BCCA Protocol Summary for Neoadjuvant or Adjuvant Therapy for Breast Cancer Using a LHRH Agonist and Tamoxifen

**Protocol Code**  
BRAJLHRHT

**Tumour Group**  
Breast

**Contact Physician**  
Dr. Stephen Chia

**ELIGIBILITY:**
- premenopausal women (defined as those who have menstruated in the last three months or who are biochemically premenopausal)
- hormone receptor positive
- May be given preoperatively in premenopausal women with hormone receptor positive breast cancer who are unsuitable for immediate surgery or preoperative chemotherapy
- node positive/high risk node negative patients who have turned down recommended adjuvant chemotherapy or
- low risk node negative patients for whom goserelin and tamoxifen would be a reasonable alternative to chemotherapy

**EXCLUSIONS:**
- Patients with a history of significant thromboembolic disease

**TESTS:**
- Annually: gynecological exam

**TREATMENT:**

<table>
<thead>
<tr>
<th>Drug</th>
<th>Dose</th>
<th>BCCA Administration Guideline</th>
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</thead>
<tbody>
<tr>
<td>tamoxifen</td>
<td>20 mg daily x 5 years</td>
<td>PO</td>
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<tr>
<td>buserelin (base) depot</td>
<td>6.3 mg every 6 weeks x 2 treatments then</td>
<td>SC</td>
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<tr>
<td>(SUPREFACT DEPOT®)* or</td>
<td>every 8 weeks x 3 years</td>
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<tr>
<td>goserelin (ZOLADEX®)* or</td>
<td></td>
<td>SC</td>
</tr>
<tr>
<td>leuprolide (LUPRON®)*</td>
<td>3.6 mg every 4 weeks x 3 years</td>
<td>SC</td>
</tr>
<tr>
<td></td>
<td>7.5 mg every 4 weeks x 3 years</td>
<td>IM</td>
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</tbody>
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Surgical oopherectomy should be strongly considered in older pre-menopausal women who do not want to preserve their fertility and who are tolerating the menopausal side effects of therapy.

Warning: The information contained in these documents are a statement of consensus of BC Cancer Agency professionals regarding their views of currently accepted approaches to treatment. Any clinician seeking to apply or consult these documents is expected to use independent medical judgement in the context of individual clinical circumstances to determine any patient's care or treatment. Use of these documents is at your own risk and is subject to BC Cancer Agency's terms of use available at [www.bccancer.bc.ca/legal.htm](http://www.bccancer.bc.ca/legal.htm).
*Once response has been established, the following long-acting agents may be substituted at the physician’s discretion for a total of 3 years of therapy. Menstrual function, and if necessary, hormone levels can be monitored to ensure effective dosing.

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<tr>
<td>buserelin (base) depot (SUPREFACT DEPOT®) or goserelin (ZOLADEX®) or leuprolide (LUPRON®)</td>
<td>9.45 mg every 12 weeks</td>
<td>SC</td>
</tr>
<tr>
<td></td>
<td>10.8 mg every 12 weeks</td>
<td>SC</td>
</tr>
<tr>
<td></td>
<td>22.5 mg every 12 weeks</td>
<td>IM</td>
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</table>

**PRECAUTIONS:**

1. **Myelosuppression:** Mild myelosuppression with transient thrombocytopenia may occur rarely. The association with tamoxifen is uncertain.
2. **Endometrial Cancer:** Annual gynecologic examinations are recommended. Pelvic complaints, such as unusual vaginal bleeding, require prompt evaluation.
3. **Ocular Toxicity:** Ocular toxicity is rare and may occur after only a few weeks of therapy, although it is more common with prolonged treatment. Ophthalmologic examination is recommended if visual disturbances occur.
4. **Thromboembolism:** Tamoxifen is associated with an increased risk of thromboembolism that is comparable to estrogen replacement therapy.
5. **Hepatotoxicity:** While hepatotoxicity is rare and usually presents as elevated hepatic enzymes, more serious liver abnormalities have been reported.
6. **Hyperlipidemia:** Elevations in cholesterol and triglycerides may occur in patients with pre-existing hyperlipidemias.

**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.**

**Date activated:** 1 June 2006 (replacing BRAJGT)

**Date revised:** 1 July 2015 (Title and eligibility clarified)

**References:**
