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Duration of treatment, treatment adherence, and treatment discontinuations associated with second-line PARP inhibitor or bevacizumab maintenance regimens for recurrent ovarian cancer

Emma L. Barber,[1,2,3] Allison M. Saiz,[1] Scott H. Bunner,[4] Nicole M. Engel-Nitz,[4] Katrine L. Wallace[5]

[1]Northwestern University, Division of Gynecologic Oncology, Department of Obstetrics and Gynecology, Chicago, IL, USA; [2]Robert H Lurie Comprehensive Cancer Center, Northwestern University, Chicago, IL, USA; [3]Surgical Outcomes and Quality Improvement Center, Institute for Public Health in Medicine, Chicago, IL, USA; [4]Health Economics and Outcomes Research, OPTUM, Eden Prairie, MN, USA; [5]Health Economics and Outcomes Research, Clovis Oncology, Inc., Boulder, CO, USA

CONCLUSIONS

- **Real-world use data suggest less than half of patients with recurrent ovarian cancer receive maintenance therapy with a poly(ADP-ribose) polymerase (PARP) inhibitor or bevacizumab after second-line (2L) chemotherapy**
- **For patients receiving maintenance therapy after a second chemotherapy regimen, degree of dose modification or discontinuation varied depending on treatment received**
- **Adherence to therapy was >86% in all regimens and did not differ between once or twice per day dosing regimens**
- **Niraparib was associated with the shortest time to dose interruption or discontinuation among the agents evaluated for 2L maintenance use**

REFERENCES

1. Coleman et al. *Lancet*. 2017;390: 1949-1961.
2. Pujade-Lauraine et al. *Lancet Oncol*. 2017;18:1274-1284.
3. Mirza et al. *N Engl J Med*. 2016;375: 2154-2164.
4. Aghajanian et al. *J Clin Oncol*. 2012;30: 2039-2045.
5. NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines®) for Ovarian Cancer V.2.2021. ©National Comprehensive Cancer Network, Inc. 2021. All rights reserved. Accessed July 8, 2021.
6. Andrade et al. *Pharmacoepidemiol Drug Saf*. 2006;15:565-574.
7. Sattler et al. *Drugs Aging*. 2013;30:383-399.

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INTRODUCTION

- Maintenance treatment after response to platinum chemotherapy has been shown to prolong progression-free survival in patients with recurrent ovarian cancer[1–4]
  - For patients with platinum-sensitive ovarian cancer, PARP inhibitors or bevacizumab are recommended by the National Comprehensive Cancer Network (NCCN) as maintenance treatment after second-line chemotherapy (ie, 2L maintenance)[5]
- We describe current real-world practice patterns for patients receiving maintenance therapy with PARP inhibitors or bevacizumab for recurrent ovarian cancer

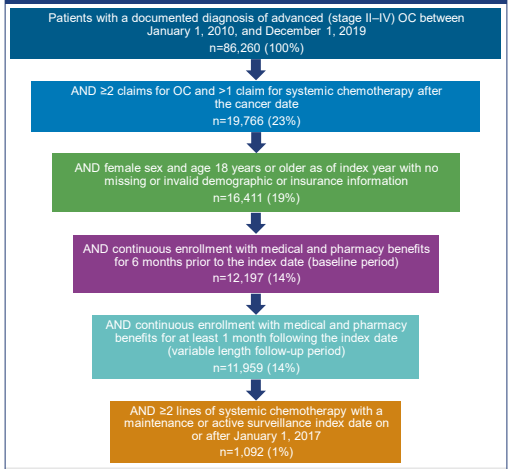
METHODS

- Retrospective cohort study of US patients
  - >18 years old with recurrent ovarian cancer
  - Commercial or Medicare Advantage data in Optum Research database
- Patients selected for inclusion in the analysis met the following criteria:
  - ≥2 claims with diagnoses of advanced ovarian cancer between January 2010 and December 2019
  - ≥2 lines of systemic chemotherapy
  - ≥18 years of age and of female sex
  - received 2L maintenance therapy with a PARP inhibitor or bevacizumab between January 2017 and end of follow-up
  - continuous enrollment with medical and pharmacy benefits for 6 months prior to and ≥1 month after maintenance therapy index date (first date of maintenance therapy after 2L chemotherapy)
- Patients were followed until death, end of study, or health plan disenrollment
- Adherence to therapy was calculated using the proportion of days covered (PDC) method, which calculates the percentage of covered days by dividing the number of days of medication supply dispensed in a period (numerator) by the number of days in the period (denominator), and multiplying by 100[6,7]
- Treatment duration, dose changes, and adherence were evaluated using descriptive statistics
- A Cox proportional hazards model was performed to ascertain the time without dose interruption or discontinuation by therapy group, controlling for baseline characteristics

RESULTS

- A total of 1,092 patients met the criteria for inclusion (**Figure 1**)

Figure 1: Study Population

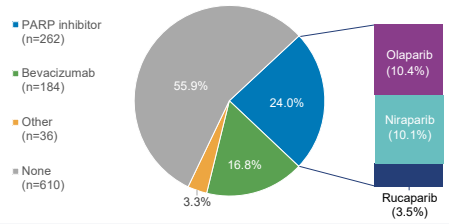


OC, ovarian cancer.

RESULTS (CONTINUED)

- 446 (40.8%) patients received a PARP inhibitor or bevacizumab as 2L maintenance treatment (**Figure 2**)

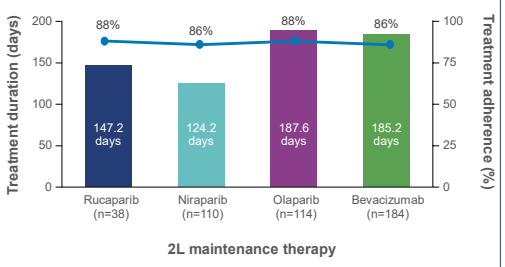
Figure 2. 2L Maintenance Therapy Used in the Study Population (n=1,092)



2L, second-line; PARP, poly(ADP-ribose) polymerase.

- Mean (± standard deviation) duration of 2L maintenance treatment was 147.2 (± 155.4) days for rucaparib, 124.2 (± 122.9) days for niraparib, 187.6 (± 178.7) days for olaparib, and 185.2 (± 149.2) days for bevacizumab (**Figure 3**)
- Adherence while on therapy was similar across all therapeutic regimens (86–88%). Once-per-day dosing for niraparib was not associated with increased adherence or treatment duration vs the other PARP inhibitors requiring twice-per-day dosing (**Figure 3**)

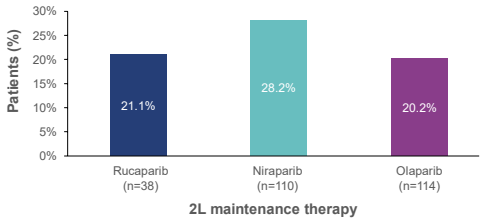
Figure 3. Mean Duration of 2L Maintenance Therapy and Proportion Adherent to Treatment (n=446)



Bars represent treatment duration in days, and line/dots represent the percentage of patients adherent to treatment.
2L, second-line.

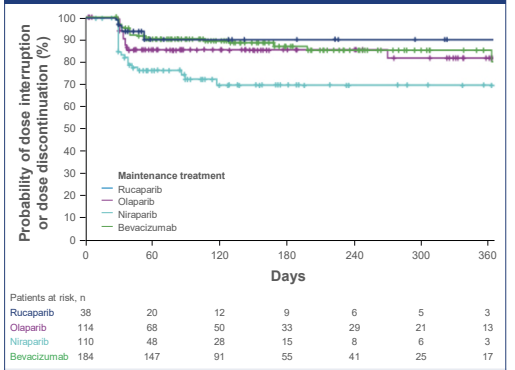
- Although dose reductions were more common in the niraparib group (28.2%) than either the rucaparib (21.1%) or olaparib (20.2%) groups over the time period analyzed, the differences were not statistically significant (**Figure 4**)
- When compared against rucaparib in a Cox proportional hazards model, niraparib was associated with a significantly shorter time to dose interruption or discontinuation (hazard ratio [HR]=3.7; *P*=0.03) (**Figure 5, Table 1**)
- Olaparib and bevacizumab also had higher HRs for dose interruptions or discontinuations compared with rucaparib, but these estimates were not statistically significant (HR=1.5; *P*=0.50 and HR=1.4; *P*=0.58, respectively) (**Figure 5, Table 1**)

Figure 4. Proportion of Patients With a Dose Reduction in 2L PARP Inhibitor Maintenance Therapy (n=262)



Percentage of patients reporting dose reductions were not found to be statistically significant between treatment groups when compared with univariate t-tests between PARP inhibitor agents.
2L, second-line; PARP, poly(ADP-ribose) polymerase.

Figure 5. Time to Dose Interruption or Discontinuation of 2L Maintenance Therapy



2L, second-line.

Table 1. Adjusted Model of Time to Dose Interruption or Discontinuation (n=446)

Independent variables	Dose interruption or dose discontinuation		
	HR	95% CI	*P* value
Maintenance therapy cohorts			
Rucaparib	reference	–	–
Olaparib	1.540	0.442–5.361	0.50
Niraparib	3.747	1.116–12.584	0.03
Bevacizumab	1.404	0.417–4.726	0.58
Age (continuous)	0.983	0.958–1.009	0.196
Personal history of malignant neoplasm ovarian cancer in the 6-month baseline	0.691	0.376–1.268	0.23
Baseline Charlson comorbidity score (categorical)			
0–2	reference	–	–
3–4	16.129	1.977–131.594	0.009
5+	6.868	0.938–50.297	0.06
AHRQ comorbidities			
Other gastrointestinal disorders	0.857	0.407–1.802	0.68
Hypertension	1.258	0.676–2.342	0.47
Diseases of the urinary system	1.736	0.999–3.016	0.05
Diseases of the heart	1.115	0.653–1.902	0.69
Disorders of lipid metabolism	1.391	0.79–2.448	0.25
Other lower respiratory disease	0.712	0.43–1.179	0.19

AHRQ, Agency for Healthcare Research and Quality; CI, confidence interval; HR, hazard ratio.