

Hair straightening products may increase risk of gynaecological cancers



Several studies published recently reported that the use of hair products may be associated with a higher risk of hormone-sensitive cancers including ovarian and endometrial cancers.

The most recent study was published in the prestigious Journal of the National Cancer Institute (*J Natl Cancer Inst* 2022 Dec 8;114:1636-1645).

The authors examined associations between hair product use and the incidence of uterine cancer among 33,947 study participants aged 35-74 years who had a uterus at enrolment. In baseline questionnaires, participants prospective cohort, reported their use of hair products in the prior 12 months, including hair dyes, straighteners, relaxers, or pressing products. Over an average of 10.9 years of follow-up, 378 uterine cancer cases developed. Ever versus never use of straightening products in the previous 12 months was associated with an 80% higher incident uterine cancer rate. The association was stronger (150% risk increase) when comparing frequent use (>4 times in the past 12 months) vs never use. Use of other hair products, including dyes and permanents or body waves, was not associated with incident uterine cancer.

I can see two possible explanations for this strong risk association:

- There is a possibility that a specific chemical is driving this association between chemical hair straighteners and gynaecological cancer risk.
- The other possibility is that certain genes that give women curly hair, may also cause an increased risk of breast, ovarian and endometrial cancers.

The use of chemical hair straighteners is common in young females. They believe that straight hair is more beautiful than curly hair. Until we know more, I would discourage girls and women from using chemical hair straighteners until research has determined the cause for this association and whether any specific chemicals are driving this association.



Prof Andreas Obermair

gynaecological oncology news

AUTUMN EDITION 2023

Welcome

Reflecting on 2022, it was a stimulating year. Managing patients with complex medical history (even without COVID) is challenging and I am very grateful to my colleagues from various specialities, including O&G, General Practice, General Surgery, Urology, Medical Imaging, Pathology, General Medicine, Anaesthetic and many others who help managing our patients. I am very fortunate to work with a number of terrific colleagues that help and support my practice.

Teams that are familiar with each other, where team members like and support each other have much better patient outcomes, including up to 30% less complication. I am very fortunate that the hospitals that I operate with, acknowledge and support this. The medical and nursing teams we created in the last few years are outstanding and fantastic to work with.

"Look after yourself and be kind to each other", said Elton John at his Farewell concert in Brisbane in January this year. With this in mind, I wish all my referrers a very peaceful and prosperous New Year 2023.

Sincerely,

Andreas Obermair

Cherish Challenge to climb Mt Kilimanjaro

11 years ago, I founded the Cherish Women's Cancer Foundation to fund invaluable gynaecological cancer research.

In the past, medical research provided the evidence necessary for change and improvement in clinical management.

Since that time, Cherish has donated \$1 million to various projects including the ENDO3 trial that I lead and that has already enrolled more than 130 patients. In 2023, I anticipate that ENDO3 will expand to other States, including NSW, VIC and TAS as well as to Singapore.

Vulvar cancer is uncommon and its treatment leaves patients with severe and long-term complications that lead to poor quality of life often for life-long.

This year's Cherish Challenge is to hike Africa's highest peak, Mt Kilimanjaro (5895m) to support our vulvar cancer program. We will do this as a group of 20 people and 15 places are already taken. The trek takes 10 days in September 2023 and will support the local economy.

If you are interested in joining the trek, please contact my office on (07) 3128 0800.



Prof Andreas Obermair MDVIE, FRANZCOG, CGO

Gynaecological Oncology Laparoscopic & Pelvic Surgery

Phone 07 3128 0800 | rooms@obermair.info | www.obermair.info

Thank you for your support to date. Stay up to date by subscribing to my blog at obermair.info or LIKE my Facebook page <https://www.facebook.com/drobermair/>

Please don't hesitate to give me a call if you wish to discuss any aspect of the enclosed or a specific patient with me.

Phone 07 3128 0800 | rooms@obermair.info

www.obermair.info



Removal of fallopian tubes (salpingectomy) to reduce the burden of ovarian cancer

The burden of ovarian cancer increasing year by year. Most patients are diagnosed at advanced stages 3 or 4 because screening remains ineffective. Ultrasound and CA125 blood tests are not sufficiently accurate. Despite heavy treatment, most ovarian cancer patients will develop a recurrence and only half of all patients survive long-term.

One strategy that has emerged over the last 15 years, and that could potentially save hundreds of women's lives, is risk-reducing, prophylactic surgery to prevent ovarian cancer from developing.

I look after some young women who opted to have a bilateral salpingectomy (removal of fallopian tubes) to reduce their risk of "ovarian cancer" which is reasonable because "ovarian cancer" often starts in the fallopian tube. Women who have had a salpingectomy have a massively reduced risk of developing "ovarian cancer" and knowing that salpingectomy does not effect a woman's hormones, makes it an attractive option for young BRCA gene carriers. They may opt for IVF to fall pregnant, which also facilitates pre-implantation BRCA testing of embryos.

By contrast, middle aged and older women often opt for prophylactic BSO with or without a laparoscopic hysterectomy.

Below, I list some recent evidence to support the surgical practice of bilateral salpingectomy as part of a hysterectomy or instead of a tubal ligation for contraception after a Caesarean Section.

Salpingectomy and ovarian cancer risk

The risk reduction of ovarian cancer through salpingectomy is significant. In a large Swedish study, the data of 4000 ovarian cancer patients were matched with 40,000 controls. Salpingectomy yielded a 38% reduction in developing ovarian cancer. A tubal ligation had a negligible effect on ovarian cancer prevention. (Darelius et al, *Cancer Epidemiology* 2020).

BSO and ovarian cancer risk

A large Canadian population-based study enrolled 195,000 women who had a hysterectomy between 1996 and 2010. 24% of all women had a BSO. In women over the age of 50 years who had a BSO, the risk reduction in ovarian cancer was 84%. (Cusimano et al, *AJOG* 2021)

Mortality and cost associated with salpingectomy

One of my colleagues from Charlotte, North Carolina (USA) calculated that salpingectomy instead of tubal ligation will reduce ovarian cancer mortality from 8.1% to 6.3%. This means, in the USA alone, 1854 deaths would be prevented each year. At the same time, replacing tubal ligation with salpingectomy would save \$US 445 million. (Nauman et al, *AJOG* 2021).

Is salpingectomy increasing?

A large population-based US study w enrolled 3.8 million women who required a Caesarean Section between 2015 and 2018. During that time, the rate of salpingectomy at Caesarean Section increased from 4.6% to 13.2%; whereas the rate of tubal ligation decreased from 11.3% to 2.4%. (Mandelbaum et al. *AJOG* 2021)

Should women have a hysterectomy at the time of risk-reducing BSO?

Some genetic mutations not only cause ovarian and fallopian tube cancer but also uterine cancer. A large Dutch cohort study compared outcomes of 5,980 BRCA carriers and 8,451 non-BRCA carriers. The risk of endometrial cancer was 3-times higher in BRCA carriers. Serous carcinoma of the endometrium, a rather aggressive form of uterine cancer, was 10 times higher in BRCA carriers.

Rapidly growing fibroids

Uterine fibroids are common, benign tumours arising from the myometrium. If they cause no issues, no pain, no bleeding, gynaecologists should provide reassurance to women that those fibroids will do them no harm. Evidence suggests that fibroids will not turn into uterine cancers.

By contrast, rapidly growing fibroids should trigger concern. There is a possibility that the assumed fibroid is, in fact, a sarcoma, which is an aggressive, malignant tumour originating from the muscle tissue of the uterus.

Recently, I was involved in the care of two women who each had a fibroid uterus but declined a hysterectomy, and I am keen to share my experience and what we can learn.

One postmenopausal patient presented for abnormal uterine bleeding caused by a "large fibroid". A curette was negative and did not suggest cancer. Nevertheless, the private gynaecologist recommended a hysterectomy. The patient was keen to switch to public and was put on a waiting list. She presented to DEM a couple of times to have blood transfusions to manage her heavy blood loss. The hospital's capacity did not allow her to have a hysterectomy expeditiously. Finally, she had a procedure at which time a disseminated sarcoma was found. Her outcome was poor.

The other patient was in her forties, had a massive 24-weeks size uterus, declined a hysterectomy and had a uterine artery embolization instead. Following that procedure she became critically ill as her uterus became necrotic and she developed sepsis. She was saved with a rather challenging hysterectomy. Histopathology was entirely benign.

My personal learning points include:

1. A large fibroid in a postmenopausal women is more likely malignant than in a premenopausal woman; and is therefore more concerning in a postmenopausal woman.
2. No diagnostic test is available to differentiate between fibroid versus sarcoma. Medical imaging and blood tests are unable to help with the differential.
3. Never morcellate a uterus at hysterectomy - except within the confinements of a containment device (e.g. a strong bag) to avoid any spillage of possible tumour. I will never know for sure if a uterus contains cancer or not until it is examined by the histopathologist.
4. Surgery is the only potential cure for sarcomas. These tumours will not respond to chemotherapy or radiation treatment. If we detect a sarcoma incidentally, it will become very important that the surgical procedure (hysterectomy) was performed with the best care. Chemotherapy and radiation treatment will not fix a compromised operation.
5. Uterine artery embolization is associated with significant risks (e.g. septic uterus), data on fertility outcomes are scarce and the procedure does not provide tissue for histopathology testing. In addition, the proceduralist (a radiologist) will not be able to help the patient in case of a complication.

In my practice, we offer patients a discussion about the risks of outcomes and the pros and cons of surgical procedures so that patients and referrers understand those risks, enabling them to make well-informed decisions.

My recommendations to reduce the burden of ovarian cancer

1. Gynaecologists should stop performing tubal ligation and offer salpingectomy instead. This is particularly relevant when a woman requests a sterilisation at Caesarean Section.
2. Gynaecologists should offer women a salpingectomy when a hysterectomy is needed for various reasons (e.g., irregular bleeding). Unfortunately, only 5% to 10% of women who have a vaginal hysterectomy are offered a salpingectomy. These numbers are much higher with laparoscopic hysterectomy.
3. Young BRCA women who still aspire fertility should be given the option of a salpingectomy, and should be offered IVF, with preimplantation testing, to achieve a pregnancy.

