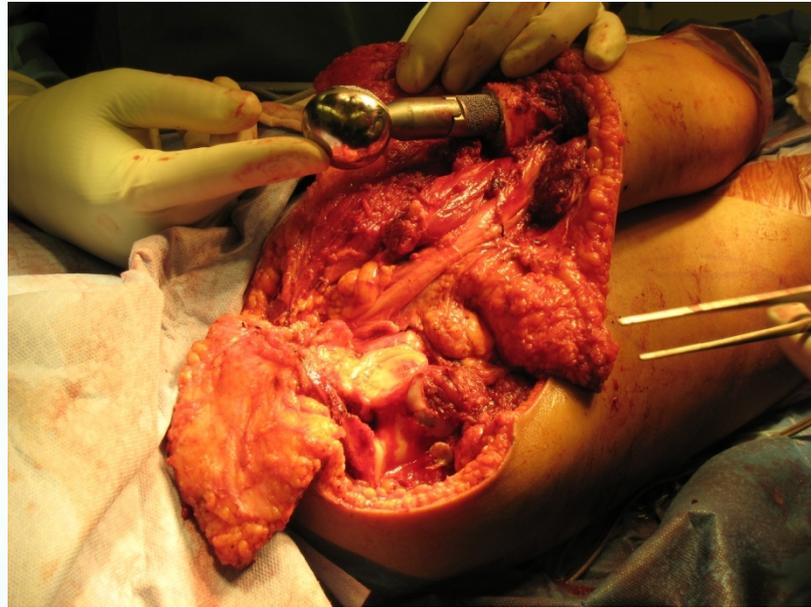


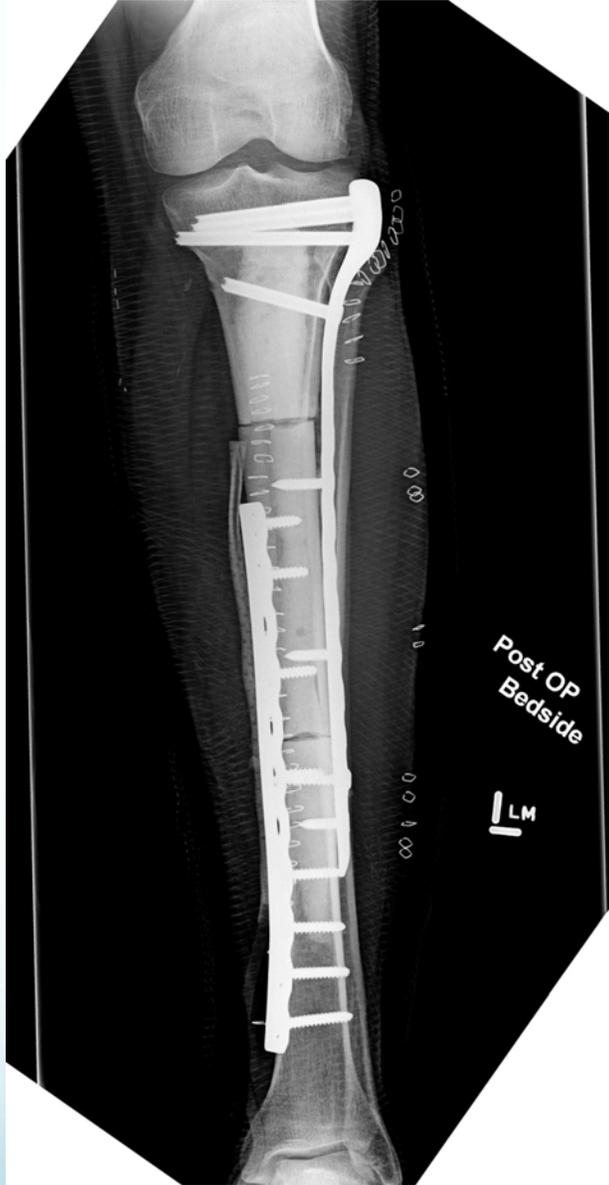
Sarcoma Update

Dr Paul Clarkson
Dept of Orthopaedics, UBC
pclarkson@bccancer.bc.ca

Introduction

- Extremity Sarcoma Service
- Myself and Bas Masri
- 200 Sarcomas per year
- Monday clinic every week
- Multidisciplinary service





Problem

- Significant % of patients
 - Delay in diagnosis
 - Inappropriate surgery
 - Compromises Limb Salvage
 - Requires more RT/Chemo/Amputations
- BUT – huge overlap between benign and malignant



Presentation

- Present as
 - Mass
 - 8mm up to 50cm or more
 - Painless or painful
 - Grow slowly or quickly
 - Soft or firm or hard

Presentation

- Suspicious if:
 - >5cm
 - Growing
 - Deep to the fascia
- Look for systemic conditions
 - NF
 - Family History Li Fraumeni

Presentation

- Tips
 - Ganglions get bigger and smaller, Sarcomas don't
 - Spontaneous Hematomas Don't Happen
 - Mythical Creatures
 - Have to have trauma/coagulopathy/etc
 - Large sarcomas can be completely necrotic





Workup

- Clinical Examination
- Ultrasound
 - Very non-specific
 - Guide you to size and depth
 - Monitor over time

Workup

- USS = “Sarcoma cannot be excluded”
 - Radiologists can be wusses at times
 - Correlate with clinical suspicion
 - If high – go to MRI or refer
 - If low – repeat test in 8 weeks
excise it if <5cm

Workup

- **MRI**
 - Gold standard
 - Expensive/access issues
 - Gives you
 - Is it a lipoma or not
 - Definitive in superficial lesions
 - Could still be a WDLS if deep and large
 - Anatomy for surgical planning
 - Extent of infiltration

Workup

- MRI Guidelines
 - All lesions >5 cm
 - All deep lesions
 - All rapidly growing lesions

(I do MRI for everything – my pre-test probability is >70%)

Workup

- MRI ?before referral
 - If you can – do it!
 - But don't delay by > a week or two

Biopsy

Having the Correct Diagnosis Never Impedes Management

(Clarkson's First Law)

Biopsy

- **Tract Contamination**
 - Very transplantable
 - Compromise Limb Salvage
 - Superficial Lesions:
 - In line with the mid-point of the lesion
 - Enter distally, fire up proximally
 - Deep Lesions:
 - We prefer to do these – not obvious
 - Go through the **EDGE** of a muscle

Biopsy

- FNA
 - 50% accuracy. So toss a coin instead
- Core Biopsy
 - Requires experienced pathologist
 - 98% accuracy
 - Make sure leave a scar
- Open Biopsy
 - If needs an open biopsy – refer it.



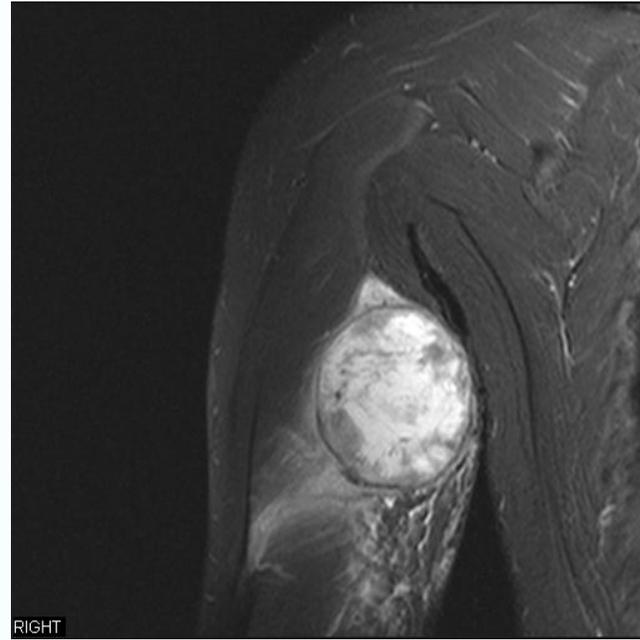
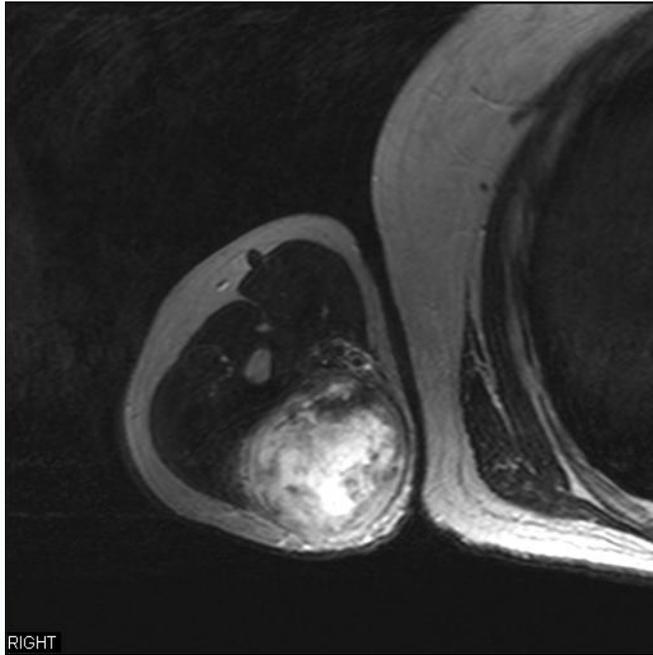
Straight to Excision

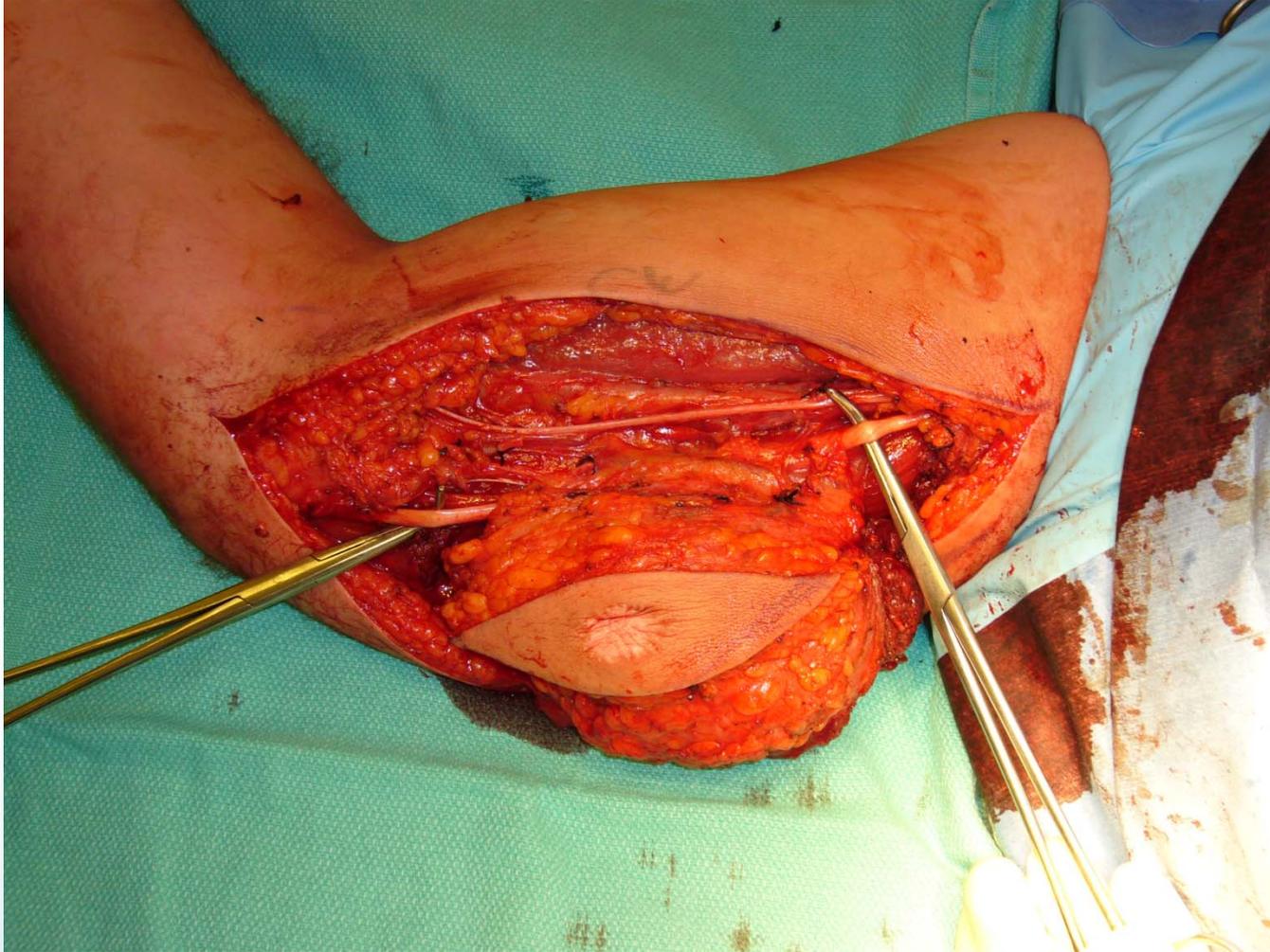
- **Safe When**
 - Small (<5cm)
 - Slow growing/stable
 - Superficial
 - Longitudinal Incision

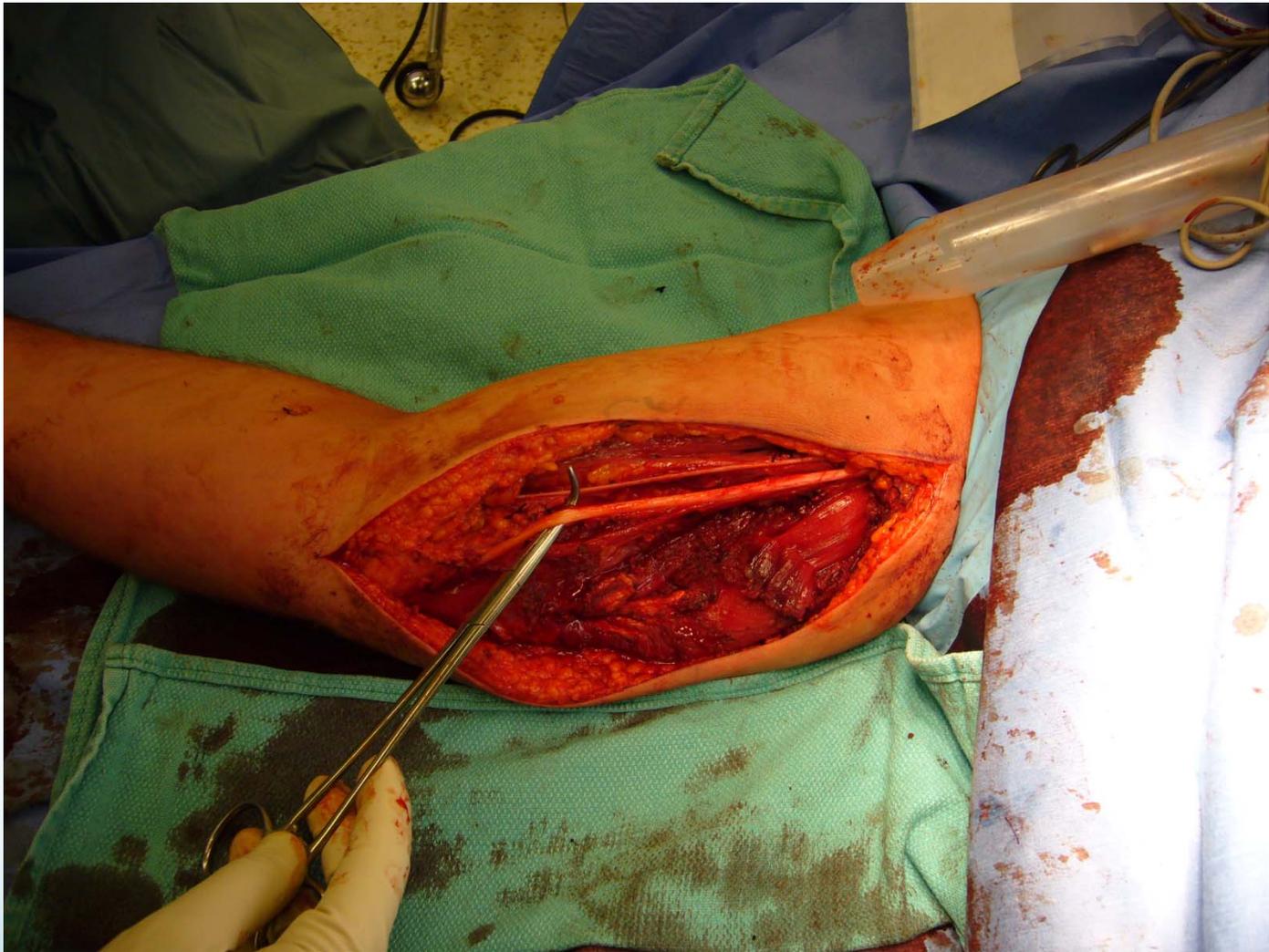
Straight to Excision

- If follow guidelines
 - Will still get occasional sarcomas
 - BUT
 - Easy to re-excise
 - Small superficial lesions = >95% cure rate

Some Cases







Summary

- Deep/Large/Growing = Bad
- Excise if <5cm/superficial/stable
- MRI for suspicious lesions

- We are happy to review cases