

The use of complementary and alternative medicine among cancer patients

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Introduction Complementary medicine and alternative medicine are popular among patients with various diseases; however, they are most often used by cancer patients.

The history of alternative medicine dates back to the 18th century. Currently, alternative medicine is widely used in many countries, and since the 1990s, experts have observed that spending on unconventional therapies increased significantly.¹

In Poland, interest in unconventional therapy among cancer patients and their relatives is on the rise. However, it is difficult to estimate how often various alternative medicine modalities are used. There is still no epidemiological research in this area. Therefore, the results of the current survey constitute a source of information for physicians working with oncological patients on a daily basis.

The aim of this survey was to assess the awareness of cancer patients about the available complementary and alternative therapies. The study aims to determine which alternative medicine methods are most often chosen by Polish patients with cancer, and why and when do they choose them.

Patients and methods An anonymous survey entitled "Use of alternative medicine methods in the treatment of cancer" consisting of 30 questions (10 on demographic data and 20 on awareness of alternative medicine methods) was made available in an electronic form between April 26, 2020 and May 30, 2020. Popular social media were used and made available to representatives of breast cancer organizations who disseminated the survey among patients. A total of 286 responses were obtained. The anonymous survey did not have the features of an experiment, which was confirmed by the Bioethical Committee of the Poznan University of Medical Science.

Statistical analysis The analysis was carried out using the IBM SPSS Statistics 26 program (IBM Co., Armonk, New York, United States). The significance level was set at a *P* value of 0.05. The statistic values for the χ^2 test for data independence were calculated. The Cramer V coefficient was calculated to assess the strength of association. In order to detail the occurring relationships, the *z* test was used to compare the structure indices (percentage value). Bonferroni correction was applied.

Results Characteristics of the surveyed group A total of 280 women (97.9%) and 6 men (2.1%) participated in the survey. The survey group mainly included young people, up to 50 years old (194 [67.9%]), followed by persons aged 51 to 65 years (81 [28.3%]). There were significantly fewer elderly people aged 66 to 75 years (9 [3.1%]) and older than 75 years (2 [0.7%]).

The survey was mostly completed by patients with breast cancer (274 [95.8%]). Almost half of the patients received cancer therapy for less than a year (136 [47.6%]), and one-third for 2 to 3 years (95 [33.2%]). In the remaining participants, the treatment lasted at least 4 years (55 [19.2%]).

The survey was mostly completed by patients with cancer in early stages, that is, without distant metastases: 76 (26.6%) in stage I, 116 (40.6%) in stage II, and 74 (25.9%) in stage III. Only 20 people (7%) had cancer in the stage of dissemination (stage IV).

The vast majority of respondents underwent surgical treatment (234 [81.8%]). A total of 212 underwent chemotherapy (74.1%), 192 hormone therapy (67.1%), 173 radiotherapy (60.5%), and 20 immunotherapy (7%).

Main analysis More than two-thirds of respondents (196 [68.5%]) were able to define an

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alternative medicine method as “treatment not supported by scientific evidence,” 50 respondents (17.5%) thought it was “treatment with proven efficacy” (z test, $P < 0.001$), and 40 (14%) were unable to answer this question.

The vast majority associated “alternative medicine methods of cancer treatment” with unconventional methods (208 [72.7%]) and with natural medicine (194 [67.8%]). These 2 answers were indicated by a comparable proportion of patients (z test, $P = 0.2$), followed by dietary supplements (122 [42.7%]), homeopathy (78 [27.3%]), or complementary medicine (36 [12.6%]). All of those answers were indicated significantly less frequently than the first 2 answers (z test, in each case $P < 0.01$).

About two-thirds of respondents (196 [68.5%]) deemed an alternative medicine method as supportive treatment in cancer, and less than one-third of respondents (78 [27.3%]) claimed that it has no or little impact on cancer treatment. Eighteen respondents (6.3%) thought that alternative medicine methods replaced conventional treatment, and 13 (4.5%) did not know what these methods were for.

Comparable number of respondents did not have experience with alternative medicine methods (154 [53.8%]) or used its various forms (132 [46.2%]) (z = 1.84; $P = 0.07$). The most common premise for using unconventional therapies was the “willingness to self-support in the fight against cancer” (121 [42.3%]).

From the entire study population, 50 (17.5%) began therapy after the diagnosis of cancer and 51 (17.8%) during cancer treatment, 18 (6.3%) after the end of cancer therapy, 14 (4.9%) after the progression of the disease, 5 (1.7%) were not satisfied with conventional therapy, 3 (1%) after occurrence of pain.

A total of 112 patients (39.2%) did not consult their physician about the possibility to include unconventional treatment, which was significantly less than the number of patients who did consult their physician (z test, $P = 0.02$).

Seventy-two respondents declared that they never mentioned any additional therapy to the physician (25.2%), 52 were afraid (18.2%), 42 (14.7%) told their physician as soon as they started treatment, and 4 (1.4%) after the end of treatment. The physicians advised against using alternative medicine methods in 31 patients (10.8%) who decided to tell them.

The most common types and alternative treatment methods that patients chose are shown in **TABLE 1**. Regular use of alternative medicine methods was declared by 100 respondents (35%).

The analysis of costs incurred by patients using unconventional methods was as follows: 84 respondents (29.4%) spent up to 100 PLN per month, which was more than 66 (23.1%) who spent between 100 and 500 PLN, but the difference did not reach the level of statistical significance (z test, $P = 0.08$). A total of 112 people (39.2%) did not answer this question.

Dependency study There was a dependence between age and knowledge about alternative medicine methods (Cramer V = 0.286, $P < 0.001$). Younger persons did not know what alternative modalities are used to treat cancer more often than older.

There was a dependence between the place of residence and the impact on alternative medicine methods of cancer treatment (Cramer V = 0.209, $P = 0.01$). Individuals from larger towns and cities were significantly more likely to believe that alternative medicine methods have no or little impact on cancer treatment compared with those from small towns and villages.

There was a dependence between education and association of alternative medicine methods of cancer treatment with complementary medicine (Cramer V = 0.182, $P = 0.02$).

There was a dependence between education and awareness of alternative medicine methods in oncology (Cramer V = 0.238, $P = 0.001$). Also, the higher the education, the more often the respondents were aware of alternative medicine methods in oncology.

Discussion The results of our survey present information on the awareness of Polish cancer patients about alternative medicine methods as well as a summary of the most frequently used therapies and monthly costs incurred by them. The expenses for alternative medicine methods in Poland are difficult to estimate due to lack of data, which increases the importance of the current study.

The respondents had good awareness of alternative medicine and 68.5% of them correctly defined it. The main source of information was the Internet (75.5%) and most of the respondents never talked to the attending physician (1%). Studies indicate that patients are more likely to talk about using alternative medicine methods if asked by their physician.²

About one-third of patients (35%) who participated in our study used unconventional methods on a regular basis and almost the same number of patients did so occasionally (31.5%). A meta-analysis of the survey of over 65 000 cancer patients conducted by Horneber et al³ indicated that as many as 49% of cancer patients in the 21st century admitted to using alternative medicine.

The Internet is the main source of information for patients worldwide about cancer, therapy, prognosis, and alternative treatment methods, which is indicated by our results and by studies from other countries.^{4,5} The most important support, apart from family and relatives, should be the physician, who also should be the source of factual knowledge.

Literature search showed that the interest in alternative or unconventional medicine grows with the severity of cancer, and the relapse or progression of disease.⁶⁻⁸ In our study, the majority of respondents were patients with cancer without distant metastases (82.9%), yet the interest

TABLE 1 The most common alternative medicine methods chosen by cancer patients

Method	Value
Types of alternative medicine methods	
Alternative medical systems such as homeopathy, acupuncture	22 (7.7)
Mind-body intervention such as meditation, hypnosis, music therapy	32 (11.2)
Pharmacological treatment not supported by scientific evidence	27 (9.4)
Manual therapy methods, eg, therapeutic massage	17 (5.9)
Natural products such as herbs	118 (41.3)
Spiritual therapies	17 (5.9)
Energy healing therapy, eg, therapeutic touch, bioresonance, magnetic field therapy	14 (4.9)
Exercise-based therapy, eg, yoga, t'ai chi	34 (11.9)
Nutritional therapies such as diets, vitamins, supplements	143 (50)
I have not used alternative medicine methods	71 (24.8)
Specific alternative medicine methods	
Aromatherapy	9 (3.1)
Bioresonance	12 (4.2)
Hypnosis	2 (0.7)
Homeopathy	28 (9.8)
Yoga	41 (14.3)
Pharmacological treatment with unproven efficacy	35 (12.2)
Ayurvedic medicine	4 (1.4)
Therapeutic massage	20 (7)
Tibetan medicine	3 (1)
Meditation	33 (11.5)
Prayer	90 (31.5)
Music therapy	23 (8)
Naturopathy	29 (10.1)
Magnetic field therapy	2 (0.7)
Cognitive and behavioral therapy	13 (4.5)
Traditional Chinese medicine	2 (0.7)
T'ai chi	2 (0.7)
Osteopathy	13 (4.5)
I have not used alternative medicine methods	73 (25.5)

Data are presented as number (percentage).

in alternative medicine was quite high, about half of them used different methods (46.2%). The patients mainly used diet (50%), natural means, such as herbs (41.3%), meditation (11.2%), acupuncture (7.7%), massages (5.9%) or physical activity (11.9%). Less than 10% received additional pharmacological treatment, which is more frequently observed among patients with disseminated disease.

Alternative medicine methods become more common in everyday clinical practice. Data from our survey and other foreign studies should be analyzed with great care. In 2007, United States citizens spent 33.9 billion USD for visits at unconventional medicine clinics and alternative therapy products.⁹ The monthly costs incurred by Polish patients are sometimes a significant part of their budget.

Limitation of the study The survey was conducted online only. The study has its limitations due

to a rather homogeneous group of respondents, that is, women with breast cancer. Thus, our analyses focused on this particular population, and was not extrapolated to patients with other cancer diagnoses.

Conclusions It is necessary to disseminate education on alternative medicine among patients and physicians as well as to encourage dialogue on this subject. Only about one-fourth of respondents did not use any type of alternative medicine.

ARTICLE INFORMATION

CONFLICT OF INTEREST None declared.

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