

Long term follow up of composite prostheses for wide periacetabular malignancies (about 86 cases)

Gérard Delépine France

Todor Sokolov Bulgaria

Fabrice Delépine France

Nicole Delépine France

www.nicoledelepine.fr



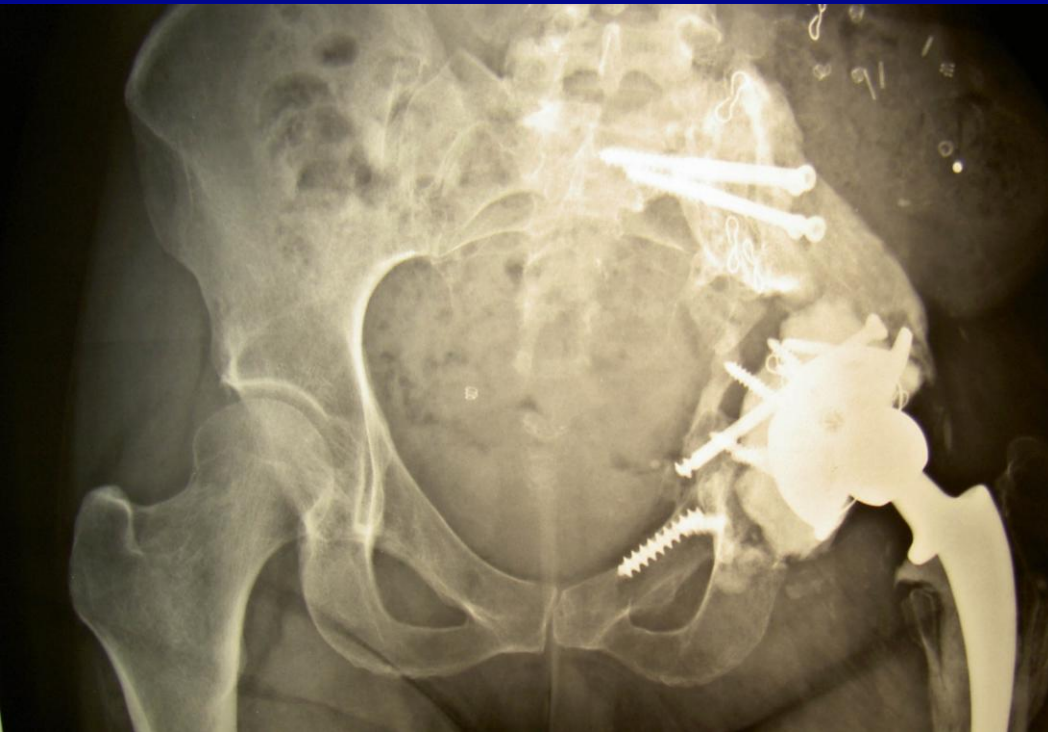
1975-1986 Internal hemi-pelvectomy without reconstruction



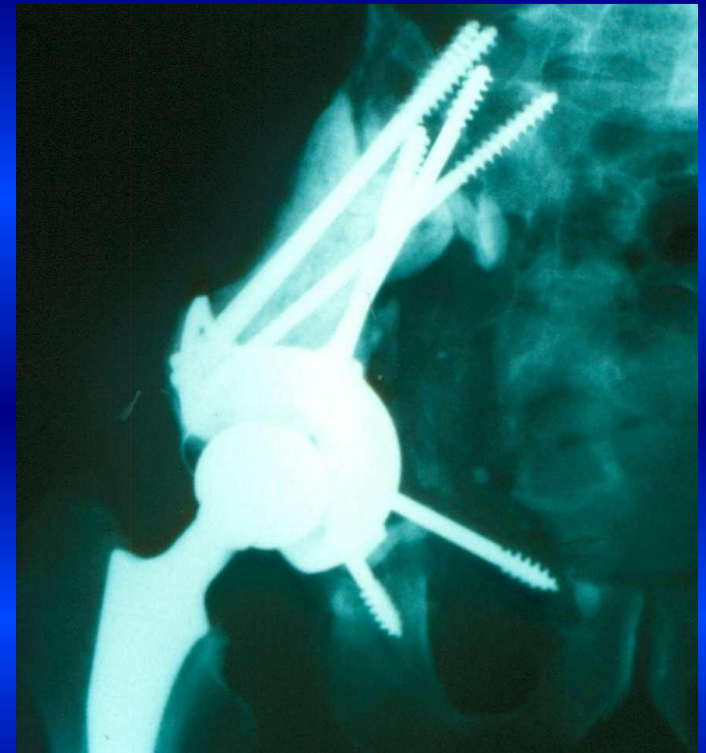
I H Without reconstruction leaves a flail hip limb
shortening can reaches 5 to 7 centimeters

INTRODUCTION

. 1986-1990 allograft : secondary fracture and loosening



1990..Composite prosthesis

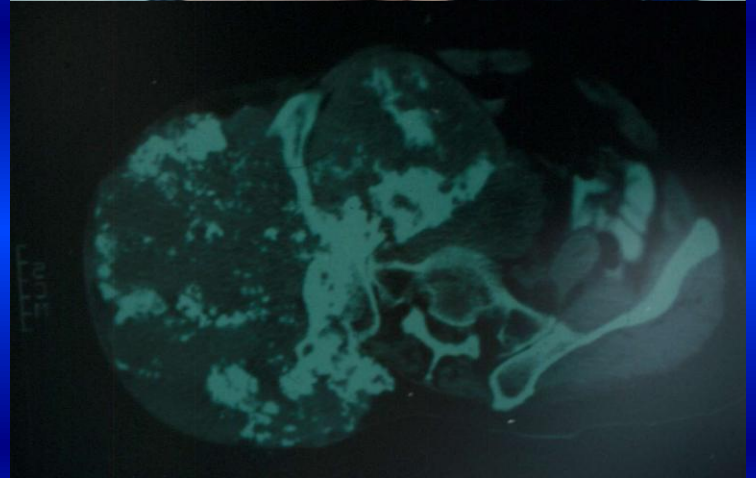


The purpose of this paper is to present its long term results.

86 Patients (1990-2003)

suffering from malignant tumors of the innominate bone received an « hand on » composite prosthesis.

They were 56 males and 30 females. The mean age of the patients is 28



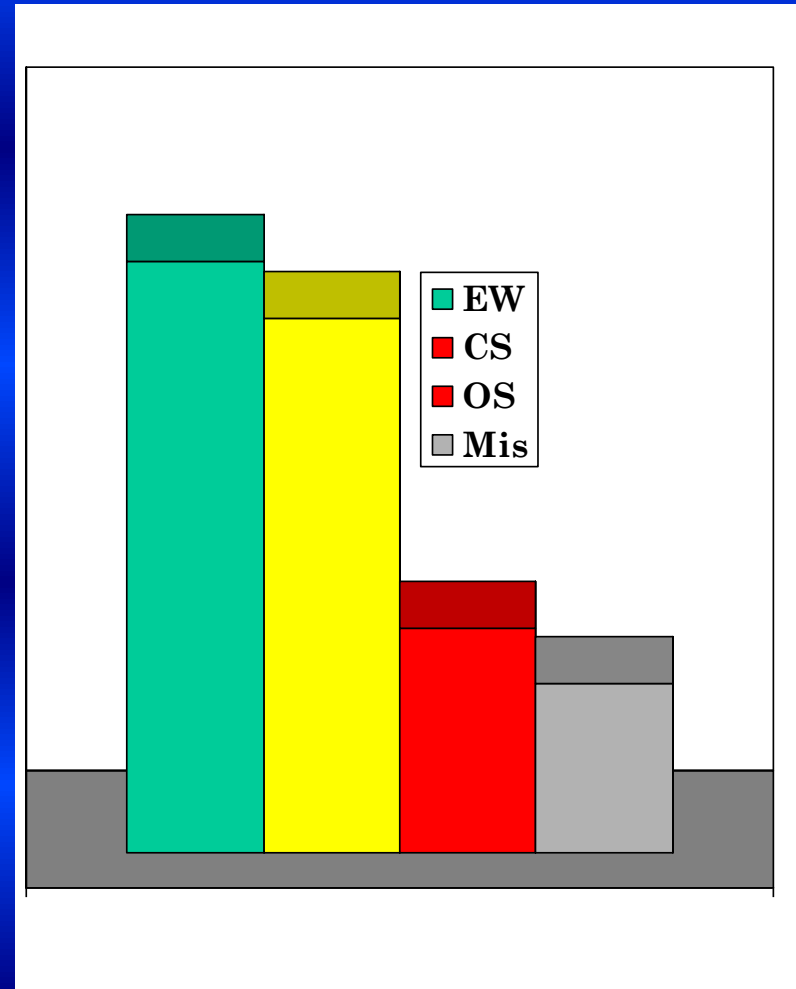
Histologie of tumors

54 sarcomas :

Ewing's sarcoma in 21
chondrosarcomas in 19
osteosarcomas in 8,
other sarcomas in 6,

and metastases in 32 .

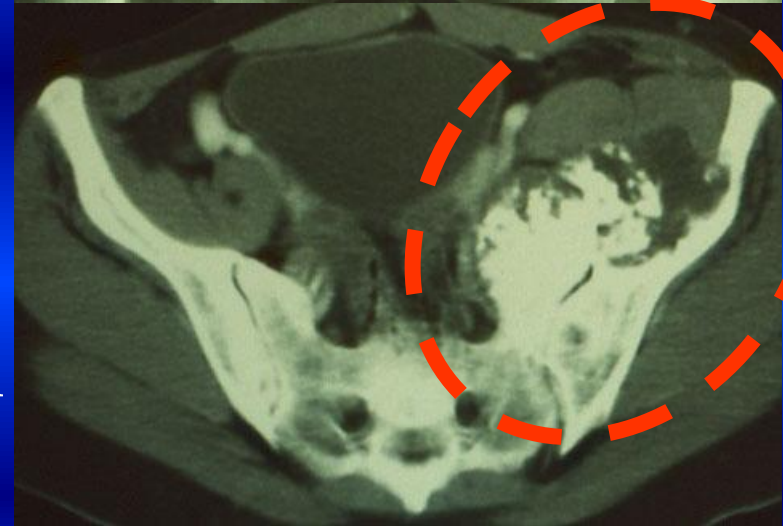
primaries were : breast in 8,
kidney in 6, prostate in 3,
thyroid in 2, misceallenous
in 13.



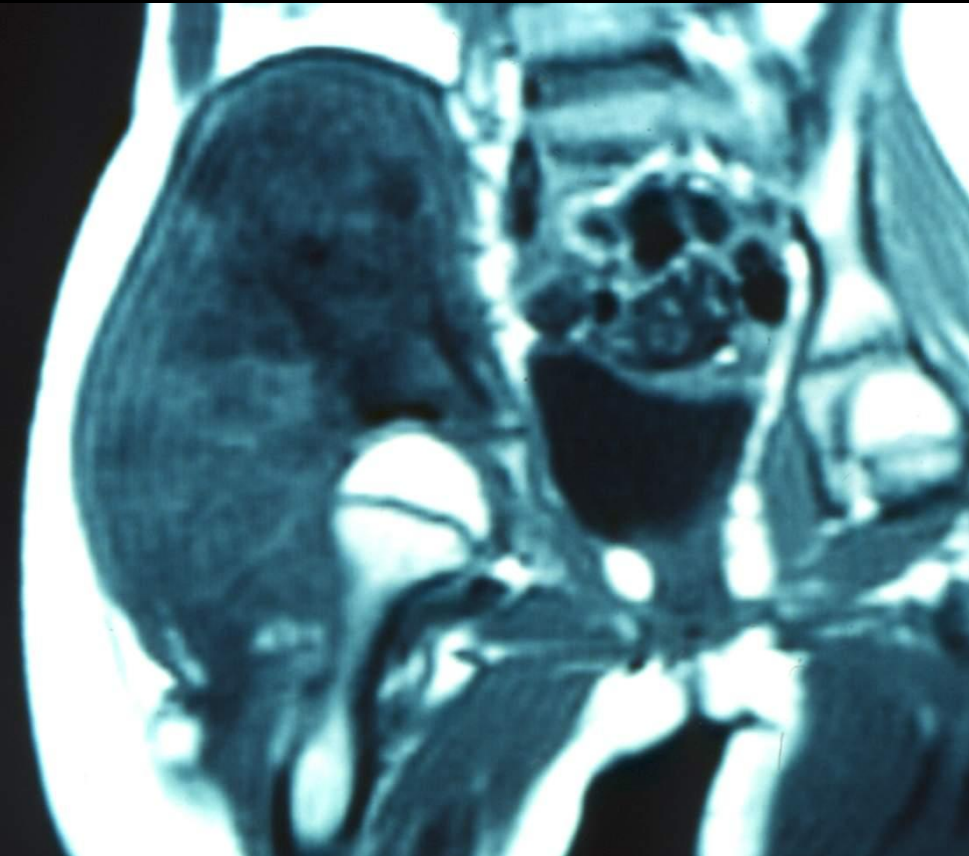
Preoperative planning

All patients, with sarcomas, except 2 with low grade chondrosarcoma had extracompartmental tumor at presentation : stage II B (41) or III B (11).

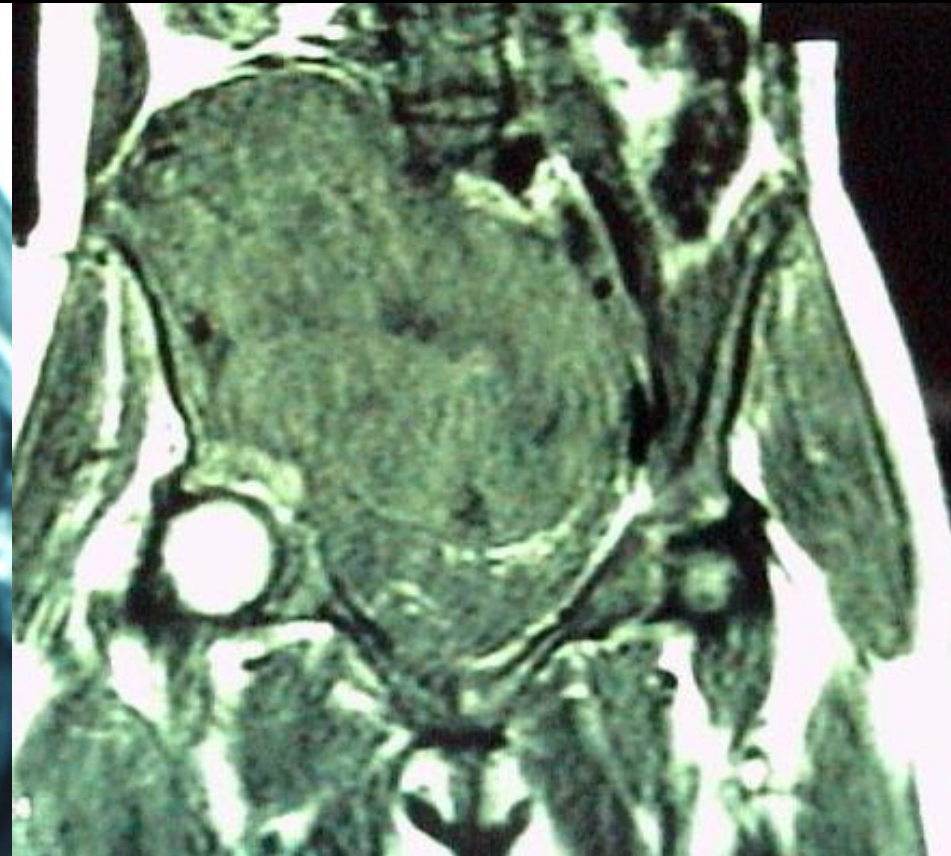
All together, 43/86 patients presented with a localized disease and the 43 other with metastases (16 solitary)



Some had very huge tumors



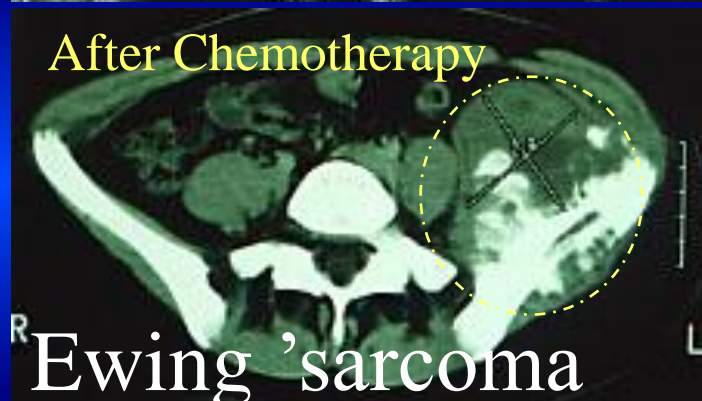
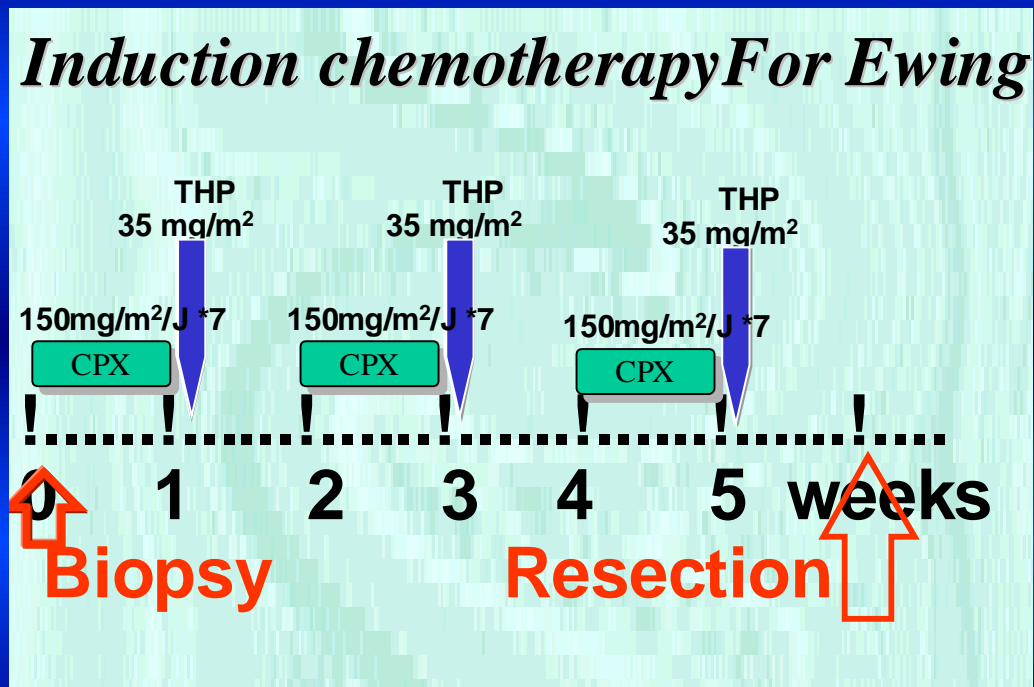
OS in an italian girl 11Y



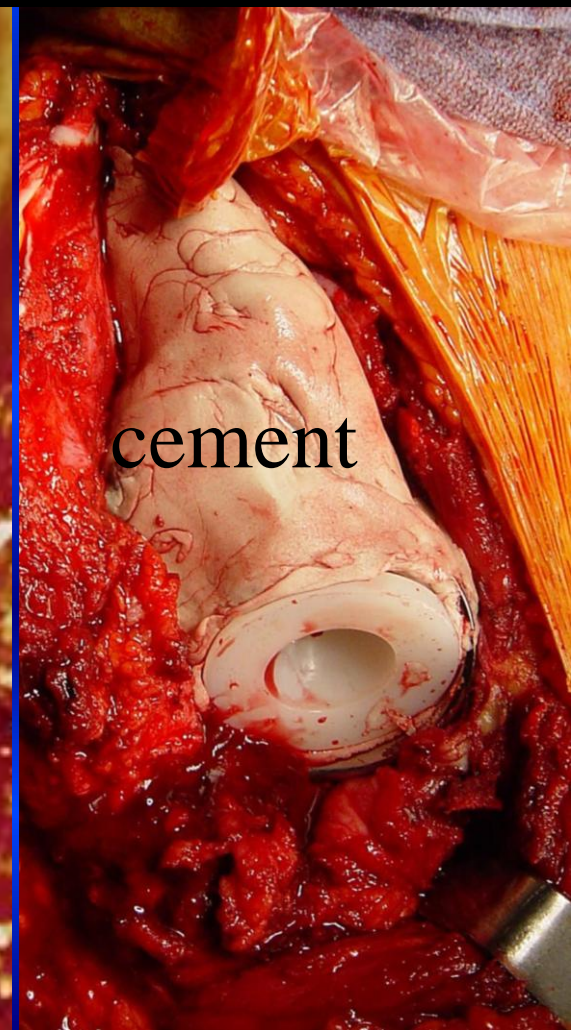
OS in an african girl 13Y

Medical treatment

Neoadjuvant chemotherapy was administered in high grade sarcomas (EW Os..)



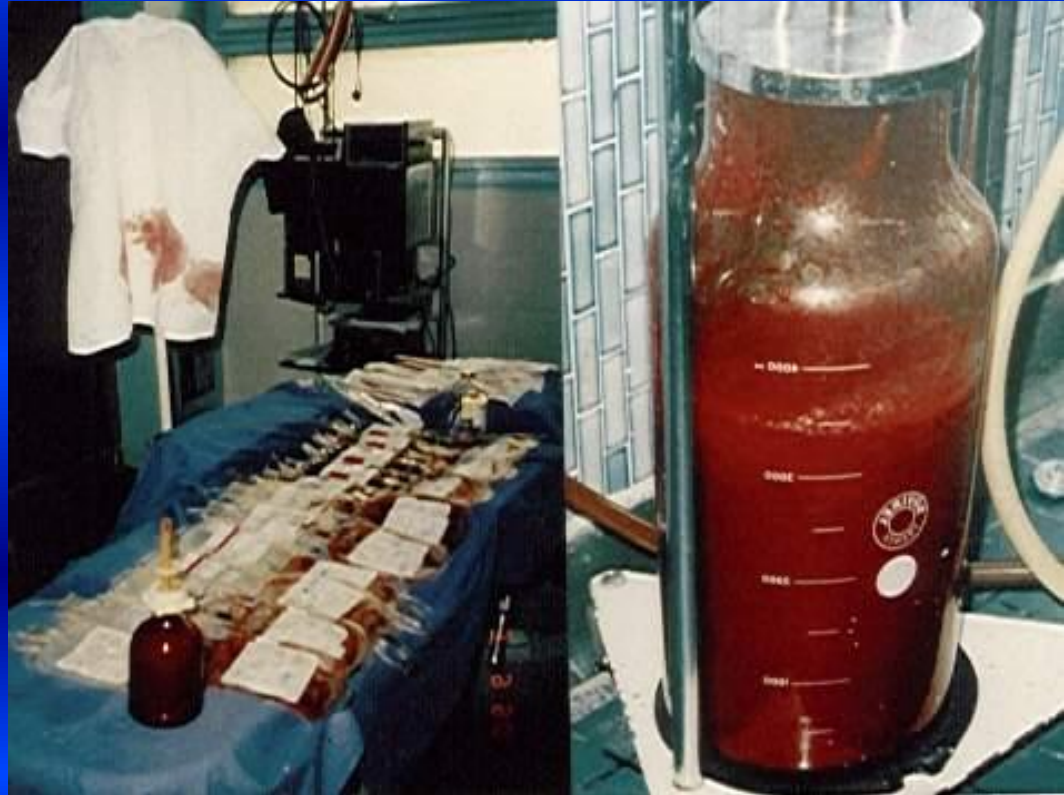
The composite prosthesis



The iliofemoral prosthesis included 3 components : a

surgical complications *occurred in 40 patients*

In all cases :
Blood loss !



in 12 patients neurological deficits or skin slough
in 21 patients Dislocation of the hip.

Deep infection in 10

Adequacy of resection

histologic examination of the resected specimen showed that margins were wide in only 42 patients.

30 resections were marginal and 14 contaminated.

12 local recurrences were observed, all after contaminated resection.



Oncologic Results

Patients were followed up separately by their surgeon and their chemotherapist

Mean follow-up of patients is 9 years At last follow up 44 patients (52 %) were alive and free of disease with a mean follow up of 108 months (12 to 196)

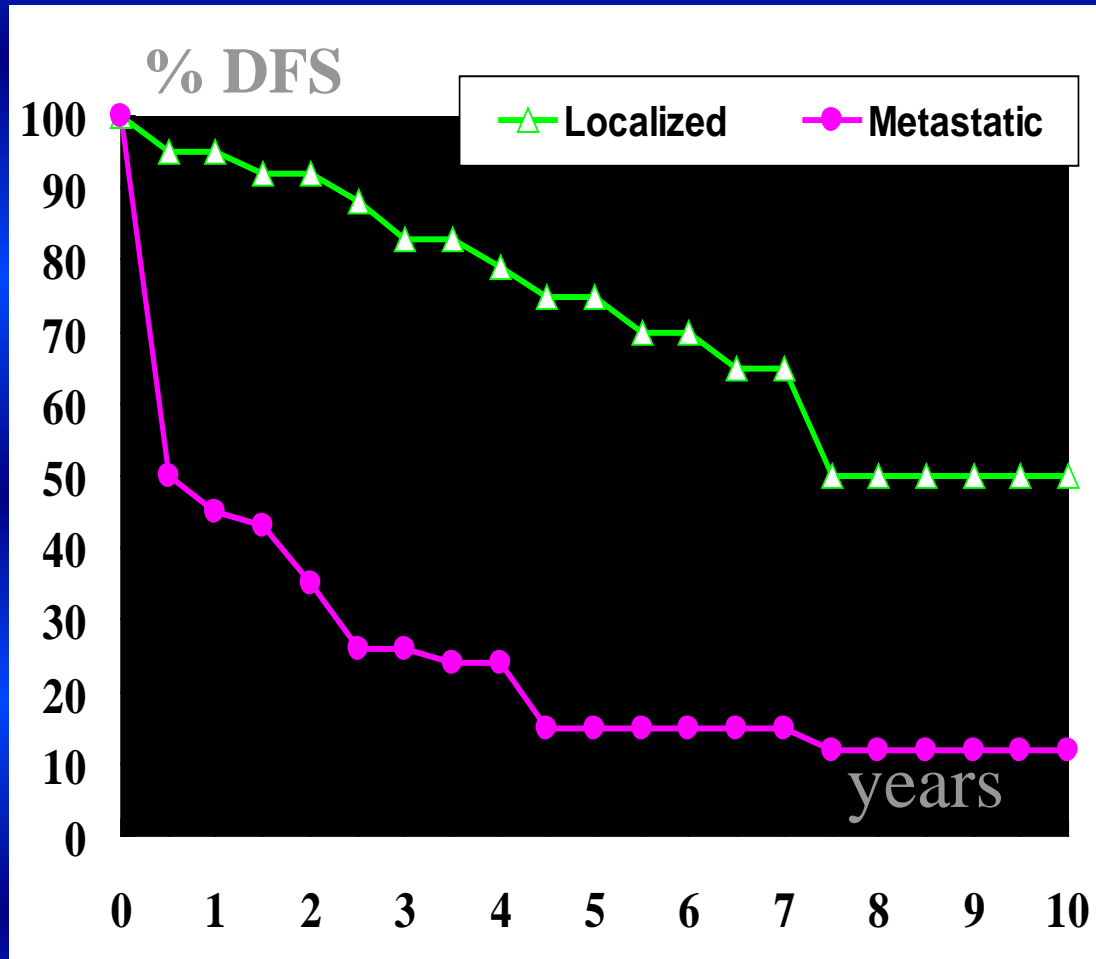
4 were alive with evolutive disease ;

36 died from disease and 2 from unrelated event.

Oncologic Results

For patients seen with localized sarcoma, the 5 year overall and event free survival rates are 70 % and 50%

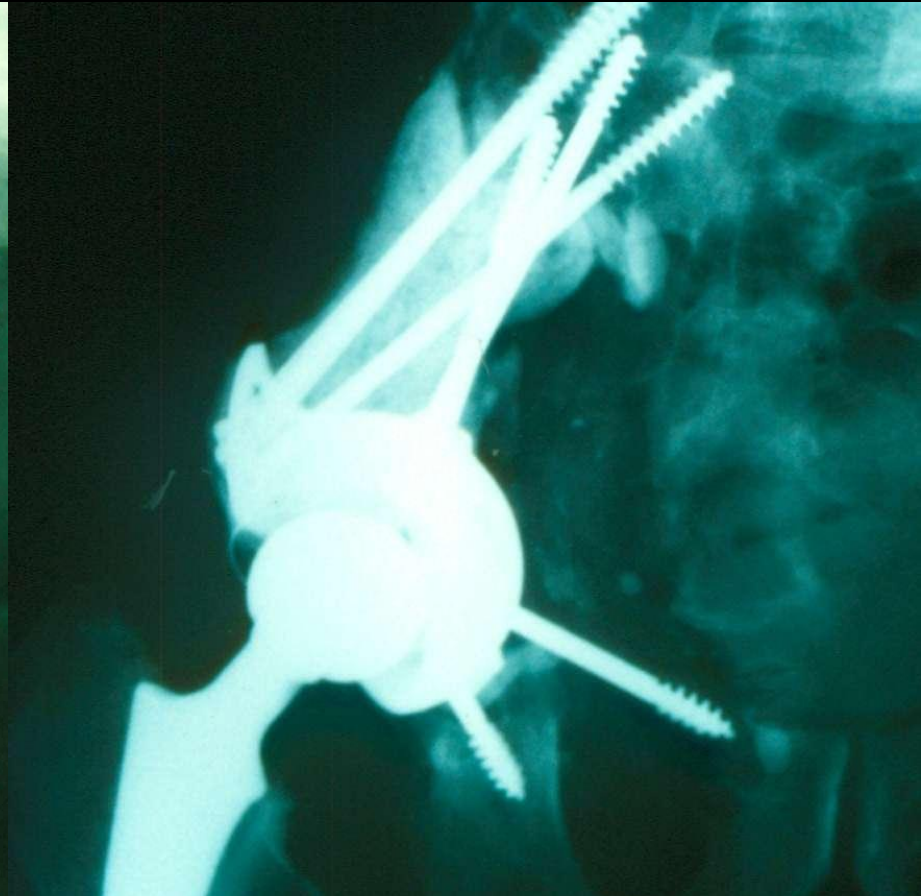
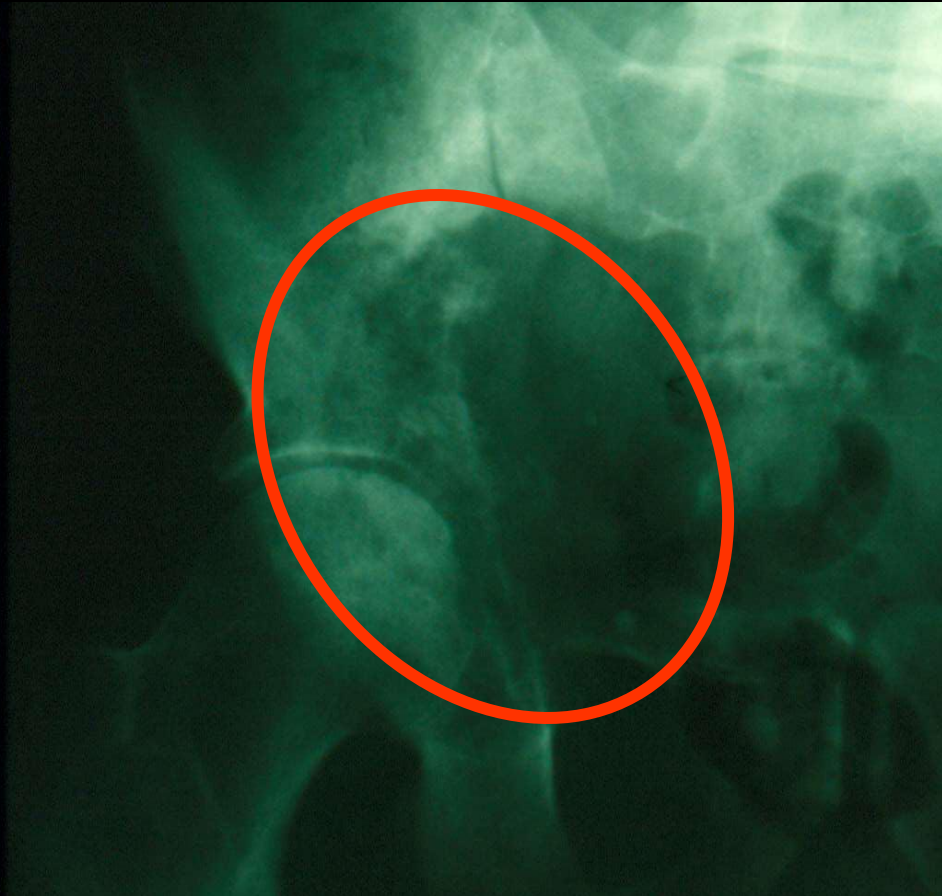
15 % and 12% for metastatic patients.



Function the 46 uncomplicated cases

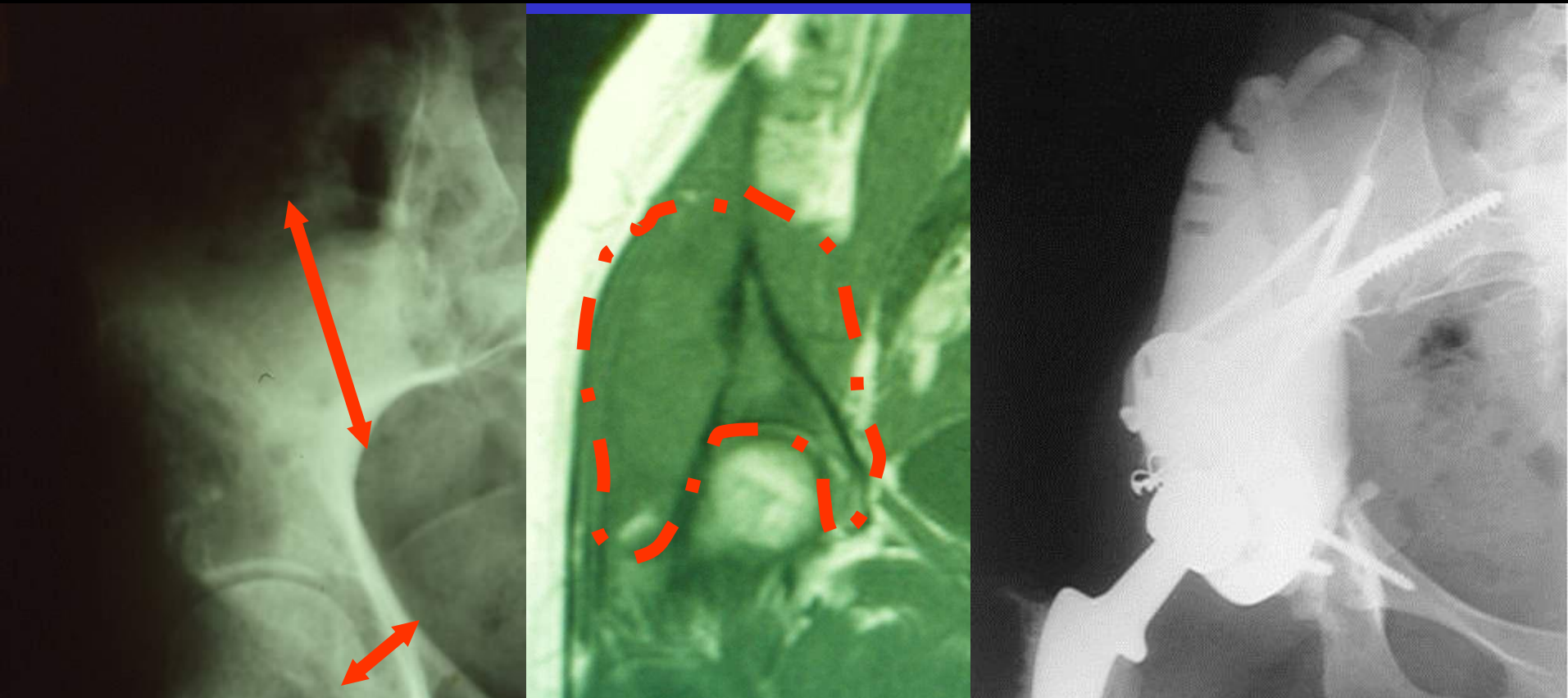
patients had no pain and could walk long distances without external support. The hip mobility averaged 100° in flexion and 195° in total. Length discrepancy was inferior to 1 centimeter in 70 and 2 in 10 . The emotional acceptance was excellent and the average score was 28 (80 %) (range 66 % ~ 94 %).

Zones 1+2 Wide resection for radioresistant metastase



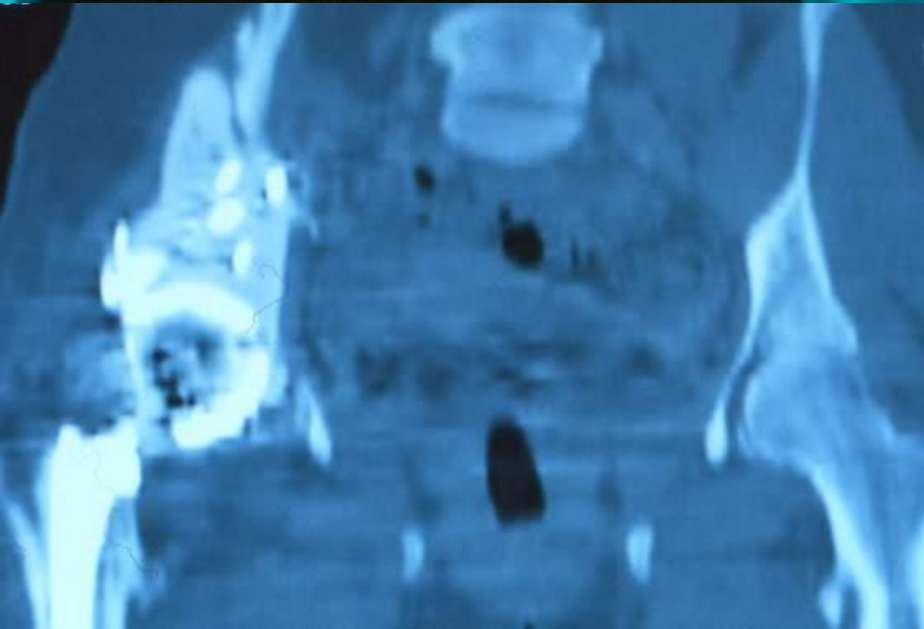
48 yars old man suffering of solitary acetabular metastase from lung carcinoma. Progressive disease under radiotherapy. Composite prosthesis excellent function till death

Zone 1+2 resection for Ewing



Ewing's sarcoma with **medial gluteus muscle extension**. Wide resection disrupting the abduction apparatus. DFS with 108 months F.U.

Function after 108 months

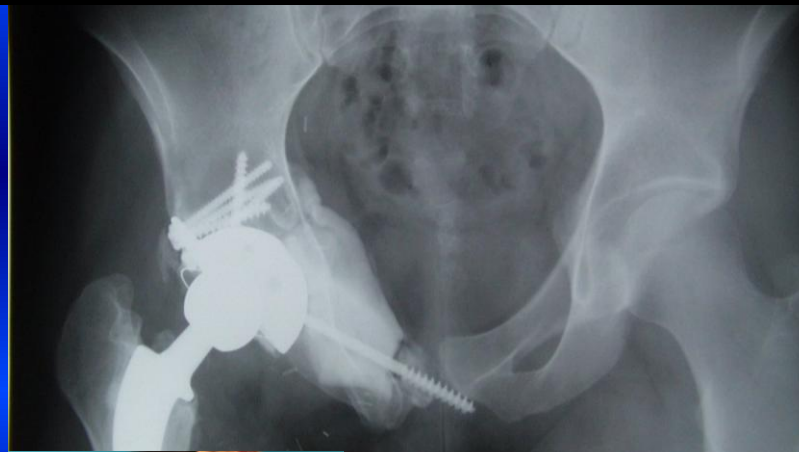
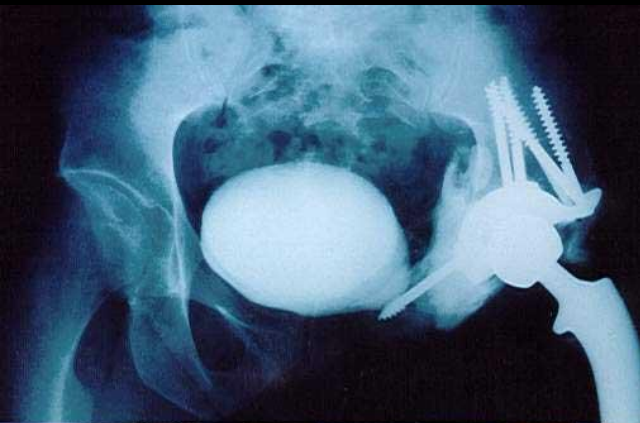


**Good function.
Complete passive
mobility.No pain.
But limping due to
the resection of
medial gluteus**

14th International Symposium
on Limb Salvage

Hamburg, Germany
September, 11th-14th 2007

Fonction after 10 years



Excellent fonction but some wear on the polyethylen acetabular component

Reoperated patients

Have a lower score : 24,5

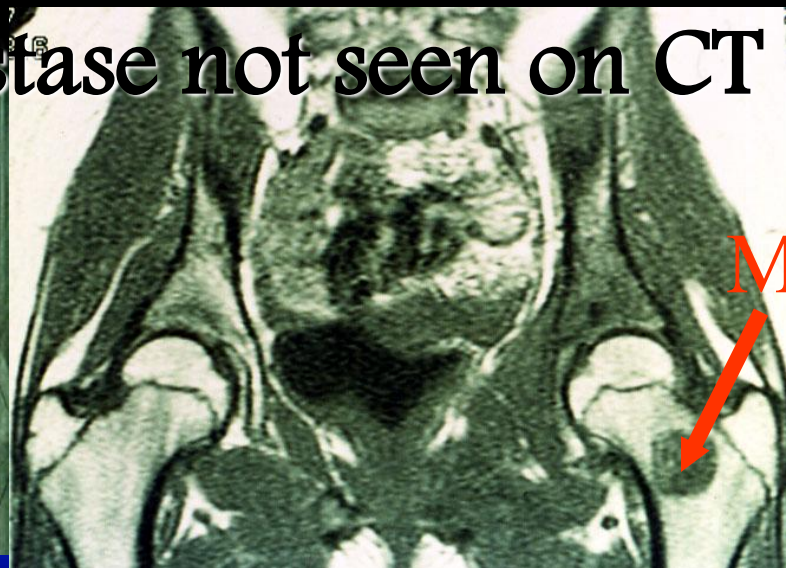
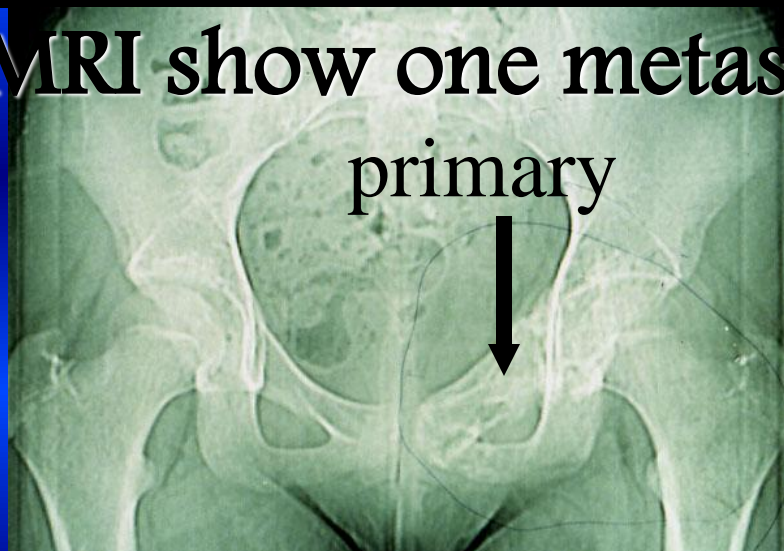
(70 % , range 50 % ~ 80%)

most due to some degree of pain or
limitation of walking.

The patients with flail hip or local
recurrence had the worst score : mean
value 10 (28 %).

MRI and regional metastases

MRI show one metastase not seen on CT



Extraarticular resection of primary and met. Postop dislocation. Sciatic palsy.

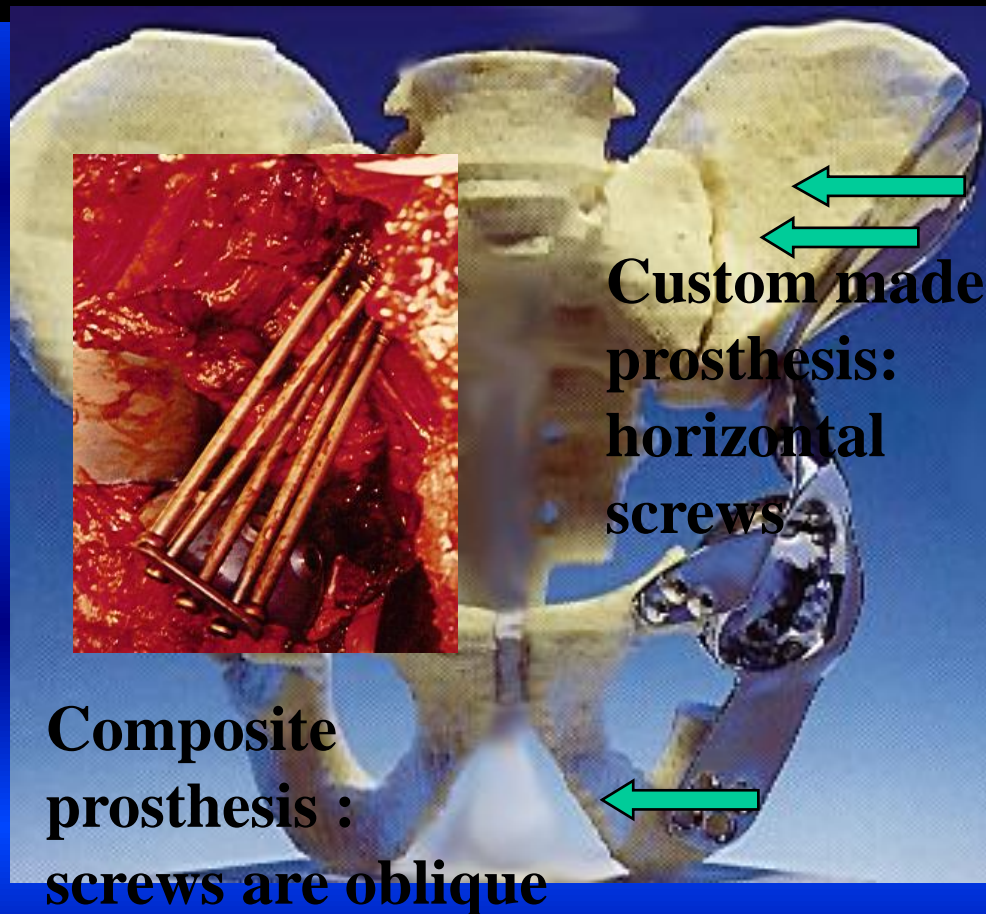
Ned with 120 months F U

Function score 60

Loosening risk

With a median follow up of 10 years, 11 loosening of pelvic component have been observed.

6 of them are due to infection or tumoral recurrence.



Aseptic loosening is not frequent (5/86)

CONCLUSIONS

Limb salvage for peri-acetabular tumors is technically demanding with a high rate a complications, but gives equivalent oncologic result than external hemipelvectomy.

“Hand on” composite prosthesis is cheaper, easier, and more adaptable than custom made and therefore seems particularly adapted to this blood and time consuming surgery.