

PROSTATE CANCER

HORMONAL THERAPY FOR PROSTATE CANCER

CATEGORY	GENERIC (BRAND)	MECHANISM OF ACTION	DOSE	COMMON SIDE-EFFECTS
Antiandrogen	Bicalutamide (Casodex [®])	Antiandrogen	50 mg PO QD <i>Use with caution in moderate-severe hepatic impairment</i>	Hot flashes
Antiandrogen	Flutamide (Eulexin [®])	Antiandrogen	250 mg PO TID	Nausea/vomiting/diarrhea; impotence; loss of libido; hot flashes
Antiandrogen	Ketoconazole (Nizoral [®]) – NOT FDA approved prostate cancer <i>**Watch for drug interactions***</i>	At higher doses, inhibits testosterone secretion and cortisol synthesis	400 mg PO Q8H <i>Consider dose reduction in severe liver impairment</i>	Nausea, vomiting; gynecomastia; loss of libido; impotence; increased hepatic enzymes
Antiandrogen	Nilutamide (Nilandron [®])	Antiandrogen	300 mg PO QD x 30 days, then 150 mg PO QD	Pain; headaches; nausea; constipation; anorexia; impotence; testicular atrophy; gynecomastia; loss of libido; hot flashes; weakness; impaired ocular adaptation to dark
GHRH analog	Leuprolide acetate (Lupron [®] , Lupron Depot [®])	Gonadotrophin releasing hormone analog	1 mg SQ QD OR 7.5mg IM Qmonth OR 22.5 mg IM Q3months OR 30mg IM Q4months OR Viadur implants SQ Q12months	Depression; pain; hot flashes; weight gain; nausea/vomiting
GHRH analog	Goserelin (Zoladex [®])	Gonadotrophin releasing hormone analog	3.6 mg SQ Q28D OR 10.8 mg SQ Q 12 weeks	Gynecomastia; post-menopausal symptoms; sexual dysfunction; loss of libido; hot flashes; impotence; ↓ erection
GHRH analog	Abarelix (Plenaxis [®])	Gonadotrophin releasing hormone antagonist	100 mg IM Day 1, 15 and 29, then every 4 weeks	Hot flashes; gynecomastia

Reference: [Loblaw DA, et al. American Society of Clinical Oncology Recommendations for the Initial Hormonal Management of Androgen-Sensitive Metastatic, Recurrent, or Progressive Prostate Cancer. J Clin Oncol 2004;22:2927 - 41.](#)

PROSTATE CANCER CHEMOTHERAPY

DOCETAXEL (WEEKLY)

Docetaxel‡	35 mg/m ²	IV*	Days 1, 8, 15, 22, 29 and 36
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‡Routine premedication administered; *Administer over 1 hour.

Repeat cycle every 8 weeks to a maximum of 4 cycles.

Reference: [Gravis G, et al. *Cancer* 2003;98:1627 – 34.](#)

DOCETAXEL – PREDNISONE

Docetaxel‡	75 mg/m ²	IV*	Day 1
Prednisone	5 mg BID	PO	Day 1 onwards

‡Routine premedication administered; *Administer over 1 hour.

Repeat cycle every 21 days to a maximum of 10 cycles.

Reference: [Tannock IF, et al. *N Engl J Med* 2004;351:1502 – 12;](#) [Berthold DR, et al. *J Clin Oncol* 2007;25\(18S\). Abstract 5005.](#)

DOCETAXEL – ESTRAMUSTINE

Estramustine	280 mg Q8H	PO*	Days 1 – 5
Docetaxel‡	60 mg/m ²	IV	Day 2

‡Routine premedication administered; *Administer 1 hour before or 2 hours after meals.

NOTE: Docetaxel dose increased to 70 mg/m² on cycle 2 if tolerated; Protocol mandates daily aspirin 325 mg PO QD and warfarin 2 mg PO QD.

Repeat cycle every 21 days to a maximum of 12 cycles.

Reference: [Petrylak DP, et al. *N Engl J Med* 2004;351:1513 – 20.](#)

DOCETAXEL – THALIDOMIDE

Docetaxel‡	30 mg/m ²	IV*	Days 1, 8 and 15
Thalidomide	200 mg/day	PO**	Daily

‡Routine premedication administered; *Administer over 30 minutes; **Administer at bedtime.

NOTE: Enoxaparin 40 mg SQ daily offered due to high rate of thromboembolic events. Patients who have not undergone bilateral orchiectomy continue to receive medical castration with a luteinizing-hormone releasing hormone (LHRH) agonist (leuprolide or goserelin).

Repeat cycle every 28 days.

Thalidomide available as 50 mg, 100 mg, and 200 mg capsules.

Reference: [Dahut WL, et al. *J Clin Oncol* 2004;22:2532 – 9.](#)

ESTRAMUSTINE – PACLITAXEL

Estramustine	140 mg TID	PO*	Days 1 – 3, 8–10 and 15 – 17
Paclitaxel [‡]	90 mg/m ²	IV**	Days 2, 9 and 16

[‡]Routine premedication administered; *Take one hour before or 2 hours after a meal; **Administer over 1 hour.

Repeat cycle every 28 days.

NOTE: Patients received warfarin 1 mg PO daily to prevent thromboembolism.

Reference: [Vaughn DJ, et al. *Cancer* 2004;100:746 – 50.](#)

ESTRAMUSTINE – VINBLASTINE

Estramustine	200 mg/m ² TID*	PO	Days 1 – 42
Vinblastine	4 mg/m ²	IVB	Days 1, 8, 15, 22, 29 and 36

*Take one hour before or two hours after a meal.

Repeat cycle every 8 weeks until disease progression.

Reference: [Hudes G, et al. *J Clin Oncol* 1999;17:3160 – 6.](#)

MITOXANTRONE – PREDNISONE

Mitoxantrone	12 mg/m ² *	IV	Day 1
Prednisone	5 mg BID	PO	Day 1 onwards

*Dose increased to 14 mg/m² if no Grade 3 or 4 adverse events seen in the first cycle.

Repeat cycle every 21 days.

NOTE: Mitoxantrone therapy continued to a cumulative maximum dose of 140 mg/m²(¹) – 144 mg/m²(²). Patients continued their primary androgen ablation therapy.

References: ¹[Tannock IF et al, *J Clin Oncol* 1996;14:1756 – 64;](#) ²[Petrylak DP, et al. *N Engl J Med* 2004;351:1513 – 20.](#)

VINOURELBINE – ESTRAMUSTINE

Vinorelbine	25 mg/m ²	IVB*	Days 1 and 8
Estramustine	140 mg TID	PO**	Days 1 – 14

*Administer as an IV bolus over 6 to 10 minutes; **Administer dose one hour before or 2 hours after meals.

NOTE: Men who were not castrated surgically continued therapy with gonadotrophin–releasing hormone (GnRH) agonist throughout treatment.

Repeat cycle every 21 days.

Reference: [Smith MR, et al. *Cancer* 2000;89:1824 – 8.](#)