



شبكة المعلومات الجامعية
التوثيق الإلكتروني والميكرو فيلم

بسم الله الرحمن الرحيم



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شبكة المعلومات الجامعية التوثيق الإلكتروني والميكروفيلم



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جامعة عين شمس

التوثيق الإلكتروني والميكروفيلم

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FDG-PET/CT as a predictive tool for the evaluation of the aggressiveness of rectal cancer

Thesis

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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

قَالَ

سَبَّحَانَكَ لَا إِلَهَ إِلَّا مَا عَلَّمْتَنَا إِنَّكَ أَنْتَ
الْعَلِيمُ الْعَظِيمُ

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List of Abbreviations

Abb.	Full term
18F FDG-PET/CT.[18F]	fluorodeoxyglucose positron emission tomography/computed tomography
AJCC	American Joint Committee on Cancer
BAT.....	Brown adipose tissue
BMI.....	Body mass index
CEA	Carcinoembryonic antigen level
CRCs.....	Colorectal cancers
CRM.....	Circumferential resection margin
CTV.....	Clinical target volume
EANM.....	European association of nuclear medicine
EMV.....	Extramural venous invasion
FAP.....	Familial adenomatous polyposis
GISTs.....	Gastrointestinal stromal tumors
GTV	Gross tumour volume
IARC	International Agency for Research on Cancer
IMV.....	Inferior mesenteric vein
MAC.....	Mucinous adenocarcinomas
MIP	Maximum-intensity-projection
MRF	Mesorectal fascia
MTV.....	Mean tumor volume
NACT-RT	Neoadjuvant chemotherapy and/radiotherapy
NCI	The national cancer institute
NHL.....	Non-Hodgkin's lymphoma
NMAC.....	Non-mucinous adenocarcinoma
OARs.....	Organs at risks
OS	Overall survival
RI	Retention index
ROI	Region of interest
SRCC	Signet ring cell carcinoma
SUV	Standardized uptake value
TLG.....	Total lesion glycolysis
TME.....	Total mesorectal excision
TRG	Tumor regression grade
UICC.....	Union International Center Cancer

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INTRODUCTION

Colorectal cancer (CRC) is the third commonest cancer worldwide with nearly 1.4 million new cases diagnosed annually (*Chiu et al., 2018*).

Colonoscopy is considered the most effective tool for the diagnosis of CRC because it can be used to localize and biopsy lesions throughout the large intestine, detect synchronous neoplasms, and remove polyps simultaneously. The most widely accepted staging system of CRC remains the TNM staging system proposed by the American Joint Committee on Cancer, which was updated in 2010 (*Agarwal et al., 2014*).

Determination of tumour type is critical because different tumour types vary regarding the radio-sensitivity, local behavior, and propensity for regional and systemic metastasis. The histological grade of tumours is an important indicator of the potential for local invasion or systemic metastases. Tumour staging as determined by clinical evaluation, imaging studies and histological evaluation are necessary to establish the extent of the tumour, both locally and systemically (*Nabi et al., 2010*).

Microscopically 98% of all CRC are adenocarcinoma. The major subtypes are non-mucinous adenocarcinomas, mucinous or colloid adenocarcinoma and signet ring cell carcinoma. Adenocarcinomas of colon and rectum are graded predominantly on the basis of the extent of glandular