

Sudan University of Science and Technology

College of Graduate Studies

Study of Bone Metastasis and Prostate Specific Antigen Level in Prostate Cancer

دراسة نقائل سرطان البروستاتا في العظام ومستوي المستضد

***A thesis Submitted for Partial Fulfillment of Academic
Requirements for the Degree of Master of Sciences in
Radiotherapy Technology***

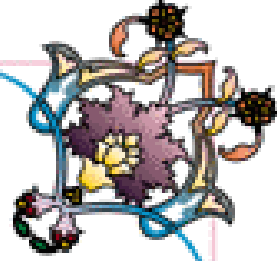
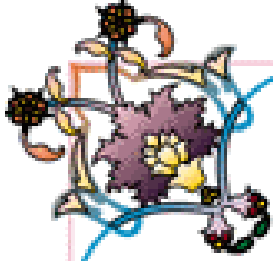
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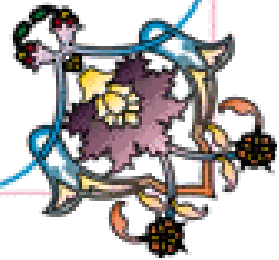
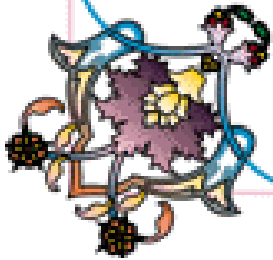
قال تعالى

قل اعملوا و سيري الله عملكم ((

((ورسوله و المومنين

الاية

صدق الله العظيم



Dedications

To my mother

Love

With much

Acknowledgement

My acknowledgments and gratefulness at the beginning and at end to Allah who gave us the gift of the mind. Profound, thanks and gratitude goes to everyone who encouraged me to complete this thesis. My gratitude is extended to my supervisor ***Dr. Mohamed Elfadil Mohamed Gar-elnabi, Ustaz/ Yousif Mohamed Yousif Abdallah*** and all employees in National Cancer Institute (NCI) for their helps; their works have stimulated and fostered my efforts in producing this research.

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Abstract

Prostate cancer is the one of the major medical problems in adult males. According to National cancer Institute (NCI) medical information and research centre annual reports it is the first male cancer in Gazira state. The main objective of this study is to find the correlation between PSA level and bone Metastasis in prostate cancer patients. The sample of this study consisted of 50 cases of prostate cancer patients that were diagnosed and referred to(NCI) for further investigations and treatment. Bone scan and serum PSA levels were done to assess the treatment response and for follow up for prostate cancer in the period between July to December 2011. Serum PSA was determined by Immune Radiometric Assay (IRMA). Results showed a significant difference between PSA level and bone scan according to *t*-test ($p < 0.0001$) for the prostate cancer patients. Also there were significant relation between PAS level before Treatment and after treatment according to a verge, PSA level before treatment ($p = .003$) PSA level after treatment (0 .014) and decrease of PSA after treatment by 0.23 show diaghram1. And also the results show the region of metastasis there was 12% at the skull and lumber spine.

الخلاصة

يعتبر سرطان البروستات من السرطانات التي تسبب مشاكل صحية كثيرة في الرجال الذين تجاوزت اعمارهم 40 سنة او اكثر وحسب التقارير الاحصائية بقسم علاج الاورام بالمعهد القومي للسرطان بجامعة الجزيرة يعتبر سرطان البروستات الاول من السرطانات التي تصيب الرجال في ولاية الجزيرة . الهدف الاساسي- لهذه الدراسة توضيح العلاقة بين- المستضد النوعي للبروستات ونتائج فحص العظام لمرضي- سرطان البروستات .اشتملت الدراسة علي 50 مريض بسرطان البروستات تم تحويلهم لقسم علاج الاورام بالمعهد القومي للسرطان للعلاج والمتابعة بسرطان البروستات تم تحويلهم لقسم علاج الاورام بالمعهد القومي للسرطان للعلاج والمتابعة بعد تشخيصهم بمعمل الجامعة للانسجه المريضه ثم عمل مسح للعظام وقياس المستضد النوعي للبروستات وذلك ففي الفتره ما بين مارس 2010 وحتى نوفمبر 2011

قياس المستضد النوعي للبروستات بواسطة القياس المناعي الاشعاعي .يعتبر مسح العظام

الوسائل المستعملة في تشخيص انتشار سرطان البروستات في العظام. من نتائج هذه الدراسة فقد وجد هنالك علاقة قوية بين المستضد البروستاتي النوعي ونتائج مسح وكذلك وجدت ان هنالك علاقة بين- $p = 0.000$ العظام حيث وجد ان مستوى الثقة (0.000 مستوى المستضد النوعي البروستاتي قبل العلاج وبعده مع انتشار المرض في العظام كما وجد ان مستوى المستضد، $p = 0.014$ حيث وجد ان مستوى الثقة (0.003 البروستاتي ينقص بعد العلاج بمعدل 0.23 . وكذلك وجدت الدراسة ان اكثر المناطق التي يمكن ان ينتشر اليها السرطان هي منطقة الراس والتي تمثل 23% من جملة المناطق التي ينتشر اليها المرض

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