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International Agency for Research on Cancer
World Health Organization
International Association of Cancer Registries
European Network of Cancer Registries

**INTERNATIONAL RULES FOR MULTIPLE
PRIMARY CANCERS
(ICD-O Third Edition)**

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MULTIPLE PRIMARY NEOPLASMS

Cancer registries use different rules for defining multiple primaries when registering cancer cases. The rules given here are for **reporting** data on cancer incidence and survival, so that cancer risk and outcome are comparable between different populations.

For **collection**, it is recommended that registries collect and register more detailed data and some suggestions are given in the Recommendations for Recording which follow. Such cases should be collapsed to conform to the international rules for analysis.

RULES FOR REPORTING INCIDENCE AND SURVIVAL

1. The 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 not an extension, nor a recurrence, nor a metastasis.
3. Only one tumour shall be recognised as arising in an organ or pair of organs or tissue.
Some groups of codes are considered to be a single organ for the purposes of defining multiple tumours. These topography code groups are shown in Table 1.

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

4. Rule 3 does not apply in two circumstances:
 - 4.1 Systemic (or multicentric) cancers potentially involving many different organs are only counted once in any individual. These are Kaposi sarcoma (group 15 in Table 2) and tumours of the haematopoietic system (groups 8-14 in Table 2).
 - 4.2 Neoplasms of different morphology should be regarded as multiple cancers (even if they are diagnosed simultaneously in the same site).

If the morphological diagnoses fall into one category in Table 2, and arise in the same primary site, they are considered to be the same morphology for the purpose of counting multiple primaries. If the morphological diagnoses fall into two or more of the categories in Table 2, even if they concern the same site, the morphology is considered to be different, and two or more cases should be counted.

Single tumours containing several different histologies which fall into one histological group in Table 2 are registered as a single case, using the numerically highest ICD-O morphology code.

If, however, one morphology is not specific (groups (5), (14) and (17)) and a specific morphology is available, the case should be reported with the specific histology and the non-specific diagnosis should be ignored.

Table 1. Groups of topography codes considered a single site in the definition of multiple cancers

ICD-O-2/3 site code	Label	If diagnosed at different times, code first diagnosis. If diagnosed at the same time use codes given below.
C01	Base of tongue	
C02	Other and unspecified parts of tongue	C02.9
C00	Lip	
C03	Gum	
C04	Floor of mouth	
C05	Palate	
C06	Other and unspecified parts of mouth	C06.9
C09	Tonsil	
C10	Oropharynx	
C12	Pyriform sinus	
C13	Hypopharynx	
C14	Other and ill-defined sites in lip, oral cavity and pharynx	C14.0
C19	Rectosigmoid junction	
C20	Rectum	C20.9
C23	Gallbladder	
C24	Other and unspecified parts of biliary tract	C24.9
C33	Trachea	
C34	Bronchus and lung	C34.9
C40	Bones, joints and articular cartilage of limbs	
C41	Bones, joints and articular cartilage of other and unspecified sites	C41.9
C65	Renal pelvis	
C66	Ureter	
C67	Bladder	
C68	Other and unspecified urinary organs	C68.9

Table 2. Groups of malignant neoplasms considered to be histologically ‘different’ for the purpose of defining multiple tumours (adapted from Berg JW. Morphologic classification of human cancer. In: Schottenfeld D & Fraumeni JF Jr. *Cancer Epidemiology and Prevention*, 2nd edition, Chapter 3 of Section 1: Basic Concepts. Oxford, New York, Oxford University Press, pp. 28-44, 1996).

Group

Carcinomas

1. Squamous and transitional cell carcinoma	8051-8084, 8120-8131
2. Basal cell carcinomas	8090-8110
3. Adenocarcinomas	8140-8149, 8160-8162, 8190-8221, 8260-8337, 8350-8551, 8570-8576, 8940-8941
4. Other specific carcinomas	8030-8046, 8150-8157, 8170-8180, 8230-8255, 8340-8347, 8560-8562, 8580-8671
(5) Unspecified carcinomas (NOS)	8010-8015, 8020-8022, 8050
6. <i>Sarcomas</i> and soft tissue tumours	8680-8713, 8800-8921, 8990-8991, 9040-9044, 9120-9125, 9130-9136, 9141-9252, 9370-9373, 9540-9582
7. Mesothelioma	9050-9055

Tumours of haematopoietic and lymphoid tissues

8. Myeloid	9840, 9861-9931, 9945-9946, 9950, 9961-9964, 9980-9987
9. B-cell neoplasms	9670-9699, 9728, 9731-9734, 9761-9767, 9769, 9823-9826, 9833, 9836, 9940
10. T-cell and NK-cell neoplasms	9700-9719, 9729, 9768, 9827-9831, 9834, 9837, 9948
11. Hodgkin lymphoma	9650-9667
12. Mast-cell Tumours	9740-9742
13. Histiocytes and Accessory Lymphoid cells	9750-9758
(14) Unspecified types	9590-9591, 9596, 9727, 9760, 9800-9801, 9805, 9820, 9832, 9835, 9860, 9960, 9970, 9975, 9989
15. Kaposi sarcoma	9140
16. Other specified types of cancer	8720-8790, 8930-8936, 8950-8983, 9000-9030, 9060-9110, 9260-9365, 9380- 9539
(17) Unspecified types of cancer	8000-8005

RECOMMENDATIONS FOR RECORDING

1. Two tumours of different laterality, but of the same morphology, diagnosed in paired organs (e.g. breast) should be registered separately unless stated to have originated from a single primary.

Exceptions to this rule are:

- a) Tumours of the ovary (of the same morphology)
- b) Wilm's tumour (nephroblastoma) of the kidney.
- c) Retinoblastoma

which should be recorded as a single bilateral registration when they occur on both sides.

Reminder: tumours in paired organs of completely different histology should be registered separately.

2. Cancers which occur in any 4th character subcategory of colon (C18) and skin (C44) should be registered as multiple primary cancers.