Attitudes and Practices of U.S. Oncologists regarding Euthanasia and Physician-Assisted Suicide

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Background: The practices of euthanasia and physician-assisted suicide remain controversial.

Objective: To achieve better understanding of attitudes and practices regarding euthanasia and physician-assisted suicide in the context of end-of-life care.

Design: Cohort study.

Setting: United States.

Participants: 3299 oncologists who are members of the American Society of Clinical Oncology.

Measurements: Responses to survey questions on attitudes toward euthanasia and physician-assisted suicide for a terminally ill patient with prostate cancer who has unremitting pain, requests for and performance of euthanasia and physician-assisted suicide, and sociodemographic characteristics.

Results: Of U.S. oncologists surveyed, 22.5% supported the use of physician-assisted suicide for a terminally ill patient with unremitting pain and 6.5% supported euthanasia. Oncologists who were reluctant to increase the dose of intravenous morphine for terminally ill patients in excruciating pain (odds ratio [OR], 0.61 [95% CI, 0.48 to 0.77]) and had sufficient time to talk to dying patients about end-of-life care issues (OR, 0.79 [CI, 0.71 to 0.87]) were less likely to support euthanasia or physician-assisted suicide. During their career, 3.7% of surveyed oncologists had performed euthanasia and 10.8% had performed physician-assisted suicide. Oncologists who were reluctant to increase the morphine dose for patients in excruciating pain (OR, 0.58 [CI, 0.43 to 0.79]) and those who believed that they had received adequate training in end-of-life care (OR, 0.86 [CI, 0.79 to 0.95]) were less likely to have performed euthanasia or physician-assisted suicide. Oncologists who reported not being able to obtain all the care that a dying patient needed were more likely to have performed euthanasia (P = 0.001).

Conclusions: Requests for euthanasia and physician-assisted suicide are likely to decrease as training in end-of-life care improves and the ability of physicians to provide this care to their patients is enhanced.


Euthanasia and physician-assisted suicide are highly controversial societal issues (1–3). In the past decade, there have been numerous surveys of physicians throughout the world on euthanasia and physician-assisted suicide (1, 4–14). Nevertheless, important deficiencies in information remain. First, most studies have been “snapshots”—surveys of attitudes or experiences at one point in time (15). Second, more than a fourfold variation exists in the reported rate of requests for and performance of euthanasia and physician-assisted suicide among U.S. physicians, making it difficult to draw definitive conclusions about physician practices (10, 11, 13, 14). Most important, almost all surveys of physicians have focused exclusively on euthanasia or physician-assisted suicide as isolated practices. None of the existing data provide insight into how these practices relate to optimal end-of-life care. To address some of these deficiencies, the American Society of Clinical Oncology (ASCO) surveyed all of its U.S. members about end-of-life care practices; we report part of the results of that survey.

Our focus on oncologists is appropriate because data from the Netherlands and Oregon indicate that more than 70% of patients using euthanasia or physician-assisted suicide have cancer (7, 16). In the United States, where patients with cancer tend to be treated by specialists, oncologists are likely to have to address the issue of euthanasia and physician-assisted suicide more often than other physicians (11, 14).

METHODS

Physician Identification

General eligibility requirements for the study were membership in ASCO in 1997, which included at least 85% of all oncologists in the United States, and being active in the management of “patients at the very end of life.” Two groups were identified for participation; neither was compensated. First, all 8715 oncologists from the United States who were ASCO members were mailed a survey with a postage-paid return envelope. Physicians who did not return the survey after 4 weeks were mailed a
reminder letter with another copy of the survey. Of U.S. oncologists, 6642 were eligible; 2645 of these physicians completed the survey (response rate, 39.8%). Second, 1550 medical, surgical, radiation, and pediatric oncologists were randomly selected in a prospective manner to be contacted through personal telephone calls and additional mailings urging them to complete the survey. Of these physicians, 1273 were eligible and 655 completed the survey (response rate, 51.5%). The responses to all questions about euthanasia and physician-assisted suicide from these cohorts were statistically indistinguishable; therefore, responses from the two groups were combined, providing a total of 3299 responses.

Survey Development
In conjunction with the Center for Survey Research, a multidisciplinary task force created a survey instrument. After pretesting among oncologists, the instrument was finalized with 118 questions in eight areas. The precise wording of the questions that we analyzed is provided in the Appendix Table. Because the terms euthanasia and physician-assisted suicide can be both misunderstood and emotionally charged, previously reported descriptions of these activities were used in all questions (1, 13, 15).

Statistical Analysis
Comparisons among groups were performed by using the Pearson chi-square test of independence. Predictors of support for and performance of physician-assisted suicide and euthanasia were identified by using stepwise logistic regression analysis. To minimize type I errors and reduce the probability of identifying factors associated with differences that are not clinically meaningful, the selection criteria for entry into the model were set at an \( \alpha \) level of 0.005.

Potential explanatory variables in all analyses were age, sex, religious affiliation, religiosity, importance of religious beliefs, death of a relative within the past 5 years, specialty, rural or urban practice, academic practice, amount of time in patient care, number of new patients in the past 6 months, and number of patients who died in the past year. Additional explanatory variables were barriers to providing

### Table 1. Sociodemographic Characteristics of Surveyed U.S. Oncologists

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>All Oncologists (n = 3299)</th>
<th>Medical Oncologists (n = 2501)</th>
<th>Surgical Oncologists (n = 239)</th>
<th>Radiation Oncologists (n = 331)</th>
<th>Pediatric Oncologists (n = 228)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean age (range), y</td>
<td>47 (28–85)</td>
<td>47 (29–85)</td>
<td>49 (28–82)</td>
<td>48 (28–74)</td>
<td>45 (30–72)</td>
</tr>
<tr>
<td>Sex, %</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>80.6</td>
<td>81.8</td>
<td>85.4</td>
<td>77.9</td>
<td>66.5</td>
</tr>
<tr>
<td>Female</td>
<td>19.4</td>
<td>18.2</td>
<td>14.6</td>
<td>22.1</td>
<td>33.5</td>
</tr>
<tr>
<td>Religion, %</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Protestant</td>
<td>34.5</td>
<td>32.9</td>
<td>40.5</td>
<td>42.3</td>
<td>34.1</td>
</tr>
<tr>
<td>Catholic</td>
<td>26.6</td>
<td>26.6</td>
<td>31.5</td>
<td>25.3</td>
<td>23.5</td>
</tr>
<tr>
<td>Jewish</td>
<td>25.7</td>
<td>26.3</td>
<td>18.1</td>
<td>22.2</td>
<td>32.7</td>
</tr>
<tr>
<td>Other</td>
<td>13.2</td>
<td>14.2</td>
<td>9.9</td>
<td>10.2</td>
<td>9.7</td>
</tr>
<tr>
<td>Importance of religious belief, %</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Very important</td>
<td>34.0</td>
<td>34.2</td>
<td>38.3</td>
<td>35.0</td>
<td>26.3</td>
</tr>
<tr>
<td>Fairly important</td>
<td>33.0</td>
<td>32.2</td>
<td>36.2</td>
<td>36.5</td>
<td>33.3</td>
</tr>
<tr>
<td>Not important</td>
<td>33.0</td>
<td>33.7</td>
<td>25.5</td>
<td>28.5</td>
<td>40.4</td>
</tr>
<tr>
<td>Population of geographic setting, %</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;100 000 persons</td>
<td>12.1</td>
<td>13.4</td>
<td>5.1</td>
<td>12.8</td>
<td>4.4</td>
</tr>
<tr>
<td>100 000–500 000 persons</td>
<td>30.0</td>
<td>31.1</td>
<td>22.2</td>
<td>36.3</td>
<td>17.3</td>
</tr>
<tr>
<td>≥500 000 persons</td>
<td>57.9</td>
<td>55.6</td>
<td>72.6</td>
<td>50.9</td>
<td>78.3</td>
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<tr>
<td>Type of practice, %</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Academic</td>
<td>34.1</td>
<td>27.7</td>
<td>63.6</td>
<td>28.5</td>
<td>80.3</td>
</tr>
<tr>
<td>Oncology specialty group</td>
<td>34.2</td>
<td>37.6</td>
<td>7.9</td>
<td>46.4</td>
<td>6.6</td>
</tr>
<tr>
<td>Other</td>
<td>31.8</td>
<td>34.7</td>
<td>28.5</td>
<td>25.2</td>
<td>13.2</td>
</tr>
<tr>
<td>Time spent in patient care, %</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;50%</td>
<td>13.4</td>
<td>13.1</td>
<td>11.2</td>
<td>5.8</td>
<td>29.2</td>
</tr>
<tr>
<td>50%–89%</td>
<td>35.2</td>
<td>31.6</td>
<td>56.0</td>
<td>34.5</td>
<td>54.0</td>
</tr>
<tr>
<td>≥90%</td>
<td>51.5</td>
<td>55.3</td>
<td>32.8</td>
<td>58.7</td>
<td>16.8</td>
</tr>
<tr>
<td>Patients who died in the past 12 months, %</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;25</td>
<td>37.5</td>
<td>31.1</td>
<td>74.4</td>
<td>20.0</td>
<td>93.2</td>
</tr>
<tr>
<td>25–49</td>
<td>26.9</td>
<td>30.0</td>
<td>19.3</td>
<td>24.3</td>
<td>5.0</td>
</tr>
<tr>
<td>≥50</td>
<td>35.6</td>
<td>39.0</td>
<td>6.3</td>
<td>95.7</td>
<td>1.8</td>
</tr>
</tbody>
</table>
optimal care to terminally ill patients, time available to talk to terminally ill patients, perceptions of reimbursement levels, perceived difficulties in getting patients the care that they required, poor pain management decisions, proportion of terminally ill patients who are depressed, and personal responsibility for care of terminally ill patients.

RESULTS

Table 1 provides basic sociodemographic data on the 3299 U.S. oncologists who participated. Among all ASCO oncologists, 17.3% are female and 33.4% work in academic settings; these overall values are similar to those among survey respondents. More than 85% of respondents spent at least half their working time in direct patient care; 52% indicated that they devoted more than 90% of their time to clinical activities. Almost two thirds (61.4%) of respondents reported that 25 or more of their patients had died during the previous year.

Attitudes toward Euthanasia and Physician-Assisted Suicide

Of the 3299 U.S. oncologists who responded, 22.5% supported physician-assisted suicide for a terminally ill patient with prostate cancer who had unremitting pain despite optimal pain management, and 6.5% supported euthanasia (Table 2). Furthermore, 15.6% of the respondents indicated that they themselves would be willing to provide physician-assisted suicide and 2.0% would be willing to carry out euthanasia. These responses varied by oncologic subspecialty.

In multivariate analysis, four factors were associated with oncologists who were significantly less likely to support euthanasia and physician-assisted suicide: 1) reluctance to increase the intravenous morphine dose for a patient with metastatic breast cancer who was experiencing pain and requested relief (odds ratio [OR], 0.61 [CI, 0.48 to 0.77]); 2) reporting that they had sufficient time to talk to dying patients about end-of-life care issues (OR, 0.79 [CI, 0.71 to 0.87]); 3) viewing themselves as religious (OR, 0.68 [CI, 0.64 to 0.74]); and 4) being Catholic (OR, 0.57 [CI, 0.45 to 0.72]). Surgical oncologists were significantly more likely to support euthanasia or physician-assisted suicide (OR, 2.11 [CI, 1.52 to 2.92]). Attitudes toward euthanasia or physician-assisted suicide did not differ by age, sex, geographic region, year of graduation from medical school, number of new patients per year, number of patients who died in the past year, proportion of income from managed care, and clinical practice setting.

Practices regarding Euthanasia and Physician-Assisted Suicide

Of the 3299 responding oncologists, 62.9% had received requests for euthanasia or physician-assisted suicide during their career and 31.1% had received such requests during the previous 12 months (Table 2). The majority of requests were not fulfilled. Overall, 10.8% of responding oncologists had performed physician-assisted suicide in their career and 3.4% had done so in the prior 12 months; 3.7% of oncologists reported performing euthanasia during their career while 0.8% had done so in the prior 12 months.
12 months. Of the 10.8% of oncologists who had performed physician-assisted suicide, 37% had done so only once and 18% had done so five or more times. Of the oncologists who performed euthanasia, the majority (57%) had done so only once and 12% had done so five or more times. These practices varied significantly among oncologic subspecialties (Table 2).

Multivariate logistic regression analysis suggested that oncologists were significantly less likely to have performed euthanasia or physician-assisted suicide if they were unwilling to increase the dose of intravenous morphine for pain control in a patient with breast cancer who had excruciating pain (OR, 0.58 [CI, 0.43 to 0.79]) and if they reported that their training in end-of-life care was helpful (OR, 0.86 [CI, 0.79 to 0.95]). Conversely, oncologists who were less spiritual were significantly more likely to have performed euthanasia or physician-assisted suicide (OR, 1.77 [CI, 1.40 to 2.26]). Of note, 1.5% of oncologists who reported that they could get their dying patients all necessary care had performed euthanasia, whereas 6.2% of oncologists who reported that administrative, fiscal, and structural barriers allowed them to provide their dying patient with only some of the care they needed had performed euthanasia ($P < 0.001$).

**DISCUSSION**

Our study of 3299 U.S. oncologists, the largest survey of physicians on the subject of euthanasia and physician-assisted suicide, provides four insights.

First, concern among oncologists about performing euthanasia and physician-assisted suicide may limit their willingness to prescribe opioids, thereby leading to inadequate pain management (8). Physicians who neither supported nor performed euthanasia and physician-assisted suicide were significantly less willing to increase the dose of intravenous opioids for patients with unremitting pain. This reticence probably reflects fear that increasing opioid dose increases the risks for respiratory depression and death and might be construed as a form of euthanasia. This view may be encouraged by proponents of euthanasia who have argued that there is no difference between increasing morphine for pain relief and euthanasia (2, 17, 18). The ASCO and others must educate physicians on the ethical and legal acceptability of increasing narcotics for pain control, even at the risk of respiratory depression and death (1, 3).

Second, the data suggest a relationship between the likelihood of performing euthanasia and physician-assisted suicide and the inability of physicians to obtain adequate end-of-life care for their patients. There is wide agreement that euthanasia and physician-assisted suicide should be reserved for circumstances in which optimal care cannot control pain and suffering. Some have worried that inadequate access to palliative care might make euthanasia and physician-assisted suicide attractive alternatives (19). Our data lend some support to this concern.

Third, physicians who reported receiving better training in end-of-life care seemed less likely to perform euthanasia or physician-assisted suicide (8). Physicians with better training in end-of-life care may feel more capable of providing optimal palliative care and less need to resort to euthanasia or physician-assisted suicide (8, 20).

Finally, the results suggest that among U.S. oncologists, support for euthanasia and physician-assisted suicide has decreased substantially. Between 1994 and 1998, oncologists’ support for physician-assisted suicide in the prototypical case of a terminally ill patient with unremitting pain declined by half, from 45.5% in 1994 to 22.5% in this study. Similarly, support for euthanasia has declined by almost three quarters, from 22.7% to 6.5% (13, 15). This decline may reflect expanding knowledge about how to facilitate a “good death,” making euthanasia and physician-assisted suicide no longer seem necessary or desirable (20).

Our study has several limitations. The low overall response rate of 39.8% raises the possibility of significant bias in the results. For instance, if all of the nonrespondents opposed euthanasia and physician-assisted suicide, the support would be only 2.6% for euthanasia and 9.0% for physician-assisted suicide and only 25.0% of physicians would have received requests for either intervention. Of note, there were no differences in the views of the oncologists targeted for intensive follow-up where the response rate was over 50%. The sociodemographic characteristics of respondents were similar to those of all ASCO members. In addition, the questions on euthanasia and physician-assisted suicide were set within a larger survey on end-of-life care, minimizing the possibility that nonrespondents differed on their views related to euthanasia or physician-assisted suicide. Our data reflect the views of oncologists who were members of ASCO and thus may not be generalizable to oncologists who do not belong to ASCO and to other types of physicians (9, 14). Finally, we used restrictive selection criteria for entry into the model; conse-
Attitudes and Practices regarding Euthanasia and Physician-Assisted Suicide

**Appendix Table. Survey Questions**

<table>
<thead>
<tr>
<th>Subject of Question</th>
<th>Survey</th>
<th>Wording of Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitudes toward euthanasia and physician-assisted suicide</td>
<td>1998 ASCO survey of 3299 oncologists</td>
<td>A 63-year-old man develops metastatic prostate cancer that invades the bones and causes excruciating pain. His disease is refractory to hormonal therapy. The appropriate use of morphine, radiation therapy, nerve blocks, and other palliative measures are failing to control the pain completely.</td>
</tr>
<tr>
<td>Pain management</td>
<td>1998 ASCO survey</td>
<td>A patient develops metastatic cancer which invades the bones resulting in excruciating pain. Current levels of morphine, nerve blocks, and other treatments are failing to completely control the pain. In this case, is it all right, upon request from the patient, to intentionally prescribe drugs so the patient could end his or her life by overdose?</td>
</tr>
<tr>
<td>Barriers to optimal end-of-life care</td>
<td>1998 ASCO survey</td>
<td>When you think objectively about ALL the administrative, fiscal, and structural barriers to delivering quality care to dying patients, how effective would you say you are at getting your dying patients the care they need?</td>
</tr>
</tbody>
</table>

* ASCO = American Society of Clinical Oncology.

quently, the odds ratios may be influenced by unmeasured confounders.

Overall, our results emphasize the need to educate physicians about optimal pain and palliative care practices throughout their formal training and as part of their continuing medical education. Physicians who are better informed about end-of-life issues feel less need to use euthanasia and physician-assisted suicide.

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Collection and assembly of data: B.C. Clarridge.

**References**


2. Vescio et al. v. Quill et al. (117 S. Ct. 2293 [1997]).


And yet uncle in his old age was probably not unhappy. He had one hobby of never-failing interest, and that was his diseases. He suffered, by his own account, from every disease in the medical dictionary, and was never weary of talking about them. Indeed, it seemed to Gordon that none of the people in his uncle’s boarding-house—he had been there occasionally—ever did talk about anything except their diseases. All over the darkish drawing-room, ageing, discoloured people sat about in couples, discussing symptoms. Their conversation was like the dripping of stalactite to stalagmite. Drip, drip. “How is your lumbago?” says stalactite to stalagmite. “I find my Kruschen Salts are doing me good,” says stalagmite to stalactite. Drip, drip, drip.

George Orwell

*Keep the Aspidistra Flying*
San Diego; Harcourt Brace; 1936:59

Submitted by:
Carol M. Ashton, MD, MPH
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Houston, TX 77030

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