The Role of Spirituality and Religious Coping in the Quality of Life of Patients With Advanced Cancer Receiving Palliative Radiation Therapy

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ABSTRACT

Objectives: National palliative care guidelines outline spiritual care as a domain of palliative care, yet patients' religiousness and/or spirituality (R/S) are underappreciated in the palliative oncology setting. Among patients with advanced cancer receiving palliative radiation therapy (RT), this study aims to characterize patient spirituality, religiousness, and religious coping; examine the relationships of these variables to quality of life (QOL); and assess patients' perceptions of spiritual care in the cancer care setting.

Methods: This is a multisite, cross-sectional survey of 69 patients with advanced cancer (response rate = 73%) receiving palliative RT. Scripted interviews assessed patient spirituality, religiousness, religious coping, QOL (McGill QOL Questionnaire), and perceptions of the importance of attention to spiritual needs by health providers. Multivariable models assessed the relationships of patient spirituality and R/S coping to patient QOL, controlling for other significant predictors of QOL.

Results: Most participants (84%) indicated reliance on R/S beliefs to cope with cancer. Patient spirituality and religious coping were associated with improved QOL in multivariable analyses ($\beta = 10.57$, $P < .001$ and $\beta = 1.28$, $P = .01$, respectively). Most patients considered attention to spiritual concerns an important part of cancer care by physicians (87%) and nurses (85%).

Limitations: Limitations include a small sample size, a cross-sectional study design, and a limited proportion of nonwhite participants (15%) from one US region.

Conclusion: Patients receiving palliative RT rely on R/S beliefs to cope with advanced cancer. Furthermore, spirituality and religious coping are contributors to better QOL. These findings highlight the importance of spiritual care in advanced cancer care.

The National Consensus Project for Quality Palliative Care (NCP), a consortium of US palliative care organizations setting palliative care quality standards, defines eight domains to quality palliative care provision: structure and processes of care; physical aspects of care; psychological and psychiatric aspects of care; social aspects of care; spiritual, religious, and existential aspects of care; cultural aspects of care; care of the imminently dying patient; and ethical and legal aspects of care.[1] However, NCP-defined palliative care domains such as the spiritual, religious, and existential aspects of care are infrequently recognized in a palliative radiation oncology setting.[2]

According to the National Cancer Institute, *spirituality* is defined as "an individual's sense of peace, purpose, and connection to others, and beliefs about the meaning of life" that may be expressed through religion or other means, while

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religion is defined as a set of beliefs and practices associated with a particular religious tradition or denomination.[3] Patients with advanced cancer often report that religion and/or spirituality (R/S) play a key role by providing hope,[4–6] comfort, and meaning[7] in their experience. Furthermore, many advanced cancer patients, particularly minorities, report spiritual pain,[8] multiple spiritual needs, and concerns such as finding spiritual resources and seeking meaning in the cancer experience.[9–12]

The NCP's care guidelines define spiritual care as the domain of care in the setting of advanced illness that recognizes the R/S concerns of the patient and family and attends to spiritual needs. Spiritual care requires the participation of all members of the interdisciplinary palliative care team, such as doctors, nurses, chaplains, and social workers. To improve spiritual care in the palliative oncology setting, data are required that describe the role of R/S among patients receiving palliative care and patient perceptions of the role of spiritual care in the oncology care setting.

The Religion and Spirituality in Cancer Care (RSCC) study is a multisite study of advanced cancer patients receiving palliative radiation therapy (RT) that aims to characterize patient spirituality, religiousness, and religious coping; determine the associations of these R/S variables to patient QOL; and assess patient perceptions of the role of spiritual care in the oncology care setting.

METHODS

Study Sample

Patients were recruited between March 3, 2006, and April 14, 2008, as part of a survey-based study of patients with advanced cancer receiving palliative RT. Eligibility criteria included a diagnosis of advanced, incurable cancer at least 4 weeks prior to the study interview; active receipt of palliative RT; ability to communicate in English or Spanish; age 21 years or older; and adequate stamina to complete a 45-minute interview. Patients were excluded if they met criteria for delirium or dementia according to the Short Portable Mental Status Questionnaire.[13]

Study Protocol

All research staff underwent a 1-day training session in the study protocol and the scripted, interviewer-administered questionnaire. Patients were recruited from four Boston sites: Beth Israel Deaconess Medical Center, Boston University Medical Center, Brigham and Women's Hospital, and Dana-Farber Cancer Institute. Radiation oncologists were randomly selected from the four sites, and all eligible patients from the RT schedules were approached for participation in a survey on their advanced cancer experience. These patients were also told, "You do not have to be religious or spiritual to answer these questions. We want to hear from people with all types of points of view." Participants provided written informed consent according to protocols approved by each site's human subjects committee.

In all, 103 patients were contacted to participate in the study, and 75 (73%) were interviewed. There was no difference in age, sex, or race between participants and nonparticipants. Of the 75 patients, six had incomplete data and five were too sick or fatigued to complete the interview as evidenced by their significantly lower average Karnofsky performance scores (KPS) compared with those of the other participants (33 vs 68; $P = .003$)—yielding a total of 69 patients (92% of 75).

Study Measures

Participant religiousness and spirituality. Participant R/S was assessed using items from the previously validated Fetzer Multidimensional Measure of Religiousness/Spirituality for Use in Health Research.[14] Overall R/S was assessed by having patients rate the extent to which they considered themselves to be religious and, in a separate item, the extent to which they considered themselves to be spiritual. Response options (four-point scales) were from "Not at all" to "Very" religious and from "Not at all" to "Very" spiritual. A combined religious/spiritual measure was created by dichotomizing patients into those who considered themselves moderately to very spiritual or moderately to very religious versus those who considered themselves slightly or not at all religious and slightly or not at all spiritual.

Religious coping. *Religious coping* is defined as reliance upon one's religious or spiritual beliefs to adapt to the stress of illness. Overall reliance on religious coping was measured using Koenig's Religious Coping Index,[15] in which patients are asked, "To what extent do your religious beliefs or activities help you cope with or handle your illness?" Response options (5-point scale) range from "Not at all" to "It is the most important thing that keeps you going." Pargament's previously validated brief positive religious coping index (RCOPE) was used to assess multiple domains of religious coping.[16] This 7-item instrument assesses the degree of reliance upon each form of religious coping (eg, "I've been trying to see how God might be trying to strengthen me in this situation") on a 4-point scale from "Not at all" to "A great deal." Answers were summed to create an overall religious coping score (possible scores, 0–21). Patients were also asked to rate the importance of their oncology nurses and physicians considering their spiritual needs as part of their cancer care, rated from "Not at all" to "Very important" (4-point scale).

Quality of life. The McGill Quality of Life Questionnaire is a validated questionnaire with a total of 16 items, each with an 11-point response scale (scores, 0–10), designed to assess quality of life (QOL) in patients with advanced disease.[17,18] The questionnaire evaluates four QOL domains: physical (3 items; possible scores, 0–30), psychological (4 items; possible scores, 0–40), existential (6 items; possible scores, 0–60), and social support (2 items; possible scores, 0–20). Overall QOL was the summed score of all domains and an overall QOL item (scored 0–10), giving total possible scores of 0–160.

Other measured variables. Additional variables including sex, age, race, years of education, marital status, and income were patient reported. Disease variables were obtained from patient medical records. KPS was obtained by physician assessment.

Analytical Methods

Descriptive statistics were used to numerically characterize patient religiousness, spirituality, religious coping, demographic variables (eg, age, sex, race), and disease variables (eg, cancer type, performance status). Simple linear regression was used to assess the relationships of patient religiousness, spirituality, religious coping (RCOPE score), and all patient demographic and disease variables to QOL. Given the high collinearity of religiousness and spirituality (72% of participants endorsing both "slightly" or more), the associations of religiousness, spirituality, and the combined R/S measure with patient QOL were evaluated. Given that no patients considered themselves religious but not spiritual and that spirituality was the strongest predictor of patient QOL compared with religiousness and the combined R/S measure, spirituality was chosen as the variable to be entered into the multivariable models. Furthermore, patients' RCOPE score was used for the analysis of the relationship of religious coping to patient QOL, as this is a validated measure that assesses multiple domains of religious coping and has been used in prior studies assessing the association of religious coping with patient QOL.[19,20] Multivariable regression models were used to determine the contributions of spirituality and religious coping to patient overall QOL and the four QOL domains, with adjustment for all other significant univariate predictors of QOL. Predictors considered were all demographic and disease variables (gender, age, race, education, marital status, income, disease type, KPS, proximity to death at the time of the study interview, religious tradition, and frequency of religious activities), which were entered into the model where the P value was $<.10$ and retained when the P values were significant ($P < .05$) after adjustment for other QOL predictors. Final models assessed the contributions of all significant predictors of patient QOL (and the four subdomains), simultaneously including spirituality and religious coping to determine the key contributors of patient QOL using the same variable entry ($P < .10$) and final model criteria ($P < .05$). Statistical analyses were performed with SAS version 9.1 (SAS Institute, Inc., Cary, NC). All reported P values are two sided and considered significant when less than .05.

RESULTS

Sample Characteristics

Patient characteristics are shown in Table 1. Most patients (93%) were at least slightly spiritual (73% moderately or very spiritual), and most (81%) were at least slightly religious (56% moderately or very religious). Most participants (97%) reported being affiliated with a religious tradition. Consistent with the advanced cancer population assessed, study partici-

Table 1

Sample Characteristics

Characteristic	Value
Total, n (%)[a]	69 (100)
Sex	
Male, n (%)	37 (54)
Female, n (%)	32 (46)
Mean age, years (SD)	60.68 (11.9)
Marital status	
Married, n (%)	40 (58)
Not married, n (%)	12 (20)
Separated/divorced, n (%)	9 (13)
Widowed, n (%)	6 (6)
Cancer types	
Lung, n (%)	23 (33)
Prostate, n (%)	5 (7)
Breast, n (%)	11 (16)
Colorectal, n (%)	6 (9)
Heme/lymphoma, n (%)	11 (16)
Ovary, n (%)	1 (1)
Other, n (%)	12 (17)
Karnofsky performance status, mean (SD)[a]	68.2 (19.7)
McGill Quality of Life, mean (SD)[b]	104.9 (25.1)
Physical	10.1 (4.9)
Psychological	28.7 (9.6)
Existential	43.0 (11.4)
Support	16.8 (3.5)
Race/ethnicity	
White, n (%)	57 (83)
Nonwhite, n (%)[c]	11 (16)
Education, mean years (SD)	15.30 (3.43)
Religious tradition	
Catholic, n (%)	32 (46)
Non-Catholic Christian, n (%)	22 (32)
Jewish, n (%)	5 (7)
Other,[d] (%)	8 (11)
To what extent do you consider yourself a religious person?[e]	
Very religious, n (%)	14 (20)
Moderately religious, n (%)	25 (36)
Slightly religious, n (%)	17 (25)
Not religious at all, n (%)	13 (19)
To what extent do you consider yourself a spiritual person?[f]	
Very spiritual, n (%)	26 (38)
Moderately spiritual, n (%)	24 (35)
Slightly spiritual, n (%)	14 (20)
Not spiritual at all, n (%)	5 (7)

[a] A measure of functional status that is predictive of survival, where 0 is dead and 100 is perfect health.

[b] A validated measure of QOL with five domains: overall quality of life, physical, psychological, existential, and social support. McGill overall QOL possible scores range 0–160. Physical QOL and support possible scores range 0–20. Psychological QOL possible scores range 0–40. Existential QOL scores range 0–60.

[c] Included eight (12%) blacks, one (1%) Asian American, one (1%) Hispanic, and one (1%) other. One participant (1%) refused to answer this question.

[d] Included three (4%) Buddhist, one (1%) Muslim, 4 (6%) other. Two (3%) participants indicated "no religious tradition."

[e] Religion was defined in this study as "a tradition of spiritual beliefs and practices shared by a group of people."

[f] Spirituality was defined in this study as "a search for what is divine and sacred (eg, God or a higher power)."

Table 2

Prevalence of Religious Coping in Patients Receiving Palliative Radiation Therapy (n = 69)

	n (%)
Koenig's Religious Coping index	
To what extent do your religious beliefs or activities help you cope with or handle your illness?	
Not at all	11 (16.4)
To a small extent	5 (7.5)
To a moderate extent	15 (22.4)
To a large extent	23 (34.3)
It is the most important thing that keeps you going	13 (19.4)
Pargament's RCOPE index[a]	
I've been looking for a stronger connection with God.	56 (81)
I've been seeking God's love and care.	58 (84)
I've been seeking help from God in letting go of my anger.	33 (48)
I've been trying to see how God might be trying to strengthen me in this situation.	52 (75)
I've been focusing on religion to stop worrying about my problems.	41 (59)
I've been trying to put my plans into action together with God.	44 (64)
I've been asking for forgiveness for my sins.	46 (67)

[a] Responses on a 4-point scale (0–3) were considered affirmative if individuals answered prompts with one of the following categories: "Somewhat," "Quite a bit," or "A great deal" vs "Not at all."

Table 3

Associations Between Religious Coping[a] and QOL Among Patients Receiving Palliative Radiation Therapy (n = 69)

	UNIVARIATE MODELS		MODELS ADJUSTED FOR KARNOFSKY PERFORMANCE STATUS	
	ß	*P*	ß	*P*
Physical QOL	0.13	.2	0.11	.26
Psychological QOL	0.13	.51	0.11	.57
Existential QOL	0.77	**<.001**	0.74	**<.001**
Social Support	0.22	**<.001**	0.21	**<.001**
Overall QOL[b]	1.37	**.01**	1.28	**.01**

[a] The religious coping summed measure is a sum of the responses to the seven positive religious coping prompts from Pargament's RCOPE index (see Table 2), with a possible values range of 0–21.

[b] McGill overall QOL possible scores range, 0–160. Physical QOL and support possible scores range, 0–20. Psychological QOL possible scores range, 0–40. Existential QOL scores range, 0–60. Statistically significant values in bold typeface above.

pants died a median of 6 months (interquartile range, 2–16 months) after the study interview.

Patient Religious Coping

Characteristics of patient religious coping are shown in Table 2. Based on responses to Koenig's Religious Coping Index, the majority of patients (84%) indicated that they relied upon their religious beliefs to cope with their illness. Furthermore, most (90%) relied on at least one or more of the religious coping types outlined in the RCOPE instrument, with the most frequent forms of religious coping being "Seeking God's love and care" and "Looking for a stronger connection with God."

Religiousness, Spirituality, and Patient QOL

The univariate and multivariable relationships of spirituality and religious coping to patient overall QOL and the four QOL domains are shown in Tables 3 and 4. Patient religious coping and spirituality were each significantly positively associated with patient QOL in univariate and multivariable analyses. Among sex, age, race, education, marital status, income, disease type, KPS, proximity to death at the time of the study interview, religious tradition, and frequency of religious activities, KPS was the only other factor significantly associated with QOL ($\beta = 0.42$; $P = .01$). After adjustment for KPS, both spirituality and religious coping were significantly associated with better overall QOL and with the existential and social support QOL domains of the McGill QOL instrument. The significant univariate association between spirituality and improved physical QOL became a nonsignificant trend after adjustment for KPS. Multivariable analysis simultaneously tested all significant univariate predictors of QOL (spirituality, religious coping, and KPS). In this analysis, spirituality ($\beta = 10.78$; $P = .006$) and KPS ($\beta = 0.32$; $P = .02$) were significant predictors of patient QOL.

Patient Perceptions of Spiritual Care

Most patients (87%) considered it at least slightly important for oncology physicians to recognize patients' spiritual needs as part of cancer care, with the majority (58%) indicating that this was moderately or very important. Similarly, most (85%) considered it at least slightly important for oncology nurses to recognize patients' spiritual needs as part of cancer care, with the majority (62%) rating this as moderately or very important.

DISCUSSION

This study demonstrates that most patients receiving palliative RT consider themselves to be religious and/or spiritual and rely on their religious/spiritual beliefs to cope with their advanced cancer. Both spirituality and religious coping were associated with improved QOL, with spirituality demonstrating the more robust association. Furthermore, most patients indicated that recognition of their spiritual concerns by physicians and nurses is an important component of their cancer care. These findings support the recommendations of the NCP for attention to the religious/spiritual aspects of palliative cancer care,[1] such as performing a spiritual history and attending to spiritual concerns and needs by making referrals to chaplaincy and other spiritual supporters (eg, patient's clergy).

Our study findings in a population receiving palliative RT are consistent with prior studies of other patient populations

Table 4

Associations of Spirituality With QOL Among Patients Receiving Palliative Radiation Therapy (n = 69)

	PATIENT SPIRITUALITY[a]			
	UNIVARIATE MODELS		MODELS ADJUSTED FOR KARNOFSKY PERFORMANCE STATUS	
	ß	*P*	ß	*P*
Physical QOL[b]	1.37	**.03**	1.11	.06
Psychological QOL[b]	1.66	.18	1.45	.24
Existential QOL[b]	5.81	**<.001**	5.50	**<.001**
Social Support[b]	1.56	**<.001**	1.49	**<.001**
Overall QOL[b]	11.55	**<.001**	10.57	**<.001**

[a] 4-point scale from "not at all" to "very spiritual."

[b] McGill overall QOL possible sum scores range 0–160 (physical QOL possible scores 0–30, psychological QOL possible scores 0–40, existential QOL possible scores 0–60, and social support QOL possible scores 0–2). Statistically significant values in bold typeface above.

with cancer.[2,21] A study of 108 patients with gynecologic malignancies, found that 76% of patients stated that religion held a serious place in their lives, with most of those patients (93%) reporting that their religious commitment was important for maintaining hope in the setting of illness.[21] In a prospective multisite cohort study examining psychosocial and spiritual factors and their associations with advanced cancer patients, it was found that 88% considered religion to be at least somewhat important[2] and 79% reported relying upon their religious beliefs to cope with illness to a moderate or greater extent.[22]

The association of spirituality with improved QOL among patients receiving palliative RT is also consistent with previous studies demonstrating the importance of R/S to patient well-being in other populations facing advanced illness.[2,8,20,23–26] In a study assessing 44 potential determinants of patient QOL at the end of life (eg, dying at home), being "at peace with God" and "free from pain" were considered by patients to be the most important factors determining their well-being at the end of life.[27] A multi-institutional survey-based study of cancer patients of all stages found that R/S was an independent predictor of QOL even after controlling for other key determinants of QOL.[25] Notably, this study also found that increasing R/S was associated with better preservation of overall QOL in the setting of a high burden of physical symptoms, a finding that potentially corroborates the trend toward improved patient-reported physical QOL with greater patient-reported spirituality demonstrated in the present study. Likewise, in a survey of 162 patients with human immunodeficiency virus infection or cancer at palliative care facilities found that patients' spiritual well-being was associated with lower measures of depression after adjustment for confounding factors.[28] The relationship of R/S to better patient well-being is related to such potential factors as R/S offering beliefs and practices that may facilitate the individual's adaptation to the stress of illness (eg, belief in an after-life, prayer),[7,9,29] R/S upholding meaning in the experience of advanced illness,[7] R/S providing support through a spiritual community,[7,9,16] R/S providing a framework within which to experience growth through illness (eg, receiving/granting forgiveness, finding new and greater sources of meaning),[7,9,16] and a notable relationship between spiritual pain and poorer reported physical/emotional symptoms and spiritual QOL.[8]

Survey studies of other patient populations similarly demonstrate that the majority of patients desire spiritual care to be incorporated into their care in the setting of advanced illness.[30,31] For example, 66% of ambulatory pulmonary outpatients desired their physician to inquire about their R/S beliefs if they became terminally ill.[30] Furthermore, data indicate that integrating spiritual care into cancer care has important implications for key patient outcomes. For example, in an intervention study alternately assigning cancer patients to spiritual assessment by their oncologists versus usual care, at the 3-week follow-up point, cancer patients receiving spiritual assessment had reductions in depressive symptoms and improved QOL compared with control patients.[32] Those receiving the intervention also reported greater satisfaction with their physician's care and higher ratings of practitioner patience, warmth, respect, and patient–practitioner communication. Similarly, attention to patient spiritual needs by the health-care team was prospectively associated with improved patient QOL and reduced aggressive medical care near death.[33] Together, these findings underscore the importance of attention to R/S in advanced cancer patients by all oncology practitioners as part of comprehensive palliative care.

Strategies for the provision of spiritual care are included in the NCP guidelines[1] and draw upon an interdisciplinary healthcare team, including physicians, chaplains, and nurses. Physicians' and nurses' spiritual care role is largely in conducting spiritual screening, which can be included as part of a general assessment of the patient's social history and other support mechanisms. Clinicians also play a key role in identifying spiritual concerns,[11] providing referrals to chaplaincy and/or patients' community spiritual supporters, and potentially participating in a spiritual practice such as patient practitioner prayer.[34] NCP guidelines regarding spiritual screenings include an initial spiritual history (inquiring about the role of patient R/S in the illness experience and identifying spiritual concerns) and ongoing reassessment for spiritual concerns. Puchalski and Romer's[35] validated spiritual screening tool is a helpful model to guide physicians and health professionals in assessing four domains denoted by the acronym FICA: faith, importance, community, and address.

Finally, attention to the spiritual aspects of care is one domain of the multidimensional practice of palliative care. A spiritual screening should ideally be set within a larger psychosocial assessment that includes all NCP palliative care domains, such as questions regarding patients' social supports and cultural background, screening for psychiatric issues (eg, anxiety and depression), and inquiring about

social needs (eg, financial stressors). Researchers recently reported on the use of such a comprehensive screening tool among palliative radiotherapy patients, demonstrating high rates of identifying unmet patient needs resulting in frequent multidisciplinary referrals.[36] This comprehensive evaluation and subsequent multidisciplinary input into patient care resulted in improvements at 4 weeks in symptoms across multiple domains, including fatigue, depression/anxiety, and overall well-being, and provided preliminary evidence for the efficacy of such comprehensive screenings at improving QOL among patients receiving palliative RT.

Notable limitations of this study include its small sample size, limiting the statistical power to distinguish between the QOL effects of spirituality and religious coping. Furthermore, the cross-sectional nature of the study renders the direction of the associations of the spiritual variables with patient QOL unclear. For example, the associations can be interpreted as meaning either that greater R/S coping leads to improved patient QOL or that greater overall well-being (ie, QOL) causes patients to report greater R/S coping, though prospective studies support the prior hypothesis.[32,33] Furthermore, the study sample is from a single US region, with a limited proportion of nonwhite participants (15%). However, the decreased overall religiousness of the Northeast[37] and the greater role of R/S among ethnic minorities[2,22] suggest that these findings may represent conservative estimates. The study's generalizability is also limited by the fact that the majority of the sample (78%) identified with a Christian (Catholic and others) religious tradition.

In conclusion, this study demonstrates that spirituality and religious coping are important to most patients receiving palliative RT, that these factors are positively associated with patient QOL, and that most patients consider spiritual care to be an important part of their advanced cancer care. While future studies are required to better elucidate the associations of R/S factors and spiritual care with patient QOL, this study highlights the importance of spiritual care in the context of providing palliative care to advanced cancer patients seen in the radiation oncology or palliative care setting.

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REFERENCES

PubMed ID in brackets

1. National Consensus Project for Quality Palliative Care. Clinical practice guidelines for quality palliative care, 2nd ed., 2009. http://www.nationalconsensusproject.org/. Accessed June 28, 2010.

2. Balboni TA, Vanderwerker LC, Block SD, et al. Religiousness and spiritual support among advanced cancer patients and associations with end-of-life treatment preferences and quality of life. *J Clin Oncol*. 2007;25(5):555-560.

3. National Cancer Institute. Spirituality in Cancer Care, 2009. http://www.cancer.gov/cancertopics/pdq/supportivecare/spirituality/Patient/page1. Accessed June 27, 2010.

4. Reynolds MA. Hope in adults, ages 20–59, with advanced stage cancer. *Palliat Support Care*. 2008;6(3):259-264.

5. Saleh US, Brockopp DY. Hope among patients with cancer hospitalized for bone marrow transplantation: a phenomenologic study. *Cancer Nurs*. 2001;24(4):308-314.

6. Fanos JH, Gelinas DF, Foster RS, et al. Hope in palliative care: from narcissism to self-transcendence in amyotrophic lateral sclerosis. *J Palliat Med*. 2008;11(3):470-475.

7. Gall TL, Cornblat MW. Breast cancer survivors give voice: a qualitative analysis of spiritual factors in long-term adjustment. *Psychooncology*. 2002;11(6):524-535.

8. Delgado-Guay MO, Hui D, Parsons HA, et al. Spirituality, religiosity, and spiritual pain in advanced cancer patients. *J Pain Symptom Manage*. 2011;41(6):986-994.

9. Alcorn SR, Balboni MJ, Prigerson HG, et al. "If God wanted me yesterday, I wouldn't be here today": religious and spiritual themes in patients' experiences of advanced cancer. *J Palliat Med*. 2010;13(5):581-588.

10. Moadel A, Morgan C, Fatone A, et al. Seeking meaning and hope: self-reported spiritual and existential needs among an ethnically-diverse cancer patient population. *Psychooncology*. 1999;8(5):378-385.

11. Winkelman WD, Lauderdale K, Balboni MJ, et al. The relationship of spiritual concerns to the quality of life in advanced cancer patients: preliminary findings. *J Palliat Med*. 2011;14(9):1022-1028.

12. Breitbart W. Spirituality and meaning in supportive care: spirituality and meaning centered group psychotherapy interventions in advanced cancer. *Support Care Cancer*. 2002;10:272-280.

13. Pfeiffer E. A short portable mental status questionnaire for the assessment of organic brain deficit in elderly patients. *J Am Geriatr Soc*. 1975;10:433-441.

14. Fetzer Institute. Multidimensional measurement of religiousness/spirituality for use in health research: a report of the Fetzer Institute/National Institute on Aging Working Group, 2009. http://www.fetzer.org/images/stories/pdf/MultidimensionalBooklet.pdf. Accessed June 28, 2010.

15. Koenig HG, Cohen HJ, Blazer DG, et al. Religious coping and depression among elderly, hospitalized medically ill men. *Am J Psychiatry*. 1992;149:1693-1700.

16. Pargament KI, Koenig HG, Perez LM. The many methods of religious coping: development and initial validation of the RCOPE. *J Clin Psychol*. 2000;56(4):519-543.

17. Cohen SR, Mount BM, Bruera E, et al. Validity of the McGill Quality of Life Questionnaire in the palliative care setting: a multicentre Canadian study demonstrating the importance of the existential domain. *Palliat Med*. 1997;11(1):3-20.

18. Cohen SR, Mount BM, Strobel MG, et al. The McGill Quality of Life Questionnaire: a measure of quality of life appropriate for people with advanced disease. A preliminary study of validity and acceptability. *Palliat Med*. 1995;9(3):207-219.

19. Trevino KM, Pargament KI, Cotton S, et al. Religious coping and physiological, psychological, social and spiritual outcomes in patients with HIV/AIDS: cross-sectional and longitudinal findings. *AIDS Behav*. 2010;14(2):379-389.

20. Tarakeshwar N, Vanderwerker LC, Paulk E, et al. Religious coping is associated with the quality of life of patients with advanced cancer. *J Palliat Med*. 2006;9(3):646-657.

21. Roberts JA, Brown D, Elkins T, et al. Factors influencing views of patients with gynecologic cancer about end-of-life decisions. *Am J Obstet Gynecol*. 1997;176(1 Pt 1):166-172.

22. Phelps AC, Maciejewski PK, Nilsson M, et al. Religious coping and use of intensive life-prolonging care near death in patients with advanced cancer. *JAMA*. 2009;301(11):1140-1147.

23. Sherman AC, Simonton S, Latif U, et al. Religious struggle and religious comfort in response to illness: health outcomes among stem cell transplant patients. *J Behav Med*. 2005;28(4):359-367.

24. McCoubrie RC, Davies AN. Is there a correlation between spirituality and anxiety and depression in patients with advanced cancer? *Support Care Cancer*. 2006;14(4):379-385.

25. Brady MJ, Peterman AH, Fitchett G, et al. A case for including spirituality in quality of life

measurement in oncology. *Psychooncology*. 1999;8(5):417-428.

26. McClain CS, Rosenfeld B, Breitbart W. Effect of spiritual well-being on end-of-life despair in terminally-ill cancer patients. *Lancet*. 2003; 361(9369):1603-1607.

27. Steinhauser KE, Christakis NA, Clipp EC, et al. Factors considered important at the end of life by patients, family, physicians, and other care providers. *JAMA*. 2000;284(19):2476-2482.

28. Nelson CJ, Rosenfeld B, Breitbart W, et al. Spirituality, religion, and depression in the terminally ill. *Psychosomatics*. 2002;43(3):213-220.

29. Ano GG, Vasconcelles EB. Religious coping and psychological adjustment to stress: a meta-analysis. *J Clin Psychol*. 2005;61(4):461-480.

30. Ehman JW, Ott BB, Short TH, et al. Do patients want physicians to inquire about their spiritual or religious beliefs if they become gravely ill? *Arch Intern Med*. 1999; 159(15):1803-1806.

31. King DE, Bushwick B. Beliefs and attitudes of hospital inpatients about faith healing and prayer. *J Fam*. 1994;39(4):349-352.

32. Kristeller JL, Rhodes M, Cripe LD, et al. Oncologist Assisted Spiritual Intervention Study (OASIS): patient acceptability and initial evidence of effects. *Int J Psychiatry Med*. 2005;35(4):329-347.

33. Balboni TA, Paulk ME, Balboni MJ, et al. Provision of spiritual care to patients with advanced cancer: associations with medical care and quality of life near death. *J Clin Oncol*. 2010; 28(3):445-452.

34. Balboni MJ, Babar A, Dillinger J, et al. "It depends": viewpoints of patients, physicians, and nurses on patient–practitioner prayer in the setting of advanced cancer. *J Pain Symptom Manage*. 2011;41(5):836-847.

35. Puchalski C, Romer AL. Taking a spiritual history allows clinicians to understand patients more fully. *J Palliat Med*. 2000;3(1):129-137.

36. Pituskin E, Fairchild A, Dutka J, et al. Multidisciplinary team contributions within a dedicated outpatient radiotherapy clinic: a prospective descriptive study. *Int J Radiat Oncol Biol Phys*. 2010;78(2):527-532.

37. Pew Forum on Religion & Public Life. US Religion Map and Religious Populations. US Religious Landscape Study, 2010. http://religions.pewforum.org/maps. Accessed October 25, 2010.