

Gynecologic Oncology™

U P D A T E

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

FACULTY INTERVIEWS

Robert L Coleman, MD

Bradley J Monk, MD

EDITOR

Neil Love, MD



Gynecologic Oncology Update

A Continuing Medical Education Audio Series

OVERVIEW OF ACTIVITY

Gynecologic cancers are comprised of 5 primary tumor types affecting the ovaries, uterine corpus (endometrial cancer), uterine cervix (cervical cancer), vulva and vagina. In 2015, it is anticipated that approximately 98,280 new cases of gynecologic cancer will be documented in the United States and 30,440 individuals will succumb to these diseases. As with many other tumors, patient outcomes are critically dependent on effective multidisciplinary care, which for these cancers often includes contributions from gynecologic, medical and radiation oncologists in addition to pathologists, diagnostic radiologists, oncology nurses and psychosocial services. Interestingly, despite many commonalities, each of these diseases is, in fact, quite distinct, and in this regard management algorithms employed for each are varied. To bridge the gap between research and patient care, *Gynecologic Oncology Update* uses one-on-one discussion with leading investigators in these fields. By providing access to the latest scientific developments and the perspectives of experts, this CME activity assists practicing clinicians with the formulation of up-to-date management strategies.

LEARNING OBJECTIVES

- Employ current clinical guidelines and available data in the selection of treatment options for patients with commonly diagnosed gynecologic cancers.
- Consider clinical investigator perspectives regarding the indications for BRCA mutation testing, and use this information to appropriately select patients with ovarian cancer (OC) for this analysis.
- Develop an evidence-based algorithm for the initial and long-term treatment of advanced OC considering the role of the recently approved anti-VEGF antibody bevacizumab.
- Appreciate the recent approval of olaparib for patients with highly refractory advanced OC, and integrate this agent into the clinical care of appropriate individuals.
- Develop an understanding of the emerging efficacy data and toxicity profiles of investigational agents in OC to effectively prioritize clinical trial opportunities for appropriate patients.
- Implement a long-term clinical plan for the management of metastatic cervical cancer, incorporating existing, recently approved and investigational treatments.

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 1.5 *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 contains an audio component. To receive credit, the participant should review the CME information, listen to the CD, complete the Post-test with a score of 70% or better and fill out the Educational Assessment and Credit Form located in the back of this booklet or on our website at ResearchToPractice.com/GOU115/CME. A complete list of supporting references may also be accessed at ResearchToPractice.com/GOU115.

This activity is supported by educational grants from AstraZeneca Pharmaceuticals LP, Genentech BioOncology, ImmunoGen Inc and Myriad Genetic Laboratories Inc.

Release date: November 2015; Expiration date: November 2016

This educational activity contains discussion of published and/or investigational uses of agents that are not indicated by the Food and Drug Administration. Research To Practice does not recommend the use of any agent outside of the labeled indications. Please refer to the official prescribing information for each product for discussion of approved indications, contraindications and warnings. The opinions expressed are those of the presenters and are not to be construed as those of the publisher or grantors.

If you would like to discontinue your complimentary subscription to *Gynecologic Oncology Update*, please email us at Info@ResearchToPractice.com, call us at (800) 648-8654 or fax us at (305) 377-9998. Please include your full name and address, and we will remove you from the mailing list.

CME INFORMATION

FACULTY



Robert L. Coleman, MD

Professor and Deputy Chairman
Vice Chair, Clinical Research
Ann Rife Cox Chair in
Gynecology
Department of Gynecologic
Oncology and Reproductive
Medicine
The University of Texas
MD Anderson Cancer Center
Houston, Texas



Bradley J. Monk, MD

Professor and Director, Division
of Gynecologic Oncology
Vice Chair, Department of
Obstetrics and Gynecology
University of Arizona Cancer
Center and Creighton University
School of Medicine at
Dignity Health
St Joseph's Hospital and
Medical Center
Phoenix, Arizona

EDITOR



Neil Love, MD

Research To Practice
Miami, Florida

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: **Dr Coleman** — Advisory Committee: Abbott Laboratories, AbbVie Inc, Amgen Inc, AstraZeneca Pharmaceuticals LP, Bayer HealthCare Pharmaceuticals, Caris Life Sciences Ltd, Celgene Corporation, Cerulean Pharma Inc, Clovis Oncology, CritiTech Inc, Eisai Inc, Genentech BioOncology, Genmab, GlaxoSmithKline, ImmunoGen Inc, Incyte Corporation, Janssen Biotech Inc, Merck, Merrimack Pharmaceuticals Inc, Nektar, Takeda Oncology, VentiRx Pharmaceuticals Inc; Consulting Agreement: Celgene Corporation; Contracted Research: Array BioPharma Inc, AstraZeneca Pharmaceuticals LP, Clovis Oncology, EMD Serono Inc, Janssen Biotech Inc, Merck, OncoMed Pharmaceuticals Inc, Takeda Oncology. **Dr Monk** — Consulting Agreements: Advaxis Inc, Amgen Inc, AstraZeneca Pharmaceuticals LP, Bayer HealthCare Pharmaceuticals, Cerulean Pharma Inc, Genentech BioOncology, GlaxoSmithKline, Gradalis Inc, ImmunoGen Inc, Merck, Pfizer Inc, Roche Laboratories Inc, TESARO Inc, Verastem Inc, Vermillion Inc; Contracted Research: Amgen Inc, Array BioPharma Inc, Genentech BioOncology, Janssen Biotech Inc, Johnson & Johnson Pharmaceuticals, Lilly, Morphotek Inc, Novartis Pharmaceuticals Corporation, TESARO Inc; Speakers Bureau: AstraZeneca Pharmaceuticals LP, Genentech BioOncology, Myriad Genetic Laboratories Inc, Roche Laboratories Inc.

EDITOR — 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 Pharma Global Development Inc, AstraZeneca Pharmaceuticals LP, 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, Daiichi Sankyo Inc, Dendreon Corporation, 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, Novartis Pharmaceuticals Corporation, Novocure, Onyx Pharmaceuticals, an Amgen subsidiary, Pharmacyclis Inc, 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.

RESEARCH TO PRACTICE STAFF AND EXTERNAL REVIEWERS — The scientific staff and reviewers for Research To Practice have no real or apparent conflicts of interest to disclose.

SELECT PUBLICATIONS

A phase 3 placebo-controlled study of carboplatin/paclitaxel with or without concurrent and continuation maintenance veliparib (PARP inhibitor) in subjects with previously untreated stages III or IV high-grade serous epithelial ovarian, fallopian tube, or primary peritoneal cancer. NCT02470585

Aghajanian C et al. **A randomized phase II study of paclitaxel/carboplatin/bevacizumab, paclitaxel/carboplatin/temsirolimus and ixabepilone/carboplatin/bevacizumab as initial therapy for measurable stage III or IVA, stage IVB or recurrent endometrial cancer, GOG-86P. Proc ASCO 2015;Abstract 5500.**

Borghaei H et al. **Phase 1 study of IMGN853, a folate receptor alpha (FR α)-targeting antibody-drug conjugate (ADC) in patients (pts) with epithelial ovarian cancer (EOC) and other FRA-positive solid tumors. Proc ASCO 2015;Abstract 5558.**

Coleman RL et al. **A phase II evaluation of the potent, highly selective PARP inhibitor veliparib in the treatment of persistent or recurrent epithelial ovarian, fallopian tube, or primary peritoneal cancer in patients who carry a germline BRCA1 or BRCA2 mutation — An NRG Oncology/Gynecologic Oncology Group study. Gynecol Oncol 2015;137(3):386-91.**

Coleman RL et al. **A phase III randomized controlled clinical trial of carboplatin and paclitaxel alone or in combination with bevacizumab followed by bevacizumab and secondary cytoreductive surgery in platinum-sensitive, recurrent ovarian, peritoneal primary and fallopian tube cancer (Gynecologic Oncology Group 0213). Proc SGO 2015;Abstract 3.**

Coleman RL et al. **Randomized phase III trial of carboplatin/paclitaxel alone (CP) or in combination with bevacizumab followed by bevacizumab (CPB) and secondary cytoreduction surgery in platinum-sensitive recurrent ovarian cancer: GOG0213, an NRG Oncology/GOG study — Analysis of patient reported outcomes (PRO) on chemotherapy randomization. Proc ASCO 2015;Abstract 5525.**

Gómez-Hidalgo NR et al. **Predictors of optimal cytoreduction in patients with newly diagnosed advanced-stage epithelial ovarian cancer: Time to incorporate laparoscopic assessment into the standard of care. Gynecol Oncol 2015;137(3):553-8.**

Gourley C et al. **Molecular subgroup of high-grade serous ovarian cancer (HGSOC) as a predictor of outcome following bevacizumab. Proc ASCO 2014;Abstract 5502.**

Matulonis UA et al. **Olaparib monotherapy in patients with advanced relapsed ovarian cancer and a germline BRCA1/2 mutation: A multi-study sub-analysis. Proc SGO 2015;Abstract 14.**

McNeish IA et al. **Results of ARIEL2: A Phase 2 trial to prospectively identify ovarian cancer patients likely to respond to rucaparib using tumor genetic analysis. Proc ASCO 2015;Abstract 5508.**

Nick AM et al. **A framework for a personalized surgical approach to ovarian cancer. Nat Rev Clin Oncol 2015;12(4):239-45.**

Nick AM et al. **Launching personalized surgical therapy for advanced ovarian cancer. Proc SGO 2014;Abstract 69.**

Phase II randomized trial of nivolumab with or without ipilimumab in patients with persistent or recurrent epithelial ovarian, primary peritoneal or fallopian tube cancer. NCT02498600

Swisher EM et al. **Tumor BRCA mutation or high genomic LOH identify ovarian cancer patients likely to respond to rucaparib: Interim results for ARIEL2 clinical trial. Proc SGO 2015;Abstract 8.**

Tewari D et al. **Long-term survival advantage and prognostic factors associated with intraperitoneal chemotherapy treatment in advanced ovarian cancer: A Gynecologic Oncology Group study. J Clin Oncol 2015;33(13):1460-6.**

Tewari KS et al. **Improved survival with bevacizumab in advanced cervical cancer. N Engl J Med 2014;370(8):734-43.**

QUESTIONS (PLEASE CIRCLE ANSWER):

- The ongoing Phase III GOG 3005 trial is evaluating platinum-based chemotherapy in combination with which type of agents for patients with previously untreated Stage III/IV high-grade serous epithelial ovarian, fallopian tube or primary peritoneal cancer?**
 - Antibody-drug conjugate
 - Novel anti-angiogenic agent
 - PARP inhibitor
- In addition to a statistically significant progression-free survival improvement, the Phase III GOG 0213 trial reported a statistically significant overall survival improvement of approximately 5 months for patients who received bevacizumab.**
 - True
 - False
- As single agents, PARP inhibitors have shown activity in _____.**
 - BRCA1 mutation-positive OC
 - BRCA2 mutation-positive OC
 - BRCA germline-normal OC
 - Both a and b
 - All of the above
- Approximately what percentage of patients with OC experience responses to anti-PD-1/PD-L1 therapy?**
 - ≤5%
 - 15% to 20%
 - 30% to 35%
- Bevacizumab is FDA approved for which of the following gynecologic cancers?**
 - Platinum-resistant recurrent epithelial OC
 - Persistent, recurrent or metastatic cervical cancer
 - Both a and b
 - Neither a nor b
- _____ is commonly associated with intraperitoneal compared to intravenous chemotherapy.**
 - Increased nausea
 - Increased abdominal pain
 - Both a and b
 - Neither a nor b
- The incidence of bevacizumab-associated bowel complications is _____ in patients with OC who have received multiple lines of prior therapy than in those who have received only 1 to 3 prior regimens.**
 - Lower
 - Higher
- The FDA recently approved olaparib monotherapy for patients with deleterious germline BRCA-mutated advanced OC previously treated with 3 or more prior lines of chemotherapy.**
 - True
 - False
- Common side effects of olaparib therapy include _____.**
 - Anemia
 - Fatigue
 - Diarrhea
 - All of the above
- Which of the following is the mechanism of action of mirvetuximab soravtansine (MGN853)?**
 - Anti-angiogenic
 - Antibody-drug conjugate
 - PARP inhibitor

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
Results of the Phase III GOG 0213 trial of carboplatin/paclitaxel alone or in combination with bevacizumab → bevacizumab and secondary debulking surgery in platinum-sensitive recurrent OC	4 3 2 1	4 3 2 1
Clinical activity and available data with bevacizumab in the management of recurrent endometrial cancer	4 3 2 1	4 3 2 1
Appropriate use of BRCA testing to guide treatment selection for patients with OC	4 3 2 1	4 3 2 1
Recent FDA approval of olaparib monotherapy and current integration into clinical practice	4 3 2 1	4 3 2 1
Mechanism of action and available data with the antibody-drug conjugate mirvetuximab soravtansine (IMGN853) in advanced OC	4 3 2 1	4 3 2 1
Incidence and management of olaparib-related side effects (eg, GI toxicity, anemia)	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?

Ovarian cancer:..... Cervical cancer:..... Endometrial cancer:.....

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:

- Employ current clinical guidelines and available data in the selection of treatment options for patients with commonly diagnosed gynecologic cancers. . . . 4 3 2 1 N/M N/A
- Consider clinical investigator perspectives regarding the indications for BRCA mutation testing, and use this information to appropriately select patients with ovarian cancer (OC) for this analysis. 4 3 2 1 N/M N/A
- Develop an evidence-based algorithm for the initial and long-term treatment of advanced OC considering the role of the recently approved anti-VEGF antibody bevacizumab. 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:

- Appreciate the recent approval of olaparib for patients with highly refractory advanced OC, and integrate this agent into the clinical care of appropriate individuals. 4 3 2 1 N/M N/A
- Develop an understanding of the emerging efficacy data and toxicity profiles of investigational agents in OC to effectively prioritize clinical trial opportunities for appropriate patients. 4 3 2 1 N/M N/A
- Implement a long-term clinical plan for the management of metastatic cervical cancer, incorporating existing, recently approved and investigational treatments. 4 3 2 1 N/M N/A

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			
Robert L Coleman, MD	4	3	2	1	4	3	2	1
Bradley J Monk, 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

Other comments about the faculty and editor for this activity:

.....

REQUEST FOR CREDIT — Please print clearly

Name: Specialty:

Professional Designation:

MD DO PharmD NP RN PA Other

Street Address: Box/Suite:

City, State, Zip:

Telephone: Fax:

Email:

Research To Practice designates this enduring material for a maximum of 1.5 AMA PRA Category 1 Credits™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

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

Signature: Date:

QID 1491

The expiration date for this activity is November 2016. To obtain a certificate of completion and receive credit for this activity, please complete the Post-test, fill out the Educational Assessment and Credit Form and fax both to (800) 447-4310, or mail both to Research To Practice, One Biscayne Tower, 2 South Biscayne Boulevard, Suite 3600, Miami, FL 33131. You may also complete the Post-test and Educational Assessment online at www.ResearchToPractice.com/GOU115/CME.

Gynecologic Oncology™

U P D A T E

Editor	Neil Love, MD
Director, Clinical Content and CPD/CME	Kathryn Ault Ziel, PhD
Scientific Director	Richard Kaderman, PhD
Editorial	Clayton Campbell Marilyn Fernandez, PhD Gloria Kelly, PhD Kemi Obajimi, PhD Margaret Peng
Creative Manager	Fernando Rendina
Graphic Designers	Tamara Dabney Silvana Izquierdo
Managing Editor	Kirsten Miller
Senior Production Editor	Aura Herrmann
Copy Editors	Rosemary Hulse Pat Morrissey/Havlin Alexis Oneca
Production Manager	Tracy Potter
Audio Production	Frank Cesarano
Web Master	John Ribeiro
Faculty Relations Manager	Stephanie Bodanyi, CMP
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

Copyright © 2015 Research To Practice. All rights reserved.

The compact disc, Internet content and accompanying printed material are protected by copyright. No part of this program may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying, recording or utilizing any information storage and retrieval system, without written permission from the copyright owner.

The opinions expressed are those of the presenters and are not to be construed as those of the publisher or grantors.

Participants have an implied responsibility to use the

newly acquired information to enhance patient outcomes and their own professional development. The information presented in this activity is not meant to serve as a guideline for patient management.

Any procedures, medications or other courses of diagnosis or treatment discussed or suggested in this activity should not be used by clinicians without evaluation of their patients' conditions and possible contraindications or dangers in use, review of any applicable manufacturer's product information and comparison with recommendations of other authorities.

Gynecologic Oncology™

U P D A T E

Copyright © 2015 Research To Practice.

This activity is supported by educational grants
from AstraZeneca Pharmaceuticals LP, Genentech BioOncology,
ImmunoGen Inc and Myriad Genetic Laboratories Inc.

Research
To Practice®

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

Release date: November 2015

Expiration date: November 2016

Estimated time to complete: 1.5 hours