

Oncologic Palliative Care

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Lecture Outline

- Palliative Chemotherapy
- Palliative Radiotherapy
- Common Symptoms

Palliative Chemotherapy

- Palliative Chemotherapy: Why?
 - Patient wants to “do something”
 - Prognostic uncertainty
 - Attempt to decrease symptoms
 - Culture promotes treating rather than “doing nothing”

Complexity: The Real World



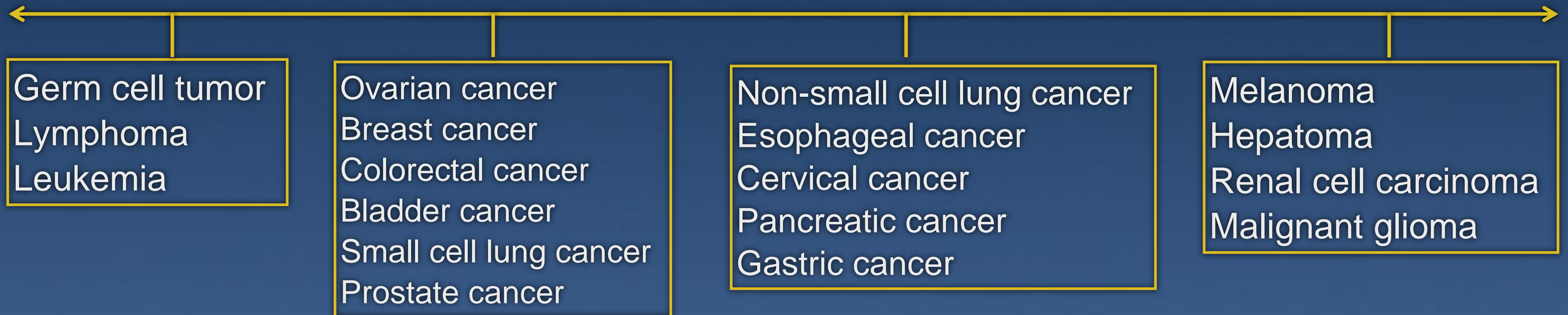
Complexity: Efficacy

Chemoresponsive:

Chemotherapy more likely to generate tumor response or improve QOL

Chemoresistant:

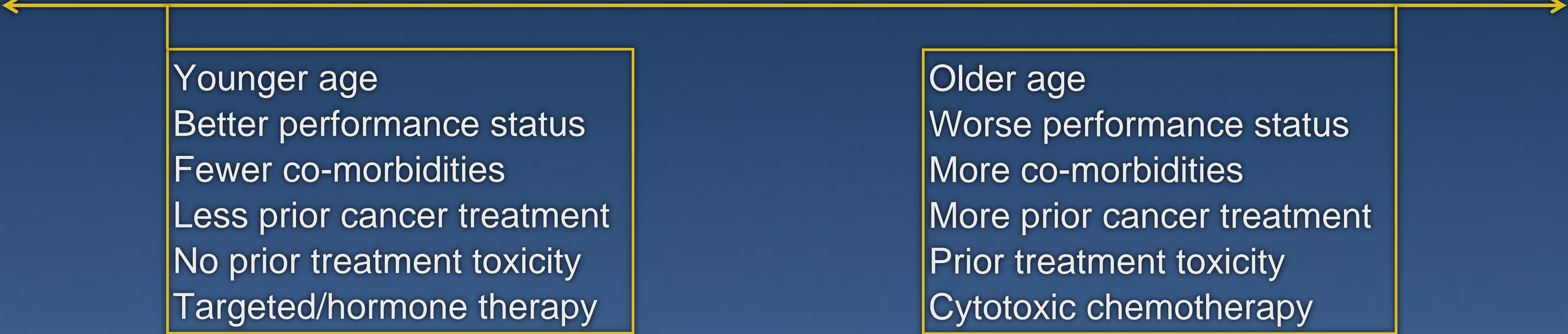
Chemotherapy less likely to generate tumor response or improve QOL



Complexity: Toxicity

Relatively lower risk
for treatment-
related toxicity

Relatively higher
risk for treatment-
related toxicity



Younger age
Better performance status
Fewer co-morbidities
Less prior cancer treatment
No prior treatment toxicity
Targeted/hormone therapy

Older age
Worse performance status
More co-morbidities
More prior cancer treatment
Prior treatment toxicity
Cytotoxic chemotherapy

Performance Status Tools

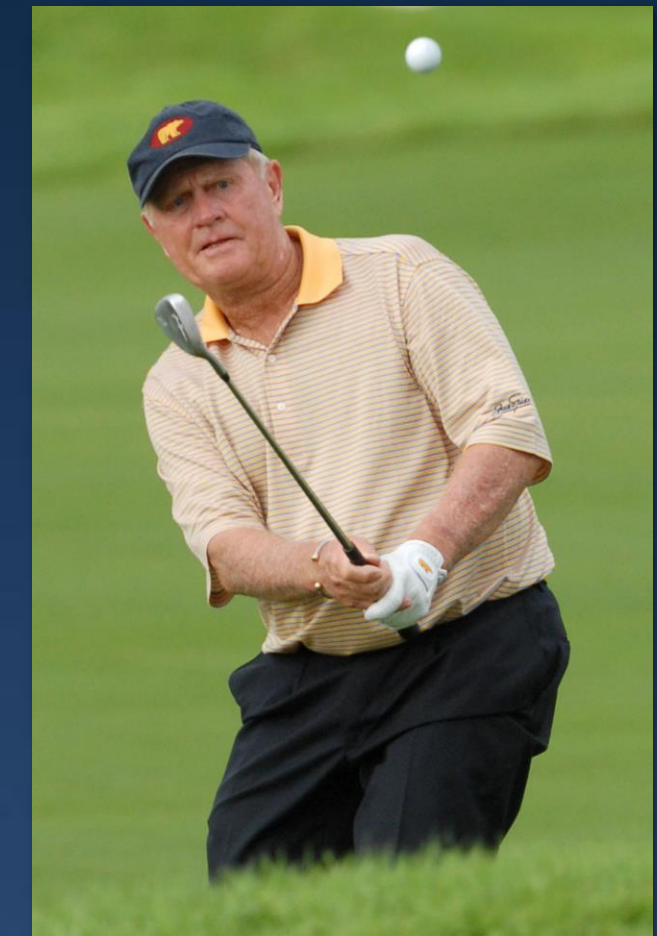
Karnofsky Performance Scale (KPS)	Eastern Cooperative Oncology Group (ECOG, Zubrod) Performance Scale
Normal, no evidence of disease Able to perform normal activity with only minor symptoms	100 90 Normal Activity 0
Normal activity with effort, some symptoms Able to care for self but unable to do normal activities	80 70 Symptomatic and ambulatory Cares for self 1
Requires occasional assistance, cares for most needs Requires considerable assistance	60 50 Ambulatory > 50% of the time Occasional assistance 2
Disabled, requires special assistance Severely disabled	40 30 Ambulatory ≤ 50% of the time Nursing care needed 3
Very sick, requires supportive treatment Moribund	20 10 Bedridden 4

Complexity: Toxicity

Performance Status: ECOG, Karnofsky, others

Better

Working
Cares for self
Ambulatory, out of bed most of the day



Worse

Not working
Cannot care for self
Confined to bed most of the day



Palliative Chemotherapy: General Concepts

- Combination agents - appropriate where chemosensitivity exists and benefit of therapy in improving QOL is established
- Single agents - appropriate where PS is < 3 (ECOG) and chemosensitivity exists and benefit of therapy in improving QOL is established
- Targeted agents - appropriate where PS < 3 (ECOG) and biomarker establishes sensitivity and benefit of therapy in improving QOL is established

Palliative Chemotherapy: General Concepts

- Treatment of patients with poor performance status with chemotherapy is discouraged unless...
 - Tumor with known rapid response to therapy (germ cell tumors, lymphoma)
 - Patient desires treatment and is accepting of toxicities
 - Potential for improved QOL is very real

Palliative Radiotherapy Basics

↑ cancer volume needs ↑ radiation dose for cure

Radiation Dose (180-200 cGy/day fractions)	Probability of Tumor Control
30-35 Gy	60-70% subclinical
40 Gy	80-90% subclinical
50 Gy	>90% subclinical
70 Gy	90% palpable axillary nodes 2.5-3 cm 65% primary tumors 2-3 cm
70-80 Gy	30% primary tumors > 5 cm
80-90 Gy	~55% primary tumors > 5 cm
90-100 Gy	75% primary tumors 5-15 cm

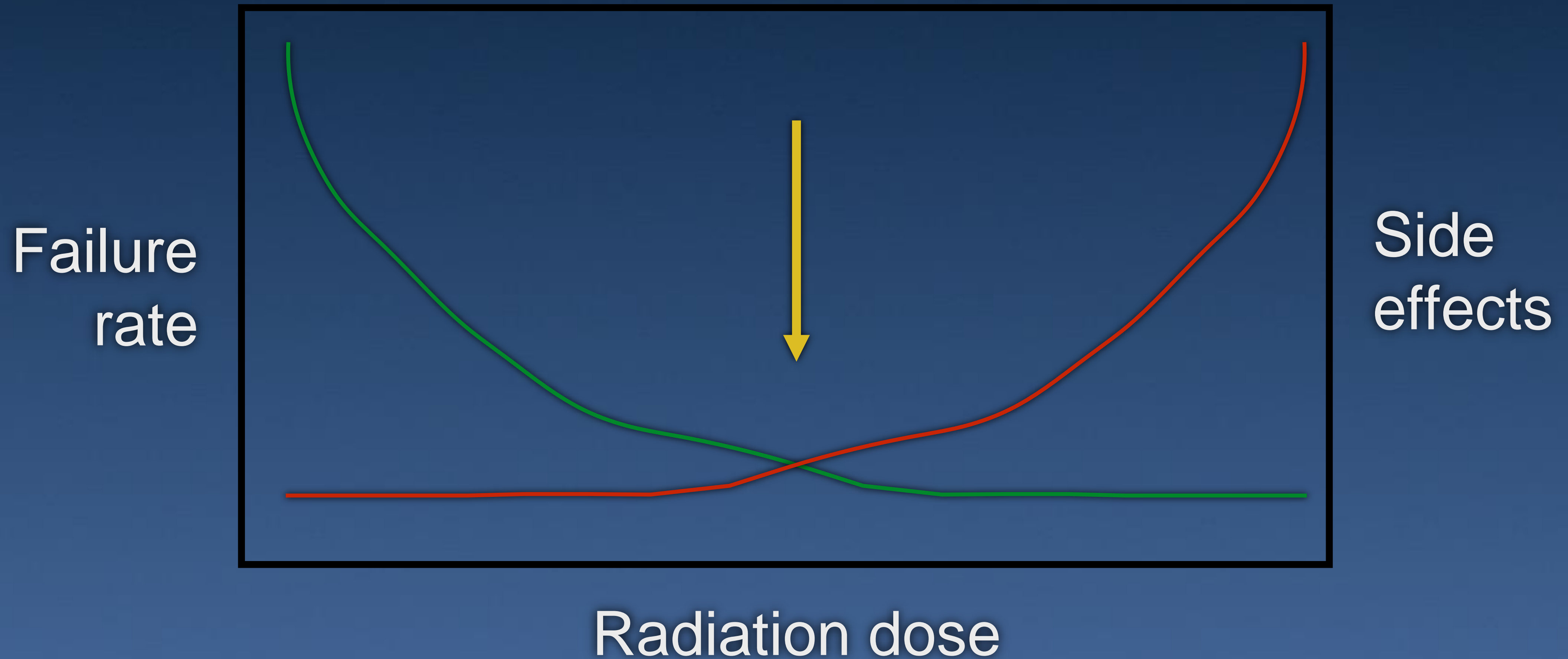
Palliative Radiotherapy Basics

↑ radiation dose causes ↑ risk to normal tissues

Normal Tissue	Dose (cGy)	Side Effect
Brain	> 6000	necrosis
Lens	> 500	cataracts
Optic chiasm	> 5000-5500	blindness
Spinal cord	> 5000	paralysis
Parotids	> 3200	xerostomia
Lung	>1800-2000	pneumonitis
Skin	>5500-6000	telangiectasia
Small bowel	>5000	adhesions, SBO

Palliative Radiotherapy Basics

Ideal dose balances probability of tumor control and normal tissue injury



Uses for Palliative Radiation Therapy

- Painful bony metastases - most common reason
 - Bone is most common metastatic site
 - 65-75% advanced breast/prostate Ca
 - 30-40% advanced lung Ca
 - Treatment given as multiple fractions over 2-3 weeks or as single dose

Uses for Palliative Radiation Therapy

- Spinal cord compression
- Impending/Pathologic fracture
- Control of massive hemoptysis in lung cancer
- Control of pelvic bleeding in cervical, vaginal, vulvar, endometrial, colorectal cancers
- Brain metastases

Uses for Palliative Radiation Therapy

- NOT valuable...
 - Death imminent
 - One symptom among many
 - Unable to give informed consent
 - Retreatment exceeds normal tissue tolerance
 - Lengthy treatment course
 - Therapy facility unavailable

Common Symptoms

- Nausea/Vomiting
- Dyspnea
- Depression/Anxiety

Nausea/Vomiting

- Affects ~60% of all terminal cancer patients with 40% in last 6 weeks of life
- 71% of patients admitted for control of symptoms
- History...focus on character of N/V, associated symptoms, medication history, prior therapies, past medical history

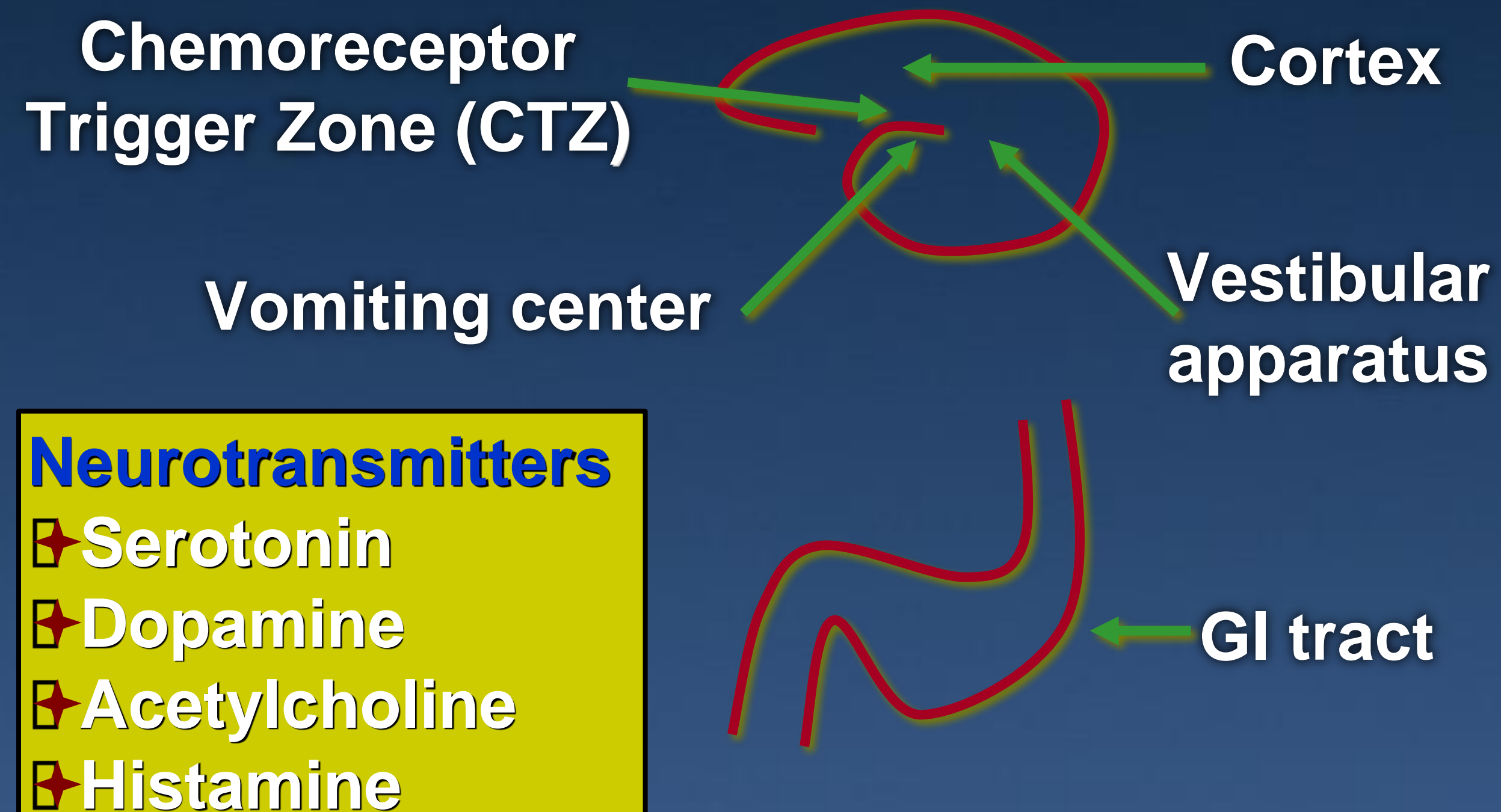
Nausea/Vomiting

- Common findings...
 - Chemical abnormalities 31% - electrolyte abnormalities, acidosis/alkalosis, infection
 - Impaired gastric emptying 44%
 - Visceral/serosal causes 31% - bowel obstruction, GI bleeding/PUD, enteritis, constipation

Nausea/Vomiting

- Common findings...
 - Medications 51%
 - 83% of these due to opioids
- Best way to control N/V is an understanding of the 4 pathways of N/V
- Chemoreceptor Trigger Zone, Cortex, Peripheral Pathways, Vestibular System

Nausea/Vomiting



from AOA ELC course

Nausea/Vomiting

- Mechanism-based therapy
 - Careful assessment to determine etiology
 - Use knowledge of pathophysiology to determine receptors underlying symptoms
 - Choose antiemetic to block appropriate receptors

Nausea/Vomiting

Antiemetic	Receptor Antagonized
Metoclopramide (po, IV, SC)	D2 (GI tract) 5HT3 (at high doses)
Haloperidol (po, IV, IM, SC)	D2 (CTZ)
Prochlorperazine (po, IV, rectal)	D2 (CTZ)
Chlorpromazine (po, IV, IM, rectal)	D2 (CTZ)
Promethazine (po, IV, rectal)	H1, Achm, D2 (CTZ)

Nausea/Vomiting

Antiemetic	Receptor Antagonized
Diphenhydramine (po, IV, SC)	H1
Scopalamine (po, patch, gel)	Achm
Hyoscyamine (sl, po, SC, IV)	Achm
Ondansetron (po, IV)	5HT3
Mirtazapine (po)	5HT3

Nausea/Vomiting

- Non-pharmacologic therapy
 - Avoid strong smells or other triggers (perfume, cologne)
 - Small, frequent meals
 - Limit oral intake during severe episodes
 - Relaxation techniques
 - Acupuncture and acupressure including wrist bands

Dyspnea

- Affects 50-70% of cancer patients with life-limiting illness
- Etiologies...
 - Concomitant lung disease
 - Deconditioning
 - Cachexia (weakens respiratory muscles)
 - Pleural effusion
 - Obstruction from tumor - atelectasis, “functional” lobectomy, etc.
 - Lymphangiitic metastases

Dyspnea

- Recognition of Symptoms
 - Only reliable measure is patient self-reporting
 - Respiratory rate, pO_2 , SaO_2 do not consistently correlate with symptom of dyspnea
 - Focus on identification and treatment (if possible) of underlying cause

Dyspnea - Potential Cause/Treatment

- Airway obstruction
 - Tumor: stent, laser, RT, resection, steroids, chemotherapy
 - COPD: bronchodilators, steroids
- Pneumonia
 - Antibiotics
- Heart failure
 - Diuretics, decrease afterload

Dyspnea - Potential Cause/Treatment

- Treatment-related Pneumonitis
 - Glucocorticoids
- Massive ascites
 - Drainage, diuretics
- Anemia
 - Transfusion

Malignant Pleural Effusion

- Drainage
 - Thoracentesis, Pleurx catheter
- Pleurodesis
 - Talc, intrapleural chemotherapy (bleomycin, others)

Dyspnea - Symptom Management

- Opioids
 - Improves sensation of breathlessness
 - Central and peripheral action (opiate receptors in lung and in pleura)
- Oxygen
 - Powerful symbol of medical care
 - Fan may do as well
 - Monitor CO₂ retainers!

Depression/Anxiety

Prevalence of depression and anxiety at the end of life

Miovic M, Block S. Psychiatric disorders in advanced cancer. *Cancer*. 2007 Oct 15;110(8):1665-76.

	Cancer	Community Elderly	NH Residents	Base Rates	PC/Hospice Inpatient Units
Anxiety	6-8%	2-10%	10%		60-70%
Depression	14-31%	2% (47% post-CVA)	10-25%	2-5%	14%

Depression

- Impact of depression
 - Reduces ability to find meaning and purpose
 - Impairs quality of life
 - Shortens survival in some illnesses
 - Worsens physical symptoms (pain)
 - Bereavement outcomes worse in family members of depressed patients

Depression

- Medications that can cause depression...
 - Steroids
 - Interferon
 - Interleukin-2
 - Tyrosine kinase inhibitors
 - Zidovudine
 - Vinblastine

Depression

- Screening tools for depression: 2 questions (97% sensitive, 67% specific)
 - “During the past month, have you been bothered by feeling down, depressed or hopeless?”
 - “During the past month, have you been bothered by little interest or pleasure in doing things?”
 - At EOL Sensitivity of 55%, specificity of 75%

Depression

- Separating grief from depression...
 - Normal Grief
 - The emotional response is intense early on after a loss, but do gradually diminish in intensity
 - May come in waves – ‘pangs of grief’
 - Depression
 - Persistent low mood, loss of interest in everyday activities, feelings of hopelessness, worthlessness or guilt, and suicidal ideation

Treatment of Depression

- Aggressively treat other physical symptoms
- Consider psychotherapy (CBT)
- Encourage exercise
- Antidepressants (SSRIs) for a life expectancy over two months
- Psychostimulants

Treatment of Depression

- SSRIs
 - Good for co-morbid anxiety and irritability
 - Nausea, diarrhea, and sexual side-effects
 - Potential for QTc prolongation (citalopram dose > 40mg)
- SNRI
 - Can be effective if there is co-morbid pain or hot flashes
 - Often increases blood pressure (venlafaxine)

Treatment of Depression

- TCA's
 - Can assist with appetite, pruritus, neuropathic pain and sleep
 - Inexpensive
 - Anticholinergic (constipation, dry mouth, orthostatic hypotension)
 - Generally contraindicated in cardiac disease or liver failure
 - Worsen symptoms of BPH
- Other
 - Mirtazepine (Remeron) can increase appetite and improve sleep, increases warfarin levels
 - Bupropion (Wellbutrin) can reduce fatigue but also lowers the seizure threshold

Benefits of Psychostimulants

- Response often seen within 2days
 - 73% response in cancer pts (noncontrolled)
 - Discontinuation from side effects <10%
- Augment opioid analgesia
- Diminish opioid sedation
- May increase appetite
- Can be used in conjunction with SSRIs
- Start with methylphenidate 5mg q am, q noon and double if no effect in 2 days, stop if no improvement in a week
 - Can go up to 60mg bid

Anxiety

- Generalized anxiety disorder and anxiety 2^o to a medical condition most common
- Medications that can cause anxiety
 - Caffeine
 - Steroids
 - Nicotine
 - Antidepressants, antipsychotics, stimulants
 - Phenylephrine (Sudafed)
 - Synthroid over replacement

Potential Sources of Anxiety Symptoms

- Actual underlying anxiety disorder
- Fear of death and the dying process
- Spiritual or existential concerns
- Chronic coping or personality style
- Medication side effects (akathisia from antiemetics)
- Undertreated symptoms (pain, dyspnea, sepsis)
- Withdrawal states (sedatives, opioids)
- Delirium
- Anticipatory response to repeated aversive treatment (chemo)

Pharmacological Anxiety Treatment

- Benzodiazepines: drugs of choice at EOL
 - Ativan (lorazepam) 0.5-2 mg q4-6hrs prn
 - Xanax (alprazolam) 0.25-0.5 mg q4-6hrs prn
 - Klonopin (clonazepam) for long-acting coverage
 - Can cause sedation, confusion, tolerance, abuse, disinhibition, gait instability, falls
- Trazodone (Desyrel)
 - Sedating but can be given in low doses during the day (12.5-50 mg q4hrs prn)
- Buspirone (BuSpar)
 - Should be scheduled, takes 4-6 weeks to see an effect (7.5-10 mg BID-TID)

Pharmacological Anxiety Treatment

- Consider antipsychotics
 - More sedating
 - Chlorpromazine (Thorazine) 12.5-50 mg q 4 hrs prn
 - Olanzapine (Zyprexa) 2.5-5 mg q 4 hrs prn
 - Quetiapine (Seroquel) 12.5-50 mg q 4 hrs prn
 - Less sedating
 - Haloperidol (Haldol) 0.5-2 mg q 4 hrs prn
 - Risperidone (Risperdal) 0.25-1 mg q 4 hrs prn
- Anti-histamines can be beneficial
 - Hydroxyzine 25-50mg q 6 hrs prn (may also potentiate effects of morphine)

Pharmacological Anxiety Treatment

- Antidepressants if life expectancy >8 weeks
 - SSRI's
 - Sertraline (Zoloft) 25-200 mg qd
 - Citalopram (Celexa) 10-40 mg qd
 - Escitalopram (Lexapro) 5-20 mg qd
 - Mirtazepine (Remeron)
 - Also helps with sleep and appetite
- Antidepressants to avoid
 - Paroxetine (Paxil): anti-cholinergic
 - Venlafaxine (Effexor): withdrawal
 - Bupropion (Wellbutrin): seizure risk
- Start low and go slow to avoid increasing anxiety

Non-pharmacological Anxiety Treatment

- Explore fears/concerns in non-judgmental fashion
 - Listen, acknowledge, normalize, remain available
- Reassurance not usually effective
 - Can make highly anxious pts more anxious
- Supportive-expressive therapy
 - Aims to reduce symptoms and maintain coping not cure
- Consider psychiatric referral

Anxiety Pearls

- Anxiety is very common
- Benzodiazepines are the drug of choice in hospice patients (need caution since they can cause delirium)
- Can decrease by effectively managing other symptoms (pain/dyspnea)