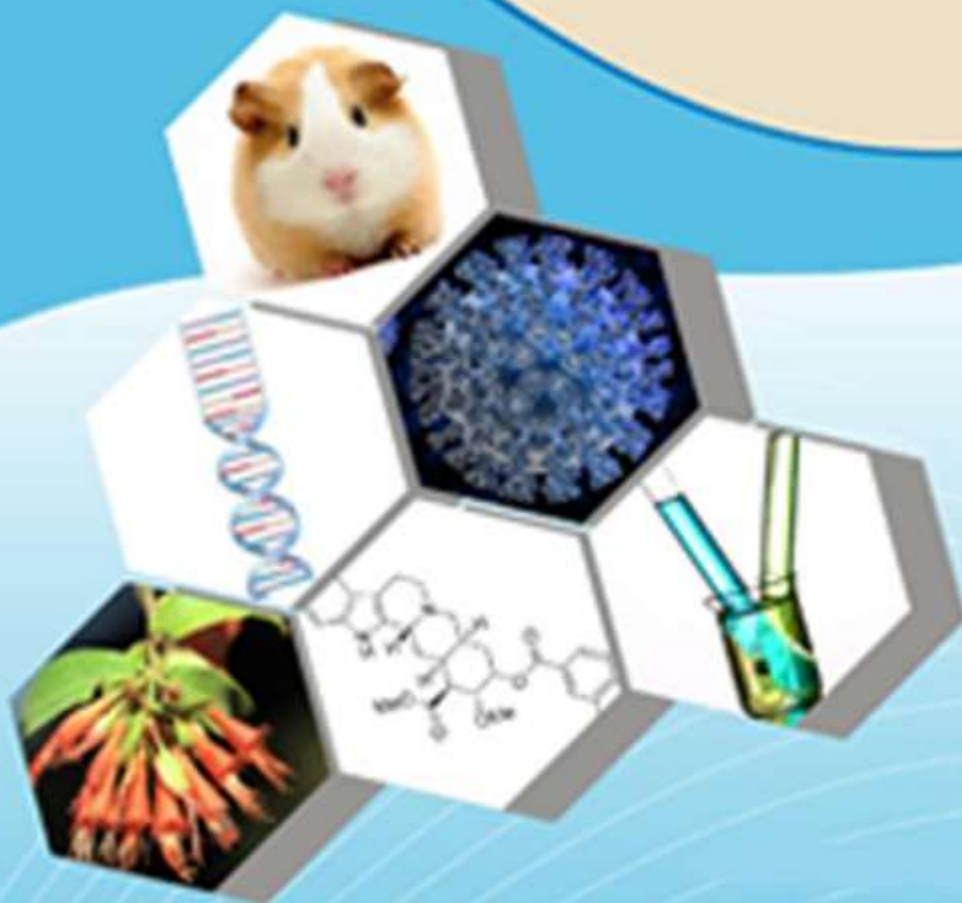




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Knowledge, attitudes, and practices of oncology health professionals on complementary medicines

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Abstract

Context: About 50% of cancer patients use some kind of CAM, raising worries about possible drug interactions with standard cancer therapy. This research aimed to investigate oncology staff members' CAM knowledge, attitudes, and behaviors in order to better understand how they may contribute to the safe use of these therapies.

The purpose of this research was to evaluate the CAM knowledge, attitudes, and behaviors among oncology professionals in Australia.

Methods: Three national oncology professional organizations' members were surveyed through online questionnaire to assess their familiarity with, and comfort with using, complementary and alternative medicine (CAM). Nine physicians, seventy nurses, and twenty pharmacists responded to the survey, for a total of 99 completed forms. Sixty-eight point four percent of those polled felt unprepared to answer patients' inquiries about CAMs because of a lack of expertise about the topic. Respondents, on the whole, agreed that CAMs play a supplementary function in oncology, however they voiced certain safety concerns. The respondents said that fewer than 40% of their patients would be open to discussing complementary and alternative medicine (CAM), with the absence of scientific evidence and guidelines for CAM usage being major hurdles to such talks. Our research reveals that a lack of awareness of CAMs among cancer health professionals may cause them to be less confident when advising patients and raises concerns about patient safety. This affects the way they talk about CAMs with patients and may explain why some people don't tell their doctors they use CAMs. Education on CAMs in oncology would help raise clinicians' confidence in addressing these treatments, leading to more patient disclosure of CAMs and safer treatment decision making for persons with cancer.

Keywords: knowledge, attitudes, practices, complementary and alternative medicine, oncology.

INTRODUCTION

The number of cancer patients who turn to CAM (complementary and alternative medicine) has increased during the last several decades. Twenty-five percent of persons with cancer undergoing treatment employed these methods prior to the 1990s. 1 Among the previous decade, the use of CAM has climbed to an average of 51% of patients², with usage being more prevalent in people with cancer than the general population. 3

Given its prevalence, there is cause for worry over the safety of standard anticancer therapy. Antiplatelet activity observed in garlic and turmeric⁴ are examples of biologically based CAMs that might impact bleeding risk, and they may also modify the pharmacokinetics of chemotherapy. agents. In the second scenario, the therapeutic efficacy may be diminished, and the risk of adverse effects and toxicity may rise. 5,6 In addition, over half of cancer patients are not revealing CAM usage to their physicians due to the doctors' apparent

lack of interest, understanding, or permission. 7

Considering their prevalence, it is important to learn how oncology doctors now view CAMs. Two systematic reviews of oncologists' and nurses' (or nurses') CAM knowledge, attitudes, and practices (KAP) have been published so far⁸ and ⁹, respectively. In most cases, doctors and nurses were found to be woefully uninformed about CAMs. Pharmacists were found to be more neutral, while nurses were found to be more encouraging of their patients' use of CAMs, while oncologists and other physicians were shown to be more likely to oppose CAM. Process of integrating complementary and alternative medicine (CAM) into standard care.

⁸ Both evaluations, however, noted that heterogeneity in KAP study designs prevented them from drawing any firm conclusions. ^{8,9}

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In addition, previous studies conducted over the last decade have either examined the KAPs of many professions collectively (as in study 10) or have zeroed in on the KAPs of a single profession.

8,11,12 Only one research was found that compared the KAPs of various health professionals; Stub et al.13 examined the KAPs of Norwegian doctors, nurses, and CAM practitioners with regards to CAM usage in cancer; this study was published in 2018. The results of this research indicate that medical professionals who have not had formal CAM training are wary of their patients using CAMs and are reluctant to have conversations with them about the topic. This contradicts the findings of complementary and alternative medicine (CAM) practitioners and health professionals with formal training in CAM treatments¹³, demonstrating that CAM expertise may influence CAM-related attitudes and behaviors.

This research seeks to be the first of its kind to examine the KAPs of oncology physicians, nurses, and pharmacists in Australia in regards to CAM use by cancer patients.

METHOD

Individuals in the Sample

In Australia, oncology professionals made up the bulk of this study's sample cohort. Three groups in particular were involved: the Clinical Oncology Society of Australia (COSA), the Cancer Nurses Society of Australia (CNSA), and the Oncology and Haematology Interest Group of the Society of Hospital Pharmacists of Australia (SHPA) (SHPA). There are a total of 2923 members of the COSA¹⁴ and CNSA¹⁵, as reported in their yearly reports and corroborated by SHPA. All active oncology physicians, nurses, and pharmacists who are members of relevant professional organizations were eligible to take part. No restrictions were placed on participants based on their level of oncology expertise or number of years in the field.

Study Tool Design

The definition of CAMs used in this study is taken from the National Centre for Complementary and Integrative Health (NCCIH). They classify CAMs into three

natural products, which includes herbs and vitamins, and mind and body practices, which includes physical therapies and mindfulness techniques like meditation and yoga; and other complementary health approaches, which comprises traditional health systems and those not in the other categories, such as Ayurveda, traditional Chinese medicine, and homeopathy.

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An online questionnaire was used to gather information on people's beliefs, expectations, and users are presented with a URL and encouraged to take part in the study. This was a link to a website that provided background on the study and survey. Participants who gave their informed consent were sent to a web-based survey. Two months later, we remem-

bered everyone in each group by email. Between February 2021 and October 2021, you might fill out this survey.

experiences with CAM for cancer treatment. With their permission, we predominantly used the survey produced by Lee et al.¹⁷ in their 2014 work that studied the KAPs of American oncologists on herbal supplements in oncology. The first part of the questionnaire consisted of 10 multiple-choice questions designed to test respondents' familiarity with the topic of complementary and alternative medicine (CAM) interactions with cancer medicines and CAM indications in oncology.

The second part of the survey measured participants' opinions by having them rate how much they agreed with statements on the use of CAM in oncology on a five-point Likert scale. As part of the survey, participants were asked to rate how crucial it was to bring up patient and treatment-related aspects while discussing CAMs with patients.

Practitioners were asked what proportion of their patients they thought were using CAMs, what proportion of their patients they had discussed CAMs with, and what proportion of those conversations they had started in the final phase of the questionnaire analyzing practices. In addition, respondents were asked to share their experiences with supporting patients' use of CAMs and to name any obstacles they've encountered when bringing up the topic with their patients. While using a Likert scale, we choose the most common response to represent the population's norm when answering the question.

The respondents were questioned in Section 4 whether they had any CAM training throughout their undergraduate studies. After that, they were asked about their demographics, including their age, gender, greatest level of education, and current occupation. Twenty-one medical professionals at Townsville University Hospital were used in a pilot study to examine the questionnaire for clarity and accuracy. The results from the trial run were discarded before the full analysis was performed.

The use of SurveyMonkey for the dissemination of the questionnaires was a convenient and reliable method (Momentive, Waterford, NY, USA). A survey was sent out to members of the COSA and CNSA via their designated survey administrators, and members of the SHPA Oncology and Haematology Interest Group were able to participate in the survey using the group's online forum.

bered everyone in each group by email. Between February 2021 and October 2021, you might fill out this survey.

In order to conduct statistical analysis, data from the SurveyMonkey website were downloaded into a Microsoft Excel (Microsoft Corporation, Redmond, WA, USA) spreadsheet and then imported into SPSS Version 25 (IBM Corp, Armonk, NY, USA). When comparing the overall replies to those of physicians, nurses, and pharmacists, we used chi-square tests and independent t-tests to establish statistical significance.

RESULTS

A total of 127 persons gave their permission to be studied during recruiting. Seventeen people didn't bother to answer any of the questions. The remaining 11 respondents either did not complete the questionnaire or did not provide their occupation. The final tally of questionnaires analyzed was 99. This would enable results to be reported with a 95% confidence level and a 9.68% margin of error, based on the total memberships of the professional organizations that were surveyed.

There were nine medical physicians, seventy nurses, and twenty pharmacists in this group. Table 1 displays the results of our demographic survey. The majority of respondents were women with advanced degrees in the medical field. Doctors had a more equitable gender split than other medical professionals (55.6% male, 44.4% female; $p < 0.001$ vs. 2.9% male, 97.1% female in the nursing sector).

Knowledge

Ten multiple-choice questions were used to test students' familiarity with the concepts of CAM interactions with conventional cancer therapy and CAM indications in cancer care. The majority of responders had scores

between 3 and 4. Separated by occupation, the average score for physicians was 4.6, the average score for nurses was 3.4, and the average score for pharmacists was 5.8. It was revealed that pharmacists had a significantly higher score than nurses ($p < 0.001$, data not provided).

Attitudes

Responses to statements on the use of CAMs in oncology were used to gauge respondents' opinions, as shown in Figure 1. The majority of respondents (68.7%) did not think that their cultural or religious views influenced their perspective on CAMs, and the majority (74.4%), did not accept that CAMs had anticancer qualities. Nearly seventy-two percent of those polled didn't think they knew enough about CAMs to correctly answer questions regarding them. The majority of people (58.6%) agreed that CAMs might assist with side effects of cancer therapy, and the majority (71.8%) and the majority (63.6%) agreed that CAMs had favorable benefits on psychological (71.8%) and physical (63.6%) symptoms. Eighty-four percent of respondents said they would back a patient's use of CAMs if none better were available, but more than three-quarters (78.8%) agreed that patients spend too much money on CAMs. As a final point, 92.9% of those who took the survey expressed worry about possible negative interactions between CAMs and anticancer therapies.

A higher percentage of pharmacists (75% vs. 20.2% & 22.0%, respectively, $p < 0.001$ & $p = 0.004$) reported feeling confident in their ability to answer patients' inquiries about CAMs. Nurses were more optimistic than pharmacists (71.4 percentage points) regarding the efficacy of CAMs in reducing adverse effects.

Table 1 Participant demographic data

	Frequency (%)	Doctors, frequency (%)	Nurses, frequency (%)	Pharmacists, frequency (%)
Gender				
Male	14 (14.1%)	5 (55.6%)	2 (2.9%)	7 (35%)
Female	84 (84.8%)	4 (44.4%)	68 (97.1%)	12 (60%)
Prefer not to say	1 (1%)	0	0	1 (5%)
Highest education level				
Health-related Postgraduate degree	48 (48.5%)	4 (44.4%)	34 (48.6%)	10 (50%)
Research-related postgraduate degree	8 (8.1%)	3 (33.3%)	4 (5.7%)	1 (5%)
Graduate diploma and graduate certificate	27 (27.3%)	0	24 (34.3%)	3 (15%)
Bachelor's degree	16 (16.2%)	2 (22.2%)	8 (11.4%)	6 (30%)

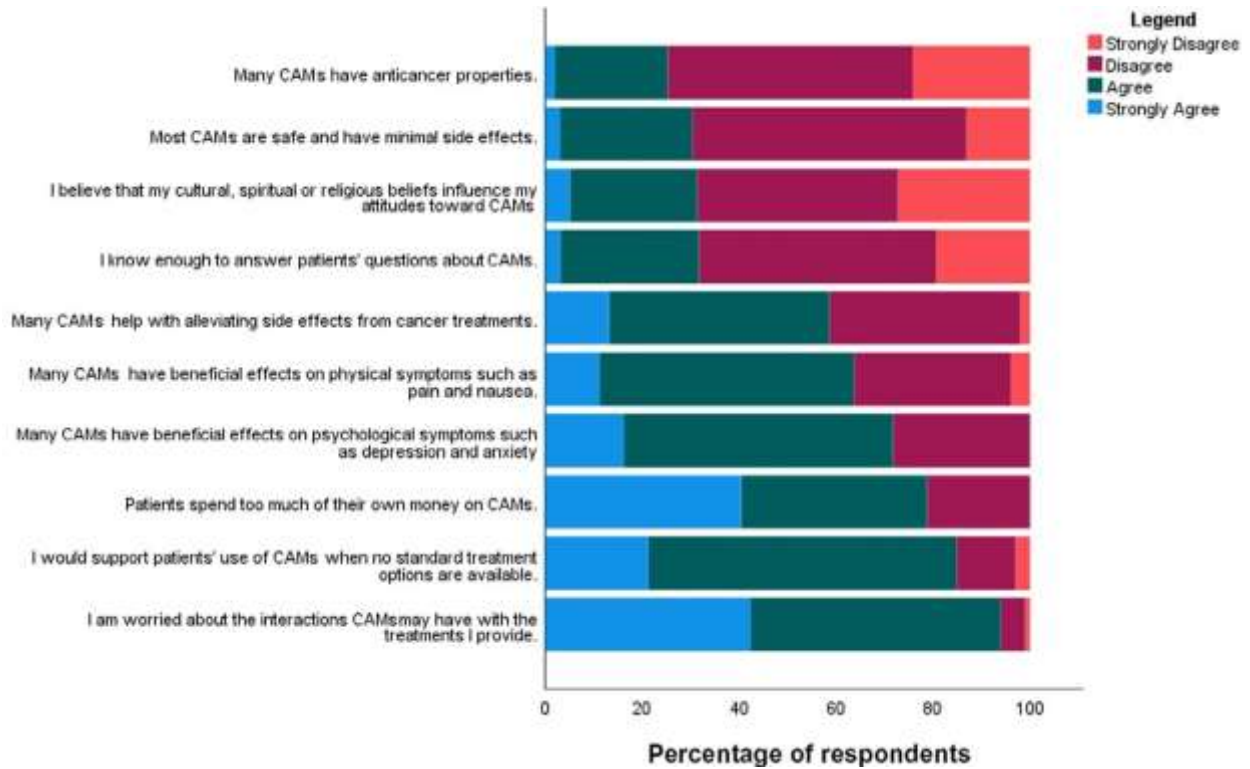


Figure 1 Responses to attitude-related statements.

nurses vs 20% of pharmacists, $p < 0.001$), alleviating psychological symptoms (78.5% versus 40% of pharmacists, $p < 0.001$), and relieving physical problems (76.3 versus 25% of pharmacists, $p < 0.001$).

Respondents were then asked to indicate the relevance of several aspects when discussing CAMs with patients in the last half of this section. All respondents ranked the safety of CAMs as either "most essential" or "very important," making it clear that this is the issue that stands out most. Patients' preferences (93.4%), clinical experience (85.7%), and CAMs' efficacy (84.9%) followed in order of importance.

Table 2 Self-estimated practice patterns of respondents

	Mean	Standard deviation
In the past 12 months what is the percentage of your patients or customers with a diagnosis of cancer that currently use CAM? (98 respondents)	41.8	20.6
In the past 12 months, with approximately what percentage of your patients or customers with a diagnosis of cancer have you discussed the topic of CAM? (97 respondents)	40.6	26.8
Please estimate what percentage of these discussions about CAM were initiated by you (90 respondents)	35.9	31.0

would be most inclined to support their patients' CAM use (82.8% would often or sometimes

Practices

First, we looked at how many patients respondents said they had discussed CAMs with and how many patients they estimated really used them (summarized in Table 2). There was a correlation between the number of patients that doctors thought were using CAMs and the number of patients that they discussed CAMs with. Only about a third of the time did medical professionals even start the conversation about complementary and alternative medicine.

Respondents stated they would reply as follows during CAM talks with patients:

support) than discourage (70.4%) or remain neutral (63.9%). Recommending CAM was close

to evenly divided among all health professionals (52.5% would often or sometimes recommend,

data not shown).

KAP on CAM by oncology professionals

Table 3 Barriers to discussion of CAM use with people with cancer by all health professionals		
	Frequency	Percentage
Do not believe in CAMs	14	14.3%
Limited time during consultation	32	32.7%
No interest in using CAMs	12	12.2%
Lack of scientific data on safety and efficacy	78	79.6%
Lack of professional/hospital guidelines	63	64.3%
Other	18	18.4%

As can be seen in Table 3, there are certain medical professionals that feel uncomfortable bringing up complementary and alternative medicine (CAM) with their patients. Lack of professional or hospital guidelines (64%) and a lack of scientific evidence on safety and efficacy (79.6%) were the two most common obstacles.

Education

Almost three quarters of participants (71.7% to be exact) said that they had not gotten any knowledge on CAM in their undergraduate degree. There was a statistically significant difference between pharmacists (65%) and nurses (18.6%, $p < 0.001$, data not shown) in terms of the percentage of respondents who reported having CAM education.

DISCUSSION

This research surveyed oncology professionals in Australia to ascertain their familiarity with complementary and alternative medicine (CAM) and their perspectives on its role in cancer treatment. Overall, health care providers scored below 50% on the knowledge evaluation and were unprepared to address patients' inquiries concerning CAMs. The results of the survey indicated that respondents thought CAMs may complement conventional therapy. They did, however, express worries regarding the security of CAMs. Most health professionals claimed they were likely to support their patients' use of CAMs, but less than half said they had brought the topic up with their patients. Lack of scientific proof regarding safety and efficacy was seen as the greatest barrier to discussing these medicines with

in for cancer nurses to have conversations about CAMs with their patients. Our recommendations are supported by their observation that inexperience leads to a cautious approach to CAM usage because of the possibility of unintended consequences.

We also discovered that our respondents had conservative views on the prevalence of CAMs, with an

patients.

consistent with the study's other results, which showed that pharmacists were more likely to obtain training in CAMs as part of their undergraduate curriculum than nurses were. These findings point to the critical need of CAM training for practitioners.

In a survey of American oncologists, Lee et al.¹⁷ reported that when asked about herbal supplements' potential interactions with standard cancer therapy, doctors gave an average score of 1.8 out of 4 (45%). With our average of the physicians' responses at 46%, this is in line with their findings. In contrast to our finding of an average of 58% from pharmacists, Harnett et al.¹⁸, who surveyed Australian community and hospital pharmacists about their KAPs toward CAM and cancer, found an average score of 10 out of 16 (63%). The time difference in issue may explain this mismatch. The absence of standardization in questionnaires and the style of knowledge evaluation (self-assessment vs. testing) hinders the comparability of research, as was shown in the systematic KAP review of health professionals.⁸

The Effect of Information on Opinions

More over two-thirds of respondents felt they did not know enough about CAMs to address their patients' inquiries, despite the knowledge ratings. This indicates that most medical professionals feel unprepared to discuss complementary and alternative medicine with their patients.

Respondents' concerns about the safety of CAM usage in cancer were evident, and this may have an effect on professionals' perspectives. Concern regarding interactions was shared by over 90% of respondents, and 69.7% of those polled did not feel that CAMs are safe. When asked about CAMs, most respondents agreed that safety comes first. Finally, the most often identified hurdles to CAM conversations were a lack of evidence on safety and efficacy. It was also found in the health professions evaluation that medical professionals were worried about the side effects and interactions that may occur while using CAM treatments alongside traditional medicine.⁸ These results suggest that future training efforts should concentrate on ensuring that professionals in these fields are adequately educated about the safety of CAMs for persons with cancer. Furthermore, it implies causality with the knowledge section results. Most respondents felt unprepared to address CAMs with their patients, which may translate to a more cautious outlook on the topic of safety. The qualitative interviews with oncologists and patients that Broom et al.¹⁹ conducted

average estimate of CAM use among their patients of 41.8%. When comparing the three professions, this was greater than the estimated range of 25%-40% of patients by physicians.⁸ A 2019 systematic analysis, however, indicated that CAMs were used by an average of 51% of cancer patients worldwide during the preceding decade.² This shows that medical practitioners often underestimate the prevalence of CAM use among their patients.

When comparing pharmacists and nurses on their perspectives on CAM's role in oncology, the former are more likely to agree that CAMs are useful in treating the side effects of cancer therapy and the physical and psychological symptoms of cancer. This is consistent with the findings from the review of health professionals, which found that nurses generally supported the use of CAMs in the treatment of symptoms and side effects, while half of doctors supported CAM use as a complementary to conventional treatment and pharmacists were neutral on the use of CAMs for symptomatic relief and improvement in quality of life. 8 A majority of our sample of oncologists had mixed feelings about CAMs' place in the field, although they were mostly favorable about their potential psychological benefits. These results are consistent with those found by a study of Italian hospital professionals conducted by Beretta et al.¹¹ Half of the oncologists polled thought CAMs may be useful in cancer treatment. In contrast, a study conducted by Yang et al.¹² among Chinese oncologists found that 95.3% of oncologists favored integrative oncology, or the use of CAMs in conjunction with traditional therapy. Note, however, that over half of the doctors who filled out the poll considered themselves integrative medicine practitioners; this might have skewed the results.

Broom and Adams¹⁹, based on interviews, corroborate our findings by suggesting that nurses are more likely to use a patient-centered, holistic approach to treatment when it comes to CAMs. Nurses were seen as more likely to support a patient's use of CAM than physicians were by respondents.

Influence on Practices

Responses to the practice section showed a general trend to be less inclined to engage with patients' CAM average of 40.6% of patients had a conversation about complementary and alternative medicine (CAM) usage. This finding is consistent with the findings of Powers-James et al.²⁰, who surveyed American oncologists online and found that respondents discussed CAMs with 41% of patients on average. The Italian research by Beretta et al.¹¹, on the other hand, indicated that oncologists typically discussed complementary and alternative medicine (CAM) with 49.2% of their patients. Since this was the first investigation of KAPs in Italian doctors, relating CAM

Weaknesses in the Research

The study had flaws, but then again, so does any research. There was a disproportionate lack of physicians and other medical professionals in this sample. This might have skewed the comparison between groups and affected the results for this occupation. Members were only reminded once to fill out the survey according to the policies set out by the COSA and CNSA. As a result, this may have discouraged prospective volunteers from taking part in our research..

CONCLUSION

usage by persons with cancer, the reason for the greater rate in the later study is not immediately evident.

When looking at all three occupations combined, an average of 36% of CAM conversations were started by respondents. This is a little more than the 25% of responding oncologists who initiated conversations about CAMs reported by Powers-James et al.²⁰. This indicates that cancer healthcare providers may be hesitant to initiate conversations on CAMs, instead expecting patients to bring up the topic first. Moreover, this supports the findings of a comprehensive review of communication of complementary and alternative medicine (CAM) usage in cancer treatment, which found that a primary reason patients did not disclose CAMs to their health providers was because they had not been asked.⁷

A majority of physicians (63%) and a large majority of nurses (93%), according to the assessment of health professionals, are willing to assist patients who desire to utilize CAMs.

8 Our findings are consistent with this range, with 82.8% of respondents expressing support for CAM usage on a regular or occasional basis. Nonetheless, it is worth noting that the second most common behavior among our questioned health professionals would be to discourage or stay neutral towards mixing CAMs with conventional treatment, suggesting that reactions made by health professionals might be extremely diverse. This is further shown by the almost even splintering of opinion across respondents about their own recommendation of CAM treatments. While 57.6% of oncologists would prescribe CAMs, the assessment of health professionals indicated that just a small percentage of MDs and RNs would make such a recommendation to their patients. 8 It's also worth noting that 84.8% of those who participated in our survey said they would support a patient's use of complementary and alternative medicine (CAM) if conventional therapies had failed. This wide range of responses shows that additional study is needed to characterize how medical professionals interact with cancer patients who use CAMs.

To our knowledge, this is the first research to examine the similarities and differences between the perspectives of medical physicians, nurses, and pharmacists in regards to the use of complementary and alternative medicine (CAM) in oncology.

Our results imply that cancer health professionals' knowledge, attitudes, and behaviors toward CAMs are interconnected. Lack of confidence in addressing CAMs with patients might be related to poor knowledge or a perceived lack of awareness about CAMs. This would cause cautious attitudes toward these therapies, motivated by worries about their compatibility with standard medical care. As a consequence, practitioners may be hesitant to bring up CAMs with patients and may react differently when patients express interest in or commitment to CAMs. Filling up the gaps in CAMs'

knowledge might have a beneficial effect on people's perspectives and choices. Health practitioners' comfort level in discussing CAM usage with cancer patients might be boosted by the creation of easily available, high-quality, evidence-based material.

REFERENCES

- 1 Horneber, Michael; Bueschel, Gerhard; Dennert, Gerhard; Less, Daniel; Ritter, Edward; Zwahlen, Michael. A comprehensive study and meta-analysis of the prevalence of complementary and alternative medicine usage by people with cancer. *Int. J. Cancer Ther.* 2012; 11: 187-203.
- 2
Researchers: Keene MR, Heslop IM, Sabesan SS, and Glass BD. Systematic review of complementary and alternative medicine for cancer. *Supplemental Therapies in Clinical Practice* 2019; 35, 33–47.
- Thirdly, Rashrash M, Schommer JC, and Brown LM. The prevalence of and factors associated with the use of herbal medicines among American adults. 2017;4(Issue 1):108-13 in the *Journal of Patient Experience*.
- 4
E. Ben-Arye, N. Samuels, L. Goldstein, K. Mutafoglu, S. Omran, E. Schiff, and others. Potential dangers of using traditional herbal medicines for cancer treatment: a survey of Middle Eastern oncology specialists. In 2016, *Cancer* was published in 122:598–610.
- 5
L. Braun and M. Cohen. *Natural & Organic Supplements & Herbs: What the Research Says*. Elsevier Australia; 2014. 6th edition. Chatswood, NSW: Elsevier Australia. S Rockwell, Y Liu, and S A Higgins. The herbal remedy black cohosh modifies the actions of cancer treatment drugs on breast cancer cells. 2005;90:233-9 *Breast Cancer Research and Treatment*.
- 7
Mullan BA, Clarke S, Oh B, Butow PN, Davis EL. Systematic assessment of the literature on complementary and alternative medication usage disclosure and communication between patients and doctors in cancer care. According to *Oncologist*, Volume 17, Issue 1475–1481, 2012.
- 8 Researchers: Keene MR, Heslop IM, Sabesan SS, and Glass BD. A comprehensive analysis of medical professionals' understanding, acceptance, and use of CAM for cancer treatment. *Journal of Community Health* 2020;13: 205-18.
- 9 Authors: Cuthbertson, L. A., Abigail W. Christina Educating nurses about alternative cancer therapies and their perceptions of these treatments. Asia Pac As of 2016, there have been three issues of the *Journal of Oncology Nursing*.
- Delaney L.J. and Manley, S.J. How can the knowledge, perspectives,

confidence, and documentation around the use of complementary and alternative therapies be increased in a regional radiation oncology treatment center? 11 *J Med Radiat Sci.* 2019; 66: 191-9. M. Berretta, L. Rinaldi, R. Taibi, P. Tralongo, A. Fulvi, V. Montesarchio, et al. How doctors feel about patients using Complementary and Alternative Medicine

In a group of 12 researchers (Yang G, Zhang H, Xu Y, Zhao A, Shu P, Wang W, et al. An introduction to integrative oncology in China, including its history, current state, and future prospects. It will be published in *Integr Cancer Ther* on January 20, 2021, with the volume number 20:153473542110635.

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T. Stub; S. A. Quandt; T. A. Arcury; J. C. Sandberg; A. E. Kristoffersen. Conventional and alternative cancer care professionals' perspectives and understanding of direct and indirect dangers. 2018;18:44 *BMC Complement Altern Med*.

Australia's 14-member Clinical Oncology Society (COSA). The 2021 Annual Report of the Council of Social Agencies. Annual Report 2020–2021, Cancer Nurses Society of Australia (CNSA), Sydney, Australia; Cancer Outcomes Services Australia (COSA), 2022. 16 National Centre for Complementary and Integrative Health. Gabbadah, WA: CNSA Australia, 2021. What's in a Name? Comparing Complementary, Alternative, and Integrative Health. Health Research and Development Administration; 2016. Integrative Health Information Network (NCCIH): <https://nccih.nih.gov/health/integrative-health>. Referred to in works cited on or after May 1, 2018.

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Lin H, Olopade OI, Melhem-Bertrandt A, Olopade IO, Lee RT, Barbo A, Lopez G, and others. Examining oncologists' perspectives on the use of complementary and alternative medicine by cancer patients in the United States. 2014, Volume 32, Issue 40:4095–101 of the *Journal of Clinical Oncology*.

18 Harnett, J., L. Le, L. Smith, I. Krass, and T. Krass. The pharmacist's perspective on, and familiarity with, complementary medicine usage by persons coping with cancer. 2018;40(10):1272–80 in the *International Journal of Clinical Pharmacy*.

Broom, A., and Adams, J. Reports from oncology professionals who have had conversations with their patients about CAM. *Health (London)*, 2009; 13:317–36. 20 A. Powers-James, A. Alvarez, K. Milbury, A. Barbo, K. Daunov, G. Lopez, and C. Powers-James, among others. We oncologists discuss how our own personal and professional experiences with and attitudes about complementary and alternative medicine have been shaped by our spiritual and religious beliefs. 2020;19:153473542094576 *Integr Cancer Ther*.