A Comprehensive Geriatric Assessment
Life Expectancy

- Before 1900, age 38
- 1900-1969, age 65
- 1969-2002, age 75
- 2002-2016, age 80
- Projected, age 85

- Of all humans who have EVER lived to be 65 or older, half are currently alive
- And many of them are your patients!

Assessment of Physiological Age

Physiological age depends on

Physiologic competence: good to optimal function of all body systems

&

Health status: absence of disease

Physiological age may or may not coincide with chronological age
Definitions

- **Geriatric**: an aged person
- **Geriatrician**: a specialist in geriatrics
- **Gerontology**: the scientific study of old age and of the process of becoming old
- **Geriatric Medicine**: a specialty that focuses on health care of elderly people. It aims to promote health by preventing and treating diseases and disabilities in older adults

Comprehensive Geriatric Assessment

A multidimensional interdisciplinary focus on determining a frail elderly person’s medical, psychological, and functional capability in order to develop a coordinated and integrated plan for treatment and follow-up.
Goal of a Geriatric Assessment

Restoration of healthy function and independence and the amelioration of disability and distress
Multidimensional Interdisciplinary Team
at Westchester Medical Center Emergency Department

- Emergency Room Attending
- Emergency Room Nurse
- Social Worker
- Pharmacist
- Palliative Care Team
- Other Geriatric Specialists
Comprehensive Geriatric Assessment

- Comprehensive History and Physical Exam
- Complete a Medication Review
- Screen for Depression
- Screen for Cognition
- Screen for Functional Status
- Screen for Mobility Status
- Screen for Nutritional Assessment
Physical Exam: Cardiovascular

- Cardiovascular disease is the leading cause of morbidity and mortality; expect presence of
- 40% have hypertension; a systolic pressure of 120 may not provide adequate perfusion
- Cardiac Output (CO) declines approximately 1% per year after the age of 30; may not effectively compensate if stressed
- Decreased Beta receptor cells; catecholamines are not as effective
- Decreased compliance of arteries; may not respond to medications or effectively compensate if stressed
Physical Exam: Pulmonary

• High prevalence of COPD and emphysema; expect presence of hypoxic drive
• Decline in maximal oxygen consumption and vital capacity; may not effectively compensate if stressed
• Loss of elastic recoil; increased risk of ARDS
• Loss of alveolar surface area; increases residual lung volume and functional reserve capacity
Physical Exam: Central Nervous System

- Cognitive abilities remain intact in healthy patient
- Decrease in weight of brain; atrophy present
- Changes and loss of neurons and supporting cells in brain and spinal cord; delay in reflexes
- Diminished electrochemical reactions; may not effectively compensate if stressed
- Sensorimotor changes; loss in function of vision, hearing, and balance
- Pre-existing dementia or strokes makes evaluation more difficult
Physical Exam: Renal

- Reduction of glomeruli, kidney mass, and reserve capacity; assessment of urine output may not be reliable during resuscitation process
- Decline in total renal blood flow; blood levels of creatinine may be misleading, CrCL levels may be more reliable
- Need to consider dosages of medications that are cleared by renal system; nephrotoxic agents may cause organ failure
- Presence of chronic dehydration
- Hypotension leads to increased risk of organ failure
Physical Exam: Gastrointestinal

- Caloric requirements are decreased but nutrient demands remain constant; there is a decreased nutritional reserve
- Glucose intolerance; undiagnosed diabetes may be present
- Presence of achlorhydria; leads to prolonged digestion time and atrophic gastritis
- Changes in esophageal function; swallow test must be completed
- Diverticula common
Physical Exam: Skin

• Wrinkled, dry, and decreased dermis thickness; more prone to decubitus
• Decreased skin strength and elasticity; more prone to skin tears
• Increased vascular fragility; results in slow healing and senile purpura
• Fingernails and toenails become dull, brittle, and thick; requires regular nail care
• Sebum secretions decrease; blockages more common
Physical Exam: Muscle

• Loss of muscle fibers; reduction in muscle size and strength
• Quickly atrophy when bed bound; requires early intervention of PT/OT
Physical Exam: Bone

• Decrease in bone mass; increase risk of fractures.
• Focal weakness in trabecular bone; increased risk of fractures specifically in head of femur, head of radius, and vertebral bodies.
• Bone renewal is slower; prolonged recovery post fracture.
• Post hip fracture: 50% of elderly patience never walk again, 20% die within a year.
Medication Review

- Prescribed and OTC meds: Is it needed?
- Safety in Elderly: Start low and go slow
- Regimen: Keep it simple and clear
- BEERS Criteria:
  https://www.scanhealthplan.com/media/1743/printablebeerspocketcard.pdf
Medication Review

- Older individuals are at greater risk for adverse drug events due to metabolic changes and decreased drug clearance associated with aging; this risk is compounded by increasing numbers of drugs used.
- Polypharmacy:
  - Increases the potential for drug-drug interactions and for prescription of potentially inappropriate medications.
  - Increases risk for falls.
  - Increases the possibility of "prescribing cascades". A prescribing cascade develops when an adverse drug event is misinterpreted as a new medical condition and additional drug therapy is then prescribed to treat this medical condition.
  - Use of multiple medications can lead to problems with medication adherence, compounded by visual or cognitive compromise in many older adults.
Screen for Depression

Erik Erickson’s Stages of Psychosocial Development
Screen for Depression
Ego-Integrity versus Despair

Ego-Integrity: In reviewing their life they find satisfaction in their actions and accomplishments.

Despair: In reviewing their life they are unsatisfied with their choices and actions.

When reviewing their life they may feel either a sense of satisfaction or failure.
Screen for Depression

- Ask:
  - Are you depressed?

- Depressive symptoms are found in 10-30% of geriatric patients
- Up to 50% of all depressed geriatric patients are not identified as depressed
- Depressive symptoms in hospitalized elders can increase risk of:
  - Readmission
  - Functional Decline
  - Mortality
Screen for Cognition

The incidence of dementia increases with age, particularly among those over 85 years, yet many patients with cognitive impairment remain undiagnosed. The value of making an early diagnosis includes the possibility of uncovering treatable conditions.

Families fail to recognize signs of dementia 21% of time.
Doctors fail to recognize signs of dementia 53% of time
Medical teams fail to document signs of dementia 76% of time

Ann Int Med, 1995
Screen for Cognition

• Ask:
  – Do you have problems with memory
  – Ask family if there are sudden changes in behavior or confusion
In the older patient with chronic, progressive and usually incurable disease, functional status becomes an increasingly important indicator of quality of life.

There is a direct correlation with how much they can do independently and medical outcomes.

Thus, preventing functional decline has highest priority and drives the process of diagnostic and clinical decision-making.
Screen for Functional Status

Ask Them How They Accomplish The Following:
Independent?
Needs Some Assistance?
Completely Dependent on Another?

- **ADL’s**
  - Bathing
  - Dressing
  - Toileting
  - Transfer
  - Continence
  - Feeding

- **IADL’s**
  - Telephone
  - Traveling
  - Shopping
  - Preparing meals
  - Housework
  - Repairs
  - Laundry
  - Medication
  - Money
Screen for Mobility Status

Approximately one-third of persons age 65 years and one-half of those over 80 years of age fall each year. Patients who have fallen or have a gait or balance problem are at higher risk of having a subsequent fall and losing independence.
Screen for Mobility Status

• Ask:
  – Have you fallen recently?

• Perform Get Up And Go Test:
  – Ask the patient to perform the following series of maneuvers:
    • Sit in a chair.
    • Rise from the chair.
    • Stand still momentarily.
    • Walk a short distance.
    • Turn around.
    • Walk back to the chair.
    • Turn around.
    • Sit down in the chair.
  – Deviation from a confident, normal performance is a sign of a risk for falling
Screen for Nutritional Status

Approximately 15%-70% of persons 65 and older are at nutritional risk or are malnourished. Malnutrition is associated with increased mortality risk. Inquiry about changing appetite are likely the most useful methods of assessing nutritional status in older patients. Loss of as little as 5 percent of weight over a three-year period is associated with increased mortality.
Screen for Nutritional Status

- Do the dentures appear to be fitting effectively?
- Ask:
  - Are they hungry?
  - What did they eat for their last meals?
  - What do they currently have in their refrigerator?
  - How do they get their meals?
Comprehensive geriatric assessment (CGA) is defined as a multidisciplinary diagnostic and treatment process that identifies medical, psychosocial, and functional capabilities of an older adult in order to develop a coordinated plan to maximize overall health with aging.

CGA is based on the premise that a systematic evaluation of frail older persons by a team of health professionals may identify a variety of treatable health problems and lead to better health outcomes.
References

