1．　乳
6．　外陰
8．　膣
9．　頚部
12．　体
14．　肉腫
16．　卵巣、卵管
18．　絨毛

Breast Tumours

(ICD-O-3 C50)

Introductory Notes

The 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
- Definition of the regional lymph nodes
- TNM clinical classification
- pTNM pathological classification
- G histopathological grading
- Stage
- Prognostic grid

Rules for Classification

The classification applies only to carcinomas and concerns the male as well as the female breast. There should be histological confirmation of the disease. The anatomical subsite of origin should be recorded but is not considered in classification.

In the case of multiple simultaneous primary tumours in one breast, the tumour with the highest T category should be used for classification. Simultaneous *bilateral* breast cancers should be classified independently to permit division of cases by histological type.

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

T categories	Physical examination and imaging, e.g., mammography
N categories	Physical examination and imaging
M categories	Physical examination and imaging

TNM Classification of Malignant Tumours, Eighth Edition. Edited by James D. Brierley, Mary K. Gospodarowicz and Christian Wittekind.

Anatomical Subsites

1. Nipple (C50.0)
2. Central portion (C50.1)
3. Upper-inner quadrant (C50.2)
4. Lower-inner quadrant (C50.3)
5. Upper-outer quadrant (C50.4)
6. Lower-outer quadrant (C50.5)
7. Axillary tail (C50.6)

Regional Lymph Nodes

The regional lymph nodes are:

1. *Axillary* (ipsilateral): interpectoral (Rotter) nodes and lymph nodes along the axillary vein and its tributaries, which may be divided into the following levels:
   a) *Level I* (low-axilla): lymph nodes lateral to the lateral border of pectoralis minor muscle
   b) *Level II* (mid-axilla): lymph nodes between the medial and lateral borders of the pectoralis minor muscle and the interpectoral (Rotter) lymph nodes
   c) *Level III* (apical axilla): apical lymph nodes and those medial to the medial margin of the pectoralis minor muscle, excluding those designated as subclavicular or infraclavicular
2. *Infraclavicular (subclavicular)* (ipsilateral)
3. *Internal mammary* (ipsilateral): lymph nodes in the intercostal spaces along the edge of the sternum in the endothoracic fascia
4. *Supraclavicular* (ipsilateral)

Note

Intramammary lymph nodes are coded as axillary lymph nodes level I. Any other lymph node metastasis is coded as a distant metastasis (M1), including cervical or contralateral internal mammary lymph nodes.

TNM Clinical Classification

T – Primary Tumour

TX	Primary tumour cannot be assessed
T0	No evidence of primary tumour
Tis	Carcinoma in situ
Tis (DCIS)	Ductal carcinoma in situ
Tis (LCIS)	Lobular carcinoma in situ[a]
Tis (Paget)	Paget disease of the nipple not associated with invasive carcinoma and/or carcinoma in situ (DCIS and/or LCIS) in the underlying breast parenchyma. Carcinomas in the breast parenchyma associated with Paget disease are categorized based on the size and characteristics of the parenchymal disease, although the presence of Paget disease should still be noted.
T1	Tumour 2 cm or less in greatest dimension
T1mi	Microinvasion 0.1 cm or less in greatest dimension[b]
T1a	More than 0.1 cm but not more than 0.5 cm in greatest dimension
T1b	More than 0.5 cm but not more than 1 cm in greatest dimension
T1c	More than 1 cm but not more than 2 cm 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 of any size with direct extension to chest wall and/or to skin (ulceration or skin nodules)[c]
T4a	Extension to chest wall (does not include pectoralis muscle invasion only)
T4b	Ulceration, ipsilateral satellite skin nodules, or skin oedema (including peau d'orange)
T4c	Both 4a and 4b
T4d	Inflammatory carcinoma[d]

Notes

[a] The AJCC exclude Tis (LCIS).

[b] Microinvasion is the extension of cancer cells beyond the basement membrane into the adjacent tissues with no focus more than 0.1 cm in greatest dimension. When there are multiple foci of microinvasion, the size of only the largest focus is used to classify the microinvasion. (Do not use the sum of all individual foci.) The presence of multiple foci of microinvasion should be noted, as it is with multiple larger invasive carcinomas.

[c] Invasion of the dermis alone does not qualify as T4. Chest wall includes ribs, intercostal muscles, and serratus anterior muscle but not pectoral muscle.

[d] Inflammatory carcinoma of the breast is characterized by diffuse, brawny induration of the skin with an erysipeloid edge, usually with no underlying mass. If the skin biopsy is negative and there is no localized measurable primary cancer, the T category is pTX when pathologically staging a clinical inflammatory carcinoma (T4d). Dimpling of the skin, nipple retraction, or other skin changes, except those in T4b and T4d, may occur in T1, T2, or T3 without affecting the classification.

N – Regional Lymph Nodes

NX Regional lymph nodes cannot be assessed (e.g., previously removed)
N0 No regional lymph node metastasis
N1 Metastasis in movable ipsilateral level I, II axillary lymph node(s)
N2 Metastasis in ipsilateral level I, II axillary lymph node(s) that are clinically fixed or matted; or in clinically detected* ipsilateral internal mammary lymph node(s) in the *absence* of clinically evident axillary lymph node metastasis
- N2a Metastasis in axillary lymph node(s) fixed to one another (matted) or to other structures
- N2b Metastasis only in clinically detected* internal mammary lymph node(s) and in the *absence* of clinically detected axillary lymph node metastasis

N3 Metastasis in ipsilateral infraclavicular (level III axillary) lymph node(s) with or without level I, II axillary lymph node involvement; or in clinically detected* ipsilateral internal mammary lymph node(s) with clinically evident level I, II axillary lymph node metastasis; or metastasis in ipsilateral supraclavicular lymph node(s) with or without axillary or internal mammary lymph node involvement
- N3a Metastasis in infraclavicular lymph node(s)
- N3b Metastasis in internal mammary and axillary lymph nodes
- N3c Metastasis in supraclavicular lymph node(s)

Notes

* Clinically detected is defined as detected by clinical examination or by imaging studies (excluding lymphoscintigraphy) and having characteristics highly suspicious for malignancy or a presumed pathological macrometastasis based on fine needle aspiration biopsy with cytological examination. Confirmation of clinically detected metastatic disease by fine needle aspiration without excision biopsy is designated with a (f) suffix, e.g. cN3a(f).

Excisional biopsy of a lymph node or biopsy of a sentinel node, in the absence of assignment of a pT, is classified as a clinical N, e.g., cN1. Pathological classification (pN) is used for excision or sentinel lymph node biopsy only in conjunction with a pathological T assignment.

M – Distant Metastasis

M0 No distant metastasis
M1 Distant metastasis

pTNM Pathological Classification

pT – Primary Tumour

The pathological classification requires the examination of the primary carcinoma with no gross tumour at the margins of resection. A case can be classified pT if there is only microscopic tumour in a margin.

The pT categories correspond to the T categories.

Note

When classifying pT the tumour size is a measurement of the invasive component. If there is a large in situ component (e.g., 4 cm) and a small invasive component (e.g., 0.5 cm), the tumour is coded pT1a.

pN – Regional Lymph Nodes

The pathological classification requires the resection and examination of at least the low axillary lymph nodes (level I) (see page 152). Such a resection 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.

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 0.2 mm in greatest extent that can be detected by routine H and 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 7.)

pN1 Micrometastases; or metastases in 1 to 3 axillary ipsilateral lymph nodes; and/or in internal mammary nodes with metastases detected by sentinel lymph node biopsy but not clinically detected*
- pN1mi Micrometastases (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 one larger than 2 mm in greatest dimension
- pN1b Internal mammary lymph nodes
- pN1c Metastasis in 1–3 axillary lymph nodes and internal mammary lymph nodes.

pN2 Metastasis in 4–9 ipsilateral axillary lymph nodes, or in clinically detected* ipsilateral internal mammary lymph node(s) in the absence of axillary lymph node metastasis

- pN2a Metastasis in 4–9 axillary lymph nodes, including at least one that is larger than 2 mm
- pN2b Metastasis in clinically detected internal mammary lymph node(s), in the *absence* of axillary lymph node metastasis

pN3

- pN3a Metastasis in 10 or more ipsilateral axillary lymph nodes (at least one larger than 2 mm) or metastasis in infraclavicular lymph nodes
- pN3b Metastasis in clinically detected* internal ipsilateral mammary lymph node(s) in the *presence* of positive axillary lymph node(s); or metastasis in more than 3 axillary lymph nodes *and* in internal mammary lymph nodes with microscopic or macroscopic metastasis detected by sentinel lymph node biopsy but not clinically detected
- pN3c Metastasis in ipsilateral supraclavicular lymph node(s)

Post-treatment ypN:

- Post-treatment yp 'N' should be evaluated as for clinical (pretreatment) 'N' methods (see Section N – Regional Lymph Nodes). The modifier 'sn' is used only if a sentinel node evaluation was performed after treatment. If no subscript is attached, it is assumed the axillary nodal evaluation was by axillary node dissection.
- The X classification will be used (ypNX) if no yp post-treatment SN or axillary dissection was performed
- N categories are the same as those used for pN.

Notes

* *Clinically detected* is defined as detected by imaging studies (excluding lymphoscintigraphy) or by clinical examination and having characteristics highly suspicious for malignancy or a presumed pathological macrometastasis based on fine needle aspiration biopsy with cytological examination.

Not clinically detected is defined as not detected by imaging studies (excluding lymphoscintigraphy) or not detected by clinical examination.

pM – Distant Metastasis

For pM see page 8.

G Histopathological Grading

For histopathological grading of invasive carcinoma the Nottingham Histological Score is recommended.[1]

Stage[a]

Stage 0	Tis	N0	M0
Stage IA	T1[b]	N0	M0
Stage IB	T0, T1	N1mi	M0
Stage IIA	T0, T1	N1	M0
	T2	N0	M0
Stage IIB	T2	N1	M0
	T3	N0	M0
Stage IIIA	T0, T1, T2	N2	M0
	T3	N1, N2	M0
Stage IIIB	T4	N0, N1, N2	M0
Stage IIIC	Any T	N3	M0
Stage IV	Any T	Any N	M1

Notes

[a] The AJCC also publish a prognostic group for breast tumours.

[b] T1 includes T1mi.

Prognostic Factors Grid – Breast

Prognostic factors for breast cancer

Prognostic factors	Tumour related	Host related	Environment related
Essential	ER HER2 receptor Histological grade Number and percentage of involved nodes Tumour size Presence of lymphatic or vascular invasion (LVI+) Surgical resection margin status	Age Menopausal status	Prior radiation involving the chest or mediastinum (e.g. for Hodgkin disease)
Additional	Progesterone receptor Tumour profiling UPA, PAI-1	*BRCA1* or 2 mutation Obesity	Use of postmenopausal hormone replacement therapy
New and promising	Ki-67	Level of activity or exercise Single nucleotide polymorphisms (SNPs) associated with drug metabolism or action	

Source: UICC Manual of Clinical Oncology, Ninth Edition. Edited by Brian O'Sullivan, James D. Brierley, Anil K. D'Cruz, Martin F. Fey, Raphael Pollock, Jan B. Vermorken and Shao Hui Huang. © 2015 UICC. Published 2015 by John Wiley & Sons, Ltd.

Reference

1 Elston CW, Ellis IO. Pathological prognostic factors in breast cancer. I. The value of histological grade in breast cancer: experience from a large study with long-term follow-up. *Histopathology* 1991; 19: 403–410.

5 Gynaecological Tumours

Introductory Notes

The following sites are included:

- Vulva
- Vagina
- Cervix uteri
- Corpus uteri
  - Endometrium
  - Uterine sarcomas
- Ovary, fallopian tube and primary peritoneal carcinoma
- 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. The classification of tumours of ovary and fallopian tube has been revised in line with the recent FIGO update.[1]

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
- Stage
- Prognostic grid

TNM Classification of Malignant Tumours, Eighth Edition. Edited by James D. Brierley, Mary K. Gospodarowicz and Christian Wittekind.

Gynaecological

Histopathological Grading

The definitions of the G categories apply to all carcinomas. These are:

G – Histopathological Grading

GX Grade of differentiation cannot be assessed
G1 Well differentiated
G2 Moderately differentiated
G3 Poorly differentiated or undifferentiated

Reference

1 Prat J, FIGO Committee on Gynecologic Oncology. Staging classification for cancer of the ovary, fallopian tube, and peritoneum. *Int J Gynecol Obstet* 2014; 124: 1–5.

6 Vulva (ICD-O-3 C51)

The definitions of the T, N, and M categories correspond to the FIGO stages.

Rules for Classification

The classification applies only to primary carcinomas of the vulva. There should be histological confirmation of the disease.

A carcinoma of the vulva that has extended to the vagina is classified as carcinoma of the vulva.

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

T categories Physical examination, endoscopy, and imaging
N categories Physical examination and imaging
M categories Physical examination and imaging

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

Regional Lymph Nodes

The regional lymph nodes are the inguinofemoral (groin) nodes.

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 2 cm or less in greatest dimension and with stromal invasion no greater than 1.0 mm[a]
- T1b Tumour greater than 2 cm and or with stromal invasion greater than 1 mm[a]

T2 Tumour invades any of the following structures: lower third urethra, lower third vagina, anus

T3[b] Tumour invades any of the following perineal structures: upper 2/3 urethra, upper 2/3 vagina, bladder mucosa, rectal mucosa; or fixed to pelvic bone

Notes

[a] 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.

[b] T3 is not used by FIGO.

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:
- N1a One or two lymph node metastasis each less than 5 mm
- N1b One lymph node metastases 5 mm or greater

N2 Regional lymph node metastasis with the following features:
- N2a Three or more lymph node metastases each less than 5 mm
- N2b Two or more lymph node metastases 5 mm or greater
- N2c Lymph node metastasis with extracapsular spread

N3 Fixed or ulcerated regional lymph node metastasis

M – Distant Metastasis

M0 No distant metastasis
M1 Distant metastasis (including pelvic lymph node metastasis)

pTNM Pathological Classification

The pT and pN categories correspond to the T and N categories. For pM see page 8.

pN0 Histological examination of an inguinofemoral 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.

Stage

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
	T3	Any N	M0
Stage IVB	Any T	Any N	M1

Prognostic Factors Grid – Vulva

Prognostic risk factors for cancer of the vulva

Prognostic factors	Tumour related	Host related	Environment related
Essential	Lymph node metastases: • Number • Size • Extracapsular tumour growth		Experience of treating centre/ concentration of care for vulvar cancer patients in tertiary referral centres
Additional	FIGO stage Depth of invasion Diameter of primary tumour Histological type	Age Smoking Adjacent dermatosis (LS, VIN) Immune status	Surgical margins
New and promising	EGFR status p53 over-expression P16INK4a level Microvessel density	HPV status Pretreatment haemoglobin level	

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Vagina
(ICD-O-3 C52)

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

Rules for Classification

The classification applies to primary carcinomas only. Tumours present in the vagina as secondary growths from either genital or extragenital sites are excluded. A tumour that has extended to the portio and reached the external os (orifice of uterus) is classified as carcinoma of the cervix. A vaginal carcinoma occurring 5 years after successful treatment (complete response) of a carcinoma of the cervix uteri is considered a primary vaginal carcinoma. A tumour involving the vulva is classified as carcinoma of the vulva. There should be histological confirmation of the disease.

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

T categories Physical examination, endoscopy, and imaging
N categories Physical examination and imaging
M categories Physical examination and imaging

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

Regional Lymph Nodes

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	Definition
TX		Primary tumour cannot be assessed
T0		No evidence of primary tumour
Tis		Carcinoma in situ (preinvasive carcinoma)
T1	I	Tumour confined to vagina
T2	II	Tumour invades paravaginal tissues (paracolpium)
T3	III	Tumour extends to pelvic wall
T4	IVA	Tumour invades *mucosa* of bladder or rectum, or extends beyond the true pelvis*
M1	IVB	Distant metastasis

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

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

TNM Pathological Classification

The pT and pN categories correspond to the T and N categories. For pM see page 8.

pN0 Histological examination of an inguinal lymphadenectomy specimen will ordinarily include 6 or more lymph nodes; a pelvic lymphadenectomy specimen will ordinarily include 10 or more lymph nodes. If the lymph nodes are negative, but the number ordinarily examined is not met, classify as pN0.

Stage

Stage 0	Tis	N0	M0
Stage I	T1	N0	M0
Stage II	T2	N0	M0
Stage III	T3	N0	M0
	T1, T2, T3	N1	M0
Stage IVA	T4	Any N	M0
Stage IVB	Any T	Any N	M1

Cervix Uteri
(ICD-O C53)

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

Rules for Classification

The classification applies only to carcinomas. There should be histological confirmation of the disease.

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

T categories Clinical examination and imaging*
N categories Clinical examination and imaging
M categories Clinical examination and imaging

Note

* The use of diagnostic imaging techniques to assess the size of the primary tumour is encouraged but is not mandatory. Other investigations, e.g., examination under anaesthesia, cystoscopy, sigmoidoscopy, intravenous pyelography, are optional and no longer mandatory.

The FIGO stages are based on clinical staging. For some Stage I subdivisions (IA–IB1) are mainly pathological, including the histological examination of the cervix. (TNM stages are based on clinical and/or pathological classification.)

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	Definition
TX		Primary tumour cannot be assessed
T0		No evidence of primary tumour
Tis		Carcinoma in situ (preinvasive carcinoma)
T1	I	Tumour confined to the cervix[a]
T1a[b,c]	IA	Invasive carcinoma diagnosed only by microscopy. Stromal invasion with a maximal depth of 5.0 mm measured from the base of the epithelium and a horizontal spread of 7.0 mm or less[d]
T1a1	IA1	Measured stromal invasion 3.0 mm or less in depth and 7.0 mm or less in horizontal spread
T1a2	IA2	Measured stromal invasion more than 3.0 mm and not more than 5.0 mm with a horizontal spread of 7.0 mm or less
T1b	IB	Clinically visible lesion confined to the cervix or microscopic lesion greater than T1a/IA2
T1b1	IB1	Clinically visible lesion 4.0 cm or less in greatest dimension
T1b2	IB2	Clinically visible lesion more than 4.0 cm in greatest dimension
T2	II	Tumour invades beyond uterus but not to pelvic wall or to lower third of vagina
T2a	IIA	Tumour without parametrial invasion
T2a1	IIA1	Clinically visible lesion 4.0 cm or less in greatest dimension

(Continued)

(Continued)

TNM Categories	FIGO Stages	Definition
T2a2	IIA2	Clinically visible lesion more than 4.0 cm in greatest dimension
T2b	IIB	Tumour with parametrial invasion
T3	III	Tumour, involves lower third of vagina, or extends to pelvic wall, or causes hydronephrosis or non-functioning kidney
T3a	IIIA	Tumour involves lower third of vagina
T3b	IIIB	Tumour extends to pelvic wall, or causes hydronephrosis or non-functioning kidney
T4	IVA	Tumour invades mucosa of the bladder or rectum, or extends beyond true pelvis[e]

Notes

[a] Extension to corpus uteri should be disregarded.

[b] The depth of invasion should be taken from the base of the epithelium, either surface or glandular, from which it originates. The depth of invasion is defined as the measurement of the tumour from the epithelial–stromal junction of the adjacent most superficial papillae to the deepest point of invasion.
Vascular space involvement, venous or lymphatic, does not affect classification.

[c] All macroscopically visible lesions even with superficial invasion are T1b/IB.

[d] Vascular space involvement, venous or lymphatic, does not affect classification.

[e] Bullous oedema is not sufficient to classify a tumour as T4.

N – Regional lymph nodes*

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

Note

* No FIGO equivalent.

M – Distant Metastasis

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

pTNM Pathological Classification

The pT and pN categories correspond to the T and N categories. For pM see page 8.

pN0 Histological examination of a pelvic lymphadenectomy specimen will ordinarily include 10 or more lymph nodes. If the lymph nodes are negative, but the number ordinarily examined is not met, classify as pN0.

Stage

Stage 0	Tis	N0	M0
Stage I	T1	N0	M0
Stage IA	T1a	N0	M0
Stage IA1	T1a1	N0	M0
Stage IA2	T1a2	N0	M0
Stage IB	T1b	N0	M0
Stage IB1	T1b1	N0	M0
Stage IB2	T1b2	N0	M0
Stage II	T2	N0	M0
Stage IIA	T2a	N0	M0
Stage IIA1	T2a1	N0	M0
Stage IIA2	T2a2	N0	M0
Stage IIB	T2b	N0	M0
Stage III	T3	N0	M0
Stage IIIA	T3a	N0	M0
Stage IIIB	T3b	Any N	M0
	T1, T2, T3	N1	M0
Stage IVA	T4	Any N	M0
Stage IVB	Any T	Any N	M1

Prognostic Factors Grid – Cervix Uteri

Prognostic risk factors in cervical cancer

Prognostic factors	Tumour related	Host related	Environment related
Essential	Unilateral vs bilateral disease Parametrial invasion Invasion to side wall Size of tumour Lymph node invasion Positive surgical margins	Immunosuppression (i.e. HIV infection) Performance status Morbid obesity	Quality of and availability of anticancer therapies Expertise of healthcare personnel Multidisciplinary teams
Additional	Lymphovascular space invasion Histological type	Anaemia during treatment	Ability to manage co-morbid conditions
New and promising	Tumour hypoxia VEGF, mEGFR, HIF-1α, COX-2 PAI-1 expression SCC-Ag and hsCRP for early detection of recurrence	Serum MyoDI hypermethylation Persistence of HPV infection following treatment	Adequate laboratory facilities to measure tumour markers

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Uterus – Endometrium
(ICD-O-3 C54.1, C55)

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 imaging including urography and cystoscopy

N categories Physical examination and imaging 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.)

Anatomical Subsites

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 paraaortic nodes.

TNM Clinical Classification

T – Primary Tumour

TNM Categories		FIGO Stages	
TX			Primary tumour cannot be assessed
T0			No evidence of primary tumour
T1		I[a]	Tumour confined to the corpus uteri[a]
	T1a	IA[a]	Tumour limited to endometrium or invading less than half of myometrium
	T1b	IB	Tumour invades one half or more of myometrium
T2		II	Tumour invades cervical stroma, but does not extend beyond the uterus
T3		III	Local and/or regional spread as specified here:
	T3a	IIIA	Tumour invades the serosa of the corpus uteri or adnexae (direct extension or metastasis)
	T3b	IIIB	Vaginal or parametrial involvement (direct extension or metastasis)
N1,N2		IIIC	Metastasis to pelvic or para-aortic lymph nodes[b]
	N1	IIIC1	Metastasis to pelvic lymph nodes
	N2	IIIC2	Metastastis to para-aortic lymph nodes with or without metastasis to pelvic lymph nodes
T4[c]		IV	Tumour invades bladder/bowel mucosa

Notes

[a] Endocervical glandular involvement only should be considered as stage I.

[b] Positive cytology has to be reported separately without changing the stage.

[c] The presence of bullous oedema is not sufficient evidence to classify as T4.

N – Regional Lymph Nodes

NX Regional lymph nodes cannot be assessed
N0 No regional lymph node metastasis
N1 Regional lymph node metastasis to pelvic lymph nodes
N2 Regional lymph node metastasis to para-aortic lymph nodes with or without metastasis to pelvic lymph nodes

M – Distant Metastasis

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

pTNM Pathological Classification

The pT and pN categories correspond to the T and N categories. For pM see page 8.

pN0 Histological examination of a pelvic lymphadenectomy specimen will ordinarily include 10 or more lymph nodes. If the lymph nodes are negative, but the number ordinarily examined is not met, classify as pN0.

G Histopathological Grading

For histopathological grading use G1, G2, or G3. For details see Creasman et al. 2006.[1]

Stage

Stage 0	Tis	N0	M0
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 III	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

Prognostic Grid – Endometrium

Prognostic factors for endometrial carcinoma

Prognostic factors	Tumour related	Host related	Environment related
Essential	Depth of myometrial invasion Grade of differentiation Tumour cell type Lymphovascular space invasion		Postsurgical treatment
Additional	Metastasis to lymph nodes Site of distant metastasis	Age Performance status Race Co-morbidities	Extent of resection Postsurgical treatment
New and promising	Molecular profile		

Reference

1 Creasman WT, Odicino F, Maisoneuve P, Quinn MA, Beller U, Benedet JL, Heintz APM, Ngan HYS, Pecorelli S. 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.

Uterine Sarcomas (Leiomyosarcoma, Endometrial Stromal Sarcoma, Adenosarcoma) (ICD-O-3 53, 54)

The definitions of the T, N, and M categories correspond to the FIGO stages. Both systems are included for comparison.[1,2]

Rules for Classification

The classification applies to sarcomas except for carcinosarcoma, which is classified as 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 categories	Physical examination and imaging
N categories	Physical examination and imaging
M categories	Physical examination and imaging

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

Anatomical Subsites

1. Cervix uteri (C53)
2. Isthmus uteri (C54.0)
3. Fundus uteri (C54.3)

Histological Types of Tumours

Leiomyosarcoma	8890/3
Endometrial stromal sarcoma	8930/3
Adenosarcoma	8933/3

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

Leiomyosarcoma, Endometrial stromal sarcoma

T – Primary tumour

TNM categories	FIGO Stage	Definition
T1	I	Tumour limited to the uterus
T1a	IA	Tumour 5 cm or less in greatest dimension
T1b	IB	Tumour more than 5 cm
T2	II	Tumour extends beyond the uterus, within the pelvis
T2a	IIA	Tumour involves adnexa
T2b	IIB	Tumour involves other pelvic tissues
T3	III	Tumour infiltrates abdominal tissues
T3a	IIIA	One site
T3b	IIIB	More than one site
N1	IIIC	Metastasis to regional lymph nodes
T4	IVA	Tumour invades bladder or rectum
M1	IVB	Distant metastasis

Note

Simultaneous tumours of the uterine corpus and ovary/pelvis in association with ovarian/pelvic endometriosis should be classified as independent primary tumours.

Adenosarcoma

T – Primary tumour

TNM categories	FIGO Stage	Definition
T1	I	Tumour limited to the uterus
T1a	IA	Tumour limited to the endometrium/ endocervix
T1b	IB	Tumour invades to less than half of the myometrium
T1c	IC	Tumour invades more than half of the myometrium
T2	II	Tumour extends beyond the uterus, within the pelvis
T2a	IIA	Tumour involves adnexa
T2b	IIB	Tumour involves other pelvic tissues
T3	III	Tumour involves abdominal tissues
T3a	IIIA	One site
T3b	IIIB	More than one site
N1	IIIC	Metastasis to regional lymph nodes
T4	IVA	Tumour invades bladder or rectum
M1	IVB	Distant metastasis

Note

Simultaneous tumours of the uterine corpus and ovary/pelvis in association with ovarian/pelvic endometriosis should be classified as independent primary tumours.

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 (excluding adnexa, pelvic and abdominal tissues)

pTNM Pathological Classification

The pT and pN categories correspond to the T and N categories. For pM see page 8.

Stage – Uterine Sarcomas

Stage I	T1	N0	M0
Stage IA	T1a	N0	M0
Stage IB	T1b	N0	M0
Stage IC*	T1c	N0	M0
Stage II	T2	N0	M0
Stage IIA	T2a	N0	M0
Stage IIB	T2b	N0	M0
Stage IIIA	T3a	N0	M0
Stage IIIB	T3b	N0	M0
Stage IIIC	T1, T2, T3	N1	M0
Stage IVA	T4	Any N	M0
Stage IVB	Any T	Any N	M1

Note

* Stage IC does not apply for leiomyosarcoma and endometrial stromal sarcoma.

References

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

2 FIGO Committee on Gynecologic Oncology Report. FIGO staging for uterine sarcomas. *Int J Gynaecol Obstet* 2009; 104: 179.

15 Ovarian, Fallopian Tube, and Primary Peritoneal Carcinoma (ICD-O-3 C56; ICD-O-3 C57)

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 malignant ovarian neoplasms of both epithelial and stromal origin including those of borderline malignancy or of low malignant potential[1] corresponding to 'common epithelial tumours' of the earlier terminology.

The classification also applies to carcinoma of the fallopian tubes and to carcinomas of the peritoneum (Müllerian origin).

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	Clinical examination, imaging, surgical exploration (laparoscopy/laparotomy)
N categories	Clinical examination, imaging, surgical exploration (laparoscopy/laparotomy)
M categories	Clinical examination, imaging, surgical exploration (laparoscopy/laparotomy)

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

Regional Lymph Nodes

The regional lymph nodes are the hypogastric (obturator), common iliac, external iliac, lateral sacral, para-aortic, and retroperitoneal nodes*.

Note

* Including intra-abdominal node such as greater omental nodes.

TNM Clinical Classification

T – Primary Tumour

TNM categories	FIGO Stage	Definition
TX		Primary tumour cannot be assessed
T0		No evidence of primary tumour
T1	I	Tumour limited to the ovaries (one or both) or fallopian tube(s)
T1a	IA	Tumour limited to one ovary; capsule intact, no tumour on ovarian surface or fallopian tube surface; no malignant cells in ascites or peritoneal washings
T1b	IB	Tumour limited to both ovaries or fallopian tubes; capsule intact, no tumour on ovarian or fallopian tube surface; no malignant cells in ascites or peritoneal washings
T1c	IC	Tumour limited to one or both ovaries or fallopian tubes with any of the following:
T1c1		Surgical spill
T1c2		Capsule ruptured before surgery or tumour on ovarian or fallopian tube surface
T1c3		Malignant cells in ascites or peritoneal washings
T2	II	Tumour involves one or both ovaries or fallopian tubes with pelvic extension (below the pelvic brim) or primary peritoneal cancer
T2a	IIA	Extension and/or implants on uterus and/or fallopian tube(s) and or ovary(ies)
T2b	IIB	Extension to other pelvic tissues, including bowel within the pelvis
T3 and/or N1	III[a]	Tumour involves one or both ovaries or fallopian tubes or primary peritoneal carcinoma with cytologically or histologically confirmed spread to the peritoneum outside the pelvis and/or metastasis to the retroperitoneal lymph nodes

(Continued)

TNM categories	FIGO Stage	Definition
N1		Retroperitoneal lymph node metastasis only
N1a	IIIA1i	Lymph node metastasis not more than 10 mm in greatest dimension
N1b	IIIA1ii	Lymph node metastasis more than 10 mm in greatest dimension
T3a any N	IIIA2	Microscopic extrapelvic (above the pelvic brim) peritoneal involvement with or without retroperitoneal lymph node, including bowel involvement
T3b any N	IIIB	Macroscopic peritoneal metastasis beyond pelvic brim 2 cm, or less in greatest dimension, including bowel involvement outside the pelvis with or without retroperitoneal nodes
T3c any N	IIIC	Peritoneal metastasis beyond pelvic brim more than 2 cm in greatest dimension and/or retroperitoneal lymph node metastasis (includes extension of tumour to capsule of liver and spleen without parenchymal involvement of either organ)
M1	IV	Distant metastasis (excludes peritoneal metastasis)
M1a	IVA	Pleural effusion with positive cytology
M1b[b]	IVB	Parenchymal metastasis and metastasis to extra-abdominal organs (including inguinal lymph nodes and lymph nodes outside the abdominal cavity)

Notes

[a] Liver capsule metastasis is T3/stage III.

[b] Liver parenchymal metastasis M1/stage IV.

N – Regional Lymph Nodes

NX	Regional lymph nodes cannot be assessed		
N0	No regional lymph node metastasis		
N1	Regional lymph node metastasis		
	N1	IIIA1	Retroperitoneal lymph node metastasis only
	N1a	IIIA1i	Lymph node metastasis no more than 10 mm in greatest dimension
	N1b	IIIA1ii	Lymph node metastasis more than 10 mm in greatest dimension

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 8.

pN0 Histological examination of a pelvic lymphadenectomy specimen will ordinarily include 10 or more lymph nodes. If the lymph nodes are negative, but the number ordinarily examined is not met, classify as pN0.

Stage

Stage I	T1	N0	M0
Stage IA	T1a	N0	M0
Stage IB	T1b	N0	M0
Stage IC	T1c	N0	M0
Stage II	T2	N0	M0
Stage IIA	T2a	N0	M0
Stage IIB	T2b	N0	M0
Stage IIC	T2c	N0	M0
Stage IIIA1	T1/2	N1	M0
Stage IIIA2	T3a	N0, N1	M0
Stage IIIB	T3b	N0, N1	M0
Stage IIIC	T3c	N0, N1	M0
Stage IV	Any T	Any N	M1
Stage IVA	Any T	Any N	M1a
Stage IVB	Any T	Any N	M1b

Prognostic Factors Grid – Tumours of the Ovary, Fallopian Tube and Peritoneal Carcinoma

Prognostic risk factor for epithelial ovarian cancer

Prognostic factors	Tumour related	Host related	Environment related
Essential	Histological type Grade Surgical stage Residual disease	Age Co-morbidities Performance status	Maximum diameter of residual disease after optimal debulking
Additional	Nodal involvement Site of metastasis DNA ploidy CA125	*BRCA 1* Genetic predisposition	Type of chemotherapy CA125 fall Ultra-radical surgery
New and promising	Molecular profile Cellular proliferative activity Tumour angiogenesis markers p53 expression Expression of human kallikrein (hK) genes, particularly *hKs* 6-10-11		Interval debulking surgery (IDS) Neoadjuvant chemotherapy

Reference

1 Tavassoli FA, Devilee P (eds). WHO *Classification of Tumours. Pathology and Genetics. Tumours of the Breast and Female Genital Organs*. Lyon, France: IACR Press, 2003.

Gestational Trophoblastic Neoplasms (ICD-O-3 C58)

The following classification for gestational trophoblastic tumours is based on that of FIGO adopted in 1992 and updated in 2002.[1] The definitions of T and M categories correspond to the FIGO stages. Both systems are included for comparison. In contrast to other sites, an N (regional lymph node) classification does not apply to these tumours. A prognostic scoring index, which is based on factors other than the anatomic extent of the disease, is used to assign cases to high-risk and low-risk categories, and these categories are used in stage grouping.

Rules for Classification

The classification applies to choriocarcinoma (9100/3), invasive hydatidiform mole (9100/1), and placental site trophoblastic tumour (9104/1). Placental site tumours should be reported separately. Histological confirmation is not required if the human chorionic gonadotropin (βhCG) level is abnormally elevated. History of prior chemotherapy for this disease should be noted.

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 pregnancy, interval months from index pregnancy, pretreatment **serum/urine** βhCG, diameter of largest tumour, site of metastasis, number of metastases, 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[a]	Definition
TX		Primary tumour cannot be assessed
T0		No evidence of primary tumour
T1	I	Tumour confined to uterus
T2[b]	II	Tumour extends to other genital structures: vagina, ovary, broad ligament, fallopian tube by metastasis or direct extension
M1a	III	Metastasis to lung(s)
M1b[c]	IV	Other distant metastasis

Notes

[a] Stages I to IV are subdivided into A and B according to the prognostic score.

[b] Genital metastasis (vagina, ovary, broad ligament, fallopian tube) is classified T2.

[c] Any involvement of non-genital structures, whether by direct invasion or metastasis is described using the M classification.

pTM Pathological Classification

The pT categories correspond to the T categories. For pM see page 8.

Stage

Stage I	T1	M0
Stage II	T2	M0
Stage III	Any T	M1a
Stage IV	Any T	M1b

Prognostic Score

Prognostic Factor	0	1	2	4
Age	<40	≥40		
Antecedent pregnancy	H. mole	Abortion	Term pregnancy	
Months from index pregnancy	<4	4–6	7–12	>12
Pretreatment serum hCG (IU/ml)	$<10^3$	10^3–$<10^4$	10^4–$<10^5$	$>10^5$
Largest tumour size including uterus	<3 cm	3–5 cm	>5 cm	
Sites of metastasis	Lung	Spleen, kidney	Gastrointestinal tract	Liver, brain
Number of metastasis		1–4	5–8	>8
Previous failed chemotherapy			Single drug	Two or more drugs

Risk categories:

Total prognostic score 6 or less = low risk

Total score 7 or more = high risk

Prognostic Group

Record stage and prognostic score separated by a colon, i.e., **II: 4 or IV: 9**

Reference

1 Ngan HYS, Bender H, Benedet JL, Jones H, Montrucolli GC, Pecorelli S; FIGO Committee on Gynecologic Oncology. Gestational trophoblastic neoplasia. *Int J Gynecol Obstet* 2002; 77: 285–287.

Urological Tumours

Introductory Notes

The following sites are included:

- Penis
- Prostate
- Testis
- Kidney
- Renal pelvis and ureter
- Urinary bladder
- Urethra

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
- Distant metastasis
- TNM clinical classification
- pTNM pathological classification
- G Histopathological grading where applicable
- Stage
- Prognostic factors grid

TNM Classification of Malignant Tumours, Eighth Edition. Edited by James D. Brierley, Mary K. Gospodarowicz and Christian Wittekind.