

## Ovarian cancer - June, 2010

### The ovaries

The ovaries are part of the female reproductive system. They contain the eggs (ova), which can make a new human life when fertilised. In women of childbearing age, a mature egg is released from one of the ovaries each month (ovulation) and travels down the fallopian tubes to the uterus (womb).

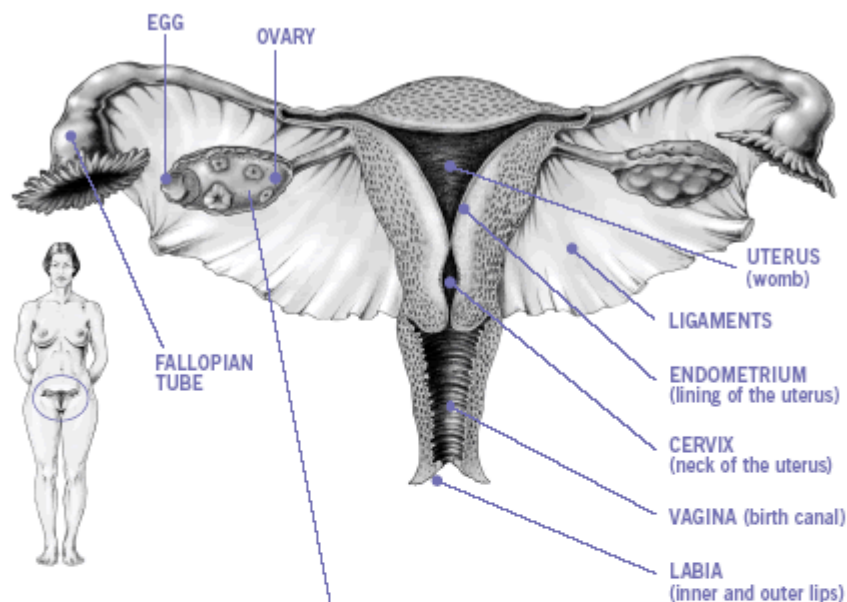
The ovaries are oval-shaped organs, each about 3 cm long and 1 cm thick. They are found inside the pelvic cavity, one on each side of the uterus, and are very close to the end of the fallopian tubes.

Each ovary is covered by a layer of cells called epithelium. Inside are germ cells that eventually mature into eggs. The eggs travel to the outside of the ovary to be released into the fallopian tubes. If the egg is not fertilised by sperm, it passes out of the uterus with the monthly period (menstruation).

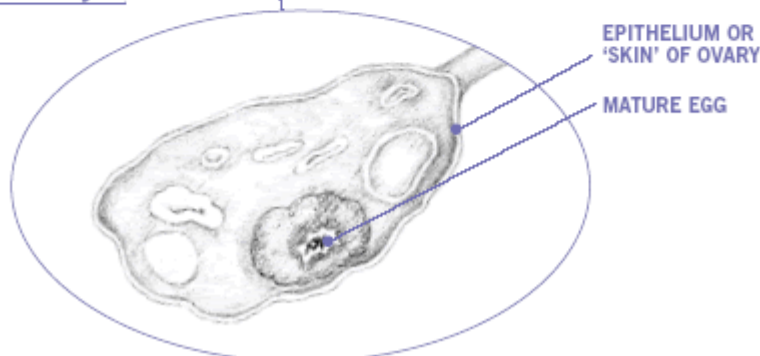
The ovaries also contain cells that release the hormones oestrogen and progesterone. These cells are called sex-cord stromal cells.

As women get older, the ovaries gradually produce less oestrogen and progesterone. The production of eggs also decreases and a woman's periods become irregular and eventually stop. This is known as menopause. It usually happens between the ages of 45 and 55. After menopause it is no longer possible to have a child.

### THE FEMALE REPRODUCTIVE SYSTEM



### The Ovary



## Ovarian cancer

Ovarian cancer is a malignant tumour in one or both ovaries. There are four main types of ovarian cancer, named after the part of the ovary that is affected. Knowing exactly which type of cancer you have helps your doctor advise you on which treatment is best for you.

### Epithelial ovarian cancer

This type of ovarian cancer arises in the epithelium: the cells covering the ovary. It is the most common type of ovarian cancer. Eight out of 10 ovarian cancers are epithelial.

### Germ cell and sex-cord stromal cell ovarian cancers

These two types of ovarian cancer are very uncommon. Germ cell cancers arise in the cells that mature into eggs, and usually only affect women under the age of 30.

Sex-cord stromal cell cancers arise in the cells which release the female hormones. These cancers can occur at any age.

Germ cell and sex-cord stromal cell ovarian cancers usually respond very well to treatment and are often curable. If these cancers only affect one ovary, it may still be possible for younger women to have children after treatment.

### Borderline tumours

Borderline tumours are epithelial tumours that are not as aggressive as other forms of ovarian cancer. Sometimes the words 'low malignant potential' are used to describe borderline tumours.

The prognosis for women with borderline tumours is generally very good, whether the disease is diagnosed early or late.

### How common is ovarian cancer?

In Victoria about 360 women are diagnosed with ovarian cancer each year. About nine out of 10 ovarian cancers occur in women over the age of 40. Like most cancers, the risk of ovarian cancer increases with age.

### Causes of ovarian cancer

The causes of most ovarian cancers are not known. However, some factors seem to put women at a higher risk of ovarian cancer. These are described below.

- Ovarian cancer is more common in Caucasian (white) women who live in western countries with a high standard of living.
- Women who have no or few pregnancies appear to be more at risk of ovarian cancer. Women who have taken the contraceptive pill for a number of years seem to be at less risk. The exact reason is uncertain. It could be that ovarian cancer is more likely to develop when the ovaries do not have a 'rest' from ovulation (release of eggs) during a woman's lifetime.
- Some types of ovarian cancer may be linked with a family history of cancers of the ovary, bowel, breast and lining of the uterus. A small number of ovarian cancers (approximately 5%–10%) are caused by inheriting a damaged gene from a parent. If there are other people in your family with ovarian, breast, bowel or uterine cancer you should discuss this with your doctor. See our Genetics and ovarian cancer page.

Many women with ovarian cancer do not have these risk factors. It's also worth noting that many women who do have the risk factors do not develop ovarian cancer.

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