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Aging & Cancer Research Joint Retreat Report



Executive Summary

The **Aging and Cancer Research Joint Retreat** brought together researchers, clinicians, and community leaders to address the growing challenges of cancer care in an aging population. Opening remarks by **Dr. Eric Winer** highlighted demographic trends: older adults now represent 18% of the U.S. population, and by 2040, nearly three-quarters of cancer survivors will be age 65 or older. This shift underscores the need for research and care models that account for complex comorbidities and social determinants of health.

Community perspectives, shared by **Dr. Melissa Lang**, emphasized that chronological age does not reflect functional status. Social drivers such as transportation, nutrition, and housing strongly influence outcomes. Community service providers, advocates, and leaders called for better coordination, data sharing, and workforce development to meet rising demands.

Survey data presented by AARP's **Nora Duncan** revealed that Connecticut residents aged 45+ prioritize mental sharpness, affordable healthcare, and aging in place. Caregiving is widespread, and concerns about prescription costs and financial security remain high. The Alzheimer's Association's **Carolyn DeRocco** highlighted the significant impact among caregivers and stark racial and gender disparities of Alzheimer's disease and dementia on older adults, which can affect cancer treatment decision-making, adherence, and tolerance, requiring more personalized and supportive care strategies.

Clinical research presentations addressed screening, prevention, and survivorship. **Dr. Douglas Brash** discussed genetic and environmental factors in late-age skin cancer risk, while **Dr. Amy Justice** demonstrated that physiological age predicts screening benefit better than chronological age. **Dr. Lajos Pusztai** explored how inherited and acquired mutations interact with aging to drive cancer risk, and **Dr. Xuehong Zhang** linked chronic inflammation and diet to liver cancer development in older adults.

Survivorship studies by **Dr. Michaela Dinan** showed that frailty, cardiovascular disease, depression, and second primary cancers are common among long-term survivors, with age and prior health history as key predictors. **Dr. Jeffrey Townsend** highlighted how aging alters the genetic drivers of cancer, calling for age-informed precision oncology. **Dr. Ira Leeds** and **Dr. Cary Gross** stressed the importance of addressing psychosocial vulnerability and unmet social needs, noting that older patients often lack access to coordinated support and are underrepresented in clinical trials.

Key Takeaways:

- Aging is the strongest risk factor for cancer and shapes treatment response.
- Social and behavioral risks associated with aging significantly affect surgical and survivorship outcomes
- Screening and care decisions should be personalized using validated tools and supportive care.
- Community partnerships and integrated support systems are essential for equitable care of older cancer patients.

Dr. Tracy Battaglia concluded the retreat reiterating our collective commitment to advance research, improve care models, and foster community collaboration to meet the needs of older adults with cancer. The retreat planning committee is launching a Cancer & Aging Research Alliance to continue this collaborative work.

I. Introduction

The **Aging and Cancer Research Joint Retreat**, co-hosted by Yale Cancer Center and the Agency on Aging of South Central Connecticut, aimed to bring together researchers across disciplines and community partners to explore the intersection of aging and cancer and foster new collaborations and new research directions to support the needs of older adults in Connecticut communities.

This event was the product of several years of partnership, collaboration, and community engagement. Leaders from both the Yale Cancer Center—including the Cancer Prevention and Control Research Program, the Genomic, Genetics, & Epigenetics Research Program, the Community Outreach and Engagement component, and the Office of Research Affairs—collaborated with leaders from the Agency on Aging of South Central Connecticut to invite community leaders, scientists and physicians, trainees and aging experts across Connecticut to convene and to learn from one another to advance the science of aging and cancer and ensure that Yale Cancer Center research is responsive to the needs of our Connecticut communities.

This event was intentionally co-created as a community-academic partnered event. Community members bring valuable lived experiences and perspectives to research conversations. To build trust and engagement across diverse sectors serving older adult populations in Connecticut, it is important to learn and to share our knowledge and expertise with one another. Researchers aimed to share scientific findings in clear, accessible ways. Civic leaders and service providers aimed to share community knowledge and expertise to inform new science. The Agency on Aging of South Central Connecticut held conversations with community partners and selected community invitees. The Yale Cancer Center shared an Aging and Cancer in Connecticut: Community Data Snapshot, 2025 to ground participants in the local cancer data and invited scientists to attend. We hope this event, grounded in collaboration is the start of an ongoing initiative moving forward in partnership.

Sixty-three attendees actively participated in an engaging program that included speakers, question and answer opportunities, and breakout discussions on topics related to aging and cancer. Attendees were very engaged throughout. Of the 73% who completed the event evaluation, participants reported high overall satisfaction and found the retreat program relevant to their work across research and community engagement.

Yale Cancer Center (YCC) has committed to fund pilot projects in aging and cancer through donor funds set aside as part of the YCC Cancer Care Equity Pilot Awards. The Agency on Aging of South Central Connecticut has committed to producing an ongoing newsletter for this initiative. We look forward to sharing this report on our event and continuing to collaborate into the future to serve our aging population in Connecticut.

II. Planning Committee

Agency on Aging of South Central CT (AoASCC)

Dr. Beverly Kidder, Dr. Melissa Lang

Yale Cancer Center

Community Outreach and Engagement (COE): Dr. Tracy Battaglia, Melissa Hughes, Dr. Jessica Lewis, Amelea Lowery, Imran Saeed, Erin Singleton, Dr. Sakinah Suttiratana

Cancer Prevention Control (CPC) Co-Leaders: Dr. Michaela Dinan, Dr. Xiaomei Ma

Genomics, Genetics and Epigenetics (GGE) Co-Leaders: Dr. Lajos Pusztai, Dr. Jeffrey Townsend, Dr. Qin Yan

Office of Research Affairs Director: Dr. Edward Kaftan

Special thank you & acknowledgement to our planning committee, our speakers, and our attendees, without whom, this event would not have been possible (*in alphabetical order*).

III. Attendees

The retreat brought together a broad and collaborative group of stakeholders committed to advance aging and cancer research. A total of 63 individuals participated in the retreat, representing research faculty, clinical providers, community partners, trainees and program staff. The varied mix of roles created a dynamic environment that supported active dialogue, cross disciplinary learning, and shared problem solving. Moreover, the range of perspectives from the participants enriched discussions during plenary sessions and break out groups allowing participants to explore the challenges pertaining to aging and cancer through clinical, scientific and community- focused lenses.

IV. Agenda

Aging and Cancer Research Joint Retreat
October 15, 2025, 8:30am-4pm
Yale West Campus, Conference Room A

Sponsored by Yale Cancer Center (CPC, COE, GGE) and the Agency on Aging of South Central CT

- 8:30-8:45** **Check-in and breakfast**
- 8:45-9:15** **Welcome and Introduction**
Eric Winer, MD
- 9:15-10:15** **Community Needs and Priorities for Aging and Cancer Research**
Moderator: Melissa Lang, DrPH, MPH, MPA, MA
[Nora Duncan](#), State Director, Connecticut AARP
[Melissa Lang](#), DrPH, MPH, MPA, MA, President and CEO, AOASCC
[Carolyn DeRocco](#) Vice President of Programs and Education, Alzheimer’s Association, Connecticut Chapter
- 10:15-10:30** **Break**
- 10:30-12:00** **Screening and Diagnosis Research Presentations**
Moderators: [Xiaomei Ma, PhD](#), Jeffrey Townsend, PhD
[Douglas Brash, PhD](#): Predicting Individual Risk of Late-Age Skin Cancer
[Amy Justice, MD, PhD](#): Chronological versus Physiological Age in Cancer Screening
[Lajos Pusztai, MD, DPhil](#): Genes, Aging, and Cancer Risk
[Xuehong Zhang, MBBS, MSc, ScD](#): Fostering Collaboration in Aging and Liver Cancer: Nutrition, Proteomics, and Pathways to Early Detection and Diagnosis
- 12:00-1:00** **Lunch and Future Directions in Screening & Diagnosis Research and Collaborations Breakout Session**
- 1:00-2:30** **Treatment & Survivorship Research Presentations**
Moderators: [Tracy Battaglia, MD, MPH, Qin Yan, PhD](#)
[Michaela Dinan, PhD](#): Long-term Cancer Survivorship in Patients over Age 65
[Jeffrey Townsend, PhD](#): Why Cancer Isn’t the Same at Every Age: Lessons for Prevention and Care
[Ira Leeds, MD, FACS, FASCRS](#): Left Behind: Surgical Cancer Care and Psychosocial Vulnerability
[Cary Gross, MD](#): Assessing Clinical and Social needs in the Geriatric Cancer Population
- 2:30-3:00** **Future Directions in Treatment & Survivorship Research and Collaborations Breakout Session**
- 3:00-4:00** **Closing & Networking Hour**
Tracy Battaglia, MD, MPH

V. Presentation Overviews

Opening Remarks - Dr. Eric Winer

Dr. Eric Winer, Director of Yale Cancer Center and President and Physician-in-Chief of Smilow Cancer Hospital, graciously opened the event, emphasizing the importance of collaboration to address scientific and community perspectives on this growing public health challenge.

As Dr. Winer shared, demographic trends underscore the urgency: the U.S. population aged 65 and older has risen steadily, now representing 18% of the population compared to 12.4% in 2004. Connecticut's median age is 41.1, higher than the national average, and nearly a quarter of its residents are over 60. This aging trend correlates with cancer risk, which increases significantly with age. While cancer mortality rates have improved over recent decades, the number of older cancer survivors continues to grow. Projections suggest that by 2040, 73% of U.S. cancer survivors will be 65 or older, many facing complex comorbidities.

Key challenges include: older patients are underrepresented in research and often undertreated. Their tumors exhibit variable biology, and they face unique barriers to care, including multiple chronic conditions and socioeconomic disparities. In Connecticut, 62% of adults over 65 have four or more chronic conditions, and 7% live below the poverty line.

The event's goals included fostering dialogue between researchers and community partners, identifying new research questions, and promoting health equity for older adults. Future Yale Cancer Center initiatives will support innovative projects through **YCC Cancer Care Equity Pilot Awards** focused on aging and cancer.

COMMUNITY NEEDS AND PRIORITIES FOR AGING AND CANCER RESEARCH

Aging and Cancer: Connecticut Community Providers & Advocates

Dr. Melissa Lang, President and CEO of the Agency on Aging of South Central Connecticut, presented themes from conversations she had with leaders from across Connecticut representing senior housing, geriatric care, adult day services, hospice, cancer support, and dementia care, in expectation of this event. These discussions centered on the growing complexity of caring for older adults as life expectancy rises and chronic conditions become more prevalent. Leaders emphasized that chronological age alone does not reflect functional status or quality of life, and families will increasingly shoulder caregiving responsibilities. Community organizations expressed concern about meeting these demands and highlighted the need for research, data sharing, and partnerships to improve coordination and funding.

Key themes emerged around the intersection of aging and cancer. Social drivers of health—such as transportation, nutrition, housing, and mental health—play a critical role in outcomes for older adults. Community leaders shared how socioeconomic status, race, and ethnicity influence cancer care and survivorship. Managing cancer alongside multiple chronic conditions was identified as a major challenge, with discussions on polypharmacy, pain management, and the impact of limited technology proficiency on treatment adherence. Community education programs promoting healthy behaviors and self-management were seen as vital interventions.

These conversations also addressed sensitive issues such as palliative and end-of-life care, disparities in hospice referrals, and the need for earlier communication about goals of care. Concerns about ageism in healthcare and research were raised, including underrepresentation of older adults in clinical trials and differential treatment approaches. Finally, community constituents stressed the importance of communication and partnerships—sharing data, educating communities, advocating for systemic change, and developing a workforce equipped to meet the needs of aging populations while respecting patient autonomy and compliance requirements.

Vital Voices: Connecticut Data

Nora Duncan, State Director of Connecticut AARP, shared insights from the Vital Voices Research Project, AARP's July 2023 survey of Connecticut residents aged 45 and older, highlighting issues that shape health, financial security, and livable communities. The survey, which included over 900 interviews, revealed that staying mentally sharp and having adequate health insurance are top priorities, alongside concerns about affording healthcare costs and prescription drugs. These affordability concerns were even more pronounced among African American/Black and Hispanic/Latino respondents.

Caregiving emerged as a significant theme, with nearly 60% of respondents currently or previously providing unpaid care to an adult relative or friend. Most participants—about 80%—expressed a strong preference for receiving care at home rather than in institutional settings. Prescription drug costs remain a major worry, with two-thirds of respondents concerned about future affordability, and this concern was highest among minority populations.

Financial security is another pressing issue. Respondents ranked having enough income or savings for retirement and affording basic necessities among their top concerns. While 43% feel more prepared for retirement than their peers, nearly one-third feel less prepared, and only a minority have developed detailed plans for care or living arrangements. Social Security remains a critical lifeline, with 41% expecting it to be a major source of retirement income and 9% relying on it exclusively.

Finally, livable communities matter deeply to older adults. Independence in transportation and aging in place were cited as extremely important by more than four in five respondents. However, two-thirds expressed concern about Connecticut's high cost of living, and affordability was the leading reason some would consider leaving their neighborhoods. Safety, neighborhood character, and proximity to family and services were key factors for staying.

Impact of Dementia & Alzheimer's in our Community

Caroyln DeRocco, Vice President of Programs and Education at the Connecticut Chapter of the Alzheimer's Association shared the growing impact of Alzheimer's disease and dementia on older adults in Connecticut, highlighting both the personal and societal dimensions of these conditions. One in three older adults dies with Alzheimer's or another dementia. Alzheimer's disease kills more people than breast cancer and prostate cancer

combined. And nearly 12 million people in the U.S. provide unpaid care for people with Alzheimer's or another dementia.

Key themes included sobering statistics: Black Americans are twice as likely as White Americans to develop Alzheimer's, and Hispanic Americans face a 1.5 times higher risk. These disparities are compounded by socioeconomic challenges such as poverty and limited access to quality healthcare, which reduce the likelihood of early diagnosis and participation in clinical trials. The presentation also emphasized the disproportionate impact on women—two-thirds of Americans living with Alzheimer's are women, and women in their 60s are more than twice as likely to develop Alzheimer's as breast cancer.

The Alzheimer's Association is committed to health equity. The organization is working to engage underserved communities, provide culturally relevant resources, and promote education to ensure fair access to diagnosis, risk reduction, and quality care. The discussion reinforced the importance of diverse perspectives in research and care strategies, aiming to close gaps and improve outcomes for all populations.

SCREENING AND DIAGNOSIS RESEARCH

Predicting Individual Risk of Late-Age Skin Cancer

Dr. Douglas Brash, Senior Research Scientist in Therapeutic Radiology and in Dermatology and Clinical Professor of Therapeutic Radiology, discussed why some people develop skin cancer later in life and how science is working to predict who is most at risk. The key message was that melanoma, a serious type of skin cancer, is almost always curable if caught early—but many cases are missed because primary care doctors are not trained to spot it. That is why researchers want better ways to identify people who should get regular skin checks.

Two main factors drive risk: your genes and your history of sun exposure. Genetics play a role in things like skin color and how well your body repairs DNA damage, but past exposure to ultraviolet (UV) light from the sun is by far the biggest factor. Instead of relying on memory—like asking if you had sunburns as a child—scientists are developing tests that can measure signs of past sun damage in your DNA.

The culprit behind this damage is something called CPDs, tiny changes in DNA caused by UV light. These changes can lead to mutations that trigger cancer. New tools now allow researchers to map where this damage occurs and how it builds up over time. Interestingly, the damage tends to stick around in parts of the DNA that are “turned off” or waiting to be activated, and it clusters in spots where important proteins bind—making repair harder.

The presentation also connected this research to aging. Our ability to repair DNA damage is linked to how long we live—species with better repair systems tend to live longer. As we age, these repair systems slow down, leaving more damage behind. Scientists are even studying biological “UV meters” in the skin, like certain patterns of mutations, to estimate how much sun exposure someone has had over their lifetime.

This research is paving the way for personalized skin cancer risk assessments, which could help doctors focus screening on those who need it most and catch cancers early when they are easiest to treat.

Chronological versus Physiological Age in Cancer Screening

Dr. Amy Justice, Professor of Internal Medicine and Health Policy, presented her work on how cancer screening decisions for older adults should consider more than just chronological age. Screening tests aim to balance short-term risks—such as discomfort, radiation exposure, anxiety, and unnecessary treatment—against long-term benefits like improved survival. Current U.S. guidelines often set age-based cutoffs for screening, but these can be misleading because they do not account for individual health differences.

The talk highlighted that strict adherence to disease-specific guidelines can create problems for older adults with multiple chronic conditions, leading to complex care and medication overload. Instead, decisions should factor in life expectancy: if someone is likely to live more than 10 years, screening may make sense; if life expectancy is shorter, care should focus on comfort and symptom management.

Dr. Justice explained why age alone is not a reliable measure. People with chronic illnesses such as diabetes or HIV often experience accelerated physiological aging, meaning their bodies function as if they were older than their actual age. Using data from over 6.5 million U.S. veterans, her team developed the VACS-CCI index, which combines clinical markers and comorbidities to estimate survival more accurately than age alone. For example, a 65-year-old veteran with diabetes may have the same 10-year survival outlook as a healthy 72-year-old, and someone with HIV may appear 11 years “older” physiologically.

Her research suggests that screening guidelines should move toward personalized assessments using validated tools rather than rigid age thresholds. Online calculators like VACS-CCI are now available to help clinicians estimate survival and guide discussions with patients about their preferences and priorities.

Genes, Aging, and Cancer Risk

Dr. Lajos Pusztai, Professor of Medical Oncology, presented on why some women develop breast cancer decades earlier than others, even when they do not carry well-known inherited mutations such as BRCA. Age remains the strongest risk factor for breast cancer, but research suggests that accelerated molecular aging in breast tissue may play a role in early onset disease. Studies have shown that normal breast tissue in women who later develop cancer exhibits more signs of molecular aging compared to those who remain cancer-free.

Dr. Pusztai emphasized that every individual is born with thousands of genetic variants, some of which affect proteins involved in cancer biology. These inherited variants, although rare and unique to each person, may combine to influence cancer risk by destabilizing cellular systems. Over a lifetime, additional mutations accumulate due to environmental exposures and natural aging. Cancer appears to result from a unique combination of inherited and acquired mutations that collectively disrupt cellular integrity.

Data indicate that younger patients often have a higher burden of inherited mutations and fewer acquired mutations, while older patients show the opposite pattern. The relative contribution of inherited versus acquired mutations also varies by cancer type. For example, cancers linked to carcinogen exposure tend to have more acquired mutations, whereas others rely more on inherited changes.

Dr. Puztai proposed a conceptual model viewing cancer as a failure of a complex biological system. He introduced the idea of a “Cancer Gene Systems Integrity Score” that could measure the combined impact of all relevant genetic alterations—both inherited and acquired—within a cell. Such a score could help predict cancer risk as it evolves over time and guide personalized prevention strategies.

The ultimate goal is to develop tests that capture the cumulative effect of aging and environmental exposures on genomic integrity, providing a more accurate assessment of cancer risk than age alone.

Fostering Collaboration in Aging and Liver Cancer: Nutrition, Proteomics, and Pathways to Early Detection and Diagnosis

Dr. Xuehong Zhang, Associate Dean of Research & Professor at Yale School of Nursing, presented an overview of the growing burden of liver cancer and its strong connection to aging. Liver cancer is currently the sixth most common cancer worldwide and the third leading cause of cancer-related death. In the United States, its incidence has tripled since the 1980s and is projected to become the third leading cause of cancer death by 2040. Most cases are diagnosed at late stages, and the five-year survival rate remains very low at 10–20 percent. Notably, 30 percent of cases cannot be explained by known risk factors, suggesting that unidentified contributors may play a role.

Aging emerged as the most significant risk factor for liver cancer, with more than 80% of cases diagnosed in individuals over 70 years of age. Aging affects liver function at both the organ and cellular levels, influencing metabolism, immunity, and detoxification. These changes contribute to systemic diseases such as cardiometabolic disorders and neurodegenerative conditions. The liver is also a key target for interventions aimed at extending longevity through nutritional and pharmacological strategies.

The presentation highlighted shared biological mechanisms between aging and cancer, including chronic inflammation, genomic instability, and epigenetic changes. Dr. Zhang introduced the concept of “inflammaging,” a state of chronic low-grade inflammation that accelerates aging and may drive liver cancer development. Epidemiological studies show that aging biomarkers, such as telomere length and frailty indices, are associated with chronic liver disease and liver cancer risk.

Proteomics research conducted by Dr. Zhang’s team has identified inflammatory proteins as key pathways linked to liver cancer. Several proteins, including CHI3L1, IL1RN, and SELE, were validated in large cohorts, reinforcing the role of inflammation in liver carcinogenesis. Dietary patterns also play a critical role: diets high in ultra-processed foods, sugary beverages, and red meat increase risk, while diets rich in whole grains, vegetables, and coffee are protective. Lifestyle factors such as obesity and physical inactivity further elevate risk, whereas brisk walking has been associated with lower liver cancer incidence.

Future research will leverage large biobanks and advanced molecular profiling to quantify inflammaging, uncover mechanisms linking genetics, aging, and chronic inflammation, and develop targeted prevention strategies. These efforts aim to improve early detection, guide precision medicine, and identify actionable interventions to reduce liver cancer risk in aging populations.

TREATMENT & SURVIVORSHIP RESEARCH PRESENTATIONS

Long-term Cancer Survivorship in Patients over Age 65

Dr. Michaela Dinan, Professor of Epidemiology, presented her research on the health challenges faced by older adults who have survived cancer for five years or more. Advances in early detection and treatment mean that two-thirds of cancer patients now live beyond five years after diagnosis. Because the median age at diagnosis is about 66 years, many survivors are older and at risk for conditions unrelated to their original cancer.

Dr. Dinan's study focused on breast, prostate, and colorectal cancer survivors using Medicare data. It examined risks for frailty, cardiovascular disease (CVD), depression, second primary cancers, and late recurrence. Key findings include:

- **Frailty:** Frailty increased sharply over time. Between five and ten years after diagnosis, 61% of survivors developed new or worsening frailty. The strongest predictors were prior frailty, older age, and multiple medical conditions. Cancer treatments had little effect, except when treatment occurred late (years 4-5), which may indicate recurrent disease.
- **Cardiovascular Disease:** About 18% of survivors experienced major cardiac events between years 5 and 15. Age and prior heart disease were the main predictors. Cancer stage and treatment had minimal impact, suggesting that general heart health models may be sufficient for predicting risk.
- **Depression:** About 10-15% of survivors were diagnosed with depression between years 5 and 10. The greatest risk factor was a prior history of depression. When those patients were excluded, anxiety, multiple comorbidities, and poverty were the strongest predictors. Cancer treatments were not major contributors except for hormone therapy in prostate cancer.
- **Second Primary Cancers:** Between 7-9% of survivors developed a new, unrelated cancer within 5-10 years. Lung cancer was the most common second cancer across all groups. This suggests that screening for other cancers may be important for long-term survivors.
- **Late Recurrence:** Recurrence after 5 years was uncommon overall but more frequent in patients with advanced stage disease at diagnosis. For example, stage III breast cancer patients had a 20% risk of recurrence between years five and ten.

Simple models can predict some late health problems, such as frailty and cardiovascular disease, using basic factors like age, prior health conditions, and early signs of the same condition. Cancer treatment details were less useful for predicting long-term risks. The high rate of second primary cancers highlights the need for continued screening and tailored survivorship care for older adults.

Why Cancer Isn't the Same at Every Age: Lessons for Prevention and Care

Dr. Jeffrey Townsend, Professor of Biostatistics & Professor of Ecology and Evolutionary Biology at Yale School of Public Health, presented research showing that cancer risk and treatment effectiveness change significantly with age. Cancer incidence rises sharply as people get older, and this increase is not only due to the accumulation of mutations over time. There is also age-related degradation of the cellular landscape. We have the technology to be able to tell patients the mutational causes of their cancer.

The presentation explained that mutations in cancer cells can either occur frequently or give cells a survival advantage. These advantages shift with age. For example, in melanoma, BRAF mutations are more important in younger patients, while NRAS mutations become more influential in older adults. This means that younger patients may benefit more from targeted drugs like BRAF/MEK inhibitors, while older patients may respond better to immune-based therapies or future NRAS inhibitors.

Similar patterns were observed in other cancers. In pancreatic cancer, TP53 mutations play a larger role in younger patients, while KRAS mutations dominate in older adults. In breast cancer, certain PIK3CA mutations matter more in younger patients and less in older ones. These findings suggest that treatment plans should consider age when deciding which genetic targets to prioritize.

The research highlights three key implications:

- **Diagnostics:** Genetic testing panels should weigh mutations differently based on age.
- **Therapy selection:** When multiple treatment options exist, clinicians should focus on the mutation most relevant for the patient's age group.
- **Clinical trials:** Studies should stratify participants by age to better understand treatment effects.

Age influences which genetic changes drive cancer and how treatments work. Incorporating age into testing, treatment decisions, and trial design can improve outcomes and support more personalized cancer care.

Left Behind: Surgical Cancer Care and Psychosocial Vulnerability

Dr. Ira Leeds, MD, FACS, FASCRS, Assistant Professor of Surgery, presented research on how psychosocial and social risk factors affect outcomes for older adults undergoing cancer surgery. Dr. Leeds emphasized that surgical care does not occur in isolation. Patients bring with them medical conditions, mental health challenges, and social vulnerabilities that can influence recovery and long-term health.

Traditional surgical risk assessments focus on disease-specific and biomedical factors such as tumor type, heart disease, or diabetes. However, psychosocial risks—such as depression, housing insecurity, and lack of transportation—also play a major role in recovery. Data from 142 patients showed that those with psychosocial risk factors had significantly worse outcomes. Patients with two or more psychosocial risks were more than three times as likely to experience complications after surgery compared to those without these risks. Common

psychosocial risks include depression, high-risk alcohol use, and food insecurity. These factors often cluster together and amplify vulnerability. Current methods for identifying these risks are inconsistent. Researcher surveys and bedside assessments often disagree, highlighting the need for better screening tools.

It is not yet clear which psychosocial factors matter most or how best to address them before surgery. However, evidence suggests that intervening early—through “prehabilitation” programs that provide mental health support, social services, and education—could improve outcomes. Interviews with patients revealed that social determinants of health, such as transportation and housing, can directly lead to complications by limiting access to care and recovery resources.

Dr. Leeds proposed developing standardized screening for social and behavioral risks and integrating supportive interventions into surgical care. Two approaches were discussed: a minimalist model that focuses on the highest-risk patients and a maximalist model that offers broad support to all surgical patients. Both strategies aim to reduce complications and improve quality of life for older adults.

Surgical success depends on more than technical skill. Addressing psychosocial and social vulnerabilities is essential for improving outcomes in older cancer patients. This research calls for a shift toward holistic care that combines medical treatment with social and behavioral support.

Assessing Clinical and Social needs in the Geriatric Cancer Population

Dr. Cary Gross, Professor of Medicine and of Epidemiology, presented research on the challenges faced by older adults with cancer, focusing on both medical and social needs. He highlighted that cancer care for older patients is complex because it often involves managing other health conditions, functional limitations, and social factors alongside cancer treatment. Dr. Gross shared key medical insights, including:

- Many older cancer patients die from non-cancer causes such as heart disease and frailty, even after surviving their initial cancer.
- Geriatric assessments can help predict treatment toxicity and identify risks such as frailty, which is common among older survivors.
- Older adults are underrepresented in clinical trials, meaning that evidence guiding treatment decisions for this population is limited.
- Data show that older patients may not benefit as much from new cancer therapies, such as immunotherapy, compared to younger patients. This raises concerns about equity and effectiveness in real-world care.

Dr. Gross shared findings from interviews with leaders of community-based organizations (CBOs) that provide services such as food assistance, transportation, and financial support. CBO leaders reported that their services often fall short of meeting patient needs due to limited resources and fragmented referral systems. Common gaps include transportation, financial assistance, and access to nutritious food. Older or socially isolated patients are at particular risk of missing out on support because they may not know what services exist or lack the ability to navigate multiple organizations. There is strong interest among CBOs in creating a coordinated social care

network to streamline referrals and improve patient-centered care, but barriers such as funding, staffing, and technology remain.

Older cancer patients face dual challenges: managing complex medical conditions and addressing unmet social needs. Current systems are fragmented, and older adults are often excluded from research that informs treatment guidelines. Improving care will require better integration of medical and social services, more inclusive research, and coordinated networks that reduce the burden on patients to find and access support.

VI. Breakout Discussion Themes

Attendees participated in breakout discussions after each section of the scientific presentations to discuss future directions for the research and collaborations that could be formed. Attendees self-selected which speaker's breakout session they joined. A moderator, a community advocate, and a scribe were assigned to each group. A set of questions helped direct conversations toward future research directions, collaboration opportunities, and community engagement opportunities. The questions we asked each group to consider included:

- What new directions or next steps can we take to move this research forward?
- What partnerships can we build to collaborate in this research area?
- What are the community priorities in this research area?
- What are the funding and support needs to bring this research to the next level?

Collated insights from notes taken during each breakout session are presented. Themes included:

1. Nutrition and Cancer Prevention

- Culturally Relevant Education: Communities at risk for liver cancer need accessible nutrition guidance, such as 'healthy plate' visuals tailored to cultural food norms.
- Diet Quality and Molecular Pathways: Poor diet influences cancer risk through mechanisms like insulin resistance and hormone disruption, impacting liver, breast, and prostate cancers.
- Precision Nutrition: Research should explore individualized dietary strategies for cancer prevention among older adults.

2. Inclusion of Older Adults in Research

- Underrepresentation in Clinical Trials: Strict eligibility criteria exclude many older adults, limiting the applicability of findings.
- Accessibility and Compensation: Transportation, travel stipends, caregiver support/engagement and relationship-building are critical for engaging older adults in research.
- Policy Advocacy: Push for requirements to include a percentage of older adults in clinical trials.

3. Community Engagement and Communication

- Bridging the Research Gap: Plain language specialists are needed to translate scientific findings into community-friendly formats.
- Accessible Dissemination: Improve how YCC shares research updates with the public, ensuring clarity and cultural relevance.
- Alternative Outreach Venues: Move beyond academic settings to informal spaces such as community gatherings, senior centers, and 'Walk with a Doc' events.
- Feedback Loops: Ensure research results are returned to communities in clear, actionable ways.

4. Psychosocial and Spiritual Dimensions of Aging

- Aging as a Continuum: Consider physical, psychological, spiritual, and motivational aspects across life stages.
- Purpose and Legacy: These themes strongly influence mental health and quality of life for older adults.
- Safe Spaces for Sensitive Topics: Hospice, survivorship, and end-of-life care discussions should be non-judgmental and culturally sensitive.

5. Research and Collaboration Opportunities

- Environmental and Dietary Exposure Analysis: Use existing sample data to study liver cancer risks.
- Pharmaceutical Safety: Conduct cost-benefit and safety analyses for elderly populations.
- Early Detection Partnerships: Work with primary care providers for better screening and referrals.
- Community-Based Geriatrics Education: Train providers and caregivers to bridge hospital-to-community care.
- Collaborate with Existing Programs: Examples include Dr. Richard Meritola's COACH initiative and federally funded geriatrics education projects.
- Coordination across social service organizations in the community: gaps exist between organizations and with clinical practices and researchers

VIII. Next Steps

The Aging & Cancer Joint Retreat underscored the importance of sustained collaboration to address the complex intersection of aging and cancer. To advance this work, we will establish the **Cancer and Aging Research Alliance (CARA)** as a dedicated platform for ongoing engagement. All attendees are invited to join this working group as we move forward.

In 2026, CARA will focus on building a strong foundation for this initiative by issuing a call for participants, setting a meeting cadence, defining goals, and identifying community-informed priorities. We will assign responsibilities, establish timelines, and develop metrics to evaluate progress.

Feedback from retreat participants highlighted critical priorities, including improving access to age-inclusive clinical trials, enhancing survivorship and care coordination, and expanding community education on cancer screening, prevention, palliative care, and survivorship for older adults. Several attendees expressed plans to pursue grant funding and collaborate with community partners, leveraging YCC Community Outreach and Engagement resources. These efforts will be integral to CARA's mission.

Looking ahead, the Agency on Aging of South Central Connecticut will lead the development of ***The Continuum***, a collaborative newsletter launching in 2026 to keep stakeholders informed about research and progress.

YCC will continue to engage the community through events and lectures on aging and cancer, and we will foster small research teams to develop proposals for the next round of **YCC Equity Awards**, which will feature a *Special Call for Aging and Cancer Research* in 2027.

Together, these initiatives represent a significant step toward advancing research, improving care, and strengthening community partnerships at the intersection of cancer and aging.

IX. Appendix

Aging and Cancer in Connecticut Community Data Snapshot, 2025