
Exemplar of an Education and Training Strategy to Build Multidisciplinary, Multispecialty Expert Care – Geriatric Oncology

Heidi D. Klepin, MD, MS

Professor of Medicine, Wake Forest School of Medicine

Atrium Health Wake Forest Baptist Comprehensive Cancer Center

Email: hklepin@wakehealth.edu Twitter: [@HKlepinMD](https://twitter.com/HKlepinMD)

On behalf of the Cancer and Aging Research Group





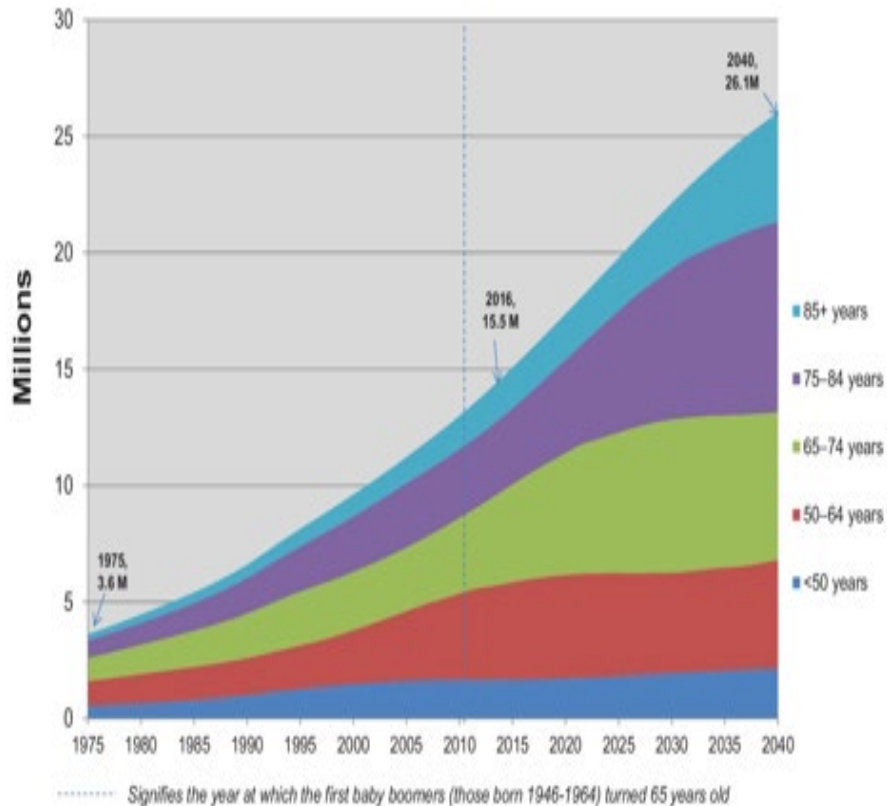
I have no conflicts of interest to disclose

OBJECTIVES

Highlight	Highlight the need for multi-disciplinary research and care for older adults with cancer
Discuss	Discuss how the Cancer and Aging Research Group (CARG) developed to address gaps in care
Describe	Describe how CARG contributes to multi-disciplinary training and education to promote geriatric oncology
Consider	Consider lessons learned

Geriatric oncology: addressing a system in crisis

Cancer prevalence by age



A system in crisis



Unmet needs in caring for older adults with cancer:

- Lack of evidence
- Lack of providers
- Lack of training
- Lack of coordination
- Lack of advocacy
- Lack of resources



A GRASSROOTS BEGINNING

Improve the **evidence** base for treating older adults with cancer

**Multi-Disciplinary
Collaborative Network**

- Conduct research
- Enhance training
- Disseminate/Implement
- Advocate



Arti Hurria MD

Improve the **quality of care** received by older adults with cancer

CANCER AND AGING RESEARCH GROUP (CARG)



- **Founded:** City of Hope by Arti Hurria, MD
2006, 10 members
- **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.
- **Co-Leads:**
William Dale, MD, PhD
Supriya Mohile, MD, MS
Heidi Klepin, MD, MS
- **Bi-monthly CARG Zoom Meetings – Tuesdays 11am PT/2pm ET**
 - Where members can present current projects for feedback
 - Average of 70 members per virtual meetings
 - Senior and Junior Co-Led Discussions

CARG TODAY

- Largest organization in North America:
 - 610+ international members
 - 90+ institutions
 - 22 countries
- Organizational partners: NIA/NCI, ACCC, ASCO, AGS, GSA, SIOG, Clin-STAR, Alliance, and EORTC
- Disseminating CARG tools and research
 - Website: mycarg.org
 - Social Media Platform:
CARG Twitter – 2,178 Followers
[@myCARG](https://twitter.com/myCARG)

CARG Infrastructure Grant (CARinG)

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



W. Dale



S. Mohile



H. Klepin

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

ACCOMPLISHMENTS

- Membership: 10 → 610+ CARG Members (79% national, 21% international members)
- Research Inquires: 225+ Inquires received and addressed utilizing the infrastructure
- CARinG Pilot Grant: Awarded 9 Pilot Grant Awards totaling \$175,000.00
- Mentorship: 83 CARG Buddy Program Matches Made
- Publications: 120+ total publications attributed to the grant
- Grant Funding ROI: \$25 million received by CARG members utilizing CARinG



Aim 1

Expand the reach of the infrastructure



Aim 2

Facilitate high-priority and impactful research



Aim 3

Identify, cultivate, and mentor CARG investigators



Aim 4

Build greater capacity for engagement

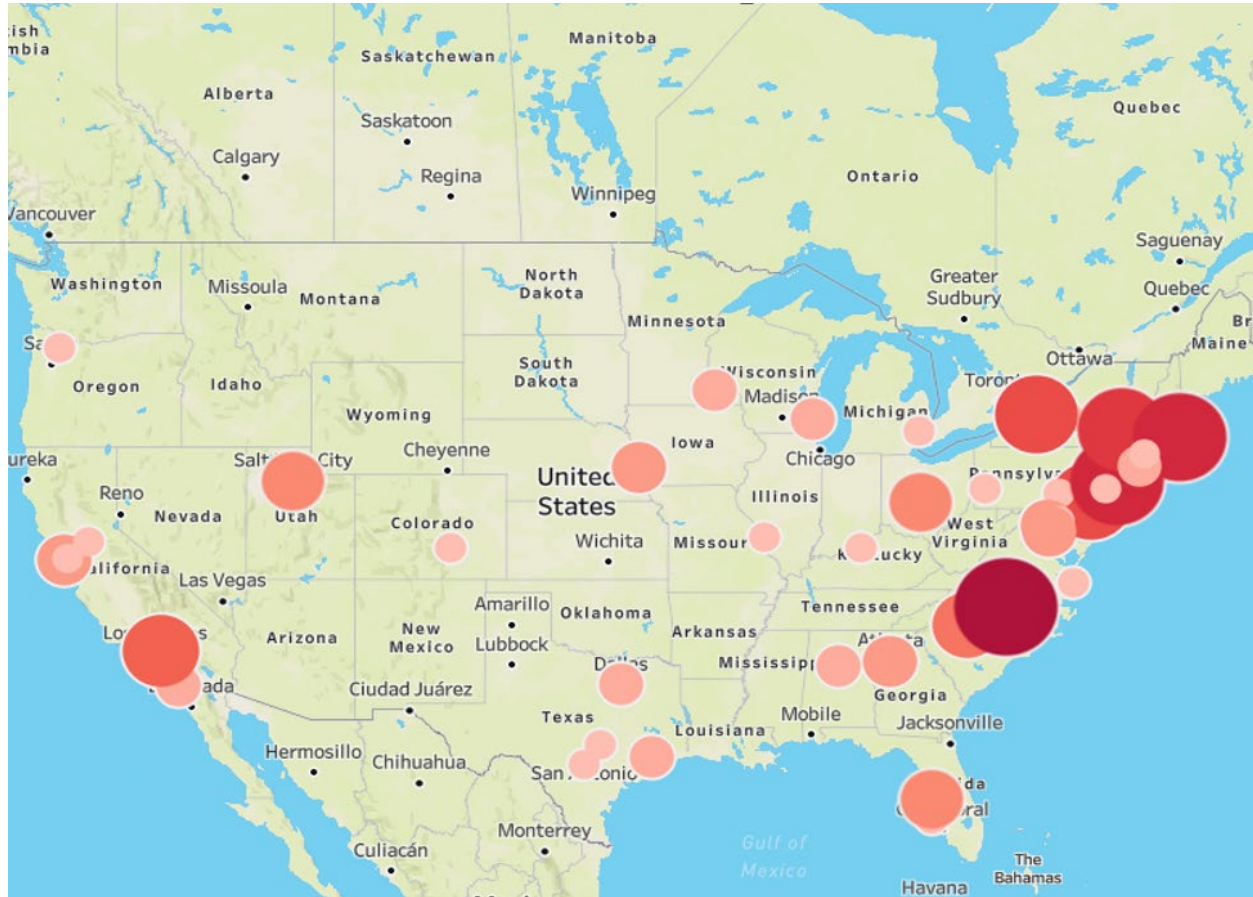


Aim 5

Develop and disseminate geriatric oncology-specific content

CARG INFRASTRUCTURE GRANT R33 RENEWAL SPECIFIC AIMS

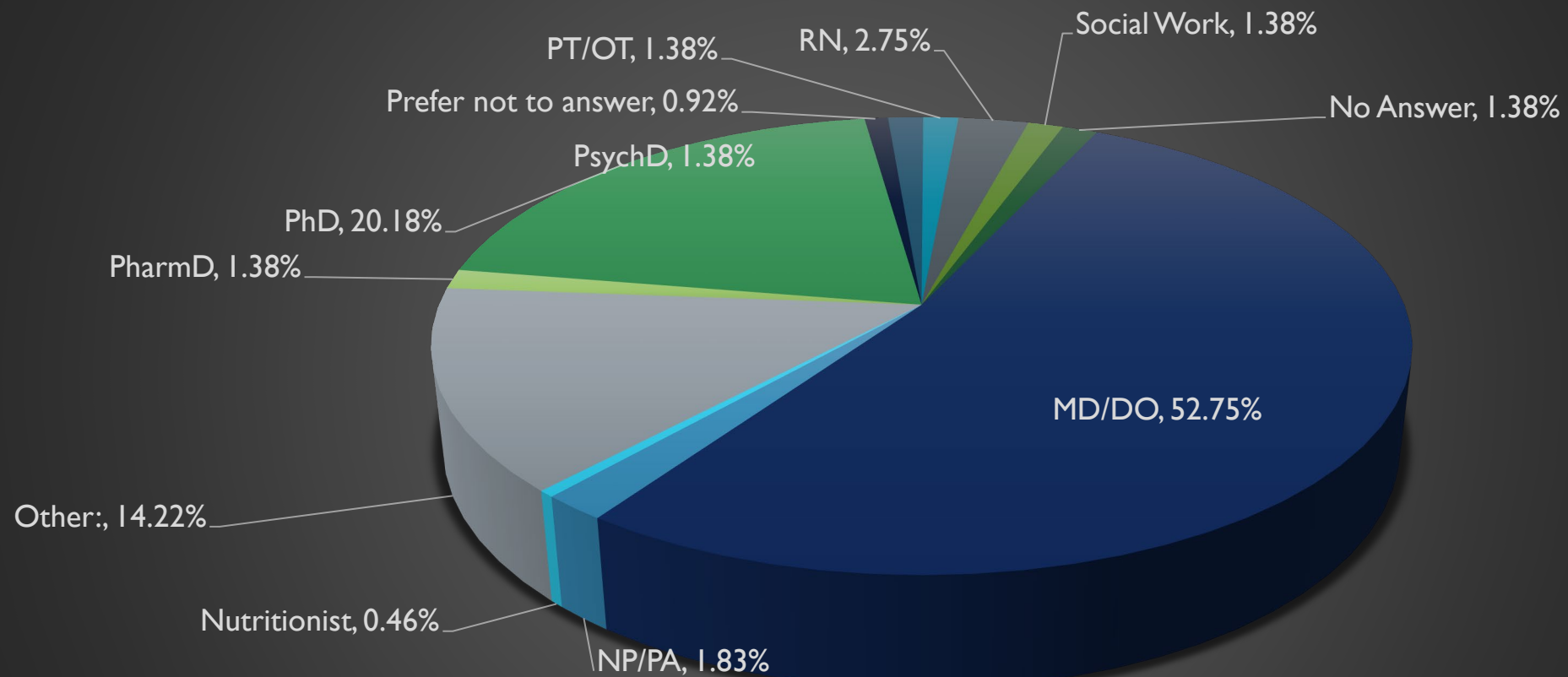
CARG Membership is Geographically Diverse



79% National Members

21% International Members: Argentina, Australia, Brazil, Canada, Denmark, England, France, Germany, India, Indonesia, Italy, Japan, Kenya, Luxembourg, Mexico, Nigeria, Norway, Portugal, Spain, UK





MD/DO
PharmD
PT/OT

NP/PA
PhD
RN

Nutritionist
Prefer not to answer
Social Work

Other:
PsychD
No Answer

CARG IS MULTI-DISCIPLINARY

**based on 218 participants*

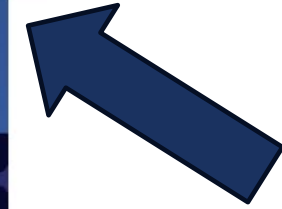
HOME ABOUT ▾ MEMBERSHIP ▾ CARING CORES ▾ RESOURCES ▾ CARG TOOLS ▾ RESEARCH ▾ NEWS ▾ EVENTS ▾



Website Usage over 90 days:

- ~8,000 hits/month on the GA Tools Page
 - 5284 on the chemo tox calculator
 - 2718 CARG Geriatric Assessment
- ~11,000 hits/month overall for the website
- Visitors from 95 countries
- 45% international visitors

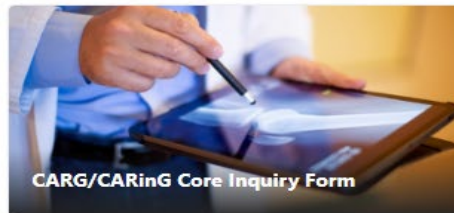
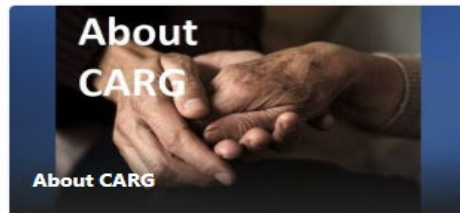
Cancer and Aging Research Report – Volume 4, Issue 1



Learn
Engage
Advocate
Disseminate

Welcome to CARG!

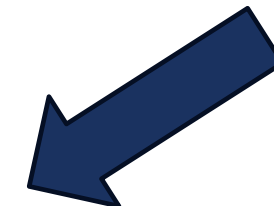
The mission of the Cancer and Aging Research Group is to join geriatric oncology researchers across the nation in a collaborative effort of designing and implementing clinical trials to improve the care of older adults with cancer. The only requirement for membership is the desire to help older adults with cancer.



Quick Links

 [Start the Chemo-Toxicity Calculator](#)

 [Take the Geriatric Assessment](#)



www.mycarg.org

TRAINING AND CAREER DEVELOPMENT ACTIVITIES

Education

- Bi-weekly group call content
- Monthly Core Meetings
- Advice from experts (inquiries)
- Shareable resources on website
- Career development workshops
- Networking/mentoring
- Leadership (Jr CARG, core leads)
- Stakeholder engagement/partnerships

Buddy Program

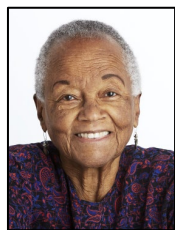
Mission: Provide an opportunity for new CARG members to **connect** with an established CARG member to provide an introduction to the CARG community/infrastructure, and serve as an **advisor** to facilitate career development, sponsorship, collaboration, and/or networking in the field of cancer and aging.

83 Buddy Matches



LEARNING FROM OUR PATIENT PARTNERS: STAKEHOLDERS FOR CARE IN ONCOLOGY RESEARCH FOR OUR ELDERS BOARD (SCOREBOARD)

SCOREboard's mission is 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.



Beverly Canin
Analytics Core



Chuck O'Shea
Measures Core



Richard Gelb
Clinical Implementation Core



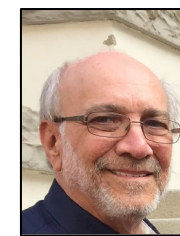
Tomma Hargraves



Lynn Murphy
Analytics Core



Lewis Mustian
Clinical Implementation Core



Edward Cutler
Health Services Core



Ann Pennella
Communication Core



John Simmons
Health Services Core



Valerie Targia
Supportive Care Core



Lester Wakefield
Measures Core



Gary Wallach
Communication Core



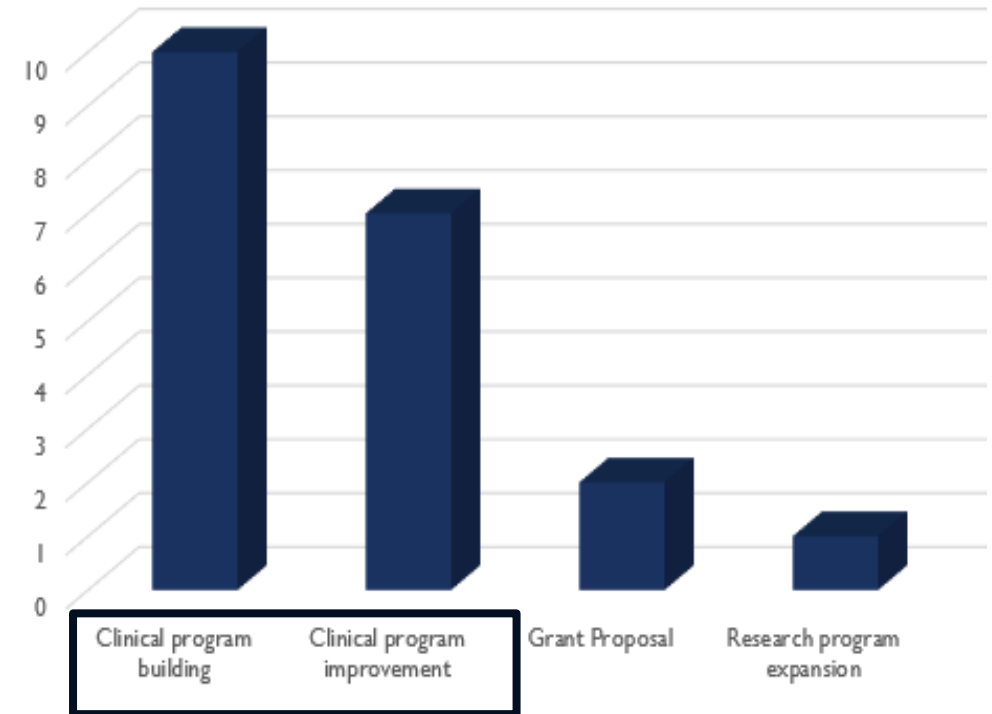
Mary Whitehead
Supportive Care Core

IMPLEMENTATION CORE: ENGAGING COMMUNITY PRACTICE

Mission: Support clinical healthcare professionals interested in **integrating aging principles into cancer clinical care** in efforts to develop Geriatric Oncology practices, and thus promote the growth of a global coordinated geriatric oncology clinical network that would foster collaborations around implementation of clinical practices, quality improvement, and research.

MTD Team: physicians, nurse practitioners, academic, community, Association of Community Cancer Centers, patient partners, global representative.

CIC Core inquiries 2021-2022



Engaging with partner organizations to improve care for older adults

ASCO® Guidelines

Practical Assessment and Management of Vulnerabilities in Older Patients Receiving Systemic Cancer Therapy: ASCO Guideline Update



- **Update to 2018 ASCO Geriatric Oncology Guidelines based on new RCT data**
 - Expert Panel of national leaders in the field including patient advocates
- **Development of a Pragmatic Geriatric Assessment (PGA)**
- **Guides (Videos, Infographic, ASCO Website, CARG Website):**
- **Manuscripts forthcoming:**
 - **Primary Guidelines – *Journal of Clinical Oncology***
(In Press, Projected Release Date: July 17th)
 - **Companion Q & A – *JCO Oncology Practice***
(In Press, Projected Release Date: July 17th)

Special Thanks to:

- | | |
|-------------------------------------|-------------------------------|
| ▪ William Dale, MD, PhD* | ▪ Ashley E. Rosko, MD |
| ▪ Heidi D. Klepin, MD, MS* | ▪ Tracy Ruegg, PhD, ANP |
| ▪ Supriya G. Mohile, MD, MS* | ▪ Melody K. Schiaffino, PhD |
| ▪ Shabbir M. H. Alibhai, MD | ▪ John F. Simmons, Jr., MD^ |
| ▪ Cristiane Bergerot, PhD | ▪ Ishwaria Subbiah, MD |
| ▪ Karlynn Brintzenhofesoc, PhD, MSW | ▪ William P. Tew, MD |
| ▪ Judith O. Hopkins, MD | ▪ Tracy L. Webb, PA-C |
| ▪ Minaxi P. Jhaver, MD | ▪ Grant R. Williams, MD, MSPH |
| ▪ Kah Poh Loh, MBBCh BAO, MS | ▪ Mary Whitehead^ |
| ▪ Lisa M. Lowenstein, PhD | ▪ Mark R. Somerfield, PhD |

Other Contributors:

- | | |
|-----------------------------------|--|
| ▪ June M. McKoy, MD, MPD, JD, MBA | ▪ Vani Katheria, MS, Drs. Alicia Morgans, Marlana Orloff & the Evidence-Based Medicine Committee |
| ▪ Vanita Noronha, MD | |
| ▪ Tanyanika Phillips, MD | |
- *Expert Panel Co-Chairs ^Patient Advocates



LESSONS LEARNED

- Define the **mission**
- Engage all who are **passionate** about the mission
- Create a culture of **collaboration**
- Embrace **inclusivity**
- Ensure **patient partners** are contributing and leading
- Think **outside the box** (and the institution)
- Create opportunities for leadership and **action**
- Identify opportunities to build **infrastructure** to support the mission
- Engage **stakeholders** to promote the mission
- Support a **pipeline** of colleagues to continue innovation and extend reach



A. Hurria



Dr. Hurria's favorite proverb:

“If you want to go fast, go alone. If you want to go far, go together.”

We welcome all to join us so we can go far together in achieving our collective goal of improving the care of older adults with cancer.

The only requirement for membership is the desire to help older adults with cancer.

To join the Cancer and Aging Research Group, please submit your inquiry at https://www.mycarg.org/?page_id=150 or email us at CARinG@coh.org

REFERENCES

- Sedrak MS, Li D, Walter LC, Mustian K, High KP, Canin B, Mohile SG, Dale W, Sun CL. Cores for geriatric oncology infrastructure in the Cancer and Aging Research Group: Biostatistics, epidemiology, and research design (the analytics core). *J Geriatr Oncol*. 2020 Mar;11(2):355-358. doi: 10.1016/j.jgo.2019.07.013. Epub 2019 Jul 17. PMID: 31326391; PMCID: PMC6980442.
- Wong ML, Lichtman SM, Morrow GR, Simmons J, Hargraves T, Gross CP, Lund JL, Lowenstein LM, Walter LC, McDermott CL, Mohile SG, Cohen HJ. Geriatric oncology health services research: Cancer and Aging Research Group infrastructure core. *J Geriatr Oncol*. 2020 Mar;11(2):350-354. doi: 10.1016/j.jgo.2019.07.012. Epub 2019 Jul 17. PMID: 31326392; PMCID: PMC6980419.
- Subbiah IM, Lundebjerg N, Appleby J, Wallach G, Beilenson J, Dale W. Development of a strategic plan for the dissemination and communication of aging research through the Cancer and Aging Research Group (CARG) infrastructure grant. *J Geriatr Oncol*. 2020 Mar;11(2):359-360. doi: 10.1016/j.jgo.2019.07.008. Epub 2019 Jul 25. PMID: 31353236; PMCID: PMC6981062.
- Elias R, Loh KP, Targia V, Whitehead M, Canin B, Jatoi A, Loscalzo M, Mohile S. Behavioral, psychological, and supportive care interventions in geriatric oncology: The Cancer and Aging Research 146 Group infrastructure core. *J Geriatr Oncol*. 2020 Mar;11(2):347-349. doi: 10.1016/j.jgo.2019.07.019. Epub 2019 Aug 2. PMID: 31383630; PMCID: PMC6995425.
- Mohile S, Dumontier C, Mian H, Loh KP, Williams GR, Wildes TM, Boyd K, Ramsdale E, Pyne S, Magnuson A, Tew W, Klepin HD, Dale W, Shahrokni A. Perspectives from the Cancer and Aging Research Group: Caring for the vulnerable older patient with cancer and their caregivers during the COVID-19 crisis in the United States. *J Geriatr Oncol*. 2020 Jun;11(5):753-760. doi: 10.1016/j.jgo.2020.04.010. Epub 2020 Apr 21. PMID: 32340908; PMCID: PMC7172832.
- Koll TT, Magnuson A, Dale W, LaBarge MA, Leach CR, Mohile S, Muss H, Sedenquist M, Klepin HD. Developing a clinical and biological measures of aging core: Cancer and Aging Research Group infrastructure. *J Geriatr Oncol*. 2020 Mar;11(2)
- Anand M, Magnuson A, Patil A, Nuristani H, Plumb S, Obrecht S, Katheria V, Mohile S, Dale W. Developing sustainable national infrastructure supporting high-impact research to improve the care of older adults with cancer: A Delphi investigation of geriatric oncology experts. *J Geriatr Oncol*. 2020 Mar;11(2):338-342. doi: 10.1016/j.jgo.2019.09.007. Epub 2019 Oct 22. PMID: 31648952; PMCID: PMC7054168.
- Gilmore NJ, Canin B, Whitehead M, Sedenquist M, Griggs L, Finch L, Grossman V, Targia V, Wells M, Kamen C, Flannery M, Magnuson A, Plumb S, Obrecht S, Lowenstein LM, Lopez G, Anderson J, Berenberg J, Vogel V, Bearden J, Dale W, Mohile SG. Engaging older patients with cancer and their caregivers as partners in cancer research. *Cancer*. 2019 Dec 1;125(23):4124-4133. doi: 10.1002/cncr.32402. Epub 2019 Aug 16. PMID: 31420878; PMCID: PMC6856383.
- Rosko AE, Steer C, Chien LC, Zittel J, Artz A, Chow S, Plotkin E, Dale W, Elias R, Chapman AE. The Cancer and Aging Research Group (CARG) infrastructure: The clinical implementation core *J Geriatr Oncol*. 2021 Nov;12(8):1164-1165