BC Cancer Protocol Summary for Therapy for Advanced Breast Cancer using a LHRH Agonist and an Aromatase Inhibitor

Protocol Code	*BRAVLHRHAI*
Tumour Group	*Breast*
Contact Physician	*Dr. Nathalie Levasseur*

ELIGIBILITY:

Patients must:

- Have locally advanced inoperable or metastatic endocrine receptor positive breast cancer, and
- Be either:
  - Premenopausal women (defined as those who have menstruated in the last 12 months or who are biochemically premenopausal), or
  - Male patients

TESTS:

- If clinically indicated: CBC & Diff, platelets, creatinine, total bilirubin, ALT, alkaline phosphatase, GGT, LDH, calcium, albumin, CA 15-3, serum cholesterol, triglycerides

TREATMENT:

Drug	Dose	BC Cancer Administration Guideline
letrozole	2.5 mg daily	PO
or		
anastrozole	1 mg daily	PO
or		
exemestane	25 mg daily	PO
buserelin long acting (SUPREFACT DEPOT)**	6.3 mg every 8 weeks *	subcutaneous
or		
goserelin long acting (ZOLADEX)**	3.6 mg every 4 weeks	subcutaneous
or		
leuprolide long acting (LUPRON DEPOT)**	7.5 mg every 4 weeks	IM

Continue treatment until disease progression. Strongly consider surgical oophorectomy in responding patients.

* buserelin 6.3 mg every 8 weeks is an option for post cycle 1 if there is toxicity or break through on other LHRH agents.

** Once response has been established, the following long-acting agents may be substituted at the physician's discretion. Menstrual function, and if necessary, hormone levels can be monitored to ensure effective dosing.

Drug	Dose	BC Cancer Administration Guideline
buserelin long acting (SUPREFACT DEPOT)*	9.45 mg every 12 weeks	subcutaneous
or		
goserelin long acting (ZOLADEX LA)*	10.8 mg every 12 weeks	subcutaneous
or		
leuprolide long acting (LUPRON DEPOT)*	22.5 mg every 12 weeks	IM

PRECAUTIONS:

1. Hepatic dysfunction: Aromatase inhibitors are considered safe in mild-to-moderate hepatic dysfunction but have not been studied in severe hepatic dysfunction.
2. Bone density: The long-term effects of aromatase inhibitors on bone density are unknown. Supplementation with calcium and vitamin D and regular weight bearing exercise is recommended. A bisphosphonate should be considered if clinically indicated. Caution in patients with an already established diagnosis of clinically significant osteoporosis.
3. Hyperlipidemia: An increase in cholesterol or triglyceride levels may occur when an aromatase inhibitor is initiated. Levels may need to be checked during the first few months of therapy, especially in those patients with prior significant lipid elevations.

Call Dr. Nathalie Levasseur or tumour group delegate at (604) 877-6000 or 1-800-670-3322 with any problems or questions regarding this treatment program.

References:

1. Klijn JG, Beex LV, Mauriac L, et al. Combined treatment with buserelin and tamoxifen in premenopausal metastatic breast cancer: a randomized study. J Natl Cancer Inst 2000;92(11):903-11.
2. Klijn JGM, Blamey RW, Boccardo F, et al. Combined tamoxifen and luteinizing hormone-releasing hormone (LHRH) agonist versus LHRH agonist alone in premenopausal advanced breast cancer: a meta-analysis of four randomized trials. J Clin Oncol 2001;19(2):343-53.
3. Gnant M, Mlineritsch B, Schippinger W, et al. Endocrine Therapy plus zoledronic acid in premenopausal breast cancer. N Engl J Med 2009; 360:679-91.
4. Masuda N, et al. Monthly versus 3-monthly goserelin acetate in premenopausal patients with estrogen receptor positive early breast cancer. Breast Cancer Res Treat. 2011;126(2):443-51.