BCCA Protocol Summary for Treatment of Acute Bone Pain Secondary to Breast Cancer Metastases Using IV Zoledronic Acid

Protocol Code *BRAVZOL*

Tumour Group *Breast*

Contact Physician *Dr. Stephen Chia*

ELIGIBILITY:

- Acute bone pain secondary to metastatic breast cancer
- Advanced breast cancer with radiological and/or clinical evidence of metastases to bone
- Treated with pamidronate (BRAVPAM) for at least 9 doses
- Adequate renal function (CrCl ≥ 30 mL/min)

TESTS:

- Completion of necessary dental work is recommended prior to starting zoledronic acid
- Baseline and prior to each 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:

Drug	Dose	BCCA Administration Guideline
Zoledronic acid	4 mg	IV in 100 mL NS over 15 minutes

Repeat once every 12 weeks

DOSE MODIFICATIONS:

1. Renal dysfunction:

Creatinine clearance (mL/min)	Dose
>60	4 mg
50-60	3.5 mg
40-49	3.3 mg
30-39	3 mg
< 30	not recommended

- There is limited experience with zoledronic acid in patients with serum creatinine greater than 440 micromol/L; caution is required.

Activated: 1 Sep 2017 Revised: 1 Feb 2018 (CAP requirement deleted)

PRECAUTIONS:

1. Zoledronic acid 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 BCCA 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. Stephen Chia or tumour group delegate at (604) 877-6000 or 1-800-663-3333 with any problems or questions regarding this treatment program.

References:

1. Fornier M. Less intense dosing schedule for a bone-modifying agent. JAMA Oncol. 2017;3(7):893-894.
2. Hortobagyi GN, Van Poznak C, Harker WG, et al. Continued treatment effect of zoledronic acid dosing every 12 vs 4 weeks in women with breast cancer metastatic to bone. The OPTIMIZE-2 randomized clinical trial. JAMA Oncol. 2017;3(7):906-912.