
in bowel habits including diarrhea or constipation, rectal bleeding or blood in stool, persistent abdominal discomfort such as cramps gas or pain, weakness, fatigue, weight loss. Although there are no specific causes of colon cancer, the risk factors include; older age, male sex, dietary factors which include high intake of fat, sugar, alcohol, red meat, processed meats, obesity, smoking, alcohol and a lack of physical exercise. Another risk factor is inflammatory bowel disease, which includes Crohn's disease and ulcerative colitis. Some of the inherited genetic disorders that can cause colorectal cancer include familial adenomatous polyposis and hereditary non-polyposis colon cancer; however, these represent less than 5% of cases.

Rectal cancer

The rectum is the final straight portion of the large intestine in humans and some other mammals, has internal involuntary sphincter

glandular tissue as well as connective tissue and has weight ranging from 7 to 16 grams averaging 11 grams [11,12]. The prostate is located in the pelvis. It sits below the urinary bladder, with the urethra passing through it and has prostate urethra which joins with the two ejaculatory ducts [11]. The prostate is covered in a surface called the prostatic capsule or prostatic fascia. Prostate cancer is the cancer that develops in prostate, a gland in the male reproductive system. Most prostate cancers are slow growing; however, some grow relatively quickly (NCI, 2014). The cancer cells may spread from the prostate to other areas of the body, particularly the bones and lymph nodes. Risk factors include; radiation exposure at a young age, having an enlarged thyroid and family history about 99% of cases occur in males over the age of 50. Early prostate cancer usually has no clear symptoms. Late symptoms include; frequent urination, nocturia, difficulty starting and maintaining a steady stream of urine, hematuria and dysuria [13].

Ovarian cancer

The ovary is an organ found in the female reproductive system that produces an ovum. Ovary is a Latin word which is ovarium meaning egg nut and located on each side of the female reproductive system. The ovaries also secrete hormones that play a role in the menstrual cycle and fertility. The ovary progresses through many stages beginning in the prenatal period through menopause. It is also an endocrine gland because of the various hormones that it secretes [14]. Ovarian cancer is the cancer that arises in ovary, a female reproductive organ. The risk of ovarian cancer increases in women who have ovulated more over their lifetime including those who have never had children, those who begin ovulation at a younger age and those who reach menopause at an older age [15]. Other risk factors include hormone therapy after menopause, fertility medication, and obesity. The factors that decrease risk include hormonal birth control, tubal ligation, and breast feeding. About 10% of cases are related to inherited genetic risk; women with mutations in the genes BRCA 1 or BRCA 2 have about a 50% chance of developing the disease [15].

Osteosarcoma

A bone is a rigid tissue that constitutes part of the vertebrate skeleton in animals. Bones protect the various organs of the body, produce red and white blood cells, store minerals, provide structure and support for the body, and enable mobility. Bones come in a variety of shapes and sizes and have a complex internal and external structure. They are lightweight yet strong and hard, and serve multiple functions.

Bone tissue (osseous tissue) is a hard tissue, a type of specialized connective tissue. It has a honeycomb-like matrix internally, which helps to give the bone rigidity. Bone tissue is made up of different types of bone cells. Osteoblasts and osteocytes are involved in the formation and mineralization of bone; osteoclasts are involved in the resorption of bone tissue. Modified (attened) osteoblasts become the lining cells that form a protective layer on the bone surface.

The mineralized matrix of bone tissue has an organic component of mainly collagen called ossein and an inorganic component of bone mineral made up of various salts. Bone tissue is a mineralized tissue of two types, cortical bone and cancellous bone. Other types of tissue found in bones include bone marrow, endosteum, periosteal, nerves, blood vessels and cartilage.

In the human body at birth, there are approximately 270 bones present; many of these fuse together during development, leaving a total of 206 separate bones in the adult, not counting numerous

small seamed bones. The largest bone in the body is the femur or thigh-bone, and the smallest is the stapes in the middle ear, (Steele and Bramblett, 1988). Osteo is a Greek meaning bones. This is a type of bone cancer that begins in the cells that form bones. It is most often found in long bones of legs and sometimes the arms. In very rare instances, it occurs in soft tissues outside the bone. Osteosarcoma tends to occur in teenagers and young adults, but it can also occur in younger children and older adults. The signs and symptoms of osteosarcoma include, swelling near a bone, bone or a joint pain and bone injury or bone break for no clear reason. Although there is no clear cause of osteosarcoma, this disease begins when healthy bone cell develops changes in its DNA.

The contributing risk factors include exposure to radiation therapy bone disorders e.g. fibrous dysplasia inherited or genetic conditions including; Werner syndrome, Bloom syndrome, hereditary retinoblastoma [16].

Kenyan situation

In Kenya, cancer ranks third as a cause of death after infectious diseases and cardiovascular diseases. It causes 7% of total national mortality every year. Although population based data does not exist in the country, it is estimated that the annual incidence of cancer is about 28,000 cases and the annual mortality to be over 22,000. Over 60% of those affected are below the age of 70 years. In Kenya, the risk of getting cancer before the age of 75 years is 14% while the risk of dying of cancer is estimated at 12%. In many developing countries the rapid rise in cancers and other non-communicable diseases has resulted from increased exposure to risk factors which include tobacco use, harmful use of alcohol and exposure to environmental carcinogens. Other risk factors for some cancers include infectious diseases such as HIV/IDS (Kaposi's sarcoma and lymphomas), HPV, HBV & HCV (Liver cancer), bacterial infections such as Helicobacter Pylori (cancer of stomach) and parasitic infestations such as schistosomiasis (cancer of bladder). The leading cancers in women are breast, esophagus and cervical cancers. In men, esophagus and prostate cancer and Kaposi sarcoma are the most common cancers. Based on 2002 data from the Nairobi Cancer Registry, of all the cancers registered breast cancer accounted for 23.3%, cervical cancer for 20% and prostate cancer for 9.4%. In 2006, around 2 354 women were diagnosed with cervical cancer and 65% of these died of the disease.

Cancer diagnosis

Cancer diagnosis needs comprises of thorough patient history and physical examination together with diagnostic tests. The tests are required to establish whether a patient has cancer or just other conditions. The effectiveness of the test is to confirm the presence or absence of the disease, to monitor the progress and evaluation of the treatment and to confirm the elimination of the diseases. The diagnostic procedure for cancer includes the following.

Laboratory tests

A laboratory test is a procedure in which a specimen is examined to get information about the health status of the individual. In most cases they provide the specific and the dependable information about the particular health problems. There are a number of laboratory tests used in diagnostic which includes, blood chemistry which measures the amount of substances that are released in the body by specific organs and tissues such as metabolites for examples fats, proteins, enzymes, Creatinine and blood nitrogen urea where high or low levels can be a sign of side effects of treatment or a diseases. Gene mutation

is the inherited s in genes which are known to play a role in cancer development, example of tumor markers are BRCA 1 and BRCA 2 gene mutations plays role in breast, ovarian and other types of cancer. FHG which measures di erent types of blood cells like RBC's, HB, platelets and WBC's which comprises of MCV, MCH, MCHC which is useful in detecting leukemia and monitoring especially during and a er treatment. Gene analysis it measures the changes in the number and structure of the chromosomes in patient's bone marrow and blood

Z= is the standard normal deviation at the required confidence level of 1.96

D=the level of statistical significance set

P=the proportion in the characteristics being measured

Q=1-p

If there is no estimate available of the proportion in the target population assumed to have the same characteristics, the research may use 50% of the given sample as recommended by Fisher et al, 1998 for example, if the proportion of a target population is 50, and the z-statistics is 1.96, and the desired accuracy at 0.05 level statistical significance, then the sample will be determined as

$$n = (1.96)^2 / 4 (0.05)^2$$

$$n = (1.96)^2 / 4 (0.05)^2 = 384.16$$

$$=384$$

Since the sample size in this study was less than 10,000; therefore the formula for infinite population was used.

$$n_f = n / (1 + n/N)$$

Where n_f = the desired sample size, when the population is less than 10000.

n = the desired sample when population is more than 10000

n = the estimated population size of the suspected cancer patients was 636 for average target for a year in the facility

Therefore

$$n_f = 384 / (1 + 384/636)$$

$$=362$$

Therefore, the research sample size was a minimum of 362 respondents.

Sample technique

The sample frame included patient's record diagnosed with cancer in the hospital that made the inclusion criteria. All the 1908 files of suspected cancer patients were distributed proportionally among three

Hepatic or liver cancer was found to be almost equal between the genders affected although male were slightly above. The most affected age group was 61-70 years and the least affected group was 21-30 years old. The high number of the age of 61-70 could be due to alcohol consumption or exposure to toxins and hepatitis B.

Colon cancer was not so much compared to other type of cancer. Men were being slightly high in numbers than female. The most affected age groups were between the ages of 51-60 years old and could be due to lack of physical exercise and eating a lot of fats.

Thyroid cancer was isolated mostly in female than male. The age group that was affected was between 31-40 years old. Rectal cancer was most predominant in female than male most affected group was 71-80 years.

From the sample that was sampled, skin cancer wasn't so much problem majority being the male and most affected group age was 71-80 years. The gastric cancer was not so much sampled from the selected sample study. There were no more than affected age group and the gender; all of them were of equal measure.

Melanoma type of cancer from the sampled sample it was not many, the few that was positive for melanoma cancer, men were more affected than female of the age group of 51-60 years. Uterus cancers were not so much common and the most affected group was 51-60 years old. Finally from the sampled sample, osteosarcoma cancer was isolated although the number was much lower and the most affected age groups were 51-70 years old.

Conclusion

In conclusion, the study found out that esophagus cancer seems to affect more people of both genders especially of the age group 61-70. Files sampled out male were more affected than women. Prostate cancer affects majority the elderly people especially from the age of 70-80 years which were more affected. Lymphoma type of cancer seems to affect more teenagers of less than 20 years from the sample studied than old people. Prostate cancer from the observation has started to affect even the younger people of 14-50 age groups. Breast cancer.

Cancer early testing is the key parameter in curbing Metastasis hence this will save a patient from succumb to the diseases to it this calls for more awareness measures like medical campaign to sensitize the people. More resources need to be allocated to this course to enhance the outreach by the healthcare provider.

Recommendations

More resources need to be allocated towards this course since there is underfunding. According to this study it was discovered that unawareness is still deep seated in majority of people especially in rural set ups. There is sufficient evidence to deduce that more resources are required for purposes of sensitization and testing and cancer screening of people and more specifically follow ups of victims affected by cancer.
