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Journal of Clinical Trials

Research Article

Complementary Therapies Use Among Cancer Patients: A Cross-Sectional Study

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ABSTRACT

Objective: Antineoplastic therapies side effects amplify the patient discomfort/suffering. To prevent/minimize drugs damage, an increasing number of cancer patients use complementary and alternative medicine. The aim of this study was to measure prevalence and benefits experienced from the use of complementary therapies among 405 cancer patients. An anonymous self-completed questionnaire has been used.

Result: 248 (61.23%) patients used complementary and/or nutritional supplements and 99 (24.44%) at least one of them. These remedies were recommended by pharmacists (36.1%), oncologists (27.3%), or general practitioners (15.4%). Two hundred twenty-four (55.31%) patients believed they had benefited from their use. Among 109 patients that would not inform the oncologist: 60.9% "do not believe it is useful/important to talk about it", 28.3% "have tried in the past and it was not useful"; 17.9% "do not consider her/him the right person".

Discussion: This study found that cancer patients use complementary therapies, often by personal choice, or through advertising, the internet or television programs, some of them do not consider it useful or appropriate to talk about it with their oncologist. Today we have both scientific evidence and instruments to learn about the interactions between complementary therapies and antineoplastic treatments. Especially about the possible adverse effects of complementary therapies during oncological treatment.

Conclusion: Therefore, the training and updating of oncologists on complementary therapies and their use can no longer be postponed. Equally important is to adopt "active listening" to the patient on use, therapeutic options and risk-benefit ratio, in line with the evidence of health-based medicine.

Keywords: Complementary therapies; Cancer; Patients; Diagnosis; Oncology

INTRODUCTION

Early diagnosis and the plurality of new antineoplastic treatments of proven efficacy have reduced cancer mortality rates [1,2]. Antitumor therapies have side effects, sometimes serious, that affect the quality of life, cause discomfort and suffering, can influence the response to treatments and sometimes cause abandonment of therapy [3-5]. This is often the reason why an increasing number of cancer patients resort to the use of so-called unconventional approaches, such as complementary therapies and nutritional supplements, with the aim of preventing or minimizing the damage of chemotherapy, strengthening the immune system and improving the response to conventional therapies [6-13].

The use of these remedies increased in recent decades, but not the awareness for example that many nutritional supplements may contain active ingredients that could have biological effects in the body. This could make them unsafe in the presence of certain pathologies or dysfunctions or for some people undergoing pharmacological treatment. The adverse effects caused by food supplements are mainly due to their inappropriate use, to excessive doses assumed, or to the use of concomitant drugs.

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Received: 27-Jun-2025, Manuscript No. JCTR-25-37877; **Editor assigned:** 30-Jun-2025, PreQC No. JCTR-25-37877 (PQ); **Reviewed:**15-Jul-2025, QC No. JCTR-25-37877; **Revised:** 23-Jul-2025, Manuscript No. JCTR-25-37877 (R); **Published:** 31-Jul-2025, DOI: 10.35248/2167-0870.25.15.599

Citation: Mazzotti E, Specchia M, Mazzuca F (2025). Complementary Therapies Use Among Cancer Patients: A Cross-Sectional Study. J Clin Trials. 15:599.

Among cancer patients, the prevalence of complementary remedies uses ranges from 17 to 50% and this variability is largely attributable to the different definitions adopted and modified over the years [14-22].

In 2017, the definition of Complementary and Alternative Medicine (CAM) was expanded to include: (a) nutritional approaches, including special diets, food supplements, vitamins and minerals, plant and herbal products and probiotic products; (b) mind-body practices, such as yoga, meditation, qigong, acupuncture and spinal manipulation (chiropractic and osteopathy), relaxation techniques, hypnotherapy and Pilates; (c) other complementary approaches to health that do not fall under the previous, including Ayurvedic medicine, Chinese medicine, homeopathy, naturopathy [22].

To ensure patient health and high-quality care, the Society for Integrative Oncology (SIO) and the American Society of Clinical Oncology (ASCO) have defined clinical conduct guidelines on how to practice Integrative Oncology (IO) [23].

The aim of this study was to measure the prevalence of use of CAM among cancer patients waiting for an outpatient follow-up visit at a large university hospital in Rome.

MATERIALS AND METHODS

Patients who met the following criteria were enrolled in the study: Age greater than or equal to 18 years; diagnosis of cancer histologically confirmed; signature of informed consent. Patients who presented a serious mental deterioration at the clinical evaluation and those with a knowledge of the Italian language, spoken or written, insufficient to understand and fill out questionnaires were excluded.

Patients were contacted by study staff who, after explaining the purposes and methods of the study and having them sign the informed consent and consent to the processing of personal data, gave them a self-report so called "paper-and-pencil" questionnaire to fill out in the waiting room.

The Questionnaire on Complementary Therapies Treatment (QCTC) is a checklist of 25 statements developed for this study:

- A session has been developed to explore: (1) The type of integrative and complementary remedies that patients use (acupuncture, anthroposophy-Steiner's system, ayurvedic medicine, Bach flowers, bio-resonance, kinesiology, craniosacral therapy, eutony, phytotherapy, hypnosis, music therapy, homeopathy, osteopathy/chiropractic, reiki, reflexology, shiatsu, Simonton method, sophrology, yoga, meditation) and the benefits that patients have been found (yes/no); (2) The food supplements' use (yes/no), frequency (occasionally, habitually), kind (vitamins/minerals, sports supplements, fiber supplements, fatty acid supplements, menopause supplements, probiotics, antioxidants, supplements based exclusively/or not on plants), reasons (to improve health/wellbeing; as nutritional integration; to counteract the toxicity of antineoplastic treatment; as an alternative to drugs; to improve physical performance; to delay aging; in case of dissatisfaction with conventional therapies; because they have fewer side effects/lesser toxicity; they was considered the only possible alternative; as holistic approach; for curiosity; to improve physician-patient relationship, they are natural products), (3) Foods avoided (yes/no), which foods, why the food has been avoided, benefits obtained.
- Another set of questions explored the font of information about these products and if patients informed the oncologist about their use. The benefits found (a lot, quite a lot, a little, not at all, I don't know).
- Knowledge about nutritional supplements side effects and communication clinician/patient was also explored.

Sociodemographic, clinical and lifestyle data (gender, age, marital status, years of school, family history of oncological pathologies, diet, alcohol use, smoking, physical activity and frequency, diagnosis, surgery, chemotherapy, radiotherapy, immunotherapy, hospitalization, cancer severity, side-effects) was also collected.

Statistical analysis

Variables are summarized and presented descriptively as counts and percentages. Pearson's χ^2, or Fisher's exact test will be used, depending on the nature and distribution of the variables. Stata 11.0 statistical software will be used for statistical analyses.

This study was conducted in accordance with the recommendations of the Declaration of Helsinki and the rules of Good Clinical Practice. The study was approved by the relevant Ethics Committee (ref n. 456; 21 April 2023).

RESULTS

405 participants (207; 51.11% males and 198; 48.89% females) were enrolled in the study. The mean age was 64.63 (12.46). Males and females differed significantly in age, relationship status, years of education, cancer type and antineoplastic treatment's side-effects. In Table 1 complete demographic and clinical data are reported.

Table 1: Demographic and clinical characteristics, separate by males and females (N; %).

	All	Males	Females	
	N=405	N=207 (51.11%)	N=198 (48.89%)	p-value[a]
Age (yrs); mean (SD)	64.63 (12.46)	68.06 (11.24)	61.02 (12.69)	<0.001
Age (yrs)				
31-55	99 (24.44)	30 (14.49)	69 (34.85)	

56-65	98 (24.20)	44 (21.26)	54 (27.27)	
66-75	118 (29.14)	74 (35.75)	44 (22.22)	
76+	90 (22.22)	59 (28.50)	31 (15.66)	<0.001
Relationship status				
Not in a relationship	154 (38.02)	69 (33.33)	85 (42.93)	
Significant spouse/partner	251 (61.98)	138 (66.67)	113 (57.07)	0.047
Schooling				
<8	149 (36.79)	95 (45.89)	54 (27.27)	
>8	256 (63.21)	112 (54.11)	144 (72.73)	<0.001
Cancer type				
lung	132 (32.59)	86 (41.55)	46 (23.23)	
breast	86 (21.23)	0	86 (43.43)	
colorectal	57 (14.07)	33 (15.94)	24 (12.12)	
other	124 (30.62)	85 (41.06)	39 (19.70)	<0.001
Cancer severity (by patient)				
Mild-moderate	158 (39.01)	77 (37.20)	81 (40.91)	
Severe- very severe	247 (60.99)	130 (62.80)	117 (59.09)	0.444
Surgery*				
yes	236 (58.27)	117 (56.52)	119 (60.10)	0.465
CHT*				
yes	334 (82.47)	165 (79.71)	169 (85.35)	0.135
Immunotherapy*				
yes	152 (37.53)	83 (40.10)	69 (34.85)	0.276
Radiotherapy*				
yes	179 (44.20)	93 (44.93)	86 (43.43)	0.762
Oncological treatments' effect side (by patient)				
0	52 (12.84)	32 (15.46)	20 (10.10)	
1	155 (38.27)	87 (42.03)	68 (34.34)	
2	99 (24.44)	53 (25.60)	46 (23.23)	
3+	99 (24.44)	35 (16.91)	64 (32.32)	0.003

Note: a: Chi square test; * answer "no" as complement to 405

As shown in Table 2, complementary and/or nutritional supplements were used by 248 (61.23%) patients. The nutritional supplements more frequently used by 149 patients were vitamins and minerals (38.10%), followed by probiotics (12.43%), supplements exclusively/or not based on plants (8.47%), antioxidants (8.20%), sport (9.52%) or fiber supplements (9.52%). The reasons for choosing supplements were to improve health status (49.24%), to integrate nutritional deficiencies (12.84%), to counteract toxicity treatment (12.54%), to have less side effects (6.42%) and because they are "natural products" (5.50%). No one had chosen them out of curiosity. 3.7% considered them an alternative to drugs, 1.22% a holistic cure, 1.22% the only solution and less than 1 percent thought that their use would have favored a better doctor-patient relationship.

One hundred twenty-seven (31.36%) patients practiced physical activity. One hundred (24.69%) followed a diet, 33 (8.15%) followed a meat-free diet, 31 (7.65%) a macrobiotic diet, 27 (6.67%) a low-calorie diet and 9 (2.22%) other. A significant difference emerged between males and females, 36 of the former (17.39%) followed some diet *versus* 64 (32.32%) of the latter. Of the 167 (41.23%) who consumed wine, 105 (50.72%) were males and 62 (31.31%) females.

Table 2: Complementary remedies, nutritional supplements, physical activity, diet and benefits, separate by males and females (N; %).

	All	Males	Females	
	N=405	207 (51.11%)	198 (48.89%)	p-value [a]
Complementaryremedies and nutritional supplements				
no-no	157(38.77)	108(52.17)	49(24.75)	
yes-no	24(5.93)	10(4.83)	14(7.07)	
no-yes	149(36.79)	68(32.85)	81(40.91)	
yes-yes	75(18.52)	21(10.14)	54(27.27)	<0.001
Physicalactivity				
no	278(68.64)	150(72.46)	128(64.65)	
yes	127(31.36)	57(27.54)	70(35.35)	0.090
Diet				
no	305(75.31)	171(82.61)	134(67.68)	
yes	100(24.69)	36(17.39)	64(32.32)	0.001
Benefits as perceived by patient				
no	181(44.69)	118(57.00)	63(31.82)	
yes	224(55.31)	89(43.00)	135(68.18)	<0.001

Patients reported that the use of complementary medicines and/or nutritional supplements was recommended to them by the pharmacist (36.1%), oncologist (27.3%) and GP (15.4%).

Regardless of the type of complementary and/or nutritional supplements used 224 (55.31%) patients believed they had benefited from them. 296 (73.09%) have informed of this the oncologist. Among patients that would not inform the oncologist: 60.9% "do not believe it is useful/important to talk about it", 28.3% "have tried in the past and it was not useful"; 17.9% "do not consider her/him the right person".

DISCUSSION

Nearly half of the patients who participated in this study chose to use supplements to improve their health. One in five did so by personal choice, through advertising, the Internet or television programs and a similar percentage does not consider it useful to talk about it with the oncologist.

This lack of discussion with the doctor could result in harmful consequences for health. While some dietary supplements can compensate for a lack of essential nutrients and thus improve general health or help patients manage the side effects of cancer therapy, on the other hand the safety and efficacy of many others requires further studies, especially regarding the herb-drug interaction or interaction with active ingredients [10]. Interactions that can cause side effects and reactions, especially when taken in high doses, or in multi therapy. Last but not least is when supplements are used as a replacement for prescribed drugs. The users of dietary supplements tend to incorporate these products into their lifestyles as part of a broader focus on healthy living. Many of users do not have accurate information about nutritional supplements.

A review of the literature over the last 25 years shows no substantial changes in the attitude and use of CAM among health professionals. Just a few examples. In Australia the results of a survey on the knowledge and attitudes of 161 oncologists regarding non-traditional therapies used by cancer patients, had highlighted a poor knowledge of the non-traditional therapies that can be used/used by their patients [23]. In Japan, only 39% of 751 oncologists declared their perception and attitude towards CAM [24]. Most of them believed CAM was ineffective, a belief based on the lack of reliable information (85%). 84% considered the possibility of drug interactions between anticancer drugs and CAM. 80% did not promote but did not recommend stopping the use of CAM. In Brazil, a questionnaire on CAM, sent to all members of the Brazilian Cancer Society (n=655), had a response rate of 18% [25]. Most respondents knew at least one type of CAM and had used at least one. Two out of three used to ask patients about the use of CAM and 1 out of 10 would have prescribed their use. Generally, the published results did not show substantial differences by gender, education, culture. A recent review that considered 5628 studies published between 2002 and 2017, highlighted, out of 25 relevant studies, that acceptance and use of CAM varies between different medical specialties (42%-62% and 37%-54%, respectively), there were no data on oncologists [26,27]. Today we have scientific evidences and instruments to steer the interactions between complementary therapies and antineoplastic treatments. Especially about the possible adverse effects of complementary therapies during oncological treatment. Therefore, the training and updating of oncologists on complementary therapies and their use can no longer be postponed. It is important to expand the evidence base in the oncology field regarding safety and efficacy, with the aim of training future professionals aware of the risks but also the benefits of CAM.

Equally important is to adopt "active listening" to the patient on use, therapeutic options and risk-benefit ratio, in line with the evidence of health-based medicine.

CONCLUSION

The gap between the skeptical attitude of physicians and the frequent and unsupervised use of CAM by cancer patients requires training for healthcare professionals on the knowledge and management of CAM in oncology, while encouraging a patient-physician dialogue that goes beyond the current boundaries of cancer "care".

On the other hand, negative perceptions of CAM also arise from the lack of proven efficacy of these products and concerns about drug interactions with anticancer treatments. The necessary training must be based on new rigorous studies on safety and efficacy in specific fields, such as oncology.

CONFLICTS OF INTEREST

The authors declared no potential conflicts of interest with respect to the research, authorship and/or publication of this article.

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