PROSTATE CANCER TREATMENT REGIMENS (Part 1 of 2)

Clinical Trials: The National Comprehensive Cancer Network (NCCN) recommends cancer patient participation in clinical trials as the gold standard for treatment.

Cancer therapy selection, dosing, administration, and the management of related adverse events can be a complex process that should be handled by an experienced healthcare team. Clinicians must choose and verify treatment options based on the individual patient; drug dose modifications and supportive care interventions should be administered accordingly. The cancer treatment regimens below may include both U.S. Food and Drug Administration-approved and unapproved indications/regimens. These regimens are only provided to supplement the latest treatment strategies.

These Guidelines are a work in progress that may be refined as often as new significant data becomes available. The NCCN Guidelines® are a consensus statement of its authors regarding their views of currently accepted approaches to treatment. Any clinician seeking to apply or consult any NCCN Guidelines® is expected to use independent medical judgment in the context of individual clinical circumstances to determine any patient's care or treatment. The NCCN makes no warranties of any kind whatsoever regarding their content, use, or application and disclaims any responsibility for their application or use in any way.

Castration-Recurrent Prostate Cancer¹

First-Line Therapy¹

Note: All recommendations are Category 2A unless otherwise indicated.

No Visceral Metastases	
REGIMEN	DOSING
Enzalutamide (Category 1) ²⁻⁴	Enzalutamide 160mg (four 40mg capsules) orally daily with or without food; prednisone can be given concurrently but is not required.
Abiraterone acetate + prednisone (Category 1) ⁵⁻⁸	Abiraterone 1,000mg orally once daily on an empty stomach, plus prednisone 5mg orally twice daily.
Docetaxel + prednisone (Category 1) ^{9,10}	Day 1: Docetaxel 75mg/m ² IV once every 3 weeks + prednisone 5mg orally twice daily. Repeat for up to 10 cycles if tolerated.
Radium-223 (for symptomatic bone metastases) (Category 1) ^{11,12}	Radium-223 50kBq/kg every 4 weeks for 6 injections.
Visceral Metastases	
Docetaxel + prednisone (Category 1) ^{9,10}	Day 1: Docetaxel 75mg/m ² IV once every 3 weeks + prednisone 5mg orally twice daily. Repeat for up to 10 cycles if tolerated. Addition of estramustine to this regimen is not recommended.
Enzalutamide (Category 1) ²⁻⁴	Enzalutamide 160mg (four 40mg capsules) orally daily with or without food; prednisone can be given concurrently but is not required.
Abiraterone acetate + prednisone ⁵⁻⁸	Abiraterone 1,000mg orally once daily on an empty stomach, plus prednisone 5mg orally twice daily.
Mitoxantrone + prednisone ^{9,10}	Day 1: Mitoxantrone 12–14mg/m ² IV every 3 weeks + prednisone 10mg orally daily or 5mg twice daily. Repeat for up to 10 cycles if tolerated.

Subsequent Therapy¹

No Visceral Metastases Prior Therapy Enzalutamide/Abiraterone Docetaxel + prednisone Day 1: Docetaxel 75mg/m² IV once every 3 weeks + prednisone 5mg orally twice daily. (Category 1)^{9,10} Repeat for up to 10 cycles if tolerated. Abiraterone 1,000mg orally once daily on an empty stomach, plus prednisone Abiraterone acetate + prednisone5-8 5mg orally twice daily. Enzalutamide²⁻⁴ Enzalutamide 160mg (four 40mg capsules) orally daily with or without food; prednisone can be given concurrently but is not required. Radium-223 (for symptomatic Radium-223 50kBq/kg every 4 weeks for 6 injections. bone metastases) (Category 1)^{11,12} Sipuleucel-T (if no or minimal Sipuleucel-T three complete doses (50 million autologous CD54+ cells), given at symptoms, no liver metastases, 2-week intervals (range 1-15 weeks). life expectancy >6 months, and an ECOG score of 0-1)13,14 **Prior Therapy Docetaxel** Enzalutamide (Category 1)²⁻⁴ Enzalutamide 160mg (four 40mg capsules) orally daily with or without food; prednisone can be given concurrently but is not required. Abiraterone acetate + Abiraterone 1,000mg orally once daily on an empty stomach, plus prednisone prednisone (Category 1)⁵⁻⁸ 5mg orally twice daily. Radium-223 50kBq/kg every 4 weeks for 6 injections. Radium-223 (for symptomatic bone metastases) (Category 1)^{11,12} Cabazitaxel + prednisone (Category 1)¹⁵⁻¹⁷ Day 1: Cabazitaxel 25mg/m² IV every 3 weeks + prednisone 10mg orally daily or 5mg twice daily throughout cabazitaxel treatment (starting doses are reduced by 5 mg/m² and 10 mg/m² for mild and moderate hepatic impairment, respectively). Repeat for up to 10 cycles if tolerated. Sipuleucel-T (if no or minimal Sipuleucel-T three complete doses (≥50 million autologous CD54+ cells), given symptoms, no liver metastases. at 2-week intervals (range 1-15 weeks). life expectancy >6 months, and an ECOG score of 0-1)13, 14 Docetaxel rechallenge9,10 Day 1: Docetaxel 75mg/m² IV once every 3 weeks + prednisone 5mg orally twice daily. Repeat for up to 10 cycles if tolerated. Mitoxantrone + prednisone9,10 Day 1: Mitoxantrone 12mg/m² IV every 3 weeks + prednisone 10mg orally daily or 5mg twice daily. Repeat for up to 10 cycles if tolerated.

PROSTATE CANCER TREATMENT REGIMENS (Part 2 of 2)

Castration-Resistant Prostate Cancer¹ (continued)

Visceral Metastases

Visceral Metastases Prior Therapy Enzalutamide/Abiraterone	
Docetaxel + prednisone (Category 1) ^{9,10}	Day 1: Docetaxel 75mg/m ² IV once every 3 weeks + prednisone 5mg orally twice daily. Repeat for up to 10 cycles if tolerated.
Abiraterone acetate + prednisone ⁵⁻⁸	Abiraterone 1,000mg orally once daily on an empty stomach, plus prednisone 5mg orally twice daily.
Enzalutamide ²⁻⁴	Enzalutamide 160mg (four 40mg capsules) orally daily with or without food; prednisone can be given concurrently but is not required.
Prior Therapy Docetaxel	
Enzalutamide (Category 1) ²⁻⁴	Enzalutamide 160mg (four 40mg capsules) orally daily with or without food; prednisone can be given concurrently but is not required.
Abiraterone acetate + prednisone (Category 1) ⁵⁻⁸	Abiraterone 1,000mg orally once daily on an empty stomach, plus prednisone 5mg orally twice daily.
Cabazitaxel + prednisone (Category 1) ¹⁵⁻¹⁷	Day 1: Cabazitaxel 25mg/m ² IV every 3 weeks + prednisone 10mg orally daily or 5mg twice daily throughout cabazitaxel treatment (starting doses are reduced by 5 mg/m ² and 10 mg/m ² for mild and moderate hepatic impairment, respectively). Repeat for up to 10 cycles if tolerated.
Docetaxel rechallenge ^{9,10}	Day 1: Docetaxel 75mg/m ² IV once every 3 weeks + prednisone 5mg orally twice daily. Repeat for up to 10 cycles if tolerated.
Mitoxantrone + prednisone ^{9,10}	Day 1: Mitoxantrone 12mg/m ² IV every 3 weeks + prednisone 10mg orally daily or 5mg twice daily. Repeat for up to 10 cycles if tolerated.
General treatment notes:	

General treatment notes:

 Encourage men with advanced prostate cancer to participate in clinical trials and refer early to a medical oncologist.

 Reserve systemic chemotherapy for men with castration-resistant metastatic prostate cancer except when enrolled in a clinical trial.

- Secondary hormone therapy (eg, antiandrogens, antiandrogen withdrawal, ketoconazole, corticosteroids) is also an option for patients with castration-resistant prostate cancer.
- •Many variables should be considered when tailoring prostate cancer therapy for the individual patient, including adjusted life expectancy, disease characteristics, predicated outcomes, and patient preferences.

•All prostate cancer patients should receive best supportive care throughout treatment.

* The maximum dosing interval has not been established.13

References 1. Referenced with permission from the NCCN Clinical Practice 9. Tannock IF, de Wit R, Berry WR, et al. Docetaxel plus predni-Guidelines in Oncology™. Prostate Cancer. v 2.2017. Available sone or mitoxantrone plus prednisone for advanced prostate at: http://www.nccn.org/professionals/physician_gls/pdf/ cancer. N Engl J Med. 2004;351(15):1502-1512. prostate.pdf. Accessed May 9, 2017. 10. Berthold DR, Pond GR, Soban F, de Wit R, Eisenberger M, 2. Xtandi [prescribing information]. Northbrook, IL: Astellas Tannock IF. Docetaxel plus prednisone or mitoxantrone plus prednisone for advanced prostate cancer: updated survival Pharma US, Inc.; 2016. in the TAX 327 study. J Clin Oncol. 2008;26:242-245. 3. Scher HI, Fizazi K, Saad F, et al; AFFIRM Investigators. Increased survival with enzalutamide in prostate cancer after 11. Xofigo [prescribing information]. Wayne, NJ: Bayer HealthCare Pharmaceuticals Inc.; 2016. chemotherapy. N Engl J Med. 2012;367(13):1187-1197. 4. Beer TM, Armstrong AJ, Rathkopf DE, et al; PREVAIL Investiga-12. Parker C, Nilsson S, Heinrich D, et al; ALSYMPCA Investigators. Alpha emitter radium-223 and survival in metastatic prostate tors. Enzalutamide in metastatic prostate cancer before chemotherapy. N Engl J Med. 2014;371(5):424-433. cancer. N Engl J Med. 2013(3);369:213-223. 5. Zytiga [prescribing information]. Horsham, PA: Janssen 13. Provenge [prescribing information]. Seattle, WA: Dandreon Corp.; 2014. Biotech, Inc.: 2017. 14. Kantoff PW, Higano CS, Shore ND, et al; IMPACT Study 6. de Bono JS, Logothetis CJ, Molina A, et al. Abiraterone and Investigators. Sipuleucel-T immunotherapy for castrationincreased survival in metastatic prostate cancer. N Engl J Med. resistant prostate cancer. N Engl J Med. 2010;363(5):411-422. 2011;364(21):1995-2005. 15. Jevtana [prescribing information] Bridgewater, NJ: sanofi-7. Fizazi K, Scher HI, Molina A, et al. Abiraterone acetate for aventis U.S. LLC; 2016. treatment of metastatic castration-resistant prostate cancer: final overall survival analysis of the COU-AA-301 randomised, 16. de Bono JS, Oudard S, Ozguroglu M, et al; TROPIC Investigadouble-blind, placebo-controlled phase 3 study. Lancet Oncol. tors. Prednisone plus cabazitaxel or mitoxantrone for meta-2012;13(10):983-992. static castration-resistant prostate cancer progressing after docetaxel treatment: a randomised open-label trial. Lancet. 8. Logothetis CJ, Basch E, Molina A, et al. Effect of abiraterone 2010;376(9747):1147-1154. acetate and prednisone compared with placebo and prednisone on pain control and skeletal-related events in patients 17. Bahl A, Oudard S, Tombal B, et al; TROPIC Investigators. Impact of cabazitaxel on 2-year survival and palliation of tumour-related with metastatic castration-resistant prostate cancer: explorpain in men with metastatic castration-resistant prostate cancer atory analysis of data from the COU-AA-301 randomised trial. Lancet Oncol. 2012;13(12):1210-1217. treated in the TROPIC trial. Ann Oncol. 2013:24(9):2402-2408.