

Dermatologic Oncology™

U P D A T E

Conversations with Oncology Investigators
Bridging the Gap between Research and Patient Care

FACULTY INTERVIEWS

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Karl Lewis, MD

Mario Sznol, MD

Professor Caroline Robert, MD, PhD

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Dermatologic Oncology Update

A Continuing Medical Education Audio Series

OVERVIEW OF ACTIVITY

Melanoma and nonmelanoma skin cancers — basal cell carcinoma (BCC) and cutaneous squamous cell carcinoma (SCC) — taken together, likely represent the most prevalent form of human cancer. The vast majority of skin cancer presents as minimally invasive BCC or SCC and is highly curable with local treatment alone. However, in rare instances these characteristically indolent lesions progress and necessitate systemic intervention with the support of limited randomized clinical evidence. In contrast, malignant melanoma is the most aggressive form of skin cancer, with a predilection toward distant metastases even when identified in the early stages. Thus, melanoma and nonmelanoma skin cancers are distinct entities, each posing unique challenges to the oncology community. Featuring information on the latest research developments along with expert perspectives, this CME activity is designed to assist medical oncologists and hematology-oncology fellows with the formulation of up-to-date clinical management strategies.

LEARNING OBJECTIVES

- Identify patients after surgical removal of primary melanoma for whom adjuvant therapy should be considered, and counsel these individuals regarding the risks and benefits of approved systemic approaches.
- Use biomarkers, clinical characteristics and mutational analyses to select individualized front-line and subsequent treatment approaches for patients with advanced melanoma.
- Use available clinical trial evidence to safely and effectively incorporate targeted and immunotherapeutic approaches into the management of metastatic melanoma with BRAF tumor mutations.
- Recall the underlying research database guiding therapeutic recommendations for patients with locally advanced or metastatic SCC of the skin.
- Assess the rationale for and clinical trial data with anti-PD-1/PD-L1 antibodies for Merkel cell carcinoma, and optimally integrate available agents into current treatment algorithms.
- Formulate a long-term clinical plan for the management of locally advanced or metastatic BCC, incorporating existing and investigational treatments.

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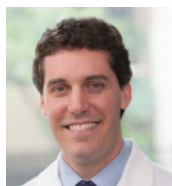
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6 POST-TEST

7 EDUCATIONAL ASSESSMENT AND CREDIT FORM

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Interview with Michael A Postow, MD

Tracks 1-26

- Track 1** Mechanism of action of immune checkpoint inhibitors and rationale for combining anti-PD-1/PD-L1 and anti-CTLA-4 antibodies
- Track 2** “Hot” versus “cold” tumors and effect of the tumor microenvironment on response to immunotherapy
- Track 3** Correlation between tumor mutational burden and activity of immune checkpoint inhibitors
- Track 4** PD-L1 expression as a predictive marker of benefit with combination immune checkpoint blockade for melanoma
- Track 5** Perspective on the role of PD-L1 testing for patients with melanoma
- Track 6** Efficacy and safety of combination versus single-agent immune checkpoint blockade in patients with melanoma and brain metastases
- Track 7** Dosing considerations and adverse events associated with anti-PD-1/PD-L1 and anti-CTLA-4 antibody combinations
- Track 8** Emerging data with novel anti-CTLA-4 antibodies under investigation for melanoma
- Track 9** Efficacy of combined immune checkpoint blockade versus BRAF/MEK inhibitor combinations for patients with melanoma and BRAF tumor mutations
- Track 10** Clinical presentation and frequency of hypophysitis associated with immune checkpoint blockade
- Track 11** Monitoring and management of hypophysitis
- Track 12** Immune-related adverse events in patients with melanoma
- Track 13** Correlation between toxicity and benefit with checkpoint inhibitors
- Track 14** **Case:** A 53-year-old man with metastatic mucosal melanoma discontinues the combination of ipilimumab and nivolumab because of immune-related adverse events
- Track 15** Management of immune checkpoint inhibitor-associated thyroid dysfunction, hepatitis and pancreatitis
- Track 16** Risks and benefits of radiation therapy for patients with melanoma and brain metastases
- Track 17** **Case:** A 31-year-old woman presents with back pain and is diagnosed with metastatic melanoma with a BRAF tumor mutation
- Track 18** UV radiation exposure from the sun as an etiologic factor for melanoma
- Track 19** Choosing among the BRAF/MEK inhibitor combinations dabrafenib/trametinib, vemurafenib/cobimetinib and encorafenib/binimetinib for melanoma with a BRAF tumor mutation
- Track 20** Side-effect profiles of BRAF/MEK inhibitor combinations
- Track 21** Use of dabrafenib/trametinib and consolidation radiation therapy for patients with metastatic melanoma and BRAF tumor mutations
- Track 22** Adjuvant therapy options for melanoma
- Track 23** **Case:** A 72-year-old woman with a history of primary biliary cirrhosis presents with an ulcerated lesion on her left arm and a mass in her axilla and is diagnosed with Stage III melanoma
- Track 24** Choosing between dabrafenib/trametinib and an anti-PD-1 antibody as adjuvant therapy for melanoma with a BRAF tumor mutation
- Track 25** Understanding the mechanisms of autoimmune toxicities in patients receiving immunotherapy
- Track 26** Perspective on the use of adjuvant therapy versus observation for patients with melanoma and BRAF tumor mutations

Interview with Karl Lewis, MD

Tracks 1-25

- Track 1** **Case:** A 75-year-old man who presents with a large mass on his right cheek is diagnosed with locally advanced squamous cell carcinoma (SCC) of the skin and receives pembrolizumab
- Track 2** Pathophysiology and management of SCC of the skin
- Track 3** Cemiplimab, a novel PD-1 antibody for locally advanced and metastatic SCC of the skin

Interview with Dr Lewis (continued)

- Track 4** Activity and tolerability of cemiplimab observed in Phase I/II studies
- Track 5** Pathogenesis of SCC of the skin and potential role of cemiplimab in management of this disease
- Track 6** Durable responses to pembrolizumab in patients with SCC of the skin
- Track 7** Emerging data with anti-PD-1 checkpoint inhibitors in combination with anti-LAG-3/TIM-3 antibodies
- Track 8** **Case:** A 78-year-old man with recurrent, locally advanced basal cell carcinoma (BCC) receives the hedgehog inhibitor sonidegib
- Track 9** Efficacy and tolerability of sonidegib
- Track 10** Management of side effects associated with hedgehog inhibitors
- Track 11** Comparison of the efficacy and side-effect profiles of vismodegib and sonidegib
- Track 12** **Case:** A 67-year-old man with metastatic Merkel cell carcinoma experiences a complete response to the anti-PD-L1 antibody avelumab
- Track 13** Biology and clinical presentation of Merkel cell carcinoma
- Track 14** JAVELIN Merkel 200 trial: Efficacy of avelumab in patients with metastatic Merkel cell carcinoma and disease progression on chemotherapy
- Track 15** Perspective on the duration of immune checkpoint inhibitor therapy
- Track 16** Ongoing investigation of immune checkpoint inhibitors for Merkel cell carcinoma in the (neo)adjuvant setting
- Track 17** **Case:** A 30-year-old woman with Stage IIIB melanoma and a BRAF tumor mutation receives adjuvant pembrolizumab
- Track 18** Efficacy of immune checkpoint inhibitors and BRAF/MEK inhibitor combinations as adjuvant therapy for Stage III/IV melanoma
- Track 19** Choosing between a BRAK/MEK inhibitor combination and immune checkpoint blockade as adjuvant therapy for melanoma with a BRAF tumor mutation
- Track 20** **Case:** A 65-year-old man with a long-standing nevus on his back is diagnosed with metastatic melanoma with a BRAF V600E mutation and receives dabrafenib/trametinib
- Track 21** First-line therapeutic options for patients with metastatic melanoma and BRAF tumor mutations
- Track 22** Results of the Phase III COLUMBUS trial: Efficacy and tolerability of encorafenib/binimetinib versus vemurafenib or encorafenib for unresectable or metastatic melanoma with a BRAF V600 mutation
- Track 23** Management of dabrafenib/trametinib-associated side effects
- Track 24** **Case:** A 53-year-old man receives first-line ipilimumab/nivolumab for metastatic melanoma
- Track 25** Perspective on combination therapy versus monotherapy with immune checkpoint inhibitors for metastatic melanoma

Interview with Mario Sznol, MD

Tracks 1-25

- Track 1** Choosing between nivolumab and dabrafenib/trametinib as adjuvant therapy for melanoma with a BRAF tumor mutation
- Track 2** Efficacy, tolerability and quality of life with adjuvant dabrafenib/trametinib and adjuvant nivolumab
- Track 3** Updated results from the Phase III CheckMate 238 trial: Adjuvant nivolumab versus ipilimumab after complete resection of Stage III/IV melanoma
- Track 4** Toxicity manifestations with anti-PD-1 antibodies alone and in combination with a CTLA-4 inhibitor
- Track 5** Rare but potentially life-threatening complications associated with immune checkpoint inhibitors
- Track 6** Monitoring and management of rare complications with immune checkpoint inhibitors
- Track 7** Clinical experience with immune checkpoint inhibitor-associated colitis, pneumonitis and hepatitis
- Track 8** General principles for managing adverse events in patients receiving immune checkpoint inhibitors
- Track 9** Therapeutic approach to disease progression on an immune checkpoint inhibitor

Interview with Dr Sznol (continued)

- Track 10** Duration of immune checkpoint inhibitor therapy for melanoma
- Track 11** Perspective on the utility of immune checkpoint inhibitors for patients with preexisting autoimmune diseases
- Track 12** Use of immune checkpoint inhibitor therapy after organ or allogeneic transplant
- Track 13** Association between the gut microbiome and response to anti-PD-1 antibody therapy in metastatic melanoma
- Track 14** **Case:** A 64-year-old man with newly diagnosed, symptomatic metastatic melanoma and a BRAF V600E mutation receives dabrafenib/trametinib
- Track 15** Response rates with dabrafenib/trametinib and nivolumab/ipilimumab as first-line therapy for metastatic melanoma with a BRAF tumor mutation
- Track 16** Switching to nivolumab/ipilimumab for patients experiencing a response to dabrafenib/trametinib
- Track 17** Management of dabrafenib/trametinib-associated fevers
- Track 18** Incidence of treatment-associated fevers with dabrafenib/trametinib and encorafenib/binimetinib
- Track 19** **Case:** A 68-year-old man with metastatic melanoma and PD-L1 expression greater than 5% receives ipilimumab/nivolumab
- Track 20** Testing for PD-L1 expression in patients with metastatic melanoma
- Track 21** Clinical experience with immunotherapy-associated uveitis and vitiligo
- Track 22** **Case:** A 47-year-old man with metastatic melanoma experiences dermatologic toxicity with ipilimumab/nivolumab
- Track 23** **Case:** A 31-year-old man is diagnosed with metastatic mucosal melanoma
- Track 24** Therapeutic options for patients with metastatic mucosal melanoma and a c-KIT mutation
- Track 25** Activity and tolerability of ipilimumab/nivolumab in patients with metastatic mucosal melanoma

Interview with Prof Caroline Robert, MD, PhD

Tracks 1-18

- Track 1** Selection of adjuvant therapy for patients with melanoma and a BRAF tumor mutation
- Track 2** Clinical benefit associated with adjuvant therapy with BRAF/MEK inhibitors and with immune checkpoint inhibitors for melanoma with a BRAF tumor mutation
- Track 3** Use of immune checkpoint inhibitors for patients with preexisting autoimmune disease
- Track 4** Safety profiles and duration of therapy with BRAF/MEK inhibitor combinations
- Track 5** Tumor mutation burden and other potential biomarkers of response to adjuvant targeted therapy or immune checkpoint inhibition
- Track 6** Emerging data with the novel IDO inhibitor epacadostat and anti-LAG-3 and anti-TIM-3 antibodies for metastatic melanoma
- Track 7** Choosing between single-agent and combination immune checkpoint inhibitor therapy for metastatic melanoma
- Track 8** Perspective on the association between immune-related adverse events and benefit from immune checkpoint inhibitors
- Track 9** Duration of therapy and complete response rate with immunotherapy versus BRAF/MEK inhibitor combinations
- Track 10** **Case:** A 27-year-old man with metastatic melanoma and a BRAF tumor mutation receives nivolumab/ipilimumab after experiencing disease progression on a BRAF/MEK inhibitor combination
- Track 11** Efficacy and tolerability of BRAF/MEK inhibitor combinations
- Track 12** Recent advances in the management of melanoma with metastases to the brain
- Track 13** Clinical experience with hedgehog inhibitors for BCC
- Track 14** Activity and side-effect profiles of sonidegib and vismodegib
- Track 15** Activity of the PD-1 antibody cemiplimab in metastatic SCC of the skin
- Track 16** Response to immune checkpoint inhibitors in patients with SCC of the skin
- Track 17** Overview of Merkel cell carcinoma
- Track 18** Response to PD-1/PD-L1 blockade in patients with Merkel cell carcinoma

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QUESTIONS (PLEASE CIRCLE ANSWER):

1. Combination immune checkpoint blockade with ipilimumab/nivolumab is _____ to anti-PD-1 monotherapy for patients with melanoma and brain metastases.
 - a. Equivalent
 - b. Inferior
 - c. Superior
2. Results of the Phase III COLUMBUS trial evaluating encorafenib/binimetinib versus vemurafenib or encorafenib for unresectable or metastatic melanoma with a BRAF V600 mutation demonstrated significant improvement in _____ with encorafenib/binimetinib compared to vemurafenib.
 - a. Overall survival
 - b. Progression-free survival
 - c. Both a and b
 - d. Neither a nor b
3. Patients with melanoma who receive encorafenib/binimetinib are significantly more likely than those who receive dabrafenib/trametinib or vemurafenib/cobimetinib to experience treatment-associated fevers or photosensitivity.
 - a. True
 - b. False
4. The target of the monoclonal antibody tremelimumab is _____.
 - a. PD-1
 - b. CTLA-4
 - c. LAG-3
5. For patients with melanoma receiving combination immune checkpoint blockade who experience hypophysitis-associated headache, the side effect typically _____.
 - a. Resolves rapidly upon administration of steroids
 - b. Occurs throughout the course of therapy regardless of preventive measures
6. Data published by Migden and colleagues in the *The New England Journal of Medicine* evaluating PD-1 blockade with cemiplimab for locally advanced or metastatic SCC of the skin demonstrated durable responses and a tolerable side-effect profile and led to its recent FDA approval in this setting.
 - a. True
 - b. False
7. When used in the treatment of BCC, the hedgehog inhibitor sonidegib _____.
 - a. Can cause muscle spasms, hair loss and changes in taste
 - b. Can elicit responses after reinitiation of therapy following a treatment holiday to mitigate toxicities
 - c. Both a and b
 - d. Neither a nor b
8. Results of the Phase II JAVELIN Merkel 200 trial demonstrated durable responses and promising survival outcomes in patients who received the anti-PD-L1 antibody avelumab for metastatic Merkel cell carcinoma after disease progression on chemotherapy.
 - a. True
 - b. False
9. Which of the following categories reflects the mechanism of action of epacadostat?
 - a. Anti-PD-1/PD-L1 antibody
 - b. Anti-CTLA-4 antibody
 - c. Hedgehog inhibitor
 - d. IDO inhibitor
10. SCC of the skin is typically associated with long-term unprotected sun exposure, and metastasis to distant sites occurs only in a small proportion of patients.
 - a. True
 - b. False

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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 monotherapy versus combination immune checkpoint blockade in patients with melanoma and brain metastases	4 3 2 1	4 3 2 1
Monitoring and management of rare complications associated with checkpoint inhibitors	4 3 2 1	4 3 2 1
Results of the Phase III COLUMBUS trial: Efficacy, tolerability and recent FDA approval of encorafenib with binimetinib for unresectable or metastatic melanoma with a BRAF V600 mutation	4 3 2 1	4 3 2 1
Activity, tolerability and recent FDA approval of the anti-PD-1 antibody cemiplimab for advanced SCC of the skin	4 3 2 1	4 3 2 1
Comparison of efficacy, tolerability and quality of life between adjuvant dabrafenib/trametinib and nivolumab for melanoma with a BRAF tumor mutation	4 3 2 1	4 3 2 1
Response to PD-1/PD-L1 blockade in patients with Merkel cell carcinoma	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).....

Approximately how many new patients with the following do you see per year?

Melanoma: Cutaneous SCC:..... Merkel cell carcinoma: BCC:

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:

- Identify patients after surgical removal of primary melanoma for whom adjuvant therapy should be considered, and counsel these individuals regarding the risks and benefits of approved systemic approaches..... 4 3 2 1 N/M N/A
- Use biomarkers, clinical characteristics and mutational analyses to select individualized front-line and subsequent treatment approaches for patients with advanced melanoma. 4 3 2 1 N/M N/A
- Use available clinical trial evidence to safely and effectively incorporate targeted and immunotherapeutic approaches into the management of metastatic melanoma with BRAF tumor mutations. 4 3 2 1 N/M N/A

EDUCATIONAL ASSESSMENT AND CREDIT FORM (continued)

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

- Recall the underlying research database guiding therapeutic recommendations for patients with locally advanced or metastatic SCC of the skin.4 3 2 1 N/M N/A
- Assess the rationale for and clinical trial data with anti-PD-1/PD-L1 antibodies for Merkel cell carcinoma, and optimally integrate available agents into current treatment algorithms.4 3 2 1 N/M N/A
- Formulate a long-term clinical plan for the management of locally advanced or metastatic BCC, incorporating existing and investigational treatments.4 3 2 1 N/M N/A

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:

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			
Michael A Postow, MD	4	3	2	1	4	3	2	1
Karl Lewis, MD	4	3	2	1	4	3	2	1
Mario Sznol, MD	4	3	2	1	4	3	2	1
Prof Caroline Robert, MD, PhD	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

REQUEST FOR CREDIT — Please print clearly

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I certify my actual time spent to complete this educational activity to be _____ hour(s).

Signature:..... Date:.....

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QID 2153

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Dermatologic Oncology™

U P D A T E

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