Strang Cancer Prevention Institute

Dedicated to promoting cure by early detection and research to prevent cancer since 1933

Ovarian Cancer Screening and Prevention

1. Guidelines for Screening

Risk factors:
General population 1-1.5% lifetime risk of diagnosis, 0.8-1.0% risk of death
Family history of breast and/or ovarian cancer
BRCA 1 and 2 mutation carriers – lifetime risk 10-45%
Hereditary non-polyposis colorectal cancer (HNPCC) – lifetime risk 7-12%
Prior diagnosis of breast, colorectal or uterine cancer
Age (post menopause)
Nulliparity
Hormone replacement therapy
Fertility drugs
Talc
Obesity

To date, no studies have shown that screening either high risk populations or the general population has an impact on mortality or morbidity of the disease.

Women at very high risk (BRCA gene mutation carriers) may be screened with CA-125 and transvaginal ultrasonography at age 30-35 years or at age 5-10 years before the earliest age of onset of disease in the family, although no benefit has been shown. Prevention by removal of the tubes and ovaries after childbearing is finished (see prevention section below) can reduce the risk of ovarian cancer by up to 75%.

No national organization or expert consensus panel recommends screening women at average risk. There is no evidence that any of the following can effectively screen the general population for ovarian cancer:
Pelvic examination
Transvaginal ultrasonography
CA-125

Strang Cancer Prevention Institute has developed and updates guidelines for cancer screening and best practices for cancer prevention. Strang is synonymous with cancer screening and prevention. Strang was the first medical facility to introduce the Pap test into clinical practice which has saved millions of women's lives worldwide. Strang was opened by first lady Eleanor Roosevelt in 1933.

No randomized controlled clinical trial (RCT) of screening for ovarian cancer with mortality outcomes in the general population has been completed.

At least three RCTs are currently in progress:
1. UK Collaborative Trial of Ovarian Cancer Screening
2. NIH Prostate, Lung, Colorectal and Ovarian (PLCO) Cancer Screening Trial
3. European Randomized Trial of Ovarian Cancer Screening

New research has shown that symptom identification is important in the diagnosis of this disease. In women with abdominal bloating, increasing abdominal size, pelvic pain, abdominal pain, early satiety, difficulty eating, or urinary symptoms of new onset or greater than 12 times a month, ovarian cancer should be considered as a possibility. Analyzing trends in CA-125 has resulted in the creation of a Risk of Ovarian Cancer (ROCA) scale that better identifies high-risk women than the CA-125 test alone. However, when used in the UK trial to guide follow-up did not improve screening outcomes.

2. **Cancer Prevention**

Identification of women at greatest genetic risk is the most effective prevention strategy. Women at highest genetic risk – recommend risk reducing bilateral salpingo-oophorectomy between the ages of 35-50 and upon conclusion of childbearing or individualized based on age of earliest onset of ovarian cancer in the family.

The following other protective factors may decrease the risk of ovarian cancer:
Oral contraceptives
Pregnancy and breastfeeding
Bilateral tubal ligation or hysterectomy

Clinical trials are being conducted:
1. Levonorgestrel in Preventing Ovarian Cancer in Patients at High Risk for Ovarian Cancer
2. Effect of Flutamide on Biomarkers in Blood and Tissue Samples from Patients at High Risk of Ovarian Cancer