Evaluating the cost-effectiveness of current FDA-approved PARP inhibitors for the treatment of recurrent ovarian cancer.

Presented Saturday, June 3, 2017

Authors:
Juliet Elizabeth Wolford, Jiaru Bai, Ramez Hassaf Eskander, Lindsey E Minion, John K. Chan, Bradley J. Monk, Krishnasu Sujata Tewari, University of California, Irvine, Orange, CA; University of California Irvine Paul Merage School of Business, Irvine, CA; University of California Irvine Medical Center, Orange, CA; Palo Alto Medical Foundation, San Francisco, CA; University of Arizona Cancer Center at Dignity Health St. Joseph's Hospital and Medical Center, Phoenix, AZ.

Methods:
A Markov model was created in TreeAge Pro 2015 with nodes in the chain allowing patients to transition through response, hematological complications, non-hematological complications, progression, and death. Separately, the PARP inhibitors were compared with IV administered drugs approved for recurrent ovarian cancers including platinum-based, non-platinum, and bevacizumab-based regimens. Toxicity and mean PFS rates for the different agents were obtained from registration trial data. Costs of IV chemotherapy, managing toxicities, infusions, and supportive care were estimated using 2015 Medicare data. Incremental cost-effectiveness ratios (ICER) were calculated and survival was reported in quality adjusted life months.

Results:
Platinum-based combinations were the most cost-effective at $1,672/PPS mo as compared to non-platinum agents ($6,688/mo), bevacizumab-containing regimens ($12,482/mo), olaparib ($13,373/mo), and rucaparib ($14,034/mo). Considering a cost of $114,478 for olaparib and $137,068 for rucaparib prior to progression, costs associated with PARP were 7.1 to 8.3x more than platinum combinations. To better compare the registration trial data to PARP data, probability was adjusted to 2nd line for rucaparib, revealing its ICERs of per month of life added to be $26,997 for bevacizumab, $17,757 for non-platinum, and $79,585 for platinums. Using the adjusted to 2nd line probabilities for olaparib, exhibited ICERS were $16,549 for bevacizumab, $25,637 for non-platinum and $72,083 for platinums.

Conclusions:
The high costs of PARP were not balanced by costs of infusion and managing toxicities of IV drugs typically associated with lower response rates and shorter PFS in the recurrent space. Balancing incremental clinical benefit with novel therapies remains problematic and could widen disparities among those with limited access to care.
Hey Team-

I just wanted to update you that I just received more good news about our project - so, in addition to the being selected for the 2018 Conquer Cancer Foundation of ASCO/Sherwin Family Endowed Merit Award, our project was also just selected as one of the 2018 Best of ASCO projects - so it will be presented at ASCO-licensed meetings around the world!

Again, I can’t thank you all enough for your mentorship, guidance, and collaborative efforts along the way! It’s truly been an honor to work with all of you!

Thank you!!!

Sincerely,

Juliet Wolford, MD
Research Fellow
UCI Division of Gynecologic Oncology
333 City Blvd West, Suite 1400
Orange, CA 92868
ph: 304-840-4148
gager: 714-506-5097

Begin forwarded message:

From: Abstracts <Abstracts@asco.org>
Subject: 2018 Best of ASCO Abstract Selection Notification
Date: April 26, 2018 at 9:49:30 AM PDT
To: "jwolford@uci.edu" <jwolford@uci.edu>

Email: jwolford@uci.edu
2018 Best of ASCO Abstract Selection Notification

Dear Dr. Wolford,

I am writing to congratulate you on the selection of your Abstract 5508: Cost-effectiveness of maintenance therapy in advanced ovarian cancer: Paclitaxel, bevacizumab, niraparib, rucaparib,
olaparib, and pembrolizumab. for presentation at the 2018 ASCO Annual Meeting. This abstract has also been hand selected to be included in the 2018 Best of ASCO* program, which will be held this summer following the ASCO Annual Meeting.

The Best of ASCO* is an educational initiative that condenses highlights from ASCO’s Annual Meeting into a two-day program. The purpose of this initiative is to increase global access to cutting-edge science. Abstracts were selected according to specific criteria and reflect research that is relevant and significant in oncology today. In addition to three domestic Best of ASCO* Meetings, there will also be nearly twenty International and Officially Licensed Best of ASCO* Meetings.

This email is simply to notify you of this distinction and requires no further action by you. Invited faculty will be selected for these meetings to present and discuss your abstract in a disease-specific session. You are not being asked to present or attend a Best of ASCO Meeting. For more information on the program or meeting agendas please visit boa.asco.org.

If you have any questions, please do not hesitate to contact us at abstracts@asco.org or 571-483-1300.

Thank you,
Jennifer Vitek
Program Coordinator, Best of ASCO* Meetings

American Society of Clinical Oncology
2318 Mill Road, Suite 800
Alexandria, VA 22314
T: 571-483-1300 or Toll Free: (800) 516-5850
F: 571.366.9547
E: abstracts@asco.org
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Presented Saturday, June 3, 2017

Abstract

Background: Unlike approved antiangiogenic therapies, most PARP inhibitors are targeted to treat patients with ovarian cancer. We sought to evaluate the cost-effectiveness of the two FDA-approved PARP, olaparib and rucaparib.

Methods: A Markov model was created in TreeAge Pro 2015 to simulate patients with recurrent ovarian cancer. Progression-free survival data, health outcomes, and costs were determined using 2015 Medicare data. Incremental cost-effectiveness ratios (ICERs) were calculated and survival was reported in quality-adjusted life months.

Results: Rucaparib was the most cost-effective at $8,072/95 QALYs compared to platinum-based chemotherapy (PBC) (platinum: $9,372/100 QALYs), and olaparib ($8,420/100 QALYs). Considering a cost of $11,475 for olaparib and $13,748 for rucaparib, the costs were $9,456/mo for rucaparib and $9,735/mo for PBC in the current analysis. To better compare the two regimens, the cost of PBC was adjusted to $13,748 while the cost of olaparib was $11,755. The ICERs for the two regimens were $122,068 and $122,388 for olaparib and rucaparib, respectively.

Conclusions: The high costs of PBC were significantly lower than those of olaparib and rucaparib, which were associated with lower incremental cost-effectiveness ratios. This finding suggests that olaparib and rucaparib may be cost-effective compared to PBC.