

## **Kidney cancer:**

### Risk factors

Environmental: occupational exposure to specific carcinogens, but the literature is inconclusive (1).

Lifestyle: obesity, hypertension, smoking, diabetes (1-3)

Genetic: Having a first -degree relative with RCC (2), VHL, Birt-Hogg Dubé syndrome (BHD) and cystic renal disease, renal medullary carcinoma in sickle haemoglobinopathies, hereditary leiomyomatosis and RCC (HLRCC) tuberous sclerosis, germline succinate dehydrogenase (SDH) mutation, non-polyposis colorectal cancer syndrome, hyperparathyroidism-jaw tumour syndrome, phosphatase and tensin homolog (PTEN) hamartoma syndrome (PHTS), constitutional chromosome 3 translocation, and familial non-syndromic ccRCC (4-7).

Protective: Stop smoking, reduce weight, increase physical activity, moderate alcohol consumption (adopt healthy lifestyle) (1-3).

### **References**

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<https://uroweb.org/guideline/renal-cell-carcinoma/>

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## Prostate cancer:

### Risk factors

Environmental: Occupational and environmental exposure to carcinogens (Cadmium, insecticides [1,2])

Lifestyle: Smoking (3,4), high alcohol intake (5).

Genetic: family history (6-10), African descent (11, 12) and germline pathologic variants in DNA repair genes (BRCA2, CHEK2, ATM, BRCA1 and PALB2) (13-18).

Other: Inflammatory bowel disease (19), balding (20), gonorrhoea (21), HPV (22).

Protective: Stop smoking, adopt healthy lifestyle, Increased intake of phytoestrogens (23), soy (24), moderate alcohol intake (25), ultraviolet radiation exposure (sun) (26).

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<https://uroweb.org/guideline/prostate-cancer/>

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## **Bladder cancer:**

### Risk factors

Environmental: Occupational and environmental exposure in particular aromatic amines, polycyclic aromatic hydrocarbons (1-4), chlorinated and non-chlorinated hydrocarbons (diesel exhaust) (1-5). Exposure to arsenic (1), ionizing radiation and cyclophosphamide and pioglitazone (1, 6,7). Schistosomiasis (1).

Lifestyle: Smoking (8, 9)

Protective: Stop smoking, adopt healthy lifestyle, including a healthy diet (10-15).

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<https://uroweb.org/guideline/non-muscle-invasive-bladder-cancer/>

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## Testis cancer:

### Risk factors

Components of the Testicular Dysgenesis Syndrome (TDS): cryptorchidism, hypospadias, decreased spermatogenesis and sub- or infertility, familial history of TCs among first-degree relatives and the presence of a contralateral tumour or GCNIS (1-8).

Protective: in the presence of clinical risk factors, which include family history of TC, family members the patient should be informed about the importance of physical self-examination as stage and prognostic are directly related to early diagnosis [9-11].

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EAU Testicular Cancer Guidelines

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## Penile cancer:

### Risk factors

Medical conditions: Phimosi (1,2, 3), lichen sclerosi (4, 5), Penile Intraepithelial Neoplasia (PeIN) (1), HPV (3,6,7), HIV/immune compromise, UVA phototherapy (for f.i. psoriasis) (8)

Lifestyle: Smoking, poor genital hygiene, never married/divorced (9,10)

General: white Hispanics or African descent (11)

Protective: Circumcision, public health advancements (improved hygiene), HPV vaccination, genital shielding in UVA therapy (8-10)

### References

EAU Penile Cancer Guidelines (currently completely revised as a collaborative project including ASCO) <https://uroweb.org/guideline/penile-cancer/>

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<http://www.iarc.fr/en/publications/pdfs-online/epi/sp155/>

*General comment relevant for several cancer types: due to more strict workplace regulations, the occupational exposure to carcinogens has decreased.*