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# Transdermal 17beta-Estradiol Gel BHR-200

National Cancer Institute

## Source

National Cancer Institute. *Transdermal 17beta-Estradiol Gel BHR-200*. NCI Thesaurus. Code C120308.

A proprietary, transdermal, hydroalcoholic gel formulation containing 17beta-estradiol, with potential antineoplastic activity. Upon topical administration, 17beta-estradiol exerts its antineoplastic effect(s) through as of yet not fully elucidated mechanism(s) of action(s). This formulation may induce feedback inhibition via the hypothalamic-pituitary-gonadal axis feedback loop, block the secretion of luteinizing hormone (LH) and prevent the release of testosterone from Leydig cells in the testes, thus suppressing testosterone secretion. In addition, 17beta-estradiol inhibits enzymes involved in steroidogenesis, thereby further inhibiting androgen production. Since testosterone is required to sustain prostate growth, reducing testosterone levels may inhibit hormone-dependent prostate cancer cell proliferation. In addition, 17beta-estradiol prevents bone loss, and suppresses andropause symptoms, such as hot flashes, which appear during androgen-deprivation therapy (ADT) where the standard of care is the use of gonadotrophin releasing hormone (GnRH) analogs. Compared to oral estrogens, the topical gel formulation lowers the risk of cardiovascular side effects.