



Cancer Prevention Strategy

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Abstract

Cancer affects more than 10 million people worldwide every year. More than 8 million deaths per year, or 13% of global mortality.

The considerable increase in the number of cancers in recent decades is certainly linked to demographic change and life expectancy.

Cancer is a condition like any other condition, it can be diagnosed early and be cured permanently. But it is also a disease that is different from others in terms of its risk of permanent recurrence that is often fatal. Health professionals and patients are reluctant to talk about a cure but remission even after a reasonable step back.

Knowledge of the epidemiology and pathophysiology of cancers leads to cancer research to identify etiological factors, to make early diagnosis, to develop preventive measures and to adapt effective therapeutic strategies.

Indeed, the best cancer management is based on prevention.

“Prevention rather than cure.”

Keywords: Cancer – risk factors – diagnosis – management – prevention.

Introduction

Cancer is a concern for all public authorities and a concern for all populations in the world. In recent years, cancer has been evolving at a very accelerated rate at the rate of current time. Cancer is responsible for a high rate of death in every country in the world. It creates a problem for all health professionals, patients, their families and the authorities of all countries.

Cancer is a disease of the cells or precisely of the molecule.

The cell is the basic unit of all organisms.

Each cell contains different elements, including deoxyribonucleic acid (DNA) and genes that make proteins to adapt to any change in its environment.

The particularity of cancers is first and foremost in their causes. Most cancer risk factors are in some way related to the oxidative process and free radicals.

Research is interested in knowing these causes or the factors that promote the appearance of cancers by relating the frequency of certain cancers to the environment, hereditary factors, certain eating habits, alcohol and tobacco intoxication, professional activities, sun exposure, exposure to pollutants, lifestyle, inflammation, infections, stress, etc.

Cancer is a dreadful disease requiring effective management, starting first with broad awareness for better prevention.

II- Diagnosis:

The diagnosis of cancer begins with:

- The positive diagnosis:

* Telltale signs such as bleeding, swelling, persistent recent functional disorders, mass or directed screening...

* Signs in favor of the diagnosis:

°Local arguments such as: Infiltration, ulceration, budding...



◦ Arguments related to the context: Age, alcohol and tobacco intoxication, predisposing pathology (rectal polyposis)...

◦ Biological arguments: Tumor markers.

◦ Arguments of certainty: The diagnosis of cancer is usually histological or cytological.

- Differential diagnosis:

For each type and location of cancer, there are differential diagnoses that can be more or less confusing with cancer. Most often dysplasia and benign tumors.

III- Cancer care:

The care of people with cancer is complex. It brings together multiple stakeholders and different therapeutic disciplines (multidisciplinary consultation meeting). It is a heavy and expensive treatment with a high risk of recurrence and an often poor prognosis.

IV- Prevention:

Cancer is a real public health problem. It is a dreadful disease for health professionals and patients. The best management lies in prevention.

This prevention must involve recommendations:

1- Know an anti-cancer diet: Diet would have a positive influence on cancer prevention [1]. In fact, 5.4% of cancers are due to an unbalanced diet, i.e. nearly 19,000 new cases of cancer that could be prevented each year by adopting a better diet [2]. Certain eating habits can increase the risk of cancer. A strategy to follow is needed to reduce the risk of cancer.

- Avoid carcinogenic substances (toxins, pesticides, hormones, drugs, food preservatives, solvents, heavy metals, etc.).
- Eat ten fruits and vegetables a day to stimulate antioxidant defenses [3].
- Have a colorful plate (health is on the plate). Hippocrates said that "your food is your first medicine".
- Choose the right plants to detoxify the body. Cruciferous vegetables (broccoli, Brussels sprouts, turnips, radishes, etc.) help detoxify the body.
- Consume garlic and onion without moderation. They are able to reduce the chances of developing cancer, especially cancer of the digestive tract.
- Prefer red fruits (raspberries, blueberries, strawberries, etc.) which have powerful antioxidant properties.
- Choose the right spices (turmeric, ginger, etc.) that fight inflammation.
- Minimize carbohydrate consumption. The relationship between carbohydrate consumption, obesity and cancer is well demonstrated. Cancer cells feed on sugar.
- Protect yourself from cell scrubs with vitamin D. Vitamin D is a potent inhibitor of tumors [4].

Exposure to the sun for 15 to 30 minutes for 4 weeks multiplies the level of vitamin D by 3 or 4. Veal or lamb livers, eggs and dairy products are rich in vitamin D.

- Eat fish: More omega 3 to create an anti-cancer cellular environment. In fish, everything is good for cardiovascular health and a protective role against cancer is recognized by researchers [5].
- Take green tea. It cleanses the body.

2- Protect yourself with therapeutic fasting:

Intermittent fasting can fight cancer.

The World Health Organization (WHO) currently recognizes the benefits of fasting on human health. It even kills cancer cells.

3- Exercise:

Physical activity can reduce cancer cases by about 30%. A daily walk of 30 minutes is recommended if you are not physically active [6].

4- Fight against moments of stress.

Stress has a direct effect on carcinogenesis. You have to avoid stress, soothe difficult moments and be calm...

5- Treat or avoid inflammation:

Treat any bacterial or viral infection [7].

6 - Be optimistic:

Each of us carries concrete or inexplicable anxieties: Anxiety (material or emotional...), fear of the future, of death and of this world in full upheaval where we lose all our bearings. You have to be in good spirits and be optimistic to overcome any difficulty.

7- Fight against smoking.

Smoking is directly responsible for bronchial, gallbladder and bladder cancers. Active and/or passive smoking must be eradicated to reduce the risk of cancer occurrence. All advertising must be abolished, prices must be increased and, above all, smoking must be banned, especially in public places and enclosed environments. We must encourage help with quitting (consultations in each health establishment) and the foundation of anti-smoking associations.

8- Fight against alcohol consumption.

Alcohol is a risk factor for cancer. It is recognized in the occurrence of pancreatic and liver cancer. When alcoholism is associated with smoking, the risk of developing cancer of the tongue, throat, larynx, pharynx and esophagus is very high. We need to increase prices, help people quit and, above all, fight against drug addiction.

9- Fight against obesity and a sedentary lifestyle.

A sedentary lifestyle promotes overweight and therefore the onset of cancer.

Obesity plays a major role in colon cancer, prostate cancer in men and breast cancer in women. The influence of calorie intake and its transformation into fat seems to be increasingly established in the development of breast, colon, prostate and endometrial cancers. You have to balance your diet, avoid a sedentary lifestyle and increase your physical activity.

10- Preventing cancers through vaccination:

Two vaccinations, against the hepatitis B virus (HBV) and against the human papillomavirus (HPV) which should reduce the incidence of hepatocarcinoma and cervical cancer respectively. Vaccination campaigns must be encouraged.

11- Living in an atmosphere free of pollution [8].

Pollution is recognized as a very important risk factor in the genesis of cancer. Prolonged exposure to chemicals, biological dust and physical agents is responsible for occupational or environmental cancers. We need to develop green spaces, especially in the city.

12- Fight against natural radiation (sun exposure) and artificial radiation.

Exposure to the sun puts you at risk for skin cancer. Avoid exposure to the sun between 11 a.m. and 4 p.m. The use of sunscreens with a high protection factor is strongly encouraged. Artificial ultraviolet rays should be avoided for tanning.

13- Mass screening: Mass screening is a form of cancer prevention (colorectal cancer, breast cancer, cervical cancer and prostate cancer). It is carried out to identify the territories and populations at risk of developing cancer.

Mass screening consists of looking for signs or factors related to cancer in an apparently healthy population

The screenings organized are as follows:

- Breast cancer screening: women aged 50 to 74 are invited, every two years, to be screened (mammogram and clinical examination);
- Colorectal cancer screening: men and women aged 50 to 74 are invited, every two years, to carry out a blood test at home in the stool;
- Cervical cancer screening (since 2018): Women aged 25 to 65 are invited to be screened every three years (cervical and uterine screening test).

Currently, individual screening is well recommended for certain cancers (breast cancer, colorectal cancer, etc.) and those of patients at risk (thyroid cancer, gastric cancer, colorectal cancer, etc.).

The role of screening is to determine a population at risk before the actual cancer occurs. It aims to make an early diagnosis, an effective therapy in time, to lower mortality and above all to have a good prognosis.

14- Encourage research:

We must support cytogenetic and molecular biology research for translational research and establish research projects in telemedicine.

V- Conclusion

Cancer is a real public health problem.

A balanced diet framed by regular physical activity would play an important role in cancer prevention.

Cancer management is complex and expensive. The best care is therefore based on prevention.

Declaration of Interests:

Authors do not declare any conflicts of interest.

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