Chapter I

Recommendations on registry practices

Section I.1. Minimum data-set

No recommendations on the minimum data-set have been made by ENCR.

However, in the recommendations with respect to Confidentiality in Population-Based Cancer Registration in the European Union (Chapter II), the Working Group made the following observation:

Data items

Cancer registries should observe the principles related to data quality (Directive 95/46/EC Article 6) and collect data that are adequate, relevant and not excessive in relation to the purpose, as well as being accurate, complete and up to date. The number of data items should thus be limited for two reasons – quality (the fewer data items the greater the likelihood that these will be recorded correctly) and confidentiality (the more data items the more chance of an unintended breach of confidentiality when releasing data).

The data items in the recommended minimum data-set for cancer registries are listed in Table 1.

Standardized definitions for recording and coding of several of these data items have been prepared.

Reference

Jensen, O.M., Parkin, D.M., MacLennan, R., Muir, C.S. & Skeet, R.G., eds, *Cancer Registration – Principles and Methods* (IARC Scientific Publications No. 95), Lyon, International Agency for Research on Cancer

Table 1. Items of information collected by registries (from Jensen *et al*., 1991)

Essential variables	
Personal identification	Names (in full) AND/OR unique personal identification number
Sex	Male or female
Date of birth	Day, month, year
Address	Usual residence (coded)
Incidence date	At least month and year
Most valid basis of diagnosis	
Topography (site) of primary	ICD-O
Morphology (histology)	ICD-O
Behaviour	ICD-O
Source of information	
Recommended variables	
Date of last contact	At least month and year
Status at last contact	(At least dead or alive)
Stage or extent of disease	
Initial treatment	

Section I.2. Incidence date

The date of the first event (of the six listed below) to occur chronologically should be chosen as incidence date. If an event of higher priority occurs within three months of the date initially chosen, the date of the higher-priority event should take precedence.

Order of declining priority:

1. Date of first histological or cytological confirmation of this malignancy (with the exception of histology or cytology at autopsy). This date should be, in the following order:

   a) date when the specimen was taken (biopsy)

   b) date of receipt by the pathologist

   c) date of the pathology report.

2. Date of admission to the hospital because of this malignancy.

3. When evaluated at an outpatient clinic only: date of first consultation at the out-patient clinic because of this malignancy.

4. Date of diagnosis, other than 1, 2 or 3

5. Date of death, if no information is available other than the fact that the patient has died because of a malignancy.

6. Date of death, if the malignancy is discovered at autopsy.

Whichever date is selected, the date of incidence should not be later than the date of the start of the treatment, or decision not to treat, or date of death.

The choice of the date of incidence does not determine the coding of the item "basis of diagnosis".

Section I.3. Basis of diagnosis

Registries may choose to record all of the notifications which they receive for a given cancer case (including date, source, and basis of diagnosis). This permits calculations of the number of notifications per case, number of sources per case, and the number of death certificate notifications (DCN).

However, for comparison between registries, and as a measure of validity, only the "most valid basis of diagnosis" is required.

The suggested codes are hierarchical, so that the higher number represents the more valid basis, and should thus be used for this purpose.

If there is no information on how the diagnosis had been made (information obtained from an automated source, for example) the code 9 (Unknown) should be used. Such cases are excluded from calculations of the percentage of cases diagnosed clinically, microscopically, by death certificate alone, etc.

Table 1. Basis of diagnosis codes

Code	Description	Criteria
0	**Death certificate only**	The only information to the registry is from a death certificate.
Non-microscopic		
1	**Clinical**	Diagnosis made before death, but without the benefit of any of the following (2–7)
2	**Clinical investigation**	To include all diagnostic techniques, including X-ray, endoscopy, imaging, ultrasound, exploratory surgery (e.g., laparotomy) and autopsy, without a tissue diagnosis.
4	**Specific tumour markers**	To include biochemical and/or immunological markers which are specific for a tumour site (Table 2).
Microscopic		
5	**Cytology**	Examination of cells whether from a primary or secondary site, including fluids aspirated using endoscopes or needles. Also to include the microscopic examination of peripheral blood films and trephine bone marrow aspirates.
6	**Histology of a metastasis**	Histological examination of tissue from a metastasis, including autopsy specimens.
7	**Histology of a primary tumour**	Histological examination of tissue from the primary tumour, however obtained, including all cutting techniques and bone marrow biopsies. Also to include autopsy specimens of a primary tumour.
9	**Unknown**	

Table 2. Specific tumour markers

Human chorionic gonadotrophin (HCG)	In diagnosis of choriocarcinoma (usually >100,000 iu in urine)
Prostate-specific antigen (PSA)	In diagnosis of prostate carcinoma (usually >10 µg/l serum)
Alphafetoprotein (AFP)	In diagnosis of hepatocellular carcinoma (usually >200 ng/ml serum)
Catecholamine degradation products (HVA, VMA)	In diagnosis of neuroblastoma
Elevated serum immunoglobulins	Myeloma (IgG >35 g/l or IgA > 20 g/l), Waldenström's macroglobulinaemia (IgM > 10 g/l)
Urinary immunoglobulins	Myeloma (light chain excretion >1 g/24 h)

"Specific" histology codes in absence of microscopic verification

The ICD-O M code is not allocated for the purpose of specifying the basis of diagnosis. However, it would be extremely unlikely (or impossible) for some specific morphological diagnoses to have been made without a histological (or cytological) examination.

Registries may therefore wish to establish some internal consistency checks, so that the combination of morphology codes 8001–9989 and basis of diagnosis code 0–4, or 9 are flagged for verification. However, certain combinations are exceptions to this general rule, as shown in Table 3.

Table 3. Combinations of specific morphology codes, and non-microscopic basis of diagnosis codes, which are considered acceptable

MORPHOLOGY		Most valid basis	Other criteria
Code	Description		
8800	(Sarcoma NOS)	2	
9590	Lymphoma NOS	1 or 2	
9800	Leukaemia NOS	1 or 2	
8720	Melanoma	1 or 2	
9140	Kaposi sarcoma	1 or 2	HIV-positive (excl. Africa)
8960	Nephroblastoma	2	Age 0–8
9100	Choriocarcinoma	4	Female, and age 15–49
9500	Neuroblastoma	2 or 4	Age 0–9
9510	Retinoblastoma	2	Age 0–5
9732	Myeloma	4	Age 40+
9761	Waldenström's macroglobulinaemia	4	Age 50+
8170	Hepatocellular carcinoma	4	
8150–8154	Islet cell tumours, gastrinomas	4	
9380	Glioma	2	C71.7 (brain stem)
9384/1	Subependymal giant cell astrocytoma	2	Tuberous sclerosis patient
9530–9539	Meningioma	2	C70
9350	Craniopharyngioma	2	
8270–8281	Pituitary tumours	4	C75.1

Section I.4. Topography, morphology, behaviour

The International Classification of Diseases for Oncology is the standard for recording site (topography), morphology (including grade of malignancy) and behaviour. The current edition (*International Classification of Diseases, Oncology*, 3rd Edition, Eds. Fritz A., Percy C., Jack A., Shanmugaratnam K., Sobin L., Parkin D.M., Whelan S.) was published by WHO, Geneva in 2000.

This edition takes into account the recommendations made by a Working Group of the ENCR with respect to the coding of leukaemias and lymphomas (the members of the Working Group were R. Otter, A. Astudillo, P.-M. Carli, A. Jack and H. van Krieken)

Section I.5. Recording multiple primary tumours

The recommendations follow those in the Third Edition of the International Classification of Diseases for Oncology (ICD-O-3). They are reproduced below. A small error in Table 24 of ICD-O-3, and in the corresponding Table 1 of the ENCR Recommendations has been corrected.

The IARC/IACR rules state the following:

1. Recognition of the existence of two or more primary cancers does not depend on time.

2. A primary cancer is one that originates in a primary site or tissue and is neither an extension, nor a recurrence, nor a metastasis.

3. Only one tumour shall be recognized as arising in an organ or pair of organs or tissue. For a tumour where site is coded by the first edition of ICD-O (or by ICD-9), an organ or tissue is defined by the three-character category of the topography code.

   ICD-O second and third editions and ICD-10 have a more detailed set of topography code. Some groups of codes are considered to be a single organ for the purpose of defining multiple tumours. These topography code groups are shown in Table 1.

   Multifocal tumour – that is, discrete masses apparently not in continuity with other primary cancer originating in the *same* primary site or tissue, for example bladder – are counted as a single cancer.

   Skin cancer presents a special problem as the same individual may have many such neoplasms over a lifetime. The IARC/IACR rules imply that only the first tumour of a defined histological type, *anywhere on the skin*, is counted as an incident cancer unless, for example, one primary was a malignant melanoma and the other a basal cell carcinoma.

4. Rule 3 does not apply in two circumstances:

   4.1 For systemic or multicentric cancers potentially involving many discrete organs, four histological groups – lymphoma, leukaemias, Kaposi sarcoma, and mesothelioma (groups 7, 8, 9 and 10 in Table 2) – are included. They are counted only once in any individual.

   4.2 Other specific histologies – groups 1, 2, 3, 4, 6, and 11 in Table 2 – are considered to be different for the purpose of defining multiple tumours. Thus, a tumour in the same organ with a ‘different’ histology is counted as a new tumour. Groups 5 and 12 include tumours that have not been satisfactorily typed histologically and cannot therefore be distinguished from the other groups.

Table 1. Groups of topography codes from ICD-O-2 and ICD-O-3 considered a single site in the definition of multiple cancers

ICD-O-2/3		ICD-O-1
C01	Base of tongue	
C02	Other and unspecified parts of tongue	141
C05	Palate	
C06	Other and unspecified parts of mouth	145
C07	Parotid gland	
C08	Other and unspecified major salivary glands	142
C09	Tonsil	
C10	Oropharynx	146
C12	Pyriform sinus	
C13	Hypopharynx	148
C19	Rectosigmoid junction	
C20	Rectum	154
C23	Gallbladder	
C24	Other and unspecified parts of biliary tract	156
C30	Nasal cavity and middle ear	
C31	Accessory sinus	160
C33	Trachea	
C34	Bronchus and lung	162
C37	Thymus	164
C38.0–3	Heart and mediastinum	164
C38.8	Overlapping lesion of heart, mediastinum and pleura	165.8
C40	Bones, joints and articular cartilage of limbs	
C41	Bones, joints and articular cartilage of other and unspec. sites	170
C51	Vulva	
C52	Vagina	184
C56	Ovary	
C57	Other specified female genital organs	183
C60	Penis	
C63	Other and unspecified male genital organs	187
C64	Kidney	
C65	Renal pelvis	
C66	Ureter	
C68	Other and unspecified urinary organs	189
C74	Adrenal gland	
C75	Other endocrine glands and related structures	194

Table 2. Groups of malignant neoplasms considered to be histologically "different" for the purpose of defining multiple tumours (adapted from Berg, 1994)

Carcinomas	
1. Squamous carcinomas	M805–808, M812–813
2. Basal cell carcinomas	M809–811
3. Adenocarcinomas	M814, M816, M819–822, M826–833, M835–855, M857, M894
4. Other specific carcinomas	M803–804, M815, M817–818, M823–825, M834, M856, M858–867
(5.) Unspecified carcinomas (NOS)	M801–802
6. **Sarcomas** and other soft tissue tumours	M868–871, M880–892, M899, M904, M912–913, M915–925, M937, M954–958
7. **Lymphomas**	M959–972
8. **Leukaemia**	M980–996, M998
9. **Kaposi sarcoma**	M914
10. **Mesothelioma**	M905
11. **Other specified** types of cancer	M872–879, M893, M895–898, M900–903, M906–911, M926–936, M938–953, M973–976
(12.) **Unspecified** types of cancer	M800, M997

Section I.6. Recording bladder tumours*

All bladder tumours should be registered, whatever the histological type and level of invasion.

Principles

The coding of tumour behaviour (/1, /2, /3) takes into account both the anatomo-pathological definition and the extent of invasion. It is, therefore, essential to have access to reports of any pathological examinations.

Rules

Tumour behaviour code: /1

Normal or slightly abnormal histology: low grade papillary urothelial tumours, not invasive. In the various anatomopathological classifications these tumours are called:

- benign or simple papillomas,
- papillary urothelial tumours,
- stage I carcinoma (Broders' classification),
- well differentiated papillary carcinoma (Jewett's classification),
- grade I carcinoma (in the WHO classification), or
- classes I and IIs (Chome's classification).

Extent of invasion – none.

Tumour behaviour code: /2

Presence of mitoses and more markedly atypical cells than in the previous categories. It includes both high-grade papillary urothelial tumours and flat tumours.

Extent of invasion – none.

Tumour behaviour code: /3

Invasion present, whatever the anatomo-pathological definition.

Particular cases:

– Carcinoma *in situ*: /2

The particular entity which consists of carcinoma *in situ* displaying clear anaplasia of the superficial epithelium without the formation of a papillary structure and without invasion is coded to 8010/2.

– Anatomopathological examination indicates the existence of a tumour, but it is

* Currently being revised by the 2nd Working Group.

not possible to determine the degree of malignancy on the specimen examined:

Code: /1 tumour benign or of uncertain malignancy

– Anatomopathological proof unavailable, but the clinical appearance is confirmed by the clinician:

8000/0: No microscopical confirmation: tumour clinically benign.

8000/1: No microscopical confirmation: tumour clinically of uncertain behaviour.

8000/3: No microscopical confirmation: tumour clinically malignant.

Section I.7. Recording central nervous system tumours

Tumours to be registered

It is recommended that cancer registries include in their database *all intracranial and intraspinal neoplasms* irrespective of their behaviour (benign/uncertain/malignant).

The principal reasons are:

- It is difficult to distinguish benign from malignant tumours by symptoms alone
- All brain and spinal tumours are capable of producing severe clinical effects, irrespective of malignancy
- Etiological and clinical syndromes associated with certain benign tumours may be of especial interest (meningiomas, pituitary tumours...)
- Certain tumours – notably astrocytomas – progress from low grade (benign) to high grade (malignant) during their clinical course

Certain 'tumours' such as benign vascular lesions of meninges (haemangiomas) and cysts may, however, be excluded.

Reporting of brain and spinal lesions may or may not include benign/uncertain neoplasms, according to the comparisons being made.

WHO grade (malignancy scale)

1. The recording of grade is an important, although not indispensable element in typing of central nervous system (CNS) tumours. It is essential to the interpretation of data on clinical outcomes. Use of the new WHO classification of brain tumours resolves a great many of the problems of determining tumour grade, since in most cases tumour grade is implicit in the diagnostic category.

GRADE I
(e.g. pilocytic astrocytoma). Tumours with a low proliferative potential, a frequently discrete nature, and a possibility of cure following surgical resection alone.

GRADE II
Generally infiltrating tumours low in mitotic activity, but with a potential to recur. Some tumour types tend to progress to lesions with higher grades of malignancy (e.g. well differentiated astrocytomas, oligodendrogliomas and ependymomas).

GRADE III Histological evidence of malignancy, generally in the form of mitotic activity, clearly expressed infiltrative capabilities, and anaplasia.

GRADE IV
Mitotically active, necrosis-prone neoplasms, generally associated with a rapid pre- and post-operative evolution of the disease.

2. These definitions are not the same as those proposed for the general grading of tumours via the 6th digit of the morphology code of ICD-O (page xxviii of ICD-O, Second Edition), which relates primarily to degree of differentiation.

HOWEVER
For malignant tumours of the central nervous system (site codes C70–C72, C75.1–C75.3), the grade should be recorded as the sixth digit of the ICD-O M code, according to the definition in Section 1.

3. Table 1 details the available grades.

Table 1. WHO grading system (malignancy scale) for CNS tumours and ICD-O behaviour code

Tumour type	Grade				ICD-O behaviour code
	I	II	III	IV	
Astrocytic tumours					
Subependymal giant cell	*				1
Pilocytic	*				3
Low grade		*			3
Pleomorphic xanthoastrocytoma		*	*		3
Anaplastic			*		3
Glioblastoma				*	3
Oligodendrogliomas					
Low grade		*			3
Anaplastic			*		3
Oligo-astrocytomas					
Low grade		*			3
Anaplastic			*		3
Ependymal tumours					
Subependymoma	*				1
Myxopapillary	*				1
Low grade		*			3
Anaplastic			*		3
Choroid plexus tumours					
Papilloma	*				0
Carcinoma			*	*	3
Neuronal/glial tumours					
Gangliocytoma	*				0
Ganglioglioma	*	*			1
Anaplastic ganglioglioma			*		3
Desmoplastic infantile ganglioglioma	*				0
Dysembryoplastic neuroepithelial tumour	*				-
Central neurocytoma	*				0
Pineal tumours					
Pineocytoma		*			1
Pineocytoma/pineoblastoma			*	*	-
Pineoblastoma				*	3
Embryonal tumours					
Medulloblastoma				*	3
Other PNETs				*	3
Medulloepithelioma				*	3
Neuroblastoma				*	3
Ependymoblastoma				*	3
Cranial and spinal nerve tumours					
Schwannoma	*				0
Malignant peripheral nerve sheath tumour			*	*	3
Meningeal tumours					
Meningioma	*				0
Atypical meningioma		*			1
Papillary meningioma		*	*		1
Haemangiopericytoma		*	*		3
Anaplastic meningioma			*		3

Footnote: " - " = no specific histology or malignancy code

Unused ICD-O codes

The European Network of Cancer Registries working group recommends that cancer registries no longer use certain morphology codes, which correspond to diagnostic terms considered to be obsolete. When these terms are encountered, the appropriate code (and diagnostic synonym) is as follows:

References

Kleihues, P., Burger, P.C. & Scheithanen, B.W., eds (1993) *Histological Typing of Tumours of the Central Nervous System*, 2nd edition (WHO Histological Classification of Tumours), Berlin, Heidelberg, Springer-Verlag

Kleihues, P. & Cavenee, W.K., eds (2000) *Pathology, Genetics and Tumours of the Nervous System* (World Health Organization Classification of Tumours), Lyon, IARCPress

Table 2. Neurological tumours: proposed ICD-O-2 codes for obsolete categories

Current code	Description	Proposed code	ICD-O-2 rubric
9393/1	Papillary ependymoma	9391/3	Ependymoma, NOS
9422/3	Spongioblastoma, NOS	9443/3	Primitive polar spongioblastoma
9423/3	Spongioblastoma polare	9443/3	
9460/3	Oligodendroblastoma	9473/3	Primitive neuroectodermal tumour
9480/3	Cerebellar sarcoma, NOS	9473/3	
9481/3	Monstrocellular sarcoma	9440/3	Glioblastoma, NOS
9502/3	Teratoid medulloepithelioma	9501/3	Medulloepithelioma, NOS
9503/3	Neuroepithelioma, NOS	9500/3	Neuroblastoma, NOS
9504/3	Spongioneuroblastoma	9500/3	
9511/3	Retinoblastoma, differentiated	9510/3	Retinoblastoma, NOS
9512/3	Retinoblastoma, undifferentiated	9510/3	
9520/3	Olfactory neurogenic tumour	9522/3	Aesthesioneuroblastoma
9521/3	Aesthesioneurocytoma	9522/3	
9532/0	Fibrous meningioma – Fibroblastic meningioma	9530/0	Meningioma, NOS
9536/0	Haemangiopericytic meningioma	9150/3	Haemangiopericytoma, malignant
9541/0	Melanotic neurofibroma	9560/0	Neurilemmoma, NOS
9560/1	Neurinomatosis	9560/0	
9560/3	Neurilemmoma, malignant – Malignant schwannoma – Neurilemmosarcoma	9540/3	Neurofibrosarcoma
9570/0	Neuroma, NOS	9540/0	Neurofibroma, NOS

Table 3. Supplementary index: terms not appearing in the ICD-O-2 alphabetical index

9505/0	Dysembryoplastic neuroepithelial tumour (DNET)
9505/0	Desmoplastic infantile ganglioglioma
9505/3	Anaplastic (malignant) ganglioglioma
9361/1	Mixed/transitional pineal tumour
8726/1	Melanocytoma
9390/3	Choroid plexus carcinoma
9506/0	Central neurocytoma
9530/1	Atypical meningioma
9540/3	Malignant peripheral nerve sheath tumour
9470/3	Melanotic medulloblastoma (Kleihues *et al*., 1993)
9470/3	Lipomatous medulloblastoma (Kleihues & Cavanee, 2000)
8963/3	Atypical teratoid/rhabdoid tumour (Kleihues & Cavanee, 2000)

Some codes are ‘matrix codes’ – i.e., already exist but without the behaviour code specified

Section I.8. Recording non-melanoma skin cancers

1. Non-melanoma skin cancers to be recorded

Non-melanoma skin cancers are extremely common in some European populations. Each registry must decide whether it has the necessary resources to record all such cancers, and whether the costs involved are reasonable, with respect to the utility of the resulting statistics. The main uses of such data are

- to quantify the workload imposed by treatment of these tumours
- to indicate exposure to carcinogens (including sunlight, occupation)
- for studies of associations with other cancers
- to document trends in occurrence

There are three options:

(a) Record all skin cancers
(b) Record all skin cancers, excluding basal cell carcinomas (M809-811)
(c) Record all skin cancers, excluding basal and squamous cell carcinomas (M805–811)

2. Topography

The subsites of skin which may be coded using ICD-O (C44.0–C44.7) are rather limited for clinical or epidemiological purposes.

For registries which do decide to collect data on skin cancers, a more detailed coding scheme, requiring a fourth digit, may be used. A suggested coding scheme is presented in Table 1.

3. Multiple tumours

The revised IARC/IACR rules (Table 2), which appear in the third edition of ICD-O, imply that only a first tumour of a defined histological type, *anywhere on the skin*, is counted as an incident cancer.

The defined histological types now separate squamous cell carcinomas (group 1) and basal cell carcinomas (group 2). The rare tumours of glandular origin are included with the adenocarcinoma group (group 3).

Notification of second (or subsequent) basal cell carcinomas in the same individual may be recognized by updating the recorded morphological code to 8091 (multifocal superficial basal cell carcinoma).

4. Multifocal tumours

For cancer registries which wish to record the occurrence of every skin cancer (not just the first), a special field must be reserved to denote the existence of multifocal cancer(s), in addition to the link between individuals and cancers, in the registry database.

Table 1. ICD-O extended subsite topography of the skin for research purposes

ICD-O	ENCR recommendation
C44.0 Skin of lip, NOS Skin of lower lip Skin of upper lip	**C44.09 Skin of lip, NOS** Skin of lower lip Skin of upper lip
C44.1 Eyelid Lid, NOS Palpebra Canthus, NOS Inner canthus Lower lid Meibomian gland Outer canthus Upper lid	**C44.19 Eyelid**
C44.2 External ear Auricle, NOS Pinna Ceruminal gland Concha Ear, NOS Ear lobule Earlobe External auditory canal Auditory canal, NOS Auricular canal, NOS External auricular canal Ear canal External auditory meatus Helix Skin of auricle Skin of ear, NOS Tragus	**C44.29 External ear**
C44.3 Skin of other and unspecified parts of face Skin of: • cheek • chin • face • forehead • jaw • nose • temple Ala nasi Chin, NOS Columnella Eyebrow Brow External cheek External nose Forehead, NOS Temple, NOS	**C44.30 Cheek** **C44.31 Forehead** Temple Eyebrow Brow **C44.32 Nose** Columnella **C44.33 Chin** Jaw **C44.39 Face, NOS**
C44.4 Skin of scalp and neck Skin of head, NOS Skin of neck Skin of scalp Scalp, NOS Skin of cervical region Skin of supraclavicular region	**C44.40 Skin of neck** Skin of cervical region Skin of supraclavicular region **C44.41 Skin of scalp** Scalp, NOS **C44.49 Skin of head, NOS**

C44.5 Skin of trunk

Skin of:
- abdomen
- abdominal wall
- anus
- axilla
- back
- breast
- buttock
- chest
- chest wall
- flank
- groin
- perineum
- thoracic wall
- thorax
- trunk
- umbilicus
- gluteal region
- infraclavicular region
- inguinal region
- sacrococcygeal region
- scapular region

Perianal skin
Umbilicus, NOS

C44.6 Skin of upper limb and shoulder

Skin of:
- antecubital space
- arm
- elbow
- finger
- forearm
- hand
- palm
- shoulder
- thumb
- upper limb
- wrist

Finger nail
Palmar skin

C44.7 Skin of lower limb and hip

Skin of:
- ankle
- calf
- foot
- heel
- hip
- knee
- leg
- lower limb
- popliteal space
- thigh
- toe

C44.50 Trunk, anterior, upper
Axilla
Breast
Chest
Infraclavicular region

C44.51 Trunk, anterior, lower
Abdomen
Abdominal wall
Flank
Groin
Inguinal region
Pubis
Umbilicus

C44.52 Trunk anterior, NOS
Thorax

C44.53 Trunk, posterior, upper
Back
Scapular region

C44.54 Trunk, posterior, lower
Buttock
Gluteal region
Sacrococcygeal region

C44.55 Trunk, posterior, NOS

C44.56 Perineum
Anus
Perianal skin

C44.59 Trunk, NOS

C44.60 Skin of upper arm
Elbow
Shoulder
Antecubital space

C44.61 Skin of lower arm
Forearm
Wrist

C44.62 Skin of hand, dorsal

C44.63 Skin of hand, palmar

C44.64 Skin of hand, NOS

C44.65 Skin of finger, dorsal

C44.66 Skin of finger, palmar

C44.67 Skin of finger, subungual
Nail

C44.68 Skin of finger, NOS

C44.69 Skin of arm, NOS

C44.70 Skin of leg
Hip
Knee
Popliteal space
Thigh

C44.71 Skin of lower leg
Ankle
Calf
Heel
Shin

C44.72 Skin of foot, dorsal

C44.73 Skin of foot, plantar
Sole

C44.74 Skin of foot, NOS

C44.75 Skin of toe, dorsal

Plantar skin Sole of foot Toe nail	**C44.76 Skin of toe, plantar** **C44.77 Skin of toe, subungual** Nail **C44.78 Skin of toe, NOS** **C44.79 Skin of leg, NOS**
C44.8 Overlapping lesion of skin	**C44.83 Overlapping lesion of skin of face or face and head/neck** **C44.84 Overlapping lesion of skin of head or head and neck** **C44.85 Overlapping lesion of skin of trunk or trunk and neck** **C44.86 Overlapping lesion of skin of upper limb or upper limb and shoulder/trunk** **C44.87 Overlapping lesion of skin of lower limb or lower limb and hip/trunk** **C44.89 Overlapping lesion of skin, NOS**
C44.9 Skin, NOS	**C44.99 Skin, NOS**
C51.0 Labium majus Skin of labia majora	**C51.0 Skin of labia majora**
C51.9 Vulva, NOS Skin of vulva	**C51.9 Skin of vulva**
C60.9 Penis, NOS Skin of penis	**C60.9 Skin of penis**
C63.2 Scrotum, NOS Skin of scrotum	**C63.2 Skin of scrotum**

Table 2. IARC/IACR rules for multiple primaries

Groups of malignant neoplasms considered to be histologically "different" for the purpose of defining multiple tumours (revised in ICD-O-3, 2000)	
Carcinomas	
1. Squamous carcinomas	M805–808, M812–813
2. Basal cell carcinomas	M809–811
3. Adenocarcinomas	M814, M816, M819–822, M826–833, M835–855, M857, M894
4. Other specific carcinomas	M803–804, M815, M817–818, M823–825, M834, M856, M858–867
(5.) Unspecified carcinomas (NOS)	M801–802
6. **Sarcomas** and other soft tissue tumours	M868–871, M880–892, M899, M904, M912–913, M915–925, M937, M954–958
7. **Lymphomas**	M959–972
8. **Leukaemia**	M980–996, M998
9. **Kaposi sarcoma**	M914
10. **Mesothelioma**	M905
11. **Other specified** types of cancer	M872–879, M893, M895–898, M900–903, M906–911, M926–936, M938–953, M973–976
(12.) **Unspecified** types of cancer	M800, M997

Section I.9. Method of detection (in relation to screening)

The old codes for 'method of first detection' in *Cancer Registration: Principles and Methods* (p. 56) are no longer considered relevant due to the difficulty in differentiating between a true 'incidental finding' and 'clinical presentation (with symptoms)', and to the currently low proportion of deaths with autopsy ('incidental finding at autopsy').

With respect to screening, the evaluation and monitoring of a programme ideally require that the records of the screening programme be linkable to the records of the cancer registries. This allows, e.g. separation of cancers in non-respondents or non-invited individuals.

1. Where feasible, cancer registries should collect a data item called '**Method of detection in relation to screening**'.

- The item has utility only in the evaluation and monitoring of organized cancer screening programmes. It is not useful to record cancer cases detected by unorganized screening programmes, or by opportunistic screening.
- Each registry should define the sites, the screening tests and the populations concerned.
- An 'organized screening programme' is defined as 'men and/or women in an *identified population*, *invited* to participate in a screening programme'.
- Each registry should define 'screening', i.e., early detection of disease by a screening test (e.g. for breast it would be mammography, for cervix pap smear, etc.).
- 'Early detection of disease by a screening test' should be defined as the initiation of the diagnostic process by a positive result in the screening test.

2. Where possible, registries should code the **Method of detection in relation to screening** using the following codes:

   1) Screen detected
   2) Interval cancer (according to local definition)*
   8) Other
   9) Unknown or not applicable

Whatever codes are used, they should be exclusive (no overlap).

Reference

Jensen, O.M., Parkin, D.M., MacLennan, R., Muir, C.S., & Skeet, .RG., eds, *Cancer Registration – Principles and Methods* (IARC Scientific Publications No. 95), Lyon, International Agency for Research on Cancer

* The time interval between a negative screen and diagnosis should be recorded.

Section I.10. Recording and coding extent of disease

Condensed TNM for coding the extent of disease in cancer registration

1. UICC/AJCC TNM classification system

1.1 The extent of disease should be recorded in terms of the three digit code of the TNM system. The rules for coding the stage of disease according to the TNM system are described in *TNM Classification of Malignant Tumours*, 6th Edition, 2002 (L.H. Sobin and Ch. Wittekind).

1.2 The TNM system is not used for coding of the extent of lymphomas, leukaemias, brain tumours and childhood cancers (defined as < 15 years of age at diagnosis).

2. pTNM vs. cTNM

When the stage/extent of the cancer is recorded in the clinical/pathological records according to the TNM system, these codes should be registered. The registry should record the best available data - that is pT (rather than cT) and pN (rather than cN), if they are available. Normally, if there is any evidence (clinical or pathological) of metastatic disease, M will be recorded as 1.

3. Time of diagnosis

Extent of disease at diagnosis is based upon all examinations carried out to plan treatment, plus surgery and pathological examination of resected specimen(s) (including the radicalization of primary surgery). Examinations carried out post-surgery, but during the same hospital stay, are included.

In the absence of surgery, staging is based upon examinations carried out prior to medical treatment, or radiotherapy, or during the hospital stay when these treatments were started, or a decision made to withhold them.

For non-hospitalized patients, staging is based upon examinations, clinical and instrumental, carried out to establish the primary treatment, or decision not to treat.

The detection of metastatic disease after the first course of treatment (including during adjuvant treatment or hormonal therapy) does not change coding of extent of disease at diagnosis.

4. Condensed TNM

4.1 When T, and/or N, and/or M have not been explicitly recorded in the clinical/ pathological records, **the cancer registry should attempt to score extent of disease according to the Condensed TNM scheme:**

T :	**L** (**L**ocalized)	**A** (**A**dvanced)	**X** (cannot be assessed)
N :	**0**	**+**	**X** (cannot be assessed)
M :	**0**	**+**	**X** (cannot be assessed)

where T and N are extracted, if possible, from the pathology report, or, in its absence, from the clinical record (endoscopy, X-ray etc.). M is based on the best available information, whether clinical, instrumental or pathological. For M, clinical signs and findings are enough to justify M+ in the absence of pathological confirmation of metastatic deposits.

4.2 The Condensed TNM should be based on all available clinical and pathological information, or on sound reasoning based on the understanding of clinical practices.

4.3 The conventional values of T, which correspond to T (**L**ocalized) and T (**A**dvanced) are given in Table 1, and a summary of the corresponding definitions from the TNM Manual in Annex 1.

N**+** refers to spread to regional lymph nodes. The definition of 'regional nodes' for each site is provided in the TNM manual and in summary form in Annex 2.

4.4 For some primary sites, correct allocation of T and N requires detailed specification of site, otherwise the extent of spread (T), or the regional nodes cannot be defined. This is the case for the cancers of head & neck, oesophagus and skin.

4.5 If the primary site is unknown (ICD-O code C80.9), T and N cannot be correctly assigned (although the fact that the tumour is M+ may be obvious).

5. Unknown or unavailable TNM or other extent of disease information

5.1 If the only recorded T, N or M is **X**, then this value should be registered. However, **X** should only be coded if it appears to be the best value based on *all available information*.

5.2 If T, N or M are recorded as X (cannot be assessed) based on pathology (pTNM), then use the best available information from *clinical* examination to code TNM, rather than coding **X**.

5.3 N and M should be coded to **X** (cannot be assessed), only if there is no reasonable evidence of zero (**0**). For example, code N**0**/M**0** instead of N**X**/M**X**, when a resection is performed for an abdominal tumour but no nodes were found in the resected specimen by the pathologist. Similarly, code N**0**/M**0** for a digestive system tumour completely resected by endoscopy (e.g. polypectomy, transanal excision).

5.4 Cancers* which are *non-resectable*, but without evidence of metastases, should be classified with M+ cases. Non-resectable cancers, and those with metastases, are advanced malignancies with a similar prognosis. Classifying such cases as M+ allows them to be distinguished from cases which have been resected, and for which no pathology report is available (NX and/or MX).

6. Tabulation of results

Extent of disease should be tabulated as:

Tumour localized	(T**L**/N**0**/M**0**)
Tumour with local spread	(T**A**/N**0**/M**0**)
Tumour with regional spread	(anyT/N**+**/M**0**)
Advanced cancer	
• Metastatic	(any T/any N/M**+**)
• Non-resectable tumours*	(MX)
Unknown extent	(TX/NX/MX)

7. Optional data

7.1 *Size of tumour*

This is relevant to the allocation of the T code. For some purposes, the exact size of the tumour is important, for example, in the evaluation of a screening programme. Registries should decide for which sites it is important to record tumour size, and provide a separate field for this purpose.

Size is recorded as maximum diameter (in mm), and is registered from the pathology report; in the absence of pathology, it is recorded from imaging or clinical examination. If size is given for both the fresh and the fixed tissue and the two measurements are discrepant, then record that obtained from the histological (fixed) specimen(s). In the case of multiple simultaneous tumours that are not independent primaries, the tumour with the greatest diameter should be used for classification.

7.2 *Number of nodes*

The presence or absence of positive nodes may depend on the number of nodes that have been examined pathologically.

For detailed staging studies of specific designated tumours, record:

Number of nodes positive (two-digit code)
Number of nodes examined (two-digit code)

7.3 *Certainty of information*

The TNM manual allows for the coding of the C-factor, to define the certainty of the information on which the TNM staging was based (Appendix 3). As the condensed TNM does not distinguish between c (clinical) and p (pathology-based) codes, registries might wish to consider the use of a simplified C code:

C1 Evidence from standard diagnostic means (e.g. inspection, palpation, standard radiography, intraluminal endoscopy)

C2 Evidence from special diagnostic means
- imaging: special radiographic projections, CT scan, ultrasound, lymphography, angiography, scintigraphy, MRI
- endoscopic biopsy or cytology

Cp Evidence based upon post-surgical (or autopsy) histopathology

Annexes

1. T**L**/T**A** precise definitions for each site

2. N list of regional nodes for each site

3. C C-factor

* This proposal does not apply to prostate cancers

Condensed TNM scheme

Table 1. Conventional values of T corresponding to T Localized and T Advanced

Site	**L**ocalized	**A**dvanced
Lip and oral cavity	T1–T2	T3–T4
Pharynx	T1–T2	T3–T4
Larynx	T1–T2	T3–T4
Paranasal sinuses	T1–T2	T3–T4
Salivary glands	T1–T2	T3–T4
Thyroid	T1–T3	T4
Oesophagus	T1–T2	T3–T4
Stomach	T1–T2	T3–T4
Small intestine	T1–T2	T3–T4
Colon and rectum	T1–T2	T3–T4
Anal canal	T1–T2	T3–T4
Liver	T1–T2	T3–T4
Gallbladder	T1–T2	T3–T4
Extrahepatic bile ducts and ampulla	T1–T2	T3
Pancreas	T1–T2	T3–T4
Lung	T1–T2	T3–T4
Pleura	T1–T2	T3–T4
Bone	T1	T2
Soft tissue	T1	T2
Skin	T1–T3	T4
Melanoma	T1–T3	T4
Breast	T1–T3	T4
Vulva	T1–T2	T3–T4
Vagina	T1–T2	T3–T4
Cervix	T1–T2	T3–T4
Corpus	T1–T2	T3–T4
Ovary	T1	T2–T3
Fallopian tube	T1	T2–T3
Trophoblastic	T1	T2
Penis	T1–T2	T3–T4
Prostate	T1–T2	T3–T4
Testis	T1–T2	T3–T4
Kidney	T1–T2	T3–T4
Pelvis and ureter	T1–T2	T3–T4
Bladder	T1–T2	T3–T4
Urethra	T1–T2	T3–T4
Eye	T1–T3	T4
Except for sarcoma of orbit	*T1–T2*	*T3–T4*

Annex 1. ENCR Condensed TNM scheme

T: L(ocalized) or **A**(dvanced)

(see Table 1 of ENCR recommendations)

Definition of **A**(dvanced)
(usually minimum criteria for T3, else specified in text)

Based on: Sobin, L.H. and Wittekind, Ch., eds, UICC International Union Against Cancer, *TNM Classification of Malignant Tumors*, Sixth Edition, New York, Wiley-Liss, 2002

Lip and oral cavity
T3, Tumour more than 4 cm in greatest dimension

Pharynx (including base of tongue, soft palate, and uvula)
Oropharynx: T3, Tumour more than 4 cm in greatest dimension
Nasopharynx: T3, Tumour invades bony structures or paranasal sinuses
Hypopharynx: T3, Tumour more than 4 cm in greatest dimension or with fixation of hemilarynx

Larynx
Supraglottis: T3, Tumour limited to larynx with vocal cord fixation and/or invades any of the following: post-cricoid area, pre-epiglottic tissues, paraglottic space, thyroid cartilage
Glottis: T3, Tumour limited to larynx with vocal cord fixation, involvement of paraglottic space, thyroid cartilage
Subglottis: T3, Tumour limited to larynx with vocal cord fixation

Paranasal sinuses
Maxillary sinus: T3, See TNM manual
Ethmoid sinus: T3, See TNM manual

Salivary glands - parotid, submandibular, and sublingual
T3, Tumour more than 4 cm in greatest dimension or having extraparenchymal extension

Thyroid gland
T4, Tumour of any size extending beyond the thyroid capsule
(Anaplastic carcinomas are all T4, irrespective of extent)

Oesophagus
T3, Tumour extends beyond the muscle coat of the oesophagus

Stomach
T3, Tumour penetrates serosa (visceral peritoneum)

Small intestine
Colon and rectum
T3, Tumour invades extends beyond the muscle coat of the intestine

Anal canal
T3, Tumour more than 5 cm in greatest dimension

Liver (including intrahepatic bile ducts)
T3, Multiple tumours >5 cm in diameter or involving major branch of portal or hepatic veins

Gallbladder
T3, Tumour penetrates serosa (visceral peritoneum) or invades adjacent structures

Extrahepatic bile duct
T3, Tumour invades adjacent structures: liver, pancreas, duodenum, gallbladder, colon, stomach

Ampulla of Vater
T3, Tumour invades pancreas or other adjacent structures (note: duodenal wall is T2)

Pancreas
T3, Tumour not limited to pancreas

Lung
Pleural mesothelioma
T3, See TNM manual

Bone
T2, Tumour more than 8 cm in greatest dimension

Soft tissues
T2, Tumour more than 5 cm in greatest dimension

Carcinoma of the skin (excluding eyelid, vulva, and penis)
T4, Tumour invades deep extradermal structures (cartilage, skeletal muscle, bone)

Malignant melanoma of the skin (excluding eyelid)
pT4, Tumour more than 4 mm in thickness.

Breast
T4, Tumour of any size with direct extension to chest wall or skin

Vulva
T3, Tumour invades beyond vulva or perineum (urethra, vagina, anus/rectum, bladder)

Vagina
T3, Tumour extends to pelvic wall or further

Cervix uteri
T3, Tumour extends beyond uterus to pelvic wall or lower third of vagina, or further, or causes hydronephrosis or non-functioning kidney

Corpus uteri
T3, Tumour involves serosa or extends beyond uterus

Ovary
Fallopian tube
T2, Tumour with pelvic extension

Gestational trophoblastic tumours
T2, Tumour extends beyond uterus

Penis
T3, Tumour invades urethra or prostate

Prostate
T3, Tumour extends through the prostatic capsule

Testis
pT3, Tumour invades spermatic cord

Kidney
T3, Tumour extends beyond kidney

Renal pelvis and ureter
T3, Tumour invades beyond muscularis

Urinary bladder
T3, Tumour invades perivesical tissue

Urethra
T3, Tumour invades beyond corpus spongiosum, prostate, or periurethral muscle

Eye
T4 (T3 for sarcoma of the orbita), See TNM manual

Annex 2. ENCR Condensed TNM scheme

Definitions of regional lymph nodes (N+)

Based on: Sobin, L.H. & Wittekind, Ch., eds, UICC International Union Against Cancer, *TNM Classification of Malignant Tumors*, Sixth Edition, New York, Wiley-Liss, 2002

Lip and oral cavity
Pharynx (including base of tongue, soft palate, and uvula)
Larynx
Paranasal sinuses
Salivary glands — parotid, submandibular, and sublingual
Cervical nodes

Thyroid gland
Cervical and upper/superior mediastinal nodes

Oesophagus

Cervical oesophagus:	Scalene, internal jugular, upper and lower cervical, perioesophageal, supraclavicular
Intrathoracic oesophagus:	Upper perioesophageal (above the azygous vein), subcarinal, lower perioesophageal (below the azygous vein), mediastinal and perigastric nodes, excluding coeliac nodes

Stomach
Perigastric nodes along the lesser and greater curvatures
Nodes along the left gastric, common hepatic, splenic, and celiac arteries
Hepatoduodenal nodes
Gastro-oesophageal junction: paracardial, left gastric, coeliac, diaphragmatic, and the lower mediastinal paraoesophageal

Small intestine

Duodenum:	Pancreaticoduodenal, pyloric, hepatic (pericholedochal, cystic, hilar), and superior mesenteric nodes
Ileum and jejunum:	Mesenteric, including superior mesenteric nodes
Terminal ileum only:	Ileocolic, including posterior caecal nodes

Colon and rectum
The regional lymph nodes are the pericolic and perirectal nodes and those located along the ileocolic, right colic, middle colic, left colic, inferior mesenteric, superior rectal (haemorrhoidal), internal iliac arteries, mesorectal, lateral sacral, presacral, and sacral promontory (Gerota).

Anal canal
Perirectal, internal iliac, and inguinal nodes

Liver (including intrahepatic bile ducts)
The regional lymph nodes are the hilar nodes (i.e., those in the hepatoduodenal ligament), hepatic (along the proper hepatic artery), periportal (along the portal vein), and those along the abdominal inferior vena cava above the renal veins (exept the inferior phrenic nodes).

Gallbladder
Extrahepatic bile duct
Cystic duct, pericholedochal, hilar, peripancreatic (head only), periduodenal, periportal, coeliac, and superior mesenteric nodes

Ampulla of Vater

Superior: Lymph nodes superior to the head and body of the pancreas
Inferior: Lymph nodes inferior to the head and body of the pancreas
Anterior: Anterior pancreaticoduodenal, pyloric, and proximal mesenteric nodes
Posterior: Posterior pancreaticoduodenal, common bile duct, and proximal mesenteric nodes

Pancreas

The regional lymph nodes are the peripancreatic nodes, which may be subdivided as follows:
Superior: Lymph nodes superior to the head and body of the pancreas
Inferior: Lymph nodes inferior to the head and body of the pancreas
Anterior: Anterior pancreaticoduodenal, pyloric (for head only), and proximal mesenteric lymph nodes
Posterior: Posterior pancreaticoduodenal, common bile duct, and proximal mesenteric nodes
Splenic: Hilum of the spleen and tail of the pancreas (for tumours in the body and tail only)
Celiac: (for tumours of head only)

Lung
Pleural mesothelioma

All regional nodes are above the diaphragm. They include the intrathoracic, scalene, internal mammary (for pleural mesothelioma only) and supraclavicular nodes.

Bone

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

Soft tissues

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

Carcinoma of the skin (excluding eyelid, vulva, and penis)
Malignant melanoma of the skin (excluding eyelid)

The regional lymph nodes are those appropriate to the location of the primary tumour.
Unilateral tumours

Head, neck	Ipsilateral preauricular, submandibular, cervical, and supraclavicular lymph nodes
Thorax	Ipsilateral axillary lymph nodes
Arm	Ipsilateral epitrochlear and axillary lymph nodes
Abdomen, loins and buttocks	Ipsilateral inguinal lymph nodes
Leg	Ipsilateral popliteal and inguinal lymph nodes
Anal margin and perianal skin	Ipsilateral inguinal lymph nodes

With tumours in the boundary zones between the above, the lymph nodes pertaining to the regions on both sides of the boundary zone are considered to be regional lymph nodes. The following 4 cm-wide bands are considered boundary zones:

Between	*Along*
Right/left	Midline
Head and neck/ thorax	Clavicula–acromion–upper shoulder blade edge
Thorax/arm	Shoulder–axilla–shoulder
Thorax/abdomen, loins, buttocks	Front: Middle between navel and costal arch Back: Lower border of thoracic vertebrae (midtransverse-axis)
Abdomen, loins, and buttock/leg	Groin-trochanter-gluteal sulcus

Breast
The regional lymph nodes are:
1. Axillary (ipsilateral): interpectoral (Rotter's) nodes and lymph nodes along the axillary vein and its tributaries, which may be divided into the following levels:
   (i) Level I (low-axilla): lymph nodes lateral to the lateral border of the pectoralis minor muscle
   (ii) Level II (mid-axilla): lymph nodes between the medial and lateral borders of the pectoralis minor muscle and the interpectoral (Rotter's) lymph nodes
   (iii) Level III (apical axilla): lymph nodes medial to the medial margin of the pectoralis minor muscle, excluding those designated as subclavicular, infraclavicular.

Note: Intramammary lymph nodes are coded as axillary lymph nodes.

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).

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

Vulva
The femoral and inguinal nodes

Vagina
Upper two-thirds of vagina: pelvic nodes, including obturator, internal iliac (hypogastric), external iliac and pelvic nodes, NOS
Lower third of vagina: inguinal and femoral nodes

Cervix uteri
Paracervical, parametrial, hypogastric (internal iliac, obturator), common and external iliac, presacral and lateral sacral nodes

Corpus uteri
Pelvic (hypogastric [obturator, internal iliac], common and external iliac, parametrial and sacral) and para-aortic nodes

Ovary
Fallopian tube
Hypogastric (obturator), common and external iliac, lateral sacral, para-aortic and inguinal nodes

Gestational trophoblastic tumours
Regional lymph nodes: Not applicable

Penis
Superficial and deep inguinal nodes and pelvic nodes

Prostate
The regional lymph nodes are the nodes of the true pelvis, which essentially are the pelvic nodes below the bifurcation of the common iliac arteries.

Testis
Abdominal para-aortic (periaortic), preaortic, interaortocaval, precaval, paracaval, retrocaval and retroaortic nodes, and nodes along the spermatic vein
Intrapelvic and inguinal nodes are considered regional after scrotal or inguinal surgery.

Kidney
Renal hilar, abdominal para-aortic and paracaval nodes

Renal pelvis and ureter
Renal hilar, abdominal para-aortic and paracaval nodes
Intrapelvic nodes (for ureter only)

Urinary bladder
The regional lymph nodes are the nodes of the true pelvis, which essentially are the pelvic nodes below the bifurcation of the common iliac arteries.

Urethra
Inguinal and pelvic nodes

Carcinoma of the eyelid
Carcinoma of the conjunctiva
Malignant melanoma of the conjunctiva
Malignant melanoma of the uvea
Retinoblastoma
Sarcoma of the orbit
Carcinoma of the lacrimal gland
Preauricular, submandibular, and cervical lymph nodes

Brain
Hodgkin disease and
Non-Hodgkin lymphoma
Not TNM classifiable

Annex 3. C-Factor

From: Sobin, L.H. & Wittekind, Ch., eds, UICC International Union Against Cancer, *TNM Classification of Malignant Tumors*, Sixth Edition, New York, Wiley-Liss, 2002

The C-factor, or certainty factor, reflects the validity of classification according to the diagnostic methods employed. Its use is optional.

The C-factor definitions are:

C1 Evidence from standard diagnostic means (e.g., inspection, palpation, and standard radiography, intraluminal endoscopy for tumours of certain organs)

C2 Evidence obtained by special diagnostic means (e.g., radiographic imaging in special projections, tomography, computerized tomography [CT], ultrasonography, lymphography, angiography; scintigraphy; magnetic resonance imaging [MRI]; endoscopy, biopsy, and cytology)

C3 Evidence from surgical exploration, including biopsy and cytology

C4 Evidence of the extent of disease following definitive surgery and pathological examination of the resected specimen

C5 Evidence from autopsy

Example: Degrees of C may be applied to the T, N, and M categories.
A case might be described as T3C2, N2C1, M0C2.

The TNM clinical classification is therefore equivalent to C1, C2, and C3 in varying degrees of certainty, while the pTNM pathological classification generally is equivalent to C4.