BC Cancer Protocol Summary for Adjuvant Therapy for Breast Cancer in post-menopausal Women using 6-Monthly Zoledronic Acid

Protocol Code	*BRAJZOL5*
Tumour Group	*Breast*
Contact Physician	*Dr. Stephen Chia*

ELIGIBILITY:

Patient must have:

- Postmenopausal status (including women with chemically induced menopause with LHRH agonists)
- Initial stage II or III only (pT2-4 pN0-3; pT0-4pN1-3), or
- Post neo-adjuvant chemotherapy stage ypT2-4 ypN0-3; ypT0-4 ypN1-3
- Biomarkers: ER any PR any
- Bisphosphonate therapy recommended to begin within 1 year of diagnosis and should start no later than 18 months of definitive breast cancer surgery

Patient should have:

- Adequate renal function (creatinine clearance greater than or equal to 30 mL/minute)

TESTS:

- Completion of necessary dental assessment and dental work is recommended prior to starting zoledronic acid
- Baseline and prior to each treatment: creatinine
- If clinically indicated, at baseline and throughout treatment: calcium*, albumin, ionized calcium

  *corrected calcium (mmol/L) = total calcium (mmol/L) + (0.02 x [40 – albumin in g/L])

PREMEDICATIONS:

- None

TREATMENT:

Drug	Dose	BC Cancer Administration Guideline
zoledronic acid	4 mg	IV in 100 mL NS over 15 minutes

Repeat once every 24 weeks for 5 years

DOSE MODIFICATIONS:

1. **Renal dysfunction: Zoledronic acid**

Creatinine clearance (mL/minute)	Dose
Greater than or equal to 60	4 mg
50 to less than 60	3.5 mg
40 to less than 50	3.3 mg
30 to less than 40	3 mg
less than 30	not recommended

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

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

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:

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3. Early Breast Cancer Trialists' Collaborative Group (EBCTCG). Adjuvant bisphosphonate treatment in early breast cancer: meta-analyses of individual patient data from randomised trials. Lancet 2015;386(10001):1353-61. Erratum in: Lancet 2016;387(10013):30.
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anastrozole plus ovarian function suppression in premenopausal early breast cancer: final analysis of the Austrian Breast and Colorectal Cancer Study Group Trial 12. Ann Oncol 2015;26(2):313-20.
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6. Powles T, Paterson A, McCloskey E, et al. Reduction in bone relapse and improved survival with oral clodronate for adjuvant treatment of operable breast cancer [ISRCTN83688026]. Breast Cancer Res 20068(2):R13. Erratum in: Breast Cancer Res 2006;8(3):406.