

The Psycho-Oncology Program: Social and Cognitive Influences on Cancer Prevention and Adaptation

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Our research focuses on evaluating methods of improving quality of life for cancer patients and improving acceptance of screening practices among cancer patients and their families. We are also interested in understanding the impact of cancer and cancer risk on patients and their families. In particular, we are interested in social-environmental influences that affect how individuals cope with cancer and cancer risk. Our primary goal is to improve quality of life for patients and their families, and to improve cancer screening participation among family members at risk. We have six ongoing studies of cancer patients, individuals at risk for cancer, and their family members focusing on the following patients and their families. Our studies focus on the following populations: 1) women undergoing treatment for all stages of breast cancer and their partners; 2) siblings at increased risk for colon or rectal cancer due to a sibling diagnosed with colon or rectal cancer prior to age 61; 3) women diagnosed with ovarian cancer; 4) individuals with melanoma and their first-degree relatives; 5) patients with colorectal cancer being offered Microsatellite Instability testing; 6) patients diagnosed with prostate cancer and their partners.

Couples coping with breast cancer: Analysis and intervention. Manne, Floyd, in collaboration with Goldstein,[§] Ostroff,^a Grana,^b Goldberg,^b Berger,^b Fox,^c Miller,^d Patrick-Miller,^e Kendall^f

Social support provided by spouses plays a critical role in the psychological adaptation of breast cancer patients. Unfortunately, the stress of illness can negatively affect close relationships such that the support provided by spouses can deteriorate as the demands of illness increase. Thus, at the very time when patients need support, it becomes increasingly

difficult for partners to meet these needs. The goal of the proposed research is to understand this social support process and to develop and test interventions to bolster the quality of close relationships during and after cancer treatment.

We have two completed studies and two pilot studies. The first completed study examined support exchanges between women with breast cancer and their husbands to determine the interactional processes that convey support or criticism; this is accomplished by videotaping couples talking about cancer-related problems.

These couples were followed over the course of cancer treatment and 18 months after treatment was completed. Supportive and unsupportive verbal and nonverbal behaviors were coded from the video tapes using a marital interaction coding system. To date, 5 publications have resulted from this phase of the project. The second completed study was a controlled clinical trial of a communication and coping skills intervention focused on the married couple that was designed to bolster the patient's well-being. Couples were randomly assigned to either the intervention group or to standard psychosocial care. The content of the group targeted productive communication, particularly asking for and providing support, problem solving skills, and coping with the illness and demands of treatment. Partners were assessed using questionnaire methods pre- and post-intervention, as well as six months post-intervention; 251 couples participated. The intervention reduced patients' depression, anxiety and improved their well-being, and had much stronger beneficial effects among patients rating their partners as unsupportive when the group began.

The first pilot study has been developed to evaluate the efficacy of an enhanced couple-focused group intervention compared with a couple's support group intervention. Couples are assessed using questionnaire methods pre- and post-intervention, as well as six months post-intervention. To date, 15 couples have been accrued. The second pilot study has been developed to compare the efficacy of six sessions of intimacy-enhancing therapy for couples with bibliotherapy. To date, seven couples have been accrued, and three have completed the intervention.

Colon cancer screening for the families of colon cancer Patients. Manne, Rohowj, Waite, in collaboration with Meropol,[§] Markowitz,^a Guillem,^a Schwartz,^g Marshall,^g Jandorf,^h Itzkowitz,^h Pilipshen,^d Brown,ⁱ Bernath,^j Petrelli,^f Gordon,^k Kurtz,^c Schrag,^c Hoops,^c Herold,^c Su,^c Ross,^c Haller,^c Sun,^c Cescon,ⁱ Emkey,ⁱ Kayal,^d Krevsky,^l Lesko,^m Minniti,ⁿ Reilly,^o Song,^p Blankstein,^q Bednar,^q Quinn,^q Bertsch,^j Siegelmann-Danieli,^j Jacobsen,^r Bapat,^s Irwin,^s Siemons,^s Gardine,^s Patrick-Miller,^e Chung,^z Peterson^{aa}

The lifetime risk of developing colorectal cancer (CRC) is approximately 5% by age 50, with men and women being at equal risk. Indi-

viduals with one first-degree relative (FDR) who has been diagnosed with CRC are estimated to have a lifetime risk of 10%. For individuals with an FDR diagnosed at or before the age of 55 (considered intermediate risk individuals), the lifetime risk is estimated to be even greater, with estimates ranging from two to four times the risk level of the average risk person. Because of this increased risk, individuals with an FDR diagnosed with CRC are advised to undergo CRC screening beginning at age 40, which is a decade earlier than is recommended for average risk individuals. Few studies to date have examined the level of compliance of CRC screening guidelines and factors affecting participation in CRC screening programs for those with an intermediate risk for CRC and designed effective ways of motivating screening in these families.

This is an ongoing program of research that has been funded since 1997. Our first grant evaluated the compliance of siblings of persons diagnosed with colorectal cancer to colon cancer screening, as well as demographic and attitudinal predictors of compliance. We studied over 550 siblings and identified reasons for non-compliance with colorectal screening. The aim of this new project is to use the results from our first study to design a tailored intervention to improve screening compliance among siblings of these early onset colorectal cancer patients. This grant targets those siblings who are not currently compliant with screening. This project compares the impact of three interventions on colorectal cancer screening behaviors and intentions among siblings at increased familial risk for colorectal cancer: 1) generic print intervention (the CDC pamphlet for screening); 2) a tailored print intervention; and 3) a combined tailored print plus tailored telephone counseling intervention. The information in the tailored study arms is tailored to the variables we found to be predictive of screening compliance in our first study. A secondary aim of the study is to determine whether demographic factors, medical access, physician recommendation, and proband characteristics (e.g., stage of disease) moderate the impact of the interventions on colorectal screening. A third objective is to evaluate whether knowledge, attitude and physician recommendation variables mediate the association between the interventions and colorectal cancer screening, and determine whether these

variables are impacted by the interventions. To date, we have enrolled 495 siblings in the study.

Psychological interventions for ovarian cancer patients. Manne, Floyd, Burden, in collaboration with Bergman,[§] Edelson,[§] Ozols,[§] Bookman,[§] Schilder,[§] Rocereto,^b Aikens,^b Warshal,^b Chu,^c Coukos,^c Morgan,^c Rubin,^c Carp,[†] Hernandez,[†] Carlson,^u King,^u Silver,^u Kendall,^f Rosenblum,[§] Dunton,^v Saul^w

Ovarian cancer patients are at high risk for chronic psychological distress resulting from worries about an invasive, aggressive cancer treatment, a relatively poor prognosis, the threat of persistent disease, and a significant impact on quality of life. To improve the quality of life for these women, support from others and effective coping are important. The aim of this study is to compare the efficacy of two widely used psychological interventions, cognitive behavior therapy and supportive psychotherapy. Participants are randomly assigned to one of three conditions: 1) a communication-coping skills intervention; 2) supportive psychotherapy; or 3) a no-treatment control group. Participants complete questionnaires at three time points: pre-intervention, post-intervention, and at a nine-month follow up. To date, 360 participants have enrolled in this collaborative study. Results indicate that the communication-coping skills intervention resulted in significantly greater reductions in depression than the supportive counseling or the no-treatment control. The communication-coping skills intervention was more effective for patients starting the intervention with high levels of depressive symptoms, patients with metastatic disease, and patients who experienced a disease recurrence over the course of the study.

Behavioral interventions to improve skin cancer screening and sun protection practices among family members of individuals with melanoma. Manne, Rohowyj, in collaboration with Lessin,[§] Ming,^c Glanz,^x Dessureault,[†] Jacobsen[†]

Cutaneous melanoma, the most serious and deadly form of skin cancer, continues to be one of the few cancers in the U.S. to continue to increase in incidence. This year, it is estimated that 62,190 cases of invasive melanoma will be diagnosed in the U.S. Risk factors for melanoma include sun exposure, oculocutaneous phenotype, genetic factors, the number and type of

melanocytic nevi, and the personal or family history of melanoma. This randomized clinical trial tests the efficacy of a generic print and generic skin cancer risk counseling approach versus a tailored print and tailored skin cancer risk counseling on the skin self-exam, total skin exam and sun protection and sun exposure habits of FDRs of melanoma patients who are not adherent with self exam, total skin exam or sun protection habits. To date, we have enrolled 202 family members onto the trial.

Impact of communication skills versus a supportive therapy intervention for women with metastatic breast cancer. Manne, Schueller, Floyd, Burden, in collaboration Schnoll,[§] Grana,^b Goldberg,^b Berger,^b Devereux,^b Gryn,^b Huang,[†] Assarsson,^y Damjanov[†]

Although a cure is not achieved for most women with metastatic breast cancer, treatment improvements have made it possible for women to survive for a relatively long period of time with stable disease. Consequently, symptom relief and quality of life are critical therapeutic goals for this population. Studies have suggested that women with metastatic breast disease may be at greater risk for psychological difficulties than women diagnosed with early stage breast cancer. Recent studies have suggested that a lack of emotional support from close others, a greater frequency of negative interactions with close others, and a tendency to not share important cancer-related concerns, are associated with increased psychological distress among women with cancer, particularly women with late-stage disease. In addition, a recent study has suggested that women with breast cancer who have low levels of emotional support from their partners may benefit most from support-based psychosocial interventions. The objective of this study is to compare the effectiveness of a support and communication skills focused intervention and a supportive psychotherapy intervention on the quality of life of women being treated for metastatic breast cancer. The design consists of a randomized clinical trial with two treatment arms: 1) support and communication skills training; and 2) supportive psychotherapy. Two hundred fifty-two women who are newly diagnosed with metastatic breast cancer will be randomly assigned to one of the study conditions. It is anticipated that 182 women will complete all aspects of the study. Patients will complete

paper-and-pencil measures of psychological distress, emotional support and negative interactions with partner, friends and family, protective buffering, coping, perceived control, and functional impairment prior to assignment to experimental condition, one month after completing the intervention sessions, and five months after completion of the second survey. Patients will attend six individual therapy sessions with a therapist as well as a telephone booster session. To date, 53 women have enrolled in the study.

Informed decision making regarding micro-satellite instability testing. Manne, in collaboration with Meropol,[§] Daly,[§] Weinberg,[§] Vig,[§] Sheth,[§] Driesbaugh,[§] Klein-Cabral,[§] Chung,^z Shannon,^z Manning,^{bb} Catts,^f Petrelli^f

Germline defects in several DNA mismatch repair genes, including MSH2 and MLH1 genes, predispose people to a hereditary form of colorectal cancer (CRC) called hereditary nonpolyposis colon cancer (HNPCC). HNPCC accounts for 5% of all colorectal cancer. Several clinical criteria have been commonly used to identify individuals who are most likely to have these germline defects in DNA. However, many HNPCC cases are not identified by these criteria. Demonstrating a germline mutation can aid in the diagnosis of HNPCC.

Microsatellite instability (MSI) testing is now used in clinical settings as a screening test to determine whether individuals are candidates for HNPCC due to mutations in the MLH1 or MSH2 mismatch-repair genes. The MSI analysis is performed on a resected colorectal tumor or a DNA sample. A result of MSI-high indicates an increased likelihood that the CRC arose due to an HNPCC-associated mutation. Individuals who have MSI-high tumors are considered for further genetic testing. In addition to serving as a screening test to determine who is most appropriate for genetic counseling and testing, in the future the MSI test may also serve as a prognostic indicator for CRC patients.

In oncology settings like Fox Chase Cancer Center, patients provide written informed consent to undergo MSI testing. Because this test is very new to the clinical setting, very little is known about the process of informed consent for the MSI test. It is not known whether patients feel they are adequately informed to make the decision to have MSI testing, under-

stand the information they are presented by their physician prior to consenting to undergo the MSI test, or understand the medical information that is contained in the consent form.

This study aims to improve patient satisfaction with the process of informed consent for MSI testing, and to improve knowledge and understanding of the MSI test and what information the MSI test yields for the patient and his or her family. We received a NCI grant in 2004 to develop and evaluate the efficacy of a CD-ROM. To date, 122 patients have enrolled in this randomized clinical trial of the educational CD-ROM.

Communication and intimacy-enhancing intervention for men diagnosed with prostate cancer and their partners. Manne, in collaboration with Pollack,[§] Uzzo,[§] Kissane,^a Roth,^a Nelson,^a Mulhall^a

The diagnosis and treatment of localized or advanced stage prostate cancer (PCa) impacts quality of life for both patient and partner. Patients may not be comfortable discussing their emotions and concerns, particularly concerns regarding erectile dysfunction (ED) and fears about disease recurrence (early stage disease) or disease progression and pain (advanced stage). Partners may wish to discuss their emotions and worries but feel unsure how to broach the topic without pressuring the patient. The aim of this study is to provide preliminary data on the efficacy of a couple-focused intervention, labeled the Communication and Intimacy-enhancing intervention (CI), against a Usual care control (UC). Couples assigned to the CI condition will take place in five 90-minute sessions with a trained clinician. The goals of these sessions are to improve couples' ability to comfortably share their thoughts and feelings regarding cancer, to improve mutual understanding and support regarding their own and one another's cancer experience, facilitate constructive discussions regarding concerns about sexual functioning and deal with feelings of shame and embarrassment in a sensitive manner, and to promote intimacy despite restrictions in sexuality. Sessions are conducted with individual couples. Couples assigned to the UC condition will be offered standard psychosocial care. Couples are assessed using questionnaire methods pre- and post-intervention, as well as two months post-intervention. To date, seven couples have been accrued.

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