
*Protocol Code*  
**BRAVPAM**

*Tumour Group*  
**Breast**

*Contact Physician*  
**Dr. Karen Gelmon**

**ELIGIBILITY:**
- To prevent skeletal related events for metastatic breast cancer

**TESTS:**
- Completion of necessary dental work is recommended prior to starting pamidronate
- Every 3rd treatment: serum creatinine
- If clinically indicated: serum calcium* and albumin (or ionized calcium)
  
  *corrected calcium (mmol/L) = total calcium (mmol/L) + (0.02 x [40 – albumin in g/L])

**PREMEDICATIONS:**
- None

**TREATMENT:**

<table>
<thead>
<tr>
<th>Drug</th>
<th>Dose</th>
<th>BC Cancer Administration Guideline</th>
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<tbody>
<tr>
<td>pamidronate</td>
<td>90 mg</td>
<td>IV in 250 mL NS over 1 hour</td>
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Repeat once monthly

**DOSE MODIFICATIONS:**

1. Renal dysfunction:
   - There is limited experience with pamidronate in patients with serum creatinine greater than 440 micromol/L; caution is required.
PRECAUTIONS:
1. Pamidronate should NEVER be given as a bolus since severe local reactions and thrombophlebitis may result from high concentrations.
2. **Symptomatic hypocalcemia** (e.g., muscle spasms, irritability) may occur and may require calcium supplement. Avoid concomitant use of other calcium lowering agents such as corticosteroids and loop diuretics.
3. After the use of bisphosphonates, there is a persistent risk of jaw osteonecrosis. Patients in whom bisphosphonates are planned should have prophylactic assessment and management by a dentist and all later dental work should be undertaken cautiously by dental specialists experienced in the recognition and management of jaw osteonecrosis.
4. **Duration of treatment:** The BC Cancer Breast Systemic Tumour Group recommends a maximum continuous exposure of patients to bisphosphonates of 2-3 years, due to increasing incidence of atypical femoral fractures with prolonged use. However patients may be treated for longer if additional clinical benefit is likely in the judgement of their treating oncologist.

Call Dr. Karen Gelmon or tumour group delegate at (604) 877-6000 or 1-800-663-3333 with any problems or questions regarding this treatment program.

References: