Breast Cancer Bone Metastases: Principles of Diagnosis and Management

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Who Gets Bone metastasis?

- Most Common Site in MBC
Survival with Bone Mets

- Median survival for bone-only metastases has been reported to be as high as 72 months in one study but can be substantially less.

- Only 20–30% of patients with breast cancer are expected to achieve 5 year survival post diagnosis of bone metastases.
Survival with Bone Mets – Guy’s data

- 7064 women, 589 (22%) developed bone metastases during 8.4 years (mean).
- Incidence of bone metastases was significantly higher in younger women, tumour size >5 cm, higher tumour grade, lobular carcinoma and four positive nodes, but was not affected by hormone receptor status.
- Median survival after bone metastases diagnosis was 2.3 years in women with bone-only metastases compared with <1 year in women with visceral and bone metastases.
Symptoms?

- Pain
- Fracture
- Hypercalcaemia
- MSCC
- May be asymptomatic
Immediate principles

- Confirm the diagnosis
  - Imaging
  - Biopsy
Imaging

- XR
- Bone Scan
- MRI
- CT scan
- PET/CT

  - Beware Lobular
Getting Tissue from Metastatic Disease

- Confirm Diagnosis
  - recent patient bone lymphoma

- Confirm Receptors
  - But!
    - Decalcification
Immediate principles

➢ Extent of disease
  - Single, oligo or multiple mets
Urgent management issues

- Pain
- High Calcium
- MSCC
Single and Oligo - Bone metastasis

Role of surgery or Ablation/RT?

Literature Review: selection bias, publication bias, small series, retrospective nature.

Suggestion that some patients do well
Role of surgery

LH - 44yrs old
IDC of Breast
Long DFI
Pain in shoulder
Resection of disease - Stanmore
Slowly progressed since
Role of stereotactic RT?

- Useful for control of oligometastatic disease in some patients
- Does it improve OS?
- Some anatomical limitations
- SABR trial
HH -39

- Large operable ca Right breast and an isolated iliac met
- NACT
- Zometa
- Mastectomy ANC
- RT inc Ilium
- Endocrine Rx
- Currently well and disease free
Bisphosphonates

- Reduce bone pain and risk of fractures
- Lower Ca
- IV vs. Oral
- Monthly Zometa vs 3 monthly
- How long for??
Denosumab

- Reduce bone pain and risk of fractures
- Lower Ca

- S/C monthly
- How long for??
- Cost
Multiple Bone Mets

Systemic therapy

- endocrine Rx first-line?

Choice of chemotherapy

- Combinations vs single agent
- HER2 targeted therapy
- Weekly Paclitaxel
- Vinorelbine and Capecitabine
Special scenarios

- Bone marrow failure
  - Weekly paclitaxel
  - Capecitabine
- Risk of fracture/SCC
  - Good links with orthopaedics/neurosurgery
Multiple Bone Mets

pentative and Supportive Care

- Pain control
- RT
- Pall care