GENITOURINARY PATHOLOGY
RESIDENT ROTATION DESCRIPTION (5/09)

This rotation encompasses the evaluation of genitourinary pathology and deals with bladder, prostate, kidneys, penis and testis. It also includes, for historical reasons, adrenal tumors.

The volume of pathologic specimens on this service has increased and continues to do so which should enhance the learning experience. This, however, requires the resident to be more than a passive observer and necessitates that the resident take responsibility for the efficient operation and complete accurate pathologic reports. Specimens must be grossed in and examined in an expeditious manner to ensure excellent clinical service to patients and our colleagues in the department of Urology.

The rotation description, cancer checklists, educational materials and reference articles have been placed on the web. The web address is **www.box.net**-- the current username is **allan_robert@hotmail.com** and the password is: **GUPATH.**

PATHOLOGISTS:

The Genitourinary Division has three pathologists with specialty interest and experience in Genitourinary pathology. Names and contact numbers for each are as below:

Robert Allan, MD	(pager 413-7435, Shands cubicle 4-7028)
Peter Drew, MD	(pager 413-7447, office ext. 4-4469, AGH 3-0258)
Samer Al-Quran	(pager 413-7564, Shands cubicle 4-3963)

WHAT TO DO ON DAY ONE:

1) Prior to the rotation Dr. Allan should have emailed you the GU rotation description, read it and print this out.

2) On so-called switch day page Dr. Allan (413-7435), if he does not answer right away keep paging him.

3) Dr. Allan will meet with you and go over the resident rotation description form step by step and have you sign an acknowledgment that you have reviewed it (at the end)

4) If Dr. Allan is not at Shands that day, he will do this over the telephone.

5) If Dr. Allan is not in town, then have either Dr. Drew or Dr. Al-Quran go over the rotation description and sign the form.

GUIDELINES FOR SIGN-OUT:

Pathology is best learned by doing and not by passively watching from the other side of the microscope. Even if this is your first day of doing GU or your first day of residency, you are expected to preview the slides prior to signing out the cases with the attending. Practicing pathologists often encounter situations where they have not seen or signed out a particular type of case and must learn how to do this; it is best learned while you are still in-training.

PREVIEWING CASES:

It is understood that previewing may take longer the first time on the rotation. However, if it is observed that you are not using this time wisely, the attending may cut this time short and ask to review the cases.

It is expected that all resection cases be signed out within two days of grossing and biopsy cases be signed out as expeditiously as possible. One strategy to help achieve this is to quickly preview cases first thing in the morning (before conference if possible) and order immunohistochemical or special stains on those cases as soon as possible. As a specific example, scan the middle level slides of all the prostate needle cores of prostate biopsies to determine if there are slides which have a small focus that may be cancer that may need immunohistochemical stains. If there is doubt, grab the attending on service and ask if they would like immunohistochemical stains on that particular case.

Cases marked RUSH are to be signed out in the morning with the attending.

REPORTING:

An important part of diagnostic pathology is the phrasing and structure of a coherent report. This should be complete in scope and devoid of typographical errors or blanks. This means that the gross description should be checked for accuracy and corrected. For the diagnosis, it is important for clarity and in many instances billing compliance to document the procedure that is performed as part of the diagnosis. Charge codes are different, for example, for a bladder biopsy (88305) and a TURBT (88307). The preferred format is shown in the following examples.

Bladder, biopsy
Bladder, TURBT
Prostate, TURP
Left apex, prostate, biopsy
Left kidney, radical nephrectomy
Right kidney, partial nephrectomy
"Tumor mass in retroperitoneum", excision

As noted in the last example, sometime the surgeon designates a specimen without a clear anatomic location-- in this instance put the location in parentheses. The generic procedure "excision" can be used if there is doubt as to the procedure.

Abbreviations are to be avoided with the exceptions shown above (TURBT, TURP). These are awfully long and it is well understood what they mean. Using BX, for example, as a shortened form of biopsy is **unacceptable.**

An additional specimen that is very common is confirming diagnosis slides from outside facilities. These are to be written up in the following standardized manner in keeping with the department recommendations. If there are multiple biopsies under a given heading it is easier to group these with a header and list the different anatomic sites separately

As examples,

A) Prostate, biopsies, review of outside slides, XS08-675309, 1/12/08
Left apex: Adenocarcinoma of the prostate, Gleason 6 (3+3), involving 20% of one core, 3mm, perineural invasion is identified
Left base: Negative for tumor
etc. etc.

A) Bladder, TURBT, review of outside slides XJ07-12345, 11/15/07
Invasive high grade urothelial carcinoma
Carcinoma invades muscularis propria (detrusor muscle)
etc.

Please check to make sure that the slides reviewed match those in the gross description and are placed in the diagnostic line. This is because the gross is not transferred in the history tab display when looking at prior history. It is important to include the date of the procedure because many patients have received multiple treatments at multiple time points (bladder tumor patients) and this avoids confusion as to when the biopsy was done. This should be printed on the outside pathology reports.

I have included some sample sign-outs at the end of this document for reference.

Oncologic genitourinary pathology resection cases are **REQUIRED** to have a diagnostic cancer checklist in the footing of the report to ensure standardizing of cancer reporting. There are many reasons for this. First, the Urology department has asked that this be made part of our reports to assist in translational research activities. Second, the American College of Surgeons (ACS) requires that institutions that are certified as cancer centers through the ACS Commission of Cancer (ACS COC) include certain required elements in their reports and devised cancer checklists, in concert with the College of American Pathologists (CAP). Third, Medicare has begun including small monetary incentives to tumor cases (currently breast and colon) that include certain relevant tumor characteristics and tumor stage (pTNM). If these are not included, reimbursement is less. Finally, many private practice and other academic positions have adopted checklist reporting formats-- so it is likely that you will do it when you leave here and thus it can be considered part of your training.

The checklists have been placed on web and are accessible with username and password provided-- the web address is **www.box.net**-- the current username is **allan_robert@hotmail.com** and the password is: **GUPATH.** I tried keeping them on the sign-out room computers but they have, at times, been deleted. In addition, the balkanization of the computer network between UF and Shands precludes any unified accessible network drive. This way you can get it from anywhere, including home.

For biopsies containing cancer there are certain required elements that depend on the anatomic site. The two major sites are prostate and bladder.

For prostate carcinomas on core biopsy report the following:

Prostatic adenocarcinoma, Gleason score 7 (3+4), involving 30% of one of two cores, maximal linear extent 4mm, perineural invasion is present

As shown this includes the Gleason score, percent involvement and number of cores, maximal linear measurement and, if present, perineural invasion. The absence of perineural invasion does not need to be reported. If there are discontinuous foci of carcinoma on a core it can be reported as "discontinuously involving 40% of core, 5mm in overall extent".

For bladder tumors it is important to mention the type and grade of tumor and in addition report the presence of absence of the bladder muscularis propria (detrusor muscle) in the specimen. This is to determine the adequacy of the specimen for pT grading. A common way to report this is "Muscularis propria (detrusor muscle) is present and uninvolved by carcinoma".

GROSSING FOR GU

Grossing is to be performed on a daily basis; all tumor cases are to be handled by the residents. Should case load become unwieldy, it is acceptable to request assistance from the PAs. It is not acceptable to delay grossing in specimens. If there are questions about grossing these can be handled by the PAs or the GU pathology attending on service. Taking gross photographs of tumor cases is strongly encouraged. Diagrams of sections are highly encouraged.

There are certain recurrent issues that warrant particular attention in grossing GU specimens. The GU portion of the grossing manual is available in electronic form.

- The lymph node dissections of bladder, ureter and testicular/germ cell tumor the size of grossly positive lymph nodes should be measured.

- Sample testicular tumors well- if feasible err on the side of submitting the entire tumor

- Weigh adrenals

- For nephrectomy specimens, an important and usually undersampled area of tumor involvement is the relationship of the tumor to the renal sinus-- the fat in the hilum of the kidney. Make sure this is well sampled as some small (otherwise T1) tumors get upstaged to T3 if this is involved. Also, palpable the hilar fat for a lymph node-- if you feel something submit it, otherwise put in a section of hilar fat to look for a lymph node.

RECOMMENDED READING:

1. Epstein, JI. et al. The World Health Organization International Society of Urological Pathology Consensus Classification of Urothelial (Transitional Cell) Neoplasms of the Urinary Bladder, American Journal of Surgical Pathology, 1998; 22; 1435-1448.
2. Epstein JI, et al. The 2005 International Society of Urologic Pathology (ISUP) Consensus Conference on Gleason Grading of Prostatic Carcinoma, American Journal of Surgical Pathology, 2005; 29; 1228-1242.
3. Zhou and Magi-Galluzzi. Genitourinary Pathology. 2007; Churchill Livingstone.
4. Epstein JI, Amin MB, Reuter VE. Bladder Biopsy Interpretation. 2002; Lippincott, Williams and Wilkins.
5. Murphy WM. Urologic Pathology, 2nd Edition. 1997; WB Saunders.

GU TUMOR BOARD

The GU tumor board is held weekly at 7:00 AM in the Shands Medical Plaza, Radiation Oncology Conference Room, Rodney Million Room. The Urology department selects cases, many of which will have pathology slides for review. You may be asked to assist in collection material for tumor board conference and you are free to review the cases for conference if you so choose. It is understood that this conference conflicts with the scheduled morning lectures so attendance is difficult if not impossible. However, if there is no conference than attendance is strongly recommended. It is actually one of the better tumor boards.

AGH

During this rotation you may be signing out with a pathologist that is over at AGH. There is no agreed upon solution to this problem at present as resident are paired with another rotation during this month (i.e. GU/ENT) and this makes going back and forth difficult. One reasonable solution is to split the weeks on the rotation to a week of ENT then a week of GU or two preview both services, send the slides over to AGH after preview with the attending at AGH sending the cases back with follow-up comments.

DR. MURPHY

Dr. Murphy is coming to the department two days a week-- typically alternating Mon-Wed and Tues-Thursday and will be available for teaching and reviewing cases. Please try to avail yourself of this resource.

ROTATION ASSESSMENT

Resident evaluation will be done as a consensus opinion of attendings on service. The criteria for evaluation are similar to those of other services.

An end of rotation slide and knowledge evaluation is in development and may be initiated at the end of the rotation. As mentioned, this is in development and will consist of slides and a computer based images and knowledge evaluation.

In addition, there are currently self-directed tutorials with examinations for Gleason grading of prostate carcinoma and bladder biopsies (normal, reactive, papillary lesions, dysplasia, carcinoma in-situ, invasive carcinoma). These are accessible on the website (www.box.net). These have self-assessment modules at the end- Dr. Allan has the answers and will go over these when you are finished. Additional modules are currently in development for adult and pediatric renal tumors.

ACKNOWLEDGEMENT OF RECEIPT:

Print name:

Signature: Date:

GU Attending
Print name:

Signature: Date:

SAMPLE SIGNOUTS:

Prostate biopsies:

A) Prostate, left apex, biopsy: Benign prostatic tissue
B) Prostate, left mid, biopsy: Prostatic adenocarcinoma, Gleason 6 (3+3), involving 20% of 1/1 cores, 3mm, perineural invasion is present

Outside prostates:

A) Prostate, biopsies, Review of outside slides, SP08-675309, 1/12/08

Left apex: Benign prostatic tissue
Left mid: Prostatic adenocarcinoma, Gleason 6 (3+3) involving 10% of multiple fragmented cores, maximal extent 4mm

Bladder:
A) Bladder, TURBT
Invasive high grade urothelial carcinoma
Carcinoma invades lamina propria
Muscularis propria (detrusor muscle) present and negative for carcinoma
Negative for angiolymphatic invasion

For the checklist-- delete the unused elements and keep the pathologic staging criteria

Prostate, robot-assisted radical prostatectomy
Prostatic adenocarcinoma, Gleason score 7 (3+4), tertiary pattern %
Tumor predominantly involves left apex
Maximal tumor nodule diameter measured on one slide: 1.3 cm (slide C3)
Percent of prostate gland involved by tumor 15% (4 /25 tissue blocks contain tumor)
Extraprostatic extension: Present- Focal, specify site: left mid posterior , 4 mm in extent
Margins: Margins uninvolved by invasive carcinoma
Angiolymphatic invasion: Absent
Seminal vesicle invasion: Absent

Pathologic Staging (pTNM) pT3a pN0 pMX
Primary Tumor (pT)pT3a: Extraprostatic extension
Regional Lymph Nodes (pN) pN0: No regional lymph node metastasis (0/4 lymph nodes 0/2 Left, 0/2 right)
Distant Metastasis (pM)pMX: Distant metastasis cannot be assessed

GU PATHOLOGY CANCER CHECKLISTS WITH EXPLANATORY NOTES:
-- For your reference-- these are on computers in the sign out rooms --

Adrenal Checklist cut and paste below line:

Specimen Type:
Subtotal adrenalectomy
Total adrenalectomy
Other (specify):
Not specified

Laterality
Right
Left
Not specified

Tumor Size
Greatest dimension: cm

Tumor Weight
Specify: g

Histologic type
Adrenal cortical adenoma
Adrenal cortical carcinoma
Myelolipoma
Pheochromocytoma

Pathologic Staging

Primary Tumor
I: Confined to gland, 5 cm or less
II: Confined to gland, greater than 5 cm
III: Extraglandular extension without other organ involvement
IV: Distant metastasis or extension into other organs

Regional Lymph Nodes
Cannot be assessed
No regional lymph node metastasis (0/)
Regional lymph node metastasis (/)

Distant Metastasis
Cannot be assessed

Margins
Margins uninvolved by tumor
Margin(s) involved by tumor
Specify margin(s):
Cannot be determined

Venous (Large Vessel) Invasion
Absent
Present
Indeterminate

Additional notes do not cut and paste this:

This checklist is **for resections of the adrenal gland. Neuroblastomas have a separate checklist-- these usually go to the pediatric service.**

Select the above and cut and paste into power path editor.

For each choice delete those that are not used--

This protocol is fairly straight forward and easy to fill out. Remember to weight the tumor as this is important in prognostication.

There is no AJCC TNM for adrenal tumors.

Prognostication:
Adrenal cortical tumors are not usually graded on histologic grounds. Severe nuclear atypia, high mitotic count, vascular invasion, tumor necrosis, and other microscopic features may, in combination, support a diagnosis of adrenal cortical carcinoma over adenoma and should be recorded, but no precise clustering of histologic features is considered diagnostic of malignancy. However, when several malignant features are present together (eg, highly atypical nuclei, sheet-like growth, necrosis, and many mitoses), the risk of distant metastases is increased.[1-4-] In some studies, specific combinations of features, such as mitotic rates of 6 or more per 50 high-power fields (HPF) along with atypical mitosis and venous invasion, have been found to correlate with metastasis or recurrence of adrenal cortical carcinomas.[2] Other studies have shown that mitotic rates greater than 20 per 50 HPF are associated with decreased survival, suggesting that a high mitotic index may be an important adverse prognostic factor.[3]

Although this protocol does not cover medullary tumors, it should be noted that pheochromocytoma is usually diagnosed preoperatively by pharmacologic means. No pathologic criteria for differentiation of benign from malignant pheochromocytomas have been defined. Metastatic disease is considered the only irrefutable proof of malignancy.

References

1. Hough AJ, Hollifield JW, Page DL, Hartmann WH. Prognostic factors in adrenocortical tumors: a mathematical analysis of clinical and morphologic data. *Am J Clin Pathol*. 1979;72:390-399.
2. Weiss LM. Comparative histologic study of 43 metastasizing and non-metastasizing adrenocortical tumors. *Am J Surg Pathol*. 1984;8:163-169.
3. Weiss LM, Medeiros LJ, Vickery AL. Pathologic features of prognostic significance in adrenal cortical carcinoma. *Am J Surg Pathol*. 1989;13:202-206.
4. Medeiros LJ, Weiss LM. New developments in the pathologic diagnosis of adrenal cortical neoplasms: a review. *Am J Clin Pathol*. 1992;97:73-83.

Bladder (Urothelial) cancer TURBT items to mention

For TURBT

Mention tumor type, grade, presence or absence of invasion, presence or absence of invasion into muscularis propria, presence or absence of muscularis propria in biopsy, presence or absence of angiolymphatic invasion

- Muscularis propria (detrusor muscle) is present and is uninvolved

- Carcinoma invades into muscularis propria (detrusor muscle)

- Negative for angiolymphatic invasion

EXAMPLES:

Trigone, TURBT
- High grade papillary urothelial carcinoma
- Negative for invasive carcinoma
- Muscularis propria (detrusor muscle) is present and is uninvolved

Lateral wall, TURBT
- Invasive high grade papillary urothelial carcinoma
- Carcinoma invades into lamina propria
- Muscularis propria (detrusor muscle) is present and is uninvolved
- Negative for angiolymphatic invasion

Bladder Cancer Checklist cut and paste below line:

Specimen Type
Partial cystectomy
Total cystectomy
Radical cystectomy
Radical cystoprostatectomy
Anterior exenteration
Other (specify):

Tumor Site
Trigone
Right lateral wall
Left lateral wall
Anterior wall
Posterior wall
Dome
Other (specify):

Tumor Size
Greatest dimension: cm

MICROSCOPIC
Histologic Type
Urothelial (transitional cell) carcinoma
Urothelial (transitional cell) carcinoma with squamous differentiation
Urothelial (transitional cell) carcinoma with glandular differentiation
Urothelial (transitional cell) carcinoma with variant histology (specify):
Squamous cell carcinoma, typical
Squamous cell carcinoma, variant histology (specify):
Adenocarcinoma, typical
Adenocarcinoma, variant histology (specify):
Small cell carcinoma
Undifferentiated carcinoma (specify):
Mixed cell type (specify):
Other (specify):
Carcinoma, type cannot be determined

Associated Epithelial Lesions
None identified
Urothelial (transitional cell) papilloma (World Health Organization [WHO] / International Society of Urologic Pathology [ISUP], 1998)
Urothelial (transitional cell) papilloma, inverted type
Papillary urothelial (transitional cell) neoplasm, low malignant potential (WHO/ISUP 1998)

Histologic Grade
Not applicable

Urothelial Carcinoma (WHO/ISUP, 1998)
Low-grade
High-grade

Other (specify):

Adenocarcinoma and Squamous Carcinoma
GX: Cannot be assessed
G1: Well differentiated
G2: Moderately differentiated
G3: Poorly differentiated
Other (specify):

Tumor Configuration
Papillary
Solid/nodule
Flat
Ulcerated

Pathologic Staging (pTNM)
Primary Tumor (pT)
pTX: Cannot be assessed
pT0: No evidence of primary tumor

pTa: Noninvasive papillary carcinoma
pTis: Flat carcinoma in situ

pT1: Tumor invades subepithelial connective tissue (lamina propria)

pT2: Tumor invades muscularis propria (detrusor muscle)
pT2a: Tumor invades superficial muscle (inner half)
pT2b: Tumor invades deep muscle

pT3: Tumor invades perivesical tissue
pT3a: Tumor microscopically invades perivesical tissue
pT3b: Tumor macroscopically invades perivesical tissue (extravesicular mass)

pT4: Tumor invades any of the following: prostate, uterus, vagina, pelvic wall, abdominal wall
pT4a: Tumor invades prostate or uterus or vagina
pT4b: Tumor invades pelvic wall or abdominal wall

Regional Lymph Nodes (pN)
pNX: Cannot be assessed
pN0: No regional lymph node metastasis (0/)
pN1: Metastasis in a single regional lymph node, 2 cm or less in greatest dimension
pN2: Metastasis in a single regional lymph node, more than 2 cm but not more than 5 cm in greatest dimension, or multiple lymph nodes, none more than 5 cm in greatest dimension (+ /)
pN3: Metastasis in a regional lymph node more than 5 cm in greatest dimension (+ /)

Distant Metastasis (pM)
pMX: Cannot be assessed

Margins
Margins uninvolved by invasive carcinoma
Distance of invasive carcinoma from closest margin: mm
Specify margin:
Margins involved by invasive carcinoma
Specify margin:
Margins uninvolved by carcinoma in situ
Margins involved by carcinoma in situ

Specify margin:

Venous/Lymphatic (Large/Small Vessel) Invasion (V/L)
Absent
Present
Indeterminate

Direct Extension of Invasive Tumor
None identified
Perivesical fat
Rectum
Prostatic stroma
Seminal vesicle (specify laterality):
Vagina
Uterus and adnexae
Pelvic sidewall (specify laterality):
Ureter (specify laterality):
Other (specify):

Additional notes do not cut and paste this:

This checklist is for bladder tumors, if it is a urothelial carcinoma in the renal pelvis or a resection only of the ureter there is a separate checklist!!

Select the above and cut and paste into power path editor.

Cut and paste the appropriate procedure, tumor site, size and type of tumor

If appropriate select an associated epithelial lesion (for example papillary tumor), if there is none just select none identified.

The grading of the tumor depends on the type-- most are urothelial but the rarer adenocarcinomas and squamous cells use a different grading scheme.

For the staging select the most appropriate choice. Please leave in the full staging designation so it is apparent why it was staged as it was. So instead of saying pT3a only write "pT3a: Tumor microscopically invades perivesical tissue". This helps reinforce staging criteria, obviates the need to grab the staging book and helps clarify issues at tumor board conferences.

For the pT3 and pT4 categories there are sub-choices under each major heading- select the most appropriate one. The designation of microscopic vs. macroscopic for pT3 lesions is based on gross examination. If on gross one could see the tumor growing into perivesicular tissue it is a pT3b, if it is only evident on microscopic slides it is pT3a.

If there are grossly positive lymph nodes measure them, this is part of the staging criteria!

If there is prior radiation or chemotherapy the tumor is staged according to what you have and this is indicated by placing a "y" prefix ahead of the pathologic stage. For example, ypT3 pN0 pMx. If there is no tumor left then the stage is ypT0.

For each choice delete those that are not used--

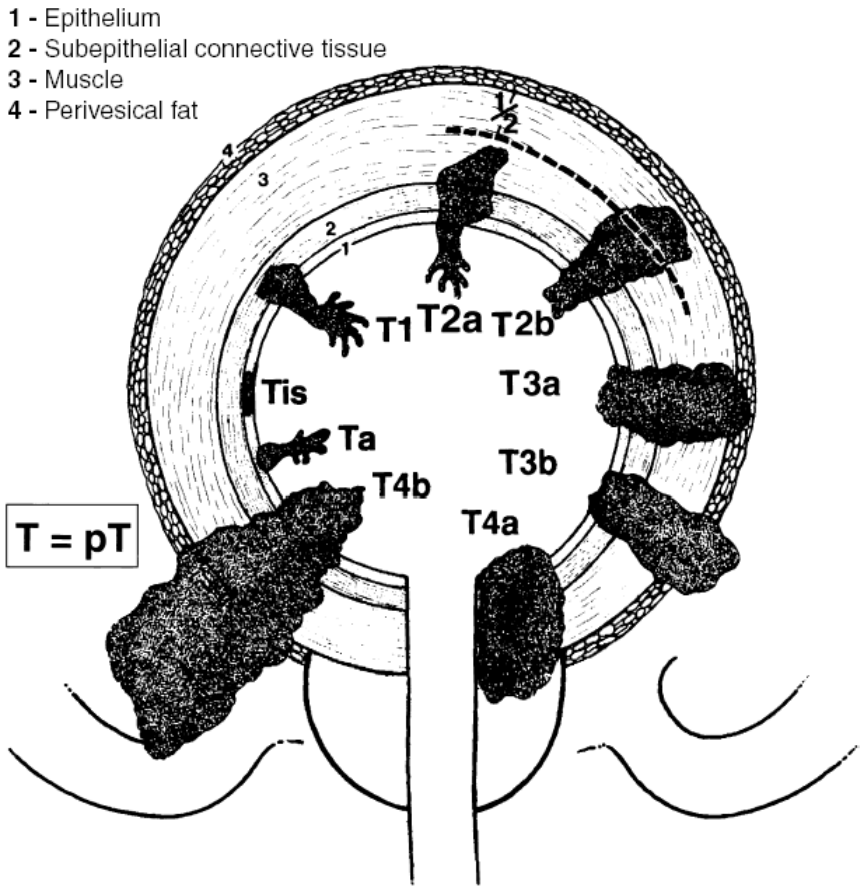

FIG. 38.1. Extent of primary bladder cancer.

Kidney Cancer Checklist cut and paste below line:

Specimen Type
Right partial nephrectomy
Left partial nephrectomy

Right radical nephrectomy
Left radical nephrectomy

Tumor Site
Upper pole
Middle
Lower pole
Not specified

Focality
Unifocal
Multifocal

Tumor Size
Greatest dimension: cm

Macroscopic Extent of Tumor
Tumor limited to kidney
Tumor extension into perinephric tissues
Tumor extension beyond Gerota's fascia
Tumor extension into adrenal
Tumor extension into major veins

Histologic Type
Clear cell (conventional) renal carcinoma
Papillary renal cell carcinoma
Chromophobe renal cell carcinoma
Collecting duct carcinoma
Sarcomatoid carcinoma arising in renal cell carcinoma
Specify: subtype ; % of sarcomatoid element
Renal cell carcinoma, unclassified
Other (specify):

Histologic Grade (Fuhrman Nuclear Grade)
Not applicable
G1: Nuclei round, uniform, approximately 10 µ; nucleoli inconspicuous or absent
G2: Nuclei slightly irregular, approximately 15 µ; nucleoli evident
G3: Nuclei very irregular, approximately 20 µ; nucleoli large and prominent
G4: Nuclei bizarre and multilobated, 20 µ or greater, nucleoli prominent, chromatin clumped

Pathologic Staging (pTNM)
Primary Tumor (pT)
pT0: No evidence of primary tumor
pT1: Tumor 7 cm or less in greatest dimension, limited to the kidney
pT1a: Tumor 4 cm or less in greatest dimension, limited to the kidney
pT1b: Tumor more than 4 cm but not more than 7 cm in greatest dimension, limited to the kidney
pT2: Tumor more than 7 cm in greatest dimension, limited to the kidney

pT3: Tumor extends into major veins or invades adrenal gland or perinephric tissues but not beyond Gerota's fascia
pT3a: Tumor directly invades adrenal gland or perirenal and/or renal sinus fat but not beyond Gerota's fascia
pT3b: Tumor grossly extends into the renal vein or its segmental (muscle-containing) branches, or vena cava below the diaphragm
pT3c: Tumor grossly extends into vena cava above diaphragm or invades the wall of the vena cava
pT4: Tumor invades beyond Gerota's fascia

Regional Lymph Nodes (pN)
pNX: Cannot be assessed
pN0: No regional lymph node metastasis (0/)
pN1: Metastasis in a single regional lymph node (1/)
pN2: Metastasis in more than 1 regional lymph node (+ /)

Distant Metastasis (pM)
pMX: Cannot be assessed

Margins
Cannot be assessed
Margins uninvolved by invasive carcinoma

Margin involved by invasive carcinoma
Renal capsular margin (partial nephrectomy only)
Perinephric fat margin (partial nephrectomy only)
Renal vein margin
Gerota's fascial margin
Ureteral margin
Renal parenchymal margin (partial nephrectomy only)
Other (specify):

Partial nephrectomy: Distance of carcinoma to parenchymal margin: mm

Adrenal Gland
Not present
Uninvolved by tumor
Direct invasion (T3a)
Metastasis (M1)

Venous (Large Vessel) Invasion (V) (excluding renal vein and inferior vena cava)
Absent
Present
Indeterminate

Lymphatic (Small Vessel) Invasion (L)
Absent
Present
Indeterminate

Additional notes do not cut and paste this:

Select the above and cut and paste into power path editor.

Cut and paste the appropriate specimen site, right or left, partial or radical

For each choice delete those that are not used--

Select a tumor site-- if it is not clear from the gross- check radiology or else just put not specified

If there are multiple tumors measure the largest tumor, make sure that you are not dealing with multilobulated single tumors-- for size discrepancies check the radiology reports

For the extent of tumor include all that apply, there may be more than one.

For staging it is important to not forget about the renal sinus fat. Take multiple sections showing the relationship of the tumor to the renal sinus. If microscopically tumor cells are seen touching adipose tissue without a fibrous capsule there is renal sinus invasion and it is a T3 lesion.

For lymph nodes, there may be a single lymph node that is in the hilum of the kidney. Palpate for a lymph node and if found submit it. If not submit a section of hilar adipose tissue, there may or may not be a lymph node in there.

The remainder should be self-explanatory, delete the choices that are not used.

Prostate cancer checklist, cut and paste below line:

Prostate, radical prostatectomy
Prostate, robot-assisted radical prostatectomy

Prostatic adenocarcinoma
Gleason score (+), tertiary pattern %
Tumor predominantly involves
Maximal tumor nodule diameter measured on one slide: cm
Percent of prostate gland involved by tumor % (/ tissue blocks contain tumor)

Extraprostatic extension
Absent
Present- Focal, specify site, mm
Present- Established, specific site:

Margins
Benign glands at surgical margin

Margins uninvolved by invasive carcinoma

Margin focally involved by invasive carcinoma, location:
Margin involved by invasive carcinoma:
Apical
Bladder neck
Anterior
Lateral
Postero-lateral (neurovascular bundle)
Posterior
Other(s) (specify):

Angiolymphatic invasion
Absent
Present
Indeterminate

Seminal vesicle invasion
Absent
Present
Indeterminate

Pathologic Staging (pTNM)
Primary Tumor (pT)
pT2a: Organ confined, Unilateral, involving one-half of 1 lobe or less
pT2b: Organ confined, Unilateral, involving more than one-half of 1 lobe
pT2c: Organ confined, Bilateral disease
pT3: Extraprostatic extension
pT3a: Extraprostatic extension
pT3b: Seminal vesicle invasion
pT4: Invasion of bladder and/or rectum
Regional Lymph Nodes (pN)
pNX: Cannot be assessed
pN0: No regional lymph node metastasis (0/ lymph nodes examined)
pN1: Metastasis in regional lymph node or nodes (+ / lymph nodes)

Distant Metastasis (pM)
pMX: Distant metastasis cannot be assessed

Additional notes do not cut and paste this:

Select the above and cut and paste into power path editor.

Cut and paste the appropriate procedure-- radical or robot-assisted

For each choice delete those that are not used--

It is assumed that it is conventional adenocarcinoma and not a variant such as ductal or small cell or adenoid cystic. If the tumor has interesting additional features (i.e. foamy gland etc. feel free to include it here).

Fill in the appropriate Gleason score-- the common 3+3 is filled in already, if there is a higher grade tertiary pattern include and estimate the percentage of that pattern (i.e. tertiary pattern 5, 5%). If there is prior hormonal therapy these are not Gleason graded- include a note stating this.

Measure the largest cross section of tumor diameter on a slide-- I realized this is imperfect but the urologists wanted a tumor nodule size

Fill in a rough estimate of the volume of tumor-- 15% (5/ 25 blocks contain tumor). The percentage should be based on the overall estimate and not be derived from the block count on its own.

For extraprostatic extension mention if it is focal (give a size estimate) or "established" and give a general description of where it is positive.

For margins mention is benign glands are at ink. If carcinoma is at ink and list all the positive sites, preferably with slide designation (i.e. slide A11, A12) and use either the focal positive if there is a small focus or the generic positive margin if more than focal.

If the margin is more than focally positive, it may be appropriate to stage the tumor pathologically with an x modifier to designated that it is unknown. For example, the tumor is "organ confined" but extends to a margin more than focally and thus in this location if cannot be determined if there is or is not extraprostatic extenstion. The stage using this example would be pT2**x**. This can additionally be designated with an R1 descriptor for microscopic residual disease following definitive surgery (for example: pT2**x** pN0 pMx **R1**).

For the pathologic staging- I think it is helpful to include the words describing why the stage is what it is. This is educational for the residents and means that you do not have to look it up in the AJCC book- this also helps at tumor board where sometimes there is a "discussion" regarding what the appropriate stage is.

Testes (orchiectomy) Checklist cut and paste below line:

Specimen
Right orchiectomy
Left orchiectomy
Bilateral orchiectomy

Focality of tumor
Unifocal
Multifocal

Tumor Size
Greatest dimension of main tumor mass: cm
Greatest dimensions of additional tumor nodules: cm, cm, etc

Histologic Type
Intratubular germ cell neoplasm, only
Seminoma, classic type
Seminoma with syncytiotrophoblastic cells
Mixed germ cell tumor (specify components and percentages):

Embryonal carcinoma
Yolk sac tumor
Choriocarcinoma, biphasic
Choriocarcinoma, monophasic
Placental site trophoblastic tumor
Mature teratoma
Immature teratoma
Teratoma with a secondary malignant component
(specify type):
Monodermal teratoma, carcinoid
Monodermal teratoma, primitive neuroectodermal tumor
Monodermal teratoma, other (specify):
Polyembryoma
Diffuse embryoma
Spermatocytic seminoma
Spermatocytic seminoma with a sarcomatous component
Testicular scar
Mixed germ cell-sex cord-stromal tumor, gonadoblastoma
Mixed germ cell-sex cord-stromal tumor, others
(specify):

Pathologic Staging (pTNM)

Primary Tumor (pT)
pTX: Cannot be assessed
pT0: No evidence of primary tumor
pTis: Intratubular germ cell neoplasia only (carcinoma in situ)
pT1: Tumor limited to the testis and epididymis without vascular/lymphatic invasion (tumor may invade tunica albuginea but not tunica vaginalis)
pT2: Tumor limited to the testis and epididymis with vascular/lymphatic invasion or tumor extending through tunica albuginea with involvement of tunica vaginalis
pT3: Tumor invades spermatic cord with or without vascular/lymphatic invasion
pT4: Tumor invades scrotum with or without vascular/lymphatic invasion

Regional Lymph Nodes (pN)
pNX: Cannot be assessed
pN0: No regional lymph node metastasis (0/)
pN1: Metastasis with a lymph node mass less than 2 cm in greatest dimension and 5 or fewer positive nodes, none more than 2 cm in greatest dimension (/)
pN2: Metastasis with a lymph node mass greater than 2 cm but not more than 5 cm in greatest dimension, or more than 5 nodes positive, none greater than 5 cm; or evidence of extranodal extension of tumor (/)
pN3: Metastasis with a lymph node mass greater than 5 cm in greatest dimension (/)

Distant Metastasis (pM)
pMX: Cannot be assessed

Margins
Spermatic Cord Margin
Cannot be assessed
Uninvolved by tumor
Involved by tumor

Other Margin(s)
Cannot be assessed
Uninvolved by tumor (specify):
Involved by tumor (specify):

Direct Extension of Invasive Tumor
Rete testis
Epididymis
Peri-hilar fat
Spermatic cord
Tunica vaginalis
Scrotal wall
None identified

Venous/Lymphatic (Large/Small Vessel) Invasion (V/L)
Absent
Present
Indeterminate

Additional Pathologic Findings
None identified
Intratubular germ cell neoplasia
Other:

Serum Tumor Markers (S)
SX: Serum marker studies not available or performed
S0: Serum marker study levels within normal limits
LDH: Reference range (135-225) U/L
HCG: Reference range (<2) mIU/mL
AFP: Reference range (0.0-8.7) ng/mL
Serum tumor marker stage:

Use this table below to calculate S stage, and then delete this table

	LDH		HCG (mIU/mL)		AFP (ng/mL)		
S1:	<1.5 x nl		and	<5,000	and	<1,000	
S2:	1.5-10 x nl		or	5,000-50,000	or	1,000-10,000	
S3:	>10 x nl	or	>50,000		or	>10,000	

Additional notes do not cut and paste this:

This checklist is for orchiectomies which are relatively uncommon but important to understand.

Select the above and cut and paste into power path editor.

Measure the largest tumor mass, and if multiple measure satellite masses, sample different masses histologically and any areas that grossly look different within the tumor. Sample liberally. If there is a minor component of a more aggressive germ cell tumor it will be very important to identify. The 3-4 extra blocks may be very important.

Cut and paste the appropriate procedure, tumor site, size and type of tumor

Stage the tumor and leave the explanatory notes in the staging in the report. This is educational and helps to clarify why a tumor was staged the way it was and makes it easier to present at tumor board conferences.

For the lymph nodes put the number involved/ positive after the staging criteria. We often do not get node dissections with the orchiectomy specimen. Notice that like other GU sites the size of involved lymph nodes is important so if there is a grossly positive node, measure it!

For metastases stage them as pMX even if clinically they say he has lung mets or brain mets. etc. Only if we have a biopsy of these mets should if be staged as an M1.

Including the serum marker studies may seem obsessive compulsive but important and it reinforces the important concept that these are helpful in diagnosis and monitoring of therapy. If the values warrant an S3 pathologic stage this clinically upstages patients so it is important. This is a laboratory value and should be included in the pathology report the same way we include ER and PR or cytogenetics findings in hematopathology reports. Look these up and include the values in the report-- the reference ranges are included next to them. Using this information, using the red table to calculate the S stage and include in the report and delete the table afterwards. A point worth emphasizing is that if there is a very high AFP and no evidence of a yolk sac component, or very high HCG and no evidence of a choriocarcinoma it is prudent to go back to the bucket and put more tissue in for sections. You may want to be proactive and check the serum levels prior to grossing in the orchiectomy-- if either of these is elevated put through more tissue of the tumor. In my experience, this will save trips back to the bucket. The author (RWA) almost always entirely submitted testicular tumors.

If there is prior radiation or chemotherapy the tumor is staged according to what you have and this is indicated by placing a "y" prefix ahead of the pathologic stage. For example, ypT3 pN0 pMx. If there is no tumor left then the stage is ypT0.

For each choice delete those that are not used--

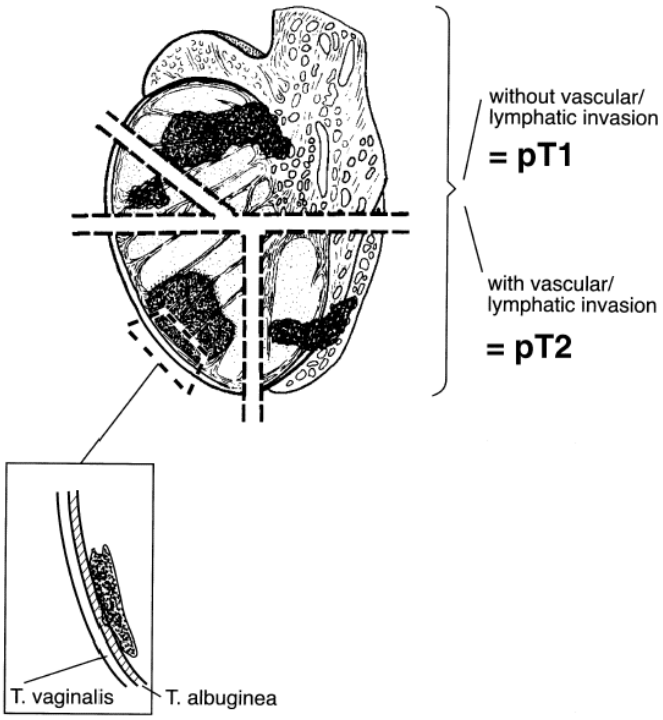

FIG. 35.1. Illustration of pT1 and pT2 showing tumor without and with vascular/lymphatic invasion.

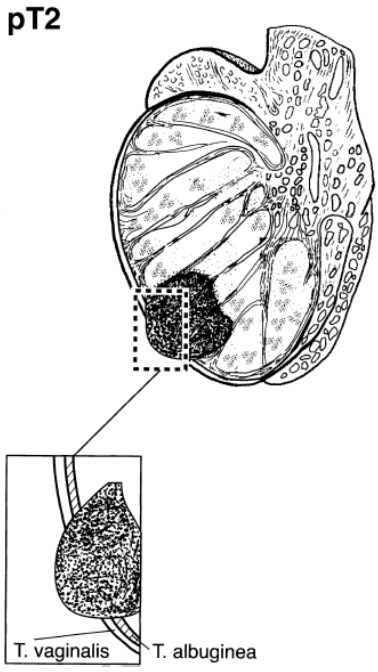

FIG. 35.2. pT2 Tumor extending through the tunica albuginea with involvement of the tunica vaginalis.

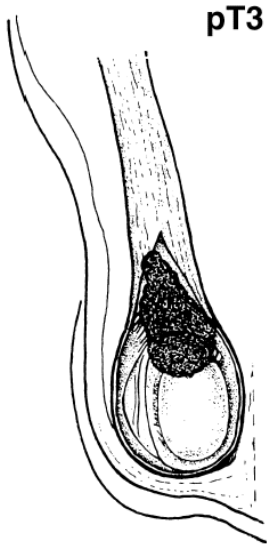

FIG. 35.3. pT3 Tumor invades the spermatic cord.

Retroperitoneal lymphadenectomy Checklist cut and paste below line:

Specimen Sites
Specify:

Size of Largest Metastasis
Not applicable
Greatest dimension: cm

Viability of Tumor
Viable tumor present
Non viable tumor present
No tumor present

Histologic Type of Metastatic Tumor
Seminoma, classic type
Seminoma with syncytiotrophoblastic cells
Mixed germ cell tumor (specify components and percentages):

Embryonal carcinoma
Yolk sac tumor
Choriocarcinoma, biphasic
Choriocarcinoma, monophasic
Placental site trophoblastic tumor
Mature teratoma
Immature teratoma
Teratoma with a secondary malignant component
(specify type):
Monodermal teratoma, carcinoid
Monodermal teratoma, primitive neuroectodermal tumor
Polyembryoma
Diffuse embryoma
Spermatocytic seminoma
Spermatocytic seminoma with a sarcomatous component
Other (specify):
Malignant neoplasm, type cannot be determined

Regional Lymph Nodes (pN)
pNX: Cannot be assessed
pN0: No regional lymph node metastasis (/)
pN1: Metastasis with a lymph node mass less than 2 cm in greatest dimension and 5 or fewer positive nodes, none greater than 2 cm in greatest dimension (/)
pN2: Metastasis with a lymph node mass greater than 2 cm but no more than 5 cm in greatest dimension, or more than 5 nodes positive, none greater than 5 cm; or evidence of extranodal extension of tumor (/)
pN3: Metastasis in a lymph node greater than 5 cm in greatest dimension (/)

Nonregional Lymph Node Metastasis (M1a)
Not applicable
Absent
Present

Prelymphadenectomy Treatment
Chemo/radiation therapy
No chemo/radiation therapy
Unknown

Serum Tumor Markers
Unknown
Serum marker studies within normal limits
Alpha-fetoprotein (AFP) elevation: U/L (Reference (135-225) U/L)
Beta subunit of HCG (b-hCG) elevation: mIU/ml (Reference (<2) mIU/mL)
Lactate dehydrogenase (LDH) elevation: U/L (Reference (135-225) U/L)

Additional notes do not cut and paste this:

Select the above and cut and paste into power path editor.

This checklist is for **retroperitoneal lymph node dissections**. These often occur after orchiectomies and after treatment so be sure to use the y staging prefix (see below). Not infrequently the orchiectomy is done outside and we do not know other than by report what the tumor is.

For specimen site, just list whatever they call the specimen.

For histologic type of tumor list what you have and if mixtures are present then list the various percentages of the different components. Often after treatment these contain mature teratomatous elements that presumably represent differentiated tumor- report these as listed above.

Notice that positive nodes need measurements! Remember to do this when grossing.

We do not usually get non-regional lymph node dissections with these.

If there is prior chemo/radiation use the y prefix for staging. The "y" prefix indicates those cases in which classification is performed during or following initial multimodality therapy (ie, neoadjuvant chemotherapy, radiation therapy, or both chemotherapy and radiation therapy). The pTNM category is identified by a "y" prefix. The ypTNM categorizes the extent of tumor **actually present at the time of that examination**. The "y" categorization is NOT an estimate of tumor prior to multimodality therapy (ie, before initiation of neoadjuvant therapy). If there is no tumor the pathologic stage is ypT0.

For each choice delete those that are not used--

Renal pelvis Checklist cut and paste below line:

Specimen Type
Left nephroureterectomy, partial
Left nephroureterectomy, complete

Right nephroureterectomy, partial
Right nephroureterectomy, complete

Tumor Size
Greatest dimension: cm

Histologic Type
 Urothelial (transitional cell) carcinoma
 Urothelial (transitional cell) carcinoma with squamous differentiation
 Urothelial (transitional cell) carcinoma with glandular differentiation
 Urothelial (transitional cell) carcinoma with variant histology
(specify):
 Squamous cell carcinoma, typical
 Squamous cell carcinoma, variant histology
(specify):
 Adenocarcinoma, typical
 Adenocarcinoma, variant histology (specify):
 Small cell carcinoma
 Undifferentiated carcinoma (specify):
 Mixed cell type (specify):
 Other (specify):
 Carcinoma, type cannot be determined

Associated Epithelial Lesions
 None identified
 Urothelial (transitional cell) papilloma (World Health Organization [WHO] / International Society
of Urologic Pathology [ISUP], 1998)
 Urothelial (transitional cell) papilloma, inverted type
 Papillary urothelial (transitional cell) neoplasm, low malignant potential
(WHO/ISUP 1998)
 Cannot be determined

Histologic Grade
 Not applicable

Urothelial Carcinoma (WHO/ISUP, 1998)
 Low-grade
 High-grade
 Other (specify):

Adenocarcinoma and Squamous Carcinoma
 GX: Cannot be assessed
 G1: Well differentiated
 G2: Moderately differentiated
 G3: Poorly differentiated
 Other (specify):

Pathologic Staging (pTNM)

Primary Tumor (pT)
pTX: Cannot be assessed
pT0: No evidence of primary tumor
pTa: Papillary noninvasive carcinoma
pTis: Flat carcinoma in situ
pT1: Tumor invades subepithelial connective tissue (lamina propria)
pT2: Tumor invades muscularis
pT3: Tumor invades beyond muscularis into peripelvic fat or the renal parenchyma
pT4: Tumor invades adjacent organs, or through the kidney into the perinephric fat

Regional Lymph Nodes (pN)
pNX: Cannot be assessed
pN0: No regional lymph node metastasis (0/)
pN1: Metastasis in a single regional lymph node, 2 cm or less in greatest dimension (+1/)
pN2: Metastasis in a single regional lymph node, more than 2 cm but not more than 5 cm in greatest dimension, or multiple lymph nodes, none more than 5 cm in greatest dimension (+ /)
pN3: Metastasis in a regional lymph node more than 5 cm in greatest dimension

Distant Metastasis (pM)
pMX: Cannot be assessed

Tumor Configuration
Papillary
Solid/nodule
Flat
Ulcerated
Indeterminate

Margins
Margins uninvolved by invasive carcinoma
Distance of invasive carcinoma from closest margin: mm

Specify margin:
Margin(s) involved by invasive carcinoma
Specify margin(s):
Margin(s) uninvolved by carcinoma in situ
Margin(s) involved by carcinoma in situ
Specify margin(s):

Venous/Lymphatic (Large/Small Vessel) Invasion (V/L)
Absent
Present
Indeterminate

Additional notes do not cut and paste this:

This checklist is for tumor that arise in the renal pelvis, typically urothelial carcinomas. Do not use the kidney checklist use this one. There is a separate checklist for bladder and pure ureter resections.

Select the above and cut and paste into power path editor.

Cut and paste the appropriate procedure, tumor site, size and type of tumor

If appropriate select an associated epithelial lesion (for example papillary tumor), if there is none just select

none identified.

The grading of the tumor depends on the type-- most are urothelial but the rarer adenocarcinomas and squamous cells use a different grading scheme.

Measure grossly positive lymph nodes, this is used for staging.

For the lymph node include the number examined and number positive after the stage information.

For example, pN1: Metastasis in a single regional lymph node, 2 cm or less in greatest dimension (+1/5)

Please leave the full staging description in the sign out. This way it is clear why it was staged the way it was, what the staging criteria are and it is useful for tumor boards.

If there is prior radiation or chemotherapy the tumor is staged according to what you have and this is indicated by placing a "y" prefix ahead of the pathologic stage. For example, ypT3 pN0 pMx. If there is no tumor left then the stage is ypT0.

For each choice delete those that are not used--

Penile Cancer Checklist cut and paste below line:

Specimen Type
Partial penectomy
Other (specify):

Tumor Site
Glans
Other:

Tumor Size
Greatest dimension: cm

MICROSCOPIC
Histologic Type
Squamous cell carcinoma in-situ/ Bowen's disease
Squamous cell carcinoma, NOS
Squamous cell carcinoma, verrucous
Adenocarcinoma, NOS
Other:

Histologic Grade
G1 Well differentiated
G2 Moderately differentiated
G3-4 Poorly differentiated or undifferentiated

Tumor Configuration
Papillary
Solid/nodule
Ulcerated

Pathologic Staging (pTNM)
Primary Tumor (pT)
pTX: Cannot be assessed
pT0: No evidence of primary tumor
pTis: Carcinoma in-situ
pTa: Non-invasive verrucous carcinoma
pT1: Tumor invades subepithelial connective tissue
pT2: Tumor invades corpus spongiosum or cavernosum
pT3: Tumor invades urethra or prostate
pT4: Tumor invades adjacent structures

Regional Lymph Nodes (pN)
pNX: Cannot be assessed
pN0: No regional lymph node metastasis (0/)
pN1: Metastasis in a single superficial inguinal lymph node (+1/)
pN2: Metastasis in a multiple or bilateral superficial inguinal lymph nodes (+ /)
pN3: Metastasis in a deep inguinal or pelvic lymph nodes unilateral or bilateral (+ /)

Distant Metastasis (pM)
pMX: Cannot be assessed

Margins
Margins uninvolved by invasive carcinoma

Distance of invasive carcinoma from closest margin: mm
Specify margin:
Margins involved by invasive carcinoma
Specify margin:
Margins uninvolved by carcinoma in situ
Margins involved by carcinoma in situ
Specify margin:

Venous/Lymphatic (Large/Small Vessel) Invasion (V/L)
Absent
Present
Indeterminate

Direct Extension of Invasive Tumor
None identified
Subepithelial connective tissue
Corpus spongiosum
Corpus cavernosum
Urethra
Other:

Additional notes do not cut and paste this:

This checklist is for penile tumors.

Select the above and cut and paste into power path editor.

Cut and paste the appropriate procedure, tumor site, size and type of tumor

For each choice delete those that are not used--

If there is prior radiation or chemotherapy the tumor is staged according to what you have and this is indicated by placing a "y" prefix ahead of the pathologic stage. For example, ypT3 pN0 pMx. If there is no tumor left then the stage is ypT0.

Diagrams of the different pathologic stages are shown below.

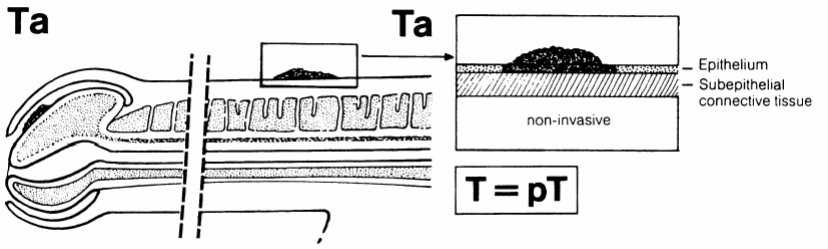

FIG. 33.1. Ta: Non-invasive verrucous carcinoma.

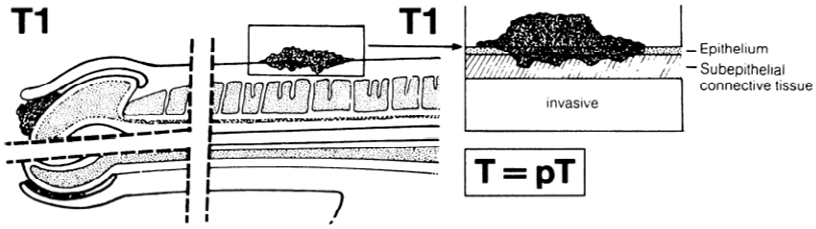

FIG. 33.2. T1: Tumor invading subepithelial connective tissue.

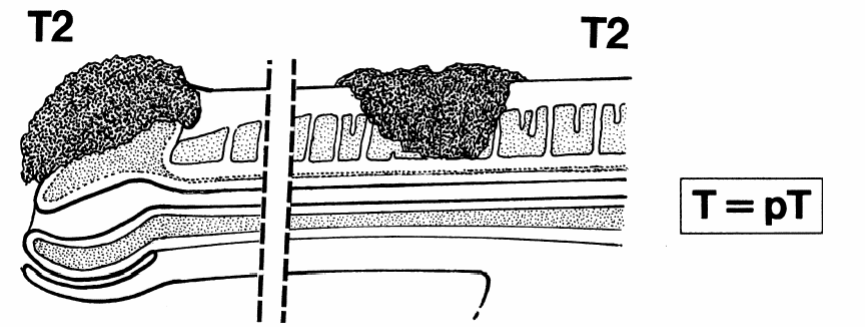

FIG. 33.3. T2: Tumor invading corpus spongiosum or cavernosum.

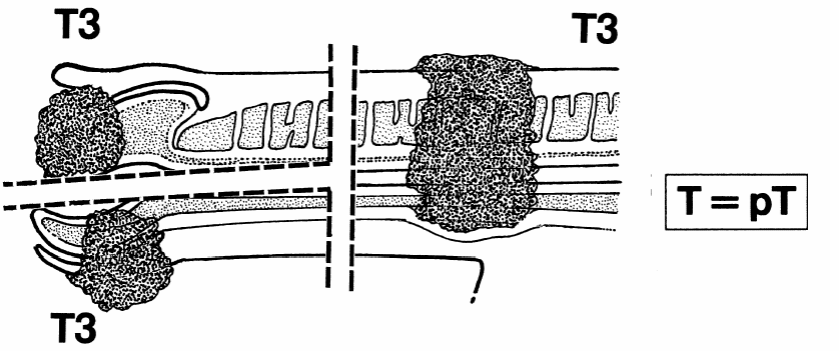

FIG. 33.4. T3: Tumor invading urethra or prostate.

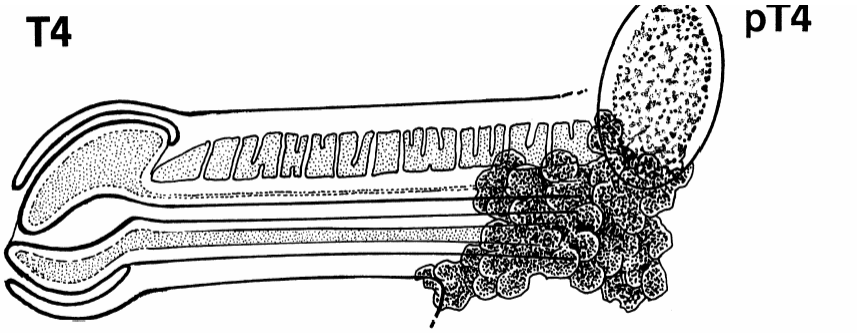

FIG. 33.5. T4: Tumor invading other adjacent structures.

Ureter resection Checklist cut and paste below line:

Specimen Type
Left ureterectomy
Left nephroureterectomy
Right ureterectomy
Right nephroureterectomy

Tumor Size
Greatest dimension:

Histologic Type
Urothelial (transitional cell) carcinoma
Urothelial (transitional cell) carcinoma with squamous differentiation:
Urothelial (transitional cell) carcinoma with glandular differentiation
Urothelial (transitional cell) carcinoma with variant histology (specify):
Squamous cell carcinoma, typical
Squamous cell carcinoma, variant histology (specify):
Adenocarcinoma, typical
Adenocarcinoma, variant histology (specify):
Small cell carcinoma
Undifferentiated carcinoma (specify):
Mixed cell type (specify):
Other (specify):
Carcinoma, type cannot be determined

Associated Epithelial Lesions
None identified
Urothelial (transitional cell) papilloma (World Health Organization [WHO] / International Society of Urologic Pathology [ISUP], 1998)
Urothelial (transitional cell) papilloma, inverted type
Papillary urothelial (transitional cell) neoplasm, low malignant potential (WHO/ISUP 1998)
Cannot be determined

Histologic Grade
Not applicable
Cannot be determined

Urothelial Carcinoma (WHO/ISUP, 1998)
Low-grade
High-grade

Adenocarcinoma and Squamous Carcinoma
GX: Cannot be assessed
G1: Well differentiated
G2: Moderately differentiated
G3: Poorly differentiated
Other (specify):

Pathologic Staging (pTNM)

Primary Tumor (pT)
pTX: Cannot be assessed
pT0: No evidence of primary tumor
pTa: Papillary noninvasive carcinoma
pTis: Carcinoma in situ
pT1: Tumor invades subepithelial connective tissue (lamina propria)
pT2: Tumor invades the muscularis
pT3: Tumor invades beyond muscularis into periureteric fat
pT4: Tumor invades adjacent organs

Regional Lymph Nodes (pN)
pNX: Cannot be assessed
pN0: No regional lymph node metastasis (0/)
pN1: Metastasis in a single regional lymph node, 2 cm or less in greatest dimension (+1/)
pN2: Metastasis in a single regional lymph node, more than 2 cm but not more than 5 cm in greatest dimension, or multiple lymph nodes, none more than 5 cm in greatest dimension (+ /)
pN3: Metastasis in a regional lymph node more than 5 cm in greatest dimension (+ /)

Distant Metastasis (pM)
pMX: Cannot be assessed

Tumor Configuration
Papillary
Solid/nodule
Ulcerated
Flat
Indeterminate
Other (specify):

Margins
Margins uninvolved by invasive carcinoma
Distance of invasive carcinoma from closest margin: mm
Specify margin(s):
Margin(s) involved by invasive carcinoma
Specify margin(s):
Margins(s) involved by carcinoma in situ
Margin(s) uninvolved by carcinoma in situ
Other(s) (specify):

Venous/Lymphatic (Large/Small Vessel) Invasion (V/L)
Absent
Present
Indeterminate

Additional notes do not cut and paste this:

This checklist is **for resections of the ureter only** which are rather uncommon. In fact, **if you are considering using this checklist you are more likely than not using the wrong checklist**.

Select the above and cut and paste into power path editor.

Cut and paste the appropriate procedure, tumor site, size and type of tumor

If appropriate select an associated epithelial lesion (for example papillary tumor), if there is none just select none identified.

The grading of the tumor depends on the type-- most are urothelial but the rarer adenocarcinomas and squamous cells use a different grading scheme.

For the lymph node include the number examined and number positive after the stage information. Remember to measure the size of grossly positive lymph nodes.

For example, pN1: Metastasis in a single regional lymph node, 2 cm or less in greatest dimension (+1/5)

Please leave the full staging description in the sign out. This way it is clear why it was staged the way it was, what the staging criteria are and it is useful for tumor boards.

If there is prior radiation or chemotherapy the tumor is staged according to what you have and this is indicated by placing a "y" prefix ahead of the pathologic stage. For example, ypT3 pN0 pMx. If there is no tumor left then the stage is ypT0.

For each choice delete those that are not used--

Urethra urothelial cancer Checklist cut and paste below line:

Specimen Type
Specify:

Tumor Site
Specify:

Tumor Size
Greatest dimension: cm

Histologic Type
Urothelial (transitional cell) carcinoma
Squamous cell carcinoma, NOS
Other:

Histologic Grade
G1 Well differentiated
G2 Moderately differentiated
G3-4 Poorly differentiated or undifferentiated

Pathologic Staging (pTNM)
Primary Tumor (pT) (male or female)
pTX: Cannot be assessed
pT0: No evidence of primary tumor
pTis: Carcinoma in-situ
pTa: Non-invasive papillary, polypoid or verrucous carcinoma
pT1: Tumor invades subepithelial connective tissue
pT2: Tumor invades any of the following: corpus spongiosum, prostate or periurethral muscle
pT3: Tumor invades any of the following: corpus cavernosum, beyond prostatic capsule, anterior vagina, bladder neck
pT4: Tumor invades other adjacent organs

Urothelial (transitional cell carcinoma) of the prostate
Primary tumor (pT)
pTis (pu): Carcinoma in-situ, involvement of prostatic urethra
pTis (pd): Carcinoma in-situ involvement of the prostatic ducts
pT1: Tumor invades supepithelial connective tissue
pT2: Tumor invades any of the following: prostatic stroma, corpus spongiosum, periurethral muscle
pT3: Tumor invades any of the following: corpus cavernosum, beyond prostatic capsule, bladder neck (extraprostatic extenstion)
pT4: Tumor invades adjacent organs (invasion of the bladder)
Regional Lymph Nodes (pN)
pNX: Cannot be assessed
pN0: No regional lymph node metastasis (0/)
pN1: Metastasis in a single lymph node 2cm or less in greatest dimension (+1/)
pN2: Metastasis in a single lymph node more than 2cm or multiple nodes (+ /)

Distant Metastasis (pM)
pMX: Cannot be assessed

Margins
Margins uninvolved by invasive carcinoma
Distance of invasive carcinoma from closest margin: mm

Specify margin:
Margins involved by invasive carcinoma
Specify margin:
Margins uninvolved by carcinoma in situ
Margins involved by carcinoma in situ
Specify margin:

Venous/Lymphatic (Large/Small Vessel) Invasion (V/L)
Absent
Present
Indeterminate

Direct Extension of Invasive Tumor
None identified
Subepithelial connective tissue
Corpus spongiosum
Corpus cavernosum
Prostatic stroma
Periurethral muscle
Bladder neck

Additional notes do not cut and paste this:

This checklist is for urethra tumors. These are very unusual. This includes women and men.

Note if there is a urothelial carcinoma of the prostatic urethra this gets its own pT staging.

Select the above and cut and paste into power path editor.

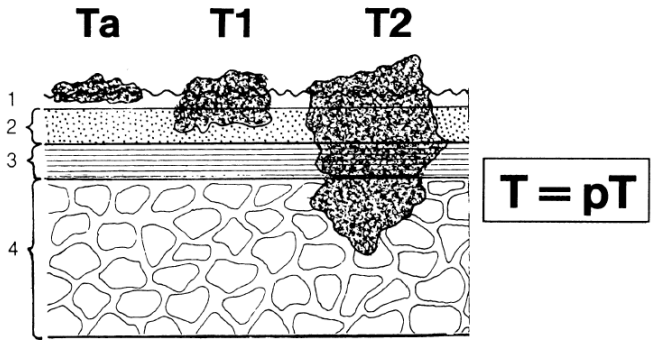

FIG. 39.1. Definition of Primary Tumor (T). 1–epithelium, 2–subepithelial connective tissue, 3–urethral muscle, 4–urogenital diaphragm.

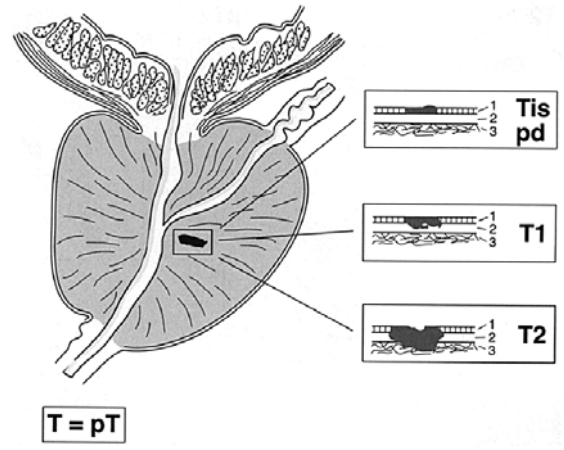

FIG. 39.2. Definition of Primary Tumor (T) for urothelial (transitional cell) carcinoma of the prostate. 1–Epithelium, 2–subepithelial connective tissue, 3–prostatic stroma.