



The Aging Cancer Patient Population in North Carolina

UNC Cancer Network, November 11, 2020

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Learning Objectives

- Describe the demographics of aging and cancer.
- Describe critical elements of performing a geriatric assessment.
- Formulate a specific treatment plan for older oncology patients.



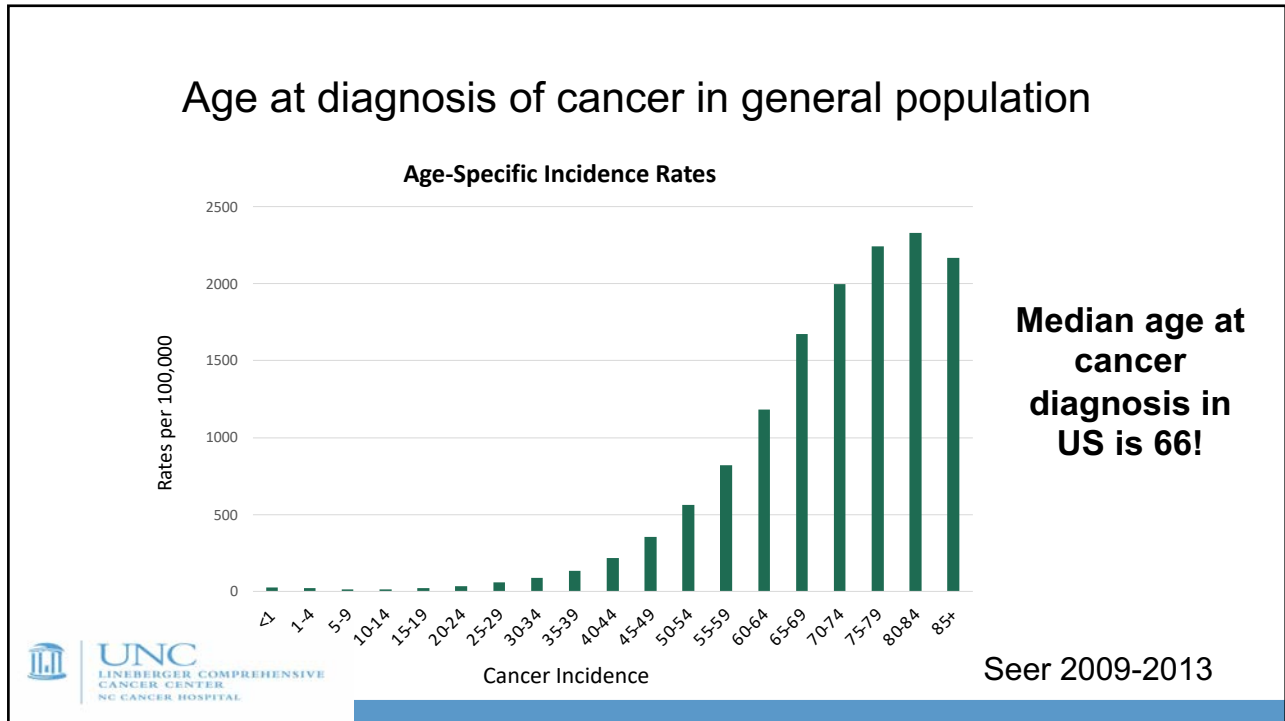
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For today....

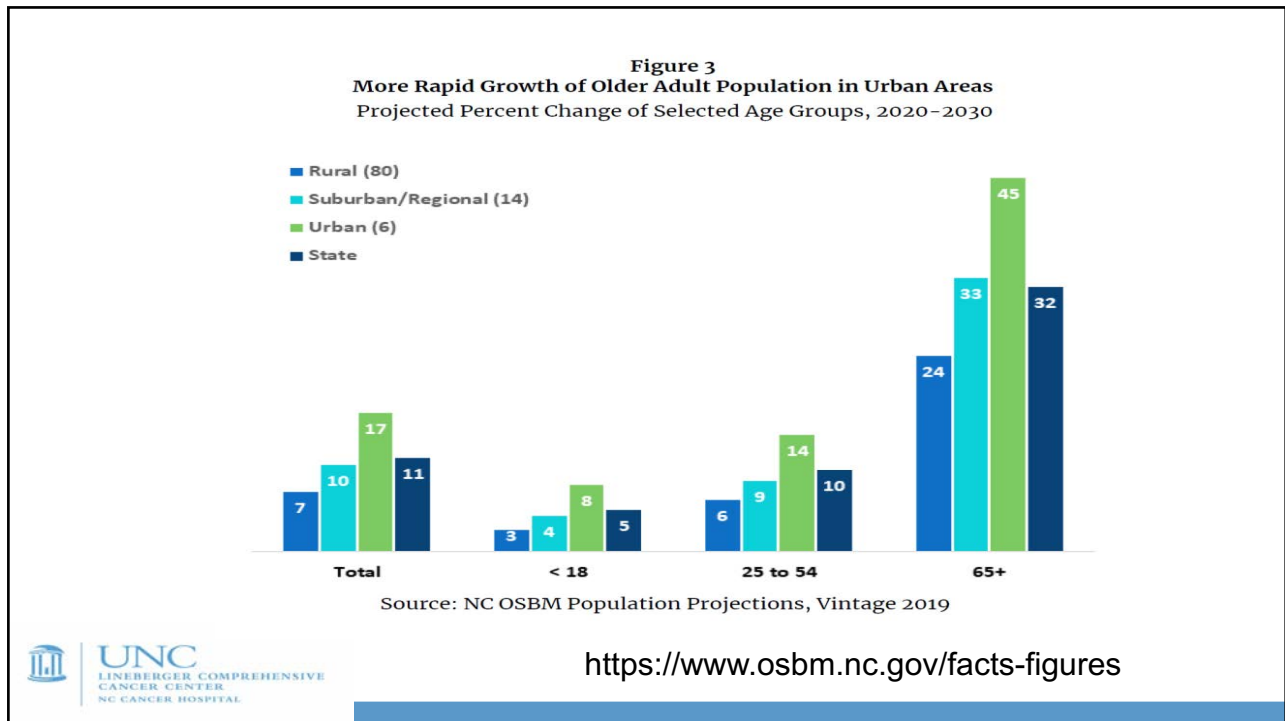
- Demographics and some facts
- Geriatric Assessment
- Age and Life-Expectancy
- Goals of Therapy
- Calculating Benefits of Treatment
- Calculating Chemotherapy Toxicity

Some facts...

- The US is aging and becoming more diverse
 - North Carolina is no different
- Cancer is a disease of aging
- In older patients cancer be an annoyance or devastating
- Older patients are underrepresented in clinical trial
- We have a national shortage of geriatricians
- Like most medicine now caring for older cancer patients is a team game



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Now

At least 38% of North Carolinians are Black, Hispanic, Asian, American Indian, or multiracial.

These race/ethnic groups accounted for 66% of total population growth since 2010 and will account for approximately 5 of 8 persons added between now and 2039.

Figure 4
Five of Every Eight People Added Now - 2039 will be a Person of Color
Proportion of Population Growth Attributed to Each Group, 2020 - 2039

Group	Proportion
NonHispanic White	37%
NonHispanic Black, Asian, American Indian, Other	35%
Hispanic	28%

Source: NC OSBM Population Projections, Vintage 2019

<https://www.osbm.nc.gov/facts-figures>

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U.S. Breast Cancer Death Rates Over Time

Year	Age 20-49 years	Age 50-64 years	Age 65-74 years	Ages 75+ years
1980	100	100	100	100
1985	100	100	100	100
1990	100	100	100	100
1995	95	95	95	95
2000	85	85	85	90
2005	75	75	75	80

Landmark Study: Smith et al. JCO 2011;29:4647-4653

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Selecting Cancer Treatment in Older Patients

Perform Brief Geriatric Assessment
www.mycarg.org



Estimate Life Expectancy
eprognosis.ucsf.edu



Define Goals of Treatment
not always longevity..

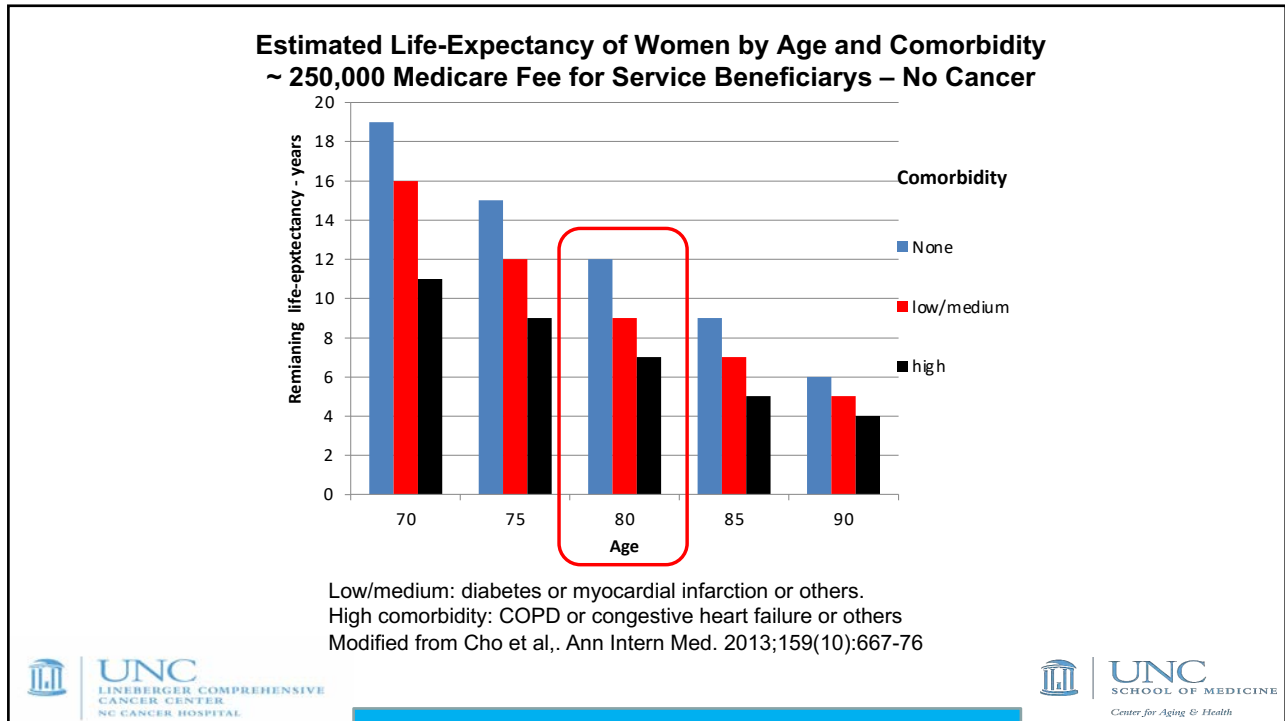


Calculate Benefits/Toxicity of Treatment

Both 75, do you think about them the same way?




It's not age,
it's life expectancy




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“Sarah Jones” as an example of caring for an older patient with cancer..



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Sarah Jones Age 77 Years

- States she is in very good health, BMI 29
- Hypertension, hyperlipidemia, hypothyroidism
- Drives, No functional deficits (Full ADL and IADL)
- No falls, prior smoker, no prior cancer
- Cares for 82 y/o husband with mild dementia
- Now: Felt a left breast lump
 - Mammogram 1.8 cm left breast lesion
 - Physical examination 2 cm breast mass and palpable LN
 - Bx mass, LN; IDC, grade 2, ER+, PR+, HER-2 Neg. LN positive



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**Is cancer her major
illness?**

**What is her life-expectancy
without cancer?**



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10-year All Cause Mortality: Lee-Schonberg

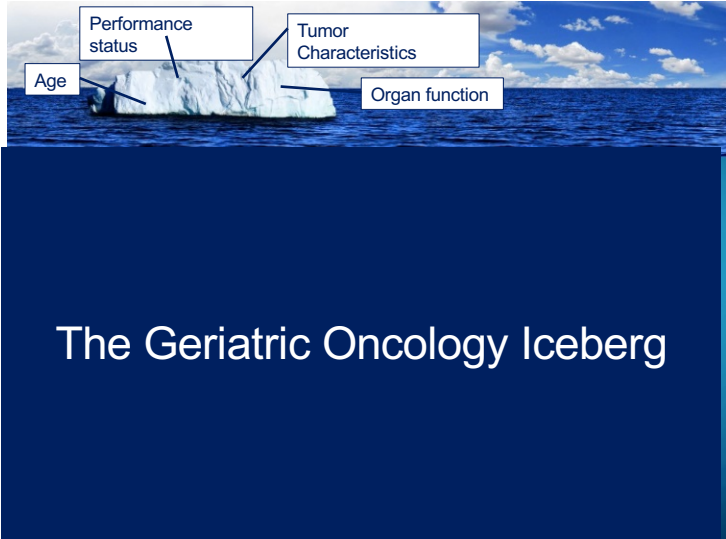
Community living adults, 15 items, takes a few minutes

Variable	Sarah Jones
Age	77
10-year Mortality Risk = 15-21%	
BMI	29
COPD, CHF, DM, prior cancer	No
Hospitalizations past year	None
Self rated health	Very good
Dependent Activity of Daily Living or IADL	none
Difficulty walking 1/4 mile, pushing, pulling objects	No



<http://eprognosis.ucsf.edu/>

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The Geriatric Oncology Iceberg

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CARG Brief Geriatric Assessment



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 last 6 months
Co-morbidity	5-10 minutes	10-30 minutes
Cognition	Blessed Orientation Memory-Concentration	
Psychologic		Mental Health Index-17
Social		Social Activity Limitation Measure (MOS) Social Support Survey (MOS)
Nutrition	BMI	Unintentional Weight Loss 6 mths



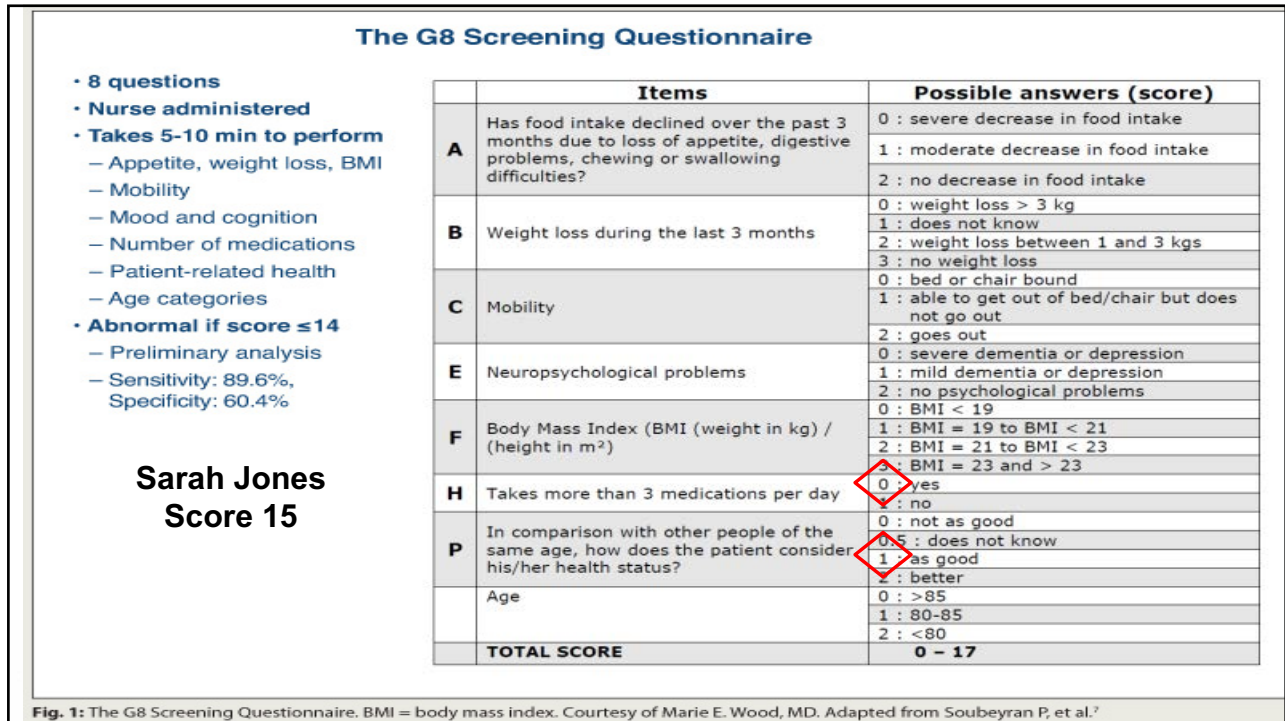
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Geriatric Assessment: Issues

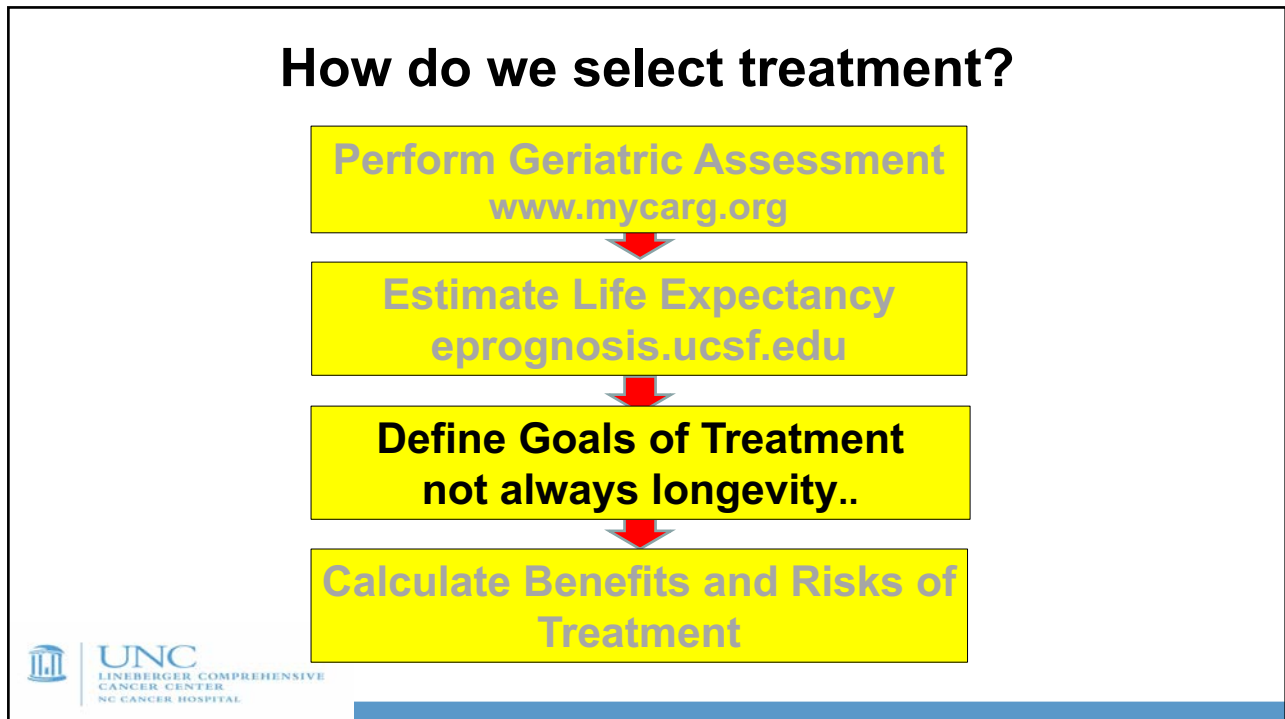
- Takes time
- Different Instruments
- Uncovers problems not found routinely
- Many problems have beneficial interventions
 - Improve function, QOL, Survival
- Allows for accurate life-expectancy estimate
 - Is cancer the major illness
- Can predict cancer related toxicity

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What are the Goals of Treatment?



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Goals...

- You need to be aligned with the patient
- Patient Goals
 - Maintain function and independence
 - “I don’t want to be a burden to my family”
 - Minimize cancer related symptoms
 - Focus on Quality of Life
- Physician Goals
 - Adjuvant therapy to increase cure
 - Metastases: maintain QOL, control cancer



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Sarah Jones

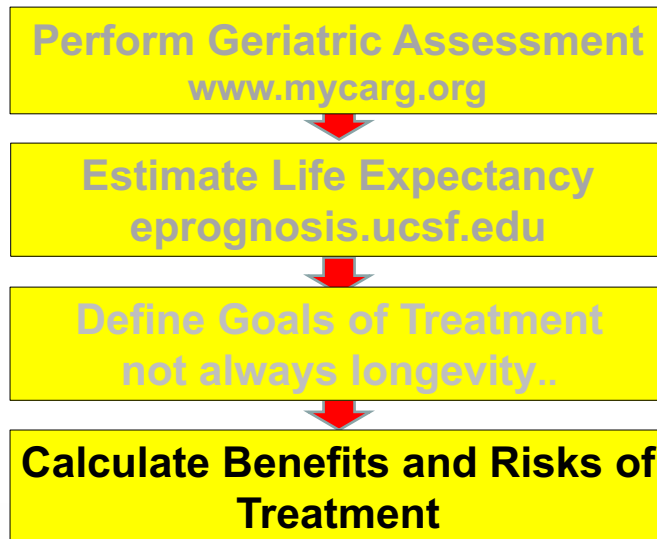
➤ She elects lumpectomy and axillary dissection:

- 2.3 cm Grade 2 IDC. No LVI.
- 5 positive nodes of 13 removed
- ER+, PR+ HER2 neg
- Staging negative
- T2 N2 M0 = Anatomic IIIA



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How do we select treatment?



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Predict Plus 2.1

- Reasonably good estimates of value of adjuvant therapy
 - Endocrine, chemotherapy or both. Also bisphosphonates
- Calculates Overall Survival (OS) at 5,10,15 years
- Some validation in 80-year-olds
- Data on OS if no cancer from UK estimates average health
- Can add bisphosphonates
- Can print out for patients

Sarah Jones Predict Plus 2.1: 10-yr OS

- **So at 10-years 37% die of NON-BC causes (100-63)**
- **and 24% of breast cancer (63-39).**
- **So 61% have died by 10 years**
- **Endocrine therapy saves 7 lives**
- **Adding chemo saves 3-5 more lives**

Selecting Adjuvant Chemotherapy

- Use the Predict model
 - <http://www.predict.nhs.uk/technical.html>
 - Includes HER-2 positive estimates
 - Uses average life-expectancy for UK
- Estimate treatment value (Oxford Criteria)
 - If **10-year Overall Survival** is:
 - < 3% **NONE**
 - 3-5% **DISCUSS**
 - >5% **RECOMMEND**



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***“If your time hasn’t
come yet,
not even a doctor
can kill you.”***

Leigh Stoecker



ASIA

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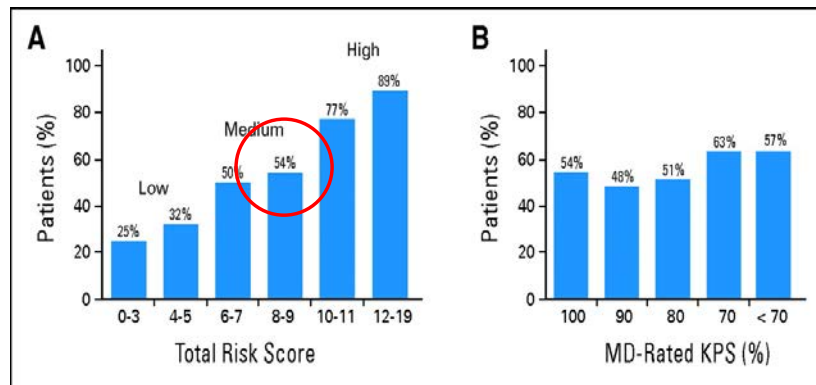
Sarah Jones Risk grade 3-5 chemotherapy toxicity

Risk factors for Grade 3-5 Toxicity	OR (95% CI)	Score	Pt
Age ≥73 yrs	1.8 (1.2-2.7)	2	2
GI/GU cancer vs. other cancer	2.2 (1.4-3.3)	3	0
Standard dose vs. reduced	2.1 (1.3-3.5)	3	3
Sarah Jones = 9 Points	1.8 (1.1-2.7)	2	3
Hemoglobin (male: <11, female: <10)	2.2 (1.1-4.3)	3	0
Creatinine Clearance (Jelliffe –ideal wt) <34	2.5 (1.2-5.6)	3	0
1 or more falls in last 6 months	2.3 (1.3-3.9)	3	0
Hearing impairment (fair or worse)	1.6 (1.0-2.6)	2	0
Limited in walking 1 block (MOS)	1.8 (1.1-3.1)	2	0
Assistance required in medication intake	1.4 (0.6-3.1)	1	0
Decreased social activity (MOS)	1.3 (0.9-2.0)	1	1

Possible score range: 0-25; ROC 0.72
Hurria JCO 29:3457, 2011



Ability of (A) risk score versus (B) physician-rated Karnofsky performance status (KPS) to predict grade 3-5 chemotherapy toxicity.

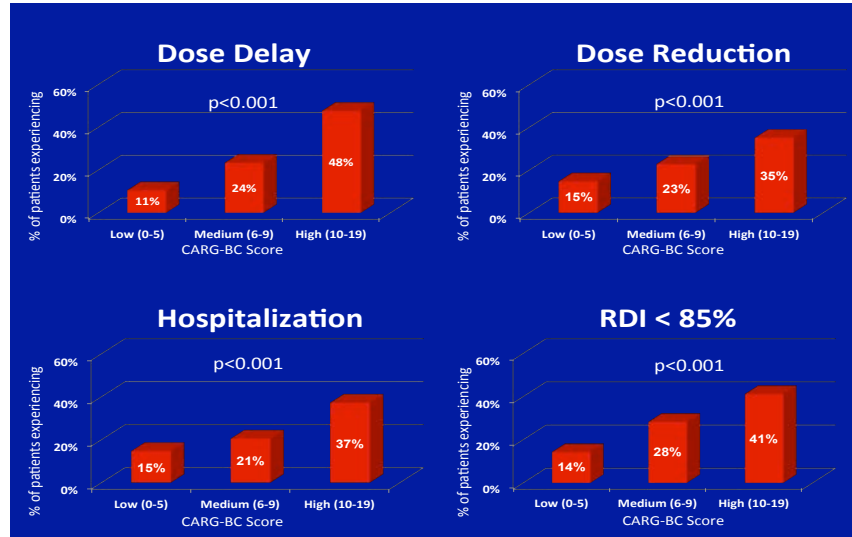


Hurria et al. JCO 2011;29:3457-3465
Breast Model coming (SABCS 2018 Hurria et al)



Predicting Toxicity Adjuvant Therapy BC >= 65 Years

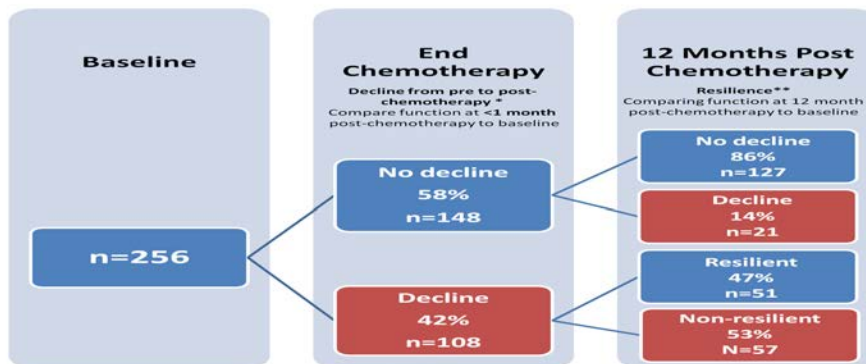
SABCS 2018
473 patients
65 and Older
Standard
adjuvant
chemotherapy
Predictor of
Grade 3-5
toxicity



Magnuson, Hurria et al SABCS 2018 Abst GS6-04

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Functional Decline and Chemotherapy CALGB 49907

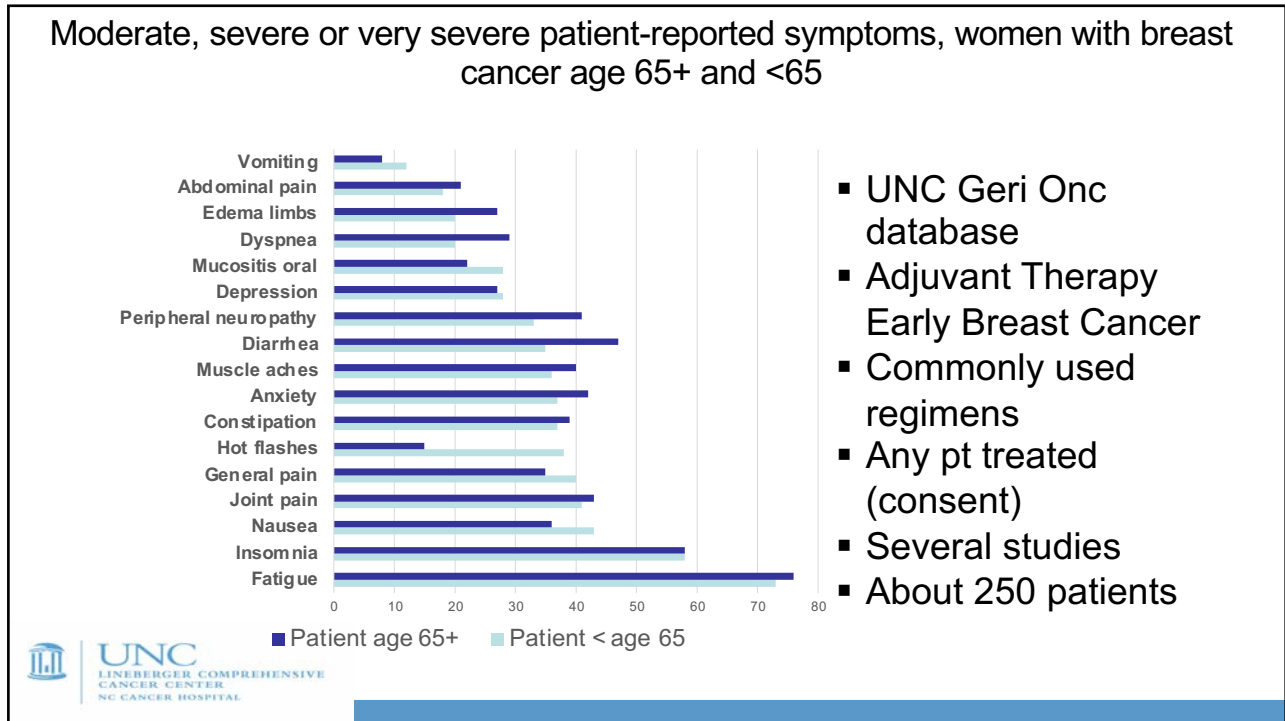


* Decline: ≥ 10 point decrease in the EORTC physical function subscale
 **Resilience: Return to within 10 points of pre-chemotherapy EORTC physical function subscale result at the 12 month timepoint. Only patients with a decline in physical function from pre- to post-chemotherapy were included in this analysis.



256 women function measure: geriatric assessment
 Hurria et al JAGS 2019

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How to get reimbursed for doing a Geriatric Assessment

- Consider Screening test first like G8 or VES13
- Worked with UNC Financial Experts, Check with your own financial team

CPT	CPT description	wRVU in 2020
99201	Office/outpatient visit new	0.48
99202	Office/outpatient visit new	0.93
99203	Office/outpatient visit new	1.42
99204	Office/outpatient visit new	2.43
99205	Office/outpatient visit new	3.17
99354	Add on code, for prolonged evalu & management beyond the typical services time of the primary office service, requiring direct patient contact. List separately in addition to code for office exam.	2.33 Document more than 30 minutes

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Key Websites

Google or other	Purpose
Eprognosis	Life expectancy calculators for community-dwelling, hospitalized, nursing home and hospice pts.
Mycarg	CARG, The Cancer and Aging Research Group. A variety of Geriatric Assessment and Toxicity tools in different languages. Can do online and print results
CRASH score	Moffitt Cancer Center, Senior Adult Oncology Program Tools. Online tools for estimating toxicity and performing Geriatric Assessment
Predict UK	Online calculator for estimating the effects of different adjuvant therapies for breast cancer on overall survival
SIOG	The International Society of Geriatric Oncology educational materials and guidelines for managing older patients with cancers.
Cancer.net	American Society of Clinical Oncology (ASCO) for patients with specific information for older adults.
ASCO.org	ASCO website provides excellent educational materials and guidelines for treating older adults.
Pogoe	The Portal of Geriatrics Online Education For those who want to learn more

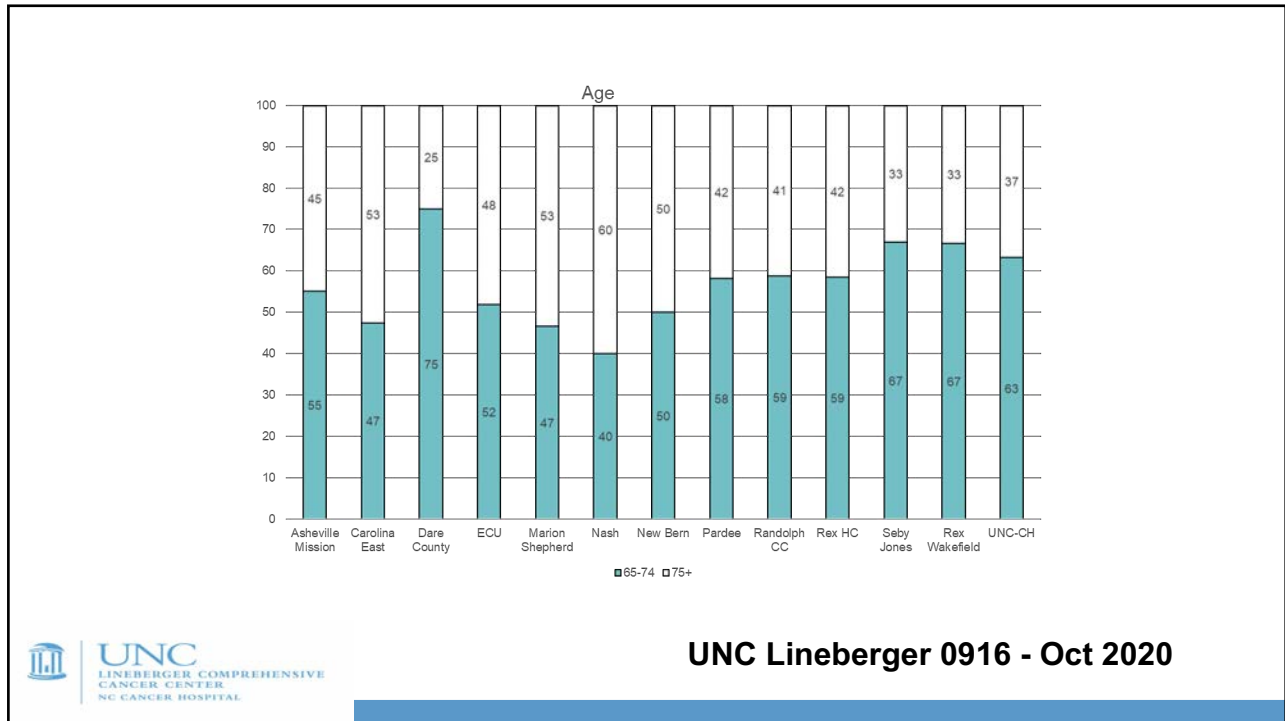


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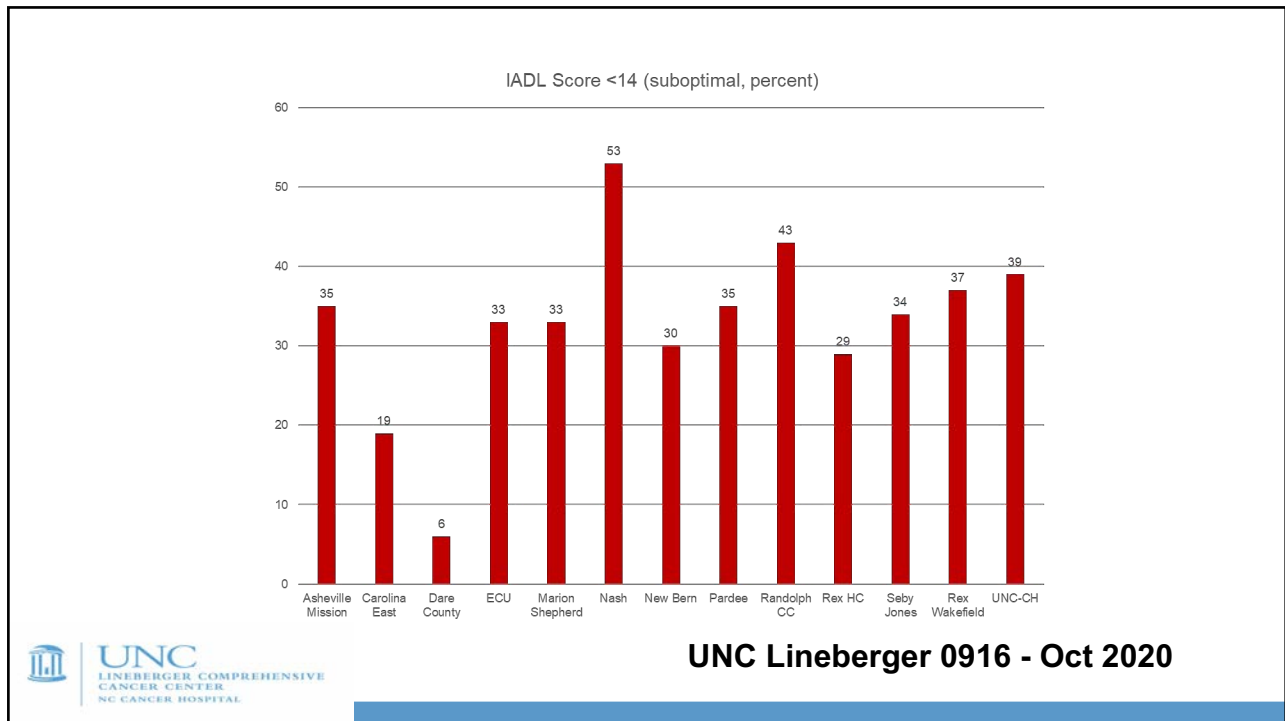
Cancer clinic sites, LCCC0916



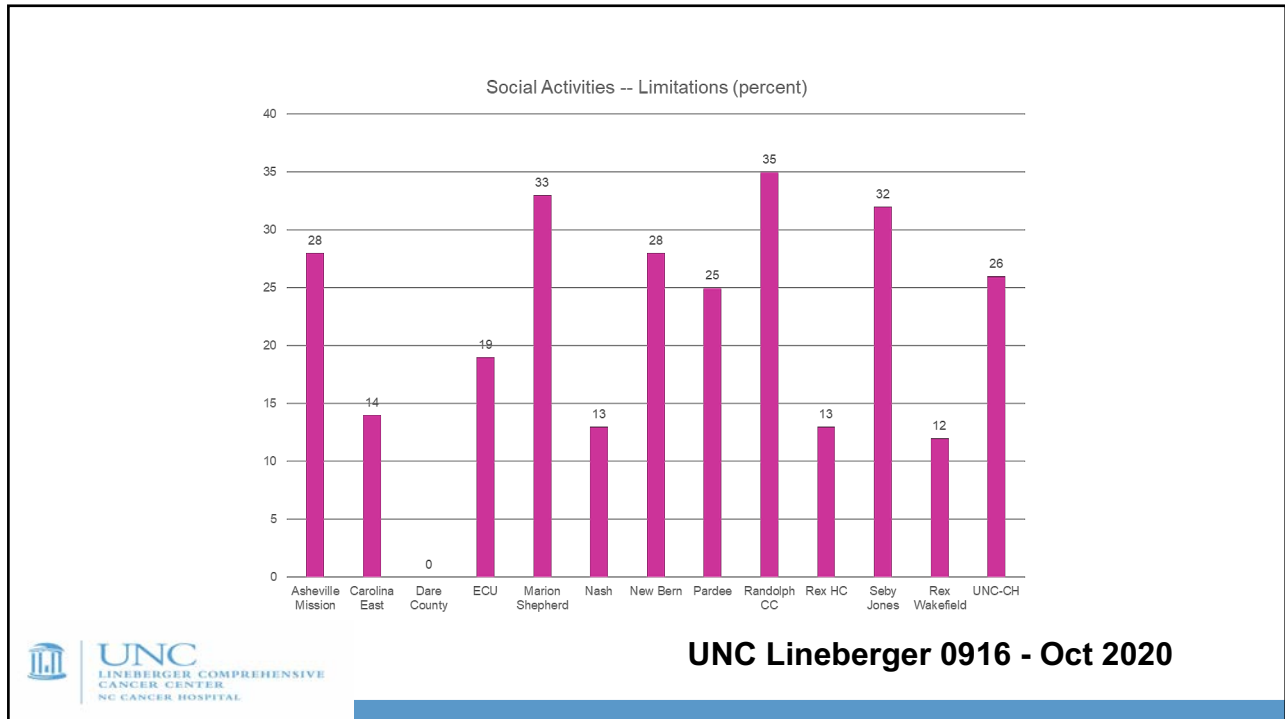
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Summary: Older Patients and Cancer

- Clinical decisions should be based on
 - Life expectancy
 - Age is not a good surrogate for life expectancy
- Use screen or geriatric assessment
- Establish the patients goals for treatment
 - Function and Quality of life key
- Calculate benefits and toxicity of treatment
- “If you have cared for one older pt with BC you have cared for one older pt with BC”

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**Thank
You**

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