Legacy Cancer Institute

Ovarian cancer prevention and Fallopian tube removal

Frequently Asked Questions

Ovarian cancer is one of the most feared cancer diagnoses as nearly 70 percent of cases have no cure, no effective screening test and no early prevention mechanism — until now. New science has found that many ovarian cancers begin in the Fallopian tubes; therefore, by proactively removing them during routine gynecological and abdominal procedures, a woman's risk can be significantly reduced. That is why the Legacy Cancer Institute is recommending that certain women consider fallopian tube removal as a way to prevent future ovarian cancer.

What is salpingectomy?
Salpingectomy is the removal of one or both of a woman's Fallopian tubes. If performed laparoscopically, this minimally invasive procedure can take less than 30 minutes and can be performed by making only a few tiny incisions. Recovery is rapid, and women can go back to their normal activities within a few days.
If you receive a salpingectomy during another routine procedure, it will only take an extra 10 minutes and there is no additional recovery time.

Who should consider proactive fallopian tube removal?

- Women past their child-bearing years who are having a hysterectomy or other pelvic or abdominal surgery
- Women choosing to have their "tubes tied" (tubal ligation)
- Women who have a known genetic predisposition for breast or ovarian cancer

How much can salpingectomy reduce the risk of cancer?
Although it will not eliminate all cases of ovarian cancer, it could cut mortality from high-grade serous carcinoma by up to 50 percent over the next 20 years. This rate is based on how many women have hysterectomies and tubal ligations and the number of women who get the most deadly form of ovarian cancer.

Are there any risks associated with salpingectomy?
There are no downsides to removing the fallopian tubes once a woman has completed childbearing. There will be no change in menstruation or hormones as the Fallopian tubes' only function is transport of egg and sperm to begin a pregnancy.

Why is it believed ovarian cancer originates in the fallopian tubes?
Pre-cancerous changes for serous ovarian cancer are found only in the Fallopian tubes. This was first discovered in women with genetic predisposition to ovarian cancer who had their tubes and ovaries removed to prevent the disease. Also the earliest forms of ovarian cancer have been found only in the Fallopian tubes, and not in the ovaries themselves.

LEGACY
HEALTH

Does removing the Fallopian tubes send women into early menopause?
No

Are there alternatives besides salpingectomy to prevent ovarian cancer?
There is currently no effective way to screen for ovarian cancer. Taking hormonal contraception can also reduce the risk of ovarian cancer in some patients.

What questions should I ask my gynecologist?

- What is my risk of ovarian cancer?
- What are my options to lower ovarian cancer risk?
- What are the benefits and risks of each option?

Should surgeons remove Fallopian tubes?

Special Grand Rounds: Fallopian tubes and ovarian cancer
Legacy Health is hosting a special Grand Rounds presentation of this subject by Dr. Smith Sehdev on Wednesday, March 13, 7 a.m., in the Lorenzen Auditorium at Legacy Emanuel Medical Center. Please come and enjoy coffee, a light breakfast and join the conversation. Feel free to invite your colleagues who may not see this communication.

The recent announcement from the Legacy Cancer Institute regarding new understanding about the origin of ovarian cancer is very exciting in its own right and also may have implications for surgeons practicing in a variety of specialties. For this reason we want to spread this news to all of our surgeons, as we anticipate there may be questioned by patients regarding this information and we would like to help them provide informed answers.

The bottom line of this discussion is that the most common highly lethal form of "ovarian cancer" (high-grade serous, formerly called "papillary serous cancer") only rarely, if ever, arises from the ovary! Careful, pathologic study of prophylactically removed tissues from patients with genetic predisposition to this cancer have identified the earliest precursors (the "P-53 signature") and all of the intermediate stages of atypia up through invasive carcinoma in a consistently occurring progression—virtually always in the Fallopian tube, and never in the ovary!

Armed with this insight, many pathologists, including our own pathologist Ann Smith Sehdev, M.D., have found that this same precursor lesion regularly occurs in the Fallopian tubes of all of our "ovarian cancer" patients, including those without any genetic predisposition. Dr. Smith Sehdev has become nationally recognized for a number of her contributions to this concept.

This helps explain why major national studies involving ultrasound and CA-125 screening hoping to achieve early diagnosis and better survival from ovarian cancer have not had any success. The long-standing tradition in pathology of classifying all serous cancers involving both Fallopian tube and ovary as "ovarian" may also have delayed recognition of this tubal origin for these malignancies.

An implication of this work is that surgical removal of at least the distal (fimbria) portion of the Fallopian tubes in patients who have completed childbearing could prevent most of these malignancies. Applying this in practice is easy for GYN surgeons doing tubal sterilizations or hysterectomies where the ovaries will be left in situ — simply removing the tubes (or distal portions) without disturbing the ovaries will accomplish the purpose.

LEGACY
HEALTH

An interesting question that will undoubtedly be raised as the public begins to digest this concept is what is the role of tubal removal for prevention of cancer in patients who are having abdominal surgery unrelated to GYN? Also, should non-GYN surgeons be offering this to patients who are having procedures in the lower abdomen or pelvis, much like the old "incidental appendectomy?" These questions are quite complex, but worth thinking about.

Sincerely,

Duncan Neilson, M.D.
Clinical Vice President, Surgical Specialties
Legacy Medical Group

Nathalie Johnson, M.D.
Medical Director, Legacy Cancer Institute

Ann Smith Sehdev, M.D.
Pathologist, Legacy Cancer Institute

References

Kuhn E, Kurman RJ, Soslow RA, Han G, Sehdev AS, Morin PJ, Wang TL, Shih IeM. The diagnostic and biological implications of laminin expression in serous tubal intraepithelial carcinoma. Am J Surg Pathol. 2012 Dec;36(12):1826-34. PubMed PMID: 22892598; PubMed Central PMCID: PMC3500426.

Kuhn E, Kurman RJ, Sehdev AS, Shih IeM. Ki-67 labeling index as an adjunct in the diagnosis of serous tubal intraepithelial carcinoma. Int J Gynecol Pathol. 2012 Sep;31(5):416-22. PubMed PMID: 22833080.

Kuhn E, Kurman RJ, Vang R, Sehdev AS, Han G, Soslow R, Wang TL, Shih IeM. TP53 mutations in serous tubal intraepithelial carcinoma and concurrent pelvic high-grade serous carcinoma--evidence supporting the clonal relationship of the two lesions. J Pathol. 2012 Feb;226(3):421-6. PubMed PMID: 21990067.

Kuhn E, Meeker A, Wang TL, Sehdev AS, Kurman RJ, Shih IeM. Shortened telomeres in serous tubal intraepithelial carcinoma: an early event in ovarian high-grade serous carcinogenesis. Am J Surg Pathol. 2010 Jun;34(6):829-36. PubMed PMID: 20431479.

Sehdev AS, Kurman RJ, Kuhn E, Shih IeM. Serous tubal intraepithelial carcinoma upregulates markers associated with high-grade serous carcinomas including Rsf-1 (HBXAP), cyclin E and fatty acid synthase. Mod Pathol. 2010 Jun;23(6):844-55. PubMed PMID: 20228782; PubMed Central PMCID: PMC2879438.