



# Cancer Care for Older Adults: The State of the Art & Science

William Dale, MD, PhD

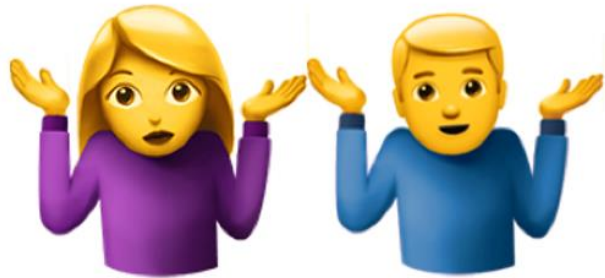
Professor and Arthur M Coppola Family Chair, Department of Supportive Care  
Medicine

Director, Center for Cancer and Aging

City of Hope

# Disclosures

- I do not have any relevant financial relationships.



*This presentation and/or comments will provide a balanced, non-promotional, and evidence-based approach to all diagnostic, therapeutic and/or research related content.*

# Cultural Linguistic Competency (CLC) & Implicit Bias (IB)

## STATE LAW:

The California legislature has passed Assembly Bill (AB) 1195, which states that as of July 1, 2006, all Category 1 CME activities that relate to patient care must include a cultural diversity/linguistics component. It has also passed AB 241, which states that as of January 1, 2022, all continuing education courses for a physician and surgeon **must** contain curriculum that includes specified instruction in the understanding of implicit bias in medical treatment.

*The cultural and linguistic competency (CLC) and implicit bias (IB) definitions reiterate how patients' diverse backgrounds may impact their access to care.*

## EXEMPTION:

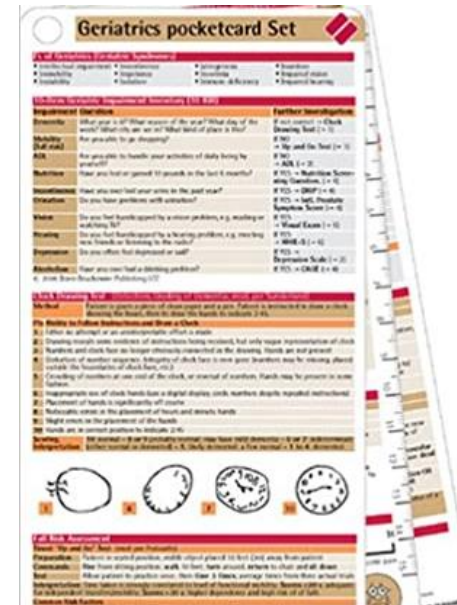
Business and Professions Code 2190.1 exempts activities which are dedicated solely to research or other issues that do not contain a direct patient care component.

***The following CLC & IB components will be addressed in this presentation:***

- *Ageism*
- *Intersectionality of age and race/ethnicity, language proficiency, and socioeconomic status*

# Comprehensive Geriatric Assessment (CGA)

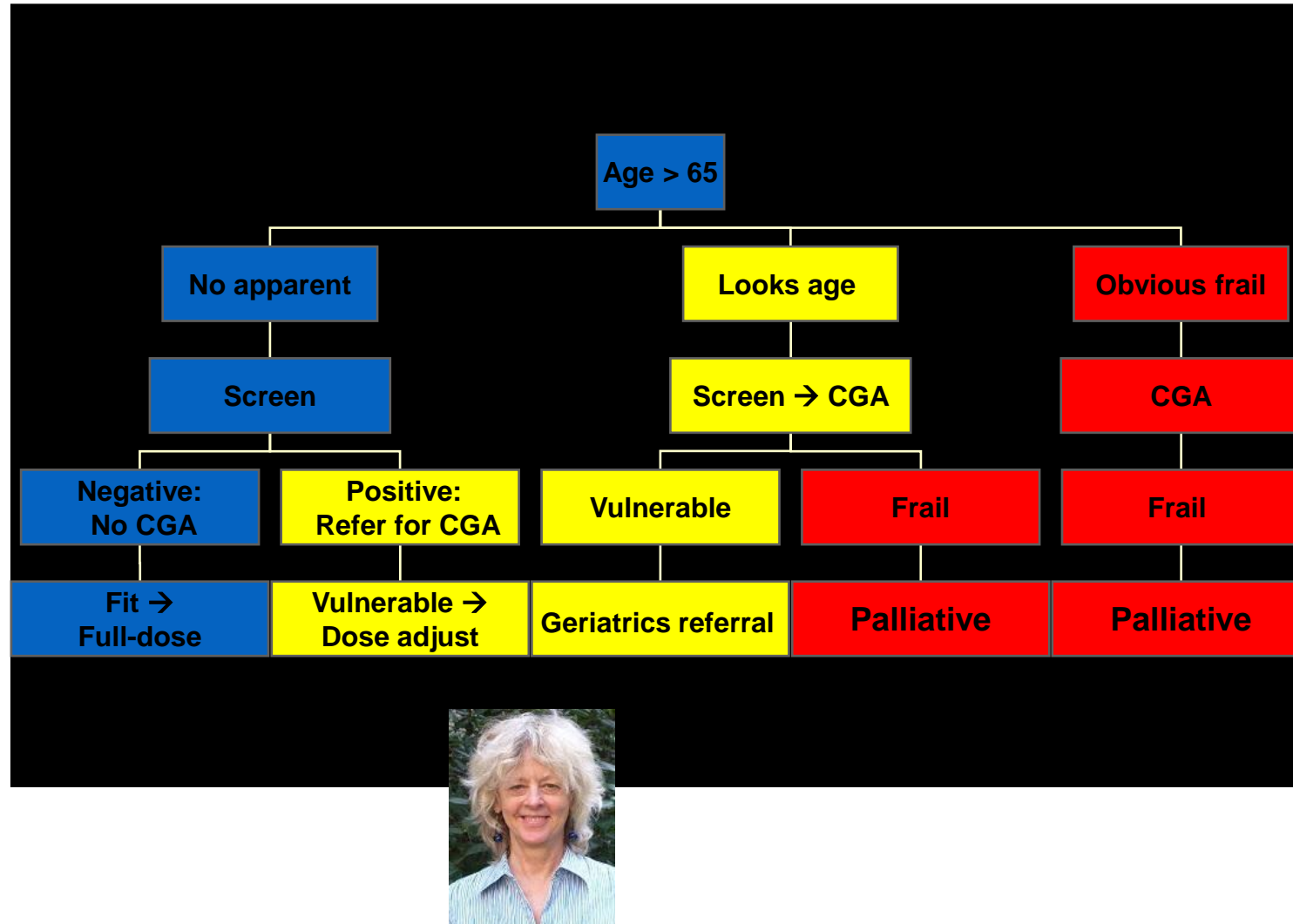
- CGA is an approach to the evaluation of the older cancer patients from geriatrics
- Includes an Evaluation:
  - Functional status
  - Mobility & Falls
  - Comorbidities
  - Cognition
  - Nutritional status
  - Mood
  - Psychological status (Mood)
  - Social support
- Each domain independently predicts morbidity & mortality



# Geriatric Assessment (GA): Tools of the Trade

1. Functional Status → ADL, IADL
2. Physical Performance → SPPB, gait speed
3. Falls → Single Question
4. Comorbidities → ROS, Carlson
5. Cognition → Mini-Cog, Blessed
6. Mood → Geriatric Depression Scale
7. Nutritional Status → Weight Loss, MNA
8. Social Support → MOS Social Support

# Schema for GA-Guided Care for Patients over 65



EVIDENCE:

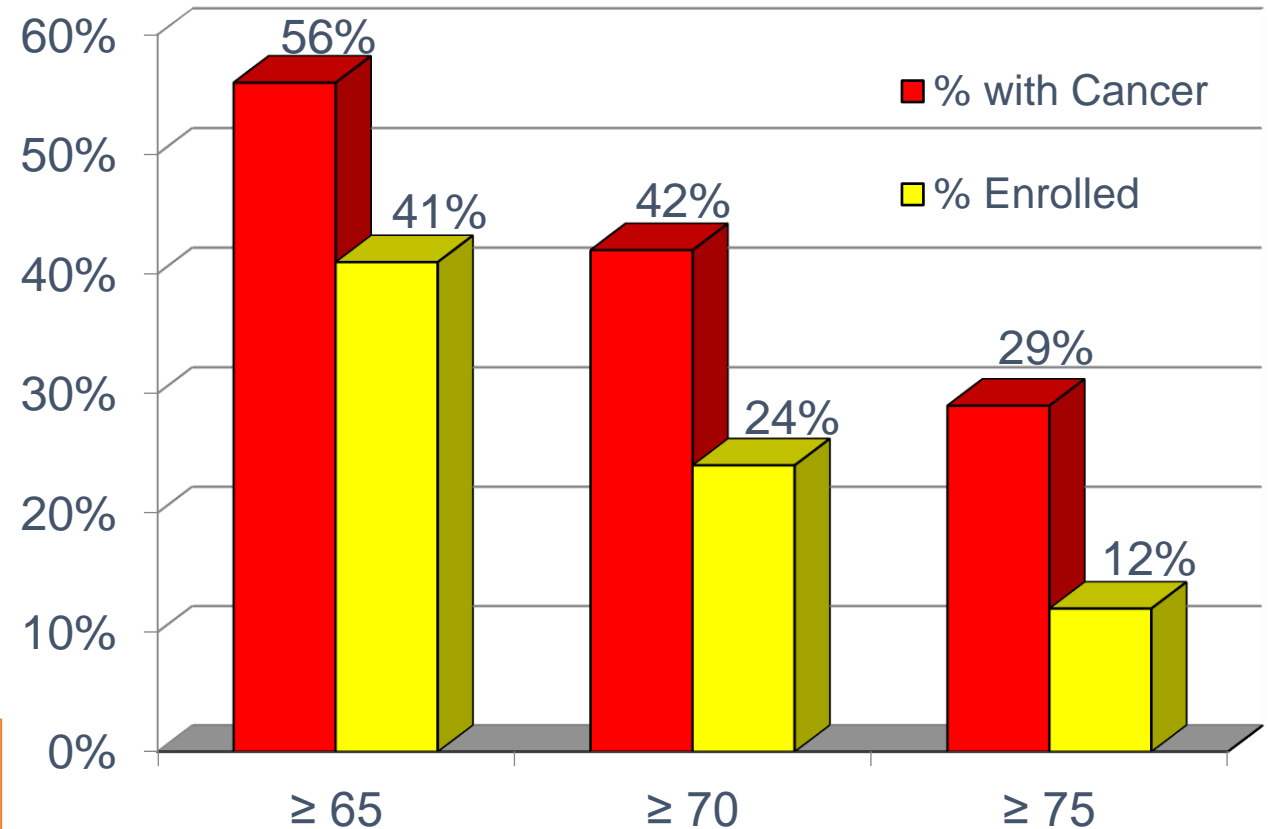
AN OVERVIEW OF CLINICAL GERIATRIC ONCOLOGY



# Under-representation of Older Adults on FDA Registration Trials

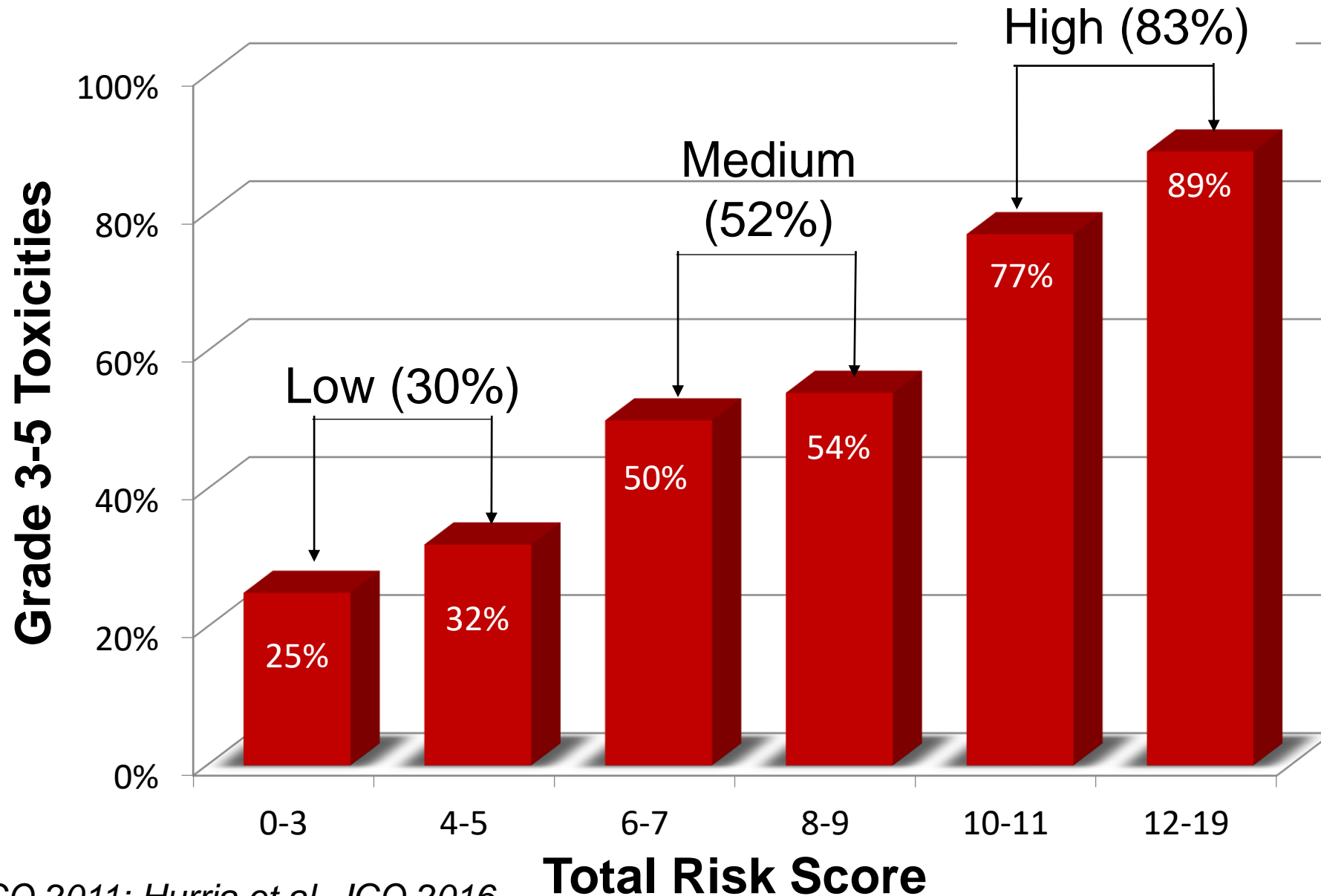
- 10-yr perspective
  - 2005-2015
- 105 FDA registration trials
- 224,766 patients

Disparity is Greatest for Patients Age  $\geq 75$





# Risk of Severe Toxicity



# U13 Grant (AG048721)

## Collaboration Between CARG, NCI, & NIA

### Biological, Clinical, and Psychosocial Correlates at the Interface of Cancer and Aging Research

William Dale, S  
Kenneth E. Sc  
Research Grou

Design  
Adults  
Arti Hurria  
Hyman B.  
and Supriya

Impr

Hyman B. Muss,  
and Aging

er Inst, 2012

Frail  
ations  
Cohen,

ncol, 2014

s With

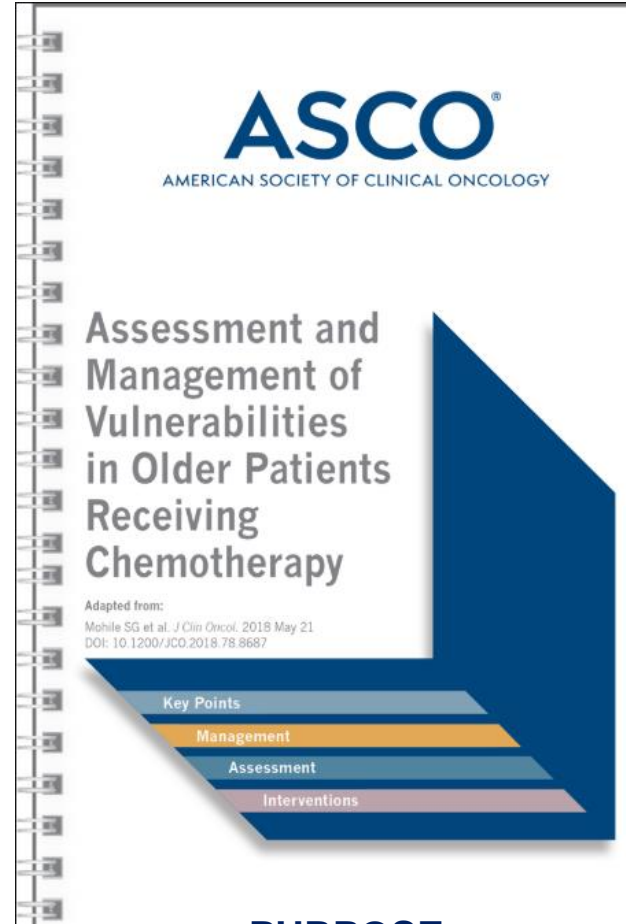
- Gap:
  - Clinical Measures Most Relevant to Older Adults Are Rarely Incorporated Into Oncology Clinical Trials
- Recommendation:
  - Consistently Incorporate Validated Geriatric Assessment Measures Into Oncology Research

Supriya G. Mohile, MD, MS<sup>1</sup>; Arti Hurria, MD<sup>2</sup>; Harvey J. Cohen, MD<sup>3</sup>; Julia H. Rowland, PhD<sup>4</sup>;  
Corinne R. Leach, PhD, MPH, MS<sup>4</sup>; Neeraj K. Arora, MS, PhD<sup>5</sup>; Beverly Canin<sup>6</sup>; Hyman B. Muss, MD<sup>7</sup>;  
Allison Magnuson, DO<sup>8</sup>; Marie Flannery, PhD, RN, AOCN<sup>9</sup>; Lisa Lowenstein, PhD<sup>10</sup>; Heather G. Allore, PhD<sup>11</sup>;  
Karen M. Mustian, PhD, MPH<sup>12</sup>; Wendy Demark-Wahnefried, PhD, RD<sup>13</sup>; Martine Extermann, MD<sup>14</sup>; Betty Ferrell, PhD, MA<sup>15</sup>;  
Sharon K. Inouye, MD, MPH<sup>16</sup>; Stephanie A. Studenski, MD, MPH<sup>17</sup>; and William Dale, MD, PhD<sup>18</sup>

# Improving Care for Older Adults with Cancer: Evidence-Based Guidelines Published (2018)

## IMPACT

- National panel of experts convened to develop **ASCO's first evidence-based guidelines** for treating older adults with cancer
- **Highlighted as one of the *Journal of Clinical Oncology's* top 12 cited articles** published in 2018 (567 citations; update ongoing)
- Key recommendations – new standard of care:
  - **In patients 65+ receiving chemotherapy, Geriatric Assessment should be used** to identify vulnerabilities or geriatric impairments that are not routinely captured in oncology assessments.
- **Fewer than 25% of older patients with cancer currently receive these assessments**



## PURPOSE

To provide guidance regarding the practical assessment and management of vulnerabilities in older patients undergoing chemotherapy.



U13 (NIH/NIA)

K24 (NIH/NIA)

<sup>1</sup>Mohile, Dale,...Hurria. ASCO Guidelines for Geriatric Oncology JCO 2018



Center for Cancer and Aging



# Practical Assessment and Management of Vulnerabilities in Older Patients Receiving Chemotherapy: ASCO Guideline for Geriatric Oncology

*Supriya G. Mohile, William Dale, Mark R. Somerfield, Mara A. Schonberg, Cynthia M. Boyd, Peggy S. Burhenn, Beverly Canin, Harvey Jay Cohen, Holly M. Holmes, Judith O. Hopkins, Michelle C. Janelins, Alok A. Khorana, Heidi D. Klepin, Stuart M. Lichtman, Karen M. Mustian, William P. Tew, and Arti Hurria*

1. Do Geriatric Assessments (GA)
2. Include Essential GA Domains
3. Conduct (Non-cancer) Prognostication
4. Enact GA-Guided, Targeted Interventions

2022 Update  
Coming!

# INTERVENTIONS & IMPLEMENTATION



# Improving Outcomes for Older Adults with Cancer: Geriatric Assessment-Driven Intervention (GAIN): ↓ Toxicity Risk



## Key findings (n=605):

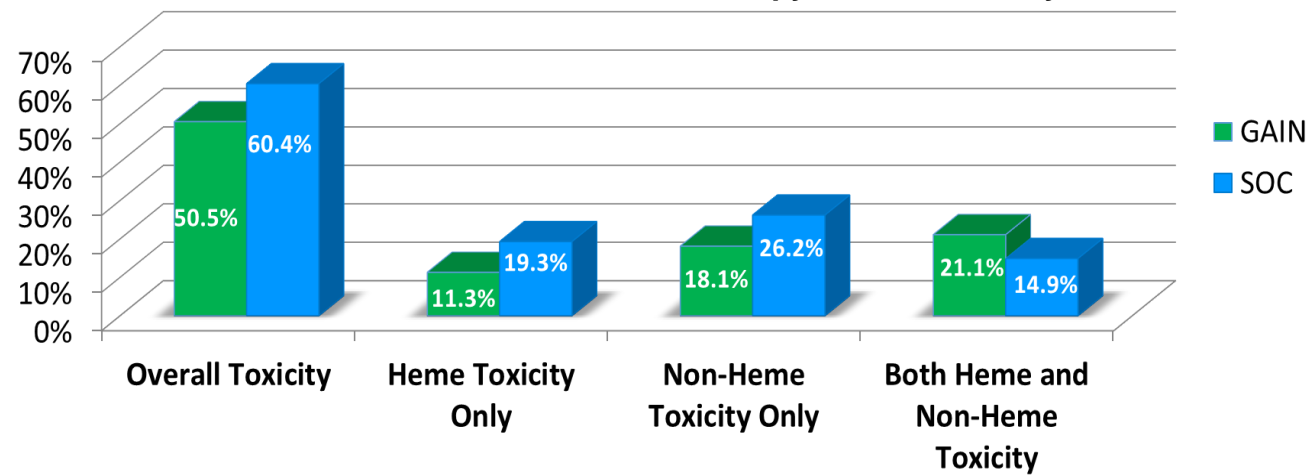
Geriatric assessment-driven interventions (GAIN) compared to standard of care (SOC):

- **Primary Outcome:** 10% reduced grade 3+ chemo-related toxicity
- Secondary outcomes: improved advance directive completion in older adults with cancer (↑24%)
- No significant differences in ER visits, hospitalizations, chemo dose modifications or discontinuations, or overall survival.



Funding:  
UniHealth  
Foundation;  
K24 AG055693

Incidence of Grade 3-5 Chemotherapy-Related Toxicity



Domain	Deficit	Interventions
Functional status	<ul style="list-style-type: none"><li>• Limitations in activities of daily living and/or instrumental activities of daily living</li><li>• History of falls</li><li>• Timed Up and Go &gt;13 s</li><li>• Lack of energy</li></ul>	<ul style="list-style-type: none"><li>• Exercise prescription</li><li>• Evaluate fall risk</li><li>• Home safety evaluation</li><li>• Gait strengthening</li><li>• Reiki therapy</li></ul>
Comorbidities	<ul style="list-style-type: none"><li>• Presence of comorbid conditions</li><li>• Hearing/visual impairments</li></ul>	<ul style="list-style-type: none"><li>• Management with treating physician or primary care</li><li>• Referrals as appropriate</li><li>• Pharmacy review of medications</li></ul>
Psychological status	<ul style="list-style-type: none"><li>• Feeling sad or depressed</li><li>• Anxiety</li><li>• Feeling nervous/worried</li></ul>	<ul style="list-style-type: none"><li>• Social work counseling</li><li>• Psychiatry referral</li><li>• Psychology referral</li><li>• Chaplaincy referral</li><li>• Support programs</li></ul>
Social activity	<ul style="list-style-type: none"><li>• Interference of physical or emotional problems on social activity</li></ul>	<ul style="list-style-type: none"><li>• Evaluation of physical/emotional concerns</li><li>• Social work referral</li><li>• Occupational therapy</li></ul>
Social support	<ul style="list-style-type: none"><li>• Lack of social support identified</li><li>• Patient lives alone</li></ul>	<ul style="list-style-type: none"><li>• Counseling</li><li>• Social work referral</li><li>• Home safety evaluation</li><li>• Support programs</li><li>• Community resources</li></ul>
Nutrition	<ul style="list-style-type: none"><li>• Weight loss ≥5%</li><li>• Body mass index ≤21 or ≥30</li><li>• Problems with eating or feeding</li></ul>	<ul style="list-style-type: none"><li>• Diet recommendations</li><li>• Supplements</li><li>• Oral care</li><li>• Physical/occupational therapy for food intake problems</li></ul>
Cognition	<ul style="list-style-type: none"><li>• Abnormal cognitive screening</li><li>• Confusion</li><li>• Memory loss/impairment</li></ul>	<ul style="list-style-type: none"><li>• Assess decision-making capacity</li><li>• Involve caregivers</li><li>• Review of medications</li><li>• Delirium prevention</li><li>• Cognitive testing</li></ul>
Polypharmacy	<ul style="list-style-type: none"><li>• ≥5 Prescribed medications</li><li>• ≥1 Over-the-counter medication</li><li>• ≥1 Herb/vitamin supplement</li></ul>	<ul style="list-style-type: none"><li>• Recommendations regarding drug interactions, potentially inappropriate medications, duplicative medications</li></ul>
Spiritual well-being	<ul style="list-style-type: none"><li>• Anxiety in relation with religious belief/experience</li></ul>	<ul style="list-style-type: none"><li>• Chaplaincy referral and counseling</li><li>• Encourage normal spiritual habits</li></ul>
Clinical symptoms	<ul style="list-style-type: none"><li>• Pain</li><li>• Skin breakdown</li><li>• Nausea</li><li>• Incontinence</li><li>• Adverse effects of treatment</li></ul>	<ul style="list-style-type: none"><li>• Supportive care/pain management referral</li><li>• Manage symptoms with primary care team</li><li>• Educational interventions</li></ul>



# Improving Outcomes for Older Adults with Cancer: Geriatric Assessment-Driven Intervention (GAP) ↓ Toxicity Risk

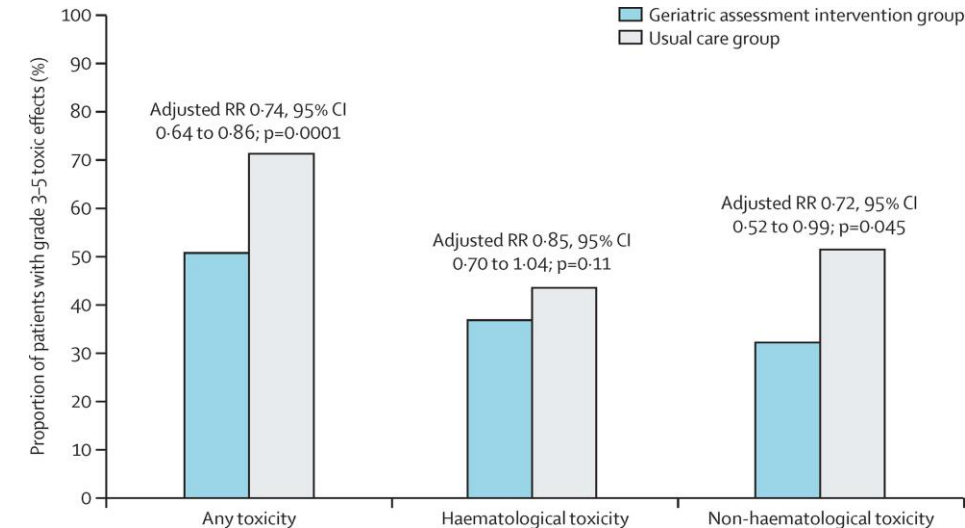
## Evaluation of geriatric assessment and management on the toxic effects of cancer treatment (GAP70+): a cluster-randomised study

Supriya G Mohile, Mostafa R Mohamed, Huiwen Xu, Eva Culakova, Kah Poh Loh, Allison Magnuson, Marie A Flannery, Spencer Obrecht, Nikesha Gilmore, Erika Ramsdale, Richard F Dunne, Tanya Wildes, Sandy Plumb, Amita Patil, Megan Wells, Lisa Lowenstein, Michelle Janelins, Karen Mustian, Judith O Hopkins, Jeffrey Berenberg, Navin Anthony, William Dale

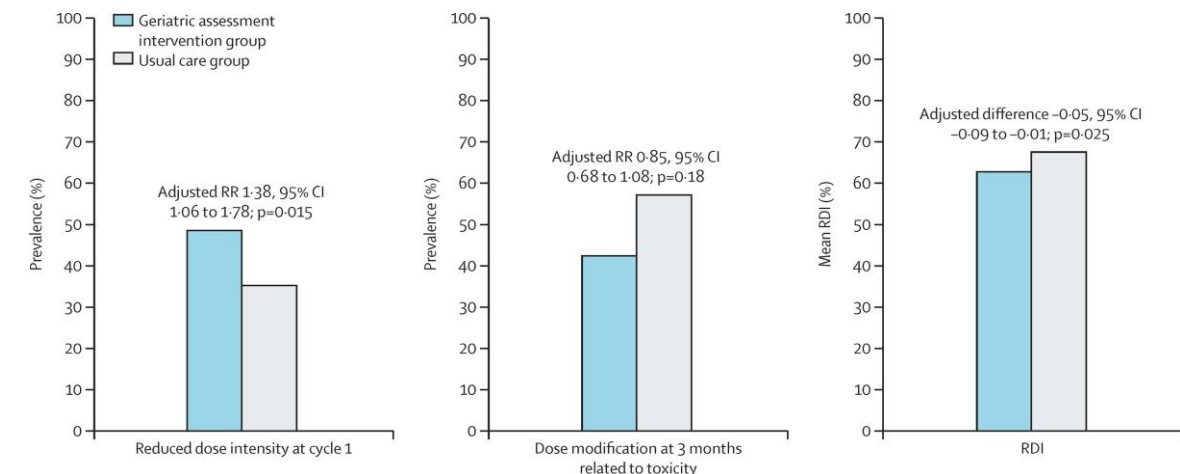
### Key findings (n=534):

- A geriatric assessment intervention for older patients with advanced cancer vs. SOC resulted in:
  - Primary outcome: reduced grade 3+ chemo-related toxicity (↓20%,  $p=0.0001$ )
  - Fewer falls (12% vs 21%,  $p=0.0034$ )
  - More medication discontinuation ( $p=0.015$ )
- Reduced dose intensity in the intervention arm did not compromise survival (similar between both arms)
- Conclusion: Geriatric assessment with management should be integrated into clinical care for older patients with cancer.

### Prevalence of any grade 3–5 CTCAE toxic effects over 3 months



### Treatment Intensity by Study Group





# GAIN vs. GAP70+:

## Differences in Patient Populations and GA Intervention Models, Similar Positive Outcomes

### GAIN Study:

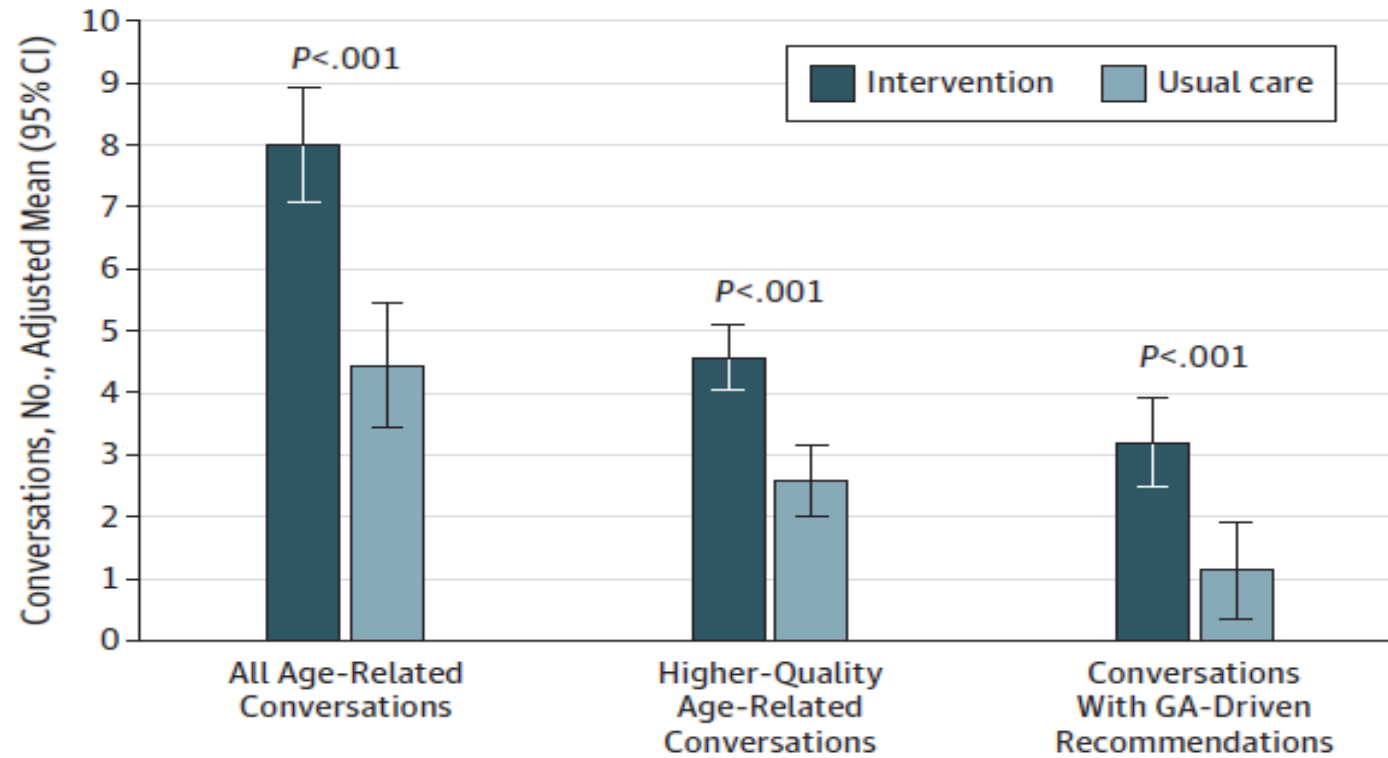
- **Setting/Design:** Single Center RCT
- **Patient Characteristics:**
  - Age: 65+ (mean age: 72.2 years)
  - Tumor Type: Solid Tumors
  - Stage: All Stages
  - Fitness: All levels
- **GA-Based Intervention:**
  - Intervention arm: Intervention and referrals, based on predetermined thresholds. Geriatric nurse practitioner guided referrals to a multi-disciplinary
  - Control arm: CGA is sent to the oncologist
- **Outcomes:**
  - Primary: Toxicity - 50% toxicity in intervention arm vs. 60% toxicity in control arm
  - Secondary Outcomes: Higher AD completion, no dose modifications, and no early discontinuation of tx
  - Survival: No differences at 12 months

### GAP70+ Study:

- **Setting/Design:** Multi-center, Cluster-randomized trial
- **Patient Characteristics:**
  - Age: 70+ (mean age: 77.2 years)
  - Tumor Type: Solid Tumors + Lymphoma
  - Stage: Advanced Cancer
  - Fitness: Presence of at least 1 impaired GA domain
- **GA-Based Intervention:**
  - Intervention arm: Geriatric assessment summary and management recommendations (including dose reduction) sent to the oncologist
  - Control arm: Oncologists received alerts for impaired depression or cognitive score
- **Outcomes:**
  - Primary: Toxicity - 50% toxicity in intervention arm vs. 70% toxicity in control arm
  - Secondary Outcomes: Treatment intensity lower, falls lower, polypharmacy lower
  - Survival: No differences at 6 months

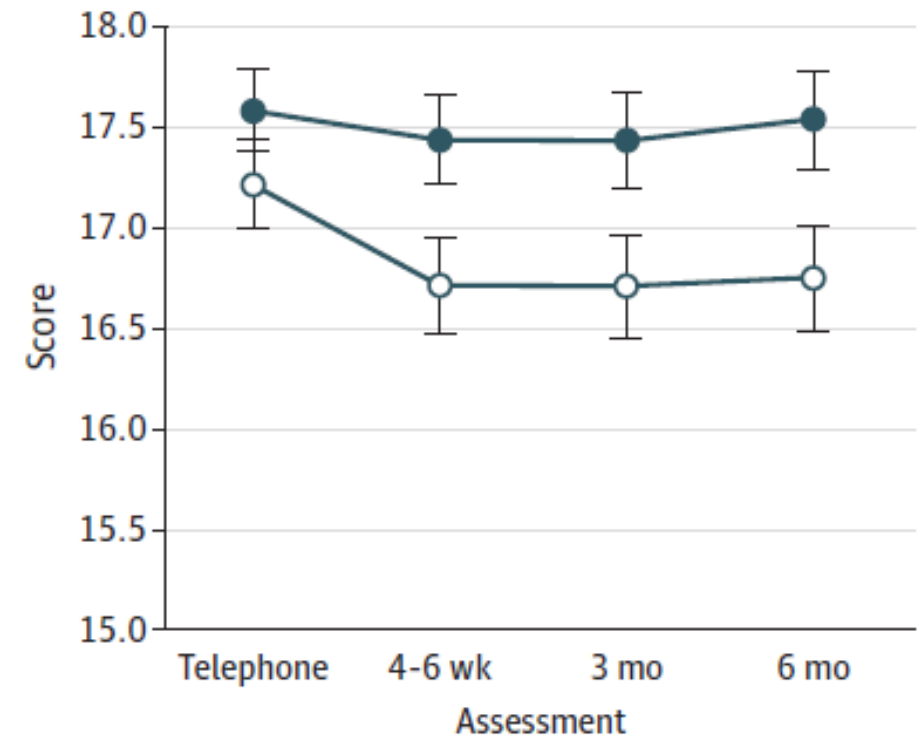
# How Does GA Improve Outcomes?

Figure 3. Conversations About Aging-Related Conditions



COACH Study

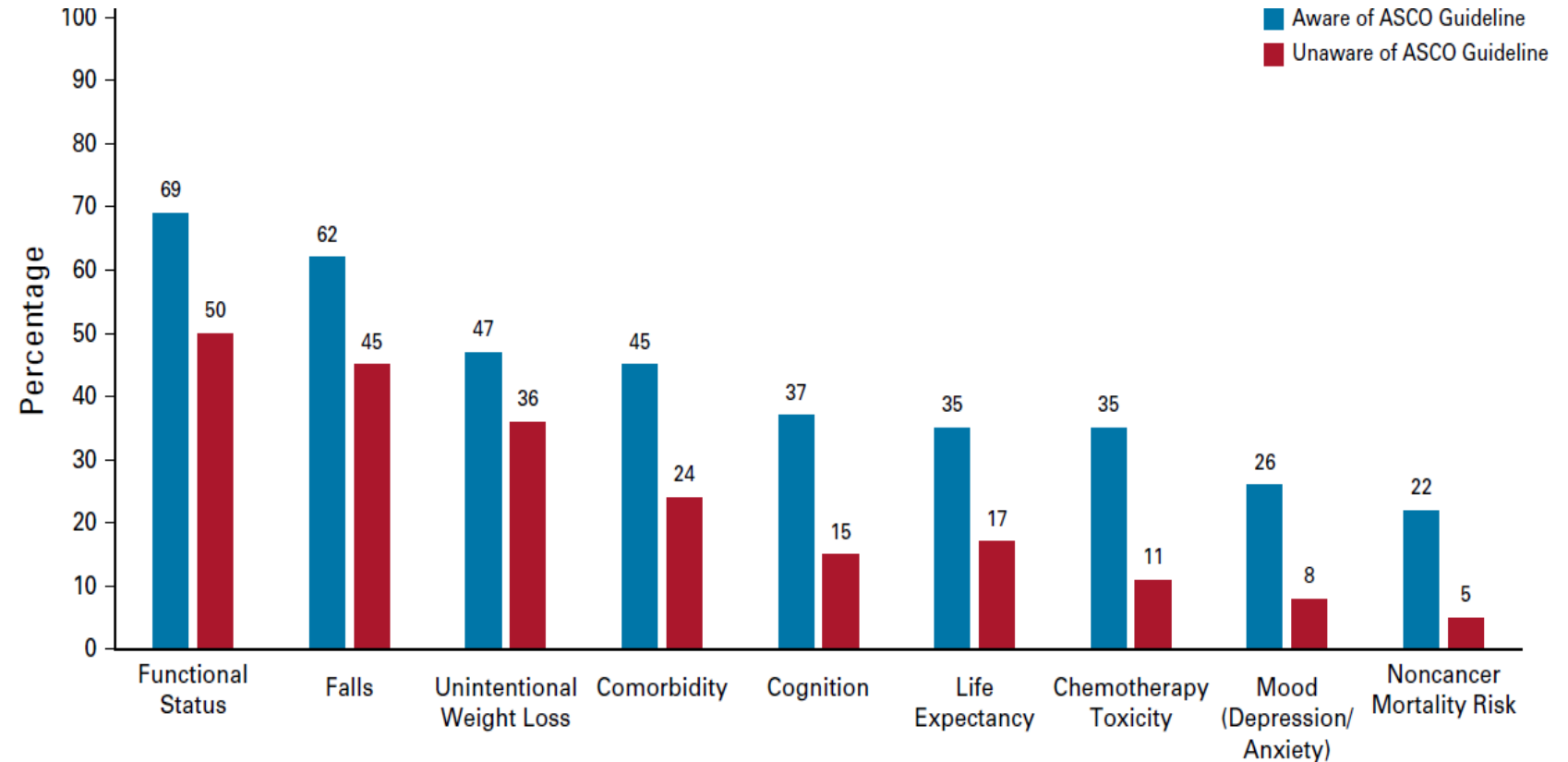
B Patient satisfaction with overall care



# Improving Care for Older Adults with Cancer: Implementation of Geriatric Assessment into Clinical Practice

## **Key findings:**

1. Among providers caring for older adults, 52% were aware of the ASCO Geriatric Oncology Guidelines.
2. Guideline awareness was associated with 2-4x increased use of geriatric assessment.



*ASCO - Addressing Cancer Health Disparities among Older Adults Task Force*

*Dale et al. JCO Oncol Pract. 2020*

# Implementation Barriers

## Key findings:

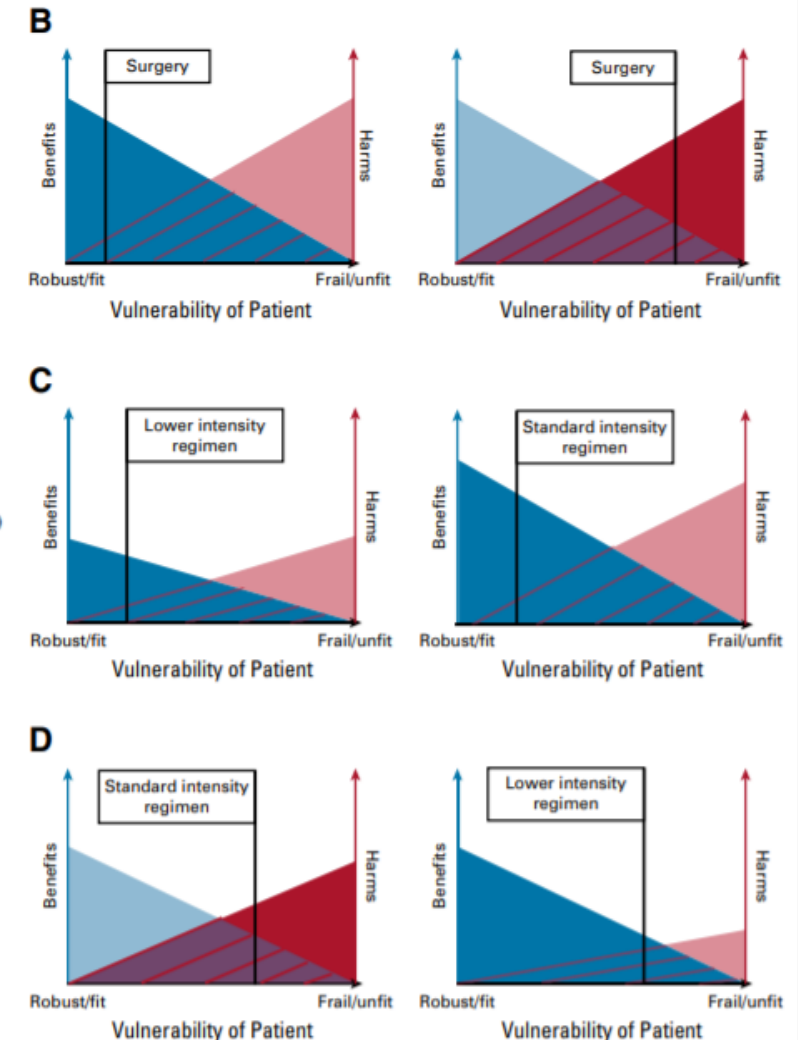
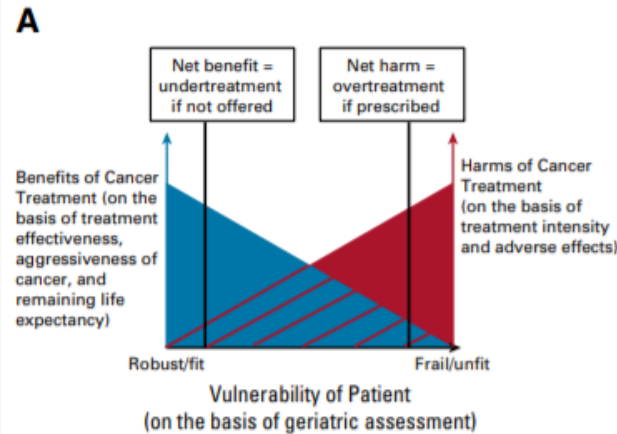
1. Barriers of Knowledge
2. Barriers of Resources



# Decision Making for Older Adults with Cancer: Defining Undertreatment and Overtreatment

- No consensus definition of under- or overtreatment for older adults exists.
- Conducted a comprehensive literature review to clarify terms and define a standard
- Balance of patient vulnerability, life expectancy, and benefits/harms from treatment.
- Must include patient preferences to define outcomes.

**Key Insight:** Undertreatment and overtreatment are imprecisely defined which carries potentially harmful implications. We propose new, more rigorous definitions of under- and overtreatment.

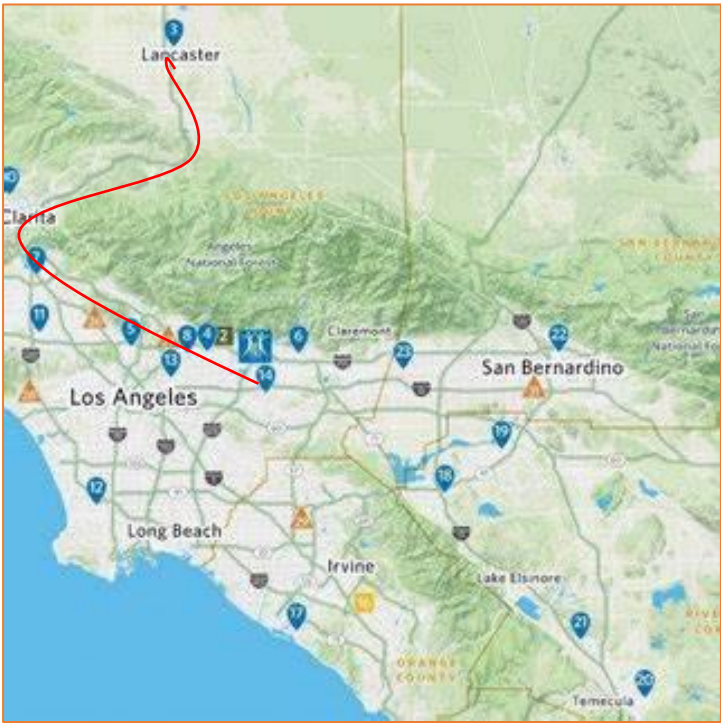




# Care Delivery in Northern Los Angeles County: Antelope Valley

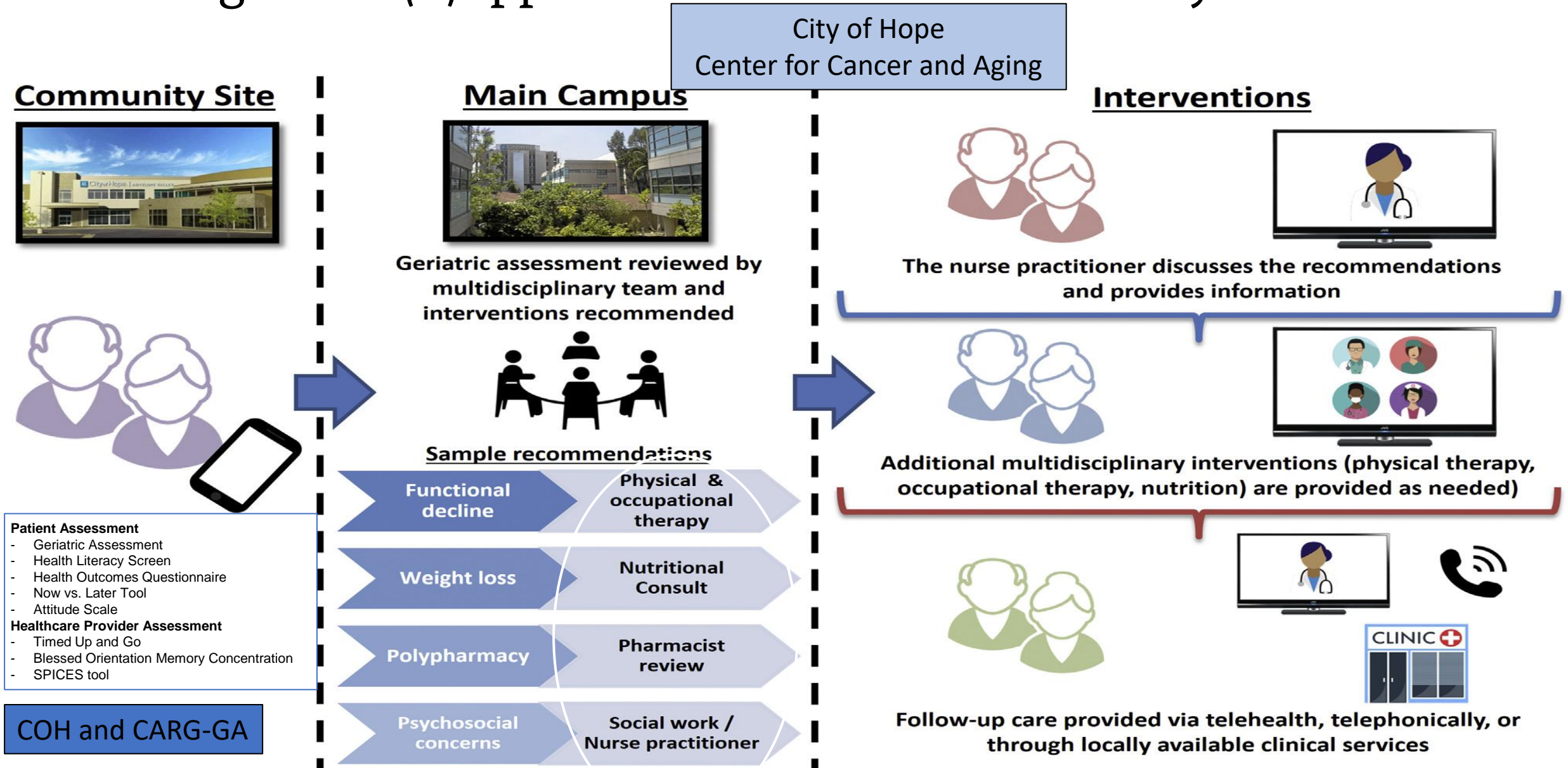


10 million residents in LA County  
AV Community Hospital 450 bed facility  
Level II Trauma  
#2 in Most ER Visits in the Count 2019  
#1 in Most ER visits 2017-2018





# Translating GAIN-(S)upportive Care to the Community with Telehealth





# Implementing Geriatric Assessment Screening and Multidisciplinary Care through Telehealth



## ➤ Progress To Date

- Launched at AV site in April 2020
- Feasibility:
  - 220+ older patients with cancer
    - completed a GA
    - received GA-guided Intervention (GAIN) supportive care via telehealth

QI Project, Eligibility Criteria:

Patients age 65+ establishing oncology

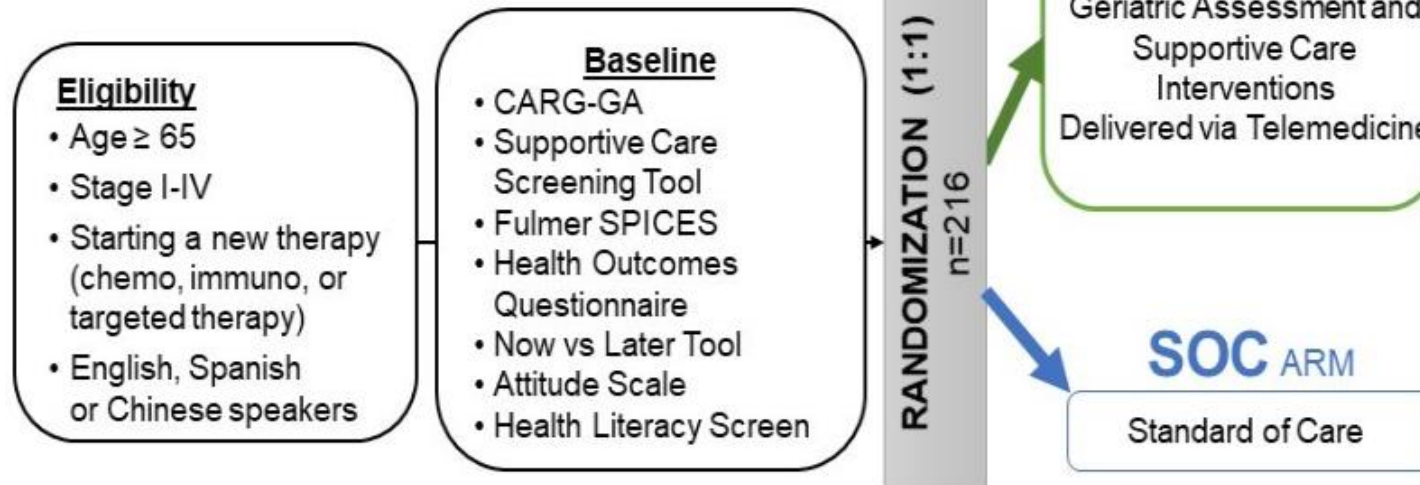
<b>Completed GA/Supportive Care Screening</b>	<b>% (n=230)</b>
• Completed via email	47%
• Completed via phone	23%
• Completed in clinic	30%

<b>High Patient Satisfaction</b>	
• Patient felt it was easy to join telehealth visits	93%
• Telehealth made it easier to access their healthcare	94%
• Patient felt that healthcare provider went over their health and emotional concerns	96%
• Were satisfied with their visit using telehealth	95%

# Expanding **GAIN-S** Supportive Care to the Community with Telehealth

Lead PI William Dale, MD, PhD  
Site PI Tanyanika Phillips, MD, MPH  
Site PI Camille Adeimy, MD

COH Center for Cancer and Aging  
RISING TIDE Foundation Grant  
Donaghue Foundation Grant



\*Prior to study initiation, each site will be quantitatively evaluated utilizing the evidence-based Association of Community Cancer Centers (ACCC) Geriatric Oncology Gap Assessment tool; each site would be reassessed at the end of the study for evaluation of process improvement.

## Follow Study Procedures Conducted at 3 and 6 months

- CARG-GA
- Supportive Care Screening Tool
- Fulmer SPICES

### **Primary endpoints:**

- Advance Directive Completion
- Documented Prognostic and Goals of Concordant Care Discussions (medical chart review)
- Direct inpatient cost

### **Secondary endpoints:**

- Grade 3+ Toxicities
- Dose Modifications
- Was It Worth It Questionnaire
- Patient-Defined Treatment Goals and Preferences (Health Outcomes Questionnaire, Now vs. Later, Attitude Scale)

# Research Directions: Rising Tide Foundation

- Current Funding Initiatives: Rising Tide Foundation for Clinical Cancer Research → CARG and City of Hope to serve as data coordinating center and the lead site

Programs	Research Focus	Program Leader/PI	Collaborators/Site PI
<b>All Cancers</b>	Creating or optimizing GA-based decision-making and communication strategies: (GAIN-S) Trial	William Dale (COH)	Tanyanika Phillips (COH)
<b>Breast</b>	Establishing optimal dosing of agents in vulnerable (pre-frail) patients using GA: DOROTHY Trial	Mina Sedrak (COH)	Rachel Freedman (Dana Farber)
<b>Prostate</b>	Optimizing treatment initiation (avoiding undertreatment and overtreatment): SHINE Trial	Alicia Morgans (Dana Farber)	Anthony D'Amico (Dana Farber)
<b>Heme</b>	Using GA-guided interventions to optimize treatment tolerance during intensive therapies: GOCART Trial	Andrew Artz (COH)	Ashley Rosko (OSU) Heidi Klepin* (WFU)
<b>Lung</b>	Determining the predictive role of GA-guided interventions: GAM-CRT Trial	Supriya Mohile (Univ. of Rochester)	Carolyn Presley* (OSU) Arya Amini (COH)

INFRASTRUCTURE





# Cancer and Aging Research Group – CARG



- **Founded:** City of Hope by Arti Hurria, MD  
2006  
10 members
- **Co-Leads:**  
William Dale, MD, PhD  
Supriya Mohile, MD, MS  
Heidi Klepin, MD, MS
- **Mission:**
  - To join geriatric oncology researchers across the nation in a collaborative effort of designing and implementing clinical trials to improve the care of older adults with cancer.
- **Bi-monthly CARG Zoom Meetings – Tuesdays 11am PT/2pm ET**
  - Where members can present current projects and grant proposals for feedback. and grant proposals for feedback.
  - Average of 70 members per virtual meetings
  - Senior and Junior Co-Led Discussionsor

## CARG TODAY

- Largest organization of its type in North America: 540 international members from over 75 institutions representing 20 countries
- Organizational partners: NIA/NCI, FDA, ACCC, ASCO, AGS, GSA, SIOG, Clin-STAR
- Disseminating CARG tools and research on [mycarg.org](http://mycarg.org)
- Social Media Platform: CARG Twitter – **2,025 Followers**



# CARG INFRASTRUCTURE GRANT (CARinG)

R21AG059206/R33AG059206

MPI:W. Dale [COH], S. Mohile [University of Rochester], H. Klepin [Wake Forest University]

**Overall Goal:** Develop a sustainable national research infrastructure to create and support significant and innovative projects addressing key interdisciplinary research questions at the aging and cancer interface.

- **Increase high-impact research** to reliably identify older patients at highest risk for adverse outcomes from cancer and its treatments;
- **Develop effective interventions** to improve outcomes for vulnerable older adults and their caregivers;
- **Mentor the next generation** of aging and cancer researchers;
- **Disseminate the findings** widely to inform clinical practice





# Patient Advocate Board: SCOREboard

- **Co-Chairs:** Beverly Canin and Chuck O'Shea
- **Mission:** to improve aging and cancer research and care delivery by infusing the knowledge and experience of older patients with cancer and their caregivers in all stages of the research process.
- Current membership 10 – 5 original members; 5 new confirmed  
3 CA; 1 NC; 2 NY; 1 CT; 2 AA; 6 cancer types
- Practices
  - 1.5 hour monthly webinar meetings including the liaison PI and members of the project team
  - One or two SCOREboard members work with each Core

# R33 CARG INFRASTRUCTURE GRANT (CARING) KEY ACCOMPLISHMENTS

**Table 1: R21/R33 CARinG Key Accomplishments**

INFRASTRUCTURE				
Development of 6 Cores	# of Inquiries	New Resources Created	Overall Infrastructure Highlights	
<ul style="list-style-type: none"><li>Measures Core</li></ul>	11	Detailed table of measures available based on geriatric assessment domains	<ul style="list-style-type: none"><li>Since 2017, CARG has grown from 150 to over 500 members representing over 75 institutions and 20 countries</li><li>Go-to website for cancer and aging scholars (mycarg.org)</li><li>Biweekly CARG Virtual Meeting with avg. 60-80 participants</li><li>Awarded 7 out of 9 pilot awards to CARG members to date (review in progress [11 submitted grants] for final 2 pilot grants)</li><li>156 inquiries received and addressed to date from investigators utilizing the Cores, SCOREboard, CARG Biweekly Meetings, and/or the Leadership team (MPIs)</li><li>CARG's Statement on Diversity, Equity, Inclusion, and Justice developed and disseminated by the Communications Core, in collaboration with the CARG Advocacy Committee, Junior Investigator Board, CARG Leadership, and AGS</li><li>CARG Research Report – quarterly newsletter disseminated via email and on the CARG website to highlight the latest in cancer and aging research and CARG member accomplishments</li><li>Collaborations with the:<ul style="list-style-type: none"><li>NCI (CARG member leadership and participation in NCI led cancer and aging workshops)</li><li>FDA (guidance on inclusion of older adults on cancer clinical trials)</li><li>ASCO (updating geriatric oncology guidelines)</li><li>AGS (CARG DEI Statement)</li></ul></li></ul>	
<ul style="list-style-type: none"><li>Supportive Care Core</li></ul>	13			
<ul style="list-style-type: none"><li>Analytics Core</li></ul>	20	List and resources of public datasets for geriatric oncology research		
<ul style="list-style-type: none"><li>Clinical Implementation Core</li></ul>	19			
<ul style="list-style-type: none"><li>Health Services Core</li></ul>	13			
<ul style="list-style-type: none"><li>Communication Core</li></ul>	2	<ul style="list-style-type: none"><li>- CARG DEI Statement</li><li>- CARG Research Report</li><li>- TweetChat Toolkit for cancer and aging research dissemination</li></ul>		
Other Aspects of the Research Infrastructure				
<ul style="list-style-type: none"><li>SCOREboard</li></ul>	23 inquiries received and addressed; Developed and implemented patient advocate recruitment process for board; 10 members currently			
<ul style="list-style-type: none"><li>Junior Investigator Board</li></ul>	Hosted Career Development Workshop for early career investigators (45 participants, positive reviews, rating 4.8/5.0)			
<ul style="list-style-type: none"><li>CARG Advocacy Committee</li></ul>	Developed and implemented 2 surveys on the impact of COVID-19 on older adults with cancer (BrintzenhofeSzoc et al. JGO 2021; Krok-Schoen et al. JGO 2021)			
<ul style="list-style-type: none"><li>CARG Buddy Task Force</li></ul>	54 mentee-mentor matches representing 43 institutions and 4 countries			
GRANTS: \$24.4 million in grant funding received by CARG members utilizing CARinG				
<ul style="list-style-type: none"><li>51 grants submitted; 27 grants funded to date</li><li>26 Career Development Awards Submitted</li><li>16 funded (\$11.7 million)<ul style="list-style-type: none"><li>6 R03 GEMSSTARS</li><li>7 K awards (3 K76 Beesons, 2 K08s, 1 K01, 1 K99/R00)</li><li>Other Grants: ASCO CDA, ACS CDA, VA IK2 grant</li></ul></li><li>2 NIA grants pending NOAs (fundable scores for a K76 and R03)</li></ul>		<ul style="list-style-type: none"><li>25 Research Grants Submitted</li><li>11 funded (\$12.7 million)<ul style="list-style-type: none"><li>2 R01s, 1 R21, 1 U01, and foundation, pharma, and institutional grants</li><li>\$4.25 million to support a CARG National Consortia of Geriatric Oncology Trials (5 GA-guided RCTs) funded through the Rising Tide Foundation (\$2.25 million), institutional support (6 institutions participating), and generous donors</li></ul></li></ul>		
PUBLICATIONS*				
95 total publications (48 publications co-authored by at least one MPI)				
Highlights				
<ul style="list-style-type: none"><li>The American Society and Clinical Oncology (ASCO) Guidelines in geriatric oncology (Mohile et al. JCO 2018)</li><li>Systematic review highlighting barriers and interventions for older adult participation in cancer clinical trials (Sedrak et al. CA Cancer J Clin 2021)</li><li>CARG Leadership led a <i>Journal of Clinical Oncology</i> Special Issue, "Caring for Older Adults with Cancer" (16 articles co-authored by CARG members)</li><li>Two large, practice-changing randomized controlled trials showing the benefits of a validated geriatric assessment (GA)-based intervention to decrease chemotherapy toxicity (Mohile et al. Lancet 2021; Li et al. JAMA Onc 2021)</li><li>Development and validation of the CARG Breast Cancer (CARG-BC) Toxicity Tool (Magnuson et al. JCO 2021)</li><li>Secondary analyses of large geriatric assessment CARG datasets (e.g. Presley et al. Front Oncol. 2022; Klepin et al. JCO Oncol Pract 2021; Dotan et al. Cancer 2020)</li><li>Validation of the CARG Toxicity Tool in Other Countries/Languages (Suto et al. Cancers (Basel) 2022); Bergerot et al. JGO 2020)</li></ul>				
*Publications: See Progress Report Publication List				

- Grown from 150 to 500+ members in the last 5 years, representing 75 institutions and 20+ countries
- \$24.4 million in grant funding received by CARG members utilizing this new infrastructure
- 95 publications attributed to the grant (high impact journals include Lancet, JAMA Onc, JCO, Cancer)
- 156 inquiries received and addressed utilizing the infrastructure



(NIA R33AG059206)

## Conducting Inclusive Research, Improving Cancer Care for People of All Ages



### *CARG's Statement on Diversity, Equity, Inclusion, and Justice*

The Cancer and Aging Research Group (CARG) gathers researchers and clinicians in geriatric oncology to conduct rigorous science that improves the care of all older adults with cancer and their caregivers. Our work is founded on an unyielding commitment to eliminating ageism from cancer care and building a broad cancer research and practice community that actively works to eliminate racism, sexism, bias against sexual and gender minorities, xenophobia, ableism, and other forms of discrimination that diminish access to quality care.

This commitment finds expression in many ways within CARG:

- Our leadership and membership has been and strives to be broadly diverse.
- Our work supports inclusive study designs that recruit a wide array of participants, including those historically underserved in cancer care.
- Projects and manuscripts consistently integrate the full range of patient and caregiver voices together with expert researchers and explicitly address issues of structural inequity, racism, and other forms of bias.
- Our members take CARG's core principles back to their home organizations and healthcare systems, where we actively nurture a welcoming and culturally competent clinical practice, one whose members reflect the communities they serve.

CARG joins other stakeholders in cancer care and research to reaffirm our commitment to health equity and justice and to ensure access to high-quality care for all people and particularly older people with cancer and their caregivers.

# Translating Research Into Clinical Practice:

## OASIS (Older Adults Specialized Interdisciplinary Services)



- **Aging Wellness Clinic**: Outpatient clinic for older adults with cancer initiating a new treatment, focused on toxicity prevention
- **Aging and Blood Cancers (ABC) Program**: Geriatric assessment-guided multidisciplinary team clinic for older adults hematopoietic cell transplant and cellular therapy candidates
- **SOCARE Clinic**: (Specialized Oncology Care and Research in Elders): Interdisciplinary, individualized, and integrated treatment for older adults with cancer.
- **Collaborations with Clinics focused on Older Adults with Cancer**
  - Breast Cancer: Dr. Mina Sedrak
  - Neuroendocrine Tumors/GI: Dr. Daneng Li
  - Community Network: Dr. Tanyanika Phillips (Lancaster)



*As part of the Age-Friendly Health Systems Action movement, we are among the first cancer centers in the country implementing age-friendly health care.*

# JCO Special Series

## Caring for Older Adults with Cancer

### Featuring Editors:

- William Dale, MD, PhD – guest editor
- Supriya Mohile, MD, MS – guest editor
- Paul Jacobson, PhD, FASCO – associate editor

“We invite readers to see how this amazing field of geriatric oncology has expanded over the years. This third *JCO* Special Series on cancer and aging shows the commitment that our Journal has made to capture the excitement of the past seven years....”

Volume 39, Issue 19

July 1, 2021

# Journal of Clinical Oncology®

An American Society  
of Clinical Oncology Journal

### SPECIAL SERIES

#### Caring for Older Adults With Cancer

Overview: Geriatric Oncology Comes of Age:  
Advancing the Science of Caring for Older  
Adults With Cancer. *W. Dale et al*

Geriatric Assessment and Management in  
Cancer. *S. Rostoft et al*

Hematologic Malignancies in Older Adults  
*A.E. Rosko et al*

Immunotherapy in Older Adults. *C.J. Presley et al*

Targeted Therapies in Older Adults With Solid  
Tumors. *N.M.L. Battisti et al*

Cognition in Older Adults With Cancer  
*A. Magnuson et al*

Health Equity for Older Adults With Cancer  
*R.D. Tucker-Seeley et al*

**ASCO**  
AMERICAN SOCIETY OF CLINICAL ONCOLOGY  
KNOWLEDGE CONQUERS CANCER



# The COH Cancer and Aging Dream Team

## “We Honor the Dream By Doing the Work”



Center for Cancer and Aging

• **Director:**

**Deputy Directors:**



William Dale,  
MD, PhD



**Basic Science**  
Mark LaBarge, PhD



**Clinical Trials**  
Mina Sedrak, MD, MS



**Outcomes**  
Andrew Artz, MD, MS

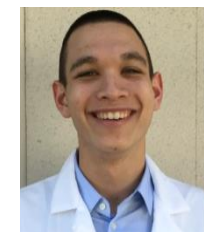
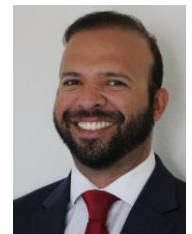


**Analytics**  
Can-Lan Sun, PhD



**Health Equity**  
Tanyanika Phillips, MD

## Center for Cancer and Aging Team Members



# Thank You!



## Funders

Our Generous Patients and Donors  
NIH: NIA and NCI  
American Society of Clinical Oncology (ASCO)  
The John A. Hartford Foundation  
The Association of Specialty Professors  
The American Federation for Aging Research  
The Breast Cancer Research Foundation  
Hearst Foundation  
UniHealth Foundation  
Rising Tide Foundation  
Donaghue Foundation