key points

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Bladder cancer is the most frequently diagnosed cancer involving the urinary tract and is the seventh most common cancer in the UK. Delayed diagnosis is associated with high-grade muscle invasive disease which has the potential to progress rapidly, metastasise and is often fatal. Urothelial cancer (transitional cell carcinoma) is the predominant histological subtype in Europe, where it accounts for 90% of all bladder cancers.

Haematuria, which is typically intermittent, frank, painless and at times present throughout micturition, is the classical and most common presentation of bladder cancer. However, irritative symptoms such as dysuria, urgency, urge incontinence and frequency as well as obstructive symptoms can also be experienced. Fatigue; weight loss; anorexia; renal failure; respiratory symptoms and a suprapubic palpable mass are usually signs of advanced or metastatic malignancy.

Cigarette smokers have up to four times the risk of bladder cancer compared with non-smokers. Other risk factors include: exposure to aniline dyes; use of cyclophosphamide; history of pelvic radiation; exposure to chemical carcinogens associated with certain industries; spinal cord injuries requiring long-term indwelling catheters; type 2 diabetes treated with pioglitazone and condylomata acuminata.

Frank haematuria has a high diagnostic yield for malignancies involving the urinary tract and initial routine tests should be directed towards identifying a variety of potential non-malignant causes. A thorough physical examination should be undertaken to identify evidence of bleeding diathesis and metastatic malignancy. Suggested laboratory investigations include FBC, coagulation, creatinine and PSA. The diagnosis of bladder cancer is based on urine cytology, cystoscopy and pathological assessment of the bladder biopsy.

Bladder cancer can be classified for treatment purposes into non-muscle invasive bladder cancer (NMIBC), organ confined muscle invasive bladder cancer (MIBC) and advanced or metastatic disease. Disease staging can be with either CT or MRI. A bone scan may be used to evaluate bone metastasis when clinically indicated.

NMIBC is treated with complete transurethral resection of bladder tumour (TURBT). Those tumours with a high risk of recurrence and progression after TURBT require the use of adjuvant treatments. Radical cystectomy with lymphadenectomy (extended) or chemoradiotherapy are the definitive local treatment options in MIBC. Extended lymphadenectomy may still be curative in patients with limited pelvic lymph node involvement.

Follow-up of patients who have received treatment for bladder cancer is imperative for response evaluation or to detect salvageable recurrence. Tumour stage is the most important prognostic factor for progression and overall survival for invasive bladder cancer.