

I. GROSS DESCRIPTION

Specimen

- urine cytology/bladder washings/cystoscopic biopsy/transurethral resection bladder (TURB)/ cystectomy/cystourethrectomy/cystoprostatectomy (including seminal vesicles)/cystoprostatourethrectomy/anterior or total exenteration (including uterus and adnexae \pm rectum).
- weight (g) and size (cm).
- length (cm) of ureters and urethra.
- bladder cancer commonly presents with symptoms of painless haematuria and investigation is by urinary cytology, cystoscopy and biopsy. Cytology is good at designating high-grade papillary, in-situ and invasive urothelial neoplasia but poor at separating low-grade papillary lesions from reactive atypia and cellular changes associated with calculi, in-dwelling catheters, recent instrumentation and post-therapy changes. Biopsy is with “cold” cup forceps or a small diathermy loop, the advantage of the former being good preservation of histological detail. Flexible cystoscopy is easier for the patient and allows a wide field of vision but rigid cystoscopy with a larger lumen allows instrument access for transurethral resection of superficial bladder tumours with diathermy to the base (TURBT). Deep biopsy of the muscularis propria is important staging information in invasive tumours and may be submitted separately by the urologist. Further staging is by a combination of endoluminal ultrasound, CT and MRI scan. Carcinoma in situ is usually treated by topical chemotherapy (mitomycin) or immunotherapy (bacille Calmette–Guérin (BCG) therapy) or resected by TURB if localized. Widespread disease may necessitate radical surgery. Superficial urothelial cancer confined to the mucous membrane is resected transurethrally with submission of multiple fragments and follow-up by cystoscopy. Adjuvant intravesical therapy is used for high-grade or recurrent disease. Muscle-invasive tumours require radical surgery with cystectomy \pm in continuity prostatectomy/urethrectomy and regional lymphadenectomy, and in the female cystourethrectomy or an anterior exenteration.

Tumour**Site**

- fundus/body/trigone/neck/ureteric orifices.
- anterior/posterior/lateral (right or left).
- single/multifocal.
- diverticulum.

Size

- length × width × depth (cm) or maximum dimension (cm).

Appearance

- papillary/sessile/ulcerated/mucoid/keratotic/calcification.
- bladder mucosa: erythematous/oedematous (carcinoma in situ).

Edge

- circumscribed/irregular.

2. HISTOLOGICAL TYPE***Transitional cell (urothelial) carcinoma***

- 90% of cases.
- usual type: papillary or sessile.

variants with deceptively benign features:

- microcystic type: intraurothelial microcysts containing protein secretions mimicking cystitis cystica.
- nested type: uniform cell nests in the lamina propria mimicking florid Von Brunn's nests but with an irregular margin and look for muscle invasion. Potentially aggressive.
- micropapillary type: resembles ovarian serous papillary carcinoma. Associated with stromal retraction artefact mimicking lymphovascular invasion. Also shows true LVI and is a high-grade tumour.
- inverted type: architecturally similar to inverted papilloma but has WHO II/III cytology. Look for muscle invasion.
- also clear cell, plasmacytoid, lipid cell, with pseudosarcomatous stroma (see below), trophoblastic cells (HCG positive) or prominent lymphoid infiltrate (lymphoepithelioma) variants.

Squamous cell carcinoma

- 5% of cases.
- classical/verrucous/basaloid/sarcomatoid, i.e. the same range of tumours as encountered in the upper aerodigestive tract.
- old age and associated with calculi, schistosomiasis or diverticulum and chronic infection. Prognosis is poor with a 13–35% 5-year survival and two-thirds are pT3/pT4 at presentation.