بسم الله الرحمن الرحيم

Sudan University of Sciences& Technology

College of Graduate study

Incidence of Cancers at Radiation and Isotopes Center (RICK) during the period between (2014-2015)

احصاء الاصابة بالسرطانات بمستشفى الذرة في الفترة ما بين (2014-2015)

Study submitted for partial fulfillment of M.Sc. Academic Degree in Diagnostic Radiology Technology

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2016-2017

الآية

بسم الله الرحمن الرحيم

قال تعالى:

﴿قَالُوا سُبْحَانَكَ لَا عِلْمَ لَنَا إِلَّا مَا عَلَّمْتَنَا إِنَّكَ أَنْتَ الْعَلِيمُ الْحَكِيمُ﴾

صدق الله العظيم

سورة البقرة الآية (32)

Dedication

I dedicate the research to my teachers and colleagues. A special feeling of gratitude for:

The spirit of my **father**…the source of my power and proud.

My **mother**…. The light of my way and his words of encouragement and push for tenacity ring in my ears.

My **husband**…who always supported and pushed me.

My sisters and brothers…my support.

Acknowledgment

I should like to express my deep gratitude to my supervisor **Dr. Caroline Edward Ayad** for his valuable guidance, continuous efforts to finish this thesis as nice as possible, suggestions and concerned follow up for the duration of the study.

Abstract

The objectives of the research was to study the incidence of cancers in Radiation and Isotopes Center (RICK) during the period between (2014-2015), to show the most common cancers frequency, to study the incidence of cancers according to age, gender, site of cancer, symptoms, diagnose and treatment, to correlate the findings with age, gender, symptoms, diagnose, treatment.

For laying out this research, the researcher collected the statistic information from statistic department in RICK from the patients (600 males and females), the data was analysed using the computer program.

The result cleared that the female patients' frequencywas 317 patients (52.8%) more than males' frequency was 283patients (47.2%) and their ages between (4-93) years old.The most age group affected by cancer were in age classes were (41-50), (51-60), (61-70). The common cancer frequencieswereBreast cancerwas 78 patients (13%) followed by Lung cancer was 49 patients (8.2%), Ovary cancer 45 patients (7.5%), Mouth cancer 45 patients (7.5%), Liver cancer 41 patients (6.8%), Prostate cancer 35 patients (5.8%), Nasopharynx cancer 31 patients (5.2%), NHL 31 patients (5.2%), Cervix cancer 28 patients (4.7%) and Endometrium27 patients (4.5%)

In addition, the results showed that the most common treatment option for cancer was chemotherapy 283 patient (47.2%). The most common diagnostic tool for cancer was Biopsy 335 patient (55.8%).The most common symptom related to cancers was pain 205 patient (34.2%).

The analysis also showed that, there is significant relationship between site of cancer with gender, age, and diagnostic tool**(**P-value=0.00). As well as there is no significant relationship between site of cancer with treatment option**(**P-value=0.755), and symptoms**(**P-value=0.997).

ملخص الدراسة

الاهداف من هذا البحث هي دراسة الاصابةبالسرطانات المترددة الى مركز العلاج بالإشعاع والنظائر المشعة بولاية الخرطوم خلال الفترة ما بين (2014-2015)،ولتوضيح أكثر انواع السرطانات ترددا في المركز، ولدراسة الاصابة بالسرطانات معتمدين على عدة عوامل هي عمر وجنس المرضي واعراض المرض وطريقة تشخيصه وعلاجه. ومعرفة العلاقة بين الاصابة بالسرطان وكل من هذه العوامل.

لإخراج هذا البحث قام الباحث بجمع المعلومات الاحصائية من قسم الاحصاء بالمركز وذلك بأخذ عينه عشوائية مكونة من 600 مريض تردد الى المركز من الجنسين الزكور والاناث، وتم تحليل المعلومات الاحصائية بواسطة جهاز الكومبيوتر.

اوضحت الدراسة ان معدلالنساء المصابات بالسرطان 317 مريض بنسبة (52.8%) أكثر من معدل الرجال المصابين بالسرطان 283 مريض بنسبة (47.2%)، وكانت اعمارهم تتراوح ما بين (4-93) سنه. وان أكثر فئات العمرية المصابةهي (41-50), (51-60), (61-70).

وان أكثر انواع السرطانات تكرارا في الجنسين هي سرطان الثدي78مريض بنسبة (13%)ثم سرطان الرئة 49 مريض بنسبة (8.2%)، المبايض 45 مريض (7.5%)، الفم 45 مريض (7.5%)، الكبد 41 مريض (6.8%)، البروستاتا 35 مريض (5.8%)، البلعوم الانفي 31 مريض (5.2%)، الغدد الليمفاوية 31 مريض (5.2%)، عنق الرحم 28 مريض (4.7%)، واخيرا بطانة الرحم 27 مريض (4.5%).

بالإضافة الى ذلك فان الدراسة اوضحت ان أكثر خيار للعلاج مستخدم هو العلاج الكيميائي283مريض بنسبة (47.2%). وان أكثر اداة تشخيصيه مستخدمه هي اخذ العينة 335 مريض بنسبة (55.8%). وان أكثر الاعراض تكررا ما بين المرضى هو الشعور بالألم 205 مريض بنسبة (34.2%). ايضا اوضحت الدراسة ان هنالك علاقة ملحوظة ما بين مكان السرطان وجنس وعمر المرضى المصابين بالسرطانوالاداة التشخيصية المستخدمة بقيمة (0.00). كما بينت

الدراسة عدم وجود علاقة ملحوظه بين مكان السرطان والعلاج بقيمة (0.755) والاعراض المرضية بقيمة (0.997).

List of Abbreviations

Meaning	Abbreviations
Radiation and Isotopes Center in Khartoum	RICK
Deoxyribo-Nucliec Acid	DNA
Tumor, Node, Metastases System	TNM
Human PapillomaViruses	HPVs
Human Immunodeficiency Virus	HIV
Acquired Immune Deficiency Syndrome	AIDS
Epstein-Barr Virus	EBV
Human Herpes Virus 8	HHV8
Non-Hodgkin Lymphoma	NHL
Positron Emission Tomography	PET
Familial Adenomatous Polyposis	FAP
Total Body Irradiation	TBI
Bacillus Chalmette Guerin	BCG
Non-Steroidal Anti-Inflammatory Drugs	NSAIDs
Squamous Cell Carcinoma	SCC
Chronic Lymphocytic Leukemia	CLL

Breast Conserving Surgery	BCS
National Center for Biotechnology Information	NCBI
Magnetic Resonance Cholangio-Pancreatography	MRCP
Microscopically Verified	MV
Prostate Specific Antigen	PSA
Beta-Human Chorionic Gonadotropin	BHCG

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