



# SPOTLIGHT

## PARP inhibitor drugs and ovarian cancer

### Our Cancer Team

**Dr. Leonard Henry**  
Medical Director,  
Surgical Oncologist

**Dr. Bolanle Adepoju**  
Medical Oncologist

**Dr. Fiona Denham**  
Breast Surgical  
Oncologist

**Dr. Walid Hadid**  
Interventional  
Pulmonologist

**Dr. Ashley Hardy**  
Surgical Oncologist

**Dr. Ebenezer Kio**  
Medical Oncologist

**Dr. Rebecca Lovejoy**  
Naturopathic Doctor

**Dr. Emily Moore**  
Naturopathic Doctor

**Dr. Laura Morris**  
Breast Surgical  
Oncologist

**Dr. Irina Sparks**  
Radiation Oncologist

**Dr. Pamela Stone**  
Gynecologic Oncologist

**Dr. Houman Vaghefi**  
Radiation Oncologist

**Dr. Urs von Holzen**  
Surgical Oncologist

**Dr. James Wheeler**  
Radiation Oncologist

**Ingrid Bowser, NP**

**Bo Coody, NP**

**Grace Darnell, NP**

**Sherise Deardorff, PA**

**Brooke Dabbert, NP**

**Devon Perkins, PA**

**Kristan Rheinheimer, NP**

**Alyssa Yoder, NP**

**Tracy Paulus,**  
Certified Tumor Registrar

**Dr. Pamela J.B. Stone, Gynecologic Oncologist**

### PARP inhibitor drugs: The newest line of defense against ovarian cancer

As has been the case with many cancers, the treatment of ovarian cancer patients and the accompanying survival rates have evolved incrementally over the last 40 years. Because of limitations in screening and surveillance tools, the typical patients we see at the Goshen Center for Cancer Care come in as stage 3 or stage 4. For this reason, until recently, our standard treatment has been an optimal surgery approach consisting of aggressive surgery and a combination of chemotherapy with carboplatin and paclitaxel.

Now the newest treatments involve drugs called PARP inhibitors, a group of pharmacological inhibitors of the enzyme poly ADP ribose polymerase. These drugs are most appropriate for patients whose BRCA has mutated. These mutations prevent DNA repair so a PARP inhibitor is a type of targeted therapy that effectively traps PARP proteins in cancer cells. The role of PARP is to repair damaged DNA. Since normal cells don't replicate their DNA as often as cancers do, the tumor cells will die.

#### Recommendations to help identify stage 3 and 4 cancers earlier

Genetic testing is recommended for all epithelial ovarian cancer patients to identify genetic abnormalities and help estimate the response to PARPi therapy. At this time there are no screening recommendations for ovarian cancer. We do have a study through the NRG (NCI cancer group) that we are opening at Goshen Center for Cancer Care called NRG CC008 for patients with BRCA 1 mutation to choose between prophylactic bilateral salpingo-oophorectomy versus bilateral salpingectomy to reduce the risk of developing ovarian cancer.

We think many ovarian cancers originate in the fimbriated end of the fallopian tube. Prophylactic surgery of removing the tubes and ovaries can reduce the risk of developing ovarian cancer by 90 percent if performed by age 40; however, this places the patient at increased risk of menopausal changes and risks. The study is being conducted to see if a stage procedure where the tubes are removed early with delayed removal of the ovaries can improve the menopausal risks while still offering the benefit of ovarian cancer risk reduction. A hysterectomy is an optional part of the surgery for patients.

#### PARP inhibitors represent an exciting new window for treatment of ovarian cancer patients

These patients have higher rates of genetic mutations than most other tumors. We have found that the tumor itself can provide critical genetic information even if it's not an inheritable mutation. That's why these drugs have now moved into the category of frontline therapy, a status we haven't seen treatments move into for a very long time.

To refer a patient to Goshen Center for Cancer Care, call (574) 364-2973.



## PARP inhibitor drugs and ovarian cancer

### *What healthcare providers need to know*

In the U.S., there are currently three primary PARP inhibitor drugs that have been approved. They are olaparib, niraparib and rucaparib. A fourth one velaparib is currently being used in research and still others are in use in Europe. Each of the drugs have some degree of differentiation so research is continuing to ascertain how well they work in combination with other drugs and how they should be sequenced. We are also using this research to study the germline genetics in patients, the dynamics of tumor mutation and any potential resistance to different drugs. All of this information coupled with actual patient experiences is a critical part of the fine-tuning process. It has opened up an exciting new arena of tumor biology and the potential for significant advances in ovarian patient care.

### Another drug worth mentioning is bevacizumab

Bevacizumab is an anti-angiogenic drug that has only been offered for ovarian cancer patients recently. It is unlike the PARP inhibitors in that it is not based on addressing DNA damage in the same ways. Bevacizumab is an interesting option because it is being used for both maintenance and recurrence. It is also being studied in combination with the other drugs as a new way to attack tumor cells.

The key takeaway from this discussion is that genetics and new drug therapies are having a profound impact on the way we treat ovarian cancer. These advancements are very effectively complementing the surgical and medical oncology expertise at Goshen Center for Cancer Care.

---

***Pamela J.B. Stone, MD, FACOGS, FACS,*** is a gynecologic surgical oncologist at Goshen Center for Cancer Care. She specializes in caring for women with all stages of cancer in the reproductive organs. Her passion for women's health and gynecologic oncology is fueled by her personal journey of caring for her mother, a labor and delivery room nurse who had ovarian cancer. Dr. Stone has served on the National Cancer Institute Ovarian Task Force and has been a primary investigator on studies related to gynecological cancer treatments.



### TO REFER A PATIENT

Goshen Center for Cancer Care provides holistic, complete care for patients. To refer a patient, call (574) 364-2973 or visit [GoshenHealth.com/quick-guide](https://GoshenHealth.com/quick-guide).

If you would like more information or to meet any of our doctors, please contact **Jenny Rupp, Physician Liaison**, at [jrupp2@goshenhealth.com](mailto:jrupp2@goshenhealth.com) or (574) 364-2978.