Keywords: stages of ovarian cancer

Problem: In the United States, ovarian cancer is the leading cause of death from gynecological cancers. Unfortunately, more than 80% recur or metastasize. This diagnosis is devastating for patients. Family physicians have established a rapport and have built trust. It is only natural that patients turn to them for information and guidance. PCPs need a basic understanding of ovarian cancer staging, prognosis and treatment options.

Solution: This article gives physicians a basic understanding of ovarian cancer staging, prognosis and treatment.

Stages of Ovarian Cancer: Knowledge that Informs and Supports

In the United States, ovarian cancer (OC) is the leading cause of gynecological cancer deaths. Unfortunately, more than 80% recur or metastasize. The prognosis for early-stage ovarian cancer is excellent. However, this aggressive tumor often goes undetected until it has progressed to advanced-stage ovarian cancer.

Family physicians have established a trusting patient-provider relationship. So, it is only natural that patients turn to them for information and guidance. Keep reading for a brief overview of the stages of ovarian cancer and the correlating prognoses.

Key Takeaways

- Patients receiving an early-stage ovarian diagnosis often have an excellent prognosis. However, this aggressive cancer usually grows undetected.
- The lack of disease-specific symptoms and lab tests makes early detection challenging.
- The initial intervention for ovarian cancer is surgery. During surgery, experts classify the cancer and determine if it is localized, regional or distant.
- Stage I and II have a 93% and 74% 5-year survival rate, respectively. However, only 20% of women find out about their cancer during these stages.
- Stage III and IV are advanced-stage ovarian cancer. Most women are diagnosed during these two stages. Advanced-stage ovarian cancer has a poor prognosis.

Early detection of ovarian cancer

Early-stage ovarian cancer has an excellent prognosis. However, only 20% of patients with OC are diagnosed during the early stages. Prognosis significantly declines as ovarian cancers transition from localized to regional or distant. Common signs of ovarian cancer are the following:

- Weight loss
- Prompt satiation when eating
- Pelvic or back pain
- Constipation
- Frequent urination
- Abdominal bloating or swelling

Early detection of ovarian cancer is challenging for various reasons. The symptoms are not disease-specific and could indicate a wide range of conditions. Once symptoms present, the cancer is typically in the advanced stages. Cancer biomarkers have come a long way. However, without surgical staging, physicians cannot determine the cancer's impact.

The protein biomarker CA-125 is the most sensitive and specific for detecting early-stage ovarian cancer. Approximately 90% of women with advanced-stage OC and 60% with stage I have elevated CA-125 blood levels. By measuring CA-125 levels and performing imaging exams, physicians can diagnose ovarian cancer as early as possible.

Stages of ovarian cancer

Ovarian cancer is an umbrella term used to classify cancers found in the ovaries, fallopian tubes or peritoneum. These cancers share staging and treatment characteristics. Additionally, they originate from the same cell types:

- Surface epithelium: Cells that line the ovaries
- Germ cells: Egg-forming cells
- Stromal cells: Hormone-releasing cells that connect various ovarian structures

The initial intervention for ovarian cancer is surgery and staging. The goal is to remove the tumor and determine the extent of its impact. The National Cancer Institute tracks survival rates based on whether the cancer is:

- Localized
- Regional
- Distant spread

Physicians classify, or stage, ovarian cancer during surgery. The stages of ovarian cancer are determined by the organs impacted and the extent of spread. As the cancer extends in and outside the pelvic region, the prognosis decreases.

Stage I

Stage 1 ovarian cancer affects **one or both ovaries or fallopian tubes.** The prognosis during this stage is excellent, with a 93% 5-year survival rate. Unfortunately, only 20% of patients receive a diagnosis during stage I or II. Stage I is subdivided into three groups:

- Stage 1A: Confined within one ovary or one fallopian tube
- Stage 1B: Found in both ovaries or fallopian tubes but not in the epithelium
- Stage 1C: Found in one or both fallopian tubes or ovaries with the tumor lining disrupted or cancer cells found in the tissue surrounding the tumor

Regardless of sub-stage, the treatment for stage I ovarian cancer is a hysterectomy with bilateral salpingo-oophorectomy. During this procedure, surgeons remove the uterus, fallopian tubes and ovaries. Depending on the sub-stage, physicians may recommend chemotherapy.

Stage II

Stage II OC is when cancer cells are in **one or both fallopian tubes or ovaries, and the cancer has spread to other pelvic organs.** The 5-year survival rate for stage II ovarian cancer is 74%. Stage II is a regional spread and sub-divided into two categories:

- Stage 2A: Metastasized to the uterus
- Stage 2B: Spread to other pelvic organs, like the bowel or bladder

The initial treatment of stage II ovarian cancer is a hysterectomy with bilateral salpingo-oophorectomy and tumor debulking. After removing as much of the tumor as possible, patients undergo at least six cycles of chemotherapy.

Stage III

The cancer is stage III when it is in **one or both ovaries, fallopian tubes or peritoneum with spread to organs outside the pelvis and/or lymph nodes**. This advanced stage indicates a poor prognosis, with a 45% 5-year survival rate. Experts further classify stage III ovarian cancer into four groups:

- Stage 3A1: Spread to pelvic or para-aortic lymph nodes
- Stage 3A2: Metastatic implants found outside the pelvic region. These cancer cells can also impact pelvic or para-aortic lymph nodes.
- Stage 3B: Visible metastasis outside the pelvic region. The tumor size is ≤ 2 centimeters, and the cancer may have spread to pelvic or para-aortic lymph nodes.
- Stage 3C: Visible metastasis outside the pelvic region. The tumor size is ≥ 2 centimeters, and the cancer may have spread to pelvic or para-aortic lymph nodes, spleen or liver.

Treatment includes hysterectomy with bilateral salpingo-oophorectomy, tumor debulking and chemotherapy. The goal is to remove all visible cancer. When all the tumors are less than 1 centimeter, the surgeon has optimally debulked the cancer.

Stage IV

Approximately **80% of women receive an OC diagnosis after the disease has spread beyond the pelvic region.** During stage IV, the cancer has metastasized to distant organs, like the lungs or bones.

Treatment for stage IV focuses on giving patients time and enhancing their quality of life. Like stage III, interventions include a hysterectomy with bilateral salpingo-oophorectomy, tumor debulking and chemotherapy. The 5-year survival rate for distant spread OC is 31%.

Relational and accessible oncology care

Ovarian cancer is an aggressive disease. Early detection is vital. Patients turn to their PCPs for direction and help. Physicians need accessible resources for patients presenting with symptoms of ovarian cancer.

Our hospital delivers accessible oncology care with a personal approach. Physicians can promote better outcomes with prompt lab tests, imaging and treatment. We would be honored to be your partner in care as we fight the battle against cancer. Click the "Refer" button to get started.

Resources

“Treatment of Invasive Epithelial Ovarian Cancers, by Stage.” American Cancer Society, 2022, Invasive Epithelial Ovarian Cancer Treatment, by Stage | American Cancer Society.

“Stages of Ovarian Cancer.” Ovarian Cancer Research Alliance (OCRA), Ovarian Cancer Stages: Knowledge is Power | OCRA.

“Early Detection of Ovarian Cancer.” NIH: National Library of Medicine, 2018, Early Detection of Ovarian Cancer - PMC.

“Real-life data on treatment and outcomes in advanced ovarian cancer: An observational, multinational cohort study (RESPONSE trial).” NIH: National Library of Medicine, 2022, Real-life data on treatment and outcomes in advanced ovarian cancer: An observational, multinational cohort study (RESPONSE trial) - PMC.