

# A Comprehensive Look at the Early Detection of Ovarian Cancer

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Joan, a 55-year-old woman, presented to the gynecologic oncology clinic after her physician palpated an adnexal mass on the left ovary. She also reported mild abdominal bloating for the past four months but otherwise felt fine.

Her past medical history was remarkable for stage IIB unilateral breast cancer at age 40; she was treated with a left lumpectomy, chemotherapy, radiation, and tamoxifen for five years. Subsequently, she was without disease recurrence. Her obstetrical and gynecologic history included two full-term pregnancies; breast-feeding of both babies for six months; menstruation at age 12; and menopause induced by breast cancer chemotherapy treatment at age 41. Prior birth control methods included the diaphragm for 12 years. She also reported occasional talc use over the past 20 years.

Her physical examination was unremarkable except for a 7 cm mass palpated on the left ovary. Transvaginal ultrasound revealed a complex mass in the left adnexa measuring 8.2 cm x 2.7 cm (normal ovaries measure about 2 cm x 3 cm). Surrounding the ovary was a tubular cystic interface. The cyst borders appeared very irregular, and the power Doppler showed large tortuous vessels within the ovarian tissue. The right ovary measured 3.8 cm x 2.5 cm. The final ultrasound reading indicated, "malignancy cannot be excluded."

Joan was taken to surgery the following week for exploratory laparotomy. At that time, she had a total abdominal hysterectomy,

Ovarian cancer is the leading cause of gynecologic cancer deaths and the fifth leading cause of cancer deaths among American women. Advances in surgery and treatment modalities have slightly improved five-year survival rates, but the prognosis for most women continues to be poor. Rectovaginal examination, ultrasound, and the CA-125 blood test are three modalities currently used to screen for ovarian cancer, although no universal ovarian cancer screening guidelines are recommended for the general population. Developments in the early detection of ovarian cancer are emerging and include blood tests that could lead to identifying asymptomatic, early-stage ovarian cancer. Nurses should be knowledgeable about these developments in ovarian cancer as they educate women about ovarian cancer risk, prevention, and early detection.

**Key Words:** ovarian neoplasms, CA-125 antigen, ultrasonography

and bilateral salpingo-oophorectomy, and lymph node biopsy. Pathology confirmed a diagnosis of stage IIIC ovarian cancer, characterized by abdominal metastasis and positive lymph nodes.

Advances in surgery and treatment modalities have slightly improved five-year survival rates for ovarian cancer, but the prognosis for most women continues to be poor. No ovarian cancer screening method exists to effectively detect it at an early stage, thereby decreasing mortality. Advances in the early detection of ovarian cancer are emerging with the prospect of improved screening, diagnosis, and prognosis. This article reviews current practices and new developments in the early detection of ovarian cancer that eventu-

ally might decrease the morbidity and mortality associated with ovarian cancer in women such as Joan.

## Epidemiology

The majority of cases of ovarian cancer are diagnosed in an advanced stage because it presents with few, if any, distinctive symptoms. These subtle symptoms may include abdominal bloating and discomfort; dyspepsia; changes in bowel or bladder function, including constipation and urge urinary incontinence; and unexplained weight loss or gain. These symptoms are fairly vague and often are seen only after the extensive spread of ovarian cancer. Symptoms often are so subtle that they are dismissed or misdiagnosed by healthcare providers. Because of a lack of

specific or early warning symptoms, the accurate detection of early-stage disease remains a challenge (Ozols, Robboy, Rubin, & Thomas, 1997). Figure 1 includes some epidemiologic facts about ovarian cancer.

## Risk Factors

The first step in evaluating a woman's risk for ovarian cancer is a thorough review of her personal and family health history. Women

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