

Appendix A TNM classification of malignant tumours (9th edition 2025)¹

Italicised text in brackets denotes an explanatory note added by the authors of this dataset.

Renal, pelvis and ureter

pT Primary tumour

pTX	Primary tumour cannot be assessed
pT0	No evidence of primary tumour
pTa	Non-invasive papillary carcinoma
pTis	Carcinoma in situ
pT1	Tumour invades subepithelial connective tissue
pT2	Tumour invades muscularis
pT3	(Renal pelvis): Tumour invades beyond muscularis into peripelvic fat or renal parenchyma. (Ureter): Tumour invades beyond muscularis into periureteric fat
pT4	Tumour invades adjacent organs or through the kidney into perinephric fat

pN Regional lymph nodes *[defined as ‘ hilar, abdominal para-aortic and paracaval nodes and, for the ureter, intrapelvic nodes’.]*

pNX	Regional lymph nodes cannot be assessed
pN0	No regional lymph node metastasis
pN0(i+)	Isolated tumour cells [defined as ‘single tumour cells or small clusters of tumour cells (in a regional lymph node) not more than 0.2 mm in greatest extent that can be detected by routine H&E stains or immunohistochemistry’.]
pN1	Metastasis to a single lymph node 2 cm or less in greatest dimension [refers to the size of the largest metastasis, not the size of the largest lymph node.]
pN1(mi)	Micrometastasis [defined as a metastasis in a regional lymph node >0.2 mm but ≤2.0 mm].

pN2 Metastasis in a single lymph node >2 cm, or multiple lymph nodes [refers to the size of the largest metastasis; pN3 has been removed in TNM 8th edition.]

pM Distant metastasis

pM1 Distant metastasis

[Categories pMX and pM0 remain invalid in 9th editions of TNM. M0 can only be assigned clinically, not pathologically.]

Stage grouping

Stage	T	N	M
Stage 0a	Ta	N0	M0
Stage 0is	Tis	N0	M0
Stage I	T1	N0	M0
Stage II	T2	N0	M0
Stage III	T3	N0	M0
Stage IV	T4	N0	M0
	Any T	N1, N2	M0
	Any T	Any N	M1

Urinary bladder

pT Primary tumour

pTX Primary tumour cannot be assessed

pT0 No evidence of primary tumour

pTa Non-invasive papillary carcinoma

pTis Carcinoma in situ: 'flat tumour'

pT1 Tumour invades subepithelial connective tissue

pT2 Tumour invades muscularis propria

pT2a Tumour invades muscularis propria (inner half)

pT2b Tumour invades muscularis propria (outer half)

pT3	Tumour invades perivesical tissue
pT3a	Microscopically
pT3b	Macroscopically (extravesical mass)
pT4	Invades any of the following: prostate stroma, seminal vesicles, uterus, vagina, pelvic wall, abdominal wall
pT4a	Tumour invades prostate stroma, seminal vesicles, uterus or vagina
pT4b	Tumour invades pelvic wall or abdominal wall

pN Regional lymph nodes *[defined as ‘the nodes of the true pelvis which essentially are the pelvic nodes below the bifurcation of the common iliac arteries but include the lymph nodes along the common iliac artery too’ – see also node groups specified below.]*

pNX	Regional lymph nodes cannot be assessed
pN0	No regional lymph node metastasis
pN0 (i+)	Isolated tumour cells [defined as ‘single tumour cells or small clusters of tumour cells (in a regional lymph node) not more than 0.2 mm in greatest extent that can be detected by routine H&E stains or immunohistochemistry’]
pN1	Metastasis in a single lymph node in the true pelvis (hypogastric, obturator, external iliac or presacral)
pN1(mi)	Micrometastasis [defined as a metastasis in a regional lymph node >0.2 mm but ≤2.0 mm]
pN2	Metastasis in multiple lymph nodes in the true pelvis (hypogastric, obturator, external iliac or presacral)
pN3	Metastasis in a common iliac lymph node(s)

pM Distant metastasis

pM1	Distant metastasis
pM1a	Non-regional lymph nodes
pM1b	Other distant metastasis

[pMX and pM0 are not valid categories in the 8th edition. M0 can only be assigned clinically, not pathologically.]

Stage grouping

Stage	T	N	M
Stage 0a	Ta	N0	M0
Stage 0is	Tis	N0	M0
Stage I	T1	N0	M0
Stage II	T2a, T2b	N0	M0
Stage IIIA	T3a, T3b, T4a	N0	M0
	T1, T2, T3, T4a	N1	M0
Stage IIIB	T1, T2, T3, T4a	N2, N3	M0
Stage IVA	T4b	Any N	M0
	Any T	Any N	M1a
Stage IVB	Any T	Any N	M1b

Urethra

pT Primary tumour

pTX Primary tumour cannot be assessed

pT0 No evidence of primary tumour

Urethra (male and female)

pTa Non-invasive papillary, polypoid or verrucous carcinoma [most verrucous carcinomas arise from the penile skin rather than urethra; readers are referred to the penile dataset for clarification. Authors of the RCPATH penile dataset²⁷ have argued that a non-invasive variant of verrucous carcinoma does not exist.]

pTis Carcinoma in situ

pT1 Tumour invades subepithelial connective tissue

pT2 Tumour invades any of the following: corpus spongiosum, prostate, periurethral muscle

- pT3 Tumour invades any of the following: corpus cavernosum, beyond prostatic capsule anterior vagina, bladder neck (extraprostatic extension)
- pT4 Tumour invades other adjacent organs (invasion of the bladder)

Prostatic urothelial (transitional cell) carcinoma

- pTis Carcinoma in situ, involving the prostatic urethra, periurethral or prostatic ducts without stromal invasion
- pT1 Tumour invades subepithelial connective tissue (for tumours involving prostatic urethra only)
- pT2 Tumour invades any of the following: prostatic stroma, corpus spongiosum, periurethral muscle
- pT3 Tumour invades any of the following: corpus cavernosum, beyond prostatic capsule, bladder neck (extraprostatic extension)
- pT4 Tumour invades other adjacent organs (invasion of bladder or rectum)

pN Regional lymph nodes *[defined by TNM as the inguinal and the pelvic nodes. Laterality does not affect the N classification.]*

- pNX Regional lymph nodes cannot be assessed
- pN0 No regional lymph node metastasis
- pN0 (i+) Isolated tumour cells [defined as 'single tumour cells or small clusters of tumour cells (in a regional lymph node) not more than 0.2 mm in greatest extent that can be detected by routine H&E stains or immunohistochemistry'.]
- pN1 Metastasis in a single lymph node (UICC)
- pN1(mi) Micrometastasis (defined as a metastasis in a regional lymph node >0.2 mm but ≤2.0 mm)
- pN2 Metastasis in multiple lymph nodes (UICC)

pM Distant metastasis

- pM1 Distant metastasis

[Categories pMX and pM0 remain not applicable in TNM 9th edition. M0 can only be assigned clinically, not pathologically.]

Stage grouping

Stage	T	N	M
Stage 0a	Ta	N0	M0
Stage 0is	Tis	N0	M0
Stage I	T1	N0	M0
Stage II	T2	N0	M0
Stage III	T1, T2	N1	M0
	T3	N0, N1	M0
Stage IV	T4	N0, N1	M0
	Any T	N2	M0
	Any T	Any N	M1

References

1. Brierley JD, Giuliani M, O'Sullivan B, Rous B, Van Eycken L (eds.). *TNM Classification of Malignant Tumours* (9th edition). Oxford, UK: Wiley-Blackwell; 2025.