Date last modification documentation sheet: 20-04-2012

Compared to previous version documentation sheet (31-01-2011) the following issues were adapted:
- New section on relevant policy areas added to the documentation sheet

Compared to previous version documentation sheet (12-08-2010) the following issues were adapted:
- Minor correction; clarification of which age groups to use for standardizations and which (compiled) age groups to use for data presentation purposes.

ECHIM Indicator name	**B) Health status** 20. Cancer incidence
Relevant policy areas	- Sustainable health care systems - Healthy ageing, Ageing population - Health system performance, Quality of care, Efficiency of care, patient safety - Non-Communicable diseases (NCD), Chronic Diseases - Burden of Disease (BoD) - (Planning of) health care resources
Definition	Total cancer incidence and incidence of the most important cancers, per 100,000 population, in a given year.
Calculation	Number of patients with newly diagnosed cancer during a given calendar year divided by person-years at risk, expressed per 100,000 population. The age standardised incidence rate is calculated for the following 10 cancer-groups: 1) all cancers combined without non-melanoma skin (ICD10 codes C00-C97), 2) trachea, bronchus or lung (C33-34), 3) breast (C50), 4) colorectal (C18-C21), 5) prostate (C61) , 6) stomach (C16), 7) melanoma (C43), 8) cervical (C53), 9) leukaemias/lymphomas (C91-95), 10) all childhood (0-14 years of age) cancers.

Relevant dimensions and subgroups	- Calendar year
	- Country
	- Region (according to ISARE recommendations; see data availability)
	- Sex (when appropriate)
	- Age group:
	   ➤ for age standardization data must be collected by 5 year age groups (see remarks for more information on age standardization method applied by preferred source)
	   ➤ for data presentations it is required to present the following age groups; 0-64, 65+

Preferred data type and data source	Preferred data type: National Cancer Registries (population based or regional/local). Preferred source: - GLOBOCAN 2008 (Cancer Incidence and Mortality Worldwide in 2008) and ECO (European Cancer Observatory) 2008 databases for the latest estimates of the incidence of the cancers. - Cancer Incidence in Five Continents (CI5*plus*) for time trends by country. The International Agency for Research on Cancer (IARC) is hosting these databases.
Data availability	- GLOBOCAN (2008) and ECO (2008): Data available for the EU-27 for year 2008, except for all childhood (0-14 years of age) cancers. - CI5*plus*: Data available for the EU-27 for year 1960-2002, depending on the cancer and country, except for all childhood (0-14 years of age) cancers. No data by region available in the databases. The ISARE project on regional data has collected data on breast cancer incidence (indicator: Breast cancer incidence per 100,000 women).

Data periodicity	Data are being updated annually (also see data availability).
Rationale	Cancer is one of the most important causes of death and it is related to a high disease burden in Europe and there are (often) prevention possibilities. Therefore cancer monitoring is an important Public Health issue
Remarks	- IARC is hosting the databases (GLOBOCAN 2008, ECO 2008 and CI5*plus*). Eurostat and OECD derive their figures from these data bases. WHO-HfA-DB receives data directly from countries, as a part of annual HFA data collection and in most cases the source is national cancer register - GLOBOCAN 2008 presents age-standardised (to the World Standard Population 1960) estimates for the year 2008. However, although the populations of the different countries are those estimated for the middle of 2008, the disease rates are not those for the year 2008, but from the most recent data available, generally 2-5 years earlier. The degree of delay in the available data was taken into account by computing predictions of the national incidence and mortality rates for the year 2008, wherever possible. - ECO 2008: Cancer incidence rates are age-standardised to the standard European population (European Standard Rate [ESR]) - CI5*plus*: Cancer incidence rates are age-standardised to The World standard population. - In some Member States the Cancer Registry covers the entire population, in others one ore more Cancer Registries cover a fraction of the population. The European Network of Cancer Registries (ENCR) and IARC produce cancer incidence estimates at national level, where missing, by mathematical models. - GLOBOCAN (2002) note: Because the sources of data are continuously improving in quality and extent, estimates may not be truly comparable overtime and care should be taken when comparing these estimates with those published earlier. The observed differences may be the result of a change in the methodology and should not be interpreted as a time trend effect.
References	- The International Agency for Research on Cancer, IARC: http://www.iarc.fr/ - GLOBOCAN 2008: Ferlay J, Shin HR, Bray F, Forman D, Mathers C and Parkin DM. GLOBOCAN 2008, Cancer Incidence and Mortality Worldwide: IARC CancerBase No. 10 [Internet]. Lyon, France: International Agency for Research on Cancer; 2010. Available from: http://globocan.iarc.fr - Cancer Incidence in Five Continents –database, CI5plus: Ferlay J, Parkin DM, Curado MP, Bray F, Edwards B, Shin HR and Forman D. Cancer Incidence in Five Continents, Volumes I to IX: IARC CancerBase No. 9 [Internet]. Lyon, France: International Agency for Research on Cancer; 2010. Available from: http://ci5.iarc.fr - ECO, European Cancer Observatory / International Agency for Research on Cancer: http://eu-cancer.iarc.fr - ECO 2008 data: http://eu-cancer.iarc.fr/2-cancer-fact-sheets.html,en and Ferlay J, Parkin DM, Steliarova-Foucher E. Estimates of cancer incidence and mortality in Europe in 2008. Eur J Cancer. 2010 Mar;46(4):765-81 - ECO 2006 data: Ferlay J, Autier P, Boniol M, Heanue M, Colombet M, Boyle P. Estimates of the cancer incidence and mortality in Europe in 2006. Ann Oncol 2007;18:581-92), available at: http://annonc.oxfordjournals.org/content/early/2007/02/07/annonc.mdl498.full.pdf - Health Indicators in the European Regions (ISARE) project: http://www.isare.org
Work to do	- Seek feedback from IARC experts on precise differences between GLOBOCAN and ECO databases (at least they use a different standard population in the age-standardisation (the World Standard Population vs. The European standard population)).