



## Positive Quality Intervention: PARP Inhibitor Eligibility in Ovarian Cancer

**Description:** The purpose of this PQI is to highlight effective practices to ensure ovarian cancer patients are identified, tested, tracked, and offered a PARP inhibitor when appropriate.

**Background:** In gynecologic cancer patients, PARP inhibitors (PARP-I), have shown increased progression free survival (PFS) and, in some cases, overall survival. Misconceptions may exist around which patients are eligible for PARP inhibitors and when these therapies should be utilized. Patients should be educated upfront about the anticipated therapy journey including the role of maintenance treatment. In ovarian cancer, maintenance therapy is rapidly becoming the new standard of care and it is imperative to identify and appropriately offer maintenance therapy to eligible patients.<sup>3</sup> Data presented at a 2018 ESMO conference showed that the majority of eligible patients were not on maintenance therapy.<sup>4</sup> A real-world data analysis by Garofalo and colleagues found that maintenance therapy was used in 49% of eligible patients; 47% of those on maintenance therapy received a PARP-I as the maintenance agent. A study done by Randall and colleagues found 50% of women with epithelial ovarian cancer underwent BRCA1/2 testing, while Buchanan and colleagues found testing rates in this patient population to be close to around 75%. Use of a PARP-I was higher in those with a BRCA mutation at 61%, vs 45% with wild-type or unknown status.<sup>5</sup> This study looked at maintenance after second line or greater therapy; newer data shows progression free survival (PFS) benefit of maintenance after first line therapy, highlighting the need to accurately identify patients up front.<sup>6,7</sup>

**PQI Process:** Upon diagnosis of ovarian cancer stage II, III or IV

- Identify and track all ovarian cancer patients by utilizing the Electronic Medical Record (EMR)
  - Use [Assessment Tool for Maintenance Therapy In Ovarian Cancer](#) tool
- Determine patient's BRCA mutation status (consider genetic testing if not already completed)
  - Utilize EMR Pathways, Regimens or Patient Management Software when available
- Work with your EMR vendor to ensure PARP-I are listed as a treatment option
- Track all current or upcoming first-line platinum therapy patients with *estimated completion date*:
  - Consider use of a calendar reminder system for dates of treatment milestones
    - The treatment plan should be reviewed with the treating oncologist. A calendar should be maintained to mark the end of systemic therapy
    - Work closely and proactively with provider to determine each unique patient's anticipated treatment plan (rather than reactive after a prescription is ordered)
  - As completion date approaches, assess treatment plan regarding maintenance therapy
    - Consider re-discussing options with provider
    - Consider monthly follow-up in the EMR during surveillance
    - When appropriate, ensure prescription for a PARP inhibitor is submitted
- Consider PARP-Inhibitor utilization:
  - For patients in relapsed platinum sensitive ovarian cancer maintenance therapy following partial or complete response to platinum based chemotherapy (niraparib or rucaparib)
  - For first line or relapsed platinum sensitive maintenance therapy in BRCA associated advanced ovarian cancer (olaparib)

**Important notice:** NCODA has developed this Positive Quality Intervention platform. This platform represents a brief summary of medication uses and therapy options derived from information provided by the drug manufacturer and other resources. This platform is intended as an educational aid and does not provide individual medical advice and does not substitute for the advice of a qualified healthcare professional. This platform does not cover all existing information related to the possible uses, directions, doses, precautions, warning, interactions, adverse effects, or risks associated with the medication discussed in the platform and is not intended as a substitute for the advice of a qualified healthcare professional. The materials contained in this platform are for informational purposes only and do not constitute or imply endorsement, recommendation, or favoring of this medication by NCODA, which assumes no liability for and does not ensure the accuracy of the information presented. NCODA does not make any representations with respect to the medications whatsoever, and any and all decisions, with respect to such medications, are at the sole risk of the individual consuming the medication. All decisions related to taking this medication should be made with the guidance and under the direction of a qualified healthcare professional.



- BRCA1 and BRCA2-positive patients have historically been more responsive to PARP-I therapy than BRCA-negative patients

#### **PQI Process Continued:**

- Ensure the entire medical integrated team is educated about the importance of consistent tracking in the EMR (as described above) to ensure critical appointments and calls are done, accordingly
  - Consider creating a standard treatment plan and inform all potential professionals of the anticipated path and timing (genetic counselors, schedulers, assistants, pharmacists, providers, technicians, financial counselors, administrators, and more)

#### **Patient Centered Activities:**

- Provide upfront education on the role of maintenance treatment and discuss genetic testing (including BRCA) and implications to patient
- Provide [Oral Chemotherapy Education \(OCE\) Sheet](#) and counsel on relevant side effects
- Emphasize the importance of adherence
- Discuss dates for anticipated treatment milestones and options for maintenance therapy
- Clarify any misconceptions around increased efficacy in IV vs. PO therapies
- Provide financial assistance when applicable
- Utilize NCODA PQI: [Niraparib \(Zejula®\)- Dose Modifications Based On Weight And Platelet Counts](#)

#### **References:**

1. Online Breast Cancer 1 Gene, OMIM®. Johns Hopkins University, Baltimore, MD. MIM Number: 113705. 06/28/2019. <https://omim.org/entry/113705#contributors>
2. Helleday T. The underlying mechanism for the PARP and BRCA synthetic lethality: clearing up the misunderstandings. *Mol Oncol* 2011; 5(4):387-93.
3. Randall LM, Birrer MJ, Herzog TJ. Ovarian cancer maintenance: practice-changing data calls for changing practice. *The Oncologist* 2019;24:1-4.
4. Mahner S. Proceedings of ESMO Educational Symposium. Presented October 22, 2018. Available at: <https://cslide.ctimeetingtech.com/library/esmo/browse/search/262N#2Ea4M>.
5. Garofalo D, Verma-Kurvari S, Aydin E, et al. Real world data analysis of ovarian cancer maintenance utilization among maintenance eligible patients. Presented at the American Society of Clinical Oncology Annual Congress; Chicago, IL: 2019.
6. Moore K, Colombo N, Scambia G, et al. Maintenance olaparib in patients with newly diagnosed advanced ovarian cancer. *N Engl J Med*. 2018;379(26):2495-2505. doi: 10.1056/NEJMoa1810858.
7. GSK announces positive headline results in Phase 3 PRIMA study of ZEJULA (niraparib) for patients with ovarian cancer in the first line maintenance setting [press release]. London, UK: GlaxoSmithKline plc; July 15, 2019. <https://bit.ly/2YTFO6h>.
8. Childers CP, Childers KK, Maggard-Gibbons M, Macinko J. National estimates of genetic testing in women with a history of breast or ovarian cancer. *J Clin Oncol* 2017;35(34):3800-3806.
9. Randall LM, Aydin E, Louie-Gao M, Hazard S, Westin SN. A retrospective analysis of real-world tumor BRCA (tBRCA) testing trends in ovarian cancer before and after PARP inhibitor approvals. Presented at the 17th Biennial Meeting of the International Gynecologic Cancer Society; Kyoto, Japan: 2018.
10. Buchanan TR, Griffin NE, Leon C, et al. Maintaining adherence rates for genetic testing in an era with fewer in-office counselors. *Gynecologic Oncology* 2019; 154(1):204.
11. Daly MB, Pilarski R, Berry M, et al. NCCN guidelines insights: Genetic/familial high-risk assessment: Breast and ovarian, version 3.2019. *J Natl Compr Canc Netw* 15:1-18-2019.
12. Zejula® (niraparib) [prescribing information]. Waltham, MA: Tesaro Inc.
13. Lynparza® (olaparib) tablets [prescribing information]. Wilmington, DE: AstraZeneca Pharmaceuticals.
14. Rubraca® (rucaparib) [prescribing information]. Boulder, CO: Clovis Oncology.
15. Talzenna® (talazoparib) [prescribing information]. New York, NY: Pfizer Inc.

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**Supplemental Information:**

Current NCCN guidelines for genetic testing describe recommendations for BRCA testing in all ovarian cancer patients and in breast cancer patients that meet specific criteria.<sup>11</sup> Please refer to the NCCN guidelines or consulting a genetic counselor for specifics on testing recommendations within that group of patients.

**BRCA Testing Populations in Breast and Ovarian Cancer<sup>5</sup>**

- Individual from family with known BRCA1/2 variant
- History of breast cancer + one of the following
  - 45 years or younger
  - 46-50 years with additional breast cancer primary OR 1 or more close blood relative with either breast cancer or high-grade prostate cancer
  - Unknown or limited family history
- 60 or younger with triple negative breast cancer
- Any age + one of the following
  - 45 years or younger
  - 1 or more blood relative with breast cancer diagnosed at 50 years or younger, ovarian carcinoma, male breast cancer, metastatic prostate cancer or pancreatic cancer
  - 2 or more diagnoses of breast cancer at any age in patient or close blood relatives
- Ashkenazi Jewish ancestry
- History of ovarian cancer
- History of male breast cancer
- History of pancreatic cancer
- History of metastatic prostate cancer
- Regardless of family history, NCCN guidelines recommend BRCA testing in those that may benefit from targeted therapy

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