### **Dedication**

This thesis dedicated to all members .of my beloved family

...To

All those who offer the humanity their lives.

# **Acknowledgement**

Special thanks to members of Radiation and Isotopes Center Khartoum (RICK), and the head department and chief technician of the laboratory department in the center for providing all of their laboratory facilities during this study and the Ibn Sina hospital who gave me the patience and power to finish this work.

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My special great fullness with love to my family father, mother, Brothers and sisters

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#### 

أجريت هذه الدراسة خلال الفترة من مايو 2005

وحتى يناير 2006 بغرض معرفة نوع الير قان الناتج من المرضي السودانيين البالغين المصابين بالسرطان وذلك به قياس بعض وظائف الكبد والفيروس الكبدي الوبائي.

يشمل مجتمع الدراسة المرضي المصابين بالسرطان و قد ظهر لديهم ير قان والذين تم حضورهم إلي المركز ال قومي للعلاج بالأشعة والطب النووي بالخرطوم وكذلك بمستشفى بن سيناء و قد تم أخذ 50 عينة لمرضي مصابين بأنواع مختلفة من السرطان وتحتوي علي الأنواع آلاتية سرطان المرئي حوالي 1% ،سرطان المعدة حوالي 1%, سرطان الثدي حوالي 1، سرطان المست قيم 1، سرطان الرحم حوالي 1، سرطان الفذة الليمفاوية من نوع الهودكن حوالي 2%, سرطان البنكرياس الحويصلة الصفراء حوالي 6، سرطان الدم الأبيض حوالي 9، سرطان البنكرياس عوالي 10%, السرطان الذي انتشر إلى الكبد حوالي 14% , وكذلك تم اخذ 50 عينة أشخاص أصحاء عبارة عن عينات قياسية.

وقد تم قياس كل من البروتين الكلي في البلازما بتركيز ذات وسط حساب 14.2 جرام/100مل, الزلالي بتركيز ذات وسط حساب 7.0 جرام/100مل, الزلالي بتركيز ذات وسط حسابي 7.1 جرام/100مل, الير قان الكلي في الدم بتركيز ذات وسط حسابي 9.7 مجرام/100مل, الير قان المباشر بتركيز ذات وسط حسابي 5.7 مجرام/100مل, الير قان المباشر بتركيز ذات وسط حسابي مجرام/100مل, كل من أنزيمات الكبد الالكلاين فوسفاتيز بتركيز ذات وسط حسابي مجرام/100مل, كل من أنزيمات الكبد الالكلاين فوسفاتيز بتركيز ذات وسط حسابي وحدة/اللتر, والترانس امينيز البايروفيد بتركيز ذات وسط حسابي 70.00 وحدة/اللتر, الترانس امينيز الاستيت بتركيز ذات وسط حسابي 50.0 وحدة/اللتر, النوانس امينيز الاستيت بتركيز ذات وسط حسابي ألير والفيروس الكبدي بنوعيه ألبي والسي للمعرفة سبب الير قان الناتج نتيجة للإصابة الأولية للورم أم لانتشاره بالحسم أم لذ قل دم يحتوي علي فيروس أم نتيجة لمضاعفات العلاج بنوعية الكيماوي و الاشعائي.

#### **ABSTRACT**

This is a prospective study conducted during the period May 2005 to January2006 to determine type of jaundice in adult sudanaces patients with cancer by estimating the liver function and serological of hepatitis B&C Virus.

The population studied include patient with different types of cancer, and having jaundice who had attended the Radiation and isotope center Khartoum (RICK) also from Ibn sina hospital.

Samples from 50 patients from different types of cancer including oesophagus comprised 1%, stomach cancer comprised 1%, breast comprised 1%, rectum comprised 1%, cervix comprised 1%, non Hodgkin s lymphoma comprised 2%, lymphoma comprised 1%, gallbladder comprised 6%, leukemia comprised 9%, pancreas comprised 10%, the primary hepatocellular carcinoma comprised 6%, and metastatsis to liver comprised 14%, and, from 50 apparently healthy individuals as control had taken, then the total plasma protein concentration mean 14.2g/dl, albumin concentration mean 7.0g/dl, globulin concentration mean 701g/dl, total bilirubin concentration mean 9.7mg/dl , direct bilirubin concentration mean 5.7mg/dl, indirect bilirubin concentration mean 4.1mg/dl, enzyme ALP concentration mean 325.6u/l, GPT concentration mean100.1u/l , GOT concentration mean 70.2u/l, γ-GT concentration mean 60.3u/l,and surgical hepatitis B&C virus were estimated in order

determine the cause of jaundice is it due to the primary tumor, metastatasis or blood transfusion or due to complication of treatment either chemotherapy or radiotherapy.

#### **Abbreviations**

CUPS Carcinoma of Unknown Primary Site

NCI National Cancer Institute

HBV Hepatitis B Virus

HCV Hepatitis C Virus

HCC Hepatocellular Carcinoma

ALP Alkaline Phosphatase

AST Aspartate Transaminase

GOT Glutamate oxaloacitate Transaminase

ALT Alanine Transaminase

GPT Glutamate pyrovate Transaminase

γ-GT Gamma Glutamate Transferase

GBC Gallbladder cancer

Ca Cancer

RICK Radiation and Isotopes Center Khartoum

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