

# Complementary and alternative therapies in oncology

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## Introduction

Cancer is the second leading cause of death worldwide after cardiovascular diseases, and its incidence is growing. The efficacy of cancer treatment is increasing due to a better understanding of its biology and improvements in the diagnostic and therapeutic methods involved. Active patient participation in the diagnostic and therapeutic process is encouraged to increase their well-being. However, greater patient awareness, more accessible public data, and determination often lead to seeking unproven alternative therapies. Complementary and alternative medicine (CAM), as opposed to evidence-based medicine (EBM), is not grounded on well-designed clinical studies, thus they may not be effective or can even harm patients [1]. These methods are mostly attempted to increase treatment efficacy, alleviate treatment side effects, or improve the patient's physical and mental condition [2, 3]. However, in many instances, patients abandon the main treatment and replace it with alternative methods, which can considerably worsen their prognosis.

One of the reasons for seeking unconventional methods is the lack of time and incomprehension patients needs of medical staff. Cancer therapy requires a complete understanding of both parties and a truthful dialogue to ensure the safety and well-being of the patient. In addition, a sincere relationship with the treating physicians and their basic knowledge of alternative treatments may significantly influence a patient's decision-making process.

Increasing the use of CAM by cancer patients constitutes a challenge for health care systems [4]. Apart from social edu-

cation, a crucial element of managing this problem is good communication between cancer patients and medical staff. This aim may be achieved by competence, understanding, patience, and adequate support for patients.

Health care professionals generally question the value of CAM and see no need to increase their expertise on this subject. However, a basic knowledge of CAM may facilitate discussion with patients and influence their decisions.

## Discussion

Perdyan et al. analyzed 91 institutions offering alternative therapies that most often concern rheumatological, neoplastic, and chronic diseases [5]. Most institutions offered both drug therapies and therapeutic techniques. The most common were intravenous infusions of vitamin C and bioresonance therapy. According to the analysis, 40% provided anti-cancer therapies and 46% alternative methods for oncological treatment. According to the study's authors, intravenous infusions of IVCI, glutathione, and ozone dominated anti-cancer therapies. A definite minority of institutions provided specializations and doctors' names in the facility. The average consultation price was PLN 179, while anti-cancer therapies were significantly more expensive PLN 250 than non-cancer therapies – PLN 150 in the analysis.

An analysis by Perdyan et al. points out that in Poland, cancer patients often look for alternative therapies not supported by scientific evidence. The wide range of services offered by institutions dealing with alternative therapies indicates the great interest of patients. The market of pro-

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**Table I.** Most commonly used CAM methods by cancer patients

Most commonly used CAM methods by cancer patients					
Perdyan et al. (n = 91)			Puskulluoglu et al. (n = 155)		
vitamin C intravenous infusion	n = 47	52%	dietary supplements	n = 31	40.8%
bioresonance	n = 44	48%	prayer	n = 24	31.6%
vitamin intravenous infusion (other than vitamin C)	n = 42	46%	herbal medicine	n = 20	26.3%
ozone therapy – autotransfusion	n = 32	35%	special diet / modification of diet	n = 17	22.4%
intravenous infusion of alpha-lipoic acid	n = 24	26%	apitherapy	n = 8	10.5%
diet	n = 19	21%	quackery / bioenergotherapy	n = 7	9.2%
colonic irrigation	n = 19	21%	psychotherapy / support groups	n = 6	7.9%
herbal medicine	n = 13	14%	homeopathy	n = 5	6.6%
intravenous infusion of glutathione	n = 13	14%	amygdalin	n = 4	5.3%
acupuncture	n = 10	11%	capsaicin	n = 4	5.3%
massage	n = 10	11%	yoga	n = 3	3.9%

posed alternative methods has significantly developed over the last ten years, which can be deduced corroborated from the rising prices of the services offered. Polish cancer patients are willing to spend more and more on alternative methods, which significantly drives up the price of the CAM market without state regulation.

The survey conducted by Puskulluoglu et al. on a group of 310 cancer patients in Poland confirms that a significant proportion of cancer patients use alternative methods during cancer treatment [6]. The authors showed that almost a quarter (24.1%) of patients admitted using CAM during active oncological treatment. The study showed that the risk factors for CAM use include: female gender, higher education, and radical oncological treatment. Patients most often decide to use alternative methods to strengthen their immune systems (46.1%), improve well-being, and counteract the adverse effects of cancer and its treatment (40.8%). Importantly, cancer patients were satisfied with the use of alternative methods (Likert's 3.5/5). Dietary supplements (40.8%), prayer (31.6%), and herbal medicine (26.3%) are the methods that patients chose most willingly. According to the authors, almost half of the patients (46.6%) did not admit using alternative methods to their doctors (tab. I).

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