

INTEGRATING COMPLEMENTARY AND CONVENTIONAL MEDICINE

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Abstract

Complementary and alternative medicine, for reasons varying from a desire to control symptoms and prevent and treat cancer to high accessibility, has assumed significant importance in cancer treatment and care for many patients. An estimated 14% to 65% of Australian adult cancer patients use complementary and alternative medicine (compared with up to 80% to 91% in Europe and the US). Cancer patients who use complementary and alternative medicine are typically female, younger, more educated and of higher socioeconomic status. Moreover, 33% to 77% of patients do not disclose complementary and alternative medicine use to their physicians. Particular complementary and alternative medicine (eg. herbal medicines, nutritional supplements) have drawn steadfast opposition from clinicians, primarily because they remain unproven in clinical trials. However, some complementary therapies (eg. relaxation, massage) used as adjuncts to conventional medical treatments, have proven beneficial in reducing disease or treatment symptoms and improving quality of life and psychological functioning in high quality cancer clinical trials. Nevertheless, cancer patients problematically perceive complementary and alternative medicine as more 'natural' and safer than conventional treatments. Indeed, there is evidence of harm. Herbal medicine, nutritional supplements and other natural therapies, for instance, may pose direct safety risks because of their potential adverse effects or interactions with conventional anti-cancer treatments and other medications. Consequently, some complementary therapies should not be used under any circumstances irrespective of potential benefit (eg. St John's wort), while others may be beneficial when cancer patients are not undergoing conventional treatments and have no other contraindications. Complementary and alternative medicine may also cause indirect harm (eg. resultant delays in conventional treatment potentially compromise treatment outcomes, quality of life and survival). It is therefore imperative that those involved in the medical care of cancer patients are equipped with the skills and knowledge to help patients appropriately evaluate complementary and alternative therapies. Additionally, due to the safety risks involved, clinicians are strongly encouraged to routinely ask patients about complementary and alternative medicine use. In conclusion, whether termed integrative cancer care or complementary medicine, health professionals in Australia should strongly consider offering evidence-based complementary therapies (or at least safe forms of them) alongside conventional treatments through their own cancer services. Conceivably, this will influence patients to continue with mainstream care and help them avoid any potential harm that may occur with autonomous complementary and alternative medicine use. In this way, optimal holistic care will be ensured for cancer patients by clinicians providing conventional oncology treatment and care.

Complementary and alternative medicine (CAM) continues to evoke fierce debate and divergent views within the medical community. It remains an attractive and commonly used treatment option for many cancer patients regardless of whether their clinicians like it or believe in it. Consequently, it divides health professionals providing conventional cancer care and CAM practitioners offering unconventional care.

The US National Centre for Complementary and Alternative Medicine (NCCAM) defines CAM as 'a group of diverse medical and health care systems, practices and products that are not presently considered part of conventional medicine'.¹ Complementary and alternative therapies must be distinguished, however. Complementary therapies are adjuncts to conventional medical treatment that are increasingly perceived as an important part of supportive care;^{2,3} they are often used for symptom management and to enhance quality of life and overall patient care.⁴ Alternative therapies, in contrast, are clinically unproven and are used instead of conventional treatments.² They

can be particularly damaging to cancer patients, as delay or outright refusal of conventional treatment often compromises their likelihood of cure or remission.⁵ More recently, the term 'integrative oncology' has emerged and involves a standard of care for cancer patients that utilises safe, evidence-based complementary therapies in conjunction with conventional anti-cancer treatments via a multidisciplinary approach designed to evaluate and treat the whole person rather than the disease per se.⁶

In the most recent population surveys in 2005/06, an estimated 67% of Australians used CAM,⁷ which was at least equivalent to prescription drug use,^{7,8} and represented out-of-pocket spending of \$4.1 billion, with as many visits being made to CAM practitioners as medical practitioners (approximately 68 million each).⁹ In adult cancer patients, a systematic review of 21 studies worldwide reported an average prevalence of CAM use of 31% (range: 7-64%).¹⁰ Other studies report even higher prevalence depending on CAM definitions used and cancer populations studied (eg. up to 91% of US patients reported CAM use including

prayer and exercise).^{11,12} In Australia, CAM use by cancer patients has varied widely from 14% to 65%.^{13,14}

Cancer patients may make the decision to use CAM upon diagnosis, during conventional treatment, in response to disease progression or recurrence, or during remission/survivorship. Cancer patients who use CAM are typically female, younger, more educated and of higher socioeconomic status.^{2,15,16,17-19} There are many reasons why cancer patients use CAM (Table 1), including: cancer cure or prolongation of life;²⁰⁻²⁹ relief from cancer symptoms and conventional treatment side-effects;^{19,27,30,31} to assist conventional treatments;^{21,25} boosting immunological function or energy;^{16,19,27,30} enhancing physical, emotional and spiritual wellbeing;^{15,16,32,33} and maintaining a sense of control or hope.^{16,19,20-22,24,25,32,34} Finally, research indicates that 33% to 77% of patients do not disclose CAM use to their physicians,⁴⁵ including 40% of cancer patients in one Australian study.²⁰

Table 1: Reasons why cancer patients use CAM.

Common reasons	Other reasons
Cure or prolongation of life ²⁰⁻²⁹	Perceptions that CAMs are natural, beneficial and will cause no harm ³⁵
Symptom relief from cancer and its treatment ^{19,27,30,32}	Encouragement from family, friends and other cancer patients/survivors ^{19,28,36-38}
Assist conventional anti-cancer treatments (eg. surgery, chemotherapy, radiotherapy) ^{21,25}	Media influence ^{39,40}
Boost immunological function ^{16,19,27,30}	Cultural values and beliefs ³³
Boost energy levels ^{16,19,27,30}	Poor cancer prognosis ⁴¹
Enhance physical, emotional and/or spiritual wellbeing ^{15,16,32,33}	Strengthen the body to cope with conventional anti-cancer treatments ³
Maintain a sense of control over their cancer and its treatment ^{16,19,20,22,24,25,32,34}	Reduce the need for invasive, painful or expensive anti-cancer treatments ³
Maintain hope of successfully overcoming cancer ^{16,19,20-22,24,25,32,34}	Enhance quality of life ³
	Prevent recurrence following conventional anticancer treatment ^{42,43}
	High accessibility of CAM (eg. due to non-prescription or self-referral) ⁴⁴
	Greater one-on-one attention from CAM practitioners
	Dissatisfaction with conventional medical care ⁴⁴
	Poor doctor-patient relationship ⁴⁴

Cancer physicians' concerns and attitudes regarding CAM

Collectively, there is a lack of scientific evidence for the efficacy of CAM in oncology.^{10,46-48} Certainly, no CAM has proven effective in reliably curing or suppressing any form of cancer.⁶ A useful distinction however, is that between cancer cure and cancer care.⁴⁹ Some CAMs (eg. mind/body techniques such as relaxation, acupuncture, massage) have proven relatively effective and safe in relieving disease/treatment symptoms and enhancing quality of life/psychosocial functioning and, thus, are important in caring for patients throughout the cancer experience.^{4,6,50-53} Other CAMs (eg. herbs, nutritional supplements, antioxidants) however, have drawn steadfast opposition from oncologists, primarily because they: remain unproven in clinical trials; possess greater health risks due to adverse interactions with prescribed cancer treatments or medications (eg. CAM-drug interactions, surgical complications such as bleeding); and may delay or reduce the efficacy of conventional treatments and, subsequently, compromise the likelihood of cure/remission and shorten survival time (Table 2).⁵⁴

Table 2: Concerns held by physicians for cancer patients using CAM.^{54,55}

Primary concerns	Other concerns
Specific CAMs are unproven in clinical trials	Financial harm due to the excessive cost associated with CAM
Adverse interactions with conventional treatments or medications (eg. CAM-drug interactions, surgical complications such as bleeding)	Psychological harm caused by CAM use (eg. by creating false hope in medically hopeless situations)
Reduced chance of cure or remission (due to CAM use delaying or reducing the efficacy of conventional treatments)	Abandonment of conventional treatment
Shorter survival time (due to CAM use delaying or reducing the efficacy of conventional treatments)	Patients confusing physicians' willingness to discuss and support their choice to use CAM with actual medical support for them
	Litigation against physicians if they (appear to) advocate use of CAM that proves to be a failure

Efficacy and safety of CAM

In one population survey, 75% of people agreed that combining conventional medical treatment and CAM was preferable to using either alone.⁵⁶ Problematically however, CAM is often perceived by cancer patients as being more 'natural' and, by association, safer than conventional treatments.³⁵ CAMs can directly harm patients via toxic or allergic reactions to their use alone, interactions with chemotherapy agents and prescribed medications, or contaminants in their manufacturing or from the environment (eg. heavy metals, pesticides, bacteria, fungi).^{52,54} Some herbs, nutritional supplements and other botanical agents: have toxic and potentially life-threatening effects (eg. kava, comfrey and black cohosh may cause hepatotoxicity);^{57,58} interact with chemotherapy and prescription drugs (eg. St John's wort may result in serotonin syndrome when taken with antidepressants, and reduce the efficacy of chemotherapy involving irinotecan and imatinib);^{54,58} or cause complications during surgery (eg. garlic, ginkgo biloba and ginseng may increase bleeding) and radiotherapy (see Table 3 for a summary of direct harm that may result from CAM use).^{54,59,60}

CAM may also cause indirect harm to patients (Table 4). Resultant delays in conventional treatment potentially compromise treatment outcomes, quality of life and survival.^{61,62} Financial or emotional burden (eg. prolonged denial), or the squandering of precious, limited time that some patients have left also constitute indirect harm. Finally, patients may fall victim to harm as a result of the unsafe practices of CAM practitioners with inadequate training or competence, often owing to the absence of self-regulatory bodies and unsatisfactory government legislation protecting health consumers. Moreover, harm may be exacerbated by: regulatory deficiencies in monitoring the biological potency of herbal crops or use of the correct plant species (causing wide variation in therapeutic efficacy); product standardisation in terms of purity and dosage (resulting in possible substitution/adulteration and incorrect dosing or preparation); and product labelling or advertising.⁶³

Despite the long history of most CAMs, rigorous scientific research evaluating their efficacy and safety is a recent phenomenon. A diverse range of CAM is utilised by cancer patients in Australia and elsewhere, and the heterogeneity of these techniques appear to

Table 3: Safety of complementary and alternative medicine: direct harm resulting from CAM use by cancer patients.⁶⁰

CAM = complementary and alternative medicine; MAOIs = monoamine oxidase inhibitors; RCT = randomised control trials; SNRIs = serotonin and noradrenaline reuptake inhibitors; SSRIs = selective serotonin reuptake inhibitors

Direct harm
<p><i>Toxic reactions to specific CAMs per se</i></p> <ul style="list-style-type: none"> laetrile/amygdalin causes cyanide poisoning, which may result in death high-dose beta-carotene increases lung cancer incidence and cancer mortality in smokers ephedrine alkaloids, such as ephedra/ma huang, may cause cardiovascular events including hypertension, tachycardia, heart attack and stroke chronic use of valerian (≥ 2-4 months) may result in insomnia, as well as withdrawal effects (e.g. delirium, tachycardia) if also used heavily
<p><i>Allergic reactions to specific CAMs per se</i></p> <ul style="list-style-type: none"> oral/topical use of garlic may cause contact dermatitis, garlic burns and anaphylaxis resulting in possible death
<p><i>Adverse CAM-drug interactions with chemotherapy agents</i></p> <ul style="list-style-type: none"> kava, black cohosh, laetrile/amygdalin and echinacea, among other herbal medicines and nutritional supplements, may increase the risk of acute or chronic liver failure (and resultant death or liver transplant) when receiving hepatotoxic chemotherapy drugs, including cyclophosphamide, methotrexate, camptothecins (for instance, irinotecan), taxanes (for instance, paclitaxel), vinca alkaloids (for instance, vinorelbine) and EGFR-TK inhibitors (for instance, erlotinib and cetuximab)
<p><i>Adverse CAM-drug interactions with other prescribed medications</i></p> <ul style="list-style-type: none"> ginseng, garlic, ginkgo biloba, ginger, Lingzhi and St John's wort, among others, may increase bleeding when used concurrently with anticoagulant/antiplatelet medications (eg. warfarin, aspirin) St John's wort may cause serotonin syndrome (eg. hypervigilance, agitation, muscle twitching, mental status changes, sweating, fever, shivering, rigidity, tachycardia/hypertension resulting in possible shock and death) when combined with prescription antidepressants valerian may increase the effects of sedatives (benzodiazepines and barbiturates), hypnotics and anxiolytics when used concurrently

Direct harm
<p><i>Adverse interactions with other CAM</i></p> <ul style="list-style-type: none"> laetrile/amygdalin combined with dietary intake of fruit seeds (for instance, apricot, bitter almond, peach, apple), raw almonds or megadoses of vitamin C increases the risk of cyanide poisoning and resultant death
<p><i>Adverse interactions with comorbid medical or psychiatric illnesses</i></p> <ul style="list-style-type: none"> ginseng, garlic, ginkgo biloba, ginger, Lingzhi, St John's wort and massage therapy, among other CAM, may increase bleeding and risk of resultant death in cancer patients with coagulation disorders kava, black cohosh, laetrile/amygdalin and echinacea, among others, are potentially hepatotoxic and increase the risk of irreversible liver damage (and resultant death or liver transplant) in cancer patients with liver disorders ephedrine alkaloids (for instance, ephedra/ma huang) and Siberian ginseng/eleuthero (<i>Eleutherococcus senticosus</i>) possess immunostimulatory properties, thus use increases the risk of cardiovascular events (eg. heart attack) and resultant death in cancer patients with cardiovascular disease meditation, hypnotherapy and Reiki may exacerbate psychological problems in cancer patients with psychosis, personality disorders and/or other psychiatric illnesses (for instance, schizophrenia, borderline personality disorder and bipolar disorder, respectively)
<p><i>Adverse effects during or following (cancer) surgery due to CAM-drug interactions (for instance, anaesthetics), inhibition of platelet function, excessive sedation, hypertensive effects, or slow wound healing</i></p> <ul style="list-style-type: none"> ginseng, garlic, ginkgo biloba, ginger, Lingzhi and St John's wort, among others, may increase bleeding during or following surgery if not ceased at least four to seven days prior to surgery St John's wort, valerian, garlic and kava, among others, may increase/decrease the effects of anaesthetics administered prior to surgery if not ceased at least four to seven days beforehand shark cartilage is best avoided prior to surgery as it may slow wound healing postoperatively
<p><i>Adverse interactions with hormonal therapy or other conventional anti-cancer treatments</i></p> <ul style="list-style-type: none"> ephedrine alkaloids such as ephedra/ma huang increase the risk of cardiovascular disease in prostate/testicular cancer patients receiving hormone therapy
<p><i>Adverse interactions with genetic predispositions or tendencies</i></p> <ul style="list-style-type: none"> laetrile/amygdalin increases the risk of cyanide poisoning and resultant death in genetically predisposed patients with a diminished capacity to detoxify cyanide atopic patients with a genetic tendency towards hypersensitivity may be more prone to allergic reactions (rashes, increased asthma, anaphylaxis resulting in possible death) when using echinacea
<p><i>Decreased efficacy of prescription medications</i></p> <ul style="list-style-type: none"> St John's wort may reduce the efficacy of opioids (for instance, morphine, fentanyl, oxycodone, buprenorphine) for cancer pain in (palliative) patients when used concurrently St John's wort may reduce the efficacy of antidepressants (for instance, SSRIs such as sertraline; SNRIs such as venlafaxine; tricyclics such as amitriptyline, MAOIs such as phenelzine) when used concurrently
<p><i>Decreased efficacy of chemotherapy</i></p> <ul style="list-style-type: none"> St John's wort can reduce the efficacy of irinotecan and increase myelosuppression in advanced colorectal and lung cancer patients; and may reduce the efficacy of imatinib for gastrointestinal stromal tumours, chronic myeloid leukaemia and other malignancies green tea may reduce the efficacy of bortezomib in multiple myeloma and mantle cell lymphoma patients
<p><i>Decreased efficacy of radiotherapy</i></p> <ul style="list-style-type: none"> limited evidence suggests that use of antioxidants may protect tumour cells and reduce the efficacy of radiotherapy
<p><i>Decreased efficacy of hormonal therapy or other conventional anti-cancer treatments</i></p> <ul style="list-style-type: none"> female ginseng (<i>Angelica sinensis</i>)/dong quai, red clover and soy exert oestrogenic effects, and may reduce the efficacy of hormonal (anti-oestrogen) therapy for breast and other hormone-sensitive cancers
<p><i>Adverse effects due to contamination of CAM products in manufacturing or from the environment (eg. by heavy metals, pesticides, bacteria, fungi or other impurities)</i></p> <ul style="list-style-type: none"> excessive consumption of shark cartilage or fish may result in adverse effects due to toxic levels of mercury and other contaminants contamination of laetrile/amygdalin manufactured in Mexico (the world's largest supplier) and Chinese herbal medicines by bacteria and other impurities may lead to infection or disease (eg. hepatitis B or C, herpes simplex, varicella zoster, tuberculosis)

Direct harm
<p><i>Adverse effects due to substitution or adulteration of CAM products with prescription or non-prescription drugs (eg. corticosteroids, hormones, salicylates, antihistamines, caffeine)</i></p> <ul style="list-style-type: none"> adulteration/substitution of Chinese herbal medicines and nutritional supplements such as laetrile/amygdalin are not uncommon (for instance, unspecified adulteration with corticosteroids may lead to the hormonal disorder Cushing's syndrome and adverse interactions with diabetic and heart medications among others)
<p><i>Adverse effects or negligible/decreased efficacy of CAM products as a result of not being standardised (ie. in terms of purity and dosage)</i></p> <ul style="list-style-type: none"> excessive doses of shark cartilage supplements may produce common side-effects (for instance, gastrointestinal symptoms such as nausea, vomiting, stomach upset, constipation/diarrhoea and taste alteration) and more serious adverse effects due to toxic levels of mercury, cadmium and other contaminants, given there is no generally accepted recommended dosage or duration for administration shark cartilage products typically contain varying amounts of active ingredients, and therefore may not have any biological activity (for instance, liquid shark cartilage preparations reportedly contain over 99% water and less than 1% protein; powdered shark cartilage may contain excessive binding agents and fillers, including collagen, gelatin, talc, magnesium stearate and silica)
<p><i>Adverse effects or negligible/decreased efficacy of CAM due to product mislabelling or misleading advertising</i></p> <ul style="list-style-type: none"> mislabelling of Chinese herbal medicines and nutritional supplements such as laetrile/amygdalin are not uncommon in regard to unlisted adulterants and may cause adverse effects (for instance, unspecified adulteration with corticosteroids may lead to the hormonal disorder Cushing's syndrome and adverse interactions with diabetic and heart medications among others) BeneFin (powdered shark cartilage), SkinAnswer (glycoalkaloid skin cream) and MGN-3 (rice-bran extract) were falsely promoted and marketed by Lane Labs-USA from 1997 to 2004 as effective and safe treatments for cancer and other diseases through books, articles, brochures, websites and employee statements. In 2004, Lane Labs were fined \$1 million and ordered to refund customers and destroy all inventory of these products, except for a quantity of BeneFin needed for research purposes. Subsequently, two RCT involving advanced cancer patients demonstrated that BeneFin was ineffective in improving survival or quality of life compared to standard conventional care.
<p><i>Adverse effects or negligible/decreased efficacy of CAMs as a result of CAM practitioners with inadequate training or competence</i></p> <ul style="list-style-type: none"> acupuncturists lacking experience or competence are more likely to cause minor adverse effects (for instance, local bleeding and needling pain), as well as major adverse events (for instance, pneumothorax) the skill of instructors in meditation or relaxation techniques may be important in determining whether the occurrence of paradoxical anxiety symptoms become valuable learning opportunities for teaching management of stress/anxiety or, alternatively, adverse events massage therapists should avoid applying direct pressure over known tumours to prevent adverse effects in cancer patients; no massage or reduced pressure is also advisable for cancer patients with coagulation disorders, bone metastases, open wounds or radiation dermatitis, and prosthetic devices (for instance, infusaport, colostomy bag, stents) homeopaths lacking experience or competence may prescribe homeopathic medicines in such ultra-low concentrations that they possess no clinical therapeutic efficacy whatsoever

Table 4: Safety of CAM: indirect harm resulting from CAM use by cancer patients.

Indirect harm
Potentially compromised treatment efficacy, quality of life and survival of cancer patients if CAM use results in the delay, abandonment or complete refusal of conventional anti-cancer treatment ^{61,62}
Decreased likelihood of comprehensive multidisciplinary input in conventional treatment plans and important evidence-based follow-up plans for cancer patients
Financial burden due to the excessive costs associated with CAM
Psychological distress (eg. due to prolonged denial, by creating false hope in medically hopeless situations)
Precious, limited time of some cancer patients (eg. advanced disease patients with poor prognosis, patients with disease progression or recurrence) may be squandered
Indirect harm stemming from CAM practitioners lacking experience or competence (eg. misdiagnosis resulting in the delay of appropriate cancer treatment) ⁶³
Compromised clinical trial outcomes if the effects of unknown CAM use by trial patients are misattributed to new conventional anti-cancer treatments being investigated ^{64,65}

be reflected in their reported efficacy also.^{6,52,60,66-68} Some show considerable promise and in years to come may be integrated into everyday clinical practice, while others are ineffective and, worse still, directly harmful. Subsequently, there is a sizable gap between the use of some popular CAM and the evidence to support that use.

Future research in CAM and establishing research priorities

Relatively little CAM research has been performed in Australia. Unfortunately, research gaps are the rule rather than the exception in the CAM area. Disincentives to CAM research are not purely financial, but also involve a lack of qualified investigators among CAM practitioners and methodological and ethical difficulties unique to conducting CAM clinical trials. Furthermore, until recently Australia had no national research body to encourage and prioritise CAM research, or co-ordinate collaborative research between CAM and conventional medical practitioners (compared with US NCCAM, UK National Cancer Research Institute, European Commission). A formal collaborative approach to establish common research goals was initiated in 2007 by the creation of the Australian National Institute of Complementary Medicine (NICM) and the inclusion of complementary medicine in the overall health and medical research strategic plan of the National Health and Medical Research Council.⁶⁹ The mission of the NICM is to increase complementary medicine research and investment across Australia, effectively linking complementary medicine researchers and practitioners with the broader research community, industry and other stakeholders to provide strategic focus and foster excellence in research.^{69,70}

Ultimately, the NICM's primary objective is to translate complementary medicine research evidence (safety, quality, efficacy, cost effectiveness) into clinical practice and relevant policy. To this end, the NICM has established three collaborative research centres: (1) traditional Chinese medicine; (2) natural medicines; and (3) neurocognition, and nutraceuticals and herbal medicine, which have secured approximately \$8 million in research funding from government, universities and other collaborative partners.⁷⁰ Emphasis is currently focused on areas of high disease burden, where preliminary evidence is strong and demonstrates likelihood of positive impact. Cancer is one of those areas and integrative oncology research has been initiated as a result of a partnership between the NICM and National Breast Cancer Foundation.⁷⁰ Importantly, this research falls into two high priority areas for cancer patients: (1) complementary therapies in the management of disease symptoms and side-effects of conventional anti-cancer treatments and; (2) adverse effects of CAM-drug interactions during conventional treatments (ie. drug toxicity, therapeutic failure).⁷⁰ Other high priority areas that need to be addressed however, include: (3) quality control and labelling of herbal medicines, nutritional supplements and other

natural products, and quality control of practitioner-administered CAMs; (4) the role of nutrition and other forms of CAM in cancer prevention, as well as the potential role they serve in cancer survivorship and prevention of recurrence; and (5) the mechanisms of action underpinning beneficial complementary therapies.

Integrative cancer care in Australia today

Most medical schools offer CAM-based courses and/or training in the US and Europe (91% of US medical schools for the graduating class of 2009, up from 26% in 2001),⁷¹ and many hospitals there offer integrative therapies for patients.⁷² However, relatively little has been accomplished to make evidence-based complementary therapies available to (cancer) patients in Australian hospitals, despite growing demand. A few notable exceptions exist, though.

The SolarisCare Foundation Cancer Support Centre was established in 2001 at Sir Charles Gairdner Hospital in Perth, Western Australia. Complementary therapy and supportive care services offered by SolarisCare include psychological and group support, relaxation/meditation, several types of massage therapy and other manipulative and body-based practices, touch therapies and education/information, but purposely exclude therapies that involve ingesting substances (eg. nutritional supplements).⁷³ Initially met with considerable opposition from some medical practitioners,⁷⁴ more than 25,000 free sessions have been provided to over 1800 cancer patients and their carers statewide by a team of over 100 qualified/trained volunteers.⁷⁵ SolarisCare has recently expanded its free and paid services to the privately run St John of God Hospital, Subiaco and to rural cancer patients and their carers in Bunbury and other regional centres in Western Australia. Of interest, however, is that 85% of individuals using their services have been women, and 55% have reported a diagnosis of breast cancer.^{74,75}

The Peter MacCallum Cancer Centre, Australia's only dedicated cancer hospital, in Melbourne, Victoria, provides complementary therapy and supportive care services to patients and their families in the form of psychological support, different types of massage therapy, relaxation/meditation, stress management and education/information, with some emphasis on music therapy.⁷⁶ Also, under construction is the Olivia Newton-John Cancer and Wellness Centre, which is based at Austin Hospital in Heidelberg, Victoria. The centre's 'wellness' therapies and support services will complement the centre's mainstream medical care and treatment, and collaborative research into new anti-cancer treatments with the US Ludwig Institute for Cancer Research.⁷⁷

Integrating complementary medicine into mainstream cancer care

Integrative cancer care or oncology is a patient-centred approach that nurtures the physical,

emotional and spiritual well-being of cancer patients by integrating safe, evidence-based complementary therapies with conventional anti-cancer treatments. It uses a multidisciplinary approach that assesses and treats the patient as a whole rather than addressing their disease alone. Complementary therapies used by cancer patients are diverse in their origin, premise, practice, efficacy and safety. In Australia, CAMs may be categorised by the Therapeutic Goods Administration (TGA) as registered or listed products. Registered products are prescribed or non-prescribed medications which meet Australian standards of quality, safety and efficacy. Listed products are low risk items that are not routinely evaluated with respect to a manufacturer's claims before marketing, but are subject to a random audit after listing.⁷⁸ Listed products consist almost entirely of CAMs, which implies that they are produced according to appropriate standards for quality and safety, but guarantees nothing in regard to their efficacy. Cancer patients and other members of the public are mostly unaware of such distinctions and may believe that a complementary (or alternative) medicine listed by the TGA has been assessed as both effective and safe and approved for use by the Federal Government. Additionally, many complementary therapies have long histories as components of ancient traditional medical practices, but have only been subjected to rigorous scientific investigation in the last 10-20 years. More research is required to evaluate or confirm the efficacy and safety of many of these therapies.

As stated previously, high quality cancer clinical trials indicate that some complementary therapies, used as adjuncts to conventional medical treatments, are beneficial in reducing disease or treatment symptoms and improving quality of life and psychological functioning.^{6,52,60,66-68} There is evidence of potential harm also (Tables 3 and 4). Herbal medicines, nutritional supplements and other natural therapies may pose direct safety risks because of their potential adverse effects or interactions with conventional anti-cancer treatments (chemotherapy, radiotherapy, surgery, hormonal therapies) and other medications. Some should not be used under any circumstances irrespective of potential benefit (eg. St John's wort), while others may be beneficial when cancer patients are not undergoing these treatments and have no other contraindications.

It is imperative that those involved in the medical care of cancer patients are equipped with the skills and knowledge to help patients appropriately evaluate CAM, in order to receive benefit while avoiding harm. Unfortunately, most physicians have limited knowledge of the safety and efficacy of specific complementary and alternative therapies and have not had any formal training in the CAM area.⁷⁹⁻⁸² Furthermore, few oncology health professionals feel comfortable discussing CAM, and are concerned that they cannot effectively communicate with patients or have the skills to help them maintain hope.^{35,83-85}

Surveys indicate that clinicians desire greater access to evidence-based CAM information, to improve the quality of their care, and to enhance communication with patients.^{86,87} Due to safety risks associated with CAM, clinicians are strongly encouraged to routinely ask patients about complementary and alternative therapy use.

Several recommended approaches for discussing CAM with cancer patients have been published,⁸⁸⁻⁹⁵ including a set of communication guidelines.⁹⁶ These approaches and guidelines to effective communication generally involve: (1) eliciting the patient's perspective of his or her illness; (2) being open-minded/non-judgmental and respectful in regard to cultural and linguistic diversity and different belief systems; (3) asking patients questions about CAM use at critical points in their cancer experience; (4) actively listening to patients and responding to their emotional state in exploring the details of CAM use or motivations to use it; (5) discussing relevant concerns while respecting the patient's beliefs and emphasising that 'natural' does not necessarily equate with safety in explaining known safety risks; (6) providing patients with balanced, evidence-based information and advice about specific complementary and alternative therapies; and (7) providing close clinical follow-up and psychological support of patients using CAM, even if they choose therapies which their clinician disagrees with.

Conclusion

Complementary therapies or CAMs, as they are commonly referred to by patients and clinicians, are much sought after by Australian cancer patients as a means of coping with the physical and emotional impact of their disease and/or treatment. Irrespective of whether doctors like them or believe in them, patients will use them. If health professionals are to provide cancer patients with the best care and advice possible, then they cannot ignore this sign of the times.

Whether termed integrative cancer care or complementary medicine, cancer physicians in Australia should strongly consider offering evidence-based complementary therapies (or at least safe forms of them) alongside conventional treatments through their own cancer services.⁷⁴ Conceivably, this will influence patients to continue with mainstream care and help them avoid any potential harm that may occur with autonomous CAM use. In this way, optimal holistic care will be ensured for cancer patients by clinicians providing conventional oncology treatment and care.

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