

Medical - Geographical Conditions and Spread of Oncological Deceases in Azerbaijan

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Abstract

Geography of oncological diseases in Azerbaijan became widespread like throughout the world. Purpose of the article is to study the geography of cancer diseases in Azerbaijan, mainly in the regions and cities. The scientific work deals with the study of relationship of eco geographical environment and the health of the population of Azerbaijan, as well as the dependency of occurrence and spread of oncological deceases depending on geographical factors. The emergence and spread of oncological deceases by different localizations are shown. The origination and responsible factors of different kinds of cancer is analyzed by different economic-geographical regions of the country. Health conditions of population of Azerbaijan as well as origination and spread of oncological deceases in the country is analyzed in context with eco geographical conditions.

Keywords: oncological decease, cancer, eco geographical, population, health.

Health conditions of population is connected with socioeconomic situation, available in a country, since huge economic and social potential allows create strong material and technical base of health care system and private efficient protection of health of population.

Nature management, including use of natural resources is one of the most important global problems standing in front of humanity at the contemporary stage of civilization. While the system of "population-economy-nature" expands continuously, rapid development of industrial areas and motor industry along with population growth, the process of urbanization and the development of chemistry-intensive agriculture are responsible for wide exploitation of natural resources which in its turn leads to the undesirable change in vegetation, animal world, and geographical spheres of the planet. Dynamic equilibrium of the nature is close to breaking due to growing industrial and other economic activities.

Without depending on how and where this process goes, its results concern not only certain regions, since all local imports lead to increasing threat at global scale, while the evolution of the whole wildlife suffer from it.

The impact of civilization on the natural environment finds it reflection in the intensification of greenhouse effect, the occurrence of acid rainfall, the depletion of the ozone layer, the pollution of spheres of the Earth, the destruction of forest and soil cover, and the depletion of biodiversity. All these processes negatively affect humans' health as the scale of spread of deceases increases. One of the factors affecting human health is the wide use of pesticides and other mineral substances in planting.

Waters with higher portion of nitrate in the composition may lead to the occurrence of dangerous deceases among children. The use of nitrate as a pesticide at excessive grade leads to serious contamination of underground and surface waters. Harmful impact of nitrate-intensive pesticides includes also the elevation of acidity grade of soil cover, which in its turn entails faster melting of microelements and increases amount of heavy metals in drinkable pure waters (Budagov, Ahmadov, Rustamov, 2009).

Increasing number of oncological deceases among humans, as well as the growth of number of relevant patients and the fall of their age should be remarked in particular. In this work, oncological deceases are studied in terms of their spatial distribution and also correlation with natural and geographical conditions. The topicality of this problem is explained with the necessity of implementation of eco geographical and medical complex studies.

The implementation of mentioned studies is important in terms of the development of medical sciences, efficient territorial organization of public healthcare system, as well as sustainable development, elevation of social welfare and elongation of life expectancy.

From this view, the study of impact of ecogeographical conditions on origination and spread of oncological deceases is needed. Medical conditions and contamination grade of the nature along with complex environmental factors and their components have a considerable impact on the growth and geographical distribution of deceases in Azerbaijan. Study of the material and geographical conditions of country's territory, identification of areals of deceases and also related ways and methods of prevention are issues of scientific and practical importance (Rzayeva, 2008-1). The study of contemporary environmental situation and issues of nature use is one of new and very important directions. The appearance and development of this priority field is related with the development of scientific and technical revolution, responsible for the critical deterioration of environmental situation, as well as the population growth and the industry.

Like in other countries of the world, Azerbaijan faces eco geographical problems in the process of development of geosystems. Climate change as a global process shows itself in Azerbaijan as well. Keeping favorable balanced state of the environment is the main condition of the provision of environmental security and stable socioeconomic development of society (Rzayeva, 2008 -2).

Climate condition, relief, soil, vegetation cover, hydrogeography and properties of natural landscapes considerably define the origination and geographical spread of deceases. The distribution of certain deceases depends on these mentioned factors. Negative impact of harmful substances, available in the atmospheric air, pure water and organic products is much higher compared to other sources. Population of cities is affected by air pollution. Cities and villages are very different in terms of the number of patients, since the spread of grade of deceases in urban environment is higher.

Reproductive factors considerably affect the origination and spread of cancer. This decrease is listed among rapidly growing ones whereas its etymology is explained in different ways by various theories. However, none of these theories succeeded in explaining the causes of origination of cancer. At present, the related role of numerous factors has been identified. Physical, chemical, biological, hormonal, and other factors are responsible for the origination of malignant tumour in both separately and combined way, known as canserogenic factors. They include smoke of cigarette, certain components, and some properties of reproduction. A number of substances and also professional (specialty) factors, as well as certain physical factors, including ultra-violet and ionized rays along with some inflectional factors cause cancer to originate. In 90-95% of cases, malignant tumour originates due to exogenic factors and genetic factor. The substance that originate may originate malignant tumour have an ability of damaging genetic composition of cells. Genetic factor may play an inclinatory role, while in less case it may serve as etymological cause. Human body has up to 200 genetic syndromes that may favor the occurrence of malignant tumour. In some cases, members of the same family may bear the same localized tumour. Exogenic factors include environmental factors and lifestyle. 30-35% of the nourishment factors may cause the emergence of malignant tumour. Among responsible factors, smoking (30%), reproductive factors (4-5%), specialty (4-5%), ionized rays (4-5%), ultra-violet rays (2-3,5%), drinking of alcohol (2-3%), air pollution (1-2%) and others should be noted (12).



Figure 1: the distribution of oncological deceases in Azerbaijan

The facts of deceases are spread unevenly by the regions of Azerbaijan. Thus, for example, the spread of grade of oncological deceases is 78,67% in southeastern part of the Greater Caucasus., while the corresponding figure is 45,18% in the Lesser Caucasus, 48,41% in Lankaran region, and 50,81% in Kura depression. In southeastern Greater Caucasus and Lesser Caucasus, breast cancer is the most observed decease of malignant tumour, whereas the spread of lung cancer is typical mainly for Kura depression and stomach cancer mainly for Lankaran region. In the Middle Aras region, breast cancer is the most spread oncological decease, followed by skin cancer.

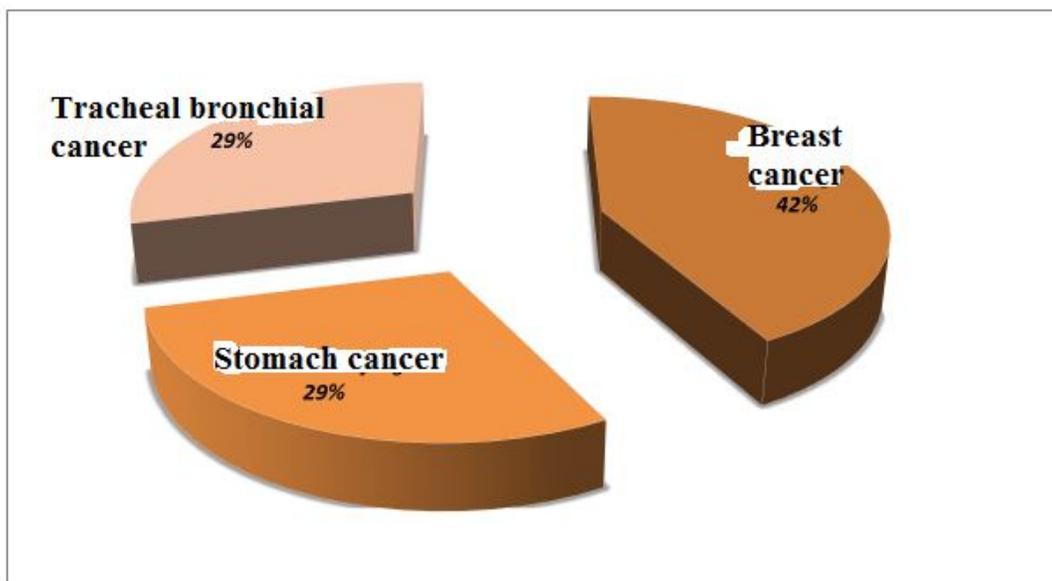


Figure 2: the most spread oncological deceases in Azerbaijan

The big majority of patients suffering from oncological deceases are females. Breast cancer is experienced by every 10th female patient of oncological deceases, while one female out of every 1000 ones in average suffers from this decease. In Azerbaijan, these figures are higher than that of the world. Thus, patients of breast cancer in the country grow in number. Cancer may be observed in every part of human body, but breast cancer in 99% cases is observed among females and only in 1% cases among males. In Azerbaijan, every seventh female patient of a oncological decease has tumour in her breast. As is seen, this is higher compared to the worldwide average figure (every 10th female). In 2000, the number of patients suffering from oncological decease equaled 10 million people whereas the figure is expected to reach 24 million in 2050 (Rzayeva, 2008 -1).

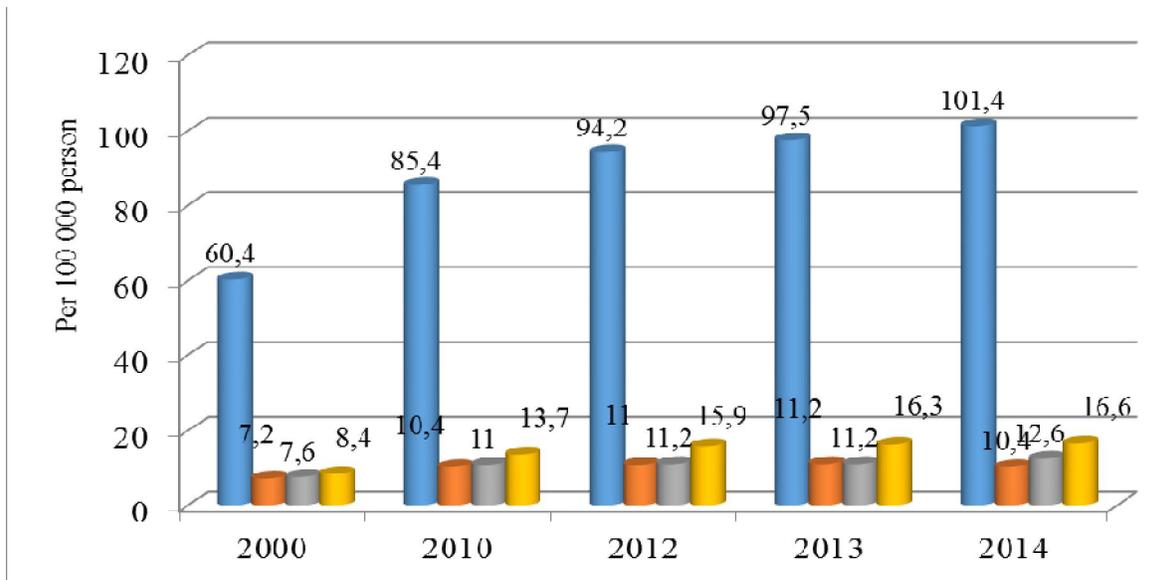


Figure 3: The number of all patients registered at facilities of treatment and prophylaxy in Azerbaijan (per 100 thousand persons) by colors: blue – stomach cancer; orange – stomach cancer; gray – tracheal, bronchial, lung cancer; yellow – breast cancer.

Geography of oncological deceases is wide in Azerbaijan. In 2014, the number of all patients (the number of facts of deceases) equaled 1852918 persons, out of which 11011 persons or 0,59% were oncological patients. The spread of decease by economic regions are different due to ecogeographical conditions.

In Absheron economic region, such factors as development of oil extraction, environmental pollution, high radiation, operation of plants producing chemicals etc. are responsible for the spread of oncological deceases and availability of relevant patients in higher number. In Nakhchivan economic region, the adverse factors include the availability of high direct solar radiation that causes skin cancer, whereas the extraction of certain ore resources may lead to the origination of other kinds of cancer. In Ganja-Gazakh region, adverse factors are the processing of raw materials, the development of mining industry, the harmful impact of poisonous gases used as military ammunition along the state border.

In Sheki-Zagatala, the availability of polimetal ores, the composition mineral waters, and the effect of Gabala Radiolocation Station should be remarked. Petroleum industry, production of construction materials, unfavorable quality of drinkable water, the use of pesticides in cotton-growing etc. cause emergence of cancer in the territory of Aran economic region. A negative factor in Lankaran-Astara region includes the use of pesticides in agriculture (mainly vegetable-growing), the availability of radon in mineral waters. In the area of Mountainous Shirvan, the relevant impact of Gabala RLS and also production of bitumen are mentionable. In Guba-Khachmaz region, mineral waters contain radon, which unfavorable in terms of origination by the development of oil extraction which is a source of radiation. The two regions – Mountainous Garabagh and Kalbajar-Lachin are under the control of Armenian military forces where the use of weapon is adverse factor.

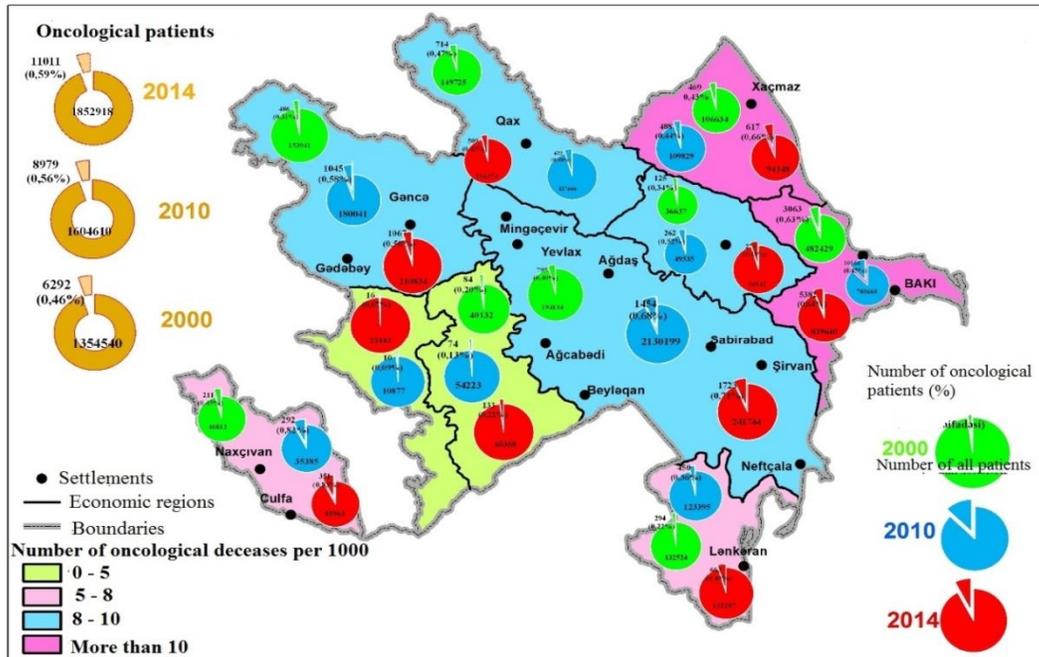


Figure 4: Common and oncological deceases registered in Azerbaijan

The operation of Gabala RLS is responsible for the growth of oncological deceases by 9 times in the administrative regions of Gabala, Aghdash, Goychay, Ujar, Ismayilli, Zardab and Kurdamir. The station causes the growth of other deceases such as nervous deceases, kidney, cardiovascular etc., too.

Typically, oncological decease seems as something dangerous for people, while this decease should be inspected on time. Thus, like other deceases, cancer can be prevented if it is revealed at the preliminary stage of its origination. It is mentionable that each year hundreds of thousands of people all over the world becomes a sacrifice of this decease. The number of relevant patients is expected to reach 20 million by 2020. Each year about 7000-8500 patients are registered as initial patients of oncological deceases. The number of patients suffering from cancer and the facts of related death increases year by year in Azerbaijan. At present, even remote villages may have higher number of related patients.

As doctors suggest, cancer originates due to different reasons in the country. The factors are pollution of the environment, non-qualitative nourishment, excessive amount of radiation, unusual lifestyle. Medical science still fails to find out the way of treatment of this decease. The most efficient way of combating cancer is early diagnosis and on-time treatment. As experts suggest, the probability of full treatment of cancer increases if the decease is revealed at early stage of its development (Rzayeva, 2008-2).

It should be noted that regret that most people in Azerbaijan typically addresses only at the late stage of cancer, whereas every person should pass through blood test several times a year. People should know that better results in treatment of cancer are reachable in case of its early reveal. According to the reports of experts and international organizations, the origination of cancer is considerably defined not only by the quality of environment but also by proper nourishment. From this view, escaping the contagion to cancer depends on people themselves.

There is a necessity of human adaptation of complex program on struggling cancer in the country, which should concern not only diagnosis but also treatment, prophylactic measures, protection of environment, combatting habits of smoking, food factors and their role in the occurrence of tumour, proper nourishment, character of lifestyle and other issues. At present situation, the most efficient way of struggling cancer is early diagnosis and treatment.

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