

SPECIAL ARTICLE

Governmental strategies for cancer control, prevention, care and management in Greece

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Summary

The Greek government through the Ministry of Health and the World Health Organisation (WHO) are concerned about the increase in cancer cases and are implementing actions related to its control. The WHO produced a guide which is a response to the World Health Assembly Resolution on Cancer Prevention and Control, adopted in May 2005. This WHO guide calls on member states to intensify action against cancer by developing and reinforcing cancer control programs. The Greek Ministry of Health has established a strategy unit and relevant health policies. The need to act comes from the fact that 11 million new cancer cases are diagnosed yearly, worldwide. The most common deaths globally are from lung cancer (1.3 million), from gastric cancer (1 million), liver

cancer (662.000), colorectal cancer (665.000) and breast cancer (502.000), yearly. Some cancers in Greece are more common. There are certain risk factors on the basis of which one can take preventative measures related to the numerous chemical, biological and natural factors in the environment. Recently, the Greek Ministry of Health organized a national plan of action against cancer. This starts with monitoring scientific societies and social groups and organizations in order to promote prevention as well as an improvement in the quality of cancer management. The targets are the collection of reliable information, primary and secondary prevention, effective treatment and a better quality of life for the patient.

Key words: cancer care, cancer control, cancer management, government strategies

Introduction

The need to take action by organizing a system to battle against cancer is based on the numerous new cancer cases around the world. According to the WHO, 11 million new cancer cases are diagnosed per year. This number is expected to increase and may reach 16 million over the next 12-15 years. There are data which support the fact that cancer is one of the most common causes of death worldwide. A higher percentage of cancer cases involves countries with a lower economic level. In 2005, globally, there were 7.6 million deaths due to cancer (13% of all deaths). In most countries, including Greece, deaths due to cancer are second only to cardiovascular disease.

The most common cancer deaths internationally per year are:

Lung cancer, 1.3 million

Gastric cancer, 1 million
Colorectal cancer 665.000
Liver cancer 662.000
Breast cancer 502.000

In male subjects the most common deaths from cancer are lung cancer, gastric, liver, colorectal, esophageal and prostate cancer. In females, the order is breast cancer, gastric cancer, colorectal and cancer of the uterus. In Europe it is estimated that approximately 3.2 million new cancer cases were diagnosed in the year 2005 which is an increase of 300.000 cases compared to 2004; 53% were male and 47% female. The number of cases reached 1.7 million (56% males and 44% females) in 2006. Out of the 3.2 million cases in 2005, the most common types of cancer were: breast cancer 425.900 cases (13.5%), colorectal 412.500 (12.9%) and lung cancer 386.300 (12.1%). Lung cancer was the first cause of death with 334.800 cases which represent

1/5 of the total number of events. Deaths from the most common cancers were: colorectal 207.400, breast 131.500 and gastric 118.200.

Over the last years the percentage of survivals has significantly increased for all types of cancer apart of those of the lung, pancreas and liver. There are differences with respect to survival from country to country, from city to city and hospital to hospital in the same city. The 5-year survival varies from 30-60%.

In Greece, according to the data of the Organization for Economic and Development Collaboration, mortality from cancer generally remains at lower levels in comparison with countries of Central and Western Europe, Canada and New Zealand. Among 27 countries, Greece in the year 2004 is classified in 19th place as far as male cancer rates are concerned with the index of mortality being 209/100.000 population. With regard to the mortality of women, Greece is in the 23rd place with the mortality index at 108/100.000 population. The rather favorable position of Greece is both true and untrue, due to diagnostic and classification defects which influence the cause of death. A proper, comprehensive neoplasia archive has not, as yet, been set up. The highest percentage of deaths is due to lung cancer versus gastric, prostate and colorectal cancers. There are also data concerning the percentages of cancer deaths classified per region of Greece and the differences are obvious: there are higher death rates in the northern areas versus the southern areas of Greece.

Risk factors

Cancer is considered to develop when the subject is exposed to carcinogenic factors. The most common factors worldwide are as follows: carcinogenesis is attributed to many substances in the environment as well as in certain foods, in asbestos, in certain liquids that are contaminated by deleterious substances, even in the water as well as substances that are used for plant cultures, nitrosamines and alcohol; obesity, low fruit and vegetable consumption and the human papilloma virus can also be such factors. Cigarette smoking is also considered to be an important factor but it is greatly overestimated as a serious cause of lung cancer and other cancers. Carcinogenesis from radiation from natural sources is also a factor; ultraviolet (UV) irradiation takes away the electrons and produces damage to the tissues. Radon and radioactivity are examples which are causatively related mainly to leukemia and secondarily to other neoplasias. UV radiation is considered responsible for skin cancers such as malignant melanoma.

In general, environmental contamination of the air, water and the soil is responsible for a percentage of many cancers; this involves carcinogenic substances which contaminate both internal and environmental air. Chemicals such as dioxins increase cancer development.

Occupational carcinogenic factors affect 20-30% of men and 5-20% of women 15-64 years of age. Ten percent of lung cancer cases and 2% of leukemia cases, worldwide, are attributed to vocational carcinogenic factors.

Biologic carcinogenesis

Certain infections have been related to the development of cancer: the hepatitis B virus (HBV) and C (HCV) may produce cancer of the liver after chronic contamination. Contamination through intercourse by the human papilloma virus, particularly by its subtypes 16 and 18, has been recognized as the main cause of cervical and/or uterine cancer and the virus HIV/AIDS may be followed by malignant neoplasias such as Kaposi's sarcoma and non-Hodgkin's lymphoma.

Other carcinogenic factors have been related to age, to hereditary or to congenital predisposition. The elderly are more vulnerable to cancer. Familial cancer has been described as a result of certain mutated genes and this results mainly in breast cancer, colorectal cancer as well as others, such as ovarian cancer.

Socioeconomic conditions

Data confirming a person's socioeconomic level, defined by education, profession and income exist. The socioeconomic level may result in an increased risk of cancer of the breast and of the cervix and lung cancer may be double that of people at a higher socioeconomic level; the same has been observed for cancer of the esophagus and stomach.

Economic consequences

The therapeutic management of cancer is a complicated subject and the cost is high for the health system of countries worldwide. Treatment of a patient with cancer may call for different types of health care depending on the stage of the disease; this may include admission and hospitalization, drug therapy, diagnostic examinations, medical and nursing care, home nursing and care and emergency hospitalization. In the USA the cost in one year (2004) was 189.8 billion dollars for the aforementioned health necessities.

National plan –strategies for cancer control– strengths, weaknesses opportunities, threats (SWOT) analysis

1. To pass governmental law for scientific specialists to organize multi-center bases and networks to advise social groups and organizations, with a target to continue to support and protect patient rights.
2. To improve the productivity and quality of oncology clinics nationwide and to implement insurance cover for all diagnostic and therapeutic measures.
3. To create a network of strategically-located and well-organized family support services covering the whole country; there may be existing services, but more access to the authorities is needed. The communication and collaboration between the existing services for the care of cancer patients should be improved.
4. The promotion of preventative health measures by specialized health-care personnel is required in order to improve quality.
5. To improve health-care services in the public and private sector by providing the necessary knowledge and medical equipment to all areas of the country.
6. To organize a system for the treatment and care of patients at home.
7. The neoplasia archive is inadequate and needs diagnostic reorganization with a precise classification of each type of malignant neoplasia; this should be moderated by a qualified team which is in the service of the Ministry of Health. This specific reorganization would cover the cancer patient population of the whole country.
8. It is necessary to develop the means of communication among health centers both small and large and to interpret the data of all health centers in the country.
9. More volunteer groups to help cancer patients should be recruited; these groups/organizations would work with cancer specialists.
10. The healthy population should be informed about certain carcinogenic substances which surround us in the environment and also about certain habits which are known to be related directly or indirectly to cancer development. Awareness should inspire the population to take preventative measures. In practice, this is not the case today. People must be made aware of the dangers of high alcohol consumption, of uncontrolled dietary habits resulting in obesity, of smoking in some respects, and of environmental pollution, which could all be considered parameters that

contribute to carcinogenesis. Scientists and laymen/women alike should be recruited in the fight against cancer, in order to create more awareness thus resulting in preventative action. The recruitment of scientists and laymen/women concerned with the fight against cancer and the awareness of the population of a kind of preventative action are needed to improve the quality of cancer management.

The Greek government has taken a decision to organize central and peripheral country networks with specialized personnel to implement the application of a strategic plan against cancer. This plan is based on the WHO suggestions.

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