

CARG

Cancer & Aging Research Group

CARG MEETING – 2/23/2021

DRS. WILLIAM DALE AND GRANT WILLIAMS

# AGENDA

- **Announcements: Dr. William Dale (10 mins)**
  - Next CARG Newsletter
  - NIA RFA: Early-Phase Clinical Trials of Novel Interventions to Prevent, Delay, or Treat Aging-Related Conditions by Targeting Aging-Related Mechanisms
  - NCI Notice of Special Interest: Understanding the effect of cancer and cancer treatment on aging trajectories and aging outcomes
  - Cancer Consult: Uncertainties and Controversies in the Diagnosis & Management of Cancer
- **Tribute to Margaret Sedenquist: Dr. William Dale (10 mins)**
- **Quality Improvement (QI) Project: Dr. Daniel Childs (30 mins)**
  - Discussants: Drs. Andy Artz, Clark DuMontier, and Grant Williams

## ANNOUNCEMENTS

- Next CARG Newsletter
- NIA RFA: Early-Phase Clinical Trials of Novel Interventions to Prevent, Delay, or Treat Aging-Related Conditions by Targeting Aging-Related Mechanisms
- NCI Notice of Special Interest: Understanding the effect of cancer and cancer treatment on aging trajectories and aging outcomes
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IN LOVING MEMORY OF  
MARGARET SEDENQUIST

*“We are so grateful for  
her contribution  
to Geriatric Oncology, our  
R21/33 grant as our  
SCOREboard patient  
advocate co-chair.”*





# IMPLEMENTATION OF ROUTINE FRAITY SCREENING FOR AMBULATORY PATIENTS WITH LYMPHOMA – A QI PROPOSAL

Dan Childs, MD  
Paul Hampel, MD  
Zoey Xie, MD  
Gita Thanarajasingam, MD

CARG Research Group Meeting  
February 23, 2021

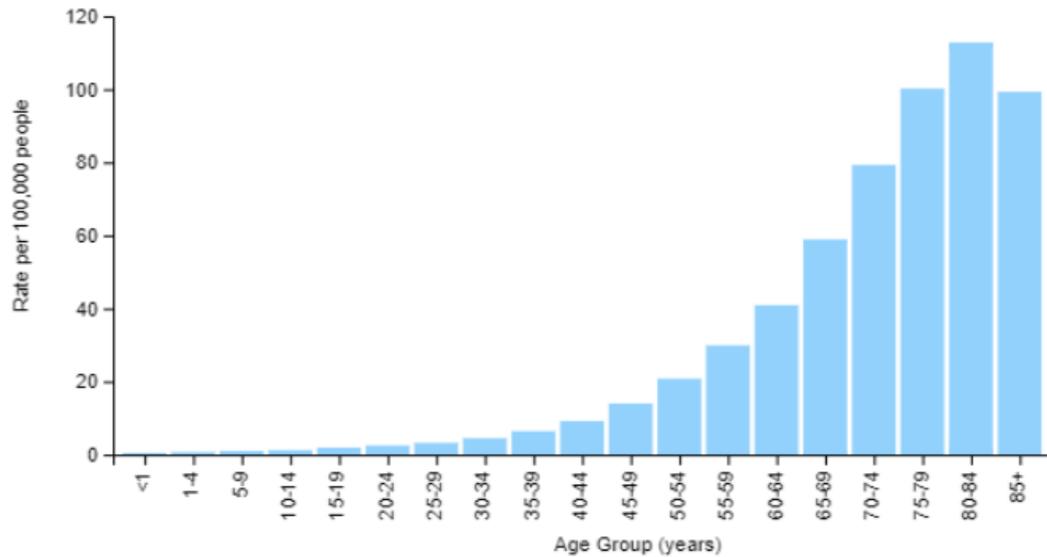
# OUTLINE

- Background
  - Prevalence of frailty in hematologic population
  - Associations with outcomes
  - Validated frailty measures
  - Challenges with implementation
- QI proposal
- Feedback from group

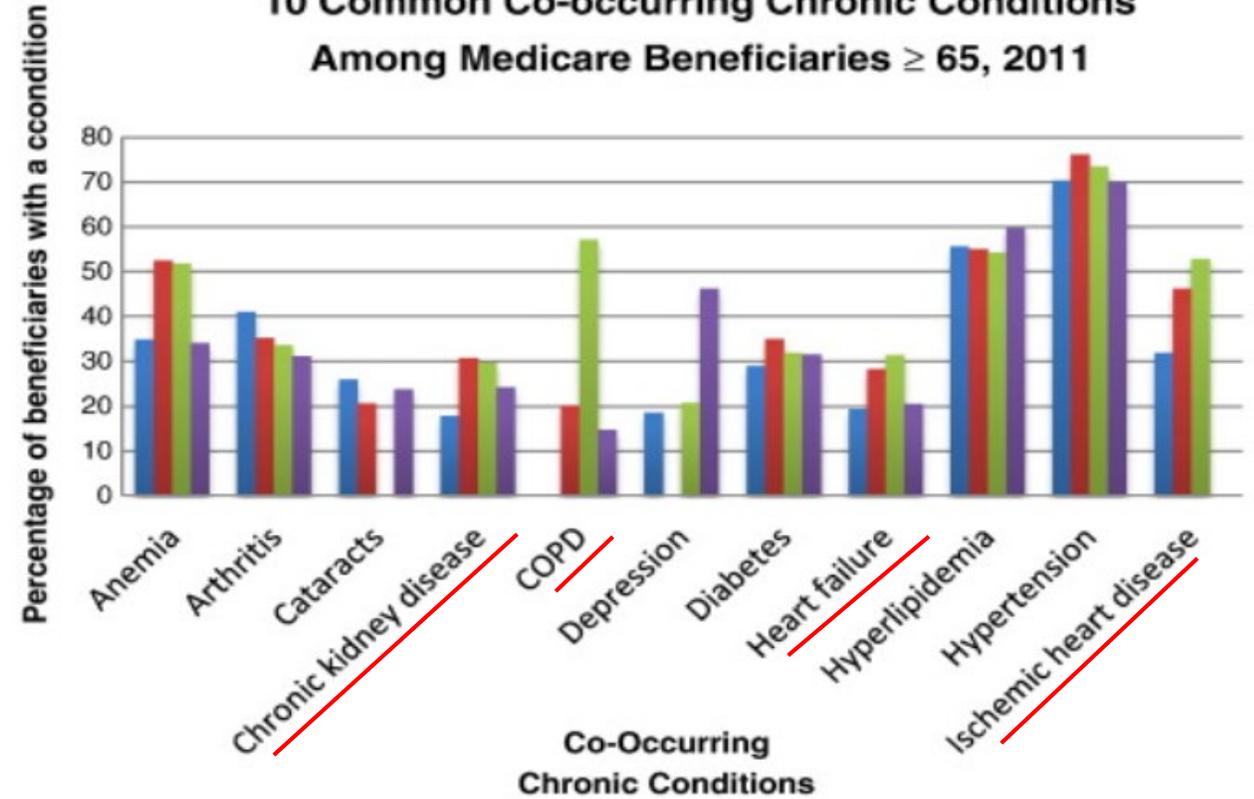
# BACKGROUND

Rate of New Cancers by Age Group (years), All Races, Both Sexes

Non-Hodgkin Lymphoma, United States, 2017



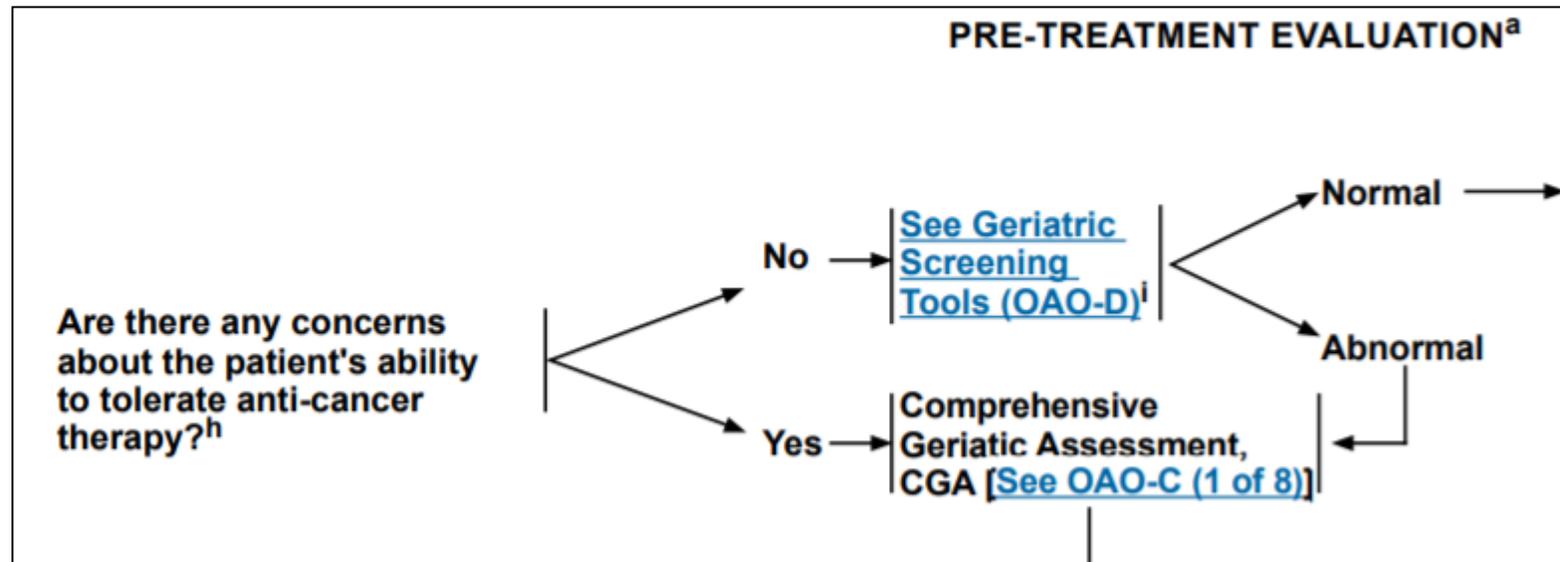
10 Common Co-occurring Chronic Conditions Among Medicare Beneficiaries ≥ 65, 2011



**Other prevalent age-related conditions:** polypharmacy, cognitive impairment, sensory impairment, malnutrition, depression, sarcopenia

# BACKGROUND: FRAILTY SCREENING

- Chronologic age is not the best metric for predicting treatment tolerance and clinical outcomes <sup>1,2</sup>
  - Need tools to identify physiologically vulnerable adults (= frailty)
- Frailty associated with increased all-cause mortality (HR 1.87) and treatment complications (adjusted OR 4.86)<sup>3</sup>
- NCCN and ASCO guidelines support pre-treatment screening:



Abbreviated CGA (aCGA) <sup>1,2</sup>
Barber questionnaire <sup>3</sup>
Fried Frailty Criteria <sup>4,5</sup>
Geriatric (G-8) <sup>6-8</sup>
Groningen Frailty Index <sup>2</sup>
Triage Risk Screening Tool (TRST) <sup>8</sup>
Vulnerable Elders Survey (VES-13) <sup>7,9-12</sup>

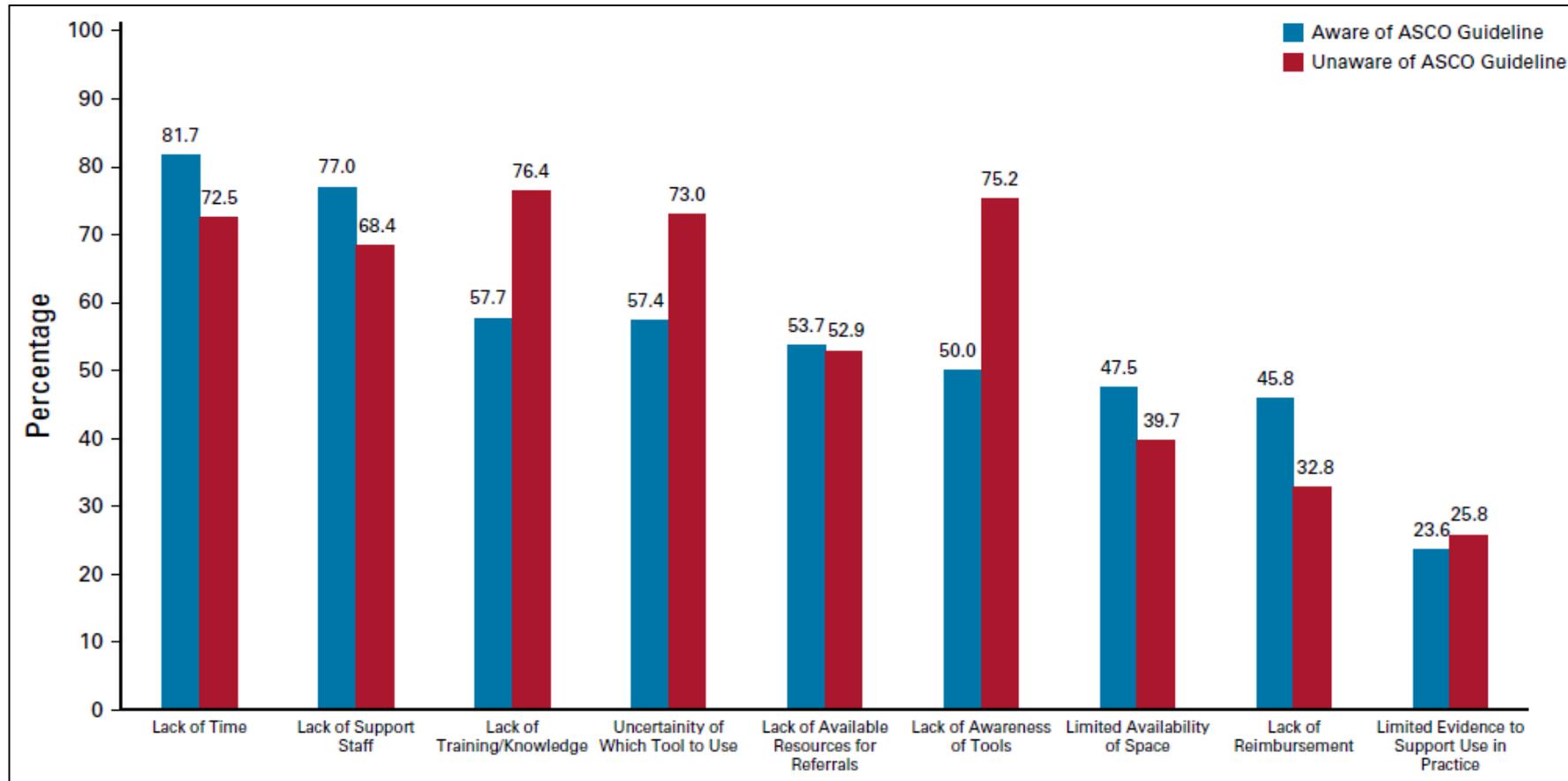
<sup>1</sup> Kim J, J Natl Compr Canc Ne. 2013  
<sup>2</sup> Kumar A, J Clin Oncol. 2007  
<sup>3</sup> Handforth C, Ann Oncol. 2015  
<sup>4</sup> VanderWalde N, J Natl Compr Canc Netw. 2016

# PROBLEM/GAP STATEMENT

- A gap exists between guideline recommended use of frailty measures in the care of patients with lymphoma, and current frailty screening practices within the Division of Hematology at Mayo Clinic
  - This gap may contribute to failure to recognize those at highest risk of poor outcomes, delays in referral to consultative/ancillary support services, and inadequate supportive care

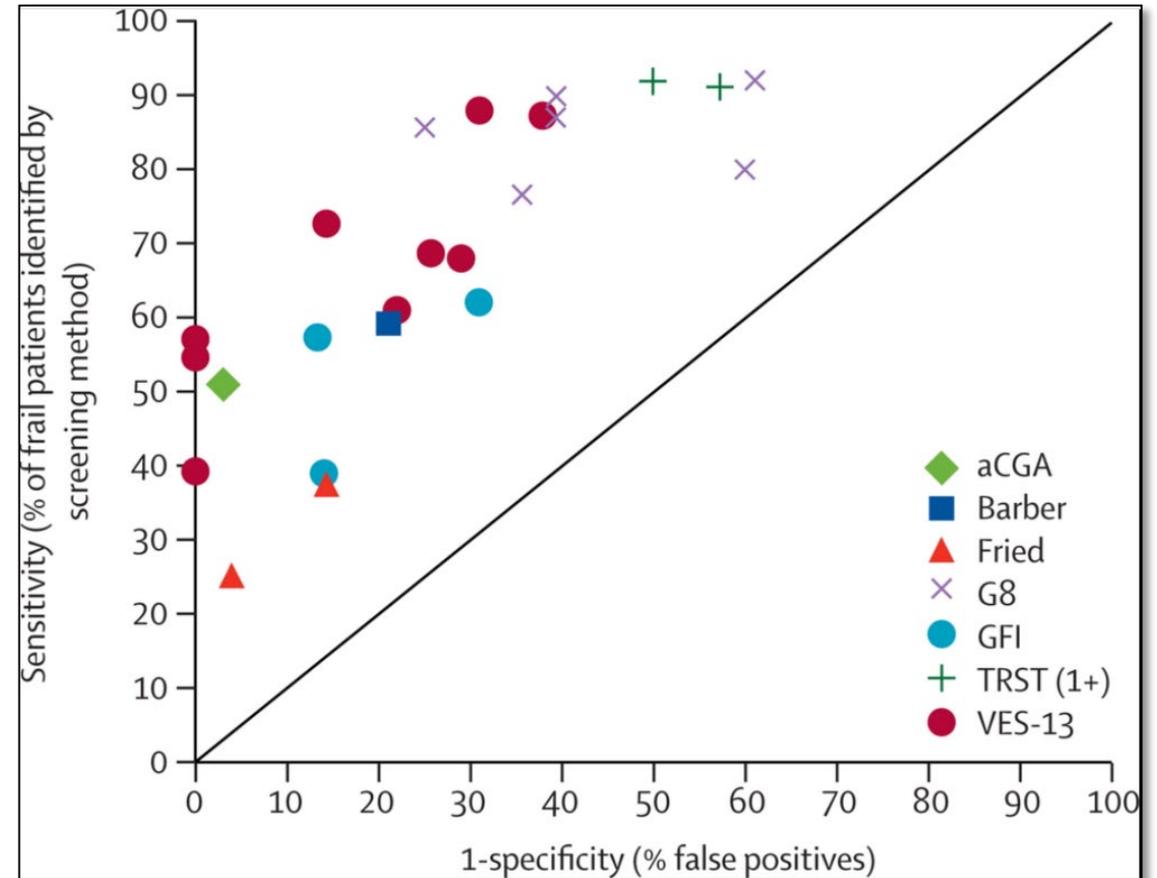
# IMPLEMENTATION BARRIERS

- Awareness
- Time and resource limitations
- Perceived complexity
- Lack of buy-in



# WHICH FRAILTY SCREENING TOOL TO USE?

- Numerous validated tools exist
- **Needs:**
  - Accurate
  - Fast
  - Ideally, can be performed by DOS during rooming process
  - Easy to interpret for clinicians without a background in Geriatric Oncology or Supportive Oncology



# 4-METER GAIT SPEED



**Check for updates**

**AMERICAN SOCIETY OF HEMATOLOGY**

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**Regular Article**

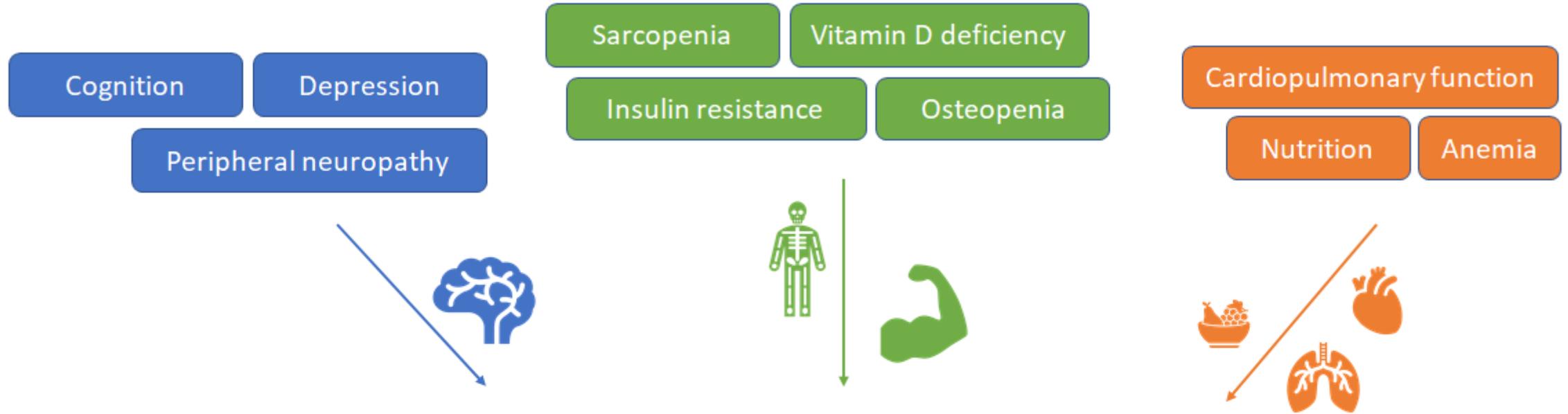
**LYMPHOID NEOPLASIA**

**Gait speed, grip strength, and clinical outcomes in older patients with hematologic malignancies**

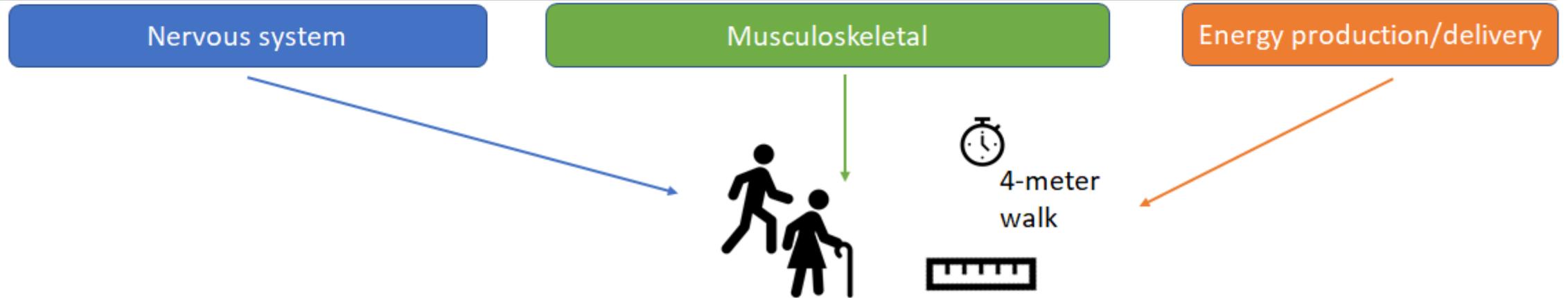
Michael A. Liu,<sup>1-3</sup> Clark DuMontier,<sup>3,4</sup> Anays Murillo,<sup>3</sup> Tammy T. Hshieh,<sup>2,3</sup> Jonathan F. Bean,<sup>5,6</sup> Robert J. Soiffer,<sup>3</sup> Richard M. Stone,<sup>3</sup> Gregory A. Abel,<sup>3</sup> and Jane A. Driver<sup>2,3,6</sup>

<sup>1</sup>Harvard T.H. Chan School of Public Health, Boston, MA; <sup>2</sup>Division of Aging, Brigham and Women's Hospital, Boston, MA; <sup>3</sup>Dana-Farber Cancer Institute, Boston, MA; <sup>4</sup>Division of Gerontology, Beth Israel Deaconess Medical Center and Harvard Medical School, Boston, MA; <sup>5</sup>Spaulding Rehabilitation Hospital, Boston, MA; and <sup>6</sup>Geriatric Research, Education and Clinical Center, VA Boston Healthcare System, Boston, MA

Aging-associated vulnerabilities potentially impacting gait



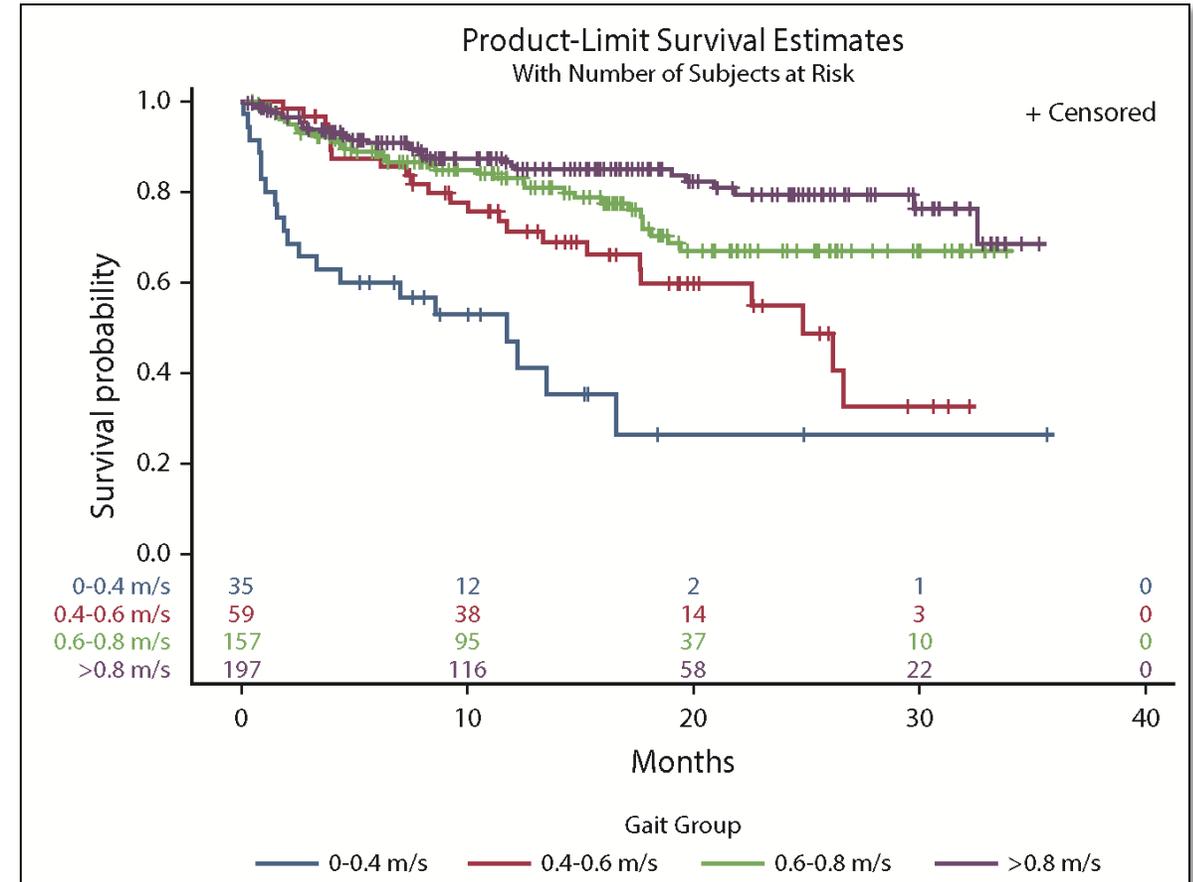
Physiologic systems involved in walking



Adapted from Wildes Blood 2019

# GAIT SPEED AND OUTCOMES

- Every 0.1-m/s decrease associated with:
  - 20% increase in **risk of death**
  - 33% increase in the odds of **unplanned hospitalization**
  - 34% increase in the odds of **ED visits**
- Distinguishes risk among those with good ECOG PS
- Strongest association with death for those with NHL (HR 1.53)



# PRO/CON LIST FOR 4-M GAIT SPEED

## PROS

- Simple
  - No special equipment
  - < 1 minute to complete
- Safety
  - Less balance required compared to other physical measures (e.g., TUG)
- No “ceiling effect” for fittest patients
  - Discriminates even among patients with ECOG 0-1
- Dynamic / responsive
- Cheap
- Performs well in identifying frailty when compared to the validated Fried phenotype model and the Rockwood cumulative deficit index

## CONS

- Validated and normed for use only up to age 85 years
- Less direct data re: ability to predict deficit on cGA
- Utility in non-ambulatory patients

Telephone (Outgoing)

Type:  Telephone (Outgoing)

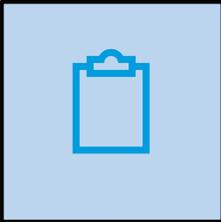
03:14 PM CST  2/19/2021 

Patient's phone comments: Pt doesn't like or want to fill out questionnaires on tablets. [Edit](#)

# QI PROJECT

## DMAIC FRAMEWORK (DEFINE, MEASURE, ANALYZE, IMPROVE, AND CONTROL)

- **Gap statement:** A gap exists between guideline recommended use of frailty measures in the care of patients with lymphoma, and current frailty screening practices within the Division of Hematology at Mayo Clinic
- **Aim Statement:** We will increase the frequency of physical frailty assessments (ie, gait speed) for patients with lymphoma by 50%. We aim to meet this goal by the end of May 2021 without increasing the time to complete rooming by more than 2 minutes.



## BASELINE DATA

- Surveys
- Chart review for frequency of documented frailty assessment
- Rooming time



## IMPLEMENT

- Education
- DOS collect 4-m gait speed as additional vital sign

Vitals:  
02/16/21 0857  
BP: 129/74  
Patient Sitting  
Position:  
Pulse: 71  
Temp: 36.7 °C  
Resp: 14  
Height: 174.7 cm  
Weight: 80.9 kg  
SpO2: 96%  
TempSrc: Tympanic

Body surface area is 1.98 meters squared.



## ANALYZE

- Surveys
- Chart review for frequency of documented frailty assessment
- Rooming time



# BASELINE DATA

- **Surveys** to assess baseline practices in frailty screening, perceptions about the value of frailty assessment, and openness to implementation
- **Chart review for frequency of documented frailty assessment**
  - All lymphoma patients over a one week period
  - Gait speed, abbreviated CGA, Barber questionnaire, Fried frailty criteria, G-8, Groningen frailty index, TRST, VES-13
  - Comments about ECOG performance status or “clinical gestalt” of frailty
- **Chart review of same patients to document rooming time**



# IMPLEMENT

- **Present/educate** lymphoma DOG on value of frailty assessment
- **DOS collect 4-m gait speed while rooming patient**
  - Floor taped, stopwatches
  - Results documented on check-in sheet and in EPIC by DOS
  - Normative gait speed values displayed in exam room

<b>Vitals:</b>	02/16/21 0857
BP:	129/74
Patient	Sitting
Position:	
Pulse:	71
Temp:	36.7 °C
Resp:	14
Height:	174.7 cm
Weight:	80.9 kg
SpO2:	96%
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Body surface area is 1.98 meters squared.



# ANALYZE

- **Surveys** to assess ease of implementation and perceived value from clinicians and DOS
  - 4 weeks after implementation
- **Chart review for frequency of documented frailty assessment**
  - Frequency of 4m gait speed documented
  - 1 and 4 weeks after implementation
- **Chart review of same patients to document rooming time**
  - 1 and 4 weeks after implementation

# POTENTIAL NEXT STEPS

- Continuation phase (with tweaks), as part of standard vital sign assessment
- Upgrade equipment
- Roll out to other hallways
- Further research arising for resultant data
  - Relationship of 4MGS with outcomes in our Mayo lymphoma patient population

# QUESTIONS TO CARG

- Do you think 4m gait speed is a good choice for frailty assessments?
  - At your institutions, which measures are used for frailty screening?  
Barriers encountered?
  - One assessment of 4m gait speed versus three?
  - Approaches with fall risk patients?
  - Thoughts on other candidate physical measures of frailty?
  - Optimal 4m gait speed measurement approach (e.g., stopwatch, lasers, iPhone app, other)?
  - Potential limitations?
  
- Comments on survey questions (next slides)

# BASELINE SURVEY TO LYMPHOMA PROVIDERS

1. What is your role? (APP/MD)
2. How many years have you been in practice?
3. Are you familiar with the concept of evaluating “frailty” in cancer patients? (Y/N)
4. Do you currently perform any frailty assessments in patients before administering chemotherapy? (Y/N)
5. How often do you currently perform any frailty assessments in patients before administering chemotherapy? (<25%, 25-50%, 50-75%, >75%)
6. Which tool do you use to assess frailty (select all that apply):
  - a) None
  - b) Routine history and physical examination
  - c) Assess ECOG performance status
  - d) Ask about independence in ADLS and IADLS
  - e) Use physical measures (eg, timed up and go, 4 meter gait speed): please specify
  - f) Use validated frailty screening tools (abbreviated CGA, Barber questionnaire, Fried frailty criteria, G-8, Groningen frailty index, TRST, VES-13, other): please specify
  - g) Refer for comprehensive geriatric assessment
  - h) Other (please describe in the comments)
7. Had you heard of the 4m gait speed before this survey? (Y/N)
8. Do you think 4m gait speed is a valuable metric for assessing frailty, or physiologic vulnerability, prior to and during chemotherapy? (Y/N)
9. Do you think 4m gait speed has prognostic value? (Y/N)
10. Would knowing 4m gait speed for your patient prior to and during chemotherapy impact your clinical decision-making regarding treatment selection and/or dose alterations? (Y/N)
11. Would knowing 4m gait speed for your patient prior to and during chemotherapy impact your likelihood to refer a patient for additional assessments or support (eg, PT/OT, geriatrics, nutrition, pharmacy)? (Y/N)

# END SURVEY TO LYMPHOMA PROVIDERS

1. What is your role? (APP/MD)
2. Do you currently perform any frailty assessments in patients before administering chemotherapy? (Y/N)
3. How often do you currently perform any frailty assessments in patients before administering chemotherapy? (<25%, 25-50%, 50-75%, >75%)
4. Which tool do you use to assess frailty (select all that apply):
  - a) None
  - b) Routine history and physical examination
  - c) Assess ECOG performance status
  - d) Ask about independence in ADLS and IADLS
  - e) Use physical measures (eg, Timed get up and go, 4 meter gait speed): please specify
  - f) Use validated frailty screening tools (abbreviated CGA, Barber questionnaire, Fried frailty criteria, G-8, Groningen frailty index, TRST, VES-13, other): please specify
  - g) Refer for comprehensive geriatric assessment
  - h) Other (please describe in the comments)
5. Has implementation of 4m gait speed detrimentally impacted your clinical encounters? (Y/N) If so, how?
6. Has routine implementation of 4m gait speed been of value in caring for your patients? (Y/N)
7. Do you think 4m gait speed is a valuable metric for assessing frailty, or physiologic vulnerability, prior to and during chemotherapy? (Y/N)
8. Has knowing 4m gait speed for your patient prior to and during chemotherapy impacted your clinical decision-making regarding treatment selection and dose alterations? (Y/N)
9. Has knowing 4m gait speed for your patient prior to and during chemotherapy impacted your likelihood to refer a patient for additional assessments or support (eg, PT/OT, geriatrics, nutrition, pharmacy)? (Y/N)

# BASELINE SURVEY TO DOS

1. Have you ever heard of the 4m gait speed? (Y/N)
2. Are you familiar with the concept of evaluating for “frailty” in cancer patients? (Y/N)
3. How long on average does it take you to collect a set of vitals?
  - a) Less than 2 minutes
  - b) Less than 5 minutes
  - c) 5-10 minutes
  - d) More than 10 minutes
4. Four meter gait speed (4MGS) is a test that involves measuring how long it takes a patient to walk 4 meters. It helps clinicians better understand prognosis and the risk of treatment-related complications. What concerns do you have about implementing 4MGS as part of check-in and vitals assessment (you may select multiple)?
  - a) No concerns
  - b) It would take too much time
  - c) Patients would not want to do it
  - d) I would not know how to do it
  - e) Other [please specify]: \_\_\_\_\_

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# THANK YOU!

NEXT MEETING: TUESDAY, MARCH 9<sup>TH</sup>, 2021

