


Caring for Older Adults with Cancer;  
Who, When, Where, Why and How?

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UNC Cancer Network  
July 12<sup>th</sup> 2017



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Outline

- What is Geriatric Oncology
- Demographics of Cancer and Aging
- Heterogeneity of Aging
- Assessment of Older Adults
- GA Tools in Routine Practice
- Questions



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What is Geriatric Oncology?

- "A multidimensional and multidisciplinary field born out of the need to train academic specialists to respond to the substantial challenges and opportunities in prevention, early detection, diagnosis and management of cancer in older adults"
- The implementation of geriatric principles in the care of older cancer patients



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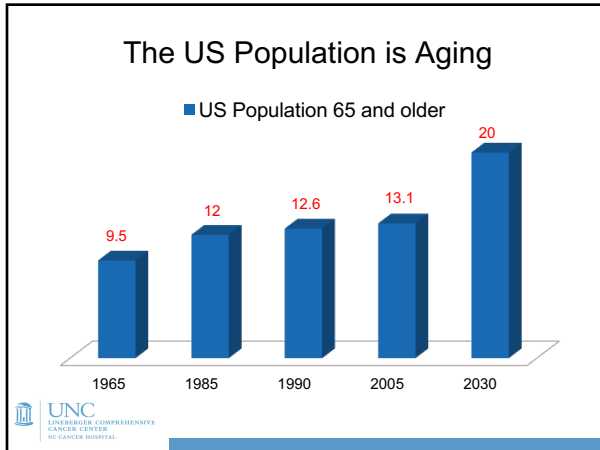
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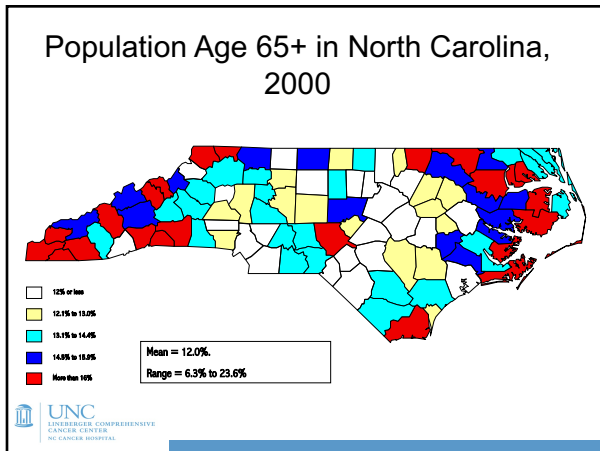
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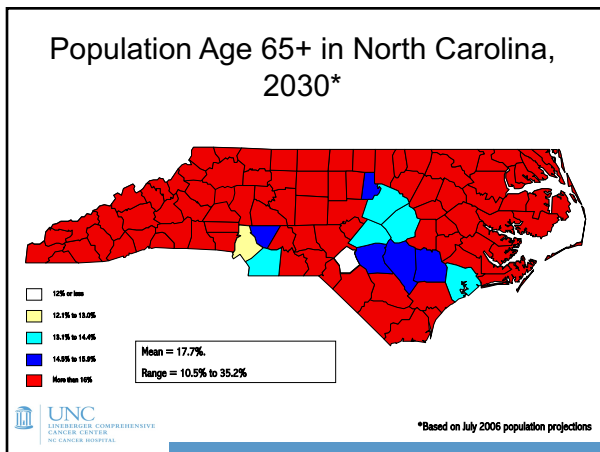
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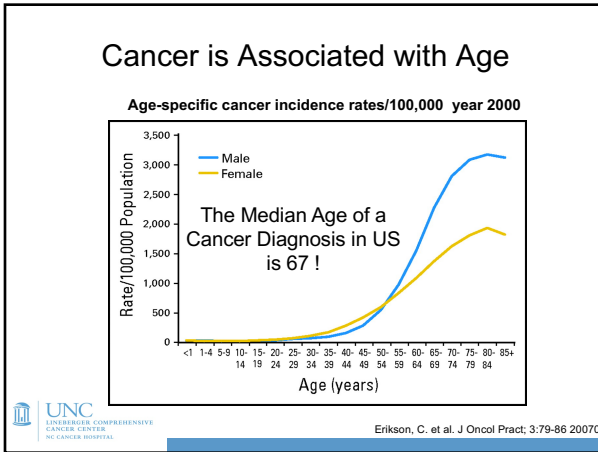
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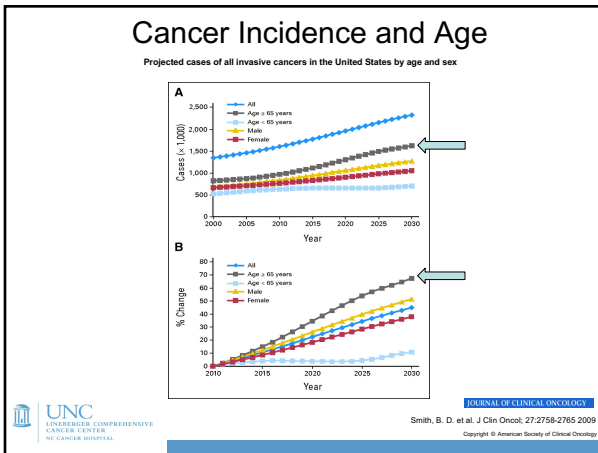
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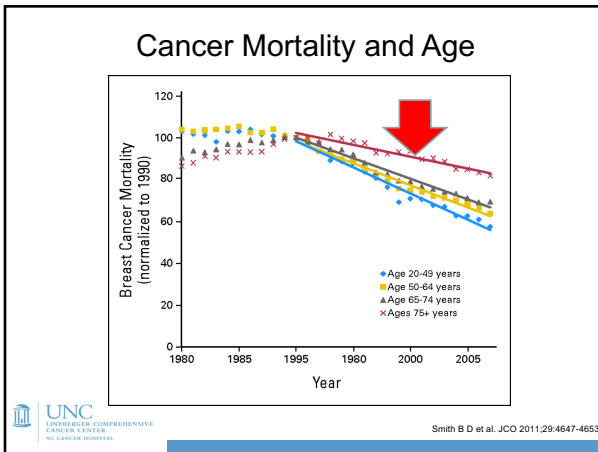
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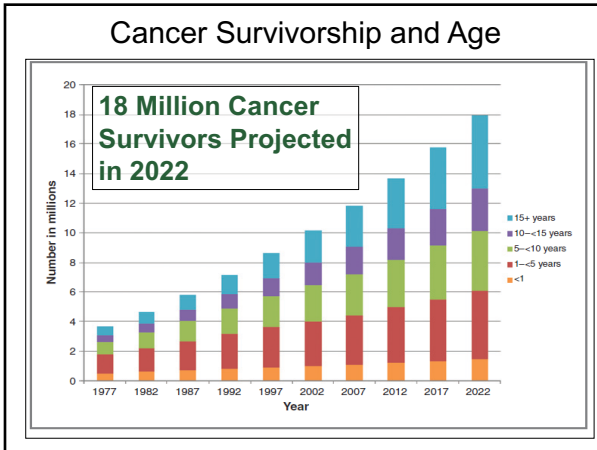
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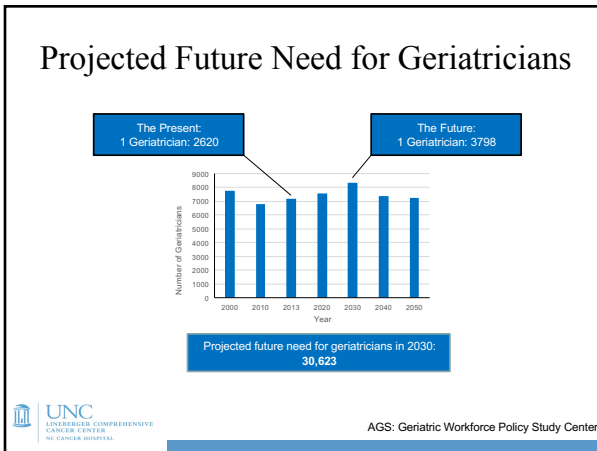
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- ### Important Points
- Cancer is associated with age
  - The US population is aging
  - The majority of cancer incidence and mortality occurs in older adults
  - The number of older cancer patients will increase
  - There are not enough geriatricians to assess older patients so you will have to do it yourself.
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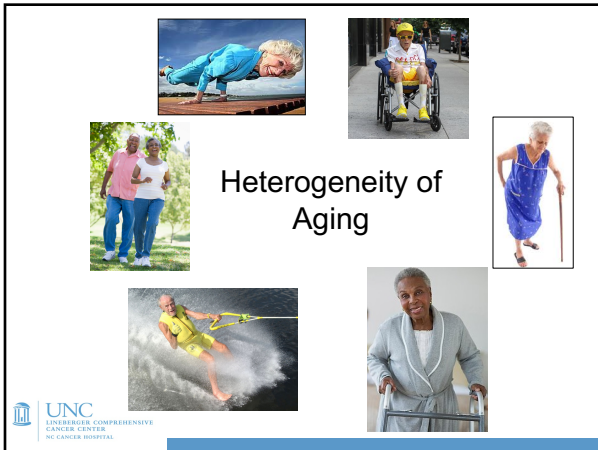
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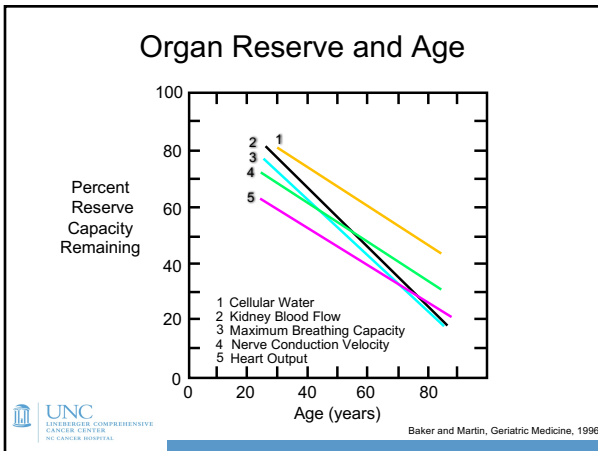
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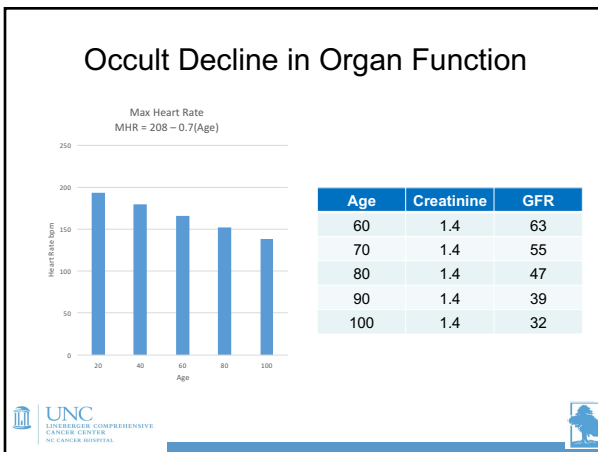
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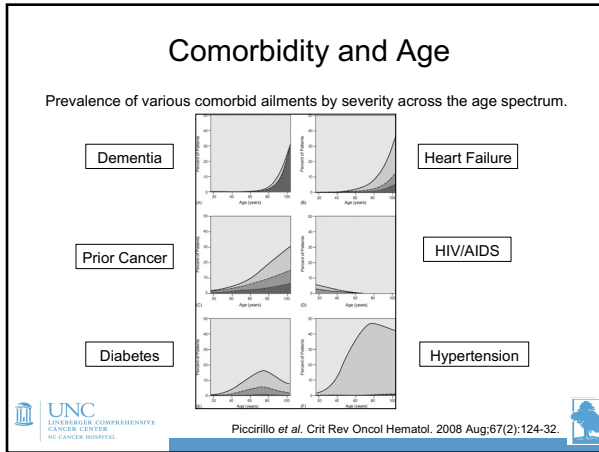
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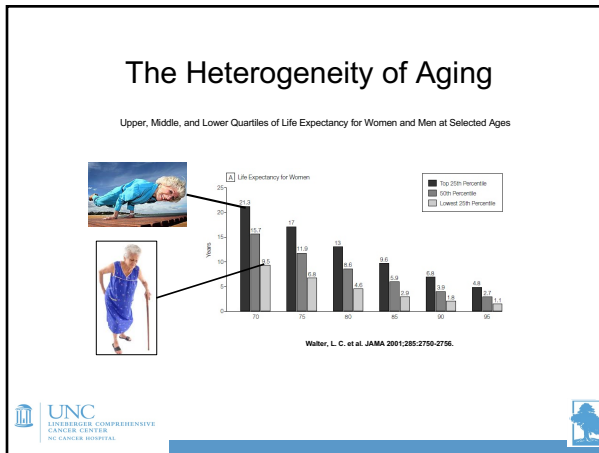
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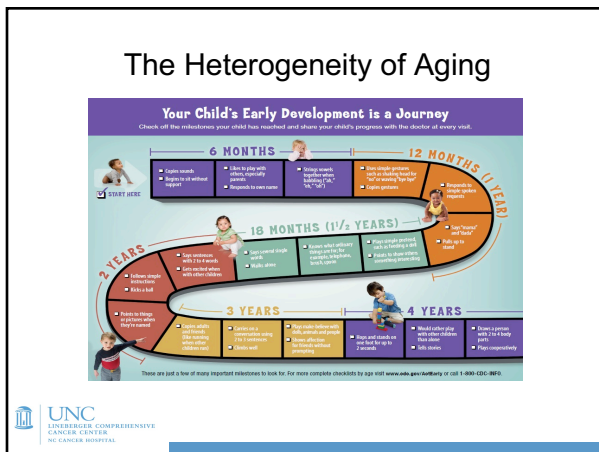
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### The Aging Spectrum



**Pediatrics** **Geriatrics**

- Provider require unique training and skill set
- Age related changes in physiology
- Vulnerable to toxicity
- Dependent in daily activities
- Concerns regarding long-term effects of therapy

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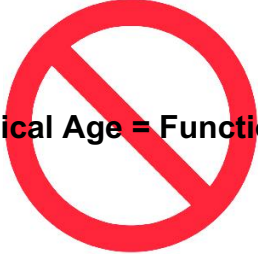
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### Important Points



**Chronological Age = Functional Age**

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### Perspectives of Aging

<ul style="list-style-type: none"><li>• Young adults<ul style="list-style-type: none"><li>– Single serious condition</li><li>– Dominates the clinical picture</li><li>– Tolerates acute, severe side effects relatively well</li><li>– Goal: survival/cure</li></ul></li></ul>	<ul style="list-style-type: none"><li>• Older adults<ul style="list-style-type: none"><li>– Coexists w/ multiple illnesses and significant disability</li><li>– Competing causes of mortality</li><li>– Variable tolerability of specific Tx, requiring tailoring</li><li>– Goal: survival vs. QOL</li></ul></li></ul>
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## Important Questions

- Is the patient going to die of, or with cancer?
- Is the patient going to live long enough to suffer the consequences of cancer?
- Is the patient able to tolerate treatment?
- Are there complications of treatment that are more common in older individuals?
- Is the social network of the patient adequate to support him/her during treatment?



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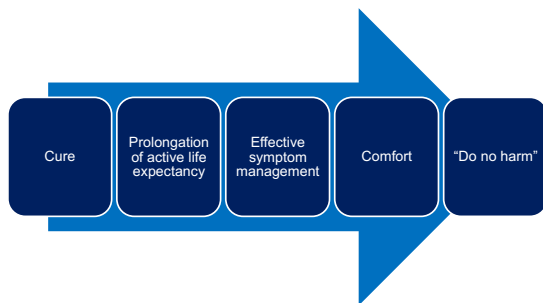
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## What is the Goal of Treatment?



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## Assessing Older Adults



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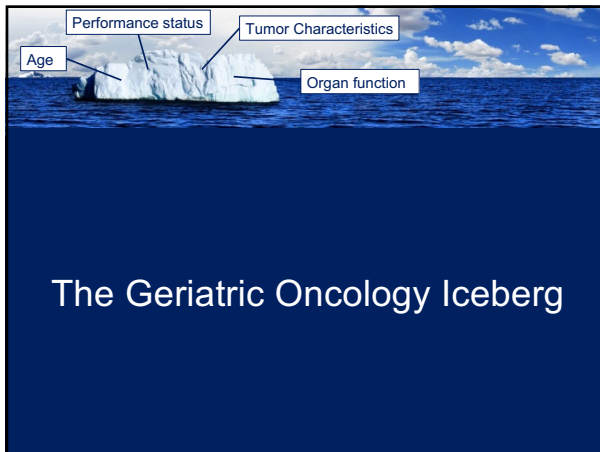
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### Geriatric Assessment

- > Definition
  - Consensus Conference 1989
  - A multi-dimensional inter-disciplinary patient evaluation that leads to the identification of patient problems.
- > Benefits
  - Uncover problems not detected by a routine H&P
  - Predicts chemotherapy toxicity, morbidity and survival
  - Leads to interventions that improves function, nutrition, mental health, social support
  - A growing body of evidence suggest this improves outcomes including early re-hospitalizations and survival
- > Challenges
  - Requires time, specialized personnel and expertise
  - Insufficient numbers of geriatricians to do it

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### Brief Geriatric Assessment: 0916

DOMAIN	ASSESSMENT MEASURE	
	Health Professional	Self Reported
Functional Status	Timed Up and Go KPS- Physician Rated	Activities of Daily Living (ADL) Instrumental Activities of Daily Living Karnofsky Self Reported No. of Falls in the last 6 months
Co-morbidity	<b>10 minutes</b>	Number /Type of Comorbid Conditions No. of Medications
Cognition		<b>20-30 minutes</b>
Psychologic		Mental Health Index-17
Social		Social Activity Limitation Measure (MOS) Social Support Survey (MOS)
Nutrition	BMI	Unintentional Weight Loss 6 mths

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### Case 1: Breast Cancer Adjuvant Chemotherapy Decision

- > 75 Year Old Woman
  - Stage IIIA (T3N1) G2 HR positive breast cancer
  - Never smoked
  - BMI 30
  - No prior cancer, diabetes, or COPD
  - No hospitalizations past year
  - My health is "excellent"
  - No dependent "Instrumental" ADLs
  - Walks a mile each day



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### Estimating Life Expectancy

- > What is her approx. 9-yr mortality risk excluding her BC diagnosis?
  - 5%
  - 15%
  - 30%
  - 50%



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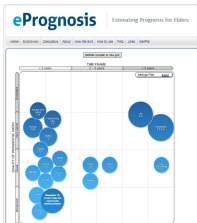
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### Estimating Life Expectancy



- > [www.eprognosis.org](http://www.eprognosis.org)
  - Estimates the likelihood of survival without Cancer
  - Uses some geriatric assessment data
  - Easy to use and several scales in various settings are available



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### Estimating Life Expectancy

**Schonberg Scale: 11 items**

- Age
- Sex
- Smoking
- BMI
- Prior cancer
- Diabetes
- COPD
- Hospitalizations in the past 12 months
- Self-rated health
- Dependent in 1+ IADL
- Difficulty walking a few blocks (1/4 mile)


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### Estimating Life Expectancy

Variable	Patient 1
Age	75
Sex	Female
smoking	Never
<b>5 year mortality risk = 6%</b>	
<b>9 year mortality risk = 16%</b>	
COPD	No
Hospitalizations past year	None
Self rated health	Excellent
Dependent in 1+ IADL	None
Difficulty walking 1/4 mile	No

Eprognosis.com


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### Mortality Risk

➤ What is the probability she will be alive in 10 years?

- About 75%
- About 50%
- About 30%
- About 15%


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### Mortality Risk

Adjuvant Online!  
www.adjuvantonline.com

**Patient Information**

Age: 55  
Comorbidity: Perfect Health  
ER Status: Positive  
Tumor Grade: Grade 2  
Tumor Size: 2.1 - 3.0 cm  
Positive Nodes: 1 - 3  
Oxidative For: Normality  
10 Year Risk: 55 Prognostic

**Adjuvant Therapy Effectiveness**

Horm: Antiestrogen Inhibitor for 5 yrs  
Chem: 2nd Generation Regimen

Hormonal Therapy: 32  
Chemotherapy: 26  
Combined Therapy: 50

**No additional therapy:**  
9.2 alive in 10 years.  
14.5 die of cancer.  
14.5 die of other causes.

**With hormonal therapy:** Benefit = 7.9 alive.

**With chemotherapy:** Benefit = 6.3 alive.

**With combined therapy:** Benefit = 12.9 alive.

Final Results PDF | Access Help and Clinical Evidence  
Images for Contributions

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### Decision Making

- She is overall good general health
- Has a reasonable life expectancy
- Her breast cancer diagnosis would likely impact her survival
- Combined chemo and endocrine therapy estimated to provide a survival benefit
- Recommend adjuvant treatment based on her goals and values

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### Case 2: Colon Cancer Adjuvant Chemotherapy Decision

- > 75 Year Old Man
  - Stage III (T1, N1) G1 colon cancer
  - Current smoker
  - BMI 19
  - Has diabetes and COPD
  - One hospitalizations in the past year for COPD
  - My health is "fair"
  - Cannot shop for groceries
  - Can barely make it to the mailbox down the hall.

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### Estimating Life Expectancy

➤ What is his approx. 9-yr mortality risk excluding his CRC diagnosis?

- 40%
- 50%
- 70%
- 90%



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### Estimating Life Expectancy

Variable	Patient 1
Age	75
Sex	Male
smoking	Current
COPD	Yes
Hospitalizations past year	1
Self rated health	Fair
Dependent in 1+ IADL	Yes
Difficulty walking 1/4 mile	Yes

**5 year mortality risk = 69%**  
**9 year mortality risk = 92%**



Eprognosis.com

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### Mortality Risk

➤ What is the probability he will die from CRC in 10 years?

- About 33%
- About 26%
- About 18%
- About 7%



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### Mortality Risk

Adjuvant Online!  
www.adjuvantonline.com

**Patient Information**

Age: 75  
 Sex: Male  
 Comorbidity: Major Prob. (+20)  
 Depth of Invasion: T1  
 Positive Node: 1-3  
 Examined Node: > 10  
 Histologic Grade: Grade 1  
 Stage: 3  
 Calculate: Mortality  
 5 Year Risk: 12 Prognostic

**No additional therapy:**

- 15.5 alive in 5 years
- 7.4 die due to cancer
- 77.1 die of other causes


**With selected additional therapy:**

- 15.5 alive in 5 years Plus
- 1.1 die due to chemotherapy
- 4.7 die due to cancer
- 78.7 die of other causes

**Adjuvant Therapy Effectiveness**

Chem: 5FU-Based  
 Proportional Risk Reduction: 38

Print Results PDF    Access Help and Clinical Evidence  
 Images for Consultations




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### Assessment of Older Adults

Risk factors for Grade 3-5 Toxicity	OR (95% CI)	Score
Age ≥73 yrs	1.8 (1.2-2.7)	2
GI/GU cancer vs. other cancer	2.2 (1.4-3.3)	3
Standard dose vs. reduced	2.1 (1.3-3.5)	3
Polychemotherapy vs. single agent	1.8 (1.1-2.7)	2
Hemoglobin (male: <11, female: <10)	2.2 (1.1-4.3)	3
Creatinine Clearance (Jelliffe -ideal wt) <34	2.5 (1.2-5.6)	3
1 or more falls in last 6 months	2.3 (1.3-3.9)	3
Hearing impairment (fair or worse)	1.6 (1.0-2.6)	2
Limited in walking 1 block (MOS)	1.8 (1.1-3.1)	2
Assistance required in medication intake	1.4 (0.6-3.1)	1
Decreased social activity (MOS)	1.3 (0.9-2.0)	1

Possible score range: 0-25



Hurria et al. JCO 29:3457, 2011

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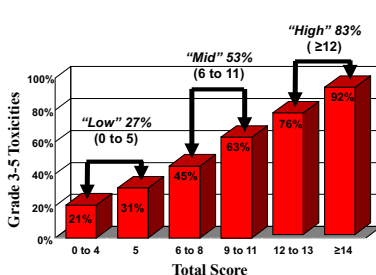
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### Assessment of Older Adults



Total Score	Grade 3-5 Toxicities (%)	Risk Level
0 to 4	21%	"Low" 27% (0 to 5)
5	31%	
6 to 8	45%	"Mid" 53% (6 to 11)
9 to 11	63%	
12 to 13	76%	"High" 83% (≥12)
≥14	92%	



Hurria et al. JCO 29:3457, 2011

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### Decision Making

- He is in overall poor general health with competing causes of morbidity
- Has a limited life expectancy
- CRC would likely not impact his survival
- Adjuvant chemo therapy estimated to provide modest survival benefit
- He has a substantial risk of toxicity
- Recommend against adjuvant treatment based on his goals and values



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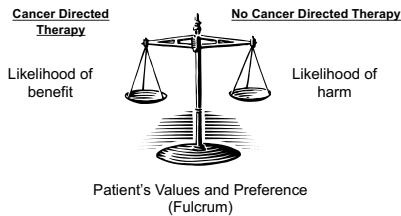
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### Putting It All Together



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### Important Points

- Tools are available to identify older adults at risk
  - Predict toxicity in cancer patients
  - Predict survival in older cancer patients
  - Uncover problems not detected by routine H&P
  - Guide practical interventions



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### Case 3

A 75 year old woman with a history of DM and HTN presents with worsening shortness of breath and is found to have critical AS. She has is limited in several IADLs and her ECOG PS is 2. On exam she is found to have a protuberant cauliflower like left breast mass and a large left thyroid mass. A staging PET/CT showed the left breast mass and FDG avid axillary LN but no evidence of other metastases. Left breast biopsy revealed a strongly HR+, HER-2 negative breast cancer. Thyroid FNA was suspicious for follicular neoplasm. B/L Heart catheterization shows severe AS, PS, no evidence of CAD and adequate biventricular function.




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### Question 2

Which of the following would you recommend?

- A. Thyroidectomy and cervical LN dissection
- B. Mastectomy with axillary lymph node dissection
- C. Open heart surgical valve replacement
- D. Neoadjuvant endocrine therapy and transaortic valve replacement
- E. Weekly Taxol chemotherapy followed by radiation.




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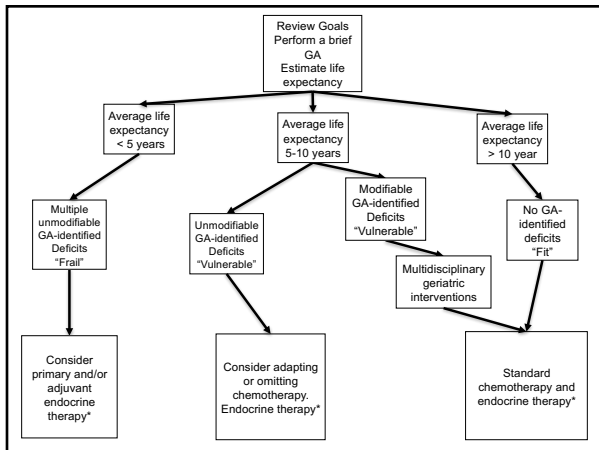
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