

REVIEW ARTICLE

Association of Directors of Anatomic
and Surgical Pathology

Recommendations for the reporting of urinary bladder specimens containing bladder neoplasms

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Abstract The Association of Directors of Anatomic and Surgical Pathology have developed recommendations for the surgical pathology report for common malignant tumors. The recommendations for carcinomas of the urinary bladder are reported herein.

Key words Transitional cell carcinoma · Cystectomy · Bladder cancer

Introduction

The Association of Directors of Anatomic and Surgical Pathology (ADASP) has named several committees to develop recommendations regarding the content of the surgical pathology report for common malignant tumors. A committee of individuals with special interest and expertise write the recommendations, which are reviewed and approved by the council of the ADASP and subsequently by the entire membership.

The recommendations have been divided into the following four major areas: (1) items that provide an informative gross description; (2) additional diagnostic features that are recommended to be included in every report if possible; (3) optional features that may be included in the final report; and (4) a checklist.

The purpose of these recommendations is to provide an informative report for the clinician. The recommendations are intended as suggestions and adherence to them is completely voluntary. In special clinical circumstances, the recommendations may not be applicable. The recommendations are intended as an educational resource rather than a mandate.

This report was prepared by an ad hoc committee composed of William M. Murphy (Chair), John D. Crissman, Sonny L. Johansson, and Alberto G. Ayala

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Features the association recommends to be included in the final report

Because they are generally accepted as being of prognostic importance, the following are required for therapy or traditionally expected.

A. Gross description

1. How the specimen was identified: labeled with name, medical record number, etc.
2. How the specimen was received: fresh, in fixative, on ice, opened, unopened, with Foley catheter still inserted, etc.
3. Good overall description, including nature of the specimen (chips, partial cystectomy, radical cystectomy, etc.) weight, three dimensional measurements, etc.
4. Describe recognizable features if identifiable (gross evidence of carcinoma, etc.)
5. Description of other organs: prostate, ureters, urethra, uterus, vagina, etc.
6. Paraffin block key (best listed at end rather than incorporated into narrative).
7. If ink is utilized, give code.

B. Diagnostic information

1. *Topography*: The type of specimen should be specified: bladder, bladder and prostate, bladder with vagina and uterus, etc.
2. *Procedure*: The type of surgical procedure should be stated: transurethral resection of bladder (TURB), partial cystectomy, total cystectomy, radical cystoprostatectomy, anterior exenteration, etc.
3. *Tumor type*: The type of carcinoma should be stated: if transitional cell carcinoma is the diagnosis, state whether it is papillary or not.

Table 1 Urinary bladder tumors checklist

<i>Specimen type:</i>		Biopsy _____	TURB _____	Radical cystectomy _____
		Partial cystectomy _____	Pelvic exenteration _____	
<i>Diagnosis section:</i> the pathology report should address all applicable items				
_____ Tumor type and grade (TCC only) (with note or comment, if necessary)				
_____ Other mucosal abnormalities (CIS, etc.)				
_____ Other abnormalities (e.g. changes c/w previous surgical site, cystitis glandularis et cystica)				
_____ Pathology in other organs:				
	Prostate		_____	Lymph nodes (usually submitted separately)
	Ureters			
	Urethra			
	Seminal vesicles			
	Vasa deferentia			
	Uterus			
	Vagina			
	Rectum			
	Other			
<i>Muscular wall:</i>				
	Present			
	Not identified			
<i>Invasion:</i>				
	Specimen entirely tumor			
	No invasion			
	Lamina propria ^a			Vascular _____
	Muscular wall			Perineural _____
	inner half			Seminal vesicles _____
	outer half			Prostate: _____
	Paravesicular tissue			glands _____
				stroma _____
<i>Specimen margin involvement:</i>				
	None			Paravesicular soft tissue _____
	Urethra			Other (specify) _____
	Ureters			
	___ L			
	___ R			
<i>Lymph nodes:</i> no. of tumor/total nodes				
Size largest met: _____ cm				

^aDistinguish muscularis mucosae if desired (optional)

4. *Tumor grade:* Utilize WHO or Murphy's grading system outlined in the *Third Series AFIP Fascicle No. 11* [3, 4].

5. *Extent of tumor in bladder* (degree of invasion):

- No invasion
- Invasion of lamina propria
- Invasion of muscularis propria
- Invasion of paravesicular tissue
- Presence or absence of lymphatic/vascular invasion
- Tumor arising in diverticulum (state whether muscularis is present or not)

Note: Presence of fibroadipose tissue is not an indication of paravesicular/adventitial involvement as fibroadipose tissue may be present in the lamina propria and/or between muscle bundles of the detrusor. If one is unsure of whether muscle fibers associated with an invasive tumor represent invasion of the muscular wall or the muscularis mucosae of the lamina propria, then a comment explaining the problem should be included in the report.

6. *Intraepithelial abnormalities:*

- Report focality or multifocality.
- If intraepithelial abnormalities are not contiguous with papillary or invasive neoplasm or are of different degrees of anaplasia, separate diagnoses are indicated.

c) Report presence of pagetoid spread of CIS in urothelial mucosa; this is not dysplasia even though cells do not occupy the full thickness of the mucosa.

7. *Extent of tumor in the organs attached to the bladder* (radical cystoprostatectomies, radical cystectomies, anterior exenterations):

Prostate:

- Direct extension into prostate from carcinoma in bladder neck.
- Involvement of prostatic urethra.
- Involvement of prostatic ducts with or without stromal involvement [5].

Ureter and urethra:

- Report any dysplastic/neoplastic change of the mucosa, including pagetoid spread of CIS.
- Report invasion into adjacent lamina propria or muscularis propria.

Seminal vesicles:

- Report spread of carcinoma in these organs either through epithelium or by direct extension of infiltrative tumor.

Vagina/uterus:

- Report direct extension or metastases to any of these organs.

8. *Surgical margins:*

- a) Report status of ureteral margins, indicate which side (R or L) if one is positive.
- b) Report status of urethral margin.
- c) Report paravesicular margin involvement.

9. *Report important associated conditions, e.g. adenocarcinoma of the prostate.*

10. *Lymph nodes:*

- a) Report presence/absence of metastases. If metastases are present, state number and size of largest one, i.e., <2.0 cm, 2.1–5 cm, or >5 cm.

C. Features considered optional in the final report

These features are considered optional because they represent specific institutional preferences or have not been generally accepted as independent prognostic indicators.

1. Invasion of muscularis mucosae, if present [2, 6].
2. Genetic abnormalities
3. Cytometry
4. Morphometry

5. Growth factors and receptors

6. Stage: there are two staging systems [1, 4]:

- a) The Marshall modification of the Jewett and Strong system (A-D);
- b) The AJCC/TNM system (T1-T4, M, N).

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