

DRUG NAME: Testosterone**SYNONYM(S):** testosterone enanthate**COMMON TRADE NAME(S):** DELATESTRYL®**CLASSIFICATION:** hormonal agent*Special pediatric considerations are noted when applicable, otherwise adult provisions apply.***MECHANISM OF ACTION:**

Testosterone is an androgen which is normally synthesized by the testes, adrenal glands, and ovarian follicles. Endogenous androgen can be converted into estrogen by aromatase in peripheral tissues (e.g., muscle, adipose tissue, breast, ovarian granulosa cells). The exact mode of action for androgen therapy in breast cancer is unclear. Synthetic androgens may bind to the aromatase to prevent conversion of endogenous androgens to estrogens, thus inhibiting the growth of estrogen-dependent breast cancer.¹

USES:**Primary uses:**Breast cancer²**Other uses:**

*Health Canada approved indication

SPECIAL PRECAUTIONS:**Contraindications:**

- avoid in pregnant women or those who may become pregnant as it may cause masculinization of the female fetus³

Caution:

- testosterone enanthate is formulated in sesame oil³

SIDE EFFECTS:

The table includes adverse events that presented during drug treatment but may not necessarily have a causal relationship with the drug. Because clinical trials are conducted under very specific conditions, the adverse event rates observed may not reflect the rates observed in clinical practice. Adverse events are generally included if they were reported in more than 1% of patients in the product monograph or pivotal trials, and/or determined to be clinically important. When placebo-controlled trials are available, adverse events are included if the incidence is $\geq 5\%$ higher in the treatment group.

ORGAN SITE	SIDE EFFECT
Clinically important side effects are in <i>bold, italics</i>	
dermatology/skin	<i>extravasation hazard: none</i> ⁴
	injection site pain when given as IM
endocrine	virilization in women (e.g., voice changes, clitoromegaly)
gastrointestinal	<i>emetogenic potential: rare</i> ⁵
metabolic/laboratory	worsening of hypercalcemia
syndrome	worsening of tumour growth during initial therapy

Adapted from standard reference⁶ unless specified otherwise.

SUPPLY AND STORAGE:

Injection: Valeant Canada LP supplies testosterone enanthate as 1000 mg ready-to-use vials in a concentration of 200 mg/mL. Product is formulated in sesame oil. Chlorobutanol 0.5% is added as a preservative. Store at room temperature.³

SOLUTION PREPARATION AND COMPATIBILITY:

Testosterone enanthate should not be mixed with other drugs.⁶

PARENTERAL ADMINISTRATION:

BC cancer administration guideline noted in **bold, italics**

Subcutaneous	no information found
Intramuscular	into the gluteal muscle³
Direct intravenous	no information found
Intermittent infusion	no information found
Continuous infusion	no information found
Intraperitoneal	no information found
Intrapleural	no information found
Intrathecal	no information found
Intra-arterial	no information found
Intravesical	no information found

DOSAGE GUIDELINES:

Refer to protocol by which patient is being treated. Numerous dosing schedules exist and depend on disease, response and concomitant therapy.

Adults:

BC Cancer usual dose noted in **bold, italics**

Intramuscular^{7,8}:

Cycle Length:

2 to 4 weeks: 200-400 mg IM for one dose on day 1

REFERENCES:

1. Ellis MJ, Swain SM. Steroid hormone therapies for cancer. Cancer Chemotherapy & Biotherapy. Philadelphia: Lippincott Williams & Wilkins; 2001. p. 91.
2. Boni C, Pagano M, Panebianco M, et al. Therapeutic activity of testosterone in metastatic breast cancer. Anticancer Research 2014;34(3):1287-1290.
3. Valeant Canada LP. DELATESTRYL® product monograph. Laval, Quebec; 1 May 2014.
4. BC Cancer Provincial Systemic Therapy Program. Provincial Systemic Therapy Program Policy III-20: Prevention and Management of Extravasation of Chemotherapy. Vancouver, British Columbia: BC Cancer; January 2016.
5. BC Cancer. (SCNAUSEA) Guidelines for Prevention and Treatment of Chemotherapy-induced Nausea and Vomiting in Adults. Vancouver, British Columbia: BC Cancer; 1 Dec 2018.
6. Repchinsky C editor. DELASTRYL® monograph, Compendium of Pharmaceuticals and Specialties. Ottawa, Ontario: Canadian Pharmacists Association; 2007.
7. BC Cancer Agency Breast Tumour Group. (BRAVTEST) BCCA Protocol Summary for Palliative Therapy for Metastatic Breast Cancer Using Testosterone Enanthate. Vancouver: BC Cancer Agency; 1 May 2009.
8. Lexi-Drugs® (database on the Internet). Testosterone. Lexi-Comp Inc., 2 July 2019. Available at: <http://online.lexi.com>. Accessed 2 July 2019.