



# Angiographic embolization of musculoskeletal tumours

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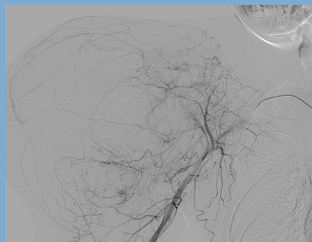
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## Objective

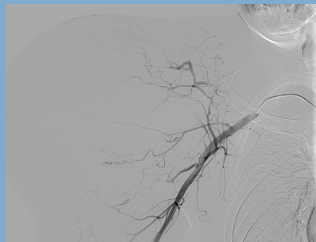
Transarterial embolization has emerged as pre-operative or definitive treatment for both benign and malignant vascular musculoskeletal tumours. This pictorial poster illustrates a few examples performed in our institution.

### Pre-operative embolization of sarcoma

24 year-old male suffering from fungating sarcoma at right shoulder referred for pre-operative embolization 1 day before surgery



Pre-embolization



Post-embolization of 4 feeding arteries with particles

#### ■ Pre-operative embolization scheduled within days of operation has the following advantages:

- Reduction of operative hemorrhage
- Simplification of surgery
- Pain palliation
- Increase sensitive to chemotherapy and RT

#### ■ Choice of embolic agents

- Particles +/- Coils
- Decreased incidence of non-target embolization compared with liquid agents

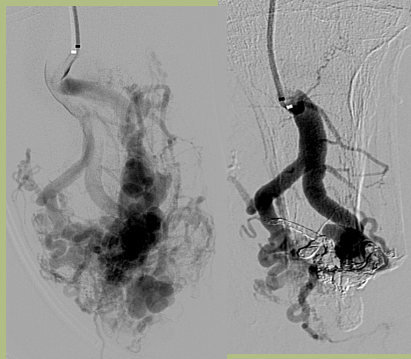
### Arterial embolization of recurrent arteriovenous malformation

59-year-old female suffering from left leg AVM with below knee amputation performed 16 years ago. Recurrent AVM in tibial stump.

Complained of progressive pain and swelling at stump and cannot fit into prosthesis



Pre-embolization



After 1<sup>st</sup> embolization, 33-50% of AVM embolized

#### ■ Arterial embolization of AVM

- Reserved for high flow lesions
- Painful, often require General Anaesthesia
- May need multiple sections/staged embolization
- Satisfactory reduction in size and symptoms, able to fit into prosthesis

#### ■ Choice of embolic agents

- Liquid agents (e.g. Onyx)

### Arterial embolization of Hemangioma

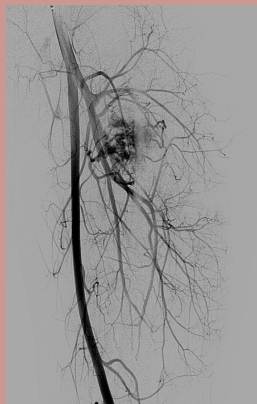
19-year-old male suffering from left thigh hemangioma within rectus femoris muscle. Complained of progressive pain and swelling

#### ■ Arterial embolization of AVM

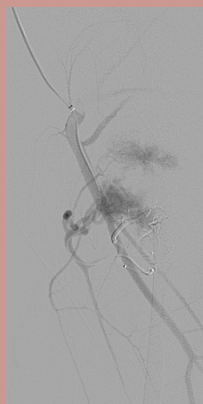
- Satisfactory reduction in size with 60-70% size reduction

#### ■ Choice of embolic agents

- Particles



Pre-embolization  
Multiple feeders identified



Post-embolization

### Other applications

#### ■ Other Tumours

- Sacral chordoma
- Osteosarcoma
- Aneurysmal Bone Cyst
- metastases

#### ■ Vascular disorders

- Femoral arteriovenous fistula
- Femoral artery aneurysms
- Hemarthrosis

#### ■ Degenerative disorders

- Tendinopathy
- Knee osteoarthritis
- Adhesive capsulitis

#### References:

Midterm Clinical Outcomes and MR Imaging Changes after Transcatheter Arterial Embolization as a Treatment for Mild to Moderate Radiographic Knee Osteoarthritis Resistant to Conservative Treatment. Journal of Vascular and Interventional Radiology, 28(7), 995-1002.

Clinical Outcomes of Transcatheter Arterial Embolization for Adhesive Capsulitis Resistant to Conservative Treatment. Journal of Vascular and Interventional Radiology, 28(2), 161-167.e1.