Symptom Management at the End of Life

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Geriatric Update for the Primary Care Provider
November 17, 2016
DISCLOSURE

Relevant Financial Relationship(s)
None

Off Label Usage
Opioids for Dyspnea
Learning Objectives

• Identify targeted approaches to treating common symptoms at the end of life.

• Describe safe prescribing options for opioids in treatment of pain and non-pain symptoms.
Case 1

A 62-year-old male, with a complex past medical history including chronic myofascial low back pain, diabetes mellitus and severe chronic obstructive pulmonary disease on 4L home oxygen therapy presents to your outpatient clinic with ongoing severe dyspnea on exertion.

He has struggled with repeated hospitalizations for his dyspnea and is now unable to play with his grandchildren due to the dyspnea of this minimal exertion.

While reasonably comfortable at rest, he develops increasing dyspnea ambulating in your office, describing an inability to “catch my breath” associated with anxiety.
Case 1

Afterwards, he is visibly tachypneic and using accessory muscles of respiration. Vitals signs reveal a temperature of 37.9, respiratory rate of 32, heart rate of 104 and pulse oximetry at 93% on 4L/min of oxygen by nasal cannula.

Pulmonary examination exhibits a prolonged expiratory phase and intermittent scattered rhonchi throughout his lung fields, with hyperresonance to percussion. Jugular venous pressure is measured at 6cm of water at 45 degree bed angle.
Which one of the following interventions is most appropriate to treat his dyspnea?

A. Start fentanyl 25 micrograms with 2mL saline via home nebulizer four times daily as needed
B. Start lorazepam 0.25mg PO BID as needed for dyspnea
C. Increase his home oral furosemide
D. Start oxycodone 2.5mg PO q4hrs as needed for dyspnea
E. Increase oxygen by nasal cannula to 5 liters/minute
Dyspnea

• Complex, uncomfortable sensation that includes air hunger, increased effort or work of breathing, and chest tightness

• **Self report is the gold standard for assessment**
  • Use 0-10 scale

• Neural structures involved in pain and dyspnea may be shared

Dyspnea

• “Total Dyspnea”
  • May be influenced by physical, social, psychological, and spiritual factors

• Primary treatment is to address the underlying cause

BONUS PEARL:
Non-pharmacologic strategies for Dyspnea

- Proper positioning & pursed-lip breathing
- Gait aids (e.g. walkers)
- Fans: RCT in refractory dyspnea
  - After 5 minutes with handheld fan, statistically significant decrease in breathlessness
- Guided meditation/relaxation training
- Acupuncture
- Oxygen?

Greer JA et al., J Pain Symptom Manage. 2015 Dec;50(6):854-60
Abernethy et al., Lancet. 2010 Sep 4;376(9743):784-93
Opioids Are First Line Pharmacotherapy

• Improve subjective sensations of dyspnea and are safe when dosed appropriately for properly selected patients.

• Class effect:
  • No data to support morphine as superior to other opioids

Opioids for Dyspnea
Starting doses

• In an opioid-naïve patient:
  • Morphine 5 to 7.5 mg PO every 4 hours
  • Oxycodone 2.5 to 5 mg PO every 4 hours
  • Hydromorphone 1 to 2 mg PO every 3 hours

• Long acting opioids:
  • Class effect
  • Increase no more frequently than every week
  • Good data in Morphine SR 10-20mg PO qAM

Management of Dyspnea

• Inhaled opioids no more beneficial than placebo in controlled trials.

• Appropriately dosed opioids should NOT cause respiratory depression.
Anxiolytics

Second line therapy: benzodiazepines

- Avoid short acting benzodiazepines (i.e. alprazolam)
- Moderate acting benzodiazepines
  - Lorazepam 0.25-2 mg po/sl q 6 hrs
- Long acting benzodiazepines
  - Caution in the elderly due to long half-life
  - Clonazepam 0.25-1.0 mg q day or bid
- Can be given in conjunction with opioids with significant caution
Take Home Points

- In patients with severe dyspnea, appropriately dosed opioids are first-line therapy for symptomatic relief.
Case 2

BL is a 67yoM with a past medical history of diabetes mellitus & end-stage renal disease on hemodialysis for the past 4 years with recently diagnosed cirrhosis, secondary to previous alcohol use (now sober x10yrs). He also carries a diagnosis of metastatic prostate adenocarcinoma with diffuse spinal metastases, but his disease is currently stable on androgen deprivation therapy. He presents for follow-up in your outpatient practice for increasing back pain.

He describes the pain as a deep aching sensation in his low-back with painful burning in his buttocks & thighs bilaterally.
Case 2

Imaging shows no evidence of malignant spinal cord compression. He does have evidence of some non-malignant spinal stenosis levels L3-L5. Of note, he has not responded to previous attempts at epidural steroid injections tried at numerous juncture in the past. The pain affects his ability to walk & perform most ADLs.

He has been tried on a number of analgesics including acetaminophen, up to 3grams/day, gabapentin which caused confusion & morphine which made him too sleepy.
What is the next best option for managing this patient’s pain?

A. Tramadol 50mg PO q6hrs prn pain
B. Hydromorphone 2mg PO q4hrs prn pain
C. Ibuprofen 600mg PO q8hrs prn pain
D. Fentanyl patch 25mcg/hr changed every 72hrs
E. Oxycodone 7.5mg PO q4hrs prn pain
Answer

B. Hydromorphone 2mg PO q4hrs prn pain
The right dose is the dose that provides adequate pain relief with acceptable side effects.
There is a Tension Between Safety and Appropriate Analgesia

Patients Report Inadequate Analgesia as Persistent Fear

• Present in most serious illnesses.

• Over 1/3 of patients with cancer do not receive analgesia according to their need.

• Pain impairs quality of life and function which can adversely affect survival.

Greco MT et al., J Clin Oncol. 2014 Dec 20;32(36):4149-54
In patients with serious illness non-opioid adjuvants often carry their own safety concerns.

And, there are safe ways to use opioids in these patients.
Renal Failure & Opioids

• Toxic metabolites accumulate
  • Morphine
  • Hydromorphone

• Increased ½ life of many drugs
  • Tramadol
  • Oxycodone

• Variability in ability to dialyze opioids
  • Methadone & fentanyl = no
  • Morphine & tramadol = yes

Cirrhosis & Opioids

- Increased drug $\frac{1}{2}$ life
- Variable onset of analgesia

- Increased effect in heavily protein bound drugs
- Increased generation of toxic metabolites.

<table>
<thead>
<tr>
<th>Opioid</th>
<th>Protein Binding</th>
<th>Metabolism</th>
<th>Pearl</th>
</tr>
</thead>
</table>
| Morphine   | Mod/high        | Liver (glucuronidation) ↑↑ bioavailable w/liver failure & ↑↑ toxic metabolites | 1. Avoid in Renal failure  
2. Avoid in hepatic failure or cirrhosis                                |
| Hydrocodone| Low             | Liver CYP2D6 ↑ time to onset in liver failure   | 1. Variable efficacy; combination w/acetaminophen limits use.          |
| Oxycodone  | Mod/high        | Liver CYP 2D6/3A4 ↑ Half life in liver failure | 1. Increased ½ life & variable onset  
2. If used, reduce dose & frequency                                      |
2. Reduce dose & frequency in liver failure/cirrhosis                   |
| Fentanyl   | High            | Liver CYP3A4 ↑ bioavailable w/liver failure     | 1. Safest long-acting drug in renal and liver failure.  
2. Start lower dose patch in liver failure                               |
| Tramadol   | Low/mod         | Liver CYP 2D6/3A4                               | 1. Variable time to onset & analgesic efficacy in liver failure  
2. Interactions w/other serotonergic medications.                       |
A Revised Pain Ladder for Patients with Renal Disease & Liver Failure/Cirrhosis

- Acetaminophen
- Topicals

If pain persists or increases:
- Hydromorphone
- Gabapentin/Pregabalin

If pain persists or increases:
- Oxycodone (IR/CR forms)
- Fentanyl TD
- Referral to Specialist for
  - Interventions
  - Methadone

Functional assessment & referral to appropriate services at each step.
Take Home Points

• In patients with severe renal impairment/dialysis, hydromorphone appears to be the safest short acting opioid.

• Opioids in liver failure can be used but need to start at lower doses and longer intervals

• Fentanyl patches can provide safer long-acting analgesia

• Morphine, codeine, tramadol all to be avoided
Case 3

- 74yoF with ischemic cardiomyopathy, pulmonary hypertension, ESRD on HD & severe dyspnea.

- She is started on oral hydromorphone for her dyspnea & experiences significant improvement. Unfortunately, she notes significant nausea and several episodes of emesis.
Clinical Question:
What is the next best step in managing her nausea?

A. Add promethazine 12.5mg PO q12hrs
B. Start a scopolamine patch
C. Add metoclopramide 5mg PO q6hrs
D. Add prochlorperazine 10mg PO q6hrs prn
E. Add lorazepam 1mg PO q4 hrs prn
Nausea/Vomiting is a Significant Clinical Problem

- Affects large numbers of patients with serious illness:
  - >70% in cancer patients
  - >50% CHF, ESRD, COPD
- Often under treated
- Negative Emotional/QOL Impact:
  - Similar distress levels to pain
  - 10-44% w/ anticipatory Nausea
- Associated w/ shortened survival

Greaves et al., Support Care Cancer. 2009 Apr;17(4):461-4
Many Possible Causes of Nausea and Vomiting

Chemotherapy
Radiation
Medications:
Infection
Gastritis/PUD
Dysmotility/Gastroparesis
Constipation/Ileus/Obstruction
Pancreatitis
Graft Vs Host Disease
Metabolic Abnormalities
Uremia
Brain Metastases
Anxiety
Oropharyngeal:
Anticipatory Nausea
A Mechanistic Approach to Nausea and Vomiting

Vs.
Principles of Targeted Management

Approach to nausea assessment is similar to approach to pain. Make them rate it!

• Do not just treat the symptom!
• Thorough history and physical
• Always have a differential diagnosis → Targeted Rx
• If cause unclear, obtain more data
Knowledge of Anti-Emetic Receptor Activity →→→ Targeted Therapy

### Pure Antagonists

<table>
<thead>
<tr>
<th>Receptor</th>
<th>Drug</th>
</tr>
</thead>
<tbody>
<tr>
<td>D&lt;sub&gt;2&lt;/sub&gt; (central)</td>
<td>Haloperidol</td>
</tr>
<tr>
<td>(peripheral)</td>
<td>Metoclopramide</td>
</tr>
<tr>
<td>H&lt;sub&gt;1&lt;/sub&gt;</td>
<td>Diphenhydramine</td>
</tr>
<tr>
<td>Ach</td>
<td>Scopolamine</td>
</tr>
<tr>
<td>5HT&lt;sub&gt;3&lt;/sub&gt;</td>
<td>Ondansetron</td>
</tr>
<tr>
<td>NK&lt;sub&gt;1&lt;/sub&gt;</td>
<td>Aprepitant</td>
</tr>
</tbody>
</table>

### Mixed Antagonists

<table>
<thead>
<tr>
<th>Receptors</th>
<th>Drug</th>
</tr>
</thead>
<tbody>
<tr>
<td>D&lt;sub&gt;2&lt;/sub&gt; &gt; H&lt;sub&gt;1&lt;/sub&gt; &gt; Ach</td>
<td>Prochlorperazine</td>
</tr>
<tr>
<td>D&lt;sub&gt;2&lt;/sub&gt; &gt; H&lt;sub&gt;1&lt;/sub&gt;</td>
<td>Mirtazapine</td>
</tr>
<tr>
<td>H&lt;sub&gt;1&lt;/sub&gt; &gt; Ach &gt; D&lt;sub&gt;2&lt;/sub&gt;</td>
<td>Promethazine</td>
</tr>
<tr>
<td>5HT&lt;sub&gt;2&lt;/sub&gt; &gt; D&lt;sub&gt;2&lt;/sub&gt; &gt; H&lt;sub&gt;1&lt;/sub&gt; &gt; α&lt;sub&gt;1&lt;/sub&gt;</td>
<td>Olanzapine</td>
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</tbody>
</table>

### Others

<table>
<thead>
<tr>
<th>Site of Action</th>
<th>Drug</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple, Inflammation</td>
<td>Corticosteroids</td>
</tr>
<tr>
<td>Cortex</td>
<td>Lorazepam</td>
</tr>
<tr>
<td>THC</td>
<td>Dronabinol</td>
</tr>
</tbody>
</table>
Vomiting

Cortex / Emotional Stimuli

Vestibular Center

Chemoreceptor Trigger Zone

Gastric Irritation/ Distention

Intracranial Pressure Receptors

Vomiting Center

Vomiting
Vomiting

Cortex / Emotional Stimuli

Vestibular Center
- Inner ear disorders
- Motion sickness

Gastric Irritation/ Distention

Chemoreceptor Trigger Zone

Intracranial Pressure Receptors

Vomiting Center
Vomiting

Center / Emotional Stimuli

Vestibular Center
Anticholinergics
Antihistamines (H1)
- scopalamine
- promethazine

Gastric Irritation/ Distention

Chemoreceptor Trigger Zone

Intracranial Pressure Receptors

Vomiting Center

Anticholinergics
Antihistamines (H1)
- scopalamine
- promethazine

Vomiting
Vomiting

Cortex / Emotional Stimuli

Vestibular Center

Psychogenic factors
Anticipatory anxiety
Pain

Chemoreceptor Trigger Zone

Gastric Irritation/ Distention

Intracranial Pressure Receptors

Vomiting
Vomiting
Cortex / Emotional Stimuli

- Vestibular Center
- Gastric Irritation/Distention
- Chemoreceptor Trigger Zone
- Intracranial Pressure Receptors

Vomiting Center

- Benzodiazepines
- Cannabinoids
- Dopamine Antagonists
  - haloperidol, olanzapine

- Benzodiazepines
- Cannabinoids
- Dopamine Antagonists
  - haloperidol, olanzapine
Vomiting Center

- Cortex / Emotional Stimuli
- Vestibular Center
- Gastric Irritation/Distention
- Chemoreceptor Trigger Zone
  - Metabolic Derangements
  - Drugs, Toxins
- Intracranial Pressure Receptors

Vomiting

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Vomiting Center

- Cortex / Emotional Stimuli
- Vestibular Center
- Gastric Irritation/Distention
- Chemoreceptor Trigger Zone
- Intracranial Pressure Receptors

- 5HT-3 Antagonists
- Corticosteroids
- Dopamine Antagonists
- NK-1 inhibitors
Vomiting

Cortex / Emotional Stimuli

Vestibular Center

Gastric Irritation/Distention

Chemoreceptor Trigger Zone

Intracranial Pressure Receptors

- Intracranial injury/mass
- Meningeal irritation
Vomiting Center

- Cortex / Emotional Stimuli
- Vestibular Center
- Gastric Irritation/Distention
- Chemoreceptor Trigger Zone
- Intracranial Pressure Receptors

- Corticosteroids
  - dexamethasone
  - 4mg BID*
Vomiting

Cortex / Emotional Stimuli

Vestibular Center

Chemoreceptor Trigger Zone

Gastric Irritation / Distention

- Pain
- Dysmotility
- Obstruction
- Visceral inflammation/injury

Vomiting Center

Intracranial Pressure Receptors
Vomiting Center

- Cortex / Emotional Stimuli
- Vestibular Center
- Gastric Irritation / Distention
- Chemoreceptor Trigger Zone
- Intracranial Pressure Receptors

- Dopamine Antagonists
- Serotonin Antagonists
- Somatostatin Analogues
FIGURE 2 The cleveland clinic approach to managing nausea and vomiting in a palliative inpatient unit.
Take Home Points in Therapy of Nausea and Vomiting

• Choose agent based on cause of nausea.
  • History and physical remains important.

• Combination therapy often works better.
  • Use drugs from different classes with different mechanisms.
  • Avoid use > 1 agent from each class
    • Increased side effects with little to no increase in efficacy

• Continually reassess patient.

• Adjunctive therapy
  • Benzodiazepines, antacid therapy, Corticosteroids
Case 4

• HG is a 44 year old patient in your primary care panel presents for evaluation of depression. You also care for his wife and two children, ages 8 and 10.

• He was diagnosed with widely metastatic pancreatic adenocarcinoma nine months ago which has progressed despite numerous lines of chemotherapy, including a phase I clinical trial.
Case 4

- HG endorses significant fatigue, poor appetite, and a 10 pound weight loss over the last several months. He has difficulty falling asleep and sometimes has difficulty concentrating when at home due to his fatigue and intermittent abdominal pain.

- HG sometimes wishes that he could fall asleep and not wake up, and he gets tearful describing that his children will have to grow up without a father. He is unable to describe any areas of enjoyment, reporting a persistent disinterest in spending time with his family, an activity that previously gave him great joy and meaning.
Which of your patient’s symptoms is most suggestive of pathologic depression rather than normal anticipatory grieving?

A. Weight loss  
B. Anhedonia  
C. Verbalizing thoughts of death  
D. Insomnia  
E. Fatigue
Major Depression In the Seriously Ill

• Patients with a terminal illness have higher rates of major depressive disorder
  • Up to 25% of patients w/ end stage cancer

• Significantly impairs quality of life and is associated with shortened survival

• Under-recognized
  • “Wouldn’t you be depressed?”
  • Stigma of depression remains
  • Not part of standard symptom management assessment.
<table>
<thead>
<tr>
<th>Characteristics of Grief</th>
<th>Characteristics of Depression</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patients experience feelings, emotions, and behaviors that result from a particular loss (16)</td>
<td>Patients experience feelings, emotions, and behaviors that fulfill criteria for a major psychiatric disorder; distress is usually generalized to all facets of life</td>
</tr>
<tr>
<td>Almost all terminally ill patients experience grief, but only a minority develop full-blown affective disorders requiring treatment</td>
<td>Major depression occurs in 1%-53% of terminally ill patients (17-22)</td>
</tr>
<tr>
<td>Patients usually cope with distress on their own</td>
<td>Medical or psychiatric intervention is usually necessary</td>
</tr>
<tr>
<td>Patients experience somatic distress, loss of usual patterns of behavior, agitation, sleep and appetite disturbances, decreased concentration, social withdrawal</td>
<td>Patients experience similar symptoms, plus hopelessness, helplessness, worthlessness, guilt, and suicidal ideation (23-27)</td>
</tr>
<tr>
<td>Grief is associated with disease progression</td>
<td>Depression has an increased prevalence (up to 77%) in patients with advanced disease (28); pain is a major risk factor (29-31)</td>
</tr>
</tbody>
</table>

- **Patients retain the capacity for pleasure**
- **Grief comes in waves**
- **Patients express passive wishes for death to come quickly**
- **Patients are able to look forward to the future**

- **Patients enjoy nothing**
- **Depression is constant and unremitting**
- **Patients express intense and persistent suicidal ideation**
- **Patients have no sense of a positive future**

* Numbers in parentheses are reference numbers.
What About HG?

Dying patient in distress (crying, sad, withdrawn, low affect, thoughts of suicide):

Evaluate for presence of unresolved physical symptoms.

Absent

Patient still in distress

Present

Treat symptoms and re-evaluate.

Distress resolves

Mood waxes and wanes with time
Normal self-esteem
Occasional fleeting thoughts of suicide
Worries about separation from loved ones

Preparatory grief

Psychosocial counseling
Grief therapy in severe cases

Patient responds
Ongoing therapy as required
Periodic rescreen for depression

No response
Reconsider depression*

Assess for: anhedonia, persistent dysphoria, disturbed self-image, hopelessness, poor sense of self-worth, ruminative thoughts of death and suicide, active desire for an early death

Depression

Take Home Pearl

• Depression is not “normal” for those facing serious illness &/or at end of life.

• Red Flags for Depression:
  • Persistent anhedonia
  • Overwhelming Guilt
  • Worthlessness/Helplessness
  • Hopelessness
Pharmacotherapy for Depression at the end of life

• Considerations must be given to
  • Prognosis
  • Side effects
    • Both good and bad!
  • Drug-Drug interactions
  • Metabolic limitations due to organ dysfunction
Choosing an Antidepressant

<table>
<thead>
<tr>
<th>Class</th>
<th>Drug</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>SSRI</td>
<td>• Citalopram (______)</td>
<td>• Sexual dysfunction</td>
</tr>
<tr>
<td></td>
<td>• Escitalopram (______)</td>
<td>• Treat both depression and anxiety</td>
</tr>
<tr>
<td></td>
<td>• Fluoxetine (______)</td>
<td>• Longer titration period needed to achieve effect</td>
</tr>
<tr>
<td></td>
<td>• Sertraline (______)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Paroxetine (______)</td>
<td></td>
</tr>
<tr>
<td>SNRI</td>
<td>• Duloxetine (______)</td>
<td>• Helpful for neuropathic pain</td>
</tr>
<tr>
<td></td>
<td>• Venlafaxine (______)</td>
<td>• Difficult withdrawal syndrome</td>
</tr>
<tr>
<td>Other</td>
<td>• Bupropriion (______)</td>
<td>• Activating</td>
</tr>
<tr>
<td></td>
<td>• Mirtazapine</td>
<td>• Sleep promoting @ low doses</td>
</tr>
<tr>
<td>Stimulant</td>
<td>• Methylphenidate (______)</td>
<td>• Rapid onset of action</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• May improve energy</td>
</tr>
</tbody>
</table>
How We Do It

**Prognosis**
- Weeks
- Months
- Weeks/Months, Severe, refractory symptoms

**Therapy**
- Methylphenidate 2.5-5mg PO BID (8am & 12pm)
- Methylphenidate + SSRI
- Electroconvulsive Therapy
  - IV Ketamine

Case 5

76-year-old gentleman w/ ischemic cardiomyopathy. Currently on optimal medical management from the standpoint of his heart failure and is not a candidate for further disease modifying therapies.

He reports poor appetite and a 15lb weight loss over the last 2 months. Denies any post-prandial symptoms but states: “Food simply doesn’t appeal to me”

His wife endorses conflict at meal times as she is used to cooking him a large meal three times daily.

“Is there another way to feed him?”
Clinical Question: What is the next best step in management?

A. Referral to nutritionist for counseling & food diary evaluation.
B. Trial of dexamethasone 4mg PO BID x 14 days
C. Start dronabinol 5mg PO BID
D. Referral to metabolic support for percutaneous enteral feeding trial.
E. Start methylphenidate 5mg PO BID at 8am and noon.
Anorexia in Serious Illness

• Very common:
  • 50-80% in pts with advanced cancer
  • Frequently found in COPD, CHF, ESRD
  • Reduction in calories seen in >85% of long term care residents

• Complex interplay of inflammatory mediators, endocrine changes, autonomic sensory change.

• Emotionally distressing for patients and families
Cachexia is complicated

**DERANGED METABOLISM**

- Lipolysis
- Lipid mobilization
- Proteolysis
- Rest-energy expenditure

- Lipogenesis
- Lipoprotein lipase
- Proteosynthesis

- Increased leptin
- IL-1, IL-6, TNF-α, INF-γ
- LIF, TGF-β

**Medication Side Effects**
- Constipation
- Taste Alteration
- Abdominal pain
  - Delayed gastric emptying
  - Malabsorption

**Psychologic factors**
Pharmacologic Treatment of Cachexia

• Only two drugs are FDA approved for the treatment of cachexia
  • Megestrol --- only in HIV
  • Dronabinol --- only in HIV

• Lots of research being done on potential new agents
  • olanzapine
  • Anabolic steroids
  • Anti-inflammatory
Pharmacologic Treatment of Cachexia

- 20-30% of patients ‘respond’
- Adipose
- No survival advantage
- Only 1 study showed improvement in QoL

vs others

- _______l = Dexamethasone*
- Megestrol > Dronabinol
- No data on mirtazapine in cachexia
- Decision based on side effect profile

EPERC Fast Facts
http://www.eperc.mcw.edu/EPERC/FastFactsandConcepts
Become a grazer…
Artificial Nutrition Not The Default Option

• Who should *not* get artificial nutrition?
  • Expected survival less than 3 months
  • Advanced cancer patients
    • Critical organ involvement
    • Brain, liver, lung
    • Poor performance status
  • Advanced Dementia
  • ACTIVELY DYING PATIENT

McCann RM et al. JAMA 1994;272:1263
Nutrition Does Not “Help” Patients at the End of Life

- Artificial Nutrition Will NOT:
  - Relieve hunger
  - Weight gain
  - Live longer / improve fatigue
  - Decrease complications
    - Aspiration
    - Heal decubitus ulcers

- Artificial Nutrition & Hydration Can Harm:
  - Volume Overload
  - Unpleasant Secretions
Overall Survival by Hydration Status

- Placebo (100 mL per day)
- Hydration (1,000 mL per day)

Bruera E et al. JCO 2013;31:111-118
Family Perspectives Are Different

<table>
<thead>
<tr>
<th>Table 2</th>
<th>Themes and Subthemes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hope</strong></td>
<td>Life sustaining: essential for survival</td>
</tr>
<tr>
<td></td>
<td>Healing/staying healthy</td>
</tr>
<tr>
<td><strong>Comfort</strong></td>
<td>Reducing pain</td>
</tr>
<tr>
<td></td>
<td>Enhancing medication effectiveness</td>
</tr>
<tr>
<td></td>
<td>Nourishing: replenish body, mind, and spirit</td>
</tr>
<tr>
<td></td>
<td>Enhancing breathing, energy, and quality of life</td>
</tr>
</tbody>
</table>

Cohen et al., J Pain Symptom Manage. 2012 May;43(5):855-65
Communication on Nutrition & Hydration

- What is patient’s / family’s understanding?
- What are their concerns?
- What are their goals?
- Teaching about what is known
- **Focus on goal**
  - Avoid blaming patient
  - Speak frankly about the disease and death
  - Not a time to equivocate
Anorexia in Serious Illness Pearl

• Pharmacologic agents for cachexia are suboptimal.

• If you choose to use a pharmacologic agent, choose based on side effect profile.

• What is the patient/family hoping nutrition will do?

• Give families other ways of expressing caring.
Acknowledgements

Slides adapted with permission from Dr. Jake Strand
Questions & Discussion