

## CARCINOGENESIS AND NUTRITION

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### Abstract:

The research work is devoted to a topical topic in modern times (one of the problems of social ecology) - nutrition and human health, namely, the relationship between carcinogenesis and nutrition. The problem of cancer has no analogues in terms of complexity and importance for humanity. Every year, 8 million people die from malignant tumours on the globe, and in Uzbekistan – about 45,000. Cancer affects all segments of the population, causing huge damage to society.

**Keywords:** social ecology, nutrition, human health, analogues.

### Introduction

The purpose of the study: to understand the causes of carcinogenesis and prove that nutrition can affect the formation of a malignant tumour.

### Research objectives:

1. Research literature data on human carcinogenesis and nutrition.
2. Conduct a sociological survey among different categories of the population about their awareness of this problem.
3. Study the statistics and causes of carcinogenesis in the Bukhara region
4. Make a menu of products that are useful for cancer prevention.

### Research methodology:

We have studied the literature on the causes and spread of malignant neoplasms and, in particular, the problem of carcinogenesis. A sociological survey was conducted among young people about their awareness of this problem. Statistical data from the journals of the cancer center on carcinogenesis in the Bukhara region are analyzed and corresponding conclusions on this disease are made. The work was carried out during 2018 - 2019.

Hypothesis: Certain products can have both negative and positive effects on the development of cancer in the population.

### **Sociological survey:**

A sociological survey of respondents aged 13-25 years was conducted on their awareness of the concept of carcinogenesis, its causes and malignant neoplasms in General. During the survey we asked the following questions:

1. What are the causes of malignant neoplasms?
2. What are the symptoms of cancer?
3. How is cancer treated?
4. Any carcinogenic disease you are aware of?

The survey shows that the population is poorly versed in the causes of cancer, although some people have information about the symptoms, types and treatment of cancer. When asked about the presence of friends and relatives with cancer, almost half of the respondents answered in the affirmative, which further indicates the relevance of this problem.

About 80% of cases of cancer in humans are the result of environmental factors, which are understood as a lifestyle. Smoking, industrial contact with carcinogens, food products (cereals, food additives containing nitrites and secondary amines), diseases that increase the risk of developing tumours, for example, cirrhosis of the liver in some cases lead to the development of hepatocellular carcinoma, and ulcerative colitis - adenocarcinoma of the colon, etc.increase the risk of developing malignant tumours.

One of the most acute medical problems "Nutrition and cancer" attracts more and more attention every year. This is because food may contain carcinogenic chemicals (CCS) and their precursors.

In comparison with the natural background, the oncogenic load on a person may increase many times when food products are contaminated with anthropogenic KHV. The sources of these CCS primarily include waste from industrial enterprises, thermal power plants, heating systems, and transport. Pesticides and especially products of their transformation in the biosphere can be an important source of contamination of food and feed plants of KHV. Potentially carcinogenic impurities can also include hormonal and other drugs used as growth stimulants (or in veterinary practice).

The possibility of formation of PAHs and nitroso compounds in meat and fish products when they are processed with smoky smoke; in vegetable products when dried with hot air containing fuel combustion products; when fat is overheated during frying has been proved. Carcinogenic substances can migrate to food products during their manufacture, storage, and transportation from equipment materials, containers, and packaging.

Currently, the remaining amounts of a number of xenobiotics with potential Carcinogenicity are officially normalized in food: pesticides, hormonal drugs, aflatoxins, arsenic, cadmium, polychlorinated biphenyls. Various factors can influence the risk of developing tumours of certain localities. Currently, it is believed that Smoking is associated with about 30-35% of

cancer cases, improper nutrition-35-40%, profession-4-5%, environmental pollution-1-2%, alcohol consumption-2-3%, ionizing radiation-4-5%, ultraviolet radiation-2-3%.

According to scientists' forecasts, the malignant cancer incidence may reach 16 million people by 2020, compared to 10 million in 2000. This growth is due to the ageing and increasing population, as well as the deterioration of lifestyle, deterioration of human living conditions. Consequently, the reduction of morbidity can be achieved by preventing cancer, as well as by improving diagnosis and treatment.

## Conclusions

The most effective measures that reduce cancer incidence are the fight against Smoking, changes in nutrition, reduction of ultraviolet radiation, mass preventive examinations (screening), dissemination of recommendations (educational work). At present knowledge is not sufficient to precisely specify all components of the diet, contributing to the development of cancer or reducing the risk of developing it, there is no doubt that increasing the intake of vegetables, greens and fruits and reduce consumption of fat (especially animal) will reduce the incidence of malignant tumours.

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