Cases from the Community

Clinical Investigators Provide Their Perspectives on Emerging Research and Actual Patients with Advanced Prostate Cancer

CME Information

TARGET AUDIENCE

This activity has been designed to meet the educational needs of medical and radiation oncologists, urologists and other allied healthcare professionals involved in the treatment of prostate cancer (PC).

OVERVIEW OF ACTIVITY

Cancers of the genitourinary (GU) system affect hundreds of thousands of individuals within the United States each year and account for almost 30% of new cancer diagnoses. Although GU cancers are a diverse array of distinct diseases, tumors of the prostate are among the most prevalent and are therefore the topic of extensive ongoing clinical research. Consequently, the clinical management of PC is frequently in a state of evolution, necessitating rapid and consistent clinician access to emerging data sets of relevance to the continuous delivery of quality cross-functional care.

These proceedings from a CME symposium during the Genitourinary Cancers Symposium explore the most significant therapeutic advances during the previous year by using the perspectives of leading GU cancer experts on challenging cases and questions submitted by clinicians in the community to frame a relevant discussion of how this information has aided in the refinement of current routine clinical practice and ongoing research. This CME activity will help medical and radiation oncologists, urologists and other allied healthcare professionals find answers to the individualized questions and concerns that they frequently encounter and in turn provide high-quality cancer care.

LEARNING OBJECTIVES

- Appraise recent data on diagnostic and therapeutic advances in advanced PC, and integrate this information, as appropriate, into current clinical care.
- Recall existing and emerging research information demonstrating the effects of secondary hormonal interventions on quality and quantity of life for patients with castration-resistant PC (CRPC), and use this information to guide therapeutic decision-making.
- Explore emerging data on the use of cytotoxic therapy in the setting of hormone-sensitive advanced PC, and consider this information when designing initial treatment plans for appropriate individuals.
- Effectively apply evidence-based research findings in the determination of best-practice sequencing of available immunotherapeutic, chemotherapeutic and secondary hormonal agents for patients with metastatic CRPC.
- Consider available research data and expert perspectives on the efficacy and safety of radium-223 chloride as monotherapy or in combination with other treatment modalities for advanced PC, and use this information to appropriately integrate this radiopharmaceutical agent into clinical practice.
- Explore the emerging data and active research evaluating novel strategies in the setting of PSA-only recurrent or advanced PC, and discuss the biologic basis for the clinical activity of individual therapies under investigation.
- Counsel appropriately selected patients with PC about the availability of and participation in ongoing clinical trials.

ACCREDITATION STATEMENT

This activity has been planned and implemented in accordance with the accreditation requirements and policies of the Accreditation Council for Continuing Medical Education (ACCME) through the joint providership of Penn State College of Medicine and Research To Practice. Penn State College of Medicine is accredited by the ACCME to provide continuing medical education for physicians.

CREDIT DESIGNATION STATEMENT

Penn State College of Medicine designates this enduring material for a maximum of 2.25 *AMA PRA Category 1 Credits™*. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

HOW TO USE THIS CME ACTIVITY

This CME activity consists of a video component. To receive credit, the participant should watch the video, complete the Post-test with a score of 80% or better and fill out the Educational Assessment and Credit Form located at **ResearchToPractice.com/GUCancers17/CME**.

CONTENT VALIDATION AND DISCLOSURES

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FACULTY — The following faculty (and their spouses/partners) reported relevant conflicts of interest, which have been resolved through a conflict of interest resolution process:

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Advisory Committee and Consulting Agreements: Clovis Oncology, Ferring Pharmaceuticals, Janssen Biotech Inc, Merck, Sanofi Genzyme, WCG Oncology; **Board of Directors:** Asterias Biotherapeutics; **Contracted Research:** Illumina Inc, Innocrin Pharmaceuticals, Janssen Biotech Inc, Medivation Inc, a Pfizer Company.

CONSULTING MEDICAL ONCOLOGISTS — The following consulting medical oncologists (and their spouses/partners) reported relevant conflicts of interest, which have been resolved through a conflict of interest resolution process:

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No relevant conflicts of interest to disclose.

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Director
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Consulting Agreements: AstraZeneca Pharmaceuticals LP, Genomic Health Inc, Integra Connect LLC; **Speakers Bureau:** Amgen Inc, Astellas Pharma Global Development Inc, Bayer HealthCare Pharmaceuticals, Dendreon Pharmaceuticals Inc, Janssen Biotech Inc, Sanofi Genzyme.

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Diablo Valley Oncology
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Speakers Bureau: Takeda Oncology.

MODERATOR — **Dr Love** is president and CEO of Research To Practice, which receives funds in the form of educational grants to develop CME activities from the following commercial interests: AbbVie Inc, Acerta Pharma, Adaptive Biotechnologies, Agendia Inc, Amgen Inc, Ariad Pharmaceuticals Inc, Array BioPharma Inc, Astellas Pharma Global Development Inc, AstraZeneca Pharmaceuticals LP, Baxalta Inc, Bayer HealthCare Pharmaceuticals, Biodesix Inc, bioTheranostics Inc, Boehringer Ingelheim Pharmaceuticals Inc, Boston Biomedical Pharma Inc, Bristol-Myers Squibb Company, Celgene Corporation, Clovis Oncology, CTI BioPharma Corp, Dendreon Pharmaceuticals Inc, Eisai Inc, Exelixis Inc, Foundation Medicine, Genentech BioOncology, Genomic Health Inc, Gilead Sciences Inc, Halozyme Inc, ImmunoGen Inc, Incyte Corporation, Infinity Pharmaceuticals Inc, Ipsen Biopharmaceuticals Inc, Janssen Biotech Inc, Jazz PharmaceuticalsInc, Kite Pharma Inc, Lexicon Pharmaceuticals Inc, Lilly, Medivation Inc, a Pfizer Company, Merck, Merrimack Pharmaceuticals Inc, Myriad Genetic Laboratories Inc, NanoString Technologies, Natera Inc, Novartis, Novocure, Onyx Pharmaceuticals, an Amgen subsidiary, Pharmacyclics LLC, an AbbVie Company, Prometheus Laboratories Inc, Puma Biotechnology Inc, Regeneron Pharmaceuticals Inc, Sanofi Genzyme, Seattle Genetics, Sigma-Tau Pharmaceuticals Inc, Sirtex Medical Ltd, Spectrum Pharmaceuticals Inc, Taiho Oncology Inc, Takeda Oncology, Tesaro Inc, Teva Oncology and Tokai Pharmaceuticals Inc.

PENN STATE COLLEGE OF MEDICINE — Faculty and staff involved in the development and review of this activity have disclosed no relevant financial relationships.

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Hardware/Software Requirements:
A high-speed Internet connection
A monitor set to 1280 x 1024 pixels or more
Internet Explorer 7 or later, Firefox 3.0 or later, Chrome, Safari 3.0 or later
Adobe Flash Player 10.2 plug-in or later
Adobe Acrobat Reader
(Optional) Sound card and speakers for audio

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Select Publications

William K Oh, MD

Robinson D et al. **Integrative clinical genomics of advanced prostate cancer.** *Cell* 2015;161(5):1215-28.

Sartor O et al. **Cabazitaxel vs docetaxel in chemotherapy-naive (CN) patients with metastatic castration-resistant prostate cancer (mCRPC): A three-arm phase III study (FIRSTANA).** *Proc ASCO* 2016;**Abstract 5006**.

Sweeney C et al. **Long term efficacy and QOL data of chemohormonal therapy (C-HT) in low and high volume hormone naïve metastatic prostate cancer (PrCa): E3805 CHAARTED trial.** *Ann Oncol* 2016;27(Suppl 6):720PD.

Sweeney C et al. **Impact on overall survival (OS) with chemohormonal therapy versus hormonal therapy for hormone-sensitive newly metastatic prostate cancer (mPrCa): An ECOG-led phase III randomized trial.** *Proc ASCO* 2014;**Abstract LBA2**.

Celestia S Higano, MD

Antonarakis ER et al. **Androgen receptor splice variant 7 and efficacy of taxane chemotherapy in patients with metastatic castration-resistant prostate cancer.** *JAMA Oncol* 2015;1(5):582-91.

Antonarakis E et al. **AR-V7 and resistance to enzalutamide and abiraterone in prostate cancer.** *N Engl J Med* 2014;371(11):1028-38.

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Lebdai S et al. **What do we know about treatment sequencing of abiraterone, enzalutamide, and chemotherapy in metastatic castration-resistant prostate cancer?** *World J Urol* 2016;34(5):617-24.

Schellhammer PF et al. **Lower baseline prostate-specific antigen is associated with a greater overall survival benefit from sipuleucel-T in the Immunotherapy for Prostate Adenocarcinoma Treatment (IMPACT) trial.** *Urology* 2013;81(6):1297-302.

Scher HI et al. **Association of AR-V7 on circulating tumor cells as a treatment-specific biomarker with outcomes and survival in castration-resistant prostate cancer.** *JAMA Oncol* 2016;2(11):1441-9.

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Steinestel J et al. **Detecting predictive androgen receptor modifications in circulating prostate cancer cells.** *Oncotarget* 2015;[Epub ahead of print].

A Oliver Sartor, MD

Ahmadzadehfar H et al. **68Ga-PSMA-11 PET as a gatekeeper for the treatment of metastatic prostate cancer with 223Ra: Proof of concept.** *J Nucl Med* 2016;58(3):438-44.

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Chatalic KL et al. **Towards personalized treatment of prostate cancer: PSMA I&T, a promising prostate-specific membrane antigen-targeted theranostic agent.** *Theranostics* 2016;6(6):849-61.

Kratochwil C et al. **PSMA-targeted radionuclide therapy of metastatic castration-resistant prostate cancer with ^{177}Lu-labeled PSMA-617.** *J Nucl Med* 2016;57(8):1170-6.

O'Connor MJ. **Targeting the DNA damage response in cancer.** *Mol Cell* 2015;60(4):547-60.

Rahbar K et al. **German multicenter study investigating ^{177}Lu-PSMA-617 radioligand therapy in advanced prostate cancer patients.** *J Nucl Med* 2017;58(1):85-90.

Saad F et al. **Radium-223 and concomitant therapies in patients with metastatic castration-resistant prostate cancer: An international, early access, open-label, single-arm phase 3b trial.** *Lancet Oncol* 2016;17(9):1306-16.

Sartor O et al. **Effect of radium-223 dichloride on symptomatic skeletal events in patients with castration-resistant prostate cancer and bone metastases: Results from a phase 3, double-blind, randomised trial.** *Lancet Oncol* 2014;15(7):738-46.

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Howard I Scher, MD

Antonarakis ES et al. **Sequencing of sipuleucel-T and androgen deprivation therapy in men with hormone-sensitive biochemically recurrent prostate cancer: A phase II randomized trial.** *Clin Cancer Res* 2016;[Epub ahead of print].

Select Publications

Bambury RM, Rathkopf DE. **Novel and next-generation androgen receptor-directed therapies for prostate cancer: Beyond abiraterone and enzalutamide.** *Urol Oncol* 2016;34(8):348-55.

D'Amico AV et al. **Surrogate end point for prostate cancer-specific mortality after radical prostatectomy or radiation therapy.** *J Natl Cancer Inst* 2003;95(18):1376-83.

Fizazi K et al. **Phase III, randomized, double-blind, multicenter trial comparing orteronel (TAK-700) plus prednisone with placebo plus prednisone in patients with metastatic castration-resistant prostate cancer that has progressed during or after docetaxel-based therapy: ELM-PC 5.** *J Clin Oncol* 2016;33(7):723-31.

Penson DF et al. **Enzalutamide versus bicalutamide in castration-resistant prostate cancer: The STRIVE trial.** *J Clin Oncol* 2016;34(18):2098-106.

Ryan CJ et al. **IMAAGEN trial safety and efficacy update: Effect of abiraterone acetate and low-dose prednisone on prostate-specific antigen and radiographic disease progression in patients with nonmetastatic castration-resistant prostate cancer.** *Proc ASCO* 2016;**Abstract 5061**.

Ryan CJ et al. **IMAAGEN trial update: Effect of abiraterone acetate and low dose prednisone on PSA and radiographic disease progression in patients with non-metastatic castration-resistant prostate cancer.** *Proc ASCO* 2015;**Abstract 5053**.

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Daniel P Petrylak, MD

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Sonnenblick A et al. **An update on PARP inhibitors — Moving to the adjuvant setting.** *Nat Rev Clin Oncol* 2015;12(1):27-41.