

## Some Medicinal Plants Used as Folk Medicine for Colon Cancer

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### Abstract

The increasingly popular folk medicine, which is rapidly advancing despite the technological advances, is nowadays the alternative method of medicine called as traditional medicine. These methods, which are used in many diseases such as allergy, weakness, spasm pain, cold, immune system deterioration have been very effective in cancer treatment and prevention of cancer. Some studies have shown that some plants reduce the risk of cancer and others, which shorten the duration of treatment, also reduce the complications that occur during the course of the treatment. This work is being done to compile and present existing information. When studies and articles made in the last 10 years on the subject were examined, 25 of the plants on which most cancer researchers were carried out were determined. Among these plants, photographs of plants which are used extensively among the public are given and their therapeutic effects are compared with each other.

According to the results of the literature research; colon cancer and plant relationship; *Rheum ribes*, *Linum usitatissimum*, *Punica granatum*, *Cornus mas* and *Vaccinium myrtillus* were found to be protective against colon cancer in particular. In addition to colon cancer, the indicated plants were also found to be effective in some other types of cancer. *Rheum ribes* was effective in stomach and lung cancer, brain tumor; some taxa belonging Ranunculales were effective in lung cancer, liver cancers, leukemia, lymphoma and breast cancer; *Linum usitatissimum* used for pancreatic and breast cancer; *Punica granatum* was using for breast cancer; *Cornus mas* was using for the treatment of lungs, head and neck, liver, breast, prostate, food borne and soft tissue cancers; *Vaccinium myrtillus* has been found to be protective against cervical and liver cancer.

**Key words:** Colon cancer, folk medicine, plant

### 1. Introduction

Although the importance of developing technology is increasing rapidly in peoples' medicine or traditional method called the treatment method today, as a method of Alternative Medicine comes to our day. Allergy, helmet, spasm pain, cold sensitivity, immune system disorders, such as used in many other diseases, cancer treatment and cancer prevention methods have been very effective. In some studies, some of them reduce the risk of cancer, some of them shorten the duration of treatment, and some of them reduce the complications that occur during the treatment period. This study is carried out in order to compile and present existing information. There are many different types of treatment for patients with breast cancer. However, the cheapest and easiest treatment includes herbal treatment. As well as in Turkey, research on this subject is still ongoing and scientists show nature as a source of healing (Kurt et al., 2013).

## 2. Materials and Methods

When studies and articles on the subject were reviewed over the last 10 years, 25 of the plants on which most cancer researchers were carried out were determined. Among these plants, photographs of plants which are used extensively among the public are given, and the therapeutic effects are given by comparing them with each other.

## 3. Results and Discussion

As a result of intensive researches, the physiological effects of nutritional support treatments including various herbal, mineral and vitamins are better defined. It is also believed that a better understanding of the biological structure of cancer cells gradually increases the efficacy of certain supporting products and drugs against cancer. In relation to this issue, Yeşilada, 5-fluorouracil (5-FU) is a chemotherapeutic agent used in the treatment of colon cancer but the patients tolerate difficulties in practice due to significant side effects and in another study carried out on this subject, the blood values of the experimental animals were significantly (increase in red cell, neutrophil and monocyte counts-1,2 fold, 9 fold and 6 fold increase respectively). He noted that consumption of blueberries is effective in the treatment of colon cancer. As a result of the literature studies it has been proved that *Rheum ribes*, *Nigella sativa*, *Echinacea purpurea*, *Linum usitatissimum*, *Punica granatum*, *Cornus mas*, *Vaccinium myrtillus* are protective and therapeutic against colon cancer (<http://www.cancer.gov> Access Date: 02.05.2017).

**Cancer and *Rheum ribes*:** In addition to its many benefits, it supports the treatment of cancer types such as stomach, intestine, lung cancer, brain tumor, lymphocyte lymphoma. Raw, olive oil, egg, and ginger with *Rheum ribes* are used in quite for different recipes (kanser.gov.tr/kansan Access Date: 02.05.2017).



**Figure 1.** *Rheum ribes*

*Rheum ribes* has a direct effect on the cancerous cells and shrinks quickly, even within 2 days, 50% of them are eliminated. Because of this reason *Rheum ribes* is using so much for drug industry (<http://www.cancer.org> Access Date: 02.05.2017).

**Cancer and *Nigella sativa*:** Timokinone, the active ingredient of *Nigella* sp. (black seed), is used as an antioxidant, anti-inflammatory and antineoplastic (anti-tumor cells prevent development) drug. Timokinone is used as raw material in drugs for adenocarcinoma of the chest, colorectal cancer, colon cancers, pancreatic adenocarcinoma, uterine sarcoma, neoplastic keratinocytes, human osteosarcoma, fibrosarcoma, and lung sarcoma. Also

timocino, androgen hormone refractor (non-responsive) inhibits prostate cancer by targeting the receptor and transcription factor E2F-1 (Kav et al., 2008).



**Figure 2.** *Nigella sativa*

Laboratory studies have shown that black seeds of *Nigella* sp. strengthen the immune system and, consequently, increases its strength against viruses and microbes that destroy the body, as well as its resistance against cancer (kanser.gov.tr/kanser Access Date: 06.05.2017).

**Cancer and *Echinacea purpurea* (L.) Moench:** *E. purpurea* is effective on colon and pancreatic cancer. Due to the intense antioxidant properties of *E. purpurea*, it is consumed in high amounts in many countries as an aging-retardant.



**Figure 3.** *E. purpurea* (L.) Moench

Because *E. purpurea* reduced free radicals it is used to support chemotherapy in many cancer treatments, especially blood cancer treatment. Consumption of tea in particular strengthens the immune system and prevents other diseases by inhibiting the immune deficiency due to chemotherapy (Kurt et al., 2013).

**Cancer and *Linum usitatissimum* (L.):** Flax seed has a protective effect against cancer of the pancreas, colon and breast. Flax seed contains alpha linolenic acid (ALA, Omega 3), linoleic acid (LA Omega-6) and oleic acid (OA, Omega-9), lignans (SDG), mucilage, and vitamin a (Beta-carotene).



**Figure 4.** *Linum usitatissimum* (L.)

*L. usitatissimum* contains highly polyunsaturated fatty acids, abundant fiber with a high percentage of small amounts of potassium, magnesium, iron, copper, zinc, and various vitamins. ([www.nutraceutical.com/educate/pdf/garlic.pdf](http://www.nutraceutical.com/educate/pdf/garlic.pdf)1995.Nature Access Date: 12.04.2017).

**Cancer and *Punica granatum* (L.):** *Punica granatum* L. it is effective in colon, breast and prostate cancer. Root and trunk shell contains alkaloids called starch, mannitol, resin, triterpenic acids, tannins, pellets, isopelletieri and methylpelletieri. Fruit peel and flowers, again mentioned above are alkaloids and tannins. It also contains pomegranate, Iron, potassium, calcium, phosphorus, B1, B2 and C vitamins (Ayaz and Alpsoy, 2007). Pomegranate juice contains high levels of tannin and flavoid antioxidants. Pomegranate juice is an important anti-tumor characteristic that stimulates apoptosis and changes the cell cycle and inhibits the expression of androgen receptor ([kanser.gov.tr/kanser/kanser-nedir/4-kanser-nedir.html](http://kanser.gov.tr/kanser/kanser-nedir/4-kanser-nedir.html) Access Date: 02.05.2017).



**Figure 5.** *Punica granatum* (L.)

High levels of iron and vitamin C inhibit the possible effects that may occur by strengthening the immune systems of individuals (Başgöl, 2007). As a result, the effect of regular pomegranate juice intake on preventing prostate cancer and delaying the progression of the disease has been known to have beneficial results (Topuz, 2012).

**Cancer and *Cornus mas* (L.):** *C. mas* is effective in lung, head and neck, colon, liver, breast, prostate, esophagus and soft tissue cancers. The melatonin hormone, secreted in the brain



and which increases our quality of life, is found in cranberry fruit. For this reason, it is also used to prevent complications such as depression, sleep disturbances experienced by patients during the treatment period. It also acts as antioxidant because it is a good diuretic. It is effective in removing harmful compounds accumulated in the body. *C. mas* also contain phytonutrients, vitamin K, manganese and a wide range of natural plant chemicals.



**Figure 6.** *Cornus mas* (L.)

They protect the body against harmful free radicals, anti-inflammatory (anti-inflammatory) and anti-cancer properties show. It is a powerful natural antioxidant because of the vitamin C It contains. It has the ability to prevent some damage caused by free radicals and increase body resistance against infectious agents (Topuz, 2012). Urinary tract infections (utis) are a common cause of urinary tract infections. It is recommended to consume cranberry especially in individuals with recurrent infections and at risk of infection. Cranberry juice also protects against stomach ulcers and stomach cancer by preventing *Helicobacter pylori* bacteria from sticking to the lining of the stomach wall (Topuz, 2012). *C. mas* plant can be consumed as fruit or boiled and consumed as sherbet or as water. However, if sugar is added to the syrup, it destroys its effect on cancer, but it becomes carcinogenic. For this reason, as in every plant, how the cranberry plant is consumed is very important (<http://www.okuryazar.tv/index.php/elif-güvelioğlu-kansere-karşı-savunmasiz-degilsin.html> Access Date: 01.05.2017).

**Cancer and *Vaccinium myrtillus* (L.):** Blueberries contain pterostylben and ellagic acid and vitamin C as well as because it is rich in cancer types especially beneficial to colon, uterus and liver cancer. Consuming a handful of fresh or dried blueberries per day significantly reduces the risk of cancer in individuals (<http://www.okuryazar.tv/index.php/elif-güvelioğlu-kansere-karşı-savunmasiz-egilsin.html> Access Date: 01.05.2013). There are proanthocyanidins that give fruit color with a dye substance called *V. myrtillus*, A, C vitamins and useful sugars, organic acids, tannins, pectin and mirtylin. *V. myrtillus* can be consumed as raw fruit or dried or consumed as tea prepared (<http://www.okuryazar.tv/index.php/elif-güvelioğlu-kansere-karşı-savunmasiz-degilsin.html> Access Date: 01.05.2013).



**Figure 7.** *Vaccinium myrtillus* (L.)

#### 4. Conclusion

As a result of this paper, it is understood that *R. ribes* rapidly decreased in size by acting directly on cancerous cells (Topuz, 2012). The thyrokinin substance found in *Nigella* sp. inhibited the formation of cancer cells and strengthened the immune system (Ayaz and Alpsoy, 2007). Because of the intense antioxidant it contained, *E. purpurea* prevented cancer (Kurt et al., 2013). In addition to this, *L. usitatissimum* which contained alpha linolenic acid, linoleic acid and oleic acid, lignan, mucilage and vitamin A, destroyed cancer cells (Kurt et al., 2013). *P. granatum* water contained flavoid antioxidant and it had an anti-tumoral trait that stimulated apoptosis and changed cell cycle, inhibited androgen receptor expression (Ayaz and Alpsoy, 2007). *C. mas* contained vitamin K, manganese and a wide range of natural plant chemicals. They protected the body against from harmful free radicals, anti-inflammatory and anti-cancer features. It had a strong natural antioxidant due to the vitamin C it contained (Topuz, 2012). *V. myrtillus* is used against cancer, especially colon, uterus and liver cancer because it had pterostilbene, ellagic acid and vitamin C (<http://www.yabanmersini.org/yaban-mersini-faydaları> Access Date:12.05.2017).

#### References

- Ayaz E., Alpsoy H.C., 2007. Sarımsak ve Geleneksel Tedavide Kullanımı, Türkiye Parazitoloji Dergisi, 2(31):146-148.
- Başgöl Ş., 2014. Jinekolojik Kanserlerin Tedavisinde Tamamlayıcı ve Alternatif Tedavi: Kanıta Dayalı Yaklaşım, Yıldırım Beyazıt Üniversitesi Sağlık Bilimleri Fakültesi Hemşirelik Dergisi, 2(3):54-56.  
<http://www.cancer.gov/cancertopics/factsheet/prevention/garlic-and-cancer-prevention> Access Date:02.05.2017
- <http://www.cancer.org/treatment/treatmentsandsideeffects/complementaryandalternativemedicine/dietandnutrition/garlic> Access Date:02.05.2017
- <http://www.okuryazar.tv/index.php/elif-güvelioğlu-kansere-karşı-savunmasız-degilsin.html> Access Date: 01.05.2017
- [kanser.gov.tr/kanser/kanser-beslenme/272-.html](http://kanser.gov.tr/kanser/kanser-beslenme/272-.html) Access Date :06.05.2017
- [kanser.gov.tr/kanser/kanser-nedir/4-kanser-nedir.html](http://kanser.gov.tr/kanser/kanser-nedir/4-kanser-nedir.html) Access Date: 02.05.2017
- Kav S., Hanoğlu Z., Algier L., 2008. Türkiye’de Kanserli Hastalarda Tamamlayıcı ve Alternatif Tedavi Yöntemlerinin Kullanımı: Literatür Taraması, Uluslararası Hematoloji-Onkoloji Dergisi, 18(1):4-37.
- Kurt H., Keşkek Ö., Çil T., Canataroğlu A., 2013. Meme kanserli hastalarda tamamlayıcı/alternatif tedavi kullanımı, Numune Eğitim ve Araştırma Hastanesi, Aile Hekimliği Kliniği, Adana Türk Onkoloji Dergisi, 1(28): 10-15.
- Topuz E., 2012. Kanserde Çözüm Var! Kansere Çeşidine Göre Tedavi Yöntemleri ve Kanserden Korunma Yolları, 22-34.  
[www.nutraceutical.com/educate/pdf/garlic.pdf1995.Nature's](http://www.nutraceutical.com/educate/pdf/garlic.pdf1995.Nature's) Amazing Nutritional Medicinal Wonder Food Woodland Publishing, Inc., P.O.Box 160, Pleasant Grove, UT 84062 Access Date: 12.04.2017
- <http://www.yabanmersini.org/yaban-mersini-faydaları> Access Date:12.05.2017