NR601 Final Review

Practice Questions

Ch 1

1. Which one of the following is most true about the rule of fourths?

What used to be called normal aging can be largely explained by processes that are not normal.

2. Which one of the following is most true about aging changes?

Stage 3 and 4 sleep decreases.

3. An old woman who is cared for by attentive, cautious, concerned family is particularly likely to suffer from which one of the following complications after an episode of gastroenteritis?

Immobility related to over concern

4. Which one of the following is most true about psychological aging?

Ageism can lead to isolation and depression.

5. Of the following conditions, which one is most common and most often preventable?

Iatrogenic disease

Ch 4

1. An 86-year-old female comes to your office for a wellness visit. Her blood pressure is 125/70 mmHg, pulse 69 beats per min, and respiratory rate 18 breaths per min. She is well appearing and reports she is up to date on her routine vaccinations. She introduces her partner of 35 years whom she would like to make medical decisions for her in case she becomes unable to make decisions for herself. She reports that she and her partner are not married. She asks if she needs any further documentation to ensure her goals of care are followed. Which one of the following would be the most appropriate recommendation for this patient and her partner?

Advise them to file an advanced directive.

2. An 81-year-old transgender female with history of depression and hyperlipidemia presents to your clinic for routine care. She endorses a history of smoking, currently smoking 1 pack per day, and occasionally drinks a glass of wine, although she denies illicit drug use. She reports she takes atorvastatin 20 mg and subcutaneous estrogen therapy. Which of the following is the most important next step in this patient's primary care?

Counseling on smoking cessation

3. An 84-year-old male with history of stroke without residual deficit, systolic heart failure, and type 2 diabetes presents to clinic for follow-up. He is independently living in a retirement community and still works part time on a golf course. He currently takes aspirin 81 mg, metoprolol tartrate 25 mg BID (twice a day), furosemide 20 mg BID, and lisinopril 10 mg daily. He reports his last colonoscopy was 8 years ago, with no abnormality. He reports he is sexually active with men and women, engaging in receptive oral, receptive anal, and penetrative sex. He states he has had over three sexual partners in the last year with intermittent condom use. What sexually transmitted infection testing should be offered?

Urine testing, blood testing, anal swab, and oropharyngeal swab

Ch 5

1.The US Advisory Committee on Immunization Practices and the Centers for Disease Control currently recommend which one of the following?

All of these are recommended.

2. Healthcare providers should recommend that older adults engage in which one of the following?

150 minutes of moderate intensity physical activity weekly

3. Guidelines for the primary prevention of stroke recommend that aspirin be used in which one of the following?

Individuals whose risk is high enough for the benefits to outweigh the risks

4. Even though older adults are less likely to get counseled for smoking cessation, they have which one of the following?

The same quit rates as younger individuals

Ch 6

1. Which of the following is true about cultural humility?

It places emphasis on power imbalances and promotes interpersonal sensitivity through partnerships with and learning from patients..

2. Racial disparities have been a part of US healthcare for many decades. How might this impact the expectations of older Black Americans?

All of these

3. Dementia is a relatively common condition in the geriatric population. It becomes more common as people age. Which is the most appropriate description of "personhood" as it relates to people with dementia?

The ability to relate to others as people, rather than preserving cognitive independence, is an important aspect of "personhood."

4. Immigrant families bring cultural traditions into healthcare decisions. With regard to older adults, which of the following is true?

End-of-life care is particularly sensitive to cultural beliefs and should be explored carefully with the patient and family, as appropriate.

Ch 8

1. Which of the following statements is true?

Lack of decision-making capacity should not be presumed if the patient goes against medical advice.

2. Which of the following statements concerning advance directives is true?

A DNR order is not equivalent to a do-not-treat order.

3. The following are components of the open disclosure of medical error, except:

A best guess as to why the error occurred.

4. Mrs. Gloth is an 84-year-old woman whom you are admitting to the nursing home. Her son takes you aside and tells you that she has metastatic ovarian cancer but has not been told the diagnosis. He asks that you not tell her, because she would "lose all hope and die." Which of the following is an appropriate response?

Suggest that you discuss this further after getting to know the patient and family a little better.

5. Dr. Smith is obtaining informed consent from Mr. Jones to perform a colonoscopy, because the patient had blood in his stool and Dr. Smith is concerned that this might indicate the presence of carcinoma of the colon. Mr. Jones is able to recite back to Dr. Smith what a colonoscopy is, how it is done, and that a colonoscopy is performed to look for cancer. He then tells Dr. Smith that he is refusing the procedure; he knows he does not have cancer because he has not experienced any bleeding. Of the following required elements for Mr. Jones's decision-making capacity, which is impaired?

Appreciation

6. George Hall is a 91-year-old man visiting his physician to receive the results of a recent computed tomography scan of his abdomen. He is cognitively intact and still works 2 days a week. He is accompanied by his daughter Eleanor. She takes the doctor aside before the appointment and says, "Please do not tell my father any bad news. It would just kill him." If the physician were to agree, which ethical principles might this violate?

Autonomy

7. Lenore White is an 80-year-old woman who smokes two packs of cigarettes per day. She is hospitalized for pneumonia because she has presenting symptoms of cough and fever. On her second day of hospitalization, she asks the nurse to please wheel her outside so she can smoke a cigarette. The nurse feels uncomfortable agreeing to this and speaks to her clinical nurse manager. What two ethical principles are in conflict?

Autonomy and nonmaleficence

8. Ms. Greta Thornberg is an 88-year-old woman admitted to the hospital with a diagnosis of squamous cell carcinoma of the lung with metastases to liver. She has signed a POLST indicating that she would like no limitation on life-sustaining measures, including resuscitation, artificial feeding, antibiotics, and hydration. On the second day of her stay, she sustains a stroke, resulting in global aphasia and hemiparesis. As her clinician, in addition to instituting appropriate medical management, you contact her healthcare agent and:

Inform her healthcare agent of the POLST and notify her that the change of condition requires that the POLST be reviewed.

Ch 9

1. Which of the following statement about community-based services is true?
The majority of the Administration on Aging budget goes to nutrition programs and community-based supportive services.
2. Which sentence completion is false? The Veterans Health Administration:
Provides care management only for individuals with disabilities that are service related
3. When a Medicare beneficiary with only traditional Part A and Part B coverage is admitted to the hospital, what will he or she will have to pay out of pocket?
More than $1000 deductible and 20% of all physician fees
4. Since passage of the ACA in 2010, the following are true about payments changes except:
Providers in Medicare Advantage will be paid higher fees
5. All of the following about the Medicare Part D prescription medication benefit plan are true except:
Beneficiaries have no out-of-pocket expense for each prescription filled.
6. All of the statements about Medicare are true except:
All of the funding for Medicare comes from federal taxes.
7. All of the statements about Medicaid are true, except:
The coverage provided under Medicaid is the same in every state.

Ch 12

1. Mr. B is an 82-year-old enrolled in your primary care clinic panel. His medical history includes moderate dementia and probable Alzheimer disease. He requires cues to bathe and dress but is otherwise independent in his activities of daily living. He cannot manage his medications and does not drive. His wife is his primary caregiver and has been providing 24-hour care supervision since he was found wandering outside by their neighbors. During your visit today, she admits that she is "feeling stressed" and at times "overwhelmed" with her caregiving responsibilities. She wants to know what options are available to help support her taking care of him. All of the following would be appropriate for Mr. B except:
Skilled nursing facility
2. Which of the following is true about the primary functions and duties of the skilled nursing facility medical director?
Participates in monitoring and improving the facility's medical care
3. Which one of the following is most true of the capacity to make medical decisions?
It includes the ability to express a choice and to weigh options.
4. Which one of the following is most true about the staffing of a typical nursing home?
CNAs provide most of the direct patient care.

Ch 15

1. A 75-year-old man with lung cancer metastatic to the bones is receiving hospice care in his home. His predominant symptom is nociceptive and neuropathic right chest wall pain caused by a fourth rib metastasis. In recent days he has experienced a dramatic increase in his pain, and hospice staff have titrated his pain regimen to gabapentin 900 mg three times daily, extended release morphine 100 mg three times daily, and immediate release morphine 30 mg every 2 hours as needed. The hospice nurse calls you to ask about next steps, and reports that he is still in severe pain but is now nonverbal, and his family is struggling to administer his medication orally because of his somnolence. The patient's family is exhausted. What is the best next step to assure the patient's comfort?
Admit to an inpatient facility under the General Inpatient Hospice benefit.
2. An 85-year-old woman with congestive heart failure, end-stage chronic obstructive pulmonary disease, chronic kidney disease stage 4, and frailty is brought to your office for a routine appointment. She has preserved cognition and her last Mini-Mental State Examination was 26. Affect is normal, and she has no history of depression. She has a loving and supportive family with whom she lives. During the visit, she shares that her quality of life is no longer acceptable, and asks about options to hasten the end of her life. Which of the following means of hastening death is legal throughout the United States?
Voluntary stopping of eating and drinking
3. A 78-year-old woman with atherosclerotic cardiovascular disease (ASCVD), peripheral vascular disease, and a history of transient ischemic attacks s/p carotid endarterectomy is seen as part of an annual wellness visit. She is advised to create an advance directive but declines, saying "I don't

know who to pick" for a healthcare agent. Which one of the following is a necessary characteristic of a healthcare agent?

Knows how the patient defines quality of life

Ch 17

1. A 67-year-old female with a history of congestive heart failure and myocardial infarction is admitted to the hospital because of increasing altered mental status and decreased arousal over the last week. Physical examination reveals a confused woman with right lower lobe crackles and a pulse oximetry of 86% on room air. While you are interviewing the patient, she is irritable, paranoid, and inattentive, which her family tells you is out of character. You notice waxing and waning in her alertness and impaired short-term memory during your examination. Which one of the following features present in this patient best distinguishes delirium from depression or dementia?

Inattentiveness

2. A 72-year-old man with colonic diverticulosis was admitted to the hospital with gastrointestinal bleeding and abdominal pain. He underwent colonoscopy under conscious sedation using fentanyl and midazolam. The following day, the patient was positive on the Confusion Assessment Method performed by the geriatric consultation services. Presence of delirium in this patient predisposes him to all of the following except:

Shorter length of stay in the hospital

3. A 78-year-old male who resides at a nursing home has Lewy Body dementia, frequent falls, visual hallucinations, and sleep disturbances. He is transferred to your hospital with poor oral intake and confusion of 3 days duration. Physical examination reveals a thin man with dry mucous membranes, tachypnea, tachycardia, and confusion. To reliably identify delirium in this patient in a time-efficient manner (<5 minutes), what will be your instrument of choice?

Confusion Assessment Method (CAM)

4. An 84-year-old woman complains of nausea and vomiting for the past 3 days. She has a history of multiple abdominal surgeries, adhesions, and recurrent hospitalizations for partial small bowel obstruction. She has visual and hearing impairment and is currently taking oxybutynin for neurogenic bladder. You recognize she is high risk for development of delirium. Interventions that may prevent the onset of delirium among older adult hospitalized patients include all of the following except:

Treating anxiety with lorazepam

5. A 78-year-old man with multiinfarct dementia, chronic kidney disease, congestive heart failure, and uncontrolled hypertension was hospitalized with a heart failure exacerbation. He was initially treated with diuretics and salt restriction and his condition stabilized. On day 3 of his hospital stay, he developed confusion, restlessness, and combativeness. Utilization of sitter, redirection, calming music, and reassurance are unsuccessful. When safety of the patient and staff are in jeopardy and nonpharmacologic approaches have failed, which of the pharmacologic agents would be the best choice for treating the agitation associated with his delirium?

Haloperidol

Ch 18

1.A 69-year-old female presents to your office for routine primary care. Her elder sister was recently diagnosed with Alzheimer disease, and she wonders what steps she can take to reduce her own risk of developing dementia. Which of the following statements about the prevention of dementia is true? **There is moderate quality evidence to suggest control of cardiovascular and metabolic risk factors, such as blood pressure, weight, and blood sugar, may reduce risk of dementia.**

2. A 78-year-old male was recently diagnosed with Alzheimer disease. He scored 23/30 on his Montreal Cognitive Assessment chap21 (MoCA) and his clinical presentation is consistent with mild disease. He returns to clinic with his family to discuss possible initiation of pharmacotherapy. You consider beginning donepezil 5 mg daily for 4 weeks, with a plan to increase to 10 mg daily if he tolerates the lower dose. Which of the following is not a common side effect of donepezil?

Thrombocytopenia

Ch 19

1.The remission rate of depressed patients who are 65 years and older to initial antidepressant treatment is:

30%

2. Which of the following groups has the highest rate of suicide in older adults?
White males
3. Which of the following is not a risk factor for late-life depression?
Family history of depression
4. Which of the following is not a side effect of selective serotonin reuptake inhibitors in older adults?
Increase in suicidal ideation
5. You want to start pharmacologic treatment for depression in an older patient who is taking numerous medications. You are concerned about drug–drug interactions. Which of the following antidepressants is the least likely to cause such an interaction?
Citalopram

Ch 21

1. Randall Johnson, an 80-year-old man with a history of high blood pressure and hypothyroidism, presents to your office with ongoing dizziness. He feels it has worsened since the summer months began. He states it is worst when he gets up from his chair on his front porch to stand or when he is working in his garden. If he stands still for a few minutes, the dizziness typically resolves on its own. If he tries to move too quickly, he has felt like he may pass out, but has not yet done so. He denies changes in vision or hearing. He has had no recent changes in his medication. On examination today, he is a frail-appearing older man in no acute distress. Vitals show a blood pressure of 118/71 mmHg with a pulse of 55 beats per minute. Heart and lung exams are benign. What is the most likely cause of his dizziness?
Orthostatic hypotension
2. Joyce Mitchell is a 73-year-old frail female with a history of frequent falls, who presents with rapid onset of nausea, vomiting, sweating, and horizontal nystagmus. She also reports hearing loss in the right ear. After testing and further questioning, you diagnose the patient with vestibular neuritis. What is the best initial course of treatment?
Supportive care with antinausea and antivertigo medication
3. Pedro Lopez is an 89-year-old male who presents to you with the complaint that he continuously experiences the feeling that a fall is imminent. He appears comfortable when seated, but is notably unsteady and imbalanced when erect, walking with a broad-based gait. Which of the following is not a standard treatment modality for this condition?
Meclizine

Ch 23

1. Which of the following is true about tolterodine?
It has greater risk of adverse effects with its twice-daily formulation.
2. An 82-year-old man, Mr. A, complains of worsening nocturia, occurring four times per night. His other lower urinary tract symptoms are slow stream, occasional urgency, and urgency-related leakage once weekly. Medical problems include poorly controlled hypertension, diastolic heart failure, hyperlipidemia, osteoarthritis, and prediabetes. His medications include lisinopril 20 mg daily, metoprolol succinate 75 mg daily, atorvastatin 10 mg daily, metformin 500 mg twice daily, hydrocodone-acetaminophen as needed, and aspirin 81 mg daily. Amlodipine 5 mg daily was recently added by his cardiologist. On review of systems, Mr. A complains that nocturia is causing daytime fatigue, and he is more constipated. Physical examination is notable for blood pressure 162/83 mmHg, heart rate 60 beats per minute, clear lungs, soft abdomen, enlarged prostate, and 21 pretibial edema. Your next step in management should be:
Stop amlodipine and increase lisinopril.
3. The daughter of a 79-year-old woman notes that her mother, who has dementia and lives with her, is wetting herself when she attends her new day program. Program staff have requested that "something be done" as she is requiring a clothes change nearly every time she is there. She cannot describe the circumstances of leakage, saying "it just comes." Leakage is uncommon at home. Her medications include donepezil and acetaminophen. Physical examination is normal. Initial treatment approach will require intervention by which of the following?
Day program staff
4. Ms. J, who is 82 years old, complains of urine leakage while playing golf. This has gotten worse over the past year, and she rarely makes it through nine holes without feeling like she needs to "run into the bushes and go." Leakage is usually small volume, but causes her extreme embarrassment

because she is afraid she will smell of urine. She has tried limiting caffeine in the morning before she golfs and avoiding drinking water while playing, to no effect. She also tried "those Kegler" exercises in the past without success. Which of the following is the most appropriate recommendation for Ms. J?

Bladder training

Ch 29

1. Which of these is true regarding the relationship of frailty with cognition?

Currently, to be considered cognitively frailty it requires a MMSE score over 26.

2. Which of these clinical vignettes are not part of the Fried frailty paradigms?

Mr. J has just been diagnosed with congestive heart failure after a recent admission to the hospital for a myocardial infarction.

3. Which of these statements about frailty are false?

Clinical diagnosis of anxiety or depression do not have any effect on frailty rates.

4. John P. is an 81-year-old male with extensive cardiac history, including three vessel coronary artery bypass graft when he was in his 60s, hypertension, diabetes mellitus, osteoarthritis, sciatica, and progressive macular degeneration. His vitals today are blood pressure 146/86 mmHg, heart rate 67 beats per minute, respiratory rate 21 breaths/min, and temperature 98.7° F. He is here with his only son and has been living in an assisted living since his wife died 3 years ago. His Montreal cognitive assessment (MoCA) 1 month ago was 23/30. He has no advance directive in the chart. He tells you he's "been slowing down" a lot lately. He does not go down to the dining room because it is too taxing, he has been slowly losing weight because food does not taste good, he has fallen four times in the last year. He has no specific concerns to discuss today. What is the most important thing that can be addressed at today's visit?

Suggest completion of an advance directive at visit with his goals of care in mind for moving forward in his care.

Ch 31

You have recently assumed directorship of a nursing home that has a 30-bed dementia unit…. The night nurse thus asked the previous attending to prescribe medications that would help these individuals sleep through the night.

1.What further diagnostic steps are required in the seven patients receiving atypical antipsychotics?

Unless there is an underlying suspicion of obstructive sleep apnea (OSA) or other sleep disorder, these patients already meet criteria for irregular sleep-wake phase disorder, and no further diagnostic steps are required.

2. What is an appropriate step in the initial management of the seven patients receiving atypical antipsychotics?

Taper to discontinue the atypical antipsychotic, and create day programs that allow patients to develop a sleep deficit/need through the morning/afternoon/early evening.

3. What aspects of sleep hygiene may make your facility more conducive for nighttime sleep?

Neutralizing antiseptic smells, minimize movement of equipment through halls, maintain quiet hours where staff can speak in areas away from residents, avoid using overhead announcement systems.

4. Which of the following statements regarding programs to increase daytime engagement in persons with dementia is true?

Daytime programs are designed to maintain client wakefulness, and as such can cover a broad range of topics, including music, art, exercise, dance, and cognitive tasks (puzzles, etc.), and should be designed with patient cognitive and physical status, cultural beliefs, social support, and available staffing in mind.

Ch 32

1. What is the most common cause of erectile dysfunction in older men?

Atherosclerosis

2. Which is the most reasonable first step in the treatment of older men with erectile dysfunction?

Sildenafil

3. A 72-year-old woman reports vaginal dryness that interferes with coitus. Her medical history includes type 2 diabetes, hypertension, and osteoarthritis. Medications are glyburide, chlorthalidone, and acetaminophen. What would be your first step in therapy?

Stop chlorthalidone

4. A 70-year-old woman reports sexual pain with deep penetration only. What is the most likely cause of her problem?

High-tone pelvic floor dysfunction

Ch 33

1. Subtypes of elder mistreatment include:

All of these

2. Risk factors for elder mistreatment include all except:

Financial independence of the caregiver

3. Barriers to detecting elder mistreatment include all except:

The tendency for many older adults to falsely claim they are being abused

Ch 40

1. An 85-year-old man with newly diagnosed nonvalvular atrial fibrillation comes to the office for a follow-up. He has a history of essential hypertension, type 2 diabetes mellitus, hyperlipidemia, and stage 3B chronic kidney disease. He takes lisinopril, atorvastatin, metformin, and aspirin. He lives in an assisted living facility and uses a walker for ambulation. He has fallen twice in the past year. On physical examination, his heart rate is normal but his rhythm is irregularly irregular. His blood pressure is 135/70 mmHg. Which medication change would be most appropriate for reducing his stroke risk?

Stop aspirin and begin apixaban 5 mg twice a day.

2. A 79-year-old woman was admitted to the hospital a month ago with an acute left middle cerebral artery ischemic stroke. On examination, she had right hemiparesis, mild motor aphasia, and dysphagia. After discharge, she was transferred to a skilled nursing facility where she has been working with physical, occupational, and speech therapy. Despite initial progress, in the last 2 weeks, she has lost her appetite, and complains of insomnia and difficulty concentrating. Which would be the next best step in management?

Start escitalopram 5 mg orally daily.

3. An 82-year-old woman with a past medical history of essential hypertension and type 2 diabetes mellitus, and who currently smokes, was brought to the hospital after collapsing at home. The onset of her symptoms was 1 hour before arrival to the emergency room. On examination, she is awake, alert, and oriented to person, place, and time. She has moderate dysarthria, right gaze preference, left hemineglect, and left face, arm, and leg weakness. Her blood pressure is 190/90 mmHg and her glucose is 110 mg/dL.
What diagnostic test should be done first?

A STAT noncontrast head computed tomography (CT)

Ch 46

1. A 79-year-old woman with a 1.5-cm breast cancer underwent lumpectomy. Pathology revealed ductal carcinoma that is hormone receptor negative (estrogen receptor 0%, progesterone receptor 1%) and HER2/neu negative. Surgical margins were adequate and uninvolved with cancer. Sentinel lymph node sampling was negative for lymph node involvement. She has good performance status and no activities of daily living (ADL) or instrumental (IADL) dependencies. What treatment would you recommend?

Hormonal therapy only

2. An 86-year-old man with no ADL deficits who has stopped driving because of macular degeneration is evaluated for a urinary tract infection associated with urinary retention. The consulting urologist places a Foley catheter and sends a prostate-specific antigen (PSA) level that comes back 12 ng/mL. Three months later after the Foley has been removed and he has had a good response to tamsulosin, his PSA is still 10 ng/mL. What is the appropriate next step in managing this man's prostate problem?

Repeat PSA in 6 months

3. In which of the following patients is chemical or surgical castration likely to prolong survival?

A 78-year-old man who had a radical prostatectomy and external beam radiation therapy 10 years earlier now has a PSA level of 24.5 ng/mL. A CT scan of the pelvis shows an enlarged pelvic lymph node, and a bone scan is positive in the pelvis.

4. On admission to the hospital, an 85-year-old woman was found to have a fungating mass on her right breast. The mass is 9 cm in diameter, partially ulcerated, and associated with edema of the arm and obvious pain. The patient has no children and had lived alone until recently, when a neighbor became concerned for what appeared to be a progressive loss of memory and neglect of the house. A nephew living in another city eventually came to take care of the situation and arranged for the admission. The patient appears confused and withdrawn; her appearance is disheveled, but she seems to be independent in her ADLs. The medical history is negative for any serious illnesses. She was able to drive her own car until shortly before this admission. The nephew does not wish to authorize hospice "right now." A positron-emission tomography scan was negative for metastatic disease. In addition to determining the cause of her delirium, which of the following is the best way to address the breast mass?

The mass should be biopsied to study hormone receptor and HER2/neu antigen status.

5. A 78-year-old man has an emergency partial colectomy for lower gastrointestinal bleeding. A localized colonic adenocarcinoma is completely resected. The surgeon did not dissect lymph nodes for metastatic sampling. The patient wants to know if he should have chemotherapy. Should he?

No because he can be followed with serial carcinoembryonic antigens and CT scans.

6. An 80-year-old woman has no weight loss, no pain, and no distention but over 2 years increasingly complains of constipation despite adequate medical treatment. A colonoscopy is negative. An abdominal CT is performed. It reveals well-circumscribed pelvic masses, the largest adherent to the ovarian ligament. The best first step is:

Invite her to return with a family member and have a long talk about the diagnostic and therapeutic options.

Ch 49

1. An 85-year-old man with chronic obstructive pulmonary disease presents to your office with his daughter with the complaint of new onset chest pain, shortness of breath, and cough. He is clearly tachypneic and has tactile fremitus and egophany and crackles heard at the right lung base. His daughter just wants you to give him an antibiotic pill so that she can take him home. You are concerned that he might need to be hospitalized and require IV antibiotics. What statement is true?

Treatment decisions for pneumonia are based on its severity, the presence of comorbid illnesses, and a prior history of MRSA or Pseudomonas respiratory infection.

2. An 80-year-old woman that you follow in a nursing home has an acute decline in her mental status. She has a fever >100° F, but no other focal complaints or findings on physical examination except for a chronic indwelling urinary catheter. What statement is true?

Fever in an older adult with an indwelling urinary catheter is an appropriate indication to start empiric antibiotic therapy.

3. An 82-year-old woman receives oral amoxicillin-clavulate for a skin abscess on her leg. She develops new onset of frequent watery stool that persists for several days after the antibiotic is stopped. You obtain a stool for Clostridium difficile antigen, toxin, and polymerase chain reaction (PCR). The antigen and PCR are both positive. She has never had C. difficile infection before. What one statement is the best answer regarding her management?

Either vancomycin or fidaxomicin are recommended for the first episode of C. difficile infection.

Ch 51

1. A 75-year-old man presents with the chief concern, "I may have a bladder infection." Further questioning reveals for several months he has been needing to void every couple of hours (can't sit through a whole ball game), feels he must go as soon as he feels the urge (he tried putting it off and had urinary leakage), and is getting up two to three times at night to void. He denies delay in voiding or straining to initiate voiding, slow stream, feeling of incomplete emptying, or dribbling after completion of urination. He also denies dysuria and abdominal pain. Which of the following best describes the category or type of his lower urinary tract symptoms?

Storage (irritative)

2. A 70-year-old man has bothersome lower urinary tract syndrome (LUTS) associated with benign prostatic hyperplasia (BPH). His symptoms are no longer well managed with lifestyle modifications. He is interested in medication to reduce his urinary symptoms but is concerned about possible side

effects. He notes that he is recently married and sexual activity is very important to him. Which of the following medications would be most appropriate for this patient?

Alfusozin

3. A 66-year-old man complains of nocturia (three to four times a night), hesitancy, and incomplete emptying of the bladder. Physical examination reveals an enlarged, nontender prostate, about 40 g in size without discrete nodules. Urinalysis reveals hematuria without leukocyte esterase. Upon further evaluation, the hematuria is attributed to his BPH. The patient declines surgical options at this time. Which of the following medications would be most appropriate?

Finasteride

4. Mr. Quince is a 68-year-old patient who describes several months of urinary frequency and a sensation of incomplete emptying with no associated dysuria, hematuria, or fever. Physical examination reveals a slightly enlarged but nontender prostate, a postvoid residual urine volume of 20 mL, and a urinalysis with 15 white blood cells (WBCs) and 5 red blood cells (RBCs). Urine culture reveals 30,000 colony-forming units of Escherichia coli. You see a report from last year that shows urinalysis with 10 WBCs and 4 RBCs that was obtained as part of a routine evaluation. What is the most appropriate next step in the management of Mr. Quince's symptoms?

Start a 4-week course of ciprofloxacin.

5. Mr. Roberts, a 72-year-old patient who has sought medical care on an intermittent basis in the past, complains of aching discomfort in his perineal area, urinary urgency, and frequency for the past few years. He also complains of insomnia and intermittent anxiety that he attributes to loneliness after his wife's death about a year ago. Digital rectal examination (DRE) reveals a slightly enlarged, nontender prostate with no palpable nodules. Perineal examination is normal. Bladder scan is unremarkable and postvoid residual urine volume is 50 mL. Urinalysis shows no WBCs or RBCs. Urine culture is negative. Previous treatment has included dietary modification and alpha-blocker medication. What is the most appropriate next step?

Screen for depression.

6. Mr. Hunter, a 69-year-old man, complains of urinary frequency and urgency that have increased over the past several months. There is no dysuria, hematuria, or sensation of incomplete voiding. He drinks 2 cups of coffee daily and diet cola multiple times a day. His International Prostate Symptom Score (IPSS) is 6, with a bother score of 1 indicating mild voiding symptoms with low impact on his quality of life. His medical history includes hypertension, coronary artery disease, and benign prostatic hyperplasia. Current medications are aspirin, metoprolol, and hydrochlorothiazide. Physical examination reveals normal sized prostate. Which of the following is the best next step?

Lifestyle modifications

7. Two years later Mr. Hunter reports progression of his urinary symptoms and desires "a pill to make this better." His current IPSS is 17, with a bother score of 3 indicating moderate voiding symptoms with moderate impact on his quality of life. On review of systems he notes that his vision has worsened, especially in his left eye. His ophthalmologist has recommended cataract surgery. For which of the following medications would initiation of therapy be delayed until after cataract surgery?

Tamsulosin

8. Several years later, Mr. Hunter, who is now 75 years old, seeks additional intervention for his urinary symptoms that have progressed further… Which of the following is the best next step in management?

Perform surgical resection of prostate.

Ch 52

1. A clinical prodrome of nonspecific symptoms of Parkinson disease (PD) include all the following except:

Bradykinesia

2. The National Institute of Neurologic Disorders and Stroke (NINDS) criteria require a confirmatory autopsy for PD to be described as "definitive" but would rate as "probable" if three of the four primary clinical features were present for at least 3 years. Which of the following lists three primary clinical features of PD? (Choose one)

Rigidity, bradykinesia, resting tremor

3. Imaging plays a limited role in diagnoses of PD but is central in making diagnosis of:

Normal pressure hydrocephalus

4. Key neurotransmitter-based therapeutic strategies for PD include all the following except:
Increase glutamatergic stimulation
5. Treatment for early PD in an otherwise healthy older patient without significant functional impairment should begin with:
Careful observation

Notes

Ch 1

The rule of fourths

- Of the decline in normal function seen as people age… 1/4 is d/t disease, 1/4 is d/t disuse, 1/4 is d/t misuse, and 1/4 is d/t physiologic aging
- If the problem is disease, then medical tx is indicated
- If the problem is disuse, it can often be cured with an activity regimen
- If the problem is misuse, prior damage cannot be reversed but steps can be taken to prevent deterioration and to preserve function
- If the problem is physiologic aging, then steps should be taken to adapt and compensate for the disability

Normal aging

- Reading glasses are needed d/t reduced lens elasticity 42-50 y/o
- Vestibular sensitivity gradually increases until about age 60
- Fertility in women peaks between 15-25 y/o and declining afterwards / menopause generally occurs at 50 y/o
- Reaction time tends to increase with age
- The amount of time a person will experience sway when standing is minimized at 15-16 y/o and gradually increases beyond 60 y/o
- Ankle jerk reflexes are increasingly diminished or absent with older age
- Bone density plateaus between 20-50 y/o then gradually declines; women decline faster than men
- Percent of body water decreases / percent of body far increases
- Brain atrophy is common in older adults
- Number of taste buds decreases
- Prostate gland anatomy increases in size by 100%
- Men and women sexual function declines

Ageism can lower self-esteem, reduce opportunities, and lead to isolation, loneliness, and depression
Iatrogenic illnesses (illnesses caused by medical interventions) are among the most common preventable problems experienced by older people.

Ch 4

Gender dysphoria – distress that is caused by a discrepancy between a person's gender identity and that persons sex assigned at birth. This distress may also be from the associated gender role or attributed sex characteristics.
Gender identity – a person's intrinsic sense of being male, female, or an alternative gender
Sex – sex is assigned at birth as male or female, usually based on the appearance of the external genitalia. Natal gender.
Gender expression – the way an individual socially expresses gender, such as style of clothing, speech, and mannerisms. Gender identity and expression may differ. There may also be people who do no present in the binary or masculine or feminine roles, presenting as an alternate gender, such as genderqueer.
Care for LGBTQ+ patients begins with your paperwork and interviews. Without a welcoming space, they may not be empowered to share their full story.
Collect pt data in a standardized fashion to collect a robust sexual, gender, and social history.
LGBTQ+ patients are often part of families of choice, which may be vulnerable to aging. Advocate for advanced care planning in your pts to respect their goals of care
31% of LBGT older adults delay or do not seek preventive care, such as cancer screening, smoking cessation, and immunizations. Studies also emphasize that social support can mitigate some of these disparities, while contributing to resilience and successful aging.

HIV testing

- CDC recommends that everyone between the ages of 13 and 64 get tested for HIV at least once as part of routine health care.
- The CDC recommends testing up to the age of 64 years. If a clinician believes a patient older than age 64 years to be at risk for HIV infection, then testing should be done.

Ch 5

Immunizations recommended for older adults

- Influenza inactive (IIV), or recombinant (RIV) — 1 dose annually
- Tetanus, diphtheria, pertussis (TDAP) — 1 dose after age 65 years then Td every 10 years
- Varicella recombinant (Shingrix) — 2 doses 2–5 months apart. Give to those who had zoster
- Pneumococcal — 1 dose of PPSV23 (Polysaccharide, Pneumovax)
- Consider 1 dose PCV 13 in high-risk patients
- Hepatitis A/hepatitis B — Only if high risk, and at least once
- All adults aged ≥65 years are advised to get a yearly influenza vaccination because of the high risk of serious complications from the flu.
- Varicella recombinant vaccine is strongly recommended for all adults over age 65 years, even those who previously received Zostavax.
- Shingrix had an effectiveness of 90% in preventing shingles, versus 50% with the zoster vaccine.
- Protection against shingles and postherpetic neuralgia is greater than 85% for a minimum of 4 years post immunization. Zostavax can be used when there is a Shingrix allergy, if a patient prefers the Zostavax, or the patient wishes an immediate vaccination and Shingrix is unavailable. The vaccination is recommended even if a patient is unsure about having chickenpox in the past.
- Persons age ≥65 years also should have pneumococcal vaccination, with the pneumococcal polysaccharide (Pneumovax) vaccine. If a person received the Pneumovax before turning 65 years, it should be repeated once after the age of 65 years.
- The routine use of pneumococcal conjugate vaccine known as prevnar is only recommended for high-risk persons such as those with asplenia or cochlear implants
- Adults over 10 age 65 years should receive the tetanus toxoid, reduced diphtheria toxoid, and acellular pertussis (TDAP) booster once followed by the diphtheria toxoid every 10 years. Trade names are Boostrix (preferred) and Aquacel.

The “Five As”: Interventions That Can Be Applied by a Variety of Clinical Staff in Primary Care

- Assess: Ask about behavioral health risks and other factors that affect health goal change.
- Advise: Provide clear, targeted behavior change advice, along with information as to potential harms/benefits.
- Agree: Work together on selection of appropriate, achievable treatment goals, and methods, based on patient’s buy-in and willingness to change.
- Assist: Guide the patient to achieve the agreed-upon goals by fostering self-confidence, along with providing additional medical treatments when needed. Help the patient with social/environmental supports for behavior change.
- Arrange: Schedule follow-up visits or phone conversations to provide ongoing support, and adjust treatment plan as needed. Include any referrals for more specialized treatment.
- The Agency for Healthcare Research and Quality recommends the use of the “five As” (assess, advise, agree, assist, and arrange) in patients age ≥50 years. Counseling interventions, physician/healthcare provider advice, buddy support programs, age-tailored self-help materials, telephone counseling, and the nicotine patch are effective interventions to facilitate smoking cessation in adults age ≥50 years (Box 5.1).

Smoking cessation – the most effective smoking cessation approach uses a combination of behavioral approaches and pharmacotherapy

- Drug treatment: first-line medications (five nicotine and two nonnicotine): bupropion SR; nicotine replacement therapy (NRT) with gum, inhaler, lozenge, nasal spray, or patch; and varenicline (Chantix)behavioral interventions, NRT, bupropion, and varenicline all improved smoking abstinence at ≥6 months; varenicline was most effective, while behavioral interventions combined with pharmacotherapy had the best quit rates
- Side Effects: The nicotine patch may cause local skin irritation, gum may cause mouth soreness or dyspepsia, nasal irritation may occur with nasal spray (or oral irritation if used as an inhaler). Nicotine may also cause insomnia. Likewise, bupropion can cause insomnia and dry mouth, whereas varenicline can cause nausea, and caution is needed for persons with history of depression who are at risk of suicide.
- Smoking cessation (better blood circulation, lowering risk of cancer, stroke, and heart attack, improves breathing and lowers blood pressure.
- Smoking increases the likelihood of getting the flu, pneumonia, and other respiratory illness; it weakens bones and can lead to vision loss, development of type 2 diabetes, erectile dysfunction, and delayed wound healing.
- Smokeless tobacco, pipes, and cigars are unsafe substitutes for cigarette smoking.
- Nicotine addiction can still occur with these products along with gum disease and precancerous lesions of oral mucosa.
- Smoking cessation is most successful when pharmacotherapy is in combination with counseling10 (level of evidence [LOE] A).
- Medicare covers “intermediate cessation counseling” (3–10 minutes per session) and “intensive cessation counseling” (>10 minutes per session), and two quit attempts per year (details available on the Center for Medicare & Medicaid website).11
- Behavioral approaches and pharmacotherapy is the most effective for smoking

Alcohol

- Screen for Alcohol Use/Abuse: The current recommendation on alcohol intake, from the National Institute on Alcohol Abuse and Alcoholism, for healthy adults over age 65 years is no more than one drink per day (maximum of seven drinks in 1 week) and never more than three drinks on a given day.
- Alcohol can worsen certain chronic conditions, such as osteoporosis, memory loss, congestive heart failure, hypertension, impaired balance, and liver disease. It increases hypertension by negatively affecting the mechanisms for blood pressure control, specifically baroreceptors, cortisol levels, and the renin-angiotensin/aldosterone systems.
- Aging alters the distribution of alcohol in the body, so that a single drink produces high blood levels
- In addition, changes to blood vessels and the heart can be harder to detect as alcohol dulls the pain sensations that can warn of a heart attack.
- The most commonly used and reliable screening instrument for alcohol use disorders is the CAGE self-report questionnaire (Box 5.3). When used with older adults, it has reported sensitivities ranging from 43% to 94% for detecting alcohol abuse and alcoholism.
- CAGE Questionnaire
    - Have you ever felt you needed to Cut down on your drinking? Yes/No
    - Have people Annoyed you by criticizing your drinking? Yes/No
    - Have you ever felt bad or Guilty about your drinking? Yes/No
    - Have you ever had a drink first thing in the morning to steady your nerves or get rid of a hangover (Eye-opener)? Yes/No
    - Two or more positive answers is considered a positive outcome
- Classes of medications that interact with alcohol
    - Antibiotics
    - Antidepressants
    - Barbiturates
    - Benzodiazepines
    - H2 receptor antagonists
    - Muscle relaxants

- Nonnarcotic pain relievers
- Anti-inflammatory agents
- Opioids
- Warfarin

Nutrition

- The US government recommends a daily caloric intake, for women over the age of 65 years, of 1600 calories for a sedentary lifestyle, and 1800 and 2000 calories respectively for moderately active and active lifestyles.
- For men in the same age group, the recommendation is 2000, 2200, and 2600 calories, respectively, for sedentary, moderately active, and active lifestyles.
- My Plate for Older Adults
  - Fruits and vegetables→ rich in fiber and nutrients. Choose those with deeply colored flesh. Choose canned varieties packed in their own juices or low-sodium types.
  - Healthy oils→ Liquid vegetable oils and soft margarines provide important fatty acids and some fat-soluble vitamins.
  - Herbs & spices→ Use a variety of these to enhance food flavor and reduce the need for salt.
  - Fluids→ Drink plenty of fluids. These can come from water, tea, soups, and fruits/vegetables.
    - Older adults experience reduced renal response to antidiuretic hormone and often a relative hyporeninemic hypoaldosteronism (sodium wasting and potassium retention).
    - Inadequate hydration can result in constipation, fatigue, hypotension, hyperthermia, dizziness, breathing difficulties, and palpitations. Fluids are best as water, juice, or milk; alcohol, caffeinated tea and coffee, and soft drinks have a diuretic effect and raise fluid level more modestly.
    - Physiologic changes of aging create a greater risk or dehydration
  - Grains→ Whole grain and fortified foods provide fiber and B vitamins.
    - The recommendation for older adults is 14 g of dietary fiber per 1000 calories consumed. Ideally, fiber intake should include cereal fibers and be consumed with 64 ounces of fluid daily
  - Dairy→ Fat-free and low-fat milk, cheeses, and yogurts provide calcium, protein, and other important nutrients.
  - Protein→ Foods rich in proteins provide many nutrients. Choose a variety, including nuts, beans, fish, lean meats, and poultry.
    - A recommended daily intake for protein of 1 to 1.5 g/kg promotes rebuilding and retention of muscles.
- Micronutrient Requirements for Age Over 50 Years

Micronutrient	Men	Women
Riboflavin	1.3 mg/day	1.1 mg/day
Thiamin	1.2 mg/day	1.1 mg/day
Vitamin A	3000 IU/day	2333 IU/day
Vitamin B6	1.7 mg/day	1.5 mg/day
Vitamin B12	100–400 mg/day	100–400 mg/day
Vitamin C	90 mg/day	75 mg/day

  - Calcium absorption is best when consumed in food sources; for those who do not meet requirements, supplements are necessary to meet a goal of 1200-1500mg of elemental calcium daily
- Obesity - behavior changes with diet and exercise.
- HTN - The Dietary Approaches to Stop Hypertension (DASH) eating plan consists of fruits, vegetables, whole grains, low-fat dairy products, poultry, and fish. In addition, obesity counseling by clinicians is reimbursable under Medicare.

Polypharmacy

- Deprescribing has been described as the process of withdrawal of an inappropriate medication with the aim of reducing polypharmacy and improving health outcomes.
- Older adults are at high risk, multiple comorbidities and multiple doctors. Always try nonpharmacologic therapies first. Interventions may include diet, exercise, stress management, and cognitive-behavioral therapy. Moreover, combining behavioral interventions with medications may reduce the drug dosages needed for effect.

Beers Criteria

- Created by the American Geriatric Society
- Goal: improve medication selection; avoid dangerous medications
- Tailored for 65 years and older in all settings except hospice and palliative care
- The Beers Criteria includes five lists that describe certain medications and situations and include (American Geriatric Society Beers Criteria Update Expert Panel, 2019):
    - potentially inappropriate medication (PIM) use in older adults
    - PIM use in older adults due to medication-disease or medication-syndrome interactions that may exacerbate the disease or syndrome
    - medications to be used cautiously in older adults
    - clinically significant drug interactions that should be avoided in older adults
    - medications to be avoided or dosage decreased in the presence of impaired kidney function in older adults
- How to avoid drug reactions - know what adverse drug reactions are?
    - Medications included on the AGS Beers Criteria either have limited effectiveness in older adults or have risk of serious adverse events and safer alternatives are available. Medications are organized by pharmacologic class and listed in tables as drugs to avoid, drugs to avoid in older adults with specific disease states, and drugs to use with caution.

Physical activity

- The US Department of Health and Human Services recommends engaging in 150 minutes of activity weekly at moderate intensity, or 75 minutes at a vigorous intensity. Ideally, activity should include muscle strengthening, endurance, flexibility, and balance to reduce risk for falls.
- Dynamic resistance :90-150 min/wk; 50-80% 1 rep maximum; 6 exercises, 3
- Isometric resistance :4 x 2 min (hand grip), 1 min rest between exercises 3 sessions/wk; 8-10 wk
- Exercise is key to successful aging and functional independence and to control of many chronic illnesses. Exercise also promotes brain health.

Cancer screening

- Prostate Cancer Screening
    - USPSTF states that screening offers only a small benefit of decreasing the risk of death in men age 55 to 64 years. In this population, the potential harms of false positives that can lead to overdiagnosis and overtreatment, and treatment complications (urinary/fecal incontinence, erectile dysfunction), outweigh the potential benefit. Persons at higher risk are those with a positive family history and Black men.
    - For men age ≥70 years, prostate-specific antigen (PSA) testing is not recommended because benefit does not outweigh potential harm. Exceptions to the USPSTF recommendations are for Black men and those with family history of prostate cancer.
- Colon cancer Screening
    - USPSTF recommends screening for colorectal cancer for persons age 50 to 74 years of age with one of the following: yearly fecal occult blood or fecal immunochemical testing (FIT); every 1 to 3 years FIT deoxyribonucleic acid; every 5 years sigmoidoscopy or computed tomography colonography; every 10 years colonoscopy.
    - In adults age 76 to 85 years, this same set of screenings should be done selectively based on professional judgment and patient preference.
    - In addition, colon cancer screening of any type is not recommended until 10 years have elapsed following a high-quality negative colonoscopy for patients without

elevated risk for the cancer (positive family history, personal history of polyps, or inflammatory bowel disease).

- Breast cancer screening
    - Biennial screening for women ages 50-74
    - The USPSTF recommendation is for biennial screening mammography for women age 50 to 74 years. In women age ≥75 years, there is insufficient evidence to determine the benefits versus harm to continued use of screening mammography.
    - The American Geriatrics Society recommends continued screening is reasonable as long as the patient has a 10-year life expectancy.
- Cervical Cancer Screening
    - USPSTF recommends against screening for cervical cancer in women older than age 65 years who have had adequate prior screening. Women with precancerous lesions, immunosuppression, or human immunodeficiency virus (HIV)/human papillomavirus (HPV) infection are at high risk for developing cervical cancer and require screening at any age. Women for whom previous screening is unknown may need screening. Screening is unnecessary in women who have undergone hysterectomy with cervix removal, and with no history of precancerous lesion (grade 2 or 3).

Bone health screening

- The US Preventive Services Task Force (USPSTF) recommends BMD testing at least once in women age 65 years and above and postmenopausal women younger than age 65 years who are at increased risk for osteoporotic fractures (e.g., previous minimal trauma fracture, history of hyperparathyroidism, use of medications that reduce bone density).
- The National Osteoporosis Foundation, International Society for Clinical Densitometry, and the Endocrine Society recommend BMD testing for all men older than age 70 years and in men age 50 to 70 years when risk factors are present.
- Calcium absorption is best when consumed in food sources; for those who do not meet requirements, supplements are necessary to meet a goal of 1200 to 1500 mg of elemental calcium daily.

Cognitive health screening

- Cognitive screening may be necessary if a patient has subjective memory complaints or if clinician observation of a patient raises red flags that may indicate cognitive change (e.g., decrease in daily function/skills of daily living, word finding difficulties, or visual-spatial difficulties).
- The Mini-Cog, a 3-minute assessment tool, contains a clock-drawing test combined with three-item recall. It is public domain and can be downloaded at no charge (see Ch. 18).

ASA screening

- Consider starting therapy when 10-year CVD risk is >15%.28 Consider continuing daily aspirin if 10-year CVD risk is >10% and the patient has already been taking aspirin for ≥10 years.
  Stop aspirin therapy for 10-year CVD risk >5%, high risk for bleeding, or patient preference to avoid bleeding.
- The use of ASA for prophylaxis against CVD must be balanced against bleeding risk. For any pts over the age of 75 years, this mean eliminating ASA>

Motivational Interviewing

- Express empathy, support self-efficacy, work thru resistance, and develop discrepancy

Ch 6

Culture refers to an everchanging set of shared symbols, beliefs, and customs that shapes individual and/or group behaviors.

Person-centered care – involves considering a person's desires, family situations, social circumstances, and values. To achieve this level of awareness, clinicians must seek and maintain aa level of cultural awareness and sensitivity.

Personhood

- The dominant US cultural definition of personhood in terms of independence and achievement leas to excess disability and suffering among people with conditions like dementia

- When personhood is defined as the ability to relate to others appropriately, dementia is less of a threat to the patients personhood

Ch 8

Principles of medical ethics

- Autonomy, beneficence, nonmaleficence, and justice
- In western society, the principles of autonomy has come to dominate other ethical principles, but this may not be true of all cultures

Ethical dilemmas

- An ethical conflict may have more than one morally acceptable solution
- It is sometimes difficult to differentiate an ethical dilemma from an interpersonal conflict, and they may occur together
- Decisional capacity – the presence of dementia does not, by itself, indicate that the patient lacks decision-making capacity

Ch 9

The Older Americans Act and the Social Services Block Grant programs are the two leading federal sources of funding for social or community-based programs that facilitate older adults ability to remain in the community and in their homes for as long as possible.

Medicare

- Part A
  - Refers to the hospital insurance program. There is no enrollment fee for most patients, and they are charged a monthly premium based on the number of eligible quarters they or their spouse contributed. This benefit also covers some skilled nursing facilities
  - Hospital visits are covered
- Part B
  - Pays the examiner (NP, PA, MD, etc.). Part B of Medicare pays for outpatient care, ambulatory surgery services, X-rays, durable medical equipment, laboratory, and home health. Part B is an option that Medicare recipients can pay for with a monthly option. This charge is based on income. Since there is an initial copay, the federal government's insurance plan may NOT pay for his visit to your clinic today.
  - Outpatient services are covered
- Part C (Advantage)
  - When you join a Medicare Advantage plan, you still have Medicare. The difference is the plan covers and pays for your services instead of Original Medicare. These plans must provide the same coverage as Original Medicare (so you're not missing out on anything). They can also offer extra benefits.
- Part D
  - Provides prescription drug coverage

Ch 12

Long-term care can be defined broadly to include medical or nonmedical care that is provided in the community, congregate housing, residential care facilities (ALF), and nursing homes to meet health or personal care needs during a short or long period of time.

AMDA has a certification program that uses an experiential model in which practicing physicians who are providing LTC and medical director duties can be certified

The nursing home physician specialist spends a substantial portion of time in the delivery of nursing home care and is proficient in nursing home regulations and the medical management of common syndromes faced by nursing home residents.

Hearing the pt and family concerns, their understanding of diagnosis and prognosis, and expectations for personal involvement in care can help to direct the care plan

Common clinical challenges

- Distinguishing between dementia, delirium, and depression
- UTI
- Norovirus
- C-diff
- Influenza, covid, and pneumonia

- Pressure ulcers
- Pain management
- Falls

Common challenges

- Determining capacity
- Advance care planning
- Abuse and

neglect Innovative

models

- The green house model – small residential-style houses are created in community neighborhoods, often alongside the founding traditional nursing homes
    - 3 core values – real homes, meaningful life, and empowered staff
- Eden alternative – international not-for-profit organization dedicated to transforming care environments into habitats for human beings that promote quality of life for all involved.
- GRACE team care model – this interprofessional model involves a NP and SW completing an in-home assessment that is then reviewed by a larger team to develop a personalized care plan

Ch 15

Reasons to refer to palliative care

- Refractory symptoms
- Difficulty with medical decision making
- Healthcare team moral distress or burnout
- Pt and/or family distress
    - Maladaptive coping styles: pessimism, high regret, passivity, tendency to blame others
    - Marital or familial conflict
    - History of severe psychiatric illness or suicidal ideation/attempts in pt or family
    - Limited/absent familial or community supports
    - Death anxiety
    - Spiritual distress (ex. God is punishing me)
    - History of ineffective coping in response to part stressors
    - Lack of trust in healthcare providers

Core principles of communication about serious illness

- Invite key family and friends to participate
- Allow adequate time and do not appear rushed – sit down
- Listen more and talk less
- Explore understanding of illness and correct misperceptions
- Deliver clear prognostic information tailored to pt preferences, medical literacy, hearing impairment, etc.
- Expect and respond to emotions
- Elicit values and goals before discussing possible next steps
- Confirm understanding – ask “have I got this right?”
- Make recommendations that align tx plans with pt values

Recommended points in disease trajectory to explore seriously ill patients values and goals

- At dx
- After major hospitalizations or onset of significant complications
- Institutionalizations
- Every 5 years

Elements of capacity assessment

- An individual is determined to have capacity to make a specific decision if all of the following factors are present:
    - The individual can accurately explain the nature of his/her condition and the risks associated with it
    - The individual can accurately explain the potential risks and benefits associated with electing or declining the intervention in question

- The individual can accurately explain the alternatives to the intervention in question and the risks and benefits associated with them
- The individual makes the same decision consistently over time

- Pharmacological management of common symptoms in serious illness

Symptom	1st line agent	2nd line agent
Mild pain	acetaminophen adjuvants	low-potency opioids,
Moderate pain	low-potency opioids	higher doses of low-potency opioids, adjuvants, high-potency opioids
Severe pain	high-potency opioids	higher doses of high-potency opioids, adjuvants
Dyspnea	moderate-potency opioids	high-potency opioids
Cough	moderate-potency opioids	high-potency opioids
N/V	promethazine, prochlorperazine, ondansetron	benzodiazepines, typical antipsychotics
Delirium	trazodone	typical and atypical antipsychotics
Fear/anxiety	lorazepam, SSRIs	atypical antipsychotics
Itching	antihistamines	steroids
Anorexia	mirtazapine	steroids
Fatigue	methylphenidate	steroids
Hiccups	chlorpromazine, metoclopramide	typical antipsychotics

Skills for responding to emotion

- Naming – I can see how sad this makes you
- Understanding – of course, this is devastating news
- Respecting – I can see how much you love your family
- Supporting – I'm going to be with you through all of this
- Exploring – can you give me a sense of what you're thinking

Ch17

Delirium symptoms

- Acute change in mental status
- Fluctuating course
- Attention/ memory/ orientation/ perceptual/ thought/ sleep/ consciousness/ speech/ and psychomotor activity disturbances

The Confusion Assessment Method Diagnostic Instrument (CAMS)

- Acute onset & fluctuating course
- Inattention
- Disorganized thinking
- Altered LOC

Delirium is associated with increased mortality, poorer functional status, limited rehabilitation, increased hospital-acquired complications, prolonged length of hospital stay, increased risk of institutionalization, and higher healthcare expenditures.

Delirium is diagnosed if a pt has an acute change in mental status with inattention accompanied by disorganized thinking or a change in alertness.

A thorough health hx, PE, chart review, and lab testing should be completed to identify reversible causes of delirium. In general, brain imaging, LP, and EEG are not part of the routine workup for delirium unless there are focal neurologic signs or concerns of subclinical seizure activity.

Identifying and managing the causes & contributing factors of delirium in a hospitalized patient

- Encourage sleep, orientation, and activity
- Personalize the environment
- Treat medical conditions such as dehydration, infection, and electrolyte imbalances
- D/C catheters, IVs, and other tethers if benefit outweighs the risks
- D/C sedating and anticholinergic medications when possible and appropriate
- Treat pain and constipation

- Consider sitter
- If hx of ETOH use, consider lorazepam
- If safety is an issue, consider haloperidol
- Protect skin; regularly check for breakdown
- Decrease dose of hypnotics and other sedating medications
- The clinicians primary objective should be the prevention of delirium b/c once symptoms have developed, the older pt is at risk for poor clinical outcomes

Ch 18

Alzheimer's/Dementia

- Risk factors
    - Non-modifiable: Age, genetics, family history
    - Modifiable: HTN, CVD, obesity, DM, sedentary lifestyle, depression, sleep disorders, social isolation, ETOH and smoking, long-term anticholinergics, benzodiazepines, PPIs, environmental pollutants, brain trauma, and hearing impairment
- Diagnostics
    - History & PE
    - Cognitive testing and specialty referrals
- Medications
    - Donepezil, galantamine IR/ER, rivastigmine and rivastigmine patch
- DICE
    - Describe, investigate, create, and evaluate

Ch 19

Depression

- Risk factors
    - Chronic medical illness
    - Loss of a loved one
    - Relocation
    - Disability
    - Social isolation
- SSRI side effects in older adults
    - GI upset & bleeding
    - Jitteriness
    - Hyponatremia
    - Drug-drug interactions (b/c of effects on CYP450 liver enzymes)
    - Extrapyramidal side effects (tremors, bruxism, and parkinsonism)
    - Checking serum Na after 2 weeks in patients starting an SSRI who have additional risk factors or who take medications associated with anti-diuretic hormone secretion is recommended
- Tricyclic antidepressants
    - Monitor HR, orthostatic BP, cardiac conduction, and anticholinergic side effects
- ECT
    - Useful when more rapid antidepressant effect is desired (failure to thrive, severe/psychotic depression, active suicidal ideation)
    - No absolute contraindications
    - Useful for frail older adult pts who may not be able to tolerate medications

Ch 21

Dizziness

- Multisensory or multifactorial dizziness is the most common cause of chronic dizziness in older persons
- Serious and potentially life-threatening causes of acute dizziness are usually cardiovascular (r/o cardiovascular causes is critical)
- Classical hearing loss patterns in dizziness:
    - Low frequency, fluctuating is typical of Meniere disease

    - Low frequency, unilateral, gradually decreasing suggests eights nerve tumor
- Most common cause of acute dizziness in older adults is BPPV (benign paroxysmal positional vertigo)
- A key role of the PCP is to help alleviate symptoms and improve function.
- Medications that cause dizziness:
    - Anticonvulsants, anxiolytics, antidepressants, NSAIDs, antiarrhythmics, diuretics, antihypertensives, antihistamines, and cold remedies
    - Meclizine (antivert) often makes most dizziness symptoms worse in older adults
- Types
    - Vertigo
        - BPPV (benign paroxysmal positional vertigo) – most common vestibular disorder in older persons. Characterized by intense vertigo lasting a minute or so after movement. Tx: usually resolves spontaneously / Epley maneuver or canalith repositioning procedure can speed resolution
        - Acute labyrinthitis – Characterized by sudden onset of severe vertigo often accompanied by visceral autonomic symptoms including N/V, diaphoresis, reduced hearing, and horizontal nystagmus. Causes: viral URI or vascular injury. Tx: supportive (meclizine or promethazine / in severe cases the pt may require systemic steroids)
        - Vestibular neuritis – similar clinical presentation, characterized by sudden onset of vertigo that lasts several hours and may be accompanied by severe N/V or tinnitus w/o hearing impairment. Causes: viral infection of the vestibular nerve concomitant with of following a middle ear infection
        - Meniere disease – abrupt onset of severe paroxysmal vertigo lasting minutes to hours accompanied by low-frequency hearing loss, roaring tinnitus, aural fullness, and N/V. Hearing loss is unilateral and sensorineural. Before attack pts typically feel ear fullness. Tx: (acute symptoms) low-dose diazepam once / (severe cases) surgery for the tx of endolymphatic hydrops

Ch 23

Screen all older persons for urinary incontinence
Behavioral change should be the first-line therapy for most older patients with urinary incontinence
Urinary incontinence is a common issue within the older adult community.
Urinary incontinence can be distressing and impact the older adult's quality of life and socialization.
Incontinence also increases the risk of skin breakdown and falls and is a leading reason for placement in long-term care.
Treatment of urinary incontinence is essential to improve health and quality of life.
Men younger than 85 have a lower incidence of incontinence than women of the same age; incidence rates are similar, however, for men and women aged 85 and above.
Risk factors

- Females
- Hysterectomy
- Obesity
- Uses a walker
- DM
- Depression

UTIs in community-dwelling older adults

- For older adults who reside in the community, symptomatic UTIs are similar in presentation to younger adults and may include dysuria, frequency, urgency, and hematuria. Postmenopausal women may also complain of incontinence, nocturia, low back pain, and constipation. Older adults may experience changes in cognition, including confusion.
- Unlike with younger adults, treatment should not be initiated based solely on symptoms, as common symptoms may mimic other disease processes. A urine dipstick to evaluate for bacteriuria and pyuria is required. If nitrites and/or leukocytes are present, using symptomatic

treatment until microbiology results are available to direct targeted antibiotic therapy can help reduce antibiotic resistance.

UTIs in long-term care residents

- Residents of long-term care facilities may not present with typical signs of UTIs, and they may be more likely to have chronic urinary symptoms such as frequency, nocturia, or incontinence. Change in mental status may be the most common symptom associated with UTI in long-term care.
- Other symptoms of a suspected UTI in this population include a change in urine character, fever, declining functional status, and hematuria. Evidence-based consensus criteria should be used to determine when to initiate treatment.
- Criteria for diagnosing UTIs in long-term care clients
    - McGeer: acute dysuria OR fever >37.9 + one of the following: urgency, frequency, suprapubic pain, gross hematuria, CVA tenderness, urinary incontinence
    - Loeb: 3 of the following: 1. fever >38 2. new/increased burning, frequency, urgency 3. new flank or suprapubic pain 4. change in character of urine 5. new or worsening mental status changes

Ch 29

Frailty

- Is a complicated geriatric syndrome b/c there is no single disease or one organ system involved but serves as a power predictor of clinical outcome.
- 2 main theories define it as a biologically driven syndrome vs a collection of diseases and comorbidities. There is no consensus as to the best way to define frailty at this time.
- Frail pts are less forgiving to minor medial insults making medications, environments, and potential intervention decisions very impactful on their trajectory.
- Frailty is more accurate in predicting functional decline than age alone.
- Those defined as prefrail may have the highest benefit from interventions and improvement in long-term outcomes.
- Frailty can serve as a valuable marker of poor surgical outcomes over and above other prediction models in current use.

Ch 31

Sleep hygiene habits

- 20 min/day of low-intensity exercise
- Afternoon natural light exposure
- Limit screen time
- Keep regular bedtime
- Bedroom should be dark, cool, and free of disturbing sounds
- Bed is for sleep and sex only
- Get out of bed if you can't sleep
- Avoid caffeine, nicotine, and other stimulants after dinner
- Limit fluids after 1800 if you experience nocturia more than twice a night
- Avoid foods that may be disruptive before sleep
- Avoid naps

Conditions that may contribute to insomnia

- Neurodegenerative diseases, TBI, CHF, obstructive/ restrictive lung diseases, PUD, GERD, IBD, hyper/ hypothyroid, hyper/hypo-cortisol, DM, BPH, urinary incontinence, cystitis, arthritis, fibromyalgia, rhinitis/ sinusitis, bruxism, and periodontal disease
- Psych conditions: substance-related & addictive disorders, anxiety, depression, bipolar, OCD, PTSD, and somatic disorders

Meds that may cause insomnia

- SSRI, dopamine agonists, sympathomimetics, cholinesterase inhibitors, antihypertensives, beta agonists, theophylline, diuretics, antihistamines, steroids, statins, and chondroitin/ glucosamines

Irregular sleep/wake phase is highly prevalent in people with dementia or stoke and those living in nursing home settings

OSA is the most common sleep disturbance of older adults. Dx is confirmed by polysomnography where the sum of apneas and hypopneas (AHI) is greater than 5 per hours
Nighttime PAP, usually CPAP, is the definitive therapy for OSA
Restless leg syndrome is based totally on pt hx

- Dopaminergic agonists (pramipexole or ropinirole) have the greatest efficacy at controlling symptoms

Ch 32

Normal age-associated changes lead to decreased sexual interest and ability; however, complete loss of sexual function is not a part of healthy aging
Sexual dysfunction in males

- Neurovascular problems are the most common causes of ED
- Other causes: DM, HTN, HLD, tobacco use, pelvic injury/surgery/radiation, spinal cord injury/ surgery, Parkinson's, MS, alcoholism, psychogenic causes, low testosterone, small testes, gynecomastia, hypo/hyperthyroid, & meds (anticholinergics, antihypertensives, cimetidine, antidepressants, antiacids, anticonvulsants, antipsychotics, aromatase inhibitors, lipid lowering agents, opioids, digoxin, metoclopramide, and ETOH)

ED Tx

- First line of tx: type 5 phosphodiesterase inhibitors (Sildenafil, vardenafil, tadalafil, and avanafil)
    - SE: h/a, flushing, rhinitis, dyspepsia, transient color blindness, and prolonged erection.
    - Contraindicated with nitrate use and alpha blockers.
- Other options: vacuum device, intracavernosal medications, MUSE, prosthesis, and sex therapy

Women

- Many women have sexual dysfunction but don't report it to her PCP
- Therapy for GSM (genitourinary syndrome of menopause) is first vaginal moisturizers; topical estrogen may be used for severe or persistent symptoms

Ch 33

Self-neglect is the most common form of elder mistreatment reported by APS
Risk factors for elder mistreatment

- Victim: poor health, functional dependence, cognitive impairment, substance abuse, mental illness, and financial dependence
- Community: low levels of social support/ social embeddedness, society, low socioeconomic status, and racial/ethnic minorities

Brief screening measures for elder mistreatment

- H-S/EAST
- VASS
- EASI

Primary care assessment of elder mistreatment

- PE: Wt loss, dehydration, abrasions/ burns/ hematomas, pressure ulcers, fractures, vaginal/ rectal bleeding, signs of STIs
- Observations: Caregiver – dominates interview & overwhelmed. Elder – inappropriately dressed, tearful, delay in seeking care, frequent ED visits, poor adherence to tx plan, hx of injuries with unclear cause, and history of mistreatment
- When elder mistreatment is suspected, the first step is a conversation with the elder in a safe environment without the presence of caregivers.

Ch 40

Stroke risk factors

- Modifiable: HTN, DM, HLD, a-fib, OSA, tobacco, ETOH, physical inactivity
- Non-modifiable: age (>55), sex (women… at younger age, women have a higher risk d/t pregnancy, hormones, and OC / at older ages), race (AA & Hispanic/Latino Americans)

Stroke syndromes

- Middle cerebral artery stroke syndromes – contralateral gaze deviation, contralateral homonymous hemianopsia, contralateral hemiparesis involving face, arm, and leg (arm > leg)

    - L hemisphere stroke: aphasia
    - R hemisphere stroke: dyspraxia and hemineglect
- Anterior cerebral artery stroke syndromes – cognitive changes (confusion, disorientations, memory loss), abulia or apathy, euphoria or disinhibition, contralateral hemiparesis (leg > arm), impaired bladder control
- Posterior circulation stroke syndromes (posterior cerebral artery, basilar artery, and vertebral arteries) – dizziness, vertigo, N/V, double vision, nystagmus, dysconjugate gaze, slurred speech, difficulty swallowing, hoarseness, limb and truncal ataxia, crossed signs (symptoms involving one side of the face and contralateral side of body), changes in consciousness, amnesia, and behavioral changes
- Lacunar stroke syndromes – pure sensory stroke, pure motor stroke, sensory-motor stroke, dysarthria-clumsy hand syndrome, and ataxia-hemiparesis

IV Alteplase for ischemic stroke

- Eligibility criteria (0-3 hrs)
    - >=18 y/o, symptoms consistent with ischemic stroke, mild but disabling symptoms should be treated, no contraindications for tx of pts with severe stroke symptoms
- Eligibility criteria (0-4.5 hrs)
    - >=18 y/o, symptoms consistent with ischemic stroke, no contraindications for tx in the 3-4.5 hrs window
- Contraindications
    - LKW > 3-4.5 hrs
    - CT shows ICH or extensive area of cerebral infarction
    - Hx of ischemic stroke, head trauma, or intracranial/spinal surgery within 3 mts, or hx of ICH
    - Pts with symptoms of SAH, GI malignancy or recent hemorrhage (21 days), coagulopathy (plt <100,000, INR >1.7, aPTT >40, PT >15), taking direct thrombin inhibitors or direct factor Xa inhibitors (Alteplase can be considered when labs are normal and pt has not received a dose for >48 hrs), infective endocarditis, aortic arch dissection, and intraaxial intracranial neoplasm.
- Contraindications in the 3-4.5 hrs window
    - For pts >80 y/o , IV Alteplase may be beneficial
    - For pts with prior stroke and DM, IV Alteplase may be a reasonable option
    - For pts taking warfarin with an INR <=1.7, IV Alteplase appears safe and may be beneficial
    - The benefit of IV Alteplase in pts with very severe stroke symptoms (NIHSS >25) is uncertain
- Current guidelines
    - Obtain brain imaging w/in 20 minutes of arrival to hospital

Tx guidelines for acute ischemic stroke

- 0-3 hrs : IV Alteplase / mechanical thrombectomy (terminal ICA or M1 occlusion)
- 3-4.5 hrs: IV Alteplase / mechanical thrombectomy (terminal ICA or M1 occlusion)
- 4.5-6 hrs: mechanical thrombectomy (terminal ICA or M1 occlusion)
- 6-24 hrs: mechanical thrombectomy (large vessel occlusion + favorable perfusion imaging)
- Wake-up stroke: Age 18-80 y/o / stroke symptoms at awakening or could not report symptom onset / MRI brain including DWI, FLAIR, a sequence sensitive to hemorrhage and time-of-flight magnetic resonance angiography of circle of Willis / pt are eligible for thrombolysis if: abnormal sign in DWI + so signal change in FLAIR

BP goals in acute ischemic stroke

- If not a candidate for thrombolysis: <220/120
- If a candidate for thrombolysis: <185/110
- After thrombolysis: <180/105
- After revascularization: <140/80
    - Meds to maintain BP at goal : labetalol, nicardipine, clevidipine, hydralazine, and enalaprilat

BP goals in hemorrhagic stroke

- For pts presenting with SBP between 150-220 and w/o contraindication to acute BP treatment, lowering to SBP of 140 is safe

Post-stroke complications in older adults

- Hemiparesis that predisposes to falls and pressure ulcers
- Dysphagia that predisposes to wt loss and apathy
- Cognitive impairment that predisposes to mood disorders/ dementia and urinary & fecal incontinence
- Identifying the stroke mechanism is important for the selection of appropriate secondary stroke prevention
- Rehab should be started ASAP to improve recovery

Ch 46

Selected age related changes in tumor biology

- Acute myelogenous leukemia = worse prognosis
- Large cell non-Hodgkin lymphoma = worse prognosis
- Celomic ovarian ca = worse prognosis
- Breast ca = better prognosis
- Non-small cell lung ca = better prognosis

Chemotherapy-Related Toxicity in Older Individuals

Type of Toxicity	Agents Involved
Myelodepression	All agents, except vincristine, bleomycin, L-asparaginase, streptozotocin
Alopecia	Most agents except gemcitabine (oral fluorinated pyrimidine, 5-FU)
Mucositis (diarrhea)	Fluorinated pyrimidines, methotrexate, anthracyclines (doxorubicin, daunorubicin, idarubicin, epirubicin)
Cardiotoxicity	Anthracyclines (doxorubicin, daunorubicin, idarubicin, epirubicin), mitomycin C
Peripheral neurotoxicity	Alkaloids (vincristine, vinblastine, vinorelbine), cisplatin, podophyllotoxins (etoposide, teniposide), taxanes (Taxotere, paclitaxel)
Central neurotoxicity	All agents (delirium, “chemo brain,” possibly dementia), high-dose cytarabine and 5-FU (cerebellar toxicity)
Anemia	Nearly all antineoplastics
Fatigue	Nearly all antineoplastics
Depression	Interferons

<u>Breast ca</u>

Prevalence

- Stage migration has affected the presentation of breast cancer in the older adult population; approximately 20% of newly diagnosed breast cancers are in situ, found on mammograms and often not palpable.
- Breast cancer is the most common noncutaneous cancer in U. S. women and was estimated to affect 61,000 with in situ disease
- Age: The median age of diagnosis of breast cancer is 61years; median age of death is 68 years. Risk is positively related to increased age, placing older women at high risk.

Presentation

- Signs and Symptoms: Signs and symptoms of breast cancer range from nonexistent to masses detected by palpation.

- Symptoms include a breast lump or mass, bloody nipple discharge, change in the size or shape of the breast, changes of the skin, inverting of the nipple, and changes in the skin texture (e.g., peeling, flaking, redness, or pitting over the breast).
- Early symptoms of breast cancer are painless; symptoms are usually evident when the cancer grows. Irregularly shaped, painless, hard masses have an increased probability of being cancerous.
- Due to the spread of cancer to the lymphatic system, a lump or swelling in the axilla should be further evaluated

Diagnostic criteria/ Lab orders

- Diagnostic Tests: For high-risk women or women who have noted a breast mass, history taking, and clinical breast examination is the first stage of breast cancer diagnosis.
- A diagnostic mammogram is used to determine breast disease in women who have breast symptoms or abnormal screening mammography.
- This diagnostic procedure is distinguished from screening mammography.
- Routine mammography screening is recommended by the ACS beginning at 45 years of age for average-risk women.

Treatment

- The treatment for breast cancer confirmed by biopsy includes neoadjuvant therapy, adjuvant therapy, chemotherapy, surgical therapy, and endocrine therapy.
- Treatment is based on stage of disease, molecular profiling (hormone-receptor positive; HER2/neu positive; triple negative [ER, P, and HER2/neu negative])
- Neoadjuvant therapies include the therapies given to reduce the size of the tumor, allowing for improvement of outcomes and breast conservation
- Surgery is usually followed with adjuvant systemic chemotherapy and/or hormone therapy and/or HER2 hormone treatment (trastuzumab).
- Radiation is recommended following surgery and chemotherapy.
- For hormone receptor-positive tumors, hormone therapy is prescribed for 5 years. HER2/neu positive tumors are treated with HER2-targeted drugs starting

Management

- Lifestyle modification has been shown to have a positive impact on cancer diagnosis.
- These modifications include maintaining a healthy body mass index (BMI), increased physical activity, and improved general nutrition. High soy intake and breastfeeding have been associated with a reduction in breast cancer risk

Median survival in months of pts with metastatic breast ca by location of metastases

- Liver & lung (lymphangitic): 3 mts
- Lung (nodular): 22 mts
- Skin: 27 mts
- Bones: 36+ mts

<u>Prostate ca</u>

Prevalence

- Prostate cancer is the leading cause of cancer death in men, second only to lung cancer.
- Prostate cancer is the most common cancer in men, with approximately a 17% lifetime risk.
- The older adults are more frequently affected, with 60% of cases diagnosed after age 65 years; 70% of deaths are in men older than 75 years

Screening

- USPSTF states that screening offers only a small benefit of decreasing the risk of death in men age 55 to 64 years. In this population, the potential harms of false positives that can lead to overdiagnosis and overtreatment, and treatment complications (urinary/fecal incontinence, erectile dysfunction), outweigh the potential benefit. Persons at higher risk are those with a positive family history and Black men.
- For men age ≥70 years, prostate-specific antigen (PSA) testing is not recommended because benefit does not outweigh potential harm. Exceptions to the USPSTF recommendations are for Black men and those with family history of prostate cancer.

Presentation

- Early stage often asymptomatic.
- Obstructive voiding symptoms (hesitancy, intermittent urinary stream, decreased force of stream) are generally indicative of advanced disease with growth into the urethra or bladder neck. Locally advanced tumors may result in hematuria and hematospermia
- If rectal obstruction occurs, a large bowel obstruction or difficulty in defecation may be present
- Prostate cancer that has spread to the regional pelvic lymph nodes occasionally causes edema of the lower extremities or discomfort in pelvic or perineal areas.
- Metastasis occurs most often to the bone, resulting in pain and pathological fractures

Diagnostic criteria/ Lab orders

- Digital rectal examination (DRE) is the only method for physically examining the prostate, with awareness that only part of the gland can be palpated, allowing for irregularities to be missed.
- DRE is considered abnormal if the prostate is enlarged, asymmetrical, nodular, or tender
- Diagnostic Tests: Screening discussion should be held with men around the age of 50 years who do not possess comorbidities that restrict life expectancy to less than 10 years, unless risk factors dictate earlier.

Clinical staging

- A / no palpable lesion, biopsy only / tx: observation
- B1 / palpable nodule 1 lobe / tx: radical prostatectomy, EBRT or brachytherapy
- B2 / palpable nodule both lobes or 1 dominant nodule >1.5 cm / tx: same
- C / locally advanced, invading the capsule / tx: radiation and hormonal therapy
- D1 / extracapsular involves pelvic lymph nodes / tx: lymph node dissection and hormonal therapy
- D1.5 / chemical recurrence, rising PSA s/p prostatectomy / tx: hormonal therapy is PSA doubling time is <10 mts, occurs within 2 years of prostatectomy, or if the primary was Gleason 8 or higher
- D2 / extensive retroperitoneal lymph node involvement, distant metastasis / tx: hormonal therapy
- D2.5 / rising PSA after definitive tx / tx: consider cytotoxic therapy if second and third line hormonal therapy fails, or treat only if symptomatic metastasis occurs

Treatment

- Treatment options include active surveillance for a tumor of incidental histological findings, to radical prostatectomy, radiation, or androgen

Chemo management

- PSA: Every 6 months for next 5 years
- If PSA is elevated after treatment, refer back to cancer
- specialist.
- DRE: Annually after radiation. Discontinue after radical
- prostatectomy if PSA undetectable
- For patients with radical prostatectomy, any PSA greater than 0.2 ng/ml is abnormal and raises concern for recurrence or progressive cancer.
- For patients with radiotherapy who previously had a low PSA, a rising PSA, particularly above 2, indicates recurrence.

<u>Colon ca</u>

Prevalence

- Cancer of the large bowel is the second leading cause of cancer death in women and the third leading cause in men; incidence increases with age, at least until age 95 years.

Screening

- USPSTF recommends screening for colorectal cancer for persons age 50 to 74 years of age with one of the following: yearly fecal occult blood or fecal immunochemical testing (FIT); every 1 to 3 years FIT deoxyribonucleic acid; every 5 years sigmoidoscopy or computed tomography colonography; every 10 years colonoscopy.

- In adults age 76 to 85 years, this same set of screenings should be done selectively based on professional judgment and patient preference.
- In addition, colon cancer screening of any type is not recommended until 10 years have elapsed following a high-quality negative colonoscopy for patients without elevated risk for the cancer (positive family history, personal history of polyps, or inflammatory bowel disease).

Presentation

- TNM stage I, T1T2, is limited to mucosa and submucosa.
- Stage IIA, invades muscularis propria, and stage IIB invades the outer layer of colon proper, the serosa.
- Stage III is any lymph node involvement.
- Stage IV involves distant metastases, typically the liver, regional abdominal lymph nodes, or lung because of the lymphatic drainage of the large bowel.

Diagnostic criteria/ Lab orders

- The clinical workup of cancer of the large bowel includes a full colonoscopy and a CT scan of the chest, abdomen, and pelvis, or a positron emission tomography scan to evaluate for metastases.

Treatment

- Resection of stage I and IIA colorectal cancer results in a cure rate as high as 90%. Several studies have demonstrated the benefits of adjuvant treatment in stage III cancer and in some subsets of stage IIB cancer

Chemo

- Adjuvant treatment consists of a combination of fluorouracil and leucovorin administered over 6 months.
- The addition of oxaliplatin to a multiagent protocol improves the cure rate by 5%, but it is associated with significant toxicity, especially painful neuropathy and thrombocytopenia.
- In metastatic disease, the combination of fluorouracil, leucovorin, and irinotecan or oxaliplatin produces a response rate of approximately 40% with a median duration response of 8 months

Ch 49

Approximately half of infected older adults will not have localizing symptoms or findings on PE or have a fever or show inflammation on labs.

UTI

- The diagnosis and treatment of urinary tract infections (UTI) in older adults differ from treatment in younger individuals. UTI is the most common bacterial infection in those over 65 and the most common cause of sepsis in older adults. Swift recognition of the difference between asymptomatic bacterial colonization, which may not require treatment, and symptomatic infection is essential
- The optimal tx of complicated UTI must be based on results of the urine culture; the organisms causing the infection and their resistance patterns are not predictable.
- Cystitis
    - First line tx: nitrofurantoin 100mg BID x5days
    - Second line tx: quinolones
- Pyelonephritis
    - First line tx: cipro 500mg BID x7days or levofloxacin 750mg daily x7days

Ch 51

BPH

- BPH is a multifactorial disease process involving smooth muscle hyperplasia, prostate enlargement, and bladder dysfunction influenced by signals from the central nervous system.
- BPH can lead to lower urinary tract symptoms (LUTS) due to hyperplasia of prostate tissue which may anatomically narrow the urethra and obstruct the flow of urine from the bladder as seen below.
- Age is the most common risk factor for BPH.
- In the United States, prostate cancer is the second most common form of cancer among men.
- The prostate tends to increase in size in an aging man. The older a man is, the greater his chance of getting prostate cancer.

- Risk factors
    - Black men have higher rates of prostate cancer than men of other races. They are also twice as likely to die from the disease and tend to develop it at a younger age. Black men also tend to have a more severe type of prostate cancer than men of other races.
- Diagnosing
    - Clients are often asymptomatic during the early stages of the disease. Later symptoms include lower urinary tract symptoms.
    - The digital rectal examination (DRE) is an essential assessment for BPH and is used to assess prostate size, contour, and presence of abnormal nodules.
    - The International Prostate Symptom Score (IPSS) is a validated questionnaire that measures the severity of lower urinary tract symptoms. A score of 7 or less indicates mild symptoms, 8 to 19 indicates moderate symptoms and 20 to 35 indicates severe symptoms. Although it indicates prostatic issues, it is not a diagnostic tool for BPH.
- Treatment
    - Lifestyle modifications can be effective in reducing urinary symptoms, and bladder diaries often assist a person in making these changes
    - Clinicians should offer one of the following alpha blockers as a treatment option for patients with bothersome, moderate to severe LUTS/BPH: alfuzosin, doxazosin, silodosin, tamsulosin, or terazosin.
    - Surgery is recommended for patients who have renal insufficiency secondary to BPH, refractory urinary retention secondary to BPH, recurrent UTIs, recurrent bladder stones or gross hematuria due to BPH, and/or with LUTS/BPH refractory to or unwilling to use other therapies.

Ch 52

Parkinson's disease

- Background
    - Parkinson's disease (PD) is one of the most common progressive neurodegenerative diseases. Although it can present at any age, PD is more common in older adults. PD progression is variable, and the course of the disease is unpredictable for clients. As the disease progresses, clients encounter increasing physical, psychosocial, and spiritual concerns. The disease also causes difficulty for family members.
- Symptoms
    - The symptoms of PD can be divided into motor and non-motor symptoms
    - Motor: tremor, bradykinesia, rigidity, postural instability, hypomimia (masked facial expression), decreased spontaneous eye blink, speech impairment, dysphagia, blurred vision, impaired upward gaze & convergence, eye-lid opening apraxia, dystonia, myoclonus, stooped posture, kyphosis, shuffling & freezing gait
    - Non-motor: cognitive dysfunction and dementia, psychosis and hallucinations, mood disorders (anxiety, depression, apathy), sleep disturbances, fatigue, autonomic dysfunction, olfactory disfunction, GI dysfunction, pain & sensory disturbances, and dermatologic issues.
- Differentials
    - The key to narrowing the differential diagnosis involves tremor identification. Tremors can be categorized into three categories: postural, intentional, and resting. Postural tremors occur during movement or holding a position against gravity. These tremors can be invisible to the naked eye but accentuated with muscle fatigue or anxiety. Postural tremors can be an effect of tricyclic antidepressants and beta-agonists. Intentional tremors occur and worsen with movement. These tremors are seen in Multiple Sclerosis and cerebellar infarctions. Resting tremors occur when a limb is supported and stationary. This is the most common tremor associated with Parkinson's disease. For an accurate diagnosis, tremors must be distinguished from dyskinesias and tics.
- Tx

- According to the American Academy of Neurology guidelines for the treatment of early Parkinson's disease, clients should be counseled on the benefits and risks of pharmacological treatment.
- Treatment should be determined by the level of functionality and client choice.
- A tremor that does not impact activities of daily living does not warrant medications. For motor symptoms that affect function, levodopa is the first-line treatment. However, clients may have side effects of dyskinesia during the first five years of treatment. The lowest, most effective dose of medication is recommended.
- Dopamine agonists can also be prescribed, but are more likely to cause impulse control disorders, daytime fatigue, and hallucinations.
- Monoamine oxidase B (MAO-B) inhibitors also cause dyskinesia and insomnia is common. Clients are more apt to discontinue treatment if started on dopamine agonists or MAO-B inhibitors due to adverse effects.
- The progression of PD varies. Treatment should be considered when functional independence is affected.