Urinary Tract Cancer

Urinary tract cancers refer to cancers that develop in the organs and tissues of the urinary and male reproductive systems, including kidneys, bladder, prostate, testicles, and penis. These cancers can affect both men and women.

Some of the most common types of urogenital tract cancer include:

• Prostate cancer:

Prostate cancer is the most common malignancy affecting men. More specifically, 21% of new cancers occurring annually in the male population are attributed to prostate cancer. It is estimated that there are 268,490 cases and 34,500 deaths annually. The overall five-year survival rate exceeds 98%. Clinical manifestations of prostate cancer are often absent at the time of diagnosis. Diagnosis of prostate cancer requires histological examination of tissue obtained by biopsy of the prostate. The treatment approach for prostate cancer is complex and requires collaboration of specialized urologists, radiation oncologists and medical oncologists.

• Bladder cancer:

This cancer develops in the bladder and is more common in men than in women. Urothelial (transitional cell) carcinoma is the predominant histological type in the United States and Europe, where it accounts for 90% of all bladder cancers. Less commonly, urothelial cancers may arise in the renal pelvis, ureter, or urethra. The most common symptom is painless hematuria. Diagnosis is often delayed due to the similarity of these symptoms to those of benign disorders (urinary tract infection, cystitis, prostatitis, passing of kidney stones), and delays may lead to a worse prognosis due to a more advanced stage at diagnosis. Treatment of bladder cancer includes local manipulations (in the early stages) and surgery, radiotherapy and systemic therapies (chemotherapy, immunotherapy, targeted therapies) in the advanced stages.

• Kidney cancer:

Globally, the incidence of renal cell carcinoma (RCC) varies widely from region to region, with the highest rates observed in the Czech Republic and North America. Worldwide, there are over 400,000 new cases and over 170,000 deaths from RCC each year. RCC is approximately twice as common in men as in women and occurs predominantly in the sixth to eighth decade of life with a median age at diagnosis of approximately 64 years. The extent of disease at presentation of patients with RCC is: 65% Localized (i.e., confined to the kidney), 17% locally advanced (i.e., spread to regional lymph nodes), and 16% metastatic. In the early stages, treatment consists of surgical removal of the lesion, while in advanced disease, systemic therapy (immunotherapy and targeted therapies) is used.

• Testicular cancer:

Germ cell tumors (GCTs) account for 95% of testicular cancers - they are divided equally between seminomas and non-seminomatous GCTs. Other testicular malignancies include stromal tumors, including Leydig cell and Sertoli cell tumors, gonadoblastoma, and tumors of other cell types that arise in the testicles, such as lymphoma and carcinoid tumors. Testicular tumors usually present as a nodule or painless swelling of a testicle, which may be noticed incidentally by the patient or his partner. There are several known risk factors for testicular neoplasia, such as cryptorchidism, a personal or family history of testicular cancer, infertility or subfertility, and HIV infection. Testicular cancers are among the most curable solid tumors—the five-year survival rate is over 95%. Initial treatment for early-stage testicular germ cell tumors (GCTs) is based on histology and extent of the tumor.

• Penile cancer:

This cancer develops in the tissues of the penis and is rare in North America and Europe, but more common in some other parts of the world. Penile cancer is usually a disease of older men, and rates increase with age. The average age at diagnosis is 60 years. Predisposing factors include warts, smoking, and phimosis. When the lesion is small, the problem can be treated with laser or cryosurgery with minimal side effects. For larger lesions, surgical removal will be required, with or without removal of part of the penis (partial penectomy) or sometimes the entire organ. At the same time, lymph nodes from the groin or pelvis may need to be removed. Surgery can be combined with radiation and chemotherapy to increase efficacy.

Our multidisciplinary team of specialists provides the safest and most effective treatments, while minimizing side effects. Innovative studies and clinical trials are conducted in Attikon Hospital to improve outcomes for all patients. Our team includes urologists, medical oncologists, radiation oncologists, pathologists and nurses.