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Phillip M. Pifer  
*West Virginia University*

Mark K. Farrugia  
*West Virginia University*

Malcolm D. Mattes  
*West Virginia University*

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## Comparative Analysis of the Views of Oncologic Subspecialists and Palliative/ Supportive Care Physicians Regarding Advanced Care Planning and End-of-Life Care

Phillip M. Pifer, BS<sup>1</sup>, Mark K. Farrugia, MD, PhD<sup>1</sup>, and Malcolm D. Mattes, MD<sup>1</sup>

<sup>1</sup>Department of Radiation Oncology, West Virginia University, Morgantown, WV, USA

### Abstract

**Background**—Early palliative/supportive care (PSC) consultation and advance care planning (ACP) improve outcomes for patients with incurable cancer. However, PSC is underutilized in the United States.

**Objective**—To examine philosophical differences among PSC, radiation oncology (RO), and medical oncology (MO) physicians in order to understand barriers to early PSC referral.

**Design**—An electronic survey collected views of a nationwide cohort of health-care professionals regarding ACP and end-of-life care.

**Setting/Participants/Measurements**—A subgroup analysis compared the responses from all 51 PSC, 178 RO, and 81 MO physician participants (12% response rate), using Pearson  $\chi^2$  and Mann-Whitney *U* tests for categorical and ordinal data, respectively.

**Results**—More statistically significant differences were observed between RO-PSC (12 questions) and MO-PSC (12 questions) than RO-MO (4 questions). Both RO and MO were more likely than PSC physicians to believe doctors adequately care for *emotional* ( $P < .001$ ) and *physical* ( $P < .001$ ) needs of patients with an incurable illness. Both RO and MO were also less likely to believe that PSC physicians were helpful at addressing these needs ( $P = .002$  and  $< .001$ , respectively) or that patients' awareness of their life expectancy leads to better *medical* ( $P = .007$  and  $.002$ , respectively) and *personal* ( $P = .001$  for each) decisions. Palliative/supportive care physicians felt that doctors are generally less successful at explaining/clarifying advanced life-sustaining treatments than RO ( $P < .001$ ) or MO ( $P = .004$ ). MO favored later initiation of ACP than either RO ( $P = .006$ ) or PSC physicians ( $P = .004$ ).

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Corresponding Author: Malcolm D. Mattes, MD, Department of Radiation Oncology, West Virginia University, PO Box 9234, One Medical Center Drive, Morgantown, WV, USA. [malcolm.mattes@gmail.com](mailto:malcolm.mattes@gmail.com).  
Phillip M. Pifer and Mark K. Farrugia contributed equally to this manuscript.

#### ORCID iD

Phillip M. Pifer <http://orcid.org/0000-0002-2810-2610>

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Supplemental Material

Supplementary material for this article is available online.

#### Declaration of Conflicting Interests

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

**Conclusions**—Differences in perception of appropriate end-of-life care exist between oncologists and PSC physicians, suggesting a need for improved education and communication between these groups.

### Keywords

palliative care; end-of-life care; advance care planning; cancer; radiation oncology; medical oncology

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### Purpose/Objectives

Palliative/supportive care (PSC) is a medical discipline that focuses on maximizing quality of life for patients with an incurable illness and limited life expectancy. Palliative/supportive care physicians emphasize control of physical and mental symptoms such as pain, anxiety, and depression and help patients engage in advance care planning (ACP) in order to ensure that when their health status changes the care received corresponds with their goals and wishes. Unfortunately, the US health-care system is notable for delivering more aggressive treatments than most patients would prefer at the end of life,<sup>1-7</sup> but better utilization of PSC has the potential to ameliorate this problem. Seven randomized trials have demonstrated that early PSC consultation improves outcomes for patient with incurable cancer, leading the American Society of Clinical Oncology (ASCO) to recommend integration of PSC into standard oncology care for all patients with distant metastases and late-stage disease and/or when the prognosis is less than 24 months.<sup>8,9</sup>

Yet, despite this strong evidence and consensus guidelines supporting its use, PSC services remain underutilized at many US institutions.<sup>10-14</sup> A variety of reasons may be causing this problem. There is a shortage of PSC physicians to care for patients with cancer in the United States,<sup>15</sup> which may impact access to care in more rural community settings. However, at most academic medical centers where resources are generally less scarce, the timing of PSC involvement for a patient with advanced cancer may be largely determined by the oncologist(s) who decide when to place the referral. As such, it is plausible that delayed PSC referral may hinge less so on evidence and more so on trust that the PSC physician will support the patient and the oncology team and not simply usher the patient toward hospice or away from cancer-directed therapies “prematurely.” There also may be knowledge gaps between oncology and PSC physicians, as Accreditation Council for Graduate Medical Education (ACGME) requirements do not mandate any formal PSC training for oncology residents/ fellows, nor oncology training for PSC fellows,<sup>16</sup> which may lead to each party lacking a basic understanding of each other’s specialty, perspective on the effects of treatments, or how each views their role in the multidisciplinary team. As has been demonstrated in other aspects of oncology, differences in philosophy, knowledge, and trust can significantly impact referral patterns, which in turn impacts the delivery of effective patient care.<sup>17-20</sup>

Previous studies have examined the views of oncologists and other health-care professionals with regard to palliative care<sup>21-28</sup>; however, none have directly compared the views of different types of oncologists and PSC physicians to each other in order to better understand

differences in philosophy that may exist. Here, we present an analysis comparing the views of radiation oncology (RO), medical oncology (MO), and PSC participants from an electronic survey of health-care professionals that assessed their views on ACP and end-of-life care in the United States.

## Methods

This study made use of a data set from a 28-item electronic survey that was initially sent in 2013 to health-care professionals in the United States who were thought to have contact with patients with advanced stage cancer.<sup>29</sup> A total of 5595 radiation oncologists, medical oncologists, surgical oncologists, nurses, and palliative care physicians whose contact information was available through the American Society for Radiation Oncology (<http://www.astro.org>) and ASCO (<http://www.asco.org>) online databases were surveyed, and 645 responses were received (12% response rate, 3.6% margin of error at 95% confidence interval). For the current subgroup analysis, all physician participants in the fields of radiation oncology (n = 178), medical oncology (n = 81), and palliative care (n = 51) were compared.

The structure of the survey has been described previously,<sup>29</sup> but briefly, the questions can be divided into 3 domains, assessing participants' views on (1) how well the US health-care system addresses ACP and end-of-life care among patients, (2) the optimal logistics for ACP, and (3) the type of end-of-life care participants would want for themselves. Question formats included multiple choice and Likert-type scales (from 1 to 5, with 1 being the worst, lowest, or least likely option and 5 being the best, highest, or most likely option, depending on the question). All of the survey questions and answers options can be found in Supplementary Tables 1, 2, and 3. Descriptive statistics were reported as frequency counts, percentages, medians (with interquartile ranges), and means (with standard deviation) for each of the 3 subspecialties. The  $\chi^2$  test was used to compare each subgroup for questions with categorical data, whereas the Mann-Whitney *U* test was used to compare each subgroup for questions with ordinal data. Finally, ordinal regression was used to control for gender and years of experience as covariates. A *P* value less than .05 was considered statistically significant. Data analysis was performed using IBM SPSS Statistics version 21.

## Results

The demographics of the physician participants are shown in Table 1. Palliative/supportive care participants had significantly fewer years of experience and were more likely to be female compared to RO and MO (*P* < .01). Overall, a greater number of questions with statistically significant differences in responses were observed between RO and PSC physicians (12 questions) and MO and PSC physicians (12 questions) than between RO and MO (4 questions). A summary of the responses and comparison between subgroups for all questions on the survey can be found in Supplementary Tables 1, 2, and 3. Comparisons between subgroups for all Likert-type questions are also shown in Table 2. Ordinal regression for Likert-style responses of paired specialties including gender and years of experience as covariates did not differ from the univariate results (Supplementary Table 4).

Compared to PSC physicians, both RO and MO were significantly more likely to believe that doctors know how to adequately care for the *emotional* and *physical* needs of patients with a serious incurable illness. Both RO and MO were also less likely to believe that PSC physicians were helpful at addressing these needs, though RO felt that PSC physicians was more helpful than did MO. Palliative/supportive care physicians were more likely to believe that patients with a serious incurable illness who are more aware of their life expectancy tend to make better *medical* and *personal* decisions for the remainder of their life; however, they were also least likely to believe that doctors consistently discuss prognosis with patients with a serious incurable illness. Both RO and PSC physicians favored earlier initiation of ACP than did MO. All participants felt that doctors are relatively unsuccessful at explaining/clarifying advanced life-sustaining treatments, though PSC physicians to a greater extent than RO or MO. As before, RO and MO were less likely to believe that PSC physician was helpful in facilitating these discussions about advanced life-sustaining treatments. Palliative/supportive care physician was also more likely to complete an advance directive for themselves earlier in life and would favor less active/ life-prolonging types of treatments if they themselves had an incurable illness with a poor prognosis.

## Discussion

This study assessed differences in opinion between oncologists and PSC physicians regarding ACP and end-of-life care as it relates to patients who they care for with advanced cancer, as well as their personal views about their own future care. We found that although there were many similarities between these subgroups, and that most responses were not necessarily opposed to one another, there were generally more differences in philosophy between PSC physicians and each group of oncologists than there were between radiation and medical oncologists. In some ways, this may not be entirely surprising, given that certain individuals choose their career path for a reason; however, this lack of shared beliefs on a variety of issues may suggest an important reason why early PSC utilization has not become the norm in many clinical practices despite high-level evidence supporting its benefit to patients.

The most notable finding from the study was that both the oncologists and PSC physicians generally valued the others' efforts less than they valued their own. For instance, PSC physicians felt that doctors were less likely to discuss prognosis with their patients, were less adept at ACP and managing the needs of dying patients, and favored earlier PSC involvement and less aggressive treatments toward the end of life than did the oncologists. Conversely, oncologists were less likely to recognize as many of these deficiencies and were also less likely to believe that PSC physicians were helpful in addressing these issues. Our finding that both groups undervalue the efforts of the other suggests (1) the inherent difficulty in effectively managing this challenging patient population and (2) a lack of understanding (among both groups) about how their colleagues are capable of helping patients. For instance, medical and radiation oncologists who are never required to work with PSC physicians during their training may not fully appreciate the breadth of psychosocial and pharmacologic support that PSC physicians can provide. Similarly, PSC physicians who are never required to rotate with an oncologist may not appreciate how tumor-directed therapies like radiation and chemotherapy can be effectively used to palliate

symptoms in a variety of situations. Previous studies in the United States and Europe have demonstrated that although most medical and radiation oncologists would like to learn more about how to provide effective palliative care, the majority feel inadequately trained to do so.<sup>22,28</sup> While increased training does require more resources, there are data to support the concept that this form of education in PSC increases the likelihood of ACP and better hospice utilization.<sup>26</sup> In our opinion, changing ACGME requirements to facilitate multidisciplinary education would be a worthwhile undertaking, but for those who have already completed their training, making a commitment to pursuing more open communication at one's own institution is likely to help bridge knowledge gaps and facilitate greater trust and cohesion within the team.

There are several limitations to this study. First and foremost, our low response rate is likely to lead to some selection bias. It is unknown how much this bias impacted the responses, though any bias introduced for this reason may be comparable for each subgroup since all participants were likely to have some interest in the topic of the survey for them to respond. Our findings may have also been somewhat skewed by the differential number of participants in each subgroup. However, if anything, the lower power for the analyses involving PSC physicians may mean that the extent of their differences with the oncologists was actually underestimated. Understanding the views of surgical oncologists would have also been valuable, though the initial survey did not target this population as much as the others. Finally, an important issue which was not explored in this study is the impact of patient misperceptions that equate palliative care with hospice care as a barrier to early PSC referral.<sup>21,24,30</sup> The rebranding of "palliative care" as "supportive care" in recent years may help alleviate this problem; however, the way in which the referring physician describes the PSC services to a patient may send the clearest message of the intention of the consultation.

## Conclusion

Significant differences in the perception of, and optimal logistics for, end-of-life care exist between oncology subspecialists and PSC physicians. This suggests a need for improved education and communication between subspecialists caring for patients with cancer nearing the end of life in order to improve quality of life in this challenging patient population.

## Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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## References

1. Hagerty RG, Butow PN, Ellis PM, Dimitry S, Tattersall MHN. Communicating prognosis in cancer care: a systematic review of the literature. *Ann Oncol*. 2005; 16(7):1005–1053. [PubMed: 15939716]

2. Marwit SJ, Datson SL. Disclosure preferences about terminal illness: an examination of decision-related factors. *Death Stud.* 2002; 26(1):1–20. [PubMed: 11865880]
3. Bradley EH, Hallemeier AG, Fried TR, et al. Documentation of discussions about prognosis with terminally ill patients. *Am J Med.* 2001; 111(3):218–223. [PubMed: 11530033]
4. Fried TR, Bradley EH, Towle VR, Allore H. Understanding the treatment preferences of seriously ill patients. *N Engl J Med.* 2002; 346(14):1061–1066. [PubMed: 11932474]
5. Wunsch H, Linde-Zwirble WT, Harrison DA, Barnato AE, Rowan KM, Angus DC. Use of intensive care services during terminal hospitalizations in England and the United States. *Am J Respir Crit Care Med.* 2009; 180(9):875–880. [PubMed: 19713448]
6. Angus DC, Barnato AE, Linde-Zwirble WT, et al. Use of intensive care at the end of life in the United States: an epidemiologic study. *Crit Care Med.* 2004; 32(3):638–643. [PubMed: 15090940]
7. Teno JM, Gozalo PL, Bynum JPW, et al. Change in end-of-life care for Medicare beneficiaries: site of death, place of care, and health care transitions in 2000, 2005, and 2009. *JAMA.* 2013; 309(5):470–477. [PubMed: 23385273]
8. Smith TJ, Temin S, Alesi ER, et al. American Society of Clinical Oncology provisional clinical opinion: the integration of palliative care into standard oncology care. *J Clin Oncol.* 2012; 30(8):880–887. [PubMed: 22312101]
9. Ferrell BR, Temel JS, Temin S, et al. Integration of palliative care into standard oncology care: American Society of Clinical Oncology Clinical Practice Guideline update. *J Clin Oncol.* 2017; 35(1):96–112.
10. Temel JS, Greer JA, Muzikansky A, et al. Early palliative care for patients with metastatic non-small-cell lung cancer. *N Engl J Med.* 2010; 363(8):733–742. [PubMed: 20818875]
11. Zimmermann C, Swami N, Krzyzanowska M, et al. Early palliative care for patients with advanced cancer: a cluster-randomised controlled trial. *Lancet.* 2014; 383(9930):1721–1730. [PubMed: 24559581]
12. Temel JS, Jackson VA, Billings JA, et al. Phase II study: integrated palliative care in newly diagnosed advanced non-small-cell lung cancer patients. *J Clin Oncol.* 2007; 25(17):2377–2382. [PubMed: 17557950]
13. Bakitas M, Lyons KD, Hegel MT, et al. Effects of a palliative care intervention on clinical outcomes in patients with advanced cancer: the Project ENABLE II randomized controlled trial. *JAMA.* 2009; 302(7):741–749. [PubMed: 19690306]
14. Bakitas MA, Tosteson TD, Li Z, et al. Early versus delayed initiation of concurrent palliative oncology care: patient outcomes in the ENABLE III randomized controlled trial. *J Clin Oncol.* 2015; 33(13):1438–1445. [PubMed: 25800768]
15. Lupu D. Estimate of current hospice and palliative medicine physician workforce shortage. *J Pain Symptom Manage.* 2010; 40(6):899–911. [PubMed: 21145468]
16. Accreditation Council for Graduate Medical Education. [Accessed February 1, 2018] ACGME Website. 2017. <http://www.acgme.org/>
17. Noonan K, Tong KM, Laskin J, et al. Referral patterns in advanced non-small cell lung cancer: impact on delivery of treatment and survival in a contemporary population based cohort. *Lung Cancer.* 2014; 86(3):344–349. [PubMed: 25439436]
18. Zhou J, Griffith KA, Hawley ST, et al. Surgeons' knowledge and practices regarding the role of radiation therapy in breast cancer management. *Int J Radiat Oncol Biol Phys.* 2013; 87(5):1022–1029. [PubMed: 24161426]
19. Jang TL, Bekelman JE, Liu Y, et al. Physician visits prior to treatment for clinically localized prostate cancer. *Arch Intern Med.* 2010; 170(5):440–450. [PubMed: 20212180]
20. Wong J, Xu B, Yeung HN, et al. Age disparity in palliative radiation therapy among patients with advanced cancer. *Int J Radiat Oncol Biol Phys.* 2014; 90(1):224–230. [PubMed: 25195994]
21. Bakitas M, Lyons KD, Hegel MT, Ahles T. Oncologists' perspectives on concurrent palliative care in an NCI-designated comprehensive cancer center. *Palliat Support Care.* 2013; 11(5):415–423. [PubMed: 23040412]
22. Cherny NI, Catane R. Attitudes of medical oncologists toward palliative care for patients with advanced and incurable cancer. *Cancer.* 2003; 98(11):2502–2510. [PubMed: 14635087]

23. Johnson CE, Girgis A, Paul CL, Currow DC. Cancer specialists' palliative care referral practices and perceptions: results of a national survey. *Palliat Med.* 2008; 22(1):51–57. [PubMed: 18216077]
24. Ward AM, Agar M, Koczwara B. Collaborating or co-existing: a survey of attitudes of medical oncologists toward specialist palliative care. *Palliat Med.* 2009; 23(8):698–707. [PubMed: 19825895]
25. Chasen M, Bhargava R, Dalzell C, Pereira JL. Attitudes of oncologists towards palliative care and the Edmonton Symptom Assessment System (ESAS) at an Ontario Cancer Center in Canada. *Support Care Cancer.* 2015; 23(3):769–778. [PubMed: 25189150]
26. Kierner KA, Gartner V, Bartsch R, et al. Attitudes towards palliative care in primary metastatic cancer: a survey among oncologists. *Wien Klin Wochenschr.* 2010; 122(1–2):45–49. [PubMed: 20177859]
27. Mattes MD, Sloane MA. Reflections on hope and its implications for end-of-life care. *J Am Geriatr Soc.* 2015; 63(5):993–996. [PubMed: 25940710]
28. Wei RL, Mattes MD, Yu J, et al. Attitudes of radiation oncologists toward palliative and supportive care in the United States: report on National Membership Survey by the American Society for Radiation Oncology (ASTRO). *Pract Radiat Oncol.* 2017; 7(2):113–119. [PubMed: 28274395]
29. Mattes MD, Tung K, Baum R, Parikh K, Ashamalla H. Understanding the views of those who care for patients with cancer on advance care planning and end-of-life care. *Am J Hosp Palliat Care.* 2015; 32(8):802–809. [PubMed: 24939206]
30. Hui D, Park M, Liu D, Reddy A, Dalal S, Bruera E. Attitudes and beliefs toward supportive and palliative care referral among hematologic and solid tumor oncology specialists. *Oncologist.* 2015; 20(11):1326–1332. [PubMed: 26417037]



**Table 1**

Demographics of Participants.

Category	Characteristic	Radiation Oncology (n = 178), n (%)	Medical Oncology (n = 81), n (%)	Palliative/Supportive Care (n = 51), n (%)
Experience	Resident/fellow	24 (13%)	13 (16%)	22 (43%)
	1–10 years in practice	44 (25%)	19 (23%)	9 (18%)
	11–20 years in practice	33 (19%)	17 (21%)	2 (4%)
	21+ years in practice	70 (39%)	27 (33%)	14 (27%)
	Unknown	7 (4%)	5 (6%)	4 (8%)
Gender	Male	105 (59%)	47 (58%)	18 (35%)
	Female	66 (37%)	29 (36%)	32 (63%)
	Unknown	7 (4%)	5 (6%)	1 (2%)
Race	Caucasian	137 (77%)	64 (79%)	34 (67%)
	Asian	17 (10%)	5 (6%)	7 (14%)
	Other	3 (2%)	4 (4%)	2 (4%)
	Unknown	21 (12%)	8 (10%)	8 (16%)

**Table 2**

Summary of Likert-Type Scale Questions.

Question	Radiation Oncology, Mean (SD); Median (IQR)	Medical Oncology, Mean (SD); Median (IQR)	Palliative/Supportive Care, Mean (SD); Median (IQR)
How well do you think doctors know how to take care of the emotional needs of patients with a serious incurable illness? (not at all to extremely well)	2.4 (0.83); 3 (2–3) <sup>a</sup>	2.4 (0.72); 2 (2–3) <sup>b</sup>	1.7 (0.60); 2 (1–2) <sup>a,b</sup>
How well do you think doctors know how to take care of the physical needs of patients with a serious incurable illness? (not at all to extremely well)	3.5 (0.78); 4 (3–4) <sup>a,c</sup>	3.2 (0.81); 3 (3–4) <sup>b,c</sup>	2.5 (0.72); 2 (2–3) <sup>a,b</sup>
How helpful do you think palliative care doctors tend to be at helping other physicians address the emotional and physical needs of patients with a serious incurable illness? (not at all to extremely helpful)	4.1 (0.94); 4 (4–5) <sup>a,c</sup>	3.8 (1.0); 4 (3–4.5) <sup>b,c</sup>	4.5 (0.78); 5 (4–5) <sup>a,b</sup>
For patients with a serious incurable illness, do you believe that patients who are more aware of their life expectancy tend to make better medical decisions for the remainder of their life? (not at all to extremely likely)	3.8 (0.8); 3 (3–4) <sup>a</sup>	3.8 (0.83); 4 (3–4) <sup>b</sup>	4.1 (0.65); 4 (4–5) <sup>a,b</sup>
For patients with a serious incurable illness, do you believe that patients who are more aware of their life expectancy tend to make better personal decisions for the remainder of their life? (not at all to extremely likely)	3.9 (0.80); 4 (3–4) <sup>a</sup>	3.9 (0.85); 4 (3–4) <sup>b</sup>	4.3 (0.67); 4 (4–5) <sup>a,b</sup>
For patients with a serious incurable illness, do you believe that patients who are more aware of their life expectancy tend to be more emotionally prepared for dying? (not at all to extremely likely)	3.7 (0.87); 4 (3–4)	3.7 (0.92); 4 (3–4) <sup>b</sup>	4.0 (0.83); 4 (4–5) <sup>b</sup>
How successful do you think most doctors are at explaining/clarifying advanced life-sustaining treatments with their patients? (not at all to extremely successful)	1.7 (0.63); 2 (1–2) <sup>a</sup>	1.7 (0.80); 2 (1–2) <sup>b</sup>	1.3 (0.61); 1 (1–2) <sup>a,b</sup>
How much of the medical decisions you make about the end of your life do you think you could make at a time when you are completely healthy? (none to all)	2.9 (0.89); 3 (2–3)	3.0 (0.83); 3 (3–4)	2.8 (0.80); 3 (2–3)

Abbreviations: IQR, interquartile range; SD, standard deviation.

<sup>a</sup>Radiation oncology versus palliative/supportive care *P* value < .05.<sup>b</sup>Medical oncology versus palliative/supportive care *P* value < .05.<sup>c</sup>Radiation oncology versus medical oncology *P* value < .05.