Summary of Changes

Understanding the Changes from the Sixth to the Seventh Edition of the *AJCC Cancer Staging Manual*
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| Key Features for 7th Edition | Includes histologic grade, stage groupings, and grade definitions for many primary sites. |
|                            | Full color and easy-to-read survivorship charts. |
|                            | Evidence-based criteria for all changes. |
|                            | Collaborative authorship by surgeons, pathologists, medical oncologists, and radiation oncologists with the cancer registrars' perspective. |
|                            | Predictive and prognostic factors where supported by scientific and clinical evidence. |
|                            | The gynecologic staging schema were created in collaboration with FIGO and UICC. |
### Purposes and Principles of Staging

This section has been significantly expanded and includes more examples and explanations of the general staging rules.

- Tables of the most common staging rules.
- Specific definitions of the time frame for both clinical and pathologic classifications.
- Expanded information on the yc and yp classifications for neoadjuvant treatment.
- New rules for tumor size rounding for the T category.
- New rules for N category—can now use node biopsies as part of the clinical classification.
- MX has been eliminated—clarification for assigning cM.
- New designation of cM0 (i+) for disseminated or circulating tumor cells.
- New rules for stage group for pTis and pM1.

### Cancer Survival Analysis

- Clarifications
- New color survival charts
### Head and Neck

**SUMMARY OF CHANGES**
- The terms “resectable” and “unresectable” are replaced with “moderately advanced” and “very advanced.”
- No major changes have been made in the N staging for any sites except that a descriptor has been added. Extracapsular spread (ECS) of disease is added as ECS + or ECS—as a descriptor. These descriptors will not influence nodal staging system.

### Lip and Oral Cavity*

**SUMMARY OF CHANGES**
- T4 lesions have been divided into T4a (moderately advanced local disease) and T4b (very advanced local disease), leading to the stratification of Stage IV into Stage IVA (moderately advanced local/regional disease), Stage IVB (very advanced local/regional disease), and Stage IVC (distant metastatic disease).

*(Nonepithelial tumors such as those of lymphoid tissue, soft tissue, bone, and cartilage are not included. Staging for mucosal melanoma of the lip and oral cavity is not included in this chapter; see Chapter 9.)*

### Pharynx*

**SUMMARY OF CHANGES**
- For nasopharynx, T2a lesions will now be designated T1. Stage IIA will therefore be Stage I. Lesions previously staged T2b will be T2 and therefore Stage IIB will now be designated Stage II. Retropharyngeal lymph node(s), regardless of unilateral or bilateral location, is considered N1.
- For oropharynx and hypopharynx only, T4 lesions have been divided into T4a (moderately advanced local disease) and T4b (very advanced local disease), leading to the stratification of Stage IV into Stage IVA (moderately advanced local/regional disease), Stage IVB (very advanced local/regional disease), and Stage IVC (distant metastatic disease).

*(Nonepithelial tumors such as those of lymphoid tissue, soft tissue, bone, and cartilage are not included. Staging of mucosal melanoma of the pharynx is not included; see Chapter 9.)*

### Larynx*

**SUMMARY OF CHANGES**
- T4 lesions have been divided into T4a (moderately advanced local disease) and T4b (very advanced local disease), leading to the stratification of Stage IV into Stage IVA (moderately advanced local/regional disease), Stage IVB (very advanced local/regional disease), and Stage IVC (distant metastatic disease).

*(Nonepithelial tumors such as those of lymphoid tissue, soft tissue, bone, and cartilage are not included.)*
### Nasal Cavity and Paranasal Sinuses*

**SUMMARY OF CHANGES**
- T4 lesions have been divided into T4a (moderately advanced local disease) and T4b (very advanced local disease), leading to the stratification of Stage IV into Stage IVA (moderately advanced local/regional disease), Stage IVB (very advanced local/regional disease), and Stage IVC (distant metastatic disease).

*(Nonepithelial tumors such as those of lymphoid tissue, soft tissue, bone, and cartilage are not included. Staging for mucosal melanoma of the nasal cavity and paranasal sinuses is not included in this chapter; see Chapter 9.)*

### Major Salivary Glands*

**SUMMARY OF CHANGES**
- T4 lesions have been divided into T4a (moderately advanced local disease) and T4b (very advanced local disease), leading to the stratification of Stage IV into Stage IVA (moderately advanced local/regional disease), Stage IVB (very advanced local/regional disease), and Stage IVC (distant metastatic disease).

*(Parotid, submandibular, and sublingual.)*

### Thyroid

**SUMMARY OF CHANGES**
- Tumor staging (T1) has been subdivided into T1a (≤ 1 cm) and T1b (> 1–2 cm) limited to thyroid.
- The descriptors to subdivide T categories have been changed to solitary tumor (s) and multifocal tumor (m).
- The terms “resectable” and “unresectable” are replaced with “moderately advanced” and “very advanced.”

### Mucosal Melanoma of the Head and Neck (NEW CHAPTER)

**SUMMARY OF CHANGES**
- This chapter is a new chapter for classification of this rare tumor.
### Esophagus and Esophagogastric Junction*

**SUMMARY OF CHANGES**
- Tumor location is simplified, and esophagogastric junction and proximal five centimeters of stomach are included.
- Tis is redefined and T4 is subclassified.
- Regional lymph nodes are redefined. N is subclassified according to the number of regional lymph nodes containing metastasis.
- M is redefined.
- Separate stage groupings for squamous cell carcinoma and adenocarcinoma.
- Stage groupings are reassigned using T, N, M, and G classifications.

*(Nonmucosal cancers are not included.)*

### Stomach*

**SUMMARY OF CHANGES**
- Tumors arising at the esophagogastric junction, or arising in the stomach greater than five centimeters from the esophagogastric junction and crossing the esophagogastric junction are staged using the TNM system for esophageal adenocarcinoma; see Chapter 10.
- T categories have been modified to harmonize with T categories of the esophagus and small and large intestine.
- T1 lesions have been subdivided into T1a and T1b.
- T2 is defined as a tumor that invades the muscularis propria.
- T3 is defined as a tumor that invades the subserosal connective tissue.
- T4 is defined as a tumor that invades the serosa (visceral peritoneum) or adjacent structures.
- N categories have been modified, with N1 = one to two positive lymph nodes, N2 = three to six positive lymph nodes, N3 = seven or more positive lymph nodes.
- Positive peritoneal cytology is classified as M1.
- Stage groupings have been changed.

*(Lymphomas, sarcomas, and carcinoid tumors [low-grade neuroendocrine tumors] are not included.)*

(continued on next page)
Small Intestine*

**SUMMARY OF CHANGES**

- T1 lesions have been divided into T1a (invasion of lamina propria) and T1b (invasion of submucosa) to facilitate comparison with tumors of other gastrointestinal sites.
- Stage II has been subdivided into Stage IIA and Stage IIB.
- The N1 category has been changed to N1 (1–3 positive lymph nodes) and N2 (four or more positive lymph nodes), leading to the division of Stage III into Stage IIIA and Stage IIIB.

*(Lymphomas, carcinoid tumors, and visceral sarcomas are not included.)*

Appendix*

**SUMMARY OF CHANGES**

**Appendiceal Carcinomas**

- In the Seventh Edition, appendiceal carcinomas are separately classified. In the Sixth Edition, appendiceal carcinomas were classified according to the definitions for colorectal tumors.
- Appendiceal carcinomas are now separated into mucinous and nonmucinous types. Histologic grading is considered of particular importance for mucinous tumors, which is reflected in the staging considerations for metastatic tumors. The change is based on published data and analysis of NCDB data.
- In the Seventh Edition, the T4 category is divided into T4a and T4b as in the colon and is reflected in the subdivision of Stage II.
- M1 is divided into M1a and M1b where pseudomyxoma peritonei, M1a, is separated from nonperitoneal metastasis, M1b.
- Regional lymph node metastasis is unchanged from the Sixth Edition, in contrast to the subdivision of N for colorectal tumors, as there are no data justifying such a division for the appendiceal tumors. Therefore, Stage III for the appendix is unchanged from the Sixth Edition.
- In the Seventh Edition, Stage IV is subdivided on the basis of N, M, and G status, unlike colorectal carcinomas.
- Clinically significant prognostic factors are identified for collection in cancer registries, including pretreatment CEA and CA 19.9, the number of tumor deposits in the mesentery, and where available, the presence of Microsatellite instability and 18q loss of heterozygosity.

**Appendiceal Carcinoids**

- A new classification is added for carcinoid tumors that were not classified previously by TNM. This classification is a new classification. There are substantial differences between the classification schemes of appendiceal carcinomas and carcinoids and between appendiceal carcinoids and other well-differentiated gastrointestinal neuroendocrine tumors (carcinoids). (See chapters of the digestive system for staging of other gastrointestinal carcinoids.)
- Serum chromogranin A is identified as a significant prognostic factor.

*(Carcinomas and carcinoid tumors of the appendix are included, but separately categorized.)*

(continued on next page)
Colon and Rectum*

**SUMMARY OF CHANGES**

- In the Sixth Edition, Stage II was subdivided into IIA and IIB on the basis of whether the primary tumor was T3N0 or T4N0, respectively, and Stage III was subdivided into IIA (T1-2N1M0), IIB (T3-4N1M0), or IIIC (any TN2M0). In the Seventh Edition, further substaging of Stage II and III has been accomplished, based on survival and relapse data that was not available for the prior edition.
- Expanded data sets have shown differential prognosis within T4 lesions based on extent of disease. Accordingly, T4 lesions are subdivided as T4a (tumor penetrates the surface of the visceral peritoneum) and as T4b (tumor directly invades or is histologically adherent to other organs or structures).
- The potential importance of satellite tumor deposits is now defined by the new site-specific factor Tumor Deposits (TD) that describe their texture and number. T1-2 lesions that lack regional lymph node metastasis but have tumor deposit(s) will be classified in addition as N1c.
- The number of nodes involved with metastasis influences prognosis within both N1 and N2 groups. Accordingly, N1 will be subdivided as N1a (metastasis in 1 regional node) and N1b (metastasis in 2–3 nodes), and N2 will be subdivided as N2a (metastasis in 4–6 nodes) and N2b (metastasis in 7 or more nodes).
- Stage Group II is subdivided into IIA (T3N0), IIB (T4aN0), and IIC (T4bN0).
- Stage Group III:
  - A category of N1 lesions, T4bN1, that was formerly classified as IIIB was found to have outcomes more akin to IIIC and has been reclassified from IIIB to IIIC.
  - Similarly, several categories of N2 lesions formerly classified as IIIC have outcomes more akin to other stage groups; therefore, T1N2a has been reclassified as IIIA and T1N2b, T2N2a-b, and T3N2a have all been reclassified as IIIB.
  - M1 has been subdivided into M1a for single metastatic site versus M1b for multiple metastatic sites.

*(Sarcomas, lymphomas, and carcinoid tumors of the large intestine are not included.)

Anus*

**SUMMARY OF CHANGES**

- The definitions of TNM and the stage groupings for this chapter have not changed from the Sixth Edition.
- The descriptions of both the boundaries of the anal canal and anal carcinomas have been clarified.
- The collection of the reported status of the tumor for the presence of human papilloma virus is included.

*(The classification applies to carcinomas only; melanomas, carcinoid tumors, and sarcomas are not included.)

Gastrointestinal Stromal Tumor

**(NEW CHAPTER)**

**SUMMARY OF CHANGES**

- This staging system is new for the Seventh Edition.

*(continued on next page)*
Neuroendocrine Tumors*  
(NEW CHAPTER)

SUMMARY OF CHANGES
- This staging system is new for the Seventh Edition.

*(Gastric, small bowel, colonic, rectal, and ampulla of vater carcinoid tumors [well-differentiated neuroendocrine tumors and well-differentiated neuroendocrine carcinomas]; carcinoid tumors of the appendix [see Chapter 13] and neuroendocrine tumors of the pancreas [see Chapter 24] are not included.)

Liver*

SUMMARY OF CHANGES
Intrahepatic bile ducts are no longer included in this staging chapter. The staging of liver cancer now includes only hepatocellular carcinoma.

T Category Changes
- In the T3 category, patients with invasion of major vessels are distinguished from patients with multiple tumors, of which any are greater than five centimeters, but lack major vessel invasion because of the markedly different prognosis of these subgroups.
  - T3a includes multiple tumors, any greater than five centimeters.
  - T3b includes tumors of any size involving a major portal vein or hepatic vein.
  - T4 category unchanged.

N Category Changes
- Inferior phrenic lymph nodes were reclassified to regional lymph nodes from distant lymph nodes.

Stage Grouping Changes
- Changes in T3 classification led to changes in Stage III groupings:
  - Stage IIIA now includes only T3a; patients with major vessel invasion are removed from the IIIA stage grouping.
  - Stage IIIB now includes only T3b (major vessel invasion).
  - T4 is shifted to Stage IIIC.
- Stage IV includes all patients with metastasis, whether nodal or distant, separated into IVA and B to permit identification of each subgroup.
  - Stage IVA now includes node-positive disease (N1).
  - Stage IVB now includes distant metastasis (M1).

*(Excluding intrahepatic bile ducts; sarcomas and tumors metastatic to the liver are not included.)

(continued on next page)
### Intrahepatic Bile Ducts

**SUMMARY OF CHANGES**
- This staging system is a novel staging system that is independent of the staging system for hepatocellular carcinoma and independent of the staging system for extrahepatic bile duct malignancy, including hilar bile duct cancers. The rare combined hepatocellular and cholangiocarcinoma (mixed hepatocellular carcinoma) are included with the intrahepatic bile duct cancer staging classification.
- The tumor category (T) is based on three major prognostic factors, including tumor number, vascular invasion, and direct extrahepatic tumoral extension.
- The nodal category (N) is a binary classification based on the presence or absence of regional lymph node metastasis.
- The metastasis category (M) is a binary classification based on the presence or absence of distant disease.
- Recommend collection of preoperative or pretreatment serum CA19-9.

### Gallbladder*

**SUMMARY OF CHANGES**
- The cystic duct is now included in this classification scheme.
- The N classification now distinguishes hilar nodes (N1: lymph nodes adjacent to the cystic duct, bile duct, hepatic artery, and portal vein) from other regional nodes (N2: celiac, periduodenal, and peripancreatic lymph nodes and those along the superior mesenteric artery).
- Stage groupings have been changed to better correlate with surgical resectability and patient outcome; locally unresectable T4 tumors have been reclassified as Stage IV.
- Lymph node metastasis is now classified as Stage IIIB (N1) or Stage IVB (N2).
  *(Carcinoid tumors and sarcomas are not included.)*

### Perihilar Bile Ducts*

**SUMMARY OF CHANGES**
- Extrahepatic bile duct tumors have been separated into perihilar (proximal) and distal groups and separate staging classifications defined for each.
- T1 (confined to bile duct) and T2 (beyond the wall of the bile duct) have been specified histologically.
- T2 includes invasion of adjacent hepatic parenchyma.
- T3 is defined as unilateral vascular invasion.
- T4 is defined on the basis of bilateral biliary and/or vascular invasion.
- Lymph node metastasis has been reclassified as Stage III (upstaged from Stage II).
- The Stage IV grouping defines unresectability based on local invasion (IVA) or distant disease (IVB).
  *(Sarcoma and carcinoid tumors are not included.)*

*(continued on next page)*
#### Distal Bile Duct*

**SUMMARY OF CHANGES**

- Extrahepatic bile duct was a single chapter in the Sixth Edition; this chapter has been divided into two chapters for the Seventh Edition (Perihilar Bile Ducts [see Chapter 21] and Distal Bile Duct).
- Two site-specific prognostic factors, preoperative or pretreatment serum carcinoembryonic antigen and CA19.9, are recommended for collection.

*(Sarcoma and carcinoid tumors are not included.)*

#### Ampulla of Vater

**SUMMARY OF CHANGES**

- The definitions of TNM and the stage grouping for this chapter have not changed from the Sixth Edition.

#### Exocrine and Endocrine Pancreas

**SUMMARY OF CHANGES**

- Pancreatic neuroendocrine tumors (including carcinoid tumors) are now staged by a single pancreatic staging system.
- Survival tables and figures have been added for adenocarcinoma and neuroendocrine tumors.
- The definition of TNM and the anatomic stage/prognostic groupings for this chapter have not changed from the Sixth Edition for exocrine tumors.
**SUMMARY OF CHANGES**

**Lung**

- This staging system is now recommended for the classification of both non–small-cell and small-cell lung carcinomas and for carcinoid tumors of the lung.
- The T classifications have been redefined:
  - T1 has been subclassified into T1a (≤2 cm in size) and T1b (>2–3 cm).
  - T2 has been subclassified into T2a (>3–5 cm in size) and T2b (>5–7 cm).
  - T2 (>7 cm in size) has been reclassified as T3.
  - Multiple tumor nodules in the same lobe have been reclassified from T4 to T3.
  - Multiple tumor nodules in the same lung but a different lobe have been reclassified from M1 to T4.
- No changes have been made to the N classification. However, a new international lymph node map defining the anatomical boundaries for lymph node stations has been developed.
- The M classifications have been redefined:
  - M1 has been subdivided into M1a and M1b.
  - Malignant pleural and pericardial effusions have been reclassified from T4 to M1a.
  - Separate tumor nodules in the contralateral lung are considered M1a.
  - M1b designates distant metastases.
*(Carcinoid tumors are included. Sarcomas and other rare tumors are not included.)*

**Pleural Mesothelioma**

- Peridiaphragmatic lymph nodes have been added to the N2 category.
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<td>• Stage III is reserved for G3, G4.</td>
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<td><em>(Primary malignant lymphoma and multiple myeloma are not included.)</em></td>
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<td>• Gastrointestinal stromal tumor (GIST) is now included in Chapter 16; fibromatosis (desmoid tumor), Kaposi’s sarcoma, and infantile fibrosarcoma are no longer included in the histological types for this site.</td>
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<tr>
<td>• Angiosarcoma, extraskeletal Ewing’s sarcoma, and dermatofibrosarcoma protuberans have been added to the list of histologic types for this site.</td>
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<td>• N1 disease has been reclassified as Stage III rather than Stage IV disease.</td>
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<td>• Grading has been reformatted from a four-grade to a three-grade system as per the criteria recommended by the College of American Pathologists.</td>
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<tr>
<td><em>(Kaposi’s sarcoma, fibromatosis [desmoid tumor], and sarcoma arising from the dura mater, brain, parenchymatous organs, or hollow viscera are not included.)</em></td>
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Summary of Changes

Cutaneous Squamous Cell Carcinoma and Other Cutaneous Carcinomas

- The previous edition chapter, entitled “Carcinoma of the Skin,” has been eliminated and two chapters have been created in its place:
  - Merkel Cell Carcinoma: An entirely new chapter specifically for Merkel cell carcinoma (MCC) has been designed (see Chapter 30).
  - This chapter has been renamed “Cutaneous Squamous Cell Carcinoma and Other Cutaneous Carcinomas” and is an entirely new staging system that, for the first time, reflects a multidisciplinary effort to provide a mechanism for staging nonmelanoma skin cancers according to evidence-based medicine. In total, seven board-certified disciplines collaborated to develop this chapter: dermatology, otolaryngology–head and neck surgery, surgical oncology, dermatopathology, oncology, plastic surgery, and oral and maxillofacial surgery. The title of this chapter reflects the basis of the data, which is focused on cutaneous squamous cell carcinoma (cSCC). All other nonmelanoma skin carcinomas (except Merkel cell carcinoma) will be staged according to the cSCC staging system.
  - Anatomic site of the eyelid is not included—staged by Ophthalmic Carcinoma of the Eyelid (see Chapter 48).
  - The T staging has eliminated the five-centimeter-size breakpoint and invasion of extradermal structures for T4. Two centimeters continues to differentiate T1 and 2; however, a list of clinical and histologic “high-risk features” has been created that can increase the T staging, independent of tumor size.
  - Grade has been included as one of the “high-risk features” within the T category and now contributes toward the final stage grouping. Other “high-risk features” include primary anatomic site ear or hair-bearing lip, greater than two millimeters depth, Clark level greater than or equal to IV, or perineural invasion.
  - Advanced T stage is reserved for bony extension or involvement (for example, maxilla, mandible, orbit, temporal bone, or perineural invasion of skull base or axial skeleton for T3 and T4, respectively).
  - Nodal (N) staging has been completely revised to reflect published evidence-based data demonstrating that survival decreases with increasing nodal size and number of nodes involved.
  - Because the majority of cSCC tumors occur on the head and neck, the Seventh Edition staging system for cSCC and other cutaneous carcinomas was made congruent with the AJCC Head and Neck staging system.

Merkel Cell Carcinoma*

- This chapter is the first staging chapter specific for Merkel cell carcinoma. Merkel cell carcinoma was previously included in the “Carcinoma of the Skin” chapter.

*(Staging for Merkel cell of the eyelid [C44.1] is not included in this chapter; see Chapter 48, “Carcinoma of the Eyelid.”)
SUMMARY OF CHANGES

Skin

Melanoma of the Skin

- Mitotic rate (histologically defined as mitoses/mm², not mitoses/10 HPF) is an important primary tumor prognostic factor. A mitotic rate equal to or greater than 1/mm² denotes a melanoma at higher risk for metastasis. It should now be used as one defining criteria of T1b melanomas.

- Melanoma thickness and tumor ulceration continue to be used in defining strata in the T category. For T1 melanomas, in addition to tumor ulceration, mitotic rate replaces level of invasion as a primary criterion for defining the subcategory of T1b.

- The presence of nodal micrometastases can be defined using either H&E or immunohistochemical staining (previously, only the H&E could be used).

- There is no lower threshold of tumor burden defining the presence of regional nodal metastasis. Specifically, nodal tumor deposits less than 0.2 millimeters in diameter (previously used as the threshold for defining nodal metastasis) are included in the staging of nodal disease as a result of the consensus that smaller volumes of metastatic tumor are still clinically significant. A lower threshold of clinically insignificant nodal metastases has not been defined based on evidence.

- The site of distant metastases (nonvisceral [that is, skin/soft tissue/distant nodal] versus lung versus all other visceral metastatic sites) continues to represent the primary component of categorizing the M category.

- An elevated serum lactic dehydrogenase (LDH) level remains a powerful predictor of survival and is also to be used in defining the M category.

- Survival estimates for patients with intralymphatic regional metastases (that is, satellites and in transit metastasis) are somewhat better than for the remaining cohort of Stage IIIB patients. Nevertheless, Stage IIIB still represents the closest statistical fit for this group, so the current staging definition for intralymphatic regional metastasis has been retained.

- The prognostic significance of microsatellites has been established less broadly. The Melanoma Task Force recommended that this uncommon feature be retained in the N2c category, largely because the published literature is insufficient to substantiate revision of the definitions used in the Sixth Edition Staging Manual.

- The staging definition of metastatic melanoma from an unknown primary site was clarified, such that isolated metastases arising in lymph nodes, skin, and subcutaneous tissues are to be categorized as Stage III rather than Stage IV.

- The definitions of tumor ulceration, mitotic rate and microsatellites were clarified.

- Lymphoscintigraphy followed by lymphatic mapping and sentinel lymph node biopsy (sentinel lymphadenectomy) remain important components of melanoma staging and should be used (or discussed with the patient) in defining occult Stage III disease among patients who present with clinical Stage IB or II melanoma.
### Tumor (T)

- Identified specific imaging modalities that can be used to estimate clinical tumor size, including mammography, ultrasound, and magnetic resonance imaging (MRI).

- Made specific recommendations that (1) the microscopic measurement is the most accurate and preferred method to determine pT with a small invasive cancer that can be entirely submitted in one paraffin block, and (2) the gross measurement is the most accurate and preferred method to determine pT with larger invasive cancers that must be submitted in multiple paraffin blocks.

- Made the specific recommendation to use the clinical measurement thought to be most accurate to determine the clinical T of breast cancers treated with neoadjuvant therapy. Pathologic (posttreatment) size should be estimated based on the best combination of gross and microscopic histological findings.

- Made the specific recommendation to estimate the size of invasive cancers that are unapparent to any clinical modalities or gross pathologic examination by carefully measuring and recording the relative positions of tissue samples submitted for microscopic evaluation and determining which contain tumor.

- Acknowledged “ductal intraepithelial neoplasia” (DIN) as uncommon, and still not widely accepted, terminology encompassing both DCIS and ADH, and clarification that only cases referred to as DIN containing DCIS (±ADH) are classified as Tis (DCIS).

- Acknowledged “lobular intraepithelial neoplasia” (LIN) as uncommon, and still not widely accepted, terminology encompassing both LCIS and ALH, and clarification that only cases referred to as LIN containing LCIS (±ALH) are classified as Tis (LCIS).

- Clarified that only Paget’s disease NOT associated with an underlying noninvasive (that is, DCIS and/or LCIS) or invasive breast cancer should be classified as Tis (Paget’s) and that Paget’s disease associated with an underlying cancer be classified according to the underlying cancer (Tis, T1, and so on).

- Made the recommendation to estimate the size of noninvasive carcinomas (DCIS and LCIS), even though it does not currently change their T classification, because noninvasive cancer size may influence therapeutic decisions, acknowledging that providing a precise size for LCIS may be difficult.

- Acknowledged that the prognosis of microinvasive carcinoma is generally thought to be quite favorable, although the clinical impact of multifocal microinvasive disease is not well understood at this time.

- Acknowledged that it is not necessary for tumors to be in separate quadrants to be classified as multiple simultaneous ipsilateral carcinomas, providing that they can be unambiguously demonstrated to be macroscopically distinct and measurable using available clinical and pathologic techniques.

- Maintained that the term “inflammatory carcinoma” be restricted to cases with typical skin changes involving a third or more of the skin of the breast. While the histologic presence of invasive carcinoma invading dermal lymphatics is supportive of the diagnosis, it is not required, nor is dermal lymphatic invasion without typical clinical findings sufficient for a diagnosis of inflammatory breast cancer.

- Recommend that all invasive cancer should be graded using the Nottingham combined histologic grade (Elston-Ellis modification of Scarff–Bloom–Richardson grading system).

(continued on next page)
SUMMARY OF CHANGES

Nodes (N)

- Classification of isolated tumor cell clusters and single cells is more stringent. Small clusters of cells not greater than 0.2 millimeters, or nonconfluent or nearly confluent clusters of cells not exceeding 200 cells in a single histologic lymph node cross section are classified as isolated tumor cells.

- Use of the (sn) modifier has been clarified and restricted. When six or more sentinel nodes are identified on gross examination of pathology specimens the (sn) modifier should be omitted.

- Stage I breast tumors have been subdivided into Stage IA and Stage IB; Stage IB includes small tumors (T1) with exclusively micrometastases in lymph nodes (N1mi).

SUMMARY OF CHANGES

Metastases (M)

- Created new M0(i+) category, defined by presence of either disseminated tumor cells detectable in bone marrow or circulating tumor cells or found incidentally in other tissues (such as ovaries removed prophylactically) if not exceeding 0.2 millimeters. However, this category does not change the stage grouping. Assuming that they do not have clinically and/or radiographically detectable metastases, patients with M0(i+) are staged according to T and N.

SUMMARY OF CHANGES

Postneoadjuvant Therapy (yc or ypTNM)

- In the setting of patients who received neoadjuvant therapy, pretreatment clinical T (cT) should be based on clinical or imaging findings.

- Postneoadjuvant therapy T should be based on clinical or imaging (ycT) or pathologic findings (ypT).

- A subscript will be added to the clinical N for both node negative and node positive patients to indicate whether the N was derived from clinical examination, fine needle aspiration, core needle biopsy, or sentinel lymph node biopsy.

- The posttreatment ypT will be defined as the largest contiguous focus of invasive cancer as defined histopathologically with a subscript to indicate the presence of multiple tumor foci. Note: Definition of posttreatment ypT remains controversial and an area in transition.

- Posttreatment nodal metastases no greater than 0.2 millimeters are classified as ypN0(i+) as in patients who have not received neoadjuvant systemic therapy. However, patients with this finding are not considered to have achieved a pathologic complete response (pCR).

- A description of the degree of response to neoadjuvant therapy (complete, partial, no response) will be collected by the registrar with the posttreatment ypTNM. The registrars are requested to describe how they defined response (by physical examination, imaging techniques [mammogram, ultrasound, magnetic resonance imaging (MRI)] or pathologically).

- Patients will be considered to have M1 (and therefore Stage IV) breast cancer if they have had clinically or radiographically detectable metastases, with or without biopsy, prior to neoadjuvant systemic therapy, regardless of their status after neoadjuvant systemic therapy.
<table>
<thead>
<tr>
<th>Gynecologic Sites</th>
<th>SUMMARY OF CHANGES</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Vulva</strong>&lt;sup&gt;*&lt;/sup&gt;</td>
<td>The definition of TNM and the stage grouping for this chapter have changed from the Sixth Edition and reflect new staging adopted by the International Federation of Gynecology and Obstetrics (FIGO) (2008). *Mucosal malignant melanoma is not included.</td>
</tr>
<tr>
<td><strong>Vagina</strong></td>
<td>The definition of TNM and the stage grouping for this chapter have not changed from the Sixth Edition.</td>
</tr>
<tr>
<td><strong>Cervix Uteri</strong></td>
<td>The definition of TNM and the stage grouping for this chapter have changed from the Sixth Edition and reflect new staging adopted by the International Federation of Gynecology and Obstetrics (FIGO) (2008).</td>
</tr>
<tr>
<td><strong>Corpus Uteri</strong></td>
<td>The definition of TNM and the stage grouping for this chapter have changed from the Sixth Edition and reflect new staging adopted by the International Federation of Gynecology and Obstetrics (FIGO) (2008). A separate staging schema adopted by FIGO for uterine sarcoma has been added.</td>
</tr>
<tr>
<td><strong>Ovary and Primary Peritoneal Carcinoma</strong></td>
<td>The definition of TNM and the stage grouping for this chapter have not changed from the Sixth Edition. Primary peritoneal carcinoma has been included in this chapter.</td>
</tr>
<tr>
<td><strong>Fallopian Tube</strong></td>
<td>The definition of TNM and the stage grouping for this chapter have not changed from the Sixth Edition.</td>
</tr>
<tr>
<td><strong>Gestational Trophoblastic Tumors</strong></td>
<td>The definition of TNM and the stage grouping for this chapter have not changed from the Sixth Edition.</td>
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</tbody>
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### Genitourinary Sites

#### PART IX

<table>
<thead>
<tr>
<th><strong>SUMMARY OF CHANGES</strong></th>
<th><strong>Penis</strong>*</th>
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<tbody>
<tr>
<td>The following changes in the definition of TNM and the stage grouping for this chapter have been made since the Sixth Edition:</td>
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</tr>
<tr>
<td>• T1 has been subdivided into T1a and T1b based on the presence or absence of lymphovascular invasion or poorly differentiated cancers.</td>
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</tr>
<tr>
<td>• T3 category is limited to urethral invasion and prostatic invasion is now considered T4.</td>
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<tr>
<td>• Nodal staging is divided into both clinical and pathologic categories.</td>
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<td>• The distinction between superficial and deep inguinal lymph nodes has been eliminated.</td>
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</tr>
<tr>
<td>• Stage II grouping includes T1b N0M0 as well as T2-3 N0M0.</td>
<td>• Stage II grouping includes T1b N0M0 as well as T2-3 N0M0.</td>
</tr>
<tr>
<td>* Primary urethral carcinomas and melanomas are not included.</td>
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<tr>
<th><strong>SUMMARY OF CHANGES</strong></th>
<th><strong>Prostate</strong>*</th>
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</thead>
<tbody>
<tr>
<td>• Extraprostatic invasion with microscopic bladder neck invasion (T4) is included with T3a.</td>
<td>• Extraprostatic invasion with microscopic bladder neck invasion (T4) is included with T3a.</td>
</tr>
<tr>
<td>• Gleason Score now recognized as the preferred grading system.</td>
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</tr>
<tr>
<td>• Prognostic factors have been incorporated in the anatomic stage/prognostic groups:</td>
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<tr>
<td>• Gleason Score</td>
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</tr>
<tr>
<td>• Preoperative prostate-specific antigen (PSA)</td>
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<tr>
<td>* Sarcomas and transitional cell carcinomas are not included.</td>
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</tr>
<tr>
<td>• T2 lesions have been divided into T2a (greater than 7 cm but less than or equal to 10 cm) and T2b (&gt;10 cm).</td>
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</tr>
<tr>
<td>• Ipsilateral adrenal involvement is reclassified as T4 if contiguous invasion and M1 if not contiguous.</td>
<td>• Ipsilateral adrenal involvement is reclassified as T4 if contiguous invasion and M1 if not contiguous.</td>
</tr>
<tr>
<td>• Renal vein involvement is reclassified as T3a.</td>
<td>• Renal vein involvement is reclassified as T3a.</td>
</tr>
<tr>
<td>• Nodal involvement is simplified to N0 versus N1.</td>
<td>• Nodal involvement is simplified to N0 versus N1.</td>
</tr>
</tbody>
</table>

(continued on next page)
### Renal Pelvis and Ureter

**SUMMARY OF CHANGES**
- The definition of TNM and the stage grouping for this chapter have not changed from the Sixth Edition.
- Grading: a low- and high-grade designation will replace previous four-grade system to match current World Health Organization/International Society of Urologic Pathology (WHO/ISUP) recommended grading system.

### Urinary Bladder

**SUMMARY OF CHANGES**
- Primary staging: T4 disease defined as including prostatic stromal invasion directly from bladder cancer. Subepithelial invasion of prostatic urethra will not constitute T4 staging status.
- Grading: a low- and high-grade designation will replace previous four-grade system to match current World Health Organization/International Society of Urologic Pathology (WHO/ISUP) recommended grading system.
- Nodal classification:
  - Common iliac nodes defined as secondary drainage region as regional nodes and not as metastatic disease.
- N staging system change:
  - N1: single positive node in primary drainage regions
  - N2: multiple positive nodes in primary drainage regions
  - N3: common iliac node involvement

### Urethra

**SUMMARY OF CHANGES**
- For urothelial (transitional cell) carcinoma of the prostate, T1 category is defined as tumors invading subepithelial connective tissue.

### Adrenal

(NEW CHAPTER)

**SUMMARY OF CHANGES**
- The definition of TNM and the stage grouping for this chapter has been created for the first time for the Seventh Edition.
### Carcinoma of the Eyelid

**SUMMARY OF CHANGES**
- A section on Lymph Node Staging was added.
- T3 was redefined, and the lesions have been divided into T3a and T3b.
- T4 has been redefined.
- N0 was redefined and divided into cN0 (no regional lymph node metastasis, based upon clinical evaluation or imaging) and pN0 (no regional lymph node metastasis, based upon lymph node biopsy).
- Stage groupings have been defined and added.

### Carcinoma of the Conjunctiva

**SUMMARY OF CHANGES**
- A listing of site-specific categories is included in T3.
- Sebaceous gland carcinoma with pagetoid conjunctival spread was added under histopathologic type.

### Malignant Melanoma of the Conjunctiva

**SUMMARY OF CHANGES**
- Definitions of T classification have changed to describe location (bulbar, noncaruncular, caruncular).
- Definitions of N category have changed to describe whether a biopsy was performed.
- Definitions of pT status have changed to describe local invasion and tumor thickness.
- Definition of T(is) or melanoma in place when tumor is limited to the epithelium.
- Definitions of “Histologic Grade” were changed to describe cases of synchronous PAM with atypia and conjunctival melanoma (G3 and G4).

### Malignant Melanoma of the Uvea (continued on next page)

**SUMMARY OF CHANGES**
- Iris
  - T4 is subdivided according to the size of extrascleral extension.

(continued on next page)
### Malignant Melanoma of the Uvea (continued)

#### SUMMARY OF CHANGES

**Ciliary Body and Choroid**
- The definitions of T1-T4 lesions have been modified.
- The definitions of T1a-c, T2a-c, and T3a have been modified, and T1-T3 has been divided into T1a-d, T2a-d, and T3a-d.
- T4 has been divided into T4a-e.
- T1 through T4 are defined as tumors representing tabulated combinations of largest basal tumor diameter and tumor thickness (height).
- T1a, T2a, T3a, and T4a are defined as tumors without ciliary body involvement and without extrascleral extension.
- T1b, T2b, T3b, and T4b are defined as tumors with ciliary body involvement but without extrascleral extension.
- T1c, T2c, T3c, and T4c are defined as tumors without ciliary body involvement but with extrascleral extension equal to or less than five millimeters.
- T1d, T2d, T3d, and T4d are defined as tumors with ciliary body involvement and with extrascleral extension equal to or less than five millimeters.
- T4e is defined as tumor of any size with an extrascleral extension greater than five millimeters in diameter.

### Retinoblastoma

#### SUMMARY OF CHANGES

**Clinical Classification**
- The definitions of T1–T4 were modified.
- The definitions for M1 were modified.

**Pathologic Classification**
- Minor modifications were made to the definitions for pT2–pT4.
- Definition of choroidal invasion, focal versus massive.
- The definitions for pM1 were modified.

**Other**
- A description of proper processing of the enucleated retinoblastoma globe for pathological examination was added.

(continued on next page)
### Carcinoma of the Lacrimal Gland

**SUMMARY OF CHANGES**

The staging system for lacrimal gland carcinomas has been made consistent with that for salivary gland carcinomas by:

- Proposing changes in the size cutoffs between T1, T2, and T3.
- Subdividing T4.
- Expanding the histologic categories to those used for salivary gland malignancies, since all of these malignancies have been reported in the lacrimal gland.
- Lacrimal sac tumors have been removed from this section.

### Sarcoma of the Orbit

**SUMMARY OF CHANGES**

- A listing of site-specific categories is now included in T4.
- The anatomy description was expanded.
- Regional lymph nodes were defined.

### Ocular Adnexal Lymphoma (NEW CHAPTER)

**SUMMARY OF CHANGES**

- This chapter is an entirely new chapter.
Central Nervous System

Brain and Spinal Cord

SUMMARY OF CHANGES

• Central nervous system tumors continue to have no TNM designation.
### Lymphoid Neoplasms

**SUMMARY OF CHANGES**
- The Introduction, Pathology, and Rules for Classification have been moved to this section.
- There is a new image providing the lymph node regions above and below the diaphragm.
- The chapter has been divided into four sections, for each distinct type of lymphoid neoplasm.

### Hodgkin and Non-Hodgkin Lymphomas*

**SUMMARY OF CHANGES**
- There are no changes to the stage groups for the Seventh Edition.
- A new image has been added depicting the four stage groups.
- Excludes ocular adnexal lymphoma.

### Primary Cutaneous Lymphomas

**SUMMARY OF CHANGES**
- There are no changes to the stage groups for the Seventh Edition.
- A new staging form has been created for these malignancies.

### Multiple Myeloma and Plasma Cell Disorders

**SUMMARY OF CHANGES**
- There are no changes to this section for the Seventh Edition.

### Pediatric Lymphoid Malignancy

**SUMMARY OF CHANGES**
- There are no changes to this section for the Seventh Edition.
For information regarding the AJCC, visit our Web site by clicking on the URL above.

http://www.cancerstaging.org/

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