Oncology Grand Rounds Series:

Part 1 — Cancer Immunotherapy

CNE Information

TARGET AUDIENCE

This activity has been designed to meet the educational needs of oncology nurses, nurse practitioners and clinical nurse specialists involved in the treatment of cancer.

OVERVIEW OF ACTIVITY

The past several years have seen an explosion in the emergence of new potential therapies that leverage the natural ability of the human body to attack and treat cancer. Known as immune-mediated therapies, or cancer immunotherapies, these promising treatments are taking center stage at medical conferences and generating excitement all over the world. Of interest, "immunotherapies" are not new, as scientists have been investigating strategies to elicit an effective immune response against malignant tumors for more than a century and the first immune treatments in oncology received FDA approval in the 1990s. The newest and perhaps most exciting arena in cancer immunotherapy has been the development and assessment of immune-modulating antibodies, or checkpoint immune modulators. To date studies have demonstrated that these agents are highly active across a number of diseases, most notably melanoma, renal cell carcinoma, non-small cell lung cancer and bladder cancer, representing the dawn of a new era in oncologic treatment that may effectively transform chemotherapy infusion rooms into immunotherapy delivery centers.

The introduction of these therapies has created a multitude of uncertainties, important clinical questions and knowledge gaps awaiting resolution. This seems to be particularly true among oncology nurses, who play an integral role in the successful delivery of systemic anticancer therapy and the preservation of patient physical and psychosocial well-being, thereby requiring that they possess a varied set of skills and an extensive knowledge base. These video proceedings from the first part of an 8-part integrated CNE curriculum originally held at the 2016 ONS Annual Congress feature discussions with leading oncology investigators and their nursing counterparts regarding actual patient cases and recent clinical research findings affecting the optimal therapeutic and supportive care for each patient scenario.

PURPOSE STATEMENT

By providing information on the latest research developments in the context of expert perspectives, this CNE activity will assist oncology nurses, nurse practitioners and clinical nurse specialists with the formulation of an understanding of the mechanism of action of cancer immunotherapies, their role in the clinical algorithm and the unique spectrum of associated side effects to facilitate optimal care of patients with cancer.

LEARNING OBJECTIVES

- Develop a basic understanding of the human immune response, and identify the underlying mechanisms by which various cancers evade this process to proliferate and grow.
- Recognize the FDA approvals of nivolumab, pembrolizumab and the combination of nivolumab and ipilimumab for the management of metastatic melanoma, and understand where these approaches fit into the clinical algorithm.
- Discuss the mechanism of action, clinical efficacy and tolerability profiles of checkpoint inhibitors and other immunotherapies in a variety of cancers.
- Understand the broad spectrum of unique side effects related to immunotherapies, and develop a plan to monitor and care for patients accordingly.
- Recall the design of ongoing clinical trials evaluating novel immunotherapeutic approaches, and counsel appropriately selected patients about availability and participation.

ACCREDITATION STATEMENT

Research To Practice is accredited as a provider of continuing nursing education by the American Nurses Credentialing Center's Commission on Accreditation.

CREDIT DESIGNATION STATEMENTS

This educational activity for 2.2 contact hours is provided by Research To Practice during the period of August 2016 through August 2017.

This activity is awarded 2.2 ANCC pharmacotherapeutic contact hours.

ONCC/ILNA CERTIFICATION INFORMATION

The program content has been reviewed by the Oncology Nursing Certification Corporation (ONCC) and is acceptable for recertification points. To review certification qualifications please visit ResearchToPractice.com/ONS2016/ILNA.

ONCC review is only for designating content to be used for recertification points and is not for CNE accreditation. CNE programs must be formally approved for contact hours by an acceptable accreditor/approver of nursing CE to be used for recertification by ONCC. If the CNE provider fails to obtain formal approval to award contact hours by an acceptable accrediting/approval body, no information related to ONCC recertification may be used in relation to the program.

FOR SUCCESSFUL COMPLETION

This is a video CNE program. To receive credit, participants should read the learning objectives and faculty disclosures, 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/ONSImmunotherapy2016/CNE**.

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 conflicts of interest with faculty, planners and managers of CNE activities. 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 reviewer for fair balance, scientific objectivity of studies referenced and patient care recommendations.

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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No relevant conflicts of interest to disclose.

MODERATOR — **Dr Love** is president and CEO of Research To Practice, which receives funds in the form of educational grants to develop CME/CNE activities from the following commercial interests: AbbVie Inc, Acerta Pharma, Agendia Inc, Amgen 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, Daiichi Sankyo Inc, Dendreon Pharmaceuticals Inc, Eisai Inc, Exelixis Inc, Foundation Medicine, Genentech BioOncology, Genomic Health Inc, Gilead Sciences Inc, ImmunoGen Inc, Incyte Corporation, Janssen Biotech Inc, Jazz Pharmaceuticals Inc, Lilly, Medivation Inc, Merck, Merrimack Pharmaceuticals Inc, Myriad Genetic Laboratories Inc, NanoString Technologies, Natera Inc, Novartis Pharmaceuticals Corporation, Novocure, Onyx Pharmaceuticals, an Amgen subsidiary, Pharmacyclics LLC, an AbbVie Company, Prometheus Laboratories Inc, Regeneron Pharmaceuticals, Sanofi, Seattle Genetics, Sigma-Tau Pharmaceuticals Inc, Sirtex Medical Ltd, Spectrum Pharmaceuticals Inc, Taiho Oncology Inc, Takeda Oncology, Teva Oncology, Tokai Pharmaceuticals Inc 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: August 2016

Expiration date: August 2017

Select Publications

Amos SM et al. **Autoimmunity associated with immunotherapy of cancer.** *Blood* 2011;118(3):499-509.

Ansell S et al. **Nivolumab in patients (pts) with relapsed or refractory classical Hodgkin lymphoma (R/R cHL): Clinical outcomes from extended follow-up of a phase 1 study (CA209-039).** *Proc ASH* 2015;**Abstract 583**.

Armand P et al. **PD-1 blockade with pembrolizumab in patients with classical Hodgkin lymphoma after brentuximab vedotin failure: Safety, efficacy, and biomarker assessment.** *Proc ASH* 2015;**Abstract 584**.

Batlevi CL et al. **Novel immunotherapies in lymphoid malignancies.** *Nat Rev Clin Oncol* 2016;13(1):25-40.

Goldberg SB et al. **Activity and safety of pembrolizumab in patients with metastatic non-small cell lung cancer with untreated brain metastases.** *Proc ASCO* 2015;**Abstract 8035**.

Johnson DB et al. **Ipilimumab therapy in patients with advanced melanoma and preexisting autoimmune disorders.** *JAMA Oncol* 2016;2(2):234-40.

Kluger HM et al. **Safety and activity of pembrolizumab in melanoma patients with untreated brain metastases.** *Proc ASCO* 2015;**Abstract 9009**.

Le DT et al. **PD-1 blockade in tumors with mismatch-repair deficiency.** *N Engl J Med* 2015;372(26):2509-20.

Petrylak DP et al. **A phase Ia study of MPDL3280A (anti-PDL1): Updated response and survival data in urothelial bladder cancer (UBC).** *Proc ASCO* 2015;**Abstract 4501**.

Plimack ER et al. **Pembrolizumab (MK-3475) for advanced urothelial cancer: Updated results and biomarker analysis from KEYNOTE-012.** *Proc ASCO* 2015;**Abstract 4502**.

Rothermundt C et al. **Successful treatment with an anti-PD-1 antibody for progressing brain metastases in renal cell cancer.** *Ann Oncol* 2016;27(3):544-5.

Spira AI et al. **Efficacy, safety and predictive biomarker results from a randomized phase II study comparing atezolizumab (MPDL3280A) versus docetaxel in 2L/3L NSCLC (POPLAR**). *Proc ASCO* 2015;**Abstract 8010**.

Topalian SL et al. **Safety, activity, and immune correlates of anti-PD-1 antibody in cancer.** *N Engl J Med* 2012;366(26):2443-54.

Villadolid J, Amin A. **Immune checkpoint inhibitors in clinical practice: Update on management of immune-related toxicities.** *Transl Lung Cancer Res* 2015;4(5):560-75.