Association of Directors of Anatomic and Surgical Pathology

Recommendations for the reporting of resected prostate carcinomas

Abstract The Association of Directors of Anatomic and Surgical Pathology has developed recommendations for the surgical pathology reporting of common malignant tumors. The recommendations for resected prostate carcinomas are reported herein.

Key word Resected prostate carcinoma

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, and they are reviewed and approved by the council of ADASP and subsequently by the entire membership.

The recommendations have been divided into 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 (Table 1).

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.

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 staging or therapy, and/or are traditionally expected.

Gross description

1. Topography: The type of specimen should be specified - prostate, prostate and seminal vesicles, bladder and prostate, etc.
2. Procedure: The type of surgical procedure should be stated - radical prostatectomy, transurethral resection of prostate (TURP), supra-retropubic pubic prostatectomy, needle biopsy, etc.
3. How the specimen was identified: labeled with name, medical, record number, etc.
4. How the specimen was received: fresh, in fixative, opened, unopened, etc.
5. Good overall gross description including weight and three-dimensional measurements, etc.
6. Describe recognizable features: gross evidence of carcinoma, nodular hyperplasia, necrosis, etc.
7. Description of other organs or structures: bladder, seminal vesicles, vas deferens, etc.
8. Paraffin block key

Microscopic features

1. Tumor type: The type of carcinoma should be stated. The following classification of prostate carcinoma is suggested:
   a) Adenocarcinoma, NOS
   b) Adenocarcinoma, acinar type
   c) Ductal (endometrioid) carcinoma
   d) Mucinous carcinoma
   e) Signet ring cell carcinoma
   f) Neuroendocrine carcinoma
   g) Small cell (oat cell) carcinoma
Table 1 Prostatic carcinoma checklist

1. Topography:
   - Prostate
   - Prostate and seminal vesicles
   - Other

2. Procedure:
   - Radical prostatectomy
   - TURP
   - Suprapubic or retropubic prostatectomy
   - Other

3. Tumor type:
   - Adenocarcinoma
   - Other

4. Gleason’s grade and score
   - Primary pattern (1–5)
   - Secondary pattern (1–5)
   - Score
   - Zones: Peripheral
   - Central
   - Transitional zone

5. Amount of tumor:
   - For needle biopsy: Size of core
   - and size of tumor
   - For TURP or supra/retropubic prostatectomies:
     a) % of tumor in relation to amount of gland removed
     b) Number of microscopic foci involved by carcinoma
   - For radical prostatectomy: % of tumor in relation to weight of the gland

6. Multicentricity:
   - Present
   - Absent

7. PIN
   - Present
   - Grade
   - Absent
   - State zone within the prostate

8. Surgical margins:
   - Posterior
   - posterolateral
   - anterior
   - apex
   - neurovascular bundle, right
   - left
   - bladder margin
   - Method of examining margins:
     - En face
     - Perpendicular
     - Shave
     - Conization

9. Perineural extension:
   - Present
   - within prostate
   - outside
   - Absent

10. Vascular/lymphatic extension:
    - Present
    - Absent

11. Seminal vesicles:
    - Involved by tumor
    - Side: R
    - L
    - Not involved by tumor
    - Adventitial involvement only
      - yes
      - no

12. Lymph nodes:
    - Right pelvic
      - yes
      - no
      - ; no. of positive LN
    - Size of met
    - Right periaortic
      - yes
      - no
      - ; no. of positive LN
    - Size of met
    - Left pelvic
      - yes
      - no
      - ; no. of positive LN
    - Size of met
    - Left periaortic
      - yes
      - no
      - ; no. of positive LN
    - Size of met

13. Pathologic stage:
    - Tumor confined to prostate
      - yes
      - no
    - Extraprostatic extension
      - yes
      - no
    - State tissues involved:
      - connective tissue
      - yes
      - no
    - fibroadipose tissue
      - yes
      - no
    - TNM/AJCC if applicable
      - Whitmore-Jewett

14. Associated conditions:
    - Nodular hyperplasia
    - Other

h) Undifferentiated non-small cell carcinoma
i) Transitional cell carcinoma
j) Squamous and adenosquamous carcinoma
k) Sarcomatoid carcinoma (carcinosarcoma)
l) Others

2. Tumor grade: It is recommended that the Gleason system be utilized. The Gleason system proposes that any given prostate carcinoma may show one or several of five histologic patterns ranging from the lowest grade (grade 1) to the highest grade (grade 5). Taking the two predominant patterns one can arrive at a score (for instance, 2+3=5; 3+4=7) which has prognostic significance.

The following rules apply to this system:

a) When there are more than two patterns, pattern 1 is the predominant pattern and pattern 2 is the second predominant pattern.

b) When there is only one pattern, for instance in a needle biopsy, duplicate that pattern to arrive at the correct score (for example, 3+3=6)

c) In a needle biopsy when there are more than two patterns and the worst grade is neither the predominant nor the secondary pattern, choose the predominant pattern and the highest grade to arrive at the correct score (for instance; the patterns are: grade 3 is 60%; grade 1 is 30%; and grade 4 is 10%; the score should be: 3+4=7).

3. Tumor amount: The amount of carcinoma present in the specimen should be recorded

a) For radical prostatectomy specimens: percentage of the prostate involved by carcinoma in relation to the weight of the specimen.

(Note: Computer-assisted methods of measurements are desirable, but at present are time-consuming and impractical for routine usage.)

b) For transurethral resections of prostate, and suprapubic or retropubic prostatectomies: the amount of carcinoma present should be givenn in terms of: (I) percentage of carcinoma found in relation to the amount of non-involved prostatic tissue, (II) number of microscopic foci of carcinoma.

I. Percentage system: The TNM/AJCC recommends

(i) 5% or less of carcinoma (Gleason score 2–6; pT1a/A1)
(ii) More than 5% of carcinoma [Gleason score 2 to 6, or any amount of carcinoma of 7–10 Gleason score; (pT1b/A2)].

II. Number of microscopic foci system:

(i) 3 or less microscopic foci of carcinoma with a Gleason’s score of 2 to 6 (A1)
(ii) 4 or above microscopic foci of carcinoma with a Gleason’s score of 2–6, or any amount of carcinoma with Gleason’s score of 7 or above (A2)