

# Australian oncologists' self-reported knowledge and attitudes about 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:** Postal survey during May and June 1997 of all 265 radiation and medical oncologists practising in Australia.

**Participants:** 161 oncologists returned surveys (61% response rate).

**Main outcome measures:** Oncologists' own level of knowledge, and, for each known therapy, their perceptions of its likely harm or benefit in patients being treated curatively and palliatively, and of the prevalence of use among their patients.

**Results:** Oncologists reported knowing most about acupuncture, antioxidant therapy and meditation and least 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 indicate self-identified gaps in oncologists' knowledge about non-traditional therapies their patients may use; they suggest a need to consider including education about these therapies in oncologists' training.

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**Introduction** Recent studies have confirmed the popularity of non-traditional therapies among Australian cancer patients: 22%-52% of medical oncology patients,<sup>1,2</sup> 40% of those being treated palliatively<sup>3</sup> and 46% of children with cancer<sup>4</sup> report using at least one non-traditional therapy. Many of the most popular non-traditional therapies are psychosocial (eg, relaxation, meditation and visual imagery) and are unlikely to pose threats to patients' health.<sup>1-4</sup> However, other popular therapies include dietary therapies, antioxidants, high dose vitamins and herbal therapies,<sup>1-4</sup> many of which 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,<sup>1-4</sup> and 74%-86% expect them to assist their traditional therapies.<sup>2</sup> Despite fairly high reported levels of satisfaction and perceived benefit with non-traditional therapies,<sup>1,2</sup> 17% of patients in one study reported negative side effects,<sup>4</sup> 10%-36% of patients reported no perceived benefit or feeling worse,<sup>1,2</sup> and around 20% reported they would not take the therapy again or recommend it to other patients.<sup>2</sup> Even if not harmful, many non-traditional

therapies are expensive,<sup>1,2</sup> and only 64% of patients felt the non-traditional therapies provided value for money.<sup>1</sup>

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.<sup>5</sup> This would require oncologists having at least a basic understanding of these therapies. We were able to identify only two relevant studies in this area -- a quantitative survey of 106 Italian oncologists<sup>6</sup> and a qualitative study of 18 Canadian oncologists.<sup>7</sup> They found limited knowledge about non-traditional therapies,<sup>6,7</sup> relatively positive attitudes towards psychological therapies,<sup>6,7</sup> more negative attitudes towards more invasive therapies,<sup>7</sup> negative attitudes towards non-traditional therapy practitioners<sup>6</sup> and more positive attitudes towards the use of non-traditional therapies by palliative patients.<sup>7</sup>

As there is a lack of data in this field, we explored Australian medical and radiation oncologists' knowledge of and attitudes to non-traditional therapies, and their perceptions of the frequency with which their patients used them. Given the increased tolerance among overseas oncologists of palliative patients using non-traditional therapies,<sup>7</sup> we assessed attitudes to palliative and curative patients separately.

We use the term "non-traditional therapies" to describe all therapies other than surgery, radiotherapy, chemotherapy and hormone therapy.

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## Methods

In May and June 1997, 273 questionnaires about 19 non-traditional therapies covering a wide range of psychosocial and physical therapies commonly discussed in the literature and media were mailed to all oncologists who practise in Australia. Non-responders received a written reminder after four weeks and a telephone reminder after six weeks.

**Ethical approval** for this study was granted by the University of Newcastle's Human Research Ethics Committee.

## Sample identification

We identified all medical and radiation oncologists practising in Australia through the Clinical Oncological Society of Australasia (COSA) and the Royal Australasian College of Radiologists' (RACR) Faculty of Radiation Oncology. The list of all the individuals registered with the Medical and Radiation Oncology Groups of COSA in late April 1997 comprised 155 Australian-based medical oncologists and 62 radiation oncologists. As the Medical Oncology Group of Australia advised they were aware of only 165 practising Australian-based medical oncologists, we considered the COSA list comprehensive for medical oncologists. However, the RACR advised they had 123 members currently practising in Australia, and, in line with its policy of not releasing members' contact details, they agreed to mail surveys to any of their members not on the COSA list -- an additional 56 radiation oncologists. The final sample of 273 thus comprised 155 medical and 118 radiation oncologists.

**The survey** We designed a brief survey whereby oncologists rated, on a four-point scale ("none/never heard of it", "very little", "some" or "lots"), their own levels of knowledge about each of 19 non-traditional therapies; we provided no additional information about these therapies. Oncologists were also asked to rate each therapy they knew (also on a four-point scale: "very", "fairly", "neither" or "don't know"), according to how harmful or helpful they considered it for patients being treated palliatively and curatively. Finally, they were asked to estimate the proportion of their palliative and curative patients they believed were using, or had used, each known therapy. Copies of the survey may be obtained from the authors.

### **Statistical analysis**

We report descriptive statistics on oncologists' knowledge and attitudes, including 95% confidence intervals around the proportion of oncologists knowing "lots" about each therapy. All analyses were conducted with the SAS statistical package;<sup>10</sup> 95% confidence intervals were calculated using Microsoft Excel,<sup>11</sup> based on the standard binomial approximation formula.<sup>12</sup>

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## **Results**

Of the 273 oncologists identified, four medical and two radiation oncologists were no longer practising and two radiation oncologists received surveys through both the COSA and RACR lists, leaving 265 eligible oncologists. Completed surveys were returned by 161 (61%) -- 60 radiation oncologists, 64 medical oncologists and 37 who could not be classified because they had destroyed the identifying number that allowed us to make this differentiation.

### **Knowledge about non-traditional therapies**

Box 1 shows that meditation, relaxation and visual imagery were the therapies that most oncologists (about a quarter) reported knowing a lot about. Approximately a fifth of the oncologists surveyed also reported knowing a lot about antioxidant therapy and microwave, or Tronado, therapy. The least-known therapies were cellular therapy, magnetotherapy and psychic surgery.

### **Perceptions of each therapy's potential harmfulness or helpfulness**

Box 2 shows that oncologists tended to consider the psychosocial therapies helpful for patients being treated both palliatively and curatively. Acupuncture was also considered helpful, especially for palliative patients. Many therapies were considered more likely to help palliative patients and, conversely, more harmful for curative patients. Not surprisingly, the less familiar, more physical or invasive therapies dominated those considered likely to be harmful.

### **Perceptions of their patients' use of each therapy**

Box 3 compares the median proportion of their curative and palliative patients that oncologists believed were using or had used each non-traditional therapy with levels of use reported by Australian cancer patients.<sup>1-4</sup> The oncologists showed a consistent trend to estimate higher use among palliative patients. The oncologists' estimates 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' use of

aromatherapy, coffee enemas, herbal therapies, naturopathy, homoeopathy, magnetotherapy and shark cartilage therapy. No patient data were available to compare cellular, mistletoe, microwave and ozone therapies or psychic surgery, and estimates for diet therapy were difficult to compare because of variation in the definitions used.

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**Discussion** As in the overseas studies,<sup>6,7</sup> we found that oncologists identified gaps in their knowledge about many non-traditional therapies. 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 knowing a lot about.

Also consistent with the overseas studies,<sup>6,7</sup> psychosocial therapies were viewed positively, and non-traditional therapies were considered more likely to be potentially helpful to patients being treated palliatively and potentially harmful to those being treated curatively. The more positive attitudes towards psychosocial therapies may reflect oncologists' awareness of some evidence of proven benefits from these therapies.<sup>8,9</sup>

Although our respondents tended to accurately estimate their patients' use of more commonly used non-traditional therapies, they tended to overestimate patients' use of more radical therapies, especially those with higher media profiles, such as coffee enemas and shark cartilage therapy. While 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 for many of the lesser-used therapies. The trend for oncologists to estimate higher use of non-traditional therapies among palliative than curative patients is consistent with Australian and international data suggesting that patients with more advanced cancers are more likely to use non-traditional therapies.<sup>2,13-15</sup>

Our study has some other limitations. Firstly, for brevity, we sought no demographic information, thus prohibiting any assessment of the respondents' representativeness of Australian oncologists. However, as we targeted all Australian oncologists, and received responses from over 60% of the population, covering the full range of responses, we are confident that our data provide the first quantitative, reasonably representative overview of Australian oncologists' knowledge of and attitudes to non-traditional therapies.

Secondly, we used self-report rather than an objective assessment of oncologists' actual knowledge about non-traditional therapies. As the oncologists are unlikely to have deliberately underestimated their knowledge levels, these estimates of how much they know should probably be interpreted as best-case scenarios. Also, we provided no definitions of "helpful" or "harmful", leaving individual oncologists to decide what constituted a harm or a help. This was done intentionally, as patients seek a

range of benefits from non-traditional therapies, including physical, psychosocial and spiritual ones.

Finally, while our results represent the first quantitative data on oncologists' knowledge and attitudes in this area, they cannot be generalised to other clinicians who treat people with cancer, such as surgeons, haematologists and general practitioners.

Sceptics may question the need for oncologists to increase their knowledge about non-traditional therapies when the benefit of most remains unproven. However, without some basic knowledge of what is involved in each therapy, and of any demonstrated benefits or adverse reactions, oncologists may be unable to give adequate advice to patients. As outlined in the National Health and Medical Research Council guidelines, overly heavy-handed and dismissive attitudes are less likely to succeed in discouraging patients from using potentially harmful non-traditional therapies than more rational and considered discussions.<sup>5</sup>

**Conclusions** Research is needed to facilitate the production of evidence-based information summaries for oncologists in the area of non-traditional therapies, to compare oncologists' perceptions of use with their own patients' reported use of such therapies, and to establish the knowledge and attitudes of other clinicians treating cancer patients.

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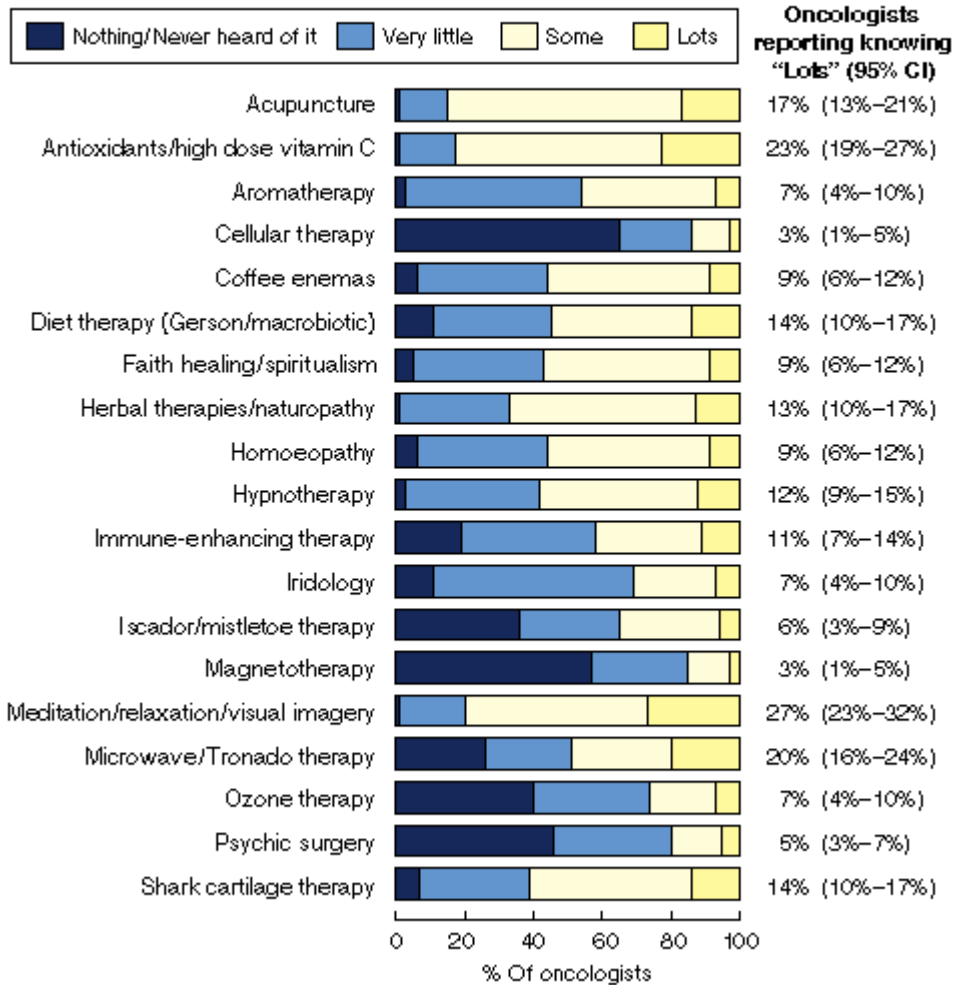
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**1: Self-reported levels of knowledge about non-traditional therapies among the 161 oncologists**



**2: Percentage of the 161 oncologists believing non-traditional therapies about which they reported at least some knowledge ("very little" or more) to be helpful or harmful**

Therapy	No. reporting some knowledge of therapy*	Curative patients		Palliative patients	
		Helpful	Harmful	Helpful	Harmful
Acupuncture	160	25%	1%	58%	1%
Antioxidants/high-dose vitamin C	160	5%	30%	5%	23%
Aromatherapy	156	9%	2%	21%	1%
Cellular therapy	57	0	29%	0	26%
Coffee enemas	151	1%	71%	1%	70%

Diet therapy (Gerson/macrobioctic)	142	2%	49%	4%	48%
Faith healing/spiritualism	152	12%	24%	23%	15%
Herbal therapies/naturopathy	159	8%	22%	13%	15%
Homoeopathy	150	4%	12%	8%	6%
Hypnotherapy	156	31%	4%	46%	3%
Immune-enhancing therapy	131	3%	27%	5%	22%
Iridology	144	1%	15%	1%	8%
Iscador/mistletoe therapy	103	2%	55%	2%	45%
Magnetotherapy	69	5%	8%	8%	6%
Meditation/relaxation/visual imagery	159	69%	3%	82%	2%
Microwave/Tronado therapy	120	7%	45%	7%	37%
Ozone therapy	96	1%	46%	2%	37%
Psychic surgery	87	2%	57%	2%	56%
Shark cartilage therapy	150	1%	23%	1%	17%

\*The remaining response options were "neither helpful nor harmful" and "don't know" - the balance of the oncologists with some knowledge of the therapy selected one of these options.

### 3: Perceptions among the 161 oncologists of their patients' use of non-traditional therapies compared with that reported by Australian cancer patients

Therapy		Oncologists' perceptions		
		No. reporting some knowledge of therapy	Median curative patients	Median palliative patients
Acupuncture		160	6%	10%
Antioxidants/high-dose vitamin C		160	15%	20%
Aromatherapy		156	5%	10%
Cellular therapy		57	3%	3%
Coffee enemas		151	3%	5%
Diet therapy (Gerson/macrobioctic)*		142	10%	10%

Faith healing/spiritualism		152	5%	10%
Herbal therapies/naturopathy		159	20%	25%
Homoeopathy		150	10%	15%
Hypnotherapy		156	5%	5%
Immune-enhancing therapy		131	5%	8%
Iridology		144	3%	5%
Iscador/mistletoe therapy		103	2%	3%
Magnetotherapy		69	2%	3%
Meditation/relaxation/visual imagery		159	20%	20%
Microwave/Tronado therapy		120	1%	1%
Ozone therapy		96	3%	5%
Psychic surgery		87	1%	1%
Shark cartilage therapy		150	5%	10%
Reported use				
Therapy	% Paediatric patients (n=48) <sup>4</sup>	% Palliative patients (n=151) <sup>3</sup>	% Medical oncology patients (n=319) <sup>1</sup>	% Medical oncology patients (n=156) <sup>2</sup>
Acupuncture	-	7%	3%	5%
Antioxidants/high-dose vitamin C	8%	24%	12%	12%-16%
Aromatherapy	-	-	-	0.5%
Cellular therapy	-	-	-	-
Coffee enemas	-	-	-	1%
Diet therapy (Gerson/macrobiotic)*	8%	18%	13%	30%
	(diet therapy)	(special foods)	(diet therapy)	(changed diet) 0.5% (Gerson)
Faith healing/spiritualism	6%	9%	7%	3%
Herbal therapies/naturopathy	8%	3%-8%	6%	5%-10%
Homoeopathy	2%	5%	3%	2%

Hypnotherapy	15%	-	-	3%
Immune-enhancing therapy	-	3%	4%	-
Iridology	-	-	-	3%
Iscador/mistletoe therapy	-	-	-	-
Magnetotherapy	-	-	-	0.5%
Meditation/relaxation/visual imagery	4%-17%	19%	10%-13%	12%-28%
Microwave/Tornado therapy	-	-	-	-
Ozone therapy	-	-	-	-
Psychic surgery	-	-	-	-
Shark cartilage therapy	-	-	-	4%

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\*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 studies is included.

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