

Nursing care of clients with altered cellular regulation such as someone who has cancer. Cancer is a group of different disease processes characterized by uncontrolled and unregulated growth of cells. As a nurse, it is vital to understand the underlying causes, assessment findings, prevention of cancer and health promotion, treatment options, support for clients and caregivers.

Smoking and drinking alcohol can increase the risk of cancer. Gaining weight is also a risk for cancer and other disease processes. Exercising 30 minutes daily, 5 times a week and a high calorie, high fiber diet are some practices that can prevent cancer.

The predisposing factors of cancer are any chemical, radiation and viral exposure. These can trigger mutation. Bacterial pneumonia and systemic lupus erythematosus are not predisposing factors of cancer.

Encouraging the client to tell more about her concerns will build a rapport between the nurse and the client.

Asking "why" is not therapeutic and will inhibit the openness of the client to the nurse. Asking the client if her mother is receiving any treatment will redirect the main concern of the client to her mother instead of addressing the client herself. Suggesting a mammogram and breast self-examination are appropriate after discussing the main concern of the client.

Cancer is a group of different disease processes characterized by uncontrolled and unregulated growth of cells. The two normal genes that can be affected by mutation are protooncogenes and tumor suppressor. Protooncogenes promote cell growth while tumor suppressor suppresses growth. Mutations of protooncogenes' function will promote tumor growth. Oncogenes can change a normal cell to a malignant cell. Oncogenes produce new proteins such as carcinoembryonic antigen (CEA) and alpha fetoprotein (AFP). These proteins can be found in the blood.

The development takes time and has an orderly process which is initiation, promotion and progression. Initiation happens when a client has a genetic predisposition and carcinogens exposure. The carcinogens can be chemical, radiation, or viral. Chemical carcinogens are benzene, arsenic, or formaldehyde. Radiation exposure can also alter cell proliferation and differentiation which can promote mutation. Viral carcinogens involve different viruses such as Epstein Barr virus, human immunodeficiency virus, hepatitis B virus, and human papillomavirus.

Promotion and Progression

Promotion of cancer happens when a client is engaged in activities that can cause cancer, including increased dietary fats, obesity, cigarette smoking, alcohol use, and physical inactivity.

Progression occurs when the tumor growth rate is faster and metastasis can happen.

The Role of Immune System

Immune system protects our body from any foreign body invasion such as cancer cells.

Oncofetal Antigens and Tumor Markers

There are different oncofetal antigens and tumor markers that are used to identify the presence, recurrence, and healing of cancer. These are carcinoembryonic antigen (CEA), alpha-fetoprotein (AFP), cancer antigen (CA)-125 (ovarian cancer), carbohydrate antigen (CA)-19-9 (pancreatic and gallbladder cancer), prostate-specific antigen (PSA; prostate cancer), CA-15.3 and CA-27-29 (breast cancer), KRAs (colon cancer), epidermal growth factor receptor (EGFR) (lung cancer) and human epidermal growth factor receptor (HER)-2 (breast cancer).

Important actions for the prevention and early detection of cancer include:

Cancer Prevention and Early Detection



Exercise 30 minutes a day, 5 times a week.



Be informed of your own familial health history and risk factors.



Avoid tobacco products in any form, and limit alcohol use.



Get consistent sleep daily for at least 6 hours.



Have regular physical examinations and regular health screenings.



Use sunscreen that has an SPF 15 or higher.



Have a regular mammography and pap smear screening test.



Avoid stressors and engage in stress management activities.



Eat a balanced diet that has vegetables, fresh fruits, whole grain and adequate amounts of fiber. Reduce dietary fats and foods that have preservatives.

Diagnostic Studies

The diagnostic studies will help to identify the absence, presence, metastasis and healing of cancer. In addition, it will help to rule out any development of complications.

History and Physical

This will identify any risk factors that will predispose the client to develop cancer.

Serum Laboratory Tests