

## The Responsibility of Incorrect Nutrition in the Expansion of Bowel Tumors: A Nutritional Survey Study (Original Research Article)

\*Amal R. Agila

**Abstract:** This effort regards as a part of diet-related tumor research. The present work offers a clue of the severity of bowel tumor incidence in Tripoli and Misurata, Libya over the past eleven years to spot the effect of incorrect dietary routines and living ways in expanding bowel tumors. 265 males and 203 females aged (25-85) years were diagnosed with bowel malignancy. Moreover, a nutritional survey study was performed on 100 Libyan patients (51 men and 49 women) from 1 January to 30 June, 2015. Participants were asked to report their dietary customs and living routine one year prior to getting hurt bowel tumors. The data proves that the incidence of bowel tumor is increasing over time from January 2004 to December 2014. Men are almost 13.2 % more likely than women to develop bowel tumor. There was a statistically significant association between males and females for getting bowel tumors ( $P=0.039$ ). The disease mostly happens in men >50 years old and in women >30 years old. A nutritional survey study finds that 24% of cases had a family history to develop cancer. Women had a family history to develop tumors than men. Results provide that more than half of patients are likely to drink 1 liter of water per day. Also, men tend to drink more water and consume red meat than women. All patients did not do exercise and had irregular sleeping time and all men were frequent smokers.

**Key Words:** Diet-Related Tumor, Bowel Tumor, Incorrect Dietary Routine, Living Way, Misurata, Tripoli.

### Introduction:

As a minimum, 10 million tumor deaths are internationally documented in 2020 (Anna *at el*, 2022) and tumor new cases may be supposed to rise to 19.3 million yearly in next future (Agata *at el*, 2022; WHO 2020). World Health Organization (WHO) reported that two third of all deaths universal are due to many risk-factors. One of these risks is food-related factors such as bowel, colon, stomach, liver, stomach, mouth and pharynx tumors (Clare and Willey, 2022, WHO 2020). Other factors are lifestyle-related including dietetic customs, smoking, ratio of animal to plant foods consumed, the quality of food, cooking method, sleeping time, drinking water and sports (Anna *at el*, 2022; Amal *at el*, 2015). Nutrition is in charge of just about 30% of all tumor threats in devolved countries and 20% in developing countries. On the other hand, an earlier study recognized that fruits, vegetables and plant constituents such as fibers and antioxidants keep a strong body and reduce tumor dangers (Clare and Willey, 2022; Pankaj, 2021). Well nourishment is a process in which correct foods are consumed for the growth and replacement of tissues. It can support patients diagnosed with bowel tumors to obtain the diet they require to sustain their power and fight infection (Agata *at el*, 2022; Anna *at el*, 2022; Varmus, 2013).

\* Department of Biochemistry, Faculty of Medicine, Derna University, Derna, Libya

**Corresponding Author\*:** Dr. Amal Rajab Agila, Associate Professor in Food Science, Department of Biochemistry, Faculty of Medicine, Derna University, Derna, Libya. E.mail: [amal\\_agela@yahoo.com](mailto:amal_agela@yahoo.com), [a.khalil@uod.osu.ly](mailto:a.khalil@uod.osu.ly)

No livelihood and eating system truly are able to protect from getting food-related tumors, but several foodstuffs aid promoting health, maintaining the immune system and keeping the danger of tumors as little as possible (Dyer, 2014). True nourishment is a course in which the correct food is consumed for expansion and replaces tissues (Agata *at el*, 2022, Varmus, 2013). Accordingly, having a quantity of fruits, vegetables, fibers and antioxidants may remain a healthy body and diminish malignancy danger (Clare and Willey, 2022). These food constitutes assist patients diagnosed with bowel tumors acquire the true diet to fight the disease (Agata *at el*, 2022; Pankaj, 2021; Varmus, 2013). Also, fruits and vegetables contain great quantity of vitamins, minerals and antioxidants, which supply a healthy weight and may reduce the danger of bowel tumor (Clare and Willey, 2022; Better Health Chanel, 2021), particularly at the start of the disease. Generally, the healing options include surgery, radiation and chemotherapy. This disease regards as a significant sickness in Libya (El Mistiri *at el*, 2013) and may stand for the one of the main causes of fatality (WHO 2020). World Health Organization (WHO) reported that unwell nutrition may be in charge of several malignancies linked to intestine and digestive system disorders such as colon, stomach, liver, mouth and pharynx tumors. Also, they noticed an affiliation between tumor dangers and other factors such as terrible diet customs, smoking, and proportion of animal to plant food consumed, nutrition quality, cooking techniques and living way (Anna *at el*, 2022; Clare and Willey, 2022; Timothy *at el*, 2020; Tantamango-Bartley *at el*, 2013). Patients diagnosed with digestive system malignancy at prior stages had a well again probability to survive from the tumor (Anna *at el*, 2022, Pankaj, 2021 ). But, the poor dealing with medical and nutritional care in North Africa develops the death speeds (Ermiah *at el*, 2012). This work is to offer a general idea about bowel malignancy size in Tripoli and Misurata, Libya from January 2004 to December 2014, and to spot the role of wrong dietary customs in developing bowel malignancy.

### **Methodology:**

#### ***Nutritional Survey Study:***

A nutritional-based survey interview was carried out on 100 Libyan patients aged from 25 to 85 years (51 males and 49 females) at National cancer Institute in Misurata and Central Tripoli Hospital from 1 January to 30 June, 2015. Data was collected on a form (questionnaire) during the interview with each patient. A questionnaire form was used to obtain information about living way and dietary program for each patient. The time of interview was 15 minutes. Each patient was individually interviewed. All patients diagnosed with bowel malignancy were informed about the research aim.

No patient refused our plan for this study. Participants' confidentiality and secrecy were insured by using codes instead of names for any personal identifier of the participants. Participants were asked to report their dietary customs and living routine one year prior to getting hurt bowel tumors. The inquiries were just focused on family history, living ways such as consuming red meat, fast foods (restaurant foods, fried potato and junk foods), and drinking water and consuming fruits and vegetables; and exercise, walking , sports , activities , sleeping time, number of meals, and smoking status.

#### ***Statistical Analysis:***

Bowel tumor statistics were recorded from Misurata National Cancer Institute Registry and collected from Tripoli and Misurata, Libya. Approximately, 265 men and 203 women were diagnosed with bowel malignancy throughout January 2004 to December 2014. Descriptive statistics was analyzed using IBM SPSS Statistics Software (version 20.0, SPSS, Inc., Chicago, Illinois, USA).

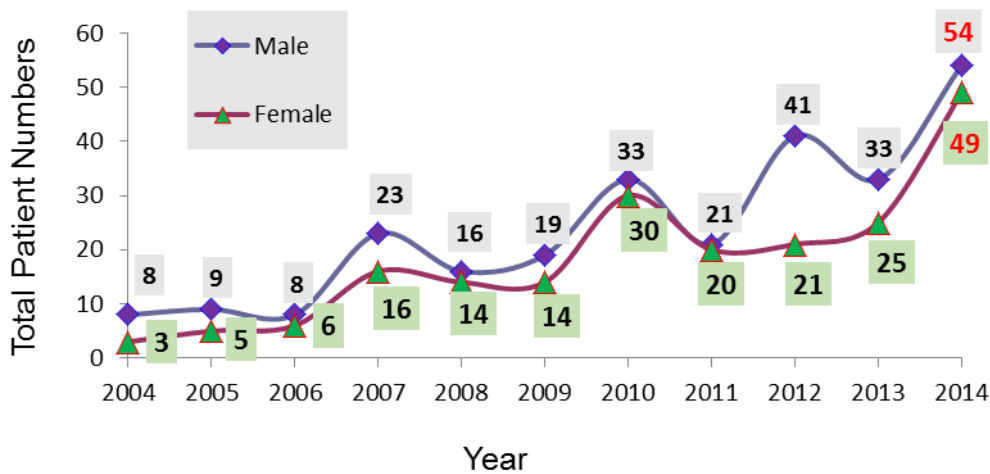
The Pearson Chi-square test was used to evaluate the significance of the association between men and women being diagnosed with bowel tumor. In all tests,  $\alpha < 0.05$  was regarded statistically significant. All confidence intervals (CIs) were calculated at the 95% level of statistical significance. Statistical analyses, percentage formulas of bowel tumor patients and graphs were produced by 2020 Microsoft Excel program.

**Results and Discussion:**

***Bowel Tumor and Patient Gender:***

The present study gives details about distribution of 265 males and 203 females diagnosed with bowel tumors in Tripoli and Misurata, Libya over past eleven years. The approximate percentage of men and women diagnosed with bowel malignancy was 56.6% and 43.4%, respectively. The outcomes show that men are about 13.2 % more likely than women to develop bowel tumors through the period from January 2004 to December 2014. A prior study showed that bowel tumors affect males more than women (Anna *at el*, 2022)

Our finding specified that there was a statistically significant association between males and females for getting bowel tumors ( $P= 0.039$ ). This implied that bowel tumors can affect both gender, but men are more probable to develop malignancy than women. This may designate dissimilarity in some cultural status including smoking, drinking manners and job exposures (Anna *at el*, 2022; Timothy *at el*, 2020). The total percentage of patients with bowel tumor in Tripoli and Misurata, Libya from January 2004 to December 2014 is shown in Fig.1.



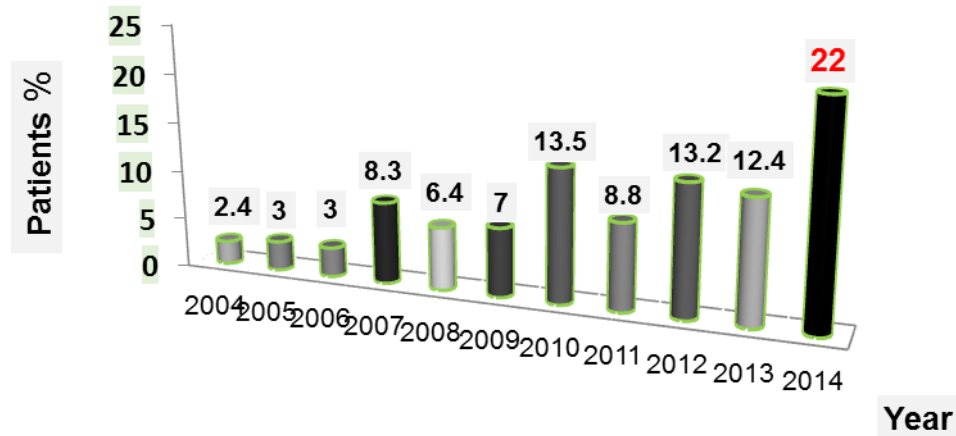
**Fig 1. Bowel Tumor in Tripoli and Misurata, Libya through Eleven Years.**

One of the significant findings in this study is the percentage of intestine malignancy had increased overall eleven years in Tripoli and Misurata, mainly in the year 2014. The increase in tumor occurrence speeds may propose that there has been no advance made in malignancy management in Western Libya.

Surroundings may affect intestine malignancy and are perhaps associated with various reasons, including huge stress (Anna *at el*, 2022; Pankaj, 2021), cigarette smoking and nutritional customs (Clare and Willey, 2022). As well, wrong Living way and poor diet routines represent threat factors for bowel malignancy (Pankaj, 2021; El Mistiri *at el*, 2013).

The tumor prevention system should reduce the supposed number of new cases and build up the quality of living for those diagnosed with bowel malignancy (Anna *at el*, 2022). Previous

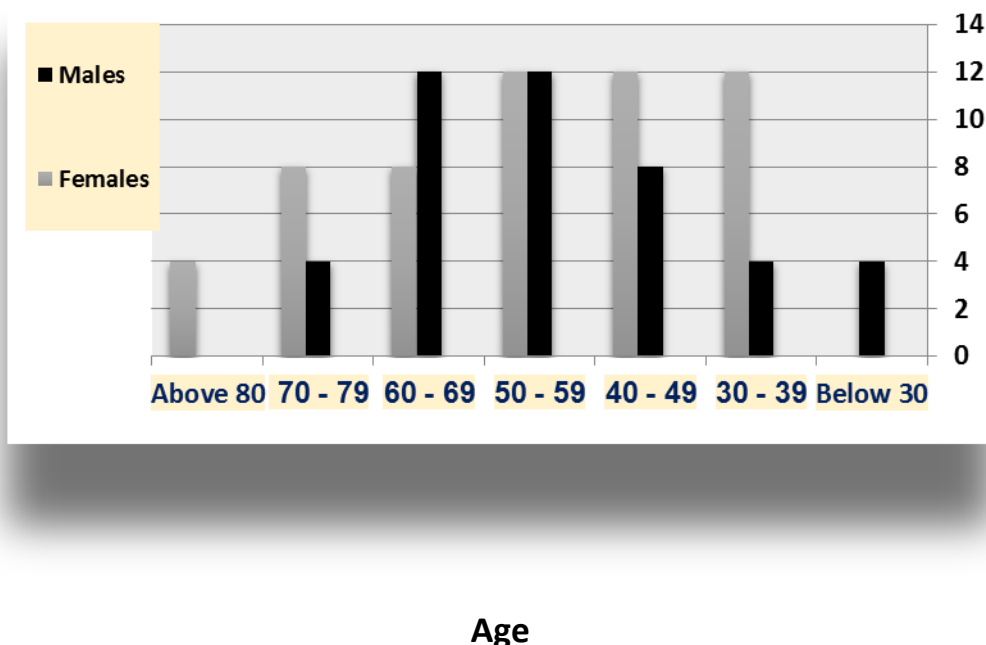
research implied that one third of cancers come from daily bad nutrition including fast, processed and fried foods (Anna *at el*, 2022; Clare and Willey, 2022).



**Fig.2. Percentage of Bowel Tumor in Tripoli and Misurata, Libya during Eleven Years.**

***Nutritional Habits and Bowel Tumors:***

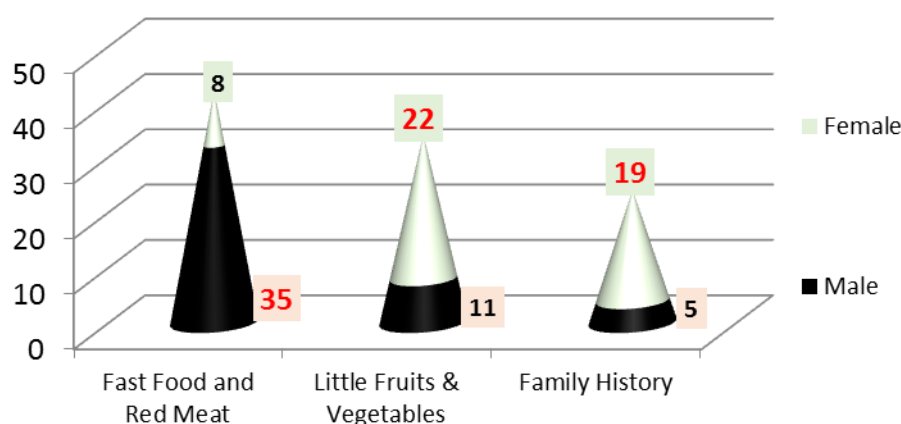
Nutritional-based survey study was achieved on about 100 interviewed patients diagnosed with intestine tumor (51 males and 49 females) aged 25 to 85 years (Fig. 3). The weight of interviewed patients was arranged from 45 to 71 Kg. Data showed that bowel tumor typically taking places in men over 50 years old and in women on top of 30 years old. The age group most affected by bowel cancer was (50-69) years in men and (30-59) years in women. A preceding study reported that there was a clear relation between the incidence of bowel cancers and age (Safia *at el*, 2022).



**Fig. 3. The Age Groups of Interviewed Patients Diagnosed with Bowel Malignancy at National Cancer Institute in Misurata and Central Tripoli Hospital, Tripoli, Libya (n= 100).**

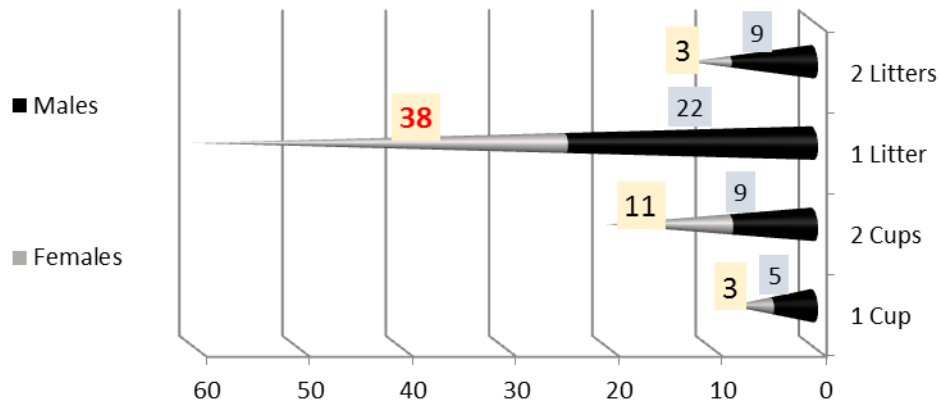
Along with 100 interviewed patients with bowel tumor, 35 % of men were eating loads of red meat, fast foods and fried potatoes. And 22% of women rarely consumed fruits and vegetables whilst, 19% had family history (Fig. 4). Data provided that women had more family history to develop tumor than men.

Researchers in the past reported that diet may influence on one third of all malignancy patients (Clare and Willey, 2022). Moreover, there is an apparent involvement between living way, dietary customs and tumor hurt (Timothy *at el*, 2020). The continuous use of red meats (in particular fast foods) such as beef and lamb, processed meats and saturated fats may raise the danger of bowel malignancy. On the other hand, foods containing high-fibers such as whole grains, raw vegetables and fruits may guard from malignancy harm because they are logically low in fat and rich in antioxidants and anti-cancer constitutes (Anna *at el*, 2022; Clare and Willey, 2022; Pankaj, 2021; Better Health Chanel, 2021; Pippin, 2014). This specified that vegan foodstuffs may preserve against bowel malignancy.



**Fig. 4. Several Reasons of Bowel Malignancy**

Besides, this work illustrated that more than half of patients were likely to drink 1 liter of water per day. Also, 12% of patients drink 2 liter of water every day (Fig. 5). Also, 3% of women drink one cup of water daily and another 3% of women drink 2 liter per day. This indicates that during the day, men tend to drink more water than women. Patients with bowel tumor in the early stage should drink 1 to 2 liters of water every day and consume various fresh vegetables and fruits without peel such as carrots, tomatoes, citrus fruits, apples, grapes and strawberries (Better Health Chanel, 2021; ASCO, 2015; Campbell and Media, 2015; Jaret, 2015; Dyer, 2014). Also, this study sets that all interviewed men were frequent smokers. An earlier work documented that most Libyan men were cigarette smokers (Clare and Willey, 2022). Also, all the interviewed cases did not do exercise and had irregular sleeping. An earlier work implied that low exercise, smoking and red meat utilization raised risk of bowel tumors (Anna *at el*, 2022).



**Fig. 5. Numbers of Water Intake Every Day**

A number of vital guidelines including doing exercise with a well diet program, keep away from cigarette smoking (especially after food), pass up alcohol consumption and having breakfast may defend from bowel malignancy (Ghalaita *at el*, 2014). Also, medical treatment instructions must pay more attention in the beginning of bowel tumors (Ermiah *at el*, 2012).

Additionally, patients with bowel malignancy should stop eating high fat diet including fried foods, margarine; and processed meats such as curing, salting, smoking meats, some sausages and burgers. They should frequently eat cooked vegetables, poultry (without skin) and fish. Also, patients should live away from community stress (Better Health Chanel, 2021; ASCO, 2015; Campbell and Media, 2015; Jaret, 2015; Dyer, 2014).

**Conclusion:**

Bowel tumor disease affects more men than women due to the dissimilarity in several civilizing and dietary customs including smoking, number of times of drinking water every day, type of diet and nature of job.

The incidence of bowel tumor is increasing over the time in Misurata and Tripoli, Libya during past eleven years. Men are about 13.2 % more likely than women to develop bowel malignancy.

The most affected age was in males above 50 years old and in women above 30 years old. Among 100 interviewed patients, 35 % of men were eating a lot of red meat, fast foods and fried potatoes, and only 5% of them had family history. In comparison, 22 % of women rarely ate fruits and vegetables and 19% of them had family history. Also, men tend to drink water daily more than women.

Our proof proposes that terrible diet routine and wrong living way including eating less amount of fruits and vegetables, eating high calorie fat /meat diet, eating high levels of fast foods; and smoking, job hazards and big stress may accountable for bowel malignancy occurrence.

But, drinking a valuable amount of water, continuous eating of fresh fruits and vegetables without peel, cooked vegetables, whole grains, healthy fat such as avocado, olive oil and nuts may stop tumor. Additional works required for improving early discovery to reduce bowel tumor dangers.

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مستولية التغذية الخاطئة في توسع اورام الامعاء: دراسة استطلاعية غذائية

(بحث اصلي)

امال رجب عقيلة

قسم الكيمياء الحيوية، كلية الطب البشرى، جامعة درنة، درنة، ليبيا

\*: د. امال رجب عقيلة

أستاذ مشارك في علم الغذاء، قسم الكيمياء الحيوية، كلية الطب البشرى، جامعة درنة، درنة، ليبيا.

البريد الإلكتروني: [amal\\_agela@yahoo.com](mailto:amal_agela@yahoo.com), [a.khalil@uod.osu.ly](mailto:a.khalil@uod.osu.ly)

**المستخلص:** يعتبر هذا الجهد العلمى من أبحاث الأورام المتعلقة بالنظام الغذائى. يقدم العمل الحالي دليلا على خطورة شدة الإصابة باورام الأمعاء في طرابلس و مصراتة، ليبيا على مدى احدى عشر سنة لتوضيح تأثير روتين التغذية اليومى الغير صحيح وطريقة المعيشة على انتشار سرطان الأمعاء. 265 رجل و 203 امرأة تتراوح أعمارهم من 25 الى 85 سنة مصابين بمرض سرطان الأمعاء. دراسة المسح التغذوى أجريت على 100 مريض لىبي (51 رجل و 49 اثنى) من 1 يناير الى 30 يونيو 2015. اثبتت البيانات ان الإصابة بورم الأمعاء تزداد مع مرور الوقت من يناير 2004 الى ديسمبر 2014 م. الرجال اكثر عرضة من النساء للإصابة بورم الأمعاء بنسبة 13.2%. توجد علاقة ذات دلالة إحصائية بين الذكور و الاناث للإصابة بورم الأمعاء ( $P = 0.039$ ). دراسة المسح التغذوى حول التغذية سنة قبل الإصابة بمرض السرطان وجدت ان المرض يحدث عند الرجال الذين تزيد أعمارهم عن 50 عام و النساء فوق 30 عاما. وجدت الدراسة ان 24% من الحالات لها تاريخ عائلى بالاصابة بورم الأمعاء. النساء لديهم تاريخ عائلى للإصابة بورم الأمعاء اعلى من الرجال. تشير النتائج ان المصابين بسرطان الأمعاء قبل سنة من اصابتهم بالسرطان يشربون على الأقل لتر من الماء يوميا. أيضا الرجال اكثر شربا للماء و يتناولون اللحوم الحمراء أكثر من النساء. جميع المرضى لا يمارسون الرياضة و لديهم أوقات نوم غير منتظمة و جميع الرجال كانوا مدخنين بشكل متكرر.

**الكلمات المفتاحية:** الأورام ذات صلة بالنظام الغذائى، ورم الأمعاء، روتين التغذية الغير صحى، طريقة المعيشة، مصراتة، طرابلس.

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