What is uterine cancer?
ENGAGe would like to thank its Executive Group members for their work and constant availability.

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The uterus or womb is the hollow, muscular organ in which the baby develops during pregnancy. Uterine cancer is the fourth most common female cancer in Europe and was diagnosed in nearly 100,000 women in 2012\textsuperscript{1} with a higher incidence in Central and Eastern Europe than in Northern or Southern Europe.

The most common type of uterine cancer is endometrial cancer, which develops from the lining of the womb (the endometrium). There are two types of endometrial cancer, which look different under the microscope. They have a different clinical course and are not always treated in the same way.

### TYPE 1

Cancers amount to more than 80\% of endometrial cancers. They are linked to excess oestrogen in the body, are usually slow growing and less likely to spread beyond the womb.

### TYPE 2

Cancers are not related to oestrogen, grow more quickly and are more likely to spread to other parts of the body.

### How is uterine cancer diagnosed?

The first symptom of uterine cancer is usually abnormal vaginal bleeding:

- After menopause, bleeding at any time
- Before menopause, bleeding between periods or after sex.
How can uterine cancer be prevented?

The causes of uterine cancer are unclear, but factors that increase a woman’s risk include: 2,3

• Advancing age: most cases are diagnosed after menopause.
• Exposure to excess oestrogen, e.g. through early onset of periods or late menopause.
• Obesity, probably because of production of estrogen in the adipose tissues.
• Diabetes, possibly because it involves resistance to the effects of insulin, which can stimulate the growth of cancer cells, and it is often associated with obesity.
• Estrogen, only as replacement therapy in menopause.
• A mother or sister with endometrial cancer.
• Lynch syndrome, also known as hereditary non-polyposis colon cancer (HNPCC), an inherited condition that increases the risk of uterine cancer and colon cancer at a younger age.
• Long-term treatment with tamoxifen, a drug given to prevent breast cancer recurrence, but only when used in postmenopausal women.
• Not having children.

Europe has some of the highest rates of uterine cancer in the world; more than one in 20 female cancers affects the endometrium, and the number of cases is increasing. 4 The rising rates of obesity are known to be an important contributory factor. 5

There are currently no screening tests, but uterine cancer can be treated successfully if it is diagnosed at an early stage. Although most women with abnormal vaginal bleeding do not have uterine cancer, it is vital for every woman to consult her doctor as soon as possible if she experiences this symptom, especially after menopause. Women, who are at high risk of uterine cancer because of their family history, should have regular gynaecological examinations.

Other symptoms include:

• Vaginal discharge
• Pain during or after sex
• Pain in the lower abdomen.

Abnormal vaginal bleeding can be a symptom of many other non-cancerous conditions that affect the womb (e.g. fibroids), so tests are needed to confirm a diagnosis of uterine cancer.

These tests include:

• Bimanual pelvic, vaginal examination to check the womb, vagina, ovaries and bladder
• A swab to examine cells from the cervix
• An ultrasound scan via the vagina
• Hysteroscopy: the doctor looks at the inside of the womb using a hysteroscope, a narrow tube with a telescope at the end
• Endometrial biopsy or curettage: the doctor removes tissue from the inside of the womb for examination under a microscope.
Several factors are thought to reduce a woman’s risk of developing uterine cancer:3,6,7

- Maintaining a healthy weight to avoid obesity, starting in young adulthood.
- Being physically active.
- Coffee drinking, mainly caffeinated but also decaffeinated.
- Having children.
- Most modern birth control pills (combination pills containing oestrogen and progesterone or progesterone-only ‘mini-pills’) if taken long term.
- Continuous combined hormone replacement therapy (HRT) with daily oestrogen and progestogen. Bear in mind that combined oestrogen-progestogen HRT at the same time increases the risk of developing breast cancer if taken long term.
How is uterine cancer treated?

The outlook is relatively good for women diagnosed with uterine cancer in Europe. On average, nearly 80% are alive five years after their diagnosis when the tumor is localized in the uterus. Survival is lower when the tumor - at diagnosis - has already spread to the cervix, ovaries or the abdominal cavity.

Standard treatment of uterine cancer is surgery. When there are characteristics of the tumor that are associated with a tendency to grow, it can be necessary to add pelvic radiotherapy, chemotherapy and/or hormone therapy. Conservative therapy with hormones can be considered in young women with early uterine cancer who wish to preserve their fertility; these cases should be discussed and treated only in specialized centers.

**Surgery** is recommended for all women with uterine cancer who are fit enough for the operation. The type of surgery depends on the woman’s cancer, but most women are recommended to have their womb, fallopian tubes and ovaries removed. Lymph glands are sometimes removed at the same time to check if further treatment is needed in case they contain tumor cells.

**Radiotherapy** is given as the main treatment for less fit women, or when surgery cannot remove all the cancer. It is also given post-operatively to reduce the risk that the cancer will recur. Radiotherapy can be given in two ways: either externally to the whole pelvis or internally via a narrow central tube of tissue (brachytherapy). These forms of radiotherapy can also be given one after the other, if indicated. Since radiotherapy can cause long-term side effects, research is under way to investigate the best time to give this treatment and to identify women who are most likely to benefit from it.

**Chemotherapy** is increasingly used in women who present with advanced uterine cancer, and platinum-based combinations of drugs can produce dramatic improvements. The side effects of chemotherapy mean that it should be adapted to the woman’s condition, particularly in case of serious health problems.
Hormone therapy with progesterone is only used in women with less aggressive disease, or when hormone receptors are seen on cancer cells when they are examined under a microscope.

Further information

- EUROCARE: http://www.eurocare.it
- ENGAGe: http://engage.esgo.org/en
- ENGAGe network members: http://www1.esgo.org/egomaps/
- ESGO: http://esgo.org
- European Society of Medical Oncology (ESMO). Endometrial cancer: a guide for patients: http://www.esmo.org/Patients/Patient-Guides
- Womb Cancer Support UK: http://wombcancersupportuk.weebly.com/

References:
9. ECO, European Cancer Observatory. International Agency for Research on Cancer
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Web: http://engage.esgo.org/
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