Geleneksel ve Tamamlayıcı Tıp Dergisi
Journal of Traditional Medical Complementary Therapies
J Tradit Complem Med. 2022;5(3):177-86

ORİJİNAL ARAŞTIRMA ORIGINAL RESEARCH

DOI: 10.5336/jtracom.2022-89655

Attitudes of Lung Cancer Patients and Their Families to Complementary and Alternative Medicine Therapies and Frequency of Use: A Descriptive Study

Akciğer Kanseri Tanılı Hastaların ve Ailesinin Tamamlayıcı ve Alternatif Tedavi Yöntemlerine Olan Tutumları ve Kullanım Sıklığı: Tanımlayıcı Araştırma

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ABSTRACT Objective: Complementary and alternative medicine (CAM) therapies do not have scientifically proven benefits, are preferred instead of medical therapies, or are used together with them. We investigated the prevalence of CAM use in a serious disorder with a short life expectancy, lung cancer (LC). **Material and Methods:** This study was planned as a cross-sectional study, and patients diagnosed with LC who applied to our clinic between 2017 and 2018 were invited to the study. 101 patients who accepted the invitation to study and whose consents were obtained were included in the study. **Results:** The mean age of the patients was 64.25±8.17 (42-82) years, majority of them were male patients (90%), and the prevalence of CAM therapy use was 62.2% (n=56/90). Herbal products were most frequently preferred. It was determined that the patients who were recommended a diet by their doctor used alternative therapies at a lower rate than the patients who have any recommendation (p=0.040). **Conclusion:** It is important to give a special nutrition program to the patient with LC and to ask the patients whether they use CAM therapies.

Keywords: Lung cancer; nutrition; complementary and alternative medicine; therapy

ÖZET Amaç: Tamamlayıcı ve alternatif tedavi (TAT), bilimsel olarak kanıtlanmış yararı olmayan, medikal tedavilerin yerine tercih edilen veya birlikte kullanılan uygulamalardır. Akciğer kanseri (AK) gibi yaşam beklentisi düşük, ciddi bir hastalık durumunda TAT kullanımı yaygınlığı araştırıldı. **Gereç ve Yöntemler:** Bu çalışma kesitsel bir çalışma olarak planlanmış olup, 2017-2018 yılları arasında kliniğimize başvuran AK tanılı hastalar çalışmaya davet edildi. Çalışma davetini kabul eden ve onamları alınan 101 hasta çalışmaya dâhil edildi. Sorular 2 bölümden oluşmakta olup, ilk bölümde, demografik özellikler ve hastalık bilgileri (hücre tipi, ailede kanser hikâyesi olması); ikinci bölümde, doktorun beslenme önerisi, hastanın TAT tercihi (bitkisel, hayvansal, diğer), tercih nedenleri, olumlu etki yönü, doktoruna bilgi verme, ailede kanser hikâyesinin tercihe etkisi bilgileri kayıt edildi. **Bulgular:** Hastaların yaş ortalaması 64,25±8,17 (42-82) yıl ve erkek hasta sayısı (%90) daha ağırlıklı olup TAT kullanımı (n=56/90) yaygınlığı %62,2 saptandı. Sıklıkla tercih edilen ürünlerin bitkisel kaynaklı olduğu izlendi. Doktor tarafından beslenme şekli önerilen hastaların, öneride bulunulmayan hastalara göre daha az oranda alternatif tedavi kullandığı saptandı (p=0,040). **Sonuç:** AK tanılı hastaya özel beslenme programı verilmesi ve hastalara TAT kullanıp kullanmadığının sorulması önem arz eder.

Anahtar Kelimeler: Akciğer kanseri; beslenme; tamamlayıcı ve alternatif tedavi; terapi

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Peer review under responsibility of Journal of Traditional Medical Complementary Therapies.

Received: 25 Apr 2022 ***Received in revised form:*** 02 Oct 2022 ***Accepted:*** 11 Oct 2022 ***Available online:*** 17 Oct 2022

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Complementary and alternative medicine (CAM) consists of medicinal products and practices that are not parts of traditional medical treatment methods.[1] The National Center for Complementary and Alternative Medicine (NCCAM) defines CAM therapies as healthcare systems, products and practices that are not considered as parts of modern medicine.[2] NCCAM has grouped CAM therapies under five headings, and the third group includes herbs, dietary supplements, medicinal herbal teas or products of animal origin (biologically based therapies).[3]

CAM has been presented as an alternative to modern cancer treatment or has been used to withstand side effects of cancer treatment, and is becoming increasingly integrated into modern cancer treatment.[4] However, CAM is not always completely natural and safe, and despite growing interest, the results of the studies regarding the safety and efficacy of CAM products are conflicting.[5,6]

A meta-analysis of a survey by Horneber et al. that included more than 65,000 cancer patients showed that 49% of cancer patients used alternative medicine in the 21st century.[7]

The rates of CAM use in the developed countries are 42.1% in the USA, 48.2% in Australia, 49.3% in France, and 70.4% in Canada, while those rates in developing countries are 71% in Chile, 71% in China, 40% in Colombia and 80% in African countries.[8] It has been determined that the rate of CAM use in cancer patients showed a wide distribution between 15% and 73% in 14 European countries, including Türkiye.[9] A literature review that investigated the rate of CAM use in cancer patients in Türkiye found this rate between 22.1% and 84.1%, and the mean CAM use was 46.2%.[10]

Life expectancy is short in lung cancer (LC), particularly in advanced stage patients who do not have a chance for surgery, it is often diagnosed at an advanced stage, and treated with chemotherapy (ChT).[11] Cancer patients stated the reasons for their preference for CAM as staying strong against the disease, fighting cancer, increasing the quality of life, strengthening immunity, supporting treatment, regaining health, and employing it as a last resort.[12,13]

In their study on the use of CAM in cancer patients, Tas et al. reported that 47.3% of the patients were using CAM therapies, and 70% of those using CAM therapies found them safe.[14] Ceylan et al. determined the rate of using CAM as 60.1% in cancer patients, and reported that 48.4% of them believed that CAM was beneficial.[15]

Other important factors affecting the preference of CAM in cancer patients are the communication problems with the healthcare team and the physician responsible for the treatment and follow-up of the patient, ineffective listening and questioning of the patients by the healthcare team, and a routine standard approach to every patient.[16,17]

Some patients/families ask their physician whether CAM will be effective or not, while others are afraid of their reaction, and hide that they have CAM therapies. Cancer patients believe that their physician will give a negative reaction when they report that they have CAM therapies. The patients state that their doctor did not approve any CAM therapies, and they could not get a clear answer to their questions about those therapies. These problems experienced by the patients show the lack of communication between the healthcare team and the patient.[17,18]

Tovey and Broom reported that some of the oncologists, either explicitly or indirectly, showed a negative attitude towards the CAM therapies while others showed a supportive but still indecisive attitude.[19]

In studies, it has been reported that the majority of patients using CAM and/or their relatives do not inform the physician/nurse about it, and it has been stated that the reason for not informing may be the fear of a negative reaction by the healthcare team.[20,21]

If CAM therapies are used together with medical treatment, physicians should not act with prejudice to the use and methods of CAM, the potential risks of some CAM methods should be explained, these patients should be followed closely, and patients should be routinely asked about the use of CAM therapies.[10]

If the patient informs the doctor on his preference for CAM, the communication with the patient should be accepting, open and clear. The CAM

method used by the patient should be investigated, the healthcare team should know how often it is used, whether it is safe, whether its benefits have been scientifically proven, and how the method is perceived by the patient. CAM methods may cause undesirable adverse effects if not reported, and may pose a potential risk to the general health of the patient during cancer treatment.[22,23] At the same time, promising misinformation about the safety and efficacy of CAM therapies for cancer is common, and may give false hope to patients.[24]

In order to minimize the undesirable side effects of CAM therapy applied in addition to modern cancer treatment, first of all, the CAM method employed should be known, and its appropriateness should be investigated by the doctor.[25,26]

Interest in CAM therapies has been increasing among cancer patients and their families. However, it is difficult to estimate how often patients use various alternative medicine practices. In this study, the factors associated with CAM awareness and its use in LC patients were analyzed.

MATERIAL AND METHODS

The study protocol was approved by the University of Health Sciences Ankara Keçiören Training and Research Hospital Clinical Research Ethics Committee (date: March 13, 2019, no: 2012-KAEK-15/1870), and it was conducted in accordance with the principles of Declaration of Helsinki.

This study was planned as a cross-sectional study, and patients diagnosed with LC who applied to our clinic between 2017 and 2018 were invited to the study. 101 patients who accepted the invitation to study and whose consents were obtained were included in the study. A total of 101 patients over the age of 18 years who were diagnosed with advanced LC histopathologically (did not have surgery, completed ChT or were receiving ChT) between January and December 2017 were interviewed face-to-face to ask the questions of our survey during their outpatient visits or hospitalization, and data was collected about their preference and use of CAM and nutritional recommendations. All patients included in the study provided their written informed consents. The patients who did not want to participate in the study, newly diagnosed patients who have not yet started their treatment, and the patients with severely impaired general conditions were excluded.

The questions of the survey consisted of two parts: In the first part, there were questions about the patient's demographic data, comorbid disorders and the presence of a family history of cancer, and whether the patient had any nutritional advice from his doctor when starting the treatment. In the second part, preference for CAM (plant-animal-derived products and other choices from a list), reasons for preference, belief that the product is effective-reliable, aspect of its positive effect, whether the patient recommends it to other patients, whether the patient reported the CAM therapy to the doctor, the effect of the family history of LC on the preference for CAM, and whether the patient used CAM before the cancer diagnosis were asked.

STATISTICAL ANALYSIS

Conformity of data to normal distribution was evaluated with skewness and kurtosis tests and histogram plots. Skewness and kurtosis values were divided by standard error. If the resulting calculation was within ±3, then skewness and kurtosis of the dataset were considered normal. Descriptive statistics of the data are presented with count and percentage for categorical variables. Normally distributed continuous variables are presented as mean and standard deviation. The demographic information of the patients, the distribution of cancer diagnosis and additional diseases, the distribution of the products they use, the reasons for preferring CAM, the frequency of reporting their CAM preferences and the recommendations were shown as n/%. Comparison of CAM use and cancer-related variables was analyzed by chi-square test and shown as (n/%). The significance level was set at an alpha of 0.05. Statistical analysis was performed using SPSS Statistics (SPSS for Windows, Version 22.0, IBM, Armonk, NY).

RESULTS

The mean age of the patients included in the study was 64.25±8.17 (minimum 42, maximum 82) years. Most of them were male patients (90%). The major-

ity of them had a low education level and a low income. It was determined that the patients mostly lived in the cities (Table 1).

The histopathological type of LC was NSCLC in 77% of the patients (adenocarcinoma and squamous cell carcinoma were observed at equal rates with 44%), family history of cancer was evident in 77.2% (Table 2).

The question of whether a special nutritional recommendation was made by the doctor-health team to the patient was answered as "no recommendation was given for nutrition" at a rate of 71.2%. It was determined that 72.2% of the patients were only told not to eat carbohydrates (such as honey, molasses) (not shown in the table).

The first five most frequently preferred herbal products in the list were turmeric, ginger, black cumin, stinging nettle and carob, the first five most frequently preferred animal products were yogurt-kefir, giblets, bone marrow, bee pollen and propolis, the first five most frequently preferred fruit/vegetables were lemon, apricot kernels, garlic, dates and dried apricots, in rank order. The most frequently preferred supplement in the "other" group was vitamins (Table 3).

Rarely preferred (1-3%) and notable products in the list were wheatgrass, reishi mushroom, cancer grass, bitter melon, shark cartilage, and donkey milk. Very rarely preferred products reported by the patients were Blue scorpion venom, silver juice, Swedish syrup, pine water, pine bark fiber, and okra seed (not shown in the table).

TABLE 1: The demographic data of the patients.

		n (%)
Gender	Male	91 (90.1)
	Female	10 (9.9)
Education	Primary school	61 (60.4)
	Middle school	19 (18.81)
	High school	14 (13.86)
	University	5 (4.95)
	Illiterate	2 (1.98)
Occupation	Civil servant	16 (16.16)
	Worker	29 (29.29)
	Housewife	8 (8.08)
	Soldier/police	1 (1.01)
	Farmer	22 (22.22)
	Handicraftsman	23 (23.23)
Income*	1,000 TL	6 (5.94)
	1,000-2,000 TL	36 (35.64)
	2,000-3,000 TL	44 (43.56)
	>3,000 TL	13 (12.87)
	No income, receiving care allowance	2 (1.98)
Place of living	Rural	32 (31.68)
	Urban	69 (68.32)

*Average US dollar exchange rate in 2017 was 3.64 TL; in 2018 average exchange rate was 4.81 TL.

TABLE 2: The histopathological types and comorbidities of the patients.

		n (%)
Histopathological type	Small cell	23 (23)
	Extra-pulmonary small cell	77 (77)
Non-small cell cancers	Adenocarcinoma	34 (44.16)
	Squamous cell carcinoma	34 (44.16)
	Other	9 (11.69)
Family history of cancer	Present	23 (22.77)
	Absent	78 (77.23)
Comorbid disorder	Cardiac disease	26 (40.63)
	Diabetes	9 (14.06)
	Liver disease	1 (1.56)
	Renal disease	0 (0)
	Pulmonary disease	28 (43.75)

TABLE 3: Frequencies of the products used by patients.

	n (%)
Turmeric	26 (25.74)
Ginger	19 (18.81)
Carob/carob molasses	13 (12.87)
Black cumin	11 (10.89)
Stinging nettle	11 (10.89)
Yogurt	33 (32.67)
Giblets	23 (22.77)
Kefir	20 (19.8)
Bone marrow	16 (15.84)
Bee pollen	10 (9.9)
Propolis	10 (9.9)
Lemon	26 (25.74)
Apricot kernels	21 (20.79)
Garlic/Onions	15 (14.85)
Dried apricots	12 (11.88)
Dates	12 (11.88)
Vitamins	13 (68.42)

The answers to the question "why did you resort CAM?" was "to beat the disease" in 46.8% of the patients, approximately one out of 4 patients used CAM with family insistence-suggestion, internet-media advertisements were not effective in their CAM preference, and it was noted that the doctors did not recommend CAM in any of the patients. It was determined that 51.5% of the patients believed that the CAM therapy they used was effective-safe, and 35.9% benefited from their CAM therapy (Table 4).

When the patients who reported their CAM method to their doctors were considered, 45.4% of the doctors left the decision of using the method to the patient, and 18.1% said it was a risky method. It was determined that the most frequent answer for not informing the doctor about the CAM therapy was "he/she did not ask whether I used CAM therapy or not". It is noteworthy that about one out of 4 patients did not inform their doctors about their CAM therapy because they were afraid of a negative reaction (Table 5).

The histopathological tumor types of the patients showed a correlation with the use of CAM therapy, and it was found that patients with SCLC used CAM at a statistically higher rate (p=0.046). When the patients who were given and not given nutritional advice by their doctor were compared, it was determined that the patients who were not given nutritional advice by their doctor used CAM therapies at a higher rate (p=0.040) (Table 6).

In the analysis of region of residence (rural-urban) and CAM preference, it was observed that

TABLE 4: Reasons for choosing CAM and confidence in CAM therapy used.

		n (%)
Why did you resort to alternative treatment methods?	To beat the disease	30 (46.88)
	To reduce the side effects of treatment	18 (28.13)
	At the insistence of my family and friends	15 (23.44)
	The credibility of the news available in the media/internet	1 (1.56)
	As a result of my doctor's recommendation	0 (0)
Do you believe that these methods you use are effective-safe?	Yes	33 (51.56)
	No	2 (3.13)
	No idea	29 (45.31)
Did the method you used/are using have a positive effect on your health?	Quite positive	23 (35.94)
	Partially effective	18 (28.13)
	Did not make a difference	22 (34.38)
	Made it worse	1 (1.56)
Do you recommend this method you use to other patients?	Yes	21 (32.81)
	No	43 (67.19)

CAM: Complementary and alternative medicine.

TABLE 5: Reporting CAM preferences to the doctors, and the doctors' recommendations.

Did you inform your doctor about the method you used?	Yes	33 (51.56)
	No	31 (48.44)
If yes	He left the decision to me	15 (45.45)
	He declared that it will not always provide benefit to every patient	9 (27.27)
	He told me that there may be unknown, unexpected side effects and risky situations and suggested that I quit	6 (18.18)
	He found it positive and suggested that I continue	3 (9.09)
	Not interested in this topic	1 (3.03)
If no	My doctor didn't ask me if I used CAM therapies	23 (74.19)
	I didn't say it because I was afraid	7 (22.58)
	My family and friends pressured me not to tell my doctor	1 (3.23)

CAM: Complementary and alternative medicine.

TABLE 6: Variables associated with the use of CAM therapy and cancer and nutrition.

	Use of CAM therapy	Yes n (%)	No n (%)	p value
Histopathology	Small cell	19 (82.61)	4 (17.39)	0.046
	Non-small cell	44 (57.89)	32 (42.11)	
Non-small cell	Adenocarcinoma	21 (61.76)	13 (38.24)	0.648
	Squamous cell cancer	19 (57.58)	14 (42.42)	
	Other	4 (44.44)	5 (55.56)	
Family history of cancer	Yes	13 (56.52)	10 (43.48)	0.546
	No	51 (66.23)	26 (33.77)	
Use of a CAM method before diagnosis of cancer	Yes	10 (100.0)	0 (0.00)	0.999
	No	54 (96.43)	2 (3.57)	
Nutrition advice given by the doctor	Yes	41 (57.75)	30 (42.25)	0.040
	No	23 (82.14)	5 (17.86)	

CAM: Complementary and alternative medicine.

those living in the cities used CAM more (73.4%), but any statistically significant difference was not observed between the groups. In the analysis of the region where the patients lived and the reasons for preference of CAM, it was noted that those living in the city used CAM (73.3%) with the insistence of their families and circles, however there was no statistically significant difference between two groups.

In our study, the number of male patients was more prevalent (90%), and the prevalence of CAM use was 62.2% (n: 56/90). In the analysis of CAM use and gender, CAM preferences of men and women were almost similar, and any statistically significant difference was not observed between the genders.

Among the reasons for prefering CAM, it was seen that family insistence was at the forefront in men, without any statistical significance.

DISCUSSION

Most patients diagnosed with a chronic disorder tend to use CAM, based on the information and suggestions of the people with similar disorders, their families and circles, and the media. In the case of a disease with a low life expectancy such as LC, the search for CAM, especially by the relatives of the patient, draws attention in clinical observations.

In this study, the number of male patients was more prevalent (90%), and the prevalence of CAM use in the male patients (n: 56/90) was higher (62.2%), in line with previous studies.[10]

In the analysis of CAM use and gender, CAM preferences of men and women were observed at approximately similar rates, and this result was found to be consistent with some studies, but inconsistent with some others in which gender was found to affect CAM use, particularly in the female patient group.[4,27,28] In addition, when the factors affecting the use of CAM were examined in our study, it was seen that family insistence was at the forefront in men, approximately similar rates were observed between male/female groups in terms of reporting the use of CAM to their doctor, no difference was observed between male/female groups in the effectiveness-benefit analysis of the CAM method used.

In the literature, there are studies reporting that CAM preference is related to educational status, and that CAM preference rates are high in patients with low education or with high education, but in this study, education level was not correlated with frequency of CAM use, purpose of CAM use, and reporting CAM use to the physician.[4,20,29] This result was not found to be compatible with the literature data.

In this study, there was no statistical difference in CAM preferences according to the rural-urban location of the living area, but it was determined that those living in the city used CAM more. In the liter-

ature, this result found consistent with studies in which city life increased the frequency of CAM preference, but inconsistent with studies reporting it decreased.[30,31]

In this study, when the histopathological tumor types and CAM preference statuses of the patients were examined, it was found that patients with SCLC used CAM at a higher rate (p=0.046). This result was not compatible with the study which reported that tumor type had no effect on the frequency of CAM use.[27]

In this study, it was found that patients frequently preferred herbal products, which was consistent with the literature data.[30] With the thought that organic products are harmless and the desire to find healing, there may be a high interest in such CAM methods. At the same time, easy access to such products by patients may increase the frequency of preference for herbal alternative supplements.[14]

The first five most frequently preferred herbal products in the list of preferred products were turmeric, ginger, black cumin, stinging nettle and carob, the first five most frequently preferred animal products were yogurt-kefir, giblets, bone marrow, bee pollen and propolis, the first five most frequently preferred fruit/vegatables were lemon, apricot kernels, garlic, dates and dried apricots, and the most frequently preferred supplement in the "other" group was vitamins. Nettle, carob and vitamins were among the most common products reported in the available studies in the literature, they were also among the frequently preferred products in this study, in line with those studies.[10,20,27]

In addition, rarely preferred (1-3%) preferred by the patients were wheatgrass, reishi mushroom, cancer grass, bitter melon, shark cartilage, and donkey milk. very rarely preferred products not present in the list were blue scorpion venom, silver juice, Swedish syrup, pine water, pine bark fiber, and okra seed.

Contrary to the study reported that those using CAM prior to cancer diagnosis preferred a CAM method more frequently, we found that use of CAM before the diagnosis of LC did not affect CAM therapy use after the diagnosis of LC.[31] In addition, it was determined that the patient's family history of cancer did not affect the choice of CAM.

In this study, it was determined that approximately one out of 4 patients used CAM with the recommendation of his/her family.[32]

Contrary to the studies in the literature reporting the media and the internet as the main sources of information in the use of CAM, it was noted in our study that internet-media advertisements were not effective for using CAM therapy.[30]

In this study, 51.5% of the patients stated they believed that CAM therapy they used was effective-reliable, and 35.9% reported that they benefited from their CAM therapy and were satisfied with it. Our results were consistent with previous studies, except for one study that showed that the patients were not satisfied with CAM therapy.[6,9]

In this study, reporting the use of CAM to their doctor was not correlated with the genders, the region of residence or education level, however our rate of reporting the CAM therapy to the doctor (51.56%) was higher than the results of previous studies.[30]

When the patients who reported their CAM method to their doctors were considered, 45.4% of the doctors left the decision of using the method to the patient, and 18.1% said it was a risky method.[30]

It was determined that the most frequent answer for not informing the doctor about the CAM therapy was "he/she did not ask whether I used CAM therapy or not". It is noteworthy that about one out of 4 patients did not inform their doctors about their CAM therapy because they were afraid of their reaction.[15]

Cancer and cancer treatment have major impacts on nutritional statuses of the patients, since they cause alteration of the metabolic function and reduction in food intake.[33] Studies have proven that malnutrition is a sign of morbidity in advanced cancer, weight loss has been associated with poor prognosis, and an important predictor of mortality. Improvement of nutritional quality may change prognosis, quality of life and functional status, and facilitates tolerance to treatment.[34]

In this study, the question of whether a special nutritional recommendation was made by the doctor-

health team was answered as "no nutritional advice was given" (directing to a dietitian, recommending a nutrition list) at a rate of 71.2%, only 72.2% of the patients were told not to consume carbohydrates (such as honey, molasses) and 60.3% were told not to eat grapefruits. In this context, it has been reported in the literature that a standard diet is insufficient to improve physical performance and body composition and it cannot meet the energy and protein intake recommended for cancer patients, however diets rich in fat and poor in carbohydrates as well as ketogenic diets can cause positive changes in body weight and composition.[35]

In this study, comparison of the patients who were given and not given nutritional advice by their doctors showed that the patients who were not given nutritional advice by their doctor used CAM therapies at a higher rate (p=0.040). This can cause unwanted side effects, and is associated with significant potential harm.[23] In conclusion, despite a high preference for CAM therapies, misinformation about the safety and efficacy of CAM therapies used for cancer is common, and the potentially risky consequences of these choices may cause dashed hopes.[24,26]

This study had some limitations. This is a cross-sectional survey. The questions asked and product lists used in the study design may cause bias such as recall bias or selection bias. In addition, since our study was conducted in a tertiary medical center, the patients participated in the study might have been followed more closely and could have adapted to conventional treatment. The results of this study cannot be generalized to other cancer patients since it was conducted only on the patients diagnosed with LC.

CONCLUSION

Nutritional disorders are frequently observed in cancer patients due to the effect of both the disease and ChT treatment. It is obvious that this situation will also affect the treatment response and the survey. This situation may cause the patient and his family to have a negative attitude towards ChT. A negative attitude towards ChT with a diagnosis of a serious disease such as cancer may lead to the search for alternative methods. This is an expectation of "hope" and doctors should not ignore this expectation. Doctors should know whether their patients use an alternative method and should respect their choice. The most important source of information about the benefit or potential harm of the alternative method should be the patient's doctor, and patients should be questioned and informed about this issue. It is important to correctly evaluate the use of alternative supplements used by the doctor and dietitian in addition to the programming of specific nutrition for cancer patients. Considering the treatment success and side effects of ChT, it is a great desire and expectation to find a proven effective alternative treatment method.

Source of Finance

During this study, no financial or spiritual support was received neither from any pharmaceutical company that has a direct connection with the research subject, nor from a company that provides or produces medical instruments and materials which may negatively affect the evaluation process of this study.

Conflict of Interest

No conflicts of interest between the authors and / or family members of the scientific and medical committee members or members of the potential conflicts of interest, counseling, expertise, working conditions, share holding and similar situations in any firm.

Authorship Contributions

Idea/Concept: *Hüsnü Baykal, Ayşe Füsun Ülger, Mehmet Bahadır Berktaş;* ***Design:*** *Hüsnü Baykal, Ayşe Füsun Ülger, Mehmet Bahadır Berktaş;* ***Control/Supervision:*** *Hüsnü Baykal, Ayşe Füsun Ülger, Mehmet Bahadır Berktaş;* ***Data Collection and/or Processing:*** *Hüsnü Baykal, Ayşe Füsun Ülger, Mehmet Bahadır Berktaş;* ***Analysis and/or Interpretation:*** *Hüsnü Baykal, Ayşe Füsun Ülger, Mehmet Bahadır Berktaş;* ***Literature Review:*** *Hüsnü Baykal, Ayşe Füsun Ülger, Mehmet Bahadır Berktaş;* ***Writing the Article:*** *Hüsnü Baykal, Ayşe Füsun Ülger, Mehmet Bahadır Berktaş;* ***Critical Review:*** *Ayşe Füsun Ülger, Mehmet Bahadır Berktaş;* ***References and Fundings:*** *Hüsnü Baykal.*

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