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The Mental, Emotional and Spiritual Components of Cancer Care

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No matter where in the physical body cancer occurs, it makes a wound on the heart and the mind. Life changes with a diagnosis of any life-threatening disease. An existential challenge arouses primal defenses at all levels of our being.

Traditional Chinese medicine is based on the Taoist philosophy of living in harmony with Nature, including adjusting lifestyle to changing seasons or circumstances. Naturopathic medicine is based on a philosophy of living in harmony with our own nature – respecting our genetic individuality, supporting the natural processes that give us health and life, and helping a person to be true to their own way and being. Naturopathic doctors utilize the forces of nature that support healing of the mind, body and spirit. Each of these realms contributes to a cancer patient's cancer journey and survivorship.

Every patient with cancer filters their experience through their culture, spiritual beliefs, prior learning, imagination, and unique consciousness. They weave a story to evaluate possible future events, and to create meaning out of the disorder. This subjective realm has potent effects on outcomes.[1, 2]

Social roles are impacted with a diagnosis of cancer and cancer treatment related symptoms such as fatigue, hair loss, disfigurement, scarring, adhesions, congestive heart failure, infertility, dental issues and sexual dysfunction. Family ranking, gender-defined roles and household duties may be altered. Financial stress often adds to the burden. There can be worries about reoccurrence, anxiety about becoming a burden to loved ones, and nameless fears. Angst can affect social, spiritual, marital, employment, vocational and cognitive functions. Depression can follow anxiety in many people living with cancer, and also impact people living with them.

Research exploring the mental, emotional and spiritual impact on cancer care is in its infancy. This paper highlights the current findings and is designed to give the reader a sense of how broad this area really is.

> *"…not one single person has ever truly healed from cancer without undergoing a transformation and healing of their inner self."*
>
> Jeremy Geffen, MD
> *The Journey Through Cancer*

Can emotions cause cancer?

It is not fair to blame anyone for having cancer, as so many causal factors are involuntary or hidden. We most certainly do not want anyone to feel they are emotionally or spiritually incompetent. In fact, we want to focus on and explore opportunities to use emotional and spiritual strengths to heal and even cure. Every physician should inquire into and encourage patients to resolve grief, trauma, resentment, and hurt that may influence their ability to make good choices, accept help, adapt to change, comply with treatment or be well.

There is ongoing debate as to specific emotions or personality styles that contribute to cancer. LeShan,[3] Booth[4] and Thomas[5] have described a cancer-prone personality profile where there is a tendency to value and live through others, with most thoughts and activities being outwardly directed. LeShan[3] named this "Type C" behavior, and linked it not only a higher risk of developing cancer, but also a less favorable course of the disease. Patients with this cancer-prone coping style:

- rarely express anger, anxiety, hostility, fear, resentment or sadness
- inwardly experience despair, hopelessness, self-loathing, a loss of goals and dreams and reason to live
- are unassertive, appeasing, yielding and very cooperative
- tend to be overly concerned with meeting the needs of others, and do not put their own needs forward
- suffer fear of rejection, which promotes social isolation
- fear emotional relationships are dangerous and doomed
- feel they can be themselves, or be loved, but never both
- illness may be provoked by the loss of a crucial relationship (brittle object relationship)
- may feel the only way out is death.

Much of the research has focused on the emotional impact that a cancer diagnosis has on a person. Both acute and chronic psychological distress is common after a diagnosis of cancer, with mental health issues reaching fourfold that of the general population. Approximately one-third of cancer patients report significant anxiety, depression and adjustment issues arising from these new circumstances.[6] Feelings of loneliness, worthlessness, and fear are common inner conflicts in those diagnosed with cancer. A higher level of self-worth has been associated with an improved self-caring approach and the will to live. Poor outcomes have been associated with feelings of helplessness or hopelessness in response to the cancer diagnosis and perceived consequences of treatment; pro-active and self-directed patients tend to fair better.[7]

Biochemistry and Pathophysiology of Distress

There have been a number of studies that have found correlations between emotional states and specific cancers and that have been able to link the progression of cancer to stress and other psychological factors. For example, depression has been found to increase risk of breast cancer by 42%.[8] In turn, cancer often elevates levels of interleukin 6 (IL-6), triggering cognitive dysfunction and depression. IL-6 has also been linked to an increased risk of metastasis. Another pro-inflammatory cytokine which is elevated in depressed patients is tumor necrosis factor alpha TNFα. TNFα is involved in angiogenesis, immune function and apoptosis.

The stress hormone adrenaline (epinephrine) stimulates tumorigenesis. Adrenaline activates phosphorylation of kinases involved in growth signal transduction from the cell surface receptors to the nucleus. This stress hormone increases protein kinase A (PKA), which regulates sugar and fat metabolism, and BAD apoptosis regulator protein. As a result, cancer cells get more food and cannot die. Adrenaline also blunts the desired induction of apoptotic cell death by chemo and radiation therapies. Learning to relax is turning out to be a *bona fide* cancer therapy.[9, 10]

Cancer incidence, progression and mortality is linked to circadian rest/activity cycle disruption. Having a lifestyle that is out-of-sync with the circadian rhythm is associated with disturbances with the pineal gland hormone melatonin and the adrenal gland stress hormone cortisol, which in turn increases a person's risk in the following ways:

- Unmitigated stress flattens the daily diurnal peaks of the adrenal stress hormone cortisol
- Cortisol alters melatonin rhythm
- Melatonin deficit from shift-work, and melatonin antagonists increase cancer risk
- Melatonin improves survival twofold[11]

The hypothalamic pituitary adrenal (HPA) axis modulates glucocorticoid signalling. The adrenergic system can affect cancer biology by promoting tumor growth, invasion, angiogenesis, and ultimately increasing metastatic potential. Sympathetic nervous system (SNS) pathway mediates downstream effects through modulation of adrenergic signalling. Adrenergic signalling enhances glucocorticoid receptor (GR) stability and binding to DNA. In turn glucocorticoids increase the expression and affinity of beta-2 adrenergic receptors and prevent their down-regulation. Activation of the glucocorticoid receptor in estrogen-receptor (ER)-negative breast cancer cells has been shown to promote cancer cell survival and growth.

A strong adaptive immune response in patients with ovarian cancer has been linked to improved survival, but it is known to be impaired by active immune-suppression within their malignant tumors. Compared to those with benign ovarian neoplasms, epithelial ovarian cancer patients showed marked elevations in unstimulated and tumor-stimulated type-2 responses such as ascites and tumor infiltration by lymphocytes. Depressed and anxious mood were both associated with significantly altered cytokines IFN gamma and IL-4. This signifies greater impairment of adaptive immunity in peripheral blood and in the tumor microenvironment among ovarian cancer patients compared to those with benign tumors.[12] A common immune-suppressant elaborated by tumours is transitional growth factor beta-1 also called transforming growth factor or TGF. This keeps immune cells in repair mode, which supports tumour growth, and prevents them from going into attack mode against the cancer.

A person's support network has been found to be strongly correlated with survival. Those patients who lack a significant social support network are particularly vulnerable when cancer occurs. Patients who report a poor level of social well-being and support show higher pre-surgical levels of the angiogenesis cytokine VEGF. From a biochemical perspective, Norepinephrine has been found to be reduced in those who have a good social support and it has also been linked to angiogenesis.[13]

Greater forgiveness significantly correlated with better immune function, as indicated by higher CD4 cell percentages.[14]

Talk Therapy as an Effective Cancer Therapy

The rational and scientific evaluation of psychosocial interventions in cancer is in its infancy. Clearly measures which will be useful will have to have potent psychogenicity, the ability to stimulate lasting and major change in the thoughts, moods, habits and lifestyle of these cases. Ideally, the response to the threat of cancer is a realization of a need for significant change, a willingness to act, an application to self-help strategies, and achievement of quality experiences in the new modes of being.

Shock seems to be the most common reaction when a patient hears the word "cancer" from their doctor. Shocked patients may feel a range of emotions from relief to grief reactions, including denial, anger, bargaining, depression and helplessness.

It is normal for cancer or any life-threatening disease to provoke fear of death, loss of control, pain, weakness, medicalization of one's life, social ostracism, financial loss, and so on. It is important to address these concerns, give stress-busting techniques to relieve anxiety, clarify a person's self-image and give hope. A medical oncologist once remarked that he was apparently unique among his medical colleagues in that he could say the word "hope" without putting "false" in front of it. He found hope is fantastic healing force to harness into a program, describing it as allowing one's internal pharmacy in synch with prescribed therapies.[15] A patient does not have to accept pain, abandonment, suffering or giving up being productive only because the future is uncertain. Hope is just having faith in good outcomes, and what people accept as a good outcome is usually just that they will have some dignity, some control, and be able to handle what will be.

Cancer can be a doorway to change – either out of this world or into a new lifestyle. It is natural to be wary of change. We do not always welcome the effort and losses involved in making a change. Still, it is human nature to try to see meaning, to find the lesson, to grasp that silver lining in the dark cloud. A reminder of our mortality can bring profound meaning back into the lives of patients and their families.

Lawrence LeShan was a psychologist working at the prestigious Revici cancer hospital in New York. Most of his patients there were terminal cancer cases, so he witnessed a lot of death and grief. Distraught at the relentless toll of cancer, despite his diligent care, after several years he suffered a breakdown. He took a mental health sabbatical, which resulted in completely reframing his approach He assumed that it is quite rational for patients with cancer to have anxiety and depression. They were therefore not neurotic or crazy, so he reasoned that he had no need for psychotherapies oriented to those mental illnesses. Rather than looking for psychological defects and trying to fix them, he advocated restoration of emotional and creative expression. He found people with cancer had often lost a main emotional focus in their lives, and had lost hope of finding any satisfactory substitute. He asserted that patients with cancer need to learn how to live fully - as he puts it, "love, laugh, play, learn, sing praises and exercise". He had remarkable success by helping them design a re-vitalized life providing meaning, authenticity, enthusiasm, zest and fulfillment. He has documented durable cures of "terminal" cases with this positive, existential psychology.[13] LeShan made each patient feel the great joy in being true to their own way and being.

Carl O. Simenton is another pioneer in psycho-oncology who has demonstrated clinical efficacy.[16] Circa 1969-1977, he demonstrated he could double survival time of *terminal* cases, meaning those expected to die within six months. In fact 40% were still alive at two years. Foundations of his approach are the following:

- accept responsibility, participate in your own recovery
- forego benefits and secondary gains of illness
- relaxation, visualization, inner guide
- overcoming resentment
- coping with fears of recurrence, death, pain
- goal setting
- family support system
- physical exercise

He and others have shown there is real survival value in positive affirmations, meditation, creative visualization, peer support, professional psychological facilitation, and therapy.

Louise Hay is a layperson who has popularized Simenton's approach of positive affirmations.[17] Drawing from her own recovery from cancer, she believes that positive language is powerful, and if attached to feelings of success and recovery, it can be healing. It is very easy to do, as she has demonstrated in many self-help books.

Guided imagery or self-directed visualization has also been found to be beneficial when faced with a terminal illness or major life change. If a person can imagine a bunch of worries, they are already skilled at imagery. Refocusing from fear and dread to clear goals and action steps is not just wishful thinking, it is strategic and wise.

Gabor Maté, MD, a prominent contemporary Canadian author and lecturer, has an extensive background in treating addictions, mental illness, and in palliative care. These intense experiences have given him insights into the connection between emotional and psychological stress and health. In several published works he gives importance to childhood exposure to abuse, neglect, trauma or violence as destabilizing forces on personality development. He believes that the patient who cannot say no to what they do not want is at higher risk of morbidity and mortality across the disease spectrum. His position is that if we do not know our own needs and identity, we cannot discern when to say no, to avoid being exploited or hurt. This has implications for obtaining informed consent to therapies. He has determined that we do not have to consciously perceive stress and emotionality for it to hurt us physically. He postulates that the physical body will say no, by introducing disease, when mental or emotional afflictions prevent us from being self-protective.[18]

> *"Ultimately, medicine's job is not to relieve suffering or eliminate it. Medicine's job is to relieve unnecessary suffering and to help shift our relationship to necessary suffering."*
>
> Ted Kaptchuk, OMD

Pain and suffering are highly subjective experiences, with strong inputs from the cerebral cortex. How noxious a signal is depends on how threatening we find it, cultural contexts, and many other perceptions and beliefs. Pain may be more easily borne by a patient who feels hopeful in facing a challenge, compared to another whose thoughts dwell on what is lost and what is threatened by their

disease. Hope is not something to avoid arousing, it is essential, for the physical therapeutic value as well as for psychological well-being There is an opportunity for growth in every challenge, and it is quite necessary to look at all emotions and problems, and take the time to live through some processing. People who come to embrace and feel good about their cancer therapy tend to have far less side-effects than those who fear it and have morbid expectations. Anxiety and depression set a patient up for a poorer response and more harm from chemotherapy, such as anticipatory nausea.[19]

Distress is common among cancer patients, especially those undergoing chemotherapy. Skill in stress management is associated with lower levels of anxiety and depression and better overall mental quality of life.[20] Common de-stressing techniques include 'mind-body' techniques such as yogic belly breathing, skin temperature biofeedback, autogenic progressive relaxation, compassionate heart-focused meditation, journalling, music and art.

Cognitive Behavioural Therapy (CBT)

Cognitive behavioural therapies (CBT) are a very useful, efficacious and practical non-drug intervention in many medical conditions. Integrative oncology practitioners refer to trained grief counsellors at hospice, and to psychotherapists for hypnotherapy or CBT. A successful cognitive therapy for clinical anxiety is Time-Line Therapy. Patients are rapidly guided to revisit and reframe past experiences, but with their present maturity and dispassion. It is primarily a mental exercise, without lengthy retelling of the story, or emotive discharges. The patient, however, often releases the emotions of the event by putting it into a much larger perspective of their life, and even their gestation time and the influences of their parents or ancestors.

Cognitive-behavioral therapy is an evidence-based treatment readily adapted to address realistic concerns related to having cancer, such as worries about disease progression, disability, and death, targeting skills for relaxation, coping with cancer worries, and activity pacing. Adults with incurable malignancies and elevated anxiety who received at least five of the required six CBT sessions significantly decreased their anxiety.[21]

Dr. David Burns, MD has contributed a book[22] and work-book on mood therapy,[23] which address cognitive distortions behind pessimism. The beneficial effects of CBT appeared to be sustained for cancer patients experiencing depression.[24] Good psychotherapy opens up a person to new expression of their physical, psychological and spiritual selves. Patients who truly become engaged with their own healing take responsibility for their lifestyle, emotions, and spirit. They change the things they can, and accept what they cannot.

Hot flushes and night sweats (HFNS) affect 65-85% of women after breast cancer treatment. They are distressing, causing sleep problems and decreased quality of life. Hormone replacement therapy in the form of estrogen is often either undesirable or contraindicated. A 90 min group CBT session a week for 6 weeks, including psycho-education, paced breathing, and cognitive and behavioural strategies has been found to be safe and effective treatment for women who have problematic HFNS with additional benefits to mood, sleep, and quality of life. The treatment could be incorporated into breast cancer survivorship programmes and delivered by trained breast cancer nurses.[25]

Persistent insomnia is a common complaint in cancer survivors, but is seldom satisfactorily addressed. A protocol-driven cognitive behavior therapy (CBT) for insomnia was printed in a manual and delivered by oncology nurses to patients who had completed active therapy for breast, prostate, colorectal, or gynecological cancer. Five small group CBT weekly sessions was associated with mean reductions in wakefulness of 55 minutes per night compared with no change in treatment as usual controls. These outcomes were sustained six months after treatment. Standardized relative effect sizes were large for complaints of difficulty initiating sleep, waking from sleep during the night, and for sleep efficiency (percentage of time in bed spent asleep). CBT was associated with moderate to large effect sizes for five of seven QOL outcomes, including significant reduction in daytime fatigue.[26]

Breast cancer survivors (BCS) benefited from an "uncertainty management intervention" consisting of a scripted CD and a guide booklet, supplemented by four scripted, 20-minute weekly training calls conducted by nurses. BCSs who received the intervention reported reductions in uncertainty and significant improvements in behavioral and cognitive coping strategies to manage uncertainty, self-efficacy, and sexual dysfunction. Materials tested in CD and guide booklet format could be translated into online format for survivors to access as issues arise during increasingly lengthy survivorship periods. Materials could be downloaded to a variety of electronic devices, fitting with the information-delivery needs and management styles of younger BCSs.[27]

Mindfulness

Mindfulness is emerging as a key coping strategy. Mindfulness is a secular approach to meditation, and being aware of one's physical as well as subjective states of being. Mindfulness-Based Stress Reduction (MBSR) typically involves yoga, meditation and non-judgemental awareness of the present. The first to advance this approach as clinically efficacious was the clinical psychologist Jon Kabat-Zinn of the University of Massachusetts, who carries on his work there at the Center for Mindfulness in Medicine, Health Care and Society.

In breast cancer populations MBSR has been associated with positive experiences such as calmness, connection, awareness, acceptance, and confidence. Patients report coping better with stress, anxiety and panic; being less judgemental of themselves and others; improved communication and personal relationships, taking more time and making more space for themselves.[28] An eight-week group based MBSR intervention for women with breast cancer had clinically meaningful, statistically significant effects on depression and anxiety after 12 months' follow-up, and medium-to-large effect sizes.[29]

A brief mindfulness-based intervention was effective for improving sexual functioning in women with gynecological cancer. Thirty-one survivors of endometrial or cervical cancer (mean age 54.0, range 31-64) who self-reported significant and distressing sexual desire and/or sexual arousal concerns were assigned either to three, 90-minute mindfulness-based cognitive behavior therapy sessions or two months of wait-list control prior to entering the treatment arm. There were no significant effects of the wait-list condition on any measure. Treatment led to significant improvements in all domains of sexual response, and a trend towards significance for reducing sexual distress.[30]

Support groups

Patients can easily become conflicted between the principles of social self-sacrifice versus the drive to seek care. Many have been raised with an aversion to selfish acts, and find it hard to navigate the boundary between being genuinely needy on account of illness, and being demanding or self-centered. It seems it helps to know that others are feeling the same things. Empathy, emotional contact and respect from peers can improve a person's self-understanding, self-acceptance and self-approval. With the will to live, to fight for life, comes restoration of emotional outlets, and inner growth, even in the face of physical catastrophe. This sets the stage for healing of anxiety, despair and disappointment. To quote Gottard Booth, "Illness is a reminder of the purpose of life."[4]

A weekly support group and self-hypnosis for pain was associated with doubling of life-span in advanced stage IV breast cancer, ovarian cancer and melanoma.[31]

Family members are often the most important source of social support for cancer patients. Long-term health-related quality of life (HRQL) study demonstrated that anger control had a positive relationship with perceived partner support. Habitual inhibition of anger showed a negative correlation with partner support. Analyses by gender revealed some clear differences. For the male patients, the wife's high level of anger expression was significantly positively related to patient mental HRQL, whereas for the female patients, their husband's anger expression was negatively correlated with the patient's mental HRQL. The anger expression styles of patients and their partners clearly modify the family atmosphere, and together are important determinants of the long-term quality of life of the cancer patients. Interventions for couples facing cancer should include a focus on mutually acceptable ways of dealing with anger and thereby support dyadic coping with cancer.[32]

Psychotherapy can be beneficial for advanced cancer patients near the end of their lives. Although psychosocial care has been regarded as central to palliative and supportive care, there have been few empirically tested approaches to individual intervention. A brief manual summarizes a new psychotherapy referred to as "Managing Cancer and Living Meaningfully" (CALM). Three to six CALM sessions based on the manual were associated with profound and unique patient-identified benefits and no patient-identified risks or concerns. A qualitative study suggested that the CALM intervention provided substantial benefits for patients with advanced cancer prior to the end of life. Five interrelated benefits of the intervention regarded by participants as unique in their cancer journey were:

- a safe place to process the experience of advanced cancer;
- permission to talk about death and dying;
- assistance in managing the illness and navigating the healthcare system;
- resolution of relational strain; and
- an opportunity to 'be seen as a whole person' within the healthcare system.[33]

Expressive therapies

The old term "placebo response" is now being called a "meaning response". People heal when they find meaning in their life. When they express their inner selves, they can remember love, speak their truth, and move into a still and sacred place where they co-create a reality where they are kind to themselves and all others. Expressive therapies such as journalling, music or art help modulate neuro-endocrine-immune parameters.

Art therapy may connect the subconscious to the outer world and reveal the inner journey. Art forms such as music, dance, drawing, painting, or any chosen medium allows some individuals to bring forward emotions and express experiences, advancing them towards resolution and integration.[34]

Spirituality

Spirituality is a dimension of life given great importance by some of our cancer patients, who seek spiritual support as a dimension of their cancer care. Because it is a life-and-death struggle to overcome cancer, for many it is seen as a spiritual process. Treating this "ghost in the machine" is not an area of expertise of most medical practitioners.

A diagnosis of a life-threatening disease can create a sense of hopelessness. Stress is lessened by reasserting personal control, taking action, rather than feeling helpless. Mortality is a fact, but how to live out a life is definitely not pre-determined.

The keys to recovery from afflictions of mind and soul have been associated with:

- the proper perception and expression of anger
- the ability to forgive
- reaching out for social support
- practicing an attitude of gratitude
- changing "I have to…" to "I get to…!"
- cultivating laughter, joy and hope.[14, 32]

Before his death, Rabbi Zusya said "In the coming world, they will not ask me: 'Why were you not Moses?' They will ask me: 'Why were you not Zusya?"[35] People all have a chance to let their little light shine, every day. It appears to be a healthy practice to be content with being who and what you are. The spiritual positivist outlook is that joy, gratitude and love are healing to the spirit, whatever the circumstances of the physical body may be.

A terminal diagnosis means a person has time to prepare for their death. Resolution of conflicts and the giving and receiving of forgiveness can be seen as possible gifts.

Larry Dossey, MD has written extensively on the non-locality of consciousness and has taken on the controversial subject of prayer and faith as sources of healing. He has assembled the available evidence for personal values and beliefs as determinants of outcomes. Religious communities provide fellowship and a forum for spiritual practices and prayer, which may reduce loneliness, isolation, abandonment and many other negative experiences that impact enjoyment of life.

> *"…praying more prayers of gratitude and fewer prayers of supplication…is the proper response on realizing that the world, at heart, is more glorious, benevolent, and friendlier than we have recently supposed."*
>
> Larry Dossey, MD

Religious faith, prayers, rituals and spiritual practices are coping mechanisms that have been positively associated with better outcomes. People who believe in a higher power, and particularly those who practice their faith or religion actively, have measurably lower rates of complications, less need for medications, and tend to survive longer with more quality of life. People of faith tend to feel peace, assurance, meaning and well-being, which allows them to embrace life. Faith in an afterlife or spiritual survival does correlate with an increased fighting spirit seen in cancer survivors. They fear death less, yet fight to survive more.[36]

Many patients find religion to be an effective coping mechanism, offering them strength, comfort and hope. A study emphasized the need for including a 'religious time-out' before and after surgery and offering religious leaders/groups to ensure quality care and patient satisfaction.[37]

The Cochrane Reviews have analyzed multiple studies on intercessory prayer that treatment teams had added to health interventions; however, the reviewers could draw no conclusions about the efficacy of prayer because the studies showed either positive or no effects and used different endpoints and methodologies. An RCT had an external group offering remote Christian intercessory prayer to cancer patients. The intervention group showed significantly greater improvements over time for the primary endpoint of spiritual well-being, emotional well-being, and functional well-being.[38]

Wholistic care may come around again to the old therapy of contact with a green, natural environment. A study of integrated medicine showed benefit to cancer patients from a program of walks in the forest, growing a vegetable garden, yoga, meditation, and support group therapy. Sessions were conducted once a week for 12 weeks. There were significant differences in functional well-being and spiritual well-being. This program improved quality of life, reduced cancer-associated fatigue and increased natural killer cell activity.[39]

Reiki means "spiritual blessing". Reiki is the laying on of hands in a traditional manner, clothes on. Some pilot studies show reiki was helpful in improving well-being, relaxation, pain relief, sleep quality and reducing anxiety[40] and fatigue in cancer patients.[41]

Healing touch, therapeutic touch and reiki are 'energy therapies' which have been found to be helpful in symptom and distress reduction by integrative oncology nurses. Healing touch and therapeutic touch are now common in nursing practice, and reiki is now being used in hospices as well as clinics. These modern reinterpretations of ancient healing practices have been shown to provide relief of pain, anxiety, including bringing increased peace and comfort at the end of life. Also improvements were seen in sleep onset and duration. There were improved biophysical markers such as reduced blood pressure, improved heart rate, decreased cortisol, and increased natural killer cells.[42] As well as being calming, they can at times be transformative experiences, and evoke deep emotional processing. Body work practitioners have an expression that 'issues are in the tissues' to describe the connection between touch and the release of emotions, memories, revelations and insights.

Mind-body healing gets results

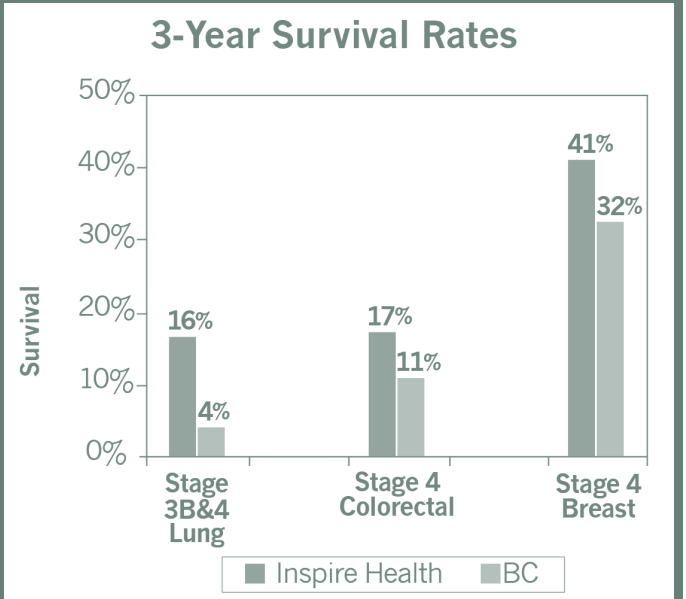
A comprehensive clinical integrative cancer treatment program combining conventional treatments with nutrition and supplementation, fitness and mind-spirit instruction as offered at the Block Center for Integrative Cancer Treatment.

Five-year survival for a consecutive case series of advanced metastatic breast cancer was 27% for the Center versus 17% for comparison patients. Despite a higher proportion of younger and relapsed patients, survival of metastatic breast cancer patients at the Center was approximately double that of comparison populations and possibly even higher compared to trials published during this period. Explanations for the advantage relative to conventional treatment alone may include the nutritional, nutraceutical, exercise and psychosocial interventions, individually or in combination.[43] A previous study incorporating similar nutritional, supplementation and mind-spirit interventions also demonstrated clinical efficacy in prostate cancer.[44]

The Urban Zen Initiative in New York City incorporated yoga therapy, holistic nursing techniques, and a "healing environment" into routine inpatient oncology care. It produced a decrease in use of anti-emetic, anxiolytic and hypnotic medications, resulting in substantial cost savings in the care of oncology patients.[45]

A CD called *Remembered Wellness* by Theresa Clarke, MD, is a very useful set of guided relaxation and visualization exercises. Dr. Clarke was Medical Director at Inspire Health clinic in Vancouver, BC, which provides stress management, mind-body healing and vegetarian diet training for patients with chronic illnesses. Inspire Health has now demonstrated these most basic wholistic interventions go beyond profound effects on quality of life for cancer patients, and actually impact overall survival, as pictured in Figure 1. On the basis of this achievement they received several millions of taxpayer's dollars to open five more clinics in British Columbia, and many millions more for further research.

FIGURE 1. Inspire Health Survival Rates Vs. BC Cancer Agency Standard of Care



Conclusion

Addressing the mental, emotional and spiritual dimension of the cancer experience have been found to greatly influence outcomes in people with cancer. Once thought of as strictly part of the palliative care process to improve quality-of-life, mind-body therapies are now emerging as essential and active therapies with significant impact on tolerance to cancer therapies and to overall cancer survival rates.

Experienced practitioners recognize that each patient brings their own set of values and beliefs to the cause of their cancer and to the ways of healing from cancer, or any disease. Some of these values and beliefs are worth nurturing, and some may benefit from intervention. Limiting beliefs from both patients and practitioners are toxins which are obstacles to cure, as surely as are heavy metals or poisonous chemicals. Assisting patients in creating a positive state of being may require elements of hope and even faith. The future will always remain a mystery, but fortunately present actions change the probabilities of what may occur.

Physicians are not usually psychotherapists, nor should they try to be ministers or gurus, but naturopathic physicians can create integrative programs and lead multidisciplinary teams dedicated to support healing at all these levels.

> *"If you don't believe in miracles, perhaps you've forgotten you are one."*
>
> Dr. Blossom Bitting, ND

About the Author

Dr. McKinney graduated in Biosciences from Simon Fraser University and moved into biophysical (radiation) cancer research. Next he studied kinesiology at the University of Waterloo and graduated as a Doctor of Naturopathic Medicine from National College of Naturopathic Medicine in 1985. He concurrently trained 3 years in TCM at the Oregon College of Oriental Medicine. He founded the BC Naturopathic Association and the Boucher Institute of Naturopathic Medicine, with many contributions to regulation, education and advancement of the profession. He is a professor and author in Naturopathic Oncology. He practices with a focus on integrative oncology in Victoria, BC.

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