Introduction

INTRODUCTION

Musculoskeletal tumours include primary and secondary benign and malignant tumours of bone and soft tissue. The most common malignant tumours in bone are metastatic carci nomas (Figure 42.1). Advances in oncological treatment mean that the number of patients living with metastatic bone disease is increasing. The most common carcinomas that metastasise to bone originate in the breast, prostate, lung, kidney , thyroid and colon (Figure 42.2). Haematopoietic tumours may also arise in bone: multiple myeloma (Figure 42.3) is a malignant neoplasm arising from - plasma cells in the bone marrow , leading to multiple lesions in the skeleton. When solitary , this type of tumour is called a plasmacytoma.

(a) (b) Figure 42.1 (a) Pathological fracture of the proximal femur through metastatic breast carcinoma. (b) Radiographs of the whole femur show a further, more distal metastatic deposit. Understand the principles of biopsy • Describe the principles of surgical treatment of • musculoskeletal tumours List the aims of surgical treatment for metastatic bone • disease Understand how to manage patients with an impending or • completed pathological fracture Evaluate the risk of pathological fracture • Thyroid Lung Breast Kidney Colon Myeloma Prostate Figure 42.2 Common malignant tumours involving bone (courtesy of Mr Andy Biggs, The Robert Jones and Agnes Hunt Orthopaedic Hospital NHS Foundation Trust).

Malignant primary bone tumours (sarcomas) are very rare, but notably can occur in children and young adults. The most common malignant primary bone tumours are osteosarcoma (Figure 42.4), chondrosarcoma (Figures 42.5, 42.6 and 42.7 and Ewing’s sarcoma (Figure 42.8). Soft-tissue tumours are common. However, only one in a 100 is malignant (Figure 42.9).

(b) Figure 42.3 (a) Multiple myeloma affecting the left humerus with a pathological fracture (arrows). (b) Multiple myeloma with multiple deposits in the skull (arrows).

Revision #1
Created 2025-12-31 15:16:20 UTC by Omar Ayman
Updated 2025-12-31 15:16:20 UTC by Omar Ayman