Chapter 3. Classification and coding

S.L. Whelan

Classification used to present date on incidence

The *Cancer Incidence in Five Continents* series has followed the evolution of the International Classification of Diseases (ICD) through four revisions and the creation of a coding scheme for oncology, the International Classification of Diseases for Oncology (ICD-O), now in its third edition. Volumes I and II (Doll *et al.*, 1966; 1970) presented data on cancer incidence coded to the 7th Revision (ICD-7; WHO, 1957). Volume III (Waterhouse *et al.*, 1976) published data using both the 7th and the 8th (ICD-8; WHO, 1967) revisions. ICD-8, which came into effect in 1968, was used in Volume IV (Waterhouse *et al.*, 1982), presenting data for the years 1973–77. The 9th revision of the ICD (ICD-9; WHO, 1977) was used for Volumes V (Muir *et al.*, 1987), VI (Parkin *et al.*, 1992) and VII (Parkin *et al.*, 1997). The data in the present volume are presented according to ICD-10 (WHO, 1992).

The data are published at the level of the three-character ICD-10 codes in the individual registry tables and, as in previous volumes, some grouping of ICD codes has been used. Malignant neoplasms of gum, floor of mouth and other and unspecified parts of mouth have been put together (ICD-10 C03–C06). Follicular (nodular) non-Hodgkin lymphoma, diffuse non-Hodgkin lymphoma, peripheral and cutaneous T-cell lymphomas and other and unspecified types of non-Hodgkin lymphoma have been combined as non-Hodgkin lymphoma. Other categories have been combined to correspond to a single three-digit rubric in ICD-9, for example base of tongue + other and unspecified parts of tongue (ICD-10 C01–C02), rectosigmoid junction and rectum (C19–C20). Table 3.1 presents the ICD-10 individual site codes, the full ICD-10 titles, the Volume VIII groupings and the short titles used in the tables of incidence. Note that two sets of data, Algiers (Algeria) and Hong Kong, are presented according to ICD-9 in this volume because the original data were coded to the ICD-9 three-digit level, and it was not possible to convert them to ICD-10. For the ICD-9 classification and groupings, see Volume VII of this series.

Classifications used in the cancer registry

Since the publication, in 1976, of the first edition of the ICD-O (WHO, 1976) with clearly defined axes of anatomical location, histology and behaviour, international conformity to standard classification systems and coding rules has increased steadily. For data published in Volume IV (1973–77), 90% of registries recorded histological diagnosis; for coding just over one-third of the registries used MOTNAC (ACS, 1951, 1968), one-third had started to use ICD-O and 12% used SNOP (CAP, 1965). 75% of contributors to Volume V used ICD-O to code histology, and this figure rose to over 90% for Volumes VI and VII. Only six of the 186 contributors to the present volume did not code their histological data to ICD-O.

Data submitted for the first four volumes of *Cancer Incidence in Five Continents* were sent in tabular format, by sex, site and five-year age-group, on tape, diskette or, most frequently, the forms designed for the purpose. The only verification possible was to tally the columns and rows. For the fifth volume, registries were given the opportunity of sending data in the form of a case-listing coded to ICD-9 topography only, or to ICD-9 or ICD-O topography plus ICD-O morphology. A very small minority of registries sent data coded to ICD-O. Contributors to Volume VI were encouraged to send data as a listing of cases, but 24% sent tabulated data. For Volumes VII and VIII, data had to be sent as a case listing. This made it easier to judge what was being included within the different codes, as well as to decide whether or not to include certain benign, uncertain or *in situ* diagnoses in the tables. In practice, it was still necessary to ask registries some questions, notably in relation to non-melanoma skin, breast, ovary and bladder cancer (see Table 3.3).

While the majority of the data submitted for this volume had been coded or converted to ICD-O (see Chapter 6), registries were asked what classification systems were used for coding data in the registry during the period. Of the 186 registries contributing data to this volume, 117 (63%) coded to ICD-O topography and morphology, 26 (16.6%) to ICD-9 or ICD-10 topography and ICD-O morphology, and 3 (1.6%) did not register histology and coded topography to ICD-9. Of the 'Other' category, 20 registries changed the classification used during the period, and 9 used ICD-O-1 topography with ICD-O-2 morphology. One registry coded morphology to SNOMED, one to SNOP, two to MOTNAC and two used a local system.

Comparability

The use of a standard, well designed coding system such as the ICD should make analysis and tabulation of comparable results a simple matter. In practice, it has been a never-ending exercise in detection for the editors of *Cancer Incidence in Five Continents* to establish exactly how registries code different cancers. A survey of coding practices was carried out among contributors to Volumes IV, V and VI in an attempt to ascertain how registries coded selected diagnostic terms, and to assess the effect this might have on comparability. 50-odd terms believed to present problems of inconsistency were selected, and the results were analysed and presented in the books as well as serving as the basis for the flags denoting variations in coding practices and the corresponding notes. For the present volume, registries were asked whether any malignant diagnoses were excluded from their data and how they coded intraduct carcinoma NOS, ductal and lobular carcinoma *in situ* of breast, ovarian cystadenoma of borderline malignancy and borderline tumour of ovary, and invasive, non-invasive and unspecified malignant carcinoma of bladder.

Non-melanoma skin cancer

The incidence of non-melanoma skin cancer (NMSC) is difficult to assess. These cancers are very common but rarely fatal, and completeness of registration varies widely depending on access to outpatient records and general practitioners. Most NMSCs are basal-cell (BCC) or squamous-cell (SCC) carcinomas; other skin cancers are rare. While some registries record the first occurrence of all NMSC, others register SCC only, several registries collect information for lip and/or genital sites only, and many do not collect

data on either SCC or BCC. Table 3.3 shows which NMSC diagnoses are included within C44 for the individual registries.

Breast cancer
Intraductal carcinoma and ductal carcinoma *in situ* (DCIS) of breast are classified in the ICD as in situ cancers. Mammographic screening has led to a dramatic increase in their detection. The majority of registries collect these diagnoses, and a very few code one or other of these diagnoses with a malignant behaviour code (3) (Table 3.3). Lobular carcinoma *in situ* has consistently been coded as an *in situ* diagnosis.

Ovarian cancer
Over half the registries in Volume IV of *Cancer Incidence in Five Continents* coded borderline ovarian malignancies as a malignant neoplasm (classified as an unspecified tumour in ICD-8). In ICD-9 these borderline tumours were classified to 236.2 (neoplasm of uncertain behaviour), but nearly a quarter of the registries in Volume V included them in the malignant category. In Volume VI, only 5% of registries counted the borderline ovarian cancers as malignant. ICD-10 and the ICD-O Field Trial and second editions categorize the borderline tumours as invasive, and registries using these classifications for part of or the whole of their submission to Volumes VII and VIII included such diagnoses in ICD183/C56. As registries were not asked about their coding of borderline ovarian cancer for Volume VII, it is not possible to know what proportion of registries using ICD-O-1 or ICD-9 continued to include them in the malignant category, with behaviour code /3. Registries contributing to this volume were asked how they coded ovarian cystadenoma of borderline malignancy and borderline tumour of ovary, and the behaviour codes used are tabulated in Table 3.3. Clearly for these diagnoses, registration practice varies considerably. The issue has been further complicated by the advent of ICD-O-3 (Fritz *et al*., 2000), in which many of these borderline ovarian diagnoses have been changed back to the /1 borderline category, although they fall within the malignant section of ICD-10. Borderline ovarian tumours accounted for 13% of all ovarian cancers in the area served by the Fred Hutchinson Cancer Surveillance System in the USA (Harlow & Weiss, 1989).

Bladder cancer
The problem of the coding of non-invasive tumours, taking into account recorded level of invasion and grade, and which to include in the tables as 'cancer of the bladder' has long been a subject of debate. In Volume VI it was decided, for the sake of geographical comparability, to exclude tumours of benign, *in situ* and unspecified behaviour. Bladder was marked in the tables if such diagnoses were not excluded, and a note drew attention to the fact that ICD-9 188 included non-invasive tumours.

In principle, the availability of data on histological type and behaviour has made it possible to publish only data on malignant cancer by excluding diagnoses with any behaviour code other than /3. When registries were questioned about the behaviour codes used for the non-invasive and unspecified diagnoses of malignant bladder cancer in Volume VII and in the present volume (see Table 3.3), it transpired that many of them assign the behaviour code /3 to both non-invasive and unspecified diagnoses, so making it impossible to distinguish such cases. The editors decided to accept that non-invasive diagnoses of bladder cancer are considered malignant by pathologists in general, and for Volumes VII and VIII the bladder cancer category includes the *in situ* and unspecified categories, unless otherwise indicated by a dagger sign against C67 in the tables and a note on the data. A few registries preferred not to include such cases in their data-set, even when available in the registry, for the sake of continuity over time.

Several registries have made the comment that tumours with unspecified behaviour (/1) are uncommon in their area, as pathologists are asked for more precision.

Brain and central nervous system
Many registries choose to include benign and unspecified tumours of the brain and central nervous system in their data because of the potentially serious clinical consequences of these tumours. Before Volume VII, such tumours may therefore have been included in the tables, along with cancers of the brain and nervous system. However, the proportion of such cases varies widely between registries, so for Volume VII and the present volume they are no longer included, and for registries which did include such diagnoses previously, there would be an artefactual decline in incidence from the time-period covered in Volume VII. Studies of trends in incidence should take into account the practice in previous volumes.

References

ACS (1951) *Manual of Tumor Nomenclature and Coding*, New York, American Cancer Society

ACS (1968) *Manual of Tumor Nomenclature and Coding*, 1968 Edition, New York, American Cancer Society

CAP (1965) *Systematized Nomenclature of Pathology*. Chicago, College of American Pathologists

Doll, R., Payne, P. & Waterhouse, J. (eds) (1966) *Cancer Incidence in Five Continents: A Technical Report*, Berlin, Springer-Verlag (for UICC)

Doll, R., Muir, C. & Waterhouse, J. (eds) (1970) *Cancer Incidence in Five Continents, Volume II*, Berlin, Springer-Verlag (for UICC)

Fritz, A., Percy, C., Jack, A., Shanmugaratnam, K., Sobin, L., Parkin, D.M. & Whelan, S.L. (eds) (2000) *International Classification of Diseases for Oncology, 3rd edition.* World Health Organization, Geneva

Harlow, B.L. & Weiss, N.S. (1989) A case-control study of borderline ovarian tumors: the influence of perineal exposure to talc. *Am. J. Epidemiol*., **130**, 390–394

Muir, C., Waterhouse, J., Mack, T., Powell, J. & Whelan, S. (eds) (1987) *Cancer Incidence in Five Continents, Volume V* (IARC Scientific Publications No. 88), Lyon, IARC

Parkin, D.M., Muir, C.S., Whelan, S.L., Gao, Y.-T., Ferlay, J. & Powell, J. (1992) *Cancer Incidence in Five Continents, Volume VI* (IARC Scientific Publications No. 120), Lyon, IARC

Parkin, D.M.,Whelan, S.L., Ferlay, J., Raymond, L. & Young, J . (1997) *Cancer Incidence in Five Continents, Volume VII* (IARC Scientific Publications No. 143), Lyon, IARC

Waterhouse, J., Muir, C., Correa, P. & Powell, J. (eds) (1976) *Cancer Incidence in Five Continents, Volume III* (IARC Scientific Publications No. 15), Lyon, IARC

Waterhouse, J., Muir, C., Shanmugaratnam, K. & Powell, J. (eds) (1982) *Cancer Incidence in Five Continents, Volume IV* (IARC Scientific Publications No. 42), Lyon, IARC

WHO (1957) *International Classification of Diseases, 1955 Revision*, Geneva, World Health Organization

WHO (1967) *International Classification of Diseases, 1965 Revision*, Geneva, World Health Organization

WHO (1976) *International Classification of Diseases for Oncology, first edition*, Geneva, World Health Organization

WHO (1977) *International Classification of Diseases, 1975 Revision*, Geneva, World Health Organization

WHO (1990) *International Classification of Diseases for Oncology, second edition*, Geneva, World Health Organization

WHO (1992) *International Classification of Diseases for Oncology, tenth revision*, Geneva, World Health Organization

Table 3.1. Classification used in incidence tables

Site	Full title	Groupings used in tables	Short title used in tables
C00	Malignant neoplasm of lip	–	Lip
C01	Malignant neoplasm of base of tongue	C01–C02 are grouped	Tongue
C02	Malignant neoplasm of other and unspecified parts of tongue		
C03	Malignant neoplasm of gum	C03–C06 are grouped	Mouth
C04	Malignant neoplasm of floor of mouth		
C05	Malignant neoplasm of palate		
C06	Malignant neoplasm of other and unspecified parts of mouth		
C07	Malignant neoplasm of parotid gland	C07–C08 are grouped	Salivary gland
C08	Malignant neoplasm of other and unspecified major salivary glands		
C09	Malignant neoplasm of tonsil	–	Tonsil
C10	Malignant neoplasm of oropharynx	–	Other oropharynx
C11	Malignant neoplasm of nasopharynx	–	Nasopharynx
C12	Malignant neoplasm of pyriform sinus	C12–C13 are grouped	Hypopharynx
C13	Malignant neoplasm of hypopharynx		
C14	Malignant neoplasm of other and ill-defined sites in the lip, oral cavity and pharynx	–	Pharynx unspecified
C15	Malignant neoplasm of oesphagus	–	Oesophagus
C16	Malignant neoplasm of stomach	–	Stomach
C17	Malignant neoplasm of small intestine	–	Small intestine
C18	Malignant neoplasm of colon	–	Colon
C19	Malignant neoplasm of rectosigmoid junction	C19–C20 are grouped	Rectum
C20	Malignant neoplasm of rectum		
C21	Malignant neoplasm of anus and anal canal	–	Anus
C22	Malignant neoplasm of liver and intrahepatic bile ducts	–	Liver
C23	Malignant neoplasm of gallbladder	C23–C24 are grouped	Gallbladder etc.
C24	Malignant neoplasm of other and unspecified parts of biliary tract		
C25	Malignant neoplasm of pancreas	–	Pancreas
C26	Malignant neoplasm of other and ill defined digestive organs	C26 is included in other and unspecified	
C30	Malignant neoplasm of nasal cavity and middle ear	C30–C31 are grouped	Nose, sinuses, etc.
C31	Malignant neoplasm of accessory sinuses		
C32	Malignant neoplasm of larynx	–	Larynx
C33	Malignant neoplasm of trachea	C33–C34 are grouped	Trachea, bronchus and lung
C34	Malignant neoplasm of bronchus and lung		
C37	Malignant neoplasm of thymus	C37–C38 are grouped	Other thoracic organs
C38	Malignant neoplasm of heart, mediastinum and pleura		
C39	Malignant neoplasm of other and ill-defined sites in the respiratory system and introthoracic organs	C39 is included in other and unspecified	
C40	Malignant neoplasm of bone and articular cartilage of limbs	C40–C41 are grouped	Bone
C41	Malignant neoplasm of bone and articular cartilage of other and unspecified sites		
C43	Malignant melanoma of skin	–	Melanoma of skin
C44	Other malignant neoplasms of skin	–	Other skin
C45	Mesothelioma	–	Mesothelioma
C46	Kaposi sarcoma		Kaposi sarcoma
C47	Malignant neoplasm of peripheral nerves and autonomic nervous system	C47+C49 are grouped	Connective and soft tissue
C48	Malignant neoplasm of retroperitoneum and peritoneum	C48 is included in other and unspecified	
C49	Malignant neoplasm of other connective and soft tissue	C49 is grouped with C47	
C50	Malignant neoplasm of breast	–	Breast
C51	Malignant neoplasm of vulva	–	Vulva
C52	Malignant neoplasm of vagina	–	Vagina
C53	Malignant neoplasm of cervix uteri	–	Cervix uteri
C54	Malignant neoplasm of corpus uteri	–	Corpus uteri
C55	Malignant neoplasm of uterus, part unspecified	–	Uterus unspecified
C56	Malignant neoplasm of ovary	–	Ovary
C57	Malignant neoplasm of other and unspecified female genital organs	–	Other female genital organs

Table 3.1 (contd). Classification used in incidence tables

Site	Full title	Groupings used in tables	Short title used in tables
C58	Malignant neoplasm of placenta	–	Placenta
C60	Malignant neoplasm of penis	–	Penis
C61	Malignant neoplasm of prostate	–	Prostate
C62	Malignant neoplasm of testis	–	Testis
C63	Malignant neoplasm of other and unspecified male genital organs	–	Other male genital organs
C64	Malignant neoplasm of kidney, except renal pelvis	–	Kidney
C65	Malignant neoplasm of renal pelvis	–	Renal pelvis
C66	Malignant neoplasm of ureter	–	Ureter
C67	Malignant neoplasm of bladder	–	Bladder
C68	Malignant neoplasm of other and unspecified urinary organs	–	Other urinary organs
C69	Malignant neoplasm of eye and adnexa	–	Eye
C70	Malignant neoplasm of meninges	C70–72 are grouped together	Brain, nervous system
C71	Malignant neoplasm of brain		
C72	Malignant neoplasm of spinal cord, cranial nerves and other parts of central nervous system	–	
C73	Malignant neoplasm of thyroid gland	–	Thyroid
C74	Malignant neoplasm of adrenal gland	–	Adrenal gland
C75	Malignant neoplasm of other endocrine glands and related structures		Other endocrine
C76	Malignant neoplasm of other and ill-defined sites	C76 is included in other and unspecified	
C81	Hodgkin disease	–	Hodgkin disease
C82	Follicular (nodular) non-Hodgkin lymphoma	C82–C85, C96 are grouped	Non-Hodgkin lymphoma
C83	Diffuse non-Hodgkin lymphoma		
C84	Peripheral and cutaneous T-cell lymphomas		
C85	Other and unspecified types of non-Hodgkin lymphoma		
C88	Malignant immunoproliferative diseases	–	Immunoproliferative diseases
C90	Multiple myeloma and malignant plasma cell neoplasms	–	Multiple myeloma
C91	Lymphoid leukaemia	–	Lymphoid leukaemia
C92	Myeloid leukaemia	C92–C94 are grouped (following ICD-O-3)	Myeloid leukaemia
C93	Monocytic leukaemia		
C94	Other leukaemias of specified cell type		
C95	Leukaemia of unspecified cell type	–	Leukaemia unspecified
C96	Other and unspecified malignant neoplasms of lymphoid, haematopoietic and related tissue	C96 is grouped with C82–C85	
O&U		Includes C26, 39, 48, 75, C76	Other and unspecified
ALL			All sites
ALLbC44			All sites but C44

Table 3.2 Coding practices

Registry	ICD-O-1 (T + M)	ICD-O-2 (T + M)	ICD-10(T) + ICD- O-2 (M)	ICD-9(T) + ICD-O-1 (M)	ICD-9(T) + ICD-O-2 (M)	ICD-10 (T) No M	Other
Africa (6)	0	4	0	1	0	0	1
Central and South America (11)	1	5	1	0	0	0	4
North America (26)	0	25	0	0	1	0	0
Asia (43)	9	17	5	5	1	3	3
Europe (90)	15	39	6	5	1	0	24
Oceania (10)	1	1	1	2	2	0	3
Total (186)	26	91	13	13	5	3	35

Table 3.3. Coding practices

		Behaviour codes							
	Non-melanoma skin cancers excluded	Intraduct ca NOS breast	Ductal ca *in situ* breast	Lobular ca *in situ* breast	Ovarian cytadeno borderline	Ovary borderline tumour	Bladder malig. invasive	Bladder malig. non-invasive	Bladder malig. NOS
Africa									
Algeria, Algiers	None	2	2	2	1	1	3	2	3
France, La Réunion	BCC	2	2	2	3	3	3	2	3
The Gambia	None	2	2	2	NA	NA	3	3	3
Mali, Bamako	None	NA	NA	NA	NA	NA	NA	NA	NA
Uganda, Kyadondo County	None	3	NA	NA	NA	NA	3	3	3
Zimbabwe, Harare	None	2	2	2	1	1	3	3	3
South America									
Argentina, Bahia Blanca	NA	2	2	2	3	3	3	2	3
Argentina, Concordia	None	3	2	2	3	3	3	3	3
Brazil, Campinas	BCC, SCC for 1993–95	2	2	2	3	1	3	2	3
Brazil, Goiania	None	NA	NA	NA	NA	NA	NA	NA	NA
Colombia, Cali	BCC, SCC	2	2	2	NR	NR	3	NR	3
Costa Rica	NA	2	2	2	1	1	3	3	3
Cuba, Villa Clara	None	3	2	2	NA	NA	NA	NA	3
Ecuador, Quito	NA	2	2	2	3	3	3	2	3
France, La Martinique	None	2	2	2	1	1	3	3	3
US, Puerto Rico	BCC, SCC, unsp. excl. genital sites	3	2	2	NA	NA	3	2	3
Uruguay, Montevideo	None	NA	NA	NA	NA	NA	NA	NA	NA
North America									
Canada	BCC, SCC	NA	NA	NA	NA	NA	3	2	3
Canada, Alberta	2	2	2	3	1	3	2	3	
Canada, British Columbia	NA	2	2	2	3	1	3	3	3
Canada, Manitoba	NA	2	2	2	1	1	3	2	3
Canada, New Brunswick	BCC, SCC	2	2	2	3	3	3	2	3
Canada, Newfoundland	BCC, SCC	2	2	2	3	1	3	2	3
Canada, Northwest Territories	BCC, SCC	2	3	2	3	1	3	3	3
Canada, Nova Scotia	BCC, SCC	2	2	2	1	1	3	2	3
Canada, Ontario	NMSC	2	2	2	3	1	3	2	3
Canada, Prince Edward Island	BCC, SCC	2	2	2	3	NA	3	2	3
Canada, Quebec	NA	NA	NA	NA	NA	NA	NA	NA	NA
Canada, Saskatchewan	BCC	2	2	2	3	1	3	3	3
Canada, Yukon	NA	2	2	2	3	1	3	3	3
USA, California, Los Angeles	BCC, SCC excl. genital sites	2	2	2	3	3	3	2	3
USA, California, San Francisco	BCC, SCC	2	2	2	3	NR	3	2	3
USA, Connecticut	NMSC excl. genital sites	2	2	2	3	NA	3	2	3
USA, Georgia, Atlanta	BCC, SCC excl. genital sites	2	2	2	3	3	3	2	3
USA, Iowa	BCC,SCC	2	2	2	3	NR	3	2	3

Table 3.3 (Contd). Coding practices

		Behaviour codes							
	Non-melanoma skin cancers excluded	Intraduct ca NOS breast	Ductal ca *in situ* breast	Lobular ca *in situ* breast	Ovarian cytadeno borderline	Ovary borderline tumour	Bladder malig. invasive	Bladder malig. non-invasive	Bladder malig. NOS
USA, Louisiana	BCC, SCC	2	2	2	3/1	1	3	2	3
USA, Michigan, Detroit	BCC, SCC excl. genital sites	3	2	2	3	1	3	2	3
USA, New Jersey	BCC, SCC excl. genital sites	2	2	2	NA	NA	3	2	3
USA, New Mexico	BCC, SCC	2	2	2	NA	NA	3	2	3
USA, New York State	BCC, SCC excl. lip and genital sites	2	2	2	3	1	3	2	3
USA, Utah	BCC, SCC & unspec. histol.	2	2	2	0	1	3	2	3
USA, Washington, Seattle	BCC, SCC excl. genital sites	2	2	2	NR	NR	3	2	3
USA, SEER	BCC, SCC	2	2	2	1/3	1	3	2	3
Asia									
China, Beijing	None	2	2	2	3	0	3	2	3
China, Changle	None	NA	NA	NA	NA	NA	NA	NA	NA
China, Cixian	None	2	2	2	1	1	3	2	3
China, Hong Kong	None	2	2	2	1	NR	3	3	3
China, Jiashan	None	2	2	2	3	1	3	2	3
China, Qidong County	NA	2	2	2	3	1	3	3	3
China, Shanghai	None	2	2	2	3	2	3	2	3
China, Taiwan	None	2	2	2	3	NR	3	2	3
China, Tianjin	None	2	2	2	1	1	3	3	3
China, Wuhan	None	NA	NAP	NA	NA	NA	NA	NA	NA
India, Ahmedabad	NA	2	2	2	3	1	3	3	3
India, Bangalore	None	2	2	2	1	1	3	3	3
India, Chennai (Madras)	None	NR	NR	NR	NR	NR	3	NR	3
India, Delhi	NA	NA	NA	NA	NA	NA	NA	NA	NA
India, Karunagappally	None	2	2	2	1	1	3	2	3
India, Mumbai (Bombay)	None	1	1	1	1	1	1	1	1
India, Nagpur	None	2	2	2	1	1	3	3	3
India, Poona	None	2	2	2	1	1	3	3	3
India, Trivandrum	None	2	2	2	1	1	3	2	3
Israel	SCC, BCC	2	2	2	3	3	3	2	3
Japan, Hiroshima	NA	2	2	2	1	1	3	3	3
Japan, Miyagi Prefecture	None	2	2	2	3	3	3	2	3
Japan, Nagasaki Prefecture	NA	2	2	2	1	1	3	2	3
Japan, Osaka Prefecture	None	2	2	2	3	NA	3	2	3
Japan, Saga Prefecture	None	3	2	2	3	3	3	3	3
Japan, Yamagata Prefecture	NA	2	2	2	1	1	3	2	1
Korea, Busan	None	2	2	2	3	1	3	2	3
Korea, Daegu	None	2	2	2	3	1	3	3	3
Korea, Kangwha County	None	2	2	2	3	3	3	2	3
Korea, Seoul	None	2	2	2	3	1	3	2	3

Table 3.3 (Contd). Coding practices

		Behaviour codes							
	Non-melanoma skin cancers excluded	Intraduct ca NOS breast	Ductal ca *in situ* breast	Lobular ca *in situ* breast	Ovarian cytadeno borderline	Ovary borderline tumour	Bladder malig. invasive	Bladder malig. non-invasive	Bladder malig. NOS
Kuwait	None	NA	NA	NA	NA	NA	NA	NA	NA
Oman	None	2	2	2	1	1	3	3	3
Pakistan, South Karachi	None	2	2	2	3	3	3	3	3
Philippines, Manila	NA	2	2	2	3	1	3	2	3
Philippines, Rizal	None	2	2	2	3	1	3	2	3
Singapore	None	2	2	2	1	1	3	3	3
Thailand, Bangkok	NA	2	2	2	1	1	NA	NA	NA
Thailand, Chiang Mai	None	2	2	2	3	NA	3	NA	3
Thailand, Khon Kaen	None	3	2	2	3	2	3	3	3
Thailand, Lampang	None	3	2	2	3	1	3	3	3
Thailand, Songkhla	NA	2	2	2	3	3	3	3	3
Viet Nam, Hanoi	None	2	2	2	3	1	3	2	3
Viet Nam, Ho Chi Minh City	NA	2	2	2	1	1	3	2	3
Europe									
Austria, Tyrol	NA	3	2	2	1	3	3	2	3
Austria, Vorarlberg	NA	3	2	2	1	1	3	2	3
Belarus	None	NA	NA	NA	NA	NA	NA	NA	NA = NAP
Belgium, Flanders	BCC	2	2	2	3	3	3	1/2	1
Belgium, Limburg	None	3	2	2	3	3	NA	NA	NA
Croatia	NMSC	3	2	2	1	1	3	2	3
Czech Republic	None	2/3	2	2	3	1	3	2	3
Denmark	NA	2	2	2	2	2	3	2	3
Estonia	None	2	2	2	1	1	3	2	3
Finland	BCC	NA	NA	NA	NA	NA	NA	NA	NA
France, Bas-Rhin	BCC	2	2	2	3	1	3	2	3
France, Calvados	BCC	2	2	2	3	1	3	2	NA
France, Côte d'Or (digestive)	None	NAP	NA	NA	NA	NA	NA	NA	NA
France, Côte d'Or (gynaecology)	None	2	2	2	3	3	NA	NA	NAP
France, Côte d'Or (haematology)	None	NAP	NA	NA	NA	NA	NA	NA	NA
France, Doubs	None	2	2	2	NA	NA	3	2	1
France, Haut-Rhin	BCC	2	2	2	3	3	3*	2*	1*
France, Hérault	BCC	2	2	2	3	3	3	1/2	1;2
France, Isère	BCC	2	2	2	3	3	3	1/2	NA
France, Manche	BCC	2	2	2	3; 1	NA	3*	2*	1/2/3*
France, Somme	BCC	2	2	2	3	3	3*	1/2*	3*
France, Tarn	BCC	2	2	2	3	3	3*	1/2*	1/2*
Germany, Saarland	None	3	2	2	3	1	3	2	3
Iceland	BCC	2	2	2	3	No cases	3	2	3
Ireland	NA	3	2	2	3	3	3	3	3
Italy, Biella Province	NMSC without HV	2	2	2	1	1	3	2	1

Table 3.3 (Contd). Coding practices

		Behaviour codes							
	Non-melanoma skin cancers excluded	Intraduct ca NOS breast	Ductal ca *in situ* breast	Lobular ca *in situ* breast	Ovarian cytadeno borderline	Ovary borderline tumour	Bladder malig. invasive	Bladder malig. non-invasive	Bladder malig. NOS
Italy, Ferrara Province	None	2	2	2	1	1	3	2	3
Italy, Florence	NA	2	2	2	1	1	3*	1/2*	1/2/3*
Italy, Liguria (Mesothelioma)	NA	NA	NA	NA	NA	NA	NA	NA	NAP
Italy, Liguria, Genoa Province	None	2	2	2	1	1	3	2	3
Italy, Lombardy, Varese Province	NA	2	2	2	1/3	1/3	3	2	3
Italy, Macerata Province	None	2	2	2	1	1	3	2	3
Italy, Modena Province	NA	2	2	2	3	NA	3	3	3
Italy, North East	BCC	2	2	2	1	1	3	2	3
Italy, Parma Province	None	2	2	2	1	1	3	2	3
Italy, Ragusa Province	None	2	2	2	1	1	3	2	1
Italy, Romagna	None	2	2	2	1	1	3	2	3
Italy, Sassari	NA	2	2	2	3	3	3	2	1
Italy, Torino	None	2	2	2	3	3	3	2	3
Italy, Umbria	NA	2	2	2	1	1	3	1	NA
Italy, Venetian Region	None	2	2	2	1	1	3	1	3
Latvia	None	3	2	2	3	3	3	2	3
Lithuania	NA	2	2	2	3	3	3	2	3
Malta	None	2	2	2	3	3	3	1	1
The Netherlands	BCC	2	2	2	3	1	3	2	3
The Netherlands, Eindhoven	None	NA	NA	NA	NA	NA	NA	NA	NA
The Netherlands, Maastricht	BCC	2	2	2	3	1	3	2	3
Norway	BCC	2	2	2	Many Codes	Many Codes	Depends	Depends	Depends*
Poland, Cracow	NA	2	2	2	3	3	3	3	3
Poland, Kielce	NA	NA	NA	NA	NA	NA	NA	NA	NA
Poland, Lower Silesia	NA	2	3	3	2	2	3	1	3
Poland, Warsaw City	NA	3	NA	NA	NA	NA	3	3	3
Portugal, Vila Nova de Gaia	None	2	2	2	1	1	3	3	3
Russia, St Petersburg	NA	2	2	2	3	2/3	2	NA	3
Slovakia	None	2	2	2	1	1	3	1/2	1/2/3
Slovenia	None	2	2	2	3	1	3*	2*	3*
Spain, Albacete	BCC, SCC	2	2	2	3	1	3	2	3
Spain, Asturias	BCC, SCC	2	2	2	1	1	3	3	3
Spain, Canary Islands	8070/3, 8090/3	2	2	2	3	3	3	2	3
Spain, Cuenca	BCC, SCC	2	2	2	3	1	3	2	3
Spain, Girona	None	2	2	2	1	1	3	2	3
Spain, Granada	None	2	2	2	1	1	3	2	3
Spain, Mallorca	None	3	2	2	NR	NR	3	2	3
Spain, Murcia	BCC	2	2	2	3	1	3	2	3
Spain, Navarra	None	2	2	2	3	NR	3	1; 2	3
Spain, Tarragona	None	2	2	2	NA	NA	3	2	3
Spain, Zaragoza	None	NA	NA	NA	3	3	3	3	3

Table 3.3 (Contd). Coding practices

		Behaviour codes							
	Non-melanoma skin cancers excluded	Intraduct ca NOS breast	Ductal ca *in situ* breast	Lobular ca *in situ* breast	Ovarian cytadeno borderline	Ovary borderline tumour	Bladder malig. invasive	Bladder malig. non-invasive	Bladder malig. NOS
Sweden	BCC	2	2	2	3	3	3	3	3
Switzerland, Basel	None	2	2	2	NA	1	3	4	2/3
Switzerland, Geneva	None	2	2	2	1/3	1/3	3	2	2/3
Switzerland, Graubünden and Glarus	None	2	2	2	3	3	3	3	3
Switzerland, Neuchâtel	None	2	2	2	1	1	3	1	1
Switzerland, St Gall-Appenzell	None	2	2	2	3	3	3	2	3
Switzerland, Ticino	BCC	2	2	2	3	3	3	2	2/3
Switzerland, Valais	None	2	2	2	1;3	1	3	2	2/3
Switzerland, Vaud	None	2	2	2	1	1	3	1	1
Switzerland, Zurich	BCC, SCC	2	2	2	1	1	3	3	3
UK, England	See individual registries								
UK, England, East Anglia	None	2	2	2	1/3	Depends*	3	1	3
UK, England, Mersey	None	2	2	2	1	1	3	3	3
UK, England, North Western	NA	2	2	2	1	1	3	2	3
UK, England, Oxford	None	2	2	2	3	1/3	3	3	3
UK, England, South Thames	BCC	2	2	2	1	1	3	2	3
UK, England, South Western	C44 excl. for half pop.	2	2	2	3	3	3	2	1
UK, England, Trent	None	2	2	2	3	3	3	3	3
UK, England, West Midlands	None	2	2	2	3	1	3	3	3
UK, England, Yorkshire	None	2	2	2	3	3	3	2	3
UK, Northern Ireland	None	2	2	2	3	3	3	1	3
UK, Scotland	None	2	2	2	1/3	1	3	1/2	3
Yugoslavia, Vojvodina	None	2	2	2	3	3	3	2	3
Oceania									
Australian Capital Territory	NMSC	2	2	2	1	1	3	2	3
Australia, New South Wales	NMSC	2	2	2	1	1	3	2	3
Australia, Northern Territory	NMSC	2	3	2	0	1	3	3	3
Australia, Queensland	BCC, SCC	2	2	2	3	1	3	3	3
South Australia	BCC, SCC excl. lip and genital sites	2	2	2	NR	NR	3	2	3;/2
Australia, Tasmania	NMSC	2	2	2	1	3	3	3	3
Australia, Victoria	BCC, SCC excl. lip and genital sites	2	2	2	1/3	1	3	3	3
Western Australia	BCC, SCC	2	2	2	1	1;2;3	3	2	3
New Zealand	BCC, SCC	NA	NA	NA	NA	NA	NA	NA	NA
USA, Hawaii	BCC, SCC excl. genital sites	2	2	2	3	1	3	2	3

Notes: NA, information not available (not provided by the registry)
NAP, not applicable
NR, not registered
* Grade taken into account when assigning behaviour code