

# Food habits is associated with cancer with preventive measure in Indian population

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**Abstract:** Cancer is non-communicable group of diseases due to genetically changes involving uncontrolled cell division of an organism, cancerous tumor grown and travels via lymphatic or blood stream to other parts of body that may developed into new tumor more easily. The causes of cancer are variable in different organs due to variable causes of it may leads to death, mutation inactivates the tumor suppressor gene that cause of cell proliferation and DNA repair gene, creates oncogene then cancer or metastasis condition is noted due to different food substance like food containing pesticide intake through different vegetables, intake of alcohol, nicotine through smoking, excessive weight or obesity, pollutions, UV and ionizing radiation, different drugs, the contraceptives pills, sedentary life style, food adulterant etc, 11% cause of cancer unknown till now. The out of different causes of cancer most important food habits, such as alcohol, smoking contain nicotine, food adulterants contain arsenic, zinc, pesticide, continue intake of different drugs e.g. drugs for treatment of blood pressure, blood sugar and pregnancy preventives or contraceptive pills that may be more effective and cause of cancer. This study to finding out the foods may associated with cancer in Indian Population.

**Key Words:** Cause of cancer, risk factors of cancer, harmful effects of cancer, preventive measure of cancer.

## I. Introduction

Non-communicable disease (NCD) is not transmitted directly from person to person, 68% person is death is due to the NCD of total death in 2012 ( WHO, 2015). The NCD include stroke, heart diseases, diabetes, chronic kidney disease, Parkinson's disease, cancer, etc. Cancer as well as uncontrolled cell division due to genetically abnormalities or inactivation of tumor suppressor genes that cause of the tumor cells are spread from one position or organ of body to another organs, is call metastasis condition (WHO, 2018). The activation of oncogene that cause of cancer which verities of over 100 types that affects human due to inactivation of tumor suppressor gene (National Cancer Institute, 2019). The following types of cancer on based of origin of tumor calls such as carcinoma arising from epithelial cells, can cause of cancer in breast, prostate, lung etc., sarcoma originate from connective tissue, cause of cancer in outside of bone marrow, Leukemia and lymphoma developed from hematopoietic cells, cause of blood cancer , germ cell tumor developed from pluripotent cells present in testicles or ovary, another types of cancer is blastoma, developed from immature precursor cells or embryonic cells. The cause of cancer is of remarkable numbers that are also associated with gene mutations. The 90 – 95 % cause of cancer associated with genetical mutation that is developed from lifestyle and environmental factors. The rest 5% also associated with inherited genetics (Anand P et al, 2008). The appropriate causes of cancer are unknown till now. The most common causes are identified smoking and tobacco that made up of thousands of chemicals may be cause of 70 % of cancer. The chemicals are identified in smoking nicotine, hydrogen cyanide, formaldehyde, lead, benzene, CO, PAH<sub>s</sub> etc are most powerful carcinogenic can cause of not only cancer, can leads to heart diseases, lung diseases etc (The American Cancer Society, 2017). The regular alcohol intake can cause of mouth, liver, throat, voice box esophagus, colon, rectal and breast cancer through inflammation, scarring, DNA damage, increase estrogen secretion etc. Overweight of body or obesity also associated factors of cancer. The different food stuffs contain pesticides, herbicides, bisphenol entering into body may cause of carcinogen indirectly, The genetically modified foods also may cause of cancer are not identified due to absence of the chemicals or pesticides (The American Cancer Society, 2016).The cancer gene also called oncogenes are activated while the tumor suppressor genes are BRCA1, BRCA2, p53, TP53 are mutated due to cause of cancer. This mutation can cause of long term exposure of UV rays, radiation or environmental factors, etc (Cancer.Net, 2018). The first and second common cause of death is cardiovascular diseases and cancer respectively in Indian population. The large numbers of Indian people are suffering with cancer is about 14lakh in 2016 (India Today, 2018). The statistics of cancer patients in India is total 7,84,821, out of total patients men are 4,13,519 and women are 3,71,302, in men 25% cause of death include cancer of oral cavity and lungs and in case of female death of cancer of breast and oral cavity (India against cancer, 2019). National cancer registry programme of Indian council of medical research (ICMR) states that more than 1300 Indian peoples die in every day due to cause of cancer. The cancer patients 491,598 died out of 2,820,179 patients in 2014. The women and men patients are suffering with commonly breast cancer and lung cancer remarkable numbers respectively (Delhi daily news, 2015). The available data about total death due to cause of cancer associated with food habits in India are not found.

## II. Gene mutation with cancer

The nucleus is the brain of the cell which consists of 23 pairs of chromosome, out of the chromosome 22 pairs are autosome and one pair is sex chromosome. The autosomes carry physical characteristics of a cell through formation of specific proteins. In cancerous condition, for the cause of mutation of genes many abnormal proteins are formed or protein formation is ceases that results uncontrolled cell division or cancerous. The gene mutation divided into following two types acquired mutation and germ line mutation, the most common types of cancer due to cause of acquired mutation of genes as well as genetic changes in single cell through different factors e.g. tobacco, UV radiation, viruses etc (Cancer.Net, 2018). There are two common types of oncogenes HER2 and RAS family of genes also responsible for cancer growth and spread, cell death. This gene mutation also link with food habits in Indian population.

## III. Cancer with food habits

Most developing countries like India, it is noted that some high food intake or consumption regularly also cause of cancer. The overcooked foods processed foods, meats contain high sugar and lower nutrient and fibers cause of stomach, breast, colorectal cancers, dairy products also associated with prostate cancer. The some study revealed that cause of cancer is prevented with more intake of vegetables containing sulforaphane include broccoli, cauliflowers, cabbage etc. There is no single foods can prevent cancer (Mary Jane Brown, 2018). The sedentary life style, fat enriched food intake, high calorie intake, low exercise also provide weight gain that also may cause of cancerous (Harvard health publishing Harvard medical school trusted advice for a healthier life, 2016). The food habits include smoking also associated with cancer of bladder, blood cells, cervix, colon, rectal, esophagus, kidney renal pelvis, liver, mouth, stomach, voice box etc (Centers for disease control and prevention, 2019). The intake of less amount of alcohol that may cause of lower risk of cancer. The alcohol intake also cause of cancer of mouth, throat, larynx, esophagus, colon, rectal liver etc. The different types of alcohol consumption provide the cancer (Centers for disease control and prevention, 2019).

## IV. Symptoms and treatment of cancer with harmful side effects

The following two types benign tumors and malignant tumors, out of them the benign tumor do not spread, can grow locally, was dangerous while developed in brain but the other type of tumor is opposite in characteristics, like can spreads, is called metastasis, some type of the tumor is curable. The common symptoms of cancer are fever, pain, fatigue, redness of skin, weight loss or weight gain of body other symptoms may noted short of breath, chest pain etc. The symptoms of cancer also dependants with size and location of the cancer. The treatment of cancer has following ways chemotherapy, radiation, drug therapy etc (Charles Patrick Davis, 2016). The surgical treatment also important but that dependent with location of cancer with its stage. The side effects are harmful while during the treatment the normal or healthy cells are damaged. The neutropenia is noted after chemotherapy where number of WBC is decreased. The hair loss or alopecia is important side effects after chemotherapy which helps to stop the fast-growing cells of body. The nausea and vomiting may noted during chemotherapy treatment or drug therapy which helps the suppress the abnormally growing cells (Centers for disease control and prevention, 2019).

## V. Conclusion

The cancer also developed from the tremendous numbers causes that provide unwanted or uncontrolled growth of cell and spreads of cells or metastasis. From different studies, it is clear the food habits such as regular intake of excessive alcohol, smoking, sugar and lipids enriched food, processed food products which are remarkable utilized by Indian peoples also associated with cancer, that may prevented by awareness about lifestyle, health education or nutritional education.

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