

## MULTIPLE PRIMARY NEOPLASMS

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 tumor shall be recognized as arising in an organ or pair of organs or tissue. For tumors 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 codes. Some groups of codes are considered to be a single organ for the purposes of defining multiple tumors. These topography code groups are shown in Table 1.

Multifocal tumors – 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.

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 tumor 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 – lymphomas, leukemias, 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 tumors. Thus, a tumor in the same organ with a ‘different’ histology is counted as a new tumor. Groups 5 and 12 include tumors 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

<b>ICD-O-2/3</b>		<b>ICD-O-1</b>
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 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 tumors (adapted from Berg, 1994)

<i>Group</i>	
<b>Carcinomas</b>	
1. Squamous carcinomas	M-805 - 808, M-812 - 813
2. Basal cell carcinomas	M-809 - 811
3. Adenocarcinomas	M-814, M-816, M-819 - 822, M-826 - 833, M-835 - 855, M-857, M-894
4. Other specific carcinomas	M-803 - 804, M-815, M-817 - 818, M-823, M-824, M-825, M-834, M-856, M-858 - 867
(5.) Unspecified carcinomas (NOS)	M-801, M-802
6. <b>Sarcomas</b> and soft tissue tumors	M-868 - 871, M-880 - 892, M-899, M-904, M-912 - 913, M-915 - 925, M-937, M-954 - 958
7. <b>Lymphomas</b>	M-959 - 972
8. <b>Leukemia</b>	M-980 - 994, M-995, M-996, M-998
9. <b>Kaposi sarcoma</b>	M-914
10. <b>Mesothelioma</b>	M-905
11. <b>Other specified</b> types of cancer	M-872 - 879, M-893, M-895 - 898, M-900 - 903, M-906 - 911, M-926 - 936, M-938 - 953, M-973 - 975, M-976
(12.) <b>Unspecified</b> types of cancer	M-800, M-997