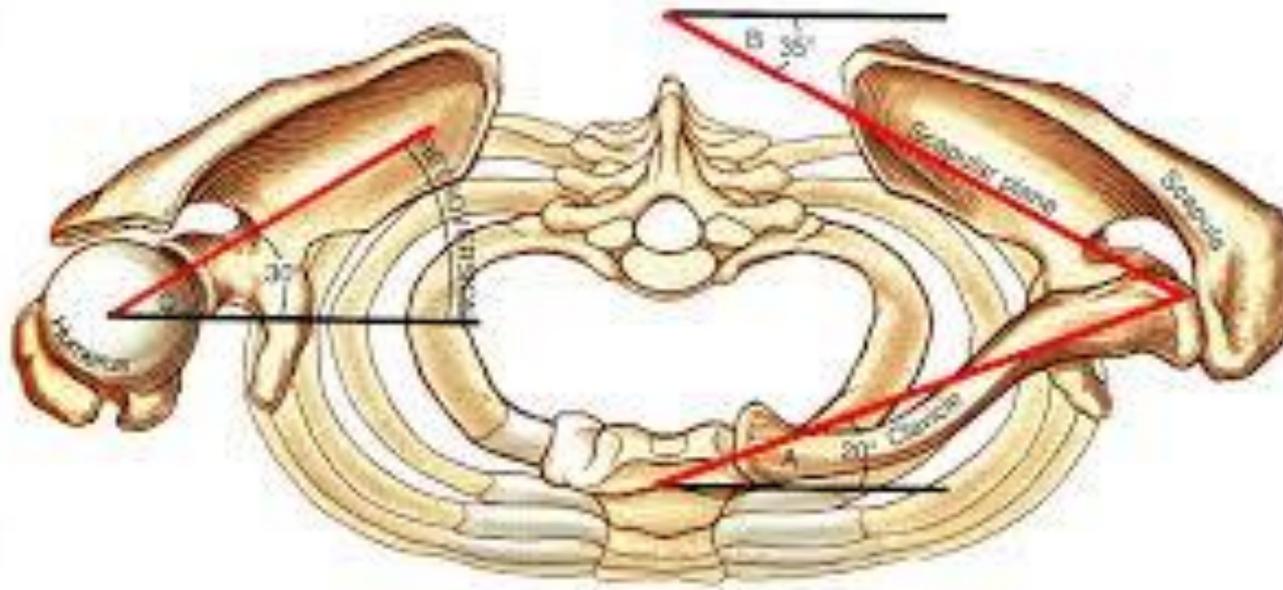




# SPALLA BIOMECCANICA COMPLESSA

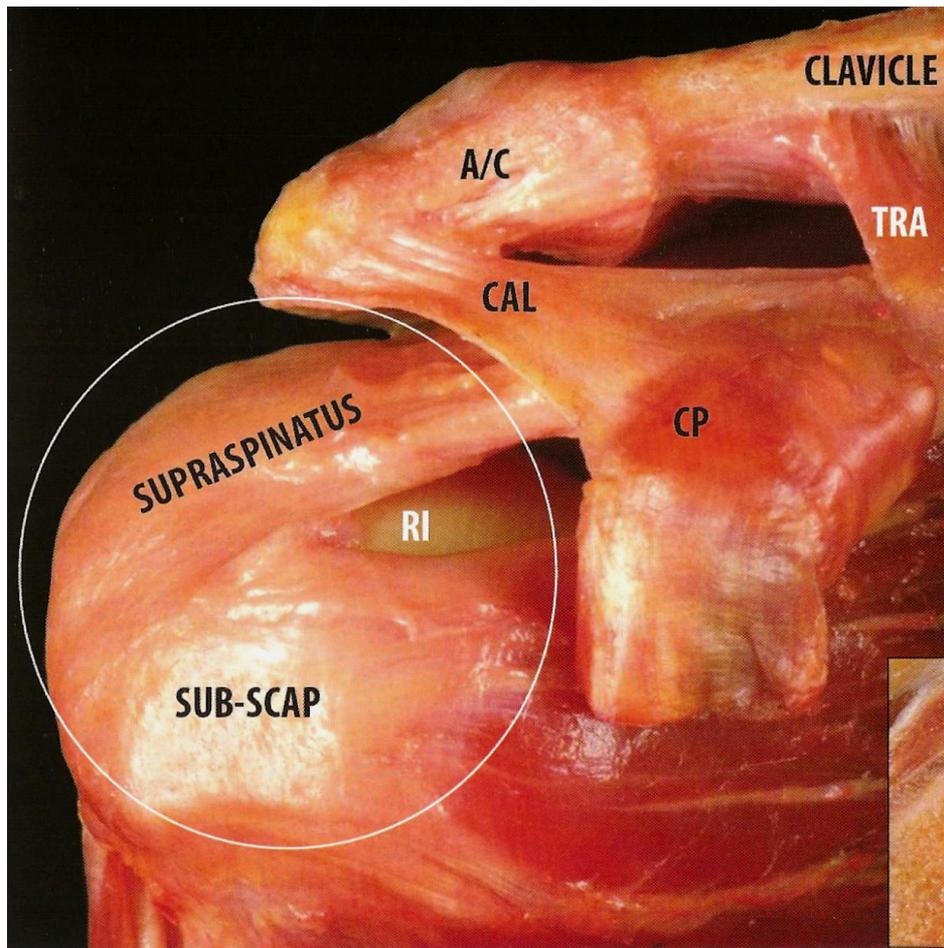


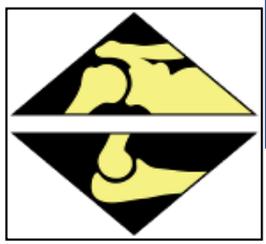
**Interazione di 4 articolazioni e  
almeno 30 muscoli**





# IMPORTANZA TENDINE CUFFIA DEI ROTATORI

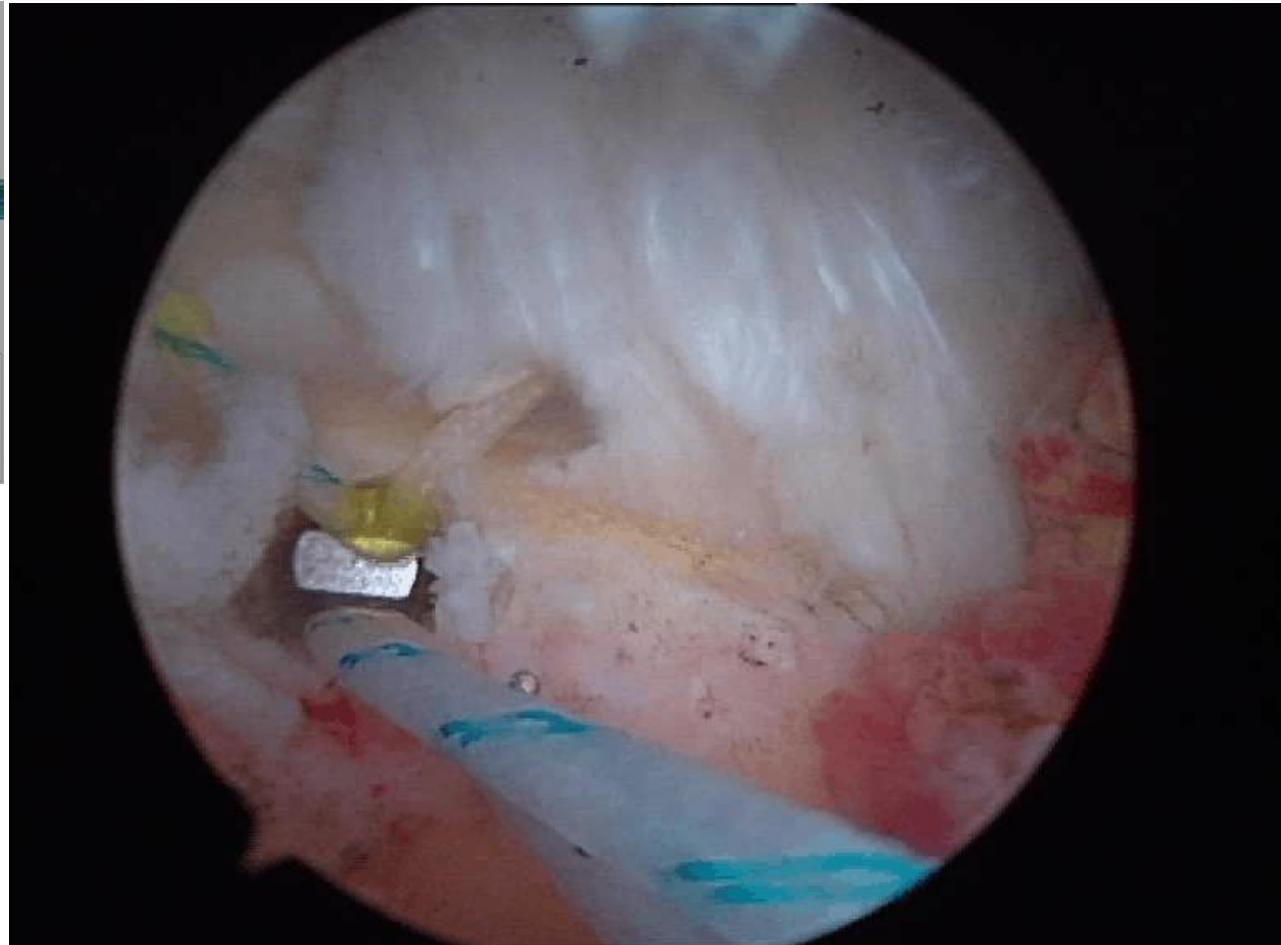
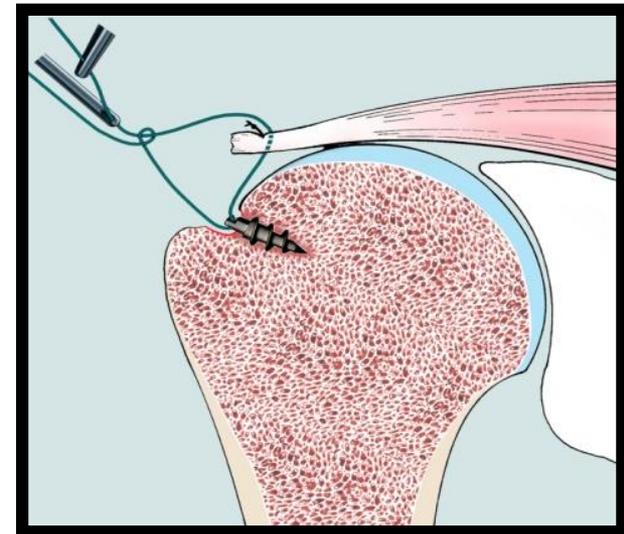
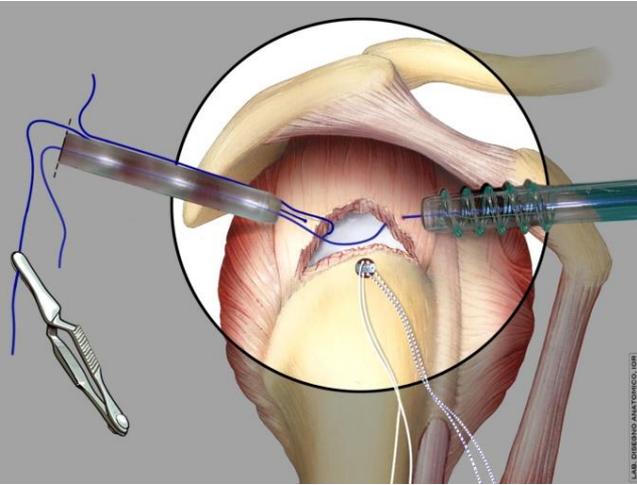


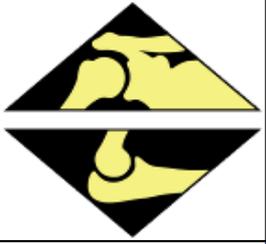


# Importanza Rottura Cuffia

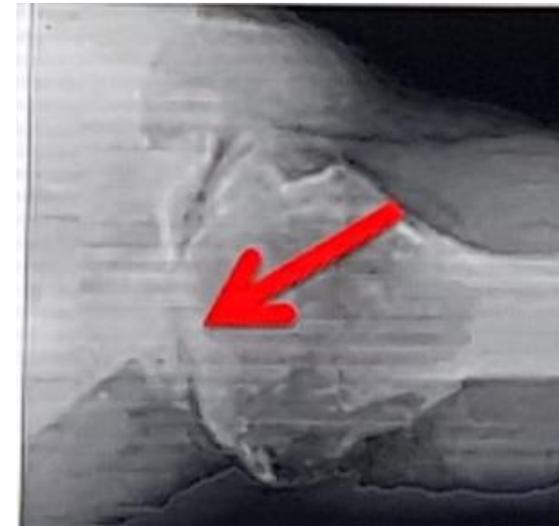
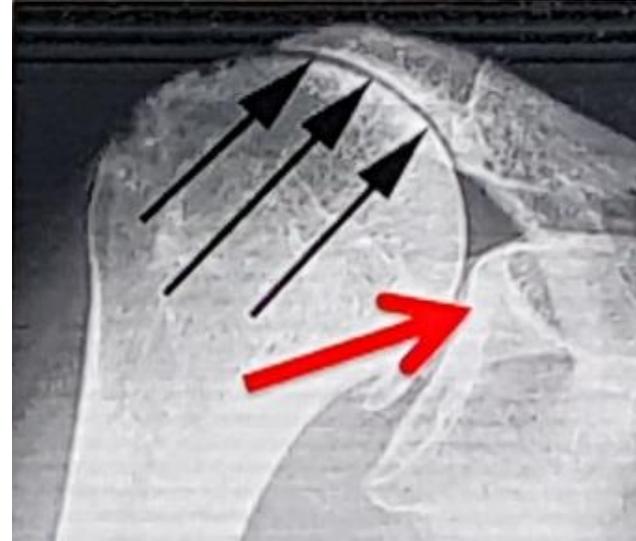
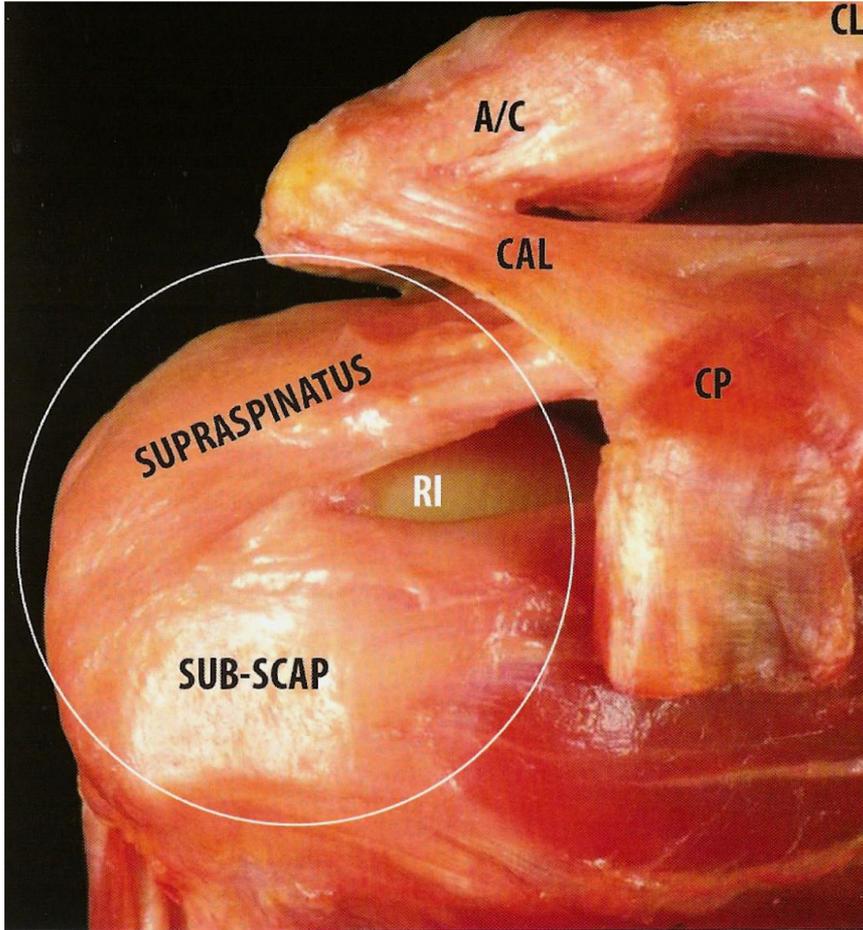


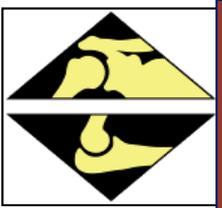
**\*70% casi di spalla "dolorosa"**



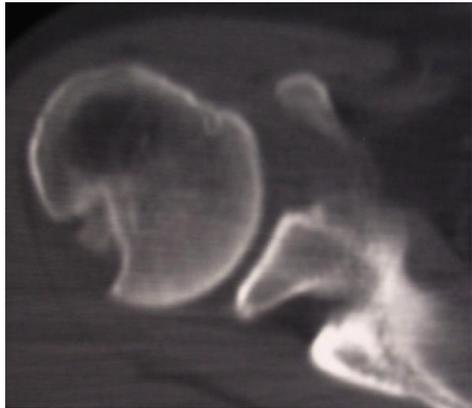
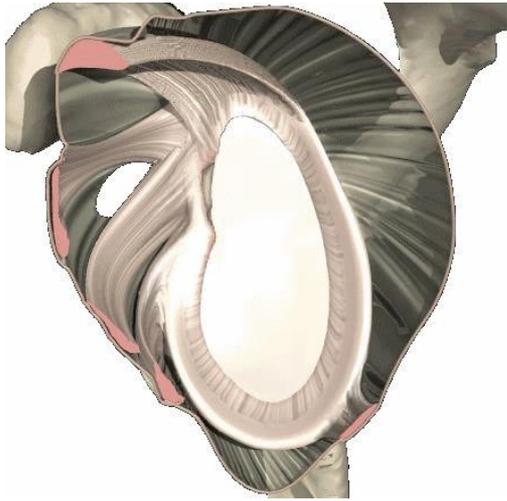


# CONSEGUENZA ROTTURA CUFFIA ROTATORI

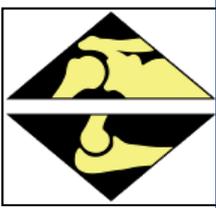




# IMPORTANZA LASSITA' LEGAMENTOSA



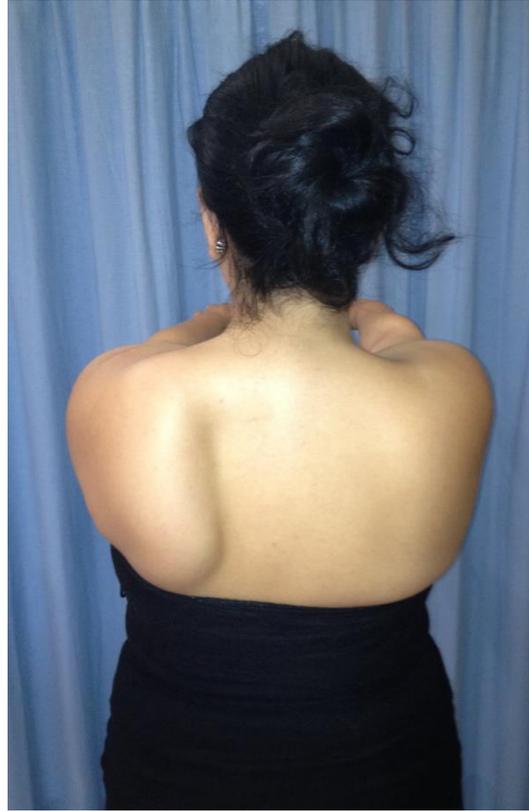
***La perdita ossea condiziona l'instabilità!!***



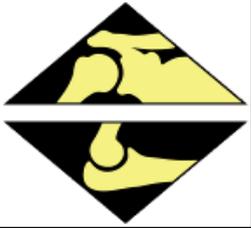
# IMPORTANZA FUNZIONE MUSCOLARE



• Scapola Alata



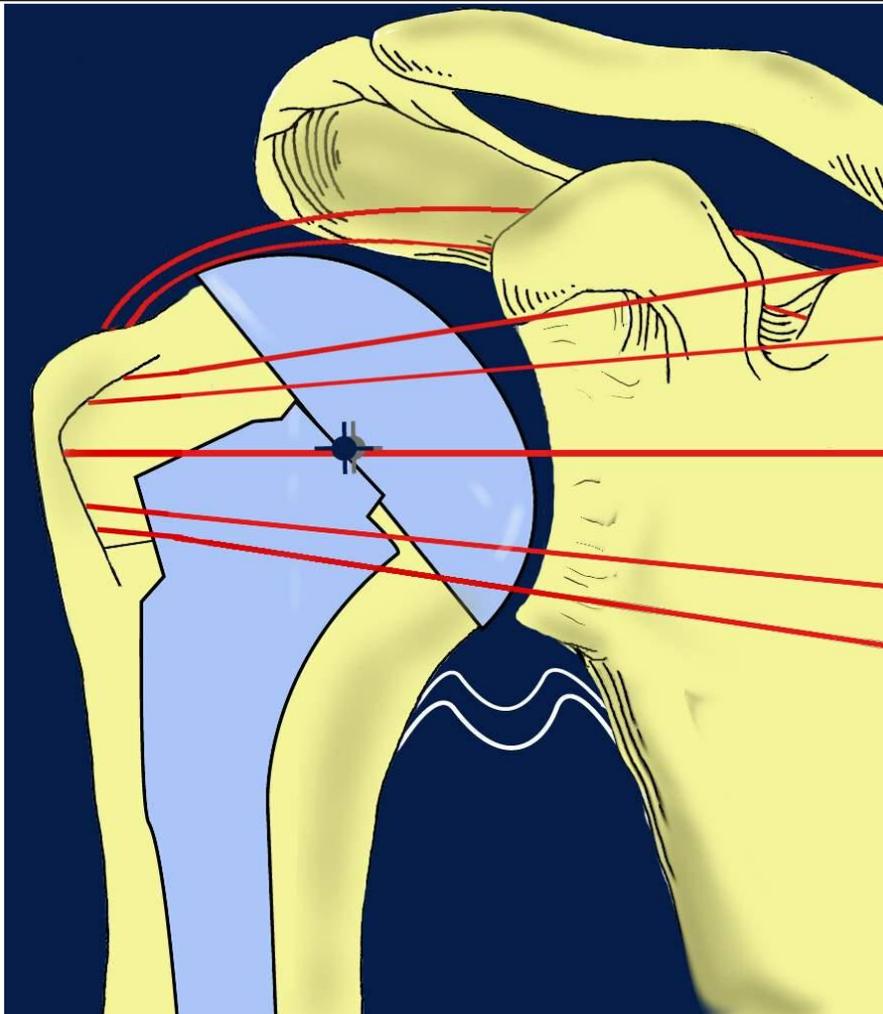
***Discinesia scapolo-toracica !!***

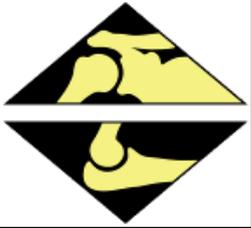


# IMPORTANZA PARTI MOLLI IN PROTESI



**Protesi Anatomica: rispetto centro di rotazione**

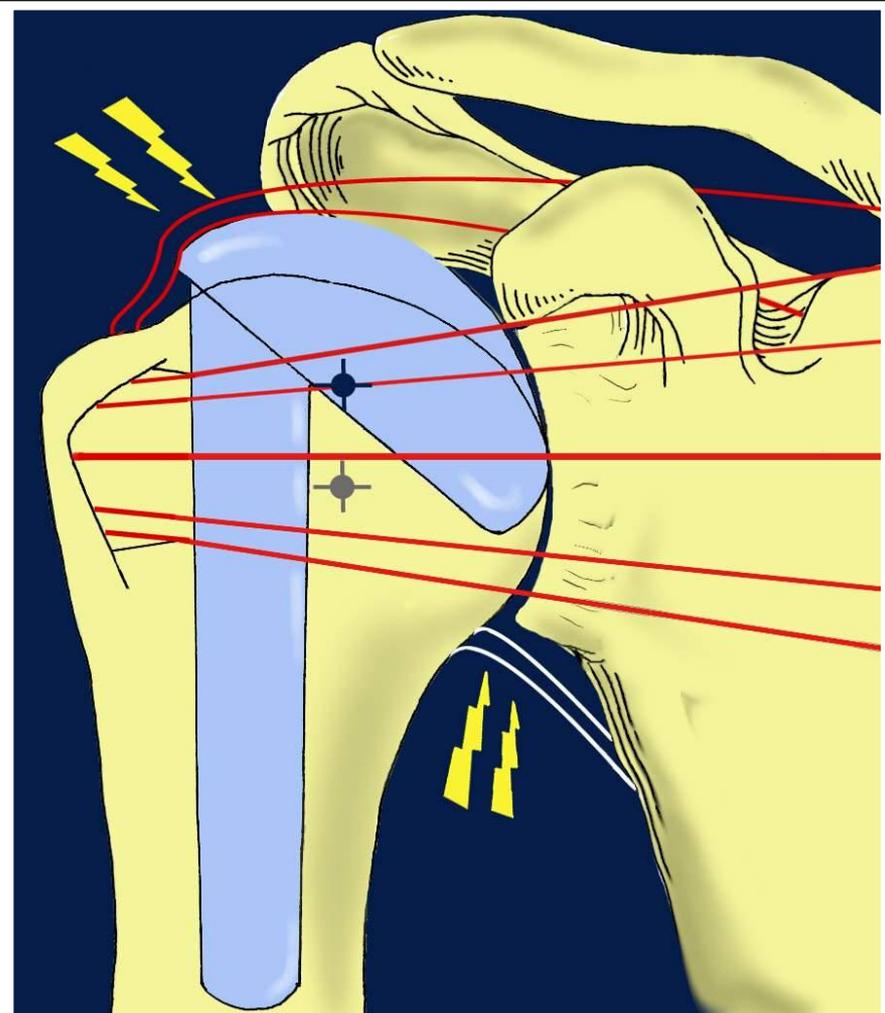
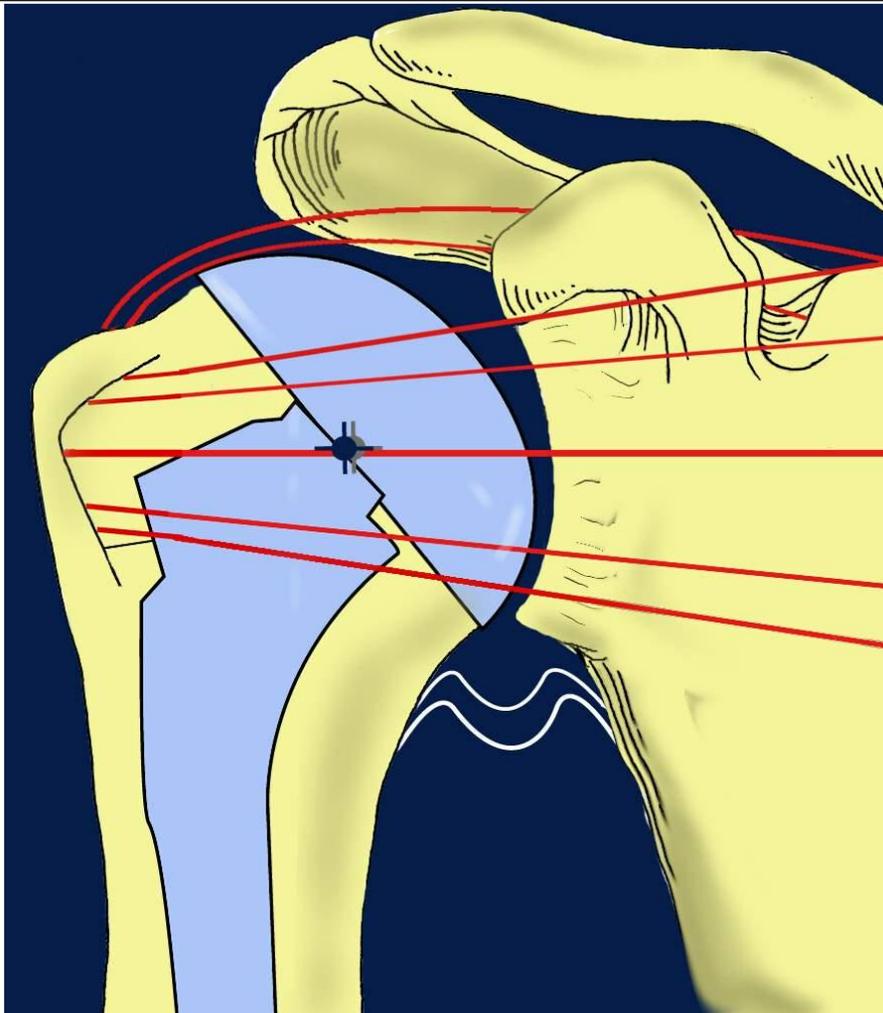


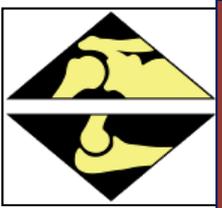


# IMPORTANZA PARTI MOLLI IN PROTESI



**Protesi Anatomica: rispetto centro di rotazione**

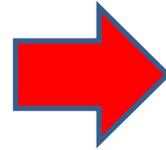


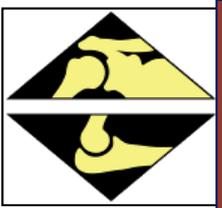


# IMPORTANZA PARTI MOLLI

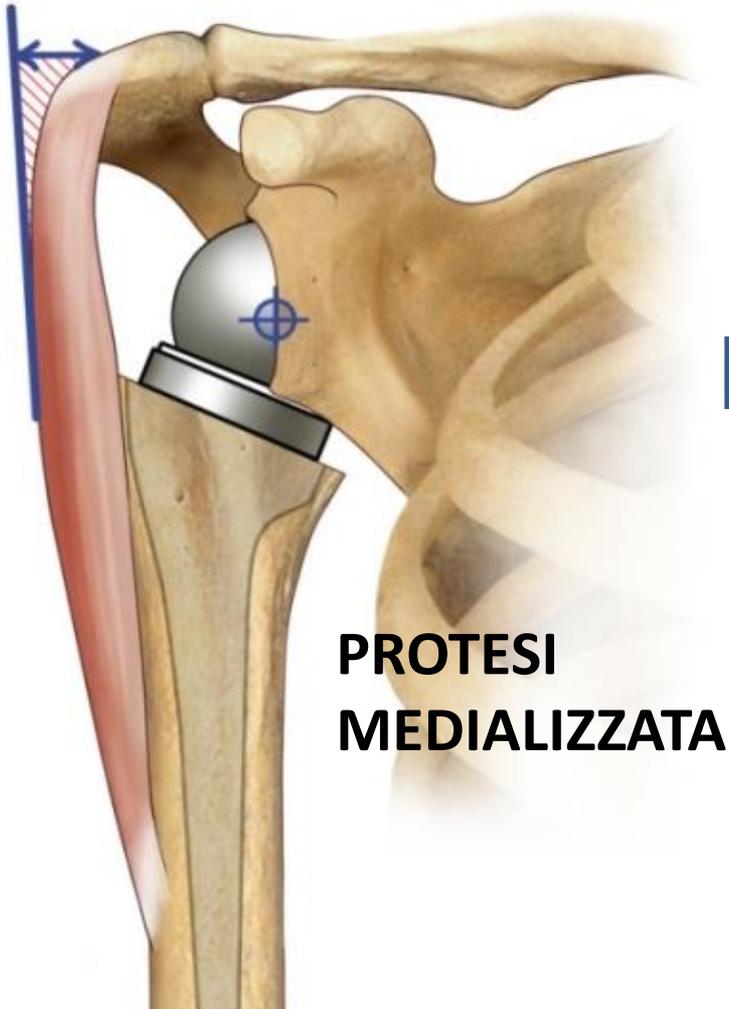


... anche nella protesi  
inversa

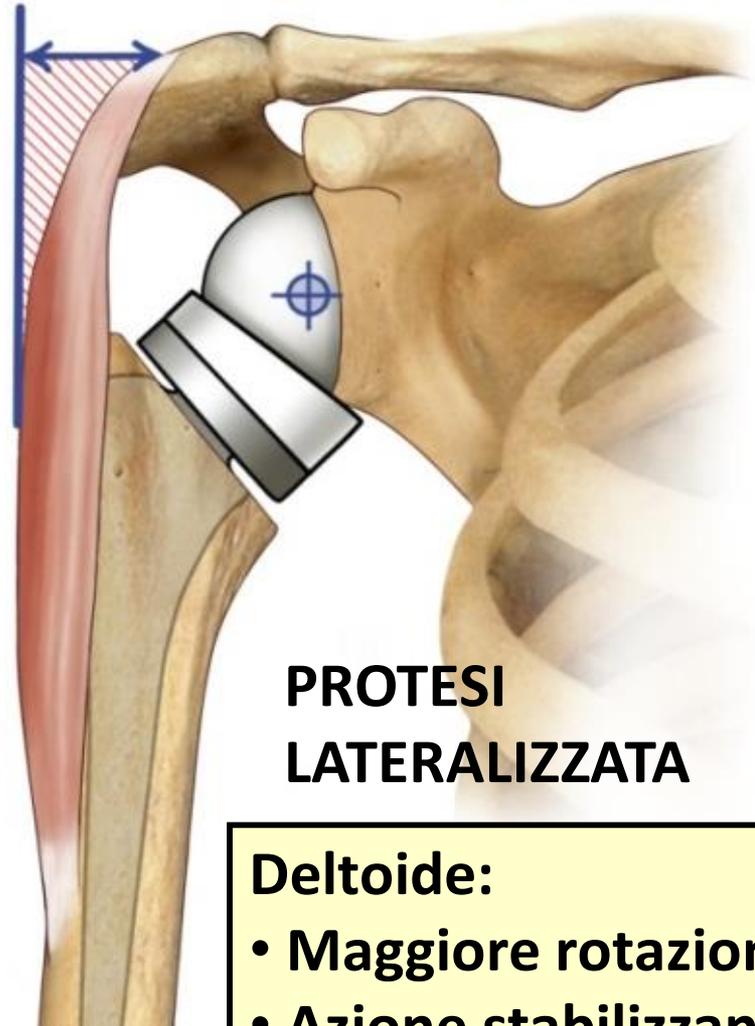
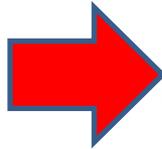




# BIOMECCANICA NUOVI DESIGN PROTESICI



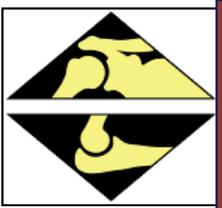
**PROTESI  
MEDIALIZZATA**



**PROTESI  
LATERALIZZATA**

**Deltoide:**

- Maggiore rotazione
- Azione stabilizzante



# BIOMECCANICA NUOVI DESIGN PROTESICI

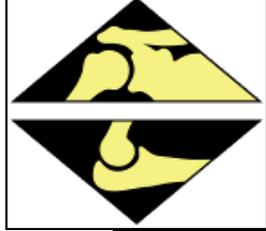


**NORMALE**

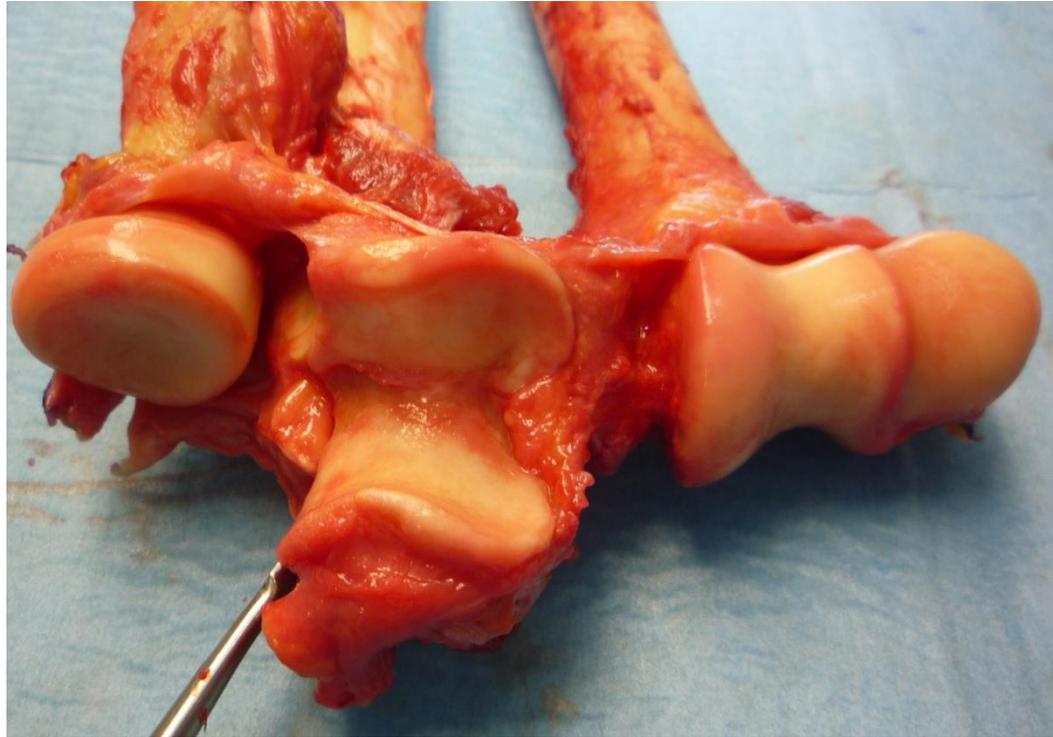
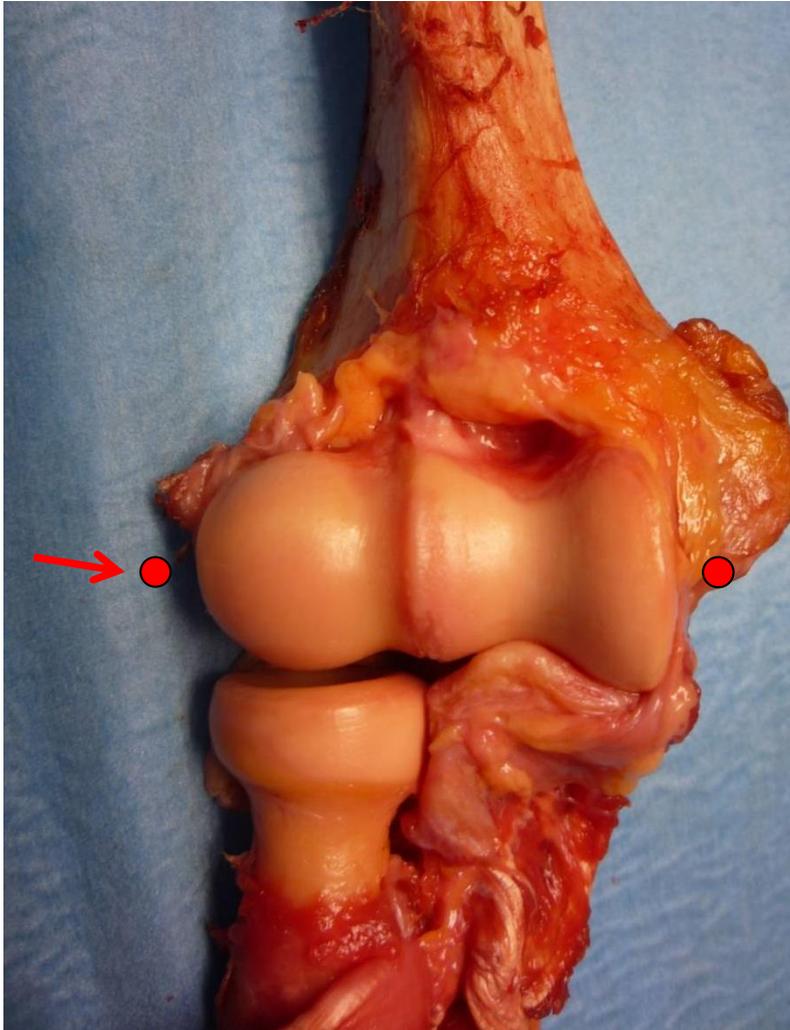
**ARTROSI**

**PROTESI  
MEDIALIZZATA**

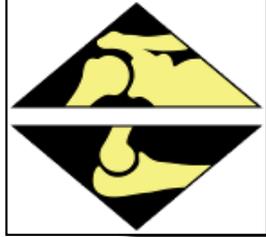
**PROTESI  
LATERALIZZATA  
CON WEDGE**



# GOMITO BIOMECCANICA PECULIARE



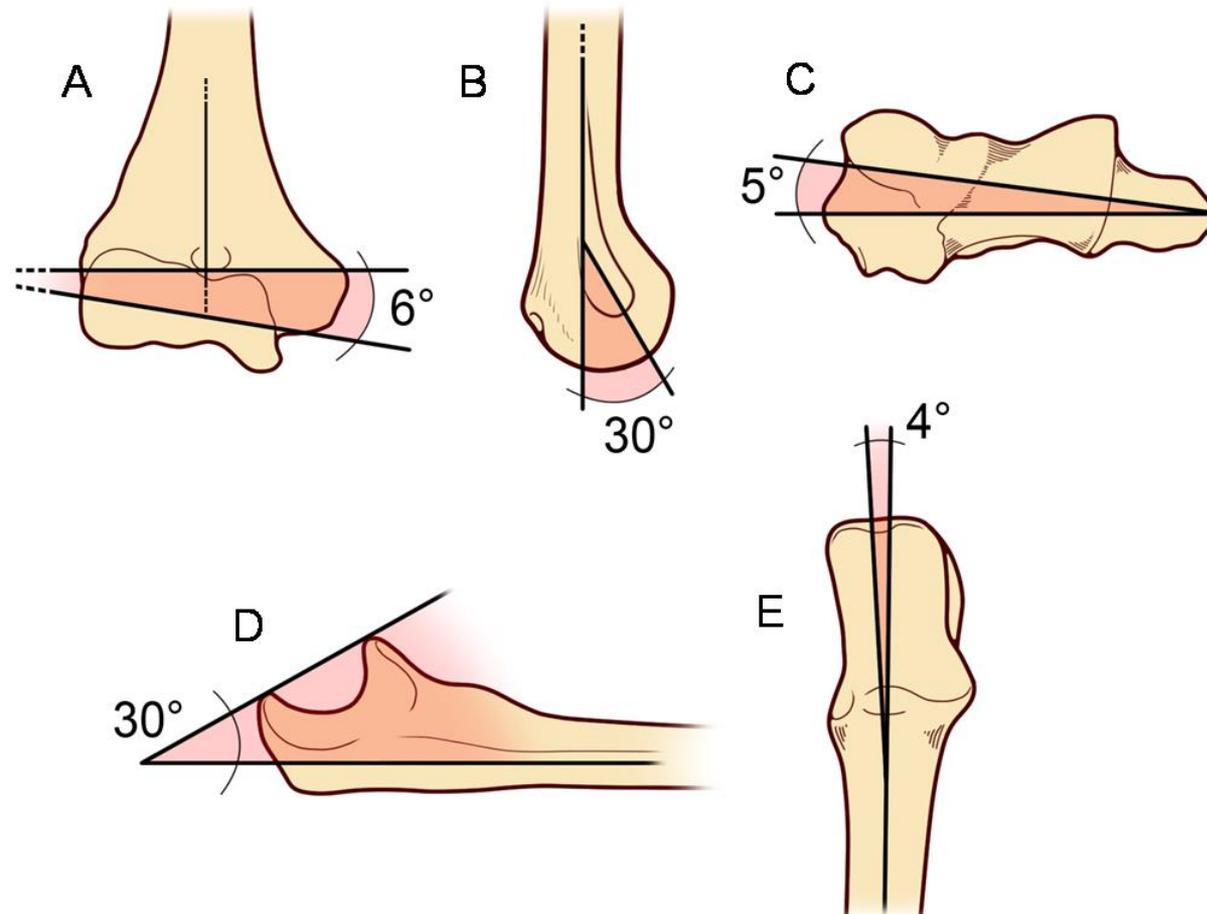
**ART. GINGLIMO TROCOIDE**



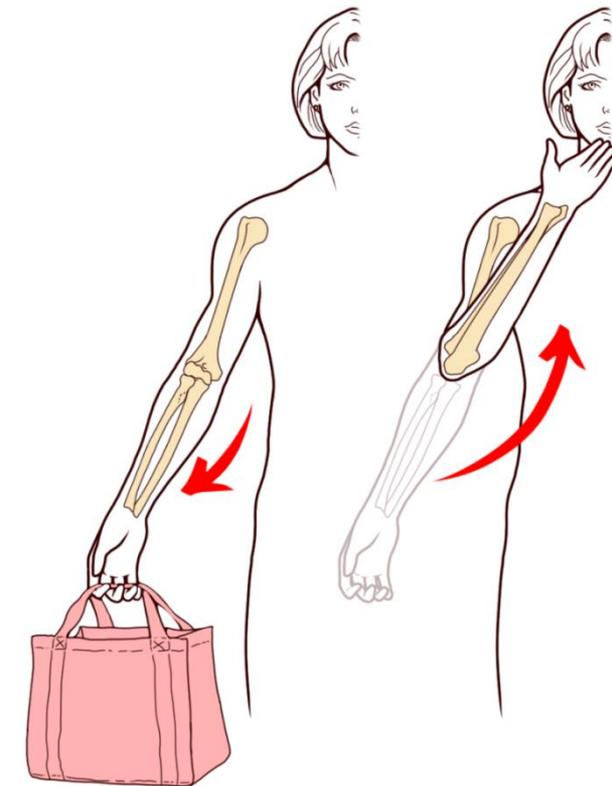
# GOMITO BIOMECCANICA PECULIARE



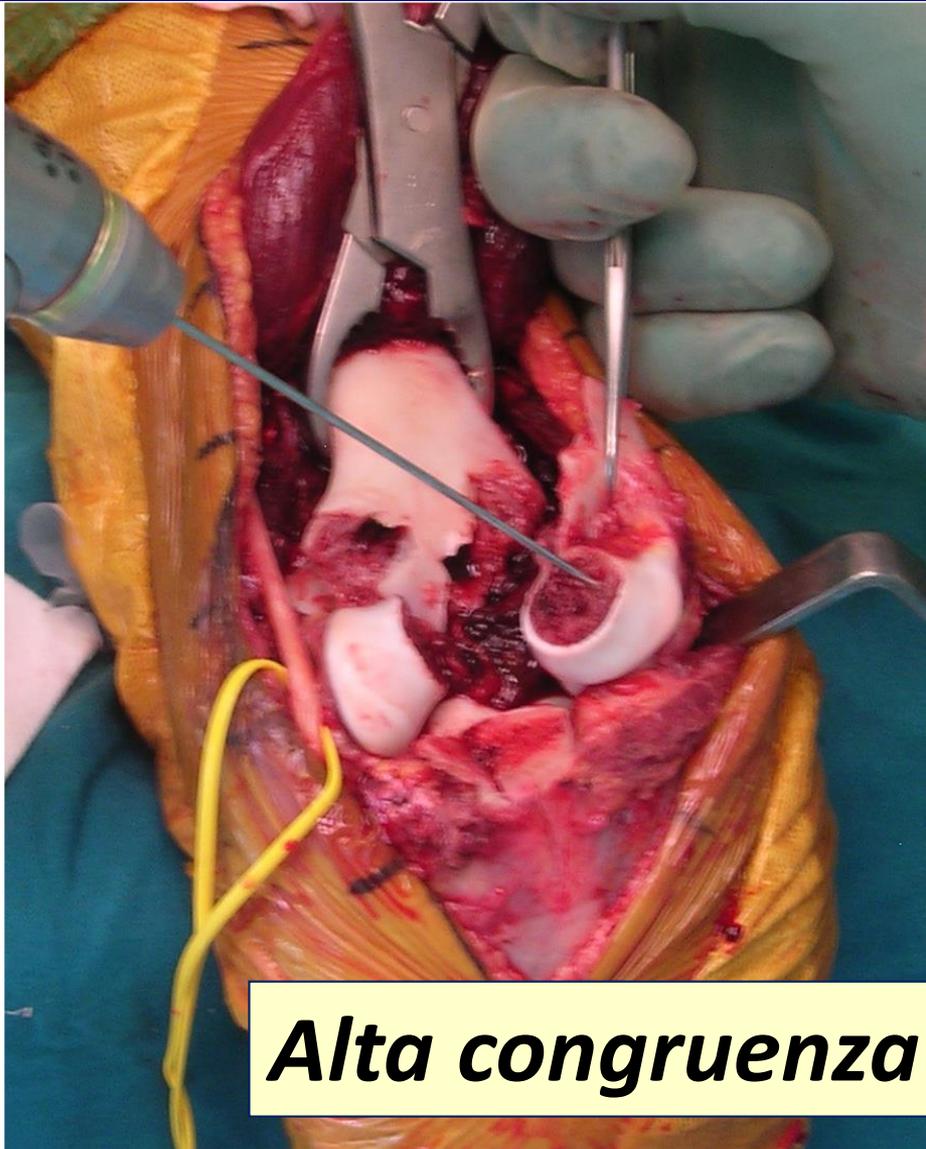
## Carrying angle



Angoli tra assi superficie articolare e diafisi

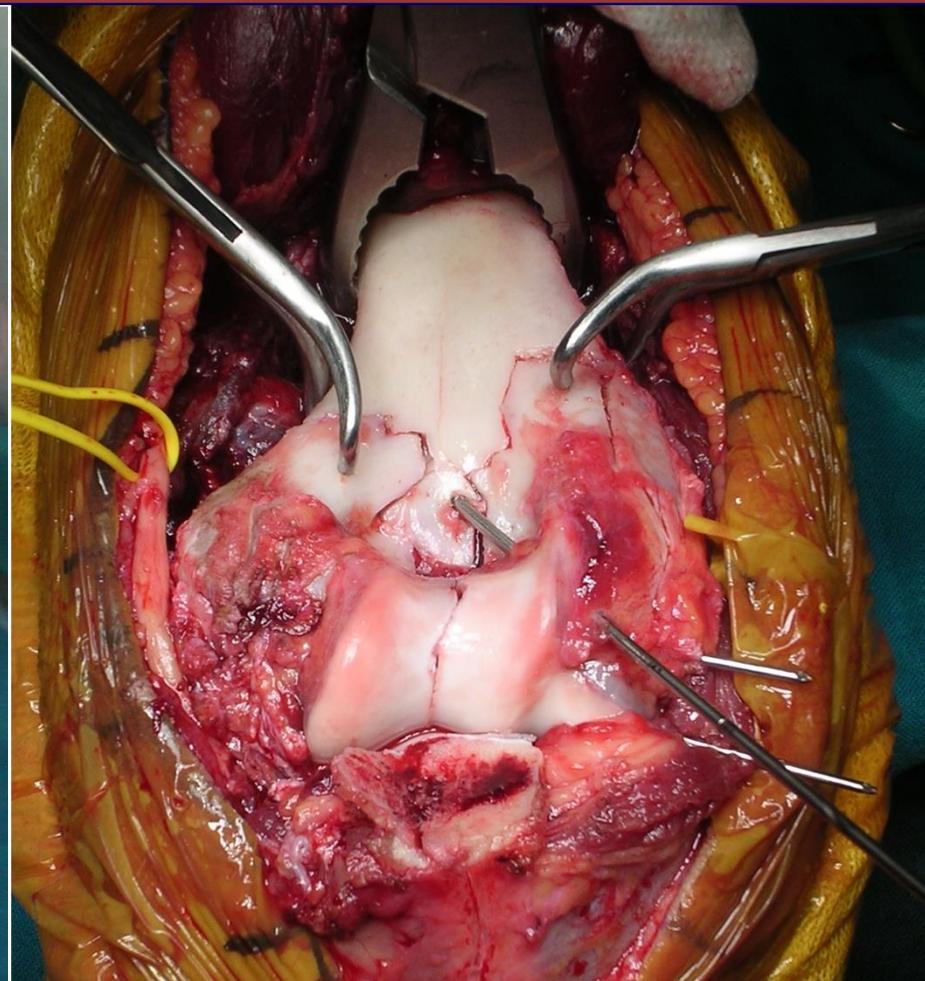
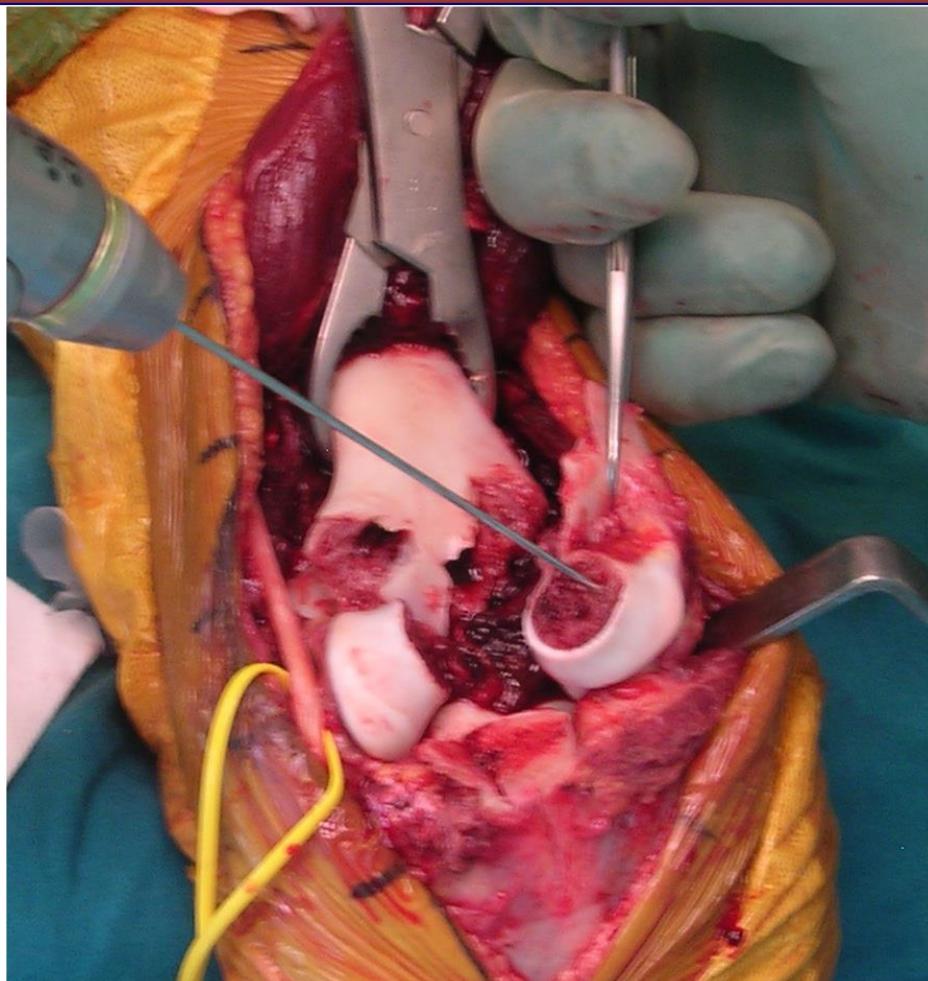


# IMPORTANZA RICOSTRUZIONE ANATOMICA



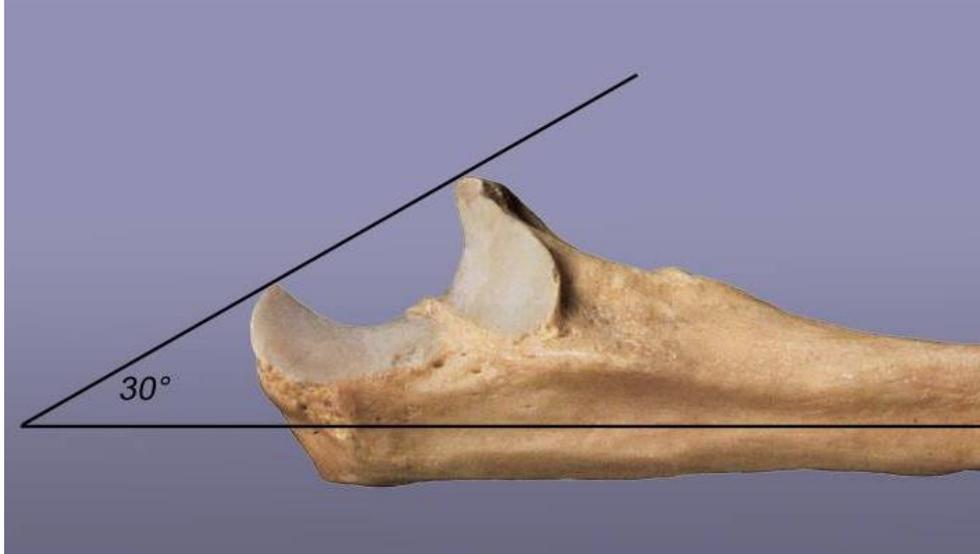
***Alta congruenza articolare!!***

# IMPORTANZA RICOSTRUZIONE ANATOMICA

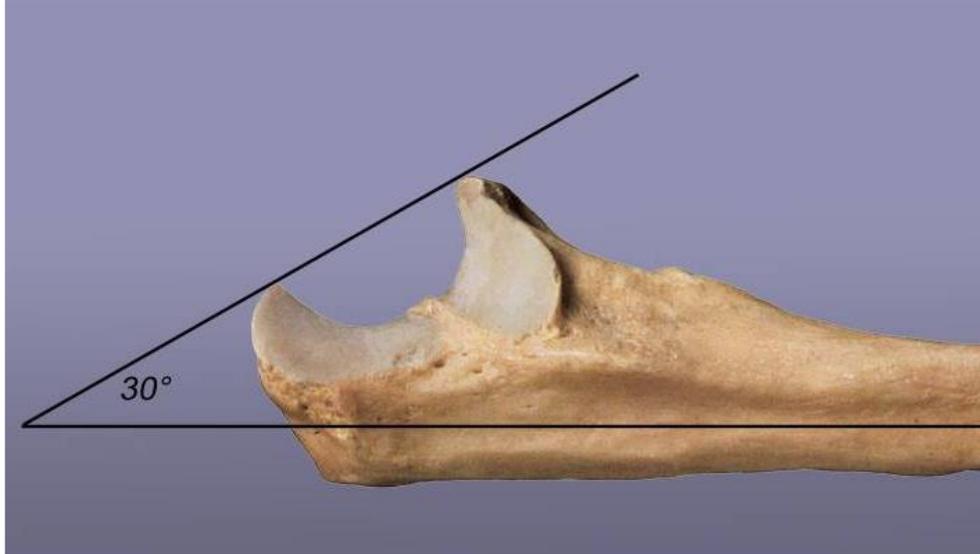


***Alta congruenza articolare!!***

# IMPORTANZA RICOSTRUZIONE ANATOMICA

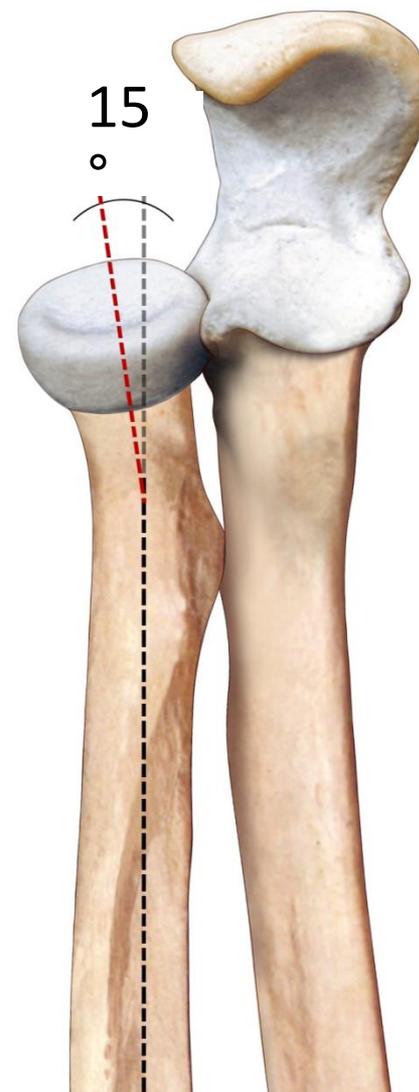


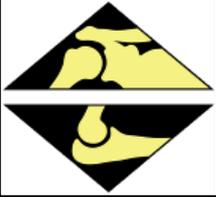
# VIZIOSA CONSOLIDAZIONE RIGIDITA' INTRINSECA IRREVERSIBILE



# IMPORTANZA RICOSTRUZIONE ANATOMICA

**\*Angolo di 15°  
fra diafisi e collo  
del radio**





# STABILIZZATORI PRIMARI



Olecrano

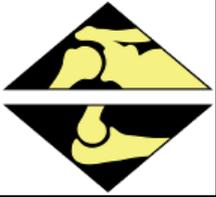


LCL



MCL

Coronoide



# STABILIZZATORI SECONDARI



## Olecrano

**\*Capsula Posteriore**

## LCL

**\*Capitello radiale**  
**\*Capitulum humeri**  
**\*Musc. epicondilarari**



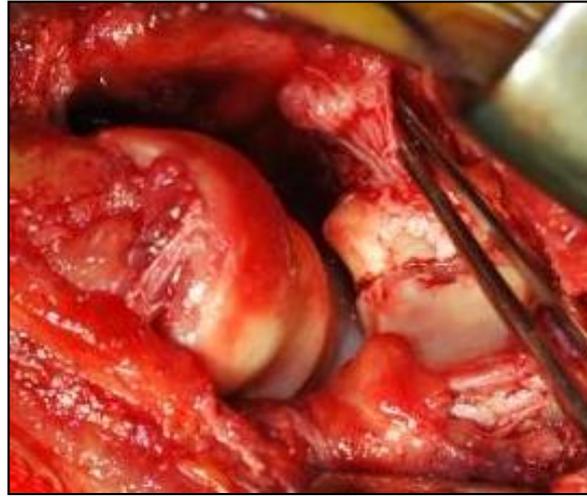
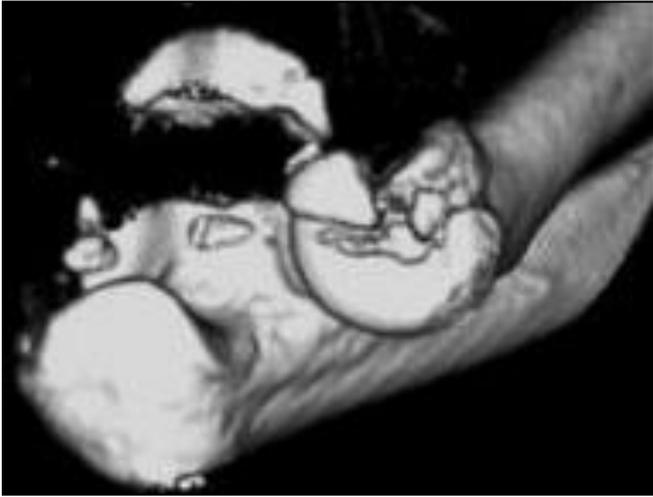
## MCL

**\*Troclea**  
**\*Musc. Epitrocleari**

## Coronoide

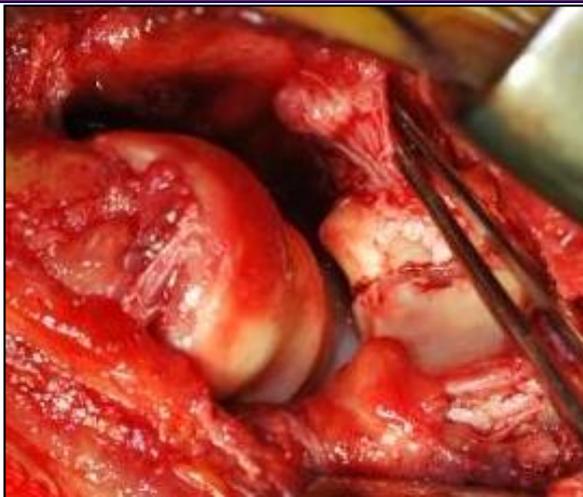
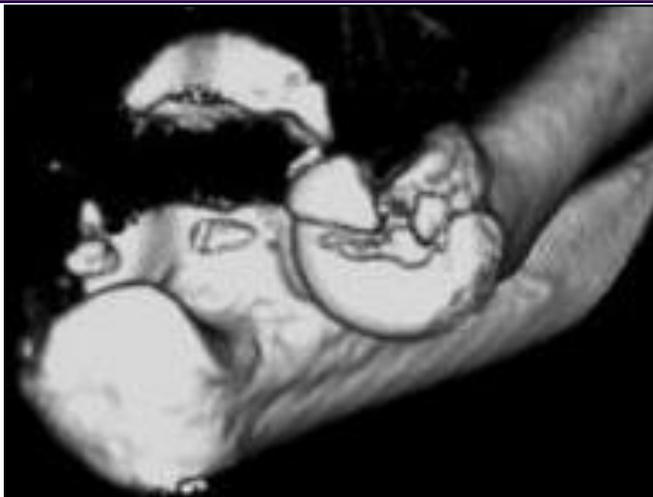
**\*Capsula Anteriore**

# IMPORTANZA RICOSTRUZIONE ANATOMICA

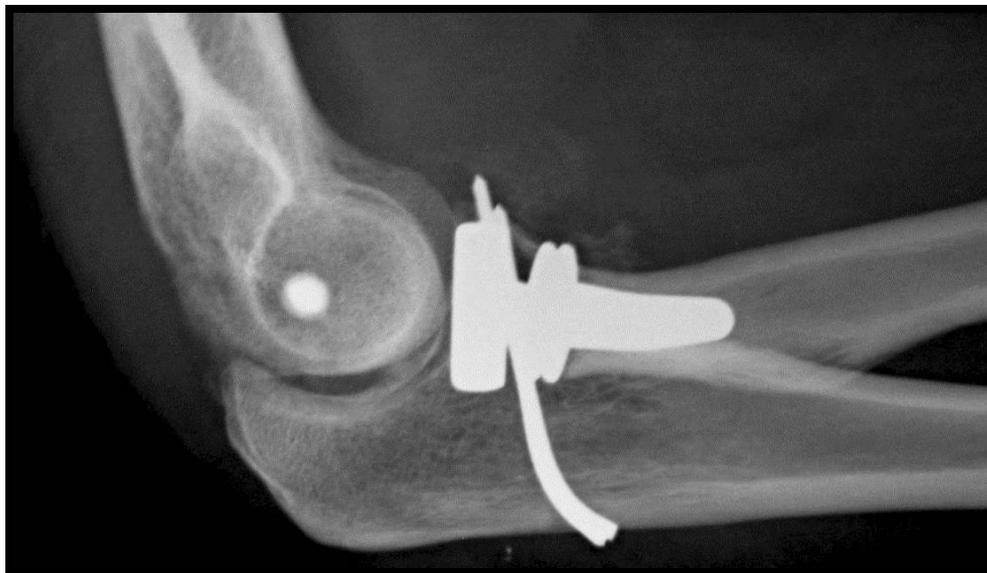


**Terribile  
triade**

# IMPORTANZA RICOSTRUZIONE ANATOMICA



**Terribile  
triade**



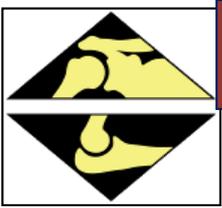


# CONCLUSIONI : RISPETTO DELLA BIOMECCANICA SPALLA E GOMITO

\* BUONA FUNZIONE MIGLIORA QUALITA' VITA

\* IMPORTANZA PRIMO TRATTAMENTO CORRETTO  
NEL TRAUMA





I.R.C.C.S. - Rizzoli Orthopaedic Institute



ATLANTE DI ANATOMIA CHIRURGICA

# vie d'accesso in traumatologia

ARTO SUPERIORE

Gianfranco Zinghi  
Raffaele Pascarella  
Roberto Rotini

