

## 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 peopeware 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.

**Table 1** of each article includes rates for 2012 calculated based on the adjusted data, which were received until the end of 2013. 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) of the correspondent sex.

**Change of incidence rate** 2012 is shown compared to one of 2011. A negative value indicates decrease of the rate in 2012; a positive indicates its increase. If the change of the rate is statistically significant with a significance level  $\leq 0,05$  then it is marked by  $\uparrow$  or  $\downarrow$ . If the change is statistically significant with a significance level  $\leq 0,01$  then it is marked by  $\uparrow\uparrow$  or  $\downarrow\downarrow$ . Statistically insignificant difference is marked  $\sim\sim$  and suggests that it could be due to random fluctuations.

Rate "**Lived less than 1 year since the diagnosis in 2012**" is calculated with respect to the total number of cancer patients with diagnosis of 2012, 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 2012.

Rate "**Microscopically verified diagnoses**" is a proportion of cancer cases of 2012 verified with histological or cytological examination. Rate "**Diagnoses verified with histology**" is calculated as a proportion of histologically verified cases of the total number of cancer cases of 2012.

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 2012.

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. "**From among them - combined or complex scheme of treatment**" is referred to patients who received chemotherapy, hormonal treatment, immunotherapy and radiotherapy along with surgery, as distinct from those who received surgery alone.

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 sex.

**Table 2 - Incidence and mortality, 2012** 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 2013.

**Table 3 - Incidence and mortality, 2013** 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 2014, and therefore these rates could change after receiving the additional information at a later date. *Comparing of rates in Table 2 and Table 3 would be improper if receiving of this additional data and probable corrections are not taken into consideration.*

**Table 4** includes some important rates of 2013 calculated based on the on-line data of regional registries. Rates "**Stage distribution of new cases, 2013, 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 4th or 6th edition was used, in line with current region's arrangement). 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.

Articles **Hodgkin lymphoma** and **Non-Hodgkin lymphoma** includes distribution by Ann-Arbour stages. Article **Leukaemia** includes proportions of acute, sub-acute, chronic and unspecified forms of the disease.

**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 stages 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 2013 to the total number of new cancer patients registered in 2013, and rate "**Microscopically verified**" is calculated based on the relevant *cancer cases*. Rate "**Lived less than 1 year since diagnosis in 2012**" 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 group and gender, incidence** and **Annex B - Rates for selected cancer sites by age group and gender, mortality** includes 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 of the corresponding gender and age and based on the adjusted NCR data of 2012.

Table of **Annex C - Cancer prevalence** includes number of cancer patients under follow-up at the end of 2013 per 100 000 of population of the corresponding gender and age in Ukraine.