## **Updated pages**

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This updated reprint of the TNM Classification of Malignant Tumours, 7th edition contains a number of corrections that include the following: Changes to: T1a and 1b categories in Melanoma – Skin N category in Kidney Stages in Stages IIB and III Soft Tissue Sarcoma Stage I Bone Sarcoma Stage IIA Prostate Stage IVA Larynx Stage IVA Salivary Gland

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### xii Preface

<sup>1</sup> International Union Against Cancer (UICC). *TNM Classification of Malignant Tumours*, 6th ed. Sobin LH, Wittekind Ch., eds. New York: Wiley; 2002.

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- <sup>2</sup> International Union Against Cancer (UICC). *Prognostic Factors in Cancer*, 3rd ed. Gospodarowicz MK, O'Sullivan B, Sobin LH, eds. New York: Wiley; 2006.
- <sup>3</sup> International Union Against Cancer (UICC). *TNM Supplement. A Commentary on Uniform Use*, 3rd ed. Wittekind Ch, Henson DE, Hutter RVP, et al., eds. New York; Wiley; 2003.
- <sup>4</sup> American Joint Committee on Cancer (AJCC). *Cancer Staging Manual* 7th ed. Edge SB, Byrd DR, Compton CC, Fritz AG, Greene FL, Trotti A. eds. New York: Springer; 2009.

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# **ABBREVIATIONS**

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a c C G ICD-O	autopsy, p. 17 clinical, p. 8, 10 certainty factor, p. 17–18 histopathological grading, p. 16 International Classification of Diseases for Oncology, 3rd ed., 2000
ITC	isolated tumour cells, p. 13–14
L	lymphatic invasion, p. 17
m	multiple tumours, p. 9
Μ	distant metastasis
Ν	regional lymph node metastasis
р	pathological, p. 12
Pn	perineural invasion, p. 17
r	recurrent tumour, p. 17
R	residual tumour after treatment, p. 19
sn	sentinel lymph node, p. 13
Stage	anatomical Stage, p. 19–20
Т	extent of primary tumour
V	venous invasion, p. 17
у	classification after initial multimodality treat- ment, p. 16

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#### 4 Introduction

optional expansions of selected categories. Second and third editions appeared in 2001<sup>11</sup> and 2003.<sup>12</sup>

In 1995, the project published *Prognostic Factors in Cancer*,<sup>13</sup> a compilation and discussion of prognostic factors in cancer, both anatomic and non-anatomic, at each of the body sites. This was expanded in the second edition in 2001<sup>14</sup> with emphasis on the relevance of different prognostic factors. The subsequent third edition in 2006<sup>15</sup> attempted to refine this by providing evidence-based criteria for relevance.

The present seventh edition of *TNM Classification* contains rules of classification and staging that correspond with those appearing in the seventh edition of the *AJCC Cancer Staging Manual* (2009)<sup>16</sup> and have approval of all national TNM committees. These are listed on pages. xv–xvi., together with the names of members of the UICC committees who have been associated with the TNM system. The UICC recognizes the need for stability

- <sup>11</sup>International Union Against Cancer (UICC). *TNM Supplement. A Commentary on Uniform Use*, 2nd ed. Wittekind Ch, Henson DE, Hutter RVP, et al., eds. New York: Wiley; 2001.
- <sup>12</sup> International Union Against Cancer (UICC). *TNM Supplement. A Commentary on Uniform Use*, 3rd ed. Wittekind Ch, Green FL, Henson DE, et al., eds. New York: Wiley; 2003.
- <sup>13</sup> International Union Against Cancer (UICC). *Prognostic Factors in Cancer*. Hermanek P, Gospodarowicz MK, Henson DE, et al., eds. Berlin, Heidelberg, New York: Springer; 1995.
- <sup>14</sup> International Union Against Cancer (UICC). Prognostic Factors in Cancer, 2nd ed. Gospodarowicz MK, Henson DE, Hutter RVP, et al., eds. New York: Wiley; 2001.
- <sup>15</sup> International Union Against Cancer (UICC). *Prognostic Factors in Cancer*, 3rd ed. Gospodarowicz MK, O'Sullivan B, Sobin LH, eds. New York: Wiley; 2006.
- <sup>16</sup> American Joint Committee on Cancer (AJCC). AJCC Cancer Staging Manual, 7th ed. Edge SB, Byrd DR, Compton CC, et al., eds. New York: Springer; 2009.

#### 8 Introduction

In effect the system is a 'shorthand notation' for describing the extent of a particular malignant tumour. The general rules applicable to all sites are as follows:

- 1. All cases should be confirmed microscopically. Any cases not so proved must be reported separately.
- 2. Two classifications are described for each site, namely:
  - (a) Clinical classification: the pretreatment clinical classification designated TNM (or cTNM) is essential to select and evaluate therapy. This is based on evidence acquired before treatment. Such evidence arises from physical examination, imaging, endoscopy, biopsy, surgical exploration, and other relevant examinations.
  - (b) Pathological classification: the postsurgical histopathological classification, designated pTNM, is used to guide adjuvant therapy and provides additional data to estimate prognosis and calculate end results. This is based on evidence acquired before treatment, supplemented or modified by additional evidence acquired from surgery and from pathological examination. The pathological assessment of the primary tumour (pT) entails a resection of the primary tumour or biopsy adequate to evaluate the highest pT category. The pathological assessment of the regional lymph nodes (pN) entails removal of the lymph nodes adequate to validate the absence of regional lymph node metastasis (pN0) or sufficient to evaluate the highest pN category. An excisional biopsy of a lymph node without pathological assessment of the primary is insufficient to fully evaluate the pN category

- and is a clinical classification. The pathological assessment of distant metastasis (pM) entails microscopic examination.
- After assigning T, N, and M and/or pT, pN, and pM categories, these may be grouped into stages. The TNM classification and stage groups, once established, must remain unchanged in the medical records.

Clinical and pathological data may be combined when only partial information is available either in the pathological classification or the clinical classification.

- 4. If there is doubt concerning the correct T, N, or M category to which a particular case should be allotted, then the lower (i.e., less advanced) category should be chosen. This will also be reflected in the stage grouping.
- 5. In the case of multiple primary tumours in one organ, the tumour with the highest T category should be classified and the multiplicity or the number of tumours should be indicated in parenthesis, e.g., T2(m) or T2(5). In simultaneous bilateral primary cancers of paired organs, each tumour should be classified independently. In tumours of the liver, ovary, and fallopian tube, multiplicity is a criterion of T classification, and in tumours of the lung multiplicity may be a criterion of T or M classification.
- Definitions of TNM categories and stage grouping may be telescoped or expanded for clinical or research purposes as long as the basic definitions recommended are not changed. For instance, any T, N, or M can be divided into subgroups.

For more details on classification the reader is referred to the *TNM Supplement*.

### N – Regional Lymph Nodes

- NX Regional lymph nodes cannot be assessed
- N0 No regional lymph node metastasis
- N1–N3 Increasing involvement of regional lymph nodes

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### M – Distant Metastasis\*

- M0 No distant metastasis
- M1 Distant metastasis
- Note: \*The MX category is considered to be inappropriate as clinical assessment of metastasis can be based on physical examination alone. (The use of MX may result in exclusion from staging.)

The category M1 may be further specified according to the following notation:

Pulmonary	PUL	Bone marrow	MAR
Osseous	OSS	Pleura	PLE
Hepatic	HEP	Peritoneum	PER
Brain	BRA	Adrenals	ADR
Lymph nodes	LYM	Skin	SKI
Others	OTH		

### Subdivisions of TNM

Subdivisions of some main categories are available for those who need greater specificity (e.g., T1a, T1b, or N2a, N2b).

Cases with or examined for isolated tumour cells in sentinel lymph nodes can be classified as follows:

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- pN0(i–)(sn) No sentinel lymph node metastasis histologically, negative morphological findings for ITC
- pN0(i+)(sn) No sentinel lymph node metastasis histologically, positive morphological findings for ITC
- pN0(mol–)(sn) No sentinel lymph node metastasis histologically, negative non-morphological findings for ITC
- pN0(mol+)(sn) No sentinel lymph node metastasis histologically, positive non-morphological findings for ITC

### pM – Distant Metastasis\*

pM1 Distant metastasis microscopically confirmed

**Note:** \*pM0 and pMX are not valid categories.

The category pM1 may be further specified in the same way as M1 (see page 11).

**Isolated tumour cells** found in bone marrow with morphological techniques are classified according to the scheme for M, e.g., M0(i+). For non-morphologic findings 'mol' is used in addition to M0, e.g., M0(mol+).

## Lip and Oral Cavity 29

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# Stage Grouping

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Stage 0	Tis	N0	M0
Stage I	T1	N0	M0
Stage II	T2	N0	M0
Stage III	Т3	N0	M0
	T1, T2, T3	N1	M0
Stage IVA	T1, T2, T3	N2	M0
	T4a	N0, N1, N2	M0
Stage IVB	Any T	N3	M0
	T4b	Any N	M0
Stage IVC	Any T	Any N	M1

## Summary

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Lip, Oral cavity			
T1	≤2 cm		
T2	>2-4 cm		
Т3	>4 cm		
T4a	<i>Lip</i> : through cortical bone, inferior alveolar nerve, floor of mouth, skin <i>Oral cavity</i> : through cortical bone, deep/ extrinsic muscle of tongue, maxillary sinus, skin of face		
T4b	Masticator space, pterygoid plates, skull base, internal carotid artery		
N1	Ipsilateral single ≤3 cm		
N2	<ul> <li>(a) Ipsilateral single &gt;3-6 cm</li> <li>(b) Ipsilateral multiple ≤6 cm</li> <li>(c) Bilateral, contralateral ≤6 cm</li> </ul>		
N3	>6 cm		

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## Summary

Phary	ynx
Oropi	harynx
T1	≤2cm
T2	>2-4 cm
T3	>4cm
T4a	Larynx, deep/extrinsic muscle of tongue, medial pterygoid, hard palate, mandible
T4b	Lateral pterygoid muscle, pterygoid plates, lateral nasopharynx, skull base, carotid artery
Нуро	pharynx
T1	≤2 cm and limited to one subsite
T2	>2–4 cm or more than one subsite
Т3	>4 cm or with hemilarynx fixation, extension to oesophagus
T4a	Thyroid/cricoid cartilage, hyoid bone, thyroid gland, central compartment soft tissue
T4b	Prevertebral fascia, carotid artery, mediastinal structures
Oropl	harynx and Hypopharynx
N1	Ipsilateral single ≤3 cm
N2	(a) Ipsilateral single $>3-6$ cm
	(b) Ipsilateral multiple ≤6 cm
	(c) Bilateral, contralateral ≤6 cm
N3	>6 cm

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specimen will ordinarily include 10 or more lymph nodes.

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If the lymph nodes are negative, but the number ordinarily examined is not met, classify as pN0.

When size is a criterion for pN classification, measurement is made of the metastasis, not of the entire lymph node.

## **G** Histopathological Grading

See definitions on page 24.

	Stage Grouping		
Stage 0	Tis	NO	M0
Stage I	T1	N0	M0
Stage II	T2	N0	M0
Stage III	T1, T2	N1	M0
	Т3	N0, N1	M0
Stage IVA	T1, T2, T3,	N2	M0
	T4a	N0, N1, N2	M0
Stage IVB	T4b	Any N	M0
	Any T	N3	M0
Stage IVC	Any T	Any N	M1

## Malignant Melanoma of Upper Aerodigestive Tract (ICD-O C00–06, C09.0, C09.1, C09.9, C10-14, C30-32)

## **Rules for Classification**

The classification applies to mucosal malignant melanomas of the head and neck region, i. e., of the upper aerodigestive tract. There should be histological confirmation of the disease and division of cases by site.

The following are the procedures for assessing T, N, and M categories:

T categoriesPhysical examination and imagingN categoriesPhysical examination and imagingM categoriesPhysical examination and imaging

## **Regional Lymph Nodes**

The regional lymph nodes are those appropriate to the site of the primary tumour. See page 24.

### **TNM Clinical Classification**

### T – Primary Tumour

- TX Primary tumour cannot be assessed
- T0 No evidence of primary tumour

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## Melanoma: Upper Aerodigestive 53

# Histopathological Grading

Not applicable.

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Stage Grouping				
Stage III Stage IVA	T3 T4a T3, T4a	N0 N0 N1	M0 M0 M0	
Stage IVB Stage IVC	T4b Any T	Any N Any N	M0 M1	

## Summary

Melanoma: Upper aerodigestive			
T3 T4a	Epithelium/submucosa (mucosal disease) Deep soft tissue, cartilage, bone, or overlying skin		
T4b	Brain, dura, skull base, lower cranial nerves, masticator space, carotid artery, prevertebral space, mediastinal structures		



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## Major Salivary Glands 57

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# G Histopathological Grading

See definitions on page 24.

Stage Grouping				
Stage I	T1	NO	M0	
Stage II	T2	NO	MO	
Stage III	Т3	N0	M0	
5	T1, T2, T3	N1	M0	
Stage IVA	T4a	N0, N1	M0	
-	T1, T2, T3, T4a	N2	M0	
Stage IVB	T4b	Any N	M0	
	Any T	N3	M0	
Stage IVC	Any T	Any N	M1	

## Summary

Salivary Glands			
T1 T2	<2 cm, without extraparenchymal extension		
T3	>2–4cm, without extraparenchymal extension >4cm and/or extraparenchymal extension		
T4a T4b	Skin, mandible, ear canal, facial nerve Skull, pterygoid plates, carotid artery		
N1 N2	<ul> <li>Ipsilateral single ≤3 cm</li> <li>(a) Ipsilateral single &gt;3-6 cm</li> <li>(b) Ipsilateral multiple ≤6 cm</li> <li>(c) Bilateral, contralateral ≤6 cm</li> </ul>		
N3	>6 cm		

# DIGESTIVE SYSTEM TUMOURS

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## **Introductory Notes**

The following sites are included:

- Oesophagus and Oesophagogastric junction
  - Stomach
- Gastrointestinal stromal tumour (GIST)
  - Small Intestine
  - Carcinoid (neuroendocrine) tumours
    - Appendix
    - Colon and Rectum
    - Anal canal
  - Liver cell carcinoma
  - Intrahepatic cholangiocarcinoma
  - Gallbladder
- Perihilar bile duct; distal extrahepatic bile duct
  - Ampulla of Vater
  - Pancreas

Each site is described under the following headings:

- Rules for classification with the procedures for assessing T, N, and M categories; additional methods may be used when they enhance the accuracy of appraisal before treatment
- Anatomical sites and subsites where appropriate
- Definition of the regional lymph nodes

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- TNM Clinical classification
- pTNM Pathological classification
- G Histopathological grading
- Stage grouping
- Summary

## **Regional Lymph Nodes**

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The number of lymph nodes ordinarily included in a lymphadenectomy specimen is noted at each site.

## **Distant Metastasis**

The categories M1 and pM1 may be further specified according to the following notation:

Pulmonary	PUL	Bone marrow	MAR
Osseous	OS S	Pleura	PLE
Hepatic	HEP	Peritoneum	PER
Brain	BRA	Adrenals	ADR
Lymph nodes	LYM	Skin	SKI
Others	OTH		

## **Histopathological Grading**

The definitions of the G categories apply to all digestive system tumours except GIST, appendix carcinoma, neuroendocrine carcinoma, and liver cell carcinoma.

## **Regional Lymph Nodes**

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The regional lymph nodes, irrespective of the site of the primary tumour, are those in the oesophageal drainage area including coeliac axis nodes and paraesophageal nodes in the neck, but not supraclavicular nodes.

## **TNM Clinical Classification**

### T – Primary Tumour

- TX Primary tumour cannot be assessed
- T0 No evidence of primary tumour
- Tis Carcinoma in situ/high-grade dysplasia
- T1 Tumour invades lamina propria, muscularis mucosae, or submucosa
  - T1a Tumour invades lamina propria or muscularis mucosae
  - T1b Tumour invades submucosa
- T2 Tumour invades muscularis propria
- T3 Tumour invades adventitia
- T4 Tumour invades adjacent structures
  - T4a Tumour invades pleura, pericardium, or diaphragm
  - T4b Tumour invades other adjacent structures such as aorta, vertebral body, or trachea

### N – Regional Lymph Nodes

- NX Regional lymph nodes cannot be assessed
- N0 No regional lymph node metastasis
- N1 Metastasis in 1–2 regional lymph nodes
- N2 Metastasis in 3–6 regional lymph nodes
- N3 Metastasis in 7 or more regional lymph nodes

### M – Distant Metastasis

- M0 No distant metastasis
- M1 Distant metastasis

## **pTNM** Pathological Classification

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The pT and pN categories correspond to the T and N categories. For pM see page 15.

pN0 Histological examination of a regional lymphadenectomy specimen will ordinarily include 7 or more lymph nodes.

If the lymph nodes are negative, but the number ordinarily examined is not met, classify as pN0.

## G Histopathological Grading

See definitions on page 65.

# Stomach (ICD-O C16)

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## **Rules for Classification**

The classification applies to carcinomas. There should be histological confirmation of the disease. A tumour the epicentre of which is within 5 cm of the oesophagogastric junction and also extends into the oesophagus is classified and staged according to the oesophageal scheme. All other tumours with an epicentre in the stomach greater than 5 cm from the oesophagogastric junction, or those within 5 cm of the junction without extension into the oesophagus, are staged using the gastric carcinoma scheme.

The following are the procedures for assessing T, N, and M categories:

T categories	-	examination, by, and/or surgi	
N categories	-	examination, Irgical explorat	
M categories	-	examination, irgical explorat	0.0

### Gastrointestinal Stromal Tumour 79

- Colon (C18)
- Rectum (C20)
- Omentum (C48.1)
- Mesentery (C48.1)

### **Regional Lymph Nodes**

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The regional lymph nodes are those appropriate to the site of the primary tumour; see gastrointestinal sites for details.

## **TNM Clinical Classification**

### **T – Primary Tumour**

- TX Primary tumour cannot be assessed
- T0 No evidence for primary tumour
- T1 Tumour 2 cm or less in greatest dimension
- T2 Tumour more than 2 cm but not more than 5 cm in greatest dimension
- T3 Tumour more than 5 cm but not more than 10 cm in greatest dimension
- T4 Tumour more than 10 cm in greatest dimension

### N – Regional Lymph Nodes

- NX Regional lymph nodes cannot be assessed\*
- N0 No regional lymph node metastasis
- N1 Regional lymph node metastasis
- Note: \*NX: Regional lymph node involvement is rare for GISTs, so that cases in which the nodal status is not assessed clinically or pathologically could be considered N0 instead of NX or pNX.

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### Gastrointestinal Stromal Tumour 81

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## Stage Grouping

Gastric GIST*					
					Mitotic rate
Stage IA	T1, T2		N0	M0	Low
Stage IB	Т3		N0	M0	Low
Stage II	T1, T2		N0	M0	High
	T4		N0	M0	Low
Stage IIIA	T3		N0	M0	High
Stage IIIB	T4		N0	M0	High
Stage IV	Any T		N1	M0	Any rate
	Any T		Any N	M1	Any rate
Small Intestinal GIST*					
					Mitotic rate
Stage I	T1, T2	N0	Ν	/10	Low
Stage II	Т3	N0	Ν	/10	Low
Stage IIIA	T1	N0	Ν	/10	High
	T4	N0	Ν	/10	Low
Stage IIIB	T2, T3, T4	N0	Ν	/10	High
Stage IV	Any T	N1		/10	Any rate
	Any T	Any N	N	/11	Any rate
Note: *Staging criteria for gastric tumours can be applied in primary, solitary omental GISTs. Staging criteria					

in primary, solitary omental GISTs. Staging criteria for small intestinal tumours can be applied to GISTs in less common sites, such as oesophagus, colon, rectum, and mesentery.

## Summary

Gastrointestinal Stromal Tumour			
≤2 cm >2 cm to 5 cm >5 cm to 10 cm >10 cm			

If the lymph nodes are negative, but the number ordinarily examined is not met, classify as pN0.

## G Histopathological Grading

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GΧ	Grade of differentiation cannot	be assessed
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G1 Well differentiated G2 Moderately

Mucinous low grade Mucinous high grade

differentiated G3 Poorly differentiated

Mucinous high grade

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G4 Undifferentiated

## Stage Grouping

Carcinoma				
Stage 0	Tis	N0	M0	
Stage I	T1, T2	N0	M0	
Stage IIA	Т3	N0	M0	
IIB	T4a	N0	M0	
IIC	T4b	N0	M0	
Stage IIIA	T1, T2	N1	M0	
IIIB	T3, T4	N1	M0	
IIIC	Any T	N2	M0	
Stage IVA	Any T	N0	M1a	G1
IVB	Any T	N0	M1a	G2, G3, G4
	Any T	N1, N2	M1a	Any G
Stage IVC	Any T	Any N	M1b	Any G

## **TNM Clinical Classification**

### T – Primary Tumour

- TX Primary tumour cannot be assessed
- T0 No evidence of primary tumour
- Tis<sup>1</sup> Carcinoma in situ: intraepithelial or invasion of lamina propria
- T1 Tumour invades submucosa
- T2 Tumour invades muscularis propria
- T3 Tumour invades subserosa or into nonperitonealized pericolic or perirectal tissues
- T4 Tumour perforates visceral peritoneum and/or directly invades other organs or structures
  - T4a Tumour perforates visceral peritoneum
  - T4b Tumour directly invades other organs or structures<sup>2,3</sup>
- Notes: 1. Tis includes cancer cells confined within the glandular basement membrane (intraepithelial) or mucosal lamina propria (intramucosal) with no extension through the muscularis mucosae into the submucosa.
  - 2. Direct invasion in T4b includes invasion of other organs or segments of the colorectum by way of the serosa, as confirmed on microscopic examination, or for tumours in a retroperitoneal or subperitoneal location, direct invasion of other organs or structures by virtue of extension beyond the muscularis propria.
  - Tumour that is adherent to other organs or structures, macroscopically, is classified cT4b. However, if no tumour is present in the adhesion, microscopically, the classification should be pT1–3, depending on the anatomical depth of wall invasion.

### N – Regional Lymph Nodes

- NX Regional lymph nodes cannot be assessed
- N0 No regional lymph node metastasis

# Anal Canal (ICD-0 C21.1,2)

The anal canal extends from rectum to perianal skin (to the junction with hair-bearing skin). It is lined by the mucous membrane overlying the internal sphincter, including the transitional epithelium and dentate line. Tumours of anal margin (ICD-O C44.5) are classified with skin tumours (page 165).

## **Rules for Classification**

The classification applies to carcinomas. There should be histological confirmation of the disease and division of cases by histological type.

The following are the procedures for assessing T, N, and M categories:

T categories	Physical examination, imaging, endoscopy, and/or surgical explo- ration
N categories	Physical examination, imaging, and/or surgical exploration
M categories	Physical examination, imaging, and/or surgical exploration

## **Regional Lymph Nodes**

The regional lymph nodes are the perirectal, the internal iliac, and the inguinal lymph nodes.

# Gallbladder (ICD-0 C23)

## **Rules for Classification**

The classification applies to carcinomas of gallbladder and cystic duct. There should be histological confirmation of the disease.

The following are the procedures for assessing T, N, and M categories:

T categories	Physical	examination,	imaging,
	and/or su	urgical explorat	ion
N categories	Physical	examination,	imaging,
	and/or su	urgical explorat	ion
M categories	Physical	examination,	imaging,
	and/or su	urgical explorat	ion

## **Anatomical Subsites**

1. Gallbladder (C23.9)

2. Cystic duct (C24.0)

## **Regional Lymph Nodes**

Regional lymph nodes are the hepatic hilus nodes (including nodes along the common bile duct, common hepatic artery, portal vein, and cystic duct).

### Gallbladder 121

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	Stage Gro	ouping	
Stage 0	Tis	NO	M0
Stage I	T1	N0	M0
Stage II	T2	N0	M0
Stage IIIA	Т3	N0	M0
Stage IIIB	T1, T2, T3	N1	M0
Stage IVA	T4	Any N	M0
Stage IVB	Any T	Any N	M1

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## Summary

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Gallbladder and Cystic Dust				
Т1	Lamina propria or muscular layer T1a Lamina propria T1b Muscular layer			
T2	Perimuscular connective tissue			
Т3	Serosa, one organ, and/or liver			
Т4	Portal vein, hepatic artery, or two or more extrahepatic organs			
N1	Along cystic duct, common bile duct, common hepatic artery, portal vein			

# G Histopathological Grading

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See definitions on page 65.

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	Stage Gr	ouping		
Stage 0	Tis	NO	M0	
Stage IA	T1	NO	M0	
Stage IB	T2	N0	M0	
Stage IIA	Т3	N0	M0	
Stage IIB	T1, T2, T3	N1	M0	
Stage III	T4	Any N	M0	
Stage IV	Any T	Any N	M1	

## **Summary**

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Distal Extrahepatic Bile Ducts				
T1	Ductal wall			
T2	Beyond ductal wall			
Т3	Gallbladder, pancreas, liver, duodenum, adjacent			
	organs			
T4	Coeliac axis or superior mesenteric artery			
N1	Regional			

## **TNM Clinical Classification**

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### T – Primary Tumour

- TX Primary tumour cannot be assessed
- T0 No evidence of primary tumour
- Tis Carcinoma in situ
- T1 Tumour limited to ampulla of Vater or sphincter of Oddi
- T2 Tumour invades duodenal wall
- T3 Tumour invades pancreas
- T4 Tumour invades peripancreatic soft tissues, or other adjacent organs or structures

### N – Regional Lymph Nodes

- NX Regional lymph nodes cannot be assessed
- N0 No regional lymph node metastasis
- N1 Regional lymph node metastasis

### M – Distant Metastasis

- M0 No distant metastasis
- M1 Distant metastasis

## **pTNM Pathological Classification**

The pT and pN categories correspond to the T and N categories. For pM see page 15.

pN0 Histological examination of a regional lymphadenectomy specimen will ordinarily include 10 or more lymph nodes.

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If the lymph nodes are negative, but the number ordinarily examined is not met, classify as pN0.

T3 Tumour extends beyond pancreas, but without involvement of coeliac axis or superior mesenteric artery

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- T4 Tumour involves coeliac axis or superior mesenteric artery
- **Note:** \*Tis also includes the 'PanIN–III' classification.

### N – Regional Lymph Nodes

- NX Regional lymph nodes cannot be assessed
- N0 No regional lymph node metastasis
- N1 Regional lymph node metastasis

### M – Distant Metastasis

- M0 No distant metastasis
- M1 Distant metastasis

## **pTNM Pathological Classification**

The pT and pN categories correspond to the T and N categories. For pM see page 15.

pN0 Histological examination of a regional lymphadenectomy specimen will ordinarily include 12 or more lymph nodes.

If the lymph nodes are negative, but the number ordinarily examined is not met, classify as pN0.

## **G** Histopathological Grading

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See definitions on page 65.

# LUNG AND PLEURAL TUMOURS

## **Introductory Notes**

The classifications apply to carcinomas of the lung including non-small cell and small cell carcinomas, bronchopulmonary carcinoid tumours, and malignant mesothelioma of pleura.

Each site is described under the following headings:

- Rules for classification with the procedures for assessing T, N, and M categories; additional methods may be used when they enhance the accuracy of appraisal before treatment
- Anatomical subsites where appropriate
- · Definition of the regional lymph nodes
- TNM Clinical classification
- pTNM Pathological classification
- G Histopathological grading where applicable
- Stage grouping
- Summary

## **Regional Lymph Nodes**

The regional lymph nodes extend from the supraclavicular region to the diaphragm.

Direct extension of the primary tumour into lymph nodes is classified as lymph node metastasis.

#### **140** Lung and Pleural Tumours

- T2 Tumour more than 3 cm but not more than 7 cm; or tumour with *any* of the following features<sup>2</sup>
  - Involves main bronchus, 2 cm or more distal to the carina
  - Invades visceral pleura
  - Associated with atelectasis or obstructive pneumonitis that extends to the hilar region but does not involve the entire lung
  - T2a Tumour more than 3cm but not more than 5cm in greatest dimension
  - T2b Tumour more than 5cm but not more than 7cm in greatest dimension
- T3 Tumour more than 7 cm or one that directly invades any of the following: parietal pleura, chest wall (including superior sulcus tumours), diaphragm, phrenic nerve, mediastinal pleura, parietal pericardium; *or* tumour in the main bronchus less than 2 cm distal to the carina<sup>1</sup> but without involvement of the carina; *or* associated atelectasis or obstructive pneumonitis of the entire lung or separate tumour nodule(s) in the same lobe as the primary
- T4 Tumour of any size that invades any of the following: mediastinum, heart, great vessels, trachea, recurrent laryngeal nerve, oesophagus, vertebral body, carina; separate tumour nodule(s) in a different ipsilateral lobe to that of the primary

### N – Regional Lymph Nodes

- NX Regional lymph nodes cannot be assessed
- N0 No regional lymph node metastasis

- N1 Metastasis in ipsilateral peribronchial and/or ipsilateral hilar lymph nodes and intrapulmonary nodes, including involvement by direct extension
- N2 Metastasis in ipsilateral mediastinal and/or subcarinal lymph node(s)
- N3 Metastasis in contralateral mediastinal, contralateral hilar, ipsilateral or contralateral scalene, or supraclavicular lymph node(s)

### M – Distant Metastasis

- M0 No distant metastasis
- M1 Distant metastasis
  - M1a Separate tumour nodule(s) in a contralateral lobe; tumour with pleural nodules or malignant pleural or pericardial effusion<sup>3</sup> M1b Distant metastasis
- **Notes:** 1. The uncommon superficial spreading tumour of any size with its invasive component limited to the bronchial wall, which may extend proximal to the main bronchus, is also classified as T1a.
  - 2. T2 tumours with these features are classified T2a if 5 cm or less, or if size cannot be determined and T2b if greater than 5 cm but not larger than 7 cm.
  - 3. Most pleural (pericardial) effusions with lung cancer are due to tumour. In a few patients, however, multiple microscopical examinations of pleural (pericardial) fluid are negative for tumour, and the fluid is nonbloody and is not an exudate. Where these elements and clinical judgement dictate that the effusion is not related to the tumour, the effusion should be excluded as a staging element and the patient should be classified as M0.

## 144 Lung and Pleural Tumours

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## Summary

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Lung	
тх	Positive cytology only
T1	≤3cm
T1a	≤2 cm
T1b	>2-3 cm
T2	Main bronchus ≥2 cm from carina, invades
	visceral pleura, partial atelectasis
T2a	>3 cm to 5 cm
T2b	>5 cm to 7 cm
T3	>7 cm; parietal pleura, chest wall, diaphragm,
	pericardium, mediastinal pleura, main bronchus
	<2 cm from carina, total atelectasis, separate
	nodule(s) in same lobe
T4	Mediastinum, heart, great vessels, carina,
	trachea, oesophagus, vertebral body; separate
	tumour nodule(s) in a different ipsilateral lobe
N1	Ipsilateral peribronchial, ipsilateral hilar
N2	Ipsilateral mediastinal, subcarinal
N3	Contralateral mediastinal or hilar, scalene or
	supraclavicular
M1	Distant metastasis
M1a	Separate tumour nodule(s) in a contralateral
	lobe; pleural nodules or malignant pleural
	or pericardial effusion
M1b	Distant metastasis

### References

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- Rami-Porta R, Ball D, Crowley J, et al. on behalf of the International Staging Committee. The IASLC Lung Cancer Staging Project: Proposals for the revision of the T descriptors in the forthcoming (seventh) edition of the TNM Classification of Lung Cancer. J Thor Oncol 2007; 2:593–602.

## **G** Histopathological Grading

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Translation table for three- and four-grade systems to a two-grade (low grade vs high grade) system

TNM two-grade	Three-grade	Four-grade
System	Systems	Systems
Low grade	Grade 1	Grade 1
		Grade 2
High grade	Grade 2	Grade 3
	Grade 3	Grade 4

**Note:** Ewing sarcoma is classified as high grade. If grade cannot be assessed classify as low grade.

### Note: Use N0 for NX

For T1 and T2, use low grade if no grade is stated

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## 156 Bone and Soft Tissue Tumours

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## Summary

Bone	
T1	≤8cm
T2	>8 cm
Т3	Discontinuous tumours in primary site
N1	Regional
M1a	Lung
M1b	Other sites
	Low grade
	High grade

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Stage Grouping				
C1	<b>T4</b> . <b>T4</b>	NO		61
Stage IA	T1a, T1b	N0	M0	G1
Stage IB	T2a, T2b	N0	M0	G1
Stage IIA	T1a, T1b	N0	M0	G2, G3
Stage IIB	T2a, T2b	N0	M0	G2
Stage III	T2a, T2b	N0	M0	G3
	Any T	N1	M0	Any G
Stage IV	Any T	Any N	M1	Any G

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Note: Use low grade for GX. Use N0 for NX.

## Summary

Soft Tissue Sarcoma		
T1 T1a T1b T2 T2a T2b	<5cm Superficial Deep >5cm Superficial Deep	
N1	Regional Low grade High grade	

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**pN0** Histological examination of a regional lymphadenectomy specimen will ordinarily include 6 or more lymph nodes.

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If the lymph nodes are negative, but the number ordinarily examined is not met, classify as pN0.

### **G** Histopathological Grading

- GX Grade of differentiation cannot be assessed
- G1 Well differentiated
- G2 Moderately differentiated
- G3 Poorly differentiated
- G4 Undifferentiated

### **High Risk Features**

Depth/Invasion	>2 mm thickness Clark Level IV
	Perineural invasion
	Lymphovascular invasion
Anatomic location	Primary site ear
	Primary site non-hair-bearing
	lip
Differentiation	Poorly differentiated or undifferentiated

#### 170 Skin Tumours

- T1 Tumour 5 mm or less in greatest dimension not invading the tarsal plate or eyelid margin
- T2a Tumour more than 5mm, but not more than 10mm in greatest dimension or any tumour that invades the tarsal plate or eyelid margin
- T2b Tumour more than 10mm, but not more than 20mm in greatest dimension, or involves full thickness eyelid
- T3a Tumour more than 20mm in greatest dimension or any tumour that invades adjacent ocular or orbital structures or any tumour with perineural invasion
- T3b Tumour whose complete resection requires enucleation, exenteration, or bone resection
- T4 Tumour is not resectable due to extensive invasion of ocular, orbital, craniofacial structures, or brain

#### N – Regional Lymph Nodes

- NX Regional lymph nodes cannot be assessed
- N0 No regional lymph node metastasis
- N1 Regional lymph node metastasis

#### M – Distant Metastasis

- M0 No distant metastasis
- M1 Distant metastasis

### **pTNM Pathological Classification**

The pT and pN categories correspond to the T and N categories. For pM see page 15.

### Carcinoma of Skin of Eyelid 171

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# G Histopathological Grading

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See definitions on page 167.

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	Stage	Group	ing
Stage 0	Tis	N0	M0
Stage IA	T1	N0	M0
Stage IB	T2a	N0	M0
Stage IC	T2b	N0	M0
Stage II	T3a	N0	M0
Stage IIIA	T3b	N0	M0
Stage IIIB	Any T	N1	M0
Stage IIIC	T4	Any N	M0
Stage IV	Any T	Any N	M1

### Summary

Eyelid Carcinoma			
T1	≤5mm, not in tarsal plate or lid margin		
T2a	>5 to 10 mm or tarsal plate or lid margin		
T2b	>10 to 20mm or full thickness eyelid		
T3a	>20mm or adjacent ocular/orbital structures,		
	perineural		
T3b	Needs enucleation, exenteration, or bone resection		
Т4	Not resectable due to extensive invasion		
N1	Regional		

#### N – Regional Lymph Nodes

- NX Regional lymph nodes cannot be assessed
- N0 No regional lymph node metastasis
- N1 Metastasis in one regional lymph node N1a Only microscopic metastasis (clinically occult)
  - N1b Macroscopic metastasis (clinically apparent)
- N2 Metastasis in two or three regional lymph nodes or satellite(s) or in-transit metastasis N2a Only microscopic nodal metastasis
  - N2b Macroscopic nodal metastasis
  - N2c Satellite(s) or in-transit metastasis without regional nodal metastasis
- N3 Metastasis in four or more regional lymph nodes, or matted metastatic regional lymph nodes, or satellite(s) or in-transit metastasis with metastasis in regional lymph node(s)
- **Note:** Satellites are tumour nests or nodules (macro- or microscopic) within 2 cm of the primary tumour. In-transit metastasis involves skin or subcutaneous tissue more than 2 cm from the primary tumour but not beyond the regional lymph nodes.

#### M – Distant Metastasis

- M0 No distant metastasis
- M1 Distant metastasis
  - M1a Skin, subcutaneous tissue or lymph node(s) beyond the regional lymph nodes M1b Lung
    - M1c Other sites, or any site with elevated serum lactic dehydrogenase (LDH)

#### 174 Skin Tumours

### **pTNM Pathological Classification**

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#### pT – Primary Tumour

- pTX Primary tumour cannot be assessed\*
- pT0 No evidence of primary tumour
- pTis Melanoma in situ (Clark Level I) (atypical melanocytic hyperplasia, severe melanocytic dysplasia, not an invasive malignant lesion)
- Note: \*pTX includes shave biopsies and regressed melanomas.
- pT1 Tumour 1 mm or less in thickness pT1a Without ulceration and mitosis  $< 1/mm^2$ pT1b With ulceration or mitoses  $\ge 1/mm^2$
- pT2 Tumour more than 1mm but not more than 2mm in thickness pT2a without ulceration pT2b with ulceration
- pT3 Tumour more than 2mm but not more than 4mm in thickness pT3a without ulceration pT3b with ulceration
- pT4 Tumour more than 4mm in thickness pT4a without ulceration pT4b with ulceration

### pN – Regional Lymph Nodes

The pN categories correspond to the N categories.

pN0 Histological examination of a regional lymphadenectomy specimen will ordinarily include 6 or more lymph nodes.

If the lymph nodes are negative, but the number ordinarily examined is not met, classify as pN0.

### Malignant Melanoma of Skin 175

Classification based solely on sentinel node biopsy without subsequent lymph node dissection is designated (sn) for sentinel node, e.g., pN1(sn). See Introduction, page 13.

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### pM – Distant Metastasis

For pM see page 15.

Stage Grouping				
Stage 0	pTis	N0	M0	
Stage I	pT1	N0	M0	
Stage IA	pT1a	N0	M0	
Stage IB	pT1b	N0	M0	
-	pT2a	N0	M0	
Stage IIA	pT2b	N0	M0	
	рТЗа	N0	M0	
Stage IIB	pT3b	N0	M0	
	pT4a	N0	M0	
Stage IIC	pT4b	N0	M0	
Stage IIIA	pT1a–4a	N1a, 2a	M0	
Stage IIIB	pT1a–4a	N1b, 2b, 2c	M0	
	pT1b–4b	N1a, 2a, 2c	M0	
Stage IIIC	pT1b–4b	N1b, 2b, 2c	M0	
	Any pT	N3	M0	
Stage IV	Any pT	Any N	M1	

### 176 Skin Tumours

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## Summary

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Skin I	Malignant Melanoma
pT1a	≤1mm, <1 mitosis/mm <sup>2</sup> , no ulceration
pT1b	$\leq$ 1 mm, $\geq$ 1 mitosis/mm <sup>2</sup> , or ulceration
pT2a	>1–2 mm, no ulceration
pT2b	>1–2 mm, ulceration
рТЗа	>2–4 mm, no ulceration
pT3b	>2–4mm, ulceration
pT4a	>4mm, no ulceration
pT4b	>4mm, ulceration
N1	1 node
N1a	Microscopic
	Macroscopic
N2	2–3 nodes or satellites/in-transit without nodes
N2a	2–3 nodes microscopic
N2b	2–3 nodes macroscopic
N2c	satellite(s) or in-transit without nodes
N3	≥4 nodes; matted; satellite(s) or in-transit
	without nodes
M1	Distant metastasis
M1a	
IVITA	beyond the regional
M1b	Lung
M1c	Other sites; any site with elevated LDH
WITC	Other sites, any site with elevated LDH

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#### 178 Skin Tumours

- T1 Tumour 2 cm or less in greatest dimension
- T2 Tumour more than 2 cm but not more than 5 cm in greatest dimension
- T3 Tumour more than 5 cm in greatest dimension
- T4 Tumour invades deep extradermal structures, i.e., cartilage, skeletal muscle, fascia, or bone

#### N – Regional Lymph Nodes

- NX Regional lymph nodes cannot be assessed
- N0 No regional lymph node metastasis
- N1 Regional lymph node metastasis
  - N1a Microscopic metastasis (clinically occult: cN0 + pN1)
    - N1b Macroscopic metastasis (clinically apparent: cN1 + pN1)
- N2 In-transit metastasis\*
- **Note:** \*In-transit metastasis: a tumour distinct from the primary lesion and located between the primary lesion and the draining regional lymph nodes or distal to the primary lesion.

#### M – Distant Metastasis

- M0 No distant metastasis
- M1 Distant metastasis
  - M1a Skin, subcutaneous tissues or non-regional lymph node(s)
  - M1b Lung
  - M1c Other site(s)

### **pTNM** Pathological Classification

The pT and pN categories correspond to the T and N categories. For pM see page 15.

#### 188 Breast Tumours

- pNX Regional lymph nodes cannot be assessed (e.g., previously removed, or not removed for pathological study)
- pN0 No regional lymph node metastasis\*
- Note: \*Isolated tumour cell clusters (ITC) are single tumour cells or small clusters of cells not more than 0.2mm in greatest extent that can be detected by routine H&E stains or immunohistochemistry. An additional criterion has been proposed to include a cluster of fewer than 200 cells in a single histological cross-section. Nodes containing only ITCs are excluded from the total positive node count for purposes of N classification and should be included in the total number of nodes evaluated. See Introduction, page 13.
- pN1 Micrometastasis; or metastasis in 1–3 axillary ipsilateral lymph nodes; and/or in internal mammary nodes with metastasis detected by sentinel lymph node biopsy but not clinically detected<sup>1</sup>
  - pN1mi Micrometastasis (larger than 0.2 mm and/or more than 200 cells, but none larger than 2.0 mm)
  - pN1a Metastasis in 1–3 axillary lymph node(s), including at least 1 larger than 2mm in greatest dimension
  - pN1b Internal mammary lymph nodes with microscopic or macroscopic metastasis detected by sentinel lymph node biopsy but not clinically detected<sup>1</sup>
  - pN1c Metastasis in 1–3 axillary lymph nodes and internal mammary lymph nodes with microscopic or macroscopic metastasis detected by sentinel lymph node biopsy but not clinically detected<sup>1</sup>
- pN2 Metastasis in 4–9 ipsilateral axillary lymph nodes, or in clinically detected<sup>1</sup> ipsilateral

# GYNAECOLOGICAL TUMOURS

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### **Introductory Notes**

The following sites are included:

- Vulva
- Vagina
- Cervix uteri
- Corpus uteri
  - Endometrium
  - Uterine sarcomas
- Ovary
- Fallopian tube
- Gestational trophoblastic tumours

Cervix uteri and corpus uteri were among the first sites to be classified by the TNM system. Originally, carcinoma of the cervix uteri was staged following the rules suggested by the Radiological Sub-Commission of the Cancer Commission of the Health Organization of the 'League of Nations'. These rules were then adopted, with minor modifications, by the newly formed Fédération Internationale de Gynécologie et d'Obstétrique (FIGO). Finally, UICC brought them into the TNM in order to correspond to the FIGO stages. FIGO, UICC, and AJCC work in close collaboration in the revision process.

#### **Reference:**

Pecorelli S. Revised FIGO staging for carcinoma of the vulva, cervix and endometrium. Int J Gynecol Obstet 2009; 105: 103–104

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#### **198** Gynaecological Tumours

### **TNM Clinical Classification**

#### T – Primary Tumour

- TX Primary tumour cannot be assessed
- T0 No evidence of primary tumour
- Tis Carcinoma in situ (preinvasive carcinoma), intraepithelial neoplasia Grade III (VIN III)
- T1 Tumour confined to vulva or vulva and perineum
  - T1a Tumour 2cm or less in greatest dimension and with stromal invasion no greater than 1.0 mm<sup>1</sup>
  - T1b Tumour greater than 2 cm or with stromal invasion greater than 1 mm<sup>1</sup>
- T2 Tumour of any size with extension to adjacent perineal structures: lower third urethra, lower third vagina, anus
- T3<sup>2</sup> Tumour of any size with extension to the following structures: upper 2/3 urethra, upper 2/3 vagina, bladder mucosa, rectal mucosa; or fixed to pelvic bone
- **Notes:** 1. The depth of invasion is defined as the measurement of the tumour from the epithelial–stromal junction of the adjacent most superficial dermal papilla to the deepest point of invasion.
  - 2. T3 is not used by FIGO. They label it T4.

#### N – Regional Lymph Nodes

- NX Regional lymph nodes cannot be assessed
- N0 No regional lymph node metastasis
- N1 Regional lymph node metastasis with the following features:

### 200 Gynaecological Tumours

# G Histopathological Grading

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See definitions on page 195.

Stage Grouping				
Stage 0*	Tis	N0	M0	
Stage I	T1	N0	M0	
Stage IA	T1a	N0	M0	
Stage IB	T1b	N0	M0	
Stage II	T2	N0	M0	
Stage IIIA	T1, T2	N1a, N1b	M0	
Stage IIIB	T1, T2	N2a, N2b	M0	
Stage IIIC	T1, T2	N2c	M0	
Stage IVA	T1, T2	N3	M0	
_	Т3	Any N	M0	
Stage IVB	Any T	Any N	M1	

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■ Note: \* FIGO no longer includes stage 0 (Tis).

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# Summary

TNM	Vulva	FIGO	
T1	Confined to vulva/perineum	1	
T1a	$\leq 2 \text{ cm}$ with stromal invasion $\leq 1.0 \text{ mm}$	IA	
T1b	>2 cm or stromal invasion >1.0 mm		
T2	Lower urethra/vagina/anus	II	
Т3	Upper urethra/vagina, bladder rectal/mucosa, fixed to pelvic bone	IVA	
N1a	1–2 nodes <5 mm	IIIA	
N1b	1 node ≥5 mm	IIIA	
N2a	3 or more nodes <5 mm	IIIB	
N2b	2 or more nodes ≥5mm	IIIB	
N2c	Extracapsular spread	IIIC	
N3	Fixed or ulcerated	IVA	
M1	Distant	IVB	

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### **Regional Lymph Nodes**

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*Upper two-thirds of vagina*: the pelvic nodes including obturator, internal iliac (hypogastric), external iliac, and pelvic nodes, NOS.

Lower third of vagina: the inguinal and femoral nodes.

### **TNM Clinical Classification**

### **T – Primary Tumour**

TNM Categories	FIGO Stages	
TX T0 Tis	1	Primary tumour cannot be assessed No evidence of primary tumour Carcinoma in situ (preinvasive carcinoma)
T1 T2	 	Tumour confined to vagina Tumour invades paravaginal tissues (paracolpium)
T3 T4	III IVA	Tumour extends to pelvic wall Tumour invades <i>mucosa</i> of bladder or rectum, or extends beyond the true pelvis <sup>2</sup>
Notes: 1. F	IGO no lor	nger includes stage 0 (Tis).

2. The presence of bullous oedema is not sufficient evidence to classify a tumour as T4

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M1 IVB Distant metastasis



Cervix Uteri 207

### **Anatomical Subsites**

- 1. Endocervix (C53.0)
- 2. Exocervix (C53.1)

### **Regional Lymph Nodes**

The regional lymph nodes are the paracervical, parametrial, hypogastric (internal iliac, obturator), common and external iliac, presacral, and lateral sacral nodes. Para-aortic nodes are not regional.

### **TNM Clinical Classification**

### **T – Primary Tumour**

TNM Categories	FIGO Stages	
TX T0 Tis	1	Primary tumour cannot be assessed No evidence of primary tumour Carcinoma in situ (preinvasive carci- noma)
T1	I	Tumour confined to the cervix (extension to corpus should be disregarded)
T1a <sup>2</sup>	IA	Invasive carcinoma diagnosed only by microscopy. Stromal invasion with a maximal depth of 5.0mm measured from the base of the epithelium and a horizontal spread of 7.0mm or less <sup>3</sup>

Т3	III	Tumour extends to pelvic wall, involves lower third of vagina, causes hydronephrosis or non-functioning kidney
ТЗа	IIIA	Tumour involves lower third of vagina
T3b	IIIB	Tumour extends to pelvic wall, causes hydronephrosis or non- functioning kidney
Τ4	IVA	Tumour invades mucosa of the bladder or rectum, or extends beyond true pelvis <sup>4,5</sup>

#### Notes:

<sup>1</sup>FIGO no longer includes Stage 0 (Tis).

- <sup>2</sup> All macroscopically visible lesions even with superficial invasion are T1b/IB.
- <sup>3</sup> Vascular space involvement, venous or lymphatic, does not affect classification.
- <sup>4</sup> Bullous oedema is not sufficient to classify a tumour as T4.

<sup>5</sup> Invasion of bladder or rectal mucosa should be biopsy proven according to FIGO

### N – Regional lymph nodes

- NX Regional lymph nodes cannot be assessed
- N0 No regional lymph node metastasis
- N1 Regional lymph node metastasis

#### M – Distant Metastasis

- M0 No distant metastasis
- M1 Distant metastasis (includes inguinal lymph nodes and intraperitoneal disease except metastasis to pelvic serosa). It excludes metastasis to vagina, pelvic serosa, and adnexa

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## Summary

TNM	Cervix Uteri	FIGO
Tis	In situ	_
T1	Confined to uterus	I
T1a	Diagnosed only by	IA
<b>T</b> 4 4	microscopy	14.4
T1a1	Depth ≤3mm, horizontal spread ≤7mm	IA1
T1a2	Depth >3–5 mm, horizontal	IA2
	spread ≤7 mm	
T1b	Clinically visible or	IB
	microscopic lesion greater	
	than T1a2	
T1b1	≪4cm	IB1
T1b2	>4cm	IB2
T2	Beyond uterus but not	
	pelvic wall or lower third	
	vagina	
T2a	No parametrium	IIA
T2a1	≤ 4 cm	IIA1
T2a2		IIA2
T2b T3	Parametrium	IIB
13	Lower third vagina/pelvic	111
	wall/hydronephrosis, non-functioning kidney	
T3a	Lower third vagina	IIIA
T3b	Pelvic wall/hydronephrosis,	IIIA
130	non-functioning kidney	IIIB
Т4	Mucosa of bladder/rectum;	ind
14	beyond true pelvis	IVA
N1	Regional	
M1	Distant metastasis	IVB

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# Uterus -Endometrium (ICD-0 C54.0, 1,3, 55)

The definitions of the T, N, and M categories correspond to the FIGO stages. Both systems are included for comparison.

### **Rules for Classification**

The classification applies to endometrial carcinomas and carcinosarcomas (malignant mixed mesodermal tumours). There should be histological verification with subdivision by histological type and grading of the carcinomas. The diagnosis should be based on examination of specimens taken by endometrial biopsy.

The following are the procedures for assessing T, N, and M categories:

T categories	Physical examination and imag- ing including urography and		
	cystoscopy		
N categories	Physical examination and imag- ing including urography		
M categories	Physical examination and imaging		

The FIGO stages are based on surgical staging. (TNM stages are based on clinical and/or pathological classification.)

### Uterus - Endometrium 213

### **Anatomical Subsites**

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- 1. Isthmus uteri (C54.0)
- 2. Fundus uteri (C54.3)
- 3. Endometrium (C54.1)

### **Regional Lymph Nodes**

The regional lymph nodes are the pelvic (hypogastric [obturator, internal iliac], common and external iliac, parametrial, and sacral) and the para-aortic nodes.

### **TNM Clinical Classification**

### **T – Primary Tumour**

TNM Categories	FIGO Stages	
тх то		Primary tumour cannot be assessed No evidence of primary tumour
Tis		Carcinoma in situ (preinvasive carcinoma)
T1	<b>I</b> <sup>1</sup>	Tumour confined to the corpus uteri <sup>1</sup>
T1a	IA <sup>1</sup>	Tumour limited to endometrium or invading less than half of myo- metrium
T1b	IB	Tumour invades one half or more of myometrium
T2	II	Tumour invades cervi- cal stroma, but does not extend beyond the uterus

### 214 Gynaecological Tumours

T3 and/or N1	Ш	Local and/or regional		
T3a	IIIA	spread as specified below: Tumour invades the serosa of the corpus uteri or ad- nexae (direct extension or metastasis)		
T3b	IIIB	Vaginal or parametrial involvement (direct exten- sion or metastasis)		
N1	IIIC	Metastasis to pelvic or para-aortic lymph nodes <sup>2</sup>		
	IIIC1	Metastasis to pelvic lymph nodes		
N2	IIIC2	Metastasis to para-aortic lymph nodes with or with- out metastasis to pelvic lymph nodes		
T4	IVA	Tumour invades bladder/ bowel mucosa <sup>3</sup>		
M1	IVB	Distant metastasis (exclud- ing metastasis to vagina, pelvic serosa, or adnexae)		
Neter		Note: The presence of bullous oedema is not sufficient evidence to classify as T4. This lesion should be confirmed by biopsy.		
Notes:				

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#### Notes:

- 1. Endocervical glandular involvement only should now be considered as Stage I.
- 2. Positive cytology has to be reported separately without changing the stage.

### N – Regional Lymph Nodes

NX Regional lymph nodes cannot be assessed

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- N0 No regional lymph node metastasis
- N1 Regional lymph node metastasis

#### M – Distant Metastasis

- M0 No distant metastasis
- M1 Distant metastasis (excluding metastasis to vagina, pelvic serosa, or adnexae, including metastasis to inguinal lymph nodes, intraabdominal lymph nodes other than para-aortic or pelvic nodes)

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### pTNM Pathological Classification

The pT and pN categories correspond to the T and N categories. For pM see page 15.

pN0 Histological examination of a pelvic lymphadenectomy specimen will ordinarily include 6 or more lymph nodes.

If the lymph nodes are negative, but the number ordinarily examined is not met, classify as pN0. (FIGO considers such cases as pNX).

### **G** Histopathological Grading

For histopathological grading use G1, G2, or G3. For details see:

Creasman WT, Odicino F, Maisoneuve P, et al. FIGO Annual Report on the results of treatment in gynaecological cancer. Vol. 26. Carcinoma of the corpus uteri. *Int J Gynecol Obstet* 2006; 95, Suppl 1:105–143.

### 216 Gynaecological Tumours

 $(\mathbf{1})$ 

Stage Grouping				
Stage IA	T1a	N0	M0	
Stage IB	T1b	N0	M0	
Stage II	T2	N0	M0	
Stage IIIA	T3a	N0	M0	
Stage IIIB	T3b	N0	M0	
Stage IIIC	T1, T2, T3	N1, N2	M0	
Stage IIIC1	T1, T2, T3	N1	M0	
Stage IIIC2	T1, T2, T3	N2	M0	
Stage IVA	T4	Any N	M0	
Stage IVB	Any T	Any N	M1	

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## Summary

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TNM	Corpus Uteri	FIGO
T1	Confined to corpus (includes	
	endocervical glands)	1
T1a	Tumour limited to endometrium or	
	less than one-half of myometrium	IA
T1b	One-half or more of myometrium	IB
T2	Invades cervix	II
T3	Local or regional as specified	III
and/or	below	
N1		
T3a	Serosa/adnexa	IIIA
T3b	Vaginal/parametrial	IIIB
N1, N2	Regional lymph node metastasis	IIIC
T4	Mucosa of bladder/bowel	IVA
M1	Distant metastasis	IVB

# Uterus - Uterine Sarcomas (leiomyosarcoma, endometrial stromal sarcoma, adenosarcoma) (ICD-0 53, 54)

The definitions of the T, N, and M categories correspond to the FIGO stages. Both systems are included for comparison.

References:

Prat J. FIGO staging for uterine sarcomas. Int J Gynaecol Obstet 2009; 104:177–178.

FIGO Committee on Gyn Onc Report. FIGO staging for uterine sarcomas. *Int J Gynaecol Obstet* 2009; 104:179.

### **Rules for Classification**

The classification applies to sarcomas except for carcinosarcoma, which is classified along with carcinoma of the endometrium. There should be histological confirmation and division of cases by histological type.

The following are the procedures for assessing T, N, and M categories:

T categoriesPhysical examination and imagingN categoriesPhysical examination and imagingM categoriesPhysical examination and imaging

The FIGO stages are based on surgical staging. (TNM stages are based on clinical and/or pathological classification.)

### 224 Gynaecological Tumours

		following: capsule ruptured, tumour on ovarian surface, malignant cells in ascites or peritoneal washings
T2	П	Tumour involves one or both
T2a	IIA	ovaries with pelvic extension Extension and/or implants on uterus and/or tube(s); no malignant cells in ascites or peritoneal washings
T2b	IIB	Extension to other pelvic tissues; no malignant cells in ascites or peritoneal washings
T2c	IIC	Pelvic extension (2a or 2b) with malignant cells in ascites or peritoneal washings
Т3	111	Tumour involves one or both ovaries with microscopically confirmed peritoneal metas- tasis outside the pelvis and/or regional lymph node metastasis
T3a	IIIA	Microscopic peritoneal
T3b	IIIB	metastasis beyond pelvis Macroscopic peritoneal, metastasis beyond pelvis, 2 cm or less in greatest dimension
T3c and/ or N1	IIIC	Peritoneal metastasis beyond pelvis, more than 2 cm in greatest dimension and/or regional lymph node
M1	IV	metastasis Distant metastasis (excludes peritoneal metastasis)

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Note: Liver capsule metastasis is T3/Stage III, liver parenchymal metastasis M1/Stage IV. Pleural effusion must have positive cytology for M1/Stage IV.

# Summary

тим	Fallopian Tube	FIGO
Tis	Carcinoma in situ	
T1	Limited to tube(s)	I
T1a	One tube; serosa intact	IA
T1b	Both tubes; serosa intact	IB
T1c	Serosa involved; malignant	IC
	cells in ascites or peritoneal	
	washings	
T2	Pelvic extension	II
T2a	Uterus and/or ovaries	IIA
T2b	Other pelvic structures	IIB
T2c	Malignant cells in ascites or	IIC
	peritoneal washings	
T3 and/	Peritoneal metastasis outside	III
or N1	the pelvis and/or regional lymph	
	node metastasis	
T3a	Microscopic peritoneal metastasi	s IIIA
T3b	Macroscopic peritoneal metastas ≪2 cm	is IIIB
T3c	Peritoneal metastasis >2 cm	IIIC
and/	and/or regional lymph node met	astasis
or N1		
M1	Distant metastasis (excludes	IV
	peritoneal metastasis)	

### Gestational Trophoblastic Tumours 233

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	The following are the procedures for assessing T and M categories:		
	T categories:	Clinical examination, imaging and endoscopy, and serum/ urine βhCG level	
	M categories:	Clinical examination, imaging, and assessment of serum/urine βhCG level	
•	Risk categories:	Age, type of antecedent preg- nancy, interval months from index pregnancy, pretreat- ment serum/urine $\beta$ hCG, diam- eter of largest tumour, site of metastasis, number of metas- tases, and previous failed chemotherapy are integrated to provide a prognostic score that divides cases into low and high risk categories.	

# TM Clinical Classification

### **T– Primary Tumour**

TM Categories	FIGO Stages*	
тх		Primary tumour cannot be assessed
Т0		No evidence of primary tumour
T1	I	Tumour confined to uterus

#### 240 Urological Tumours

### **TNM Clinical Classification**

### T – Primary Tumour

- TX Primary tumour cannot be assessed
- T0 No evidence of primary tumour
- Tis Carcinoma in situ
- Ta Non-invasive verrucous carcinoma<sup>1</sup>
- T1 Tumour invades subepithelial connective tissue
  - T1a Tumour invades subepithelial connective tissue without lymphovascular invasion and is not poorly differentiated or undifferentiated
  - T1b Tumour invades subepithelial connective tissue with lymphovascular invasion or is poorly differentiated or undifferentiated
- T2 Tumour invades corpus spongiosum or cavernosum
- T3 Tumour invades urethra
- T4 Tumour invades other adjacent structures
- **Note:** 1. Verrucous carcinoma not associated with destructive invasion.

#### N – Regional Lymph Nodes

- NX Regional lymph nodes cannot be assessed
- N0 No palpable or visibly enlarged inguinal lymph nodes
- N1 Palpable mobile unilateral inguinal lymph node
- N2 Palpable mobile multiple or bilateral inguinal lymph nodes
- N3 Fixed inguinal nodal mass or pelvic lymphadenopathy unilateral or bilateral

### M – Distant Metastasis

- M0 No distant metastasis
- M1 Distant metastasis

### **pTNM Pathological Classification**

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The pT categories correspond to the T categories. The pN categories are based upon biopsy, or surgical excision. For pM see page 15.

- pNX Regional lymph nodes cannot be assessed
- pN0 No regional lymph node metastasis
- pN1 Metastasis in a single inguinal lymph node
- pN2 Metastasis in multiple or bilateral inguinal lymph nodes
- pN3 Metastasis in pelvic lymph node(s), unilateral or bilateral or extranodal extension of regional lymph node metastasis

### **G** Histopathological Grading

- GX Grade of differentiation cannot be assessed
- G1 Well differentiated
- G2 Moderately differentiated
- G3-4 Poorly differentiated/undifferentiated

### 242 Urological Tumours

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Stage Grouping				
Ctore O	<b>T</b> :-	NO	140	
Stage 0	Tis Ta	N0 N0	M0 M0	
Stage I	T1a	N0	M0	
Stage II	T1b	N0	M0	
	T2	N0	M0	
	Т3	N0	M0	
Stage IIIA	T1, T2, T3	N1	M0	
Stage IIIB	T1, T2, T3	N2	M0	
Stage IV	T4	Any N	M0	
	Any T	N3	M0	
	Any T	Any N	M1	

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# Summary

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Penis			
Tis	Carcinoma in situ		
Та	Non-invasive verrucous of	carcin	oma
T1	Subepithelial connective	e tissu	e
T1a	without lymphovascular	inva	sion, not G3–4
T1b	with lymphovascular inv	asion	, or G3–4
T2	Corpus spongiosum, cav	ernos	sum
Т3	Urethra		
Т4	Other adjacent structure	es	
N1	Single palpable mobile unilateral inguinal	pN1	Single inguinal
N2	Palpable mobile	pN2	Multiple/bilateral
	multiple or bilateral		inguinal
	inguinal		
N3	Fixed inguinal or	pN3	Pelvic or
	pelvic		extranodal

#### 244 Urological Tumours

### **TNM Clinical Classification**

#### T – Primary Tumour

- TX Primary tumour cannot be assessed
- T0 No evidence of primary tumour
- T1 Clinically inapparent tumour, neither palpable nor visible by imaging
  - T1a Tumour incidental histological finding in 5% or less of tissue resected
  - T1b Tumour incidental histological finding in more than 5% of tissue resected
  - T1c Tumour identified by needle biopsy, e.g., because of elevated prostate-specific antigen (PSA)
- T2 Tumour confined within prostate<sup>1</sup>
  - T2a Tumour involves one-half of one lobe or less
  - T2b Tumour involves more than one-half of one lobe, but not both lobes
  - T2c Tumour involves both lobes
- T3 Tumour extends through the prostatic capsule<sup>2</sup>
  - T3a Extracapsular extension (unilateral or bilateral) including microscopic bladder neck involvement
  - T3b Tumour invades seminal vesicle(s)
- T4 Tumour is fixed or invades adjacent structures other than seminal vesicles: external sphincter, rectum, levator muscles, and/or pelvic wall
- Notes: 1. Tumour found in one or both lobes by needle biopsy, but not palpable or reliably visible by imaging, is classified as T1c.
  - Invasion into the prostatic apex or into (but not beyond) the prostatic capsule is not classified as T3, but as T2.

#### N – Regional Lymph Nodes

NX Regional lymph nodes cannot be assessed

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- N0 No regional lymph node metastasis
- N1 Regional lymph node metastasis

#### M – Distant Metastasis\*

- M0 No distant metastasis
- M1 Distant metastasis M1a Non-regional lymph node(s) M1b Bone(s) M1c Other site(s)
- Note: \*When more than one site of metastasis is present, the most advanced category is used. pM1c is the most advanced category.

### **pTNM Pathological Classification**

The pT and pN categories correspond to the T and N categories. For pM see page 15.

However, there is no pT1 category because there is insufficient tissue to assess the highest pT category.

Note: Metastasis no larger than 0.2 cm can be designated pN1 mi. (see Introduction, pN, page 13.)

### G Histopathological Grading

- GX Grade cannot be assessed
- G1 Well differentiated (slight anaplasia) (Gleason  $\leq$ 6)
- G2 Moderately differentiated (moderate anaplasia) (Gleason 7)
- G3–4 Poorly differentiated/undifferentiated (marked anaplasia) (Gleason 8–10)

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# Prognostic Grouping

Group I	T1a–c	N0	M0	PSA <	<10	Gleason ≤6
	T2a	N0	M0	PSA <	<10	⊲o Gleason ≤6
Group IIA	T1a–c	N0	M0	PSA <	< 20	Gleason 7
	T1a–c	N0	M0	PSA ≥	≥10<20	Gleason ≤6
	T2a	N0	M0	PSA ≥	≥10<20	Gleason ≤6
	T2a	N0	M0	PSA <	< 20	Gleason 7
	T2b	N0	M0	PSA <	< 20	Gleason ≤7
Group IIB	T2c	N0	M0	Any P	SA	Any Gleason
	T1–2	N0	M0	PSA ≥	≥20	Any Gleason
	T1–2	N0	M0	Any P	SA	Gleason ≥8
Group III	T3a, b	N0	M0	Any P	SA	Any Gleason
Group IV	T4	N0	M0	Any P	SA	Any Gleason
	Any T	N1	M0	Any P	SA	Any Gleason
	Any T	Any N	M1	Any P	SA	Any Gleason
Note: When either PSA or Gleason is not available, group- ing should be determined by T category and which- ever of either PSA or Gleason is available. When neither is available prognostic grouping is not pos- sible, use stage grouping						

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#### 256 Urological Tumours

T2 Tumour more than 7 cm in greatest dimension, limited to the kidney

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- T2a Tumour more than 7cm but not more than 10cm
- T2b Tumour more than 10cm, limited to the kidney
- T3 Tumour extends into major veins or perinephric tissues but not into the ipsilateral adrenal gland and not beyond Gerota fascia
  - T3a Tumour grossly extends into the renal vein or its segmental (muscle containing) branches, or tumour invades perirenal and/or renal sinus fat (peripelvic) fat but not beyond Gerota fascia
  - T3b Tumour grossly extends into vena cava below diaphragm
  - T3c Tumour grossly extends into vena cava above the diaphragm or invades the wall of the vena cava
- T4 Tumour invades beyond Gerota fascia (including contiguous extension into the ipsilateral adrenal gland)

#### N – Regional Lymph Nodes

- NX Regional lymph nodes cannot be assessed
- N0 No regional lymph node metastasis
- N1 Regional lymph node metastasis

#### M – Distant Metastasis

- M0 No distant metastasis
- M1 Distant metastasis

### pTNM Pathological Classification

The pT and pN categories correspond to the T and N categories. For pM see page 15.

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### **G** Histopathological Grading

- GX Grade of differentiation cannot be assessed
- G1 Well differentiated
- G2 Moderately differentiated
- G3-4 Poorly differentiated/undifferentiated

Stage Grouping						
Stage I	T1	N0	M0			
Stage II	T2	N0	M0			
Stage III	Т3	Any N	M0			
	T1–3	N1	M0			
Stage IV	T4	Any N	M0			
-	Any T	Any N	M1			

### **Summary**

Kidney				
T1	≤7 cm; limited to the kidney			
T1a	≤4 cm			
T1b	>4 cm			
T2	>7 cm; limited to the kidney			
T2a	>7 to 10 cm			
T2b	>10 cm			
T3	major veins, perinephric fat			
T3a	Renal vein, perinephric fat			
T3b	Vena cava below diaphragm			
T3c	Vena cava above diaphragm			
T4	Beyond Gerota fascia, ipsilateral adrenal			
N1	Single			

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- TX Primary tumour cannot be assessed
- T0 No evidence of primary tumour
- Ta Non-invasive papillary carcinoma
- Tis Carcinoma in situ: 'flat tumour'
- T1 Tumour invades subepithelial connective tissue
- T2 Tumour invades muscle
  - T2a Tumour invades superficial muscle (inner half)
  - T2b Tumour invades deep muscle (outer half)
- T3 Tumour invades perivesical tissue:
  - T3a microscopically
  - T3b macroscopically (extravesical mass)
- T4 Tumour invades any of the following: prostate stroma, seminal vesicles, uterus, vagina, pelvic wall, abdominal wall
  - T4a Tumour invades prostate stroma, seminal vesicles, uterus, or vagina
  - T4b Tumour invades pelvic wall or abdominal wall

### N – Regional Lymph Nodes

- NX Regional lymph nodes cannot be assessed
- N0 No regional lymph node metastasis
- N1 Metastasis in a single lymph node in the true pelvis (hypogastric, obturator, external iliac, or presacral)
- N2 Metastasis in multiple lymph nodes in the true pelvis (hypogastric, obturator, external iliac, or presacral)
- N3 Metastasis in a common iliac lymph node(s)

### M – Distant Metastasis

- M0 No distant metastasis
- M1 Distant metastasis



#### Malignant Melanoma of Conjunctiva 281

2. Quadrants are defined by clock hour, starting at the limbus (e.g., 6, 9, 12, 3) extending from the central cornea, to and beyond the eyelid margins. This will bisect the caruncle.

#### N – Regional Lymph Nodes

- NX Regional lymph nodes cannot be assessed
- N0 No regional lymph node metastasis
- N1 Regional lymph node metastasis

#### M – Distant Metastasis

- M0 No distant metastasis
- M1 Distant metastasis

### **pTNM Pathological Classification**

#### pT – Primary Tumour

- pTX Primary tumour cannot be assessed
- pT0 No evidence of primary tumour
- pTis Melanoma confined to the conjunctival epithelium (in situ)\*
- pT1 Melanoma of the bulbar conjunctiva
  - pT1a Tumour not more than 0.5 mm in thickness with invasion of the substantia propria
  - pT1b Tumour more than 0.5mm but not more than 1.5mm in thickness with invasion of the substantia propria
  - pT1c Tumour greater than 1.5 mm in thickness with invasion of the substantia propria
- pT2 Melanoma of the palpebral, forniceal, or caruncular conjunctiva

### Malignant Melanoma of Conjunctiva 283

G2 Primary acquired melanosis with cellular atypia (epithelial disease only)

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- G3 Primary acquired melanosis with epithelial cellular atypia and invasive melanoma
- G4 De novo malignant melanoma

## Stage Grouping

No stage grouping is at present recommended.

### Summary

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Malignant Melanoma of Conjunctiva					
T1	Bulbar conjunctiva	pT1	Bulbar conjunctiva		
		pT1a	≤0.5mm, substantia propria		
		pT1b	>0.5mm to 1.5mm, and >1.55mm substantia propria		
		pT1c	>1.5 mm, substania propria		
T2	Non-bulbar conjunctiva	pT2	Palpebral, forniceal, caruncular conjunctiva		
		pT2a	≤0.5mm, substantia propria		
		pT2b	>0.5mm to 1.5mm, and >1.55mm substantia propria		
		pT2c	>1.5 mm, substantia propria		
Т3	Eyelid, globe, orbit, sinuses,	рТ3	Eye, eyelid, nasola- crimal system		
T4	CNS	pT4	CNS		

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### Malignant Melanoma of Uvea 285

### **TNM Clinical Classification**

### **T – Primary Tumour**

- TX Primary tumour cannot be assessed
- T0 No evidence of primary tumour

#### lris\*

- T1 Tumour limited to iris
  - T1a Not more than 3 clock hours in size
  - T1b More than 3 clock hours in size
  - T1c With secondary glaucoma
- T2 Tumour confluent with or extending into the ciliary body, choroid or both T2a With secondary glaucoma
- T3 Tumour confluent with or extending into the ciliary body, choroid or both, with scleral extension

T3a With secondary glaucoma

- T4 Tumour with extrascleral extension
  - T4a Less than or equal to 5 mm in diameterT4b More than 5 mm in diameter
- Note: \*Iris melanomas originate from, and are predominantly located in, this region of the uvea. If less than one-half of the tumour volume is located within the iris, the tumour may have originated in the ciliary body and consideration should be given to classifying it accordingly.

### **Ciliary Body and Choroid**

Primary ciliary body and choroidal melanomas are classified according to the four tumour size categories below:

- T1 Tumour size category 1
  - T1a Without ciliary body involvement and extraocular extension

### 290 Ophthalmic Tumours

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Ciliary Body and Choroid Malignant Melanoma				
T1	Category 1			
T1a	without ciliary body involvement and			
	extraocular extension			
T1b	with ciliary body involvement			
T1c	without ciliary body involvement but			
	extraocular extension $\leq$ 5 mm			
T1d	with ciliary body involvement and extraocu-			
	lar extension ≤5mm			
T2	Category 2			
T2a	without ciliary body involvement and			
	extraocular extension			
T2b	with ciliary body involvement			
T2c	without ciliary body involvement but			
<b>T</b> 2	extraocular extension ≤5mm			
T2d	with ciliary body involvement and extraocu- lar extension ≤5mm			
<b>T</b> 2				
T3 T3a	Category 3 without ciliary body involvement and			
150	extraocular extension			
T3b	with ciliary body involvement			
T3c	without ciliary body involvement but			
150	extraocular extension $\leq 5 \text{ mm}$			
T3d	with ciliary body involvement and extraocu-			
	lar extension ≤5mm			
T4	Category 4			
T4a	without ciliary body involvement and			
	extraocular extension			
T4b	with ciliary body involvement			
T4c	without ciliary body involvement but			
	extraocular extension $\leq$ 5 mm			
T4d	with ciliary body involvement and extraocu-			
	lar extension $\leq$ 5 mm			
T4e	Any tumour size with extraocular extension			
	>5mm			

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#### **292** Ophthalmic Tumours

### **TNM Clinical Classification**

#### T – Primary Tumour

- TX Primary tumour cannot be assessed
- T0 No evidence of primary tumour
- T1 Tumour no more than two-thirds the volume of the eye with no vitreous or subretinal seeding.
  - T1a No tumour in either eye is greater than 3 mm in largest dimension or located closer than 1.5 mm to the optic nerve or fovea
  - T1b At least one tumour is greater than 3 mm in largest dimension or located closer than 1.5 mm to the optic nerve or fovea. No retinal detachment or subretinal fluid beyond 5 mm from the base of the tumour
  - T1c At least one tumour greater than 3 mm in largest dimension or located closer than 1.5 mm to the optic nerve or fovea, with retinal detachment or subretinal fluid beyond 5 mm from the base of the tumour
- T2 Tumours no more than two-thirds the volume of the eye with vitreous or subretinal seeding with retinal detachment
  - T2a Tumour with focal vitreous and/or subretinal seeding of fine aggregates of tumour cells, but no large clumps or 'snowballs' of tumour cells
  - T2b Tumour with massive vitreous and/or subretinal seeding, defined as diffuse clumps or 'snowballs' of tumour cells

### Retinoblastoma 297

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T3b	>one complications	pT3b	Invasion of optic nerve past lamina cribrosa (not to surgical resection line, massive choroidal invasion)
Τ4	Extraocular tumour	pT4	Invasion of optic nerve to resection line or extraocular extension
T4a	Optic nerve	pT4a	Invasion of optic nerve to resection line, no extraocular
T4b	Orbit	pT4b	extension Invasion of optic nerve to resection Line, extraocular extension
T4c	Intracranial, not past		extension
T4d	chiasm		
140	Intracranial, past chiasm		
N1	Regional	pN1	Regional
M1	Distant metastasis	pM1 pM1a	Distant metastasis Single metastasis to sites other than CNS
		pM1b	Multiple metastasis to sites other than CNS
		pM1c	CNS metastasis
		pM1d	Discrete mass(es) without leptomeningeal and/or CSF involvement
		pM1e	Leptomeningeal and/or CSF involvement

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### 300 Ophthalmic Tumours

# Stage Grouping

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No stage grouping is at present recommended.

### Summary

Sarcoma of Orbit				
T1	≤15mm			
T2	>15 mm			
Т3	Invades orbital tissues/bony walls			
T4	Invades globe or periorbital structures			
N1	Regional			

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### Carcinoma of Lacrimal Gland 303

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G2 Moderately differentiated; includes adenoid cystic carcinoma without basaloid (solid) pattern

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- G3 Poorly differentiated; includes adenoid cystic carcinoma with basaloid (solid) pattern
- G4 Undifferentiated

### **Stage Grouping**

No stage grouping is at present recommended.

### Summary

Lacrimal Gland Carcinoma				
T1	≤2.0 cm, limited to gland			
T2	>2.0 cm to 4 cm, limited to gland			
Т3	>4 cm, extraglandular extension into orbital			
	soft tissue, including optic nerve or globe			
T4	Periosteum, orbital bone, adjacent structures			
T4a	Periosteum			
T4b	Orbit bone			
T4c	Adjacent structures			
N1	Regional			

Hodgkin Lymphoma 307

Pulmonary	PUL or L	Bone marrow	MAR or M
Osseous	OSS or O	Pleura	PLE or P
Hepatic	HEP or H	Peritoneum	PER
Brain	BRA	Adrenals	ADR
Lymph nodes	LYM or N	Skin	SKI or D
Others	OTH		

### **Clinical Stages (cS)**

#### Stage I

Involvement of a single lymph node region (I), or localized involvement of a single extralymphatic organ or site (IE)

#### Stage II

Involvement of two or more lymph node regions on the same side of the diaphragm (II), or localized involvement of a single extralymphatic organ or site and its regional lymph node(s) with or without involvement of other lymph node regions on the same side of the diaphragm (IIE)

**Note:** The number of lymph node regions involved may be indicated by a subscript (e.g.,  $\Pi_{a'}$  page 304.)

#### Stage III

Involvement of lymph node regions on both sides of the diaphragm (III), which may also be accompanied by localized involvement of an associated extralymphatic organ or site IIIE, or by involvement of the spleen (IIIS), or both IIIE+S.

# Summary

Stage	Hodgkin Lymphoma	Substage
Stage I Stage II	Single node region Localized single extra- lymphatic organ/site Two or more node regions, same side of diaphragm	IE
Stage III	Localized single extra- lymphatic organ/ site with its regional nodes, ± other node regions same side of diaphragm Node regions both sides of diaphragm	IIE
	+ localized single extra- lymphatic organ/site	IIIE
	Spleen	IIIS
Stage IV	Both Diffuse or multifocal involvement of extra- lymphatic organ(s) ± regional nodes; isolated extralymphatic organ and non-regional nodes	IIIE+S
All	Without weight loss/	А
stages divided	fever/sweats With weight loss/ fever/sweats	В