# Visiting Professors

Clinical Investigators Provide Their Perspectives on Current Cases and Emerging Research in the Management of Prostate Cancer

# **CME Information**

#### **TARGET AUDIENCE**

This activity is intended for medical oncologists, urologists and other healthcare professionals involved in the treatment of prostate cancer (PC).

#### **OVERVIEW OF ACTIVITY**

Nearly one million men each year are newly diagnosed with PC, making it the fifth most common cancer in both sexes combined and the second most common among men worldwide. In 2014 in the United States alone it is estimated that the disease will culminate in 233,000 new cases and 29,480 deaths. As such, PC has a tremendous global impact and has become the center of extensive ongoing clinical research. For this reason, 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.

By providing access to the latest research developments and expert perspectives, these proceedings from an international case-based CME symposium held at the 2014 ESMO Annual Meeting in Madrid, Spain aim to assist medical oncologists, urologists and other healthcare professionals as they attempt to formulate optimal disease management strategies in the face of a constantly evolving body of knowledge.

#### **LEARNING OBJECTIVES**

- Explore emerging data on the use of cytotoxic therapy in the setting of hormone-sensitive advanced PC.
- Recall existing and emerging research information demonstrating the effects of secondary hormonal interventions on quality and quantity of life for chemotherapynaïve or pretreated castration-resistant PC, and use this information to guide treatment planning for these patients.
- Consider available Phase III clinical trial data documenting the efficacy of radium-223 dichloride in patients with PC and bone metastases, and formulate strategies to use this novel radiopharmaceutical.
- 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 PC.

- Explore the emerging data and active research evaluating novel agents in the setting of PSA-only recurrent or advanced PC, and discuss the biologic basis for their clinical activity.
- Counsel appropriately selected patients with recurrent, asymptomatic and symptomatic metastatic PC about availability of and participation in ongoing clinical trials.

#### **ACCREDITATION STATEMENT**

Research To Practice is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians.

#### CREDIT DESIGNATION STATEMENT

Research To Practice designates this enduring material for a maximum of 2.25 AMA PRA Category 1 Credits<sup>TM</sup>. 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 75% or better and fill out the Educational Assessment and Credit Form located at ResearchToPractice.com/ESMOProstate14/CME.

#### **CONTENT VALIDATION AND DISCLOSURES**

Research To Practice (RTP) is committed to providing its participants with high-quality, unbiased and state-of-the-art education. We assess potential conflicts of interest with faculty, planners and managers of CME activities. Real or apparent conflicts of interest are identified and resolved through a conflict of interest resolution process. In addition, all activity content is reviewed by both a member of the RTP scientific staff and an external, independent physician reviewer for fair balance, scientific objectivity of studies referenced and patient care recommendations.

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

#### Johann S de Bono, MBChB, MSc, PhD

Professor of Experimental Cancer Medicine and Honorary Consultant in Medical Oncology

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# **Advisory Committee and Consulting Agreements:**

Astellas, AstraZeneca Pharmaceuticals LP, Boehringer Ingelheim Pharmaceuticals Inc, Genentech BioOncology, GlaxoSmithKline, Pfizer Inc, Sanofi; **Contracted Research:** Astellas, AstraZeneca Pharmaceuticals LP, Boehringer Ingelheim Pharmaceuticals Inc, Genentech BioOncology, GlaxoSmithKline, Sanofi.

## Karim Fizazi, MD, PhD

Head of the Department of Cancer Medicine Institute Gustave-Roussy Professor in Oncology University of Paris Villejuif, France

Advisory Committee: Astellas, Bayer HealthCare Pharmaceuticals, Bristol-Myers Squibb Company, Janssen Pharmaceuticals Inc, Millennium: The Takeda Oncology Company, Sanofi; Speakers Bureau: Amgen Inc, Astellas, Janssen Pharmaceuticals Inc, Sanofi.

### Chris Parker, MD

Consultant in Clinical Oncology Royal Marsden Hospital Honorary Reader in Prostate Oncology Institute of Cancer Research Sutton, United Kingdom

Advisory Committee: Astellas, Bayer HealthCare Pharmaceuticals, Janssen Pharmaceuticals Inc; Consulting Agreement: BN ImmunoTherapeutics Inc; Contracted Research: Bayer HealthCare Pharmaceuticals; Speakers Bureau: Sanofi.

#### David I Quinn, MBBS, PhD

Medical Director, Norris Cancer Hospital and Clinics Head, GU Cancer Section Division of Cancer Medicine and Blood Diseases USC/Norris Comprehensive Cancer Center Los Angeles, California

Advisory Committee: Astellas, Bayer HealthCare Pharmaceuticals, Bristol-Myers Squibb Company, Dendreon Corporation, Genentech BioOncology, Janssen Pharmaceuticals Inc, Medivation Inc, Novartis Pharmaceuticals Corporation, Pfizer Inc, Roche Laboratories Inc, Sanofi; Consulting Agreements: Astellas, Bayer HealthCare Pharmaceuticals, Bristol-Myers Squibb Company, Dendreon Corporation, Genentech BioOncology, Janssen Pharmaceuticals Inc, Medivation Inc, Novartis Pharmaceuticals Corporation, Pfizer Inc, Roche Laboratories Inc; Other Remunerated Activities: Medivation Inc.

**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, Amgen Inc, Astellas, AstraZeneca Pharmaceuticals LP, Aveo Pharmaceuticals, Bayer HealthCare Pharmaceuticals, Biodesix Inc, Biogen Idec, Boehringer Ingelheim Pharmaceuticals Inc, Boston Biomedical Pharma Inc., Bristol-Myers Squibb Company, Celgene Corporation, Clovis Oncology, Daiichi Sankyo Inc, Dendreon Corporation, Eisai Inc, Exelixis Inc, Foundation Medicine, Genentech BioOncology, Genomic Health Inc, Gilead Sciences Inc, Incyte Corporation, Lilly, Medivation Inc., Merck, Millennium: The Takeda Oncology Company, Novartis Pharmaceuticals Corporation, Novocure, Onyx Pharmaceuticals, an Amgen subsidiary, Pharmacyclics Inc, Prometheus Laboratories Inc, Regeneron Pharmaceuticals, Sanofi, Seattle Genetics, Sirtex Medical Ltd, Spectrum Pharmaceuticals Inc, Taiho Oncology Inc, Teva Oncology and VisionGate Inc.

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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

**Last review date:** January 2015 **Expiration date:** January 2016

# Select Publications

#### Johann S de Bono, MBChB, MSc, PhD

A randomized, open label multi-center study of XRP6258 at 25 mg/m<sup>2</sup> in combination with prednisone every 3 weeks compared to mitoxantrone in combination with prednisone for the treatment of hormone refractory metastatic prostate cancer previously treated with a Taxotere®-containing regimen. NCT00417079

Berthold DR et al; TAX-327 investigators. **Treatment of hormone-refractory prostate cancer with docetaxel or mitoxantrone: Relationships between prostate-specific antigen, pain, and quality of life response and survival in the TAX-327 study.** *Clin Cancer Res* 2008;14(9):2763-7.

CHAARTED: ChemoHormonal therapy versus Androgen Ablation Randomized Trial for Extensive Disease in prostate cancer. NCT00309985

Gravis G et al. Androgen-deprivation therapy alone or with docetaxel in non-castrate metastatic prostate cancer (GETUG-AFU 15): A randomised, open-label, Phase 3 trial. *Lancet Oncol* 2013;14(2):149-58.

STAMPEDE: Systemic Therapy in Advanced or Metastatic Prostate cancer: Evaluation of Drug Efficacy — Androgen suppression-based therapy alone or combined with zoledronic acid, docetaxel, prednisolone, celecoxib, abiraterone, enzalutamide and/or radiotherapy in treating patients with locally advanced or metastatic prostate cancer. NCT00268476

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.

#### Chris Parker, MD

ALSYMPCA: A double-blind, randomised, multiple dose, Phase III, multicentre study of Alpharadin in the treatment of patients with symptomatic hormone refractory prostate cancer with skeletal metastases. NCT00699751

Henriksen G et al. Targeting of osseous sites with alpha-emitting 223Ra: Comparison with the beta-emitter 89Sr in mice. *J Nucl Med* 2003;44(2):252-9.

Henriksen G et al. Significant antitumor effect from bone-seeking, alpha-particle-emitting (223)Ra demonstrated in an experimental skeletal metastases model. *Cancer Res* 2002;62(11):3120-5.

James ND et al. Clinical outcomes in patients with castrate-refractory prostate cancer (CRPC) metastatic to bone randomized in the factorial TRAPEZE trial to docetaxel (D) with strontium-89 (Sr89), zoledronic acid (ZA), neither, or both (ISRCTN 12808747). *Proc ASCO* 2013;Abstract LBA5000.

Parker C et al. Alpha emitter radium-223 and survival in metastatic prostate cancer. N Engl J Med 2013;369(3):213-23.

Porter AT et al. Results of a randomized phase-III trial to evaluate the efficacy of strontium-89 adjuvant to local field external beam irradiation in the management of endocrine resistant metastatic prostate cancer. Int J Radiat Oncol Biol Phys 1993:25(5):805-13.

### Karim Fizazi, MD, PhD

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

Badrising S et al. Clinical activity and tolerability of enzalutamide (MDV3100) in patients with metastatic, castration-resistant prostate cancer who progress after docetaxel and abiraterone treatment. *Cancer* 2014;120(7):968-75.

Beer TM et al. Enzalutamide in metastatic prostate cancer before chemotherapy. N Engl J Med 2014;371(5):424-33.

COU-AA-302: A Phase 3, randomized, double-blind, placebo-controlled study of abiraterone acetate (CB7630) plus prednisone in asymptomatic or mildly symptomatic patients with metastatic castration-resistant prostate cancer. NCT00887198

Efstathiou E et al. Enzalutamide (ENZA) in combination with abiraterone acetate (AA) in bone metastatic castration resistant prostate cancer (mCRPC). *Proc ASCO* 2014; Abstract 5000.

Fizazi K et al. Activity and safety of ODM-201 in patients with progressive metastatic castration-resistant prostate cancer (ARADES): An open-label phase 1 dose-escalation and randomised Phase 2 dose expansion trial. *Lancet Oncol* 2014;15(9):975-85.

Loriot Y et al. Antitumour activity of abiraterone acetate against metastatic castration-resistant prostate cancer progressing after docetaxel and enzalutamide (MDV3100). *Ann Oncol* 2013;24(7):1807-12.

Matthew RS et al. **ARN-509** in men with high-risk nonmetastatic castration-resistant prostate cancer (CRPC). Genitourinary Cancers Symposium 2013;**Abstract 07**.

# Select Publications

Noonan KL et al. Clinical activity of abiraterone acetate in patients with metastatic castration-resistant prostate cancer progressing after enzalutamide. *Ann Oncol* 2013;24(7):1802-7.

PEACE1: A prospective randomised Phase III study of androgen deprivation therapy with or without local radiotherapy with or without abiraterone acetate and prednisone in patients with metastatic hormone-naïve prostate cancer. NCT01957436

PREVAIL: A multinational Phase 3, randomized, double-blind, placebo-controlled efficacy and safety study of oral MDV3100 in chemotherapy-naive patients with progressive metastatic prostate cancer who have failed androgen deprivation therapy. NCT01212991

Rathkopf DE et al. **Updated interim efficacy analysis and long-term safety of abiraterone acetate in metastatic castration-resistant prostate cancer patients without prior chemotherapy (COU-AA-302).** *Eur Urol* 2014;S0302-2838(14):00185-7.

Ryan CJ et al. Abiraterone in metastatic prostate cancer without previous chemotherapy. N Engl J Med 2013;368(2):138-48.

Schmid SC et al. **Enzalutamide after docetaxel and abiraterone therapy in metastatic castration-resistant prostate cancer.** *Adv Ther* 2014;31(2):234-41.

Schrader AJ et al. Enzalutamide in castration-resistant prostate cancer patients progressing after docetaxel and abiraterone. *Eur Urol* 2014;65(1):30-6.

## David I Quinn, MBBS, PhD

A Phase I, open-label study of the safety and pharmacokinetics of escalating doses of DSTP3086S in patients with metastatic castration-resistant prostate cancer. NCT01283373

A Phase 2, open-label, multicenter study of PSMA ADC in subjects with metastatic castration-resistant prostate cancer. NCT01695044

A Phase 3, randomized, double-blind, controlled study of cabozantinib (XL184) versus prednisone in metastatic castration-resistant prostate cancer patients who have received prior docetaxel and prior abiraterone or MDV3100. NCT01605227

A Phase 3 randomized, double-blind, placebo-controlled study of tasquinimod in men with metastatic castrate resistant prostate cancer. NCT01234311

Antonarakis ES et al. Androgen receptor splice variant, AR-V7, and resistance to enzalutamide and abiraterone in men with metastatic castration-resistant prostate cancer (mCRPC). *Proc ASCO* 2014; Abstract 5001.

ARMOR2: A 2 part, Phase 2 trial of galeterone in the treatment of castration resistant prostate cancer. NCT01709734

Gatalica Z et al. Programmed death 1 (PD-1) lymphocytes and ligand (PD-L1) in colorectal cancer and their relationship to microsatellite instability status. *Proc ASCO* 2014; Abstract 3625.

Knezevic D et al. Analytical validation of the Onco*type* DX prostate cancer assay — A clinical RT-PCR assay optimized for prostate needle biopsies. *BMC Genomics* 2013;14:690.

Phase II randomized double blind placebo-controlled study to determine the efficacy of ABR-215050 in asymptomatic patients with metastatic castrate-resistant prostate cancer. NCT00560482