Chapter 4: Histological groups

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BACKGROUND

The data presented in this volume of *Cancer Incidence in Five Continents* (CI5) cover the period 2008–2012 and are mainly organized by the predominantly site-based categories of Chapter II (Neoplasms) of the 10th revision of the *International Classification of Diseases* (ICD-10, 2010 version; WHO, 2010) (see Chapter 3 of this volume). However, for some sites of cancer, the histological type is particularly relevant clinically and/or epidemiologically. In the present volume, the data are grouped according to histological types as defined in CI5 Volume X (Forman et al., 2014) and listed in this chapter.

GENERAL STRUCTURE

The main structure of the histological grouping is that specific types of malignant neoplasms are listed, as well as the category "Unspecified malignant neoplasm" (i.e. malignant tumours that are so poorly differentiated that we are unable to classify them into major groups such as carcinoma or sarcoma). Neoplasms that have a specific morphology but are too rare to be listed among the major histological groups are grouped together in the category "Other specified malignant neoplasm". Similarly, in the category "Carcinoma", specific subtypes, such as "Squamous cell carcinoma" and "Adenocarcinoma", are listed, as well as "Unspecified carcinoma" (i.e. carcinomas that are so poorly differentiated that we are unable to classify them according to histological subtype, although it is still possible to distinguish them from non-epithelial malignant neoplasms such as sarcoma). Morphological codes are listed for the specific types of neoplasm (or carcinoma), and for "Unspecified malignant neoplasm" (or carcinoma). The remaining codes of neoplasia (or carcinoma) are then automatically assigned to the "Other specified malignant neoplasm" (or carcinoma) category.

SITES

For inclusion in CI5 as a distinct histological type within a site group, a type must be both sufficiently common at the site and clinically epidemiologically relevant. The following 15 organ sites are included in this chapter, with accompanying histological type information: oesophagus, anus, liver, lung, bone, skin, cervix uteri, corpus uteri, ovary, testis, kidney and renal pelvis, urinary bladder, eye, brain and central nervous system, and thyroid, as well as haematological malignancies. Some major cancer sites, such as breast and prostate, are not included, because most malignant neoplasms at these sites are adenocarcinomas, and the coding of adenocarcinoma subtypes is not consistent. Kidney was combined with renal pelvis because some urothelial carcinomas originating from the renal pelvis are site coded as kidney cancers, whereas others are coded as renal pelvis cancers. Hodgkin lymphoma and leukaemias are combined together in the haematological group.

TYPES OF NEOPLASMS INCLUDED

The CI5 Volume XI data include all invasive malignant neoplasms and some non-invasive malignant neoplasms (see Chapter 3). For most morphology codes, a fifth digit of /1 or /2 automatically excludes data entry. Carcinoma in situ is reported by many cancer registries, but is not generally dealt with in this volume, with the exception of urothelial carcinoma in situ. A few lesions of borderline malignancy are included, such as low-grade non-invasive papillary transitional cell tumours, which are now designated as papillary urothelial neoplasia of low malignant potential (PUNLMP) (8130/1). Flat carcinoma in situ of the urothelium (8120/2) and PUNLMP (8130/1, 8130/2) have been grouped with transitional cell carcinoma in this volume. Because skin has been added to the sites, basal cell carcinoma is reported as a separate group, although many cancer registries do not have statistics on these tumours. Within the 15 organ sites presented, there are no cases of mesothelioma (ICD-O M905_), Kaposi sarcoma (9140), lymphoma, or leukaemia (9590–9992), because these cancers have their own specific ICD-10 codes and are presented separately in this volume.

MORPHOLOGY CODES

The grouping of morphology codes presents several difficulties. The ICD-O system is based on separate site (topography) and morphology (histology) codes that can be combined. Inevitably, in cancer registry data, morphology codes are sometimes mistakenly combined with codes for sites where these entities do not occur or have not been reported. Some morphology codes are redundant (i.e. multiple codes can be applied for the same tumour). Other codes are obsolete (i.e. the entities have been renamed or deleted in later revisions of tumour classifications). A major difficulty is the variation in coding precision (specific codes for tumour subtypes vs comprehensive codes for broad categories such as adenocarcinoma), which limits the utility of detailed codes. An example of this is kidney tumours. Renal cell carcinomas are often

coded as renal cell carcinoma, not otherwise specified (NOS) (8312) or adenocarcinoma, NOS (8140), whereas others are subtyped. Therefore, all carcinomas of the kidney are grouped together in this chapter.

Some cancer types occur in several organs but have different clinical behaviour depending on the site of origin. For most sites, adenosquamous carcinoma (8560) and mucoepidermoid carcinoma (8430) are included in the category "Other specified carcinoma". An exception is the corpus uteri (C54), where these are included in the category "Adenocarcinoma" because they are thought to have similar biology (Zaino and Kurman, 1988). Furthermore, squamous differentiation is very common in endometrioid carcinoma (8380–8383), which makes it difficult to differentiate between these tumours. Another example is metaplastic carcinoma (8575), which is generally included in the category "Other specified carcinoma". However, for the corpus uteri, it is included in the category "Other specified malignant neoplasm", because metaplastic carcinoma is considered equivalent to carcinosarcoma at this site (Silverberg et al., 1990).

The "Unspecified carcinoma" category includes tumours that are coded as carcinoma, NOS, but also some descriptive diagnoses of poorly differentiated cancers. These tumours can be recognized as carcinomas but are too undifferentiated to be further classified according to their histogenetic origin. This group generally includes the morphology codes 8010–8035. An exception is the lung, where "Large cell carcinoma" is a separate category in the WHO classification, and includes 8010–8012, 8014–8031, and 8035 (Travis et al., 2004). Another exception is the thyroid, where "Anaplastic carcinoma" is also a specific category in the WHO classification, and includes the morphology codes 8020–8035 (DeLellis et al., 2004).

Some tumours are evidently miscoded in cancer registry data, because their incidence is far higher than expected. Papillary carcinomas, NOS are listed in the category "Squamous cell neoplasm" in ICD-O-3 (Fritz et al., 2000). But most bladder tumours for which this code is used are probably miscoded urothelial carcinomas rather than papillary squamous cell carcinomas, and they are therefore included in the "Transitional cell carcinoma" category. In the thyroid, it can be assumed that carcinomas assigned the morphology code 8050 are actually papillary carcinomas of the thyroid, and they are therefore included in that category. In the kidney, it can be assumed that the majority of tumours with the morphology code 8050 are miscoded papillary renal cell carcinomas, and they are therefore included in the "Renal cell carcinoma" category.

OESOPHAGUS (C15)

The "Adenocarcinoma" category excludes linitis plastica (8142), which occurs in the gastric epithelium. The "Squamous cell carcinoma" category includes basaloid squamous cell carcinoma (8083). The principal cancers in the "Other specified carcinoma" category are large cell carcinoma (8012–8014) and small cell carcinoma (8041–8045). Melanoma and carcinosarcoma are included in the category "Other specified malignant neoplasm".

Table 4.1. Oesophagus (C15)

1 Carcinoma	**8010–8576**
1.1 Squamous cell carcinoma	8050–8078, 8083–8084
1.2 Adenocarcinoma	8140–8141, 8143–8145, 8190–8231, 8260–8265, 8310, 8401, 8480–8490, 8550–8552, 8570–8574, 8576
1.3 Other specified carcinoma	
1.4 Unspecified carcinoma	8010–8035
2 Sarcoma	**8800–8811, 8830, 8840–8921, 8990–8991, 9040–9044, 9120–9133, 9150, 9540–9581**
3 Other specified malignant neoplasm	
4 Unspecified malignant neoplasm	**8000–8005**

ANUS (C21)

The category "Squamous cell carcinoma" includes basaloid and cloacogenic carcinomas (8123–8124) and basaloid squamous cell carcinoma (8083). Cloacogenic carcinoma is a controversial entity, sometimes defined as carcinoma arising from the anal transition zone, and sometimes as a morphological variant of squamous cell carcinoma. The term "basaloid carcinoma" has also been used to designate this group of tumours. Their reported incidence is highly variable, possibly because of the confusing nomenclature. Hence, these tumour types are included in the category "Squamous cell carcinoma".

Table 4.2. Anus (C21)

1 Carcinoma	**8010–8576**
1.1 Squamous cell carcinoma	8050–8076, 8083–8084, 8123–8124
1.2 Adenocarcinoma	8140–8145, 8190–8231, 8260–8265, 8310, 8401, 8480–8490, 8550–8552, 8570–8574, 8576
1.3 Other specified carcinoma	
1.4 Unspecified carcinoma	8010–8011
2 Melanoma	**8720–8790**
3 Other specified malignant neoplasm	
4 Unspecified malignant neoplasm	**8000–8005**

LIVER (C22)

The category "Hepatocellular carcinoma" includes hepatoid carcinomas (8576), under the assumption that these are actually miscoded hepatocellular carcinomas. The category "Cholangiocarcinoma" encompasses all primary carcinomas of the liver of biliary epithelial type (i.e. it excludes hepatocellular carcinoma and combined hepatocellular and cholangiocarcinoma). Combined hepatocellular and cholangiocarcinoma (8180) is included in the "Other specified carcinoma" category, as are carcinoids.

Table 4.3. Liver and intrahepatic bile ducts (C22)

1 Carcinoma	**8010–8576**
1.1 Hepatocellular carcinoma	8170–8175
1.2 Cholangiocarcinoma (all intrahepatic biliary carcinomas, i.e. all primary adenocarcinomas)	8050, 8140–8141, 8160–8161, 8260, 8440, 8480–8500, 8570–8572
1.3 Other specified carcinoma	
1.4 Unspecified carcinoma	8010–8035
2 Hepatoblastoma	**8970**
3 Sarcoma	
3.1 Haemangiosarcoma	9120–9133, 9161
3.2 Other sarcomas	8800–8811, 8830, 8840–8921, 8990–8991, 9040–9044, 9150, 9170, 9540–9581
4 Other specified malignant neoplasm	
5 Unspecified malignant neoplasm	**8000–8005**

LUNG (C34)

The "Squamous cell carcinoma" category includes papillary carcinomas, NOS (8050), because these are listed under "Squamous cell neoplasm" in ICD-O-3. The category "Adenocarcinoma" includes bronchiolo-alveolar adenocarcinoma (8250–8254) but excludes adenoid cystic (8200), mucoepidermoid (8430), and adenosquamous (8560) carcinomas, which are instead included in the category "Other specified carcinoma". The category "Large cell carcinoma" includes cancers so described (8012), as well as other morphological variants of undifferentiated carcinomas (except those with neuroendocrine or spindle cell differentiation) and clear cell adenocarcinoma (8310). The category "Other specified carcinoma" includes non-small cell carcinoma (8046); carcinoid tumours (8240–8245); and adenoid cystic (8200), mucoepidermoid (8430), adenosquamous (8560), and large cell neuroendocrine (8013) carcinomas.

Table 4.4. Lung (C34)

1	**Carcinoma**	**8010–8576**
1.1	Squamous cell carcinoma	8050–8078, 8083–8084
1.2	Adenocarcinoma	8140, 8211, 8230–8231, 8250–8260, 8323, 8480–8490, 8550–8552, 8570–8574, 8576
1.3	Small cell carcinoma	8041–8045
1.4	Large cell carcinoma (including giant cell, clear cell and large cell undifferentiated carcinoma)	8010–8012, 8014–8031, 8035, 8310
1.5	Other specified carcinoma	
2	**Sarcoma**	**8800–8811, 8830, 8840–8921, 8990–8991, 9040–9044, 9120–9133, 9150, 9540–9581**
3	**Other specified malignant neoplasm**	
4	**Unspecified malignant neoplasm**	**8000–8005**

BONE (C40–C41)

The main categories are "Osteosarcoma", "Chondro-sarcoma", and "Ewing sarcoma". These three groups encompass the same ICD-O entities as groups VIII A–C in the third edition of *International Classification of Childhood Cancer* (Steliarova-Foucher et al., 2005). The "Other specified sarcoma" category includes epithelioid sarcoma (8804), fibrosarcoma (8810–8812), malignant fibrous histiocytoma (8830), liposarcomas (8850–8858), angiosarcomas (9120–9133), and malignant giant cell tumours (9250). The "Other specified malignant neoplasm" category includes desmoplastic small round cell tumour (8806), mesenchymoma (8990), chordoma (9370–9372), adamantinomas (9261, 9310), and primitive neuroectodermal tumour (PNET) (9473).

Table 4.5. Bone (C40–C41)

1	**Sarcoma**	**8800–8921, 9040–9044, 9120–9133, 9150, 9180–9250, 9260, 9540–9581**
1.1	Osteosarcoma	9180–9200
1.2	Chondrosarcoma	9210–9243
1.3	Ewing sarcoma	9260
1.4	Other specified sarcoma	
1.5	Unspecified sarcoma	8800–8803, 8805
2	**Other specified malignant neoplasm**	
3	**Unspecified malignant neoplasm**	**8000–8005**

SKIN (C43–C44)

Basal cell carcinoma is registered and reported by several cancer registries, and has therefore been included.

Table 4.6. Skin (C43–C44)

1 Carcinoma	**8010–8576**
1.1 Squamous cell carcinoma	8050–8078, 8083–8084
1.2 Basal cell carcinoma	8090–8098
1.3 Other specified carcinoma	
1.4 Unspecified carcinoma	8010–8035
2 Melanoma	**8720–8790**
3 Other specified malignant neoplasm	
4 Unspecified malignant neoplasm	**8000–8005**

CERVIX UTERI (C53)

Mucoepidermoid carcinoma (8430) and adenosquamous carcinoma (8560) are included in the category "Other specified carcinoma". The "Other specified malignant neoplasm" category includes Mullerian mixed tumour (8950), carcinosarcoma (8980), and melanoma (8720–8790). Malignant endometrioid adenofibroma (8381) is also classified as "Other specified malignant neoplasm".

Table 4.7. Cervix uteri (C53)

1 Carcinoma	**8010–8380, 8382–8576**
1.1 Squamous cell carcinoma	8050–8078, 8083–8084
1.2 Adenocarcinoma	8140–8141, 8190–8211, 8230–8231, 8260–8265, 8310, 8380, 8382–8384, 8440–8490, 8570–8574, 8576
1.3 Other specified carcinoma	
1.4 Unspecified carcinoma	8010–8035
2 Sarcoma	**8800–8811, 8830, 8840–8921, 8990–8991, 9040–9044, 9120–9133, 9150, 9540–9581**
3 Other specified malignant neoplasm	
4 Unspecified malignant neoplasm	**8000–8005**

CORPUS UTERI (C54)

Squamous cell carcinomas are included in the category "Other specified carcinoma" because of their rarity at this site. Unlike for other sites, mucoepidermoid (8430) and adenosquamous (8569) carcinomas are included in the category "Adenocarcinoma", because squamous differentiation is very common in adenocarcinoma of the corpus uteri, and it is assumed that partial squamous differentiation does not change the behaviour of these neoplasms. Also, unlike for other sites, metaplastic carcinoma (8575) is included in the category "Other specified malignant neoplasm", because in the corpus uteri, metaplastic carcinoma of the endometrium has been equated with carcinosarcoma.

Table 4.8. Corpus uteri (C54)

1 Carcinoma	**8010–8574, 8576**
1.1 Adenocarcinoma (including mucoepidermoid and adenosquamous carcinoma)	8140–8141, 8190–8211, 8230–8231, 8260–8265, 8310, 8380, 8382–8384, 8430, 8440–8490, 8510, 8560, 8569, 8570–8574, 8576
1.2 Other specified carcinoma	
1.3 Unspecified carcinoma	8010–8035
2 Sarcoma	**8800–8811, 8830, 8840–8921, 8990–8991, 9040–9044, 9120–9133, 9150, 9540–9581**
3 Other specified malignant neoplasm	
4 Unspecified malignant neoplasm	**8000–8005**

OVARY (C56)

The first four carcinoma categories listed here correspond to malignant serous, mucinous, endometrioid, and clear cell tumours. Among the carcinomas not included in these four groups, there are various adenocarcinomas that cannot with certainty be allocated to any of the above-mentioned groups, and are hence included in the category "Adenocarcinoma, NOS". This category also includes papillary adenocarcinoma (8260), cystadenocarcinoma (8440), and other variants of adenocarcinoma. Within the category "Adenocarcinoma, NOS", there are probably a substantial number of tumours that actually belong to categories 1.1–1.4. Truly unclassified adenocarcinomas of the ovary are uncommon. Sex cord-stromal tumours have their own group. The category "Germ cell tumours" includes dysgerminomas, embryonal carcinomas, and teratomas, as well as the rare carcinoid tumours of the ovary, and the very rare gonadoblastomas. Lipid cell tumours, malignant Brenner tumours, and sarcomas are very rare and are consigned to the category "Other specified malignant neoplasm".

Table 4.9. Ovary (C56)

1 Carcinoma	**8010–8231, 8246–8576, 9014–9015, 9110**
1.1 Serous carcinoma	8441, 8460–8463, 9014
1.2 Mucinous carcinoma	8470–8490, 9015
1.3 Endometrioid carcinoma	8380–8383, 8560, 8570
1.4 Clear cell carcinoma	8310–8313, 9110
1.5 Adenocarcinoma, NOS	8140–8147, 8170–8190, 8211–8231, 8260, 8384, 8440, 8576
1.6 Other specified carcinoma	
1.7 Unspecified carcinoma	8010–8035
2 Sex cord-stromal tumours	**8590–8671**
3 Germ cell tumours	**8240–8245, 9060–9102**
4 Other specified malignant neoplasm (including Mullerian mixed tumour, carcinosarcoma)	
5 Unspecified malignant neoplasm	**8000–8005**

TESTIS (C62)

Spermatocytic seminoma has a more favourable prognosis than does seminoma, and these tumours should not be grouped together. Embryonal carcinoma, malignant teratoma, yolk sac tumour, choriocarcinoma, and mixed germ cell tumours are included in the category "Non-seminomatous germ cell tumours". Sex cord-stromal tumours are included in the category "Other specified malignant neoplasm".

Table 4.10. Testis (C62)

1 Germ cell tumours	**9060–9102**
1.1 Seminoma	9060–9062, 9064
1.2 Spermatocytic seminoma	9063
1.3 Non-seminomatous germ cell tumours	9065–9102
2 Other specified malignant neoplasm	
3 Unspecified malignant neoplasm	**8000–8005**

KIDNEY (C64) AND RENAL PELVIS (C65)

There are several major difficulties with the histological grouping of kidney tumours. Transitional cell and squamous carcinomas in the kidney usually originate from the renal pelvis, although it may be difficult to trace the origin of the tumour. It can be assumed that some of these are site coded kidney (C64) and others renal pelvis (C65). Hence, these two sites are now grouped.

Renal cell carcinomas have recently undergone a reclassification based on molecular, cytogenetic, morphological, and clinical data. However, a substantial portion of these tumours are coded as renal cell carcinoma, NOS (8312) or adenocarcinoma, NOS (8140), whereas others are subtyped. Therefore, the "Renal cell carcinoma" category includes adenocarcinoma, NOS (8140), specific subtypes of renal cell carcinoma, and also obsolete entities such as granular cell carcinoma (8320). Papillary carcinoma, NOS (8050) is listed under "Squamous cell neoplasm" in ICD-O-3. When this code is used for renal tumours, it is probably most often a miscoding of papillary renal carcinoma, and it is therefore included in the "Renal cell carcinoma" category as well.

Table 4.11. Kidney (C64) and renal pelvis (C65)

1 Carcinoma	**8010–8576**
1.1 Squamous, transitional cell carcinoma	8051–8084, 8120–8122, 8130–8131
1.2 Renal cell carcinoma	8050, 8140, 8260, 8270, 8280–8312, 8316–8320, 8340–8344
1.3 Other specified carcinoma	
1.4 Unspecified carcinoma	8010–8035
2 Other specified malignant neoplasm	
3 Unspecified malignant neoplasm	**8000–8005**

URINARY BLADDER (C67)

The classification of urinary bladder tumours has undergone several revisions in recent years. Some low-grade papillary transitional cell tumours are now designated as PUNLMP (8130/1). To enable longitudinal comparisons, flat carcinoma in situ (8120/2) and PUNLMP (8130/1, 8130/2) have been included in the category "Transitional cell carcinoma".

Papillary carcinomas, NOS (8050) are listed under "Squamous cell neoplasm" in ICD-O-3. But when this code is used for bladder tumours, it is probably most often a miscoding of transitional cell carcinoma, and it is therefore included in the "Transitional cell carcinoma" category. Pheochromocytoma, malignant paraganglioma, melanoma, and carcinosarcoma are included in the "Other specified malignant neoplasm" category.

Table 4.12. Urinary bladder (C67)

1	**Carcinoma**	**8010–8576**
1.1	Squamous cell carcinoma	8051–8078, 8083–8084
1.2	Transitional cell carcinoma (including transitional cell carcinoma with squamous and/or glandular differentiation)	8050, 8120–8122, 8130–8131
1.3	Adenocarcinoma	8140–8145, 8190–8231, 8260–8265, 8310, 8401, 8480–8490, 8550–8552, 8570–8574, 8576
1.4	Other specified carcinoma	
1.5	Unspecified carcinoma	8010–8035
2	**Sarcoma**	**8800–8811, 8830, 8840–8921, 8990–8991, 9040–9044, 9120–9133, 9150, 9540–9581**
3	**Other specified malignant neoplasm**	
4	**Unspecified malignant neoplasm**	**8000–8005**

EYE (C69)

The principal eye cancers – retinoblastoma and malignant melanoma – form two categories. The carcinomas are divided into three subgroups: "Squamous cell carcinoma" (70% of the carcinomas, principally tumours of the conjunctiva and cornea), "Other specified carcinoma" (14.6% of the carcinomas, comprising almost entirely adenocarcinomas and mainly originating in the lacrimal gland and duct), and "Unspecified carcinoma". Squamous cell carcinomas that are site coded for the eye (C69) probably include some cancers that originate in the skin (C44) of the eyelids.

Table 4.13. Eye (C69)

1	**Retinoblastoma**	**9510–9513**
2	**Malignant melanoma**	**8720–8790**
3	**Carcinoma**	**8010–8576**
3.1	Squamous cell carcinoma	8050–8078, 8083–8084
3.2	Other specified carcinoma	
3.3	Unspecified carcinoma	8010–8035
4	**Sarcoma**	**8800–8811, 8830, 8840–8921, 8990–8991, 9040–9044, 9120–9133, 9150, 9540–9581**
5	**Other specified malignant neoplasm**	
6	**Unspecified malignant neoplasm**	**8000–8005**

BRAIN AND CENTRAL NERVOUS SYSTEM (C71–C72)

These categories are based on those of the WHO *Pathology and Genetics of Tumours of the Nervous System* classification (Kleihues and Cavenee, 1997). Atypical teratoid/rhabdoid tumour (9508) is included in the "Embryonal tumours" category. The "Other neuroepithelial tumours" category includes olfactory, pineal, and some pituitary tumours, such as craniopharyngioma (9350–9352); pinealoma, pineocytoma, and pineoblastoma (9360–9362); papillary tumour of the pineal region (9395); and olfactory neuroepitheliomatous neoplasms (9520–9523).

Table 4.14. Brain and central nervous system (C71–C72)

1 Tumours of neuroepithelial tissue	**8680, 9350–9362, 9380–9508, 9520–9523**
1.1 Gliomas	9380–9384, 9391–9460
1.1.1 Astrocytic tumours	9384, 9400–9421, 9424–9425, 9440–9442
1.1.2 Oligodendroglial tumours and mixed gliomas	9382, 9450–9451
1.1.3 Ependymal tumours	9383, 9391–9394
1.1.4 Gliomas, others	9380–9381, 9423, 9430, 9444, 9460
1.2 Embryonal tumours	9470–9474, 9490, 9500–9504, 9508
1.2.1 Medulloblastoma	9470–9472, 9474
1.2.2 Other	9473, 9490, 9500–9504, 9508
1.3 Other neuroepithelial tumours	
2 Other specified malignant neoplasm	
3 Unspecified malignant neoplasm	**8000–8005**

THYROID (C73)

Follicular and papillary carcinomas constitute the majority of thyroid cancers. The "Papillary carcinoma" category includes follicular carcinomas with a papillary component (8340). It is assumed that most cases of papillary squamous carcinoma (8050) are actually papillary carcinomas, and they are therefore included in this category as well. Squamous carcinoma is no longer recognized as a major histological type in the WHO classification, and it is therefore included in the category "Other specified carcinoma".

"Anaplastic carcinoma" (encompassing undifferentiated, giant cell, and spindle cell carcinomas) is a separate category from "Unspecified carcinoma". Poorly differentiated carcinoma is a controversial entity and has been classified under "Anaplastic carcinoma". Small cell carcinoma (8040–8045) is specifically excluded, because the great majority of tumours previously so diagnosed are in fact lymphomas.

Insular thyroid carcinoma (8337) is a distinctive clinicopathological entity that has been included in the "Other specified carcinoma" category. Mixed medullary-follicular carcinoma (8346) and mixed medullary-papillary carcinoma (8347) are also included in this category.

Table 4.15. Thyroid (C73)

1 Carcinoma	**8010–8576**
1.1 Follicular carcinoma	8290, 8330–8335
1.2 Papillary carcinoma	8050, 8260, 8340–8344, 8350, 8450–8460
1.3 Medullary carcinoma	8345, 8510–8513
1.4 Anaplastic carcinoma	8020–8035
1.5 Other specified carcinoma	
1.6 Unspecified carcinoma	8010-8015
2 Sarcoma	**8800–8811, 8830, 8840–8921, 8990–8991, 9040–9044, 9120–9133, 9150, 9540–9581**
3 Other specified malignant neoplasm	
4 Unspecified malignant neoplasm	**8000–8005**

HAEMATOPOIETIC AND LYMPHOID TISSUES (9590–9992)

The category "Non-Hodgkin lymphoma NOS" is used because some cancer registries lack sufficiently specific data for lineage-based classification.

Table 4.16. Haematopoietic and lymphoid tissues (9590–9992)

1 Hodgkin lymphoma	**9650–9667**
1.1 Nodular lymphocytic predominance	9659
1.2 Classical lymphocyte-rich	9651
1.3 Nodular sclerosis	9663–9667
1.4 Mixed cellularity	9652
1.5 Lymphocytic depletion	9653–9655
1.6 Unspecified	
2 B-cell neoplasms	**9597, 9670–9699, 9712, 9728, 9731–9738, 9761–9764, 9811–9818, 9823–9826, 9833, 9836, 9940**
3 T-cell and NK-cell neoplasms	**9700–9726, 9729, 9827–9831, 9834, 9837, 9948**
4 Myeloid neoplasms	**9840, 9860–9931, 9945–9946, 9950, 9960–9964, 9975, 9980–9989, 9991–9992**
5 Non-Hodgkin lymphoma NOS	**9591**
6 Other specified malignant neoplasms	
7 Unspecified malignant neoplasms	**9590, 9596, 9727, 9760, 9800–9801, 9805–9809, 9820, 9832, 9835, 9965–9967, 9971**

REFERENCES

DeLellis RA, Lloyd RV, Heitz PU, Eng C, editors (2004). World Health Organization Classification of Tumours. Pathology and Genetics of Tumours of Endocrine Organs. 3rd ed. Vol. 8. Lyon: IARCPress.

Forman D, Bray F, Brewster DH, Gombe Mbalawa C, Kohler B, Piñeros M, et al., editors (2014). Cancer Incidence in Five Continents, Vol. X. IARC Scientific Publication No. 164. Lyon: International Agency for Research on Cancer.

Fritz A, Percy C, Jack A, Shanmugaratnam K, Sobin L, Parkin DM, et al., editors (2000). International Classification of Diseases for Oncology. 3rd ed. (ICD-O-3). Geneva: World Health Organization.

Kleihues P, Cavenee WK, editors (1997). Pathology and Genetics of Tumours of the Nervous System. Lyon: IARCPress.

Silverberg SG, Major FJ, Blessing JA, Fetter B, Askin FB, Liao SY, et al. (1990). Carcinosarcoma (malignant mixed mesodermal tumor) of the uterus. A Gynecologic Oncology Group pathologic study of 203 cases. Int J Gynecol Pathol. 9(1):1–19. https://doi.org/10.1097/00004347-199001000-00001 PMID:2152890

Steliarova-Foucher E, Stiller C, Lacour B, Kaatsch P (2005). International Classification of Childhood Cancer, third edition. Cancer. 103(7):1457–67. https://doi.org/10.1002/cncr.20910 PMID:15712273

Travis WD, Brambilla E, Muller-Hermelink HK, Harris CC, editors (2004). World Health Organization Classification of Tumours. Pathology and Genetics of Tumours of the Lung, Pleura, Thymus and Heart. 3rd ed. Vol. 10. Lyon: IARCPress; pp. 179–84.

WHO (2010). International Statistical Classification of Diseases and Related Health Problems. 10th revision (ICD-10). 2010 version. Geneva: World Health Organization. Available from: https://icd.who.int/browse10/2010/en#/.

Zaino RJ, Kurman RJ (1988). Squamous differentiation in carcinoma of the endometrium: a critical appraisal of adenoacanthoma and adenosquamous carcinoma. Semin Diagn Pathol. 5(2):154–71. PMID:3041509