



## Original Article

Colorectal cancer epidemiology and clinical study  
in Misan

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## ABSTRACT

**Introduction:** Colorectal carcinoma is commonest cancer of gastrointestinal tract. It is represent third cancer in man worldwide beyond lung and prostate cancers. It is fourth cancer in woman beyond breast, lung and uterus cancers. Deaths from colorectal cancer are more in compare with other GIT cancers.

**Objective:** The aim is prove epidemiological and clinical data of colorectal cancer.

**Method:** Our study conducted in Misan Province, Iraq. The data collected from 2013 to 2016. Seventy one patients that found have colorectal cancer. Gender, age, residency, site of cancer, family history, past history, year of onset, smoking history, alcohol intake, presentation, staging and histopathology pattern are get.

**Results:** Prevalence of colon and rectum carcinoma is 3.75%. The most age group affected was 51–60 years as 30.99%. The gender and residency of patients have no effect on cancer percent. Obesity, Family history, cigarette smoking and alcohol consumption risk factors. In 42.25% of patients had family history of cancer.

**Conclusion:** Most common site of colorectal carcinoma left colon, which present in 61.97%. There is increase in new cases detection of colorectal carcinoma from 2013 to 2016. Advanced stages cancer were most common stages description as IIIA, IIIB, IIIC and IV in 12.67%, 16.90%, 19.72% and 15.49%. The common histopathological pattern is differentiated adenocarcinoma as 53.52%.

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## Epidemiologia do câncer colorretal e estudo clínico em Misan

### R E S U M O

#### Palavras-chave:

Carcinoma colorretal

Misan

Epidemiologia

**Introdução:** O carcinoma colorretal é o câncer mais comum do trato gastrointestinal. É o terceiro tipo de câncer mais observado no sexo masculino mundialmente, atrás dos cânceres de pulmão e próstata. É o quarto câncer mais observado no sexo feminino, atrás dos cânceres de mama, pulmão e útero. As mortes por câncer colorretal são mais comuns comparadas a outros cânceres do TGI.

**Objetivo:** O objetivo do estudo é comprovar dados epidemiológicos e clínicos do câncer colorretal.

**Métodos:** Nosso estudo foi conduzido na província de Misan, no Iraque. Os dados foram coletados de 2013 a 2016. Setenta e um pacientes apresentaram câncer colorretal. Sexo, idade, local de residência, local do câncer, história familiar, história pregressa, ano de início, história de tabagismo, etilismo, apresentação, estadiamento e padrão histopatológico foram obtidos.

**Resultados:** A prevalência de carcinoma de cólon e reto é de 3,75%. A faixa etária mais afetada foi de 51 a 60 anos, com 30,99%. O gênero e o local de residência dos pacientes não afetam a porcentagem de ocorrência do câncer. Obesidade, antecedentes familiares, tabagismo e consumo de álcool são fatores de risco. 42,25% dos pacientes tinha história familiar de câncer.

**Conclusão:** O local mais comum de carcinoma colorretal é o cólon esquerdo, com 61,97%. Houve aumento na detecção de novos casos de carcinoma colorretal de 2013 a 2016. Os estágios avançados de câncer mais comuns foram IIIA, IIIB, IIIC e IV em 12,67%, 16,90%, 19,72% e 15,49% dos casos. O padrão histopatológico comum é o adenocarcinoma diferenciado, em 53,52% dos casos.

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## Introduction

Colorectal cancer is most events in the down part of the descending colon, the sigmoid colon, or/and rectum.<sup>1</sup> Most cases occur in people aged over five decades.<sup>2</sup> Colorectal cancer usually grows, take a period of 10 to 20 years.<sup>3</sup> Bowel cancer inserted from a small fleshy polyp on the colon or rectum. The most kind of polyp is an adenomatous polyp when reach age above fifty.<sup>3</sup> About one in four people have at least one bowel polyp.<sup>3</sup> About two thirds of all colon and rectal tumors found in the colon and the rest in the rectum.<sup>4</sup> Most neoplasms are adenocarcinomas. Colorectal cancer is invasive but metastatic spread may happened before local growth.<sup>3</sup> The most site of colon and rectum carcinoma for metastasis is the liver.<sup>2</sup> It is second most common cancer in female and third in male, and it being fourth most common cause of cancer death beyond lung, stomach, and liver cancers.<sup>5</sup> It is more common in developed than developing countries. Occurrence related to age, with almost 75% of cases occurring in people aged 65 or over. In US and European countries, about 2–8% of cases occur in below forty, whereas in Egypt, Saudi Arabia, Philippines, and Iran recorded rates of 38%, 21%, 17%, and 15–35%, for the same age group.<sup>2,4,5</sup>

## Methods

### Area of study

Misan province, Iraq.

### Duration of study

The information collected from February 2013 to November 2016.

### Populations

71 from 1894 patients that found have colorectal cancer that attended.

### Design of study

Epidemiological, and clinical study involved gender, age, residency, site of cancer, family history, past history, year of onset, smoking history, staging and histopathology types are observed.

### Statistical analysis

The significances via different tests to compares between the epidemiological results.

## Results

### Significant result

The prevalence, family history, cancer site, year of management and staging were significant ( $p < 0.05$  and  $p < 0.01$ ).

There were significant differences among age groups and histopathological patterns ( $p < 0.001$ ) (Table 1).

### Un-significant results

They recorded no significant differences among gender, residency, tobacco habits, alcohol consumption and presentation ( $p > 0.05$  and  $p > 0.01$ ) (Table 1).

## Discussion

Because of low socioeconomic status, insufficient screening methods, doubtful early detection, low educational level, errors in diagnosis and unavailability of diagnostic tools, the prevalence was 3.75% which less than expected in comparison with reports from other countries in the world according to WHO, NIC, NICE and CRUK.<sup>1,2,4-7</sup> The percent of cancer were higher in developed countries as US, UK, Australia, Germany, France, Italy, Spain, Canada, Japan and Turkey, due to increasing of risky factors as sedentary lifestyle, alcohol consumption, cigarette smoking, obesity and meaty food.<sup>6-9</sup> In developing and poor cities the ratios different.<sup>7</sup> The studies showed high prevalence in Jordan, Iran, Egypt and Saudi Arabia but it low in African countries.<sup>8</sup> The most age groups affected in this study were 40–60 years, as 41–50 and 51–60, in 23.94% and 30.99% respectively. This recorded in the most studies conducted worldwide.<sup>1-3,7</sup>

About gender and residency, there were no significant relationship and that belong to the nature of cancer, which not related to sex or living areas. Cigarette smoking and alcohol consumption play risk role, but there were no significant presented or obtained. While in many studies in other countries showed a strong relation between cancer and tobacco habit and alcohol intake.<sup>6,7</sup> In America, Europa and Asia, the family history of colorectal cancer, and family history of other cancer, if positive, the incidence will increase,<sup>3,6,7</sup> which is 42.25% in this study. The most common site of carcinoma was left colon, which presented in 61.97% and this due to anatomic circumferential. According to Giovannucci and Wu, the most common site is the sigmoid 25% followed by the rectum 21%, cecum 20%, rectosigmoid junction 20%, transverse colon 15%, ascending colon 10%.<sup>5</sup> This explain by many reasons as inaccuracy of investigation methods or neglected accurate results of colonoscopy. Because off increase awareness among national people with increased of buildup of oncology centers in our countries, we obtained slight increase in new cases detection of colorectal carcinoma from 2013 to 2016. The viable symptoms and sings found in different proportions of no significant. On staging, the most common stages were advance as IIIA, IIIB, IIIC and IV in 12.67%, 16.90%, 19.72%, 15.49% respectively. These results were like other studies conducted in Asia, Europa and South America.<sup>5,7-9</sup> Those due to late diagnosis, un-availability of screening tools and decreased awareness. Another studies in developed countries as US, UK, Australia, Canada, New Zealand, Japan, South Korea and China, determination of excite cancer in early stages due to increase screening facilities, increase awareness about it and available of methods of early detection.<sup>6-9</sup> The most common histopathological pattern was adenocarcinoma (well, poor,

**Table 1 – All criteria of colorectal cancer.**

Variables	n
Other cancer	1823 (96.2)
Colorectal cancer	71 (3.8)
Age group (years) – n (%)	
10–20	1 (1.4)
21–30	4 (5.6)
31–40	7 (9.9)
41–50	17 (23.9)
51–60	22 (30.9)
61–70	9 (12.7)
71–80	9 (12.7)
81–90	2 (2.8)
>91	0 (0)
Gender – n (%)	
Male	31 (43.7)
Female	40 (56.3)
Residency – n (%)	
Rural	36 (50.7)
Urban	35 (49.3)
Tobacco habit – n (%)	
Smoking	14 (19.7)
Non smoking	57 (80.3)
Alcohol intake – n (%)	
Positive	2 (2.8)
Negative	69 (97.2)
Family history – n (%)	
Positive	30 (42.3)
Negative	24 (33.8)
Unknown	17 (23.9)
Site – n (%)	
Right	24 (33.8)
Left	44 (61.9)
Sigmoid	3 (4.3)
Year of diagnosis – n (%)	
2013	12 (16.9)
2014	16 (22.5)
2015	19 (26.8)
2016	24 (33.8)
Presentation – n (%)	
Abdominal pain	19 (26.8)
Constipating	11 (15.5)
Repeated vomiting	7 (9.9)
Bloody diarrhea	3 (4.2)
Refractory anemia	2 (2.8)
Bleeding per rectum	12 (16.9)
Abdominal distention	3 (4.2)
Systemic	14 (19.7)
Staging – n (%)	
0	2 (2.8)
I	8 (11.3)
II A	8 (11.3)
II B	7 (9.9)
III A	9 (12.7)
III B	12 (16.9)
III C	14 (19.7)
IV	11 (15.5)
Histopathological type – n (%)	
Undifferentiated adenocarcinoma	5 (7.1)
Moderately differentiated adenocarcinoma	38 (53.5)
Poorly differentiated adenocarcinoma	8 (11.3)
Well differentiated adenocarcinoma	6 (8.5)

– Table 1 (Continued)

Variables	n
Poorly differentiated mucinous adenocarcinoma	6 (8.5)
Moderately differentiated mucinous adenocarcinoma	4 (5.6)
Polyp with early neoplastic change	2 (2.8)
Squamous cell carcinoma	1 (1.4)
Stromal tumor moderately differentiated	1 (1.4)

moderate and undifferentiated). The common one was moderately differentiated adenocarcinoma as 53.52%, which similar in all studies conducted about colorectal cancer overall the world.<sup>5,6,8,9</sup>

## Conclusions

Colorectal carcinoma is most common Gastrointestinal Tract (GIT) cancer in Misan population. Middle aged groups are common age for colorectal cancer. Sex and address of patients have no role in epidemic of cancer. Cigarette smoking and alcohol consumption are risky factors. Family history of cancer is duplicating the occurrence of colorectal cancer. Detection ways for diagnosing the new cases of colorectal cancer is increase by time. Different presentation of colorectal carcinoma. Late in diagnosis and management of colorectal cancer causing detection of cancer in advanced stages rather than detection in early stage. Advanced stages of colorectal cancer are poor prognosis. Early diagnosis of colorectal carcinoma result in better management, prognosis and survival. Adenocarcinoma is the commonest histo-pathological types.

## Conflicts of interest

The authors declare no conflicts of interest.

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