Current Status of Palliative Care—Clinical Implementation, Education, and Research

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Abstract

Palliative and end-of-life care is changing in the United States. This dynamic field is improving care for patients with serious and life-threatening cancer through creation of national guidelines for quality care, multidisciplinary educational offerings, research endeavors, and resources made available to clinicians. Barriers to implementing quality palliative care across cancer populations include a rapidly expanding population of older adults who will need cancer care and a decrease in the workforce available to give care. Methods of integrating current palliative care knowledge into care of patients include multidisciplinary national education and research endeavors, and clinician resources. Acceptance of palliative care as a recognized medical specialty provides a valuable resource for improvement of care. Although compilation of evidence for the importance of palliative care specialities is in its initial stages, national research grants have provided support to build the knowledge necessary for appropriate palliative care. Opportunities are available to clinicians for understanding and applying appropriate palliative and end-of-life care to patients with serious and life-threatening cancers. CA Cancer J Clin 2009;59:327–335. ©2009 American Cancer Society, Inc.

Introduction

A projected 1,479,350 new cancer cases in the United States will be diagnosed in 2009, and 562,340 Americans with cancer are expected to die.1 In addition, 1 in every 4 deaths in the United States is due to cancer.1 These numbers are expected to increase dramatically because the number of people older than age 85 years will double to 10 million by the year 2030.2 Care for the more than half a million current cancer patients with serious or advanced disease involves expert symptom management and maintenance of quality of life.

Throughout the United States, across disciplines and settings, improved care for patients is emerging as palliative care becomes available to increasing numbers of patients. Improved palliative and end-of-life care has included institutional changes, educational activities for the variety of disciplines involved in care, research initiatives to improve care, and the development of national guidelines for assessing quality cancer care. The purpose of this article is to identify the current status of palliative care, the challenges to implementing palliative care, the methods to improve application of palliative care principles, and the clinical implications for clinicians involved in caring for patients with serious and advanced cancer.

Current Status of Palliative Care

Palliative care is a dynamic field and is now recognized as a medical specialty with an inherent interdisciplinary nature. The focus of palliative care includes the relief of suffering for patients with life-threatening or serious
debilitating illness and support for the best quality of life for patients and their families. Coordination and partnerships with hospice programs is a major feature, as palliative care continues across the trajectory of disease (Fig. 1). As an interdisciplinary endeavor, the field of palliative care includes medicine, nursing, social work, psychology, nutrition, and rehabilitation, although depth of support available from each discipline varies from institution to institution.

The last few years has witnessed the reporting of a large number of palliative care programs across the United States. Data from the 2008 American Hospital Association (AHA) Annual Survey of US Hospitals shows that 1,299 (31%) hospitals have palliative care programs today. This represents a rapid increase over the 632 hospitals that reported palliative care programs in 2000. The range of interdisciplinary support available at each of these institutions varies from a full complement of supportive services to small consultation programs.

With the occurrence of such rapid growth, concern by professional palliative care organizations for the quality of care has emerged. Efforts to address quality have come from the national level. Two of these are outlined here: The Clinical Practice Guidelines for Quality Palliative Care and a state-by-state report card developed by the Center for the Advancement of Palliative Care. These reports identify the characteristics of a quality palliative care effort and where we are now in providing that care.

Clinical Practice Guidelines for Palliative Care

National guidelines for palliative care were initiated by the National Consensus Project for Quality Palliative Care (NCP). In 2009, the second edition of The Clinical Practice Guidelines for Palliative Care was published by NCP. The framework for these guidelines consists of 8 broad domains, with guidelines identified under each domain (Table 1). Within each domain, examples of institutions that represent successful implementation are identified. The Joint Commission (TJC), formerly known as the Joint Commission for the Accreditation of Hospitals, has embedded these guidelines within their existing standards. These guidelines can be accessed at http://www.nationalconsensusproject.org.

The State Report Card

The second effort to address the quality of existing palliative care practice is the State-by-State Report Card on Access to Palliative Care in Our Nation’s Hospitals. This effort addresses the multiple needs of patients with serious and advanced disease and stresses the importance of coordinating care across medical disciplines; excellent symptom management; relief of suffering; addressing family caregiver needs; and providing excellent communication among patients, families, and health care providers. Hospitals were rated on 4 areas: patient access to palliative care services, patient access to palliative medicine physicians, medical student access to clinical training in palliative medicine, and physician access to specialty-level training in palliative medicine. Grades varied from A, Top Performers; B, On Their Way; C, In the Middle; D, Need Significant Improvement; and F, Little or No Access. Distribution of scores across states revealed that differences occurred geographically with most states scoring in the middle (Fig. 2).

The top performing states were Vermont, Montana, and New Hampshire, whereas states with little or no access to palliative care included Oklahoma, Alabama, and Mississippi. In addition, palliative care was unlikely to be part of public hospitals, demonstrating that access to palliative care support is least

| TABLE 1. The National Consensus Project Domains |
|------------------------------|
| DOMAINS | DESCRIPTION |
| Domain 1 | Structure and Process of Care |
| Domain 2 | Physical Aspects of Care |
| Domain 3 | Psychological and Psychiatric Aspects of Care |
| Domain 4 | Social Aspects of Care |
| Domain 5 | Spiritual, Religious and Existential Aspects of Care |
| Domain 6 | Cultural Aspects of Care |
| Domain 7 | The Imminently Dying Patient |
| Domain 8 | Ethical and Legal Aspects of Care |
likely for medically underserved populations. For states where there is more access to palliative care services, patients are less likely to die in a hospital and are less likely to spend time in an intensive care unit or critical care unit during their last 6 months of life.

Challenges to Implementing Palliative Care

Several trends in health care today decrease the chance of cancer patients having access to palliative care. These range from limited availability of palliative care services to the philosophy of patient care that dominates our health care system.

With the aging of the US population, the demand for cancer services will increase. At the same time, the supply of physicians, and especially oncologists, will decrease because of the retirement of a large percentage of oncologists, a decrease in the number of trained physicians, and a new generation of physicians who will prefer to work part-time or in specialties with fewer working hours and less emotional demand than the specialty of oncology. The recognition and increased use of palliative care physicians and nurse practitioners who specialize in palliative care is one approach that has been recommended to address this workforce shortage. A palliative care specialist is better prepared to meet patients’ needs and can relieve some of the burden of care from the oncologist.

Most patient care is disease oriented, with a focus on the tumor, the treatment approach, and specialty consultation by various medical disciplines. Care is usually complex, and treatment involves many specialties. After treatment, remission followed by recurrence and additional treatment is not unusual for many patients, thus increasing the need for multiple physicians and introducing potential fragmentation of the individual patient’s care. The need for physician expertise outside of oncology will increase, as the cancer population ages and comorbidities increase. Coordination of care across this many disciplines is limited. One approach to this problem has been to use navigators (laypersons, nurses, and social workers) to assist cancer patients as they move through diagnosis, treatment, and follow-up care.

Palliative care can transform the current disease-focused approach to a patient-centered philosophy, where the needs of the patient and patient and family goals become essential to planning the patient’s care. Patient-centeredness broadens the focus of care and requires clear coordination across specialties and disciplines as well as access to palliative care physicians and nurses.

Another aspect of care that is clearly lacking in current health care systems is communication with patients on their goals and preferences for care. When patients are asked what kind of care they want when serious and life-threatening disease occurs, their preferences include pain and symptom control, avoidance of prolongation of the dying process, a sense of control, concern for the burden they may place on family, and an opportunity to strengthen relationships with loved ones. However, research does not demonstrate that patients’ preferences are adequately met. Moderate to severe pain has been reported by 60% of patients with colon cancer and by 57% of patients with lung cancer between Days 8 and 14 of hospitalization—a sufficient period after admission to get any pain under control. Family members report poor emotional support, a lack of respectful treatment, and no involvement in decisions about care.

Ninety percent of patients say they would like to die at home. However, approximately 53% of all patients die in the hospital, and 24% die in a nursing home. Also, death continues to occur in intensive care units, and critical care units, with patients surrounded by equipment and having difficulty communicating with their families. The median length of stay in a hospice during 2005 was 26 days; one-third enrolled during the last week of life and 10% on the last day of life. Reasons for the late transfer to hospice include patients, families, and medical staff difficulties switching to a nontreatment mode, inability to have the conversation about death with the patient and family, and reluctance of the patient and family to give up the search for a cure. A change in health care to include palliative care early in the course of cancer can begin to familiarize the family
with palliative care services, start communication about death earlier in the course of cancer treatment, and provide an opportunity for a discussion of goals of care among the physician, patient, and family.

An additional challenge to implementation of palliative care is the limited evidence for this specialty. Needed are studies that provide evidence to guide better decisions on symptom management, different health care models, decision-making approaches about treatment options, communication on sensitive topics such as death, and support for family caregivers.

Challenges to implementing palliative care are many and include issues from workforce deficiencies to changing models of health care delivery. Current activities in palliative care have the potential for improving many of the issues identified in this article.

Methods to Improve Application of Palliative Care Principles

Palliative care guidelines provide a framework for the care needed for patients with serious and life-threatening cancers. Approaches to improving application of this care include education, training, and research endeavors.

Education

Educational efforts in palliative and end-of-life care have targeted nurses, physicians, and other disciplines associated with clinical care. These efforts are essential for clinical changes in patient care to begin.

End-of-Life Nursing Education Consortium (ELNEC)

ELNEC is a national education initiative to improve end-of-life care in the United States.\(^\text{15}\) The project uses a train-the-trainer approach to provide undergraduate and graduate nursing faculties, nursing continuing education faculty, staff development educators, staff nurses, specialty nurses in pediatrics, oncology, critical care and geriatrics, and other nurses with education in palliative and end-of-life care. To date, over 5,300 nurses in 50 states have received ELNEC training through these national courses and are sharing their new expertise in educational and clinical settings. This, however, represents less than 0.2% of practicing nurses. The ELNEC project is administered by the American Association of Colleges of Nursing, Washington, DC, and the City of Hope, Los Angeles, California. The curriculum content is delivered by national nurse leaders and includes 8 modules (Table 2). Details on upcoming courses are provided on the ELNEC website at http://www.aacn.nche.edu/ELNEC/.

| TABLE 2. End-of-Life Nursing Education Consortium (ELNEC) Curriculum |
|---------------------------------------------------------------|
| MODULES | |
| 1 | Nursing Care at the End of Life |
| 2 | Pain Management |
| 3 | Symptom Management |
| 4 | Ethical/Legal Issues |
| 5 | Cultural Considerations |
| 6 | Communication |
| 7 | Loss, Grief, and Bereavement |
| 8 | Preparation for and Care at the Time of Death |

The Education for Physicians on End-of-life Care (EPEC) Curriculum

The EPEC Project was initially developed and led by Linda Emanuel, MD, PhD, at the Institute for Ethics of the American Medical Association (AMA), Chicago, Ill, with support from the Robert Wood Johnson Foundation.\(^\text{16}\) EPEC was designed to provide practicing physicians with the core competencies that they would need to effectively manage end-of-life care. It was disseminated by using a train-the-trainer model. The EPEC Project is estimated to have reached 120,000 physicians and has introduced them to the field of hospice and palliative medicine.\(^\text{17}\)

EPEC-Oncology (EPEC-O)

EPEC-O was developed to overcome the barrier among American physicians described as “tribalism”. Many US physicians do not think of themselves as a physician in the general sense but look to their own specialty or subspecialty for continuing education. Thus, the target audiences for EPEC-O are the practicing oncologist and the interdisciplinary team caring for persons and families with cancer. The curriculum is similar to EPEC, except it addresses only patients with cancer (Table 3).

The EPEC curriculum and the EPEC-O curriculum are available through the EPEC Project at http://www.EPEC.net. National courses are held on a regular basis. The entire curriculum is also now adapted for Web-based distance learning and is available at the EPEC Web site.
Palliative Care Training Efforts

Applying what is known about appropriate palliative and end-of-life care to the improvement of clinical practice requires trained, multidisciplinary champions to assist with needed institutional changes. Several projects have focused on preparing multidisciplinary teams in palliative and end-of-life care.

Center to Advance Palliative Care (CAPC)

CAPC is a national organization dedicated to improving the lives of patients with serious, complex illness by increasing the availability of high-quality palliative-care services in health care settings throughout the United States.

CAPC’s premier training initiative is the Palliative Care Leadership Centers (PCLC), 9 leading palliative care programs across the country representing diverse settings and led by experts in the field. PCLC provides intensive, hands-on, operational training and year-long mentoring to teams of hospital and hospice health care professionals involved in starting or running a palliative care program. Other CAPC educational offerings include the annual CAPC seminar, a 2.5-day program providing comprehensive training in all aspects of planning, implementing, and developing a palliative care program; e-learning courses through CAPC Campus Online; audio conferences; CAPCconnect Forum, a moderated peer-to-peer discussion board; and a wide variety of tools and publications available on the CAPC Web site, http://www.capc.org.

To date, approximately 2,300 hospitals and hospices and more than 5,000 individuals have participated in CAPC seminars or PCLC training. Two years after training, 76% of teams that did not have a program in place at the time of training succeeded in establishing a palliative care program. CAPC seminars and PCLC training are attended by a diverse population of health care professionals: 33% physicians, 21% nurses, 17% advanced practice nurses, 5% social workers, and 3% clergy.

Disseminating End-of-Life Education to Cancer Centers (DELEtCC)

DELEtCC was an education project dedicated to improve palliative and end-of-life care through training of interdisciplinary teams from nation-wide cancer centers.

Nationally recognized palliative and end-of-life care faculty presented the 3-day curriculum comprised of 10 modules that used plenary sessions, group work, and breakout sessions (Table 4).

Between the years 2002 and 2005, 199 teams from 42 states completed the course and successfully implemented palliative and end-of-life care goals at their institutions. Dissemination of DELEtCC information continues by means of an ongoing availability of the course curriculum through compact discs and at http://prc.coh.org/.

Advocating for Clinical Excellence: Transdisciplinary Palliative Care Education (ACE)

The ACE Project involves a 2.5-day palliative and end-of-life educational experience for psycho-oncology professionals (psychologists, social workers, and spiritual care professionals). The curriculum is conducted by a faculty in the fields of psycho-oncology
and palliative care and addresses effective team functioning, collaboration, and advocacy as approaches to systematically improve the institutional delivery of palliative care. The curriculum includes 9 modules and uses adult-learning approaches (Table 5). Initial evaluation of the ongoing courses has demonstrated that the first 2 ACE courses were highly successful, with participants rating the overall course an average of 4.6 on a 1 through 5 scale with 5 as excellent, and participants were actively involved in institutional efforts to improve palliative care.

**Research Activities**

Despite national efforts to provide professional education and support for institutional change, the evidence for palliative and end-of-life care is limited. Research on treatment decisions, family care, and advance directions are just a few of the areas that need rigorous research efforts. Resources for such research, although limited, have begun to fund needed studies.

**National Palliative Care Research Center**

NPCRC is a unique national organization whose mission is to stimulate, develop, and fund new research directed at improving care for seriously ill patients and their families. The NPCRC specifically targets research that can be rapidly and directly translated into improved clinical practice. The NPCRC currently funds Career Development Awards for Junior Investigators and Pilot and Exploratory Project Support Grants. Currently funded projects range from quality of death in institutional long-term settings, symptom control in advanced cancer, and interventions for intensive care unit patients and families (Table 6).

The NPCRC hosts an annual research retreat that convenes researchers for presenting cutting-edge research, establishing research priorities, and promoting collaboration. The annual retreat is cosponsored by the American Cancer Society and the College of Palliative Care of the American Academy of Hospice and Palliative Medicine. Additional information on NPCRC can be obtained from their web site at http://www.npcrc.org.

**American Cancer Society (ACS) Initiatives for Palliative Care Research**

The ACS has, among many research initiatives, extramural research initiatives in palliative care through Pilot and Exploratory Grants. Targeted areas include the following:

1. Exploring the relation of pain and other distressing symptoms to quality and quantity of life, independence, function, and disability, and developing interventions directed at their treatment in patients with advanced and chronic illnesses;
2. Studying methods of improving communication among adults living with serious illness, their families, and their health care providers;
3. Evaluating models and systems of care for patients living with advanced illness and their families;
4. Examining poor prognosis malignancies at any stage of illness;
5. Researching advanced malignancies, defined as recurrent and/or metastatic disease; and
6. Studying favorable-prognosis malignancies associated with a high symptom burden.

Information on other ACS research mechanisms can be found at http://www.cancer.org. To date, 15 pilot and exploratory projects have been funded (Table 7). Even within this small group, there is a range of foci:

| MODULES | MODULES |
|---------|---------|
| 1       | Moral Imperative |
| 2       | Advocacy and Change |
| 3       | Personal Death Awareness |
| 4       | Ethical Obligations of Psycho-Oncology Professionals in Palliative Care |
| 5       | Transdisciplinary Team Work and Team Building |
| 6       | Physical Aspects of Palliative Care |
| 7       | Psychosocial Aspects of Palliative Care |
| 8       | Spiritual Aspects of Palliative Care |
| 9       | Applying our Heart, Head, and Hands: Bringing Together Passion, Knowledge, and Action for Quality Palliative, End-of-Life, and Bereavement Care |

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Table 5. Advocating for Clinical Excellence: Transdisciplinary Palliative Care Education (ACE) Curriculum Modules

| MODULES | MODULES |
|---------|---------|
| 1       | Moral Imperative |
| 2       | Advocacy and Change |
| 3       | Personal Death Awareness |
| 4       | Ethical Obligations of Psycho-Oncology Professionals in Palliative Care |
| 5       | Transdisciplinary Team Work and Team Building |
| 6       | Physical Aspects of Palliative Care |
| 7       | Psychosocial Aspects of Palliative Care |
| 8       | Spiritual Aspects of Palliative Care |
| 9       | Applying our Heart, Head, and Hands: Bringing Together Passion, Knowledge, and Action for Quality Palliative, End-of-Life, and Bereavement Care |
studies are examining strategies to enhance communication, 4 are studying methods to minimize pain and fatigue, 2 are examining the use of measurement tools, and 2 are focused on health care systems. Four of these studies center on underserved populations.

**Implications for Clinicians**

Care for cancer patients with serious and life-threatening illness and for their families needs improvement. Untreated physical symptoms, poor communication between providers and patients, and treatment decisions in conflict with patient and family preferences characterize the current standard of health care for our sickest and most vulnerable patients. The field of palliative care was developed in direct response to the unmet needs and wishes of patients and their families, and the accomplishments of this interdisciplinary specialty over the past decade have been remarkable. Nonetheless, serious barriers to palliative and end-of-life care implementation remain.

Clinicians are urged to learn more about palliative care in order to overcome some of these barriers. Clinicians cannot practice what they do not know, and, therefore, attending local and national presentations on palliative care to increase their knowledge is an essential initial step. This can occur through local presentations, national meetings, online courses, and individual reading and exploration.

Next, clinicians should support the education and training of others—those involved in implementation of palliative care on an institutional level and those with whom they work on a daily basis. Support for colleagues to attend a CAPC course, an ELNEC course, or the ACE course will result in increasing the knowledge of the team and prepare them for improved patient care as well as support for institutional change.

Clinicians can review new research findings for palliative and end-of-life care and apply these findings to daily care of patients. These are generally posted on the NPCRC Web site. Resources to improve care for pa-

| PRINCIPLE INVESTIGATOR | AWARD | YEAR | INSTITUTION | PROJECT TITLE |
|------------------------|-------|------|-------------|--------------|
| Sheryl Zimmerman, PhD  | Pilot | 2007 | University of North Carolina, Chapel Hill | Measuring the Quality of Dying in Residential Long-Term Care |
| Marcia Grant, RN, DNSc  | Pilot | 2007 | City of Hope National Medical Center | QOL Concerns for Pts Receiving IP Chemo for Carcinomatosis |
| Robert Arnold, MD       | Pilot | 2007 | University of Pittsburgh | Critical Care Communication (C3): Teaching Intensivists’ Communication Skills |
| Christina Ulrich, MD    | CDA  | 2007 | Dana Farber Cancer Institute/Children’s Hospital Boston | Investigating Symptom Control in Advanced Cancer: A Focus on Fatigue |
| Helene Starks, PhD, MPH | CDA  | 2007 | University of Washington | Palliative Care Consults: A Mixed Methods Evaluation of Referral Processes and Outcomes |
| Melissa Carlson, PhD, MBA, MPH | CDA | 2007 | Mount Sinai School of Medicine | Understanding Service Delivery in Hospice |
| Kimberly Johnson, MD, MPH | CDA | 2007 | Duke University Medical Center | Organizational Variability and Racial Disparities in Hospice Use |
| Joseph Shega, MD        | CDA  | 2008 | Northwestern University | Non-cancer Pain in Persons with Dementia: A Disabling Relationship? |
| Wendy Anderson, MD, MS  | CDA  | 2008 | University of California, San Francisco | Hospitalist Communication with Seriously Ill Patients and Their Relatives |
| Elisabeth Dellon, MD, MPH | CDA | 2008 | University of North Carolina | Improving Communication about Goals of Care and Decision-Making about Intensive Treatments for Patients w/ Cystic Fibrosis |
| Marie Bakitas, PhD, DNSc | CDA  | 2008 | Dartmouth College | Decision Making and Decision Support Needs of Women with Metastatic Breast Cancer |
| Greg A. Sachs, MD       | Pilot | 2008 | Indiana University School of Medicine | PEACE (Palliative Excellence in Alzheimer’s Care Efforts) in Indiana |
| Kathleen A. Puntillo    | Pilot | 2008 | University of California, San Francisco | Interventions for ICU Patients’ and Families’ Symptoms |

QOL indicates quality of life; Pts, patients; IP, intra-peritoneal; ; ICU, intensive care unit.
patients with serious and life-threatening cancers are available through the ACS, the NPCRC, and the PRC Web sites. Clinicians can ask patients and families about their goals for care and collaborate in selecting treatment options.

Continued efforts are needed to overcome barriers to successful implementation of palliative and end-of-life care for patients with cancer. The National Guidelines for Palliative Care can provide a quality yardstick for evaluating current clinical practice.

Summary

In summary, multidisciplinary educational initiatives, in clinical applications, and research studies have begun to move palliative and end-of-life care toward the recommendations identified in the National Consensus Guidelines. Continued efforts on all fronts will be needed to identify compassionate and appropriate care and to disseminate this care to all clinicians caring for cancer patients.

Table 7. Currently Funded American Cancer Society (ACS) Pilot and Exploratory Projects

| INVESTIGATOR       | INSTITUTION                                      | PROJECT                                                   |
|--------------------|--------------------------------------------------|-----------------------------------------------------------|
| Joanne Wolfe, MD   | Dana Farber Cancer Institute, Boston, MA         | Evaluation of PediQUEST in Children with Advanced Cancer |
| Kristin M. Kilbourn, PhD | University of Colorado Health Sciences Center, Denver, CO | Support by Telephone for Caregivers in Hospice (Support TECH) |
| Judith E. Nelson, MD, JD | Mount Sinai School of Medicine, New York, NY | Integrative Palliative Care in Stage III Non-Small Cell Lung Cancer |
| Frederick J. Meyers, MD | University of California, Davis Medical Center, Sacramento, CA | Latino Palliative Care Cancer Study |
| Joan Teno, MD       | Brown University, Providence, RI                 | Hospices Organized to Promote Excellence (HOPE)            |
| Elana Evan, PhD     | University of California, Los Angeles, Los Angeles, CA | Active Listening Communication Intervention in Pediatric Palliative Care |
| Jeanne S. Mandelblatt, MD, MPH | Georgetown University, Washington, DC | End of Life Caregiving in Latinos and Whites |
| Elizabeth K. Vig, MD | University of Washington, Seattle, WA           | Using a Navigator to Facilitate Older Adults’ Cancer Management Decisions |
| Donna S. Zhukovsky, MD, CM | The University of Texas, M. D. Anderson Cancer Center, Houston, TX | Symptom Profiles in English and Spanish-speaking Children with Cancer |
| Saul N. Weingart, MD, PhD | Dana Farber Cancer Institute, Boston, MA | Understanding the Risk of Severe Pain Among Patients with Advanced Cancer |
| Gary G. Schwartz, PhD | Wake Forest University, Winston-Salem, NC        | Paricalcitol for Palliation in Advanced Prostate Cancer: A Phase II Trial |
| Cara B. Gonzales, DDS, PhD | University of Texas Health Science Center, San Antonio, TX | Mechanisms of Oral Cancer Pain |
| Amber E. Bamato, MD | University of Pittsburgh, Pittsburgh, PA        | ICU Triage Communication and Decision Making: The Role of Race |
| Egidio Del Fabbro, MD | The University of Texas, M. D. Anderson Cancer Center, Houston, TX | Testosterone for Fatigue in Hypogonadic Males with Advanced Cancer |
| Terry A. Badger, RN, PhD | University of Arizona, Tucson, AZ | Women with Breast Cancer and Partners: Psychosocial Interventions |

References

1. Jemal A, Siegel R, Ward E, et al. Cancer statistics, 2009. CA Cancer J Clin. 2009;59: 225–249.
2. Agingstats.gov. Number of people age 65 and over, by age group, selected years 1900-2006 and projected 2010-2050. Available at: http://www.agingstats.gov/Agingstatsdotnet/Main_Site/Data/2008_Documents/Population.aspx. Accessed June 14, 2009.
3. National Consensus Project for Quality Palliative Care. Clinical Practice Guidelines for Quality for Palliative Care. 2nd ed. Pittsburgh, PA: National Consensus Project; 2009.
4. Center to Advance Palliative Care. New analysis shows hospitals continue to implement palliative care programs at rapid pace. New medical subspecialty fills gap for aging population. Available at: http://www.capc.org/news-and-events/releases/news-release-4-14-08. Accessed June 9, 2009.
5. Morrison RS, Dietrich J, Meier DE; for the Center to Advance Palliative Care and the National Palliative Care Research Center. America’s Care of Serious Illness. A State-by-State Report Card on Access to Palliative Care in Our Nation’s Hospitals. New York, NY: Center to Advance Palliative Care; 2008.
6. IOM (Institute of Medicine). Ensuring Quality Cancer Care Through the Oncology Workforce: Sustaining Research and Care in the 21st Century: Workshop Summary. Washington, DC: The National Academies Press; 2009.
7. American Association of Medical Colleges (AAMC). Forecasting the Supply of and Demand for Oncologists: A Report to the American Society of Clinical Oncology (ASCO) from the AAMC Center for Workforce Studies. 2007. Available at: http://www.asco.org/ASCO/Downloads/Cancer%20Research/Oncology%20Workforce%20Report%20FINAL.pdf. Accessed January 14, 2009.

8. Grol R, de Maeseneer J, Whitfield M, Mokkink H. Disease-centered versus patient-centered attitudes: comparison of general practitioners in Belgium, Britain and The Netherlands. Fam Pract. 1990;7:100–103.

9. Shalkowski L, O'Leary K, Demko L. Designed for success: developing and implementing a pilot breast navigation program using the Six Sigma methodology. Oncol Iss. 2009;24:24–33.

10. Singer PA, Martin DK, Kelner M. Quality end-of-life care: patients’ perspectives. JAMA. 1999;281:163–168.

11. Desbiens NA, Wu AW. Pain and suffering in seriously ill hospitalized patients. J Am Geriatr Soc. 2000;48(5 suppl):S183–S186.

12. Sirovich BE, Gottlieb DJ, Welch HG, Fisher ES. Regional variations in health care intensity and physician perceptions of quality of care. Ann Intern Med. 2006;144:641–649.

13. Stanford University End of Life Online Curriculum. Overview of Palliative Care: Where Do Patients Die? Available at: http://endoflife.stanford.edu/M00_overview/where_death.html. Accessed June 14, 2009.

14. Harrington SE, Smith TJ. The role of chemotherapy at the end of life: “when is enough, enough?” JAMA. 2008;299:2667–2678.

15. Coyne P, Paice JA, Ferrell BR, et al. Oncology End-of-Life Nursing Education Consortium training program: improving palliative care in cancer. Oncol Nurs Forum. 2007;34:801–807.

16. Emanuel LL, von Gunten CF, Ferris FD, eds. The EPEC Curriculum: Education for Physicians on End-of-life Care. Available at: http://www.EPEC.net: The EPEC Project, 1999.

17. Robinson K, Sutton S, von Gunten CF, et al. Assessment of the Education for Physicians on End-of-Life Care (EPEC) Project. J Palliat Med. 2004;7:637–645.

18. Grant M, Hanson J, Mullan P, Spolum M, Ferrell B. Disseminating end-of-life education to cancer centers: overview of program and of evaluation. J Cancer Educ. 2007;22:140–148.

19. Otis-Green S, Ferrell B, Spolum M, et al. An overview of the ACE Project-advocating for clinical excellence: transdisciplinary palliative care education. J Cancer Educ. 2009;24:120–126.

20. Otis-Green S, Ferrell B. Professional education in psychosocial oncology. In: Holland J, ed. Psycho-Oncology, 2nd ed. New York, NY: Oxford University Press. (In Press).