Ovarian Cancer in the US\textsuperscript{1, 2}
Ovarian cancer ranks fifth in cancer deaths among women, accounting for more deaths than any other cancer of the female reproductive system. It is more common in white women than African American women. The incidence of ovarian cancer has been slowly falling over the past 20 years.

Types of Ovarian Cancer\textsuperscript{2, 3}
About 90\% of ovarian cancers are epithelial, the majority of which are high-grade serous tumors, and have the fewest established risk factors and the worst prognosis. Other less common epithelial ovarian tumor types include mucinous, endometrioid, and clear cell.

Risk Factors\textsuperscript{1, 2}
\textbf{Age} The risk of developing ovarian cancer increases with age. Ovarian cancer is rare in women younger than age 40 and most commonly develops after menopause. About half of women diagnosed with ovarian cancer are age 63 or older.

\textbf{Obesity} Studies suggest heavier body weight (BMI of at least 30) may increase risk and negatively affect survival.

\textbf{Reproductive history} Having children later, or never having a full-term pregnancy can increase risk. Use of some fertility treatments may increase risk. Conversely, using contraceptives for several years or having a hysterectomy or tubal ligation may help reduce risk.

\textbf{Estrogen replacement therapy and hormone replacement therapy after menopause} Women using estrogen alone or with progesterone after menopause have an increased risk of developing ovarian cancer compared to women who have never used hormones.

Personal history of breast cancer Women who have had breast cancer may have an increased risk for ovarian cancer.

Family history of ovarian, breast, or colorectal cancer About 5\% to 10\% of women with ovarian cancer have an inherited gene mutation. Hereditary breast and ovarian cancer syndrome (HBOC) is caused by \textit{BRCA1} and \textit{BRCA2} mutations and is about 10 times more common in women of Ashkenazi Jewish descent. Lynch syndrome or hereditary nonpolyposis colon cancer (HPNCC) can involve various gene mutations and increases the risk for ovarian and multiple other cancers. Other syndromes associated with ovarian cancer include PTEN tumor hamartoma syndrome, Peutz-Jeghers syndrome, and MUTYH-associated polyposis.

Smoking is linked to an increased risk for mucinous ovarian tumors, but hasn’t been shown to increase the risk of ovarian cancer overall.

Screening and Detection\textsuperscript{1, 3}
Screening is a process used to test for cancer in people who have no symptoms. The American Cancer Society does not have recommended screening guidelines for ovarian cancer. Studies to identify effective screening tests are underway. In addition to a complete pelvic exam, clinicians may consider offering a transvaginal ultrasound (TVUS) and the CA-125 blood test for high-risk patients.
Signs and Symptoms\textsuperscript{1,2,3}

Ovarian cancer presents unique concerns because early disease often has no symptoms. Therefore, it’s difficult to detect at an early stage when treatment is likely to be most effective. Clinicians should regularly assess for persistent signs and symptoms, including:

- Bloating
- Pelvic or abdominal pain
- Lack of appetite
- Urinary symptoms such as urgency
- Dyspareunia
- Constipation
- Abdominal distension with ascites

Prevention\textsuperscript{2}

More research is needed to understand known and additional risk factors and their link to ovarian cancer. Patient education should include a discussion of personal and family medical history. Some patients with hereditary risk factors might benefit from meeting with a certified genetic counselor to better understand their risk and help make an informed decision about having genetic testing.

Treatment\textsuperscript{2,3,4}

Treatment is based on the tumor type, stage, and characteristics, and additional patient factors, such as age, health, and preferences. Surgery, targeted therapy, and chemotherapy – either in combination or alone – are common treatments used for ovarian cancer. Chemotherapy given directly into the abdomen (intraperitoneal chemotherapy) might also be helpful.

Ovarian Cancer in the US:

2020 estimates\textsuperscript{1}

- New cases: 21,750
- Deaths: 13,940
- 5-year relative survival rate for localized stage (Epithelial Ovarian Cancer): 92%
- 5-year relative survival rate for all stages combined (Epithelial Ovarian Cancer): 47%

Quality of Life\textsuperscript{3,5}

Concerns that ovarian cancer patients and survivors most often express are fear of recurrence; chronic and/or acute pain; ascites; early menopause; loss of fertility; changes in appetite; body image; intimacy issues; depression; sleep difficulties; changes in what they are able to do after treatment; and the burden on finances and loved ones. A cancer diagnosis can profoundly impact quality of life. Clinicians should assess for any physical, social, psychological, spiritual, and financial issues. Integrating palliative care can help manage symptoms, address issues, and improve quality of life. It can be offered at any time from the point of diagnosis and until the end of life. Hospice care is appropriate for women with limited life expectancy. Studies show women with ovarian cancer are generally very concerned about end-of-life issues due to the low survival rate for ovarian cancer.

References