

Appendix I. Coding system in Nordic countries and NOCCA study

The following briefly describes the history of cancer coding in the included Nordic countries during the follow-up period, which has been the basis for the formation of the 49 main cancer categories and 27 cancer subgroups in the analysis of the NOCCA data.

Denmark. The cancer registration in Denmark is based on notifications from clinical hospital departments, supplemented with notifications from practicing specialists in dermatology and gynecology, and with autopsy reports from pathology departments. Throughout the period, the notifications were supplemented with information on cancer cases reported on death certificates. From 1988 onwards linkage was also made with the Hospital Discharge Register, and from 2002 onwards also with the Pathology Register. Through 1977 the cancer cases were coded according to an extended version of the International Classification on Diseases, version 7, (ICD-7), and from 1978 onwards according to the International Classification on Diseases for Oncology, version 1 (ICD-O-1).

Finland. Cancer registration in Finland started in 1953 and the reporting has been compulsory since 1961. Registration of new cases of cancer is based on reports from clinical and pathological departments, private clinics, general practitioners, and information from the causes of death registry. The incident cancer cases were coded for topography according to the ICD-7 and for morphology according to MOTNAC 1951, both nomenclatures extended to correspond to the practical new needs of classification.

Iceland. In Iceland, cancer registration has from the start (1955) been based on information from all pathology laboratories in the country. This information is complemented by information from cytology and haematology laboratories, by notifications from hospitals and health centres and by death certificates. Topography was coded according to ICD-7 and morphology according to ICD-O-1.

Norway. Cancer registration in Norway has been based on compulsory reporting of new cases of cancer from clinical and pathological departments, private clinics, general practitioners and information from the causes of death registry since 1953. The pathology reports provide histological, cytological or autopsy information. Since 1998, the Patient Administrative Data (PAD) system in hospitals has been used as an additional source of information. Cancer cases diagnosed before 1993 are coded according to ICD-7. From 1993 ICD-O-2 has been used, with a semiautomatic conversion back to ICD-7 codes, which have been used in the classification of cancer in the present study. MOTNAC was used for the coding of morphology until 1993 but was then replaced by ICD-O-2.

Sweden. The cancer registration in Sweden during 1958-1982 was based on reports from hospital clinicians and from hospital pathologists. Private practitioners have been required to report

cancer cases since 1983. Notifications were collected and centrally coded in Stockholm until 1984, when the coding was fully decentralized to the six oncology centers (founded during the period 1976 to 1984) The coding is done simultaneously in several versions; 1958 until now in ICD-7, 1987 until now in ICD-9, 1993 until now ICD-O-2, and 2005 until now in ICD-O-3. The histology has been coded with three digits according to the statistical codes for human tumours by the WHO from 1956. Unlike the other Nordic countries, Sweden does not register cancer cases based on death certificate only and does not trace back missing cases that could be identified via death certificates.

Adapted from: Pukkala E, Martinsen JI, Lynge E, Gunnarsdottir HK, Sparén P, Tryggvadottir L, et al. Occupation and cancer – follow-up of 15 million people in five Nordic countries. *Acta Oncologica* (Stockholm, Sweden). 2009;48(5):646-790.