

# Surgical Palliative Care: Recent Trends and Developments

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## KEYWORDS

- Palliative care • Surgical palliative care • Palliative surgery
- Symptom management • End-of-life care

## VIGNETTES: THEN AND NOW

### 1985

A 55-year-old woman with a history of stage III ovarian carcinoma, 1 year after total abdominal hysterectomy, bilateral salpingo-oophorectomy and omentectomy, and several cycles of cisplatin-based chemotherapy, presents at a 350-bed regional medical center with increasing abdominal pain and distention, nausea, and vomiting. She was told she was stable at her last outpatient oncology evaluation 2 months previously when she was complaining of abdominal pain, numbness in her feet, and loss of appetite. She is receiving no regular medications except propoxyphene with acetaminophen (Darvocet) as needed for abdominal pain. On physical examination she is pale and cachectic. She has diminished breath sounds with dullness to percussion at each lung base, more so on the right. Her abdomen is distended with a remote midline incision.

Bowel sounds are high pitched. She has shifting dullness to percussion and multiple palpable abdominal masses. She has no guarding. Plain abdominal radiographs are consistent with a small-bowel obstruction. Bilateral moderate-sized pleural effusions are noted on the chest radiograph. The surgeon tells her he thinks she has a bowel obstruction from her cancer and he would like to avoid operating if at all possible. A nasogastric (NG) tube is inserted and placed to continuous suction. She is not given opioid analgesia because of the surgeon's fear of masking peritoneal signs. After 5 days of nonoperative therapy the patient is advised that her condition mandates surgery because of persistent obstruction and fears of potential gangrenous bowel. She signs an operative consent for exploratory laparotomy, possible bowel resection, removal of tumor, possible formation of ostomy, and insertion of central venous catheter. Potential complications listed include failure to remove the entire tumor,

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reobstruction, bleeding, bowel injury, wound hernia, fistula formation, and pneumothorax. The patient confides to her nurse that she is worried the surgeon, "will not be able to remove all of the tumor." The patient proceeds to an exploratory laparotomy by an experienced general surgeon assisted by a third-year surgical resident. While at the scrub sink, the surgeon tells the resident, "This will probably be an exercise in futility. I feel like an executioner. At least this way, she might not live the rest of her life with an NG tube stuck down her nose." After making a generous midline incision, a large amount of ascites and multiple points of small-bowel obstruction secondary to bulky tumor are noted. Additionally, extensive studding of all peritoneal surfaces with tumor is noted. A gastrostomy for drainage is placed and subclavian venous access is established for administration of total parenteral nutrition. The surgeon discloses the findings to the patient's husband in a busy waiting room. "Unfortunately, there was nothing we could do but palliate her with a gastrostomy tube. We will see what the oncologists can recommend and give her intravenous nutrition so she will not starve." The following day, the same findings are disclosed to the patient in the same fashion as disclosed to her husband by the surgeon during morning rounds. The patient asks, "What happens next?" to which the surgeon responds, "It's in God's hands at this point." The patient's postoperative analgesia orders specify meperidine 25 to 50 mg intramuscularly (IM) every 3 hours as needed and hydroxyzine 25 mg IM every 3 hours as needed. The consulting oncologist tells the patient he would like to defer chemotherapy until the patient "becomes stronger." A close friend of the patient privately asks the surgeon, "what he knows about hospice," to which he scornfully responds, "What are they going to do for her, kill her with morphine?" On the fourth postoperative day, bilious drainage begins draining from the midline incision at the site of an external retention suture, which necessitates placement of an ostomy drainage bag. Two days later, the patient becomes lethargic, hypotensive, and anuric and is transferred to the surgical intensive care unit (SICU). Because of the hypotension, her nurse withholds her pain medication but exhorts her to "not give up." Because of ongoing hypotension and hypoxemia, an arterial line and Swan-Ganz catheter are inserted, vasopressor support is initiated, and the patient is intubated for ventilator support. She receives multiple infusions of albumin and frequent boluses of crystalloid. A right-sided thoracostomy tube is placed because of an increasingly large pleural effusion. After 2 days, the patient becomes increasingly obtunded and hypotensive, and then develops ventricular ectopy, which is followed by ventricular fibrillation. She is defibrillated but is unable to resume a cardiac rhythm and is pronounced dead by the ICU resident. The family is notified by telephone and asked to come to the hospital for her personal effects. One week later her case is presented at the surgical department's mortality and morbidity rounds because of her postoperative complication and death. The consensus of the surgeons present is "What else could you [the surgeon] do?"

### **2010**

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A 55-year-old woman with a history of stage III ovarian carcinoma, 3 years status after total abdominal hysterectomy, bilateral salpingo-oophorectomy and omentectomy, and subsequent carboplatin, paclitaxel, and topotecan chemotherapy presents at a 350-bed regional medical center with increasing abdominal distention, abdominal pain, nausea, and vomiting. Further questioning reveals she has dyspnea and profound weakness. She is an active member of an ovarian cancer support group facilitated by a health care professional. A palliative care team at the outpatient cancer treatment center actively follows her for management of her cancer-related pain and chemotherapy-induced neuropathic pain. She is receiving 160 mg extended-release morphine daily, with 20 mg immediate-release morphine every 2 hours as needed

for breakthrough pain and gabapentin 600 mg daily for her neuropathic pain. Additionally, she is taking megestrol acetate 600 mg daily for appetite stimulation and mirtazapine 15 mg daily for depression and sleeplessness.

At the time of her admission, her surgeon assesses her pain during which she reports generalized abdominal pain with an intensity of 8 to 9 out of 10 with pain spikes “above 10.” Her pain was well controlled 1 week previously. On physical examination she is pale and cachectic. She has diminished breath sounds with dullness to percussion at each lung base, more so on the right. Her abdomen is distended with a remote midline incision.

Bowel sounds are high pitched. She has shifting dullness to percussion and multiple palpable abdominal masses. She has no guarding. The surgeon explains to the patient that he would like to make her more comfortable before initiating any diagnostics or conversation to which she promptly agrees. He orders morphine 20 mg intravenously (IV) every 4 hours with 10 mg IV every 2 hours as needed for breakthrough pain. Following this, a nasogastric tube is inserted and two liters of bilious fluid is drained.

The surgeon explains to her that he will now order a CT scan of the abdomen and pelvis with contrast to determine the site of obstruction, its probable cause, and extent of her disease. He asks her to invite others of her choosing to be present later when he discusses the results in her room. He states that he is concerned that among the possible reasons for her clinical presentation is progressing disease, in which case several important decisions will have to be made. The patient indicates she will have her husband present. CT of the abdomen and pelvis shows evidence of small-bowel obstruction, a small amount of ascites, and disseminated bulky disease. She also is noted to have a large right pleural effusion. Laboratory results include prealbumin (7 mg/dL), hematocrit (23%), and CA 125 (7000 U/mL). The surgeon asks the patient’s nurse to accompany him during his meeting with the patient and her husband. He turns off his beeper, introduces himself to the patient’s husband and sits down in a chair next to the patient. After he determines that her pain is now well controlled (“2 out of 10, much better”), the surgeon asks them what they already know about her illness and if they are willing to hear any new important information. Both indicate their willingness to proceed with the discussion. The patient says, “I know it isn’t looking good, my oncologist said we have about run out of options. My CA 125 has been going up but I am hoping it’s the chemo that has been making me so weak and sick. My support group has been telling me to seek another opinion. I don’t want to give up for my family’s sake,” looking pleadingly at her husband, “but I don’t think I can do this anymore.” The surgeon acknowledges how difficult this must be with her physical discomfort and her concerns for her family. The husband speaks up and says, tearfully, “I just don’t want her to suffer.” The surgeon acknowledges that he can see that this is his wish. He then tells them that the scan and blood tests have confirmed their fears, that the cancer has significantly progressed and has now caused a bowel blockage. He tells them there is also a large amount of fluid in the right chest cavity. The surgeon remains silent as she reacts to the news with a knowing downward look nodding her head and crying softly. He offers her a tissue and states, “I can see this has come as a sad disappointment to you,” turning to the husband, “and you.” After a long period of silence she states, “what next?” The husband asks if surgery can relieve her blockage. The surgeon says, “Let’s go back to what you said about your wish that she not suffer and use that as the standard by which we decide what to do and what not do. Surgery is theoretically possible, although I am not recommending it for several reasons. She has some of the features that predict poor survival and quality-of-life outcomes from surgery in this situation: the fluid in her abdomen; the multiple bulky masses; and most importantly, the failure of multiple chemotherapy regimens to control the disease. Additionally, she has poor nutritional

status, and, as she has said she is tired, in the sense that her reserves are exhausted. Even if surgery relieved her blockage, it will not restore her strength or appetite.” The patient’s husband looks bewildered and states, “What do you do if you don’t operate and she can’t eat?” The surgeon responds, “Let me break this down into several answers because there are several forms of discomfort or suffering her illness can cause. We can relieve her of the symptoms of bowel obstruction and the fluid in her abdomen and chest cavities using a combination of medications and procedures less invasive than an open operation. While this is getting underway, we will work on preparing for your ongoing support after she is out of the hospital. Your question about eating is more of a challenge because we equate eating with health and survival and food is such a central part of the way we relate to others. The lack of appetite and the ability for the body to turn nutrients into beneficial protein is a part of her illness. It’s not lack of food that is making her ill, it’s her illness that is now making the benefit of food impossible, which is not starving in the usual sense of the word. The word *starving* implies that the restoration of lacking nutrients would reverse the condition. That is, unfortunately, not the case here.” The surgeon continues, looking at the husband, “You may be less distressed to know that she is probably indifferent to food and would be relieved to not have it be the focus at this point.” The patient nods affirmatively. The surgeon concludes by explaining the regimen of medications he will use to give her relief from her bowel obstruction, explaining that she may have an occasional emesis but that is generally acceptable to patients if their nausea and pain are controlled. He then tells her he will be in again later to see if she is getting relief and to answer further questions. In addition to the morphine she is receiving, he orders octreotide 250 µg subcutaneously every 12 hours and prochlorperazine 10 mg IV every 6 hours, and then removes her nasogastric tube. When he returns several hours later she is comfortable. She tells the surgeon, “I want to go home.” The surgeon confirms with them that they have accepted his recommendation not to have surgery and instead focus on keeping her comfortable and expediting her return home. He states that he is confident that she can be kept comfortable in her home setting with the proper support. She then asks him, “How long can this go?” The surgeon asks the patient and her husband if they are ready to discuss prognosis at this time, to which they both respond definitely yes. The surgeon says, “When we give estimates, we are giving averages of all patients with similar problems, not necessarily what will happen to you. Our best way of making an estimate is the change in the person’s functional status, in other words, what you are able to do during a day. If you are bedbound and with a known progressive, life-limiting illness such as yours and requiring total care, survival is measured in weeks or less.” Silence follows. The surgeon tells them, “I can see how sad this is making you.” The patient says, “Actually, that is what I figured. When can I go?” The surgeon responds by telling them she could leave as soon as her home is ready and her symptoms are reliably controlled. He tells them that the best support available to fulfill her wish to be home and keep her symptoms controlled would be a hospice program. The surgeon tells them it would be prudent to clarify at this time her future preferences for interventions, such as cardiopulmonary resuscitation, ventilator support, intravenous hydration, and artificial nutrition. The patient says she is no longer interested in these interventions, to which the surgeon responds that he supports her preferences because of the marginal benefit these interventions would bestow during this phase of her illness. He asks them if they think they have the spiritual support they would want at this time, to which they respond they have already met with their pastor earlier in the day. Although her medication is controlling her symptoms well, the patient elects an endoscopic percutaneous gastrostomy (PEG) insertion for drainage. Additionally, the right pleural

effusion is drained under CT guidance. Arrangements with a home hospice agency are subsequently made and she returns home the day following PEG placement. Her symptoms remain controlled at home and she is even able to eat small amounts of low-residue food. She succumbs 10 days later, peacefully, surrounded by her family. Several days later, during calling hours before her funeral, the patient's husband gives the surgeon a long silent hug when the surgeon greets him. He says to the surgeon, "You could not have done more for me and my wife."

Palliation has been an essential, if not the primary, activity of surgery during much of its history. However, it has been only during the past decade that the modern principles and practices of palliative care, which were developed in nonsurgical specialties in the United States and abroad, have been introduced to surgical institutions, widely varied practice settings, education, and research. Because of its relevance to surgery, the specialty of anesthesia will inevitably be influenced by these developments as well. The Ether Monument in the Boston Public Garden, erected by a citizen grateful for the contribution of anesthesia to the relief of human suffering, reminds us that the specialty of anesthesia, like that of surgery, is rooted in the impulse to relieve suffering, something that may be overlooked in an era of increased focus on physiologic monitoring and perioperative risk reduction.

The experience and success of the hospice movement in the United States and abroad undoubtedly has facilitated the acceptance and development of the field of palliative medicine, although not without some resistance from all medical specialties and the public because of hospice's association with the dying process and the persistence of a death-denying popular and medical culture. The conceptual and psychological challenge for surgeons is the assimilation of principles (patient/family unit as the unit of care, relief of suffering, spiritual growth) first learned from hospice care, which were subsequently adapted to the much larger population of patients with advanced, but not necessarily terminal, illness. This reframing of the goal of care requires a shift from the biophysical (disease-focused) model to a model centered upon suffering or existential considerations independent of the treatment's impact upon the disease processes.

Palliative care is interdisciplinary care that aims to relieve suffering and improve quality of life for patients and their families in the context of serious illness. It is offered simultaneously with all other appropriate medical treatment and its indication is not limited to situations associated with a poor prognosis for survival. Palliative care strives to achieve more than symptom control, but it should not be confused with non-curative treatment. Palliative care is not the opposite of curative treatment. Noncurative treatment is the opposite of curative treatment. *Surgical* palliative care is the treatment of suffering and the promotion of quality of life for patients who are seriously or terminally ill under surgical care (**Table 1**).<sup>1</sup>

The previous strongly contrasting vignettes, taken directly from the author's clinical experience, demonstrate the impact of the growing field of palliative care on surgical practice. Many of the interventions; communication approaches; and the scientific, ethical, and legal underpinnings for the care demonstrated in the second vignette were not available or well developed as recently as the 1990s, and in many hospitals, not even in the last decade. What has changed for surgeons in the interim is their growing capacity to respond to the complexity and potential of patients' experience of serious illness rather than narrowing the scope of the patient encounter by conceptualizing it as management of stage IV disease. Using the operation as the ultimate metaphor for surgeons, the physical operation used to manage a terminal situation in 1985 has evolved into a more expanded concept of the operation, an interdisciplinary exercise that restores comfort, dignity, and hope. This evolution could not

Table 1 Palliative care definitions	
Palliative care	Medical care provided by an interdisciplinary team, including the professions of medicine, nursing, social work, chaplaincy, counseling, nursing assistant, and other health care professions, focused on the relief of suffering and support for the best possible quality of life for patients facing serious life-threatening illness and their families. It aims to identify and address the physical, psychological, spiritual, and practical burdens of illness. <sup>45</sup>
Palliative medicine	Palliative medicine is the study and management of patients with active, progressive, and far-advanced disease, for which the prognosis is limited and the focus of care is the quality of life. <sup>46</sup>
Surgical palliative care	<i>Surgical</i> palliative care is the treatment of suffering and the promotion of quality of life for patients who are seriously or terminally ill under surgical care. <sup>1</sup>
Palliative surgery	A surgical procedure used with the primary intention of improving quality of life or relieving symptoms caused by advanced disease. Its effectiveness is judged by the presence and durability of patient-acknowledged symptom resolution.
Hospice	<i>Hospice</i> is variably used to describe a (1) philosophy of care, (2) a place of care, or (3) an insurance benefit, such as the Medicare Hospice Benefit. Hospice describes supportive care for patients and their families during the patients' final phase of life-limiting illness. The traditional goal of hospice care is to enable patients to be comfortable and free of pain, so that they live each day as contentedly as possible.

have occurred, however, without a concurrent shift in the public and the courts' perception of death.

## PALLIATIVE MEDICINE: ITS RECOGNITION AND LEGITIMIZATION IN MEDICAL PRACTICE

Palliative medicine was first recognized as a medical specialty in the United Kingdom where it evolved from the modern hospice movement that also began there during the 1960s and 1970s. It was recognized in Great Britain as a medical subspecialty as early as 1987. Balfour Mount, a urologic oncologist, established the world's first acute care hospital in-patient palliative care service at the Royal Victoria Hospital in Montreal in 1974. His prescient work anticipated the need for these services in an acute care (and surgical) environment that is only now being validated by outcomes studies. He coined the term, *palliative care*.<sup>2</sup> About that time, the first hospice program was established in the United States and the hospice movement was well established here before the field organized and differentiated itself sufficiently to evolve into a medical subspecialty.

The organizational beginnings of the specialty of hospice and palliative medicine in the United States occurred in 1988 when 250 physicians formed the Academy of Hospice Physicians. By the end of 1996, the organization had grown, changed its name to the American Academy of Hospice and Palliative Medicine (AAHPM), and sponsored the American Board of Hospice and Palliative Medicine (ABHPM). The

ABHPM independently gave its first certifying examination in November 1996. As of 2006, The American Board of Medical Specialties (ABMS) and its affiliated sponsoring boards have superseded the certification process previously sponsored by ABHPM.

In 2006, the AAHPM and the American Board of Hospice and Palliative Medicine jointly succeeded in achieving recognition of the subspecialty of hospice and palliative medicine within the ABMS and the Accreditation Council for Graduate Medical Education (ACGME). Ten ABMS boards, including the American Board of Surgery and the American Board of Anesthesiology, were subsequently authorized to confer ABMS certification for Hospice and Palliative Medicine. ABMS reported a total of 1271 physicians who successfully received subspecialty certification in hospice and palliative medicine from one of the 10 cosponsoring boards following the first examination in 2008.<sup>3</sup>

Currently, there are 26 surgeons and 58 anesthesiologists certified. Critical care and pain management, both very relevant to palliative care, are other subspecialty certifications available to American Board of Anesthesiology diplomates. Following the recognition of hospice and palliative medicine by ABMS and ACGME, The Center for Medicare and Medicaid Services followed suit in 2008. During the past several years, the number of fellowships in palliative medicine has increased (as of January 2010) to a total of 74 active programs offering 181 fellowship positions, including 27 research slots. ACGME has accredited 73 of these programs. After October 2012, only those who have completed an ACGME-accredited fellowship in palliative medicine will be able to sit for the ABMS certification examination. The small number of participants emerging from palliative medicine fellowships who could be certified and those currently certified will not be adequate to respond to the needs of the nation's increasing numbers of hospice and palliative care programs. The looming certified palliative specialist shortfall should prompt practicing physicians and surgeons who are not certified in palliative medicine to familiarize themselves with the basic principles and practices of palliative care as they apply to their respective disciplines. Because the number of surgeons and anesthesiologists who will pursue fellowships in hospice and palliative medicine will be small, surgeons will have to rely on nonsurgeon palliative medicine specialists for guidance in research design, quality improvement initiatives, and promotion of palliative care.

Other developments critical for the alignment of palliative care with mainstream medicine and positioning it for further introduction into the health care continuum has been the issuance of guidelines and preferred practices. In 2001, with foundation funding, The National Consensus Project for Quality Palliative Care initiative was launched with members representing the leading 5 hospice and palliative care organizations in the United States. Consensus guidelines were subsequently issued in 2004.<sup>4</sup> Using these guidelines as a foundation (**Box 1**), The National Quality Forum established its *National Framework and Preferred Practices for Palliative and Hospice Care*.<sup>5</sup>

The palliative care movement has been shaped and accelerated by changing demographics, failures of the current health care system, the strengthening of individual's autonomy in end-of-life matters in judicial opinion during the past 3 decades, and the favorable popular impact of the hospice movement. In addition, considerable investment by private philanthropic organizations, including the Robert Wood Johnson Foundation<sup>6</sup> and The Open Society Institute<sup>7</sup> founded by George Soros, provided the support necessary to develop the infrastructure and maintain the momentum of the field following the earlier success of hospice whose launching was also greatly benefited by private philanthropic funding before the passage of the Medicare Hospice Benefit in 1983. The success in leveraging millions of dollars of federal

**Box 1****National Quality Forum's 8 domains of quality palliative and hospice care**

1. Structures and processes of care
2. Physical aspects of care
3. Psychological and psychiatric aspects of care
4. Social aspects of care
5. Spiritual, religious, and existential aspects of care
6. Cultural aspects of care
7. Care of patients who are imminently dying
8. Ethical and legal aspects of care

*From National Quality Forum. A national framework and preferred practices for palliative and hospice care quality. A consensus report. Washington, DC: National Quality Forum; 2006. Available at: [http://www.qualityforum.org/Publications/2006/12/A\\_National\\_Framework\\_and\\_Prefered\\_Practices\\_for\\_Palliative\\_and\\_Hospice\\_Care\\_Quality.aspx](http://www.qualityforum.org/Publications/2006/12/A_National_Framework_and_Prefered_Practices_for_Palliative_and_Hospice_Care_Quality.aspx). Accessed January 14, 2011; with permission.*

support by the private sector for the dying stands out as an instructive and encouraging example for future initiatives related to revision of the health care system. Formerly rapidly fatal diseases, such as cancer, cardiovascular disease, and HIV, have become chronic, life-limiting illnesses. This development has contributed to the expansion of the elderly population that has contributed to the dramatically increasing and unsustainable per capita expenditures<sup>8</sup> for costly new technologies and drugs. An unforeseen consequence of technological success has been the fragmentation of medical care from the subspecialization that has accompanied these advances. This fragmentation is undermining primary care that has historically been the specialty of knowing the individual in their medical and social context. The erosion of primary care has too often left no effective physician advocate for patients in situations where vision and guidance far beyond the repertoire of surgery and medications are needed. Finally, there has been increased recognition of family caregivers and their unmet practical, social, and psychological needs.<sup>9</sup> Because of its patient/family focus; its emphasis on quality of life; and its recognition of the importance of social, psychological, and spiritual needs, palliative care appears suited to respond to many of these needs and to correct some of the failings of the current health care system.

Given these developments, palliative care programs have not surprisingly proliferated in the United States during the past decade. As of 2008, 53% of hospitals with more than 50 beds in the United States had a palliative care program.<sup>10</sup> Most of these are in-hospital programs, although nursing homes, outpatient treatment centers, and Veterans Affairs hospitals are offering these services. Two initiatives, the Center to Advance Palliative Care<sup>11</sup> and the Veterans Affairs Hospice and Palliative Care Initiative,<sup>12</sup> have greatly facilitated the introduction of palliative care into the in-hospital setting. As the concept has expanded across the spectrum of health care settings, it has also penetrated more than a dozen medical subspecialties in varying degrees whether through sponsorship of the American Board of Internal Medicine subspecialty certification in hospice and palliative medicine or attention to palliative care in position papers, specialty meetings, and journals.

One of the most notable trends, particularly relevant to surgeons and anesthesiologists, has been the acceptance of palliative care in the critical care setting (see article



by Christine C. Toevs elsewhere in this issue for further exploration of this topic). This acceptance might have been inconceivable to many a decade ago, although certainly not surprising given the similarity of illness severity of patients served in the ICU and patients considered suitable for palliative care elsewhere. Palliative care and critical care have 4 fundamental similarities: (1) Both have a strong tradition of team-based care. (2) Both identify patients and families as a unit, which has been a longstanding precept of palliative care for philosophic reasons related to social and psychologic support of patients, while the patient/family is establishing itself as a treatment unit in critical care medicine because of the practical and legal necessity to turn to surrogates for direction and future care planning. Wall and colleagues<sup>13</sup> noted that family satisfaction in the ICU setting was higher for patients that died in the ICU than for families of survivors. They speculate that the increased attention by staff to families of non-survivors was the reason. (3) Both palliative care and critical care recognize that symptom control is mandatory for improvement of function even if only for the function of hope. (4) Both recognize and emphasize the role of communication. Good communication skills, a prerequisite for all palliative care, have recently received closer attention in critical care.<sup>14</sup> There is a high incidence (~30%) of posttraumatic stress disorder (PTSD) among families of ICU survivors, and evidence that the risk of PTSD can be ameliorated by communication with family before patients die or leave the ICU alive.<sup>15</sup> Two models of palliative care have been proposed for the ICU setting: the consultative model uses palliative care consultants to work with ICU staff to guide patients/families identified as not likely to survive the hospitalization and the integrative model seeks to incorporate palliative care principles and interventions in the daily practice of the intensive care unit team for all patients and families facing critical illness.<sup>16</sup>

For surgeons, burn care is the most obvious model for what critical palliative care should look like. It is an outstanding model for palliative care because the care of patients is not based on prognosis but their need for comfort while attempting to preserve or improve function. There is arguably no experience for patients who are critically ill that compares with a major burn for registering extremely high levels of distress in all dimensions of perception (physical, psychological, socioeconomic, and spiritual). Burns are truly a transformative experience for all involved for that reason and for some an end-of-life article. Until recently, burn care was the only surgical care where narcotics were routinely liberally and appropriately employed if for no other reason to make patients manageable and functional as they would be for patients receiving palliative care. This principle was established early on in the hospice movement: the relief of pain is a major prerequisite to the restoration of hope.

Over the past decade, increasing evidence has documented the social, psychological, economic, and even survival benefits for patients in the hospital and outpatient setting resulting from palliative care consultation and interventions. Palliative care has been shown to be patient-centered, beneficial, safe and not associated with earlier death, and more efficient in the use of health care resources and cost. Hospice care received substantially higher satisfaction ratings by families of decedents when compared with standard home health care, hospital care, and nursing home care.<sup>9</sup> Given this finding, it is not surprising that several studies have shown that palliative care improves pain and nonpain symptom control and family satisfaction with care in the public and Veterans' hospital settings.<sup>17-20</sup>

For years, palliative care professionals have suspected that palliative care improves survival in some patient populations. Several reasons could be invoked: avoidance of toxic nonbeneficial treatments, improved compliance with disease-directed treatments, and physiologic benefits resulting from effective symptom control (ie, relief

of angina or dyspnea in patients with cardiomyopathy). In a 2007 study, the mean survival was 29 days longer for hospice patients than for nonhospice patients.<sup>21</sup> A recent study by Temel and colleagues<sup>22</sup> demonstrated early palliative care for patients with metastatic non-small-cell lung cancer is not only associated with significantly better quality of life, mood, and less aggressive treatment at end of life but also *increased survival*. Increased survival has been identified by Easson<sup>23</sup> as a potential outcome measure for palliative surgical procedures that had previously been recommended only for symptom control.

A significant factor in the rapid proliferation of hospital-based palliative care programs has no doubt been the cost avoidance realized by the reduction in hospital and ICU stays and costly invasive procedures resulting from effective palliative care team intervention. Not only has palliative care reduced hospital costs,<sup>24</sup> reduced days in the ICU and hospital,<sup>25</sup> it has also not been associated with increased mortality or morbidity. In some cases, the avoidance of invasive procedures that would have been performed on debilitated patients has probably increased their survival as well. The 30-day postoperative mortality and morbidity of patients with advanced cancer is considerable.<sup>26</sup> Despite these benefits, palliative care has not been timely<sup>27</sup> in the hospital setting.

Charles Von Gunten, currently Editor-in-Chief of *Palliative Medicine* and Chairman, Test Committee, Hospice and Palliative Medicine, American Board of Medical Specialties, and previous holder of many leadership positions in palliative care organizations, summarizes the change in palliative care over the past decade:

“To me, the most significant change is the move from palliative care as an ‘option’ or a ‘choice’ to proven gold standard of care that should be offered to all patients. We should be giving up any ‘choice’ language. It should all be focused now on ‘how’.” (Charles Von Gunten, MD, personal communication, September 9, 2010).

For an extensive and scholarly review of the growth and current status of palliative care in the United States, the reader is referred to Meier D. The development, status, and future of palliative care. In: Meier D, Isaacs SL, Hughes R, editors. *Palliative care: transforming the care of serious illness*. San Francisco: Jossey Bass; 2010. p. 1–464. Available at <http://www.rwjf.org/files/research/4558.pdf>.

See **Table 2** for a list of additional resources for surgeons interested in palliative care.

## **SURGERY AND PALLIATIVE CARE: THE ROLE OF THE AMERICAN COLLEGE OF SURGEONS**

Over the past 15 years, the American College of Surgeons has been the primary catalyst for the recognition of palliative care in the field of surgery, primarily through educational efforts. The college has also endorsed palliative care in a series of professional standards statements<sup>28,29</sup> and public policy recommendations.<sup>30</sup> Much credit is due to the personal interest of the highest level of the college’s leadership and its Division of Education, the sustained efforts of Wendy Husser who initiated the surgical palliative care series for the *Journal of the American College of Surgeons*, and Linn Meyer who never missed an opportunity to advocate for palliative care through her administration of public relations outlets for the college. During the past 2 decades, the college’s perspective on end-of-life matters has evolved from debating physician-assisted suicide (PAS) in the mid to late 1990s to recognizing and implementing clinical approaches to palliative care in the current decade. No matter what position was taken in the physician-assisted suicide debate, it did little to improve symptom relief and clinical guidance for thousands of patients and families with life-limiting illness.

Center to Advance Palliative Care Available at: <a href="http://www.capc.org/">http://www.capc.org/</a>	The Center to Advance Palliative Care provides health care professionals with tools, training, and technical assistance necessary to start and sustain palliative care programs in hospitals and other health care settings
Education of Physicians about End-of-Life Care Available at: <a href="http://www.eperc.mcw.edu/">http://www.eperc.mcw.edu/</a>	This site has been designed for use by medical school course/clerkship directors, residency, and continuing education program directors, medical faculty, community preceptors, or other professionals who are (or will be) involved in providing end-of-life instruction to health care professionals in training
Dunn G, Martensen R, Weissman D, editors <i>Surgical palliative care: A resident's guide</i> Chicago: American College of Surgeons. Cuniff-Dixon Foundation; 2009 Available through American College of Surgeons 633 N, St Clair Street Chicago, IL 60,611–3211	Guide introducing surgeons in training to the basic principles and practices of surgical palliative care
Hospice and Palliative Care Training for Physicians: UNIPAC, 3rd edition American Academy of hospice and Palliative Medicine Available at: <a href="http://www.aahpm.org/resources/default/training.html">http://www.aahpm.org/resources/default/training.html</a>	9 module self-study program for physicians, which introduces hospice and palliative care concepts and practices for a variety of patient groups (cancer, chronic obstructive pulmonary disease, dementia, HIV/AIDS, pediatrics)
Walsh D, Caraceni AT, Fainsinger R, et al, editors <i>Palliative Medicine</i> . Philadelphia: Saunders-Elsevier; 2009	Hardbound and online textbook of palliative medicine with contributions from many pioneers of the specialty

In the late 1990s, most surgeons would have equated end-of-life care with hospice, PAS, or medical ethics. Since then, a broader understanding of the relevance of quality-of-life outcomes to day-to-day decision making and treatments for patients who are seriously ill has emerged. This understanding is reflected in 2 position statements of the college in 1998 and 2005. The first statement refers specifically to end of life and hospice, reinforcing the impression that palliative care is something that happens in the last stages of life. The subsequent statement is framed in language that adapts palliative principles to a much more broad population for whom death is not imminent or certain but for whom distress is likely, such as those in a critical care setting or with a new diagnosis of cancer. Currently, the college is focusing on the education of surgeons and surgeons in training in the strategy and tactics of palliative care, communication, and symptom management (**Box 2**),<sup>31</sup> while not abandoning its long-standing attention to medical ethics.<sup>32</sup> A recent important contribution of the college's Commission on Cancer has been the addition of a new Cancer Program Standard for 2012 that states, "Palliative care services are available to patients on-site or by referral."<sup>33</sup>

**Box 2****List of teaching modules in surgical palliative care: a resident's guide**

- Personal awareness, self-care, and the surgeon-patient relationship
- Pain
- Dyspnea
- Delirium
- Depression
- Nausea
- Constipation
- Malignant bowel obstruction
- Cachexia, anorexia, asthenia, fatigue (wasting syndromes)
- Artificial nutrition and hydration
- Palliative surgery: definition, principles, outcomes assessment
- Pediatric palliative care
- Cross-cultural encounters
- Delivering bad news
- Goals of care/conducting a family conference
- The do not resuscitate discussion
- Palliative and hospice care referrals
- Care during the final days of life
- Discussing spiritual issues: maintaining hope

*From* Dunn G, Martensen R, Weissman D, editors. *Surgical palliative care: a resident's guide*. Chicago: American College of Surgeons. Cuniff-Dixon Foundation; 2009; with permission.

To summarize the college's contribution to the evolution of surgical palliative care over the past 2 decades, it started with its search for an effective strategy for the care of patients at the end of life following the establishment of the legal pathway to freedom from futile or undesired treatments as laid out in the landmark cases of Quinlan<sup>34</sup> (ruling allowed withdrawal of ventilator support from patient in permanent vegetative state), Cruzan<sup>35</sup> (ruling affirmed that patients who could not make decisions still retained a right to refuse medical treatment), and its acknowledgment of end-of-life issues within the limited scope of the physician-assisted suicide debate. From the previous highly intellectualized ethical discourse evolved a more practical concern about how surgeons should communicate with patients who are seriously ill, how they should manage their most troubling symptoms, and how they can contribute to the restoration of hope using their own and their patients' personal, socioeconomic, and spiritual assets. Growing public interest and awareness of end-of-life issues and its implications for future health policy advocacy has catalyzed this transition.

## **PALLIATIVE CARE AND THE AMERICAN BOARD OF SURGERY**

The American Board of Surgery was one of 10 boards of the American Board of Medical Specialties that sponsored the formation of the subspecialty of Hospice

and Palliative Medicine in 2006. A small number of surgeons have been certified to date. Up until now 2 paths to certification have been open to surgeons seeking certification in hospice and palliative medicine: experiential and fellowship. The window for grandfathering is closing, as the required 2-year period of affiliation with a hospice or palliative care team has already started for those attempting to sit for the next (2012) examination. Following 2012, completion of an ACGME-credited palliative medicine fellowship program will be required to sit for the examination. The American Board of Anesthesiology has similar requirements. Apart from offering a certification in hospice and palliative medicine, the American Board of Surgery considers palliative care skills among the expected domains of competence for surgeons seeking board certification.<sup>36</sup>

### **SURGICAL PALLIATIVE CARE ACROSS THE SPECTRUM OF SURGERY**

Currently, the concept of surgical palliative care appears to be establishing itself in critical and trauma care mainly because of the similarities of palliative care and critical care as previously outlined. Access to palliative care in that setting is still quite limited and not improved by use of triggers to prompt palliative care referrals.<sup>37</sup> However, a recent presentation<sup>38</sup> at the American College of Surgeons' 96th Annual Clinical Congress demonstrated the compatibility of palliative care for transplantation patients in all stages of the transplantation continuum. In a recent study, trauma-burn surgeons and neurosurgeons reported being better equipped to manage multidimensional suffering of patients with sudden advanced illness when collaborating with a palliative care team.<sup>39</sup> Jacobs and colleagues<sup>40</sup> published a best-practice model for end-of-life support for trauma patients and their families. It stands as a model for the application of surgical palliative care in other venues beyond trauma care because it is a systems-based and interdisciplinary model. The American Trauma Society has published a valuable contribution to surgical palliative care in *The Second Trauma Program. The Art of Communicating with Families of Trauma Patients*.<sup>41</sup> The *second trauma* that the title refers to is the emotional trauma that happens to the family of the victim, the *first trauma* is the injury to the victim. The manual outlines communication and support techniques and strategies. It also addresses specific issues, such as family support after suicide, requests for organ donation, family presence during resuscitation, and suspected abuse.

The field of surgical oncology has seen a consensus and refinement of the definition of palliative surgery (see **Table 1**). The definition that has emerged is now in alignment with palliative as understood by the rest of the field of palliative care. Other contributions will include increased use of less invasive surgical techniques and better prognostication, especially for those patients for whom operative intervention is being considered. A nomogram has recently been developed to predict 30-day morbidity and mortality for patients with disseminated malignancy undergoing surgical intervention.<sup>42</sup> This type of innovation will be a valuable adjunct to the developing field of communication. The social, ethical, and statistical complexity of designing clinical trials for palliative surgical outcomes<sup>43,44</sup> will benefit from the extensive experience and work that has been done in nonsurgical palliative care research.

### **SURGICAL PALLIATIVE CARE: WILL IT TRANSFORM SURGERY AND SURGEONS?**

What will successful implementation of palliative care in the field of surgery look like? It will be successfully established when any surgical patient who is seriously ill and their family know to request palliative care; all surgeons have the willingness, knowledge, and skills to ensure their patients will receive palliative care; and the surgical venue

will be prepared and equipped to provide palliative care. This success will require not only a change in the cognitive and technical repertoire of the surgeon but also a change of the surgical character that is willing to risk some degree of psychologic and spiritual reflection and introspection. In the past, surgeons have made similarly significant adjustments. The eighteenth century surgeon who relied on speed and callousness to accomplish life-saving amputations yielded to the more deliberate, cerebral, and gentler surgeon of the late nineteenth and twentieth century who performed reconstructions. It seems particularly appropriate in the current era of social networking and globalization to ask if the surgeon of the twenty-first century be noted for their ability to recognize the impact of their intervention beyond the merely physical aspects the patients' experience and its impact beyond the individual patient.

Palliative care is not care for the dying, but care of people with serious or life-limiting illness, some of whom will die imminently. To limit the concept of palliative care to the dying only reinforces the current Western dichotomous view of life and death, which could be summarized as all or nothing or fight or flight. The richness of palliative care lies in its recognition of the possible where there is uncertainty. There is nothing uncertain about robust health or active dying. This philosophy is an extension of the hospice philosophy that has facilitated the transition from *death as failure* to *dying as opportunity*. For those who actually are at the end of their life, palliative care offers the opportunity to die in peace instead of pieces. For those not at the end of life, palliative care offers the same hope: to live in peace, not piecemeal. The specialties of surgery and anesthesiology have too many seriously ill people in its care and has too much to offer the seriously ill with all diagnoses to not assume a leadership role for the continued growth and development of palliative care. Recent developments in the field of surgery and the anticipated development of this idea in the field of anesthesiology give reason for optimism that this will occur.

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