



RESEARCH UPDATES APRIL 2013

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FOR THE LATEST IN WORLDWIDE INTEGRATIVE CANCER CARE

IN THIS ISSUE: Steindorf et al. concluded that moderate to high physical activity can reduce the risk of breast cancer. Buffart et al. concluded that yoga was physically and psychologically beneficial for cancer patients. Song et al. reported that higher intake of skim/low-fat milk was associated with a greater risk of nonaggressive prostate cancer, whereas whole milk was consistently associated with prostate cancer mortality. Traeger and colleagues found that cognitive-behavioral stress management can improve the emotional well-being of men with prostate cancer. Tantamango-Bartley and colleagues reported that in a Western population with a low risk for chronic diseases, vegetarian diets help protect against cancer, and that vegan diets reduce overall cancer risk and female-specific cancer risk. As well, lacto-ovo-vegetarian diets help to protect against gastrointestinal cancers. Stephen and colleagues found that the online support groups provided by CancerChatCanada were psychologically beneficial and increased access to underserved and burdened cancer patients, survivors, and family caregivers. Tayarani-Najaran et al. found that essential oils of spearmint and peppermint were helpful in alleviating chemotherapy-induced nausea and vomiting. Vachiramam and colleagues found that patients undergoing Mohs micrographic surgery benefitted from listening to music during their procedure. Vij and associates found that educational programs about the benefits of vitamin D for geriatric patients are needed to increase awareness among physicians reluctant to prescribe vitamin D. In the Study of the Month, Song et al. found that patient age and cancer aggressiveness were important factors for physicians to consider when facilitating a more patient-oriented decision-making process for men with localized prostate cancer.

BREAST CANCER

Steindorf, K, R. Ritte, P. -P Eomois, et al.

Physical Activity and Risk of Breast Cancer overall and by Hormone Receptor Status: The European Prospective Investigation into Cancer and Nutrition.

International Journal of Cancer. 2013 01 Apr 2013; 1327: 1667-1678.

BACKGROUND: Physical activity is associated with reduced risks of invasive breast cancer. However, whether this holds true for breast cancer subtypes defined by the estrogen receptor (ER) and the progesterone receptor (PR) status is controversial.

METHODS: The study included 257,805 women from the multinational EPIC-cohort study with detailed information on occupational, recreational and household physical activity and important cofactors assessed at baseline. During 11.6 years of median follow-up, 8,034 incident invasive breast cancer cases were identified. Data on ER, PR and combined ER/PR expression were available for 6,007 (67.6%), 4,814 (54.2%) and 4,798 (53.9%) cases, respectively. Adjusted hazard ratios (HR) were estimated by proportional hazards models. **RESULTS:** Breast cancer risk was inversely associated with moderate and high levels of total physical activity (HR = 0.92, 95% confidence interval (CI): 0.86-0.99, HR = 0.87, 95%-CI: 0.79-0.97, respectively; p-trend = 0.002), compared to the lowest quartile. Among women diagnosed with breast cancer after age 50, the largest risk reduction was found with highest activity (HR = 0.86, 95%-CI: 0.77-0.97), whereas for cancers diagnosed before age 50 strongest associations were found for moderate total physical activity (HR = 0.78, 95%-CI: 0.64-0.94). Analyses by hormone receptor status suggested differential associations for total physical activity (p-heterogeneity = 0.04), with a somewhat stronger inverse relationship for ER+/PR+ breast tumors, primarily driven by PR+ tumors (p-heterogeneity < 0.01). Household physical activity was inversely associated with ER-/PR- tumors. **CONCLUSIONS:** The results of this largest prospective study on the protective effects of physical activity indicate that moderate and high physical activity are associated with modest decreased breast cancer risk. Heterogeneities by receptor status indicate hormone-related mechanisms.

INSPIREHEALTH'S INTERPRETATION: High physical activity (for women over the age of 50) and moderate total physical activity (for women under the age of 50) can reduce the risk of breast cancer.

E-VERSION EXTRA

Hojan, K, M. Molinska-Glura and P. Milecki.

Physical Activity and Body Composition, Body Physique, and Quality of Life in Premenopausal Breast Cancer Patients during Endocrine Therapy - A Feasibility Study.

Acta Oncol. 2013 February 2013; 522: 319-326.

BACKGROUND: Endocrine therapy (ET) is a common method of treatment in breast cancer patients; however, its negative impact on body composition, body physique (physical body shape/measurements), and quality of life (QoL) remains controversial. Previous studies have shown physical exercise can have a positive effect on QoL in breast cancer patients, especially premenopausal subjects. **OBJECTIVE:** In this feasibility study, we sought to assess the impact that physical exercise had on body composition and QoL in premenopausal breast cancer patients undergoing ET, and to determine the appropriateness of further testing of this intervention in this patient group. **MATERIAL AND METHODS:** This study involved 41 premenopausal female breast cancer patients before and after six, 12, and 18 months of ET. Aerobic training began in the 6th month and resistance training was added in the 12th month. Body composition was evaluated using dual-energy x-ray absorptiometry (DXA) scans, body physique was evaluated using anthropometric measurement techniques, and QoL was evaluated using questionnaires from the European Organization for Research and Treatment of Cancer. **RESULTS:** The initial period of ET with no exercise resulted in a reduction in fat-free body mass (FFBM), an increase in fat body mass (FBM), and a decline in QoL scores. Adding aerobic training resulted in a reduction of FBM and percentage of android fat, and improved QoL scores. The introduction of resistance training further reduced percentage of android and gynoid fat, increased FFBM, and further improved QoL scores. **CONCLUSION:** ET negatively impacts body composition, body physique, and QoL of premenopausal breast cancer patients. This feasibility study shows that physical activity may improve QoL and reduce adverse effects of ET on body composition and body physique, indicating appropriateness for further investigation on the use of exercise programs in premenopausal breast cancer patients to improve the outcomes of therapy.

INSPIREHEALTH'S INTERPRETATION: Physical activity may improve quality of life and decrease the adverse effects of endocrine therapy in premenopausal women with breast cancer.

YOGA

Buffart, LM, J. G. Z. van Uffelen, I. I. Riphagen, et al.

Physical and Psychosocial Benefits of Yoga in Cancer Patients and Survivors, a Systematic Review and Meta-Analysis of Randomized Controlled Trials.

BMC Cancer. 2012 27 Nov 2012; 12559.

BACKGROUND: This study aimed to systematically review the evidence from randomized controlled trials (RCTs) and to conduct a meta-analysis of the effects of yoga on physical and psychosocial outcomes in cancer patients and survivors. **METHODS:** A systematic literature search in ten databases was conducted in November 2011. Studies were included if they had an RCT design, focused on cancer patients or survivors, included physical postures in the yoga program, compared yoga with a non-exercise or waitlist control group, and evaluated physical and/or psychosocial outcomes. Two researchers independently rated the quality of the included RCTs, and high quality was defined as >50% of the total possible score. Effect sizes (Cohen's d) were calculated for outcomes studied in more than three studies among patients with breast cancer using means and standard deviations of post-test scores of the intervention and control groups. **RESULTS:** Sixteen publications of 13 RCTs met the inclusion criteria, of which one included patients with lymphomas and the others focused on patients with breast cancer. The median quality score was 67% (range: 22-89%). The included studies evaluated 23 physical and 20 psychosocial outcomes. Of the outcomes studied in more than three studies among patients with breast cancer, we found large reductions in distress, anxiety, and depression ($d = -0.69$ to -0.75), moderate reductions in fatigue ($d = -0.51$), moderate increases in general quality of life, emotional function and social function ($d = 0.33$ to 0.49), and a small increase in functional well-being ($d = 0.31$). Effects on physical function and sleep were small and not significant. **CONCLUSION:** Yoga appeared to be a feasible intervention and beneficial effects on several physical and psychosocial symptoms were reported. In patients with breast cancer, effect size on functional well-being was small, and they were moderate to large for psychosocial outcomes. **INSPIREHEALTH'S INTERPRETATION:** Yoga is feasible and beneficial (both physically and psychologically) for cancer patients.

PROSTATE CANCER

Song, Y, J. E. Chavarro, Y. Cao, et al.

Whole Milk Intake is Associated with Prostate Cancer-Specific Mortality among U.S. Male Physicians.

J Nutr. 2013 February 2013; 1432: 189-196.

BACKGROUND: Previous studies have associated higher milk intake with greater prostate cancer (PCa) incidence, but little data are available concerning milk types and the relation between milk intake and risk of fatal PCa. **METHODS:** We investigated

the association between intake of dairy products and the incidence and survival of PCa during a 28-y follow-up. We conducted a cohort study in the Physicians' Health Study (n = 21,660) and a survival analysis among the incident PCa cases (n = 2806). Information on dairy product consumption was collected at baseline. PCa cases and deaths (n = 305) were confirmed during follow-up. **RESULTS:** The intake of total dairy products was associated with increased PCa incidence [HR = 1.12 (95% CI: 0.93, 1.35); >2.5 servings/d vs. ≤0.5 servings/d]. Skim/low-fat milk intake was positively associated with risk of low-grade, early stage, and screen-detected cancers, whereas whole milk intake was associated only with fatal PCa [HR = 1.49 (95% CI: 0.97, 2.28); ≥237 mL/d (1 serving/d) vs. rarely consumed]. In the survival analysis, whole milk intake remained associated with risk of progression to fatal disease after diagnosis [HR = 2.17 (95% CI: 1.34, 3.51)]. **CONCLUSIONS:** In this prospective cohort, higher intake of skim/low-fat milk was associated with a greater risk of nonaggressive PCa. Most importantly, only whole milk was consistently associated with higher incidence of fatal PCa in the entire cohort and higher PCa-specific mortality among cases. These findings add further evidence to suggest the potential role of dairy products in the development and prognosis of PCa.

INSPIREHEALTH'S INTERPRETATION: In this cohort study, higher intake of skim/low-fat milk was associated with a greater risk of nonaggressive prostate cancer, but only whole milk was consistently associated with a higher risk of prostate cancer mortality.

Traeger, L, F. J. Penedo, C. Benedict, et al.

Identifying How and for Whom Cognitive-Behavioral Stress Management Improves Emotional Well-being among Recent Prostate Cancer Survivors.

Psychooncology. 2013 February 2013; 222: 250-259.

OBJECTIVE: The outcomes of a 10-week cognitive-behavioral stress management (CBSM) group intervention were evaluated in prostate cancer survivors. A model was tested in which CBSM-related improvements in emotional well-being were attained through changes in men's perceptions of their condition, as conceptualized by information processing explanations of self-regulation theory. The model also tested whether life stress and treatment-related side effects moderated intervention effects.

METHODS: Men treated for localized prostate cancer (n=257) within the past 18 months were randomized to CBSM or a half-day psycho-educational seminar. At pre-intervention and 12-week follow-up, emotional well-being, illness perceptions, life stress, and sexual and urinary function were assessed using validated questionnaires. **RESULTS:** After controlling for covariates, CBSM participants showed greater improvements in emotional well-being relative to control participants ($\beta=0.13$, $p<0.05$). For men reporting higher stress upon study entry, CBSM-related improvements were partially explained by changes in some, but not all, illness perceptions. Sexual and urinary dysfunction did not influence CBSM-related gains. **CONCLUSIONS:** Prostate cancer perceptions may be an important target for enhancing emotional well-being, particularly for men experiencing general life stress. However, interventions that explicitly target mental representations of cancer may be needed to modify perceptions of the disease.

INSPIREHEALTH'S INTERPRETATION: Cognitive-behavioral stress management strategies that modify disease perceptions can improve the emotional well-being of prostate cancer survivors.

NUTRITION

Tantamango-Bartley, Y, K. Jaceldo-Siegl, J. Fan and G. Fraser.

Vegetarian Diets and the Incidence of Cancer in a Low-Risk Population.

Cancer Epidemiology Biomarkers and Prevention. 2013 February 2013; 222: 286-294.

BACKGROUND: Cancer is the second leading cause of death in the United States. Dietary factors account for at least 30% of all cancers in Western countries. As people do not consume individual foods but rather combinations of them, the assessment of dietary patterns may offer valuable information when determining associations between diet and cancer risk. **METHODS:** We examined the association between dietary patterns (non-vegetarians, lacto, pesco, vegan, and semi-vegetarian) and the overall cancer incidence among 69,120 participants of the Adventist Health Study-2. Cancer cases were identified by matching to cancer registries. Cox proportional hazard regression analysis was conducted to estimate hazard ratios, with "attained age" as the time variable. **RESULTS:** A total of 2,939 incident cancer cases were identified. The multivariate HR of overall cancer risk among vegetarians compared with non-vegetarians was statistically significant [HR, 0.92; 95% confidence interval (CI), 0.85-0.99] for both genders combined. Also, a statistically significant association was found between vegetarian diet and cancers of the gastrointestinal tract (HR, 0.76; 95% CI, 0.63-0.90). When analyzing the association of specific vegetarian dietary patterns, vegan diets showed statistically significant protection for overall cancer incidence (HR, 0.84; 95% CI, 0.72-0.99) in both genders combined and for female-specific cancers (HR, 0.66; 95% CI, 0.47-0.92). Lacto-ovo-vegetarians appeared to be associated with decreased risk of cancers of the gastrointestinal system (HR, 0.75; 95% CI, 0.60-0.92). **CONCLUSION:** Vegetarian diets seem to confer protection against cancer. **IMPACT:** Vegan diet seems to confer lower risk for overall and female-specific cancer than other dietary patterns. The lacto-ovo-vegetarian diets seem to confer protection from cancers of the gastrointestinal tract.

INSPIREHEALTH'S INTERPRETATION: In a Western population with a low risk for chronic diseases, vegetarian and/or vegan diets help to prevent cancer in general, cancer of the gastrointestinal tract, as well as female-specific cancer.

E-VERSION EXTRA

Bosetti, C, F. Bravi, F. Turati, et al.

Nutrient-Based Dietary Patterns and Pancreatic Cancer Risk.*Ann Epidemiol.* 2013 March 2013; 233: 124-128.

PURPOSE: Few data are available on the role of combinations of foods and/or nutrients on pancreatic cancer risk. To add further information on dietary patterns potentially associated with pancreatic cancer, we applied an exploratory principal component factor analysis on 28 major nutrients derived from an Italian case-control study. **METHODS:** Cases were 326 incident pancreatic cancer cases and controls 652 frequency-matched controls admitted to hospital for non-neoplastic diseases. Dietary information was collected through a validated and reproducible food frequency questionnaire. Multiple logistic regression models adjusted for sociodemographic variables and major recognized risk factors for pancreatic cancer were used to estimate the odds ratios (OR) of pancreatic cancer for each dietary pattern. **RESULTS:** We identified four dietary patterns named “animal products,” “unsaturated fats,” “vitamins and fiber,” and “starch rich,” that explain 75% of the total variance in nutrient intake in this population. After allowing for all the four patterns, positive associations were found for the animal products and the starch rich patterns, the OR for the highest versus the lowest quartiles being 2.03 (95% confidence interval [CI], 1.29-3.19) and 1.69 (95% CI, 1.02-2.79), respectively; an inverse association emerged for the vitamins and fiber pattern (OR, 0.55; 95% CI, 0.35-0.86), whereas no association was observed for the unsaturated fats pattern (OR, 1.13; 95% CI, 0.71-1.78). **CONCLUSIONS:** A diet characterized by a high consumption of meat and other animal products, as well as of (refined) cereals and sugars, is positively associated with pancreatic cancer risk, whereas a diet rich in fruit and vegetables is inversely associated.

INSPIREHEALTH'S INTERPRETATION: A diet high in meat, animal products, refined cereals and sugars can increase pancreatic cancer risk, whereas a diet high in fruits and vegetables can decrease the risk.

ONLINE SUPPORT GROUPS

Stephen, J, A. Rojbal, K. MacGregor, et al.

Evaluation of Cancerchatcanada: A Program of Online Support for Canadians Affected by Cancer.*Curr Oncol.* 2013 2013; 201: 39-47.

BACKGROUND: Professional-led cancer support groups can improve quality of life and address unmet needs, but most Canadians affected by cancer do not have access to or do not make use of cancer support groups. A collaborative interdisciplinary team developed, operated, and evaluated Internet-based, professional-led, live-chat support groups (osgs) for cancer patients, caregivers, and survivors across Canada. **OBJECTIVE:** Our study aimed to report participant and participation characteristics in the pan-Canadian initiative known as CancerChatCanada, and to understand participant perspectives about the quality of communication and professional facilitation, overall satisfaction, and psychosocial benefits and outcomes. **METHODS:** Participants in osgs provided informed consent. Participant and participation characteristics were gathered from program data collection tools and are described using frequencies, means, and chi-squares. Patient, survivor, and caregiver perspectives were derived from 102 telephone interviews conducted after osg completion and subjected to a directed qualitative content analysis. **RESULTS:** The 55 professional-led osgs enrolled 351 participants from 9 provinces. More than half the participants came from rural or semirural areas, and more than 84% had not received previous cancer support. The attendance rate was 75%, the dropout rate was 26%, and 80% of participants were satisfied or very satisfied. The convenience and privacy of osgs were benefits. Meaningful communication about important and difficult topics, kinship and bonding with others, and improved mood and self-care were perceived outcomes. **CONCLUSIONS:** Our results demonstrate that this collaborative initiative was successful in increasing reach and access, and that pan-Canadian, professional-led osgs provide psychosocial benefit to underserved and burdened cancer patients, survivors, and family caregivers.

INSPIREHEALTH'S INTERPRETATION: Professional-led online support groups can be beneficial for underserved and burdened cancer patients, survivors, and family caregivers who do not have access to other support services.

ESSENTIAL OILS

Tayarani-Najaran, Z., E. Talasaz-Firoozi, R. Nasiri, et al.

Antiemetic Activity of Volatile Oil from Mentha Spicata and Mentha x Piperita in Chemotherapy-Induced Nausea and Vomiting.*Ecancermedscience.* 2013 290.

BACKGROUND: This study is aimed at determining the efficacy of *Mentha spicata* (M. spicata) and *Mentha x piperita* (M. x piperita) in preventing chemotherapy-induced nausea and vomiting (CINV). **METHODS:** This was a randomised, double-blind clinical trial study. Prior to the study, patients were randomly assigned into four groups to receive M. spicata or M. x piperita. Statistical analysis included the χ^2 test, relative risk, and Student's t-test. Fifty courses were analysed for each group that

met our eligibility criteria. The treatment and placebo groups applied essential oils of *M. spicata*, *M. × piperita*, or a placebo, while the control group continued with their previous antiemetic regimen. Patients or guardians recorded the number of emetic events, the intensity of nausea over 20 h of chemotherapy, as well as any possible adverse effects that occurred during this time. **RESULTS:** There was a significant reduction in the intensity and number of emetic events in the first 24 h with *M. spicata* and *M. × piperita* in both treatment groups ($p < 0.05$) when compared with the control and no adverse effects were reported. The cost of treatment was also reduced when essential oils were used. **CONCLUSION:** *M. spicata* or *M. × piperita* essential oils are safe and effective for antiemetic treatment in patients, as well as being cost effective.

INSPIREHEALTH'S INTERPRETATION: *Mentha spicata* and *Mentha × piperita* spearmint and peppermint oils are cheap, safe and effective in preventing chemotherapy-induced nausea and vomiting.

MUSIC

Vachiramon, V, J. F. Sobanko, P. Rattanaumpawan and C. J. Miller.

Music Reduces Patient Anxiety during Mohs Surgery: An Open-Label Randomized Controlled Trial.

Dermatol Surg. 2013 February 2013; 391: 298-305.

BACKGROUND: Many patients undergoing Mohs micrographic surgery (MMS) experience anxiety and stress. Although music has been proven to reduce anxiety and promote relaxation in other fields of medicine, scant research investigates the effect of music on anxiety during MMS. **OBJECTIVES:** To determine whether music can reduce anxiety in patients undergoing MMS. **METHODS AND MATERIALS:** An open-labeled randomized controlled trial was conducted to assess anxiety before and after listening to music. Subjects undergoing MMS were randomly allocated to listen to self-selected music ($n = 50$) or to have surgery without music ($n = 50$). Anxiety was measured using the State-Trait Anxiety Inventory (STAI) and on a visual analog scale (VAS). **RESULTS:** Subjects in the music group experienced statistically significantly lower STAI and VAS scores than those in the control group. STAI and VAS scores were significantly lower in subjects who underwent MMS for the first time. Anxiety measures did not correlate with sex or type of skin cancer. **CONCLUSION:** Listening to self-selected music reduces anxiety in patients undergoing MMS, especially those who undergo MMS for the first time. Presenting patients the opportunity to listen to music is a simple strategy to minimize anxiety during MMS.

INSPIREHEALTH'S INTERPRETATION: Music can help to reduce anxiety in patients undergoing MMS (microscopically controlled surgery for skin cancer).

VITAMIN D

Vij, B, O. Papacostea, S. Sam, et al.

Why Aren't Physicians Prescribing Vitamin D for Nursing Home Residents?

J Am Geriatr Soc. 2010. April 2010; 58S228-S229.

INTRODUCTION: There is growing scientific evidence of the clinical impact of vitamin D on a multiplicity of chronic medical conditions affecting the elderly. We studied physicians' vitamin D prescribing patterns in long-term care settings. **METHODS:** We conducted a website-based anonymous survey of AMDA members. **RESULTS:** In the 360 surveys collected, 70.5% of respondents were male, and 62.9% over the age of 51 years, with 86.8% in practice for at least 6 years, and only 34.5% having received formal training in Geriatrics. Whereas most (89.3%) knew the daily recommended dose of vitamin D, with 93.8% believing that vitamin D supplementation is beneficial to older patients and 74.1% agreeing that all nursing home residents should be supplemented, the majority of physicians did not recognize the beneficial correlations between vitamin D levels and cancers (74%), congestive heart failure (77.4%), coronary artery disease (77%), diabetes and metabolic syndromes (79.2%), blood pressure control (72.9%) and strokes (84.9%). Surprisingly, 55.7% were aware that adequate vitamin D level reduces nursing home placement. Though 92.9% knew that daily vitamins do not contain sufficient vitamin D for adequate supplementation, only 20.2% always prescribed vitamin D, 58.9% most of the times and 17.1% sometimes. Cost was never (46.6%), or rarely (44.1%), a factor in prescribing, and neither were pressures from administration staff (42.8%), or pharmacy consultants (42.8%), or concerns about potential drugs interaction (83.9%) and poly-pharmacy (64.5%). However, 37.5% did believe that vitamin D can be harmful to elderly patients when given in high doses. There was a significant direct and persistent correlation between belief that vitamin D supplementation is beneficial to older adults and knowledge score ($p < .0001$). Furthermore, there was a direct relationship between frequency of prescribing vitamin D and knowledge score ($p < .0001$), physician age ($p < .002$), and years of experience in long-term care ($p < .003$). **CONCLUSION:** Though physicians appear convinced of the importance of vitamin D, their reluctance to prescribe it seems to correlate with a lack of knowledge about its positive impact on comorbidities of older adults. In view of current evidence, educational programs should be implemented to maximize physicians awareness of vitamin D benefits for their geriatric practice.

INSPIREHEALTH'S INTERPRETATION: Physicians should be educated about the benefits of vitamin D for geriatric patients.

STUDY OF THE MONTH

Song, L, R. C. Chen, J. T. Bensen, et al.

Who Makes the Decision Regarding the Treatment of Clinically Localized Prostate Cancer—the Patient Or Physician? Results from a Population-Based Study.

Cancer. 2013 Jan 15; 119(2): 421-428.

BACKGROUND: The current study examined how patients' sociodemographic, cancer-related, and subjective affective factors impacted their role in treatment decision-making. **METHODS:** The patient sample (N = 788) was taken from a prospective follow-up study of a population-based cohort. Participants included 343 African American and 445 Caucasian-American patients with clinically localized prostate cancer. Multinomial logistic regression was used to investigate relations between the explanatory variables and the nominal 3-level decision-making variable: patient-only, patient-physician shared, and physician-only. **RESULTS:** Approximately 41% of patients reported patient-only decision-making, 45% reported shared decision-making, and 13% reported physician-only decision-making. The odds of patient-only over physician-only decision-making were greater for younger men (vs those aged ≥ 65 years) (odds ratio [OR], 1.68; 95% confidence interval [95% CI], 1.03-2.74), and were less for men with high (vs low) cancer aggressiveness (OR, 0.29; 95% CI, 0.15-0.55). The odds of shared over physician-only decision-making were less for men with high (vs low) cancer aggressiveness (OR, 0.40; 95% CI, 0.22-0.73). Greater odds of patient-only and shared decision-making also were found to be associated with greater concerns about the physical impact of treatment and having enough time for decision-making and lower scores of receiving advice from others. **CONCLUSIONS:** The findings of the current study indicate that, to facilitate a more patient-oriented decision-making process regarding treatment in those with clinically localized prostate cancer, clinicians need to tailor their interventions according to patient age and cancer aggressiveness, help reduce patient concerns and misconceptions regarding the physical impact of treatments, allow sufficient time for patients to consider treatment options, and assist patients in balancing advice and information received from different sources.

INSPIREHEALTH'S INTERPRETATION: Physicians who are trying to facilitate a more patient-oriented decision-making process for men with prostate cancer need to consider patient age and cancer aggressiveness, as well as help address patient concerns regarding treatment options, while allowing patients sufficient time to consider their options, and assisting them in weighing the opinions from different sources.

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