Self-Study Module 11:
Withdrawing Nutrition, Hydration
Abstract

The withholding or withdrawing of life-sustaining therapies is ethical and medically appropriate in some circumstances. Oncologists need to develop facility with general aspects of the subject, as well as specific skills and approaches. In this module, general aspects are discussed first. Then, a specific application to artificial nutrition and hydration is presented.

Weight loss and diminished appetite or ability to eat are common features and poor prognostic signs in cancer. A reasonable hypothesis was that in addition to attempting to cure or control the cancer, providing nutrients, either enterally or parenterally, would improve quality of life or survival. Unfortunately, prospective, randomly controlled trials have failed to demonstrate that nutritional support alone improves morbidity, mortality, or duration of hospitalization for the vast majority of cancer patients. In contrast with conventional wisdom, the scientific evidence for efficacy of artificial nutrition and hydration to sustain life and relieve symptoms is limited to very specific circumstances in a small number of patients.

Patients and families need clear communication from their oncologists that artificial nutrition, whether parenteral or enteral, does not help most cancer patients. Artificial hydration rarely improves symptoms and quality of life near the end-of-life. Artificial nutrition and hydration can cause symptoms and, in some circumstances, hasten death.

Discussions and decisions about the use of artificial nutrition and hydration are always challenging. A structured approach is needed to address the cultural and emotional implications of decisions about artificial hydration and nutrition for the patient, family, and oncologist. To meet the need to “do something” and demonstrate caring, alternatives to artificial nutrition and hydration must be part of the overall plan of care.

Introduction

Facilitating decision making and implementing decisions about life-sustaining treatments are essential skills for oncologists. Impediments to good care include misconceptions about legal and ethical issues, as well as unfamiliarity with the practical aspects of implementation.

This module discusses approaches to determining and implementing treatment preferences regarding the withholding or withdrawing of interventions. First, general principles and approaches are covered. Related discussions appear in the original EPEC Curriculum in Plenary 2: Legal Issues. (Ref. 1) They are also in EPEC™-O Module 3: Symptoms and EPEC™-O Module 9: Negotiating Goals of Care. Next,
specific issues of artificial nutrition and hydration are covered in more detail. These issues frequently present a challenge in the routine practice of oncology, and they also provide an example of how to discuss withholding or withdrawing treatments in general.

Module 11 - Video 1

Role of the Oncologist

The oncologist plays an essential role in defining and implementing the medical plan of care, and providing continuity of care as the goals evolve and change over time. The oncologist will often take the lead in initiating discussions about life-sustaining treatment, educating patients and families, helping them deliberate, and making recommendations about the treatment plan. As part of this role, the oncologist is responsible for ensuring that the patient's wishes are documented and supported by the appropriate medical orders. Advance directives may be in place and helpful, but may not necessarily make clear how to translate general goals or treatment preferences into treatment of the present medical conditions. Consequently, it is critical that oncologists have the knowledge and skills necessary for discussions, negotiations, and implementation of decisions related to life-sustaining treatments.

Legal Perspective

All states in the United States have statutes covering issues related to withholding or withdrawing life-sustaining treatments. The Quinlan case (1976) established that artificial nutrition could be withdrawn even from a patient in a persistent vegetative state. (Ref. 2) In 1983, the President's Commission for the Study of Ethical Problems in Medicine and Biomedical and Behavioral Research found that no treatments, including artificial nutrition and hydration, were obligatory. (Ref. 3) This was confirmed in the United States Supreme Court decision on the Cruzan case (1990), which established that artificial hydration and nutrition are like other life-sustaining treatment. (Ref. 4) It was upheld again in Florida courts in the case of Schiavo (2005).

It is also legal and ethical to withhold or withdraw nutrition and hydration for the patient who lacks decision-making capacity. (Ref. 5) States may differ in the degree of evidence that is required if the patient lacks decision-making capacity. For example, in New York and Missouri, there must be “clear and convincing evidence.” In the other states, substitute decision makers can make the decision.

Institutional policies of many hospitals or other health care institutions tend to include considerations, perhaps drafted by ethics committees, to protect patients’ rights and interests and considerations, or possibly crafted by risk management officers to protect the institution from risk. Institutional policies are often written in response to the general perceived legal imperative to, when in doubt, provide treatment to prolong life. Institutional policies may or may not be in the best interest of a particular patient. If the
appropriate goals of care are other than “life at all costs,” then the physician needs to write orders that are specific enough to accomplish the intended goals.

Emergency medical technicians are regulated by statute, and sometimes by city ordinance. Although requirements vary, in general emergency medical technicians are required to provide all resuscitative and life-prolonging treatments unless a physician’s order is in place to the contrary.

The oncologist is the only member of the cancer care team who can write orders and ensure appropriate care. It is the oncologist’s responsibility to ensure that the patient’s wishes (or parents’ if the patient is a child) are followed across care settings. In the hospital, one major study demonstrated that the majority of patients in intensive care unit settings die without attention to issues of life-sustaining treatment. (Ref. 4) Many of these patients have undergone some form of invasive medical treatment against their previously stated wishes. (Ref. 6)

All too often, patients are transferred to the acute care setting, where inappropriate life-sustaining measures are administered because the appropriate treatment plan and physician’s orders have not been completed and placed in the patient’s chart. One study demonstrated that fewer than 25% of advance directive orders were carried from the nursing home to the acute care hospital. (Ref. 7) The fact that physician’s orders may not transfer across settings (e.g., nursing home, ambulance, acute care hospital) also exacerbates the problem.

**Life-Sustaining Treatments**

There is a wide range of life-sustaining treatments that might be considered for an individual patient and family. These include cardiopulmonary resuscitation, elective intubation and mechanical ventilation, surgery, dialysis, blood transfusions or administration of blood products, artificial nutrition and hydration, diagnostic tests, antibiotics, other medications and treatments, and future hospital or intensive care unit admissions.

After determining the general goals of care (see EPEC™-O Module 9: Negotiating Goals of Care), discuss specific treatments with your patients and families if those treatments will possibly help achieve the overall goal (see EPEC™-O Module 13: Advance Care Planning). At a minimum, try to discuss an invasive and a noninvasive intervention to get a general idea of a patient’s priorities for making treatment decisions. Decisions about surgery and antibiotics are often strongly predictive of other invasive and noninvasive decisions, respectively. (Ref. 8)

**Culture**

Culture plays a role in decisions to withhold or withdraw care. For example, many studies have shown that nonwhite patients are less likely than white patients to agree to “Do Not Resuscitate” (DNR) orders or to withhold or withdraw care and are less likely to
have advance care directives. (Ref. 9) (Ref. 10) (Ref. 11) In Asian cultures, filial piety, the obligation of children to care for their parents in gratitude for the parent’s caring and sacrifice, is a central value. Making a decision to withhold or withdraw life support from a parent may be seen as unfilial. (Ref. 12) If the integrity of the family as a whole is valued more than the wishes of an individual family member, even the patient who would not want life support may expect the family to do everything possible to prolong his or her life. To do otherwise would bring dishonor on the family.

Different cultures may have varying views of the role of suffering. Although many nurses and doctors may support withholding life support at the end-of-life as a compassionate act that prevents unnecessary suffering, not all patients share this value. Some cultures view suffering as redemptive and something to be endured as a test of faith rather than avoided. The idea that only God, not doctors, knows when it is time to die may also affect how patients view the use of life-sustaining therapies. This is discussed in more detail in EPEC™-O Module 12: Conflict Resolution.

**Religion**

Various religions have espoused specific opinions about the use of artificial hydration and nutrition. Most teach that when death is inevitable and not due to the absence of hydration or nutrition, withholding both can be appropriate. However, some religious leaders teach that human beings must do all in their power to prolong life. In situations of conflict, it is wise to engage leaders or teachers of the religious faith in question.

**Weight Loss**

Weight loss is a common feature and an independent poor prognostic sign in cancer. (Ref. 13) Various mechanisms have been proposed, including decreased caloric intake, increased metabolic rate, specific nutritional or vitamin deficiencies, and disordered or futile metabolic pathways. Since cancer is frequently accompanied by a loss of appetite and diminished caloric intake, the hypothesis that provision of nutrients, either enterally or parenterally, would improve quality of life or survival has been repeatedly tested over the past 30 years. (Ref. 14) Unfortunately, except in limited circumstances for clearly defined subsets of patients, the hypothesis has not been supported. (Ref. 15) Since this finding contradicts popular wisdom, oncologists need to both know the evidence base as well as develop specific skills and approaches to discuss artificial nutrition and hydration with patients and families.

Clinical practice is frequently not guided by evidence. (Ref. 16) Impediments to good care include unfamiliarity with the evidence base, misconceptions about legal and ethical issues, lack of training in discussing the issues, reimbursement of ineffective treatment, and insufficient attention to alternative strategies to meet the needs of families and health care professionals to show they care for the patient.
Objectives

After reviewing this module, oncologists and other members of the cancer care team will be able to:

- Discuss the principles for withholding or withdrawing therapy.
- Describe the evidence base for artificial nutrition and hydration.
- Use a seven-step approach to discussing the withholding or withdrawing of these treatments as a model for these discussions.
- Help families and professionals with their need to give care.
- Discuss hospice care

Artificial Nutrition

It is “ordinary care” to provide oral nutrition to the patient who wants to eat. That includes bringing food to the mouth even if the patient is too weak to do so. For the patient who needs assistance, special attention to appearance, color, smell, and consistency may be needed to make food appetizing. However, it is unethical and illegal to force the patient to eat if the patient declines to do so.

Administration of nutrition by an alternate route is indicated if the patient is hungry and cannot eat (i.e., when there is a neurological abnormality affecting swallowing or an obstructing esophageal cancer). (Ref. 17) The gastrointestinal tract should always be the route of intake if it is functional.

There is no evidence that artificial nutrition alone improves functional ability or energy, relieves fatigue, or improves survival or symptom control (except hunger) if it is the cancer that is responsible for the anorexia and weight loss. (Ref. 18) (Ref. 19) (Ref. 20) (Ref. 21) (Ref. 22) (Ref. 23) (Ref. 24) (Ref. 25) (Ref. 26) (Ref. 27)

Pathophysiology of Anorexia

The causes of anorexia are numerous. (Ref. 28) The consequences of anorexia depend on the composition of what continues to be ingested. The patient who takes in no calories develops ketosis as fats and proteins are metabolized to an energy source. Anorectic ketosis, in contrast to diabetic ketoacidosis, is experienced as a mild euphoria or sense of well-being and analgesia. Supplemental carbohydrates or other foods interfere with ketosis. (Ref. 29) See EPEC™-O Module 3b: Symptoms – Anorexia / Cachexia for more details.
Enteral Nutrition

There are two common reasons cited for instituting enteral nutrition in cancer patients: to improve fatigue or “strength” and to avoid “starving to death.” Patients, family, and some clinicians erroneously believe that the patient is weak because he or she is not eating. Further, they erroneously believe that if the patient does not eat, he or she will die.

In contrast with conventional wisdom, there is no evidence that enteral nutrition improves energy level or survival in the patient with progressive cancer. With the exception of patients with a mechanical reason for not being able to eat (e.g., an obstructing cancer or stroke involving deglutition), cancer patients who report anorexia and cachexia do so for a number of complex reasons. If the cancer cannot be reversed, the pathophysiology underlying the causes of cancer cachexia and anorexia is not reversible. No study has demonstrated improved outcome of enteral feeding over oral feeding alone. In contrast to original expectations, percutaneous endoscopic gastrostomy (PEG) tubes increase the risk for aspiration rather than reduce it. The use of feeding tubes is associated with increased mortality. Complications from PEG tubes has reached 35%. (Ref. 27) (Ref. 30) (Ref. 31) In fact, enteral feeding tubes can make matters worse, and are associated with infection, obstruction, edema, ascites, and aspiration pneumonia.

In summary, there is no evidence that enteral nutrition improves survival or improves quality of life for the general oncology patient.

There are reasons to believe that the patient with anorexia associated with advanced cancer is not suffering because of it. In most cases, it is the meaning of not eating that distresses patients and families. Finding meaning is an emotional and spiritual, not a biological, issue. While placement of a feeding tube may avert a discussion about the meaning of anorexia, it will not treat it, and only sets the patient and family up for disappointment later on.

Parenteral Nutrition

The weight of scientific evidence has shown no general benefit for parenteral nutrition in patients with cancer. (Ref. 14) (Ref. 32) This has even turned out to be the case in the surgical and intensive care settings. Parenteral nutrition has been shown to be of benefit in the limited circumstances where the gastrointestinal tract suffers prolonged toxicity (e.g., bone marrow transplant), or in the perioperative setting where there is preexisting malnutrition. In fact, even in the setting of bone marrow transplant, there only appears to be a role when there is prolonged, demonstrable inability to eat. (Ref. 22) This surprising conclusion is drawn from studies performed over the past 30 years. In other words, the null hypothesis has proved to be true: parenteral nutrition does not improve survival or symptoms in patients with cancer. In fact, meta-analysis suggests that patients with cancer who receive parenteral nutrition die faster than patients who do not. (Ref. 32)
Artificial Hydration

One of the most common treatments associated with medical care is an intravenous infusion of fluids. The indication is the maintenance of fluid and electrolyte balance when the patient is temporarily unable to drink adequate volumes. The administration of isotonic fluids subcutaneously (hypodermoclysis) is an underutilized, equally efficacious way to administer fluids without the risk of intravenous access (infection, clot, bleeding) or the skills needed to locate a vein.

The most common inappropriate reason to consider intravenous fluids in the setting of symptom control is to prevent or treat thirst and to prevent “dehydrating to death.”

Pathophysiology of Dehydration

The conventional evidence base for dehydration comes from the study of normal individuals and those with reversible conditions causing the dehydration. It is divided into hyponatremic dehydration (where salt loss exceeds water loss), hypernatremic dehydration (where water loss exceeds salt loss), and mixed dehydration, where salt and water loss are balanced. Diuretics, vomiting, diarrhea, osmotic diuresis, adrenal insufficiency, edema, ascites, fever, laxatives, and postobstructive diuresis may all contribute to dehydration. Patients dying of cancer without a confounding etiology usually have a mixed pattern.

Symptoms of dehydration differ between those who are ambulatory and those who are bed-bound. Whereas an otherwise healthy person will experience reversal of severe thirst, fatigue, or malaise with rehydration, a seriously ill patient will not. There is no evidence that IV fluids relieve thirst in the patient with advanced cancer. The same is true for fluids given via an enteral feeding tube. In contrast, stopping medications with anticholinergic side effects and administering good lip and mouth care has been shown to relieve thirst. (Ref. 33) (Ref. 34) (Ref. 35) (Ref. 36) (Ref. 37)

Dehydration appears to be associated with endorphin release resulting in an associated improvement in mood.

Common Concerns

There are several common concerns that impact decisions about life-sustaining treatments in general and withdrawal of hydration and nutrition in particular. (Ref. 3)

- Are oncologists legally required to provide all life-sustaining measures possible?
No. Physicians are required to provide care that will accomplish treatment goals within the bounds of accepted medical practice. No physician is required to provide care that is futile (e.g., total parenteral nutrition for a dying patient). Conversely, even when a treatment might prolong life (e.g., intravenous antibiotics for pneumonia), patients have a right to refuse, and the physician has an obligation not to provide or coerce.

- **Is withdrawal or withholding of artificial hydration and nutrition euthanasia?**

  After decades of discussion in society, there is strong general consensus that withdrawal or withholding of artificial hydration and nutrition is a decision/action that allows the cancer to progress on its natural course. It is not a decision/action actively to seek death and end life. By contrast, euthanasia actively seeks to end the patient’s life.

- **Can the treatment of symptoms associated with withdrawal of hydration and nutrition constitute euthanasia?**

  The intent of the oncologist and the means used to accomplish the intent are important. Opioids for pain, sedatives for restlessness, and other treatments to control symptoms are not euthanasia when accepted dosing guidelines are used. Avoid the rationale that says, “death is the treatment.” Symptom treatment alleviates symptoms; it does not intentionally cause death.

- **Is it illegal to prescribe large doses of opioids to relieve symptoms of pain, breathlessness, or other symptoms after artificial hydration and nutrition have been withdrawn?**

  Even very large doses of opioids or other drugs are both permitted and appropriate, if the intent and doses given are titrated to the patient’s needs.

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**Seven-Step Protocol to Discuss Treatment Preferences**

- To guide the discussion of treatment preferences, particularly when considering withholding or withdrawing a life-sustaining therapy, use the following modification of the six-step protocol, SPIKES (Ref. 38) (Ref. 39) for communicating bad news (see EPEC™-O Module 7: Communicating Effectively.

  **SPIKES+: Steps to Resolve Conflicts**
### SPIKES+

<table>
<thead>
<tr>
<th>Setting. Getting started.</th>
<th>1. Be familiar with pertinent policies and statutes. Establish the right setting for the discussion.</th>
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<td>Knowledge. Sharing the information.</td>
<td>4. Establish the context of the discussion. Discuss artificial nutrition and hydration.</td>
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<td>Emotion. Responding to the feelings of the patient and family.</td>
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<td>Subsequent. Planning and follow-up.</td>
<td>6. Establish a plan and follow-up.</td>
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<td>+ Review. Reassess and revise periodically</td>
<td>7. Reassess and revise periodically.</td>
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EPEC™-O Module 7: Communicating Effectively presents guidelines on how to conduct discussions related to communicating bad news. EPEC™-O Module 9: Negotiating Goals of Care presents an approach to determining the general goals of care. EPEC™-O Module 13: Advance Care Planning presents a general approach to the discussion of advance care planning. This module integrates the principles from these modules into the discussion of specific treatment preferences, particularly to discussion about withholding or withdrawing therapy.

Reasonable physicians may disagree about the extent to which specific treatment preferences ought to be discussed, if such treatment will not help achieve the overall goals. It is well established that if a treatment has no chance of achieving its intended benefit (e.g., performing cardiopulmonary resuscitation on a body whose head has been severed as a result of trauma), it need not be offered. However, since chance for benefit is rarely absolutely zero, and since discussion of treatment decisions is favored by patients and builds trust, an approach to discussing these decisions is part of the skills set of the oncologist. In approaching all discussions of withholding or withdrawing therapy...
treatment, discuss general goals of care first. Then discuss specific treatment preferences in light of whether they are likely to help achieve the overall goal.

Physicians usually conduct discussions of treatment preferences. Other appropriate members of the cancer care team may enhance the discussion and prevent subsequent conflict within the team. They will have additional time to carry on the dialogue with the patient and family. The team will also be able to provide valuable emotional support to the patient, family, and each other.

Even though other members of the health care team participate and/or conduct the discussion, implementation of any decision requires a physician’s order. The attending physician must sign the documentation and assume full responsibility for its accuracy.

**Applying Seven Steps to Discuss Nutrition and Hydration**

Oncologists frequently perceive the discussion about whether or not to use or continue artificial feeding and/or hydration to be difficult. Successful approaches are not customarily demonstrated during medical training. (Ref. 3) Food and water are widely held symbols of caring, so withholding of artificial nutrition and hydration may be easily misperceived as neglect by the patient, family, or other professional and volunteer caregivers.

**Step 1: Become Familiar with Pertinent Policies and Statutes**

Oncologists need to be familiar with the policies of the institution and pertinent statutes where they practice. Unfortunately, many oncologists presume that because their institution has a specific policy (e.g., all patients who cannot eat will have a percutaneous enteroscopic gastrostomy tube), this practice reflects state or federal law. In fact, no state requires artificial nutrition and hydration when a cancer patient cannot eat. Most states leave specific treatment decisions to be decided between patient and physician.

**Step 2: Ask the Patient and Family What They Understand**

Listen for how they make sense of the relationship between the disease and eating and drinking patterns. For example, if someone says, “If only she’d eat, she’d get stronger,” this may reflect the need to review why the doctor thinks the patient is weak. Similarly, “I don’t want her to dehydrate to death” may show the need to explain how normal dying occurs.

**Step 3: Determine / Reconfirm Goals of Care**

Determine or reconfirm the general goals of care. Examples are:

- “Can we review our overall goals for your care?”
• “Let me tell you what I understand you want as we plan your care.”

Talk about the general medical condition. For example, if the patient has advanced cancer, establish an understanding of the overall situation. What is the expected course of the cancer? Is anything reversible?

Once the general goals of care have been confirmed, specific life-sustaining treatment preferences can be discussed.

**Step 4: Establish the Context of the Discussion**

Be sure to establish the context in which or for which artificial nutrition or hydration is being discussed. The classic misstatement on the part of well-meaning physicians is, “Do you want us to do everything?” This highly euphemistic and misleading question fails to acknowledge context. When are we talking about? (Today, when the patient is recovering from an infection or the side effects of chemotherapy, or when the patient is dying despite maximal medical therapy?) “Everything” is much too broad and is easily misinterpreted by families, especially when they feel “everything” has not, in fact, been done.

**Discuss Artificial Nutrition and Hydration**

Explore how artificial hydration and nutrition will contribute to the overall goals of care or improve the situation. If the patient and family hope to see improved energy, weight, and strength, then artificial fluid and nutrition are unlikely to accomplish those goals. Help the patient and family to understand the goals for which artificial nutrition and hydration are appropriate (see EPEC™-O Module 9: Negotiating Goals of Care).

Discuss specific treatment preferences. Use language that the patient will understand. If the patient is not fluent in English, use a translator, preferably someone trained in these skills. Give information in small pieces. Reinforce the context in which the decisions will apply. Stop frequently to check for reactions, ask for questions, and clarify misunderstandings.

Reasonable physicians may argue that it is unnecessary and potentially confusing to patients and families to ask them to decide about specific treatment preferences. Patients and families may be ill served if physicians regard the principle of autonomy as meaning that physicians must offer all possible therapies from which patients and families choose, as though they were choosing items from a menu in a restaurant. Nonetheless, it is often useful to discuss and recommend withholding or withdrawing artificial nutrition and hydration in light of the general or overall goals that have previously been established.
Aspects of Informed Consent

Informed consent is a fundamental ethical principle that underlies contemporary medical care. Patients deserve a clear, complete understanding of all therapies that are proposed for them. Some will want to know all the details. Others will prefer not to know anything. Be prepared to describe in simple, neutral terms the aspects of artificial nutrition and hydration in a manner that conforms to the principles of informed consent, including:

- The problem the treatment would address.
- What is involved in the treatment or procedure.
- What is likely to happen if the patient decides not to have the treatment.
- The benefits of the treatment.
- The burden created by the treatment.

Information that could be provided to patients and families who are making decisions regarding artificial feeding and hydration is provided in the Appendix.

Address Misperceptions

Listen for cues like:

- “I don’t want her to starve to death.”
- “Dehydration is a miserable way to die.”
- “We can’t just let her die.”

These statements often express goals for the family as much or more than they express goals for the patient. These statements suggest the patient and family have misperceptions about the underlying situation or the meaning of signs and symptoms. They may believe that lack of appetite and diminished oral intake of fluids is causing the patient’s level of disability. Most then make the assumption that if only the patient got more fluids and nutrition, he or she would be stronger. Use clear, simple language to help the patient and family focus on the true causes of the situation; for example:

- “The cancer is taking all of your strength.”
- “The fact that your heart is so weak is what is causing you to lose your appetite and feel so fatigued.”
- “I can understand why you might think that, but she’s dying of cancer, not starvation.”

If the patient is close to dying, make sure the family knows that a dry mouth may not improve with intravenous fluids. Relief is much more likely to occur with attention to
mouth care and oral lubricants (see EPEC™-O Module 6: Last Hours of Living). In some patients, delirium may be related to dehydration, so a clinical trial of intravenous fluids may be warranted. However, before starting, ensure that everyone is aware that there are other causes of delirium that may not respond to fluids, and there is a risk that fluids will only increase other physical symptoms (e.g., edema, breathlessness), without relieving the delirium.

Urine output normally declines in a patient who is dying; it is not just an indicator of hydration. Urine output in the range of 300 to 500 ml/day is adequate. The large volumes (2 to 3 l/day) that physicians and other health care professionals associate with hospitalized patients are usually the result of overvigorous intravenous infusions in patients with normal renal function and oncotic pressure and do not reflect usual output with oral hydration. Both high-volume infusions and excessive urination may be a source of discomfort to the patient (see EPEC™-O Module 3: Symptoms and EPEC™-O Module 6: Last Hours of Living).

**Step 5: Respond to Emotions**

During these discussions, respond to patient and family anxiety, and acknowledge emotional content. Empathic silence and acknowledgment of the situation with a phrase like, “I wish things were different,” may be all that is needed. Parents, if the patient is a child, are likely to be very emotional and need support from the physician and other members of the health care team. Patients, families, and surrogates may be profoundly disturbed by the subject matter being discussed. If you find that emotions are too challenging, ask other colleagues and/or members of the cancer care team to assist.

**Step 6: Establish a Plan**

Establish and implement a plan that is well articulated and understood. The next steps may be as simple as planning to discuss the subject again at the next visit, or convening a family meeting to further discuss the proposed treatment plan. They may be as complex as organizing nursing, social work, and chaplaincy intervention, or assuring that a key family member living out of town is notified.

**Time-Limited Trials**

In some circumstances, a time-limited trial of artificial nutrition and hydration may be warranted when it is unclear whether these treatments will achieve a specific goal. For example, a Dobhoff tube may be placed during a hospitalization for evaluation of new-onset fatigue and anorexia. It should be clearly stated at the outset what the measures of success will be. “Tolerating” the feeding is not a very satisfying endpoint. Reasonable endpoints are whether the patient feels stronger or is able to resume eating after 2 weeks.
Document and Disseminate the Plan

Discuss treatment plans with other health care professionals so the plans may be carried out in a straightforward and organized fashion. In health care institutions, this involves discussing the plan with nursing and house staff, at a minimum. Write the appropriate orders, document the discussion in the medical record, and talk about the plan with other members of the health care team.

Step 7: Review and Revise Periodically

Patients and families change their goals of care and treatment priorities periodically. Once presented with a situation and information (e.g., that fluids and nutrition are not helping and may be harmful), patients and families may take some time to decide to change the plan of care. Even after stopping a therapy, review the goals of care and treatment priorities periodically to ensure that the patient’s choice is durable. It is comforting to know that the plan can change at any time.

Helping Family and Professionals with Their Need to Give Care

Family members and health care professionals frequently feel helpless in the face of cancer. (Ref. 40) Their advocacy for artificial nutrition or hydration may be a response to this feeling. The advocacy may come from a misunderstanding of the situation (e.g., she’ll be stronger if only she eats more; he won’t die if he eats; her mouth won’t be so dry if she has an IV), or as an emotional response (e.g., it’s important to fight back). “Doing something” may be an important motivation for the professional (for example, associating large urine output as can only be obtained with an intravenous infusion as being equivalent to providing good medical care).

As part of the discussion, identify the emotional need that is met by providing food and water, particularly for families and other health professionals. Don’t just address issues of artificial hydration and nutrition. Help the family find ways to demonstrate their caring in the face of “letting nature take its course,” and teach them the skills they need to be effective. A major goal is to permit the family and professionals to feel helpful rather than helpless. Examples include:

- Eat for pleasure.
- Plan social interactions that don’t center on meals.
- Read or watch movies together.
- Look at photo albums together.
- Participate in mouth care.
- Massage the extremities or feet with unscented oil.
- Do chores such as housecleaning, gardening.
- Reminisce and tell stories.

**Normal Dying**

Loss of appetite and diminished fluid intake are a part of the normal dying process. Trying to counteract these natural trends may lead to more discomfort for the patient without affecting the outcome.

Near the end-of-life, patients and families may be concerned that there will be suffering from thirst or hunger if the patient is not taking any fluids or nutrition. Help the patient and caregiving family to understand that dehydration is a natural part of the dying process. It does not affect the dying patient in the same way as a healthy person who feels thirsty on a hot day or becomes dizzy on standing.

Let family members know that if the patient is not hungry, artificial fluids and hydration will not help him or her feel better. Badgering the patient to eat or drink will only increase tension and may cause the patient to become angry, depressed, or withdrawn if he or she cannot comply.

In addition, make sure family members and caregivers know that artificial fluids and nutrition may make edema, ascites, pulmonary and other secretions, and dyspnea worse, particularly if there is significant hypoalbuminemia.

Ensure that family and caregivers know that a state of dehydration in a patient who is bed-bound and imminently dying may have some benefits. Pulmonary secretions, vomiting, and urinary incontinence may be less severe. Dehydration may actually stimulate the production of endorphins and other anesthetic compounds that help contribute to a peaceful, comfortable death for many patients.

Practical approaches to managing specific symptoms are covered in EPEC™-O Module 3: Symptoms and EPEC™-O Module 6: Last Hours of Living.

**Discussing Hospice Care**

A referral for hospice care is frequently perceived as challenging. It becomes easier if the idea of hospice care is presented as a response to a need rather than something to turn to when there is nothing left to do.
Elicit the patient’s and family’s understanding of the current situation before discussing hospice care. If there is an understanding that the main focus should be on comfort, quality of life, and emotional and practical support, hospice care can be introduced as a way for the physician to provide additional resources to care for the patient and family at this time. Patients frequently identify the family as needing the most help. Family members identify the need for a group that will help manage the case and coordinate numerous caregivers and services. Hospice programs are an effective way to provide this.

About 10 to 15% of all patients referred for hospice care are disenrolled (graduate) because they get better with the intensive care and support. There is no penalty for disenrolling and becoming involved later, if needed.

Summary

The issue of withholding or withdrawing artificial hydration and nutritional therapy challenges oncologists to be excellent communicators with patients and families. When oncologists establish the overall goals first, then evaluate whether artificial hydration or nutrition will achieve those goals, patients and families understand the limits of modern medical help and can focus on the role they can play in providing the best oncologic care for their loved one.

Key Take-Home Points

1. Patients have the right to refuse any medical treatment, even artificial nutrition and hydration.
2. Withdrawal or withholding of treatment is a decision/action that allows the disease to progress on its natural course. It is not a decision or action intended to cause death.
3. In rare circumstances, opioids and other drugs are rapidly titrated to treat physical symptoms following accepted dosing guidelines. They might be perceived to contribute to death; however, provided the intent was genuinely to treat the symptoms, then such use is not euthanasia.
4. Physicians must familiarize themselves with the policies of the institution and pertinent statutes where they practice.
5. Impediments to good care include misconceptions about legal and ethical issues, as well as unfamiliarity with the practical aspects of withholding or withdrawing treatment.
6. Patients may be transferred to an acute care setting where life-sustaining measures are administered because the appropriate treatment plan and physician’s orders have not been completed and placed in the patient’s chart, or physician’s orders may not transfer across settings.
Nutrition / Hydration

7. If the patient and family hope to see improved energy, weight, and strength, artificial fluid and nutrition may not help accomplish those goals.
8. If the patient is close to dying, make sure the family knows that a dry mouth may not improve with intravenous fluids. Relief is much more likely to occur with attention to mouth care and use of oral lubricants.
9. Dehydration is a natural part of the dying process. Artificial fluids and hydration will not help the patient feel better.

Pearls

1. Discuss overall goals before discussing specific treatments.
2. Acknowledge emotional components of decisions.
3. Dehydration may stimulate the production of endorphins and other anesthetic compounds that help contribute to a peaceful, comfortable death for many patients.
4. Make a partnership with your patient and the family caregiver; draw them into the interdisciplinary team and foster their active participation in the care plan.

Pitfalls

1. Using loaded slogans like “do everything”, “starve to death.”
2. Failing to realize that institutional policies may be written in response to the general legal imperative to err on the side of prolonging life in cases of uncertainty or in emergencies.
Appendix: Information for Patients / Families about Artificial Nutrition and Fluids

When is Artificial Feeding and Nutrition Most Appropriate?

If you have a temporary condition that prevents swallowing, artificial fluids and nutrition can be provided until you recover.

What is Involved in the Procedure?

An intravenous catheter may be placed in a vein in the skin for fluids, or sometimes nutrition.

Alternatively, a plastic tube called a nasogastric tube (NG tube) may be placed through the nose, down the throat, and into the stomach. It is approximately 1/8 inch in diameter. This can only be left temporarily.

If feeding by this route, a more permanent feeding tube may be placed into the wall of the stomach (PEG tube or G tube).

What Happens if it is Not Administered?

If a person is unable to take any food or fluids due to illness, he or she will eventually fall into a state much like a deep sleep. This process will take 1 to 3 weeks.

Before entering the deep sleep, he or she will normally not experience any hunger or thirst after the first several days.

For a person who has an advanced illness, giving artificial hydration and nutrition may not prolong life.

What are the Benefits?

A feeding tube may reduce hunger in someone who is hungry, but cannot swallow.

Intravenous fluids may reduce some symptoms, such as delirium.

What are the Burdens?

All feeding tubes are associated with significant risk. Around 30% of patients have signs of the liquid entering the lungs. This aspiration of fluid can cause coughing, pneumonia, and shortness of breath.

Feeding tubes may feel uncomfortable. They can block the stomach, causing pain, nausea, and vomiting.
Tubes for food and fluids may become infected.

Physical restraints are occasionally needed so the patient won't remove the tube.
References

Module 11: Withdrawing Nutrition, Hydration


4 Cruzan v Director of Missouri Department of Health 109 SCt 3240 (1990).


Over the course of 2 years, a total of 9,105 adults in five academic medical centers hospitalized with one or more of nine life-threatening diagnoses had an overall 6-month mortality rate of 47%. The phase I observation documented shortcomings in communication, frequency of aggressive treatment, and characteristics of hospital death. The phase II intervention phase produced no improvement in patient-physician communication (eg, 37% of control patients and 40% of intervention patients discussed CPR preferences) or in the five targeted outcomes.

The medical records of 180 admissions showed only 26% of patients who had previously executed advance directives had their directives recognized during their hospitalization. When the advance directive was recognized, it appeared to influence treatment decisions in 12 (86%) of 14 cases.

8  Fischer GS, Alpert HR, Stoeckle JD, Emanuel LL. Can goals of care be used to predict intervention preferences in an advance directive? Arch Int Med. 1997;157:801-807. PMID: 9125014.

This study showed that among patients who completed an advance care document as part of a survey, their selected goals predicted intervention choices. Further, decline of noninvasive interventions predicted decline of invasive interventions and desire for invasive interventions predicted desire for noninvasive interventions.


This study analyzed the influence of race and ethnicity on the knowledge and attitudes of patients concerning advance directives and life-prolonging therapy.

A survey was conducted of 200 respondents from each of four ethnic groups: European-American, African-American, Korean-American, and Mexican-American (800 total), followed by in-depth ethnographic interviews with 80 respondents. European-Americans were the least likely to both desire and accept life-support treatment (p<0.001). Mexican-Americans were generally more positive about the use of life support and were more likely to personally desire such treatment (p<0.001). Ethnographic interviews revealed that this was due to their belief that life support would not be suggested if a case were truly hopeless. Compared with European-Americans, Korean-Americans had positive attitudes regarding life support (RR=6.7, p<0.0001); however, they did not want such technology personally (RR=1.2, p=0.45). Ethnographic interviews revealed that the decision for life support would be made by respondents’ families. Compared with European-Americans, African-Americans felt it was generally acceptable to withhold or withdraw life-support measures (RR=1.6, p=0.06), but were the most likely to want to be kept alive on life support (RR=2.1, p=0.002). Ethnographic interviews documented a deep distrust towards the health care system and a fear that provision of health care was based on one’s ability to pay.


African-Americans and other minorities underuse palliative and hospice care, even when they have access to this care.


This article reports on an interview with a 79-year-old typical Korean-American respondent to explain contradiction in survey data. Expectations among elderly Korean-Americans include protecting family members with a life-threatening illness from being informed of their diagnosis and prognosis, and doing everything to keep them alive.

The prognostic effect of weight loss prior to chemotherapy was analyzed using data from 3,047 patients enrolled in 12 chemotherapy protocols of the Eastern Cooperative Oncology Group. Chemotherapy response rates were lower in the patients with weight loss, but only in patients with breast cancer was this difference significant. These observations emphasize the prognostic effect of weight loss, especially in patients with a favorable performance status or a limited anatomic involvement with tumor.


Weight loss is a poor prognostic factor in cancer. Enteral feeding is only effective when patients are unable to ingest food because of neurological disorders or structural abnormalities of the upper GI tract. Enteral therapy has not been shown to be an effective adjuvant for anticancer therapy. Total parenteral nutrition has only been shown to be of benefit in cases of prolonged GI tract toxicity such as in bone marrow transplant.


Prospective, randomly controlled trials have failed to demonstrate the clinical efficacy of providing nutritional support to most cancer patients in terms of morbidity, mortality, and duration of hospitalization. Although retrospective studies of parenteral nutrition suggested a benefit for patients with cancer who were undergoing surgery, radiation, or chemotherapy, carefully designed, prospective studies have not shown benefit. Routine use of parenteral nutrition should be discouraged.


Enteral nutrition has proven efficacy in patients receiving radiation to the head and neck, those with persistent dysphagia, and critically ill patients with impaired gastric emptying. Specialized formulas designed to enhance immune function may decrease infectious complications but do not improve survival.

Parenteral nutritional therapy is associated with net harm; no conditions could be defined in which such treatment appeared to be of benefit. In regard to survival, those treated with TPN had a best-estimate odds ratio of 0.81. (p=0.05). For those with short-term survival (3 months) the best-estimate odds ratio was 0.74. For tumor response rates, the best odds ratio was 0.68. These data have been summarized as the TPN “feeds the tumor,” not the patient.


This article provides a prospective evaluation of 31 dying cancer patients with no parenteral hydration or nutrition. Twenty patients (63%) had no hunger. In 11 patients (34%) hunger, thirst, and dry mouth were alleviated with small amounts food, fluids, ice chips, and lubrication.


Eleven prospective, randomized, controlled trials evaluating 1,009 patients treated with combinations of key nutrients were evaluated. There were no differences between patient groups for either pneumonia or death.


This trial included 119 evaluable patients. Median survival for patients with limited disease was 18 months; median survival for patients with extensive disease was 11 months. Patients randomized to receive IVH had no better response rate (P=0.97) or survival (P=0.78) than control patients.


The authors propose a three-step process: Step 1: define the eight key elements necessary to reach a decision; Step II: make the decision; and Step III: reevaluate the patient and the proposed treatment at specified intervals.

In this study, 55 patients were randomized to TPN vs oral diet. Fifty percent of those on oral diet were given TPN later due to poor oral intake. There were no differences in length of stay or survival between the two groups.


Surgery should not be undertaken routinely in patients with poor prognostic criteria, such as intra-abdominal carcinomatosis, poor performance status, and massive ascites. A nasogastric tube should be used only as a temporary measure. Medical measures such as analgesics, antisecretory drugs, and antiemetics should be used alone or in combination to relieve symptoms. A venting gastrostomy should be considered if drugs fail to reduce vomiting to an acceptable level. TPN should be considered only for patients who may die of starvation rather than from tumour spread. Parenteral hydration is sometimes indicated to correct nausea, whereas regular mouth care is the treatment of choice for dry mouth.


No benefit of TPN was demonstrated in this study. Complications were significantly greater in the TPN group, primarily associated with infection.


Nutrient provision has not been successfully demonstrated to influence survival or quality of life.


Most patients with advanced cancer, anorexia, and/or weight loss do not appear to benefit from nutritional supplementation.

The effects of ketone body metabolism suggests that mild ketosis may offer therapeutic potential in a variety of common and rare disease states.


Forty-six nursing home patients with PEG tubes were studied; 48% were completely functionally impaired. There was no functional improvement and a high mortality rate (50% at 12 months; 60% at 18 months); 35% had PEG-related complications.

In a retrospective study of 7,369 VA patients, 23.5% had a PEG placed during the admission and died. Median survival after PEG was 7.5 months.


Parenteral nutritional therapy is associated with net harm; no conditions could be defined in which such treatment appeared to be of benefit. In regard to survival, those treated with TPN had a best estimate odds ratio of 0.81 (p=0.05). For those with short-term survival (3 months) the best estimate odds ratio is 0.74. For tumor response rates, the best odds ratio is 0.68. These data have been summarized as the TPN “feeds the tumor,” not the patient.

This study included 82 hospice patients with decreased oral intake. Serum sodium was checked 1 to 5 days before death. Despite the fact that many patients had normal chemistries, 87% had thirst and 83% had dry mouth; 91% of patients received drugs that could cause dry mouth.

Thirty-two alert, terminally ill patients were studied regarding symptoms of hunger, thirst, and dry mouth. They were offered food, fluid, ice chips, lubricants, and opioids. One-third of patients had no thirst or dry mouth; one-third had thirst and dry mouth only initially; and one-third had thirst and dry mouth present until death.

Thirty-one dying patients were observed for spontaneous fluid intake; 60% drank <500 cc/day and 19% drank >500 cc/day up until 3 days before death. The most common symptom, dry mouth, was easily controlled.

When treated with hypodermoclysis, the incidence of agitated delirium decreased to 10 to 30%. This decrease may have been due to opioid rotation or the use of less-sedating agents.


The authors discuss possible physiologic explanations for observed dehydration-related phenomena and offer guidelines for determining when it is appropriate to decrease or discontinue nutritional support and hydration by artificial means.


The article describes a prospective evaluation of 82 dying cancer patients. None of the patients received parenteral hydration. Serum osmolarity was measured. There was no correlation between level of hydration and symptoms of dry mouth.


This study demonstrated that sensation of thirst was not diminished in dying patients receiving IV hydration.

This article reviews the published data regarding the use of nutritional support in patients with cancer. Total parenteral nutrition has shown no benefits in patients being treated with standard-dose chemotherapy or radiation.


A protocol for disclosing unfavorable information—"breaking bad news"—to cancer patients about their illness is described.


A protocol for disclosing unfavorable information—"breaking bad news"—to cancer patients about their illness is described.

41 von Gunten CF. Discussing hospice care. 2003 May 1;21(9 Suppl):31-36. PMID: 12743186; full text.

Self-Assessment

Module 11: Withdrawing Nutrition, Hydration

1. Mrs. Montanez is a 64-year-old woman with hypertension, diabetes, and renal failure who had a feeding tube placed during treatment for head and neck cancer. She has been increasingly debilitated due to advancing disease and leaves the house only to come to oncology appointments. She has been admitted to the hospital. Although she is awake, she does not have the capacity to make decisions. In discussing the continuation of the use of the feeding tube with her family, the physician should begin by:

   a). telling the patient and family about the current condition
   b). telling the patient and family the benefits and burdens of tube feeding
   c). asking what they understand about her current condition
   d). asking what they understand about tube feeding

2. Mr. Maltoni is an 84-year-old man with hormone refractory metastatic prostate cancer, weight loss of 13% of his usual body weight over the past 4 months, and increasing fatigue. He is currently an ECOG 3 in performance status. In considering the placement of a percutaneous gastrostomy feeding tube in this man for supplemental nutrition, his oncologist should be guided by:

   a). the evidence that enteral nutrition does not improve energy, weight, or prognosis
   b). the low operative complication rate of percutaneous gastrostomy tube placement
   c). the low complication rate from the use of percutaneous gastrostomy feeding tubes
   d). the family's insistence that the tube be placed to keep him from starving to death
3. If Mr. Maltoni’s family asks about parenteral nutrition, the oncologist should best be guided by:

   a). the results of a time-limited trial of a week of total parenteral nutrition
   b). the data of no general benefit for parenteral nutrition
   c). the desire to avoid conflict with the family
   d). the practice of other oncologists in the area

4. Suggestions the oncologist might have for the Maltoni family include:

   a). urging the patient to eat
   b). planning social interactions that don’t center on meals
   c). hiring staff to provide direct care
   d). avoid talking about the past when he was healthy
Self-Assessment Answers

**Question 1. The correct answer is: c)**

This question is aimed at understanding how to discuss treatment decisions of withdrawing or withholding therapy. Begin with asking the patient/family what they understand about her condition before telling any new information. Although asking about the feeding tube is important, it is a more focused question that should come after a more general open-ended question.

**Question 2. The correct answer is: a)**

In contrast with conventional wisdom, there is no evidence that enteral nutrition improves energy level or survival in patients with progressive cancer.

**Question 3. The correct answer is: b)**

The weight of scientific evidence has shown no general benefit for parenteral nutrition in patients with cancer.

**Question 4. The correct answer is: b)**

Urging the patient to eat will only increase conflict. Focusing on eating only for pleasure and planning social interactions that don’t center on meals like reading or watching movies together are more likely to substitute for the social needs of the family. Teaching them to provide care and speak openly about the past is also helpful.