

GLOSSARY

Crude incidence (mortality) rate (CR) - number of new cancer cases (or cases of death from cancer) observed in a population during a year divided by the average number of this population in the same year, expressed per 100 000. It describes the frequency of new cases in a population of a region and used for the analysis of epidemiological situation in a region.

Age-standardized incidence (mortality) rate (ASR) – incidence (mortality) rate in a population calculated applied to the age distribution of a "standard population". The World Standard Population is widespread used for comparison of cancer levels between countries. *The Ukrainian Standard Population* was calculated in Ukrainian National Cancer Registry based on the age distribution of Ukrainian population in 2000. ASR with Ukrainian Standard Population is advisable for comparing cancer incidence (mortality) levels between the regions of Ukraine or in time analysis of the incidence in a region.

Standard error (SE) presents some measure of precision of the estimated age-standardized rate; it is used for estimation of its confidence interval.

Prevalence rate is number of population with cancer at the end of a year divided by the number of the population, expressed per 100 000. It describes the level of cancer prevalence in a population, usually used for determination of logistical support and peopleware in the oncological medical services.

DESCRIPTION OF RATES IN TABLES

All information in the Bulletin is calculated based on the personified data bases of regional cancer registries which are component parts of National Cancer Registry (NCR) of Ukraine.

The information is given by articles that represent selected nosologic forms of cancer with the correspondent ICD-10 codes. Separate article contains information about children (0-17 years old). Children cancer incidence and mortality rates by nosologic forms are included into the corresponding articles.

Please note that in 2016 **NCR did not receive database from AR Krym, Sevastopol city, Donetska and part of Louganska oblasts**. That is why number of cancer patients, cancer cases and deaths from cancer in Ukraine as a whole does not cover the cases occurred in these regions. All rates are calculated for the population of the regions from which data were received.

Table 1 of each article includes rates for 2014 calculated based on the adjusted data, which were received until the end of 2015. All rates are given for total, male and female population. Age-standardized rates are given for World Standard Population and Ukrainian Standard Population (see Glossary). Children cancer rates are calculated for the number of children population aged 0-17 years.

Change of incidence rate is not calculated because of lack of data from all regions of Ukraine.

Rate "**Lived less than 1 year since the diagnosis in 2014**" is calculated with respect to the total number of cancer patients with diagnosis of 2014, regardless of whether they were diagnosed and registered alive or dead.

Rate "**From among the newly diagnosed – diagnosed post mortem**" is calculated as a ratio of number of cancer patients with post mortem diagnosis to the total number of those diagnosed in 2014.

Rate "**Microscopically verified**" is a proportion of cancer cases of 2014 verified with histological or cytological examination. Rate "**Verified with histology**" is calculated as a proportion of

histologically verified cases of the total number of cancer cases of 2014.

"Not specified morphology" is a percentage of microscopically verified cases with ICDO morphology codes 8000-8005.

Rate **"Patients diagnosed during the preventive medical examinations"** is defined as a ratio of patients with cancer determined during the preventive medical examination or in a doctor's consulting room for women of the total number of cancer patients of 2014.

Rate **"Newly diagnosed patients received the special treatment"** is a ratio of cancer patients who received the special anticancer treatment (curative, palliative or prophylactic anticancer therapy), along with surgery or without it, during 12 months from the moment of diagnosis, to the total number of cancer patients. Ratio of patients received **"combined or complex scheme of treatment"** shows percentage of patients who received chemotherapy, hormonal treatment, immunotherapy and radio-therapy along with surgery, as distinct from those who received **"surgical treatment only"** (*since this year this proportions are given referred to the whole number of new patients and not to the number of treated as previously*).

Rates **"Incidence and mortality of children population"** are calculated as a ratio of number of cancer cases and deaths from cancer in population of persons under 18 years old at time of diagnosis or death to the total number of children population of the correspondent gender.

Table 2 - Incidence and mortality, 2014 includes rates by administrative territories (oblasts and Autonomous Republic of Crimea). All rates are given for total, male and female population in according to such pattern: crude rate, age-standardized rate (World Standard Population) and age-standardized rate (Ukrainian Standard Population). These data are calculated considering corrections and additive information received by regional registries during 2015.

Table 3 - Incidence and mortality, 2015 includes incidence rates by administrative territories according to the on-line data of regional cancer registries. The rates are given for total, male and female population in according to a pattern: number of cases and crude rate. In contrast to Table 2, this Table includes on-line (not adjusted) data that were registered until the beginning of 2015, and therefore these rates could change after receiving the additional information at a later date.

Comparing of rates in Table 2 and Table 3 is improper.

Table 4 includes some important rates of 2015 calculated based on the on-line data of regional registries. Rates **"Stage distribution of new cases, 2015, according to TNM"** consist of proportions of cancer patients with respective stage that was automatically defined based on (p)TNM indices (TNM classification of the 6th edition was used). Column **"Not determined"** accounts cancers that are subject to TNM staging system but were registered without TNM indices (though they are to be classified) or the indices were incorrect or any other relevant information was missed (e.g.differentiation grade of tumour of bones, etc.). Cancers that are not subject to staging by TNM were not taken into account in "Not determined" stage. The articles **Hodgkin lymphoma** and **Non-Hodgkin lymphoma** include distribution by Ann-Arbour stages. The article **Leukaemia** includes proportions of acute, sub-acute, chronic and unspecified forms of the disease. The **Children** article shows number of children with not specified stage of solid cancers (C00-C80), lymphomas (C81-C85) and unspecified form of leukaemia (C91-C95).

The distribution by stage as well as rates **"Received special treatment"** and **"During the preventive examination"** are calculated as a ratio of the corresponding on-line number of cancer patients of 2015 to the total number of new cancer patients registered in 2015, and rate **"Microscopically verified"** is calculated based on the relevant *cancer cases*.

Rate "**Lived less than 1 year since diagnosis in 2014**" is calculated in a similar way to that described in Table 1. Number of cancer patients who were diagnosed post-mortem is also given.

Tables of **Annex A - Rates for selected cancer sites by age groups, incidence** and **Annex B - Rates for selected cancer sites by age groups, mortality** include number of cancer cases and deaths from cancer, age-specific rates, crude rates, age-standardized rates (World Standard Population) per 100 000 of population and standard errors of ASR for **53** nosologic forms of cancer as well as for all sites in total and for all sites with the exception of non-melanoma skin cancer. All rates are calculated for population of Ukraine by gender and age groups and based on the adjusted NCR data of 2015.

Table of **Annex C - Cancer prevalence** includes number of cancer patients under follow-up at the end of 2015 per 100 000 of Ukrainian population by gender and age groups.