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Clinical Update: Literature Abstracts

SYMPTOM CONTROL

Quality of Life and Symptom Control in Hospice Patients with Cancer Receiving Chemotherapy

Schonwetter, R.S., Roscoe, L.A., Nwosu, M., Zilka, B., and Kim, S.

Journal of Palliative Medicine, *9* (2006), 638–645.

The value of palliative chemotherapy for hospice patients is difficult to quantify and little is known about outcomes from these treatments. This study examined quality of life and symptom control in hospice patients with cancer receiving chemotherapy and in a control group of hospice patients with cancer who had not received chemotherapy for at least 3 months. Using a case-control study design matching patients by age, gender, race, and cancer diagnosis, patients receiving chemotherapy reported a number of symptoms similar to that of patients off chemotherapy. Global symptom distress was comparable in both groups, as was quality of life. Patients in both groups were similar at the symptom-specific level; however, patients on chemotherapy had better symptom outcomes for urination problems ($p = .03$), numbness/tingling ($p = .03$), muscle weakness ($p = .07$), and pain ($p = .09$). Patients on chemotherapy had poorer symptom control involving change in taste ($p = .01$) and cough ($p = .01$). Patients on chemotherapy were more likely than those off chemotherapy to report that chemotherapy "made them feel better" ($p = .01$) and "allowed better symptom control" ($p = .01$), indicating that patients taking chemotherapy had more subjective benefit from chemotherapy when compared to those off chemotherapy. The two groups showed no difference in the rate of survival.

Redefining Cancer-Related Asthenia-Fatigue Syndrome

Scialla, S.J., Cole, R.P., and Bednarz, L.

Journal of Palliative Medicine, *9* (2006), 866–872.

Asthenia fatigue syndrome (AFS) is a common symptom perceived by patients with cancer and consists of reported pathologic fatigue, poor endurance, and impaired motor and cognitive function. The purpose of this study was to examine the relationship between a traditional measure of AFS, visual analogue scale (VAS) fatigue ratings, and a set of more objective functional and physiologic measures (Dietz oncology classification, C-reactive protein, serum albumin, hemoglobin, body mass index [BMI]), Motor Functional Independence Measure (FIM) Score, and Cognitive FIM Score. We hypothesized a relationship could suggest the utility of alternative means of assessing and addressing AFS. We retrospectively examined the records of 131 patients admitted to our facility for inpatient rehabilitation because of disability-causing cancer or its treatment. Of our sample, 94.7% (124 cases) indicated at least mild fatigue and 97.7% (128 cases) showed abnormal serum albumin, C-reactive protein, hemoglobin, or BMI. We used multiple regression analysis to examine the relationship between VAS fatigue ratings and the aforementioned set of functional and physiologic variables. The regression explained a significant proportion of the variability in VAS fatigue ratings ($F = 2.25$, $df = 7,123$, $p = .03$, $R = .34$, $R^2 = .11$). However, only Motor FIM Score accounted for a significant independent contribution to the variability in VAS fatigue ratings. The data indicate physiologic and functional variables may provide an alternative, objective, and reliable operational definition of AFS. Specifically, the Motor FIM Score, as a surrogate for VAS fatigue ratings, may be used to measure the efficacy of AFS treatment.

The Role of Oxidative Stress in Postoperative Delirium

Karlidag, R., Unal, S., Sezer, O.H., Bay Karabulut, A., Battaloglu, B., But, A., and Ozcan, C.

General Hospital Psychiatry, *28* (2006), 418–423.

This study aimed to determine a marker that predicts delirium using preoperative oxidative pro-

cesses in patients undergoing cardiopulmonary bypass surgery. Twelve of the 50 patients included in the study showed signs of delirium during postoperative follow-up. The Delirium Rating Scale was used in patients with delirium according to DSM-IV-TR in the postoperative period. Venous blood samples were obtained from the patients the day before and the day after the surgery to determine plasma antioxidant enzyme levels. Although there were no differences in preoperative superoxide dismutase (SOD), glutathione peroxidase (GSH-Px), and malondialdehyde (MDA) levels in both groups, catalase (CAT) levels were significantly lower in the delirium group. Postoperative SOD and MDA levels were also higher in the delirium group, whereas the GSH-Px levels were found to be lower when compared with those during the preoperative period. In the nondelirium group, the postoperative MDA and GSH-Px levels were found to be lower than preoperative levels, and postoperative SOD levels were found to be higher than preoperative levels. CAT levels were lower in the delirium group when the pre- and postoperative levels were compared in both groups. The postoperative levels of SOD, GSH-Px, and CAT in the nondelirium group and MDA in the delirium group were significantly higher than preoperative levels. Patients with low preoperative CAT levels appeared to be more susceptible to delirium than patients with higher CAT levels.

Effect of Depression on All-Cause Mortality in Adults with Cancer and Differential Effects by Cancer Site

Onitilo, A.A., Nietert, P.J., and Egede, L.E.

General Hospital Psychiatry, *28* (2006), 396–402.

The objective of this study was to compare the effect of depression on the risk of death in adults with and without cancer and by specific cancer site among those with cancer. We analyzed data on 10,025 participants in the population-based National Health and Nutrition Examination Survey (NHANES) 1 Epidemiologic Follow-up Study. Four groups were created based on cancer and depression status in 1982: (a) no cancer, no depression (reference group; no CA, no DEP); (b) depression but no cancer (DEP, no CA); (c) cancer but no depression (CA, no DEP); and (d) cancer and depression (CA + DEP). Six CA sites were defined: lung, breast, gastrointestinal (GI), genitourinary (GU), skin, and other. Cox proportional models were used to calculate adjusted hazard for death for each group compared with the reference group and by cancer site. Over 8 years (78,433 person-years of follow-up), 1925 deaths were documented. The mortality rate per 1000 person-years of follow-up was highest in the CA + DEP group. Compared to the reference group, the hazard ratios (HRs) for all-cause mortality were as follows: CA, no DEP: 1.43 [95% confidence interval (95% CI) = 1.23–1.67]; DEP, no CA: 1.44 (95% CI = 1.28–1.63); CA + DEP: 1.87 (95% CI = 1.49–2.34). HRs for depression by site were as follows: lung: 1.30 (95% CI = 0.49–3.99); breast: 1.27 (95% CI = 0.58–2.79); GI: 1.47 (95% CI = 0.58–3.75); GU: 0.93 (95% CI = 0.50–1.74); skin: 1.07 (95% CI = 0.67–1.69); other: 2.13 (95% CI = 0.55–8.25). The coexistence of cancer and depression is associated with a significantly increased risk of death, and the effect of depression on the risk of death differs by cancer site

Preventing Paclitaxel-Induced Peripheral Neuropathy: A Phase II Trial of Vitamin E Supplementation.

Argyriou, A.A., Chroni, E., Koutras, A., Iconomou, G., Papapetropoulos, S., Polychronopoulos, P., and Kalofonos, H.P.

Journal of Pain and Symptom Management, *32* (2006), 237–244.

A randomized, controlled trial was performed to assess the efficacy and safety of vitamin E supplementation for prophylaxis against paclitaxel-induced peripheral neuropathy (PIPN). Thirty-two patients undergoing six courses of paclitaxel-based chemotherapy were randomly assigned to receive either chemotherapy with vitamin E (300 mg twice a day, Group I) or chemotherapy without vitamin E supplementation (Group II). A detailed neurological examination and electrophysiological study was performed during and 3 months after chemotherapy. The severity of PIPN was summarized by means of a modified Peripheral Neuropathy (PNP) score. The incidence of neurotoxicity differed significantly between groups, occurring in 3/16 (18.7%) patients assigned to the vitamin E supplementation group and in 10/16 (62.5%) controls ($p = .03$). The relative risk (RR) of developing PIPN was significantly higher in controls than in vitamin E group patients (RR = 0.3, 95% confidence interval (CI) = 0.1–0.9). Mean PNP scores were 2.25 ± 5.1 (range 0–15) for patients in Group I and 11 ± 11.63 (range 0–32) for those in Group II ($p = .01$). Vitamin E supplementation was well tolerated and showed an excellent safety profile. This study shows that vitamin E effectively and safely protects patients with cancer from the occurrence of paclitaxel-induced peripheral nerve damage. A double-blind, placebo-controlled trial is needed to confirm these results.

Risk Factors for Chronic Pain Following Breast Cancer Surgery: A Prospective Study

Poleshuck, E.L., Katz, J., Andrus, C.H., Hogan, L.A., Jung, B.F., Kulick, D.I., and Dworkin, R.H.

Journal of Pain, *7* (2006), 626–634.

Chronic pain following breast cancer surgery is associated with decreased health-related quality of life and is a source of additional psychosocial distress in women who are already confronting the multiple stresses of cancer. Few prospective studies have identified risk factors for chronic pain following breast cancer surgery. Putative demographic, clinical, and psychosocial risk factors for chronic pain were evaluated prospectively in 95 women scheduled for breast cancer surgery. In a multivariate analysis of the presence of chronic pain, only younger age was associated with a significantly increased risk of developing chronic pain 3 months after surgery. In an analysis of the intensity of chronic pain, however, more invasive surgery, radiation therapy after surgery, and clinically meaningful acute postoperative pain each independently predicted more intense chronic pain 3 months after surgery. Preoperative emotional functioning variables did not independently contribute to the prediction of either the presence or the intensity of chronic pain after breast cancer surgery. These findings not only increase understanding of risk factors for chronic pain following breast cancer surgery and the processes that may contribute to its development but also provide a basis for the development of preventive interventions. Clinical variables and severe acute pain were risk factors for chronic pain following breast cancer surgery, but psychosocial distress was not, which provides a basis for hypothesizing that aggressive management of acute postoperative pain may reduce chronic pain.

How Do We Interpret the Answer "Neither" When Physicians Ask Patients with Cancer "Are You Depressed or Not?"

Ohno, T., Noguchi, W., Nakayama, Y., Kato, S., Tsujii, H., and Suzuki, Y.

Journal of Palliative Medicine, *9* (2006), 861–865.

The aim of this study was to clarify how physicians should interpret the answer "neither" to the single-question interview, "Are you depressed or not?" Two hundred fifty-one patients with cancer were studied. The patients were directly interviewed, choosing one answer among these three: "Yes, I am depressed"; "No, I am not depressed"; or "Neither." After this, the patients completed the Hospital Anxiety and Depression Scale (HADS). The threshold of 11 or greater on HADS was used for adjustment disorder and major depressive disorder. All patients could reply to the single question, but 10 patients did not complete HADS. Among 83, 81, and 77 patients who answered "yes," "neither," and "no," respectively, 75 (90%), 43 (65%), and 9 (12%) patients scored 11 or more on HADS. The mean score of HADS was 12.2 in patients who answered "neither," significantly higher than that of the "no" group ($p < .0001$) and significantly lower than that of the "yes" group ($p < .0001$). Patients who answered "neither" frequently scored in a high enough range to warrant further investigation for adjustment or depressive disorder.

Complementary and Alternative Medicine Use and Quality of Life in Patients with Primary Brain Tumors

Armstrong, T., Cohen, M.Z., Hess, K.R., Manning, R., Lee, E.L., Tamayo, G., Baumgartner, K., Min, S.J., Yung, A., and Gilbert, M.

Journal of Pain and Symptom Management, *32* (2006), 148–154.

This study explored the use of complementary and alternative medicine (CAM) approaches and their relationship with demographic and disease characteristics and quality of life (QOL) in the primary brain tumor (PBT) population. One hundred one PBT patients were enrolled in this study. The results showed that 34% of patients reported using CAM. Forty-one percent reported using more than one type of CAM. The average cost of each CAM used per month was $69, with 20% of patients spending more than $100 per month. The majority (74%) reported that their physicians were unaware of their use of CAM. Data analysis found a higher performance status to be the only factor significantly related to use of CAM therapy ($p < .005$). There was no difference in patient report of QOL between users and nonusers of CAM therapies. The high number of patients who do not report CAM use has potential implications for evaluation of symptoms and response to therapy in this population. This may be especially relevant in those patients with higher functional status participating in clinical trials.

Self-Care Management and Risk Factors for Depressive Symptoms among Elderly Nursing Home Residents in Taiwan

Tsai, Y.F.

Journal of Pain and Symptom Management, *32* (2006), 140–147.

The purpose of this study was to explore self-care management strategies and risk factors for depressive symptoms among elderly residents of nursing homes in Taiwan. Stratified random sampling was used to recruit participants (n = 220). In these elderly nursing home residents, the prevalence of depressive tendency was 55.0%. Although only 42% of participants used self-care strategies to manage depressive symptoms, the most frequently used strategy was "take a walk." Self-learning was the main information source for self-care strategies. Logistic regression analysis indicated that satisfaction with living situation and perceived health status significantly predicted depressive symptoms. Because elders tended to engage in activities and interact with others to manage their depressive symptoms, health care providers in nursing homes should consider improving access to activities and interpersonal contacts for elderly residents. Elders' awareness of strategies to self-manage depressive symptoms also needs to be increased. The risk factors for depressive symptoms may be addressed by providing a pleasant and comfortable living environment, discouraging poor perceived health status, and promoting the health of elderly residents of nursing homes in Taiwan.

Pain, Depression, and Fatigue in Community-Dwelling Adults with and without a History of Cancer

Reyes-Gibby, C.C., Aday, L.A., Anderson, K.O., Mendoza, T.R., and Cleeland, C.S.

Journal of Pain and Symptom Management, *32* (2006), 118–128.

The State of the Science Report by the National Cancer Institute on Symptom Management in Cancer identified gaps in understanding the epidemiology of pain, depression, and fatigue, and called for studies that will identify the extent of risk for these symptoms among those with cancer relative to other populations. Using year 2000 data from the Health and Retirement Study, a survey of a nationally representative sample of adults aged ≥50, we evaluated whether respondents with a history of cancer had excess risk for pain, depression, and fatigue compared to those without a history of cancer. We also compared clustering/cooccurrence of symptoms. Controlling for the confounding effects of comorbidities, sociodemographic, and access to care factors, respondents with a history of cancer had higher risk for fatigue (OR = 1.45; 95%CI = 1.29–1.63), depression (OR = 1.21; 95%CI = 1.06–1.37), and pain (OR = 1.15; 95%CI = 1.03–1.28). Symptom clusters were also more prevalent among those with a history of cancer ($p < .001$), with the pain–depression–fatigue cluster as most prevalent.

Transitions of Care and Changes in Distressing Pain

Trask, P.C., Teno, J.M., and Nash. J.

Journal of Pain and Symptom Management, *32* (2006), 104–109.

This study employed a 22-state mortality follow-back survey to examine bereaved family members' perception of the level and pattern of distressing pain in decedents with cancer at the last two sites of care. Of the 1,578 individuals interviewed, 423 of their family members had cancer listed as the leading cause of death on the decedent's death certificate. Decedents were treated at home, hospitals, hospices, or nursing homes, with more than half of the respondents (n = 216) reporting that the decedent was at more than one site of care in the last month. Forty-two percent of decedents had distressing pain (defined as "quite a bit" or "very much") at their second to last place of care, with 40% having distressing pain at the last place. There was some variation in the degree of change depending on the transition between the second to last and last places of care. For many individuals, however, the transition to another place of care did not result in an improvement in the level of distressing pain. No significant differences were found in the change in distressing pain by transition of care. Increased attention is needed not only on how to adequately manage pain and pain-related distress but also on how to improve pain reduction measures in transitions between health care settings at the end of life.

PSYCHOSOCIAL INTERVENTIONS

Reduction of Cancer-Specific Thought Intrusions and Anxiety Symptoms with a Stress Management Intervention among Women Undergoing Treatment for Breast Cancer

Antoni, M.H., Wimberly, S.R., Lechner, S.C., Kazi, A., Sifre, T., Urcuyo, K.R., Phillips, K., Smith, R.G., Petronis, V.M., Guellati, S., Wells, K.A., Blomberg, B., and Carver, C.S.

American Journal of Psychiatry, *163* (2006), 1791–1797.

After surgery for breast cancer, many women experience anxiety relating to the cancer that can adversely affect quality of life and emotional functioning during the year postsurgery. Symptoms such as intrusive thoughts may be ameliorated dur-

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ing this period with a structured, group-based cognitive behavior intervention. A 10-week group cognitive behavior stress management intervention that included anxiety reduction (relaxation training), cognitive restructuring, and coping skills training was tested among 199 women newly treated for stage 0–III breast cancer. They were then followed for 1 year after recruitment. The intervention reduced reports of thought intrusion, interviewer ratings of anxiety, and emotional distress across 1 year significantly more than was seen with the control condition. The beneficial effects were maintained well past the completion of adjuvant therapy. Structured, group-based cognitive behavior stress management may ameliorate cancer-related anxiety during active medical treatment for breast cancer and for 1 year following treatment. Group-based cognitive behavior stress management is a clinically useful adjunct to offer to women treated for breast cancer.

Working with Families in Palliative Care: One Size Does Not Fit All

King, D.A. and Quill, T.

Journal of Palliative Medicine, *9* (2006), 704–715.

Comprehensive palliative care requires that family concerns are understood and addressed. Yet medical professionals frequently lack formal training in family systems concepts and, therefore, may be unprepared to engage in family-inclusive approaches to treatment. To address this problem, we selectively reviewed the literature on working with families in end-of-life settings and offer specific recommendations for involving families as collaborators in the care process. Based on existing theory regarding the development of family communication styles and problem-solving abilities, we propose a tentative framework for understanding and responding to a range of common family dynamics encountered in palliative care and hospice settings. In light of the lack of empirical studies in this area, we conclude with recommendations for future research.

Peer-Professional Workgroups in Palliative Care: A Strategy for Advancing Professional Discourse and Practice

Byock, I., Twohig, J.S., Merriman, M., and Collins, K.

Journal of Palliative Medicine, *9* (2006), 934–947.

As part of a comprehensive national effort to improve care at the end of life, the Promoting Excellence in End-of-Life Care program of The Robert Wood Johnson Foundation convened "national peer-professional workgroups" of recognized authorities or leaders to advance palliative aspects of practice in their respective specialties or fields. The conveners' goals were to establish research and practice agendas to integrate palliative care within selected fields and health care settings, and to expand delivery of palliative care to special patient populations that have been underserved by palliative care. We hypothesized that leading professionals within specific fields, chartered to achieve clear goals and then provided with sufficient administrative and logistical support could develop recommendations for expanding access to, quality of, and financing for palliative care within their disciplines. Staff at the national program office of Promoting Excellence in End-of-Life Care convened eight disease-based, specialty-based, or issue-based workgroups (the selected workgroup topics were amyotrophic lateral sclerosis, cost accounting, critical care, end-stage renal disease, human immunodeficiency virus/acquired immune deficiency syndrome [HIV/AIDS] disease, Huntington's disease, pediatric care, and surgical palliative care). The national program office implemented a small group process design in convening the groups, and provided coordination, oversight, and administrative support, along with funds to support meetings (telephone and in person). A workgroup "charter" guided groups in determining the scope of efforts and set specific, time-limited goals. From the outset, the workgroups developed plans for dissemination of workgroup recommendations to defined stakeholder audiences, including health care providers, policy makers, payers, researchers, funders, educators, professional organizations, and patient advocacy groups. Groups averaged 25 members and met for an average of 24 months. Promoting Excellence leadership chose workgroup topic areas that addressed patient populations underserved for palliative care and corresponding professional specialties with demonstrated interest and readiness to improve education, evidence base, and professional expertise in palliative aspects of care. Each workgroup was highly productive and advanced changes in respective fields through developing and disseminating recommendations to their respective fields regarding practice, education, clinical and health service research, and policy. Beyond their chartered responsibilities, workgroups also developed educational programs and curricula and a wide array of resources. The workgroups also authored articles for publication, intended to stimulate professional discourse and influence clinical norms and culture. The national peer-professional workgroup model exceeded original expectations and produced well-considered Rec-

ommendations to the Field as well as a body of resources for professionals in expanding access to and quality of palliative care. Results of this experimental venture in professional change suggest that the workgroup model may be a useful, cost-effective, rapid-change strategy for quality improvement in other areas of professional practice and service delivery.

Evaluation of an Educational Intervention to Encourage Advance Directive Discussions between Medicine Residents and Patients

Furman, C.D., Head, B., Lazor, B., Casper, B., and Ritchie, C.S.

Journal of Palliative Medicine, 9 (2006), 964–967.

Most medical schools are remiss in preparing physicians in end-of-life communication skills. As a result, many residents are uncomfortable with approaching the patient, have not developed the skills required to discuss the patients' wishes, and avoid end-of-life conversations. Our objective was to evaluate an educational intervention focused on teaching residents skills to discuss advance directives. Residents attended a morning report consisting of both didactic training and participation in a role-play exercise. Charts of inpatients were audited 10 days prior to and 5 days subsequent to the intervention to ascertain if there was a documented do-not-resuscitate (DNR) discussion. Seventy-nine records of patients assigned to eight physicians who attended the intervention and who were responsible for patients before and after the intervention were reviewed. Of the patients assigned to these residents before the intervention, 32% had a documented DNR discussion. Thirty-four (34%) of the physicians had discussions after the intervention, demonstrating only minimal improvement. A single intervention may be inadequate to affect physician practices related to DNR discussions. Physicians may need more interactive, experiential learning opportunities and related supervision over the course of their training in order to improve these communication skills. A chart review that only records if a DNR discussion was documented in the medical record may not be the best tool to evaluate the success of this educational intervention. Improvement in attitudes and knowledge were not able to be measured.

Interest in Research Participation among Hospice Patients, Caregivers, and Ambulatory Senior Citizens: Practical Barriers or Ethical Constraints?

Williams, C.J., Shuster, J.L., Clay, O.J., and Burgio, K.L.

Journal of Palliative Medicine, *9* (2006), 968–974.

The purpose of this survey study was to explore hypothetical interest in research participation among hospice patients and caregivers compared to ambulatory senior citizens using a cross-sectional survey. The setting was 21 community-based hospice offices, a university medical center geriatric ambulatory care clinic, and three community-based senior citizen centers. Participants were hospice patients, caregivers, and ambulatory senior citizens not enrolled in hospice. Using a self-administered questionnaire, participants rated their interest in participating in survey/interview and therapeutic studies, identified potential benefits and barriers to research participation, and reported their preferences for who they would want to approach them about research participation. Forty-six percent of hospice patients and 60% of caregivers reported an interest in interview or survey research participation; 45% and 57%, respectively, expressed interest in therapeutic research. Compared to hospice patients, caregivers reported higher rates of personal interest in both survey research ($p \leq .001$) and therapeutic research ($p \leq .001$) and were more likely to report that the hospice patients they cared for would be interested ($p = .005$ and $p = .027$). Younger hospice patients were more favorably disposed toward both survey and therapeutic research participation than hospice patients over the age of 75 ($p = .063$ and .011). The proportion of older hospice patients showing interest in research did not differ significantly from ambulatory senior citizens for either type of research ($p = .56$, .98). This study suggests that many hospice patients are interested in research participation and are able to articulate benefits and barriers, which supports the inclusion of this population in research.

How Well Do Family Caregivers Cope after Caring for a Relative with Advanced Disease and How Can Health Professionals Enhance Their Support?

Hudson, P.L.

Journal of Palliative Medicine, *9* (2006), 694–703

Support for families during a person's advanced disease and also into the bereavement period is a major component of palliative care. However, because of the gaps in bereavement research in this area, there is a lack of evidence-based direction for health professionals. This study sought to explore family caregiver perceptions of their relative's death

and assess how well they were coping. Caregivers were also asked to identify which health professional strategies helped them prepare for and respond to their relative's death. Two months after their relative's death primary family caregivers (n = 45) of patients with advanced cancer completed a structured interview and were also assessed to determine if they were confronted by traumatic grief. Seven percent of caregivers were confronted by traumatic grief; most caregivers perceived they were coping reasonably well and could identify positive outcomes related to their experience. Caregivers noted the significant benefits of receiving comprehensive information to prepare them for the future and expressed appreciation for the support provided by specialist palliative care services. There is a large body of literature that highlights the negative consequences of being a family caregiver to a person with advanced disease. The sample population in this study, however, seemed to be reasonably well functioning; the results of the study were therefore somewhat surprising. A research agenda and key clinical implications are outlined to aid direction in targeting bereavement interventions.

QUALITY OF PALLIATIVE CARE

Impact of a Palliative Care Service on In-Hospital Mortality in a Comprehensive Cancer Center

Elsayem, A., Smith, M.L., Parmley, L., Palmer, J.L., Jenkins, R., Reddy, S., and Bruera, E.

Journal of Palliative Medicine, *9* (2006), 894–902

Palliative care services provide symptom control and psychosocial support for dying patients and their families. These services are not available in many cancer centers and tertiary hospitals. The purpose of this study was to review the impact of a palliative care program, established in 1999, on overall in-hospital mortality. We reviewed the M. D. Anderson Cancer Center computerized database to determine the total number of deaths and discharges and the place of death for each fiscal year from 1999 to 2004. The median length of stay for patients who died in different locations within the hospital was calculated. Annual palliative care consultations for patients who subsequently died in the hospital were retrieved. The annual mortality rate for the cancer center was calculated. The overall in-hospital mortality rates were 3.6, 3.7, 3.6, 3.5, 3.6, and 3.7% of all discharges for the period 1999–2004, respectively ($p > .2$). The number of deaths in the medical intensive care unit (MICU) dropped from 252 in 671 (38%) in 1999 to 213 in 764 (28%) in 2004 ($p < .0001$). Involvement of the palliative care service in the care of patients dying in the hospital grew from 8 in 583 (1%) in 1999 to 264 in 764 (35%) in 2004 ($p < .0001$). The median length of hospital stay (MLOS) for patients who subsequently died in-hospital was significantly longer than that for patients who were discharged alive. Increased involvement by the palliative care service in the care of decedent patients was associated with a decreased MICU mortality and no change in overall hospital mortality rate or inpatient length of hospital stay.

Cost and Utilization Outcomes of Patients Receiving Hospital-Based Palliative Care Consultation

Penrod, J.D., Deb, P., Luhrs, C., Dellenbaugh, C., Zhu, C.W., Hochman, T., Maciejewski, M.L., Granieri, E., and Morrison, R.S.

Journal of Palliative Medicine, *9* (2006), 855–860.

Our objective was to compare per diem total direct, ancillary (laboratory and radiology), and pharmacy costs of palliative care (PC) compared to usual care (UC) patients during a terminal hospitalization and to examine the association between PC and ICU admission. Our method was a retrospective, observational cost analysis using a VA (payer) perspective at two urban VA medical centers. Demographic and health characteristics of 314 veterans admitted during two years were obtained from VA administrative data. Hospital costs came from the VA cost accounting system. Generalized linear models (GLM) were estimated for total direct, ancillary and pharmacy costs. Predictors included patient age, principal diagnosis, comorbidity, whether patient stay was medical or surgical, site, and whether the patient was seen by the palliative care consultation team. A probit regression was used to analyze probability of ICU admission. Propensity score matching was used to improve balance in observed covariates. PC patients were 42 percentage points (95% CI, −556% to −31%) less likely to be admitted to ICU. Total direct costs per day were $239 (95% CI, −387 to −122) lower and ancillary costs were $98 (95% CI, −133 to −57) lower than costs for UC patients. There was no difference in pharmacy costs. The results were similar using propensity score matching. PC was associated with significantly lower likelihood of ICU use and lower inpatient costs compared to UC. Our findings coupled with those indicating better patient and family outcomes with PC suggest both a cost and quality incentive for hospitals to develop PC programs.

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Views on Physician-Assisted Suicide among Family Members of Oregon Cancer Patients

Ganzini, L., Beer, T.M., and Brouns, M.C.

Journal of Pain and Symptom Management, *32* (2006), 230–236.

Ninety-eight Oregonians with advanced cancer and their family members participated in a cross-sectional survey to understand agreement in views on physician-assisted suicide (PAS), which was a legal option for these patients. Half of the family members would support the patient's request for PAS, 30% would oppose it, and 19% were undecided. Low religiousness and the family member's personal health concerns were associated with increasing support by the family member for PAS for the patient. Family members were able to predict patients' political views on legalized PAS, and there was moderately high agreement among family members on political views. Family members, however, were not knowledgeable about patients' interest in PAS for themselves, and there was low agreement among dyads on whether they had discussed this issue. Improved knowledge of patient-based barriers to discussing PAS may facilitate interventions for psychosocial distress in cancer patients.

The Seattle Pediatric Palliative Care Project: Effects on Family Satisfaction and Health-Related Quality of Life

Hays, R.M., Valentine, J., Haynes, G., Geyer, J.R., Villareale, N., McKinstry, B., Varni, J.W., and Churchill, S.S.

Journal of Palliative Medicine, *9* (2006), 716–728.

This paper presents the components of a pediatric palliative care demonstration program implemented in Seattle during the period 1999–2001. It reports findings from the evaluation of quality of life and family satisfaction among enrolled participants. The program was designed to enhance patient-provider communication using the Decision-Making Tool (DMT) and experimented with comanagement by clinicians and insurers to support decision making in advanced serious pediatric illness. The project design consisted of ethical decision making, provider education, and flexible administration of health benefits through co-case management between insurers and care providers. The evaluation study design is a nonexperimental pretest, posttest design comparison of pediatric quality of life and family satisfaction at program entry with repeated measures at 3 months postprogram entry. Quality of life was measured with parent proxy reports of health-related quality of life using the PedsQL Version 4.0, and family satisfaction was measured with a 31-item self-administered questionnaire designed by project staff. Forty-one patients ranging in age from infancy to 22 years old were enrolled in the program over a 2-year period. Parents consented to participate in the evaluation study. Thirty-one specific diagnoses were represented in the patient population; 34% were some form of cancer. Improvements in health-related quality of life over baseline were observed for 21 matched pairs available for analysis in each domain of health-related quality of life; positive changes in reports of emotional well-being were statistically significant. Improvements over baseline in 14 of 31 family satisfaction items were statistically significant. Pediatric palliative care services that focus on effective communication, decision support, and co-case management with insurers can improve aspects of quality of life and family satisfaction.

Preparedness for the Death of a Loved One and Mental Health in Bereaved Caregivers of Patients with Dementia: Findings from the REACH Study

Hebert, R.S., Dang, Q., and Schulz, R.

Journal of Palliative Medicine, *9* (2006), 683–693.

Although it has been suggested that family and friends who are prepared for the death of a loved one have less distress, the relationship between preparedness and bereavement mental health is inconclusive. Our objectives were to determine the relationship between preparedness for the death and mental health in bereaved caregivers of dementia patients and explore predictors of preparedness. Our method was a prospective study of family caregivers of persons with dementia. Standardized assessment instruments and structured questions were used to collect data at study entry and at 6, 12, and 18 months. Multiple caregiving-related variables were collected. Bereaved caregivers reported whether they were "not at all" prepared or prepared for the death of their loved one. We studied 222 bereaved caregivers. Twenty-three percent of caregivers were not prepared for the death. These caregivers had more depression, anxiety, and complicated grief symptoms. Black caregivers, caregivers with less education, those with less income, and those with more depressive symptoms prior to the death were more likely to perceive themselves as "not at all" prepared. In contrast, the amount of pain the care recipient was in prior to death was positively associated with preparedness. Despite providing high-intensity care, often for years, many

bereaved caregivers perceived themselves as unprepared for the death. These caregivers had more depression, anxiety, and complicated grief symptoms. Future work should be directed to confirming these findings and determining how best to intervene with high-risk caregivers.

Survival, Mortality, and Location of Death for Patients Seen by a Hospital-Based Palliative Care Team

Fromme, E.K., Bascom, P.B., Smith, M.D., Tolle, S.W., Hanson, L., Hickam, D.H., and Osborne, M.L.

Journal of Palliative Medicine, *9* (2006), 903–911.

Little is known about patient outcomes after discharge planning by inpatient palliative care teams. A major difficulty is that successful discharge planning often effectively limits or ends the team's relationship with the patient and family. The goal of this study was to gather a clearer picture of what happened to our palliative care consult patients after discharge. This was a longitudinal survey of all patients seen over a 1-year period by the inpatient palliative care team at Oregon Health & Science University (OHSU). Data were recorded by team members at the time of consultation and supplemented by data from administrative databases and death certificates. The team provided consults to 292 unique patients: 60% were younger than age 65, 39% were female, and 16% were members of an ethnic or racial minority. Almost three quarters of patients carried a noncancer diagnosis. Of the 292 patients, 37% died in hospital and 63% were discharged alive, either to home (54%), nursing facilities (20%), or inpatient hospice (26%). Of the 183 patients discharged alive, 38% died within 2 weeks, 32% died between 2 weeks and 6 months, 25% were alive at 6 months, and 4% were unknown. Of note, only 10% of patients seen by the consult service were readmitted to OSHU within 30 days, and only 5% of those discharged alive from OHSU ultimately died in an acute care hospital. We characterized patient outcomes following inpatient palliative care consultation: where patients are discharged, how long they live, and where they die. Two thirds of patients were able to be discharged, even when death occurred within 2 weeks. The low rates of readmission and death in an acute care hospital support that the decision to discharge the patients was reasonable and the discharge plan was adequate. Hospital-based palliative care teams can play an important and unique role in discharge planning—allowing even patients very near death to leave the hospital if they wish.

MEASURES

Comparison between Fatigue, Sleep Disturbance, and Circadian Rhythm in Cancer Inpatients and Healthy Volunteers: Evaluation of Diagnostic Criteria for Cancer-Related Fatigue

Fernandes, R., Stone, P., Andrews, P., Morgan, R., and Sharma, S.

Journal of Pain and Symptom Management, *32* (2006), 245–254.

The aim of this study was to evaluate whether diagnostic criteria for cancer-related fatigue syndrome (CRFS) could be rigorously applied to cancer inpatients, and to explore the relationship between subjective fatigue and objective measures of physical activity, sleep, and circadian rhythm. Female cancer patients ($n = 25$) and a comparison group of subjects without cancer ($n = 25$) were studied. Study participants completed a structured interview for CRFS and questionnaires relating to fatigue, psychological symptoms, and quality of life (QoL). Wrist actigraphs worn for 72 h were used as an objective measure of activity, sleep, and circadian rhythm. Compared to controls, cancer patients were more fatigued, had worse sleep quality, more disrupted circadian rhythms, lower daytime activity levels, and worse QoL. After exclusion of subjects with "probable" mood disorders, the prevalence of CRFS was 56%. Fatigue severity among the cancer patients was significantly correlated with low QoL, depression, constipation, and decreased self-reported physical functioning. It can be concluded that the diagnostic criteria for CRFS can be applied to cancer inpatients, but strict application requires a rigorous assessment of psychiatric comorbidity. Despite cancer inpatients having greater impairments of sleep and circadian rhythm, it was found that fatigue severity did not appear to be related to these impairments.

Assessing Fatigue in Persons with Cancer: Further Validation of the Wu Cancer Fatigue Scale

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Cancer-related fatigue (CRF) is a significant clinical symptom. Effective assessment of CRF attributes from the patients' perspective is essential. This study tested the psychometric properties of the Wu Cancer Fatigue Scale (WCFS). A total of 172 out-

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patients with breast cancer, who were at various stages and on various chemotherapy regimens and were undergoing treatment at one of three cancer clinics in a Midwest metropolitan area participated in this study. The participants were instructed to complete four instruments in the following order: the 16-item WCFS, Schwartz Cancer Fatigue Scale (SCFS),
Geriatric Depression Scale (GDS), and Cancer-Related Fatigue Distress Scale (CRFDS). Structural equation modeling (LISREL 8.54) supported the one-factor measurement model with nine items remaining. Nonsignificant Satorra-Bentler Scaled Chi-square (27) = 32.52, $p = .21$, standardized root mean square residual = 0.032, nonnormal fit index = 0.97, comparative fit index = 0.98, and incremental fit index = 0.98 indicated a good model fit. Convergent validity with the SCFS was 0.78, concurrent validity with the GDS was 0.60, and predictive validity with the CRFDS was 0.73. Internal consistency reliability was alpha = .91 for the nine-item scale. The revised WCFS is a reliable and valid instrument that aims to measure the subjective characteristics of CRF from the patients' perspective. It may prove useful in both clinical and research settings.

Psychometric Testing of Three Chinese Fatigue Instruments in Taiwan

Shun, S.C., Beck, S.L., Pett, M.A., and Berry, P.H.

Journal of Pain and Symptom Management, *32* (2006), 155–167.

The purpose of this study was to evaluate the psychometric properties (reliabilities and validities) and ease of use of three translated fatigue instruments: Chinese versions of the Cancer Fatigue Scale, the Fatigue Symptom Inventory (FSI), and the Schwartz Cancer Fatigue Scale-revised. Convenience sampling was used to recruit 243 cancer outpatients at a chemotherapy treatment center in Taiwan. The results indicated that the three scales had good internal consistency (Cronbach's alphas for three total scales $> .80$) and were brief (less than 6 min to complete), valid (confirmed by convergent, divergent, and discriminant validity), and feasible measures (completion rates $> 97\%$) of fatigue for use with Taiwanese cancer patients. However, 27% of cancer patients reported that the FSI was difficult for them to complete. Differences in factorial validity between each original scale and its Chinese version indicate a need for further testing in Taiwan.

Can Pain Be More or Less Neuropathic? Comparison of Symptom Assessment Tools with Ratings of Certainty by Clinicians

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Pain, *122* (2006), 289–294.

Chronic pain is generally regarded as being divided into two mutually exclusive pain mechanisms: nociceptive and neuropathic. Recently, this dichotomous approach has been questioned and a model of chronic pain being "more or less neuropathic" has been suggested. To test whether such a spectrum exists, we examined responses by patients with chronic pain to validated neuropathic pain assessment tools and compared these with ratings of certainty about the neuropathic origin of pain by their specialist pain physicians. We examined 200 patients (100 each with nociceptive and neuropathic pain) and administered the self-complete Leeds Assessment of Neuropathic Symptoms and Signs (S-LANSS score) and the Neuropathic Pain Scale (NPS). Clinicians were asked to rate their certainty of the presence of neuropathic pain mechanisms on a 100-mm visual analogue scale (VAS) (0 = *not at all neuropathic in origin* to 100 = *completely neuropathic in origin*). The whole sample was divided into tertiles based on ascending ratings of diagnostic certainty by clinicians using the VAS and labeled "unlikely," "possible," and "definite" neuropathic pain. There were significant differences in median S-LANSS and NPS composite scores between all tertile groups. There were also significant differences between many S-LANSS and NPS item scores between groups. We have shown that higher scores on both the S-LANSS and the NPS are indicative of greater clinician certainty of neuropathic pain mechanisms being present. These data support the theoretical construct that pain can be more or less neuropathic and that pain of predominantly neuropathic origin may be a useful clinical concept.

The Reliability and Validity of Pain Interference Measures in Persons with Multiple Sclerosis

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Valid measures of pain-related interference with functioning could serve as useful outcome measures in much needed clinical trials of pain treatments

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for persons with multiple sclerosis (MS). The purpose of this study was to examine the psychometric properties of two pain interference measures in persons with MS and chronic pain. Modified versions of the Interference scale of the Brief Pain Inventory (BPI) and the Disability scale of the Graded Chronic Pain Scale were administered via a mailed survey to 187 community-dwelling persons with MS. Data from the 125 participants who reported pain were analyzed. Although both measures demonstrated excellent internal consistency, in the current sample, evidence regarding the construct and concurrent validity was stronger for the modified versions of the BPI Interference scale. These results provide preliminary support for the reliability and validity of modified versions of the BPI Interference scale in persons with MS and chronic pain.

Validation and Clinical Application of the Screener and Opioid Assessment for Patients with Pain (SOAPP)

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Journal of Pain and Symptom Management, *32* (2006), 287–293.

The Screener and Opioid Assessment for Patients with Pain (SOAPP) is a brief, self-administered screening instrument used to assess suitability of long-term opioid therapy for chronic pain patients. This study presents preliminary data to examine the reliability and validity of the SOAPP as a measure of risk of opioid abuse for patients on opioid medication. Patients taking opioids for noncancer pain ($n = 396$) from two pain centers completed the SOAPP prior to being placed on opioids for pain. Demographic data, SOAPP scores, and results of urine toxicology screens from the patients' medical records were examined. Patients were divided into two groups of high and low risk of opioid abuse potential based on cutoff scores of 8 and higher on the SOAPP. Results showed that patients in the high-risk group were younger, more likely to be asked to give a urine screen, and had more abnormal urine screens compared with those in the low-risk group ($p < .05$). A combined factor analysis of the SOAPP revealed five factors labeled (1) history of substance abuse, (2) legal problems, (3) craving medication, (4) heavy smoking, and (5) mood swings. Preliminary support was found for the internal reliability and predictive validity of the SOAPP. Current limitations of the SOAPP and future directions for change are discussed.

EXISTENTIAL AND SPIRITUAL ASPECTS OF CARE

Religious Coping Is Associated with the Quality of Life of Patients with Advanced Cancer

Tarakeshwar, N., Vanderwerker, L.C., Paulk, E., Pearce, M.J., Kasl, S.V., and Prigerson, H.G.

Journal of Palliative Medicine, *9* (2006), 646–657.

For patients confronting a life-threatening illness such as advanced cancer, religious coping can be an important factor influencing their quality of life (QOL). The study's main purpose was to examine the association between religious coping and QOL among 170 patients with advanced cancer. Both positive religious coping (e.g., benevolent religious appraisals) and negative religious coping (e.g., anger at God) and multiple dimensions of QOL (physical, physical symptom, psychological, existential, and support) were studied. Structured interviews were conducted with 170 patients recruited as part of an ongoing multi-institutional longitudinal evaluation of the prevalence of mental illness and patterns of mental health service utilization in advanced cancer patients and their primary informal caregivers. Patients completed measures of QOL (McGill QOL questionnaire), religious coping (Brief Measure of Religious Coping [RCOPE] and Multidimensional Measure of Religion/Spirituality), self-efficacy (General Self-Efficacy Scale), and sociodemographic variables. Linear regression analyses revealed that after controlling for sociodemographic variables, lifetime history of depression, and self-efficacy, greater use of positive religious coping was associated with better overall QOL as well as higher scores on the existential and support QOL dimensions. Greater use of positive religious coping was also related to more physical symptoms. In contrast, greater use of negative religious coping was related to poorer overall QOL and lower scores on the existential and psychological QOL dimensions. Findings show that religious coping plays an important role for the QOL of patients and the types of religious coping strategies used are related to better or poorer QOL.

Suffering at the End of Life in the Setting of Low Physical Symptom Distress

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Alleviation of suffering is a fundamental goal of medicine, especially at the end of life. Although

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physical distress is a component of suffering, other determinants likely play a role. This study attempted to elucidate these other components in an effort to understand the nature of suffering better. A prospective cohort study was conducted in the Population-based Palliative Care Research Network (PoPCRN) among English-speaking adults. Data were collected at hospice admission and at frequent intervals until death or discharge. This paper presents patient-reported data collected at the first available assessment after admission, using the Condensed Memorial Symptom Assessment Scale (MSAS; 0 = *not distressing*, 4 = *very distressing*), the McGill Quality of Life Questionnaire (MQOL; 0 = *worst QOL*, 10 = *best QOL*) and two suffering scales, overall suffering and suffering caused by physical symptoms (0 = *not suffering*, 10 = *extreme suffering*). The study population (n = 48) is limited to those with physical symptoms less than "somewhat" distressing on the MSAS-PHYS. Respondents were divided into two groups: no–mild overall suffering (0–3) and moderate–severe overall suffering (4–10) and compared based on demographics, MQOL scores, MSAS-PSYCH scores, and suffering caused by physical symptoms. Mean age 70 years (range, 33–91), mean Karnofsky score 46, 46% married, 54% male, 71% cancer, 93% non-Hispanic white. Compared to patients reporting no–mild overall suffering, patients reporting moderate–severe overall suffering were more likely to have a diagnosis other than cancer (83% vs. 57%, p = .05), be younger (65 vs. 75 years, p = .02), and have lower scores on the MQOL-psychological subscale (6.4 vs. 8.0, p = .02) and overall QOL scale (6.2 vs. 7.2, p = .04). No significant differences were noted with respect to gender, marital status, MSAS-PSYCH, or MQOL existential and support subscales. Study patients reporting worse overall suffering also reported worse suffering caused by physical symptoms (6.3 vs. 2.1, $p < .0001$). There was little association between the MSAS-PHYS score and either overall suffering (correlation coefficient = .18, p = .21) or suffering resulting from physical symptoms (correlation coefficient = .22, p = .13). Patients reporting lack of distress resulting from physical symptoms did not necessarily indicate lack of suffering because of physical symptoms or lack of overall suffering. Factors other than physical symptom distress, such as diagnosis, age, and QOL, appear to affect the perception of suffering. To better address suffering at the end of life, care must be taken to understand differences between physical symptom distress, suffering caused by physical symptoms, and overall suffering.

Dignity in the Terminally Ill: Revisited

Chochinov, H.M., Krisjanson, L.J., Hack, T.F., Hassard, T., McClement, S., and Harlos, M.

Journal of Palliative Medicine, *9* (2006), 666–672.

Several studies have been conducted examining the notion of dignity and how it is understood and experienced by people as they approach death. The purpose of this study was to use a quantitative approach to validate the Dignity Model, originally based on qualitative data. Themes and subthemes from the Dignity Model were used to devise 22 items; patients were asked the extent to which they believed these specific issues were or could be related to their sense of dignity. Of 211 patients receiving palliative care, "not being treated with respect or understanding" (87.1%) and "feeling a burden to others" (87.1%) were the issues most identified as having an influence on their sense of dignity. All but 1 of the 22 items were endorsed by more that half of the patients; 16 items were endorsed by more than 70% of the patients. Demographic variables such as gender, age, education, and religious affiliation had an influence on what items patients ascribed to their sense of dignity. "Feeling life no longer had meaning or purpose" was the only variable to enter a logistic regression model predicting overall sense of dignity. This study provides further evidence supporting the validity of the Dignity Model. Items contained within this model provide a broad and inclusive range of issues and concerns that may influence a dying patient's sense of dignity. Sensitivity to these issues will draw care providers closer to being able to provide comprehensive, dignity conserving care.

The Hard Work of Living in the Face of Death

Coyle, N.

Journal of Pain and Symptom Management, *32* (2006), 266–274.

This study examines, from the patient's perspective, the work of trying to live with advanced cancer at the same time as facing the immediacy of death. The findings are part of an exploratory qualitative study that examined the first-hand accounts of seven patients being cared for at an urban cancer research center who were living with advanced disease. Using interpretive phenomenology, a series of in-depth, semistructured interviews were audiotaped, transcribed, coded, and organized into themes. Three subthemes emerged from the data that reflected the hard work that these individuals undertook. These were orientating themselves to the

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disease and maintaining control, searching for and creating a system of support and safety, and struggling to find meaning and create a legacy. The findings confirm that living with advanced cancer in the face of death involves hard work on the part of the patient.

COMMUNICATION

Concerns about Losing Control when Breaking Bad News to Terminally Ill Patients with Cancer: Physicians' Perspective

Friedrichsen, M. & Milberg, A.

Journal of Palliative Medicine, *9* (2006), 673–682.

The objective of this paper was to study and explore problems perceived by physicians when breaking bad news to advanced cancer patients about discontinuing or not offering tumor-specific treatment due to incurable cancer. Our methods was a qualitative phenomenographic interview study in the county of Ostergotland in Sweden. We surveyed 30 physicians with different demographic characteristics. According to the physicians' answers, breaking bad news was perceived as involving a risk of losing control in different ways, regarding emotions, oneself, confidence, professionalism, and patient trust. Four different main categories described as problems were identified; perceptions focusing on existential thoughts, relationships, knowledge, and perceptions related to time and environmental disturbances. Physicians perceived that breaking bad news to dying patients with cancer involved a risk of losing control. Existential thoughts and a lack of knowledge contribute to this risk. Theoretical education in existentiality/spirituality and clinical practice in a palliative context may help maintaining control.