ADVANCED BREAST CANCER

PALLIATIVE CARE APPROACHES

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Road map

- Introduction
- Palliative care need and their assessment
- Management of site specific metastases
- Loco-regional palliation
- Palliative psychosocial care
- Approach to palliation
Breast cancer presentation

Figure 1 Stage wise distribution at presentation.
Background

• Approximately 6%–10% of newly diagnosed BC cases are metastatic, whereas 20%–50% of patients with early BC will eventually develop metastatic disease

• Though systemic treatment aims has improved survival in recent years - metastatic breast cancer (MBC) remains an incurable disease

• Hence palliation and supportive care gains importance
Difference between Supportive care and Palliative care

- European association of Palliative Care (EAPC)

- Supportive care is more appropriate for patients still receiving antineoplastic therapy /therapies

- Palliative care has its major focus on patients with far advanced diseases where anti neoplastic therapies have been withdrawn

- WHO –broader definition ; care from diagnosis or at the start of treatment
The BOW-TIE model
Palliative Care need assessment

1. Patient assessment
   - disease status, expected disease progression, present functional level, symptoms, current therapies, and anticipated future problems
   - Patients understanding of the current situation

2. Family assessment
   - Socio-economic assessment, psychosocial concerns, and the adequacy and availability of supports

3. Health care provider assessment
   - Resources available
   - Competence and focus
Management strategies depend on:

- Symptoms
- Location of the disease
- Burden of disease
- Tumor characteristics
- Patient factors
- Available treatment modalities
- Resources available
Management of site specific metastases
Bone metastases

- Bone is the most common site of recurrence in metastatic breast cancer
- reported in up to 70–80% of patients
- 48% of purely osteolytic, 38% being mixed, and 13% being purely osteoblastic
- Causes
  - bone pain
  - Hypercalcemia
  - pathologic fractures
  - spinal cord compression
Osteolytic vs Osteoblastic

Osteolytic pathway

- TGF-B, IGF
- PTHrP, Interleukins, PG-E, TNF, Macrophage factor
- RANK- Ligand

Osteoblastic pathway

- PTHrP, ET-1
- BMP, FGF, PDGF,
- IL-6, MCP-1, VEGF, MIP-2,
- Dkk1

Palliative approaches: ICRO BREAST CANCER : 2019
Bone metastases- management options

- Managing bone pain
  - Analgesics
  - Radiation
  - Surgical interventions
  - Bisphosphonates
  - Radiopharmaceuticals

- Managing established complication of bone Mets
  - Steroids
  - Surgery/radiotherapy

- Preventing complications of bone metastases
  - Bisphosphonates
  - Denosumab
Approach for Bone Management

- DIAGNOSIS
  - IMAGING

Palliative approaches: ICRO BREAST CANCER : 2019
# Imaging for diagnosing bone mets

<table>
<thead>
<tr>
<th>Imaging modality</th>
<th>Anatom ic detail</th>
<th>Extent of imaging</th>
<th>Appearance of bone diseases</th>
<th>Diagnostic sensitivity</th>
<th>Diagnostic specificity</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bone scan</td>
<td>No</td>
<td>Whole body</td>
<td>Hot spots</td>
<td>Varies 62-100%</td>
<td>78-100%</td>
<td>Moderate</td>
</tr>
<tr>
<td>Xray</td>
<td>Yes</td>
<td>Local/regional/w hole body</td>
<td>Lytic/sclerotic/mixed</td>
<td>Low 44-50%</td>
<td>-</td>
<td>Low</td>
</tr>
<tr>
<td>CT</td>
<td>Yes</td>
<td>Local/regional</td>
<td>Lytic/sclerotic for bone , higher attenuation for marrow</td>
<td>High 71-100%</td>
<td>-</td>
<td>Moderate</td>
</tr>
<tr>
<td>MRI</td>
<td>Yes</td>
<td>Regional</td>
<td>Lower or higher intensity on T1/T2 scans</td>
<td>High 71-100%</td>
<td>High 73-100%</td>
<td>Moderate</td>
</tr>
<tr>
<td>PET</td>
<td>No</td>
<td>Whole body</td>
<td>Hot spots</td>
<td>Varies 62-100%</td>
<td>High 96-100%</td>
<td>High</td>
</tr>
</tbody>
</table>
Diagnostic algorithm

Palliative approaches: ICRO BREAST CANCER : 2019
Bone metastases - reactive focus model

**History**
- Bone pain
- Pathological fracture
- Spinal cord compression
- Hypercalcemia symptoms
- Incidental (bloods, imaging)

**Assessment**

**Imaging**
- X-ray
- Bone scan
- CT bone window
- MRI spine
- +/- biopsy

**Bone Metastases Confirmed**
- Analgesia, NSAIDs, steroids
- Bisphosphonates
- Surgery
- Radiotherapy
- Radio-pharmaceuticals (emerging)

**Continuing management**
- Chemotherapy
- Continue until substantial decline
- Hormone therapy
- Clinical trials
Bone metastases - proactive model

1. Identify High-risk individuals
2. Adjuvant Rx + Bisphosphonate
3. Biomarker surveillance

Early breast cancer

Early management

History

Bone Pain
Pathological fracture
Spinal cord compression
Hypercalcemia symptoms
Incidental (bloods, imaging)

Accurate assessment

4. Imaging Algorithm
   - X-ray
   - Bone scan
   - CT bone window
   - MRI spine
   - CT-PET
   - SPECT
   +/- biopsy

Bone metastases confirmed

Acute management

Analgesia, NSAIDs, steroids
Bisphosphonates
Surgery/vertebroplasty
Radiotherapy
Radio-pharmaceuticals

Continuing management

Chemotherapy
Dose/Time using biomarker
“Bone cycle inhibitors”
Hormone therapy
Clinical trials

Palliative approaches: ICRO BREAST CANCER : 2019
Bone metastases- role of Surgery/interventions

- Surgery is usually not the primary choice of treatment in bone metastases
- The main goals of surgical treatment are:
  - to alleviate the pain
  - to prevent an imminent fracture
  - to perform an osteosynthesis in cases of a pathological fracture
  - to restore patient mobility and
  - to improve the patient’s quality of life.
- Surgical intervention for patients with cancer with impending pathologic fractures lead better outcomes than established treatments.
Bone metastases- role of Radiation

- The goals of palliative radiotherapy
  - pain alleviation
  - recalcification and stabilization of the bone
  - Minimising the risk of paraplegia

- Options of radiotherapy
  - Focal radiotherapy
  - Hemibody radiation
  - Radiopharmaceuticals
Bone metastases- role of Radiation : ASTRO guidelines

- Ideal fractionation schedule
  - Equivalence of various fractionation schedules; 30Gy/10#, 24Gy in 6#, 20Gy/5# and 8Gy single #.
  - Fractionated RT – 8% repeat treatment
  - Single Fraction -20% repeat treatment

- When Single Fraction ?
  - Any uncomplicated bone mets
  - Spinal vs non-spinal-?
Bone metastases- role of Radiation: DEGRO guidelines

Therapeutic goal: pain reduction
- Single-dose radiotherapy 1 × 8 Gy (cave: > 8 Gy to the myelon may cause paresis; LoE III)

Therapeutic goal: stabilization, good prognosis
- Fractionated regimen preferable, e.g., 10–12 × 3 Gy (LoE IIb)

Oligometastases
- Full-dose fractionated regimen recommended, e.g., 20–25 × 2 Gy to 40–50 Gy (LoE IIb, III)
Technical aspects

- **Target volume**
  - affected part of bone with additional margin (1-2cm)
  - soft tissue component if present
  - For vertebrae – whole of vertebral body, plus/minus adjacent vertebra
  - Surgical clips/metal components of stabilisation to be included

- **Technique**
  - Most cases simple opposed fields / direct fields
  - Conformal techniques preferable when associated soft tissue component or near vital structures

- **Prescription**
  - Mid vertebral body
Radiation - generalised bone mets

- Hemi body irradiation

- Radionuclide therapy (samarium-153 and strontium-89)
  - For multiple painful mets, greater in number that can be reasonably treated by EBRT
  - most active in areas of bone growth present in osteoblastic metastases
  - pain relief onset of 2-3 weeks, partial response rates of 55-95%, complete response rates of 5-20%.
  - Side effects: pain flare in 10-40% & self-limiting myelosuppression
Bisphosphonates are an important class of therapeutics in reducing the frequency of skeletal-related events (30%–40%) and improving bone pain (50%).

Bisphosphonates inhibit osteoclasts by inducing apoptosis of osteoclasts, and are therefore potent inhibitors of bone resorption.
Choice of Bisphosphonates

### 1.4.1 IV Zolendronate 4 mg

<table>
<thead>
<tr>
<th>Study or subgroup</th>
<th>Treatment Events</th>
<th>Treatment Total</th>
<th>Control Events</th>
<th>Control Total</th>
<th>Weight</th>
<th>Risk ratio M-H, fixed, 95%CI</th>
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</thead>
<tbody>
<tr>
<td>Kohno 2005</td>
<td>35</td>
<td>114</td>
<td>59</td>
<td>113</td>
<td>8.5%</td>
<td>0.59 [0.42, 0.82]</td>
</tr>
<tr>
<td><strong>Subtotal (95% CI)</strong></td>
<td><strong>114</strong></td>
<td><strong>114</strong></td>
<td><strong>59</strong></td>
<td><strong>113</strong></td>
<td><strong>8.5%</strong></td>
<td><strong>0.59 [0.42, 0.82]</strong></td>
</tr>
<tr>
<td>Total events</td>
<td>35</td>
<td>59</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| *Heterogeneity: Not applicable*
| *Test for overall effect: Z = 3.18 (P = 0.001)* |

### 1.4.2 IV Pamidronate 90 mg

<table>
<thead>
<tr>
<th>Study or subgroup</th>
<th>Treatment Events</th>
<th>Treatment Total</th>
<th>Control Events</th>
<th>Control Total</th>
<th>Weight</th>
<th>Risk ratio M-H, fixed, 95%CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aredia 2000</td>
<td>194</td>
<td>367</td>
<td>263</td>
<td>384</td>
<td>37.0%</td>
<td>0.77 [0.69, 0.87]</td>
</tr>
<tr>
<td><strong>Subtotal (95% CI)</strong></td>
<td><strong>367</strong></td>
<td><strong>367</strong></td>
<td><strong>263</strong></td>
<td><strong>384</strong></td>
<td><strong>37.0%</strong></td>
<td><strong>0.77 [0.69, 0.87]</strong></td>
</tr>
<tr>
<td>Total events</td>
<td>194</td>
<td>263</td>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>
| *Heterogeneity: Not applicable*
| *Test for overall effect: Z = 4.30 (P < 0.0001)* |

### 1.4.3 IV Ibbandronate 6 mg

<table>
<thead>
<tr>
<th>Study or subgroup</th>
<th>Treatment Events</th>
<th>Treatment Total</th>
<th>Control Events</th>
<th>Control Total</th>
<th>Weight</th>
<th>Risk ratio M-H, fixed, 95%CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Body 2003</td>
<td>78</td>
<td>154</td>
<td>98</td>
<td>158</td>
<td>13.9%</td>
<td>0.82 [0.67, 1.00]</td>
</tr>
<tr>
<td><strong>Subtotal (95% CI)</strong></td>
<td><strong>154</strong></td>
<td><strong>154</strong></td>
<td><strong>98</strong></td>
<td><strong>158</strong></td>
<td><strong>13.9%</strong></td>
<td><strong>0.82 [0.67, 1.00]</strong></td>
</tr>
<tr>
<td>Total events</td>
<td>78</td>
<td>98</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| *Heterogeneity: Not applicable*
| *Test for overall effect: Z = 2.01 (P = 0.04)* |

### 1.4.4 Oral Ibbandronate 50 mg

<table>
<thead>
<tr>
<th>Study or subgroup</th>
<th>Treatment Events</th>
<th>Treatment Total</th>
<th>Control Events</th>
<th>Control Total</th>
<th>Weight</th>
<th>Risk ratio M-H, fixed, 95%CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Body 2004</td>
<td>130</td>
<td>287</td>
<td>146</td>
<td>277</td>
<td>21.4%</td>
<td>0.86 [0.73, 1.02]</td>
</tr>
<tr>
<td><strong>Subtotal (95% CI)</strong></td>
<td><strong>287</strong></td>
<td><strong>287</strong></td>
<td><strong>146</strong></td>
<td><strong>277</strong></td>
<td><strong>21.4%</strong></td>
<td><strong>0.86 [0.73, 1.02]</strong></td>
</tr>
<tr>
<td>Total events</td>
<td>130</td>
<td>146</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| *Heterogeneity: Not applicable*
| *Test for overall effect: Z = 1.76 (P = 0.08)* |

**Total (95% CI):**

<table>
<thead>
<tr>
<th>Study or subgroup</th>
<th>Treatment Events</th>
<th>Treatment Total</th>
<th>Control Events</th>
<th>Control Total</th>
<th>Weight</th>
<th>Risk ratio M-H, fixed, 95%CI</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total (95% CI)</strong></td>
<td><strong>1130</strong></td>
<td><strong>1146</strong></td>
<td><strong>100.0%</strong></td>
<td></td>
<td></td>
<td><strong>0.79 [0.74, 0.86]</strong></td>
</tr>
<tr>
<td>Total events</td>
<td>548</td>
<td>702</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| *Heterogeneity: Chi² = 6.06, df = 6 (P = 0.42); I² = 1%*
| *Test for overall effect: Z = 6.05 (P < 0.00001)* |
### Existing guidelines

<table>
<thead>
<tr>
<th>ASCO guidelines 2011&lt;sup&gt;70&lt;/sup&gt;</th>
<th>When to start?</th>
<th>Which bisphosphonate?</th>
<th>When to stop?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breast cancer + radiographic evidence of bone destruction:</td>
<td></td>
<td>IV PAM 90 mg every 3–4 weeks OR</td>
<td>Once initiated, to continue until evidence of substantial decline in patient's general performance status</td>
</tr>
<tr>
<td>• Lytic disease on x-ray</td>
<td></td>
<td>IV ZOL 4 mg every 3–4 weeks OR</td>
<td></td>
</tr>
<tr>
<td>• Abnormal bone scan with CT/MR showing bone destruction</td>
<td></td>
<td>SC DMB 120 mg every 4 weeks</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Starting bone modifying agents in women with abnormal bone scan in the absence of bone destruction in X-ray/CT/MR is not recommended.</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>International expert panel guidelines 2008&lt;sup&gt;64&lt;/sup&gt;</th>
<th>When to start?</th>
<th>Which bisphosphonate?</th>
<th>When to stop?</th>
</tr>
</thead>
<tbody>
<tr>
<td>MBC + first sign of radiographic evidence of bone metastases, even if patient is asymptomatic</td>
<td></td>
<td>Nitrogen-bisphosphonate</td>
<td>Continue beyond 2 years but always based on individual risk assessment; should not discontinue treatment once SRE occurs</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• IV preferable (ZOL, IBA, PAM)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• PO for patients who cannot or need not attend hospital care (CLO, IBA)</td>
<td></td>
</tr>
</tbody>
</table>
Metastatic spinal cord compression

- Diagnostic steps for suspected MSCC

History with specific focus on
- Beginning of signs and symptoms
- Localization
- Character of pain (dependence on stress, motion and/or position)
- Time course
- Duration of neurologic deficit/back pain/loss of continence

Clinical examination
- Neurologic examination (motor/sensory deficits)
- Clinical estimation of level of spinal compression
- Work-up of extent of extraspinal metastases

Imaging
Targeted according to clinical examination
- MRI (extent; intradural/extradural/intraspinal masses)
- CT (stability; extent of destruction)
- (Conventional X-rays [extent of deformity, stability])
Guidelines for treatment of MSCC

Instability of vertebral column, bony compression and/or paresis/paraplegia
- Immediate (within maximally 24–48 h) surgical intervention and postoperative radiotherapy (LoE IIb)

Spinal cord compression without neurologic deficits
- In ambulatory patients: radiotherapy (LoE IIb)
- In case of analgesia as additional goal: short course of radiotherapy with increased single doses
- In case of remineralization as additional goal: fractionated radiotherapy with conventional single doses

Acute onset of paresis/paraplegia
- Surgical decompression followed by radiotherapy
- Radiotherapy when decompression is not possible (LoE III)

Inoperability
- Radiotherapy; choice of fractionation depending on life expectancy (LoE III)

After surgical decompression
- Radiotherapy (LoE IIb)

In case of (in-field) recurrence after previous radiotherapy
- Surgery (when possible)
- Reirradiation (using high-precision techniques; LoE IV)
## Bone metastases - management summary

<table>
<thead>
<tr>
<th>Skeletal Related Event</th>
<th>Management</th>
<th>Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bone pain</td>
<td>NSAIDs, Opioids</td>
<td>Analgesic effects</td>
</tr>
<tr>
<td></td>
<td>Bisphosphonates</td>
<td>Inhibition of pathological bone resorption Analgesic effects</td>
</tr>
<tr>
<td></td>
<td>Denosumab</td>
<td>Inhibition of pathological bone resorption Analgesic effects</td>
</tr>
<tr>
<td></td>
<td>Radiation</td>
<td>Analgesic effects Tumor shrinkage</td>
</tr>
<tr>
<td>Pathological bone fracture</td>
<td>Surgery</td>
<td>Stabilization of fracture</td>
</tr>
<tr>
<td></td>
<td>Radiation</td>
<td>Supportive therapy to prevent local recurrence</td>
</tr>
<tr>
<td></td>
<td>Bisphosphonates</td>
<td>Prophylaxis</td>
</tr>
<tr>
<td></td>
<td>Denosumab</td>
<td>Prophylaxis</td>
</tr>
<tr>
<td>Spinal cord compression</td>
<td>Steroids</td>
<td>Stabilization of vascular membranes Reduction of inflammation and edema</td>
</tr>
<tr>
<td></td>
<td>Radiation</td>
<td>Tumor shrinkage effects</td>
</tr>
<tr>
<td></td>
<td>Surgery</td>
<td>Relief for the compression</td>
</tr>
<tr>
<td></td>
<td>Bisphosphonates</td>
<td>Prophylaxis</td>
</tr>
<tr>
<td></td>
<td>Denosumab</td>
<td>Prophylaxis</td>
</tr>
<tr>
<td>Hypercalcemia</td>
<td>Hydration</td>
<td>Promotion of renal calciuresis</td>
</tr>
<tr>
<td></td>
<td>Loop diuretics</td>
<td>Promotion of renal calciuresis</td>
</tr>
<tr>
<td></td>
<td>Bisphosphonates</td>
<td>Inhibition of pathological bone resorption</td>
</tr>
<tr>
<td></td>
<td>Denosumab</td>
<td>Inhibition of pathological bone resorption</td>
</tr>
</tbody>
</table>
Brain metastases

- Brain metastases in breast cancer patients represent a catastrophic event that portends a poor prognosis,
- median survival 2 to 25.3 months despite treatment
- Affects about 20% of patients
- the median time to the development of BM from the diagnosis of primary cancer 30–40 months
- Palliative treatment goals
  - Pain control
  - Improving neurologic function /prevention of deterioration
  - Improving quality of life
### Prognostication

#### Prognosis of Patients With Brain Metastases by Diagnosis-Specific Graded Prognostic Assessment (DS-GPA) Score

<table>
<thead>
<tr>
<th>Lung Cancer</th>
<th>GPA Scoring Criteria</th>
<th>Total Score</th>
<th>Median Survival Time in Months (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Prognostic Factor</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age, years</td>
<td>&gt; 60</td>
<td>0</td>
<td>3.02 (2.63 to 3.84)</td>
</tr>
<tr>
<td></td>
<td>50–60</td>
<td>0.5</td>
<td>2.79 (1.83 to 3.12)</td>
</tr>
<tr>
<td></td>
<td>&lt; 50</td>
<td>1.0</td>
<td></td>
</tr>
<tr>
<td>KPS</td>
<td>&lt; 70</td>
<td>0</td>
<td>5.49 (4.83 to 6.40)</td>
</tr>
<tr>
<td></td>
<td>70–80</td>
<td>0.5</td>
<td>4.90 (4.04 to 6.51)</td>
</tr>
<tr>
<td></td>
<td>90–100</td>
<td>1.0</td>
<td></td>
</tr>
<tr>
<td>ECM</td>
<td>+</td>
<td>n/a</td>
<td></td>
</tr>
<tr>
<td>No. of BM</td>
<td>&gt; 3</td>
<td>2</td>
<td>9.43 (8.38 to 10.80)</td>
</tr>
<tr>
<td></td>
<td>2–3</td>
<td>3</td>
<td>7.67 (6.27 to 9.13)</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>4</td>
<td>17.05 (4.70 to 27.43)</td>
</tr>
<tr>
<td><strong>Total Score</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Melanoma

<table>
<thead>
<tr>
<th>Melanoma</th>
<th>GPA Scoring Criteria</th>
<th>Total Score</th>
<th>Median Survival Time in Months (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Prognostic Factor</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>KPS</td>
<td>&lt; 70</td>
<td>0</td>
<td>3.38 (2.53 to 4.27)</td>
</tr>
<tr>
<td></td>
<td>70–80</td>
<td>1</td>
<td>4.70 (4.07 to 5.39)</td>
</tr>
<tr>
<td></td>
<td>90–100</td>
<td>2</td>
<td>8.77 (6.74 to 10.77)</td>
</tr>
<tr>
<td>No. of BM</td>
<td>&gt; 3</td>
<td>1</td>
<td>13.23 (9.13 to 15.64)</td>
</tr>
</tbody>
</table>

#### Breast Cancer

<table>
<thead>
<tr>
<th>Breast Cancer</th>
<th>GPA Scoring Criteria</th>
<th>Total Score</th>
<th>Median Survival Time in Months (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Prognostic Factor</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>KPS</td>
<td>≤ 50</td>
<td>0</td>
<td>3.35 (3.13 to 3.78)</td>
</tr>
<tr>
<td>Subtype</td>
<td>Basal</td>
<td>0.5</td>
<td>7.70 (5.62 to 8.74)</td>
</tr>
<tr>
<td></td>
<td>LumA</td>
<td>1.0</td>
<td>15.07 (12.94 to 15.87)</td>
</tr>
<tr>
<td></td>
<td>HER2</td>
<td>1.5</td>
<td>25.30 (23.10 to 26.51)</td>
</tr>
<tr>
<td>Age, years</td>
<td>≥ 60</td>
<td>2</td>
<td>7.29 (5.37 to 9.19)</td>
</tr>
<tr>
<td></td>
<td>&lt; 60</td>
<td>3</td>
<td>11.27 (8.80 to 14.80)</td>
</tr>
<tr>
<td></td>
<td>n/a</td>
<td>4</td>
<td>14.77 (9.73 to 19.79)</td>
</tr>
</tbody>
</table>

#### Renal Cell Carcinoma

<table>
<thead>
<tr>
<th>Renal Cell Carcinoma</th>
<th>GPA Scoring Criteria</th>
<th>Total Score</th>
<th>Median Survival Time in Months (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Prognostic Factor</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>KPS</td>
<td>&lt; 70</td>
<td>0</td>
<td>3.13 (2.37 to 4.57)</td>
</tr>
<tr>
<td></td>
<td>70–80</td>
<td>1</td>
<td>4.40 (3.37 to 6.53)</td>
</tr>
<tr>
<td></td>
<td>90–100</td>
<td>2</td>
<td>6.87 (4.86 to 11.63)</td>
</tr>
<tr>
<td>No. of BM</td>
<td>&gt; 3</td>
<td>3</td>
<td>13.54 (9.76 to 27.12)</td>
</tr>
</tbody>
</table>

#### GI Cancers

<table>
<thead>
<tr>
<th>GI Cancers</th>
<th>GPA Scoring Criteria</th>
<th>Total Score</th>
<th>Median Survival Time in Months (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Prognostic Factor</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>KPS</td>
<td>&lt; 70</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>70</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>80</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>90</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>100</td>
<td>4</td>
<td></td>
</tr>
</tbody>
</table>
Brain metastases - management and palliation options

- Symptomatic and supportive
  - Corticosteroids
  - Anti epileptics
  - Anticoagulation

- Local therapy
  - Surgical resection
  - Whole brain radiotherapy
  - SRT/SRS

- Systemic therapy
  - Chemotherapy and biologics

Palliative approaches: ICRO BREAST CANCER : 2019
Brain metastases - management and palliation options

Symptomatic and supportive

- Corticosteroids
  - Improve neurologic symptoms in up to 75% of patients with cerebral edema
  - Dexamethasone is the corticosteroid of choice
  - 4 to 8 mg is as good as 16 mg per day
  - 4 to 8 mg per day in two divided doses - initial choice
  - Higher doses if symptom not relieved within 48 hrs.
  - No specific role in asymptomatic except to prevent radiation induced edema
Brain metastases - management and palliation options

Symptomatic and supportive

- **AEDs**
  - AEDs are indicated in the approximately 25% of patients who present with seizures
  - No role of prophylactic AEDs
  - In patients undergoing resection, short term prophylactic AED reduces risk of post op seizures by 40-50%

- **Anticoagulation therapy**
  - Can be safely given for patients with venous thromboembolism and brain Mets going for surgery
Multiple brain metastases

<table>
<thead>
<tr>
<th>Prognostic category</th>
<th>Other features</th>
<th>Treatment options (evidence grade) references</th>
<th>Clinical benefit</th>
</tr>
</thead>
</table>
| Good prognosis       | All brain metastases ≤3-4 cm | • Radiosurgery and WBRT (level 1)\(^{51,53}\)  
• Radiosurgery alone\(^{23,54}\) (level 1)  
• WBRT (level 1)\(^{59,85}\) | ✓ ✓ ✓ |
| Expected survival 3 mo or more | Brain metastasis/metastases causing significant mass effect | • Safe surgical resection of the brain metastasis/metastases causing significant mass effect and postoperative WBRT (level 3)\(^{25,8}\)  
• WBRT (level 3)\(^{59,85}\) | ✓ ✓ ✓ |
| Good prognosis       | Brain metastasis/metastases causing significant mass effect | | ✓ ✓ |
| Expected survival 3 mo or more | | | ✓ ✓ ✓ |
| Poor prognosis       | | • WBRT (level 3)\(^{59,85}\)  
• Palliative care without WBRT (level 3)\(^{59,85}\) | ✓ ✓ ✓ |

KPS, Karnofsky performance status; LC, local control; S, survival; WB, whole brain; WBRT, whole brain radiotherapy.
WBRT

- Goals of treatment –
  - Response
  - Palliation of symptoms
  - Brain only RFS
  - OS
- Response (clinical and radiological) -> 50%
- Palliation -> 60%
Brain metastases- management and palliation options

- WBRT
  - the most frequently used treatment for multiple BM and improves neurologic symptoms and median survival, from 1 to 2 months without WBRT to 3 to 6 months with it.
  - multiple BMs, oligometastases with poorly controlled systemic disease, Large oligometastases
  - Re-irradiation after late WBRT failure
  - after surgery or SRS
Hippocampal sparing WBRT

- New neurons generation — subgranular zone of hippocampal dentate gyrus
- Dose response relationship between dose to hippocampus and decline of episodic memory
- IMRT — available technology
- Phase II study hippocampal sparing leads to memory preservation
- Phase III trial NRG oncology CC001.
Leptomeningeal metastases

- Diffuse or multifocal involvement of the subarachnoid space
- Poor prognosis - median overall survival <4 months
- Presents with focal /multifocal neurological signs/symptoms
- M/c – headache, cranial nerve palsies, radicular pain

- Gadolinium enhanced MRI – leptomeningeal enhancement in T1+C, often scattered over the brain in a 'sugar coated' manner
- Gadolinium−enhanced MRI +ve in almost 50% with clinical findings & 60% in CSF negative patients
Leptomeningeal metastases

- CSF cytology is less sensitive but more specific
- CSF analysis:
  - ↑ pressure, ↑ protein
  - ↓ glucose, Lymphocytic pleocytosis
- serial CSF study increases sensitivity

Management strategy

**Poor PS**
- Fixed neurological deficit
- Extensive systemic disease
  - Analgesics
  - Corticosteroids
  - Anticonvulsants

**Good PS**
- Little neurological deficit
- Minimal systemic disease
  - Corticosteroids
  - Focal radiotherapy
  - Intrathecal MTX
  - Intrathecal trastuzumab

Palliative approaches: ICRO BREAST CANCER : 2019
Liver metastases

- Living with liver metastases
  - Basic management of liver metastases includes pain control with analgesics and steroids, anti-emetics and antihistamines for nausea or pruritus.
  - Biliary stents and percutaneous drainage for obstructive jaundice
  - Tumor embolization
  - Liver resection
Liver metastases management approach

Breast liver metastases

HPB MDM

Non resectable
Chemotherapy & review
Response
Restage
No response
Palliation

Resectable
±PET-CT
Extrahepatic disease
Chemotherapy/immunotherapy
Liver resection (PVE)
Confined to liver

No response
Response

?palliative liver resection/RFA/SIRT
Lung metastases

- Lung metastasis is common in recurrent/metastatic breast cancer - up to 71% in autopsy series
- Cause respiratory compromise by
  - Direct effect of the metastases on lung tissue
  - Airway obstruction
  - From pleural effusion
- Although surgical resection may prolong survival it is not recommended
- Management
  - Opioids, anxiolytics, antipsychotics & steroids
  - Radiotherapy for haemoptysis and obstruction
Malignant pleural effusion

- Malignant Pleural effusion implies terminal stage of the disease
- MPE - average survival 6-36 months
- M/c symptoms – dyspnoea / breathlessness
- Local plus systemic therapy improves survival then systemic alone

- Goals of treatment
  - Removal of fluid
  - Prevent re-accumulation
Malignant pleural effusion — management strategies

- **Nonsurgical interventions**
  - Repeated thoracentesis
    - Low success
    - Suboptimal quality of life
  - TIPC/IC drainage
    - Improve symptoms
    - Spontaneous pleurodesis in 50%
    - Increased risk of infection
    - Potential Nutritional loss
  - Chemical Pleurodesis — asbestos free talc
    - Safe and effective (97% success)
    - Recommended for those with >6 months survival
    - May develop fatal complications
Surgical interventions

- VATS technique
  - Helps identifying candidates for complete lung expansion and pleurodesis
  - VATS decortication - removal of the pleura or part of it by thoracoscopic ports
  - Adv- direct visualisation, can obtain tissue, allows for checking lung re-expansion, allows distribution of talc in uniform manner

- Initial success rate of 90%
- Reports of survival of 17 months
### Breathlessness - other causes

<table>
<thead>
<tr>
<th>Underlying cause</th>
<th>Potential treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anemia</td>
<td>Blood transfusion</td>
</tr>
<tr>
<td>Acidosis</td>
<td>$\text{HCO}_3$</td>
</tr>
<tr>
<td>Bronchospasm</td>
<td>Bronchodilator therapy</td>
</tr>
<tr>
<td>Pneumonia</td>
<td>Antibiotic therapy</td>
</tr>
<tr>
<td>Pulmonary embolus</td>
<td>Anti-coagulate</td>
</tr>
<tr>
<td>Pneumonitis</td>
<td>Steroids</td>
</tr>
<tr>
<td>Atrial fibrillation</td>
<td>Anti-arrhythmic</td>
</tr>
<tr>
<td>Congestive cardiac failure</td>
<td>Diuretic</td>
</tr>
<tr>
<td>Pericardial tamponade</td>
<td>Drainage</td>
</tr>
<tr>
<td>Pleural effusion</td>
<td>Thoracentesis</td>
</tr>
<tr>
<td>Endobronchial tumor</td>
<td>Endobronchial laser</td>
</tr>
<tr>
<td>Extrinsic compression of bronchus</td>
<td>Radiotherapy</td>
</tr>
<tr>
<td>Carcinomatous lymphangitis</td>
<td>Steroids (anecdotes only)</td>
</tr>
<tr>
<td>Lung metastases</td>
<td>Chemotherapy/hormonal therapy</td>
</tr>
</tbody>
</table>
Bowel obstruction

Physiopathology of MBO

Factors directly related to intra-abdominal tumor growth
- Extrinsic intestinal compression
- Endoluminal intestinal obstruction
- Intramural intestinal infiltration
- Infiltration of the mesenterium and plexus

Factors not directly related to intra-abdominal tumor growth
- Paraneoplastic neuropathy
- Chronic constipation
- Opioid-induced intestinal dysfunction
- Adynamic ileum
- Inflammatory intestinal disease
- Renal insufficiency/dehydratation
- Mesenteric thrombosis
- Postsurgical adherences
- Radiogenic fibrosis
Bowel obstruction

Malignant bowel obstruction

Intestinal distension: accumulation of fluid and gases

Increase peristaltic contractions and endoluminal pressure

Inflammatory intestinal response: prostaglandins, vasoactive intestinal polypeptide (VIP), nociceptive mediators

Hyperemia and edema of intestinal wall

Changes in intestinal wall: increase in endoluminal secretion of \( H_2O, Na^+, Cl^- \)

- Continuous and colic pain
- Nausea and vomiting
- Fecaloid vomiting: bacterial contamination of retained intestinal content (fecaloid appearance)
- Limitation of inferior vena cava venous return
- \( H_2O \) and electrolyte losses
- Deterioration general, metabolic and hemodynamic status
- Diaphragmatic elevation: ventilatory restriction
Bowel obstruction – management options

- GI decompression
- Surgery
- Endoscopic Palliation and stenting
- Percutaneous endoscopic gastrostomy
- Parenteral nutrition
- Pharmacological treatments
  - Morphine
  - Antiemetics
  - Anti secretory drugs
  - Corticosteroids
  - Octeotride
Management of locoregional issues /complications
Fungating lesions

- Chronic pain
- Malodorous discharges
- Bleeding
- Exudative secretions
- Frequent infections
- Maggots

Implications

- Physical
- Psychological
- Social
## Assessment guide for Malodour

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Strong</strong></td>
<td>Odour is evident on entering the room (2–3 metres from the patient) when the dressing is intact</td>
</tr>
<tr>
<td><strong>Moderate</strong></td>
<td>Odour is evident on entering the room (2–3 metres from the patient) when the dressing is removed</td>
</tr>
<tr>
<td><strong>Slight</strong></td>
<td>Odour is evident at close proximity to the patient when the dressing is removed</td>
</tr>
<tr>
<td><strong>No odour</strong></td>
<td>No odour is evident, even at the patient’s bedside, when the dressing is removed</td>
</tr>
</tbody>
</table>
Malodor - Local care

<table>
<thead>
<tr>
<th>Topical Intervention</th>
<th>Citations in Studies, n (%)&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Highest Level of Evidence Achieved</th>
<th>Highest Grade of Recommendation Achieved</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metronidazole</td>
<td>10 (50)</td>
<td>2b</td>
<td>B</td>
</tr>
<tr>
<td>Mesalt® dressing</td>
<td>1 (5)</td>
<td>2b</td>
<td>B</td>
</tr>
<tr>
<td>Curcumin ointment</td>
<td>1 (5)</td>
<td>2c</td>
<td>B</td>
</tr>
<tr>
<td>Activated carbon dressing</td>
<td>2 (10)</td>
<td>2c</td>
<td>B</td>
</tr>
<tr>
<td>Topical arsenic trioxide</td>
<td>1 (5)</td>
<td>4</td>
<td>C</td>
</tr>
<tr>
<td>Essential oils</td>
<td>4 (20)</td>
<td>4</td>
<td>C</td>
</tr>
<tr>
<td>Green tea extract</td>
<td>1 (5)</td>
<td>4</td>
<td>C</td>
</tr>
<tr>
<td>Hydropolymer dressings</td>
<td>1 (5)</td>
<td>4</td>
<td>C</td>
</tr>
<tr>
<td>Antiseptic solutions</td>
<td>1 (5)</td>
<td>5</td>
<td>D</td>
</tr>
<tr>
<td>Hydrogels</td>
<td>1 (5)</td>
<td>5</td>
<td>D</td>
</tr>
<tr>
<td>Debridement enzymes</td>
<td>1 (5)</td>
<td>5</td>
<td>D</td>
</tr>
</tbody>
</table>

<sup>a</sup> Percentage of total citations.
Malodor - Local care

- Malodor causes social embarrassment for the patient and her family and can be psychologically devastating.
- The mainstay of treatment include anticancer therapy, local wound care and local therapy like radiation and surgery.

- Palliative care with highest level of evidence includes:
  - metronidazole
  - mesalt dressing
  - activated carbon dressing
  - and curcumin ointment
Surgery

• Rationale –
  - A reduction in the number of cancer cells/resistant clones
  - debulking
  - Immunocompetency
  - Palliation

• Disadvantages
  - Accelerated regrowth or relapse: release on angiogenic factors and growth factors
  - Complications

• local treatments to palliative management of uncontrolled local and/or regional disease – toilet mastectomy

• bulk of retrospective data suggesting the importance of local treatment of primary tumor in non-oligometastatic breast cancer

Palliative approaches: ICRO BREAST CANCER: 2019
Surgery for fungating wounds

Palliative approaches: ICRO BREAST CANCER : 2019
### Management and Reconstruction in the Breast Cancer Patient With a Fungating T4b Tumor

**Aditya Sood, MD, MBA, Lily N. Daniali, MD, Kameron S. Rezzadeh, BA, Edward S. Lee, MD, and Jonathan Keith, MD**

<table>
<thead>
<tr>
<th>Variable</th>
<th>n (%)</th>
<th>n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Location of first presentation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emergency department</td>
<td>3 (25)</td>
<td>Healed</td>
</tr>
<tr>
<td>Charity care clinic/community clinic</td>
<td>7 (58)</td>
<td>Open wound requiring dressings</td>
</tr>
<tr>
<td>Private office</td>
<td>2 (17)</td>
<td>Not reported</td>
</tr>
<tr>
<td><strong>Chief complaint on presentation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Open wound and/or skin involvement</td>
<td>12 (100)</td>
<td></td>
</tr>
<tr>
<td>Pain</td>
<td>8 (66)</td>
<td>Reduced pain</td>
</tr>
<tr>
<td>Malodorous drainage</td>
<td>3 (25)</td>
<td>Persistent or increased pain</td>
</tr>
<tr>
<td>Breast mass increasing in size</td>
<td>3 (25)</td>
<td>Not reported</td>
</tr>
<tr>
<td><strong>Postoperative pain palliation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Surgical site at 6-wk follow-up</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Healed</td>
<td>7 (58)</td>
<td></td>
</tr>
<tr>
<td>Open wound requiring dressings</td>
<td>3 (25)</td>
<td></td>
</tr>
<tr>
<td>Not reported</td>
<td>2 (17)</td>
<td></td>
</tr>
<tr>
<td><strong>Postoperative wound palliation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Improved wound qualities (odor, drainage)</td>
<td>10 (84)</td>
<td></td>
</tr>
<tr>
<td>Unimproved wound qualities</td>
<td>1 (8)</td>
<td></td>
</tr>
<tr>
<td>Not reported</td>
<td>1 (8)</td>
<td></td>
</tr>
<tr>
<td><strong>Adjuvant therapy</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chemotherapy</td>
<td>4 (33)</td>
<td></td>
</tr>
<tr>
<td>Radiation</td>
<td>1 (8)</td>
<td></td>
</tr>
</tbody>
</table>

Palliative approaches: ICRO BREAST CANCER : 2019
Breast surgery for metastatic breast cancer (Review)

Tosello G, Torloni MR, Mota BS, Neeman T, Riera R

1.5.1 Local progression-free survival

<table>
<thead>
<tr>
<th>Study or Subgroup</th>
<th>log[Hazard Ratio]</th>
<th>SE</th>
<th>Weight</th>
<th>Hazard Ratio IV, Random, 95% CI</th>
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</thead>
<tbody>
<tr>
<td>Badwe 2015</td>
<td>-1.83</td>
<td>0.244</td>
<td>73.7%</td>
<td>0.16 [0.10, 0.26]</td>
</tr>
<tr>
<td>Scrän 2016</td>
<td>-0.7</td>
<td>0.816</td>
<td>26.3%</td>
<td>0.50 [0.10, 2.46]</td>
</tr>
<tr>
<td>Subtotal (95% CI)</td>
<td></td>
<td></td>
<td>100.0%</td>
<td>0.22 [0.08, 0.57]</td>
</tr>
</tbody>
</table>

Heterogeneity: $\tau^2 = 0.28; \chi^2 = 1.76, df = 1 (P = 0.18); I^2 = 43\%$

Test for overall effect: $Z = 3.08 (P = 0.002)$

1.5.2 Distant progression-free survival

<table>
<thead>
<tr>
<th>Study or Subgroup</th>
<th>Hazard Ratio IV, Random, 95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Badwe 2015</td>
<td>1.42 [1.08, 1.86]</td>
</tr>
<tr>
<td>Subtotal (95% CI)</td>
<td>1.42 [1.08, 1.86]</td>
</tr>
</tbody>
</table>

Heterogeneity: Not applicable

Test for overall effect: $Z = 2.55 (P = 0.01)$
Radiotherapy for fungating wounds

- Numerous observational and single arm studies
- Palliative radiation has a high response rate and is associated with a median local progression-free survival of 10 months.
- Linear correlation between tumor dose and local control such that a 15 Gy increase in dose potentially increases local control by twofold.
- Best control rates with doses above 30 Gy
- Most prevalent fractionation scheme is 30 Gy in 10 fractions - though wide variation; single fraction to up to 30 # are reported
- Tangential beam most commonly used, though VMAT for complex volumes
Malodor scores

Pain scores

Palliation achieved

Original Article
Palliative radiotherapy for breast cancer patients with skin invasion: a multi-institutional prospective observational study
Naoki Nakamura¹,²,*, Jiro Kawamori², Osamu Takahashi³,

Palliative approaches: ICRO BREAST CANCER : 2019
Pain management

- Assessment of pain
- Evaluating the cause of pain

FREEDOM FROM PAIN

1. Nonopioid ± Adjuvant
2. Opioid for mild to moderate pain ± Nonopioid ± Adjuvant
3. Opioid for moderate to severe pain ± Nonopioid ± Adjuvant

- Titrate until adequate pain control is achieved.
- Proceed to next step if pain persists or increases.
- Proceed to next step if pain persists or increases.
Pain management – modified ladder

1. Nonopioid analgesics
   Psychological counseling
   ± Adjuvant therapy

2. Weak opioids
   Psychological counseling
   ± Nonopioid analgesics
   ± Adjuvant therapy

3. Immediate or sustained release
   strong opioids
   Psychological counseling
   ± Nonopioid analgesics
   ± Adjuvant therapy

Proceed to next step if pain persists or increases

Proceed to next step if pain persists or increases

Titrate until adequate pain control is achieved; proceed to next step if patient is still in pain or develops severe side effects from therapy

Palliative approaches: ICRO BREAST CANCER: 2019
Pain management – modified ladder

- Intrathecal opioids (tunneled catheters, implantable pumps)
- Peripheral neurodestruction (alcohol/phenol blocks, radiofrequency procedures, etc.)
- Spinal cord or peripheral nerve stimulation
- Psychological counseling
  - Nonopioid analgesics
  - Adjuvant therapy

Considered in patients who failed all nonsurgical treatment options or developed severe side effects from conventional opioid therapy and have life expectancy more than 3 months

- Central neurodestructive procedures (rhizotomy, ganglionectomy, cordotomy, myelotomy, tractotomy, thalamotomy, etc.)
- Operations on limbic system (cingulotomy)
- Psychological counseling
  - Intrathecal opioids
  - Adjuvant therapy

Rarely used nowadays but may be still considered if all other treatment modalities fail particularly in patients with life expectancy less than 3 months

Palliative approaches: ICRO BREAST CANCER : 2019
# Palliative Psychosocial Care

## Palliative Care Resource Allocations: Pain Management and End-of-Life Care with Metastatic Disease

<table>
<thead>
<tr>
<th>Basic</th>
<th>Limited</th>
<th>Enhanced</th>
<th>Maximal</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pain Management</strong>&lt;sup&gt;a&lt;/sup&gt;</td>
<td>Pain consideration&lt;sup&gt;b&lt;/sup&gt; (simple assessment)</td>
<td>Other pain drugs&lt;sup&gt;a&lt;/sup&gt;</td>
<td>Pain screening</td>
</tr>
<tr>
<td></td>
<td>Pain drugs&lt;sup&gt;a&lt;/sup&gt;, including morphine (basic)</td>
<td>Radiotherapy (single and multi-fraction)</td>
<td>Pain care plan</td>
</tr>
<tr>
<td></td>
<td>Management of pain-related physical symptoms</td>
<td>PT and OT for functional limitations or pain management</td>
<td>Opioid pumps, methadone, fentanyl patch</td>
</tr>
<tr>
<td></td>
<td>CAM and non-drug pain management</td>
<td></td>
<td>Consultation with specialist in pain therapy</td>
</tr>
<tr>
<td><strong>Psychosocial (End-of-life)</strong></td>
<td>Psychosocial (end-of-life) consideration&lt;sup&gt;b&lt;/sup&gt;</td>
<td>Patient, family, and caregiver education&lt;sup&gt;c&lt;/sup&gt;: emotional aspects of death</td>
<td>Screening and referrals for depression/distress by mental health specialist</td>
</tr>
<tr>
<td></td>
<td>Patient, family, and caregiver education&lt;sup&gt;c&lt;/sup&gt;</td>
<td>Advanced care planning</td>
<td>Psychosocial counseling by mental health specialist</td>
</tr>
<tr>
<td></td>
<td>Psychosocial support: community-based</td>
<td></td>
<td>Antidepressants</td>
</tr>
<tr>
<td></td>
<td>Bereavement support: community based</td>
<td></td>
<td>Social services for financial, legal and family matters</td>
</tr>
<tr>
<td><strong>Spiritual (End-of-life)</strong></td>
<td>Spiritual consideration&lt;sup&gt;b&lt;/sup&gt;</td>
<td></td>
<td>Clinic or hospital associated spiritual support</td>
</tr>
<tr>
<td></td>
<td>Spiritual support: community based</td>
<td></td>
<td>Hospital or hospice spiritual reflection and meditation space</td>
</tr>
</tbody>
</table>

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Palliative approaches: ICRO BREAST CANCER: 2019
Evaluation and management of common psychological symptoms

- **Anxiety**
  - Anxiolytic pharmacotherapy
    - Benzodiazepines and nonbenzodiazepine anxiolytics
  - Nonpharmacological interventions
    - Supportive psychotherapy and behavioral interventions

- **Depression**
  - Pharmacological
    - SSRI – third generation preferred (venlaflaxine /trazodone)
    - TCA – for those suffering from agitation
    - Psychostimulants –methylphenidate (rapid action)
  - Non pharmacological
    - Supportive psychotherapy, cognitive-behavioral techniques

- **Existential suffering**
Conclusion

- Patients with advanced breast cancer and their families have complex needs, which, when unmet, can result in severe distress and undermine their quality of life.
- The management depends on patient symptoms, location of the metastases, burden of disease, co-morbidities and other patient factors along with resource availability.
- Management of the physical complications of metastatic disease involves similar interventions as the management of early-stage disease.
- Additional palliative care needs include supportive care services that can address end-of-life symptom and pain management, as well as psychosocial and spiritual concerns.
- Optimizing and individualizing therapy requires the full engagement of an interdisciplinary approach to palliative care with strong emphasis on the assessment of needs and anticipated needs.