

Sudan University of Science and Technology
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**Screening for breast cancer among women
with breast lumps using cytological methods
and demonstration of DNA**

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Dedication

To my father,

To my mother,

To my brothers,

To my sisters

To my wife and son.

Acknowledgement

My special thanks to my supervisor *Dr. Elgizouli Omer* for his supervision. My thanks to *Dr. Husam El Din Omer*, I am very indebted to (RICK) Laboratory Staff, my thanks extended to all my colleagues in medical science laboratory college, (SUST). My thanks to *Mr. Salah Awad*, *Mr. Mustafa Osman*, *Mr. Salah El Rowa*, and *Mr. Babeker Mohamed* my thanks to *Ustaz Khalid and Afra*. I also like to thanks *Miss Widad A. Magsood* for her typing.

ABSTRACT

This study was conducted in radiation and isotopes center Khartoum (RICK), from February to April 2005.

The study was aimed to screen for breast cancer among women presenting with palpable lumps, to determine the incidence of breast cancer among women attended to (RICK) with breast lumps using fine needle aspiration (FNA) and to detect the ratio of Deoxyribonucleic acid (DNA) among patients.

One hundred specimens were collected from fifty patients from different age. Fifty specimens were stained with May-Grun Wald Giemsa Technique concluded that (8%) were carcinoma, (12%) inflammation and (80%) benign tumors.

The mean of the ages among patients with carcinoma and inflammation is (49) years and (35) years in benign tumors.

After staining with acridine orange, the DNA ratio seemed to be normal in inflammation and benign cases but was increased in carcinoma.

ملخص الأطروحة

أجريت هذه الدراسة العملية في المركز القومي للعلاج بالأشعة والطب النووي- الخرطوم في الفترة من فبراير إلى أبريل 2005م.

هدفت الدراسة لبحث وتحديد سرطان الثدي خلال المرضي (نساء) الذين لديهم أورام محسوسة في الثدي، تحديد نسبة سرطان الثدي خلال المرضي الذين يحضرون للمركز باستخدام طريقة الرشف بالإبر الدقيقة (FNA) وتحديد معدل الحمض النووي DNA للعينات المأخوذة من أورام الثدي.

تم جمع 100 عينة من 50 مريض من مختلف الأعمار . 50 عينة ثم صبغها بواسطة May- Grun wald Giemsa وكان تشخيصها كآلآتي (8%) سرطان الثدي، (12%) التهابات و (80%) أورام حميدة .

لوحظ أن متوسط أعمار المرضي الذين تم تشخيصهم سرطان ثدي (49 سنة)، التهابات (49 سنة) وأورام حميدة (35 سنة). كما أظهرت الدراسة أن معدل الحمض النووي DNA طبيعي في حالي الالتهابات والأورام الحميدة بينما هنالك ازدياد في معدل الحمض في حالات سرطان الثدي وذلك بعد صبغها بصبغة acridine orange .

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