

Module: Palliative Surgery: Definition, Principles, Outcomes Assessment

Learning Objectives

Describe five indications for palliative surgery

Attitudes

- Reflects on the concept of a “good death”
- Believes in the importance of a shared decision-making process between the patient/surrogate and surgeon
- Recognizes their right to refuse to provide interventions that are unsafe/unindicated
- Respects patient autonomy, including the right to understand their condition and treatment limitations
- Recognizes and respects the patient's right to refuse care
- Recognizes that treatments with both curative intent and palliative intent can be delivered simultaneously
- Values the role of palliative surgery, regardless of its impact on prolonging survival
- Believes that the alleviation of suffering is a core responsibility of all physicians, even when cure is impossible

Knowledge

- Describe the difference between a noncurative procedure and palliative procedure
- Describe the considerations in planning a palliative procedure
- Describe the ethical hazards inherent in palliative surgery
- Describe the potential outcome measures for palliative surgery
- Describe the use of three adjunct therapies for palliative surgical procedures

Skills

- Demonstrate how to initiate a discussion about palliative surgery
- Demonstrate shared decision making with patients and their surrogates
- Develop an approach to help patients evaluate the risks and benefits of palliative surgery
- Demonstrate proficiency in helping patients appreciate the difference between surgeries with palliative intent versus surgeries with curative intent

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Palliative Surgery

Palliative surgery is as ancient as surgery itself, although it remains an evolving concept because of the changing face of illness, technological innovation, and developments in the moral and ethical framework within which surgeons operate.

The word *palliative* has had an almost pejorative connotation to surgeons because of the specter of failure that haunts us in the face of any incurable illness, despite the fact that incurability is an expected and natural phase of many ailments, and surgeons have much to offer patients even in the late stages of illness. The field of palliative care has grown rapidly over the past decade, as evidenced by the number of hospitals with dedicated palliative care teams having increased by 178% from 2000 to 2016. At the same time, awareness of the importance of and role for palliative surgery has improved, thereby reducing confusion about the definition of palliative surgery and leading to a greater consensus about the role of surgery in advanced, symptomatic illness. Previously, the term *palliative surgery* was used to describe a resection with microscopic or gross residual tumor left *in situ* at the end of the operation or a resection done for persistent or recurrent disease after treatment failure. Palliative surgery is now defined as surgical procedures performed with the primary *intention* of improving quality of life (QOL) or relieving symptoms caused by an advanced disease. This definition is consistent with the established principles of nonsurgical palliative care.

Palliative procedures are common in surgical practice, comprising an estimated 21% of operations performed by surgical oncologists. When one considers the palliative nature of numerous vascular, plastic, orthopedic, and ophthalmologic procedures for symptoms stemming from nonneoplastic, progressive, life-limiting diseases, such as chronic renal failure, the percentage could be much higher. As a technical undertaking, the skill set and techniques for performing palliative surgery are no different from those for curative indications. Clinical judgment when performing major palliative surgical interventions is notoriously and appropriately demanding of even the most seasoned clinician. Many of the principles outlined in this chapter have been derived from the collective experience of these individuals.

Aside from the degree of risk, the moral and ethical questions posed by a proposed palliative surgery are no different than those posed by any other medical treatment for this vulnerable patient population. The primary ethical challenge inherent to palliative surgery is the balancing of the duty to help with the ethical imperatives of nonmaleficence and beneficence. Unchallenged benevolence can undermine autonomy if it masks paternalism and the abuse of power - a possibility for surgeons, who have traditionally been seen as authoritarian and powerful. Other threats to patient autonomy that apply when contemplating any invasive palliative treatment include the following:

- The paucity of scientific outcomes data for palliative procedures
- Patients' heightened physical, psychological, and social vulnerability
- Misinterpretation about what "doing everything" means
- Lack of patient understanding about the difference between palliative procedures and procedures with curative intent
- Lack of knowledge by patients and care providers about less invasive but equally effective alternative treatments
- Pressures from family and other health professionals to "do something"

The increasing availability of dedicated palliative care teams provides the opportunity for an interdisciplinary approach to mitigate these pressures on patients, families, and surgeons.

Definitions

Palliative Surgery: A surgical procedure used with the primary intention of improving QOL or relieving symptoms caused by an advanced disease. The efficacy of palliative surgery is judged by the presence and durability of patient-acknowledged symptom resolution.

Noncurative Surgery: Operations with curative intent in patients that result in residual disease or positive margins.

Principles of Palliative Surgery

- Palliation is not the opposite of cure: it has its own distinct indications and goals and should be evaluated independently.
- Asymptomatic patients cannot be palliated.
- Palliative surgery is as morally legitimate as surgery for curative intent.
- Day-to-day surgical decisions are best made within the framework of ethical, scientific, and technical principles.
- The patient or surrogate must acknowledge the personal relevance of the symptom to be treated.
- Realistic survival expectations should exist before offering surgical palliation.
- Goals must be clearly and honestly defined to the patient, family, and surgeon.

Selection of Procedure

The selection of an appropriate palliative procedure is essential and becoming increasingly complex as the armamentarium of possible therapies continues to expand.

The three main determinants for selecting a procedure include:

- The patient's symptoms and personal goals
- The expected impact of the procedure on QOL, function, and/or prognosis (time)
- Prognosis of the underlying disease (expectations regarding trajectory of functional decline in context of overall survival)

Additional determinants include the following:

- Feasibility/availability of nonsurgical options (such as pharmacotherapy, radiation therapy, chemotherapy)
- Reconstructive requirements (such as complex wound coverage, wound vacuum device)
- Recovery and rehabilitation requirements
- Surgeon characteristics (such as experience, technical ability)
- Technical considerations (such as an expectation of extensive adhesions)

Patient Assessment for Palliative Surgery

1. Does the patient/surrogate understand the nature and prognosis of the underlying illness?
2. Does the patient/surrogate understand the potential risks/benefits of the proposed surgical intervention?
3. Does the patient/surrogate understand the nature of a palliative procedure versus a procedure with curative intent?
4. Does the patient/surrogate understand the available nonsurgical options?
5. Can the patient physically tolerate the procedure based on organ system function?
6. Is the expected improvement in quality, function, or time sufficient to warrant the proposed surgical intervention?
7. Does the patient have an advanced directive including a designated surrogate decision maker?

Discussing the Surgical Procedure

The discussion with a patient and family members about a palliative procedure requires the same careful preparation that the procedure itself would require. For some patients, the true nature of their illness may not be apparent to them until the purpose and details of an intervention are discussed (see Chapter 15, Delivering Bad News). Up to 80% of patients receiving palliative chemotherapy do not report understanding that their treatment is not likely to cure their cancer. Gentle probing for the patient's degree of awareness of the medical situation and readiness to proceed with the discussion is no different from the first steps in any operation. Patients should be given the opportunity to have the individuals they want present for the discussion. The discussion preceding a palliative intervention is an extraordinary opportunity to clarify goals of care, adjust future treatment plans accordingly, and deepen the level of trust between the patient and surgeon. The surgeon should be prepared to make a recommendation in addition to merely providing information. A surgeon who is unwilling to make a recommendation runs the risk of being considered, at best, indecisive and, at worst, abandoning.

Anesthesia Concerns

Consideration should be given to the anticipated physiologic impact of the procedure as well as the proposed anesthetic regimen. Many patients undergoing palliative operations will have decreased renal, hepatic, or cardiopulmonary reserve. The patient's preoperative analgesic regimen must also be taken into careful consideration. Special attention must be given to patients receiving preoperative opioids in order to ensure that the postoperative regimen appropriately addresses their analgesic requirements. The DNR status for patients undergoing surgery should be specifically addressed before surgery. Position papers by the American College of Surgeons, the Association of Operating Room Nurses, and the American Society of Anesthesiologists condemn policies requiring automatic cancellation of existing DNR orders for patients undergoing anesthesia, based on the principle of patient autonomy. However, many hospitals and surgical centers have this type of policy. It is imperative to discuss and develop a written plan for resuscitation management options in the event of cardiopulmonary arrest with the anesthesiologist and the patient/surrogate for the intraoperative and the immediate postoperative periods.

Palliative Surgical Procedures

Palliative surgical procedures can be classified into two groups: (1) procedures that directly relieve symptoms and (2) supportive procedures that guide or enable the delivery of non-surgical palliative treatment, such as a biopsy done to guide radiation therapy

Palliative surgical procedures for direct symptom control

- Drainage procedures for ascites, pleural effusions, pericardial effusions
- Laparotomy/laparoscopy and bypass or resection for relief of biliary or bowel obstruction
- Tumor debulking for relief of pain, constitutional symptoms, control of odor
- Endoscopic interventions for stenting an obstructed lumen, ablation of tumor, or hemostasis
- Gastrostomy (PEG) placement for relief of obstruction or hunger
- Definitive management of pleural effusion (VATS), pleurodesis
- Craniotomy for excision of symptomatic metastases or for hemorrhage
- Fixation of pathologic fracture
- Major amputation for painful, nonviable extremity
- Tumor embolization procedures
- Surgical procedures for metastatic spinal cord compression
- Suprapubic cystostomy for bladder outlet obstruction
- Simple mastectomy
- Creation of pit fistula

- Tracheostomy in the case of obstructing head and neck cancer

Palliative support procedures

- Biopsy procedures to guide palliative treatment
- Vascular access procedures for medication administration, dialysis, and parenteral nutrition
- Gut intubation procedures for feeding (PEG)

Complications, Quality of Life, and Outcomes Measurement

The complication rate for palliative surgical interventions is high and not limited to major procedures. Palliative procedures contributed to 36 percent of the total annual 30-day operative mortality in one major cancer center. The same study found that a major postoperative complication reduced the probability of symptom resolution to 17 percent. Complications occurred with comparable frequency regardless of surgical subspecialty in this survey. Although some studies have found that palliative care is associated with increased survival, standard outcomes measures such as 30-day morbidity and mortality are illogical endpoints for patients undergoing palliative surgery. Pain control, cost, QOL, need for repeat intervention, and survival have been used as success measures. However, by definition, palliative procedures are an effort to alleviate suffering which is a largely subjective measure. There are multiple validated scoring systems to define the benefit of palliation. A few of the most common systems include: The McGill Quality of Life Questionnaire (MQOL), Quality of Life at End of Life (QUAL-E), and the Functional Assessment of Cancer Therapy-General (FACT-G) scale. While these scoring systems and others have been used for surgical patients, they have not been adapted and prospectively evaluated for the extensive repertoire of palliative surgery. The absence of a postoperative complication requiring hospitalization has been used as part of a proxy measurement for QOL following palliative surgery. Another more straightforward system for assessing the value of a palliative intervention is to explicitly ask patients if they feel it was "worth it". It should be noted that the answer to this question may evolve over time as the patient recovers from surgical intervention.

The Palliative Surgery Outcome Score (PSOS) is a prospective measure of palliative surgery. It is calculated by using the following equation•

Number of Symptom-free, Non-Hospitalized Days/Number of Postoperative Days of Life (up to 180 Days)

Symptom-free denotes the symptom intended for treatment and free of major complications. *Hospitalized* denotes days hospitalized for the palliative operation and any additional days to monitor surgical complications or recurrent symptoms

A PSOS value of 0.7 was identified by patients and families who had good to excellent palliation as an acceptable outcome score. With increasing exposure to social science research methods, better prospective measures for QOL outcomes for palliative surgery should emerge.

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Pre/Post Test

Questions

1. Describe three indications for palliative surgery.
2. Describe the difference between a noncurative procedure and a palliative procedure.
3. List the three main considerations in planning a palliative surgical procedure.
4. Describe two indicators used for measuring palliative surgical outcomes.
5. What question can be asked of patients to qualitatively gauge the success of their palliative operation?

Answers

(1) Obstruction, hemorrhage, and pain (2) Palliative surgery is surgery in which the intent is to relieve patient-identified distressing symptoms; noncurative surgery is surgery after which there is residual disease with or without symptom relief. (3) Goals and persona of the patient, nature of the disease process, efficacy of the intervention. (4) PSOS. EROTC. (5) "Was it worth it?"

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Objectives

1. Describe the assessment of a patient for whom palliative surgery is being considered.
2. Describe the measures taken to ensure that the consent process is truly informed.
3. Describe perioperative anesthesia considerations for a major palliative procedure.
4. Describe the assessment for the efficacy and success of a palliative operation

Teaching Points

- Resist the temptation of centering the discussion on the surgical procedure rather than the overall goals of care. The procedure is secondary to the goal of care, not the other way around.
- Harness the moment of discussing surgery to address other fears, beliefs, and goals.
- Palliative surgery is an interdisciplinary process - the role of the anesthesiologist is neither superior nor subordinate to the role of the surgeon.

Case Study

M.T. is a 35-year-old woman with peritoneal mesothelioma. She underwent cytoreductive surgery and hyperthermic intraperitoneal chemotherapy (HIPEC) several years ago with an incomplete cytoreduction. She has felt well up until the past few months in which time she has developed progressively worsening nausea, vomiting, constipation, and 15lb weight loss. She is admitted to the hospital for symptom management and hydration. CT shows dilation of her large intestine and new peritoneal studding. She is taken for colonoscopy which reveals extrinsic compression and significant narrowing of the upper rectum. Diagnostic laparoscopy reveals bulky disease in the pelvis and a peritoneal carcinomatosis index of 34. She asks if there are any surgical options to cure her or to at least let her enjoy eating again.

QUESTIONS

1. How do you initially respond to her statements? Emotionally or scientifically?
2. What medical, psychosocial, and spiritual information would be relevant before selecting treatment?
3. How would you frame the discussion if the patient decides against surgical intervention?
4. How would you frame the consideration of repeated attempts at cytoreduction and HIPEC versus other palliative procedures?
5. Describe the approach to discussion you will have when obtaining her consent for a palliative ostomy.
6. Before surgery, the anesthesiologist says he will not give anesthesia unless the patient cancels her DNR order. How would you handle this development?
7. How would you decide if your palliative operation was a "success"?