Geriatric Assessments for the Seriously Ill Patient

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The University of Kansas School of Medicine

Geriatric Assessment

- Why?
- What?
- How do I do it?
- Now what?

Geriatric Assessment

- Why?
- What?
- How do I do it?
- Now what?
What is different about the older patient?

- Limited life expectancy
- Decreased reserve
- Multimorbidity
- Functional impairments

Quartiles of Life Expectancy:
U.S. WOMEN, 1997

<table>
<thead>
<tr>
<th>Age</th>
<th>70</th>
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<td>9.5</td>
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<td>Lowest 25%</td>
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<td>3.3</td>
<td>2.2</td>
<td>1.5</td>
<td>1.0</td>
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What is different about the older patient?

- Limited life expectancy
- Decreased reserve
- Multimorbidity
- Functional impairments

Figure 2. Functional aging. A. The Fries and Crapo model of diminishing area of physiologic reserve due to the deadly disease process as the body's ability to withstand disease decreases with age. B. Normal and decreased functional reserve. The horizontal line is the homoeostatic cylinder representing the physical and instrumental activities of daily living (side tests). Death will occur when reserves decrease to a point less than that allowed supported by the homoeostatic cylinder or when a stress exceeds the compensation reserve.
What is different about the older patient?
- Limited life expectancy
- Decreased reserve
- Multimorbidity
- Functional impairments

Comorbidity and prognosis: Simply add up the co-existing conditions

SEER Registry, Senators & Hodgson 1984
What is different about the older patient?

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Functional Impairment

- Activities of daily living (ADL)
  - Bathing
  - Dressing
  - Toileting

- Instrumental activities of daily living (IADL)
  - Use telephone
  - Manage finances
  - Shop
  - Arrange transportation

Persons Reporting Problems with >=2 ADLs

<table>
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<th>AGE (years)</th>
<th>Percent</th>
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<tr>
<td>Total &gt; 65</td>
<td>6.0</td>
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<tr>
<td>65-74</td>
<td>3.1</td>
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<tr>
<td>75-84</td>
<td>7.8</td>
</tr>
<tr>
<td>&gt;= 85</td>
<td>18.1</td>
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</table>
2-year mortality rate
70 years and older

- 8% fully independent,
- 14% dependent in IADL,
- 27% dependent in ADL,
- > 40% institutionalized.


Short Physical Performance Battery,
Death Rates by Summary Score

Age and Sex Adjusted

Why does this matter to the specialist?

- Decisions about therapy
Comparison of CGA and Standard Disease Interventions

<table>
<thead>
<tr>
<th>Setting</th>
<th>Intervention</th>
<th>Death reduction</th>
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<tr>
<td>Elderly</td>
<td>CGA</td>
<td>14%</td>
</tr>
<tr>
<td>Breast cancer</td>
<td>Adjuvant chemotherapy</td>
<td>15.3%</td>
</tr>
<tr>
<td>Myocardial infarction</td>
<td>Beta-blocker</td>
<td>22%</td>
</tr>
</tbody>
</table>

Treatment of Older Cancer Patients

- Patient
  - Life Expectancy (LE)
    - LE>Cancer Survival
    - LE<Cancer Survival

Collaborative Model of Care of the Older Patient

- Oncology → stage the cancer
  - Make predictions of life expectancy
  - Expected side effects of cancer therapy
- Geriatrics → stage the aging
  - Make predictions of life expectancy
  - Anticipate potential complications
Aging Categorized

- Very fit
  - “Vulnerable”: look healthy but at increased risk of complications and of dying in the next few years
- Frail

Glidepaths*

- “Super” Aging
- Usual Aging
- Vulnerable
- Frail
- End-of-Life

* > 5yrs / < 5yrs

Life expectancy

Summary

- For those who appear
  - Very fit: do geriatrics screen
  - Average fitness: screen and consider comprehensive assessment to determine vulnerabilities
  - Frail: comprehensive assessment
Who needs further assessment?

Geriatric Assessment

- Why?
- What?
- How do I do it?
- Now what?

Geriatric Assessment

- Geriatrics ➔ comprehensive, multidisciplinary evaluation of many domains
  - Available for complex issues

- Other settings ➔ short, screening using validated instruments
Comprehensive Geriatric Assessment
- Activities of Daily Living, Instrumental ADLs
- Physical performance
- Cognition
- Co-morbidities
- Pharmacy review
- Nutrition
- Social Resources
- “Syndromes:” falls, depression, delirium, polypharmacy, incontinence

Abbreviated Geriatric Assessment
- Medical issues
- Geriatrics issues in history
- Cognitive screen
- Functional assessment
  - Questionnaire
  - Performance measures

That’s all well and good but. . .
- I don’t have the time.
  - Takes less time than you’d expect
  - Can be administered by staff
Geriatric Assessment

- Why?
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Abbreviated Geriatric Assessment

- Comorbidities
- Geriatrics issues in history
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Abbreviated Geriatric Assessment

- Comorbidities
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  - Questionnaire
  - Performance measures
Comorbidity Assessment

- Charlson Comorbidity Scale
  - Standardized scoring
  - May be self-administered
  - Public Domain
  - Demonstrated predictive value for hospitalization, mortality

Extermann et al. JCO 1998;16(4):1542

Categories of Comorbidities

**Terminal**
- Class IV CHF, end-stage COPD, end stage Parkinson disease

**Function-limiting, possible life-limiting**
- Stroke, Severe COPD, PAD, OA, Vision impairment, Depression, Urinary Incontinence

**Reserve-limiting**
- CKD, DM, COPD, stable CAD
Abbreviated Geriatric Assessment

- Comorbidities
- Geriatrics issues in history
- Cognitive screen
- Functional assessment
  - Questionnaire
  - Performance measures

Geriatric issues

- ROS:
  - Incontinence,
  - Depression,
  - Falls
- Pharmacy review
- Nutritional assessment
- Social assessment

Abbreviated Geriatric Assessment

- Comorbidities
- Geriatrics issues in history
- **Cognitive screen**
- Functional assessment
  - Questionnaire
  - Performance measures
Cognitive Screening Tools

Table 2. Mini-Cog Assessment Instrument

<table>
<thead>
<tr>
<th>Number of words recalled from Step 1</th>
<th>Result of clock-drawing test</th>
<th>Interpretation of screen for dementia</th>
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<tbody>
<tr>
<td>0</td>
<td>Normal</td>
<td>Positive</td>
</tr>
<tr>
<td>0</td>
<td>Abnormal</td>
<td>Positive</td>
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<td>Positive</td>
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<tr>
<td>2</td>
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<td>2</td>
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<td>Negative</td>
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<tr>
<td>3</td>
<td>Abnormal</td>
<td>Negative</td>
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Abbreviated Geriatric Assessment

- Comorbidities
- Geriatrics issues in history
- Cognitive screen
- Functional Assessment
  - Questionnaire
  - Performance measures

Functional Screen

- Questionnaire
  - Vulnerable elder survey (VES-13)
  - SP 36
- Performance
  - Short physical performance battery (SPPB)
ACOVE Vulnerable Elders Survey (VES-13)

www.rand.org/health/survey/ves/

Vulnerable Elders Survey

Simple, 13-item Function-based System

- Age
  - 75-84 years +1
  - ≥ 85 years +3
- Self-rated health
  - Fair or poor +1
- Physical function limitation
  - Count = 1 +1
  - Count ≥ 2 +2
- Functional disability
  - Any of 5 IADL/ADLS +4

Identifying Vulnerable Elders

Physical Limitations

- Stooping and bending
- Lifting 10 pounds
- Reaching
- Walking 1/4 mile or climbing stairs
- Heavy housework
Functional decline or death within 24 months

<table>
<thead>
<tr>
<th>Score</th>
<th>Relative risk</th>
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<tbody>
<tr>
<td>0-2</td>
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<td>&gt;= 3</td>
<td>4.2</td>
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Short Physical Performance Battery

- Timed standing balance (up to 10 seconds)
  - Side-by-side stand
  - Semi-tandem stand
  - Tandem stand
- Timed 4-meter walk
- Chair rise
  - Single
  - Timed multiple (5) chair rises

TOTAL TIME TO COMPLETE ~ 2 MINUTES

Short Physical Performance Battery (SPPB)

5 Highest performance level
0 Unable to do test

Walking speed  Ability to stand from a chair  Standing balance test

Three measures added from 0 (worst) to 12 (best)

1. Balance Tests
   - Standing Reach Test
     * Feet apart, 1 foot off the floor for 5 sec.
     * 30 cm (1.0 ft)
   - Gait Speed Test
     * Measured along a portion of a runway
     * For a distance of 10 sec
     * 5.8 sec
   - Stair Climbing Test
     * Stairs, 30 cm (1.0 ft)
     * 14.0 sec

2. Gait Speed Test
   - Measure the time required to walk a distance of 10 meters.
   - Summary Performance Score

3. Crate Stand Test
   - Measured for the time required to stand up from a seated position.

Disability Status at 4 Year Follow-up
by BPPS Baseline Summary Score
Among Those Not Disabled at Baseline

Nursing Home Admission Rates by BPPS Summary Score
Ages and Sex Adjusted

Mr L

Specific concerns for assessment today include: Assessment to help guide decisions about future cancer therapy.

84 y/o
Recent diagnosis of Gastric adenocarcinoma, stage II (T3 N0 M0).

PMH:
- Prostate cancer, 2013. Treated w/rads, ADT
- AFB Xarelto D/C'd recently with gastric cancer dx
- COPD, severe
- Stopped drinking with new CA dx

Medications:
How do you manage/remember to take your medications?

- Very regimented about medications. Has a plan and does not deviate from that.

Activities of Daily Living:
Able to do the following without help?
I = Independent
A = Requires assistance
D = Dependent

- Dress
- Eat by self
- Transferring
- Toilet
- Not bathing in shower, tub. Doing sponge bathing.

Instrumental
- Shop
- Perform Household chores
- Manage financial accounts
- Prepare own food
- Arrange transportation--drives a little

Support System/Caregivers:
Who makes up your family? Support?
Evidence of caregiver strain?
Concerns for elder abuse?

- He depends on son to cook and do laundry and general household chores for him. Ph is covering all costs of his 2 sons and 2 grandchildren plus housing and food costs. He is concerned about what will happen once he does stop working as he will only get $1600 month in SS which he is receiving now."

Social History:
- Semi retired attorney--still goes to work a few days a week though this is mostly social
- Lives with 2 sons and 2 granddaughters.
- Widowed for 7 years
- No tobacco

SF 36

Self reported health: POOR
General health this year compared to last: SOMEWHA T WORSE
Many limitations on physical health: LIMITED A LOT, LIMITED A LITTLE
Function in the last 4 weeks: MORE DIFFICULTY
Pain: NONE
Psychologic: Not depressed
Energy: Tired all the time
Cognitive and Affective

Montreal Cognitive Assessment

<table>
<thead>
<tr>
<th>Category</th>
<th>Score</th>
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<tbody>
<tr>
<td>Visual/Spatial/Executive</td>
<td>2/5</td>
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<tr>
<td>Naming</td>
<td>2/3</td>
</tr>
<tr>
<td>Memory</td>
<td>2/5</td>
</tr>
<tr>
<td>Attention</td>
<td>6/6</td>
</tr>
<tr>
<td>Language</td>
<td>3/3</td>
</tr>
<tr>
<td>Abstraction</td>
<td>1/2</td>
</tr>
<tr>
<td>Delayed recall</td>
<td>3/5</td>
</tr>
<tr>
<td>Orientation</td>
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<td>Education, post grad</td>
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<tr>
<td>Total score</td>
<td>23/30</td>
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Geriatric Depression Scale 6/15

Recommendations

The results of this assessment show increased vulnerability as measured by:

- Poor self-rated health
- Poor endurance and energy by self-report
- Functional impairment (assists with IADLs and not independent in bathing)
- Mild cognitive impairment

Severe COPD but is not completely explained by this.

His score on the health assessment places him as vulnerable which means that there is a four-fold increase in risk of death or functional decline when compared to those who score less.

Even without cancer, he is probably in the lower quartile of health for his age and that would place his average life expectancy more in the range of 2.2 years.

Results

Oncology decided NOT to give him IV chemo.

He will get oral Xeloda
Now what?

- Refer for more in-depth evaluation if:
  - Positive Mini-Cog
  - Any historical items about geriatrics syndromes are positive
  - Consider tailored treatment for

Who needs further assessment?

Abbreviated Geriatrics Assessment

- Co-morbidities
  - Charlson
- Geriatrics syndromes
- Cognitive screen
  - MiniCog
- Functional assessment
  - VES
  - SPPB
Summary

- Geriatrics screen:
  - Can be done by non-physician staff
  - Can be done relatively quickly
  - Can offer important information about vulnerabilities