

**PREVALENCE OF HEPATOCELLULAR
CARCINOMA AMONG HEPATIC PATIENTS
IN DAMIETTA GOVERNORATE IN
COMPARISON TO AIN SHAMS
UNIVERSITY HOSPITAL.**

THESIS

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Internal medicine

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List of Abbreviations

AASLD	American Association of Study of liver Disease.
AFB	Aflatoxin B.
AFP	Alpha-fetoprotein
ALT	Alanine aminotransferase.
ASUH	Ain Shams university Hospital.
BCLC	Barcelona Clinic Liver Cancer
CHB	Chronic hepatitis B.
CLD	Chronic liver disease
CLIP	Cancer of liver Italian Program.
CT	Computerized Tomography.
CUPI	Chinese University Prognostic Index.
DCP	Des-gamma carboxy prothrombin.
DEB	Drug-elluting bead.
DM	Diabetes Mellitus
DNA	Deoxyribonucleic acid.
EUS	Endoscopic ultrasound.
FDA	Food and drug administration.
FDG	Fluorodeoxyglucose.

FNA	Fine needle aspiration.
GCP3	Glypican -3.
H.H	Hemochromatosis
HB IG	Hepatitis B immunoglobulin.
HBeAg	Hepatitis B E Antigen
HBsAg	Hepatitis B surface Antigen
HCC	Hepatocellular carcinoma
HCV	Hepatitis C virus.
HGF	Hepatocyte growth factor.
IDU	Injection drug users.
IFN	Interferon.
IGF-1	Insulin like growth factor -1.
JIS	Japanese integrated system.
MOH	Ministry of Health
MRI	Magnetic resonance imaging.
NAFLD	Non alcoholic fatty liver disease
NASH	Non alcoholic steatohepatitis.
NCR	National cancer registry
NUCs	Nucleosides
OR	Odd ratio
Peg IFN	pegylated interferon.

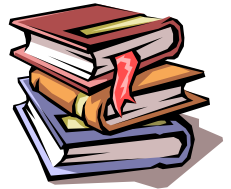
PVT	Portal vein thrombosis.
RE	Radio-embolization
RFA	Radiofrequency ablation.
SGPC	Soluble Glypican -3.
SVR	Sustained virological response.
TACE	Trans-arterial chemoembolization
TAE	Trans-arterial embolization.
TNM	Tumor Lymph Nodes Metastasis.
UNOS	United network of Organ sharing.

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Introduction and Aim of the Work

INTRODUCTION

Hepatocellular carcinoma (HCC) is one of the most common malignancies associated with poor prognosis (**Elzayadi et al., 2005**). HCC is the third leading cause of cancer mortality worldwide (**Sean et al., 2009**) and the ninth leading cause of cancer deaths in the United States (**Altekruse et al., 2009**). Its incidence is increasing worldwide ranging between 3% and 9% annually (**Elzayadi et al., 2005**). The estimated incidence of new cases is about 500,000 -1,000, 000 per year, causing 600, 000 deaths globally per year (**Gomaa et al., 2008**). HCC is more prevalent in men than in women which may be at least in part explained by differences in exposure to risk factors (**Elzayadi et al., 2005**).

The major clinical risk factor for the development of HCC is liver cirrhosis since 70-90% of HCCs develop into a cirrhotic liver (**Brechot, 2004**). Coexistence of etiologies, such as hepatitis B virus (HBV) and HCV infection, HBV infection and aflatoxin B1, HBV/HCV infection and alcohol or diabetes mellitus, or HCV infection and liver steatosis increases the relative risk of HCC development (**Hassan et al., 2002**). There is evidence that HBV and possibly HCV under certain circumstances play an additional direct role in the molecular pathogenesis of HCC (**Block et al., 2003**).

In Egypt, HCC was reported to account for about 4.7% of chronic liver disease (CLD) patients (**Elzayadi et al., 2005**). HCC is the second most frequent cause of cancer incidence and mortality among Egyptian men. Hospital based studies from Egypt have

reported an increase in the relative frequency of all liver-related cancers in Egypt from 4 % in 1993 to 7.3% in 2003 (**Elizabeth et al., 2009**).

AIM OF THE WORK

The aim of the work is to estimate the prevalence of HCC among hepatic patients in Damietta Governorate in comparison to Ain Shams university hospital (ASUH).



Review of Literature

Epidemiology

Liver cancer is the fifth most frequently diagnosed cancer worldwide, and is the second leading cause of cancer-related death (**Jemal et al., 2011**). Almost 80 percent of cases are due to underlying chronic hepatitis B and C virus infection (**Perzetal, 2006**).

Geographic variation:

The incidence of HCC varies widely according to geographic location (**Jemal et al., 2011**).

1)-**High-incidence regions** (more than 15 cases per 100,000 populations per year) include sub-Saharan Africa, the People's Republic of China, Hong Kong, and Taiwan. The age-standardized incidence in China is 52.1 per 100,000 persons per year, Melanesia 25 per 100,000, middle Africa 41.2 per 100,000, eastern Africa 29.7 per 100,000, and western Africa 20.9 per 100,000 (**Parkin et al., 2005**).

2)-**Intermediate-incidence areas** (more than five per 100,000 persons per year) occur in western Asia, Central America, the Caribbean, eastern, and southern Europe, Romania, Peru, Czechoslovakia, Poland, and Russia (**Bosch et al., 2004**).

3)-**low-incidence areas** (with fewer than three cases reported per 100,000 populations per year) occur in North and South America, most of Europe, Australia and parts of the Middle East. However, the incidence in the United States has increased during the past two