Gynecological Cancer

Gynecological cancers are cancers that affect a woman's reproductive organs. There are several types of gynecological cancers, including:

-Ovarian cancer: This type of cancer starts in the ovaries, the organs that produce eggs.

-Cervical cancer: This type of cancer starts in the cervix, which is the narrow end of the uterus that connects to the vagina.

-Uterine cancer: This type of cancer starts in the uterus, which is the organ where the fetus develops during pregnancy.

-Vulvar cancer: This type of cancer starts in the vulva, which is the outer part of the female genitalia.

-Vaginal cancer: This type of cancer starts in the vagina, which is the canal that connects the cervix to the outside of the body.

*Ovarian cancer (OC)*is the second most common gynecological malignancy in developed countries (where uterine cancer is the most common) and the third most common gynecological malignancy in developing countries (where cervical cancer is the most common). The median age at diagnosis is 63 years. The age at diagnosis of OC is younger among patients with a hereditary OC syndrome. The lifetime risk of developing OC is 1.3%. Increased risk of OC is associated with: increasing age, infertility, endometriosis, polycystic ovary syndrome, and smoking (for mucinous carcinomas). Factors associated with reduced risk include: previous pregnancy, history of breastfeeding, oral contraceptives, use of an intrauterine device, and tubal ligation. Several susceptibility genes for OC have been identified, most notably BRCA1, BRCA2, as well as other genes in the homologous recombination pathway, as well as mismatch repair genes associated with Lynch syndrome (hereditary non-polyposis colorectal cancer). A personal or family history of breast cancer has been considered a risk factor for OC; however, mutations in the BRCA gene appear to account for a significant proportion of this increased risk. Symptoms of OC can be vague and nonspecific, and this can make it difficult to diagnose in its early stages. Common symptoms include bloating, abdominal pain or swelling, difficulty eating, and changes in bowel or bladder habits.

There are several histological types of OC, including epithelial OC(the most common type), germ cell tumors, and stromal tumors. Treatment options may include surgery, chemotherapy, and targeted therapies, depending on the type and stage of the cancer.

Cervical cancer is the third most common gynecological cancer and the third leading cause of cancer-related death among gynecological cancers. Cervical cancer has lower incidence and mortality rates than endometrial and ovarian cancer. However, in countries without access to cervical cancer screening and prevention programs, cervical cancer remains a significant cause of cancer morbidity and mortality. Human papillomavirus (HPV) is mainly responsible for the development of cervical neoplasia and can be detected in 99.7% of cervical cancers. The most common histological types of cervical cancer are squamous cell (70%) and adenocarcinoma (25%).

Symptoms of cervical cancer may include abnormal vaginal bleeding, especially following sexual intercourse or menopause, and pelvic pain or discomfort. However, many women with early-stage cervical cancer may not have any symptoms at all.

Treatment options for cervical cancer depend on the stage of the cancer and may include surgery, radiation therapy, and systemic therapy, such as chemotherapy and immunotherapy. In some cases, a combination of these treatments may be used.

Uterine or Endometrial cancer (EC) is the most common gynecological malignancy in developed countries and the second most common in developing countries. Endometrioid carcinoma is the most common histological type of endometrial carcinoma and uterine malignancies overall. Endometrioid tumors tend to have a favorable prognosis and usually present early with abnormal uterine bleeding. Other histological types of endometrial carcinoma (e.g., serous, clear) as well as other types of uterine cancer are associated with a poor prognosis. Incidence peaks between the ages of 60 and 70 years, but 2% to 5% of cases occur before the age of 40 years.

Treatment options for EC depend on the stage of the cancer and may include surgery, radiation therapy, and systemic therapy. Systemic treatment includes chemotherapy, immunotherapy, targeted therapies, and hormone therapy.

Vulvar cancer is less common than other gynecological malignancies, including endometrial, ovarian, and cervical cancers. Squamous cell carcinoma is the most common histological sub type of vulvar cancer, accounting for at least 75% of cases. Other histological types include melanoma, basal cell carcinoma, Bartholin gland adenocarcinoma, sarcoma, and Paget's disease. HPV infection is associated with the majority of vulvar squamous cell carcinomas. In addition, lichen sclerosus of the vulva is associated with an increased risk of vulvar cancer.

Risk factors for vulvar cancer include vulvar or cervical intraepithelial neoplasia, a previous history of cervical cancer, smoking, lichen sclerosus of the vulva, immunodeficiency syndromes, and Northern European ancestry.

Diagnosis of vulvar cancer involves physical (gynecological) examination, biopsy of any suspicious areas and imaging tests to determine the extent of the cancer. Treatment options depend on the stage of the cancer and may include surgery, radiation therapy, and systemic therapies, such as chemotherapy, immunotherapy, and targeted therapies.

Primary vaginal cancer is less common than endometrial, ovarian, and cervical cancer. Most vaginal tumors are squamous cell carcinomas, but melanoma, sarcoma, adenocarcinoma, and other histological types also occur. Although primary vaginal cancer is rare, metastatic disease to the vagina or local extension from adjacent gynecologic structures is not uncommon. As a result, the majority of vaginal malignancies are metastatic, often originating from the endometrium, cervix, vulva, ovary, breast, rectum, and kidney. Vaginal metastases may occur by direct extension (eg, cervix, vagina, endometrium) or by lymphatic or hematogenous spread (eg, breast, ovary, kidney). Approximately 1 in 100,000 women will be diagnosed with in situ or invasive vaginal cancer (usually squamous cell histology). The average age at diagnosis of squamous cell carcinoma, the most common histological type of vaginal cancer, is approximately 60 years, although it occasionally occurs in women in their 20s and 30s. Squamous cell carcinoma is more common as the patient ages.

Most cases of vaginal cancer are caused by HPV infection, similar to cervical cancer. Thus, vaginal cancer has the same risk factors as cervical neoplasia: multiple sexual partners, early age at first sexual intercourse, and being a current smoker.

Diagnosis of vaginal cancer includes a physical (gynecological) examination, biopsy of any suspicious areas, and imaging tests to determine the extent of the cancer. Treatment options depend on the stage of the cancer and may include surgery, radiation therapy, and chemotherapy.

At Attiko Hospital there is a team of surgeons (gynecological oncologists), radiation oncologists, pathologists and medical oncologists specialized in the treatment of gynecological cancers. In addition, all cases are discussed at the Multidisciplinary Team Meeting with the participation of the above specialties; national and international clinical studies are also conducted.