

# Appendix L

## Glossary

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**Adenocarcinoma** – a malignant epithelial tumour derived from glandular tissue (tissue which produces a secretion).

**Adenoma** – a benign epithelial tumour derived from glandular tissue.

**Adjuvant** – in terms of treating cancer, a second form of treatment that is given in addition to the main form. For example, adjuvant radiotherapy before or after surgery, adjuvant chemotherapy after surgery or radiotherapy.

**Aetiology** – the cause(s) of a disease.

**Age-specific rate** – the number of cancer registrations or deaths for a particular sex and age group divided by the corresponding sex- and age-specific mid-year population; usually expressed per 100,000 population (see Appendix H for fuller explanation).

**Age standardisation** – a way of controlling for differences in the age structure of populations between geographical areas or over time, to allow unbiased comparison of incidence or mortality rates (see Appendix H for fuller explanation).

**Age-standardised rate** – an incidence or mortality rate which has been weighted using a standard population (in this book the European standard population) to control for differences in populations between geographical areas or over time, to allow unbiased comparison; usually expressed per 100,000 population (see Appendix H for fuller explanation).

**Ascertainment (level)** – the proportion of all newly diagnosed cases of cancer that are registered by a cancer registry.

**Astrocytoma** – a type of brain tumour arising from supporting cells in the brain called astrocytes.

**Benign** – tumours which are usually slow growing, in which the cells resemble those of their tissue of origin, which do not invade surrounding tissue or metastasise to distant sites, and which are not usually fatal.

**Carcinogen** – a chemical that can modify the structure of a cell's DNA to initiate or promote malignant transformation (cancer development).

**Carcinogenesis** – the development of cancer.

**Carcinoma** – a malignant tumour derived from epithelial tissue (tissue covering the internal organs and other internal surfaces of the body; also forms glands).

**Carstairs deprivation index** – small area level (enumeration district or ward) index of socio-economic deprivation based on data for male unemployment, car ownership, house overcrowding and social class from a census.

**Case-control study** – an epidemiological study in which exposure to a putative risk factor is compared between a group of people who have a disease or condition (cases) and a group who do not, and are representative of the population from which the cases originated (controls). For example, examining past exposure to chemicals in people with and without bladder cancer to determine whether people with bladder cancer were more likely to have been exposed.

**Cervical intraepithelial neoplasia (CIN)** – the pre-invasive stage of cervical cancer, when the tumour is confined to the surface epithelium. Cervical screening is designed to detect CIN.

**Chemotherapy** – the use of drugs to treat cancer by killing tumour cells (chemotherapeutic drugs).

**Cohort** – a defined group of people. A birth cohort is a group of people, selected by their year of birth, whose characteristics can be followed as they enter successive age and time periods.

**Cohort study** – an epidemiological study in which rates of disease are compared in groups with different exposures. For example, a group of smokers (exposed) and a group of non-smokers (not exposed) are followed up over time to see which ones develop lung cancer. The rates of lung cancer in the two groups are then compared to determine whether smoking (the exposure) increases the risk of developing lung cancer (is a risk factor for lung cancer, in other words).

**Confidence interval** – a range of values for a variable (for example, a rate) constructed so that this range has a specified probability of including the true value of the variable (see Appendix H for fuller explanation).

**Confounding factor** – a factor which may appear to be a cause or risk factor for a disease when it is not, because it is related to a real cause or risk factor for the disease. For example, people who smoke cigarettes and drink alcohol are more likely to develop lung cancer. It could be concluded (falsely) that alcohol consumption causes lung cancer, because smoking (which does cause it) is associated with drinking – in this case alcohol consumption is a confounding factor.

**Crude survival** – the proportion of a cohort of subjects alive at the end of a specified time interval since diagnosis, irrespective of the cause of death.

**Cryptorchidism** – failure of one or both testicles to descend into the scrotum.

**Death certificate only** – cases of cancer registered solely from information provided on the death certificate. These patients necessarily appear to have zero survival time (as the date of diagnosis has to be taken to be the date of death).

**Deprivation** – usually refers to socio-economic deprivation indicated by poor housing conditions and low income. Defined here using the Carstairs index, which combines several variables, taken as indicative of socio-economic status, into a score for each enumeration district or ward. All individuals living in a particular enumeration district or ward are assigned the same deprivation score (see Appendix F for further details).

**Dysplasia** – disordered cell growth.

**Endometrium** – the lining of the uterus.

**Germ cell** – cell specialised to produce gametes (spermatozoa in males, oocytes in females).

**Glioma** – a tumour of the central nervous system arising from supporting cells, called glial cells, of which there are several types including astrocytes.

**Grade** – an estimate of the degree of malignancy of a tumour, based on the proportion of its cells which resemble the cells of origin. Grade I has the least degree of malignancy and grade IV has the greatest.

**Great Britain** – England including the Scilly Isles, Wales and Scotland including Orkney and Shetland (excludes the Isle of Man and the Channel Islands, which are Crown Dependencies).

**Heritable** – capable of being passed from one generation to the next; for example, the tendency to develop a disease can be inherited.

**Histology** – the study of cells and tissues at the microscopic level; in terms of cancer, the type of cell from which the tumour arises.

**Histologically verified** – a tumour from which a sample has been examined microscopically (also known as microscopically verified).

**Incidence** – the number or rate (per head of population) of new cases of a disease diagnosed in a given population during a specified time period (usually a calendar year). The crude rate is the total number of cases divided by the mid-year population, usually expressed per 100,000 population (see also age-standardised rate).

**In situ** – localised tumour which has not invaded surrounding tissues or spread to other parts of the body.

**Invasive** – tumour which has spread to surrounding tissues.

**Ireland** – the country of the Republic of Ireland, occupying most of the island of Ireland.

**Latent period** – the interval between disease initiation to onset of clinical symptoms and signs (also known as latency period).

**Lead-time bias** – if an individual participates in a screening programme which detects a disease earlier than it would have been detected in the absence of screening, the amount of time by which diagnosis is advanced as a result of screening is called the lead time. Since the point of diagnosis is brought forward in time, survival as measured from diagnosis is lengthened, even if total length of life is not increased.

**Leukaemia** – a group of cancers of the white blood cells in the bone marrow and/or the lymph nodes, classified according to whether they arise from lymphocytes (lymphocytic and lymphoblastic leukaemias) or from granulocytes (myeloid leukaemias), and according to whether they progress rapidly (acute) or slowly and intermittently (chronic).

**Leukoplakia** – an abnormal condition characterised by white spots or patches on mucous membranes, especially of the mouth and vulva. Also called leukoplasia.

**Life tables** – tables giving statistics on life expectancy of a population, based on mortality rates. Used to calculate lifetime risk and relative survival.

**Lifetime risk** – the chance of an individual being diagnosed with a specific type of cancer during their lifetime; usually estimated using the 'life table' method, and expressed as a percentage.

**Lymphocyte** – an agranulocytic leukocyte (white blood cell) that normally makes up a quarter of the white blood cell count but increases in the presence of infection.

**Lymphoma** – a tumour of the lymphatic system. The two main types are Hodgkin’s disease (which mainly affects lymph nodes) and non-Hodgkin’s lymphoma (which can affect diffuse lymphatic tissues throughout the body, as well as lymph nodes).

**Male-to-female ratio** – the number of cases or deaths (or the age-standardised rate) in males divided by that in females.

**Malignant** – tumours which grow by invasion into surrounding tissues and have the ability to metastasise to distant sites.

**Menarche** – the first menstrual period.

**Meta-analysis** – technique of synthesising research results by using various statistical methods to retrieve, select, and combine results from previous separate but related studies.

**Metastases** – secondary cancers, formed by the process of metastasis.

**Metastasis** – the spread or transfer of cancer cells from the site of the original tumour to another place in the body where a new tumour starts to form. This usually occurs by way of the bloodstream or the lymphatic system.

**Misclassification** – an error in the process of cancer registration whereby a primary tumour could be classified as a secondary or vice versa, or a primary tumour could be classified to the wrong ICD site code.

**Morphology** – in terms of cancer, the type of cell from which the tumour arises and the behaviour of the tumour (benign, *in situ*, malignant, borderline, uncertain, microinvasive).

**Mortality** – the number or rate (per head of population) of deaths in a given population during a specified time period (usually a calendar year). The crude rate is the total number of deaths divided by the mid-year population, usually expressed per 100,000 population (see also age-standardised rate).

**Mortality-to-incidence ratio** – the number of deaths (or age-standardised mortality rate) in a particular period (usually a calendar year) divided by the number of new cases (or age-standardised incidence rate) in the same period (see Appendix H for fuller explanation).

**Mutagenic** – capable of inducing mutation in DNA (refers mainly to extracellular factors such as X-rays or chemical pollution).

**Neoplasm** – a growth of abnormal tissue (also known as a tumour).

**Pap smear** – cells are taken from the cervix using a spatula or brush, fixed on a slide, stained with a special stain (Papanicolaou stain), and examined under a microscope for abnormalities (also known as smear test, cervical smear).

**Papilloma** – a small benign epithelial tumour.

**Parity** – the number of live-born children a woman has delivered.

**Prevalence** – a measure of the commonality of disease, or an activity, such as smoking; for example, the number of cases of a disease present in a population at a specified time, or the proportion of the population who undertake a certain activity at a specified time.

**Primary tumour** – the tumour which forms where the cancer originally begins (at the primary site).

**Radiotherapy** – the use of high-energy radiation to treat cancer, either by directing an external beam of radiation at the affected area of the body (teletherapy) or by placing small radioactive sources inside the body, close to the location of a tumour (brachytherapy).

**Relative survival** – the ratio of the observed survival in the cohort being studied and the survival that would have been expected had they been subject only to the mortality rates of the general population. In other words, survival from cancer in the absence of other causes of death. The expected survival is derived from a life table.

**Risk** – the proportion of people in a population who develop a disease within a specified time period.

**Risk factor** – a variable associated with an increased risk of disease, not necessarily causal. Risk factors are evaluated by comparing the risk of disease in those exposed to the potential risk factor with the risk of disease in those not exposed (relative risk).

**Sarcoma** – a malignant tumour of connective tissue: bone, muscle, blood vessel, cartilage, fat, or fibrous tissue.

**Screening** – the routine examination of apparently healthy individuals in order to detect a particular disease at an early stage, before it becomes clinically symptomatic.

**Secondary tumours** – tumours formed at sites distant from the site of the original tumour (also known as metastases).

**Site** – the anatomical location of a tumour, as specified by the ICD code.

**Socio-economic gradient** – measure of the relationship between incidence, mortality or survival rates and levels of socio-economic deprivation. For cancer there is commonly a positive gradient (incidence rates are higher in more deprived groups for the smoking-related cancers, for example), although for some cancers there is a negative gradient (incidence rates are higher in more affluent groups for breast and prostate cancers). It is usually a marker for some risk factor associated with deprivation.

**Squamous cell** – type of epithelial cell found in many parts of the body, for example lungs, kidneys, mouth, oesophagus, and skin.

**Stage** – a measure of the size and extent of a tumour at the time of diagnosis. The TNM system is the principal staging system for most types of cancer, and is based on the extent of the primary tumour (T), the extent of lymph node involvement (N), and the presence or absence of metastases (M).

**Sub-site** – more specific anatomical location of a tumour, as specified by the fourth digit of the ICD code.

**Transitional cell** – type of epithelial cell which forms the lining of the bladder and urinary tract.

**Tumour** – a mass of abnormal tissue, the growth of which exceeds and is uncoordinated with the normal tissue from which it originates, and which persists in the same excessive manner after the stimuli which evoked the change have ceased (also known as a neoplasm).

**United Kingdom (UK)** – England including the Scilly Isles, Wales, Scotland including Orkney and Shetland, and Northern Ireland (excludes the Isle of Man and the Channel Islands, which are Crown Dependencies).













