



Australian Government

Cancer Australia

National Centre for

Gynaecological Cancers

# NATIONAL CENTRE FOR GYNAECOLOGICAL CANCERS

## What is gestational trophoblastic disease?

Gestational trophoblastic disease includes any of a group of tumours that develops from trophoblastic cells (cells that help an embryo attach to the uterus and help form the placenta) after fertilisation of an egg by a sperm.

Gestational trophoblastic disease is also called gestational trophoblastic tumour.

The types of gestational trophoblastic disease are hydatidiform mole (also called a molar pregnancy), gestational trophoblastic neoplasia and placental-site trophoblastic tumour.

A hydatidiform mole is usually benign (not cancer) but it may spread to nearby tissues (invasive mole) or become a malignant tumour.

Gestational trophoblastic disease occurs in women during the years when they are able to have children.

### **The female reproductive organs**

Gestational trophoblastic disease starts inside the uterus, the hollow, muscular, pear-shaped organ (also called the womb) where a baby grows.

The uterus is the main female reproductive organ. The bulk of the uterus is smooth muscle tissue, which is called the myometrium. The uterus sits low in the abdomen between the bladder and rectum and is held there lightly by muscle. It is joined to the vagina by the cervix, which is the neck of the uterus.

When women ovulate, or produce eggs in their ovaries, an egg travels through their fallopian tube into the uterus. If the egg is fertilised by a sperm, it will implant itself into the lining of the uterus and grow into a baby.

The lining of the uterus is called the endometrium. The endometrium is made up of several layers, including skin-like cells (surface epithelium), blood vessels, tissue spaces and glands. If a woman is ovulating, the endometrium will grow thicker each month to prepare for pregnancy. If the egg is not fertilised, the top layers of the endometrium are shed and flow out of the body through the vagina during menstruation. This is known as a woman's period.

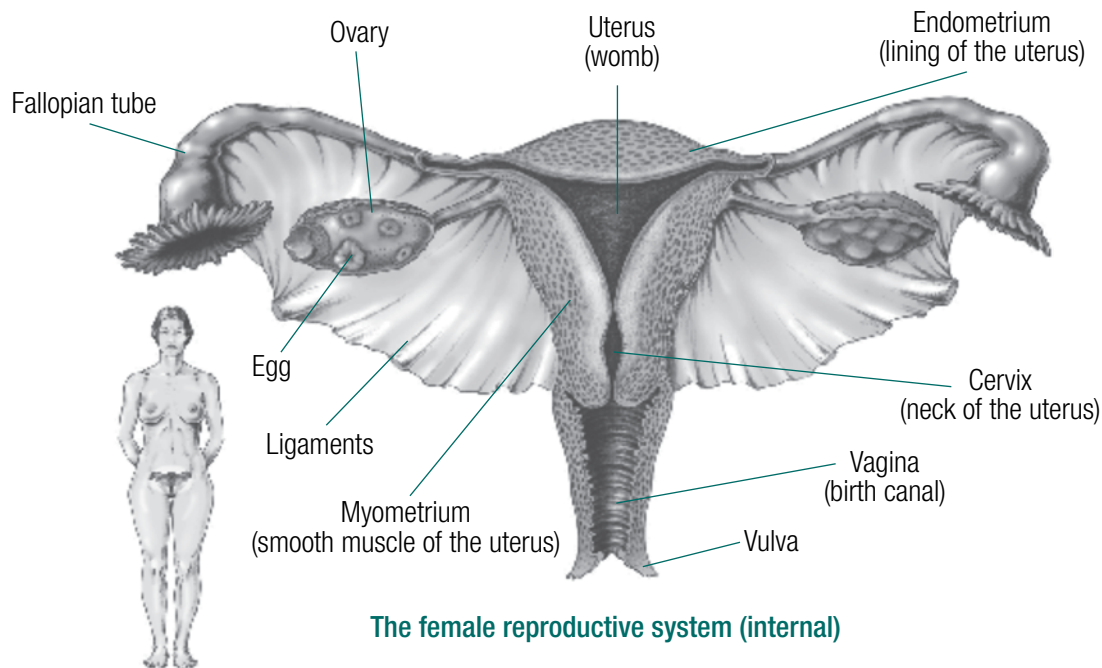
### **What is cancer?**

Cancer is a group of many related diseases. All cancers begin in cells, the body's basic building blocks.

Normally, cells grow and multiply in an orderly way.

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The female reproductive system (internal)

However, damaged genes can cause them to behave abnormally. They may grow into a lump called a tumour. Tumours can be benign (not cancer) or malignant (cancer).

A malignant tumour is made up of cancer cells. If these cells are not treated, they may spread beyond their normal boundaries and into surrounding tissues, becoming invasive cancer. This spread of cancer is called metastasis.

When cancer spreads from its original place to another part of the body, the new tumour has the same kind of abnormal cells and the same name as the primary tumour.

For more information about cancer and how it spreads, see our factsheet [What is cancer?](#)

### Types of gestational trophoblastic disease

The types of gestational trophoblastic disease include hydatidiform mole, gestational trophoblastic neoplasia and placental-site trophoblastic tumour.

- **Hydatidiform mole.** If a woman has a hydatidiform mole (also called a molar pregnancy), the sperm and egg cells have joined without the development of a baby in the uterus. Instead, the tissue that is formed resembles grape-like cysts.
- A hydatidiform mole is usually benign (not cancer) but it may spread to nearby tissues (invasive mole)

or become a malignant tumour called gestational trophoblastic neoplasia. Hydatidiform mole is the most common type of gestational trophoblastic disease.

- There are two types of hydatidiform mole: complete and partial. In a complete hydatidiform mole, there is a mass of rapidly growing abnormal cells but no foetus. In a partial hydatidiform mole, there is an abnormal non-viable foetus and placenta. The two types also differ in their genetic makeup.
- **Gestational trophoblastic neoplasia.** If a woman has gestational trophoblastic neoplasia, the tumour may have started from a hydatidiform mole, or from tissue that remains in the uterus following an abortion or delivery of baby. Gestational trophoblastic neoplasia can spread from the uterus to other parts of the body.
- **Placental-site trophoblastic tumour.** This is a very rare type of gestational trophoblastic tumour that starts in the uterus where the placenta was attached.

### Staging of gestational trophoblastic disease

The stage of gestational trophoblastic disease is a term used to describe its size and whether it has spread beyond its original area of the body.

Knowing the type and stage helps the doctors to decide on the most appropriate treatment.

The following stages are used for gestational trophoblastic disease:

- **Hydatidiform mole:** The tumour is found only in the space inside the uterus. If the tumour is found in the muscle of the uterus, it is called an invasive mole.
- **Placental-site gestational trophoblastic tumour:** Cancer is found in the place where the placenta was attached and in the muscle of the uterus.
- **Nonmetastatic gestational trophoblastic neoplasia:** Cancer cells have grown inside the uterus from tissue remaining following treatment of a hydatidiform mole or following an abortion or delivery of a baby. Cancer has not spread outside the uterus.
- **Metastatic gestational trophoblastic neoplasia, good prognosis:** Cancer cells have grown inside the uterus from tissue remaining following treatment of a hydatidiform mole or following an abortion or delivery of a baby. The cancer has spread from the uterus to other parts of the body.

Metastatic gestational trophoblastic neoplasia is considered good prognosis if all of the following are true:

- The last pregnancy was less than four months ago.
- The level of hCG (a hormone normally found in the blood and urine during pregnancy) in the blood is low.
- Cancer has not spread to the liver or brain.
- The patient has not received chemotherapy earlier.

- **Metastatic gestational trophoblastic neoplasia, poor prognosis:** Cancer cells have grown inside the uterus from tissue remaining following treatment of a hydatidiform mole or following an abortion or delivery of a baby. The cancer has spread from the uterus to other parts of the body.

Metastatic gestational trophoblastic disease is

considered poor prognosis if any the following are true:

- The last pregnancy was more than four months ago.
- The level of hCG (a hormone normally found in the blood and urine during pregnancy) in the blood is high.
- Cancer has spread to the liver or brain.
- The patient received chemotherapy earlier and the cancer did not go away.
- The tumour began after the completion of a normal pregnancy.

If gestational trophoblastic disease comes back after initial treatment, this is known as recurrent disease. Gestational trophoblastic disease may come back in the uterus or in another part of the body.

## Sources

We thank the following organisations and individuals for allowing their information to be used for this factsheet:

### National Cancer Institute (USA)

### Cancer Council New South Wales

Dr Stephen Steigrad, Director, Department of Reproductive Medicine, Royal Hospital for Women, Sydney; and Officer for Australasia, International Society for the Study of Trophoblastic Diseases

Additional information from Hydatidiform Mole and Choriocarcinoma UK Information and Support Service:

[http://www.hmole-chorio.org.uk/patients\\_info\\_intro.html](http://www.hmole-chorio.org.uk/patients_info_intro.html)

## **NATIONAL CENTRE FOR GYNAECOLOGICAL CANCERS**

### **CANCER AUSTRALIA**

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**The National Centre for Gynaecological Cancers is an Australian Government initiative to improve outcomes for women affected by gynaecological cancers, their families and carers, and to lessen the impact of cancer on their lives. It has been established by Cancer Australia.**

#### **What is gestational trophoblastic disease? 2010**

Last updated 2009. The information in this fact sheet was current at the time of publication. To check if it is the most up-to date version, please call 02 6217 9818

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