**Dedication**

I would like to dedicate this work to

Whom I owe my existence, my father and my mother

Whom I owe my joy and pride, my wife and my only one sister

Whom I owe my faithful and grateful appreciation, my friends and my colleagues

Those who ever provided me a candle to enlighten my long way

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May Allah reward you generously…….

# Abstract

This descriptive study was conducted in Gezira state during the period from April 2012 to July 2013.The study aimed to detect hepsin gene in prostate tumors using PCR technique. The study included 100 patients previously diagnosed as prostate tumors, divided into two groups, 50 patients diagnosed as prostate cancer as cases group and 50 patients diagnosed as benign prostate hyperplasia as control group. There were collected 2.5 ml bloods from them for DNA extraction. Their age ranged from 50 – 90 years with mean age 70.2 ± 8.9. Most of patients were in age above 65 years.

The result showed that 47 patients with prostate cancer and 32 patients with benign prostate hyperplasia were above 65 years,3 patients with prostate cancer and 18 patients with benign prostate hyperplasia were less than 65 years, with significant relation between the age group and tumor behavior (P=0.000).

The present study found that the expression of hepsin gene were positive in 10 patients and negative in 40 patients among case group, while in control group all cases were revealed negative expression for hepsin gene, with significant relation between the expression of hepsin gene and tumor behavior (P=0.001).

This study concluded that the expression of hepsin gene is associated with prostate cancer, and most of prostate tumors patients in this study were above 65 years.

# المستخلص

أجريت هذه الدراسة الوصفية في ولاية الجزيرة في الفترة من أبريل 2012 حتى يوليو 2013 . هدفت هذه الدراسة للكشف عن جين الهبسين في أورام البروستاتا بإستخدام تقنية تفاعل البلمرة المتسلسل.

إشتملت هذه الدراسة على 100 مريض تم تشخيصهم مسبقا بأورام البروستاتا. كان منهم 50 مريض تم تشخيصهم بسرطان البروستاتا كعينات دراسية و 50 مريض تم تشخيصهم بفرط تنسج البروستاتا الحميد كعينات قياسية.تم اخذ 2.5 مللي من الدم من كل مريض لاستخلاص الحمض النووي. معدل أعمار هؤلاء المرضى تراوحت بين 50 الى 90 سنة ومتوسط هذه الأعمار 70.2 ± 8.9 . معظم أعمار المرضى وجدت في مدى أعلى من 65 سنة.

وجدت هذه الدراسة أن 47 حالة من سرطان البروستاتا و 32 حالة من فرط تنسج البروستاتا الحميد أعمارهمكانت اكبرمن 65 سنة'كما وجدت أن 3 حالات من سرطان البروستاتا و 18 حالة من فرط تنسج البروستاتا الحميد أعمارهم كانت أقل من 65 سنة ومع وجود علاقة ذات دلالة إحصائية(P=0.000) بين سلوك ورم البروستاتا والفئات العمرية.

وجدت نتائج هذه الدراسة 10عينات موجبة بجين الهبسين من حالات سرطان البروستاتا و 40 عينة سالبة بجين الهبسين من نفس الحالات'وجميع عينات فرط تنسج البروستاتا الحميد ((50 كانت جميها سالبة بجين الهبسين'مع وجود علاقة ذات دلالة إحصائية (P=0.001) بين وجود جين الهبسين وسلوك ورم البروستاتا.

خلصت هذه الدراسة الى أن إفراز جين الهبسين مصاحبا لسرطان البروستاتا، وأن أعمار مرضى
أورام البروستاتا في هذه الدراسة كانت أعلى من 65 سنة.

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