



Commentary

Opportunistic salpingectomy to decrease the mortality from ovarian cancer: Can we expand the pool of eligible patients?



The focus on what anatomic site is most responsible for development of ovarian cancers has shifted specifically from the ovary to the fallopian tube. Nearly 2 decades ago, gynecologic pathologists first noticed the presence of early serous adenocarcinomas in the fallopian tubes of woman undergoing risk-reducing bilateral salpingo-oophorectomy for deleterious BRCA1/2 mutations, mutations that markedly increase the risk of developing ovarian cancer. Since that time, great attention has been paid to the fallopian tube as the origin of serous ovarian and pelvic carcinomas, and pathologic evaluation of the fallopian tube has evolved to extensive examination of the tubal fimbria. This evolution in thinking about ovarian cancer along with the recognition of the health complications associated with oophorectomy has shifted attention from the ovaries to the use of opportunistic salpingectomy as a cancer-risk-reduction strategy at the time of hysterectomy and other gynecologic operations. This inherently implies (1) that a patient has completed childbearing, and (2) does not carry a genetic predisposition to ovarian cancer, where risk-reducing salpingo-oophorectomy is the more appropriate consideration.

Ovarian cancer is the most lethal gynecologic malignancy, and approximately 75% of women diagnosed will have advanced stage disease, which carries with it a 5-year overall survival of approximately 25%. In women at increased risk of developing ovarian cancer secondary to BRCA1/2 mutations, removing the ovaries and fallopian tubes dramatically decreases the risk of ovarian cancer and decreases all-cause mortality. Importantly, removal of the ovaries in average risk, premenopausal women increases the risk of numerous cardiovascular, neurologic, and metabolic comorbidities and all-cause mortality.¹ As such, ovarian preservation and natural menopause is recommended for average risk women undergoing benign pelvic surgery.

Several – most often unintentional – interventions, such as the use of oral contraceptive pills, pregnancy, breast-feeding, hysterectomy, and bilateral tubal ligation, have been shown to decrease the risk of ovarian cancer in the general female population. Tubal ligation alone decreases the risk of ovarian cancer by 30%;² however, the mechanism(s) through which tubal ligation decreases the risk of ovarian cancer have largely been theoretical—decreased blood flow to the ovary and/or blockage of retrograde menstruation and/or carcinogens—until recently. Population-based cohort studies support the blockage of retrograde menstruation as a plausible theory for decreasing the risk of endometrioid ovarian

cancer.³ The risk-reduction of tubal ligation on this particular histology is also around 30%; however, in practices where the tubal ligation procedure was that of a salpingectomy, the risk of ovarian cancer was decreased further to 42–77%.^{3,4} In a study using the Rochester Epidemiology Project, we showed that salpingectomy for contraception decreased the risk of serous ovarian and peritoneal cancers by nearly 80%,⁴ suggesting the fallopian tube is a source of carcinogenesis in women at average risk for ovarian cancer.

In recent years, the concept of “opportunistic salpingectomy” has evolved into a common practice among gynecologic surgeons. Opportunistic salpingectomy refers to removal of the fallopian tubes at the time of abdominal/pelvic surgery, most often hysterectomy, performed for other benign indications but in which the ovaries are preserved *in situ*. The procedure preserves the ovaries, which then obviates the sequelae of premature menopause. Additionally, total bilateral salpingectomy as a method of tubal ligation has evolved as a practice change in several large health care systems.^{5,6} Opportunistic salpingectomy also appears to be cost-effective^{6,7} and provides an estimated 38% additional ovarian cancer risk-reduction above and beyond the risk-reduction with hysterectomy alone.⁶ The potential impact of opportunistic salpingectomy on ovarian cancer risk-reduction was the driving rationale for a nationwide Canadian educational campaign, which launched in 2010, that promoted the procedure at the time of hysterectomy or instead of other forms of tubal ligation. The provocative question raised by Tamussino and colleagues⁸ is whether women and specialists should be expanding the catchment of patients eligible for this procedure? The answer suggests there is strong interest in pursuing this further to address issues such as surgical counseling, training, and a multidisciplinary approach.

Opportunistic salpingectomy has become an important cancer-risk-reducing strategy for average risk women who have completed childbearing and are undergoing benign pelvic surgery. Other pelvic and abdominal surgical subspecialties (eg, colorectal surgeons and now perhaps general surgeons performing intra-abdominal procedures like laparoscopic cholecystectomy) have an opportunity to contribute to the global decrease in the incidence of such a horribly lethal disease. For trained individuals, the procedure takes less than 5 minutes to complete, carries minimal additional surgical risks, and has the great potential to save lives from ovarian cancer.

Jamie N. Bakkum-Gamez, MD*
William A. Cliby, MD

Department of Obstetrics and Gynecology, Division of Gynecologic
Oncology Surgery, Mayo Clinic, Rochester, Minnesota

*Corresponding author: Eisenberg Lobby 71, Mayo Clinic, 200
First Street SW, Rochester, MN 55905.

E-mail address: bakkum.jamie@mayo.edu (J.N. Bakkum-Gamez)

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“So, from your position as dean of a medical school, could you explain why it takes four more years to train a family physician than a family nurse practitioner when they end up doing the same work?”