

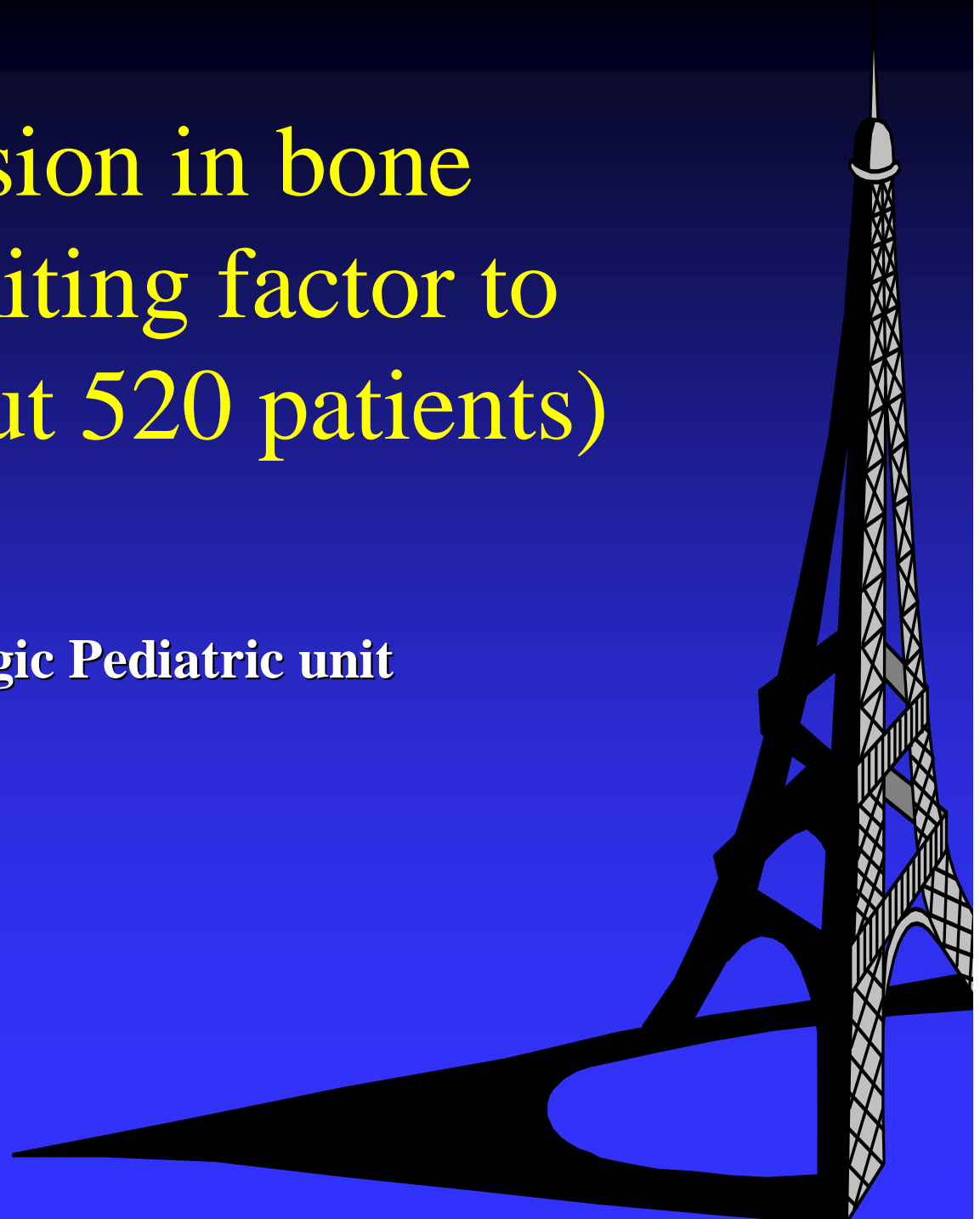
Neurovascular invasion in bone sarcoma. Which limiting factor to limb salvage ? (about 520 patients)

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# Material

From 1/1981 To 31 /12/2003

520 sarcomas of limb or girdle.

Average size 13.1 cms.

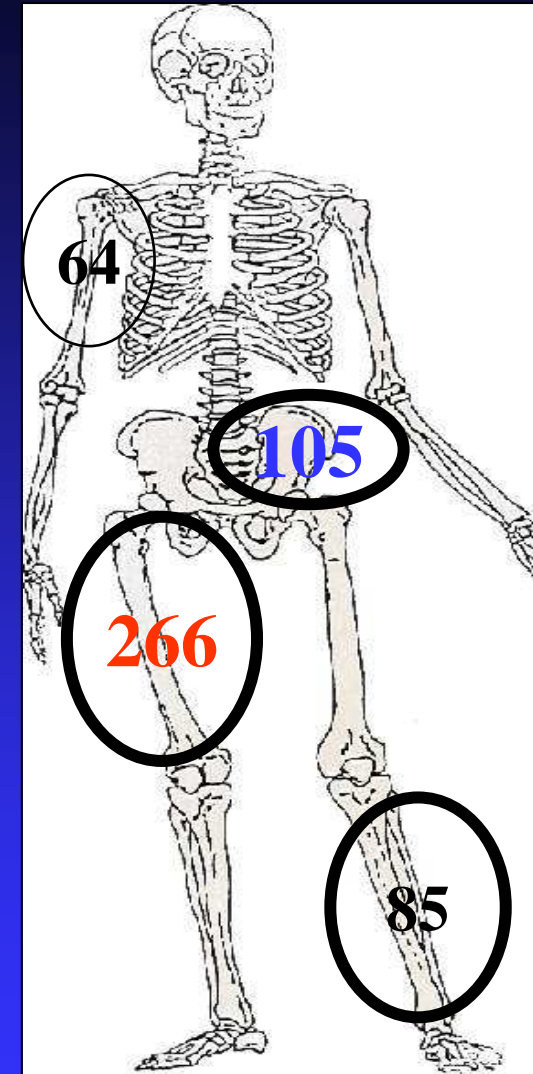
265 Osteosarcomas

135 chondrosarcomas

130 Ewing' s sarcoma

## Aims of the study

- Measure the incidence of neurovascular involmnet
- Evaluate the surgical consequences



Patients

# Method

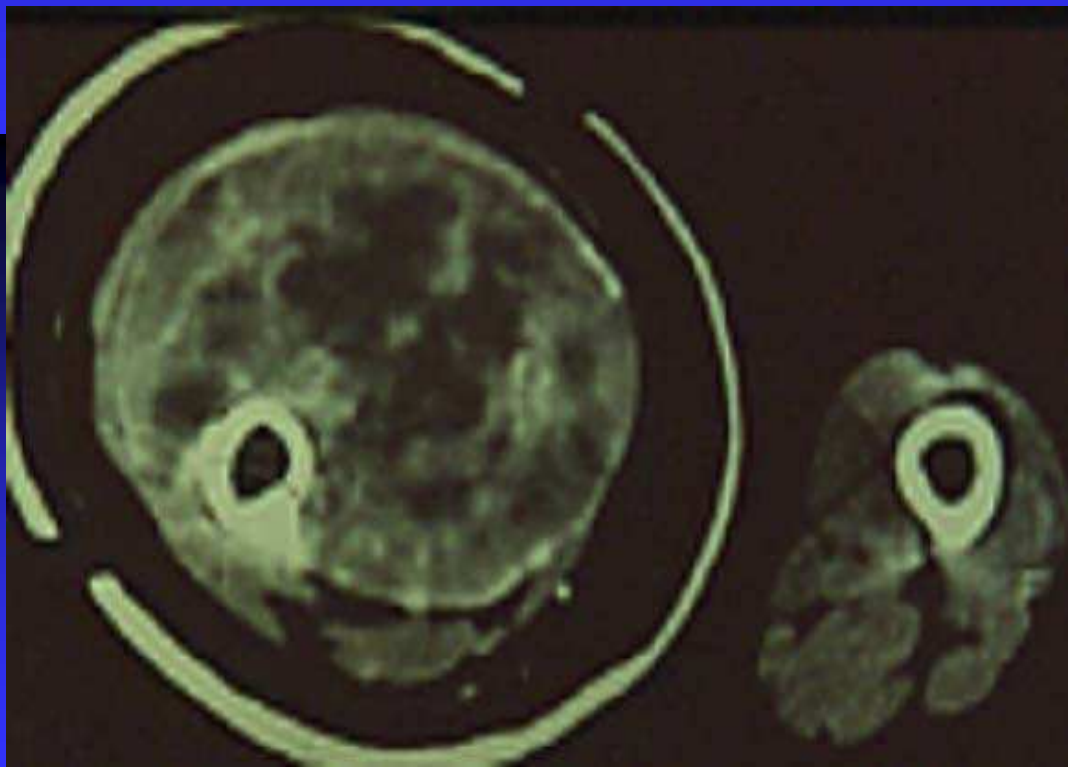
- All patients had Xrays and CT scan
- 350 NMR
- 45 vascular exploration
- Their results were compared to the operative constatations and to histologic findings

# Results in osteosarcoma

In osteosarcoma neurovascular invasion is uncommon (19/256)

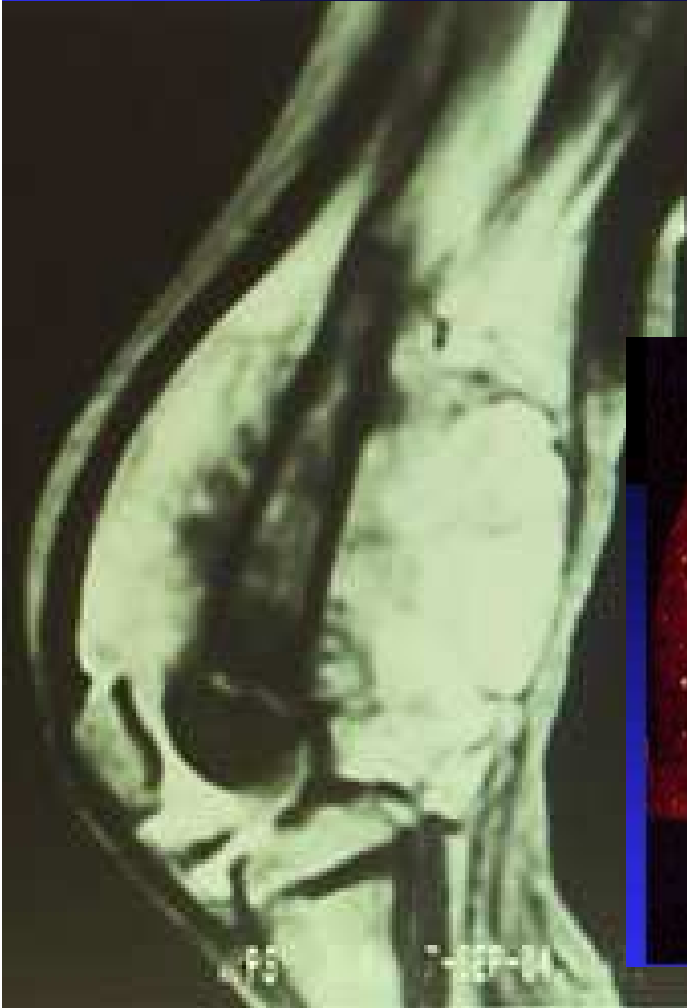
Most interest the radial and fibular nerves (11)

Artery were invaded in 2 The invasion of efferent veins by tumoral thrombus is not exceptionnal (6 cases) and justify vein angiography in cases of distal oedema.

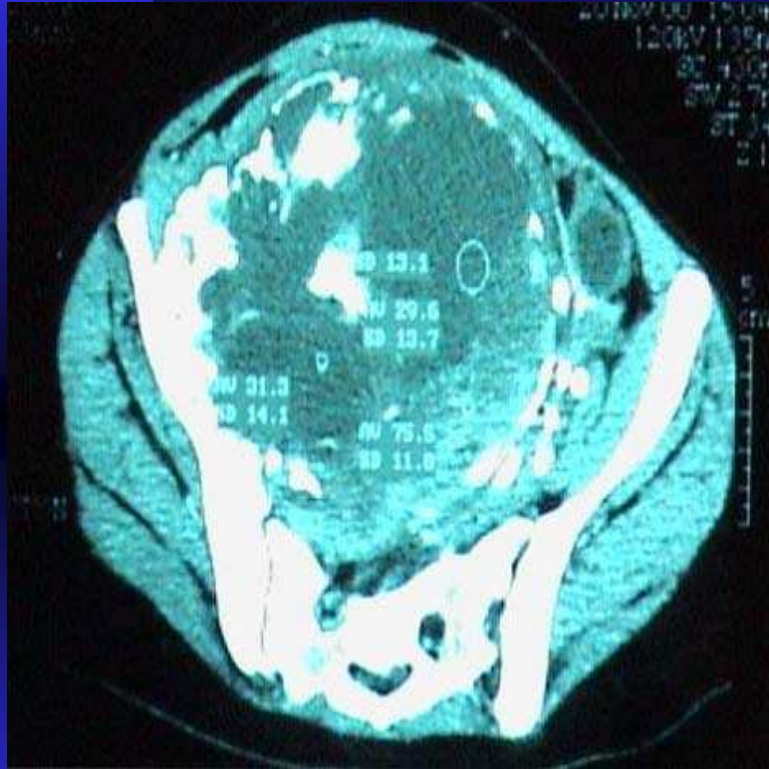


# The artery was not involved

The artery is attached to the tumoral capsulae by all afferent arteries. When all the arteries have been cut the artery can be separated from tumor

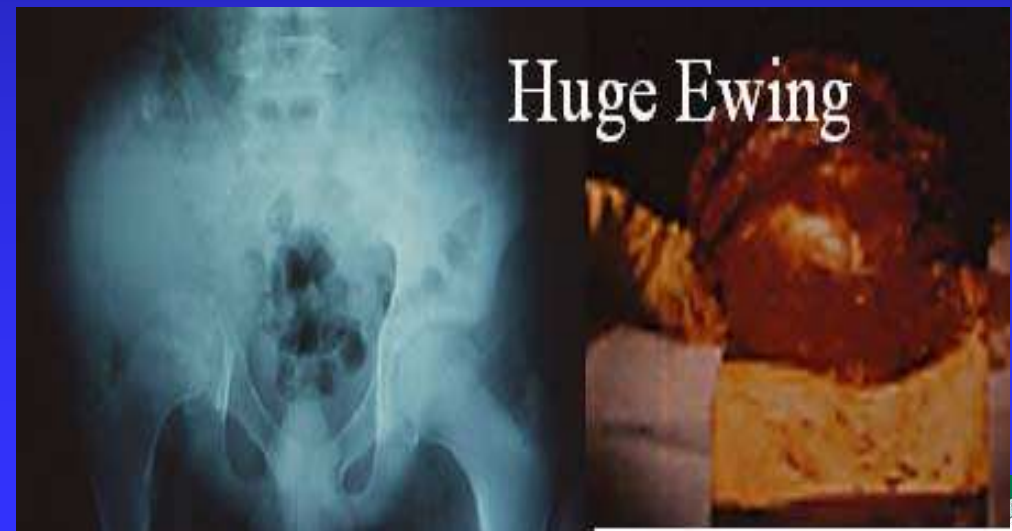
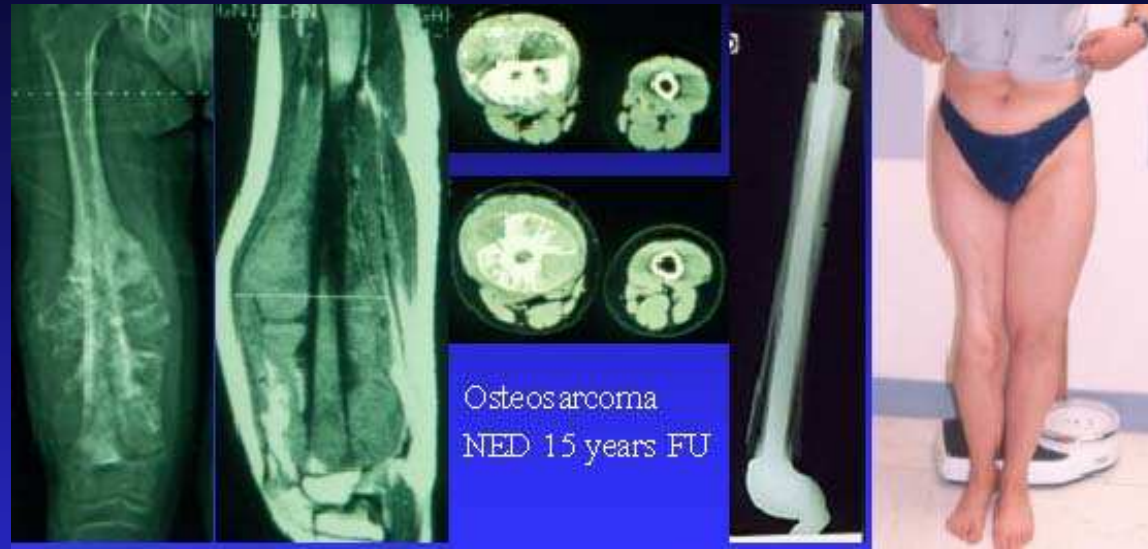


# Huge pelvic osteosarcoma

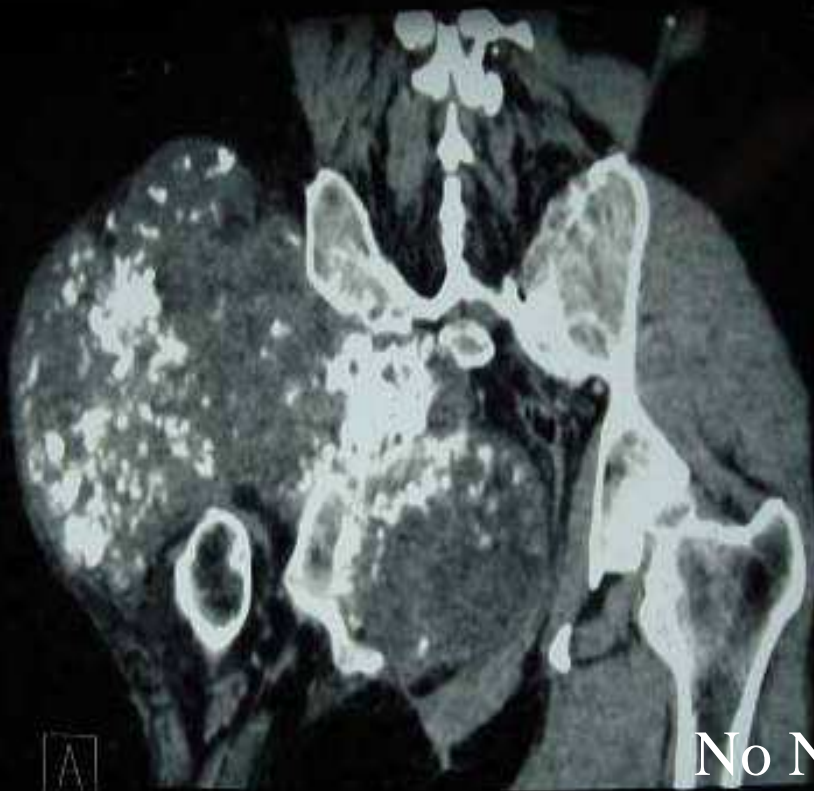


- Resection showed no NV invasion .10 years DFS

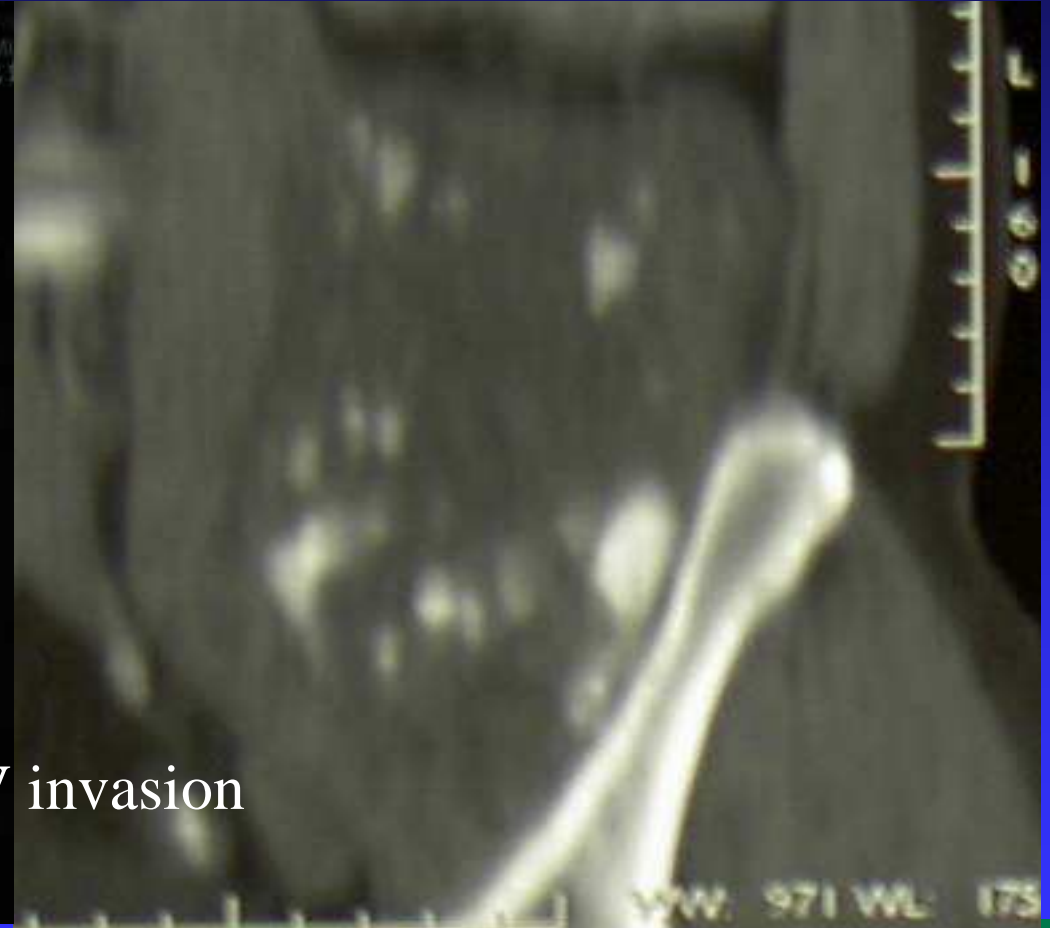
# Others cases without NV invasion



# In chondrosarcoma NV invasion is exceptional : 5%



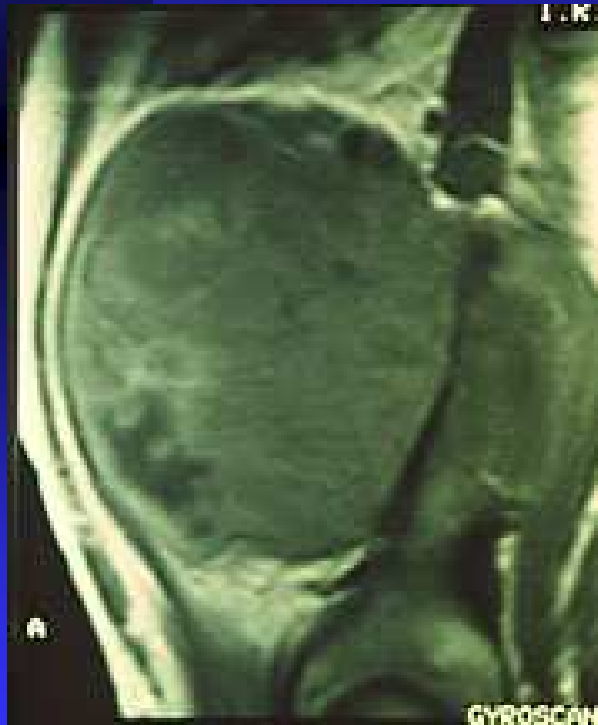
No NV invasion





# Neurovascular invasion was not observed in Ewing

- Even in very huge tumors

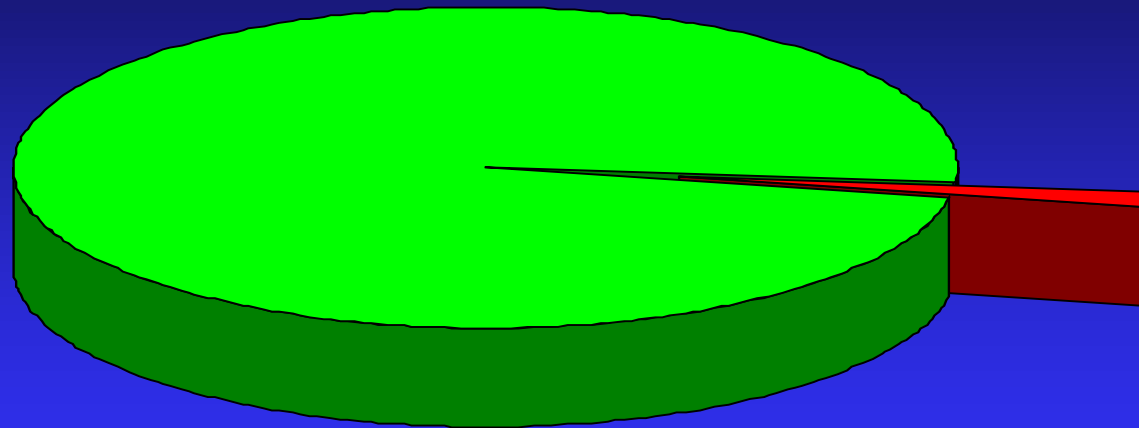


# Conclusions

Neurovascular invasion is too rare to limit significantly limb salvage in bone sarcoma

**Limb salvage has been performed in 98% of cases since 1981 .**

■ Amputation ■ Limb salvage



Less than 2% of patients have been primarily amputated. They were all patients seen after inadequate initial management.