

Geriatric View of Heme Malignancy Patients

Gabrielle Meyers, MD

January 20, 2023

Disclosures

- None

Overview

- “Older adults” are not just *older* adults
- Cancer in older adults
- Unique features of older adult cancer care
- Assessing an older adult with cancer and why
- Geri Fast 5

“Older Adults” (previously known as “The Elderly”)

- Estimated by 2030 1 in 6 people in the world will be over the age 60, with continued, rapid growth
 - this older population estimated to double by 2050
- Older women > older men. When looking at 65+ ratio is 1.25 women/men, and 85+ ratio is 1.78 women/men.
- Of older adults 65+ living in the community, just under 30% live alone, and ~60% live with a partner/spouse.
- Among women 75+, 42% live alone
- Key considerations for hematology and oncology care teams
 - Our patients are getting older
 - Their living environment is very important in their care plan
 - Older people often have older caregivers, or no readily available caregiver

Cancer in Older Adults

- Average age of a cancer patient at diagnosis is 66
- Those over the age of 74 make up almost 30% of new cases of cancer
- Expected to have over 186,000 new cases of heme malignancies per year, with all of these diseases increasing in incidence as we age (except for ALL)
- Huge dearth of older adults in clinical trials-so often we have little data to guide treatments and understand potential toxicities in older adults.
- Variability in older adults
 - Comorbidities
 - Functional status
 - Psychosocial
 - Their goals of treatment

Case

- 80 y/o man with HTN and HLD presents with newly diagnosed Stage IVB DLBCL
- Typically walks 4-5 miles per day and works in his garden most days of the week.
- He reports a 3-4 month history of decreased appetite and fatigue. Started to have difficulties with the hills in his daily walk
- Weight loss of ~15 pounds over this time, unintentional
- Developed night sweats the last 2 weeks
- Presented initially to PCP with these complaints, adenopathy found on exam in groin, neck and axilla.
- Biopsy → DLBCL with PET/CT showing multiple areas of bone marrow involvement without cortical destruction.

Case

- 80 y/o man with HTN and HLD presents with newly diagnosed Stage IVB DLBCL
- What would you recommend for treatment?
 - R-CHOP
 - Mini-R-CHOP
 - Mini R-CEOP
 - R-CVP
 - No treatment and refer to palliative care

Case

- 80 y/o man with HTN and HLD presents with newly diagnosed Stage IVB DLBCL
- What impacts your decision on what to offer for treatment for this patient?
 - His prognosis without the lymphoma
 - His current functional status
 - Discussion regarding his goals of treatment
 - Quality vs. quantity?

Unique Features of Older Adult Care

- Wide variability in older adults
- Comorbidities more common
- Functional decline, due to cancer, comorbidities, malnourishment, is more common
- Decline in renal function as we age
- Polypharmacy (more than 5 medications taken each day) is more common → drug interactions and side-effects
- More sensitive to centrally-acting agents

Assessing an older adult with cancer and why

- Comprehensive Geriatric Assessment is multi-component review of an older adult
 - Physical performance
 - Functional status
 - Cognitive function
 - Psych-social
 - Medications
 - Nutrition
 - Comorbidities
- What is the benefit of these assessments?
 - Identifies vulnerabilities → guide treatment regimens and dosing
 - Identifies needs for additional support teams to help them through treatment
 - Prepares for future complications and care needs
 - Advance Care Planning/Goals of care discussions started in this review

****Problem**** Time consuming given the depth and breadth evaluated

Solution: Can we focus on key elements and integrate quick assessments that give useful information?

Key Components in a Geriatric Oncology Assessment

- How can we evaluate these domains rather quickly or with surveys that can be performed outside of the visit/in the waiting room?
 - Physical performance-Timed Up and GO (TUG) and 1 question about falls last 6 months (“How many falls have you had in the last 6 months?”)
 - Functional status-Basic Activities of Daily Living and Instrumental Activities of Daily Living
 - Cognitive function-Mini-COG or Blessed Orientation Memory Concentration Test
 - Psych: Depression Screening with Geriatric Depression Screen
 - Risky Medications/Polypharmacy: is the patient taking high-risk meds and/or 5 or more medications?
 - Nutrition: BMI assessment, ask about weight loss
 - Comorbidities and impact on prognosis: ePrognosis
 - Social: Living arrangement, support team

Timed up and Go (TUG)

- Quick assessment of physical function, balance, fall risk.
- Time patients as they perform the tasks
 - Get up from the chair
 - Walk 10 feet
 - Turn around
 - Walk back to the chair
 - Sit back down
- Less than 13.5 seconds is considered OK (in Oncology geriatric assessment literature)
- Easily performed by office staff
- If the score is abnormal → This patient is at higher risk of toxicity → Dose reduction?
- If the score is abnormal → referral to PT may be beneficial
- This patient is at higher risk of toxicity → more frequent follow-ups

Assessment of Activities of Daily Living

- Are they dependent or independent in the following tasks?
- Basic Activities of Daily Living (bADLs)
 - Bathing, toileting, dressing, eating, walking, getting in/out of bed/chair
- Instrumental Activities of Daily Living (iADLs)
 - Meal prep, shopping, finances, housework, telephone use, medication management, driving
- If dependent on any of these activities → higher risk for potential toxicity
- If dependent on any of these activities → higher care needs
- Plan → ? Dose reduction or less toxic regimen
- Plan → More frequent follow-ups
- The TUG and ADL review may compliment each other-patient may “fail” one or both of them.
- ADLs can be impacted by physical and cognitive frailty.

Cognitive Assessments

- 2 quick screens for cognitive function that are used most frequently
- Have different information and test different domains
- Mini-COG
 - 3 word recall –short term memory
 - clock draw (10 after 11)-memory and executive function
- Blessed Orientation Memory Concentration
 - Orientation questions (year, month, time of day)
 - Memory: short term-Name and address to remember
 - Concentration: Counting backwards, months of the year backwards
- I have included these as resources

Depression Screening

- Undiagnosed depression in older adults is common and impacts:
 - Cognitive function
 - Motivation
 - Eating
 - Sleep
 - Quality of life
 - Relationships
- Screening tool is Geriatric Depression Screen-15 item questionnaire
- Score over 5 is a risk for depression
- Can be performed in the waiting area/prior to visit
- I have included this in the resources section

Comorbidities and non-cancer prognosis

- Important aspect to discuss with patients
 - Truly impacts risk of treatment, toxicity, impacts on QOL
- But, can be difficult discussion
- Tools that may help in this discussion
 - ePrognosis (more nuanced and personalized)
 - Standard insurance lifespan tables (less nuanced)
- This objective data may be useful for this conversation of balancing risks and benefits

This is from our first case-his non-cancer prognosis is actually pretty good

1. How old is your patient? **80**
2. What is the sex of your patient? Female/**Male**
3. What is your patient's BMI? **<25**
4. Which best describes your patient's health in general? **Good/Very good**
5. Does your patient have chronic lung disease, such as emphysema or chronic bronchitis? Yes/**No**
6. Has your patient ever had cancer (excluding minor skin cancers)? Yes/**No**
7. Does your patient have congestive heart failure? Yes/**No**
8. Does your patient have diabetes or high blood sugar? Yes/**No**
9. Which best describes your patient's cigarette use? **Never used**
10. Does your patient have difficulty walking 1/4 mile (several city blocks) without help from other people or special equipment? Yes/**No**
11. During the past 12 months, how many times was your patient hospitalized overnight? **None**
12. Because of a physical, mental or emotional problem, does your patient need the help of others in handling routine needs such as everyday household chores, doing necessary business, shopping, or getting around for other purposes? Yes/**No**
13. Because of a health or memory problem, does your patient have difficulty managing money - such as paying bills and keeping track of expenses? Yes/**No**
14. Because of a health or memory problem, does your patient have difficulty with bathing or showering? Yes/**No**
15. Because of a health problem, does your patient have difficulty pushing or pulling large objects like a living room chair? Yes/**No**

Total Lee Index Points: 8

Total Schonberg Index Points: 10

Mortality Risk for Lee Index

Points	Risk of FIVE YEAR mortality	Risk of TEN YEAR mortality	Life Expectancy (years)
0 - 1	1% - 2%	2% - 5%	33.1 - 35.4
2 - 3	2% - 4%	7% - 10%	23.7 - 30.1
4 - 5	6% - 8%	15% - 23%	17.7 - 21.1
6 - 7	9% - 15%	34% - 43%	12.6 - 14.3
8 - 9	20%	52% - 58%	8.9 - 10
10 - 11	28% - 45%	70% - 82%	5.0 - 7.2
12 - 13	44% - 59%	83% - 91%	3.8 - 5.1
≥14	63%	93%	2.9

Patients that have >50% chance of death in a specific time interval have an estimated life expectancy less than that time interval. For example, a patient with a 60% mortality risk at 5 years has a life expectancy <5 years.

This is a different patient with more comorbidities, who's risk of non-cancer related death is much higher

1. How old is your patient? **80**
2. What is the sex of your patient? **Female**/Male
3. What is your patient's [BMI](#)? **≥25**
4. Which best describes your patient's health in general? **Fair to Poor**
5. Does your patient have chronic lung disease, such as emphysema or chronic bronchitis? **Yes**/No
6. Has your patient ever had cancer (excluding minor skin cancers)? Yes/**No**
7. Does your patient have congestive heart failure? **Yes**
8. Does your patient have diabetes or high blood sugar? **Yes**
9. Which best describes your patient's cigarette use? **Former Smoker**
10. Does your patient have difficulty walking 1/4 mile (several city blocks) without help from other people or special equipment? **Yes**/No
11. During the past 12 months, how many times was your patient hospitalized overnight? **2+**
12. Because of a physical, mental or emotional problem, does your patient need the help of others in handling routine needs such as everyday household chores, doing necessary business, shopping, or getting around for other purposes?
Yes
13. Because of a health or memory problem, does your patient have difficulty managing money - such as paying bills and keeping track of expenses? Yes/**No**
14. Because of a health or memory problem, does your patient have difficulty with bathing or showering? Yes/**No**
15. Because of a health problem, does your patient have difficulty pushing or pulling large objects like a living room chair? **Yes**

Total Lee Index Points: 11

Total Schonberg Index Points: 20

Mortality Risk for Schonberg Index

Points	Risk of FIVE YEAR mortality	Risk of TEN YEAR mortality	Risk of FOURTEEN YEAR mortality
0 - 1	<3%	5% - 11%	19% - 21%
2 - 3	3% - 6%	9% - 12%	19% - 24%
4 - 5	7% - 8%	15% - 21%	27% - 36%
6 - 7	10% - 12%	26% - 37%	42% - 52%
8 - 9	17% - 27%	37% - 44%	42% - 52%
10 - 11	26% - 29%	53% - 60%	74% - 78%
12 - 13	37% - 41%	60% - 68%	81% - 83%
14 - 15	47% - 52%	74% - 76%	87% - 88%
16 - 17	60% - 61%	86% - 87%	100%
≥17	70%	92%	100%

Can We Capture Key Components in 1 Survey?

- G8 is a good tool to use to capture key components
- It is a questionnaire that has clinical input and patient input
- This has been validated in a number of diseases to help identify patients at risk for complications
 - Prostate cancer-in mCRPC OS and rPFS predicted (Bana GL, Curr Onc 2022)
 - Heme malig-predicted survival better than GA (Hamaker ME AnnHem 2014)
 - Met colon CA in older adults-predicted OS (Liposits G et al. J Ger Onc 2022)
- If full assessments are challenging to consider, this is a tool I would recommend using, and can be completed with MA/nursing with patient/caregiver.

G8 Geriatric Assessment Tool

Lower the score=higher the number of vulnerabilities

Score ≤ 14 is associated with an increased risk of complications/reduced survival

	Items	Possible answers (score)
A	Has food intake declined over the past 3 months due to loss of appetite, digestive problems, chewing or swallowing difficulties?	0 : severe decrease in food intake
		1 : moderate decrease in food intake
		2 : no decrease in food intake
B	Weight loss during the last 3 months	0 : weight loss > 3 kg
		1 : does not know
		2 : weight loss between 1 and 3 kgs
		3 : no weight loss
C	Mobility	0 : bed or chair bound
		1 : able to get out of bed/chair but do not go out
		2 : goes out
E	Neuropsychological problems	0 : severe dementia or depression
		1 : mild dementia or depression
		2 : no psychological problems
F	Body Mass Index (BMI (weight in kg) / (height in m ²))	0 : BMI < 19
		1 : BMI = 19 to BMI < 21
		2 : BMI = 21 to BMI < 23
		3 : BMI = 23 and > 23
H	Takes more than 3 medications per day	0 : yes
		1 : no
P	In comparison with other people of the same age, how does the patient consider his/her health status?	0 : not as good
		0.5 : does not know
		1 : as good
		2 : better
	Age	0 : >85
		1 : 80-85
		2 : <80
	TOTAL SCORE	0 – 17

What Are the Benefits of a Detailed Assessment in Older Oncology Patients?

- Higher level of disability/defects (ADLs, physical functioning, nutritional defects) correlate with poorer outcomes in multiple cancer types
- Detailed assessment can help guide you in considering dose reductions or no dose reductions in treatment planning
 - Multiple studies have shown survival benefit to those able to get more intensive treatment
- Can help identify additional support resources (PT, SW, nutrition) that may optimize ability to tolerate treatment
- Can help identify patients with excess care needs
- Patients with multiple deficiencies/risks may need more frequent visits
- Caregiver support may need to be more robust
- Recent article May 2022 found 5 key tests predicted frailty in NHL patients (TUG >20, >5 meds, GDS >5, iADL defect, 1 geri impairment) compared to full assessment (Samaniego MNDP et al, Clin Hem Int, May 2022)

What Benefits are there to a Formal Geriatric Assessment for Older Oncology Patients?

- First randomized trial of GA in 65+ y/o cancer patients about to proceed with initial chemotherapy found formal GA beneficial in reducing grade 3+ toxicity events (50% vs. 60%) (GAIN study, Li et al. JAMA Onc 2021)
- Randomized trial (formal GA with management recommendations given to oncologist vs. not (GAP 70+ study Mohile et al Lancet 2021) found:
 - Reduction in grade 3-5 toxicity events (51% vs. 71%)
 - Reduction in falls at 3 months (12% vs. 21%)
 - Reduction in polypharmacy
 - Population of incurable solid tumor patients, median age 77.
- Study of MM patients getting GA before induction and after 4 cycles found features that impacted the chance of physical improvement
- Formal GA may lead to improved outcomes through optimizing supportive care and recognizing those at highest risk of complications

Summary Benefits of Assessing Older Adults with Cancer

- Quick assessments done by oncology care teams (MA/nurse/provider) can find patients at risk for complications
 - Timed Up and Go
 - Geriatric Depression Screen
 - Assessment of ADLs
 - Cognitive Assessment
 - G8
- Randomized studies of formal geriatric assessments with additional support services found significant reduction in grade 3+ toxicity in both those initiating chemotherapy and those with incurable disease
- How to access a formal assessment:
 - Partner with local geriatrician
 - I would be delighted to evaluate any patient with in person or virtual visits



Geri Fast 5-Key recommendations for care of Geri patients

- Don't just talk, walk
- “I sleep much better when I take Tylenol PM”
- “If I only had a heart...” and other organ problems
- “If I only had a brain...”
- Biological vs. chronological age

Don't just talk, walk

From personal experience, I have spent time sitting with a patient and not seen them walk

Then discovered later (from the MA) that they were slow moving and had balance concerns

You get really useful information about a patient's physical ability, balance, and fall risk from just watching them walk



“I sleep much better
when I take Tylenol PM”

Over the counter meds can cause real
issues with older adults

Diphenhydramine can cause daytime
confusion, urinary retention, constipation,
dry mouth, dizziness in older adults

Prescription drugs to watch for include
diuretics, blood pressure medications,
benzos, antihistamines, Z drugs for sleep



“If I only had a heart...” and other organ problems

Older adults have a higher chance of cardiac and renal disease that can impact treatment decisions and dosing

Renal function declines as we age and older adults more prone to dehydration from reduced fluid intake

Watch IV fluid dosing-as we age our vessels and heart get stiffer, leading to risks of volume overload/diastolic failure

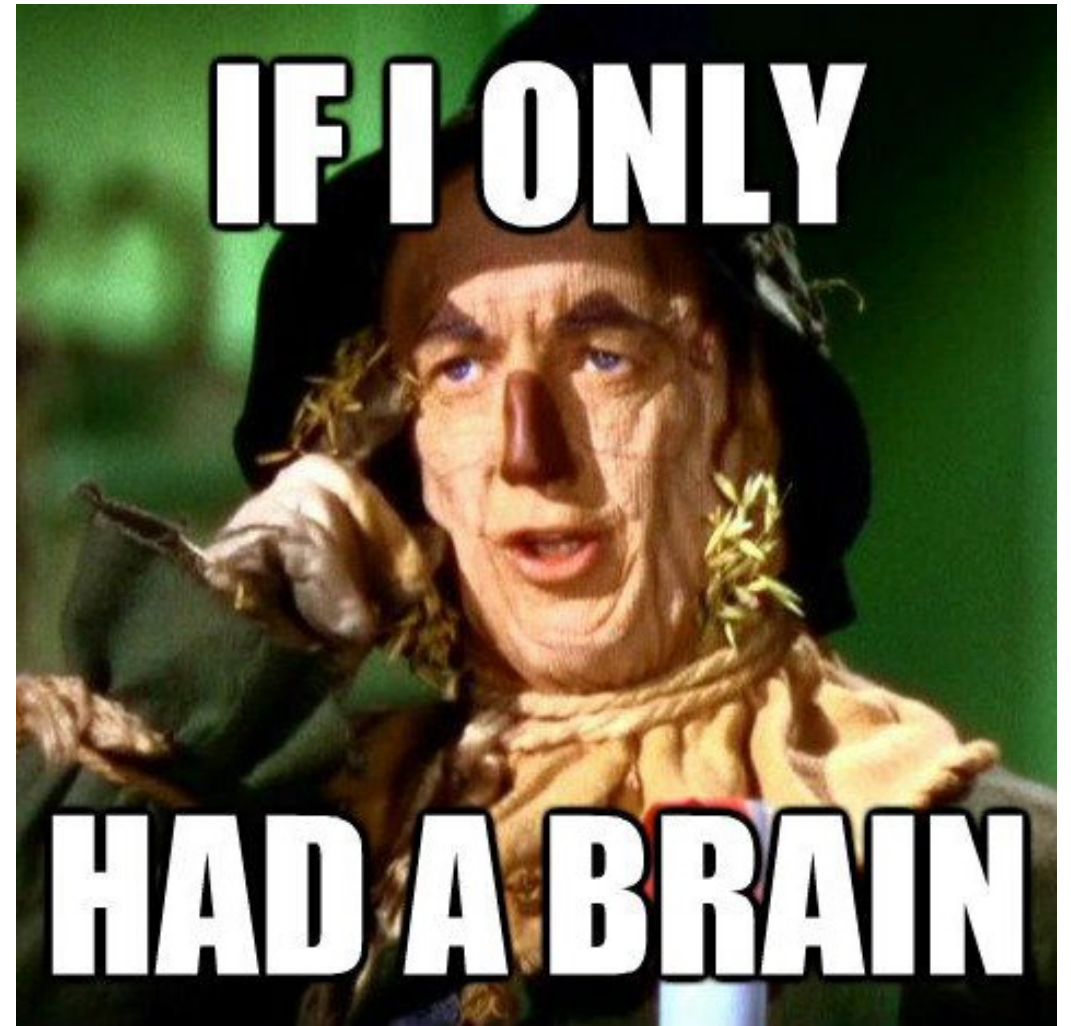
Constipation increases as we age, so make sure to give a bowel regimen with antiemetics



“If I only had a brain...”

Cancer related cognitive impairment is a real issue. In studies:

- Before treatment ~30% of patients had cognitive impairment
- During treatment 60+% have cognitive changes
- Survivors 30-50+% of patients have cognitive impairment
- Impacts return to work, independence
- Diet (Medi, MIND, DASH), reducing CV risk factors, managing depression, sleep apnea, avoiding certain meds can improve cognitive function



Biological vs. chronological age

Big area of research in ageing is understanding what factors “age” us

Tests can look at DNA markers and see the impact of stressors → biological age

Trying to understand how this can impact tolerance of treatment, resiliency, and risk of diseases (like cancer and cardiovascular disease)

People are just starting to look at this testing in cancer and how it predicts treatment toxicity, response, etc.



Questions??

- Thank you!
- Please reach out if I can help with patients, and I am happy to see anyone for geriatric evaluation or specifically for cognitive evaluation (can do these virtually too)
- Email: meyersg@ohsu.edu

Resources

- Chemotherapy toxicity tool from Cancer and Aging Research Group (CARG): [Cancer and Aging Research Group – Improving the care of older adults with cancer \(mycarg.org\) www.mycarg.org](http://www.mycarg.org)
- This site also has a Geriatric Assessment Tool
- ePrognosis: [ePrognosis \(ucsf.edu\) https://eprognosis.ucsf.edu](https://eprognosis.ucsf.edu)