



RESEARCH UPDATES NOVEMBER 2013

INSIDE:

Breast Cancer	1,2
Colorectal Cancer	2
Acupuncture	3
Mindfulness-Based Stress Reduction ...	3
Gardening	4
Vitamin E	4
Psychosocial Services	5
Lung Cancer	5
Exercise	5
STUDY OF THE MONTH	6

Research Updates is published once a month to provide the latest integrative cancer care research to patients, health care providers, and the public.

To support this valuable educational service, please donate at:
www.inspirehealth.ca/donate

FOR THE LATEST IN WORLDWIDE INTEGRATIVE CANCER CARE

IN THIS ISSUE: Bilinski et al. found that low levels of vitamin D at diagnosis were associated with a higher risk of breast cancer. Kroenke and colleagues concluded that high fat dairy intake, but not low fat dairy intake was related to a higher risk of mortality from breast cancer. Chen and associates found that a high-fiber diet reduced the risk of colorectal cancer. Jeong and associates found that acupuncture helped to relieve severity of hot flashes in Korean women receiving antiestrogen therapy for breast cancer. Cramer et al. found that Mindfulness-Based Stress Reduction improved the psychological well-being of breast cancer patients. Blair and associates found that gardening was helpful in increasing fruit and vegetable consumption and physical activity in cancer survivors. Chao et al. found that acupressure shortened the time to first flatus and improved gastrointestinal function in colorectal cancer patients following abdominal surgery. Fallahi and associates found that vitamin E was protective against radiation-induced salivary gland dysfunction following single-dose radiation therapy. Gunn and colleagues found that rural cancer patients desire individualized care with respect to psychosocial services. Haas and associates concluded that exercise improves quality of life for people with all stages of cancer. In our study of the month, Frenkel et al. evaluated the efficacy of a number of dietary supplements in cancer care, based on previously published research.

BREAST CANCER

Bilinski, K and J. Boyages

Association between 25-Hydroxyvitamin D Concentration and Breast Cancer Risk in an Australian Population: An Observational Case-Control Study.

Breast Cancer Res Treat. 2013 Jan; 1372: 599-607.

OBJECTIVE: The objective of this study is to examine the association between vitamin D status and risk of breast cancer in an Australian population of women. **DESIGN:** The study design is observational case-control study, performed at Westmead Breast Cancer Institute, Westmead Hospital, Sydney, Australia. 214 women newly diagnosed with breast cancer were matched to 852 controls, and their blood samples were tested at the same laboratory between August 2008 and July 2010. Circulating 25-hydroxyvitamin D (25(OH)D) concentration, was defined as sufficient (≥ 75 nmol/L), insufficient (50-74 nmol/L), deficient (25-49 nmol/L) or severely deficient (< 25 nmol/L). The difference in median 25(OH)D concentration between cases and controls was reported, and the Mann-Whitney U test was used to determine the significance of the difference. Odds ratios and 95 % confidence intervals for the risk of breast cancer were estimated by Cox regression. **RESULTS:** Median plasma 25(OH)D was significantly lower in cases versus controls overall (53.0 vs 62.0 nmol/L, $P < 0.001$) and during summer (53.0 vs 68.0 nmol/L, $P < 0.001$) and winter (54.5 vs 63.0 nmol/L, $P < 0.001$). Median 25(OH)D was also lower in cases when stratified by BMI (< 30 , ≥ 30) and age group (< 50 , ≥ 50 years) compared to matched controls, although the difference failed to reach statistical significance. In a Cox regression model, plasma 25(OH)D was inversely associated with the odds ratio of breast cancer. Compared to subjects with sufficient 25(OH)D concentration, the odds ratios of breast cancer were 2.3 (95 % CI 1.3-4.3), 2.5 (95 % CI 1.6-3.9) and 2.5 (95 % CI 1.6-3.8) for subjects categorised as severely deficient, deficient or insufficient vitamin D status, respectively. **CONCLUSION:** The results of this observational case-control study indicate that a 25(OH)D concentration below 75 nmol/L at diagnosis was associated with a significantly higher risk of breast cancer. These results support previous research which has shown that lower 25(OH)D concentrations are associated with increased risk of breast cancer.

INSPIREHEALTH'S INTERPRETATION: In this observational study, it was found that the vitamin D levels below 75 nmol/L at diagnosis were associated with an increased risk of breast cancer.

Kroenke, CH, M. L. Kwan, C. Sweeney, et al.

High- and Low-Fat Dairy Intake, Recurrence, and Mortality After Breast Cancer Diagnosis.

J Natl Cancer Inst. 2013 May 1; 1059: 616-623.

BACKGROUND: Dietary fat in dairy is a source of estrogenic hormones and may be related to worse breast cancer survival. We evaluated associations between high- and low-fat dairy intake, recurrence, and mortality after breast cancer diagnosis. **METHODS:** We included 1893 women from the Life After Cancer Epidemiology study diagnosed with early-stage invasive breast cancer from 1997 to 2000, who completed the Fred Hutchinson Cancer Research Center Food Frequency Questionnaire after diagnosis. A total of 349 women had a recurrence and 372 died during a median follow-up of 11.8 years, with 189 deaths from breast cancer. We used delayed entry Cox proportional hazards regression to evaluate associations between categories of the cumulative average of dairy fat at baseline and at follow-up 5 to 6 years later and subsequent outcomes. Tests of statistical significance were two-sided. **RESULTS:** In multivariable-adjusted analyses, overall dairy intake was unrelated to breast cancer-specific outcomes, although it was positively related to overall mortality. Low-fat dairy intake was unrelated to recurrence or survival. However, high-fat dairy intake was positively associated with outcomes. Compared with the reference (0 to <0.5 servings/day), those consuming larger amounts of high-fat dairy had higher breast cancer mortality (0.5 to <1.0 servings/day: hazard ratio [HR] = 1.20, 95% confidence interval [CI] = 0.82 to 1.77; and ≥ 1.0 servings/day: HR = 1.49, 95% CI = 1.00 to 2.24, P trend = .05), higher all-cause mortality (P trend < .001), and higher non-breast cancer mortality (P trend = .007); the relationship with breast cancer recurrence was positive but not statistically significant. The higher risk appeared consistent across different types of high-fat dairy products. **CONCLUSIONS:** Intake of high-fat dairy, but not low-fat dairy, was related to a higher risk of mortality after breast cancer diagnosis.

INSPIREHEALTH'S INTERPRETATION: In this large prospective study of early-stage breast cancer patients, intake of high fat dairy products (more than one serving per day) increased risk of death by 49%, and possibly impacted cancer recurrence. Low fat dairy consumption was not associated with either cancer recurrence or survival.

COLORECTAL CANCER

Chen, HM, Y. N. Yu, J. L. Wang, et al.

Decreased Dietary Fiber Intake and Structural Alteration of Gut Microbiota in Patients with Advanced Colorectal Adenoma.

Am J Clin Nutr. 2013 May; 975: 1044-1052.

BACKGROUND: Accumulating evidence indicates that diet is one of the most important environmental factors involved in the progression from advanced colorectal adenoma (A-CRA) to colorectal cancer. **OBJECTIVE:** We evaluated the possible effects of dietary fiber on the fecal microbiota of patients with A-CRA. **DESIGN:** Patients with a diagnosis of A-CRA by pathological examination were enrolled in the A-CRA group. Patients with no obvious abnormalities or histopathological changes were enrolled in the healthy control (HC) group. Dietary fiber intake was assessed in all patients. Short-chain fatty acids (SCFAs) in feces were detected by gas chromatography. The fecal microbiota community was analyzed by 454 pyrosequencing based on 16S ribosomal RNA. **RESULTS:** Lower dietary fiber patterns and consistently lower SCFA production were observed in the A-CRA group (n = 344). Principal component analysis showed distinct differences in the fecal microbiota communities of the 2 groups. *Clostridium*, *Roseburia*, and *Eubacterium* spp. were significantly less prevalent in the A-CRA group (n = 47) than in the HC group (n = 47), whereas *Enterococcus* and *Streptococcus* spp. were more prevalent in the A-CRA group (n = 47) (all P < 0.05). Butyrate and butyrate-producing bacteria were more prevalent in a subgroup of HC subjects with a high fiber intake than in those in both the low-fiber HC subgroup and the high-fiber A-CRA subgroup (all P < 0.05). **CONCLUSION:** A high-fiber dietary pattern and subsequent consistent production of SCFAs and healthy gut microbiota are associated with a reduced risk of A-CRA. This trial was registered at www.chictr.org as ChiCTR-TRC-00000123.

INSPIREHEALTH'S INTERPRETATION: A healthy diet high in fiber has a positive impact on intestinal bacteria and can reduce the risk of colorectal cancer.

E-VERSION EXTRA

de Oliveira, AL and F. M. Aarestrup.

Nutritional Status and Systemic Inflammatory Activity of Colorectal Patients on Symbiotic Supplementation.

Arq Bras Cir Dig. 2012 2012; 253: 147-153.

BACKGROUND: Nutritional depletion in patients with advanced colorectal cancer, even with adequate weight, may be associated with co-morbidity factors such as: reduction of immunity, increased rate of infections, impaired cicatrization and muscle weakness. Immunomodulating diets have recently been used as a nutritional approach to cancer patients. Prebiotics, probiotics and symbiotics (a mixture of the first two) have been studied. **AIM:** To assess the Nutritional Status and Systemic

Inflammatory Activity of colorectal patients on symbiotic supplementation. It was a progressive longitudinal study in colorectal cancer patients. **METHODS:** All patients underwent assessment of nutritional status and subsequent serological analysis, daily use of the symbiotic supplement, anthropometric and biochemical assessment every three months. Besides anthropometric data, the following blood components were measured: C-reactive protein (CRP), carcino-embryonic antigen (CEA) and albumin. **RESULTS:** The mean CRP level at baseline, before symbiotic administration, was 11 mg/dL, with a reduction to below 6 mg/dL at the end of the study. **CONCLUSION:** There was a beneficial effect of symbiotic supplementation, because although albumin and CEA levels were stable during the study, there was a CRP reduction in meantime.

INSPIREHEALTH'S INTERPRETATION: Supplementation with symbiotics (a combination of bacteria and indigestible food that stimulate bacterial growth) can reduce circulating C-reactive protein, a biomarker of inflammation, further supporting the growing evidence of the benefits of healthy intestinal bacteria.

ACUPUNCTURE

Jeong, YJ, Y. S. Park, H. J. Kwon, et al.

Acupuncture for the Treatment of Hot Flashes in Patients with Breast Cancer Receiving Antiestrogen Therapy: A Pilot Study in Korean Women.

J Altern Complement Med. 2013 01 Aug 2013; 198: 690-696.

OBJECTIVES: Antiestrogen therapy can cause vasomotor symptoms similar to those occurring during menopause, including hot flashes. Recent studies suggest that acupuncture is effective in reducing vasomotor symptoms in patients with breast cancer receiving tamoxifen. The purpose of this study was to assess the feasibility and safety of acupuncture for treatment of hot flashes in Korean patients with breast cancer receiving antiestrogen therapy. **DESIGN:** This was a prospective single-arm observational study using before and after measurements. **SETTINGS/LOCATION:** The study was located at the East-West Medical Center at Daegu Catholic University Medical Center, Daegu, Korea. **SUBJECTS:** The subjects were 10 patients with breast cancer who were undergoing antiestrogen therapy with tamoxifen or anastrozole and who were suffering from hot flashes. **INTERVENTIONS:** Acupuncture was administered 3 times a week for 4 consecutive weeks, for 20±5 minutes at each session. **OUTCOME MEASURES:** The outcome measure was severity of hot flashes assessed by visual analogue scale (VAS) and total hot flash score. **RESULTS:** During treatment, severity of hot flashes was reduced by 70%-95% in all patients. Acupuncture significantly alleviated severity of hot flashes assessed by a visual analogue scale ($F=30.261$; $p<0.001$) as well as the total hot flash score ($F=21.698$; $p=0.006$). Four (4) weeks after the final treatment, symptoms were not aggravated. **CONCLUSIONS:** Acupuncture appeared to provide effective relief from hot flashes among Korean women receiving antiestrogen therapy after surgery for breast cancer, and the effects lasted for at least 1 month after termination of treatment. A randomized controlled prospective study with a larger sample size is required to clarify the role of acupuncture in the management of hot flashes in Korean patients with breast cancer.

INSPIREHEALTH'S INTERPRETATION: Antiestrogen therapy (such as tamoxifen or anastrozole) can cause hot flashes in women with breast cancer. Acupuncture administered 3 times a week for 4 weeks effectively reduced the severity of hot flashes by 70-95% in this small study.

MINDFULNESS-BASED STRESS REDUCTION

Cramer, H, R. Lauche, A. Paul and G. Dobos.

Mindfulness-Based Stress Reduction for Breast Cancer-a Systematic Review and Meta-Analysis.

Curr Oncol. 2012 Oct; 195: e343-52.

OBJECTIVE: The aim of this systematic review and meta-analysis was to assess the effectiveness of mindfulness-based stress reduction (mbsr) and mindfulness-based cognitive therapy (mbct) in patients with breast cancer. **METHODS:** The medline, Cochrane Library, embase, cambase, and PsycInfo databases were screened through November 2011. The search strategy combined keywords for mbsr and mbct with keywords for breast cancer. Randomized controlled trials (rcts) comparing mbsr or mbct with control conditions in patients with breast cancer were included. Two authors independently used the Cochrane risk of bias tool to assess risk of bias in the selected studies. Study characteristics and outcomes were extracted by two authors independently. Primary outcome measures were health-related quality of life and psychological health. If at least two studies assessing an outcome were available, standardized mean differences (smds) and 95% confidence intervals (cis) were calculated for that outcome. As a measure of heterogeneity, $I(2)$ was calculated. **RESULTS:** Three rcts with a total of 327 subjects were included. One rct compared mbsr with usual care, one rct compared mbsr with free-choice stress management, and a three-arm rct compared mbsr with usual care and with nutrition education. Compared with usual care, mbsr was superior in decreasing depression (smd: -0.37; 95% ci: -0.65 to -0.08; $p = 0.01$; $I(2) = 0\%$) and anxiety (smd: -0.51; 95% ci: -0.80 to -0.21; $p = 0.0009$; $I(2) = 0\%$), but not in increasing spirituality (smd: 0.27; 95% ci: -0.37 to 0.91; $p = 0.41$; $I(2) = 79\%$).

CONCLUSIONS: There is some evidence for the effectiveness of mbsr in improving psychological health in breast cancer patients, but more rcts are needed to underpin those results.

INSPIREHEALTH'S INTERPRETATION: In this systematic review, data from three randomized control trials was evaluated, and mindfulness-based stress reduction was found to be superior to usual care in improving mental health in breast cancer patients.

GARDENING

Blair, CK, A. Madan-Swain, J. L. Locher, et al.

Harvest for Health Gardening Intervention Feasibility Study in Cancer Survivors.

Acta Oncol. 2013 August 2013; 526: 1110-1118.

BACKGROUND: Cancer survivors are at increased risk for second malignancies, cardiovascular disease, diabetes, and functional decline. Evidence suggests that a healthful diet and physical activity may reduce the risk of chronic disease and improve health in this population. **METHODS:** We conducted a feasibility study to evaluate a vegetable gardening intervention that paired 12 adult and child cancer survivors with Master Gardeners to explore effects on fruit and vegetable intake, physical activity, quality-of-life, and physical function. Throughout the year-long study period, the survivor-Master Gardener dyads worked together to plan/plant three gardens, harvest/rotate plantings, and troubleshoot/correct problems. Data on diet, physical activity, and quality-of-life were collected via surveys; anthropometrics and physical function were objectively measured. Acceptability of the intervention was assessed with a structured debriefing survey. **RESULTS:** The gardening intervention was feasible (robust enrollment; minimal attrition) and well-received by cancer survivors and Master Gardeners. Improvement in three of four objective measures of strength, agility, and endurance was observed in 90% of survivors, with the following change scores [median (interquartile range)] noted between baseline and one-year follow-up: hand grip test [+ 4.8 (3.0, 6.7) kg], 2.44 meter Get-Up-and-Go [+ 1.0 (+ 1.8, + 0.2) seconds], 30-second chair stand [+ 3.0 (+ 1.0, 5.0) stands], and six-minute walk [+ 11.6 (6.1, 48.8) meters]. Increases of ≥ 1 fruit and vegetable serving/day and ≥ 30 minutes/week of physical activity were observed in 40% and 60%, respectively. **CONCLUSION:** These preliminary results support the feasibility and acceptability of a mentored gardening intervention and suggest that it may offer a novel and promising strategy to improve fruit and vegetable consumption, physical activity, and physical function in cancer survivors. A larger randomized controlled trial is needed to confirm our results.

INSPIREHEALTH'S INTERPRETATION: A mentored vegetable gardening intervention can promote increased fruit and vegetable consumption and improve strength, agility and endurance in cancer survivors.

VITAMIN E

Fallahi, B, D. Beiki, S. M. Abedi, et al.

Does Vitamin E Protect Salivary Glands from I-131 Radiation Damage in Patients with Thyroid Cancer?

Nucl Med Commun. 2013 August 2013; 348: 777-786.

OBJECTIVES: Salivary gland impairment after high-dose radioiodine (^{131}I) treatment is well recognized. The aim of this study was to determine the protective effect of vitamin E on radiation-induced salivary gland dysfunction in patients undergoing ^{131}I treatment for differentiated thyroid cancer. **METHODS:** Thirty-six patients with differentiated thyroid carcinoma were enrolled in this study. They were randomly divided into two groups before postsurgical ablation therapy with 3700-5550 MBq ^{131}I : the control group, comprising 17 patients, and the vitamin E group, comprising 19 patients. All 19 patients in the experimental group received vitamin E at a dose of 800 IU/day for a duration of 1 week before to 4 weeks after I therapy and the 17 patients in the control group received a placebo for the same duration. Salivary gland function was assessed using salivary gland scintigraphy with intravenous injection of 370 MBq Tc-pertechnetate in two phases, one immediately before and the other 6 months after ^{131}I ablative therapy. First-minute uptake ratio, maximum uptake ratio, maximum secretion percentage, and excretion fraction (EF) of each salivary gland were measured and compared between the study phases for the two groups. **RESULTS:** There was no significant difference between preablative and postablative salivary scintigraphic indices in the experimental vitamin E group, whereas maximum secretion percentage and EF of the right submandibular gland and EF of the left parotid gland were significantly decreased in the control group. There was also a higher significant decrease in the EF of the left parotid gland in the control group compared with the vitamin E group. **CONCLUSION:** Vitamin E consumption may be associated with a significant protective effect against radiation-induced dysfunction in salivary glands following single-dose ^{131}I therapy in patients with differentiated thyroid cancer.

INSPIREHEALTH'S INTERPRETATION: Vitamin E supplementation at 800 IU/day can relieve dry mouth and other symptoms of salivary gland dysfunction following high-dose radiation treatment in thyroid cancer patients.

PSYCHOSOCIAL SERVICES

Gunn, K, D. Turnbull, J. L. McWha, et al.

Psychosocial Service use: A Qualitative Exploration from the Perspective of Rural Australian Cancer Patients.

Support Care Cancer. 2013 September 2013; 219: 2547-2555.

PURPOSE: This study aims to identify key issues associated with the provision of psychosocial care from the perspective of rural Australian cancer patients and determine culturally appropriate methods that may reduce barriers to service use. **METHOD:** Seventeen purposively sampled adult South Australians who lived outside metropolitan Adelaide, had a diagnosis of cancer and various demographic and medical histories participated in semi-structured, face-to-face interviews. Participants also completed a demographic questionnaire. Qualitative data were analysed using thematic analysis. **RESULTS:** Five key themes were identified: (1) psychosocial support is highly valued by those who have accessed it, (2) having access to both lay and professional psychosocial support is vitally important, (3) accessing psychosocial services is made difficult by several barriers (lack of information about services, initial beliefs they are unnecessary, feeling overwhelmed and concerns about stigma and dual relationships), (4) medical staff located in metropolitan treatment centres are not sufficiently aware of the unique needs of rural patients and (5) patients require better access to psychosocial services post-treatment. Methods through which rural patients believe access to psychosocial services could be improved include: (1) providing more rural-specific information on psychosocial care, (2) improving communication between health care providers and referral to psychosocial services and (3) making psychosocial services a standard part of care. **CONCLUSIONS:** Rural cancer patients want their unique needs to be recognised and to be treated differently to their urban counterparts. There is a need for more targeted and rurally relevant information for rural cancer patients, both to inform them of, and change their attitudes towards, psychosocial services. Other practical recommendations are also discussed.

INSPIREHEALTH'S INTERPRETATION: This study indicated that there were a number of systemic issues that were hindering the provision of adequate psychosocial care to cancer patients in rural areas. The subjects indicated that they wanted their unique needs to be recognized and to be treated differently than their urban counterparts.

E-VERSION EXTRA LUNG CANCER

Deng, GE, S. M. Rausch, L. W. Jones, et al.

Complementary Therapies and Integrative Medicine in Lung Cancer: Diagnosis and Management of Lung Cancer, 3rd Ed: American College of Chest Physicians Evidence-Based Clinical Practice Guidelines.

Chest. 2013 May; 1435 Suppl: e420S-36S.

BACKGROUND: Physicians are often asked about complementary therapies by patients with cancer, and data show that the interest in and use of these therapies among patients with cancer is common. Therefore, it is important to assess the current evidence base on the benefits and risks of complementary therapies (modalities not historically used in modern Western medicine). **METHODS:** A systematic literature review was carried out and recommendations were made according to the American College of Chest Physicians Evidence-Based Clinical Practice Guidelines development methodology. **RESULTS:** A large number of randomized controlled trials, systematic reviews, and meta-analyses, as well as a number of prospective cohort studies, met the predetermined inclusion criteria. These trials addressed many different issues pertaining to patients with lung cancer, such as symptoms of anxiety, mood disturbance, pain, quality of life, and treatment-related side effects. The available data cover a variety of interventions, including acupuncture, nutrition, mind-body therapies, exercise, and massage. The body of evidence supports a series of recommendations. An evidenced-based approach to modern cancer care should integrate complementary therapies with standard cancer therapies such as surgery, radiation, chemotherapy, and best supportive care measures. **CONCLUSIONS:** Several complementary therapy modalities can be helpful in improving the overall care of patients with lung cancer.

INSPIREHEALTH'S INTERPRETATION: There are a number of studies that indicate that complementary therapies have positive effects on patients with lung cancer and should be integrated with conventional cancer treatment.

EXERCISE

Haas, BK, G. Kimmel, M. Hermanns and B. Deal.

Community-Based Fitsteps for Life Exercise Program for Persons with Cancer: 5-Year Evaluation.

J Oncol Pract. 2012 November 2012; 86: 320-324.

PURPOSE: To determine the effects of a community-based program of exercise on quality of life (QOL) of persons with cancer over time. **METHODS:** Participants were referred by their physician to participate in an individualized program of exercise at one of 14 community centers. The Medical Outcomes Survey, Short Form, version 2.0 (SF-36) was used to assess QOL.

Individual participants were monitored for 2 years. Data collection took place at baseline, every 3 months during year 1, and every 6 months during year 2. **RESULTS:** Enrolled participants (n = 701) had been diagnosed with different cancers and were at all stages; 177 completed data collection for 2 years. One-way analysis of variance (n = 177) supported the positive impact of exercise on QOL over time. Significant subscale scores of the SF-36, including Physical Function (F = 2.13, P ≤ .047), Role Physical (F = 3.78, P ≤ .001), Vitality (F = 5.97, P ≤ .001), Social Function (F = 4.46, P ≤ .001), Role Emotional (F = 2.56, P ≤ .01), Mental Health (F = 2.16, P ≤ .05), and General Health (F = 3.42, P ≤ .01), were sustainable over time. **CONCLUSION:** This research introduces the concept of a long-term community-based program of individualized exercise as a feasible and effective intervention to improve QOL for persons with all stages of cancer. Improvements, noted at the 3-month time point, appear to be sustainable for extended time (24 months). Attrition is problematic and needs to be addressed. Results from this study have significance for practice recommendations and health policy reimbursement issues.

INSPIREHEALTH'S INTERPRETATION: Community exercise programs can improve quality of life across all stages of cancer; improvements were noted as early as three months into the intervention.

STUDY OF THE MONTH

Frenkel, M, D. I. Abrams, E. J. Ladas, et al.

Integrating Dietary Supplements into Cancer Care.

Integr Cancer Ther. 2013 Sep; 125: 369-384.

Many studies confirm that a majority of patients undergoing cancer therapy use self-selected forms of complementary therapies, mainly dietary supplements. Unfortunately, patients often do not report their use of supplements to their providers. The failure of physicians to communicate effectively with patients on this use may result in a loss of trust within the therapeutic relationship and in the selection by patients of harmful, useless, or ineffective and costly nonconventional therapies when effective integrative interventions may exist. Poor communication may also lead to diminishment of patient autonomy and self-efficacy and thereby interfere with the healing response. To be open to the patient's perspective, and sensitive to his or her need for autonomy and empowerment, physicians may need a shift in their own perspectives. Perhaps the optimal approach is to discuss both the facts and the uncertainty with the patient, in order to reach a mutually informed decision. Today's informed patients truly value physicians who appreciate them as equal participants in making their own health care choices. To reach a mutually informed decision about the use of these supplements, the Clinical Practice Committee of The Society of Integrative Oncology undertook the challenge of providing basic information to physicians who wish to discuss these issues with their patients. A list of leading supplements that have the best suggestions of benefit was constructed by leading researchers and clinicians who have experience in using these supplements. This list includes curcumin, glutamine, vitamin D, Maitake mushrooms, fish oil, green tea, milk thistle, Astragalus, melatonin, and probiotics. The list includes basic information on each supplement, such as evidence on effectiveness and clinical trials, adverse effects, and interactions with medications. The information was constructed to provide an up-to-date base of knowledge, so that physicians and other health care providers would be aware of the supplements and be able to discuss realistic expectations and potential benefits and risks.

INSPIREHEALTH'S INTERPRETATION: The Clinical Practice Committee of The Society of Integrative Oncology reviewed dietary supplements and constructed a list of leading supplements that best support cancer care. The purpose of this review was to provide evidence-based information on dietary supplements so that physicians may be better able to discuss their benefits and risks with patients.

We are grateful to the Prostate Cancer Foundation BC and the Canadian Breast Cancer Foundation (BC/Yukon) for their generous support of *Research Updates*.



Canadian
Breast Cancer
Foundation
BC • YUKON



www.prostatecancerbc.ca
www.cbcbf.org

InspireHealth provides patients with the knowledge, tools, and services to support their overall health during and after cancer treatment. Our medical doctors value conventional cancer treatments such as chemotherapy, radiation, and surgery. At the same time, they recognize the importance of supporting health, immune function, body, mind, and spirit.

InspireHealth's programs are supported by current research and can be safely integrated with patient's conventional treatments.

InspireHealth's *Research Updates* are compiled by Jan Rennie and Dr. Cletus D'Souza, PhD—with guidance from the editorial board—using InspireHealth's Research Information System, a unique integrative cancer care knowledge management database. The editorial team selects authoritative articles based on their evidence and their relevance to this area of medicine. The editorial board includes: Dr. Hal Gunn, CEO and Co-founder, Dr. Janice Wright, Dr. Teresa Clarke, Dr. Ron Puhky, and Dr. Walter Lemmo, ND. For more information, email library@inspirehealth.ca

#200-1330 West 8th Ave.
Vancouver, BC, V6H 4A6
604.734.7125

#212-2187 Oak Bay Ave.
Victoria, BC V8R 1G1
250.595.7125

#123-565 Bernard Ave.
Kelowna, BC V8R 1G1
250.861.7125

inspirehealth.ca