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**Australian Oncologists' Self-Reported Knowledge and Attitudes Regarding Non-
Traditional Therapies Used by Cancer Patients**

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Abstract

Objective: To assess Australian radiation and medical oncologists' self-reported knowledge about and attitudes towards a range of non-traditional therapies used by people with cancer.

Design: A paper survey was mailed to all radiation and medical oncologists within Australia.

Participants: 161 completed surveys were returned, representing a 61% response rate.

Outcome Measures: The therapies included in the survey were acupuncture, antioxidant therapy, aromatherapy, cellular therapy, coffee enemas, diet therapy, faith healing, herbal therapies, homeopathy, hypnotherapy, immune-enhancing therapy, iridology, iscador, magnetotherapy, meditation (including relaxation and visual imagery), microwave therapy, ozone therapy, psychic surgery and shark cartilage therapy. For each therapy, oncologists rated their own level of knowledge and, for each known therapy, indicated their perceptions of its likely harm or benefit and of the prevalence of use among their patients. These perceptions were rated separately for patients being treated curatively and palliatively.

Results: Oncologists reported the highest knowledge levels about acupuncture, antioxidant therapy and meditation and the lowest knowledge levels about cellular therapy, magnetotherapy and psychic surgery. The therapies most likely to be considered helpful were meditation, acupuncture and hypnotherapy. Those most likely to be considered harmful were coffee enemas, psychic surgery, iscador therapy and diet therapies. Perceptions of patients' use of most therapies varied widely with herbal therapies, antioxidant therapy and meditation considered the most commonly-used.

Conclusions: These results provide the first quantitative information in this area, indicating self-identified gaps in oncologists' knowledge about non-traditional therapies their patients may use and suggesting a need to consider including education about these therapies in oncologists' training.

Keywords: Alternative Medicine; Medical Oncology; Radiation Oncology; Knowledge, Attitudes, Practice.

Introduction

INSERT FIGURE 1 HERE

Recent studies have confirmed the popularity of non-traditional therapies among Australian cancer patients: 22 - 52% of medical oncology patients(1,2), 40% of palliative patients(3) and 46% of paediatric patients(4) report using at least one non-traditional therapy. Many of the most popular non-traditional therapies are psychosocial, such as relaxation, meditation and visual imagery, and are unlikely to pose threats to patients' health(1-4). However, dietary therapies, antioxidants, high dose vitamins and herbal therapies are also among the most popular(1-4). Many of these are poorly evaluated and could pose physical threats to patients, either directly, or by interfering with traditional therapies.

Despite the lack of scientific evidence, 25 – 73% of patients using non-traditional therapies expect them to cure their cancer or to prolong their lives(1,4) and 74 – 86% expect them to assist their traditional therapies(2). Despite fairly high reported satisfaction and perceived benefit levels with non-traditional therapies(1,2), 17% of patients in one study reported negative side effects(4), 10 – 36% of patients report no perceived benefit or feeling worse(1,2) and around 20% report they would not take the therapy again or recommend it to other patients(2). Even if not harmful, many non-traditional therapies are expensive: Begbie et al (1996) found the median annual cost to patients was \$530, with a maximum of \$20,000(1); Miller et al (1998) found patients spent between \$74 and \$27,000 on non-traditional therapies(2). Again, despite fairly high satisfaction levels, only 64% of patients felt the non-traditional therapies provided value for money(1). These data suggest that cancer patients need to be better informed about non-traditional therapies.

Recent guidelines highlight the need for oncologists to be aware of non-traditional therapies being used or considered by their patients and to encourage patients to discuss them(5), suggesting that

oncologists need at least a basic understanding of these therapies. Only two relevant studies could be identified: a quantitative survey of 106 Italian oncologists(6) and a qualitative study of 18 Canadian oncologists(7). They found limited knowledge about non-traditional therapies(6,7), relatively positive attitudes towards psychological therapies(6,7), more negative attitudes towards more invasive therapies(7), negative attitudes towards non-traditional therapy practitioners(6) and more positive attitudes towards the use of non-traditional therapies by palliative patients(7).

The surveys of Australian cancer patients indicated that 40 – 57% of those using non-traditional therapies had not discussed their use with their oncologist(1,4). However, patients having discussed their use with their doctors, although not necessarily oncologists, perceived them to be generally supportive of acupuncture, antioxidants, exercise therapy, meditation and relaxation programs but unsupportive of high dose vitamin C and herbal therapies(2).

Given the lack of data, this study explored Australian medical and radiation oncologists' knowledge and attitudes about non-traditional therapies and their perceptions of their frequency of use among their patients. Given the increased tolerance of palliative patients using non-traditional therapies in the overseas literature, separate assessments were sought for palliative and curative patients.

Method

Sample identification

The Clinical Oncological Society of Australasia (COSA) provided a list of all the individuals registered with their Medical and Radiation Oncology Groups in late April 1997: 155 Australia-based medical and 62 radiation oncologists. As the Medical Oncology Group of Australia advised they were aware of only 165 practising Australian-based medical oncologists, the COSA list was considered comprehensive for medical oncologists. However, the Royal Australasian College of Radiologists' (RACR) Faculty of Radiation Oncology advised they had 123 members currently practising in Australia. As the RACR had

a policy of not releasing members' contact details, they agreed to mail surveys to their members not on the COSA list: 56 additional radiation oncologists received surveys using this method, giving a total sample of 118.

The survey instrument

A brief survey was designed where oncologists rated their own levels of knowledge about each of the 19 therapies listed in each results table on a 4 point scale ("none/never heard of it", "very little", "some" or "lots"). The oncologists received no additional information about these therapies, which covered the wide range of psychosocial and physical therapies commonly discussed in the literature and media. For each known therapy, the oncologists rated how harmful or helpful (very, fairly, neither or don't know) they considered it, giving separate ratings for patients being treated palliatively and curatively. The oncologists also estimated the proportion of their patients they believed were using, or had used, each known therapy - again separately for palliative and curative patients. The authors are happy to provide copies of the survey instrument to interested readers.

Procedure

The surveys were mailed to the 273 identified oncologists in May and June 1997 with a written reminder to non-responders after four weeks and a telephone reminder after six weeks.

Analyses

Descriptive statistics are reported regarding oncologists' knowledge and attitudes and 95% confidence intervals were calculated around the proportion of oncologists knowing lots about each therapy. All analyses were conducted using the SAS statistical package; 95% confidence intervals were calculated using an excel spreadsheet based on the standard binomial approximation formula(8).

Funding Source

This study was supported by the NSW Cancer Council's Cancer Education Research Program (CERP). The Cancer Council had no direct role in the design and/or analyses for this study or over the decision about publication of the results.

Ethics

This study was approved by the University of Newcastle's Human Research Ethics Committee.

Results

Sample characteristics

Of the 273 oncologists identified, four medical and two radiation oncologists were no longer practising and two radiation oncologists received surveys via both lists, leaving 265 eligible oncologists. Of these, 161 (61%) returned completed surveys: 60 were radiation oncologists, 64 were medical oncologists and 37 could not be classified as they had destroyed the identifying number indicating this differentiation.

Oncologists' knowledge about non-traditional therapies

Table 1 summarises the oncologists' reported knowledge levels about each non-traditional therapy. Meditation, relaxation and visual imagery were the therapies that most oncologists, around a quarter, reported knowing lots about. Around a fifth of the oncologists surveyed also reported knowing lots about antioxidants and microwave, or Tronado, therapy. The least known therapies were cellular therapy, magnetotherapy and psychic surgery.

INSERT TABLE 1 ABOUT HERE

Oncologists' perceptions of each therapy's potential harmfulness / helpfulness

Table 2 summarises the oncologists' attitudes regarding the potential harmfulness or helpfulness of each non-traditional therapy. The psychosocial therapies tended to be considered helpful for both palliative and curative patients, as was acupuncture, especially for palliative patients. Many therapies

were considered more likely to help palliative patients and, conversely, to be more likely to harm curative patients. Not surprisingly, the less familiar, more physical or invasive therapies dominated those considered likely to be harmful.

INSERT TABLE 2 ABOUT HERE

Oncologists' perceptions of their patients' usage of each therapy

Table 3 summarises the median proportion of their curative and palliative patients oncologists perceived to be using, or to have used, each non-traditional therapy, with a consistent trend to estimate higher usage among palliative patients. It also summarises the reported levels of usage by Australian cancer patients(1-4). Oncologists' estimates of usage were within the ranges reported by Australian cancer patients for acupuncture, antioxidants, faith healing, hypnotherapy, iridology and meditation, relaxation and visual imagery. However, the oncologists overestimated patients' usage of aromatherapy, coffee enemas, herbal therapies, naturopathy, homeopathy, immune-enhancing therapy, magnetotherapy and shark cartilage. No patient data were available for comparison for cellular, mistletoe, microwave and ozone therapies or psychic surgery and estimates for diet therapy were difficult to compare due to the varied definitions used.

INSERT TABLE 3 ABOUT HERE

Discussion

In keeping with overseas data, self-identified gaps were found in oncologists' knowledge about many non-traditional therapies(6,7). It is interesting to note, however, that the therapies most patients reported using, meditation, relaxation and visual imagery and antioxidants, were also the therapies that most oncologists, although still only up to a quarter, reported lots of knowledge about.

Also consistent with overseas data, psychosocial therapies were viewed positively and non-traditional therapies were considered more likely to be potentially helpful to palliative patients and potentially harmful to curative patients(6,7). The more positive attitudes towards psychosocial therapies could be a reflection of the oncologists' awareness of the existence of some evidence of proven benefits for these therapies(9,10).

Although the oncologists surveyed tended to accurately perceive their patients' usage of more commonly-used non-traditional therapies, they tended to overestimate patients' usage of less commonly-used, more radical therapies, especially those with higher media profiles, such as coffee enemas and shark cartilage. Although these comparisons should be viewed with some caution as the oncologists' and patients' estimates come from different surveys of different populations collected at different points in time, making some degree of variation inevitable, such variation is unlikely to explain the reasonably large differences found for many of the lesser-used therapies. The trend for oncologists to estimate higher usage of non-traditional therapies among palliative than curative patients is in keeping with Australian and international data suggesting that patients with more advanced cancers are more likely to use non-traditional therapies(2,11-13).

In discussing these findings, it is important to consider some other limitations of this study. First, as all Australian oncologists were targeted and in order to keep the survey instrument brief, to maximise the response rate, no demographic information was asked of the oncologists surveyed, prohibiting any assessment of their representativeness of the population of Australian oncologists. However, as responses were received from over 60% of the population and covered the full range of responses, the authors are confident that the data provide the first quantitative, reasonably representative overview of Australian oncologists' knowledge and attitudes regarding non-traditional therapies.

Second, the survey instrument assessed oncologists' self-reported levels of knowledge about these therapies and did not provide an objective assessment of their actual knowledge. As the oncologists are considered unlikely to have considerably underestimated their knowledge levels, these estimates should probably be interpreted as best case scenarios. The survey instrument also provided no definitions of "helpful" or "harmful" for oncologists' to use in rating their attitudes towards the therapies. While this left it to individual oncologists to decide what constituted a harm or a help, this was done intentionally as patients report using non-traditional therapies in search of a range of benefits, including physical, psychosocial and spiritual.

Third, while the results of this survey represent the first quantitative data regarding oncologists' knowledge and attitudes in this area, they can, of course, not be generalised to other clinicians treating people with cancer, such as surgeons, haematologists and general practitioners. Future surveys of these and other groups may be useful in building a more comprehensive picture of clinicians' opinions in general.

Finally, almost one quarter of the survey respondents removed the coded identification number from their surveys, making comparisons between medical and radiation oncologists difficult. However, no consistent differences emerged between the identified medical and radiation oncologists in relation to knowledge, attitudes or perceptions of patients' use of these non-traditional therapies.

Sceptics may question the need for oncologists to increase their knowledge about non-traditional therapies when most remain of unproven benefit. However, without some knowledge of, at least, each therapy's existence, the basics of what is involved and any demonstrated adverse reactions, oncologists run the risk of being unable to adequately advise patients who may be using or considering potentially-harmful non-traditional therapies. As outlined in NHMRC guidelines, overly heavy-handed

and dismissive doctors are unlikely to succeed in discouraging their patients from using such therapies whereas more rational and considered discussions with patients may succeed(5). Alternatively, without knowledge of any proven benefits associated with non-traditional therapies, such as the psychosocial therapies, oncologists run the risk of being unable to adequately advise their patients about potentially-beneficial therapies.

Conclusion and Future Directions

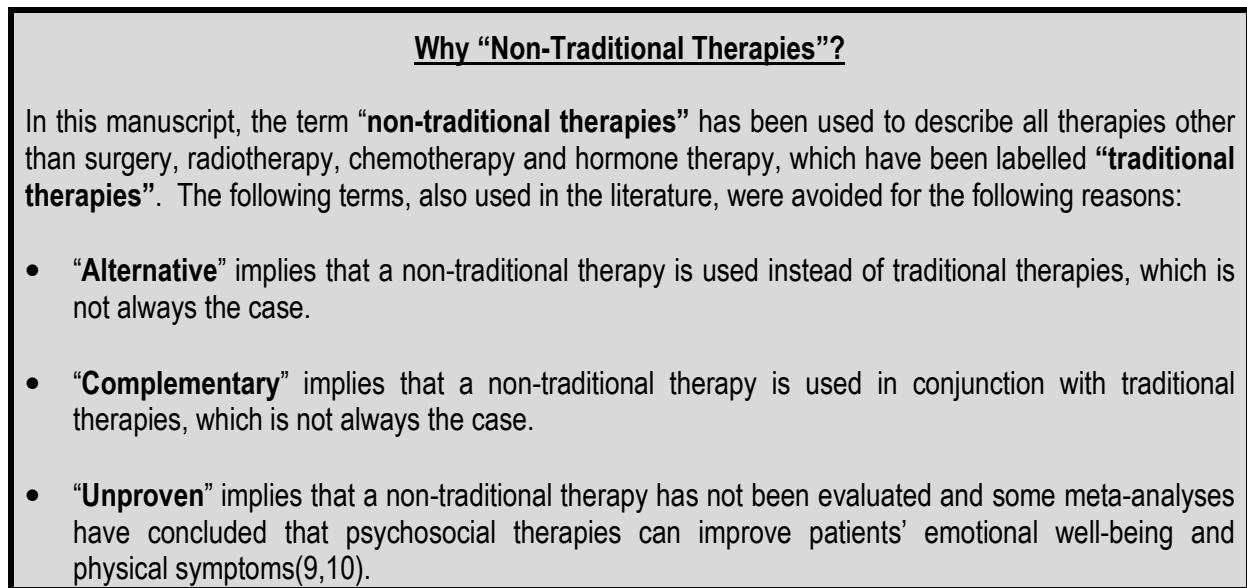
Given the high levels of usage of non-traditional therapies reported by Australian cancer patients, the data, although showing higher levels of knowledge regarding more commonly-used therapies, indicate a need to improve the extent of oncologists' basic knowledge about non-traditional therapies to enable them to adequately discuss their potential harms and benefits with patients who may be considering or using them. Therefore, future research is needed to facilitate the production of evidence-based information summaries for oncologists in this area, to compare oncologists' perceptions of usage with their own patients' reported use of non-traditional therapies and to establish the knowledge and attitudes of other clinicians treating cancer patients.

References

1. Begbie SD, Kerestes ZL, Bell DR. Patterns of alternative medicine use by cancer patients. *Med J Aust* 1996;165:545-8.
2. Miller M, Boyer MJ, Butow PN et al. The use of unproven methods of treatment by cancer patients: Frequency, expectations and cost. *Supportive Care Cancer* 1998;6:337-47.
3. Yates PM, Beadle G, Clavarino A et al. Patients with terminal cancer who use alternative therapies: their beliefs and practices. *Sociology Health Illness* 1993;15:199-216.
4. Sawyer MG, Gannoni AF, Toogood IR et. The use of alternative therapies by children with cancer. *Med J Aust* 1994;160:320-2.
5. National Health & Medical Research Council. *Clinical Practice Guidelines: The Management of Early Breast Cancer*. Sydney: The Stone Press; 1995.
6. Crocetti E, Crotti N, Montella M, Musso M. Complementary medicine and oncologists' attitudes: A survey in Italy. *Tumori* 1996;82:539-42.
7. Bourgeault IL. Physicians attitudes toward patients' use of alternative cancer therapies. *Can Med Assoc J* 1996;155:1679-85.
8. Dobson AJ. Calculating sample size. *Trans Menzies Found* 1984;7:75-9.
9. Meyer TJ, Mark MM. Effects of psychosocial interventions with adult cancer patients: A meta-analysis of randomized experiments. *Health Psychol* 1995;14:101-8.
10. Devine EC, Westlake SK. The effects of psychoeducational care provided to adults with cancer: meta-analysis of 116 studies. *Oncol Nurs Forum* 1995;22:1369-81.
11. Risberg T, Lund E, Wist E. Use of non-proven therapies. Differences in attitudes between Norwegian patients with non-malignant disease and patients suffering from cancer. *Acta Oncologica* 1995;34:893-8.

12. Sollner W, Zingg-Schir M, Rumpold G, Fritsch P. Attitude toward alternative therapy, compliance with standard treatment, and need for emotional support in patients with melanoma. *Arch Dermatol* 1997;133:316-21.
13. Risberg T, Lund E, Wist E, Dahl O, Sundstrom S, Anderson OK, Kaasa S. The use of non-proven therapy among patients treated in Norwegian oncological departments. A cross-sectional national multicentre study. *Eur J Cancer* 1995;31A:1785-9.

Figure 1: Why “non-traditional therapies”?



NB: This whole figure is an edit to the manuscript but has not been underlined due to the need to present figures in an immediately useable format.

Table 1: Oncologists' perceived levels of knowledge regarding non-traditional therapies.

Therapy	% oncologists reporting knowing ... (N=161)*		
	Nothing / Never heard of it	Some	Lots (95% CI)
Acupuncture	1	68	17 (13-21)
Anti-oxidants/ high dose vitamin C	1	60	23 (19-27)
Aromatherapy	3	39	7 (4-10)
Cellular therapy	65	11	3 (1-5)
Coffee enemas	6	47	9 (6-12)
Diet therapy (Gerson/ macrobiotic)	11	41	14 (10-17)
Faith healing/ spiritualism	5	48	9 (6-12)
Herbal therapies/ naturopathy	1	54	13 (10-17)
Homeopathy	6	47	9 (6-12)
Hypnotherapy	3	46	12 (9-15)
Immune-enhancing therapy	19	31	11 (7-14)
Iridology	11	24	7 (4-10)
Isador/ mistletoe therapy	36	29	6 (3-9)
Magnetotherapy	57	12	3 (1-5)
Meditation/ relaxation/ visual imagery	1	53	27 (23-32)
Microwave/ Tronado therapy	26	29	20 (16-24)
Ozone therapy	40	19	7 (4-10)
Psychic surgery	46	15	5 (3-7)
Shark cartilage therapy	7	47	14 (10-17)

* The remaining response option was "a little" knowledge – the balance of the 100% of oncologists for each therapy selected this response option.

Table 2: Oncologists' perceptions of the potential helpfulness or harmfulness of non-traditional therapies.

Therapy	N*	% perceive therapy to be ...			
		Helpful		Harmful	
		Curative patients	Palliative patients	Curative patients	Palliative patients
Acupuncture	160	25	58	1	1
Anti-oxidants/ high dose vitamin C	160	5	5	30	23
Aromatherapy	156	9	21	2	1
Cellular therapy	57	0	0	29	26
Coffee enemas	151	1	1	71	70
Diet therapy (Gerson/ macrobiotic)	142	2	4	49	48
Faith healing/ spiritualism	152	12	23	24	15
Herbal therapies/ naturopathy	159	8	13	22	15
Homeopathy	150	4	8	12	6
Hypnotherapy	156	31	46	4	3
Immune-enhancing therapy	131	3	5	27	22
Iridology	144	1	1	15	8
Iscador/ mistletoe therapy	103	2	2	55	45
Magnetotherapy	69	5	8	8	6
Meditation/ relaxation/ visual imagery	159	69	82	3	2
Microwave/ Tronado therapy	120	7	7	45	37
Ozone therapy	96	1	2	46	37
Psychic surgery	87	2	2	57	56
Shark cartilage therapy	150	1	1	23	17

* The attitudinal items were asked only of those oncologists reporting at least "very little" knowledge of each therapy – this column indicates the denominator for each therapy. The remaining response options were "neither helpful or harmful" and "don't know" – the balance of the 100% of oncologists for each therapy selected one of these response options.

Table 3: Comparing oncologists' perceptions of usage with Australian cancer patients' reported usage of non-traditional therapies.

Therapy	Oncologists' perceptions			Australian cancer patients' reported usage			
	N*	Median % curative patients	Median % palliative patients	% pediatric patients (n=48)(4)	% palliative patients (n=151)(3)	% medical oncology patients (n=319)(1)	% medical oncology patients (n=156)(2)
Acupuncture	160	6	10	-	7	3	5
Anti-oxidants/ high dose vitamin C	160	15	20	8	24	12	12 – 16
Aromatherapy	156	5	10	-	-	-	½
Cellular therapy	57	3	3	-	-	-	-
Coffee enemas	151	3	5	-	-	-	1
Diet therapy (Gerson/ macrobiotic)#	142	10	10	8 (diet therapy)	18 (special foods)	13 (diet therapy)	30 (changed diet) ½ (Gerson)
Faith healing/ spiritualism	152	5	10	6	9	7	3
Herbal therapies/ naturopathy	159	20	25	8	3 - 8	6	5 – 10
Homeopathy	150	10	15	2	5	3	2
Hypnotherapy	156	5	5	15	-	-	3
Immune-enhancing therapy	131	5	8	-	3	4	-
Iridology	144	3	5	-	-	-	3

Therapy	Oncologists' perceptions			Australian cancer patients' reported usage			
	N*	Median % curative patients	Median % palliative patients	% pediatric patients (n=48)(4)	% palliative patients (n=151)(3)	% medical oncology patients (n=319)(1)	% medical oncology patients (n=156)(2)
Iscador/ mistletoe therapy	103	2	3	-	-	-	-
Magnetotherapy	69	2	3	-	-	-	½
Meditation/ relaxation/ visual imagery	159	20	20	4 – 17	19	10 – 13	12 – 28
Microwave/ Tronado therapy	120	1	1	-	-	-	-
Ozone therapy	96	3	5	-	-	-	-
Psychic surgery	87	1	1	-	-	-	-
Shark cartilage therapy	150	5	10	-	-	-	4

* The attitudinal items were asked only of those oncologists reporting at least “a little” knowledge of each therapy – this column indicates the denominator for each therapy.

As diet therapies included those ranging from basic dietary changes through to very restricted diets (eg: Gerson diet), the actual wording used in each of the Australian studies is included in this table.