

Building Equitable Partnerships & Collaborations to Create Lung Cancer Survivors

NLCRT 6th Annual Meeting

December 5-6, 2022

*Grand Hyatt Hotel
Washington, DC*



NATIONAL
LUNG CANCER
ROUNDTABLE

Introduction	3
Meeting Overview.....	3
Table of Speakers with Presentation Links - Agenda Day 1	4
Table of Speakers with Presentation Links - Agenda Day 2	7
Presentation Highlights – Day 1	9
Session 1 – Welcome and Patient Advocate Story.....	9
Session 2 – Accelerating Uptake of Lung Cancer Screening	12
Session 3 – NLCRT Initiatives – Rapid Fire.....	16
Session 4 – Organization Initiatives – Rapid Fire	19
Session 5 – Updates in Science in A Multidisciplinary Tumor Board Discussion.....	22
Presentation Highlights - Day 2	26
Session 6 – Addressing Healthcare Equity in Lung Cancer.....	26
Session 7 – Community Engagement and Outreach	29
Session 8 – The Patient Perspective – Patient-Centered Care Across the Lung Cancer Continuum.....	32
Session 9 – The Systems Perspective – Patient-Centered Care Across the Lung Cancer Continuum.....	34

Introduction

On December 5-6, 2022, the American Cancer Society National Lung Cancer Roundtable (ACS NLCRT) convened its sixth Annual Meeting at the Grand Hyatt Hotel in Washington, DC. The theme of the in-person event was ***Building Equitable Partnerships and Collaborations to Create Lung Cancer Survivors.***

Established by the American Cancer Society in 2017, the ACS NLCRT works throughout the lung cancer continuum and has launched several successful initiatives around its strategic priorities: 1) accelerating implementation and uptake of, and adherence to, early detection (lung cancer screening and nodule detection and management); 2) improving guideline-concordant lung cancer staging and optimizing the use of biomarkers in practice; and 3) promoting initiatives to eliminate lung cancer-related stigma and nihilism. Additional priorities are to support and strengthen state and local initiatives, reduce disparities, and advance health equity in lung cancer care and outcomes.

The 2022 Annual Meeting hosted more than 300 participants and consisted of keynote and panel presentations, task group discussions, and collegial conversations among colleagues who were focused on the mission of building and supporting equitable partnerships and collaborations to create lung cancer survivors. Over the course of the two-day meeting, presentations were delivered on ACS NLCRT initiatives, patient advocate perspectives, scientific updates, ACS NLCRT organizational member projects, and success stories from state-based coalitions. Participants viewed more than 30 posters, engaged in live demonstrations of the ACS NLCRT LungPLAN™ software and the ACS NLCRT Lung Cancer Atlas and Story Maps websites, and learned more about partner and sponsor efforts.

The theme of the meeting recognizes the value of partnerships in public health interventions. Whether it be at the state, regional, or national level, these partnerships strengthen the work of the ACS NLCRT and expand its reach.

Meeting Overview

Day 1 began with the welcome session and a patient advocate story. The welcome session was followed by Session One, which included a keynote and panel on the topic of *Creating Lung Cancer Survivors Through State-Level Partnerships*. Session Two focused on *Accelerating Uptake of Lung Cancer Screening*, and Session Three described select *NLCRT Initiatives*. Finally, Session Four highlighted *Organization Initiatives*, and Session Five illustrated perspectives on the *Uptakes in Science in a Multidisciplinary Tumor Board Discussion*.

Day 2 began with a review of Day 1 topics and a second patient advocate story. Session Six included a keynote and a panel on *Addressing Health Care Equity in Lung Cancer*. Next, Session Seven delivered a presentation and panel on *Community Engagement and Outreach*. Session Eight focused on the patient perspective, in *Patient Perspective – Patient-Centered Care Across the Lung Cancer Continuum*. Session Nine provided the systems perspective in *Systems Perspective – Patient-Centered Care Across the Lung Cancer Continuum*. The meeting was adjourned after closing remarks.

This document highlights the diverse and impactful presentations given by partners in the lung cancer field during the two-day national meeting. It also includes information about the valuable sponsors and member organizations that make this work possible.

Table of Speakers with Presentation Links - Agenda Day 1

Monday, December 5, 2022
<i>Opening Session: Welcome and Patient Advocate Story</i>
<ul style="list-style-type: none"> • Welcome from the American Cancer Society National Lung Cancer Roundtable Ella A. Kazerooni, MD, MS, FACR, FACC, FSABI, NLCRT Chair, University of Michigan • Welcome from the American Cancer Society Arif H. Kamal, MD, MBA, MHS, FACP, FAAHPM, FASCO, American Cancer Society • Patient Advocate Story Natalie Brown, LUNgevity Foundation
<i>Session One: Keynote – Creating Lung Cancer Survivors Through State-Level Partnerships</i>
<ul style="list-style-type: none"> • CDC and State-Based Cancer Control for Lung Cancer Nikki Hayes, MPH, Centers for Disease Control and Prevention
<i>Session One: Panel – Creating Lung Cancer Survivors Through State-Level Partnerships</i>
<ul style="list-style-type: none"> • Moderator Timothy W. Mullett, MD, MBA, FACS, University of Kentucky (Kentucky LEADS Program)
<ul style="list-style-type: none"> • Maine Lung Cancer Coalition Elizabeth Scharnetzki, PhD, Maine Health Institute for Research • Mississippi Lung Cancer Roundtable Pierre E. de Delva, MD, FACS, University of Mississippi Medical Center • Rhode Island: Working through Challenges in the Early Stages Terrance T. Healey, MD, FACR, Rhode Island Hospital • UC Comprehensive Cancer Center Lung Cancer Consortium Moon S. Chen, Jr., PhD, MPH, UC Davis Health

- [Rural Appalachian Lung Cancer Screening Initiative](#)
J. Robert Headrick, MD, MBA, FACS, CHI Memorial Medical Group
- [NLCRT State-Based Initiative Planning Tool](#)
Jessica Olson, PhD, MPH, Medical College of Wisconsin

Session Two: Accelerating Uptake of Lung Cancer Screening

- [Remembrance of Brady McKee, MD](#)
Ella Kazerooni, MD, MS, FACR, FACC, FSABI, NLCRT Chair, University of Michigan
Carey C. Thomson, MD, MPH, FCCP, Mount Auburn Hospital/Beth Israel Lahey Health, Harvard Medical School
Andrea McKee, MD, Beth Israel Lahey Health

- **Moderator**
Jan Eberth, PhD, FACE, Drexel University

- [Accelerating Lung Cancer Screening Summit Overview](#)
Ella Kazerooni, MD, MS, FACR, FACC, FSABI, NLCRT Chair, University of Michigan
- [President's Cancer Panel Report](#)
John P. Williams, MD, FACS, Novant UVA Breast Center
- [Measuring Lung Cancer Screening Uptake](#)
Robert A. Smith, PhD, FSBI, NLCRT Principal Investigator, American Cancer Society
- [Public Awareness and Outreach](#)
Anita Y. Kinney, PhD, RN, FAAN, FABMR, Rutgers Cancer Institute of New Jersey
- [Health Equity & Population Gaps](#)
Jan Eberth, PhD, FACE, Drexel University
- [Primary Care Practice](#)
Michael R. Gieske, MD, St. Elizabeth Healthcare
- [Health Policy](#)
Ruth C. Carlos, MD, MS, FACR, University of Michigan
- [Information Technology and Electronic Health Records](#)
Carey C. Thomson, MD, MPH, FCCP, Mount Auburn Hospital/Beth Israel Lahey Health, Harvard Medical School
- [Strengthening Systems to Support Team-Based Care](#)
Joelle T. Fathi, DNP, RN, ARNP, CTTS, FAAN, GO2 Foundation for Lung Cancer
William R. Mayfield, MD, FACS, FCCP, WellStar Health System

Session Three: NLCRT Initiatives – Rapid Fire

- **Moderator**
Renda S. Wiener, MD, MPH, ATSF, Boston University Medical Center, Center for Healthcare Organization and Implementation Research, VA Boston Healthcare System

- **[NLCRT Initiative: Campaign to End Lung Cancer Stigma](#)**
Jamie L. Studts, PhD, University of Colorado
- **[Empathic Communications Skills Training](#)**
Jamie S. Ostroff, PhD, Memorial Sloan-Kettering Cancer Center
- **[Advancing Lung Cancer Screening among the Primary Care Community](#)**
Robert J. Volk, PhD, The University of Texas MD Anderson Cancer Center
- **[Coordinate A Lung Screening with Mammography \(CALM\) Study](#)**
Kim L. Sandler, MD, Vanderbilt University Medical Center
- **[LungPlan™ \(Projecting Lung Assessment Needs\)](#)**
Carey C. Thomson, MD, MPH, FCCP, Mount Auburn Hospital/Beth Israel Lahey Health, Harvard Medical School
- **[GIS and the NLCRT: Year in Review and What's Next](#)**
Liora Sahar, PhD, GISP, American Cancer Society
- **[NLCRT Initiative: Optimizing Lung Cancer Biomarkers in Practice](#)**
M. Patricia Rivera, MD, ATSF, FCCP, Wilmet Cancer Institute, University of Rochester
- **[NLCRT Initiative: Promoting Guideline-Concordant Staging](#)**
Farhood Farjah, MD, MPH, FACS, University of Washington

Session Four: Organization Initiatives – Rapid Fire

- **Moderator**
Peter J. Mazzone, MD, MPH, FCCP, Cleveland Clinic
- **[American College of Chest Physicians: One Breath Bubble Challenge](#)**
A. Christine Argento, MD, Johns Hopkins University
- **[American Lung Association: State of Lung Cancer](#)**
Deborah P. Brown, MS, American Lung Association
- **[National Committee for Quality Assurance: HEDIS Measure for Lung Cancer Screening](#)**
Mary Barton, MD, MPP, National Committee for Quality Assurance
- **[American College of Chest Physicians & Thomas Jefferson University: Shared Decision-Making Training](#)**
Ronald E. Myers, DSW, PhD, Thomas Jefferson University
- **[American College of Radiology: Promoting Screening through Provider and Patient Education](#)**
Debra S. Dyer, MD, FACR, National Jewish Health
- **[IASLC: Air Pollution and Lung Cancer – Position Statement](#)**
Christine D. Berg, MD, Early Detection Consultant, LLC
- **[Veterans Health Administration: Lung Precision Oncology Program](#)**
Nichole T. Tanner, MD, MSCR, FCCP, Ralph H. Johnson VA Healthcare System, Medical University of South Carolina
- **[North American Quitline Consortium: Project Connect – Lung Cancer Screening Support Through Quitlines](#)**
Linda Bailey, JD, MHS, North American Quitline Consortium
Lisa M. Lowenstein, PhD, University of Texas MD Anderson Cancer Center

- [American Cancer Society: Get Screened](#)
Laura Makaroff, DO, American Cancer Society

Session Five: Updates in Science in a Multidisciplinary Tumor Board Discussion

- **Moderator**
Gerard A. Silvestri, MD, MS, Master FCCP, Medical University of South Carolina

- **Patient Perspective**
James Pantelas, Veterans Health Administration
- **Tobacco Treatment**
Joelle T. Fathi, DNP, RN, ARNP, CTTS, FAAN, GO2 Foundation for Lung Cancer
- **Pulmonary Medicine**
Julie A. Barta, MD, ATSF, Sidney Kimmel Medical College at Thomas Jefferson University
- **Radiology**
Robert. D. Suh, MD, UCLA Health
- **Thoracic Surgery**
Leah Backhus, MD, MPH, FACS, Stanford University School of Medicine
- **Pathology**
Ignacio I. Wistuba, MD, University of Texas MD Anderson Cancer Center
- **Medical Oncology**
Raymond U. Osarogiagbon, MBBS, FACP, Baptist Memorial Healthcare Corporation
- **Radiation Oncology**
Andrea B. McKee, MD, Lahey Hospital and Medical Center/Beth Israel Lahey Health

Table of Speakers with Presentation Links - Agenda Day 2

Tuesday, December 6, 2022

Day 1 Recap and Patient Advocate Story

- [Douglas E. Wood, MD, FACS, FRCSEd](#)
NLCRT Vice Chair, University of Washington
- [Amanda Nerstad](#)
ALK Positive, Inc.

Session Six: Keynote – Addressing Health Care Equity in Lung Cancer

- [Addressing Cancer Disparities in Lung Cancer Screening](#)
Edith Peterson Mitchell, MD, MACP, FCPP, FRCP, Sidney Kimmel Medical College at Thomas Jefferson University

Session Six: Panel – Addressing Health Care Equity in Lung Cancer

- **Moderator**

M. Patricia Rivera, MD, ATSF, FCCP, Wilmot Cancer Institute, University of Rochester

- [Health Disparities Across the Lung Cancer Care Continuum](#)

Shanada Monestime, PharmD, BCOP, GO2 Foundation for Lung Cancer

- [Disparities in Care for Early-Stage NSCLC](#)

Loretta Erhunmwunsee, MD, FACS, City of Hope Comprehensive Cancer Center

- [Project URBANA – Increasing Access to Lung Cancer Screening in the Bronx in Latinx and African American Communities](#)

Brendon M. Stiles, MD, FACS, Montefiore and Albert Einstein College of Medicine

- [Lung Cancer in the LGBTQIA+ Community](#)

Scout, PhD, MA, National LGBT Cancer Network

- [Tribally Engaged Approaches to Lung Cancer Screening \(TEALS\)](#)

Zsolt J. Nagykaldi, PhD, University of Oklahoma Health Sciences Center

- [Centering Racial Equity in Lung Cancer Clinical Research](#)

Arif H. Kamal, MD, MBA, MHS, FACP, FAAHPM, FASCO, American Cancer Society

Session Seven: Keynote – Community Engagement and Outreach

- [Effective Community Engagement and Outreach](#)

Robert A. Winn, MD, Virginia Commonwealth University

Session Seven: Panel – Community Engagement and Outreach

- **Moderator**

Jane Kim, MD, MPH, National Center for Health Promotion and Disease Prevention, Veterans Health Administration

- **Lung Cancer Screening at HRSA and the Bureau of Primary Health Care**

Amelia Khalil, Health Resources and Services Administration

- [Alabama Lung Cancer Awareness, Screening, and Education \(ALCASE\) Project](#)

Maureen Rigney, MSW, GO2 Foundation for Lung Cancer

- [Collaborating with Community Organizations](#)

Cherie P. Erkmen, MD, FACS, Temple University

- [Lung Cancer Screening in a Federally Qualified Health Center](#)

Mary M. Pasquinelli, DNP, APRN, FNP-BC, University of Illinois at Chicago

- [The Mid-South Miracle](#)

Raymond U. Osarogiagbon, MBBS, FACP, Baptist Memorial Healthcare Corporation

- [Lung Cancer Patient Navigator Programs](#)

Claudia T. Miller, BSN, RN, OCN, ONN-CG, Medical University of South Carolina

Session Eight: Patient Perspective – Patient-Centered Care Across the Lung Cancer Continuum

- **Remembrance of Gina Hollenbeck, RN**

Amanda Nerstad, ALK Positive, Inc.

John Hallick, MET Crusaders, Biomarker Collaborative

Raymond U. Osarogiagbon, MBBS, FACP, Baptist Memorial Healthcare Corporation

- **Moderator**

Lisa Carter-Bawa, PhD, APRN, ANP-C, FAAN, Hackensack Meridian Health

- **Lung Cancer Survivorship (and Co-Survivorship) in the 21st Century: One size will not fit all!**

Upal Basu Roy, PhD, MPH, LUNGeVity Foundation

- **Patient, Caregiver, and Physician Panel: Riding the Roller Coaster of Lung Cancer and Living in Limbo**

Natalie Brown, LUNGeVity Foundation

James Pantelas, Veterans Health Administration

[Heidi Nafman-Onda, MS & Pierre Onda, MD MPH, The White Ribbon Project](#)

[Christine M. Lovly, MD, PhD, Vanderbilt University Medical Center and Vanderbilt Ingram Cancer Center](#)

Session Nine: Systems Perspective – Patient-Centered Care Across the Lung Cancer Continuum

- **Moderator**

Lisa Carter-Bawa, PhD, APRN, ANP-C, FAAN, Hackensack Meridian Health

- **The Cost of Care and Financial Toxicity for those Affected by Lung Cancer**

Alan J. Balch, PhD, National Patient Advocate Foundation

- **Palliative Care and Support Services**

Laura A. Petrillo, MD, Massachusetts General Hospital

- **Setting Up the Ideal Patient-Centered Care Paradigm**

Julia L. Agne, MD, The Ohio State University

- **Survivorship – Why it Matters**

Jill Feldman, EGFR Resisters

Presentation Highlights – Day 1

Session 1 – Welcome and Patient Advocate Story

The first speaker of the session was Ms. Nikki Hayes, whose presentation was titled ***Creating Lung Cancer Survivors Through State-Level Partnerships - A Glance at Lung Cancer Prevention and Control Activities in the CDC national Comprehensive Cancer Control Program***. The National Comprehensive Cancer Control Program (NCCCP) supports cancer coalitions in all 50 states, the District of Columbia, eight U.S. territories and Pacific Island Jurisdictions, and seven

tribes or tribal organizations. The goal of the program is to create and implement cancer plans that focus on risk reduction, early detection, better treatment, improved quality of life for survivors, and advancing equity in cancer health outcomes. NCCCP coalitions today are comprised of dedicated volunteers. More than 70% of coalitions include local businesses, professional healthcare associations, hospital members, public health workers, partners in the local state or national governments, local law and policymakers, and community groups such as faith-based organizations. Almost all state-level cancer control plans include tobacco cessation interventions. About 60% of them include LCS strategies, and more than half of them include radon mitigation as a lung cancer prevention strategy. Ms. Hayes closed her presentation by summarizing eight examples of NCCCP coalitions and their activities, which often included environmental scans, plans to increase awareness about lung cancer and tobacco cessation, early detection strategies, and LCS services.

The next speaker of the session was Dr. Liz Scharnetzki, who presented on ***The Maine Lung Cancer Coalition***. In the state of Maine, lung cancer incidence and mortality rates are significantly higher than the national averages; most lung cancer cases are detected at a later stage when the survival rate is lower, and LDCT screening rates among eligible high-risk individuals are low. The Maine Lung Cancer Coalition is mitigating these issues by engaging and educating the public and healthcare professionals about evidence-based lung cancer risk reduction and screening practices. In addition, they are helping to develop innovative programs to increase access to risk-reduction, screening, and treatment services for all Mainers. Forming partnerships was a key strategy of the coalition. They enlisted multidisciplinary teams to develop strategies; recruited providers, health plans, community members, and policymakers as advisors; brought Maine's largest LCS programs together to identify needs and share best practices; and expanded partnerships with the Maine CDC and the Maine Impact Cancer Network. The coalitions also worked to understand the impact of stigma by creating six focus groups in three rural counties and then created stigma-informed social media campaigns. 22 of 36 nonprofit Maine hospitals are involved in the MLCC Learning Community to help raise awareness about early detection by sharing best practices. In the future, the coalition will help partners to understand new LDCT screening guidelines, mitigate lung cancer stigma, and create a statewide database for LCS.

Next, Dr. Pierre E. de Delva gave a talk about ***The Mississippi Lung Cancer Roundtable***. The vision of the Mississippi Lung Cancer Roundtable (MLCRT) is to develop a collaboration among patients, caregivers, cancer centers, and partners that will make Mississippi a leader in risk reduction and care of lung cancer. Key elements of their roadmap to prevent lung cancer include focusing on the patient, intentionally mitigating healthcare disparities, improving tobacco control and early detection programs, and aggressively treating early and late-stage diseases with surgery, radiotherapy, biomarker-driven care, and multidisciplinary team-based care. The structure of the Roundtable includes a steering committee and working groups for recruitment,

smoking cessation, lung cancer screening, patient-centered advocacy, and team-based care. The current Roundtable includes 206 members, including patients, survivors, providers, nurses, advocacy groups, state government, payers, health systems, practices, and industry members. Accomplishments and activities of the Mississippi Lung Cancer Roundtable include joint education efforts with the Mississippi Department of Health, a survey of current screening practices, an awareness campaign based on 11 billboards in eight cities (1.1M impressions), a social media campaign (600K impressions), recruitment of survivors, dissemination of non-stigmatizing language guidelines, assessing tobacco cessation services in Mississippi, promoting biomarker testing, working with the clinical trials network, and the creation of a web-based data and educational tool called the Mississippi Lung Cancer Story Map. The Roundtable received excellent feedback on its first annual meeting in November 2022, with 15 speakers and 170 registrants. Future projects include creating a new fundraising and grant strategy, monitoring results, and developing a policy and advocacy strategy.

Dr. Terrance T. Healey from the Rhode Island Hospital gave a presentation on ***Rhode Island - Working Through Challenges in the Early Stages***. He started by emphasizing that LDCT is a pain-free and fast test method with high diagnostic value. Then, he explained his role in running an LCS program in Rhode Island and described it as a complex mission that involves the coordination of both staff and patients, the implementation of administrative solutions, and solving billing issues. Dr. Healey highlighted the necessity of identifying the healthcare team and the access points. This year, by partnering with many organizations and politicians, the lung cancer screening advocacy plan team was formalized in Rhode Island with the goal of providing their citizens with easy access to LCS. One of the initiatives involved adding LCS criteria to patients who are getting mammography letters to schedule their mammogram, bone density scan, and, when they qualify, a lung cancer screening scan at the same time. Finally, Dr. Healey talked about the importance of reaching people at community centers.

Dr. Moon S. Chen from the University of California talked about ***California's Aspirations to Increase Lung Cancer Survivors***. He first presented the US screening rates for cervical, breast, and colorectal cancers in the last decades, which ranged from 65 to 80% in 2018, and compared them with LCS, which was under 10%. Then, he pointed out that California has the highest prevalence of smoking and, consequently, also of lung cancer. However, California has municipalities, such as Sacramento, with the lowest LCS rates in the United States. Hence, they created the "Love Your Lungs" Sacramento lung health coalition to educate, engage, and provide evidence-based lung health information and resources to diverse communities. Now, the University of California Lung Cancer Consortium, represented by Dr. Chen, has the mission of replicating the Love Your Lungs coalition to the rest of the state. To this end, they partnered with the American Cancer Society (ACS) and the California Dialogue on Cancer (CDOC) and elaborated California's 2021-2025 State Cancer Plan. The goal of this initiative is to increase LCS and treatment rates to reduce the burden of Lung Cancer on Californians.

Dr. J. Robert Headrick from the CHI Memorial Medical Group talked about the ***Rural Appalachian Lung Cancer Screening Initiative***. As a first step, he presented a Tennessee geospatial mapping showing that the highest lung cancer incidence and highest mortality rates are found in rural communities, where there are no rural hospitals, care providers, or imaging centers. Hence, they designed a mobile screening program that consisted of a custom bus equipped with an LDCT scanner and a medical team that visits different rural communities. They participate in the lung screening program connected to the radiology department through a telehealth tool. Thus, the results go back to the hospital in about 15 minutes, and the patients are notified about the outcomes the same day by using a texting system, which is also used for HIPPA-Compliant texting. Dr. Headrick highlighted that, as a secondary benefit, chest LDCT scans combined with artificial intelligence are also useful tools for the screening of heart disease, which constitute the major cause of death in Tennessee.

The last speaker of the session was Dr. Jessica Olson from the Medical College of Wisconsin, who gave a presentation on the ***NLCRT State-Based Initiative Planning Tool***. She started by explaining that the charge of the State-Based Initiatives Task Group was to address similar but local challenges to implement strategies that would help to reduce lung cancer risk and lung cancer deaths in every location. They wanted to encourage local authorities to set common goals but, at the same time, provide them with a highly tailorable formula to build lung cancer initiatives. Hence, they worked together with organizations operating at the local level to bring tools and best practices to improve lung cancer control systematically at the state and local levels. Dr. Olson described the guide developed by the program, which is a planning tool available as a PDF file and a website created to help build a state-based coalition to support the goals of the ACS NLCRT. The plan is organized into three phases, each with its resources and tips that will help the users to achieve the goals. The speaker invited the audience to collaborate with the task group to improve the planning tool. Finally, she emphasized the need for health equity assessment to reach every minority group.

Session 2 – Accelerating Uptake of Lung Cancer Screening

The second session began with remembrance and recognition of the memory of Dr. Brady McKee, who passed away unexpectedly earlier in 2022. First, Dr. Ella A. Kazerooni acknowledged the foundational work on lung cancer screening of Drs. Brady and Andrea McKee and their colleagues at the Lahey Clinic. This session was dedicated to them because of their contributions to ensuring that community hospitals and cancer centers provide equitable access to high-quality LCS. Dr. Kazerooni summarized the key findings of Drs. McKee's manuscript entitled "*Initial Experience With a Free, High-Volume, Low-Dose CT Lung Cancer Screening Program*," which she described as foundational and long-lasting.

Then, Dr. Carey C. Thomson from Beth Israel Lahey Health talked about the impact of the McKees' work on people with lung cancer and their relatives. She described Dr. Brady McKee as a person who cared about his family and friends and was dedicated to saving lives and relieving suffering.

To finalize the remembrance of Dr. Brady McKee, Dr. Andrea McKee, his wife and collaborator, talked about his career and defined him as a brilliant chemical engineer who loved to create innovative solutions to complex problems. She described how they developed the Rescue Lung Rescue Life movement together.

The panel's first speaker was Dr. Ella A. Kazerooni, who gave an overview of the **Accelerating Lung Cancer Screening Summit**. The summit goal was to elaborate strategies to increase the uptake of LCS. The meeting gathered about 100 people from many disciplines that worked in 6 breakout groups to discuss different topic areas. They first identified the problem and the starting barriers and then discussed possible strategies. At the end of the summit, all the groups brought together their proposed solutions.

Then, Dr. John P. Williams presented the **President's Cancer Panel Report**. The President's Cancer Panel organization was created 50 years ago to advise the White House and the President on opportunities to improve cancer care in the US. They have meetings to develop key topics about cancer screening and meetings about innovation. Their report showed that overall cancer screening rates decreased by 90% during the COVID-19 pandemic. Moreover, compared to other cancer types, uptake is just beginning for lung cancer screening, hence the need for this Roundtable. He talked about the barriers to LCS and highlighted that achieving equitable outcomes is the major challenge. Then, he shared the President's Cancer Panel's actionable recommendations to enhance screening: 1) improve and align communications by national campaigns and roundtables; 2) facilitate equitable access by reaching those communities with a high incidence of lung cancer, partnering with local people, and assuring sustainable funding; 3) strengthen workforce collaborations by training and promoting team-based approaches; and 4) increase the accessibility of the screening guidelines to support clinical decisions.

The next speaker was Dr. Robert Smith, who presented on **Measuring Lung Cancer Screening Uptake**. First, he described the Behavioral Risk Factor Surveillance System (BRFSS), which consists of health-related telephone surveys led by the Centers for Disease Control and Prevention (CDC) that take place in every state. In 2022, BRFSS included lung cancer screening in the core questionnaire. Then, he talked about the National Health Interview Survey, which is administered by the CDC in cooperation with the National Cancer Institute (NCI). It consists of a 30-minute in-person interview and includes LCS every four years, giving a national estimate. The American College of Radiology Lung Cancer Screening Registry (ACR LCSR) data is the only CMS-approved registry in the country. Since reporting lung cancer screening to the ACR LCSR was an

initial requisite for CMS to approve reimbursement, and since this registry also has records of non-Medicare exams, it is a good resource for the estimation of all U.S. LCS exams. Overall, with these tools and others, Dr. Smith's group estimated that LCS reached only about 5% of adults in 2018, with a range of 1% to 15%. Finally, Dr. Smith mentioned other recently implemented tools like the National Committee on Quality Assurance (NCQA) Healthcare Effectiveness Data and Information Set (HEDIS) measures, Medicaid's Adult Core Set of Quality Measures, and the Health Resources & Services Administration (HRSA) Uniform Data System (UDS).

Dr. Anita Y. Kinney talked about **Public Awareness and Outreach**, one of the six breakouts developed during the 2022 Accelerating the Uptake of Lung Cancer Screening summit. She first enumerated the barriers and challenges that her group identified during the initial breakout session. Barriers and challenges included stigmatization and hesitation to address tobacco and cancer, healthcare institutions' denial to prioritize LCS, lack of coordination of strength-based approaches with community input, community mistrust of the healthcare system, and lack of understanding of lung cancer statistics and the benefits of LCS. Then she talked about strategies for public awareness and outreach that included increasing community representation, developing national public awareness campaigns with local feel and impact, and implementing efforts for increasing diversity. She gave some examples of strategies to improve outreach that were implemented in New Jersey, including public campaigns, events, mobile units, navigators, and community grant programs.

Dr. Jan Eberth presented on the feedback from the Screening Summit's breakout **Equity and Population Gaps**. She highlighted the importance of having worked in a multidisciplinary team of investigators, practitioners, and survivors who contributed their diverse perspectives. The barriers that they identified for achieving equity in LCS included the competing demands at the clinical, social, and patient levels; access to care in terms of insurance, screening center availability, and costs; lack of awareness and knowledge about LCS; mistrust, bias, and stigma; the eligibility criteria that underestimate the burden in some populations; and the low number of evidence-based interventions conducted in priority populations, including rural communities. Then, Dr. Eberth described the strategies proposed by her group at the July 2022 summit. First, the most relevant approach is to co-develop a community engagement, outreach, and advocacy framework that prioritizes health equity. Second, increase awareness and eliminate knowledge gaps about LCS among and about priority populations. And third, promote the use of social determinants of health data to identify disparities and the development of quality improvement projects meant to reduce those disparities. Then, she showed some data demonstrating disparities in lung cancer prevention and survivorship among different races, genders, socioeconomic statuses, and rural populations. Finally, she emphasized the importance of increasing funding for implementing lung cancer research in varied contexts and population groups and the need for a federal program to screen low-income, uninsured Americans, like those that already exist for breast and cervical cancers.

The following talk, entitled **Primary Care Practice**, was presented by Dr. Michael R. Gieske and addressed another barrier breakout from the screening summit. The barriers and challenges identified in his working group included access to screening facilities; lack of education for primary care providers regarding screening criteria and shared decision-making requirements and elements; primary care provider's stigmatization of patients; the need for quality measures (HEDIS); acceptance and implementation of shared decision-making; use of information technology for the promotion of LCS, EMR configuration for the inclusion of eventual diagnoses of other chest morbidities, and the improvement of smoking history accuracy. The recommended strategies include the implementation of LCS as a quality measure, the development of a more uniform and simplified way to obtain the patient's smoking history, and the improvement of primary care team education on LCS, specifically on strategies to engage the medically underserved populations. Finally, he showed that his institution, St. Elizabeth Healthcare, adopted the United States Preventive Services Task Force (USPSTF) 2021 criteria for LCS and captured 50% of the eligible population, which let them diagnose 75% of lung cancer cases at early stages.

The next speaker was Dr. Ruth C. Carlos, whose talk was entitled **Policy and Health Insurance Coverage: Impact on Lung Cancer Screening**. She talked about the two priorities the policy task breakout group explored at the NLCRT Lung Screening Summit. The first one was standardizing state-level Medicaid coverage for LCS with current USPSTF guidelines. The second was expanding policy coverage to eliminate the cost-share burden for downstream diagnosis after a positive lung cancer test to increase patient adherence to screening. Hence, the proposed strategies are centered on advancing those two priorities and engaging Medicaid and payers around episode-based care.

Dr. Carey C. Thomson presented on **Information Technology and the Electronic Medical Record**. She first highlighted the participation of people from technology companies in her multidisciplinary task group. They found many barriers and challenges, such as inconsistency and misclassification of current and former tobacco use status, suboptimal use of the available data, the need for validated prediction models integrated into the electronic health records (EHR) at the point of care, IT and operations disconnection, the need to design EHRs for the incorporation of clinical decision support tools, information overload problems for both providers and patients, poor ability of EHR systems to support adherence to screening, and lack of patients' use of EHR portals to access information. The first strategy proposed by the group was to elaborate a national consensus on developing core EHR elements and standards. They wanted to cover both lung cancer early detection and lung nodule management (reporting, tracking, return to follow-up, and referral). This was the thinking behind the name change for the task group to "Lung Cancer Early Detection Implementation Strategies Task Group." Another strategy was to collaborate with the policy task group to develop an LCS qualities standard act.

The last talk of the session was presented by Dr. William R. Mayfield, who spoke about ***Strengthening Systems to Support Team-Based Care***. The key barriers found by his team were the lack of financial incentives for highly coordinated care, knowledge gaps in financial revenue streams and the eligibility criteria related to LCS, problems with human capital such as the availability of navigation service for screening, and lack of diversity in providers and the workforce shortage. They also found challenges around coordination of care issues, like a lack of meaningful and timely coordination of care and a lack of inter-system coordination to share patient information. Dr. Mayfield explained that systems should share common definitions to overcome these challenges, and the language they use should be tailored to communities to build trust and address inequities. He recommended that all groups come together to a common value proposition to transmit to hospital executives, healthcare workers, and governors the financial, clinical, and population benefits and costs of LCS. Moreover, the breakout group suggested the co-creation of a common language that harmonizes and integrates a Common Standard for LCS. Finally, the communication strategy should be designed at the national level and tailored to the local level.

Session 3 – NLCRT Initiatives – Rapid Fire

The first speaker of the session was Jamie L. Studts, who presented on ***NLCRT Initiative: Campaign to End Lung Cancer Stigma***. Stigma is a potential barrier to optimizing all the progress achieved around the entire lung cancer control trajectory. Hence, the campaign is based on a strategic plan aimed at extinguishing the causes and consequences of lung cancer stigma to improve outcomes for individuals with lung cancer. One mission is to change how society views lung cancer risk. Another objective is to improve survivorship, which is negatively impacted by stigma. Dr. Studts acknowledged the success of the campaign in infusing understanding and empathy within the clinical context. One of the important goals of the campaign is to increase the funding to improve the translation of scientific innovations in terms of early detection, risk reduction, and survivorship to better communicate with the community. He presented the International Association for the Study of Lung Cancer (IASLC) Language Guide, which contains recommendations about the terminology to use to demonstrate empathy and sensitivity to individuals who have a history of smoking or who are at risk or have been diagnosed with lung cancer. Finally, he mentioned the Empathic Communication Skill Training program and shared the topics of the September NCI Global Cancer Stigma Workshop.

The second talk of the session, presented by Dr. Jamie S. Ostroff, was entitled ***Empathic Communications Skills Training: A provider-facing strategy to reduce lung cancer stigma***. She first shared a review paper she wrote along with other session panelists to call attention to the problem of lung cancer stigma and the importance of multiple levels of intervention from a provider focus. They found that one of the variables with the highest association with lung cancer

stigma was doctor-patient communication, which was inversely correlated. Hence, they hypothesized that targeting empathic communication could effectively mitigate or prevent experienced lung cancer stigma. Dr. Ostroff described the training program, which comprises a didactic presentation, a roleplay with simulations of clinical scenarios, an evaluation, and feedback to the trainees. Their method was adapted from other empathy interventions, based on patient narratives about their experience in clinical care, and was provided to a variety of professionals. Her group is now conducting a multi-institutional clinical trial to evaluate the adoption level of trained oncology care providers and patient-reported outcomes. Dr. Ostroff said they had already enrolled 16 lung cancer provider settings across the country and invited the audience to join their program.

The next speaker, Dr. Robert J. Volk, presented ***High-Quality Patient Decision Aids for LCS: Results From an Environmental Scan***. He spoke about the environmental scan initiative that MD Anderson is doing with the American Academy of Family Physicians. The purpose of the scan is to evaluate publicly available patient educational materials about LCS and compare them against the standards from the International Patient Decision Aid Standards (IPDAS) Collaboration. He described that a high-quality decision aid must show benefits and harms in equal detail, follow best practices for communicating probabilities, provide citations for evidence and publication date, provide an updated policy, and disclose funding for development. As a first step, they performed a literature search for LCS decision aids. Then, they discarded those that did not discuss the benefits and harms. And finally, they kept with the seven remaining tools that met the quality criteria based on the IPDAS, which he briefly described: A video from the University of Chicago, the ShouldIScreen.com website with a risk calculator tool from the University of Michigan, a paper-based tool from the Siteman Cancer Center, a video at MD Anderson that was evaluated in a large, randomized trial, a health library template about LCS from the University of Pittsburgh, and patient education materials available at the UpToDate website. In addition, he highlighted the Lungscreen.com tool, a personalized tool meant to be used by clinicians, which has a risk calculator function for lung cancer. Finally, Dr. Volk clarified that high-quality decision aids emphasize annual screening as opposed to screening as a one-time event.

Dr. Kim L. Sandler presented on ***Coordinate A Lung Screening with Mammography (CALM) Study***. The purpose of the program is to identify the cohort of women undergoing screening mammograms who are also eligible for LCS and get them screened. To identify those women that meet the eligibility criteria, they search electronic health records (her) and recruit patients in breast centers. Then, they either directly outreach to the patient or inform her primary care provider one month before the patient goes for her annual mammography. Dr. Sandler highlighted that at the Vanderbilt University Medical Center, 80% of cases referred to providers from the Vanderbilt system enroll in the LCS program. Finally, she presented data demonstrating that the CALM intervention significantly increases patient enrollment for LCS.

Dr. Carey C. Thomson presented on **LungPLAN™ (Projecting Lung Assessment Needs)**, which is a forecasting model from the NLCRT that helps project the resources to create or optimize lung screening and nodule management programs. The tool is designed to input local payer distribution and reimbursement rates, costs of program infrastructure, and the impact of stage shifting. Then, the tool output shows the calculated return on investment and the five-year volume and reimbursement, which allows for estimating the institution's needs. The website also has resources, such as webinars, national meetings, a user manual, and testimonials.

Dr. Liora Sahar talked about **GIS and the NLCRT: Year in Review and What's Next**. She started by sharing publications and meeting communications about access to LCS across rural and urban environments. Then, she presented the current research agenda, which includes access to treatment and biomarker testing, identifying the geographical places where there is a need to grow screening capacity, and localizing breast cancer centers that are near LCS facilities to evaluate women's accessibility to both breast and lung cancer screenings. Finally, Dr. Sahar showed a video of the NLCRT website introducing three interactive geospatial tools: a Lung Cancer Atlas, a Health System Dashboard, and a State Story Map.

Dr. M. Patricia Rivera presented on **NLCRT Strategic Plan to Optimize Biomarker Testing for NLCRT**. She started her presentation by emphasizing that adequate biomarker testing in NSCLC is critical for making decisions about appropriate patient-driven therapy and targeted therapy. The aims of the first Biomarker Summit held in 2020 were to bridge the gaps in biomarker testing; share clinical experiences related to biomarker testing; determine the best practices regarding tissue acquisition, choice of an assay, reimbursement, and turnaround time; and develop strategies to optimize biomarker testing in clinical practice to reach every patient. She presented data from a survey sent to pulmonologists about molecular biomarker testing in NSCLC that revealed differences in knowledge and practice patterns between pulmonologists in the community setting and pulmonologists in academic settings. Then she talked about a Roundtable biomarker strategic plan aimed at identifying what barriers exist for biomarker testing and elaborating a strategy to mitigate those barriers. She also talked about the ECHO model, in which community physicians brought information about biomarker testing to their communities. It helped to increase the knowledge and confidence of the participants in the learning sessions. Dr. Rivera summarized a paper addressing the barriers to turnaround time and appropriate management, which provides institutions and clinicians with a roadmap of best practices in biomarker testing. She presented another publication describing clinical examples of how to approach the tissue diagnosis of complex patients. Another ongoing project is the elaboration of a consensus statement of recommendations within guidelines for biomarker testing. Finally, she summarized the conclusions of the 2022 Biomarker Summit, which brought together a multidisciplinary group of individuals to discuss persistent barriers to LC biomarker testing.

The final speaker for the session was Dr. Farhood Farjah, whose talk was entitled **NLCRT Initiative: Promoting Guideline-Concordant Staging**. He started by highlighting that inaccurate staging leads to inappropriate treatment and, consequently, to suboptimal outcomes even if the proper therapeutic option exists. He described data showing that more than 40% of the hospitals do not follow established guidelines for staging. Then, he enumerated the recommendations of The ACS NLCRT Strategic Plan, which are to identify facilitators and barriers, increase the evidence base, harmonize guideline recommendations, augment existing databases to better measure concordance with guidelines for staging, develop and implement performance feedback, increase opportunities for patient self-advocacy, and promote policy-level interventions. He talked about a survey showing that 29% of the responders, who were pulmonologists, ignored the existence of the LC staging guidelines. Among the responders who knew about the guidelines, 90% faced at least one barrier to following the guidelines, and 50% felt insecure about the advantage of following the guidelines in terms of therapeutic outcomes. Therefore, Dr. Farjah and his colleagues started a study funded by the National Cancer Institute to look at the comparative effectiveness of varying nodal staging strategies. Finally, Dr. Farjah announced that the ACS NLCRT is launching the inaugural Lung Cancer Staging Summit in March of 2023.

Session 4 – Organization Initiatives – Rapid Fire

The first speaker of the session was Dr. A. Christine Argento, who presented on the **American College of Chest Physicians: One Breath Bubble Challenge**. The One Breath Bubble Challenge is a social media campaign and an initiative to raise awareness for lung cancer. Most patients and many care providers do not know that an early diagnosis of LC can improve the prognosis. Hence, Dr. Argento, together with a team of doctors and marketing, social media, and technology experts, designed a campaign inspired by the amyotrophic lateral sclerosis (ALS) ice bucket challenge. The campaign challenges people to blow bubbles in any creative manner and post the images and videos on social media. They are going to start with lung cancer survivors who will give positive messages and continue with a focus on lung cancer in women, then LCS, and finally share some advances in the fields of diagnostics and therapeutics. A website with information about LCS will be created to help people participate in the challenge. Although the main goal is to raise awareness, they are also partnering with the CHESTFoundation to find a way to raise funds for lung cancer research.

The second talk, entitled **American Lung Association: State of Lung Cancer**, was presented by Ms. Deborah P. Brown. The goal of the project is to evaluate the state's performance using different measures and provide a foundation for identifying the way the state can best use its limited resources to decrease the burden of lung cancer. The state data, extracted from diverse sources, is analyzed by their epidemiologist and statistics department. The website project has a

search tool that allows the visualization of the state measures in comparison to other states and the national rate, in addition to the evolution of the state over the last five years. Furthermore, each state page provides information on LCS coverage and a section about LC risk reduction, including adult smoking rates as well as rates on testing levels by state. Lastly, each state has a section dedicated to racial and ethnic disparities with a tab for each group, allowing quick access to these findings. Dr. Brown summarized the key findings of the report. Although LCS saves lives, only 5.8% of those individuals eligible were screened in 2021. 14.2 million Americans are now eligible for screening. Moreover, the report revealed that the five-year survival rate increased nationally from 21% in 2014 to 25% in 2018, but it still remains significantly lower (20%) in communities of color. Hence, addressing racial disparities in healthcare coverage is critical to address racial disparities in lung cancer care. 46 Medicaid fee-for-service programs cover LCS. Finally, more than 20% of Americans with lung cancer do not receive any type of treatment.

Dr. Mary Barton presented on the ***National Committee for Quality Assurance: HEDIS Measure for Lung Cancer Screening***. The goal of the project is to develop an evidence-based, reliable, and valid LCS measure suitable for use at multiple levels of the healthcare system. This project aims to assess the state of data availability to determine the most reliable method of identifying a denominator population for this measure and then to develop, test, and publish a measure specification. She presented the timeline of the project that started in 2022, will convene a technical expert panel in 2023, and will finish the project in 2024 by gathering public comments and finalizing the measure for publication.

Dr. Ronald E. Myers presented on ***Having a Conversation About Lung Cancer Screening***. He first illustrated the importance of having conversations with patients by showing that shared decision-making was included in the USPSTF Recommendation and Centers for Medicare & Medicaid Services (CMS) Requirement for initial LCS. Then he presented the *Course on Shared Decision-Making about Lung Cancer Screening*, which is a short, no-cost, self-guided, accredited online course. The course aims to prepare the providers for the identification of persons eligible for LCS and to educate those persons to make well-informed shared decisions about LCS. The learners will also be able to provide access to tobacco treatment services to those who need it. The course is divided into three modules, and the third one focuses on strategies to guide patients through a structured conversation to determine their values and their position relative to LCS. He presented data showing that the course objectives are achieved and said that it increases the learner's confidence to engage patients in the discussion about LCS. Future studies will reveal if the course contributes to raising initial and repeat LCS. Dr. Myers finished his talk by emphasizing the need to disseminate this program.

The next panelist, Dr. Debra S. Dyer, presented on ***Promoting Screening Through American College of Radiology – NLCRT Partnership***. She started by showing a quick reference guide that the ACR developed to help to understand LCS logistics, program requirements, economics, and

billing issues. In addition, it has a section with follow-up guidelines. Then, she presented another consensus guideline for the management of CT incidental findings during the LCS. Next, she talked about a podcast series about conversations in lung cancer and a Lung Cancer Screening 201 Webinar Series entitled *Accelerating Screening Uptake*. Finally, Dr. Dyer talked about the formalization of the National Lung Cancer Screening Day, which took place on Saturday, November 12. That day they encouraged LCS facilities around the country to open and invite patients for screening.

Dr. Christine D. Berg presented her talk entitled ***International Association for the Study of Lung Cancer (IASLC): Air Pollution and Lung Cancer – Position Statement***. Air pollution is the second leading cause of lung cancer, increasing the risk of lung cancer in persons that never smoke. It accounts for 14% of all lung cancer deaths worldwide and 4.7% in the United States. Each 10 $\mu\text{g}/\text{m}^3$ increase in the concentration of particulate matter of size 2.5 micrometers is associated with a 15–27% increase in lung cancer mortality. Air pollution also leads to climate change which in turn leads to hurricanes. Dr. Berg shared data showing a negative association between the length of hurricane disaster declarations and the risk of deaths in patients with lung cancer, in part because they lose access to healthcare centers. Then she presented a position statement from the IASLC aimed to draw attention and impulse action to restrict air pollutants, persuade health organizations to reduce the use of fossil fuels and encourage advocacy against fossil fuel use and for a more sustainable environment. She talked about the benefits of organizing meetings in the virtual modality in terms of decreasing carbon footprint. Finally, Dr. Berg highlighted that the IASLC supports International Clean Air Day and put out a podcast on climate change.

The next talk, entitled ***Veterans Health Administration (VHA) Lung Screening Efforts***, was presented by Dr. Nichole T. Tanner. Veterans are at higher risk of lung cancer because of an increased incidence of smoking and other exposures related to their activities. Lung cancer is the leading cause of cancer-related mortality among veterans, accounting for 5,000 deaths every year. Hence, the VHA started to think about LCS shortly after the National Lung Screening Trial (NLST) was published in 2011. She presented a timeline showing different milestones. In 2021 the Lung Precision Oncology Program was launched, allowing tumor genetic mutational testing for veterans to guide precision oncology treatments. Dr. Tanner showed the distributed networks of the program across the United States and explained that the VA Central Office, as part of Pulmonary Specialty Care, has established the National Center for Lung Cancer Screening to provide high-quality and equitable LCS. The Cancer Moonshot goal is to reduce the cancer death rate by 50% over the next 25 years, and increasing LCS is an integral part of this goal.

Dr. Lisa M. Lowenstein, together with Linda Bailey, JD, presented ***Engaging Tobacco Quit Lines to Help Persons Who Smoke Make Informed Decisions About Lung Cancer Screening***. Quitlines are a unique partnership between the state agency that funds the Quitline and the call center,

which has expertise in tobacco cessation and operates the Quitline. They provide information, counseling, and medications via phone and other technologies, such as online and texting services, to help tobacco users quit. There are currently 53 state quitlines in the United States and 11 call centers (service providers). The North American Quitline Consortium is a non-profit organization comprised of the funders of Quitlines, the service providers, researchers, as well as national organizations that work on tobacco cessation. The first Quitline in the United States was launched in 1992 in California. At that time, they conducted a randomized clinical trial that showed that tobacco cessation services could effectively be provided by phone, which laid the ground for the extension of this population-based intervention to other states. Since 56% of participants in Quitlines are 50 to 80 years of age, they are eligible for LCS. Hence, in partnership with MD Anderson Cancer Center, the North American Quitline started the CONNECT project to develop a Lung Cancer Screening Implementation Guide with basic strategies to educate Quitline participants about LCS. As a result, about 18% of the 168 project participants scheduled an LCS.

The last speaker of Session Four was Dr. Laura Makaroff, whose talk was entitled ***Get Screened Initiative: Reducing the Impact of the COVID-19 Pandemic on Cancer Screening and Care***. Get Screened is an ACS initiative launched in 2020 to reduce the impact of the COVID-19 pandemic on cancer screening and care. It is an interdisciplinary national consortium. The ACS worked directly with health systems to organize a public campaign to raise awareness and empower patients on the importance of screening. Through the State and Coalition Engagement Initiative, they partner with 12 states to work on recovering from the impact of the pandemic on breast cancer, cervical cancer, colorectal cancer, and lung cancer. Of note, 6 of the 12 states prioritize LCS campaigns. The partnership with the health care systems involves creating and executing meaningful and sustainable action plans for improving processes around LCS and tobacco cessation. Dr. Makaroff described four initiatives: patient navigators to help support and engage patients in LCS; the Project ECHO model to help facilitate collaboration and peer learning; tobacco cessation classes to help patients to quit smoking; and five federally qualified health centers that developed an LCS referral process for the first time. Finally, she showed data about the Get Screened campaign, which was designed from a perspective of diversity and reached millions of people through social media.

Session 5 – Updates in Science in A Multidisciplinary Tumor Board Discussion

The moderator, Dr. Gerard Silvestri, opened the session and presented five cases that were discussed by a multidisciplinary panel based on the most up-to-date published evidence.

Case 1

CASE 1: A 74-year-old man is referred to follow a lung nodule identified on LCS. He has a history of well-controlled hypertension and gastroesophageal reflux with no other medical problems. His social history is notable for 35 pack-years of smoking, and he continues to smoke. Family history reveals that his uncle, whom he describes as a "heavy smoker," died of lung cancer. Physical examination is unremarkable.

*Radiologist: the CT scan shows a pure ground-glass nodule within the left upper lobe. Given its radiological appearance and that it is <2mm, the risk of malignancy is less than 1%. LungRads 2022 recommends a follow-up in 12 months.

*Pulmonologist: Inform the patient about the evidence. Even if it was LungRads 4B, the chance of having cancer in the following 12 months would be less than 50%. Refer for smoking cessation.

*Tobacco Treatment Specialist: The evidence shows that smoking cessation improves prognosis even after a lung cancer diagnosis. Combining counseling with evidence-based pharmacotherapies increases the chances of smoking cessation regardless of the addiction severity. It is more efficient to coach the patients and partner with them than just advise them to quit smoking.

*Patient Perspective: He wants to be informed about the follow-up and is open to listening to information about tobacco treatment, but he is not sure if he is going to go to the specialist.

Five years later, the nodule is still a pure ground-glass opacity but was 28mm in size.

*Radiologist: Although it can still be followed up, he recommends a biopsy since it could be an adenocarcinoma in sight, minimally invasive.

*Pathologist: Premalignant nodules can also have pure ground-glass opacity features. It is not possible to measure invasion until the specimen is completely removed; hence he would recommend its extirpation.

*Thoracic Surgeon: Since it is probably a premalignant lesion and eventually is going to be removed, she would recommend a segmental resection.

Case 2

CASE 2: A 70-year-old female with no significant past pulmonary history was referred for evaluation of a lung mass identified incidentally on an MRI performed for back pain. She was never a smoker and had no family history of lung cancer. Physical examination was unremarkable.

*Radiologist: The CT and PET scans are consistent with lung cancer.

The patient had a CT-guided biopsy, and the diagnosis was moderately differentiated adenocarcinoma. The EBUS showed no evidence of tumor in sampled nodes.

*Pathologist: Since it is TTF-1+ and Napsin A+, it is a lung adenocarcinoma, the most frequent subtype of NSCLC. A 50-gene panel for molecular characterization of the tumor identified the EGFR exon 19 deletion mutation, which is one of the most common sensitizing mutations.

*Pulmonologist: Since it is a 4cm tumor with no positive lymph nodes and no metastatic diseases, it is classified as clinical stage 1B. 45% of patients with stage IB NSCLC will have disease recurrence within five years of resection.

*Medical Oncologist: These patients are treated with adjuvant platinum-doublet chemotherapy, which results in a decrease in the risk of disease recurrence and death. Furthermore, the ADAURA trial showed that in patients with stage 1B to 3A tumors completely resected which had EGFR mutations, three-year treatment with the oral targeted tyrosine kinase inhibitor, Osimertinib, significantly reduces the risk of cancer recurrence. Although there is still no evidence of the benefit of chemo in patients receiving Osimertinib, he recommends his patient take both therapies, except for the elderly.

*Patient perspective: If I was an altruistic 70-year-old woman and had no proven therapeutic option for my cancer, then I would accept receiving a placebo in a clinical trial.

Case 3

CASE 3: A 64-year-old man with a former history of 40 packs per year smoking presents for evaluation of a lung mass. No other relevant medical problems.

*Radiologist: identifies a large metabolic reactive mass in the right upper lobe and a metabolic reactive right lymph node.

*Pulmonologist (GS): The tumor was classified as cT3, one, and zero based on clinical, not pathologic, lymph node (cT3N1M0), which is a clinical-stage IIIA.

*Pulmonologist (JB): The indication is a bronchoscopy and EBUS-TBNA as the next step because of the size of the primary lesion as well as the presence of the hilar lymph node.

*Medical Oncologist: CheckMate816 was a clinical trial that proved that in patients with stage IB–IIIA resectable NSCLC, the combination of platinum doublet chemotherapy with an immune checkpoint inhibitor, Nivolumab, before surgical resection, improved the disease-free survival rate compared to chemotherapy doublet alone. Remarkably, 24% of patients with the combined

therapy showed no evidence of residual disease at the time of surgery. Hence the FDA approved this combination as a standard of care.

*Thoracic Surgeon: The extension of the disease has to be considered to decide whether to suggest neoadjuvant therapy or not.

*Medical Oncologist: The Impower010 trial showed that patients with stage IIA to IIIA who had finished their platinum doublet chemotherapy and subsequently received the immune CheckPoint inhibitor, Atezolizumab, improved their disease-free survival rate. Furthermore, the more PDL1 expression they had, the better their result was. Hence, the FDA approved the use of Atezolizumab as an adjuvant for patients with stage IIA to IIIA resected NSCLC who had a PDL1 expression of 1% or greater.

*Pathologist: when more targeted therapies get potentially approved in the new adjuvant setting, we probably have to run a panel of molecular biomarkers before surgery like we are doing now for advanced metastatic disease.

Case 4

CASE 4: A 72-year-old heavy smoker, currently smoking, presented with a 6cm right upper lobe mass and multiple station lymphadenopathies (>2cms). MRI of the brain and PET revealed no other sites of disease. The 50-gene panel was unrevealing. PDL1 was greater than 50%.

*Medical Oncologist: The patient has an EBUS indication. Then, since it was diagnosed as adenocarcinoma and was 20% positive for PDL1, it would benefit from immunotherapy. The PACIFIC trial showed that in patients who had unresectable stage III NSCLC, the administration of immunotherapy with Durvalumab after reaching a point of no progression following chemo and radiotherapy increases survival rates.

Case 5

CASE 5: A 71-year-old patient in good general health with a 52-pack-year history of smoking quit in 2021. In April, had a cough and hemoptysis. Had a very large left lower lobe mass, and the PET-CT showed intense avidity. The 5x6cm mass touched the descending thoracic aorta. The histopathology after CT-guided biopsy showed NSCLC.

*Radiologist: It is very difficult to say whether there is a true invasion or not of the aorta when it is not possible to see a fat plane.

*Thoracic Surgeon: When it is not clear, surgeons explore the possibility of resection because it is not necessarily excessively risky, and this is an opportunity to cure the patient.

The patient received concurrent chemoradiation with conventional fractionation followed by Durvalumab. The tumor had a decrease in size and SUV.

*Thoracic Surgeon: Now, the indication is to resect the tumor.

*Pulmonologist (GS): The most important message is that it is necessary to stage the tumor to indicate the right treatment.

Presentation Highlights - Day 2

Session 6 – Addressing Healthcare Equity in Lung Cancer

The Keynote of Session Six was given by Dr. Edith Peterson Mitchell, whose talk was entitled ***Improved Survival In Lung Cancer But still Disparities***. The National Medical Association was founded in 1895 and was the first and largest organization representing African American physicians and health professionals in the United States. In 1910, the Flexner Report, which set the culture for medical education in the United States, stated that black people should be trained in hygiene rather than surgery and specialties with the purpose of protecting whites from diseases like tuberculosis. The Flexner Report also closed all but two black medical schools, contributing to a decrease in black physicians in the country, which negatively impacted the access to medical care for marginalized individuals. Dr. Peterson Mitchell recognized the labor of Dr. Jane Cooke Wright, one of the American Society of Clinical Oncologists (ASCO) organizers and the only black woman among the seven organizers of ASCO. Her father, Dr. Wright, was an advisor to former President Roosevelt and contributed to building hospitals with an equity perspective. Former President Johnson was the first president to sign a Medicare bill in 1965, contributing to reducing disparities. The Accreditation Council for Graduate Medical Education, through which all residents go in the United States, has a workforce diversity focused on achieving health equity. As an example of disparity, Dr. Mitchell highlighted that although cancer mortality rates have decreased significantly over the years, African Americans have the highest death rates, which in the case of lung cancer is 9.8% higher than the rate for White people. She added that individuals from African American and other marginalized groups who are diagnosed with lung cancer undergo molecular marker precision medicine tests less frequently than others. She called to address disparities in cancer outcomes by starting with self-bias awareness and emphasized the need to guarantee equity in access to precision medicine clinical trials. Then, she recognized that the implementation of Medicaid expansions improved timely treatment in African American cancer patients, reducing racial disparities in access to care. Finally, she talked about the importance of the All of Us Program in providing research grants, commented on the Biden-Harris administration's goal of reducing the cancer death rate by at least 50 percent over the next 25 years, and mentioned the President's Cancer Panel.

The first panelist of Session Six was Dr. Shanada Monestime, who presented on ***Health Disparities Across the Lung Cancer Care Continuum***. She started by talking about the goal of the GO2 Foundation for Lung Cancer, which is to understand access barriers across the lung cancer care continuum for historically medically underserved communities. They conducted qualitative research by interviewing patient advocacy organizations, health systems, cancer centers, and academic institutions. She first highlighted that 18%-42% of racial/ethnic minorities do not have access to a healthcare provider, decreasing their opportunity to be screened. Moreover, they have lower access to biomarker testing, which is a barrier to clinical trial participation, and are less likely to receive lung cancer treatment. Regarding survival rate disparities, Dr. Monestime highlighted that low socioeconomic status populations are more likely to die within a year after a lung cancer diagnosis, that lung cancer mortality rates are higher in rural versus urban populations, and that minorities were 13-21% less likely to survive five years compared to White people. Then, she described disparities in minority populations regarding palliative care. She showed testimonies describing barriers that are specific to each minority group. They found geography, health insurance, and provider bias among the common barriers for the different groups. Finally, she described different strategies to reduce disparities, such as developing culturally-appropriate educational materials, creating specialized support groups, and increasing the participation of patient navigators.

Next, Dr. Loretta Erhunmwunsee presented on ***Disparities in Care for Early-Stage NSCLC***. She shared data extracted from a study published in 1999 showing that the rate of surgery for early-stage lung cancer was 12.7% points less in Black compared to White patients, leading to lower survival rates in the black population. Another study published in 2015 showed the persistence of this disparity. Similar disparities in surgical rates impacting overall survival were found in the Hispanic population and in patients with low socioeconomic status. The reasons for disparities in care for early-stage NSCLC in those populations are less invasive and non-invasive staging, fewer recommendations for surgery, increased refusal of surgery, lower access to high volume centers and biomarker testing/molecular profiling, and social determinants of health, such as travel distance and insurance coverage. Then, Dr. Erhunmwunsee emphasized the need to meditate on the self-bias as healthcare providers that contribute to decreased survival rates in minority populations. Finally, she highlighted that some of the disparities are a consequence of structural inequities.

The next speaker was Dr. Brendon M. Stiles, whose talk was entitled ***Project URBANA – Increasing Access to Lung Cancer Screening in the Bronx in Latinx and African American Communities***. In the Bronx, most patients identify as Hispanic or Latino and black or African American patients. He shared his experience at the Montefiore Medical Center, which experienced an overload of patients in 2021 due to the COVID-19 pandemic. This resulted in increased waiting times for screening up to more than 100 days. By taking screening from the radiology training program, they could decrease the time from referral to CT screening. Some of

the remaining challenges are expanding outreach, engaging providers and patients, and increasing uptake and adherence. They partnered with LUNGeivity and took their health-literate educational materials refined with community input. In addition, they set up the BOLD Buddies Program, a peer navigation program consisting of training volunteers who have the major cultures of the Bronx. They studied social barriers and found that 25% of patients identified a major social need that is affecting their care in Montefiore.

Scout presented on ***Lung Cancer in the LGBTQIA+ Community***. He showed that 7.1% of United States adults identify as LGBTQIA+ and that this rate grows from generation to generation, reaching 20.8% among those born between 1997 and 2003. He added that the gender non-conforming group is the fastest-growing group within them, and 42% of LGBTQIA+ identify themselves as racial and ethnic minorities. Of note, their rates of tobacco use are 40% higher than that of the general population. He gave examples of patients who had difficulties in receiving proper cancer health care because of discriminative issues. He celebrated that one-third of NCI-designated cancer centers around the country are changing and started to collect pronouns, sexual orientation, and gender identity data in their electronic health records. 47% of NCI Cancer Centers do not have LGBTQIA+ non-discrimination statements. Scout explained that the lack of cancer information tailored to LGBTQIA+ generates a trust barrier. Finally, he presented the barriers they face at every step of the cancer continuum, resulting in a lower survivorship rate.

Dr. Zsolt J. Nagykaldi presented on ***Tribally Engaged Approaches to Lung Cancer Screening (TEALS)***. The TEALS Project is a five-year initiative to collaboratively design and test a multipronged primary care-based intervention to enhance LCS with low-dose CT in a tribal health setting using implementation and dissemination science. It involves a partnership between the University of Oklahoma Health Sciences Center and the Choctaw Nation of Oklahoma. They started a parametric cluster randomized clinical trial in six primary care centers to measure the effectiveness of TEALS on various outcomes. The pilot study was conducted during the COVID-19 pandemic and was evaluated by semi-structured interviews designed to explore patient experiences with the program. Moreover, some clinicians and staff were interviewed to determine their readiness for the care delivery intervention. Most of the participants were Oklahoma Native Americans or American Indians, and 70% reported currently smoking cigarettes. Although most of the patients had an appointment for a health checkup, the study evidenced very low preventative screening rates, with less than 40% of patients subjected to LCS. They concluded that the pandemic negatively impacted community-based prevention programs and that the LCS process still needs to be optimized at various levels.

The last speaker of Session Six was Dr. Arif H. Kamal, whose talk was entitled ***Centering Racial Equity in Lung Cancer Clinical Research***. Science must be innovative and generalized. Regarding clinical trials, their outcomes must be generalizable to the population to which the new

knowledge will be applied. However, there are very few people of color being represented in clinical trials. Therefore, the applicability of the innovations to this population is uncertain. Of 5000+ patients participating in clinical trials for 17 new oncology drugs approved by the FDA, only 15% were Asian, 4% were Black or African American, and 4% were Hispanic. Numerous published clinical trials do not inform the ethnicity of the participants, limiting the generalization of their outcomes and opening the possibility of response disparities after FDA approval. To finalize, Dr. Kamal presented ASCO recommendations for several identified barriers and emphasized the need for standardizing data.

Session 7 – Community Engagement and Outreach

The Keynote of Session Seven was given by Robert A. Winn, whose talk was entitled ***Southeastern Consortium for Lung Cancer Health Equity***. The southeastern consortium states include Virginia, North Carolina, and South Carolina. These three catchment areas have large territories of rural and African American populations and populations of poor socioeconomic status that have high rates of tobacco consumption. Dr. Winn showed the photos and team roles for 15 team members that were grouped into patient advocates, early career investigators, community engagement leaders, and team leaders. Then he showed that living conditions were the centermost factor in the spectrum of social determinants of health. Social inequities and institutional inequities were upstream of living conditions, while behaviors and health outcomes were downstream of living conditions. Two specific aims of the Consortium are to 1) initiate and evaluate a high-impact, multimodal, and multilevel navigation intervention to promote LCS among Black/African American individuals and 2) to develop a robust, shared population-based cohort and biorepository to support research in understanding biological determinants and risk factors for poor lung cancer outcomes among Blacks and African Americans. The Consortium was awarded the Stand Up to Cancer Dream Catalyst Award for its work in creating the largest LCS biorepository in the United States. About 675 people participated in the project, where innovative genetic analysis was used to develop a precision-based, competent risk score for identifying people at the highest risk for lung cancer. Dr. Winn highlighted the difference between trust based on relevance, accessibility, and flexibility versus trustworthiness, which was based on credibility, dependability, transferability, and common firm ability. He closed the presentation by listing the ten principles of trustworthiness published by the Association of American Medical Colleges.

The first speaker of the session was Maureen Rigney, who presented on the ***Alabama Lung Cancer Awareness, Screening, and Education (ALCASE) Project***. Alabama has high smoking rates, high lung cancer incidence and mortality rates, and a high percentage of Black/African Americans in the state population and has many rural populations. The goals of the ALCASE project were to conduct a needs assessment, convene focus groups to research the issues, and

collaborate with the University of Alabama Comprehensive Cancer Control group to conduct community health assessments. Essential elements of the project included five coordinators in seven counties, conducting almost 200 community health assessments, setting goals of screening 250 people, adding four screening centers to the project, providing gas cards for transportation, and increasing funding for screening centers and for under-insured or not-insured people. The project encountered challenges such as a lack of primary care provider knowledge and partnership and personnel changes (Department of Health and QuitLine) through the pandemic but nonetheless created many satisfying results. Their achievements included hiring Kathy Levy, developing partnerships with local experts, and making continual adaptations as required for gas cards, primary care provider education, and Dear Doctor letters. Results of the project included increased awareness among 17,000 people, 87 PCP appointments, 65 people screened, 58 gas cards issued, 63 post-screening surveys completed (almost all with strong positive feedback), two journal articles published, and the creation of enduring relationships and increased access to quality screening services.

The next speaker was Dr. Cherie P. Erkmen, who presented on ***Collaborating with Community Organizations***. The population served by Temple University Health Systems includes 23% who are unemployed, 45% with incomes below the federal poverty level, and 86% who are covered by Medicaid and Medicare. The population demographics are Black (46%), Hispanic (30%), White (18%), Asian/Pacific (4%), and Other (2%). Community collaboration is required to address the issues and includes the procedural steps of conducting assessments, gaining trust, encouraging engagement, and forming partnerships to achieve results. The main takeaway message from the assessment phase was that more education was required. People were worried about lung cancer but lacked knowledge about screening and viewed it as a complicated process. They were also frustrated with the stigma around quitting smoking and lung cancer. Trust was built up through credible messengers and survivors. The engagement of patients and partners was achieved through community outreach events such as the Block Captain Alliance launch and community church events. Partnerships were formed with the local Philadelphia police force, the fire department, and the Carpenters and Joiners Union, as well as with organizations such as the GO2 Foundation, LUNGevery, and the Ride Hard Breathe Easy advocacy group. As a result of the community collaborations, the number of lung cancer screenings increased by 800% from about 200 in 2014 to almost 1600 in 2022.

Next, Mary M. Pasquinelli presented on ***Lung Cancer Screening in a Federally Qualified Health Center***. The University of Illinois Chicago is the largest public hospital system in Illinois. The catchment area of Cook County includes mostly Black/African American and Latinx people and has dramatic disparities in cancer survival outcomes. Engagement strategies with primary care providers and FQHCs include faculty meetings, educational and training sessions, streamlined referral and screening processes for patients, and the use of multidisciplinary care teams with champions such as residents, doctors, or registered nurses. The hybrid lung screening workflow

at UI Health includes identifying eligible patients at the provider office, conducting a shared decision-making visit that includes smoking cessation discussions, performing an LDCT scan, referring LungRADS 1-3 results to providers for patient follow-up, and reviewing LungRADS 4 in a multidisciplinary thoracic tumor board conference before follow-up treatment. The thoracic oncology team supports the lung screening program with surgeons, radiation oncologists, medical oncologists, pulmonologists, pathologists, primary care providers, navigators, and ancillary staff. Results of the program show a 2.8% lung cancer detection rate, with more than 65% of cancers diagnosed at an early stage (1 or 2). In 2022, 100% of lung cancers diagnosed with annual follow-up scans were at an early stage, a ratio of one lung cancer diagnosed for about every 30 scans. About 7% of high-risk patients are screened in Illinois.

The next speaker was Dr. Raymond U. Osarogiagbon, who talked about ***The Mid-South Miracle*** in the Baptist Memorial Healthcare (BMHCC) catchment area. The Mid-South Miracle is a program-based implementation project to eliminate geographic lung cancer disparities within the catchment area of the BMHCC hospital system, which is largely located in Mississippi but has a few hospitals in Arkansas and Tennessee. The BMHCC system would have ranked about 38th in the United States for the estimated number of new lung cancer cases in 2020. The goal of the BMHCC is to reduce lung cancer mortality by more than 25% over a ten-year period using a sustained, rigorous implementation of seven specific clinical programs that can be visualized as a pyramid with seven layers. From the bottom to the top, these seven programs include tobacco control, management of incidental lung nodules, LDCT screening, treatment selection, optimal surgical resection, optimal pathologic evaluation, and optimal systemic therapy. The overall strategy is based on population science, team science, and dissemination and implementation science. Nodule patients enrolled in the program increased from 450 in 2015 to 24220 in 2021, an increase of about 5400%. The number of new cancers that were diagnosed over the same time period increased from 38 to 1498, an increase of about 3900%. The lung nodule program might be a good complementary pathway to early lung cancer detection because the program would have detected 20% of all stage 1 and 2 patients in the entire cohort of eligible patients selected by the USPSTF 2021 eligibility criteria. Dr. Osarogiagbon presented several graphs that showed that the lung nodule program produced a survival curve midway between the LDCT survival rate curve and the multidisciplinary care survival rate curve over a five-year period. The data showed that lives were saved by multidisciplinary care, by diagnosing lung cancer through different pathways (including the nodule program), and good-quality surgical resections.

The last speaker of the session was Claudia T. Miller, who talked about ***The Evolution of Precision Medicine Navigation***. Ms. Miller began the presentation with a short history of biomarker use over the past two decades. In 2007, no biomarkers were used, and in 2022, all patients in the Bristol-Myers Squibb Checkmate 816 Phase 3 clinical trial received biomarker testing. The present-day practice at the university is to enter orders for biomarker testing into the EHR system. Standing orders exist for in-house 60-gene next-generation sequencing (NGS), and there

is an open line of communication with the pathology navigator for biomarker orders. The system is moving toward performing NGS runs twice a week in 2023. The molecular pathologist sends out a weekly email containing all results from the previous NGS run. Over time, Miller learned that tissue samples will always be the central issue and that there is a need to integrate ctDNA into practice. The EHR system is pivotal for integrating precision medicine into clinical practice, there is a need for ongoing profiling of the patient's tumor, and the pathology and molecular pathology functions are crucial members of thoracic multidisciplinary teams. Navigation and precision nursing are critical components of precision medicine.

Session 8 – The Patient Perspective – Patient-Centered Care Across the Lung Cancer Continuum

The first presenter of Session Eight was Dr. Upal Basu Roy, whose talk was entitled ***Survivorship and Co-Survivorship In The 21st Century - There is no one-size-fits-all!*** Given the advances in new drugs in the past two decades, the number of survivors living with both early-stage as well as metastatic lung cancer has been increasing, reaching more than 600,000 people living with lung cancer in 2022. Compared with other cancer types, lung cancer is unique in that many survivors live with metastatic disease. The panelist described the complex and dynamic life of a patient living with metastatic lung cancer, with alternating remission and recurrence periods. He showed that the journey is heterogeneous, with divergence in side effects concern among the patients from different ethnic groups. The journey is also dynamic since this concern increases as cancer progresses to a higher stage. Then, he talked about the need to create a survivorship plan to balance survival with meaningful survivorship. This plan should consider different domains, namely health and quality of life, disease and treatment-related factors, tumor/tissue-related factors, patient preferences, health-related behaviors, patient-specific factors, and longitudinal factors, such as going back to work and the cost of living with cancer. Then he talked about "co-survivorship," which refers to caregivers whose journey mimics that of patients. Finally, Dr. Basu Roy described an action plan, which includes listening and learning from both patients and caregivers, improving methods to understand survivorship and co-survivorship, and using that information to create evidence-based interventions and programs.

The session continued with a Patient, Caregiver, and Physician Panel, starting with Natalie Brown, a cancer survivor whose talk was entitled ***Riding the Roller Coaster of Lung Cancer and Living in Limbo***. She described her life as a rollercoaster, with ups and downs. She was diagnosed with stage 4 lung cancer in 2020 at a very young age and, since then, felt like living in 90-day increments, given the intervals between scans. She talked about the chemotherapy side effects as a "down" and the importance of social media support groups as well as her family and friends as an "up." She became an advocate for lung cancer and wants to start a non-profit

organization to visualize that young people also get lung cancer. She tries to live a normal life, still working a regular full-time job.

The next speaker was James Pantelas, a 17-year lung cancer survivor. When he was diagnosed, his wife was six and a half months pregnant. He was receiving chemo and radiotherapies when his daughter was born. When his baby was 21 days old, she had a brain bleed and spent more than 40 days in the NICU until healing. After she recovered, he spent five years volunteering at the Children's Hospital. Now, he is a patient advocate for the Veterans Health Administration. Finally, he highlighted the need to involve more men and veterans in initiatives to engage people for LCS.

Next, Ms. Heidi Nafman-Onda and her husband, Dr. Pierre Onda, presented on ***Incorporating Lung Cancer Advocacy Into Survivorship***. They and other cancer survivors and caregivers founded the White Ribbon Project, which is a non-profit organization focused on the promotion of lung cancer awareness to the general public. Ms. Nafman-Onda spoke about her 3A-stage lung cancer diagnosis, which was an incidental finding in 2018. Since 2020, after receiving chemotherapy followed by Durvalumab, she has had no evidence of lung cancer disease. The White Ribbon Project started with a wood-made white ribbon that her husband did for her to show at their home front door with the purpose of lung cancer awareness. Then, the idea went viral, and the White Ribbon Project reached 50 states and 33 countries. They built a community of patients, caregivers, and healthcare providers. The couple highlighted the importance of primary healthcare providers for LCS awareness and clarified that, for women, this role is sometimes accomplished by their gynecologists. Then, they showed the stories of other patient advocates and emphasized the importance of sharing patient stories to humanize LC disease.

The last talk of Session Eight, entitled ***Patient-Centered Care Across the Lung Cancer Continuum***, was presented by Dr. Christine M. Lovly. She said that there are a lot of definitions for patient-centered care, but the heart of it is *humanism*. Then, she shared the barriers that she, as an oncologist, found across the patient journey. She first described the barriers around diagnosis, which include timely access (or access at all) to care (sub-specialist referrals, diagnostic imaging, biopsies, biomarker testing results, etc.), coordination between providers, and timely transfer of and access to records from other medical facilities. During treatment, she found insurance/payer obstacles, poor accessibility to clinics for patients and their caregivers, symptom surveillance and management that could be tackled by telemedicine instead of in-site visits, and timely access to sub-specialists as symptoms arise. She emphasized the need to educate doctors from other specialties so that they will be aware that patients with lung cancer are living longer and that they get other medical issues that must be treated. Patients should have access to resources that promote long-term physical and emotional wellness. Dr. Lovly ended by saying that coordination and integration of care are highly important to supply patient-centered care.

Session 9 – The Systems Perspective – Patient-Centered Care Across the Lung Cancer Continuum

The first presenter of Session Nine was Dr. Alan J. Balch, whose talk was entitled ***Patient-Centered Care Across the Lung Cancer Continuum - Financial Toxicity***. He described the Patient Advocate Foundation, which is a 26-year-old national non-profit organization that provides direct financial and case management systems to primarily low-income patients across the United States. To date, they have helped approximately two million people by either giving them money or by paying for a case manager who spends, on average, ten business days with the patient. Of the approximately 190,000 patients that they serve per year, 60% have cancer. He presented some of the data they collected that demonstrate that the major financial burden that patients face is presented at the moment of diagnosis. Hence, it is important to talk to them about their financial situation from the very beginning. In contrast to other diseases, the financial hardships of low-income patients with cancer are equally distributed among direct and indirect costs, including treatment costs, housing, food, and transportation. Patients consider the cost of their treatments as part of their decision-making for care. Hence, he believes that it is important to better know the patient by introducing these conversations early, in a way that makes people feel comfortable, and to make the conversations part of the care experience.

Next, Dr. Laura A. Petrillo presented on ***Optimizing Palliative Care for People Living with Lung Cancer***. Since its origins, palliative care has focused on alleviating patient suffering in hospice care when they are at the end of their lives. In the last decade, the focus of palliative care moved to the quality of life, improving the symptoms and stress of serious illness from the time of diagnosis in what is known as *early* palliative care. Dr. Petrillo shared a landmark study demonstrating that early palliative care not only improves the quality of life but also extends the survival of patients with metastatic lung cancer. However, there are still implementation challenges for early palliative care, such as uneven expansion (with greater uptake in large hospitals compared to small ones), disparities in palliative care access, questionable efficacy among home-based palliative care provided by hospice agencies, and workforce shortages. Moreover, as targeted therapy and immunotherapy prolong the survival of patients living with lung cancer, disease trajectories are transforming, and new challenges are appearing. Dr. Petrillo showed the findings of a qualitative study they conducted to identify these challenges in which they surveyed people with lung cancer with targetable mutations. Their results showed that doctors do not talk about prognosis at the moment of diagnosis anymore and do not talk about end-of-life outcomes. Patients live with uncertainty because they do not have a clear prognosis. When patients were questioned about their needs, they asked for holistic support for both the psychological aspects and lifestyle factors. As a result, they are launching a survivorship task group to develop another patient-centered initiative that will provide lung cancer survivors the kind of supportive care that they deserve.

The presentation of Dr. Julia L. Agne was entitled ***Setting Up the Ideal Patient-Centered Care Paradigm***, which was focused on the embedded clinic model of outpatient palliative care in thoracic oncology at the Ohio State University. To develop the model, they first surveyed oncology providers and nursing staff about the priorities that this model should take into account, and the priority that stood out was to minimize the burden of appointment times. This burden includes the amount of time that patients are required to be in the medical setting as a part of their treatment. Hence, Dr. Agne's group developed a model that allowed patients traveling from outlying areas to coordinate their oncology and palliative care visits, which enabled the clinics to serve a wider catchment area of patients. As a result, they measured a reduction in the number of visits to the emergency department, hospitalizations, and ICU admissions of patients with lung cancer, as well as an estimated healthcare cost savings of \$2.7 million.

The last panelist of the session, lung cancer survivor Jill Feldman, presented a talk entitled ***Survivorship - Why it Matters***. Two of her grandparents, both parents, and an aunt died from lung cancer. She was diagnosed with lung cancer in 2009 at the age of 39. She emphasized the importance of acknowledging that the necessities of patients, healthcare providers, health systems, and research are changing as the survival of lung cancer increases. Survival is not the only important endpoint for patients, but life quality is as important as survivorship. She highlighted that classical science, including statistical analysis, is not sufficient to approach this problem because the meaning of quality of life is unique to each person. Finally, she thanked the NLCRT and her fellow advocates for participating in the meeting.

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The NLCRT, member organizations, and partners are committed to the adoption of language, phrasing, and imagery that is person-first, judgment-free, and non-stigmatizing. This shift in language takes time and dedicated effort, and slips happen, but it is an important part of creating a more supportive and empathic environment to reduce the burden of lung cancer. We appreciate your effort!

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