

The Current Application of and New Directions in Cancer Immunotherapy

A Special Edition Interview Program

FACULTY

David F McDermott, MD
Julie R Brahmer, MD

EDITOR

Neil Love, MD

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1 Audio CD

Bonus Audio: Access approximately 1 hour of additional content available only on the web at ResearchToPractice.com/Immunotherapy15



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Bonus Audio Available Exclusively Online

Please visit [ResearchToPractice.com/Immunotherapy15](https://www.researchtopractice.com/immunotherapy15) for an additional 53 minutes of dialogue and discussion.

The Current Application of and New Directions in Cancer Immunotherapy

A Continuing Medical Education Audio Program

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. The future of immunotherapy may be more promising than ever imagined, as a number of novel approaches are already delivering unprecedented outcomes. However, with the many exciting advances that are rapidly occurring, a number of vexing questions and clinical challenges are emerging simultaneously. Featuring information on the latest research developments along with expert perspectives from clinical investigators, this CME program is designed to assist medical oncologists, hematology-oncology fellows and other allied cancer professionals to better understand the implications of emerging data and optimally incorporate existing and novel immunotherapeutic strategies into the care of patients with various cancers.

LEARNING OBJECTIVES

- Develop a basic understanding of the human immune response, and identify the underlying mechanisms by which various tumor types evade this process to proliferate and grow.
- Compare and contrast the mechanisms of action, efficacy and safety/toxicities of approved and investigational immunotherapies for the treatment of melanoma, non-small cell lung cancer, renal cell carcinoma and other solid tumors and hematologic cancers to determine the current and/or potential utility of each in clinical practice.
- Appreciate the recent FDA approvals of the anti-PD-1 antibodies pembrolizumab and nivolumab, and discern how these agents can be appropriately integrated into clinical practice for patients with metastatic melanoma.
- Counsel patients about and define supportive management strategies for immune-related adverse events and other common side effects associated with approved and developmental immunotherapeutics.
- Recall the scientific rationale for ongoing investigations of novel immunotherapeutic approaches, and counsel appropriately selected patients about study participation.

ACCREDITATION STATEMENT

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ResearchToPractice.com/Immunotherapy15/CME.

This activity is supported by educational grants from Bristol-Myers Squibb Company, Genentech BioOncology and Prometheus Laboratories Inc.

Release date: April 2015; Expiration date: April 2016

CME INFORMATION

FACULTY AFFILIATIONS



David F McDermott, MD
Associate Professor of Medicine
Harvard Medical School
Director, Biologic Therapy and
Cutaneous Oncology Programs
Beth Israel Deaconess
Medical Center
Leader, Kidney Cancer Program
Dana-Farber Harvard Cancer Center
Boston, Massachusetts



Julie R Brahmer, MD
Associate Professor of Oncology
The Sidney Kimmel Comprehensive
Cancer Center at Johns Hopkins
Baltimore, Maryland

EDITOR



Neil Love, MD
Research To Practice
Miami, Florida

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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: **Dr McDermott** — Advisory Committee: Pfizer Inc; Consulting Agreements: Bristol-Myers Squibb Company, Genentech BioOncology, Merck, Roche Laboratories Inc; Contracted Research: Novartis Pharmaceuticals Corporation. **Dr Brahmer** — Advisory Committee: Bristol-Myers Squibb Company, Merck; Consulting Agreements: Bristol-Myers Squibb Company, Celgene Corporation, Lilly, Merck; Paid Research: AstraZeneca Pharmaceuticals LP; Uncompensated Research: Bristol-Myers Squibb Company.

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QUESTIONS (PLEASE CIRCLE ANSWER):

- 1. A Phase II trial reported by Motzer and colleagues evaluating 3 different doses of _____ demonstrated durable response rates with a manageable safety profile in patients with metastatic renal cell carcinoma.**
 - a. Nivolumab
 - b. Pembrolizumab
 - c. MPDL3280A
- 2. Adverse events associated with immune checkpoint inhibitors include _____.**
 - a. Fatigue
 - b. Decreased appetite
 - c. Fever
 - d. Diarrhea
 - e. Skin reactions
 - f. All of the above
- 3. Responses to anti-PD-L1 antibodies have been reported in patients with _____.**
 - a. Bladder cancer
 - b. Melanoma
 - c. Non-small cell lung cancer
 - d. Renal cell carcinoma
 - e. All of the above
- 4. _____ is an anti-PD-1 antibody that was recently approved for the treatment of unresectable or metastatic melanoma with disease progression after ipilimumab (if the patient has BRAF mutation-negative disease) or both ipilimumab and a BRAF inhibitor (if the patient has BRAF V600 mutation-positive disease).**
 - a. Pembrolizumab
 - b. Nivolumab
 - c. Both a and b
 - d. Neither a nor b
- 5. Trials evaluating single-agent nivolumab in patients with metastatic melanoma have demonstrated activity with this agent in patients with _____ disease.**
 - a. Ipilimumab-naïve
 - b. Ipilimumab-refractory
 - c. Both a and b
 - d. Neither a nor b
- 6. Data published by Wolchok and colleagues evaluating the combination of nivolumab and ipilimumab reported that the combination produced higher response rates than those reported previously with nivolumab monotherapy.**
 - a. True
 - b. False
- 7. A Phase II study published by Lynch and colleagues evaluating ipilimumab in combination with paclitaxel and carboplatin as first-line therapy for Stage IIIB/IV non-small cell lung cancer reported significant improvements in progression-free survival for patients with _____ histology.**
 - a. Nonsquamous
 - b. Squamous
 - c. Both a and b
 - d. Neither a nor b
- 8. Responses to anti-PD-1/PD-L1 antibodies are _____ among smokers compared to never smokers.**
 - a. Greater
 - b. Lesser
 - c. Equivalent

EDUCATIONAL ASSESSMENT AND CREDIT FORM

The Current Application of and New Directions in Cancer Immunotherapy

Research To Practice is committed to providing valuable continuing education for oncology clinicians, and your input is critical to helping us achieve this important goal. Please take the time to assess the activity you just completed, with the assurance that your answers and suggestions are strictly confidential.

PART 1 — Please tell us about your experience with this educational activity

How would you characterize your level of knowledge on the following topics?

4 = Excellent 3 = Good 2 = Adequate 1 = Suboptimal

	BEFORE	AFTER
Efficacy and safety of anti-PD-1 and anti-PD-L1 antibodies in metastatic renal cell carcinoma, melanoma and non-small cell lung cancer	4 3 2 1	4 3 2 1
Management of ipilimumab-associated colitis — best-practice use of corticosteroids, PCP prophylaxis and other immunosuppressive agents	4 3 2 1	4 3 2 1
FDA approvals of pembrolizumab and nivolumab and optimal integration into the management of metastatic melanoma	4 3 2 1	4 3 2 1
Activity of ipilimumab in combination with anti-PD-1 antibodies in melanoma, renal cell carcinoma and non-small cell lung cancer	4 3 2 1	4 3 2 1
Incidence, severity and management of treatment-related pneumonitis with anti-PD-1 and PD-L1 antibodies	4 3 2 1	4 3 2 1

Practice Setting:

- Academic center/medical school Community cancer center/hospital Group practice
 Solo practice Government (eg, VA) Other (please specify)

Was the activity evidence based, fair, balanced and free from commercial bias?

- Yes No If no, please explain:

Please identify how you will change your practice as a result of completing this activity (select all that apply).

- This activity validated my current practice
 Create/revise protocols, policies and/or procedures
 Change the management and/or treatment of my patients
 Other (please explain):

If you intend to implement any changes in your practice, please provide 1 or more examples:

.....

The content of this activity matched my current (or potential) scope of practice.

- Yes No If no, please explain:

Please respond to the following learning objectives (LOs) by circling the appropriate selection:

4 = Yes 3 = Will consider 2 = No 1 = Already doing N/M = LO not met N/A = Not applicable

As a result of this activity, I will be able to:

- Develop a basic understanding of the human immune response, and identify the underlying mechanisms by which various tumor types evade this process to proliferate and grow. 4 3 2 1 N/M N/A
- Compare and contrast the mechanisms of action, efficacy and safety/toxicities of approved and investigational immunotherapies for the treatment of melanoma, non-small cell lung cancer, renal cell carcinoma and other solid tumors and hematologic cancers to determine the current and/or potential utility of each in clinical practice... 4 3 2 1 N/M N/A
- Appreciate the recent FDA approvals of the anti-PD-1 antibodies pembrolizumab and nivolumab, and discern how these agents can be appropriately integrated into clinical practice for patients with metastatic melanoma... 4 3 2 1 N/M N/A
- Counsel patients about and define supportive management strategies for immune-related adverse events and other common side effects associated with approved and developmental immunotherapeutics. 4 3 2 1 N/M N/A
- Recall the scientific rationale for ongoing investigations of novel immunotherapeutic approaches, and counsel appropriately selected patients about study participation. 4 3 2 1 N/M N/A

EDUCATIONAL ASSESSMENT AND CREDIT FORM (continued)

Please describe any clinical situations that you find difficult to manage or resolve that you would like to see addressed in future educational activities:

.....
.....

Would you recommend this activity to a colleague?

Yes No If no, please explain:

Additional comments about this activity:

.....

As part of our ongoing, continuous quality-improvement effort, we conduct postactivity follow-up surveys to assess the impact of our educational interventions on professional practice. Please indicate your willingness to participate in such a survey.

Yes, I am willing to participate in a follow-up survey.
 No, I am not willing to participate in a follow-up survey.

PART 2 — Please tell us about the faculty and editor for this educational activity

	4 = Excellent	3 = Good	2 = Adequate	1 = Suboptimal	
Faculty	Knowledge of subject matter				Effectiveness as an educator
David F McDermott, MD	4	3	2	1	4 3 2 1
Julie R Brahmer, MD	4	3	2	1	4 3 2 1
Editor	Knowledge of subject matter				Effectiveness as an educator
Neil Love, MD	4	3	2	1	4 3 2 1

Please recommend additional faculty for future activities:

.....
.....

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Editor	Neil Love, MD
Director, Clinical Content and CPD/CME	Kathryn Ault Ziel, PhD
Scientific Director	Richard Kaderman, PhD
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Continuing Education Administrator for Nursing	Karen Gabel Speroni, BSN, MHSA, PhD, RN
Contact Information	Neil Love, MD Research To Practice One Biscayne Tower 2 South Biscayne Boulevard, Suite 3600 Miami, FL 33131 Fax: (305) 377-9998 Email: DrNeilLove@ResearchToPractice.com
For CME/CNE Information	Email: CE@ResearchToPractice.com

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This activity is supported by educational grants from Bristol-Myers Squibb Company,
Genentech BioOncology and Prometheus Laboratories Inc.

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Release date: April 2015

Expiration date: April 2016

Estimated time to complete: 2.5 hours