Tsivian, M., P. Qi, M. Kimura, et al.  

**The Effect of Noise-Cancelling Headphones Or Music on Pain Perception and Anxiety in Men Undergoing Transrectal Prostate Biopsy.**  

_**Urology.** 2012 Jan; 791: 32-36._

**OBJECTIVE:** To assess the effect of noise-cancelling headphones with or without music on patient pain and anxiety associated with routine, office-based transrectal ultrasound (TRUS)-guided prostate biopsy in a prospective randomized study. **METHODS:** Patients scheduled for prostate biopsy as a result of elevated prostate-specific antigen and/or abnormal digital rectal examination were prospectively enrolled and randomized into a control, noise-cancelling headphones, or music-headphones group. Patients completed pain and anxiety questionnaires and had their physiological parameters assessed before and after the procedure and compared across groups.  

**RESULTS:** Eighty-eight patients were enrolled. Pain scores increased from baseline across all study groups, with the lowest mean score in the music group. No appreciable change was noted in anxiety scores after the procedure between groups (P>.05). Although postbiopsy systolic blood pressure values remained comparable with baseline levels in all groups, postbiopsy diastolic blood pressure increased in the control and headphones groups (P=.062 and .088, respectively) but remained stable in the music group (P=.552) after biopsy, indicating lesser physiological response to anxiety and pain in this group.  

**CONCLUSION:** Music-induced attention shift during prostate biopsy may have a beneficial impact on procedural anxiety and pain perception, but no apparent effect was noted for use of headphones alone. Further studies are necessary to explore strategies to reduce perceived anxiety and pain in men undergoing prostate biopsy.
Tacon, AM.

**Mindfulness: Existential, Loss, and Grief Factors in Women with Breast Cancer.**


**BACKGROUND, AIMS AND PARTICIPANTS:** Although a plethora of studies exist as to the efficacy of mindfulness-based interventions with cancer patients, existential, loss, and grief factors are absent. The primary purpose of this exploratory study was to add to the literature by exploring the pre-post effects of an 8-week mindfulness-based intervention on existential well-being, summed self-identified losses, and grief scores as well as assess mental adjustment to cancer; also, 6-month follow-up data as to intervention maintenance were obtained. Sixty-five women, all of whom had been diagnosed with breast cancer within the past 12 months, participated in this study.

**RESULTS:** The data indicated significant improvements for existential well-being, number of self-identified losses, grief scores as well as three mental adjustment styles. Six-month follow-up revealed that of the 58 responding participants, 88% were maintaining mindfulness strategies at varying schedules on a weekly basis with mindfulness-based walking as the preferred strategy.

**CONCLUSIONS:** This is the first known mindfulness-based intervention study to investigate existential, loss, and grief factors in those with cancer. Further investigations earnestly are needed in this area to provide full psychosocial care to those confronting cancer.


**Skin Toxicity from External Beam Radiation Therapy in Breast Cancer Patients: Protective Effects of Resveratrol, Lycopene, Vitamin C and Anthocyanin (Ixor).**


**INTRODUCTION:** This is an observational study and the aim is to evaluate the effect of dietary supplements based on Resveratrol, Lycopene, Vitamin C and Anthocyanins (Ixor*) in reducing skin toxicity due to external beam radiotherapy in patients affected by breast cancer. **MATERIALS AND METHODS:** 71 patients were enrolled and they were divided in two different groups: a control group (CG) of 41 patients treated with prophylactic topical therapy based on hyaluronic acid and topical steroid therapy in case of occurrence of radiodermatitis, and a Ixor-Group (IG) of 30 patients treated also with an oral therapy based on Resveratrol, Lycopene, Vitamin C and Anthocyanin (Ixor*) at a dose of 2 tablets/day, starting from 10 days before the radiation treatment until 10 days after the end of treatment. Skin toxicity has been related to PTV, to breast volume that received a radiation dose equal or lower than 107%, included between 107% and 110%, or greater than 110% of the prescribed dose. Moreover it’s been studied the relationship between skin toxicity and the chemotherapy schedule used before treatment. We calculated in both groups the percentage of patients who had a skin toxicity of grade 2 or 3 (according to RTOG scale). Absolute risk reduction (ARR), relative risk (RR) and odds ratio (OR) have been calculated for each relationship.

**RESULTS:** Control Group (CG) patients with a PTV > 500 ml presented skin toxicity G2 + G3 in 30% of cases, versus 25% of Ixor-Group (IG) [OR 0.77]. In patients with a PTV < 500 ml G2 + G3 toxicity was 0% in the IG compared to 18% in CG (OR 0.23). When Dmax was less than or equal to 107% of the prescribed dose skin toxicity was G2 + G3 in 12.5% in CG, versus 0% in IG (OR 0.73), instead when Dmax was included between 107 and 110% of the prescribed dose, G2 + G3 skin toxicity was 35% in CG and 21% in IG (OR 0.50). In patients undergoing chemotherapy with anthracyclines and taxanes, G2 + G3 toxicity was 27% in CG, against 20% in IG (OR 0.68).

**CONCLUSIONS:** The protective effect of Resveratrol, Lycopene, Vitamin C and Anthocyanin (Ixor*) is more detected in patients with PTV < 500 ml, when Dmax reaches values lower or equal to 107%, but not exceeding 110% of the prescribed dose, and in patients undergoing adjuvant chemotherapy with anthracyclines and taxanes.
EXERCISE


Exercise among Breast and Prostate Cancer Survivors—what are their Barriers?


INTRODUCTION: Despite proven benefits of regular physical activity, estimates indicate that few cancer survivors meet physical activity guidelines. The purpose of this paper is to identify and compare exercise barriers among cancer survivors, both cross-sectionally and longitudinally as they undergo home-based behavioral interventions. METHODS: Data on a sample of 452 breast and prostate cancer survivors who completed the FRESH START trial were analyzed collectively, as well as separately by cancer type.

RESULTS: More total barriers (3.5 vs. 2.4; p < 0.01) were reported among breast cancer survivors compared with prostate cancer survivors. Commonly reported baseline exercise barriers among both groups were “too busy” (breast, 52% and prostate, 45%) and “no willpower” (breast, 51% and prostate, 44%). At baseline, breast cancer survivors who reported “no willpower” also reported 18.7 fewer minutes of physical activity compared with those not reporting this barrier (p < 0.01). Among prostate cancer survivors, this difference was 39.5 min (p < 0.01). Change in barriers was not associated with change in minutes of physical activity from baseline to post-intervention in either cancer survivor group.

CONCLUSIONS: This is the largest study evaluating barriers and physical activity over time among cancer survivors. There are similarities and differences that both need to be taken into consideration when promoting physical activity among subgroups of survivors.

IMPLICATIONS FOR CANCER SURVIVORS: Knowledge concerning barriers associated with reported physical activity may be helpful in designing optimally targeted physical activity interventions among breast and prostate cancer survivors.


Exercise in Patients with Lymphedema: A Systematic Review of the Contemporary Literature.


BACKGROUND: Controversy exists regarding the role of exercise in cancer patients with or at risk for lymphedema, particularly breast. We conducted a systematic review of the contemporary literature to distill the weight of the evidence and provide recommendations for exercise and lymphedema care in breast cancer survivors. METHODS: Publications were retrieved from 11 major medical indices for articles published from 2004 to 2010 using search terms for exercise and lymphedema; 1,303 potential articles were selected, of which 659 articles were reviewed by clinical lymphedema experts for inclusion, yielding 35 articles. After applying exclusion criteria, 19 articles were selected for final review. Information on study design/objectives, participants, outcomes, intervention, results, and study strengths and weaknesses was extracted. Study evidence was also rated according to the Oncology Nursing Society Putting Evidence Into Practice® Weight-of-Evidence Classification.

RESULTS: Seven studies were identified addressing resistance exercise, seven studies on aerobic and resistance exercise, and five studies on other exercise modalities. Studies concluded that slowly progressive exercise of varying modalities is not associated with the development or exacerbation of breast cancer-related lymphedema and can be safely pursued with proper supervision. Combined aerobic and resistance exercise appear safe, but confirmation requires larger and more rigorous studies.

CONCLUSIONS: Strong evidence is now available on the safety of resistance exercise without an increase in risk of lymphedema for breast cancer patients. Comparable studies are needed for other cancer patients at risk for lymphedema.

IMPLICATIONS FOR CANCER SURVIVORS: With reasonable precautions, it is safe for breast cancer survivors to exercise throughout the trajectory of their cancer experience, including during treatment.
COGNITIVE BEHAVIOURAL THERAPY (CBT)

Mann, E. M. J. Smith, J. Hellier, et al.

Cognitive Behavioural Treatment for Women Who have Menopausal Symptoms After Breast Cancer Treatment (MENOS 1): A Randomised Controlled Trial.


BACKGROUND: 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 is often either undesirable or contraindicated. Safe, effective non-hormonal treatments are needed. We investigated whether cognitive behavioural therapy (CBT) can help breast cancer survivors to effectively manage HFNS. METHODS: In this randomised controlled trial, we recruited women from breast clinics in London, UK, who had problematic HFNS (minimum ten problematic episodes a week) after breast-cancer treatment. Participants were randomly allocated to receive either usual care or usual care plus group CBT (1:1). Randomisation was done in blocks of 12-20 participants, stratifying by age (younger than 50 years, 50 years or older), and was done with a computer-generated sequence. The trial statistician and researchers collecting outcome measures were masked to group allocation. Group CBT comprised one 90 min session a week for 6 weeks, and included psycho-education, paced breathing, and cognitive and behavioural strategies to manage HFNS. Assessments were done at baseline, 9 weeks, and 26 weeks after randomisation. The primary outcome was the adjusted mean difference in HFNS problem rating (1-10) between CBT and usual care groups at 9 weeks after randomisation. Analysis of the primary endpoint was done by modified intention to treat. The trial is registered, ISRCTN13771934, and was closed March 15, 2011.

FINDINGS: Between May 5, 2009, and Aug 27, 2010, 96 women were randomly allocated to group CBT (n=47) or usual care (n=49). Group CBT significantly reduced HFNS problem rating at 9 weeks after randomisation compared with usual care (mean difference -167, 95% CI -243 to -091; p<0.0001) and improvements were maintained at 26 weeks (mean difference -176, -254 to -099; p<0.0001). We recorded no CBT-related adverse events.

INTERPRETATION: Group CBT seems to be a safe and effective treatment for women who have problematic HFNS after breast cancer treatment 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.

FUNDING: Cancer Research UK.

COLORECTAL CANCER


Determination of the Minimal Essential Serum Folate Concentration for Reduced Risk of Colorectal Adenoma.


BACKGROUND & AIDS: There are no data regarding basal folate levels in patients without colorectal adenoma. This study aimed to determine the minimum serum folate concentration that associates with reduced risk of colorectal adenoma. METHODS: 1510 consecutive patients underwent total colonoscopy for suspected colorectal lesions after barium enema examination. Prior to colonoscopy, history of alcohol consumption was noted and blood serum analyzed for folate and vitamin B12 levels. Polypoid lesions were evaluated histologically. We excluded patients with anemia, history of colonoscopy, overconsumption of alcohol, or malignancies. In all, 458/1510 patients (male/female; 258/200, 40-75 years) were determined eligible. Variables were compared between patients with adenoma and those without adenoma.

RESULTS: Serum folate concentration was the variable with the most significant statistical variation between males with adenoma (8.0 ng/ml) and males without adenoma (9.2) (p<0.001). Serum folate concentrations in females with adenoma did not differ significantly from those in females without adenoma (10.7 versus 10.9). When subjects were stratified into groups according to serum folate, we found no significant difference in the prevalence of adenoma in patients with folate levels greater than 8.0 ng/ml.

CONCLUSION: Patients with serum folate concentrations above 8.0 ng/ml had the lowest risk of developing colorectal adenoma.
Preoperative Probiotics Decrease Postoperative Infectious Complications of Colorectal Cancer.


BACKGROUND: The objective is to elucidate the effects of oral bifid triple viable probiotics among patients with colorectal cancer. METHODS: Sixty patients undergoing radical colorectal resection were randomly assigned to 3-day (days -5 to -3) preoperative probiotics (group A, n = 30) or placebo (group B, n = 30) treatment. The alteration of intestinal flora was evaluated by fecal cultures of Escherichia coli, Bifidobacterium longum and intestinal fungi; the gut barrier function by serum endotoxins and D-lactic acids and the immune and stress responses by peripheral blood immunoglobins, interleukin-6 and C-reactive protein. Postoperative infections were documented physically, radiologically and microbiologically.

RESULTS: Inverted Bifidobacterium/Escherichia ratios were preoperatively and postoperatively present in group B (both P < 0.05). Bifidobacterium counts increased significantly, whereas Escherichia counts decreased significantly on postoperative days 3 to 5 (P < 0.05), along with reversing the Bifidobacterium/Escherichia ratio inversion until postoperative days 3 to 5 in group A. Group A also had lower levels of endotoxins, D-lactic acids, serum interleukin-6 and C-reactive protein but higher levels of serum IgG and sIgA (all P < 0.05) than group B. The incidences of postoperative infectious complications were 3.3% to 6.7% and 3.3% to 30% in groups A and B (overall, 10.0% versus 33.3%, P < 0.05), respectively.

CONCLUSION: The preoperative oral bifid triple viable probiotics minimize the postoperative occurrence of infectious complications, with possible mechanisms attributed to the maintenance of the intestinal flora and restriction of bacterial translocation from the intestine. It was representative of the enhancement of systemic/localized immunity and concurrent attenuation of systemic stress response.


Oncology. 2011 815-6) (pp 312-318: ate of Pubaton: February 2012.

BACKGROUND: Pancreatic cancer has the worst prognosis because of poor response to conventional therapy. We investigated the clinical feasibility of the standardized allergen-removed Rhus verniciflua Stokes (aRVS) extract as a potential therapeutic agent for advanced or metastatic pancreatic cancer.

PATIENTS AND METHODS: From July 2006 to June 2010, patients with advanced or metastatic pancreatic adenocarcinoma were checked in our institution. After applying inclusion/exclusion criteria, 42 patients were eligible for the final analysis. Overall survival, clinical benefit and adverse events of these patients treated with aRVS in the aftercare period were determined.

RESULTS: In May 2011, 39 patients had died and the remaining 3 patients were alive with evidence of disease. The mean RVS administration period was 3.86 months (95% confidence interval 2.52-5.20). The median overall survival for the entire population was 7.87 months (95% confidence interval 5.14-10.59), and the 1-year survival rate was 26.2%, which is compatible with external controls. Using univariate and multivariate analyses, aRVS treatment including performance status and prognostic index significantly affected overall survival. A clinical benefit response was also shown by aRVS treatment which was not dependent on concurrent chemotherapy. Adverse reactions to aRVS treatment were mostly mild and self-limiting.

CONCLUSIONS: The standardized aRVS extract might be beneficial for patients with advanced or metastatic pancreatic cancer since it positively affected overall survival and clinical symptoms without significant adverse effects.
**VITAMIN D**

Molina, S., G. Digiesi, A. Antenucci, et al.

**Vitamin D Insufficiency Predicts Time to First Treatment (TFT) in Early Chronic Lymphocytic Leukemia (CLL).**


**BACKGROUND:** Although vitamin D insufficiency is related to inferior prognosis in some cancers, limited data exist in hematologic malignancies. **METHODS:** We evaluated the relationship between 25(OH)D serum levels and time to first treatment (TFT), a disease-specific end point, in 130 previously untreated Binet stage A chronic lymphocytic leukemia (CLL) patients. Measurement of 25(OH)D was performed by means of a direct, competitive chemiluminescence immuno-assay using the DiaSorin LIAISON 25(OH)D TOTAL assay (DiaSorin, Inc., Stillwater, Minnesota).

**RESULTS:** Overall, 41 patients (31.5%) had severe vitamin D insufficiency (<10. ng/mL), 66 (50.7%) had mild to moderate insufficiency (10-24. ng/mL), and 23 (17.6%) had 25(OH)D levels within the optimal range (25-80. ng/mL), with no relationship with between the season of sample collection and 25(OH)D level (P= 0.188). A patient stratification according to these 3 groups led to significant difference in terms of TFT, with vitamin D insufficient patients having the shortest TFT (P= 0.02). With respect to continuous 25(OH)D levels and clinical outcome, TFT was shorter as 25(OH)D decreased until a value of 13.5. ng/mL at which point the association of 25(OH)D and TFT remained constant. As a matter of fact, the 25(OH)D value of 13.5. ng/mL identified two patients subsets with different TFT risk (HR  =  1.91; 95% CI =  1.06-3.44; P=  0.03). In multivariate analysis the variable entering the model at a significant level were mutational status of IgVH (P< 0.0001), serum thymidine kinase (P=  0.02) and absolute lymphocyte count (P=  0.03).

**CONCLUSIONS:** Thus confirming the Mayo clinic experience, our data provide further evidence that 25(OH)D levels may be an important host factor influencing TFT of Binet stage A patients. Whether normalizing vitamin D levels may delay disease-progression of patients with early disease will require testing in future trials.

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**Prognostic Effects of 25-Hydroxy-vitamin D Levels in Gastric Cancer.**


**BACKGROUND:** Results from large epidemiologic studies on the association between vitamin D and gastric cancer are controversial. Vitamin D significantly promotes apoptosis in the undifferentiated gastric cancer cell, but the prognostic effects of its levels are unknown. **METHODS:** 197 gastric carcinoma patients who received treatment in the cancer centre of Sun Yat-sen University from January 2002 to January 2006 were involved in the study. The stored blood drawn before any treatment was assayed for 25-hydroxyvitamin D levels. The clinico-pathologic data were collected to examine the prognostic effects of vitamin D.

**RESULTS:** The mean vitamin D levels of the 197 gastric patients was 49.85 +/- 23.68 nmol/L, among whom 114 (57.9%) were deficient in Vitamin D (75 nmol/L). Clinical stage (P= 0.004) and lymph node metastasis classification (P = 0.009) were inversely associated with vitamin D levels. The patients with high vitamin D levels group (>= 50 nmol/L) had a higher overall survival compared with the low vitamin D levels group (< 50 nmol/L)(P= 0.018). Multivariate analysis indicated that vitamin D levels were an independent prognostic factor of gastric cancer (P = 0.019).

**CONCLUSIONS:** Vitamin D deficiency may be associated with poor prognosis in gastric cancer.
STUDY OF THE MONTH

Grimmett, C.J., Bridgewater, A., Steptoe and J. Wardle.

Lifestyle and Quality of Life in Colorectal Cancer Survivors.

Quality of Life Research. 2011 Oct; 208: 1237-1245.

PURPOSE: As cancer survival rates improve, there is growing interest in the role of lifestyle in longer-term health and quality of life (QoL). This study examined the prevalence of health-related behaviours, and the associations between health behaviours and QoL, in colorectal cancer survivors. METHODS: Patients diagnosed with colorectal cancer within the last 5 years identified from five London (UK) hospitals (N = 495) completed a survey that included measures of fruit and vegetable (F&V) intake, physical activity, smoking status and alcohol consumption. The EORTC-QLQ-C30 questionnaire was used to index QoL.

RESULTS: The majority of respondents were overweight/obese (58%), not physically active (21 for men and >14 for women; 8%), Physical activity showed the strongest association with functional QoL and was also associated with lower fatigue, pain and insomnia (P 21 for men and >14 for women; 8%). Physical activity showed the strongest association with functional QoL and was also associated with lower fatigue, pain and insomnia (P = 5 portions of F&V a day, being physically active and having moderate alcohol consumption), there was a linear relationship with global QoL, physical function and fatigue (P < 0.05).

CONCLUSION: A high proportion of colorectal cancer survivors in the UK have suboptimal health behaviours, and this is associated with poorer QoL.