

CANCER – WORLDWIDE SCOURGE

CARMEN DANIELA DOMNARIU¹

"Lucian Blaga" University of Sibiu

Keywords: cancer, types of cancer, cancer incidence, cancer mortality

Abstract: Cancer is a leading cause of death at worldwide, European and national level. Deaths from cancer worldwide are projected to continue to rise from 7,6 million in 2008 to 11 million in 2030. There is a different distribution of cancer incidence and mortality in men and women. The risk factors are many, but 30% of the cancers are due to five main risk factors that can be intervened upon.

Cuvinte cheie: cancer, tipuri de cancer, incidență cancerului, mortalitatea prin cancer

Rezumat: Cancerul este o cauză importantă de deces, atât la nivel mondial, cât și european și național. Proiecțiile pentru 2030 arată o creștere a numărului de decese cauzate de cancer de la 7,6 milioane în 2008 la 11 milioane în 2030. Se înregistrează o distribuție diferită atât a incidenței cât și a mortalității prin cancer la bărbați față de femei. Factorii de risc sunt multipli, dar 30 % din cancere sunt determinate de cinci factori de risc asupra cărora se poate interveni.

Cancer is a major public health problem significantly associated with death and handicap. It is the second cause of death in the developed countries and is one of the three causes of death in adults in the developing countries. [1]

Cancer is a leading cause of death worldwide, accounting for 7,6 million of deaths, representing almost 13% of the total of deaths, in 2008 [3]. The first five types of cancer with the largest frequency in determining death worldwide, are lung cancer, responsible for 1,4 million of deaths worldwide, stomach cancer (740 000 deaths), hepatic cancers (700 000 deaths), colorectal cancer (610 000 deaths) and breast cancer (460 000 deaths). About 70% of all cancer deaths occurred in low- and middle-income countries. Deaths from cancer worldwide are projected to continue to rise to over 11 million in 2030.

In Europe, the first five ranks hierarchy is changed. The first place is occupied by lung cancer, the second by the colorectal cancer, followed by the stomach, breast, prostate cancer. (Picture 1) [2]

The types of cancer differ between men and women. In men, the most frequent types of cancer, taking into account the total number of cases, are prostate cancer, lung cancer, colorectal cancer, bladder, stomach cancer. (Picture 2) Prostate cancer has the largest frequency in men, while in women, the largest frequency is registered by breast cancer.

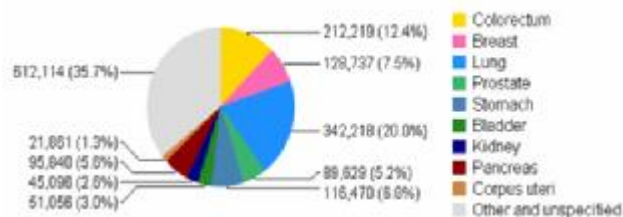
The most frequent cancer cases in women are breast cancer, colorectal cancer, lung cancer and uterine body cancer, ovarian cancer. (Picture 3) Instead, the most increased mortality is determined by lung cancer in men and breast cancer in women.

It is noted that breast cancer in women occupies the first place, both in terms of incidence and mortality.

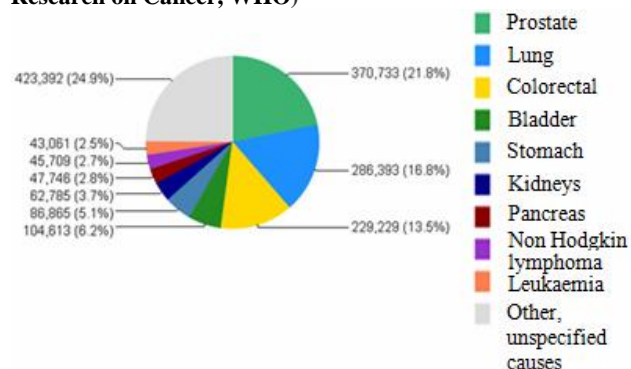
About 30% of cancer deaths are due to the five risk factors: high body mass index (high BMI), low fruit and vegetable intake, lack of physical activity, tobacco use, alcohol use. The lack of physical activity is the main cause for almost

21-25% of the burden due to colon and breast cancer. [4]

Picture no. 1. Distribution of standardised mortality from cancer after its location (source GLOBOCAN 2008, International Agency for Research on Cancer, WHO)



Picture no. 2. Incidence of types of cancer in men, 2008 (source GLOBOCAN 2008, International Agency for Research on Cancer, WHO)



The risk factors for cancer are many and complex, according to their location.

Tobacco use, alcohol use, unhealthy diet, and chronic infections from hepatitis B (HBV), hepatitis C virus (HCV) and some types of Human Papilloma Virus (HPV) are leading risk factors for cancer in low- and middle-income countries. Cervical cancer, which is caused by HPV, is a leading cause of cancer

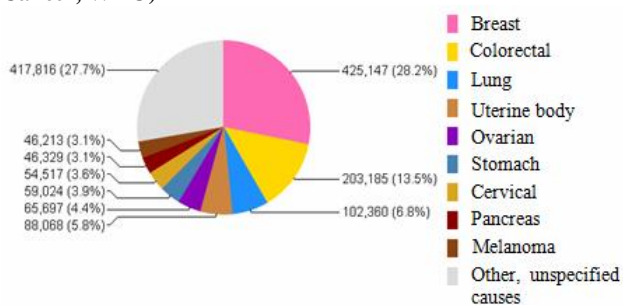
¹Corresponding Author: Carmen Domnariu, Regional Center of Public Health Sibiu, 21, Luptei street, Sibiu, 550330, Romania, e-mail: cdomnariu@yahoo.com, tel +40-(269) 21.28.12

Article received on 09.07.2011 and accepted for publication on 30.09.2011

ACTA MEDICA TRANSILVANICA December 2011; 2(4)161-162

death among women in low-income countries.

Picture no. 3. Incidence of types of cancer in women (source GLOBOCAN 2008, International Agency for Research on Cancer, WHO)



More than half of the cases of cancer and 60% of the deaths due to cancer occur in less developed countries. [5]

The burden of cancer is very large. This can be reduced and controlled by implementing evidence-based strategies for cancer prevention, early detection of cancer and management of patients with cancer. [3]

More than 30% of cancer could be prevented by modifying or avoiding key risk factors, including: tobacco use, overweight or obesity, low fruit and vegetable intake, lack of physical activity, alcohol use, sexually transmitted HPV-infection, urban air pollution, indoor smoke from household use of solid fuels.[3]

According to WHO, the prevention strategies can be oriented towards:

- Increase avoidance of the risk factors listed above;
- Vaccinate against human papilloma virus (HPV) and hepatitis B virus (HBV);
- Control of occupational hazards;
- Reduce exposure to sunlight.

Early detection and treatment may reduce cancer mortality. There are two components of early detection efforts: early diagnosis and screening.

Screening consists in the systematic application of a screening test in an asymptomatic population. It aims to identify individuals with abnormalities suggestive of a specific cancer or pre-cancer. A positive screening test should be immediately followed by diagnosis and treatment. The screening programmes are especially effective for frequent cancer types that have a screening test that is cost-effective, affordable, acceptable and accessible to the majority of the population at risk.

Some of the most common types of cancer, such as breast cancer, cervical cancer, oral cancer and colorectal cancer have higher cure rates especially when they are early detected and treated according to best practices.[3]

Some cancer types, even though disseminated, such as leukemias and lymphomas in children, and testicular seminoma, have high cure rates if appropriate treatment is provided.

In 2008, the World Health Organization (WHO) launched the Noncommunicable Diseases Action Plan.

WHO and the International Agency for Research on Cancer, the specialized cancer agency of WHO, collaborate with other United Nations organizations and partners in the areas of international cancer prevention and control recommending to:

- increase political commitment for cancer prevention and control;
- generate new knowledge, and disseminate existing knowledge to facilitate the delivery of evidence-based approaches to cancer control;

- develop standards and tools to guide the planning and implementation of interventions for prevention, early detection, treatment and care;
- facilitate broad networks of cancer control partners at global, regional and national levels;
- strengthen health systems at national and local levels;
- provide technical assistance for rapid, effective transfer of best practice interventions to developing countries;
- coordinate and conduct research on the causes of human cancer, the mechanisms of carcinogenesis, and develop scientific strategies for cancer prevention and control.

REFERENCES

1. The Global Burden of Cancer, The facts, Boehringer Ingelheim GmbH, May 2009
2. GLOBOCAN, International Agency for Research on Cancer,WHO, 2010
3. World Health Organization, Fact sheet, no 297, October 2011
4. World Health Organization, Global recommendations on physical activity for health, 2010, ISBN 978 92 4 159 997 9
5. Boyle/ P, and Levin, B. World Cancer Report 2008, IARC, Lyon: International Agency for Research on Cancer p42..