# Update Management of Malignant Pancreatic Neoplasm

Essay

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Master Degree In General Surgery

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# الطرق الحديثة لعلاج أورام البنكرياس الخبيثة

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توطئة للحصول على درجة الماجستير

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**جامعة عين شمس**

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# SUMMARY

Pancreatic cancer is one of the most aggressive human cancer. It mainly affects men above the age of fifty, with five-year survival rate not more than 5%. Resection is the only chance for cure. However, only 10-20% of the patients with pancreatic cancer have respectable cancer on presentation.

Over 90% of pancreatic cancer is due to ductal adencarcinoma of the exocrine pancreas, which has many pathological characteristics that differentiate it from other cancers.

Its affects mainly the head of the pancreas (75% of the cases). Its aggressive behavior causes wide spread disease and dissemination at the of initial presentation, which raises the question about a precursor pathologic lesion to be identified.

The deep location of the pancreas in the abdomen increased the difficulty of both diagnosis and treatment of its disorders, especially malignancy. High index of suspicion is required to evaluate the patient with vague history and normal physical examination.

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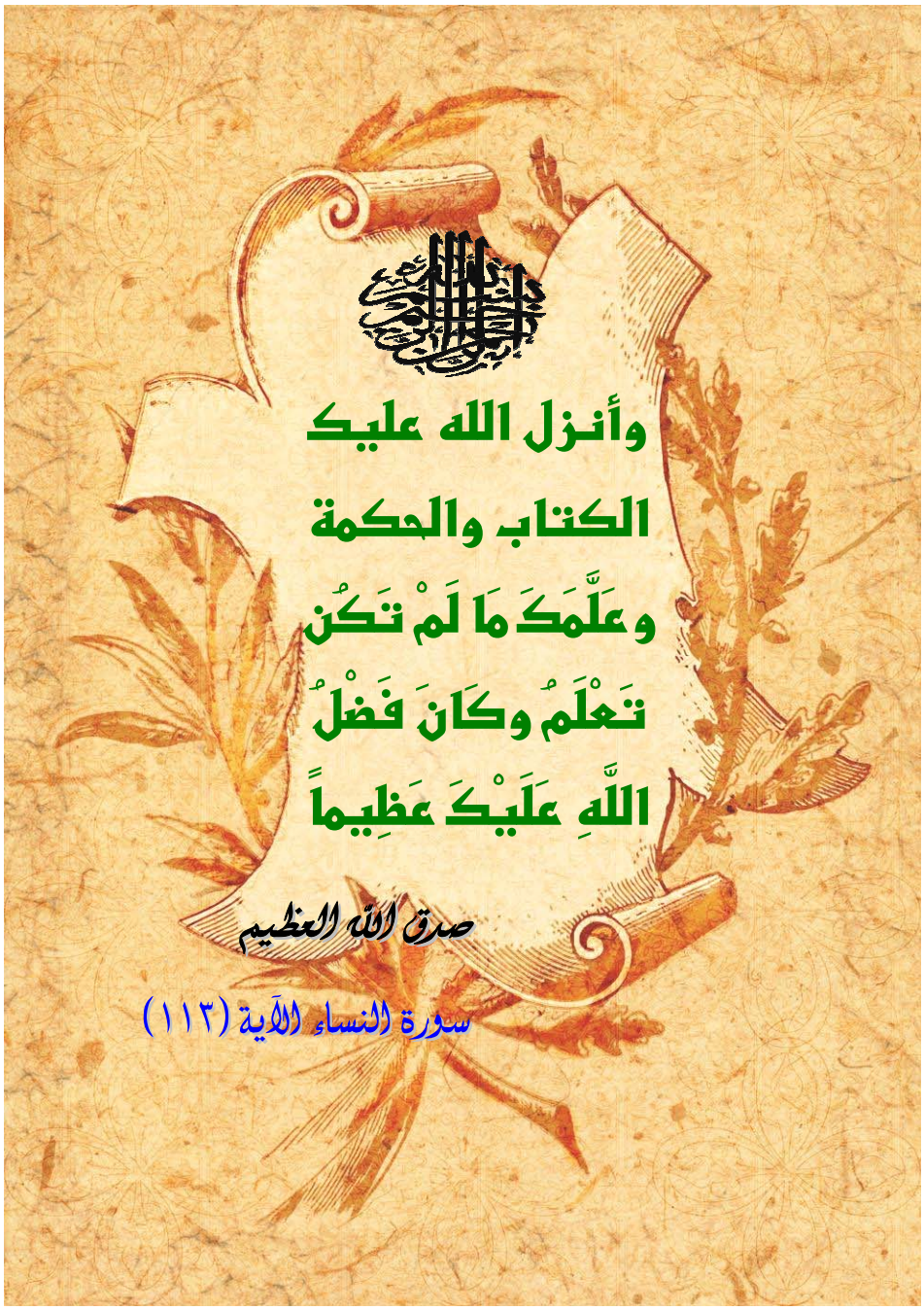
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**Hamada Ahmed Ali Mousa**

# INTRODUCTION

Pancreatic cancer is the eighth most common malignancy and the fifth leading cause of the adult cancer death in the United States. Only 1-4% of all patients diagnosed with pancreatic cancer can expect to survive 5 years. In the year 2000: 28,300 new cases of adenocarcinoma of the pancreas were diagnosed in the United States, and 28,200 patients died of this aggressive malignancy ***(Grau et al., 2004)***.

In the year 2006 about 33,000 individuals in the United States were diagnosed with this condition, and more than 60,000 in Europe. Depending on the extent of the tumor at the time of diagnosis, the prognosis is generally regarded as poor, with few victims still alive five years after diagnosis, and complete remission still extremely rare ***(American Cancer Society, 2008)*.**

Risk factors for pancreatic cancer include age, male gender, African ethnicity and smoking. Cigarette smoking causes a 75% risk increase, and the risk persists for at least a decade after quitting. Diets high in red meat, obesity, diabetes mellitus and chronic pancreatitis have been linked, but are not known to be causal. Helicobacter pylori infection, occupational exposure to certain pesticides, dyes, and chemicals

related to gasoline are among the risk factors. 5-10% of pancreatic cancer patients have a family history of pancreatic cancer ***(Iodice et al., 2008)***.

Early diagnosis of pancreatic cancer is difficult because the symptoms are so non-specific and varied, pancreatic cancer is sometimes called a "silent disease". Common symptoms include pain in the upper abdomen, loss of appetite, nausea, vomiting significant weight loss and painless jaundice related to bile duct obstruction (carcinoma of the head of pancreas), diabetes mellitus ***(Bakkevold et al., 1992).***

Pancreatic cancer is usually discovered during the course of the evaluation of one of the forementioned symptoms. Liver function tests may show a combination of results indicative of bile duct obstruction (raised conjugated bilirubin, y-glutamyl transpeptidase and alkaline phosphatase levels). CA19-9 (carbohydrate antigen 19.9) is a tumor marker that is frequently elevated in pancreatic cancer imaging studies, such as ultrasound or abdominal CT scan may be used to identify tumors. Endoscopic ultrasound (EUS) is another procedure that can help to visualize the tumor and obtain tissue biopsy to establish the diagnosis, ERCP (endoscopic retrograde cholangiopancreatography), PTC (percutaneous

transhepatic cholangiography) and MRI (magnetic resonance imaging) are used for diagnosis and "staging of pancreatic cancer ***(Ghaneh et al., 2007)***.

People with pancreatic cancer may have several treatment options. Depending on the type and stage, pancreatic cancer may be treated with surgery, radiation therapy or chemotherapy. Some patients have a combination of therapies. The surgeon may remove all or part of the pancreas. The extent of surgery depends on the location and size of the tumor, the stage of the disease and the patient's general health ***(Evans et al., 2001)***.

The mortality rates for the pancreatic resection have fallen substantially over the last two decades. This is related to the better quality of peri-operative care, improvement in the skill and experience of the surgeons and the concentration of these patients in specialist centers ***(Evans et al., 2001)***.

# AIM OF THE WORK

To review the subject of pancreatic malignant neoplasm from epidemiological; etiological and pathological aspects with special attention to stress the update management of the disease.

# Anatomy

## Introduction

The pancreas is an elongated organ, light tan or pinkish in color that lies in close proximity to the duodenum. It is covered with a very thin connective tissue capsule which extends inward as septa, partitioning the gland into lobules ***(American Society Center, 2008)***.

Duramen has summarized the anatomical relationship of the pancreas as follow: "the pancreas cuddles the left kidney, tickles the spleen, hugs the duodenum, cradles the aorta, opposes the inferior vena cava, dallies with the right renal pedicle, hides behind the posterior parietal peritoneum of the lesser sac and wraps itself around the superior mesenteric vessels ***(Cuschieri, 2002)***.