

# Clinical Staging of Bladder Carcinoma

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**Summary.** The TNM staging system for carcinoma of the bladder is reviewed and compared with the Jewett-Strong-Marshall classification system.

**Key words:** TNM System - Urinary bladder carcinoma - Staging.

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A prerequisite for comparison of different tumour series and for exchange of information concerning results is that all concerned use the same definitions in the identification of various tumours, or at least speak languages which are translatable with exactness into each other.

The staging system by Jewett & Strong (1), as modified by Marshall (2) has been used widely for the categorisation of bladder carcinoma. The details of this system are given in Figure 1. Stage 0 tumours are limited to the mucosa. In stage A, tumour infiltration does not extend beyond the submucosa, in stage B not beyond the detrusor muscle layer and in stage C into the perivesical tissue whereas stage D indicates metastases and/or invasion of adjacent organs or the pelvic or abdominal wall.

The Jewett-Strong-Marshall system is convenient and still the most common in many centres especially in the USA. Although it is often used for clinical tumour staging the system is based on the histopathological examination of operative specimens. There is a need for a staging system based solely on clinical and radiological examinations and possibly even on biochemical tests. Many patients are, of course, never operated on, except for biopsies. It must be stressed, however, that the tumour diagnosis must be confirmed histologically or cytologically.

The TNM-system, proposed by the International Union Against Cancer (4) fulfils these requirements. T indicates the extent of the local tumour, N involvement of regional and juxta-regional lymph nodes, and M indicates

metastases in distant organs and tissues, including remote lymph node areas. The suffix (m) may be added to the appropriate T category to indicate multiple localisation. Regional lymph nodes for the bladder are the pelvic nodes below the bifurcation of the common iliac arteries, and juxta-regional nodes, the inguinal nodes and the nodes around the common iliac arteries, abdominal aorta and vena cava. Figure 2, taken from a publication by Wallace, Chisholm and Hendry (3) indicates the T stage of the local tumour. Tumour in situ is pre-invasive carcinoma. There has been some confusion about the meaning of this term. The UICC Committee has recommended it should be used for "definite anaplasia of surface epithelium without the formation of papillary structures and without infiltration" (4).

Stage T 1 indicates that there is either no tumour palpable or a freely mobile mass, no longer to be felt after transurethral resection of the exophytic lesion. With T 2 a rubbery induration is felt in the bladder wall with no residual induration following transurethral resection. The T 3 tumour is hard or nodular but mobile and residual induration persists following resection of the exophytic lesion. In T 4 there is fixation of the tumour or evidence of invasion of adjacent structures.

The findings on palpation are uncertain in adipose patients or if previous surgery or radiotherapy have produced fibrotic changes in the pelvis. To evaluate the degree of infiltration bimanual palpation should be supplemented by biopsy from the tumour base. It is sometimes difficult, however, to

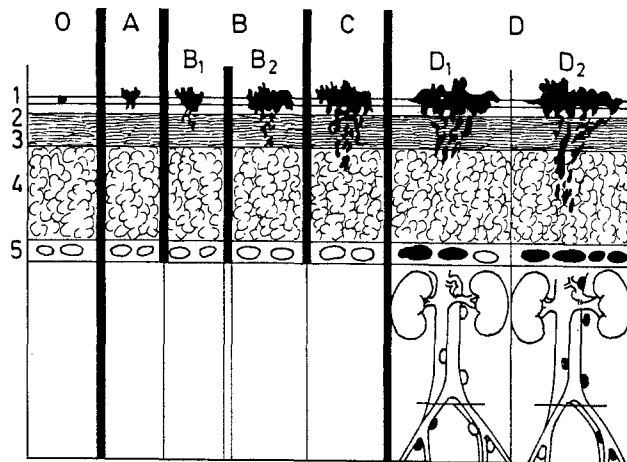


Fig. 1. Jewett-Strong-Marshall classification (Reproduced by kind permission of the Journal of Urology)

identify with certainty the depth of the biopsy and the thickness of the bladder wall. In some cases the distinction between a T 2 and a T 3 lesion is in practice impossible.

The TNM classification system is subject to a trial period from 1975 to 1979 and will then be reviewed. Even if a number of uncertain factors are inherent in the preoperative staging, the system provides a detailed description of the disease. The system has been adopted by an increasing number of centres and will hopefully, possibly with some modifications, attain general acceptance in the future.

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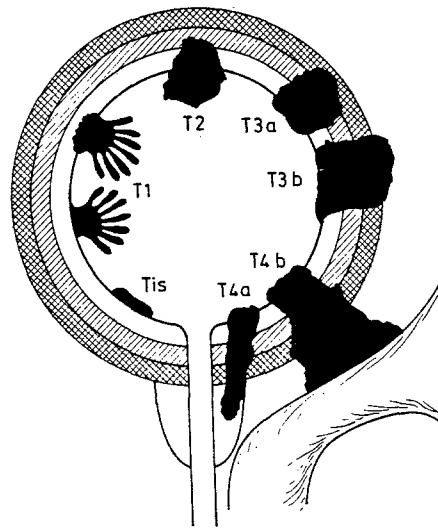


Fig. 2. TNM system for staging of bladder tumours (Reproduced by kind permission of the British Journal of Urology)

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