Advance Program

ATS 2025

San Francisco | May 16-21
conference.thoracic.org

TABLE OF CONTENTS

ATS 2025 INTERNATIONAL CONFERENCE
MAY 16-21, San Francisco, CA

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The information contained in this program is up to date as of January 20,2025.

Click on the session title to view more information about ATS events, assemblies and sections.

https://conference.thoracic.org/attendees/registration/

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ATS thanks Conference presenters for their cooperation in completing disclosure forms by announced deadlines, and thanks Conference session organizers and all those involved in this important process.

POSTGRADUATE COURSES

Friday, May 16

CLINICAL

POSTGRADUATE COURSE

PG1A CRITICAL CARE ULTRASOUND AND ECHOCARDIOGRAPHY I

This is part 1 of a two-part course which includes PG1B on Saturday, May 17. Those registering for PG1A will registered for PG1A and PG1B. Pre-registration and additional fees required. Attendance is limited.

Member $1,240	In-Training Member $945
LMIC Member $868	LMIC In-Training Member $662
Non-Member $1650	In-Training Non-Member $1070

Assemblies on Critical Care, Clinical Problems, Nursing, Pediatrics

8:00 A.M. - 4:00 P.M.

Target Audience
Providers of critical care or emergency medicine; specialists in pulmonary hypertension, pulmonologists.

Objectives
At the conclusion of this session, the participant will be able to:

- apply ultrasound at bedside to assesscritically ill patients
- apply ultrasound to guide common ICU procedures
- diagnose alternate etiologies of shock in the critically ill patient

This is a 2-day postgraduate course that consists of didactic lectures and hands-on stations. The focus is primaritransthoracic echocardiography, with some diagnostic ultrasound. The topics include basic and intermediate criticechocardiography (including hemodynamic measures), assessment of fluid status, procedural guidance for vascuthoracentesis, venography. The hands-on stations will include both healthy models and laptops that can demonstpathology.

8:00 **Welcome and Introduction to Critical Care Ultrasound: Training and Competency**

8:20 **Basic Physics, Artifacts, and Knobology**

8:45 **Transthoracic Windows and Views**

9:15 **Basic Evaluation of LV Systolic Function, Measurement of Cardiac Output**

9:45 **Basic Evaluation of RV Size and Function, Pulmonary Embolus**

10:15 **Break**

10:30 **Practical Skills Session: Hands- On Stations I**
- **Apical Window**
- **Parasternal Window**
- **Subcostal Window**

12:00 **Lunch**

12:30 **Lunch and Clinical Cases I**

12:45 **Chest Ultrasound**

1:15 **Valvulopathy and Endocarditis**

1:45 **Basic Assessment of Diastolic Function**

2:15 **Break**

2:30 **Practical Skills Session: Hands-On Station II**
- **Lung Ultrasound**
- **Cardiac Output**
- **Diastolic Measurements**

CLINICAL

POSTGRADUATE COURSE

PG2 BRONCH DAY 2025: A COMPREHENSIVE, HANDS-ON GUIDE TO BASIC BRONCHOSCOPY, EBUS, AND GUIDED BRONCHOSCOPY

Pre-registration and additional fees required. Attendance is limited.

Member $630	In-Training Member $405
LMIC Member $441	LMIC In-Training Member $284
Non-Member $735	In-Training Non-Member $530

Assemblies on Clinical Problems, Thoracic Oncology

8:00 A.M. - 4:00 P.M.

Target Audience
Adult and pediatric pulmonologists and intensivists, thoracic surgeons, physicians in training, allied health professionals, anesthesiologists interested in improving their skills in diagnostic and therapeutic flexible bronchoscopy and EBUS

Objectives
At the conclusion of this session, the participant will be able to:

- diagnose and manage adults with benign and malignant respiratory diseases that require bronchoscopic intervention
- understand the indications for basic bronchoscopy, linear and radial endobronchial ultrasound and the skills necessary to perform these procedures
- improve knowledge of navigational and robotic bronchoscopy and strengthen these procedural skills

This course is designed to provide a comprehensive introduction to diagnostic and therapeutic flexible bronchoscopy. Participants will acquire the knowledge and skills to improve their proficiency in basic bronchoscopic techniques and be exposed to advanced skills such as linear EBUS, radial EBUS, navigational and robotic bronchoscopy. A series of lectures will be followed by intensive, hands-on stations. Through the use of physical and virtual reality simulators, participants will strengthen their procedural skills. This course is of particular interest to providers seeking to refine their bronchoscopy skills and who wish to review the most up-to-date data behind the various bronchoscopic techniques used today. Audience Response will be used during lectures.

8:00 **Introduction**

8:05 **Optimizing Basic Bronchoscopy Skills**

8:30 **Maximize Bronchoscopic Outcomes in High Risk Patients**

8:55 **Role of Flexible Bronchoscopy in Management of Hemoptysis**

9:45 **Break**

9:20 **Foreign Body Aspiration**

10:00 **The Fundamentals of Linear EBUS**

10:25 **Navigational Bronchoscopy: From Fluoroscopy to Robotics**

10:55 **Bronchoscopic Lung Volume Reduction**

12:00 **Practical Skills Session:**
- **Bronchoscopy with Biopsy and Needle Aspiration**
- **Bronchoscopy Management of Hemoptysis**
- **Management of the Difficult Airway Including Trachcostomy Tubes**
- **Techniques for Foreign Body Removal Using Flexible Bronchoscopy**
- **Navigational Bronchoscopy with Radial Endobronchial Ultrasound**
- **Robotic Bronchoscopy**
- **Endobronchial Ultrasound Anatomy**
- **Endobronchial Ultrasound-Guided Transbronchial Needle Aspiration**
- **Endobronchial Valves**

3:55 **Wrap-Up**

CLINICAL

POSTGRADUATE COURSE

PG3 ADVANCES IN THE MANAGEMENT OF COMPLEX SLEEP-DISORDERED BREATHING AND CHRONIC RESPIRATORY FAILURE

Pre-registration and additional fees required. Attendance is limited.

Member $630	In-Training Member $405
LMIC Member $441	LMIC In-Training Member $284
Non-Member $735	In-Training Non-Member $530

Assembly on Sleep and Respiratory Neurobiology

8:00 A.M. - 4:00 P.M.

Target Audience
Health care providers who care for patients with complex sleep disordered breathing conditions and/or chronic respiratory failure syndromes, implement home assisted ventilation management including invasive and noninvasive ventilation.

Objectives
At the conclusion of this session, the participant will be able to:

- know evidence based management of chronic hypercapnic and/or hypoxic respiratory failure conditions that would benefit from implementation of home mechanical ventilators and/or high flow oxygen
- learn strategies in transitioning patients with chronic respiratory failure requiring ventilatory support from hospital to home
- know how to manage home tracheostomy, use of leak speech and how to troubleshoot emergencies

This combined didactic and skills-based course aims to highlight state of the art, evidenced-based management of the spectrum of complex sleep disordered breathing to chronic respiratory failure, with a focus on neuromuscular respiratory failure, severe COPD, central sleep apnea secondary to opioids, diaphragmatic / phrenic nerve dysfunction, and chronic tracheostomy management. The skills-based section will focus on state of the art management of invasive and noninvasive ventilation with home mechanical ventilators and high flow oxygen, point of care diaphragmatic ultrasound, tracheostomy management in the home. Attendees will have the opportunity to participate in small group hands-on learning with faculty and apply these skills towards specific disease states to optimize patient care.

8:00 **Introductions**

8:05 **Noninvasive Ventilation in COPD - Personalizing Care Through Phenotypes**

8:30 **Update on Sleep Disordered Breathing Secondary to Chronic Opioid Use**

9:00 **Neuromuscular Respiratory Failure: Optimizing Ventilation and Quality of Life with Noninvasive Ventilation**

9:30 **Break**

9:45 **Respiratory Impairment Secondary to Phrenic Nerve and Diaphragmatic Dysfunction**

10:15 **Transitioning Patients from ICU to Home with Noninvasive Ventilation**

10:45 **Home Tracheostomy Management for the Adult and Pediatric Pulmonologist**

11:15 **Safety and Monitoring Tips for Home Assisted Ventilation**

11:45 **Lunch and Learn: Advances in Ambulatory High Flow Oxygen Systems - Case Based Discussion**

12:45 **Practical Skills Session:**
- **Basics of Point of Care Diaphragmatic Ultrasound •High Flow Oxygen Systems**
- **Home Mechanical Ventilators with Download Interpretation (Vivo 45LS and Luisa**
- **Mouth Piece Ventilation for Adults and Children on Full Time Ventilation (Astral 150 and VOSCN)**
- **Tracheostomy Management and Leak Speech Ventilation for Adults and Children**

2:30 **Break**

BEHAVIORAL • CLINICAL

POSTGRADUATE COURSE

PG4 METHODOLOGY FOR INNOVATIVE HEALTH EQUITY RESEARCH: A GRANT PROPOSAL WORKSHOP

Pre-registration and additional fees required. Attendance is limited.

Member $465	In-Training Member $275
LMIC Member $326	LMIC In-Training Member $193
Non-Member $570	In-Training Non-Member $405

Assemblies on Behavioral Science and Health Services Research, Respiratory Cell and Molecular Biology; Health Equity and Diversity Committee Section on Medical Education

8:00 A.M. - 4:00 P.M.

Target Audience
Investigators developing health equity research proposals, including health services, basic science, and translational scientists.

Objectives
At the conclusion of this session, the participant will be able to:

- construct or refine an established research question grounded in heath equity theories and frameworks: in small groups participants will be asked to generate a research question using WHO framework for action on the social determinants of health
- propose methods to address the research question previously outlined that centers marginalized groups: each small group will collaboratively develop a research agenda for investigating their question using methods introduced in the didactic sessions
- create a health equity focused grant proposal: each small group will collaboratively frame previously defined health equity questions and methods into a grant proposal

Health equity research has become a burgeoning field in the past half decade, yet, few scientists have formal training in health equity research methods. This limits innovation and prevents the generation of solutions to end health disparities. To help equip the pulmonary and critical care research community, this postgraduate course targets scientists across all disciplines who are interested in designing research projects that concern health equity. The goals of the session are 1) to provide an overview of methods used to research health disparities and 2) workshop a fundable proposal that incorporates concepts and methods discussed during the course. This session will leverage examples and small group exercises facilitated by experts to develop a strong health equity research proposal.

8:00 **Introduction to Seminar and a Conceptual Framework for Social Determinants of Health**

8:20 **How To Obtain Funding by Defining and Addressing Gaps in Current Knowledge About Health Disparities**

8:50 **Social Determinants of Health**

9:20 **Break-Out Session #1: Generating a Health Equity Research Question**

10:00 **Break**

10:30 **Quantitative Methods for Health Equity Research**

11:00 **Unique Aspects of Qualitative Methods in Equity Research**

11:30 **Case Study: A Mixed-Methods Evaluation of Disparities in Clinician Communication**

12:00 **Lunch**

1:00 **Case Study: Community-Engaged Research in the Treatment of Asthma**

1:30 **Break-Out Session #2: Generating a Health Equity Research Agenda**

2:10 **Panel Discussion: Unknowns in Health Equity Research Across the Translational Research Spectrum**

3:00 **Break-Out Session #3: Writing a Health Equity Research Proposal**

BASIC • CLINICAL • TRANSLATIONAL

POSTGRADUATE COURSE

PG5 PULMONARY HYPERTENSION: WHAT YOU NEED TO KNOW TODAY

Pre-registration and additional fees required. Attendance is limited.

Member $465	In-Training Member $275
LMIC Member $326	LMIC In-Training Member $193
Non-Member $570	In-Training Non-Member $405

Assemblies on Pulmonary Circulation, Clinical Problems, Pulmonary Circulation, Respiratory Cell and Molecular Biology

8:00 A.M. - 4:00 P.M.

Target Audience
Pulmonologists, Cardiologists, Hepatologists, Rheumatologists, Residents, Fellows, NP's, PA's, Nurses

Objectives
At the conclusion of this session, the participant will be able to:

- after this PG course, clinicians will be able to better diagnose PH, understand the nuances of management, and have a clearer understanding of disease pathobiology. This will improve patient care and outcomes
- clinicians will be able to better navigate discussions surrounding controversial topics in PH, such as risk stratification and treatment algorithms. This will improve patient care and outcomes
- audience will be better at identifying areas of future critical research and new upcoming technologies for diagnosis and treatment

This postgraduate course offers a comprehensive update on the 7th World Symposium in Pulmonary Hypertension (WSPH) held in Barcelona in 2024. It covers topics such as patient perspectives, advancements in disease mechanisms and genetics, clinical updates in diagnosis and therapy, novel imaging for pulmonary vasculature, and right ventricle interactions. Discussions include evolving PH definitions and classifications, controversies in risk scores, and a fourth treatment pathway. The course addresses management of end-stage disease, special situation considerations, and clinical trial design. Updates on specific PH groups and discussions on challenges in health disparities, treatment access, and global guidelines are also included.

8:00 **Introduction to PG, and Overview of the WSPH 2024**

8:10 **What Do We Know about PAH Pathobiology and Mechanism of Disease**

8:30 **Genetics and Genomics in PH**

8:50 **Updates in PH Definition, Classification and Diagnosis**

9:10 **The Nuts and Bolts of Accurate Diagnosis with RHC**

9:30 **Break**

9:40 **How Should We Manage PAH: Focus on Risk Stratification and Treatment Goals**

10:00 **Updated Treatment Algorithm in PAH, Where Do We Fit the Fourth Pathway?**

10:20 **End-Stage Disease: Transplantation, Support Technologies, and Palliative Care**

10:40 **Special Situations in PAH Pregnancy, ICU, Perioperative**

11:10 **How To Treat Cpcph in Patients with Group 2 PH?**

11:30 **PH-ILD, How We Treat Based on What We Know and Don't Know**

11:50 **Choosing the Right Therapy in CTEPH**

12:10 **Lunch**

12:50 **Small Group Discussion**

1:50 **Don't Forget About the Little Ones! PH in Pediatric Patients and How Their Management Differ from Adults**

2:10 **How Can I Help You? Shared Decision Making in the Era of Evidence-Based Medicine**

2:00 **Break**

2:40 **Emerging Therapies and Future Clinical Trial Design Considerations**

3:00 **Can I Have Your Attention: Real World Community and Global PH Practice**

3:20 **Challenges With Disparities in PH: Trials, Access, and Beyond**

3:40 **PH Guidelines: One Size Does Not Fit All**

CLINICAL

POSTGRADUATE COURSE

PG6 COMPLEX CARE OF CHILDREN WITH CHRONIC RESPIRATORY FAILURE

Pre-registration and additional fees required. Attendance is limited.

Member $465	In-Training Member $275
LMIC Member $326	LMIC In-Training Member $193
Non-Member $570	In-Training Non-Member $405

Assembly on Pediatrics

8:00 A.M. - 4:00 P.M.

Target Audience
Pediatric lung health providers, members of complex care teams, pediatric intensive care physicians and providers, nurses and respiratory therapists providing care to children with complex care needs

Objectives
At the conclusion of this session, the participant will be able to:

- define new strategies to manage the care of children with chronic respiratory failure including patients with neuromuscular and chronic lung diseases
- improve the health status of patients with chronic respiratory insufficiency by better understanding of the role of lung health providers as members of chronic complex care teams
- apply the experience with upper and lower airway endoscopy and interpretation of airway sampling to the care of children with chronic respiratory insufficiency and lower airway disease

Chronic respiratory failure in children is caused by a heterogeneous group of diseases. A deep understanding of the underlying causes of respiratory insufficiency including restrictive lung disease, airway abnormalities, intrinsic lung disease, and pulmonary infections is required for successful care of these children. This didactic session will concentrate on management of respiratory insufficiency and its underlying causes in children with common conditions such as neuromuscular diseases and bronchopulmonary dysplasia. Special attention will be given to

the role that pediatric lung health specialists play in the multidisciplinary care of these children in the setting of a complex chronic care model.

8:00 **Introduction**

8:05 **Respiratory Involvement in Neuromuscular Disease**

8:40 **Chronic Respiratory Failure in Children**

9:15 **Break**

9:35 **The Role of the Pulmonologist in Interdisciplinary Neuromuscular Care**

10:10 **Home Ventilation Strategies for Children with Neuromuscular Disease**

10:45 **Panel Discussion**

11:15 **Lunch**

12:15 **Upper and Lower Airway Endoscopy in Children With Neuromuscular Disease**

12:50 **Interpretation of Lower Airway Bacterial Culture in Children with Tracheostomy**

1:25 **Airway Clearance Strategies in Children With Neuromuscular Disease**

2:00 **Break**

2:20 **Scoliosis Surgery and Lung Health in Children With Neuromuscular Disease**

2:55 **Strategies for Decannulation in Children with Bronchopulmonary Dysplasia**

3:30 **General Discussion**

BASIC • TRANSLATIONAL

POSTGRADUATE COURSE

PG7 A HANDS-ON INTRODUCTION TO STUDYING THE LUNG MICROBIOME

Pre-registration and additional fees required. Attendance is limited.

Member $465	In-Training Member $275
LMIC Member $326	LMIC In-Training Member $193
Non-Member $570	In-Training Non-Member $405

Assemblies on Pulmonary Infections and Tuberculosis, Allergy, Immunology and Inflammation

8:00 A.M. - 4:00 P.M.

Target Audience
Research scientists interested in designing, performing, and understanding the analysis of lung and airway microbiome samples using sequencing-based techniques.

Objectives
At the conclusion of this session, the participant will be able to:

- understand research design and analytical approaches needed to conduct culture-independent assessment of microbial communities in low-biomass respiratory specimens
- integrate microbiota sequencing results with culture-based models of respiratory infection. Audience will appreciate the complexity of re-evaluating our disease paradigms and apply this knowledge when designing studies of lung microbiota
- illustrate the use of a combination of basic science as well as multi-dimensional computational approaches for investigating microbial function and mechanisms of disease

This course provides an up-to-date and accessible introduction to microbiome analyses for trainees and investigators. The course will introduce methodologies used to study the lung microbiome using culture-independent methods. During the sessions, participants will learn how to design, execute, analyze and interpret a lung microbiome study. Experiences will include didactic sessions, facilitated small-group discussions on designing and executing lung microbiome studies, and demonstrations on the use of statistical software to analyze microbiome data. Attendees will be provided with a set of microbiome data as well as annotated code for hands-on analysis.

8:00 **An Introduction To Thinking About the Microbiome**

8:50 **Integrating Microbiota Findings with Our Disease Models**

9:20 **Lung Microbiome Techniques and Respiratory Infections**

9:50 **Break**

10:05 **Contaminomics**

10:35 **Longitudinal Microbiome Studies**

11:05 **A Beginner's Introduction to Microbiome Analyses**

12:35 **Lunch**

1:45 **Studying the Host-Microbiome Interface**

2:15 **Metagenomics and Metatranscriptomics**

3:00 **Introduction to Multi-Omic Analyses: Has This Helped Our Patients?**

3:20 **Introduction to Multi-Omic Techniques**

BASIC • TRANSLATIONAL

POSTGRADUATE COURSE

PG8 INNOVATIVE PRECLINICAL MODELS FOR HUMAN LUNG RESEARCH: BRIDGING THE GAP FROM BENCH TO BEDSIDE

Pre-registration and additional fees required. Attendance is limited.

Member $465	In-Training Member $275
LMIC Member $326	LMIC In-Training Member $193
Non-Member $570	In-Training Non-Member $405

Assemblies on Respiratory Cell and Molecular Biology, Allergy, Immunology and Inflammation, Environmental, Occupational and Population Health, Pulmonary Circulation, Pulmonary Infections and Tuberculosis, Respiratory Structure and Function

8:00 A.M. - 4:00 P.M.

Target Audience
Translational and basic science researchers as well as clinical researchers with an interest in translational preclinical lung research

Objectives
At the conclusion of this session, the participant will be able to:

- comprehend the capabilities and applications of various preclinical lung models
- evaluate the strengths and limitations of each preclinical model
- integrate advanced technologies and interdisciplinary approaches in lung research

This postgraduate course will provide an in-depth exploration of the latest advancements in preclinical models of human lung research. Attendees will gain insights into a diverse array of cutting-edge methodologies, including in vitro models, in vivo animal models, lung organoids, spheroids, precision-cut lung slices, iPSC-derived models, Organs-on-Chips, and bioinspired robotics. The course is designed to offer a comprehensive overview of each model's capabilities, applications, and limitations, providing participants with the knowledge to select and utilize the most appropriate models for their research.

8:00 **Chairs Welcome and Intro**

8:10 **Lung Organoids and Spheroids: Tools for Studying Development and Disease**

8:40 **iPSC-Derived Models: A Platform for Lung Disease Modeling and Drug Screening**

9:10 **Animal Models for Lung Disease: Strengths and Limitations**

9:40 **Break**

10:05 **Integrative Multi-Scale Modeling for Predictive Lung Health: From Molecular Networks to Patient Outcomes**

10:35 **Advancements in Air-Liquid Interface (ALI) Culture Models: Bridging In Vitro and In Vivo Lung Research**

11:05 **Precision-Cut Lung Slices (PCLS): A Versatile Tool for Pulmonary Research and Drug Discovery**

11:35 **Lunch**

12:35 **Organs-on-Chips and Bioinspired Robotics in Lung Research**

1:05 **Regenerative Strategies for Lung Tissues: Engineered Blood Vessels**

1:35 **Break**

2:00 **3D Bioprinting of Functional Lung Tissues: Innovations and Applications in Respiratory Medicine**

2:30 **Innovations in Lung Tissue Engineering: Decellularization and Recellularization Techniques**

3:00 **Functional Vascularized Lung Grafts for Lung Bioengineering**

3:30 **Panel Discussion and Closing**

CLINICAL

POSTGRADUATE COURSE

PG9 INTERSTITIAL LUNG DISEASE: IMPLEMENTING GUIDELINES FOR PATIENT CENTERED CARE

Pre-registration and additional fees required. Attendance is limited.

Member $465	In-Training Member $275
LMIC Member $326	LMIC In-Training Member $193
Non-Member $570	In-Training Non-Member $405

Assemblies on Clinical Problems, Allergy, Immunology and Inflammation, Behavioral Science and Health Services Research, Nursing, Pulmonary Circulation, Pulmonary Rehabilitation

8:00 A.M. - 4:00 P.M.

Target Audience
This session should be broadly relevant to those who provide clinical care for patients with ILD including pulmonary fellows, general pulmonologists, ILD specialists, and advanced care nurses.

Objectives
At the conclusion of this session, the participant will be able to:

- be able to apply a consistent, effective strategy to ILD/IPF diagnosis
- understand the range of therapeutics available for ILD and how and when to prescribe them
- be able to integrate a holistic and interdisciplinary approach to ILD patient care

This session will provide a practical approach to the diagnosis and management of patients with ILD. It will bring the most recent recommendations and guidelines into a usable strategy that will facilitate the care of patients with ILD. This will be accomplished through didactics, simulated MDD and panel discussion of difficult cases—providing a range of learning methods to reach the largest number of learners.

8:00 **Introduction**

8:10 **Clinical Evaluation of the New ILD Patient**

8:35 **Applying the Guidelines: IPF, PFF and CPFE**

9:00 **Applying the Guidelines: CTD-ILD**

9:25 **Applying the Guidelines: Hypersensitivity Pneumonitis**

9:40 **Break**

10:00 **Familial ILD**

10:15 **Risk Factors, Natural History, and Prognosis**

10:40 **Speed MDD**

11:50 **Lunch**

12:45 **Therapies for Pulmonary Fibrosis**

1:10 **Therapies for CTD-ILD**

1:35 **The Critically Ill Patient with ILD**

1:55 **Advanced Stages of ILD - PH and Lung Transplant**

2:20 **Break**

2:40 **Tough Cases**

3:50 **Wrap Up**

CLINICAL

POSTGRADUATE COURSE

PG10 PULMONARY FUNCTION TESTING: STATE OF THE ART IN 2025

Pre-registration and additional fees required. Attendance is limited.

Member $465	In-Training Member $275
LMIC Member $326	LMIC In-Training Member $193
Non-Member $570	In-Training Non-Member $405

Assemblies on Respiratory Structure and Function, Clinical Problems

8:00 A.M. - 4:00 P.M.

Target Audience
Current and future directors of PFT labs, attending physicians, respiratory therapists, trainees, fellows, and other interested health care providers including advanced care practitioners.

Objectives
At the conclusion of this session, the participant will be able to:

- gain further understanding/improve the principles and practice of pulmonary function diagnostic tests
- develop greater confidence interpreting pulmonary function test results in clinical practice
- identify strategies to approach the interpretation of pulmonary function test results in complex patients

This course will focus on clinical lung function testing, combining guidelines from recent technical standards and the new interpretive strategies guideline with interactive experience in small group settings focusing on the performance, interpretation, and reporting of pulmonary function testing (PFT). We will combine didactic lectures with case-based instruction, small group discussion, and live demonstration of spirometry and diffusing capacity measurement. We will use a multidisciplinary team approach to facilitating case discussions including content experts, clinicians, respiratory therapists, and pulmonary function laboratory medical directors. The course will conclude with a discussion of difficult cases by a diverse expert panel.

8:00 **Introduction**

8:05 **Spirometry: State of the Art Measurement and Interpretation**

8:30 **Spirometry: Reference Equations and Significant Change**

8:55 **Assessment and Interpretation of Static Lung Volumes**

9:20 **Difficulty Capacity Assessment and Interpretation**

9:40 **Break**

10:00 **Pediatric Considerations in Pulmonary Function Testing**

10:30 **Real-time Demonstration of PFT Assessment and Troubleshooting**

11:10 **Small Group PFT Case Discussion**

11:50 **Lunch**

12:40 **The Use of Oscillometry in Clinical Practice**

1:10 **Bronchial Challenge Testing: State-of-the-art in 2025**

1:50 **Break**

2:05 **Complex Patterns in Pulmonary Function**

2:35 **Small Group PFT Case Discussion #2**

3:10 **Expert Panel Case Debate**

CLINICAL

POSTGRADUATE COURSE

PG11 CRITICAL CARE OF THE MODERN ONCOLOGY PATIENT

R Pre-registration and additional fees required. Attendance is limited.

Member $465	In-Training Member $275
LMIC Member $326	LMIC In-Training Member $193
Non-Member $570	In-Training Non-Member $405

Assemblies on Critical Care, Behavioral Science and Health Services Research, Clinical Problems, Nursing, Thoracic Oncology

8:00 A.M. - 4:00 P.M.

Target Audience
Critical care clinicians, researchers, and administrators who are interested in the care of critically ill patients with cancer. This includes physicians (practicing and trainee), nurses, advanced practice providers, and therapists.

Objectives
At the conclusion of this session, the participant will be able to:

- apply the diagnosis and management of common oncologic complications such as leukostasis, neutropenic sepsis, tumor lysis syndrome , and immunocompromised respiratory failure to the care of critically ill patients with cancer
- define new strategies to manage the care of complications of emerging oncologic therapies such a CAR T-cells, immune checkpoint inhibitors, bi-specific antibodies
- improve the quality of life/health status of patients, caregivers, and ICU team members by applying strategies to foster collaboration between palliative care, oncology, and critical care

This session will provide a state-of-the-science update in the expanding discipline of oncologic critical care. In addition to discussion of long-standing oncologic critical care concerns such as neutropenic sepsis, tumor lysis syndrome, and leukostasis, attendees will learn about emerging problems including toxicity of checkpoint inhibitors and immune effector cells. Attention will also be paid to the human aspect of oncologic critical care, including supportive care of patients, families, and ICU staff. The format will include lectures from international experts, case-based didactic sessions, and small group discussions with faculty experts.

8:00 **Welcome and Course Goals**

8:05 **History, Evolution, and Future of Oncologic Critical Care**

8:25 **The Oncologist's Perspective: What I Want the Intensivist to Know**

8:45 **Burning Clinical Question I: How Do I Manage Neutropenic Sepsis in 2025**

8:55 **The Role of Palliative Care in Oncology Critical Care**

9:20 **Case-Based Discussion of Legacy Problems in Oncologic Critical Care 1: Chemotherapy Toxicities**

9:35 **Break**

9:50 **Case-Based Discussion of Legacy Problems in Oncologic Critical Care 2: Acute leukemia and leukostasis**

10:05 **Respiratory Failure in Immunocompromised Patients**

10:35 **Burning Clinical Question: Help! My Patient Might Have Immune Checkpoint Inhibitor Pneumonitis?**

10:50 **Challenging Cases in Oncology Critical Care: Small Group Break Outs**

11:50 **Lunch**

12:35 **Case-Based Discussion of Legacy Problems in Oncologic Critical Care 3: Tumor Lysis Syndrome**

12:50 **Multi-Disciplinary Teams in Oncology Critical Care: the Nursing Perspective**

1:20 **Practical Strategies for Caring for the Critically Ill BMT Patient**

1:45 **Pro-Con Debate: ECMO for Severe Respiratory Failure in Immunosuppressed Patients**

2:15 **Break**

2:30 **Life-Threatening Complications of Immune Effector Cells**

2:55 **Comfort Always: Care of Patients, Families, and Staff in the Oncology ICU**

3:25 **Ask the Experts: Q&A and Wrap-Up**

Saturday, May 17

CLINICAL

POSTGRADUATE COURSE

PG1B CRITICAL CARE ULTRASOUND AND ECHOCARDIOGRAPHY II

R This is part 2 of a two-part course which includes PG1A on Friday, May 16. Pre-registration and additional fees required. Attendance is limited. See PG1A for course fees.

Assemblies on Critical Care, Clinical Problems, Nursing, Pediatrics

8:00 A.M. - 4:00 P.M.

Target Audience
Providers of critical care or emergency medicine; specialists in pulmonary hypertension, pulmonologists.

Objectives
At the conclusion of this session, the participant will be able to:

- apply ultrasound at bedside to assess critically ill patients;
- apply ultrasound to guide common ICU procedures
- diagnose alternate etiologies of shock in the critically ill patient

This is a 2-day postgraduate course that consists of didactic lectures and hands-on stations. The focus is primarily bedside transthoracic echocardiography, with some diagnostic ultrasound. The topics include basic and intermediate critical care echocardiography (including hemodynamic measures), assessment of fluid status, procedural guidance for vascular access and thoracentesis, venography. The hands on stations will include both healthy models and laptops that can demonstrate abnormal pathology.

8:00 Vascular Ultrasound

8:25 Vascular Access

8:45 Tamponade

9:15 Using Ultrasound to Assess Intravascular Volume and Fluid Responsiveness

9:45 Ultrasound for Diuresis and Dialysis

10:15 Break

10:30 Practical Skills Session: Hands-On Stations III
- Vascular Ultrasound
- Tamponade Evaluation
- Volume Status

12:00 Lunch

12:30 Lunch and Neuroultrasound

12:45 Abdominal Ultrasound

1:15 Goal Directed Management of Shock Using Echocardiography

1:45 Incorporating Echocardiography Into Shock and CPR

2:15 Break

2:30 Practical Skills Session: Hands-On Station IV
- Abdominal Ultrasound
- Echo in Shock and CPRs
- Ask the Expert

BEHAVIORAL • CLINICAL • TRANSLATIONAL

POSTGRADUATE COURSE

PG12 STATE OF THE ART: LUNG CANCER IN 2025

R Pre-registration and additional fees required. Attendance is limited.

Member $465	In-Training Member $275
LMIC Member $326	LMIC In-Training Member $193
Non-Member $570	In-Training Non-Member $405

Assembly on Thoracic Oncology

8:00 A.M. - 4:00 P.M.

Target Audience
All providers caring for patients with known or suspected lung cancer (pulmonologist, thoracic surgeons, radiation oncologist, medical oncologist, APPs) and those interested in translational research in this field.

Objectives
At the conclusion of this session, the participant will be able to:

- review and understand recent advances and changes in the treatment of lung cancer
- understand the role of biomarker testing and the integral role played in treatment selection and response
- understand the changes to lung cancer staging guidelines and their impact on patient treatment and outcomes.

This course will provide a comprehensive review of topics in the evaluation and management of patients with known and suspected lung cancer. We will discuss recent developments in the areas of tobacco control, updated guidelines for pulmonary nodule management and staging for lung cancer, advances in lung cancer screening, invasive diagnostic approaches for patients with lung nodules and inoperable lung cancer, biomarkers across the spectrum of lung cancer, and updates in multimodal treatment approaches for lung cancer. Attention will be given to the potential disparities across the lung cancer continuum. Interactive tumor boards will be held to highlight these topics and encourage participant engagement.

8:00 **Introduction**

8:05 **The Shifting Epidemiology of Lung Cancer Globally: Implications for Clinical and Global Health Policy Research**

8:30 **Updates in Lung Cancer Screening across the Globe**

8:55 **We Can Cut Out More or Less; We Can Operate First or Last: The Flexibility of Thoracic Surgery in 2025**

9:20 **Pulmonary Nodule Guideline Updates**

9:45 **Break**

10:05 **Updates in Multimodality Treatment for Lung Cancer: An Oncologist's Perspective**

10:30 **Radiation Oncology for Lung Cancer: A Review of Current Best Practices for Treatment of Early-Stage Disease, Palliation, and Ongoing Trials**

10:55 **Multidisciplinary Tumor Board**

11:30 **Lunch**

12:35 **Tobacco Treatment across the Lung Cancer Continuum as a Priority**

1:00 **Lung Cancer Staging: Changes and Impact on Management and Outcomes**

1:25 **The Importance of Biomarker Testing: What the Pulmonologist Should Know**

1:50 **Addressing Disparities across the Lung Cancer Continuum**

2:15 **Break**

2:35 **Updates in Mesothelioma**

3:00 **Multidisciplinary Tumor Board**

3:35 **The Top 5 in Thoracic Oncology: This Year's Most Important Articles**

BASIC • TRANSLATIONAL

POSTGRADUATE COURSE

PG13 LUNG IMMUNITY AND RESPIRATORY INFECTION

Pre-registration and additional fees required. Attendance is limited.

Member $465	In-Training Member $275
LMIC Member $326	LMIC In-Training Member $193
Non-Member $570	In-Training Non-Member $405

Assemblies on Pulmonary Infections and Tuberculosis, Allergy, Immunology and Inflammation, Respiratory Cell and Molecular Biology

8:00 A.M. - 4:00 P.M.

Target Audience
providers of lung health; those serving a specific patient group or multiple groups; those with research and/or clinical responsibilities; those needing instruction in areas of medicine outside of their specialty.

Objectives
At the conclusion of this session, the participant will be able to:

- describe new findings about specialized elements of immunity within the lung
- improve research efforts relating to pulmonary immunology and respiratory infections
- apply knowledge of immunopathophysiology and immunoprotection to preventing and treating patients with or at risk for pneumonia

The session will provide an overview of immunity in the lung, how that lung immunity determines both the susceptibility to and the outcome of acute lower respiratory infection, and how those immune cells and processes drive protection or pathogenesis.

8:00 **Resident and Recruited Macrophages in the Lung**

8:30 **Neutrophils and Acute Lower Respiratory Infection**

9:00 **Eosinophils Defend Against Respiratory Microbes**

9:30 **Visualizing Immunity in the Lungs**

10:00 **Break**

10:15 **Microbiome Effects on Lung Immunity and Respiratory Infection**

10:45 **Mechanisms of Lung Repair after Infection**

11:15 **T Regulatory Cells Preventing Injury and Promoting Recovery**

11:45 **Lunch**

12:45 **Lung-Resident Immunity across the Life-Course**

1:15 **Immunological Factors Dictating Severity of Acute Respiratory Infection**

2:30 **Co-Morbidities and Susceptibility to Respiratory Infection**

3:00 **Stimulating Lung Innate Immunity to Prevent Respiratory Infection**

CLINICAL • TRANSLATIONAL

POSTGRADUATE COURSE

PG14 UPDATES ON LUNG TRANSPLANTATION: WHAT PULMONOLOGISTS NEED TO KNOW

R Pre-registration and additional fees required. Attendance is limited.

Member $465	In-Training Member $275
LMIC Member $326	LMIC In-Training Member $193
Non-Member $570	In-Training Non-Member $405

Assemblies on Clinical Problems, Allergy, Immunology and Inflammation, Critical Care

8:00 A.M. - 4:00 P.M.

Target Audience

Providers caring for patients with advanced stage lung diseases that could benefit from lung transplant, pulmonologists, surgeons, physical therapists, pharmacists, trainees interested in lung transplant, transplant pulmonologists and surgeons.

Objectives

At the conclusion of this session, the participant will be able to:

- better understand the indications and proper timing of referral for lung transplantation as well as optimization of end stage lung disease prior to listing to ensure optimal outcomes
- understand the process of donor selection and optimization, peri-operative care of lung transplant including mechanical ventilation and ECMO support
- recognize various causes of acute and chronic allograft dysfunction and how to utilize the current methods to diagnose and treat them

This session will provide a comprehensive review and updates of important topics of lung transplant that are highly relevant to ATS attendees. The audience will learn about indications, proper referral, optimization and selection of lung transplant recipients and donors, perioperative care and complications as well as acute and chronic lung allograft dysfunction and long term outcomes of lung transplant.

8:00 **Introduction**

8:05 **Indications and Timing of Referral for Lung Transplant; Who and When?**

8:30 **Optimization of Lung Transplant Recipients: How Can It Be Achieved?**

8:55 **Is My Patient Ready for Listing, Science or Art and How Can We Quantify Readiness**

9:20 **Is the New Allocation System Helping My Patient's Chances to Be Transplanted? CAS v. LAS and What Can We Do?**

9:45 **Panel Discussion**

10:00 **Break**

10:10 **Perioperative Care of Lung Transplant, Mechanical Ventilation, ECMO, and Other Critical Care Treatments**

10:35 **Airway and Vascular Complications Mimicking Acute Rejection**

11:00 **Primary Graft Dysfunction, Is It Just a Post-op ALI or Much More and What Can Be Done to Minimize Its Risk**

11:25 **Panel Discussion**

11:40 **Lunch**

12:40 **Antibody Mediated Rejection- What's New in Risk and Management?**

1:05 **Biomarkers and Therapeutic Targets: PFT, BAL, Liquid Biopsy, and Biologics**

1:30 **Acute Cellular Rejection- Updates on Diagnosis and Management**

1:55 **Panel Discussion**

2:10 **Break**

2:20 **CLAD; Diagnosis and Management- Anything New or All Doom and Gloom?**

2:45 **Quality of Life Post Lung Transplant- How Much Are We Really Helping Our Patient With End Stage Lung Diseases by Doing a Lung Transplant**

3:10 **Retransplant for CLAD- Indications, Outcomes, and Ethical Implications**

BASIC • TRANSLATIONAL

POSTGRADUATE COURSE

PG15 INTEGRATIVE LUNG BIOINFORMATICS: FROM DATA TO DISCOVERY

Pre-registration and additional fees required. Attendance is limited.

Member $465	In-Training Member $275
LMIC Member $326	LMIC In-Training Member $193
Non-Member $570	In-Training Non-Member $405

Assemblies on Respiratory Cell and Molecular Biology, Respiratory Cell and Molecular Biology; Phd and Basic and Translational Scientists working Group (PBTS WG)

8:00 A.M. - 4:00 P.M.

Target Audience
Researchers with limited computational biology background wishing to gain these skills.

Objectives
At the conclusion of this session, the participant will be able to:

- independently analyze your own single-cell RNA-Seq dataset using easy-to-use only tools without prior expertise
- identify known or novel cell populations with altered gene expression programs in diverse lung diseases
- exploring lung spatial imaging and transcriptomics

In this interactive workshop, we will introduce a series of web-based bioinformatics applications to explore, visualize and analyze diverse molecular omics and imaging lung resources. The focus will be on existing tools and protocols developed by the LungMAP, HCA, ArchMap.bio and HuBMAP. In particular: 1. Interactive exploration of single-cell genomic datasets 2. Tools to explore lung cell type biology and gene regulatory programs. 3. Best practices for single-nuclei RNA/ATAC data generation. 4. Web-based and AI tools to analyze and interpret user provided scRNA-Seq. 5. Interactive exploration of spatial imaging and transcriptomic/proteomic datasets. 6. Integrative omics comparisons between technologies

8:00 **Multi-omic Data Exploration at LungMAP.net**

8:20 **Defining Healthy and Disease Single-Cell Heterogeneity with ArchMap**

8:40 **Surveying Signatures of the Lung with ToppCell and ToppGene**

9:00 **Integrative Analyses of Lung Molecular Omics Data with LGEA**

9:20 **Break**

9:35 **Analyzing Single-Cell Genomics in the Cloud with Terra.bio**

9:55 **Exploring Lung Spatial Imaging and Transcriptomics**

10:15 **Best Practices for Single-Cell Data Generation and Analysis**

10:35 **Lunch**

11:20 **Workstation Round Robin**

1:40 **Break**

1:55 **Workstation Round Robin**

3:40 **Discussion and Follow Up**

CLINICAL

POSTGRADUATE COURSE

PG16 CARDIOPULMONARY EXERCISE TESTING: ADVANCES AND APPLICATIONS

Pre-registration and additional fees required. Attendance is limited.

Member $465	In-Training Member $275
LMIC Member $326	LMIC In-Training Member $193
Non-Member $570	In-Training Non-Member $405

Assemblies on Pulmonary Rehabilitation, Clinical Problems, Respiratory Structure and Function

8:00 A.M. - 4:00 P.M.

Target Audience
CPET lab directors, attending physicians, clinical physiologists, exercise physiologists, clinical fellows, research fellows.

Objectives
At the conclusion of this session, the participant will be able to:

- better understand the physiologic principles of CPET that determine the pulmonary, cardiovascular and neuromuscular responses to exercise in health, and how these are modified in chronic cardiopulmonary diseases
- better understand the utility of CPET to: 1) assess mechanisms of dyspnea and exercise intolerance, 2) stratify

disease severity or prognosis, 2) assess safety and prescription for exercise training or pulmonary rehabilitation

- develop confidence in understanding the integrated physiologic responses during CPET, the application of CPET and the interpretation of CPET responses in clinical practice

This course focuses on cardiopulmonary exercise testing (CPET). This includes education on the physiologic basis for CPET, current guidelines, quality control and advances in CPET methods to assess the pulmonary system and central hemodynamics dynamics during exercise. Interpretative strategies and common CPET responses in disease states will be presented in didactic sessions and followed by practice-based learning in an interactive small group setting. Learners will be supported during practice-based learning by expert Faculty. The inclusion of a live CPET demonstration will complement the didactic sessions and highlight the multidisciplinary components necessary for performing high-quality CPET.

8:00 **Physiologic Basis for CPET**

8:45 **Understanding Pulmonary System Limitations to Exercise**

9:15 **Questions and Answers**

9:30 **Break**

9:45 **Exercise and the Heart: Invasive CPET**

10:30 **Use of CPET in Exercise Rehabilitation Programs**

11:00 **Conducting the Test: Practical Issues 1**

11:30 **Lunch**

12:00 **Live CPET Demonstration 1**

12:45 **Quality Control and Troubleshooting**

1:15 **Data Analysis from Graphic Display**

1:45 **Break**

2:00 **Reference values**

2:30 **Spectrum of CPET Responses Among Disease States: Pulmonary**

2:45 **Spectrum of CPET Responses Among Disease States: Cardiovascular**

3:00 **Making the Case - Round Table Discussions**

CLINICAL

POSTGRADUATE COURSE

PG17 OCCUPATIONAL AND ENVIRONMENTAL LUNG DISEASE 101: DOES MY PATIENT HAVE OCCUPATIONAL LUNG DISEASE?

Pre-registration and additional fees required. Attendance is limited.

Member $465	In-Training Member $275
LMIC Member $326	LMIC In-Training Member $193
Non-Member $570	In-Training Non-Member $405

Assembly on Environmental, Occupational and Population Health

8:00 A.M. - 4:00 P.M.

Target Audience
Residents, fellows, non-physician caregivers and early career professionals who care for patients with occupational and environmental lung disease.

Objectives
At the conclusion of this session, the participant will be able to:

- establish a framework for evaluating whether occupational and environmental exposures are associated with chronic lung disease to improve patient care
- apply principles of occupational and environmental lung disease to establish causality across a range of chronic pulmonary conditions
- evaluate and remediate drivers of chronic lung disease in patients with an occupational or environmental exposure

Occupational and environmental exposures are an important, and often unrecognized driver of chronic lung disease. In this session, we will provide a structured, clinically focused introduction to the evaluation and diagnosis of occupational lung disease, with a focus on practical guidance of topics important for providers caring for these patients. These will include an overview of, including workers compensation, medical depositions and establishing how to establish causation and how to give a medical deposition.

8:00 **Opening Remarks**

8:10 **How Do I Ask? A Clinician's Approach**

8:40 **Workers Compensation - How Do I Establish Causation?**

9:10 **How Will Imaging Help? A Radiologist's Approach**

9:40 **Break**

9:55 **Wheezing on the Job - Occupational Obstructive Lung Disease**

10:25 **Medical Surveillance- Screening and Potential Downsides**

10:50 **Break**

11:05 **The Lingering Effects of Military Deployment**

11:25 **Occupational Lung Disease in Cannabis Workers**

11:45 **Engineered Stone Silicosis: Worker Outreach and Advocacy**

12:05 **Lunch**

1:05 **When the Exposure is Coming from Inside**

1:35 **Occupational Exposures and Interstitial Lung Disease**

2:05 **Break**

2:25 **So You've Been Deposed- Now What?**

3:25 **So Your Patient Needs a Respirator- Now What?**

3:55 **Closing remarks**

BEHAVIORAL • CLINICAL

POSTGRADUATE COURSE

PG18 EMPOWERING & DEVELOPING THE NEXT GENERATION OF WOMEN & URIM LEADERS

Pre-registration and additional fees required. Attendance is limited.

Member $465	In-Training Member $275
LMIC Member $326	LMIC In-Training Member $193
Non-Member $570	In-Training Non-Member $405

Assemblies on Critical Care, Behavioral Science and Health Services Research, Clinical Problems, Pediatrics

8:00 A.M. - 4:00 P.M.

Target Audience

Women and underrepresented in medicine (URiM) clinicians and scientists at all stages (fellows, junior faculty, mid-career) in medicine invested in increasing the diversity of leadership in Pulmonary, Critical Care, and Sleep Medicine.

Objectives

At the conclusion of this session, the participant will be able to:

- review the known disparities in medicine that exist and highlight the extent to which these disparities have been addresses
- identify common barriers to promotion in academic medicine and successful strategies to overcome them
- list actionable items to help continue growing your career in medicine as a mid- and senior career URiM clinician

Women and underrepresented in medicine (URiM) clinicians encounter numerous and differing challenges and barriers as they strive to rise through leadership ranks within their place of work. Significant attention, especially at ATS, has focused on early career challenges and transitions from fellowship to independent practice, but little has been done to identify needs of women and URiM clinicians as they advance through subsequent career transitions and navigate new challenges and opportunities in medicine. In this session, participants will learn from leaders in medicine about the unique challenges encountered across a variety of career stages, lessons learned, and potential solutions to consider. Topics from how to negotiate to how become a leader within your division from ICU director to a division chief will be covered.

8:00 **Introduction**

8:05 **Interviewing for Division Chief Positions (1)**

9:05 **Panel Discussion**

9:20 **How to Prepare to Lead**

9:40 **Navigating Sinkholes While Shattering Glass Ceilings: Getting to Promotion**

10:00 **Protecting and Promoting URiM Faculty**

10:20 **Panel Discussion**

10:30 **Break**

10:35 **Speed Dating Session**

11:25 **Lunch**

12:10 **Diversifying the Pipeline into Medicine**

12:25 **How to Get What You Want, When You Want It.**

12:45 **Leadership from a Different Lens**

1:20 **The Pervasiveness of Sexual Harassment**

1:35 **Combating the Gasping Breaths of Misogyny in Academia**

1:55 **How to Be an Ally and Sponsor**

2:10 **Panel Discussion**

2:20 **Speed Dating Session**

3:10 **Break**

3:15 **Navigating Career Transitions**

3:30 **Publish or Perish: The Vicious Cycle of Academic Publishing, and How to Break It**

3:45 **Panel Discussion**

3:55 **Closing remarks**

CLINICAL

POSTGRADUATE COURSE

PG19 A SWAN DIVE INTO HEMODYNAMICS: MASTERING PULMONARY ARTERY CATHETERS

Pre-registration and additional fees required. Attendance is limited.

Member $235	In-Training Member $140
LMIC Member $165	LMIC In-Training Member $98
Non-Member $290	In-Training Non-Member $210

Assemblies on Pulmonary Circulation, Critical Care

12:00 P.M. - 4:00 P.M.

Target Audience
Cardiopulmonary providers, intensivists, providers using or encountering pulmonary artery catheters, trainees and staff (nurses, PA/NP) encountering or using pulmonary artery catheters

Objectives
At the conclusion of this session, the participant will be able to:

- learn expert procedural technique for catheter insertion, preparation, and troubleshooting. Learners will be able to safely acquire accurate, reliable, and reproducible cardiopulmonary hemodynamic data using pulmonary artery catheters
- assess pulmonary artery catheter waveforms and interpret resulting hemodynamic data, quantify flow through the cardiopulmonary system, calculate shunting. Learners will be able to confidently interpret PAC data to guide management
- recognize the application of PAC in the ICU and the role of exercise testing. Learners will be comfortable recognizing when to use the PAC to guide management in the ICU and how to exercise can help with challenging clinical cases

This course will review the setup, technical considerations, and interpretation of waveforms and data regarding pulmonary artery catheters in both the outpatient and intensive care unit settings. Using both case-based lectures and small group practice sessions interpreting cases led by experienced faculty, learners will enhance their understanding of how to correctly acquire data using pulmonary artery catheters, how to troubleshoot during the procedure and ensure high-quality data capture, how to apply this technique to the outpatient and ICU settings, and how to interpret the resulting data to guide clinical decision-making.

12:00 **Nuts and Bolts of Performing Right Heart Catheterization**

12:20 **Case Based Discussion**

12:45 **Waveforms, Cardiac Output Calculations and Vasoreactivity Testing, Oh My!**

1:10 **Break**

1:15 **Breakout Session 1**

2:00 **Welcome to the Jungle: RHC Applications in the ICU**

2:25 **Exercise RHC: Who, What, When, Why and How**

2:50 **Case based discussion 2**

3:15 **Break**

3:20 **Breakout Session 2**

CLINICAL

POSTGRADUATE COURSE

PG20 TACKLING OBESITY IN PATIENTS WITH SLEEP-DISORDERED BREATHING

Pre-registration and additional fees required. Attendance is limited.

Member $235	In-Training Member $140
LMIC Member $165	LMIC In-Training Member $98
Non-Member $290	In-Training Non-Member $210

Assemblies on Sleep and Respiratory Neurobiology, Behavioral Science and Health Services Research

12:00 P.M. - 4:00 P.M.

Target Audience
Pulmonary and sleep medicine healthcare providers, pulmonary and sleep medicine trainees/fellows, pulmonary and sleep medicine nurses, and members of the SRN, CP, and BSHSR assemblies.

Objectives
At the conclusion of this session, the participant will be able to:

- learn about the current approaches for the management of obesity
- understand how to facilitate the care of patients with sleep-disordered breathing and obesity
- apply this knowledge to improve the health and quality of life in patients with sleep-disordered breathing and obesity

This half-day post-graduate course will focus on advances in the management of obesity for adults with sleep-disordered breathing (SDB). Didactic sessions will address the variety of weight loss methods currently being utilized as well as upcoming novel medications and approaches. Additional sessions will focus on how best to deliver care to SDB patients with obesity and the role that sleep providers play.

12:00 **The Global Obesity Epidemic**

12:10 **Lifestyle: Not Just a Starting Point**

12:30 **Shedding the Weight: How Bariatric Surgery Cuts through Obstructive Sleep Apnea**

12:50 **Beyond the Scalpel: Bariatric Endoscopy**

1:10 **The New Frontier: GLP-1 Agonists and Beyond**

1:40 **Break**

1:50 **Developing Expertise: Training Pathways for Obesity Medicine**

2:10 **Pro-Con Debate- Sleep Providers Should Prescribe GLP-1 Agonists- Pro**

2:30 **Pre-Con Debate- Sleep Providers Should Prescribe GLP-1 Agonists- Con**

2:50 **Break**

3:00 **What's Weight Got to Do With It: The Impact of Weight Loss on Obstructive Sleep Apnea**

3:15 **Obesity in Sleep-Disordered Breathing: The Big Picture**

3:45 **Panel Discussion**

4:30 - 5:30 p.m.

OPENING CEREMONY

The ATS is thrilled to kick off the 2025 International Conference with an inspiring Opening Ceremony on Saturday, May 17, in San Francisco, featuring keynote speaker Kimberly D. Manning, MD, MACP, a trailblazing physician, educator, and storyteller whose impact resonates far beyond medicine. The Opening Ceremony is free for all registered attendees, offering a unique opportunity to connect with peers and be inspired by one of medicine's most dynamic voices.

Follow Dr. Manning on X (@gradydoctor) and BlueSky (@gradydoctor.bsky.social)

NETWORKING SUPER CENTER

Stop by the Networking Super Center to visit the ATS Center, the International Participants Center, and the Learning Studio. The Learning Studio and the International Participants Center offer unique programming, and the ATS Center hosts resources to help you maximize your conference experience.

COLLABORATE, EDUCATE, CONNECT AND LEARN

5:30 p.m. - 6:30 p.m.

THE NETWORKING EXCHANGE FOR EARLY CAREER PROFESSIONALS

The Network Exchange is a welcome event for all Early Career Professionals (residents, fellows, post docs, IP members, and other medical professionals) and takes place on Saturday following the Opening Ceremony. This one-hour event allows attendees to network and mingle with peers as well as provides information at the start of the conference.

This event is free to paid conference registrants

Sunday Morning, May 18

MEET THE EXPERT SEMINARS

Pre-registration and additional fees required. Attendance is limited.
$100 Member/Non-Members
$70 LMIC Member/LMIC Non-Members

10:45 a.m. - 11:45 a.m.

MTE1 CHOOSING AND MONITORING IMMUNOSUPPRESSION IN ILD PATIENTS

MTE2 MAKING WAVES: OSCILLOMETRY BASICS AND INTERPRETATION FOR CLINICAL AND RESEARCH APPLICATION

MTE3 THE APPROACH TO A MALIGNANT PLEURAL EFFUSION

MTE4 BRONCHIECTASIS - MORE THAN A CASE OF CHRONIC COUGH

MTE5 THE EVALUATION OF RECURRENT PULMONARY INFECTIONS: IDENTIFICATION OF PRIMARY IMMUNODEFIENCY AND DIFFERENTIAL DIAGNOSIS

MTE6 HITCHHIKER'S GUIDE TO NAVIGATING SINGLE CELL RNA SEQUENCING: CRITICAL INSIGHTS FOR USERS

MTE7 LUNG TRANSPLANTATION POST CHILDHOOD CANCER THERAPY

MTE8 NEUROLOGIC CONSULTATIONS IN THE ICU

MTE9 HAS THE TIME COME TO AIM FOR ASTHMA REMISSION?

MTE10 ANSWERING DIFFICULT CLINICAL QUESTIONS IN MANAGEMENT OF SARCOIDOSIS

MTE11 SLEEP, THE FORGOTTEN DIMENSION OF COPD CARE

KEYNOTE SERIES

8:00 a.m. -8:45 a.m.

The Fran Comi Keynote Lecture will focus on:

K1 PROVIDING HEALTH CARE FOR UNHOUSED INDIVIDUALS

The ATS Keynote Series focuses on timely topics of high relevance to the pulmonary, critical care, and sleep medicine community. Keynote lectures feature leaders who have made major contributions in the important themes programmed at the 2025 conference and are unopposed by any other programming.

CLINICAL

YEAR IN REVIEW

A1 CLINICAL YEAR IN REVIEW

9:15 A.M. - 10:45 A.M.

Target Audience
Pulmonary, critical care, and sleep providers. The program will discuss topics of interest to a broad group of providers. The program is relevant to not only clinicians, but also to researchers and administrators.

Objectives
At the conclusion of this session, the participant will be able to:

- be able to apply new clinical research knowledge to clinical practice
- learn new findings about key conditions in pulmonary, critical care and sleep
- have new strategies to manage the care of common conditions in pulmonary, critical care, and sleep

This program has been developed to include core topics in pulmonary, critical care, and sleep medicine. The goal of the session is to discuss critical state-of-the-art topics and evolving

concepts. The learner will be exposed to a carefully curated review of the current literature by emerging leaders in the field. After the course, participants will better understand novel concepts in each specific domain that we hope will translate to improved patient care.

9:15 **Asthma**

9:37 **Interventional Pulmonary**

10:00 **Pulmonary Function Tests**

10:22 **Sleep**

BEHAVIORAL

SCIENTIFIC SYMPOSIUM

A3 FELLOWS CASE CONFERENCE

Assembly on Behavioral Science and Health Services Research

10:45 AM – 11:45 AM

Target Audience
Trainees including fellows, residents and students; educators; clinicians; nurses; and researchers aiming to broaden their clinical acumen to facilitate clinical and translational research and education.

Objectives
At the conclusion of this session, the participant will be able to:

- present an evidence based argument for why mentorship should be a professional priority
- debunk three common mentorship myths through a panel discussion.
- describe how to create a “mentorship-map” to equip participants with a practical tool for future mentorship.

This is an interactive session that comprises of 1) a panel discussion that debunks common mentorship myths from the perspective of a mentee 2) an overview of the evidence supporting mentorship 3) guidance on creation of and time to complete a “mentorship-map” to help plan for future mentor-mentee interactions 4) advice from a seasoned mentor on how to maximize the mentor-mentee relationship. This session is geared towards trainees and early career faculty members with a wide range of clinical and research focuses.

Cases and Discussants To Be An Announced

CRITICAL CARE TRACK

A4 SPEAKING BUT NOT HEARD: DISPARITIES IN GERIATRIC CRITICAL CARE

Assembly on Critical Care

9:15 A.M. - 10:45 A.M.

Target Audience
Critical care providers (MDs, RNs, OTs, PTs) Research scientists focused on family involvement in patient care, delirium, post-ICU outcomes, geriatric care

Objectives
At the conclusion of this session, the participant will be able to:

- identify disparities in the aging population in multiple care settings
- identify unique barriers to high quality care that minoritized older adults face in the ICU
- identify strategies to address disparities in older, under-represented communities

As the proportion of older adults in the community grows and our population in the United States becomes increasingly more diverse, racial and ethnic healthcare disparities in the Intensive Care Unit (ICU) are likely to intensify. Barriers to equitable, high-level care include language discordance, disparities in sedation and analgesia practices, and racism in provider-patient communication. Older ICU patients are uniquely vulnerable to these care differences. In this session, we will discuss disparities in geriatric critical care and ICU recovery, as well as proposed strategies to improve communication and promote equity in our ICUs.

9:15 **How Does Ethnicity Influence ICU Care of Minoritized Older Adults?**

9:27 **The Impact of Language Discordance on ICU Delirium Care**

9:39 **Practical Strategies to Improve Implementation of the ICU Liberation Bundle in Non-English Speaking Patients**

9:49 **Practical Strategies to Improve Implementation of the ICU Liberation Bundle in Non-English Speaking Patients Part 2**

9:59 **Understanding the Impact of Race in End-of-Life Communication in ICU Patients**

10:11 **How Health Care Disparities Impact the Recovery from Critical Illness for Older Adults**

10:23 **Reducing Disparities in Rural ICU Care**

TRANSLATIONAL

SCIENTIFIC SYMPOSIUM

A6 EVOLVING LANDSCAPE OF RESPIRATORY OUTCOMES IN SURVIVORS OF PREMATURE BIRTH

Assemblies on Pediatrics, Clinical Problems, Environmental, Occupational and Population Health

9:15 A.M. - 10:45 A.M.

Target Audience
Pulmonologists, researchers, and other healthcare professionals interested in the long-term respiratory outcomes of premature birth survivors, with a focus on prevention and therapeutic strategies for chronic obstructive pulmonary disease

Objectives
At the conclusion of this session, the participant will be able to:

- describe the physiological mechanisms behind catch-up growth in preterm infants and articulate its implications for lung development, facilitating early life medical management and long term patient counseling
- describe the impact of both genetic and environmental variables on the respiratory health of individuals born prematurely, thereby improving participant competency in optimizing long term health status in this population
- identify individuals at higher risk for developing chronic obstructive lung disease in early adult life among those born prematurely, facilitating early referral and appropriate patient counseling

Premature birth, occurring in approximately 10% of births worldwide, presents significant challenges to long-term health, particularly affecting respiratory outcomes. This symposium will explore the lifelong pulmonary effects of premature birth with a focus on the interplay between catch-up growth, environmental exposures, and genetic factors in determining the increased risk of chronic obstructive pulmonary disease (COPD) and other respiratory conditions later in life.

9:15 **Session Introduction**

9:25 **Catch-Up Growth and Lung Development in Premature Infants**

9:45 **Environmental Exposures and Respiratory Health in Prematurity Survivors**

10:05 **Genetic Influences on Catch-Up Growth and Environmental Responses in Premature Infants**

10:25 **Chronic Obstructive Pulmonary Disease in Adults Born Preterm: Pathways and Prevention**

CLINICAL

SCIENTIFIC SYMPOSIUM

A7 INCLUDE: ADVANCES IN PEDIATRIC OSA THROUGH DOWN SYNDROME-FOCUSED TRIALS

Assemblies on Pediatrics, Sleep and Respiratory Neurobiology

9:15 A.M. - 10:45 A.M.

Target Audience
Pediatric pulmonologists, sleep medicine physicians, advanced practice providers who care for children

Objectives
At the conclusion of this session, the participant will be able to:

- define new strategies for the care of children with Down syndrome who have OSA
- describe new findings about medication therapy for OSA in children with Down syndrome
- describe the specific challenges and consequences of OSA in children with Down syndrome

Obstructive sleep apnea is highly prevalent in children with Down syndrome. Historically, people with Down syndrome were excluded from clinical trials, but through the NIH INCLUDE Project, a number of ongoing clinical trials are underway that may provide new options for sleep apnea in both children with Down syndrome and beyond.

9:15 **Introduction**

9:21 **DOSA: Oxygen Therapy for Children with Down Syndrome and Obstructive Sleep Apnea**

9:37 **MOSAIC DS: Medications for Obstructive Sleep Apnea in Children with Down Syndrome**

9:53 **APAP21: Positive Airway Pressure for OSA in Children with Down Syndrome**

10:09 **Oximetry Measurement Biases by Race/Ethnicity and Skin Pigmentation in Children with Down Syndrome**

10:25 **Potential Future Directions in Obstructive Sleep Apnea for Children with Down Syndrome**

10:35 **Discussion**

BASIC • CLINICAL • TRANSLATIONAL

SCIENTIFIC SYMPOSIUM

A8 EMPHYSEMA ACROSS DISEASES: FLAWED (RE)GENERATION OR RAPID DESTRUCTION?

Assemblies on Respiratory Cell and Molecular Biology, Allergy, Immunology and Inflammation, Clinical Problems, Respiratory Structure and Function

9:15 A.M. - 10:45 A.M.

Target Audience
Basic and translational scientists and clinicians

Objectives
At the conclusion of this session, the participant will be able to:

- learn the other lung conditions beyond COPD where emplysema is one of the main features
- learn the mechanisms underlying emphysema in absence of cigarette smoke

Emphysema, while primarily recognized as a component of chronic obstructive pulmonary disease (COPD), can also be present in various other lung conditions such as pulmonary fibrosis, COVID, prematurity, or infections, as well as in physiological aging. This session will discuss the causes and pathobiological features of emphysema in several lung conditions.

9:15 **"I Have Never Smoked and I Have Emphysema. I'll Tell You More About It."**

9:20 **Emphysema in IPF: The Unusual Suspect**

9:34 **I Bet You Didn't Know: COPD and Emphysema Are Not the Same Disease**

9:48 **The Growing Burden of Emphysema in an Aging Population: Parhobiology of Senescence-Induced Emphysema**

10:02 **Beyond the Surface: Imaging Insights into Emphysema Progression**

10:16 **It's Not Emphysema, It's Alveolar Simplification: When the Lung Fails to Develop**

10:30 **Post-COVID Airspace Enlargement: A Rising Contributor to Emphysema**

BASIC • CLINICAL • TRANSLATIONAL

SCIENTIFIC SYMPOSIUM

A9 ADVANCING HOST-DIRECTED THERAPIES IN PULMONARY INFECTIONS: BRIDGING RESEARCH AND CLINICAL PRACTICE

Assemblies on Pulmonary Infections and Tuberculosis, Allergy, Immunology and Inflammation

9:15 A.M. - 10:45 A.M.

Target Audience
Clinical providers and investigators in the field of pulmonary infections

Objectives
At the conclusion of this session, the participant will be able to:

- accurately define and differentiate between host-directed and host-informed therapies for pneumonia, bronchiectasis, and tuberculosis
- identify and implement specific HDTs in the treatment of pneumonia, bronchiectasis and tuberculosis, incorporating these therapies into their clinical practice
- identify research gaps, formulate innovative questions , discover novel mechanisms, study immune response variability, and design trials for target populations

Pulmonary infections remain a leading cause of morbidity and mortality globally, necessitating innovative approaches beyond conventional antimicrobial treatments. This scientific symposium aims to explore the potential of host-directed therapies (HDTs) in treating pneumonia, bronchiectasis and tuberculosis. By bringing together leading experts, the session will address current professional practice gaps, provide updates on HDT research, and identify future research directions. Attendees will gain valuable insights into HDT applications, improving their ability to implement these therapies in clinical practice, ultimately enhancing patient outcomes. The symposium will serve as a platform for fostering collaboration and advancing the field of HDTs.

9:15 **Profiling the Host Response in Respiratory Infections**

9:33 **Host-Directed Therapies in Pneumonia**

9:51 **Host-Directed Therapies in Bronchiectasis**

10:09 **Host-Directed Therapies in Tuberculosis**

10:27 **How Do We Make This Happen: Clinical Trials for Host-Directed Therapies in Pulmonary Infections**

BASIC • CLINICAL • TRANSLATIONAL

SCIENTIFIC SYMPOSIUM

A10 TRUE GRIT: TALES OF IMPACTFUL SCIENCE IN DRUG DEVELOPMENT, CLINICAL TRIALS, GLOBAL REGISTRIES AND BIOBANKS FOR PULMONARY ARTERIAL HYPERTENSION

Assembly on Pulmonary Circulation

9:15 A.M. - 10:45 A.M.

Target Audience
1)Adult and pediatric clinicians interested in understanding new pharmacotherapeutics for PAH. 2)Translational scientists interested in understanding the roadmap from bench-to-bedside 3) Pharmaceutical companies interested in product development

Objectives
At the conclusion of this session, the participant will be able to:

- explore Activin A's mechanistic role in PAH and the translational pathway of product development, highlighting challenges and opportunities from academic and pharmaceutical perspectives
- explore the challenges and opportunities involved in applying for funding from philanthropic foundations. Emphasize the importance of creative, out-of-the-box thinking to stand out in a competitive funding landscape
- describe the design of multicenter biobank and registries for PAH, including the major limitations on using real-world-data sets, as well as data-sharing

This session targets clinicians, scientists, and industry professionals to enhance attendance and interaction. It includes four topics, each presented by one or two speakers, focusing on the vision, challenges, and troubleshooting involved in advancing projects. By the end of the session, participants will understand the mechanisms behind new generation therapies for PAH, including supporting data, potential molecular biology-based side effects, and long-term adverse event monitoring. They will also learn about collaboration with biobanks and global registries, effective use of databases, and addressing industry-related limitations for new targets. Lastly, we aim to provide insights for developing treatments for pulmonary hypertension.

9:15 **Discovery and Clinical Development of Activin Ligand Traps for PAH: What's Special About It?**

9:30 **PVDomics Cohort: Inception and Execution**

9:45 **PVRI GoDeep Cohort: Inception and Execution**

10:00 **Engaging in High-Risk/High-Reward Science: Going Off the Beaten Path**

10:15 **A Second Career: Preordained?**

10:30 **From the Other Side of the Fence: Drug Development in the Pharmaceutical Industry**

BASIC • CLINICAL • TRANSLATIONAL

SCIENTIFIC SYMPOSIUM

A11 CENTENNIAL CELEBRATION OF VA'S RESEARCH AND DEVELOPMENT PROGRAM

Assemblies on Thoracic Oncology, Allergy, Immunology and Inflammation, Clinical Problems, Nursing

9:15 A.M. - 10:45 A.M.

Target Audience
Those interested in learning about research in VA, especially related to lung cancer screening, immunology, and COPD; those with research interests in leveraging data from CT scans using AI to inform lung cancer screening and treatment.

Objectives
At the conclusion of this session, the participant will be able to:

- understand the value of risk prediction-based patient selection for screening as compared to use of USPSTF(2021) guidelines
- have a better understanding of the potential value of artificial intelligence and radiomics in risk stratification and predicting prognosis and treatment responses in patients with lung cancer
- have insight into how and why these biomarkers may be clinically useful.

Starting in 1925, discoveries in the Research and Development Program included development of concepts required for CT scanning and establishing links between smoking and lung cancer. Because lung cancer remains a major health concern, the Program embarked on the Lung Precision Oncology Program (LPOP), which includes early detection using lung cancer screening. Three speakers will describe leveraging LPOP's infrastructure to influence policy for patient selection, analyzing data in screening CT scans using artificial intelligence to inform screening practices, and using translational research to improve immunotherapy. Another will describe efforts to improve care for COPD using VA's integrated health care system.

9:15 **Milestones of the Last Hundred Years and Developing a Learning Healthcare System for the Future**

9:33 **Implementing Prediction-Augmented Lung Cancer Screening in LPOP**

9:51 **Applications of Artificial Intelligence and Radiomics to Improve Lung Cancer Screening in LPOP**

10:09 **Studying Immunity Markers for Interception of Lung Cancers at Their Earliest Stages**

10:27 **Population-Based Approaches to Improve Care for COPD and Other Smoking-Related Diseases**

BEHAVIORAL

SCIENTIFIC SYMPOSIUM

A12 IMPLEMENTING PREVENTATIVE AND BEHAVIORAL HEALTH INTERVENTIONS IN PULMONARY MEDICINE

Assembly on Behavioral Science and Health Services Research

9:15 A.M. - 10:45 A.M.

Target Audience
Health System Leaders, clinicians, those interested in implementing quality improvement projects, interprofessional team members, trainees/fellows

Objectives
At the conclusion of this session, the participant will be able to:

- identify gaps in the provision of high-quality comprehensive care to patients with lung disease, particularly among minoritized populations
- increase knowledge about evidence-based behavioral interventions that go beyond disease-specific treatments to improve patient symptoms and clinical outcomes
- learn practical skills on how to integrate these evidence-based behavioral interventions into pulmonary specialty practice, with a focus on the role of the interprofessional care team

Although preventative care has traditionally fallen under the role of primary care, there is an increasing demand for pulmonary specialists to take responsibility in providing comprehensive care that goes beyond disease-specific treatments. In this session, we will review the role of the interprofessional pulmonary specialty team in providing evidence-based behavioral interventions such as vaccination, smoking cessation, promotion of physical activity, stress management and mitigation of environmental triggers. By the end of the session, learners will gain practical knowledge that can be integrated into pulmonary specialty care to improve patient-centered outcomes for individuals with lung disease.

9:15 **Introduction**

9:20 **Increasing Vaccination Rates Among Patients with Lung Disease**

9:35 **Proactive Smoking Cessation Assistance in the Context of Lung Cancer Screening**

9:50 **Promoting Lifestyle Changes in Minoritized Patients with Asthma**

10:05 **Stress Management in Asthma: The Coping with Asthma through Life Management (CALM) Study**

10:20 **Mitigating the Effects of Environmental Exposures on Lung Disease**

BEHAVIORAL

SCIENTIFIC SYMPOSIUM

A13 POTENTIATING THE BENEFITS OF WORKFORCE DIVERSITY

Assemblies on Behavioral Science and Health Services Research, Nursing; Ethics Committee, Membership Committee ; Health Policy Committee AND Health Equity and Diversity Committee

9:15 A.M. - 10:45 A.M.

Target Audience
Attendess engaged in the healthcare sector, whether as a frontline provider, researcher, or administrator

Objectives
At the conclusion of this session, the participant will be able to:

- explain potential benefits of a diverse workforce
- assess their home institution for structures that can inhibit diverse expression and practice
- develop structures that support a diverse learning and working environment

The American Thoracic Society recognizes the value of a diverse workforce in meeting the needs of and increasingly diverse population, many of whom are under-served or disadvantaged relative to those with socially privileged identities. However, many institutions struggle to retain the degree of workforce diversity they already have, or to translate this diversity into known benefits like improved health outcomes and a more creative learning environment. This session offers expert-guided, evidence-based insight into maximizing local institutional workforce diversity. Attendees will learn about the impact of workforce diversity on the clinical and learning environment, barriers to realizing these important outcomes, and interventions to support their realization in the workplace.

9:15 **Introduction**

9:18 **Supporting Gender Equity in PCCASM**

9:28 **Burdens & Benefits of Intersectional Perspective**

9:38 **Diversity in Allied Health Professions & Research**

9:48 **Mentoring the URIM Physician**

9:58 **Building a DEI Curriculum**

10:08 **Actualizing the Promise of Diversity for Equity: The Benefits of Diverse Working & Learning Environments**

10:27 **International Medical Graduate (IMG) Physicians: Barriers to Success and Recommendations for Support**

MEDICAL EDUCATION SEMINAR

ME101 BEING THE CHANGE : AN ALLYSHIP TOOL KIT FOR CLINICIANS, EDUCATORS AND RESEARCHERS

Assembly on Behavioral Science and Health Services Research

10:45 AM – 11:45 AM

Objectives
At the conclusion of this session, the participant will be able to:

- identify and articulate the unique challenges faced by individuals balancing full-time employment with caregiving responsibilities.
- learn effective strategies for managing time between work responsibilities and caregiving duties, and develop techniques to effectively communicate with employers, colleagues, and family members about caregiving responsibilities and work commitments.
- identify workplace-based solutions that are both flexible and creative enough to mitigate the challenges of both caregiving and career advancement.

In this interactive session, we will discuss the myriad of difficulties facing healthcare professionals functioning as informal caregivers throughout the life spectrum and the disparate impact these roles have according to gender, race, and ethnicity. We will discuss and troubleshoot creative and flexible solutions to keep caregivers working, engaged in their career-based endeavors, and able to utilize their skills for the betterment of the entire workforce.

CLINICAL

ADULT CLINICAL CORE CURRICULUM

CC1 ADULT CRITICAL CARE CORE CURRICULUM

Education Committee

11:30 A.M. - 1:00 P.M.

Target Audience
Practicing physicians, trainees, students, Advanced Practice Providers

Objectives
At the conclusion of this session, the participant will be able to:

- Integrate new critical care guidelines in to clinical practice.
- Identify knowledge gaps in the treatment of patients with critical illness.
- Better counsel patients on treatment options available for critical illness.

The goal of the core is to support clinicians who are engaged in maintenance of certification activities by providing updates on subjects included in recertification requirements. The ATS Clinical Core Curriculum Symposia focus on key topics in the areas of Adult and Pediatric Pulmonary, Critical Care, and Sleep Medicine. The topics are aligned with corresponding MOC Medical Knowledge modules. This symposium is intended to help clinicians stay up to date with important information relevant to

their medical practices, and to provide an opportunity for clinicians to evaluate their individual knowledge and skills while earning MOC Medical Knowledge points

11:30 **Hit the Road Jack: Optimizing the ICU to Floor Transition**

11:55 **Like a Surgeon: Timing and Benefits of Tracheostomy for Prolonged Respiratory Failure**

12:20 **My Heart Will Go On: The Role of the Intensivist in Organ DonationCLINICAL**

11:45 a.m. - 1:15 p.m.

DIVERSITY FORUM

The annual ATS Diversity Forum focuses on diversity within the fields of pulmonary, critical care, and sleep medicine and research. All ATS Members are invited to attend this event to find inspiration and valuable career insights.

The Underrepresented Trainee Development Scholarship will be presented at this forum. The scholarship was created to increase representation of underrepresented racial and ethnic groups as defined by the National Institutes of Health (NIH) (African American, Hispanic or Latinx, American Indian, Alaskan Native and Pacific Islander) in pulmonary, critical care, and sleep medicine research by providing an opportunity for trainees in U.S. based programs to attend the ATS International Conference

Pre-registration and an additional fee are required. $40 members/non-members

Sunday Mid-day, May 18

BASIC • TRANSLATIONAL

MID-DAY SYMPOSIUM

MD1 RED JOURNAL IN ACTION 1: EARLY CAREER LUNG RESEARCH HIGHLIGHTS

American Journal of Respiratory Cell and Molecular Biology

12:00 P.M. - 1:00 P.M.

Target Audience
Individuals interested in basic mechanisms of lung disease and development; individuals who publish basic mechanistic and translational lung research; individuals interested in the peer review and editorial process; early career researchers

Objectives
At the conclusion of this session, the participant will be able to:

- describe new findings about emerging breakthroughs of molecular and cellular mechanisms for lung disease as reported in Am J Respir Cell Mol Biol
- better understand the peer review process, in particular the most effective approaches to address reviewer comments, and the role of associate editors to facilitate author-reviewer interactions
- better understand the features of mechanism-deciphering lung pathobiology research, and elements that create potential for future impact in the field

This is a continuation of a series started in 2023. The audience-interactive session will include early career authors of

exemplary recent article on basic mechanisms of lung disease in the American Journal of Respiratory Cell and Molecular Biology. It will highlight the review process for these articles, with Associate Editors describing the novelty and relevance of the work alongside critical comments from reviewers. Authors present the study and highlight how they addressed reviewer comments to achieve acceptance.

12:00 Overview of Session

12:05 Introduction of First Paper

12:10 First Highlighted Research Paper

12:30 Introduction of Second Paper

12:35 Second Highlighted Research Paper

12:55 Closing Remarks

CLINICAL • TRANSLATIONAL

MID-DAY SYMPOSIUM

MD2 STUDY UPDATES FROM THE AMERICAN LUNG ASSOCIATION'S AIRWAY CLINICAL RESEARCH CENTERS NETWORK

American Lung Association Airways Clinical Research Centers

12:00 P.M. - 1:00 P.M.

Target Audience
Physicians, clinical scientists, nurses, paraprofessionals, educators, health care providers

Objectives
At the conclusion of this session, the participant will be able to:

- describe the clinical and demographic characteristics of healthy young adults entered into the Lung Health Cohort
- better diagnose early onset and precursors of chronic lower respiratory disease in young adults
- describe new findings about lung structure defined by computed tomography in young health adults

The purpose of the session is to discuss ongoing research initiatives within the American Lung Association Airways Clinical Research Centers network. Recent evidence has supported the finding that reduced lung function in early adulthood is an important determinant of development chronic lower respiratory disease. The Lung Health Cohort is a cohort study of young adults to determine exposures and clinical precursors of impaired peak lung growth. The session will review functional and anatomic findings from the first 2000 participants to describe the initial findings from the cohort.

12:00 Introduction

12:05 The American Lung Association Lung Health Cohort (ALA-LHC): The First 2,000 Participants

12:15 Lung Function in Millennials at the Time of Peak Lung Health

12:25 Incidental Findings on Chest Computed Tomography (CT) Scans in Health, Young Adults

12:35 Club Cell Secretory Protein CC16 and Lung Health in Young Adult Life

12:45 Questions

CLINICAL

MID-DAY SYMPOSIUM

MD3 PULMONARY UPDATE FROM THE US FOOD AND DRUG ADMINISTRATION

United States Department of Agriculture

12:00 P.M. - 1:00 P.M.

Target Audience
Clinicians in practice, academic researchers, pharmaceutical industry representatives, international regulators

Objectives
At the conclusion of this session, the participant will be able to:

- provide a better understanding of regulatory considerations in reviewing new drug applications for COPD with an eosinophilic phenotype
- provide a better understanding of the regulatory considerations behind review of new drug applications for obstructive sleep apnea

The most recent FDA approvals in the pulmonary disease space, research endeavors, safety issues and other hot topics navigated over the past year in the Division of Pulmonology, Allergy, and Critical Care in the Office of New Drugs at FDA

12:00 Regulatory Considerations for the Clinical Development of Drug for Obstructive Sleep Apnea

12:20 Regulatory Considerations for Clinical Development Programs in Eosinophilic COPD

12:40 **Updates from the Division of Pulmonology, Allergy, and Critical Care**

12:55 **Questions and Answers**

BASIC • CLINICAL • TRANSLATIONAL

MID-DAY SYMPOSIUM

MD4 THE NHLBI LUNG TRANSPLANT CONSORTIUM

Division of Lung Diseases, NHLBI, NIH

12:00 P.M. - 1:00 P.M.

Target Audience
Those with research interests involving the study of lung transplant donors or recipients.

Objectives
At the conclusion of this session, the participant will be able to:

- learn about the impact of certain clinical practices on, and the value of collecting particular data elements to inform, donor lung utilization and early post-transplant outcomes in lung transplant recipients
- increase awareness among the broader lung transplant research community of the availability of the consortium's resources to support ancillary studies
- be able to more appropriately design and control for clinical variables during the conduct of multi-site research studies involving lung transplant donors or recipients

Clinical outcomes following lung transplantation are substantially worse than for other solid organs, mostly due to early complications leading to acute allograft dysfunction and infection. The incidence of these outcomes varies widely, raising the prospect that site-specific clinical assessment and practices contribute to this heterogeneity, and posing a significant barrier to performing clinical research studies and interventional trials. To address this challenge, the NHLBI created in 2022 the Lung Transplant Consortium. This session will provide an overview of the consortium, an update on recent progress, and information regarding the utility of the consortium's data and biorepositories to support ancillary studies.

12:00 **The PROMISE-LUNG Study**

12:15 **Peri-Operative Factors That Drive Cell-Free Hemoglobin-Mediated Primary Graft Dysfunction**

12:30 **The Clinical And Molecular Impacts Of Lung Primary Graft Dysfunction**

12:45 **CATCH: Creating Access To Transplant For Candidates Who Are High Risk**

BASIC • CLINICAL • TRANSLATIONAL

MID-DAY SYMPOSIUM

MD5 NOVEL THERAPEUTIC TARGETS FOR PULMONARY ATERIAL HYPERTENSION (PAH)

Division of Lung Diseases, NHLBI, NIH

12:00 P.M. - 1:00 P.M.

Target Audience
Providers of lung health-treating and managing PH patients. Clinical, basic or translational research in PH. Those interested in new drug development particularly physicians treating pulmonary hypertension, scientists studying lung, vascular

Objectives
At the conclusion of this session, the participant will be able to:

- improve understanding of resistin and RGTX-23 in pulmonary vascular disease and right heart failure
- improve understanding of 2-HOBA in pulmonary vascular disease
- improve understanding of VN-1032 in pulmonary vascular disease

Pulmonary hypertension (PH) is characterized by remodeling of the pulmonary vasculature that results in right ventricular failure. Current vasodilator therapies have shown limited efficacy. To reduce PH mortality, NHLBI supports the development of several novel therapies that target pulmonary vascular remodeling and/or right ventricular function: a monoclonal antibody against human resistin targeting vascular proliferative pathways and fibrotic response of PAH; a small molecule (2-hydroxybenzylamine) that restores metabolic imbalances by scavenging reactive lipids; and a selective aryl hydrocarbon receptor modulator that inhibits pulmonary artery smooth muscle cell proliferation, oxidative stress, and inflammation will be discussed as novel therapeutic approaches for PH.

12:00 **2-Hydroxybenzylamine (2-HOBA) Improves Cardiac Metabolism and Function Under Load Stress**

12:15 **Resistin as a New Target to Treat PAH**

12:30 **Resistin-BTK Activation of the Inflammasome in Vascular and Cardiac Remodeling in PAH**

12:45 A Novel Selective Aryl Hydrocarbon Receptor Modulator (SAhRM) as a New Class of Disease Modifying Therapy for PAH

CLINICAL • TRANSLATIONAL

MID-DAY SYMPOSIUM

MD6 NIOSH OCCUPATIONAL RESPIRATORY DISEASE UPDATES

CDC - National Institute for Occupational Safety and Health

12:00 P.M. - 1:00 P.M.

Target Audience
Providers of lung health; those interested in preventing occupational respiratory disease.

Objectives
At the conclusion of this session, the participant will be able to:

- understand and apply NIOSH recommendations to protect outdoor workers from wildfire smoke
- learn about the importance of the ILO system for classifying chest radiographs for findings of pneumoconiosis, the role of the B Reader in performing classifications, and how to become a B Reader
- learn about hazardous respiratory exposures in nail salons and their risks

The session will provide attendees with useful new information relevant to occupational respiratory disease including guidance on protecting outdoor workers exposed to wildland fire smoke, updates to the B Reader program, and emerging information about respiratory exposures in nail salon workers.

12:00 Introduction to Session

12:03 NIOSH Updates Including Guidance on Outdoor Workers Exposed to Wildland Fire Smoke

12:22 NIOSH B Reader Program Update

12:41 Exposures to Respiratory Hazards in Nail Salons

CLINICAL • TRANSLATIONAL

MID-DAY SYMPOSIUM

MD7 CARDIOPULMONARY FAILURE IN COPD: INSIGHTS FROM THE SUBPOPULATIONS AND INTERMEDIATE OUTCOMES IN COPD AND HEART FAILURE STUDY (SPIROMICS HF)

Division of Lung Diseases, NHLBI, NIH

12:00 P.M. - 1:00 P.M.

Target Audience
Researchers, medical trainees, those interested in relationship between COPD and heart failure

Objectives
At the conclusion of this session, the participant will be able to:

- learn about the SPIROMICS Heart Failure Study
- become familiar with new imaging technologies
- learn new findings about the relationship between COPD and heart failure

While heart failure, particularly with preserved ejection fraction (HFpEF), is a common comorbidity of COPD, little research has been done on the mechanisms that underlie this relationship. The SPIROMICS Heart Failure study takes advantage of the large well-phenotyped longitudinal SPIROMICS cohort and adds high quality cardiovascular measurements and images for a subset of participants. The goal is to better understand how emphysema and airway structure subtypes relate to heart failure phenotypes. During this session, investigators will discuss relationships between cardiovascular phenotypes and emphysema subtypes, combined pulmonary fibrosis and emphysema, and longitudinal changes in COPD.

12:00 Background and Aims of the SPIROMICS HF Study

12:15 Distinguishing Cor Pulmonale from Impaired Left Ventricular Filling with Machine-Learned CT Emphysema Subtypes

12:30 Cardiopulmonary Fibrosis and Diastolic Dysfunction in Combined Pulmonary Fibrosis Emphysema

12:45 Insights from 4D Flow MRI into Right Heart Changes in COPD

TRANSLATIONAL

MID-DAY SYMPOSIUM

MD8 THE DEVELOPMENT AND EVALUATION OF AN ASTHMA TRIGGERS TRAINING COURSE

Centers for Disease Control and Prevention

12:00 P.M. - 1:00 P.M.

Target Audience
Clinicians who seek to understand how environmental health affects a patient's risk to exposures that result in adverse respiratory health.

Objectives
At the conclusion of this session, the participant will be able to:

- improve ATS members' knowledge about environmental conditions related to lung health in vulnerable populations
- learn about new findings from a newly evaluated training course on the home environment and updates to environmental health data
- raise awareness about diversity and health equity issues related to respiratory health

This workshop will explore the development of a nationally standardized training course for home assessments of asthma triggers, including its evaluation for usability and comprehension. Presenters will discuss how the training addresses knowledge gaps and empowers home visit staff (e.g., community health workers) to help reduce residents' exposure to asthma triggers. The presentation will detail how post-course evaluation findings and formative interviews led to subsequent improvements, enhancing the training's comprehension and usability. Additionally, attendees will learn about CDC tracking network data related to respiratory health (e.g., asthma), environmental justice, built environment, and outdoor air triggers (e.g., particulate matter).

12:00 The Development of a Standardized Training Course for Home Visit Staff Who Assess Asthma Triggers in the Home Environment

12:20 The Evaluation of a Standardized, National Asthma Home Visitor Training Program

12:45 Updates on the CDC's Environmental Public Health Tracking Network Related to Respiratory Health

BEHAVIORAL • CLINICAL

MID-DAY SYMPOSIUM

MD9 USE OF IMPLEMENTATION SCIENCE TO ADVANCE EVIDENCE-BASED PRACTICES IN CRITICAL CARE SETTING

Division of Lung Diseases, NHLBI, DLD

12:00 P.M. - 1:00 P.M.

Target Audience
Researchers interesting in conducting implementation science research in the intensive care unit; clinicians wanting to increase adoption of evidence-based care in their practice

Objectives
At the conclusion of this session, the participant will be able to:

- learn about ongoing NHLBI funded research in implementation science in critical care
- apply innovative principles in behavioral economics, organizational science, and data science to implementation research
- participate in quality improvement and implementation science research in clinical practice

Many critically ill patients do not receive evidence-based practices proven to save lives and reduce morbidity. Addressing this gap is a priority for clinicians, health care administrators, and health care policy makers. Unfortunately, traditional strategies to close the implementation gap, are general ineffective. In this session, we will highlight several ongoing implementation studies conducted by ATS members and funded by the NHLBI. These projects examine strategies to support adoption of evidence-based practice in the ICU, building off recent advances in the fields of behavioral economics, organizational science, machine learning, and other innovative disciplines

12:00 Telehealth-Enabled Coaching to Promote Coordinated Awakening and Breathing Trials in Mechanical Ventilation

12:12 Implementing Nudges to Promote Utilization of Low-Tidal Volume Ventilation in ARDS

12:24 Interprofessional Teamwork to Improve Post-Extubation Care

12:36 Optimizing Use of Early Mobilization in the Intensive Care Unit

TRANSLATIONAL

MID-DAY SYMPOSIUM

MD10 NEUTROPHILIC MECHANISMS OF INFLAMMATION, INJURY, AND REPAIR IN LUNG DISEASES

The Neu-Lung Consortium: an NIAID U19 Cooperative Center in Human Immunology

12:00 P.M. - 1:00 P.M.

Target Audience
Translational researchers involved with lung and airways inflammation, injury, and repair Basic and human immunologists Data scientists Physicians and researchers interested in using clinical and multi-omics data integration for discovery

Objectives
At the conclusion of this session, the participant will be able to:

- describe fundamentals of neutrophil immunobiology as it relates to lung and airways disease
- describe and apply emerging technologies in single-cell and spatial analysis of human clinical samples
- be familiar with the NIH Cooperative Centers in Human Immunology

In our Mid-day Session, we will present an overview of the Neu-Lung consortium and then present data from studies focused on human neutrophilic diseases of 1) the alveolar space (pneumonia and PGD) and 2) the airways (asthma).

12:00 The NIAID U19 Cooperative Centers in Human Immunology

12:10 The Neu-Lung Consortium: Neutrophilic Mechanisms of Inflammation, Injury, and Repair in Lung and Airways Diseases

12:20 Mechanisms of Neutrophil Responses Underlying Alveolar Diseases

12:40 Neutrophilic Mechanisms of Airway Dysfunction in Severe Asthma Endotypes

CLINICAL • TRANSLATIONAL

MID-DAY SYMPOSIUM

MD11 COPDGENE: A 15-YEAR LONGITUDINAL STUDY UNRAVELING COPD PROGRESSION AND HEALTH OUTCOMES

Division of Lung Diseases, NHLBI, NIH

12:00 P.M. - 1:00 P.M.

Target Audience
Researchers, medical trainees, those interested in origins and subtypes of COPD

Objectives
At the conclusion of this session, the participant will be able to:

- understand what factors can be used to better diagnose COPD
- understand how new machine learning and deep learning approaches can be used to analyze large-scale cohort data
- understanding how aging processes are linked to COPD and COPD outcomes

Genetic Epidemiology of COPD (COPDgene) is a multi-site longitudinal cohort study funded by NHLBI of current and former smokers to better understand risk factors, natural history, and genetic contributions of chronic obstructive pulmonary disease (COPD). COPDGene uses extensive longitudinal imaging, physiology, and Omics molecular data in combination with genetics in the COPDGene cohort to identify high-risk subgroups with distinct diagnostic, prognostic, and therapeutic implications. COPDGene has been funded for over 15 years. During this session, investigators from the COPDGene study will describe progress and recent findings ranging from machine learning approaches to roles of aging in COPD.

12:00 New Diagnostic Approach for COPD

12:12 Deep Learning in COPD Imaging

12:24 Frailty in COPD

12:36 Metabolomic Aging in COPD

12:48 Machine Learning for COPD Subtyping

BASIC • TRANSLATIONAL

MID-DAY SYMPOSIUM

MD12 LUNGMAP PHASE 3- NOVEL TECHNOLOGY, DATA SCIENCE, AND RESOURCES

Division of Lung Diseases, NHLBI, NIH

12:00 P.M. - 1:00 P.M.

Target Audience
Providers of lung health, medical fellows in training, and basic and clinical researchers interested in lung biology, developmental biology, lung disease, multi-omics, bioinformatics, and systems biology

Objectives
At the conclusion of this session, the participant will be able to:

- learn the innovative technologies for single-cell multiomics, spatial multiomics, and data analysis of the lung
- learn the newest datasets of LungMAP that could inform lung research
- learn how to access and use the LungMAP resources

The overall goal of LungMAP is to build a molecular and cellular atlas of the human lung to serve as a reference to better understand both normal biology and disease pathobiology. LungMAP Phase 3 aims to utilize the power of single-cell omics and other innovative technologies to identify the pathogenic mechanisms of lung disease at cellular resolution, including cell types critical to disease initiation and progression, aberrant molecular pathways in abnormal and diseased cell states, and targets for novel lung disease therapies. Speakers will describe cutting-edge technology platforms, e.g., spatial transcriptomics, LungMAP data pipeline, data analysis tools, and LungMAP resources.

12:00 Multi-Modal Spatial Transcriptomic Profiling of Fibrotic Lung Tissue in 3D

12:12 Single-Cell Multiomics Understanding of Childhood Interstitial Lung Disease Associated with TBX4 Variants

12:24 LungMAP BRINDL Biorepository to Advance Human Lung Research

12:36 LungMAP Portal Ecosystem

12:48 Reader Glasses and Tools for the Analysis of Lung Cell Atlas Data

BEHAVIORAL • CLINICAL

MID-DAY SYMPOSIUM

MD13 NAVIGATING RESEARCH FUNDING: PEARLS FOR SUCCESS AND FUTURE DIRECTIONS

Nursing, Behavioral Science and Health Services Research, Critical Care, Pulmonary Rehabilitation; ATS Research Program; NHLBI, NINR, PCORI

12:00 P.M. - 1:00 P.M.

Target Audience
This session will benefit attendees with clinical, academic, research, and/or funding responsibilities. The information is appropriate for students as well as early-career, mid-career, and senior clinician-scientists.

Objectives
At the conclusion of this session, the participant will be able to:

- describe the research priorities of each funding agency/organization represented on the panel
- to identify each presenting agency/organization's available funding mechanisms and associated criteria
- select an agency/organization and funding mechanism most appropriate for their research

This session will introduce programs and research funding opportunities offered by multiple federal agencies and private organizations/foundations. Speakers will present current research priorities and mechanisms of funding available within their respective agency or organization. This talk will summarize the previous speakers' content and offer tips for successfully securing extramural grant funds from the perspective of a research dean. Time will also be provided for audience members to ask questions of the panel of speakers.

12:00 Introduction to the Session and Presenters & Audience Poll

12:05 NIH - National Heart, Lung, and Blood Institute (NHLBI)

12:12 Patient-Centered Outcomes Research Institute (PCORI)

12:19 American Thoracic Society (ATS) Research Program

12:26 NIH National Institute of Nursing Research (NINR)

12:33 **Case Study: Funded Program Success (RESP-FIT R01)**

12:40 **Success in Securing Research Funding from the Perspective of an Associate Dean for Nursing Research**

12:50 **Summary of the Session and Discussion**

CLINICAL

PEDIATRIC CLINICAL CORE CURRICULUM

PCC1 PEDIATRIC CLINICAL CORE CURRICULUM

Education Committee

12:00 P.M. - 1:00 P.M.

Target Audience
Clinicians, trainees, students, advanced practice providers

Objectives
At the conclusion of this session, the participant will be able to:

- Integrate new pediatric pulmonary and critical care guidelines into clinical practice.
- Identify knowledge gaps in the treatment of pediatric patients with pulmonary disease and critical illness.
- Better counsel pediatric patients and families on treatment options available for management of pulmonary diseases and critical illness.

The goal of the core is to support clinicians who are engaged in maintenance of certification activities by providing updates on subjects included in recertification requirements. The ATS Clinical Core Curriculum Symposia focus on key topics in the areas of Adult and Pediatric Pulmonary, Critical Care, and Sleep Medicine. The topics are aligned with corresponding MOC Medical Knowledge modules. This symposium is intended to help clinicians stay up to date with important information relevant to their medical practices, and to provide an opportunity for clinicians to evaluate their individual knowledge and skills while earning MOC Medical Knowledge points

Sunday Afternoon, May 18

CC2 ADULT PULMONARY CLINICAL CORE CURRICULUM

Education Committee

2:15 P.M. - 3:45 P.M.

Target Audience
Physicians practicing Pulmonary Medicine, trainees, APPs

Objectives
At the conclusion of this session, the participant will be able to:

- Apply current guidelines to effectively screen for lung cancer.
- Identify knowledge gaps in the approach to diagnosis, staging, and treatment suspected lung cancer.
- Describe the current practice for the identification and management of malignant pleural effusions.

The goal of the core is to support clinicians who are engaged in maintenance of certification activities by providing updates on subjects included in recertification requirements. The ATS Clinical Core Curriculum Symposia focus on key topics in the areas of Adult and Pediatric Pulmonary, Critical Care, and Sleep Medicine. The topics are aligned with corresponding MOC Medical Knowledge modules. This symposium is intended to help clinicians stay up to date with important information relevant to their medical practices, and to provide an opportunity for clinicians to evaluate their individual knowledge and skills while earning MOC Medical Knowledge points.

2:15 **I'm Down with LDCT - You Know Me: Lung Cancer Screening and Prevention in 2025**

2:40 **Stuck in the Middle with You: Diagnosis and Staging of Lung Cancer with Endobronchial Ultrasound**

3:05 **Livin' on the Edge: Image-Guided Bronchoscopy for Peripheral Pulmonary Nodules**

CLINICAL • TRANSLATIONAL

CLINICAL TOPICS IN PULMONARY MEDICINE

A81 PEDIATRIC YEAR IN REVIEW

Assembly on Pediatrics

2:15 P.M. - 3:45 P.M.

Target Audience
Pediatric pulmonologists including trainees and APPS and researchers

Objectives
At the conclusion of this session, the participant will be able to:

- updates on sickle cell disease management
- update on childhood origins of obstructive lung disease
- identify issues with work force in Pediatric Pulmonology and potential ways to address them

Pediatric in Review will cover 4 pertinent topics on which there are clinical and research advancements in the recent years. In keeping with the Basic Science Focus on Developmental Origins of Pulmonary Diseases, the talks will be on a) Sickle Cell Disease, b) Childhood origins of obstructive lung disease c) Role of nutrition in early onset of Respiratory Disease d) Pediatric Pulmonology workforce development

2:15 **Introduction to This Year's Pediatrics Year-in-Review**

2:25 **Effect of Nutrition on Early-Life Onset of Respiratory Diseases**

2:45 **Early Life Origins of Obstructive Lung Disease**

3:05 **New Therapies for Sickle Cell Disease - Is It Time for a Change in Outcomes for an Orphan Disease**

3:25 **Workforce Development in Pediatric Pulmonology - Is There A Crisis At Hand?**

CLINICAL

CLINICAL TOPICS IN PULMONARY MEDICINE

A83 GREAT CASES: CLINICAL, RADIOLOGIC, AND PATHOLOGIC CORRELATIONS BY MASTER CLINICIANS

Council of Chapter Representatives

2:15 P.M. - 3:45 P.M.

Target Audience
Clinicians practicing adult and pediatric pulmonary and critical care medicine

Objectives
At the conclusion of this session, the participant will be able to:

- improve recognition of clinical findings of patients in correlation with rare and common pulmonary diseases using a multidisciplinary approach
- apply clinical reasoning approaches to formulate differential diagnoses from complex patient presentations from real-time sharing of clinical knowledge, correlations, and inclusive of radiologic, and pathologic assessment by Master Clinicians
- learners will increase clinical knowledge of management and treatment approaches of pathologies presented

The Great Cases session is an active discussion about adult and pulmonary clinical cases with a multidisciplinary team. Radiology and pathology are presented and reviewed by experts in their fields. Attending learners have the opportunity to learn about unusual clinical problems and the approach to diagnosis, treatment and course.

2:15 **Radiological Findings**

2:33 **Pathology findings**

2:51 **Master Clinician**

3:09 **Master Pediatric Clinician**

3:27 **Master Clinician**

CLINICAL

CLINICAL TOPICS IN PULMONARY MEDICINE

A84 NAVIGATING THE NEW LANDSCAPE IN HOME VENTILATION

Assemblies on Clinical Problems, Pediatrics

2:15 P.M. - 3:45 P.M.

Target Audience
Clinicians (Physician, mid-level, RT, Resident and Fellow trainees, RN) who care for patients who require home mechanical ventilation support (COPD, neuromuscular disorders, restrictive lung disease)

Objectives
At the conclusion of this session, the participant will be able to:

- understand the similar and different modes available on home life-support ventilators and clinical application in advanced respiratory disease physiology to mitigate breathlessness and improve patient-ventilatory synchrony
- understand the impact of the use of home non-invasive ventilation in improving quality of life and survival in hypercapneic COPD and thoracic restrictive disease

With the exit of one dominant vendor from the home ventilator market, the landscape has changed significantly with multiple new devices that have different features that can be tailored to individual disease needs. The advanced capabilities will allow us to better meet the needs of our patients with complex advanced lung disease but require a more in depth knowledge of the intricacies of the available modes and where they fit into the framework of staged needs for respiratory support. We will also discuss how to navigate the changing insurance approval process with the implementation of AI.

2:15 **It's A New Day, No It's Groundhog Day in Home Ventilation**

2:20 **Legendary Luisa**

2:34 **Adaptive Astral**

2:48 **Breathtaking Breas**

3:02 **Versatile VOCSN**

3:16 **Navigating the New Insurance Minefield- the Arrival of AI**

BASIC • TRANSLATIONAL

SCIENTIFIC SYMPOSIUM

A86 UNLOCKING HETEROGENEITY TO ADVANCE PRECISION MEDICINE IN ARDS

2:15 PM – 3:45 PM

Target Audience
Critical care clinicians, scientists, clinical researchers, translational researchers

Objectives
At the conclusion of this session, the participant will be able to:

- understand the many tools available to assess the clinical and biologic heterogeneity of ARDS, including methods to sub phenotype and discover treatable traits using data from multiple clinical sources and biologic compartments
- apply our understanding of heterogeneity of ARDS to identify heterogeneity of treatment effect either in observational data, retrospective analysis of prior RCTs, or design of future clinical trials
- identify the research gaps that remain before precision therapeutics can be tested in clinical trials and used at bedside
- Heterogeneity is a key feature of critical illness syndromes, including Acute Respiratory Distress Syndrome (ARDS). This heterogeneity is hypothesized to partially explain the failure of therapeutics tested in unselected populations of ARDS. The heterogeneity of our syndromes, however, has been described on multiple axes from systemic molecular biology, alveolar inflammation, respiratory physiology, and host-pathogen interactions. By understanding these distinct axes of heterogeneity, we have the potential to unlock a pathway to precision medicine in ARDS. The objective of this session is to discuss these axes of heterogeneity and the paths towards translating these findings to future targetable traits in ARDS.

2:15 **Identifying Treatable Traits and Examining Heterogeneity of Treatment Effect in Critical Care Trials**

2:26 **Applying Systemic Blood Phenotypes of ARDS to the Bedside**

2:37 **Biologic Heterogeneity in the Alveolar Compartment**

2:48 **Using Physiologic and Morphologic Heterogeneity in AHRF to Personalize the Ventilator**

2:59 The Interaction of the Host and Pathogen in Determining Heterogeneity in Infectious ARDS

3:10 Pediatric ARDS, A Distinct Subphenotype or Smaller Adults

3:21 Heterogeneity in Recovery in ARDS Survivors

3:32 General Audience and Panel Discussion

BASIC • TRANSLATIONAL

SCIENTIFIC SYMPOSIUM

A87 VIRTUAL PULMONARY REHABILITATION: CAN WE GET TO CONSENSUS? A PRO/CON DEBATE

Assembly on Pulmonary Rehabilitation

2:15 PM – 3:45 PM

Target Audience
All clinicians, clinical researchers, respiratory therapists, physiotherapists, advanced practice providers, nurses

Objectives
At the conclusion of this session, the participant will be able to:

- at the conclusion of this session, the learner will be better able to define a framework that includes the essential components of virtual pulmonary rehabilitation
- at the conclusion of this session, the learner will be better able to apply the components of virtual pulmonary rehabilitation to improve exisitng virtual programs or guide the development of new ones
- at the conclusion of this session, the learner will be better able to rigorously identify the aspects of virtual pulmonary rehabilitation programs that deliver high quality care to which to refer their patients

Conventional in-person Pulmonary Rehabilitation (PR) is standard of care for patients with chronic lung disease. Virtual PR programs have emerged at a rapid pace since the COVID-19 pandemic to deliver an important nonpharmacological treatment, with hopes that a remote method of delivery will improve access and provide an alternative option to in-person, center-based PR. Yet, the virtual PR programs are very heterogeneous. Quality metrics and minimum standards are needed to guide existing and future programs. In this session, key questions about delivery platform, exercise components, and outcome assessments for virtual PR will be debated using data grounded in the existing literature.

2:15 Introduction

2:18 PRO: Virtual PR Should be Delivered via 2-Way Live Videoconferencing

2:30 CON: Virtual PR Should be Delivered Asynchronously

2:42 PRO: Exercise Should be Conducted Using Aerobic Gym Equipment

2:54 CON: Exercise Should Use Minimal Equipment and Ground-Based Walking Training

3:06 PRO: The Primary Functional Outcome Assessment Should be a Measure of Exercise Capacity

3:18 CON: The Primary Functional Outcome Assessment Should be a Measure of Physical Activity or Balance/Frailty

3:30 Questions and Answers

BASIC • TRANSLATIONAL

SCIENTIFIC SYMPOSIUM

A88 EPIGENETICS: HOW EARLY LIFE EXPOSURES CONTRIBUTE TO LUNG DISEASE LATER IN LIFE

Assemblies on Respiratory Cell and Molecular Biology, Allergy, Immunology and Inflammation, Environmental, Occupational and Population Health, Respiratory Structure and Function

2:15 P.M. - 3:45 P.M.

Target Audience
Basic science researchers, environmental health researchers, clinical researchers, and researchers in preventative medicine.

Objectives
At the conclusion of this session, the participant will be able to:

- to understand and appreciate how early life exposures contribute to the development of chronic lung disease later in life
- to understand how epigenetic changes contribute to the development of asthma, COPD, and pulmonary fibrosis
- to understand how environmental exposures can cause epigenetic changes and how preventative measures in early development might mitigate against chronic lung disease later in life

Accumulating evidence has demonstrated that many chronic lung diseases including asthma, COPD, and pulmonary fibrosis that develop later in life are associated with developmental origins.

The mechanisms by which this occurs is not fully understood. This session will help address how epigenetic changes might serve as a mechanism linking environmental exposures during development with asthma, COPD, and pulmonary fibrosis later in life. Understanding the mechanisms that serve as the basis for the "Developmental Origins of Health and Disease (DOHaD)" hypothesis can help the medical community appreciate strategies to mitigate and prevent chronic lung disease.

2:15 Epigenetics and the Developmental Origins of Lung Disease - the DOHaD Hypothesis

2:33 Epigenetic Changes in Utero and the Development of Asthma

2:51 Role of Epigenetics in the Developmental Origins of COPD

3:09 Air Pollution Exposure and Epigenetics

3:27 Epigenetic Changes and Pulmonary Fibrosis

CLINICAL

SCIENTIFIC SYMPOSIUM

A89 REVOLUTIONIZING RESPIRATORY DISEASE MANAGEMENT WITH MACHINE LEARNING AND AI INSIGHTS

Assemblies on Allergy, Immunology and Inflammation, Environmental, Occupational and Population Health

2:15 P.M. - 3:45 P.M.

Target Audience
Respiratory disease specialists, clinical and research professionals, and healthcare administrators.

Objectives
At the conclusion of this session, the participant will be able to:

- identify key ways ML and AI are integrated into environmental health science and respiratory disease studies
- assess the current trends and future potential of ML and AI technologies in revolutionizing the management and understanding of respiratory diseases, particularly through the development of predictive models and intervention strategies
- examine the ethical considerations, challenges, and societal implications of employing advanced computational techniques in healthcare, emphasizing privacy, equity, and the responsible use of AI and ML in public health and patient care

This session explores the transformative role of Machine Learning (ML) and Artificial Intelligence (AI) in respiratory disease management. With environmental factors significantly affecting respiratory health, advanced computational techniques promise to revolutionize our understanding and management of these conditions. Our panel of leading experts in ML, AI, and respiratory health will discuss current trends, future potential, and ethical considerations. Through presentations and moderated discussion, we aim to uncover how AI and ML can provide predictive insights, enhance diagnostic accuracy, and tailor interventions, thereby improving patient outcomes and public health strategies.

2:15 Deciphering Environmental Health: The Role of AI and ML in Respiratory Disease Management

2:38 Machine Learning Identifies Respiratory Disease Subphenotypes for Enhanced Prognosis and Treatment

3:00 Machine Learning in Identifying Mortality Risks in Respiratory Diseases

3:23 Artificial Intelligence in Respiratory Diseases: Innovations and Future Directions

BEHAVIORAL • CLINICAL • TRANSLATIONAL

SCIENTIFIC SYMPOSIUM

A90 LEVERAGING ONE HEALTH TO PREPARE FOR EMERGING PATHOGENS AND PANDEMICS

Assemblies on Environmental, Occupational and Population Health, Behavioral Science and Health Services Research, Critical Care

2:15 P.M. - 3:45 P.M.

Target Audience
pulmonary and critical care clinicians; hospital and ICU administrators; health services researchers; clinical epidemiology researchers; emergency management and preparedness personnel and researchers

Objectives
At the conclusion of this session, the participant will be able to:

- understand the evidence base supporting or questioning the natural transmission and lab leak theories for the origins of the COVID-19 pandemic
- understand the One Health approach and the connection between human, animal, and environmental health

- understand the impact of climate change on emerging pathogen risk and respiratory viruses as occupational diseases

Submitted on behalf of the ATS Section on Terrorism and Inhalation Disasters (TID), this session will use the One Health lens-the connection between human, animal, and environmental health-to chart a path through COVID-19 and other past outbreaks, contemporary zoonotic threats including highly pathogenic avian influenza, and forward looking preparedness efforts. The session will specifically address COVID-19 origin theories, zoonotic risk for emerging human-relevant pathogens, the ongoing H5N1 avian influenza epidemic, the impact of climate change on animal and human disease risk, and respiratory viruses as occupational diseases. The focus is lessons learned, unanswered questions, and continued challenges.

2:15 The One Health Approach and Zoonotic Hosts for Emerging Human-Relevant Pathogens

2:25 COVID-19 Origins: Scientific, Apolitical Assessments of the Natural Transmission and Lab Leak Theories

2:35 Highly Pathogenic Avian Influenza A(H5N1) Virus - Zoonotic and Pandemic Concerns

2:45 A Global Perspective on Outbreak Investigation and Clinical Management of Novel Severe Acute Respiratory Infections

2:55 Climate Change and the Evolving Risk of Emerging Pathogens

3:05 Respiratory Viruses as Occupational Diseases: NIOSH Lessons from Workplace Mitigation and Risk Reduction for Future Pandemic Preparedness

3:15 Patient Perspective

CLINICAL

SCIENTIFIC SYMPOSIUM

A91 HOW TO ACHIEVE GLOBAL EQUITY IN MEDICATION ACCESS FOR CHRONIC RESPIRATORY DISEASES: CHALLENGES AND OPPORTUNITIES

Assemblies on Allergy, Immunology and Inflammation, Clinical Problems; International Health Committee

2:15 P.M. - 3:45 P.M.

Target Audience
Healthcare Professionals, Primary Care Physicians, Nurses and Nurse Practitioners, Policy Makers and Public Health Officials

Objectives
At the conclusion of this session, the participant will be able to:

- define the problem of lack of access and affordability of chronic respiratory treatments
- understand the role of international organizations in education, dissemination and implementation of treatment guidelines around the world
- To identify innovative solutions and address inequities in medication access around the world..

An overarching principle of the American Thoracic Society is to improve global lung health and to serve as a resource for members from 129 countries with over 30 percent residing outside the United States. Common challenges are faced by members in all countries although context matters. This symposium invites perspectives from multilateral organizations and in-country experts to address challenges and opportunities regarding global inequities in medication access for chronic respiratory diseases.

2:15 Why Is It Important to Achieve Global Equity in Medication Access for Chronic Respiratory Disease

2:20 Role of the Global Initiative for Chronic Obstructive Lung Disease in Achieving Global Equity in Medication Access

2:40 The Growing Epidemic of Chronic Respiratory Disease Across Africa and Equity in Medication Access

3:00 Innovations in Implementing Better Access to Medications for Chronic Respiratory Disease in India

3:20 Drivers of Inequity in Medication Access for Chronic Respiratory Disease in the United States

3:40 Closing Remarks

BEHAVIORAL • CLINICAL

SCIENTIFIC SYMPOSIUM

A92 WEIGHING THE BALANCE: EXPANDING LUNG CANCER SCREENING OPPORTUNITIES FOR HIGH-RISK INDIVIDUALS

Assemblies on Thoracic Oncology, Behavioral Science and Health Services Research, Environmental, Occupational and Population Health; Tobacco Action Committee

2:15 P.M. - 3:45 P.M.

Target Audience
The target audience includes both clinicians and researchers focused on lung cancer risk and carcinogenesis, lung cancer epidemiology, tobacco treatment, occupational health, lung cancer screening implementation, and early detection of lung cancer.

Objectives
At the conclusion of this session, the participant will be able to:

- describe the rationale for current USPSTF eligibility criteria for lung cancer screening
- define and identify individuals and populations who have elevated lung cancer risk due to environmental or occupational exposures, family history, comorbid conditions, or other factors
- apply knowledge about lung cancer risk factors to better understand the balance of benefits and harms for lung cancer screening

The proposed session focuses on early detection of lung cancer among individuals at high risk but are currently excluded from lung cancer screening based on US Preventive Services Task Force (USPSTF) recommendations. This includes members of underserved groups such as female Asian never-smokers, firefighters, and people living with HIV, as well as individuals with USPSTF-ineligible risk factors such as family history of lung cancer, occupational exposures, or low intensity smoking. Multidisciplinary speakers will include scientists and physician scientists from Pulmonary Medicine, Cancer Epidemiology, and Medical Oncology with research expertise in these populations, as well as a representative from the USPSTF.

2:15 **Understanding Driving Factors for the US Preventive Services Task Force Recommendation for Lung Cancer Screening**

2:30 **Prediction-Augmented Screening: A Novel Method for Early Detection of Lung Cancer Among High-Risk Veterans**

2:45 **Expanding Knowledge About Military Toxic Exposures and Lung Cancer Risk: The MAS-EXPAND Study**

3:00 **Developing Early Lung Cancer Detection Opportunities for Workers with Inhalational Occupational Exposures**

3:15 **Defining Lung Cancer Risk Among Asian-American Females Who Have Never Smoked: The FANS Study**

3:30 **Engaging People Living with HIV (PLWH) for Tobacco Treatment and Early Detection of Lung Cancer**

Monday Morning, May 19

MEET THE EXPERT SEMINARS

Pre-registration and additional fees required. Attendance is limited.
$100 Member/Non-Members
$70 LMIC Member/LMIC Non-Members

10:45 a.m. - 11:45 a.m.

MTE12 PULMONARY NODULE EVALUATION IN THE AGE OF ARTIFICIAL INTELLIGENCE

MTE13 ?HARD? DATA IN SCLERODERMA ILD: NEW GUIDELINES AND MANAGEMENT STRATEGIES

MTE14 EXPLORING NOVEL COLLABORATIONS AND SOCIAL DETERMINANTS FOR HEALTH CARE EQUITY

MTE15 SIMPLY DOES IT: DELIVERING PULMONARY REHABILITATION USING MINIMAL EXERCISE EQUIPMENT

MTE16 TEACHING CASES IN ENDEMIC FUNGAL PNEUMONIA FOR THE NON-ENDEMIC CLINICIAN

MTE17 TWO BAD DISEASES ARE WORSE THAN ONE: PULMONARY HYPERTENSION IN ILD AND COPD

MTE18 PEDIATRIC AIRWAY SAMPLING: ARE WE DOING IT RIGHT?

MTE19 SMALL BUT MIGHTY- ISOLATION AND ANALYSIS OFEVS IN LUNG HEALTH AND DISEASES

MTE20 GENERATIVE AI FOR LUNG IMAGING AND DISEASE DIAGNOSIS

MTE21 TAKING YOUR MULTIDISCIPLINARY ICU TEACHING ROUNDS TO THE NEXT LEVEL.

MTE22 PROFESSIONAL IDENTITY FORMATION: PREPARING THE NEXT GENERATION TO BE MORE THAN DOCTORS

KEYNOTE SERIES

8:00 a.m. -8:45 a.m.

K2 THE DEVELOPMENT OF GENETIC THERAPIES FOR PEOPLE WITH RESPIRATORY DISEASE

The ATS Keynote Series focuses on timely topics of high relevance to the pulmonary, critical care, and sleep medicine community. Keynote lectures feature leaders who have made major contributions in the important themes programmed at the 2025 conference and are unopposed by any other programming.

CLINICAL

YEAR IN REVIEW

B1 CLINICAL YEAR IN REVIEW

9:15 A.M. - 10:45 A.M.

Target Audience
Pulmonary, critical care, and sleep providers. The program will discuss topics of interest to a broad group of providers. The program is relevant to not only clinicians, but also to researchers and administrators.

Objectives
At the conclusion of this session, the participant will be able to:

- be able to apply new clinical research knowledge to clinical practice
- learn new findings about key conditions in pulmonary, critical care and sleep
- have new strategies to manage the care of common conditions in pulmonary, critical care, and sleep

This program has been developed to include core topics in pulmonary, critical care, and sleep medicine. The goal of the session is to discuss critical state-of-the-art topics and evolving concepts. The learner will be exposed to a carefully curated review of the current literature by emerging leaders in the field. After the course, participants will better understand novel concepts in each specific domain that we hope will translate to improved patient care.

9:15 **General Critical Care**

9:37 **Ards**

10:00 **Sepsis**

10:23 **Medical Education**

CLINICAL

CLINICAL TOPICS IN PULMONARY MEDICINE

B3 NON-MALIGNANT PLEURAL DISEASE - A PRO/CON DEBATE

Assembly on Clinical Problems

9:15 A.M. - 10:45 A.M.

Target Audience
This will be for all practicing clinicians that see pleural disease consults. Physicians, Trainees, Advanced Practice Providers, Nurses

Objectives
At the conclusion of this session, the participant will be able to:

- understand the data behind conservative management of pneumothoraces and how to apply that to your practice
- describe the data and upcoming trials that will shape empyema management in the future
- apply literature to traditionally frowned upon methods of insertion of a tunneled pleural catheter and surgical pleurodesis for a recurrent, transudative pleural effusion

This session will delve into three common clinical scenarios and have experts debate pros and cons. The three scenarios include pneumothorax, empyema, and recurrent transudative effusions and the management intricacies associated.

9:15 **Pro: All Patients with Empyema Should Be Managed with Chest Tube Insertion, Drainage, and Intrapleural Enzyme Therapy Prior to Surgical Intervention.**

9:30 **Con: All Patients with Empyema Should Be Managed with Chest Tube Insertion, Drainage, and Intrapleural Enzyme Therapy Prior to Surgical Intervention**

9:45 **Pro: Recurrent and Refractory to Treatment Transudative Pleural Effusions Should Be Managed with Indwelling Pleural Catheters**

10:00 **Con: Recurrent and Refractory to Treatment Transudative Pleural Effusions Should Be Managed with Indwelling Pleural Catheters**

10:15 **Pro: All Spontaneous Pneumothoraces Should Be Managed Conservatively in the Absence of Significant Symptoms and Hemodynamic Compromise**

10:30 **Con: All Spontaneous Pneumothoraces Should Be Managed Conservatively in the Absence of Significant Symptoms and Hemodynamic Compromise**

CLINICAL • TRANSLATIONAL

CRITICAL CARE TRACK

B4 FRAILTY IN THE INTENSIVE CARE UNIT

Assembly on Critical Care

9:15 A.M. - 10:45 A.M.

Target Audience
Critical care clinical providers (physicians, physician assistants, and nurses), clinical and translational researchers interested in aging and frailty

Objectives
At the conclusion of this session, the participant will be able to:

- compare and apply available methods for assessing frailty in critically ill patients
- describe the risks of frailty in the critically ill patient on survival and long-term outcomes
- identify opportunities for frailty intervention

Frailty, a syndrome characterized by increased vulnerability to stressors, is common among intensive care unit (ICU) patients and is associated with adverse outcomes. The optimal strategies to assess and manage frailty in the critically ill remain under intense study. Given the growth of aging populations and of ICU survivors, frailty identification and intervention are essential. In this session, we will review the state of the science regarding frailty in the ICU, including frailty assessment tools, the impact of frailty in the ICU and afterwards, and potential intervention points.

This session will span clinical and translational research and will highlight new advances in the field, including lessons learned from the COVID-19 pandemic.

9:15 **Assessing Frailty in the ICU Setting**

9:27 **Frailty and Its Impact on ICU and Post-ICU Outcomes**

9:39 **Multi-Omic Pathways in Frailty**

9:51 **Frailty the Post-COVID Era: Lessons Learned and Ethical Considerations**

10:03 **Opportunities for Frailty Intervention**

10:15 **A Research Agenda for Frailty**

BASIC • TRANSLATIONAL

SCIENTIFIC SYMPOSIUM

B5 REMINISCENCE OF AN EARLIER LIFE &NDASH; SHEDDING MECHANISTIC LIGHT ON THE TRANSGENERATIONAL IMPACT OF CIGARETTE SMOKE ON LUNG FUNCTION

Assemblies on Respiratory Structure and Function, Pediatrics

9:15 A.M. - 10:45 A.M.

Target Audience
Basic Science Researchers, Clinicians

Objectives
At the conclusion of this session, the participant will be able to:

- understand the epidemiological/clinical role of cigarette smoking before, during and after child conception
- elucidate cigarette smoke as a transgenerational modifier of the lung epigenetic landscape that determines lung function
- learn from advanced pre-clinical models and cohorts on parental exposure and lung function outcome

Lung function decline, originating in childhood, underlies chronic lung diseases (e.g. asthma, COPD). Traditionally, this decline has been attributed to self-inflicted exposures (e.g. smoking). Recent advances reveal that smoke exposure during childhood and parental smoking decades before conception can increase susceptibility to chronic lung diseases in offspring, indicating a transgenerational memory. Critically, novel smoking behaviors (e.g. vaping) may shape future generations' lung health. Large epidemiological studies are exploring transgenerational mechanisms by which smoking affects lung health, including maternal immune activation, aberrant lung structure maturation, and epigenetic priming of lung cell memory and susceptibility to chronic lung disease in the offspring.

9:15 **Grandparent's Heritage: Transgenerational Effects of Cigarette Smoke on Lung Health**

9:33 **Crossing Barriers - Dysfunctional Placental Gate-Keeping Effects on Lung Development and Risk for Disease**

9:51 **Not a Distant Memory - Linking Fetal Lung Epigenetics After Nicotine Exposure to Early-COPD**

10:09 **Cigarette Smoke Kills - Why Women Might Get More than their Fair Share**

10:27 **You Never Walk Alone - Obesity x Smoking as Multipliers of Chronic Lung Diseases Across Generations**

CLINICAL • TRANSLATIONAL

SCIENTIFIC SYMPOSIUM

B6 PRECISION MEDICINE IN SEVERE ASTHMA: LATE-BREAKING RESULTS FROM THE PRECISE TRIAL

Assemblies on Allergy, Immunology and Inflammation, Clinical Problems

9:15 A.M. - 10:45 A.M.

Target Audience
Clinicians (physicians, nurses, fellows, residents, pharmacists), researchers, administrators, regulators and policymakers: anyone involved in delivery of care and the science of patients with asthma and severe asthma

Objectives
At the conclusion of this session, the participant will be able to:

- describe new thinking about how to design and interpret biomarker-stratified adaptive platform trials
- describe new findings about the following interventions targeting new pathways in severe and exacerbation-prone asthma: medium chain triglycerides, cavosonstat, imatinib, Broncho-Vaxomr, and clazakizumab
- learn how established and new biomarkers can predict asthma severity and response to therapy. The learner can apply this new knowledge in clinical practice to improve the care of severe asthmatics

This session will present for the first time the results of the Precision Interventions in Severe and Exacerbation Prone Asthma (PrecISE) clinical trial, which will conclude in late 2024. PrecISE is a ground-breaking biomarker stratified, adaptive platform trial that tested 5 novel interventions in adults and adolescents with severe asthma. Sponsored by the NIH and conducted at top asthma centers throughout the U.S., PrecISE started in 2019 and used an innovative multi-stage crossover trial design. This phase II study of targeted therapies will advance our understanding of new pathways and biomarkers involved in severe and exacerbation prone asthma.

9:15 **Welcome and Introduction**

9:18 **Design and Statistical Analysis in the PrecISE trial**

9:32 **Medium Chain Triglycerides**

9:46 **Cavosonstat**

10:00 **Imatinib**

10:14 **OM-85 (Broncho-Vaxom)**

10:28 **Clazakizumab**

10:42 **Summary and Q&A**

TRANSLATIONAL

SCIENTIFIC SYMPOSIUM

B7 CLEAR SKIES OR HAZY HORIZONS: DEBATING PERSONAL POLLUTION CONTROL

Assemblies on Environmental, Occupational and Population Health, Clinical Problems

9:15 A.M. - 10:45 A.M.

Target Audience
Clinicians in pulmonary, pediatrics, infectious disease and occupational health fields, respiratory health workers, environmental and urban health experts, global health researchers.

Objectives
At the conclusion of this session, the participant will be able to:

- increase awareness about environmental exposures relevant to people with chronic lung diseases
- review the evidence for personal interventions to mitigate exposure to environmental hazards
- navigate risk communication and when to recommend specific interventions to reduce exposure to environmental exposures in patients with chronic lung disease

There is a pressing need to understand the evidence for personal exposure interventions for people with chronic lung disease, particularly in the context of worsening air quality days from pollen and wildfire smoke. This session highlights the pros and cons of 3 different personal exposure interventions, (1) HEPA air filtration, (2) N95 respirators, and (3) exercise limitation on poor air quality days. Through this session, we will identify key knowledge gaps, highlight benefits, and provide practical guidance on how clinicians can counsel their patients

9:15 **Our Changing Environment and Implications for Lung Health**

9:23 **PRO: "I Should Recommend that My Patient Purchase a HEPA Air Purifier for Their House."**

9:35 **CON: "I Should Recommend that My Patient Purchase a HEPA Air Purifier for Their House."**

9:47 **PRO: "I Should Advise My Patients to Avoid Exercising When the Air Quality Is Poor."**

9:59 **CON: "I Should Advise My Patients to Avoid Exercising When the Air Quality Is Poor."**

10:11 **PRO: "I Should Recommend that My Patient Wears a N95 Outside During High Pollutant Events."**

10:23 **CON: "I Should Recommend that My Patient Wears a N95 Outside During High Pollutant Events."**

10:35 **Question and Answer Period**

BASIC • TRANSLATIONAL

SCIENTIFIC SYMPOSIUM

B8 PULMONARY VIRUS INFECTIONS ACROSS THE LIFESPAN

Assemblies on Pulmonary Infections and Tuberculosis, Allergy, Immunology and Inflammation, Pediatrics, Respiratory Cell and Molecular Biology, Respiratory Structure and Function

9:15 A.M. - 10:45 A.M.

Target Audience
Basic and Translational Researchers; Clinical Scientists;Fellows

Objectives
At the conclusion of this session, the participant will be able to:

- discuss recent advances in understanding the immunopathogenesis of respiratory virus infections across the lifespan
- develop new strategies to study respiratory viral disease within the context of immuneaging
- identify opportunities for innovative collaborations aimed at advancing knowledge on respiratory virus infections across the lifespan

This symposium will explore host responses to pulmonary viral infections throughout different stages of life. Leading experts on respiratory viruses-including respiratory syncytial virus (RSV), rhinovirus (RV), influenza A virus (IAV)-will analyze variations in viral pathogenesis and host outcomes among pediatric, adult, and geriatric populations. Special emphasis will be placed on dynamics of host immunity during infection, highlighting the role of immunoaging in shaping disease manifestations.

9:15 Consideration of Age in Respiratory Virus Infections

9:17 Impact of Age on RSV Infection, Pathogenesis and Treatment

9:39 Rhinovirus: Complications of Early Life Infection

10:01 Respiratory Viruses in the Development of COPD

10:23 Immune System Changes in the Lungs with Age

CLINICAL

SCIENTIFIC SYMPOSIUM

B9 CONTEMPORARY DISEASE-MODIFYING THERAPIES: UPDATES FOR THE PEDIATRIC PULMONOLOGIST

Assemblies on Pediatrics, Sleep and Respiratory Neurobiology

9:15 A.M. - 10:45 A.M.

Target Audience
Providers of lung health; Pediatric providers; Providers for people with neuromuscular disorders and sickle cell disease; individuals with clinical and research responsibilities

Objectives
At the conclusion of this session, the participant will be able to:

- define new strategies to manage the respiratory care of children with spinal muscular atrophy, Duchenne muscular dystrophy, Pompe disease, and sickle cell disease
- better counsel patients regarding the respiratory impacts of disease-modifying therapies in spinal muscular atrophy, Duchenne muscular dystrophy, Pompe disease, and sickle cell disease
- improve equitable access to disease-modifying therapies within a global context

The paradigms of care for multisystem pediatric disorders including spinal muscular atrophy, Duchenne muscular dystrophy, Pompe disease, and sickle cell disease are shifting as disease-modifying therapies become increasingly available and attenuate the natural trajectory of decline. Respiratory monitoring and treatment are evolving. Although these conditions are individually rare, they collectively represent a growing group of pediatric multisystem disorders that have seen rapid treatment advances generally outpacing the generation of robust respiratory outcome data. This session will review the current literature on respiratory outcomes and management in these emerging populations while also highlighting issues related to health equity.

9:15 Reassessing Respiratory Care for Spinal Muscular Atrophy in the Era of Disease Modifying Therapies

9:30 Respiratory Health in Duchenne Muscular Dystrophy: The Impact of Disease-Modifying Therapies

9:45 Pompe Disease Therapies: Updates for the Pediatric Pulmonologist

10:00 Pulmonary Outcomes in Sickle Cell Disease: A Changing Landscape

10:15 Understanding Patient and Caregiver Experiences Accessing Disease-Modifying Therapies

CLINICAL

SCIENTIFIC SYMPOSIUM

B10 BLOOD BASED BIOMARKERS FOR LUNG CANCER SCREENING: FIVE QUESTIONS (AND ANSWERS) TO MOVE THE FIELD FORWARD

Assemblies on Thoracic Oncology, Clinical Problems

9:15 A.M. - 10:45 A.M.

Target Audience
providers of lung health, lung cancer screening interdisciplinary teams, policy and regulatory, clinical research, health equity researchers and providers

Objectives
At the conclusion of this session, the participant will be able to:

- contextualize emerging blood-based biomarker tests for early lung cancer detection in terms of their performance, evaluation, and evidence requirements
- have a valuable framework for understanding this emerging field
- evaluate independently the claims and performance of the test, help patients understand the role of these tests and when they may be relevant and helpful, and interpret their results

Despite convincing randomized clinical trials of lung cancer screening, lung cancer screening rates remain low both in the United States and globally. Recent technological advances have suggested that blood-based tests might provide an alternative means of early detection, providing a potential avenue to increasing screening rates among the current screening-eligible population, reducing barriers to access in remote and rural communities, and potentially serving as a means of evaluating individuals whose risk of lung cancer is lower than current criteria. The session will serve an important need, updating attendees.

9:15 Introduction

9:20 How Should the Clinical Validation Endpoints for Biomarker Screening Tests Be Defined, and What Is Their Timing?

9:33 How Do the Performance Characteristics of a Screening Biomarker Affect Screening Uptake? Projecting the Impact on Population Health Outcomes

9:46 What Metrics Are Necessary to Assess the Clinical Utility of Biomarkers for Lung Cancer Screening?

9:59 What Is the Current Status of Lung Cancer Screening Biomarkers

10:12 Will the Routine Use of Biomarker Screening Tests Lead to Reduced or Exacerbated Health Inequities?

10:25 Discussion

TRANSLATIONAL

CLINICAL TOPICS IN PULMONARY MEDICINE

B11 BIOMARKERS IN PULMONARY FIBROSIS: GLEANING THROUGH AN OMICS LENS

Assemblies on Clinical Problems, Respiratory Cell and Molecular Biology

9:15 A.M. - 10:45 A.M.

Target Audience
Clinicians and Clinical and Translational Scientists involved in treating and studying chronic lung diseases

Objectives
At the conclusion of this session, the participant will be able to:

- describe the disease heterogeneity and differential prognoses and endotypes that exists within pulmonary fibrosis using omics methods.
- discuss the utility of omics in understanding individualized disease trajectories and in developing targeted treatments in pulmonary fibrosis
- integrate of multi-omics and the promise of precision medicine in pulmonary fibrosis

Pulmonary fibrosis continues to be a chronic fatal disease with heterogenous outcomes and limited effective treatment options. Recent advances in genomic, transcriptomic, proteomic, metabolomic and radiomic technology have led to a rapid proliferation of investigations utilizing these platforms to study pulmonary fibrosis. This work has shed important light on the heterogeneity of molecular phenotypes and identifying clinically relevant biomarkers for differential survival and treatment effects. This scientific symposium will highlight key findings across the genome, transcriptome, proteome and radiome that have advanced our understanding of pulmonary fibrosis.

9:15 Introduction and Overview

9:20 Genomics and Transcriptomics- PRS-ing Forward and sTRS-ing on the Genetic Variation in PF

9:40 Glimpsing at the 'Protean' Manifestations of PF

10:00 Metabolomics- Taking the Fuel Out of the Fire

10:20 Radiomics - Looking Beyond the White and Gray

BEHAVIORAL • CLINICAL

SCIENTIFIC SYMPOSIUM

B12 ADVANCES IN MEDICAL EDUCATION AND THE ATS STEERING COMMITTEE ON ADVANCEMENT AND LEARNING (SCALE)'S YEAR-ROUND EDUCATIONAL STRATEGY

Steering Committee on Advancement and Learning

9:15 A.M. - 10:45 A.M.

Objectives

At the conclusion of this session, the participant will be able to:

- apply data from needs assessments to develop or refine educational strategies for their own ATS or institutional educational programs
- generate education strategies and projects within existing ATS committees, assemblies, and sections that can be incorporated into the new ATS year-round educational programming
- integrate the latest medical education research findings to enhance educational practices and outcomes

The Steering Committee on Advancement and Learning (SCALe) is a new ATS committee that plays a crucial role in fostering lifelong learning among pulmonary, critical care, and sleep medicine healthcare professionals and researchers. By delivering high-quality accredited and non-accredited educational programs, SCALe prioritizes the needs and values of each professional in our field and society. This session aims to:

9:15 **What is SCALe?**

9:35 **What We Learned from the Educational Needs Assessment**

9:55 **ATS Year-Round Educational Strategy**

10:15 **The Latest in Medical Education Research**

MEDICAL EDUCATION SEMINAR

ME102 DUAL DUTIES: HEALTHCARE PROVIDERS AS CAREGIVERS

Pre-registration and additional fee required. Attendance is limited.

Assembly on Behavioral Science and Health Services Research

10:45 AM – 11:45 AM

Objectives

At the conclusion of this session, the participant will be able to:

- Identify and articulate the unique challenges faced by individuals balancing full-time employment with caregiving responsibilities.
- learn effective strategies for managing time between work responsibilities and caregiving duties, and develop techniques to effectively communicate with employers, colleagues, and family members about caregiving responsibilities and work commitments.

identify workplace-based solutions that are both flexible and creative enough to mitigate the challenges of both caregiving and career advancement.

Monday Mid-Day, May 19

11:45 a.m. - 1:15 p.m.

ATS WOMEN'S FORUM

The annual ATS Women's Forum recognizes the achievements and supports the advancement of women in pulmonary, critical care, and sleep medicine and research. The forum provides a valuable opportunity for women to find value in the inspirational messages and career insights the speakers share.

ATS Thanks Johnson & Johnson, Sanofi | Regeneron, and Genentech USA for their generous support of the ATS 2025 Women's Forum

Pre-registration and an additional fee are required. $40 members/non-members

CLINICAL

ADULT CLINICAL CORE CURRICULUM

CC3 ADULT CRITICAL CARE CORE CURRICULUM

Education Committee

11:30 A.M. - 1:00 P.M.

Target Audience
Practicing physicians, trainees, students, Advanced Practice Providers

Objectives
At the conclusion of this session, the participant will be able to:

- Integrate new critical care guidelines in to clinical practice.
- Identify knowledge gaps in the treatment of patients with critical illness.
- Better counsel patients on treatment options available for critical illness.

The goal of the core is to support clinicians who are engaged in maintenance of certification activities by providing updates on subjects included in recertification requirements. The ATS Clinical Core Curriculum Symposia focus on key topics in the areas of Adult and Pediatric Pulmonary, Critical Care, and Sleep Medicine. The topics are aligned with corresponding MOC Medical Knowledge modules. This symposium is intended to help clinicians stay up to date with important information relevant to their medical practices, and to provide an opportunity for clinicians to evaluate their individual knowledge and skills while earning MOC Medical Knowledge points

11:30 **Life is a Highway: Advice on Seeking a Higher Level of Care**

11:55 **A Change Would Do You Good: LTAC Indications and Outcomes**

12:20 **We Are Family: Impact of Patient Transfers on Families**

12:00 **Capturing the Future: Modern Imaging Techniques**

12:20 **What's New in Diagnostic Flexible Bronchoscopy**

BASIC • TRANSLATIONAL

MID-DAY SYMPOSIUM

MD14 USING NASA SATELLITE DATA TO GUIDE NOVEL AIR QUALITY APPLICATIONS

National Aeronautics and Space Administration

12:00 P.M. - 1:00 P.M.

Target Audience
Physicians; nurses; allied health professionals; public health practitioners; community health educators; researchers who are interested in using Earth observation data for environmental and occupational health research applications

Objectives
At the conclusion of this session, the participant will be able to:

- present an overview of the NASA Health and Air Quality Program activities that showcase cross-cutting environmental health applications of interest to clinicians and researchers
- share information about current and future NASA projects and missions, including Early Adopter Programs, that investigate the exposures of harmful air pollutants on respiratory and cardiovascular health
- analyze at least three examples where NASA satellite data can help examine the global health risks of air pollution

Each day, Earth-observing satellite missions collect terabytes of spatial and temporal data related to environmental indicators of public health importance. This session will highlight how NASA satellite data can support novel applications guiding health and policy decision-making related to the changing Earth's systems. It will describe updates to current and upcoming NASA projects and missions, such as the NASA GEOS Model, Tropospheric Emissions: Monitoring Pollution (TEMPO), and Multi-Angle Imager for Aerosols (MAIA). Each incorporate valuable community stakeholder partnerships examining adverse health risks related to harmful air pollution exposure.

12:00 Using NASA Satellite Data to Examine Respiratory Health Risks: An Overview of NASA Health and Air Quality Applications

12:15 The NASA MAIA (Multi-Angle Imager for Aerosols) Mission

12:30 The NASA TEMPO Mission: Unprecedented Hourly Daytime Air Pollution Observations from Space for Enhanced Health and Air Quality Applications

12:45 Near Real Time Air Quality Forecasts using the NASA GEOS Model

BEHAVIORAL • CLINICAL

MID-DAY SYMPOSIUM

MD15 ATS SCHOLAR: PEER REVIEW 101 FOR THE CLINICIAN EDUCATOR

ATS Scholar

12:00 P.M. - 1:00 P.M.

Target Audience
Providers of lung health who are clinician educators at academic centers

Objectives
At the conclusion of this session, the participant will be able to:

- implement an appropriate framework for writing a peer review of a scientific manuscript
- critically assess the methods, results, and conclusions of scientific manuscripts, identifying strengths, weaknesses, and potential biases in order to provide constructive feedback to authors
- improve skills in writing clear, concise, and actionable peer review reports that help authors improve their manuscripts and contribute to the advancement of scientific knowledge

This session led by the editors of ATS Scholar will walk through the basics of peer review for clinician educators who may want to contribute to ATS journals peer review process but lack experience or want helpful tips on how to be an effective reviewer. The session will be interactive, walking through an example manuscript and decision, highlighting the important elements that an expert peer reviewer would consider and comment on when completing the review process.

12:00 Introduction to Peer Review for Clinician Educators

12:05 A Structured Approach to Reading and Reviewing a Paper

12:20 General Discussion

12:30 Practical Tips to Writing Peer Review Decisions

12:45 Editor's Perspective on Peer Review

12:55 General Discussion

BASIC • TRANSLATIONAL

MID-DAY SYMPOSIUM

MD16 RED JOURNAL IN ACTION 2: AIRWAYS MEET NEUROSCIENCE PERSPECTIVES

American Journal of Respiratory Cell and Molecular Biology

12:00 P.M. - 1:00 P.M.

Target Audience
Basic and translational researchers interested in neurobiology and neuroimmunology in airway disorders and cough; individuals interested in understanding objectives for Am J Respir Cell Mol Biol collections of themed perspectives and reviews.

Objectives
At the conclusion of this session, the participant will be able to:

- describe new discoveries about the diversity of airway nerve structure and function, and neural dysregulation in the manifestation of airway diseases and cough

- understand emerging technologies and research models to investigate the role of airway nerves in lung disease origins, pathogenesis and pathophysiology
- appreciate the objectives of Collections at Am J Respir Cell Mol Biol and understand opportunities to suggest and co-develop future compilations with journal editors

The session features experts of Perspectives articles in an Am J Respir Cell Mol Biol collection "Wired for Action: Airways Meet Neuroscience". The presentations highlight emerging understanding of airway nerve dysregulation and neuroimmune interactions in asthma and chronic cough. The session will also highlight the goals and opportunities future Collections in The Red Journal.

12:00 Introduction and Overview

12:05 Brainstem Dbh+ Neurons Control Chronic Allergen-Induced Airway Hyperreactivity

12:33 Airway Sensory Nerve Plasticity in Asthma and Chronic Cough

CLINICAL

MID-DAY SYMPOSIUM

MD17 PCORI-FUNDED PULMONARY & CRITICAL CARE TRIALS

Patient-Centered Outcomes Research Institute (PCORI)

12:00 P.M. - 1:00 P.M.

Target Audience
Clinicians and clinical researchers in pulmonary and critical care with an interest in clinical trials and patient-centered comparative clinical effectiveness research.

Objectives
At the conclusion of this session, the participant will be able to:

- better understand CER and how ongoing CER studies can help people make more informed healthcare decisions and improve healthcare delivery and outcomes
- better understand the importance and feasibility of patient engagement in pulmonary and critical care CER studies

This session will provide an overview of PCORI and its comparative clinical effectiveness research (CER) funding opportunities. Ongoing PCORI-funded pulmonary & critical care studies will be presented by investigators and patient partners, including discussion of how the studies are patient-centered and actively engage patients and other stakeholders.

12:00 Overview of PCORI

12:10 Overview of the RSI Study

12:20 Patient Engagement in the RSI Study

12:30 Overview of the EQuiP COPD Study

12:40 Patient Engagement in the EQuiP COPD Study

BEHAVIORAL • CLINICAL

MID-DAY SYMPOSIUM

MD18 IMPROVING COPD CARE QUALITY USING IMPLEMENTATION SCIENCE METHODS

Division of Lung Diseases, NHLBI, NIH

12:00 P.M. - 1:00 P.M.

Target Audience
Any clinician or researcher interested in improving COPD care quality using implementation science methods

Objectives
At the conclusion of this session, the participant will be able to:

- provide overview of goals of implementation science versus human centered design
- discuss how integrating implementation science and human centered design approaches can be synergistic
- outline challenges in conducting implementation science randomized trials

Improving the quality and value of care for patients with COPD is complex and, in many instances, knowledge of effective interventions is known, yet are not implemented in practice. In this session, four speakers at different stages of their careers will address projects that use implementation science to study how to improve care quality in COPD, including transition of care to reduce readmissions, multi-modal intervention for improving health outcomes in wildfires, COPD self-management and reducing polypharmacy and fall risk for multi-morbid adults with COPD.

12:00 Integrating Implementation Science and Human Centered Design Methods to Improve COPD Transitions of Care

12:10 Preventing Hospitalizations for COPD Exacerbations Due to Air Pollution

12:20 Optimizing COPD Self-Management Programs for Effectiveness and Implementation

12:30 **Reducing Polypharmacy and Fall Risk for Multi-Morbid Adults with COPD**

12:40 **Improving Access to Pulmonary Rehabilitation in Low-Resourced Health Care Settings**

TRANSLATIONAL

MID-DAY SYMPOSIUM

MD19 ONE BREATH, MANY SPECIES: TRANSLATIONAL APPLICATIONS OF LUNG DISEASES

ATS Members and CTSA One Health Alliance

12:00 P.M. - 1:00 P.M.

Target Audience
Clinicians/clinician-scientists treating pulmonary disorders, seeking to learn from other disciplines. Scientists interested in cross-species respiratory disease models. Clinicians and researchers interested in cross-species collaborations.

Objectives
At the conclusion of this session, the participant will be able to:

- improve awareness of large animal models (canine, feline, and equine) in pulmonary fibrosis, asthma, and exercise-disordered breathing useful in human pre-clinical trials
- understand respiratory dysbiosis associated with respiratory disease, particularly with respect to fibrosis and other remodeling changes and inflammation
- provide a platform for discussion allowing future interdisciplinary and cross-species collaboration for clinically important respiratory disorders

Despite many respiratory diseases benefitting from induced animal models, we explore spontaneous respiratory conditions in domestic animals. Given similarities to human physiology and immunology, domestic animals serve greater translatability as pre-clinical models. Pulmonary fibrosis manifests in multiple animals. Cats and horses develop allergic/eosinophilic and neutrophilic asthma, respectively. Complex genetics, shared environment, and airway dysbiosis increase their relevance for humans. Exercise-disordered breathing in horses could translate to dynamic airway changes in humans (exercise-induced laryngeal obstruction, dynamic airway collapse), under studied in humans.

12:00 **Session Chair Opening Statement**

12:02 **Fibrosis Across Species: Lessons Learned**

12:16 **Airway Remodeling and Structure-Function Relationship in an Equine Asthma Model**

12:30 **Exercise-Disordered Breathing in Equine and Human Athletes**

12:44 **The Respiratory Microbiome: Using Comparative Information from Animal Species**

BASIC • CLINICAL • TRANSLATIONAL

MID-DAY SYMPOSIUM

MD20 THE TRANSPIRE STUDY- LUNG INJURY WITH PEDIATRIC HEMATOPOEITIC STEM CELL TRANSPLANTATION

Division of Lung Diseases, NHLBI, NIH

12:00 P.M. - 1:00 P.M.

Target Audience
Pediatric and adult pulmonologists, fellows, residents and medical students, basic science researchers in lung injury

Objectives
At the conclusion of this session, the participant will be able to:

- understand current study findings of baseline lung function and potential impact post stem cell transplant
- understand different methods used as biomarkers for pulmonary disease post stem cell transplant
- a new understanding of imaging techniques to detect pulmonary complications post stem cell transplant

Hematopoietic stem cell transplantation (HSCT) poses a risk of short- and long-term toxicity. Pulmonary morbidity affects up to 25% of children receiving transplant. An NHLBI -supported R01-TRANSPIRE, is a large prospective uniformly screened cohort of children receiving HSCT to identify risk factors , mechanisms and optimal screening, diagnostic and therapeutic modalities. TRANSPIRE has enrolled over 400 allogeneic HSCT patients across 7 sites. In this session, clinical data, and preliminary results of longitudinal pulmonary function testing, oscillometry, Multiple Breath Washout/Lung Clearance and Hyperpolarized Xenon MRI will be presented, to educate the audience on pulmonary complications after pediatric HSCT.

12:00 **Lung Injury in a Longitudinal Cohort of Pediatric Hematopoietic Stem Cell Transplant Patients**

12:12 **TRANSPIRE- Baseline Pulmonary Findings Pre HSCT**

12:24 **TRANSPIRE -Oscillometry and MBW Longitudinal Findings**

12:36 **Potential Protein Biomarkers in HSCT Lung Injury -Updates from the TRANSPIRE Cohort**

12:48 **Xe MRI Imaging Findings in the TRANSPIRE Cohort**

BASIC • BEHAVIORAL • CLINICAL • TRANSLATIONAL

MID-DAY SYMPOSIUM

MD21 50 YEARS OF SUPPORTING LUNG RESEARCH: THE PARKER B. FRANCIS FELLOWSHIP

Francis Family Foundation/ATS

12:00 P.M. - 1:00 P.M.

Target Audience
Target audience includes any an all lung researchers, junior faculty and trainees.

Objectives
At the conclusion of this session, the participant will be able to:

- affirm the mission of the PBF "To exert a favorable and lasting influence on the field of pulmonary medicine by providing the means to support promising young physicians and scientists for a period of training in research"
- highlight the history and impact of the PBF Fellowship on advancing the understanding and treatment of lung diseases

In 2025, the Francis Family Foundation, via the Parker B. Francis Fellowship, will be celebrating its 50th year of supporting the development of junior faculty in lung research. These three-year mentored junior faculty awards have launched the careers of nearly 1,000 researchers in nearly every area of lung disease and lung biology. This session will highlight the impact the PBF Fellowship has had on lung research over the last 50 years and serve as a Q&A for those interested in applying.

12:00 **History of the PBF**

12:12 **Impact of the PBF Fellowship**

12:24 **Impact of the PBF Fellowship**

12:36 **Impact of the PBF Fellowship**

BASIC • CLINICAL • TRANSLATIONAL

MID-DAY SYMPOSIUM

MD22 EVALUATING INTERSTITIAL LUNG ABNORMALITIES AS EARLY RISK FACTORS FOR PULMONARY FIBROSIS

Division of Lung Diseases, NHLBI, NIH

12:00 P.M. - 1:00 P.M.

Target Audience
Fellow/Junior / Established Professional

Objectives
At the conclusion of this session, the participant will be able to:

- understand new technologies (transcriptomics and metagenomic analyses, lung function and imaging analyses) and evaluation of environmental risk factors to investigate pathogenic mechanisms and prediction of pulmonary fibrosis and genetic disorders
- understand the pathogenesis, genetic, and environmental risk factor of pulmonary fibrosis
- Clinical Phenotyping of Pulmonary fibrosis to understand, diagnose, predict and improve outcomes

Interstitial lung abnormalities (ILA) are incidental findings of computed tomography (CT) abnormalities with potential to reveal interstitial lung disease (ILD) in undiagnosed patients, to inform about subclinical pulmonary fibrosis (PF), and to anticipate disease progression. NHLBI-funded projects focused on cohort data to study the risk factors, the etiology, natural history, and phenotypic heterogeneity of ILA will be presented. Participants will discuss opportunities to prognosticate PF and to intervene during early, pre-symptomatic PF. The scientific information of this session will create awareness and interest in ILA as well as about their unique and overlapping features with PF.

12:00 **Development and Progression of ILA in Persons At-Risk for Familial Pulmonary Fibrosis**

12:12 **ILA in First-Degree Relatives**

12:24 **Early Lung Fibrosis: an Opportunity to Intervene**

12:36 **ILAs Are Common Among Older Adults**

12:48 **Discussion**

TRANSLATIONAL

MID-DAY SYMPOSIUM

MD23 NEW INSIGHTS INTO THE PATHOPHYSIOLOGY OF SEVERE ASTHMA

NIAID

12:00 P.M. - 1:00 P.M.

Target Audience
Clinicians, basic & clinical researchers

Objectives
At the conclusion of this session, the participant will be able to:

- describe 2 cell death and survival pathways impacting epithelial cell differentiation and function, & discuss how compartmentalized ferroptosis and its mitophagic response could lead to approaches to normalizing diseased epithelium in asthma
- describe innate immune responses to respiratory viral infection by bronchial epithelium , & how variability in inflammatory responses relates to asthma severity, exacerbations, clinical phenotypes, and type -2 (T2) & non-T2 endotypes
- review current data on the regulation of airway inflammation by incretin signaling pathways including the GLP-1 receptor, & discuss potential clinical implications of incretin mimetic therapeutics for the management of obesity-related asthma

This session will highlight emerging data generated by NIAID-funded investigators describing novel pathophysiologic mechanisms underlying asthma severity.

12:00 Metabolic and Mitochondrial Changes Drive Airway Epithelial Remodeling

12:20 Enhanced Inflammation and Viral Replication in Epithelium from Children with Severe Asthma Exacerbation

12:40 Targeting Incretin Pathways to Attenuate Obesity-Related Asthma

BASIC • CLINICAL • TRANSLATIONAL

MID-DAY SYMPOSIUM

MD24 GENERIC DRUG DEVELOPMENT FOR RESPIRATORY PRODUCTS, US FOOD AND DRUG ADMINISTRATION UPDATE

USDA

12:00 P.M. - 1:00 P.M.

Target Audience
clinicians in practice, researchers, pharmaceutical industry representatives, international drug regulators

Objectives
At the conclusion of this session, the participant will be able to:

- recognize key aspects of the generic drug regulatory approval process, and how the Office of Generic Drugs (OGD) evaluates comparative clinical information to support bioequivalence for complex inhaled generic drug products
- describe product-specific guidances for generic drug products recently posted by the Office of Generic Drugs (OGD), with a focus on how these can inform complex orally inhaled and nasal generic drug development
- articulate how emerging technologies and innovative approaches are being utilized for FDA-funded research, FDA guidance development, and regulatory decision-making

session will describe respiratory product development of generic drugs within the US, focusing on paths forward to bring safe and effective generic respiratory products to the American public. A general overview will summarize the generic drug approval process, including demonstration of bioequivalence and therapeutic equivalence utilizing comparative clinical information. Discussion of recent generic product approvals and posted regulatory guidance will provide the audience a greater understanding of the generic approval process, and how the use of emerging technologies and outcomes of research projects contribute to scientific understanding for these complex orally inhaled and nasal drug products to inform regulatory actions.

12:00 Introduction

12:03 Update for Generic Orally Inhaled and Nasal Drug Products

12:20 Emerging Concepts and New Technologies for Bioequivalence of Orally Inhaled and Nasal Drug Products

12:37 Comparative Clinical Considerations in the Determination of Sameness

CLINICAL • TRANSLATIONAL

MID-DAY SYMPOSIUM

MD25 INSIGHTS FROM THE SUBPOPULATIONS AND INTERMEDIATE OUTCOMES IN COPD STUDY (SPIROMICS) FAMILY OF STUDIES: EARLY DATA AND FUTURE PLANS

Division of Lung Diseases, NHLBI, NIH

12:00 P.M. - 1:00 P.M.

Target Audience
Researchers, medical trainees, those interested in origins and subtypes of COPD

Objectives
At the conclusion of this session, the participant will be able to:

- understand “pre-COPD” as well as plans to investigate early COPD
- understand associations between COPD and cardiovascular phenotypes
- understanding how epigenetics are related to COPD phenotypes

The SubPopulations and InteRmediate Outcomes In COPD Study (SPIROMICS) is a clinical observational study intended to identify different subpopulations of individuals with COPD and ultimately define endotypes within this heterogeneous disease that are responsive to mechanism-specific interventions. SPIROMICS has launched and been included in a family of studies, including SOURCE, a cohort designed to investigate the origins of COPD and SPIROMICS Heart Failure, which collects cardiovascular measures in a subset of the SPIROMICS cohort. During this session, investigators will discuss plans for continuing the cohort, recent results from SPIROMICS as well the progress of other studies in the SPIROMICS family.

12:00 “One Plus Two Equals Three”: Design and Timeline for SPIROMICS III

12:15 Early Results from SOURCE, a Study of the Origins of Early COPD

12:30 Cardiac Changes in Symptomatic Tobacco-Exposed Persons with Preserved Spirometry

12:45 Insights from Epigenetic Studies in SPIROMICS

BEHAVIORAL • CLINICAL • TRANSLATIONAL

MID-DAY SYMPOSIUM

MD26 TUBERCULOSIS (TB) SCIENTIFIC AND PROGRAMMATIC UPDATES FROM THE CENTERS FOR DISEASE CONTROL AND PREVENTION

Centers for Disease Control and Prevention

12:00 P.M. - 1:00 P.M.

Target Audience
Clinicians and researchers interested in tuberculosis.

Objectives
At the conclusion of this session, the participant will be able to:

- describe the epidemiology of TB in the rural United States
- learn about current landscape of clinical trials in drug-susceptible TB
- understand perceptions of TB among adults and at risk populations in the United States

This session will fill knowledge gaps about tuberculosis (TB) epidemiology in the United States, new treatment regimens on the horizon, and attitudes and perceptions of persons in the United States at risk for TB. One talk will focus on translating information about TB treatment regimens to practice. Information covered in the talks will help providers understand potentially new shorter course TB treatment regimens in current CDC sponsored clinical trials, recognize unique considerations for TB transmission in rural areas of the United States, and engage with persons and patients who may be at increased risk for TB.

12:00 Introduction

12:05 Recent Transmission of TB in Rural Areas of the United States, 2011-2021

12:15 Perceptions and Attitudes About TB Among U.S. Adults: Findings from National Surveys

12:25 Practical Considerations for Implementing Novel TB Regimens in the United States

12:35 Adaptive Design of the CDC-Sponsored Trial S38/CRUSH-TB: A Study of Two Investigational Four-Month Regimens For Drug-Susceptible Tuberculosis (TB)

CLINICAL • TRANSLATIONAL

MID-DAY SYMPOSIUM

MD27 UNDERSTANDING DISPARITIES IN CHILDHOOD ASTHMA USING NIH ENVIRONMENTAL INFLUENCES ON CHILD HEALTH OUTCOMES (ECHO) PROGRAM DATA: MULTICENTER APPROACHES

National Institutes of Health, Environmental influences on Child Health Outcomes

12:00 P.M. - 1:00 P.M.

Target Audience
Attendees interested in pediatric asthma research; health equity research and airways research leveraging the NIH Environmental influences on Child Health Outcomes (ECHO) Program.

Objectives
At the conclusion of this session, the participant will be able to:

- describe how geospatial sciences can be applied to understand root causes of asthma disparities
- incorporate new ATS guidelines on race-based lung function measurements into clinical practice
- be able to describe links between socioeconomic factors, early life wheezing episodes, and neurocognitive development

There are marked disparities in the incidence and disease activity of childhood asthma. Multicenter research efforts are helpful to address these disparities, their causes and their consequences. The information in the proposed session will identify associations between race, social context and the diagnosis and course of childhood asthma. These studies will help with interpretation of lung function test with respect to asthma and identify targets to improve neighborhood factors related to asthma.

12:00 **Social Determinants of Early Life Wheeze and Neurocognitive Outcomes in Children**

12:15 **Using Geospatial Science to Understand Childhood Asthma Disparities**

12:30 **Self-Reported Race Influences Associations Between Spirometry and Childhood Asthma Risk**

12:45 **Panel Discussion**

BASIC • CLINICAL • TRANSLATIONAL

MID-DAY SYMPOSIUM

MD28 HOW DO SHORT-LIVED LUNG INFECTIONS LEAD TO LONG-LASTING LUNG DAMAGE AND CHRONIC DISEASES?

ATS Vaccine Initiative Advisory Panel

12:00 P.M. - 1:00 P.M.

Target Audience
Translational scientists interested in the long term impact of viral respiratory infections and providers of lung health.

Objectives
At the conclusion of this session, the participant will be able to:

- review mechanisms of respiratory virus infection as a cause of chronic respiratory disease
- review the literature to identify knowledge gaps on the role of respiratory infection prevention to impact lung health
- review the clinical impact of respiratory virus infection on lung function and other respiratory health indicators

The goal of this session is to describe the potential long-term consequences of short-lived viral lung infections, including respiratory syncytial virus, influenza, and SARS-CoV-2 infections. We will review the literature to identify respiratory viruses associated with chronic lung disease, we will discuss the underlying mechanisms implicated in these illnesses, and we will discuss the clinical implications of prevention on lung health. Experts from multiple disciplines, including basic science, prevention, public health, and clinical pulmonology will be involved as moderators and speakers. The talks will engage basic scientists, clinicians, and prevention researchers on the role of short-lived infection on long-term respiratory health.

12:00 **The Mechanisms of Acute Respiratory Infection Morbidity in Infants: Implications for Long-Term Lung Health**

12:15 **What We Do and Don't Yet Know About the Potential of Vaccines to Prevent Long-Term Respiratory Morbidity**

12:30 **Early Life Lower Respiratory Tract Infection - Impact for Long Term Health**

12:45 **Discussion**

BASIC • BEHAVIORAL • CLINICAL • TRANSLATIONAL

MID-DAY SYMPOSIUM

MD29 USE OF ARTIFICIAL INTELLIGENGE IN VHA'S LPOP IMPROVES SCREENING EFFICIENCY

Office of Research and Development, Department of Veterans Affairs

12:00 P.M. - 1:00 P.M.

Target Audience
Those interested in lung cancer care and lung cancer screening; those with clinical, research, or administrative responsibilities within the VA; those interested in learning more about clinical applications of artificial intelligence.

Objectives
At the conclusion of this session, the participant will be able to:

- manage and run lung cancer screening programs with a sense of the importance of beginning to incorporate the tools of artificial intelligence
- establish screening for those who have the greatest risk and avoid over-screening those with lower risk and to incorporate Sybil into accomplishing this process
- put a special emphasis on detecting ILA's and full-blown interstitial lung diseases in our screening LDCT scans

In 11/2020 VHA embarked on LPOP to improve lung cancer care among Veterans. One goal was increased access to early detection through screening. The program has grown. There are now 118 VA facilities across the country with screening programs within LPOP. This growth has led to a focus on inefficiencies in screening and a realization about the importance of improving them. A VA Hub called CoMPL (Computer Vision and Machine Learning in Precision Oncology) has made the use of artificial intelligence (AI) available to LPOP investigators. This session will describe how AI is being used to improve screening in LPOP.

12:00 Using Artificial Intelligence and Radiomics for Risk Stratification in LPOP Screening

12:15 Timely Detection of Pulmonary Fibrosis: AI for Surveillance and Care Pathway Optimization

12:30 AI for Personalized Cancer Screening

12:45 Radiomics and Pathomics for Diagnosis, Prognosis and Predicting Treatment Response of Lung Pathologies

BASIC

MID-DAY SYMPOSIUM

MD30 MICRO AND NANOPLASTICS HEALTH EFFECTS: WHAT WE KNOW OR DON'T

National Institute of Environmental Health Sciences

12:00 P.M. - 1:00 P.M.

Target Audience
Basic scientists, trainees and physicians

Objectives
At the conclusion of this session, the participant will be able to:

- understand the concerns around the presence of micro/nanoplastic particles in the tissues including lungs and their potential impacts on exacerbation of pulmonary morbidity
- develop a comprehensive understanding on the physical and chemical properties of diverse micro/nanoplastics and how these properties may play a role in perturbing biological outcomes

An estimated 40 million metric tons of plastic waste is generated annually in the US, and about 70% of this ends up in landfills and the environment. Photooxidative, thermal, mechanical, and fragmentation of plastic waste generates plastic particles in the micro and nanometer ranges, termed micro/nanoplastics, or MNPs. MNPs enter the body through the food chain (by direct ingestion or trophic transfer) as well as through the air we breathe and are found in all human tissues. This session will provide an overview of US Federal government agencies efforts to address this emergent public health issue as well as research supported by NIEHS to understand potential health effects of micro and nanoplastics.

12:00 Introduction

12:05 Inter-Agency Collaborations to Address Knowledge Gaps for Micro and Nanoplastics

12:22 Synthesis and Toxicological Impact of Environmentally Relevant Micro- and Nanoplastics

12:39 Harnessing PET Imaging to Track the Pulmonary Clearance of Micro- and Nanoplastics in Mice

12:56 Moderated Discussion

CLINICAL

PEDIATRIC CLINICAL CORE CURRICULUM

PCC2 PEDIATRIC CLINICAL CORE CURRICULUM

Education Committee

12:00 P.M. - 1:00 P.M.

Target Audience
Clinicians, trainees, students, advanced practice providers

Objectives
At the conclusion of this session, the participant will be able to:

- Integrate new pediatric pulmonary and critical care guidelines into clinical practice.
- Identify knowledge gaps in the treatment of pediatric patients with pulmonary disease and critical illness.
- Better counsel pediatric patients and families on treatment options available for management of pulmonary diseases and critical illness.

The goal of the core is to support clinicians who are engaged in maintenance of certification activities by providing updates on subjects included in recertification requirements. The ATS Clinical Core Curriculum Symposia focus on key topics in the areas of Adult and Pediatric Pulmonary, Critical Care, and Sleep Medicine. The topics are aligned with corresponding MOC Medical Knowledge modules. This symposium is intended to help clinicians stay up to date with important information relevant to their medical practices, and to provide an opportunity for clinicians to evaluate their individual knowledge and skills while earning MOC Medical Knowledge points

Monday Afternoon, May 19

CLINICAL

ADULT CLINICAL CORE CURRICULUM

CC4 ADULT PULMONARY CLINICAL CORE CURRICULUM

Education Committee

2:15 P.M. - 3:45 P.M.

Target Audience
Physicians practicing Pulmonary Medicine, trainees, APPs

Objectives
At the conclusion of this session, the participant will be able to:

- Apply current guidelines to effectively screen for lung cancer.
- Identify knowledge gaps in the approach to diagnosis, staging, and treatment suspected lung cancer.
- Describe the current practice for the identification and management of malignant pleural effusions.

The goal of the core is to support clinicians who are engaged in maintenance of certification activities by providing updates on subjects included in recertification requirements. The ATS Clinical Core Curriculum Symposia focus on key topics in the areas of Adult and Pediatric Pulmonary, Critical Care, and Sleep Medicine. The topics are aligned with corresponding MOC Medical Knowledge modules. This symposium is intended to help clinicians stay up to date with important information relevant to their medical practices, and to provide an opportunity for clinicians to evaluate their individual knowledge and skills while earning MOC Medical Knowledge points.

2:15 **Cuts Like a Knife: Determining Candidacy for Lung Cancer Resection**

2:40 **Let's Get Personal: What the General Pulmonologist Needs to Know about Molecular Targets in Lung Cancer**

3:05 **Like a Surgeon: Pleural Procedures for Diagnosis and Management of Malignant Pleural Disease**

3:30 **Panel Discussion**

BEHAVIORAL • CLINICAL • TRANSLATIONAL

CLINICAL TOPICS IN PULMONARY MEDICINE

B81 NURSING YEAR IN REVIEW- THE COMPLEXITY OF SURVIVING ICU EXPERIENCE: PATIENTS, CAREGIVERS, AND COMMUNITY MEMBERS

Assembly on Nursing

2:15 P.M. - 3:45 P.M.

Target Audience
Researchers, Nurses, Physicians, Allied health professionals, Junior physicians, Patients & family members

Objectives
At the conclusion of this session, the participant will be able to:

- identify system-related barriers contributing to poor post-ICU symptoms experienced by ICU survivors
- identify factors leading to suboptimal psychological distress outcomes experienced by bereaved or post-ICU family members
- describe the available resources in the community that support ICU survivors and family members

This Nursing Year In Review Session will provide a forum to disseminate and discuss the complex dynamics and consequences of surviving ICU experiences from patients, caregivers, and post-ICU community providers. Descriptions of Post-ICU symptoms by patients (PICS) and family members (PICS-F) will be summarized along with current practice guidelines for Post-ICU care available within the community to support patients and their families. We will summarize the evidence-based strategies for the successful implementation of Post-ICU Community Support to improve PICS and PICS-F and health-related quality of life.

2:15 **Introduction to Session**

2:18 **Introduction to session**

2:20 **Current State of ICU Care and Post-ICU Care**

2:40 **Post-ICU Symptoms: Patients Who Braved the Storm**

3:00 **I-See-You: Symptoms in Bereaved Survivors Who Lost a Loved One in the ICU**

3:20 **Strategies for Successful Implementation of Post-ICU Community Support**

3:40 **Summary of the Session**

CLINICAL

CRITICAL CARE TRACK

B82 MECHANICAL VENTILATION OF THE FUTURE: NEW FOUNDATIONS FOR VENTILATOR STRATEGIES

Assembly on Critical Care

2:15 P.M. - 3:45 P.M.

Target Audience
Practicing clinicians in critical care, clinical researchers

Objectives
At the conclusion of this session, the participant will be able to:

- understand new parameters that can guide ventilator management, including driving pressure and measures of patient effort
- discuss new strategies that may define future ventilator management
- specify key features of future clinical trials to help address the remaining gaps in knowledge

Prior advances in mechanical ventilation have been limited to improving supportive care practices, preventing intubation with noninvasive strategies, and avoiding excessive tidal volumes. This symposium will provide a framework to reimagine the future of mechanical ventilation in which ventilator strategies are guided by optimizing driving pressure, patient effort, diaphragm protection, and dyssynchrony in all types of respiratory failure.

2:15 **We Should Worry About Patient Self-Inflicted Lung Injury (P-SILI) in Non-Intubated Patients**

2:28 **We Should Titrate to Driving Pressure**

2:41 **We Should Assess Patient Effort**

2:54 **We Should Protect the Diaphragm to Protect the Lung**

3:07 **We Should Study Ventilator Strategies in Patients Without ARDS**

3:20 **We Should Address Patient-Ventilator Dyssynchrony**

CLINICAL • TRANSLATIONAL

CLINICAL TOPICS IN PULMONARY MEDICINE

B83 PROGRESSIVE PULMONARY FIBROSIS: FIVE YEARS LATER

Assembly on Clinical Problems

2:15 P.M. - 3:45 P.M.

Target Audience
Clinicians, investigators and trainees involved in interstitial lung disease clinical care and research.

Objectives
At the conclusion of this session, the participant will be able to:

- better diagnose PPF
- describe new findings about PPF, including new imaging and molecular biomarkers
- integrate/incorporate new guidelines into current practice

This proposal aims to contextualize the evolution of PPF paradigm starting with the 2019 publication of the INBUILD trial and then discuss current clinical measures of PPF, recently identified limitations of PPF criteria, emerging biomarkers of PPF and critical gaps in knowledge in PPF.

2:15 **The Road from PF-ILD to PPF: How Did We Get Here?**

2:25 **The Chosen One(s): What Constitutes a Good Measure of PPF?**

2:45 **Nuance or Nuissance: Does ILD Etiology Matter in PPF?**

3:05 **Biomarkers of PPF: Where Are We Today?**

3:25 **PPF: The Next Five Years**

CLINICAL

CLINICAL TOPICS IN PULMONARY MEDICINE

B84 DIAGNOSIS OF COPD: A PRO CON DEBATE

Assembly on Clinical Problems

2:15 P.M. - 3:45 P.M.

Target Audience
Physicians, nurse practitioners, physician assistants, respiratory therapists, researchers

Objectives
At the conclusion of this session, the participant will be able to:

- learn about the impact of using the lower limit of normal versus the fixed 0.70 cutoff for FEV1/FVC, their strengths and limitations, and practical considerations for clinical practice
- appreciate the implications of restricting diagnosis of COPD to spirometric impairment versus expanding diagnosis beyond spirometry to include imaging and symptoms
- gain new knowledge of the definition of Pre-COPD, and its pros and cons

The diagnosis and detection of COPD is the first step in the management of this common disease. There have been a number of recommendations for diagnosis from multiple respiratory societies that are divergent and have created confusion in the field. In this session, key questions about whether to use the fixed FEV1/FVC ratio of 0.70 or the population-based lower limit of normal, whether the diagnosis should extend beyond spirometry, and whether earlier diagnosis should incorporate the concept of pre-COPD, will be debated using the most recent evidence.

2:15 **Pro: COPD Should Be Diagnosed Using the Lower Limit of Normal for Airflow Obstruction**

2:29 **Con: COPD Should Be Diagnosed Using the Fixed FEV1/FVC Ratio for Airflow Obstruction**

2:48 **Pro: COPD Should Be Diagnosed on the Basis of Spirometric Airflow Obstruction**

3:00 **Con: The Diagnosis of COPD Should Extend Beyond Spirometric Airflow Obstruction**

3:17 **Pro: Pre-COPD Is Real and Will Impact Clinical Practice**

3:29 **Con: Pre-COPD Is A Premature Concept**

BASIC • CLINICAL • TRANSLATIONAL

SCIENTIFIC SYMPOSIUM

B85 OBSTRUCTIVE AIRWAY AND LUNG DISEASE BEGINS IN THE WOMB

Assemblies on Respiratory Structure and Function

2:15 P.M. - 3:45 P.M.

Target Audience
Pulmonary clinician scientists, population health scientists, environmental epidemiologists, basic and translational scientists.

Objectives
At the conclusion of this session, the participant will be able to:

- increase awareness of the various prenatal influences that are associated with reduced lung function and increased risk of asthma and COPD in later life
- gain perspective of altered lung function trajectories demonstrating obstructive disease having a developmental origin
- learn new findings about the structure, function and inflammation alterations in offspring exposed to prenatal insults

Trajectories of airway remodelling and functional impairment in asthma are consistent with the notion that airway pathology precedes or coincides with the onset of asthma and COPD symptoms and may be present at birth. This symposium focuses on epidemiology, physiology, cellular, and molecular evidence that supports airway and lung pathophysiology as a consequence of a developmental origin that increases susceptibility to asthma and COPD.

2:15 **Evidence on the Early Origins of Obstructive Lung Disease**

2:30 **Intrauterine Growth Restriction on Respiratory Structure-Function**

2:45 **Maternal Allergen Sensitization Exacerbates Offspring Airway Function through Fetal Programming**

3:00 **The Impact of Early-Life Infections and Allergen Exposures on Airway Dysbiosis, Immunity and Adverse Outcomes**

3:15 **The Maternal Exposome and Child Risks for Chronic Lung Disease**

3:30 **Maternal Diabetes as an Early Life Risk Factor for Obstructive Lung Disease**

CLINICAL • TRANSLATIONAL

SCIENTIFIC SYMPOSIUM

B86 PULMONARY HYPERTENSION: UNRAVELING CELLULAR PHENOTYPE SHIFTS ACROSS THE TIMELINE OF DISEASE PROGRESSION

Assemblies on Pulmonary Circulation, Respiratory Cell and Molecular Biology

2:15 P.M. - 3:45 P.M.

Target Audience
basic scientists, clinical specialists, graduate students, postdocs, trainees, interns, junior faculty, and established faculty

Objectives
At the conclusion of this session, the participant will be able to:

- understand temporal phenotype shifts in PH: Explore cellular processes in endothelial, smooth muscle and pericytes. Investigate molecular changes in vascular remodeling and disease severity implications
- explore Emerging Therapeutic Strategies: Discuss recent advancements in therapeutic approaches targeting specific cellular pathways implicated in pulmonary hypertension
- foster collaboration: Facilitate interdisciplinary discussions between basic scientists and clinicians to enhance understanding of cellular dynamics in PH. Identify opportunities for developing personalized therapies

Pulmonary hypertension (PH) is a complex and multifactorial disease characterized by increased blood pressure in the pulmonary arteries, leading to right heart failure and death if untreated. The cellular mechanisms underlying PH involve significant phenotypic changes and plasticity among various cell types, including endothelial cells, smooth muscle cells, pericytes and fibroblasts. The factors leading to a cellular phenotype shift is still very obscure. This Session aims to bring together leading researchers and clinicians to discuss the latest advancements in understanding cell plasticity, de-differentiation, and phenotypic shifts in the context of PH. The ultimate goal is to foster collaboration and spark innovative approaches for therapeutic intervention.

2:15 **Epigenetic Shapeshifters: How Genes Dance to the Tune of Pulmonary Hypertension**

2:30 **Vascular Dialogues: Endothelial-Pericyte Interactions in the Pathogenesis of PAH**

2:45 **Capillary Chameleons: Exploring Phenotypic Shifts in Capillary Endothelial Cells in Pulmonary Arterial Hypertension**

3:00 **Signaling Symphony: Extracellular Vesicles and the Molecular Ballet of Pulmonary Hypertension**

3:15 **Temporal Trajectories: Tracking Endothelial Cell Plasticity Across the Course of Pulmonary Hypertension**

3:30 **A Gut Feeling: The Role of the Microbiome in Pulmonary Arterial Hypertension Pathogenesis**

CLINICAL • TRANSLATIONAL

SCIENTIFIC SYMPOSIUM

B87 HOT TOPICS IN CHILDHOOD ASTHMA: RISK FACTORS, MANAGEMENT, AND REMISSION

Assemblies on Pediatrics, Allergy, Immunology and Inflammation, Clinical Problems

2:15 P.M. - 3:45 P.M.

Target Audience
This session will appeal to pediatric pulmonologists, pediatric allergists, physicians-in-training, advanced practice providers, nurses, and respiratory therapists who care for children with asthma, as well as researchers in this field.

Objectives
At the conclusion of this session, the participant will be able to:

- describe the role of inhaled corticosteroids combined with short- or long-acting bronchodilators in the management of asthma in children
- discuss the pathophysiology and treatment strategies for children with type-2 low asthma phenotypes
- understand how to incorporate biologic therapy into the care of children with severe asthma and provide appropriate counseling on disease remission for severe childhood asthma

Asthma is the most common chronic lung disease in childhood. This condition contributes to significant morbidity and mortality in the pediatric population. Guided by a panel of recognized experts, we will examine current controversies in the field of childhood asthma, including the impact of RSV in the onset of this disease, the use of ICS/SABA vs. ICS/LABA as treatment strategies, and alternatives to manage type-2 low asthma phenotypes. Furthermore, we will discuss the discontinuation of controller therapies after initiation of a biologic and the possibility of achieving disease remission using biologics in children with severe asthma.

2:15 **Initial Remarks**

2:20 **RSV Infection in Infancy and Asthma in Childhood: Is the Association Causal?**

2:37 **When Albuterol Isn't Good Enough Anymore: ICS/SABA vs. ICS/LABA for the Management of Childhood Asthma**

2:54 **Treatment Strategies for Type-2 Low Asthma Phenotypes in Children**

3:11 **I Started a Biologic - Now Can I stop Everything Else?**

3:28 **Remission of Severe Childhood Asthma: Can It Be Achieved?**

BASIC • CLINICAL • TRANSLATIONAL

SCIENTIFIC SYMPOSIUM

B88 NOVEL MANAGEMENT STRATEGIES IN BRONCHIECTASIS

Assemblies on Pulmonary Infections and Tuberculosis, Clinical Problems

2:15 P.M. - 3:45 P.M.

Target Audience
Pulmonary attendings, fellows, nurse practitioners and physician assistants, medicine attendings and residens, respiratory therapists, nurses

Objectives
At the conclusion of this session, the participant will be able to:

- describe new concepts in the management of bronchiectasis, including inflammation, exacerbations, endotyping, and the microbiome
- apply a comprehensive update in the management of bronchiectasis for 2025
- describe new findings from clinical trials and bronchiectasis registry databases that have recently been published

This interactive session will highlight new concepts in the management of bronchiectasis. The session will include an up to date summary of the management of bronchiectasis in 2025. This will also highlight the different clinical phenotype in the public hospital sector, and need to study this population further.

Inflammation in bronchiectasis, novel concepts including endotypes and phenotypes, and the microbiome will be discussed. Finally, an update on recent and upcoming clinical trials in bronchiectasis will be presented.

2:15 Bronchiectasis Management in 2025

2:30 Inflammation and Exacerbations in Bronchiectasis

2:45 Endotypes and Phenotypes

3:00 Microbiome in Bronchiectasis

3:15 Clinical Trials Update

BEHAVIORAL • CLINICAL • TRANSLATIONAL

SCIENTIFIC SYMPOSIUM

B89 THERAPEUTIC INNOVATIONS FOR WEIGHT MANAGEMENT IN OSA: FROM METABOLIC MODULATION TO WEIGHT LOSS

Assembly on Sleep and Respiratory Neurobiology

2:15 P.M. - 3:45 P.M.

Target Audience
Pulmonary and Sleep Medicine Health Care providers
Pulmonary and Sleep Medicine Trainees/fellows Researchers interested in the interactions between Sleep Apnea and Obesity
Members of the Sleep and Clinical Problems and BSHSR Assemblies

Objectives
At the conclusion of this session, the participant will be able to:

- describe the complex interplay between obesity and body fat distribution patterns in OSA, as well as the sex and age-dependent impact of obesity on OSA pathogenesis
- understand the role of emerging obesity pharmacotherapies and recent trial results, as well as anatomic and metabolic changes induced by GLP-1 drugs and SGLT-2 inhibitors in the management of obesity in OSA
- improve healthcare delivery in patients with OSA and comorbid obesity with a better understanding of obesity management using emerging weight loss pharmacotherapy

The relationship between obesity and OSA is well-established, with obesity driving much of its pathogenesis and exacerbating cardiometabolic comorbidities in OSA. Yet, many sleep providers lack confidence in effectively tackling obesity among OSA patients. Advances in weight-loss medications such as GLP-1 drugs and SGLT-2 inhibitors offer promising avenues for addressing this challenge. Our session will delve into the latest research on pharmacotherapeutics for metabolic modulation and obesity management in OSA, reviewing the breadth of physiology linking these two conditions. Join us to explore how these novel therapeutics could revolutionize obesity management in OSA, offering insights into implications for patient care.

2:15 OSA, Obesity, and Body Fat Distribution: A Role for Emerging Pharmacotherapies

2:25 Highlights from the Surmount OSA Trial

2:40 Pharyngeal Changes Associated with Weight Loss from GLP-1 Agonists

2:55 Treating Sleep Apnea with Metabolic Modulation Using Sodium Glucose 2 Transport Inhibitors

3:10 How Does Obesity Contribute to OSA Pathogenesis? Age and Sex-Specific Considerations

3:25 Should Obesity Be Considered a Chronic Disease with Life-Long Pharmacotherapy?

BASIC • CLINICAL • TRANSLATIONAL

SCIENTIFIC SYMPOSIUM

B90 UNSEEN YET CRITICAL: SMALL AIRWAYS IN CHRONIC AIRWAY DISEASES

Assemblies on Respiratory Cell and Molecular Biology, Allergy, Immunology and Inflammation, Clinical Problems, Respiratory Structure and Function

2:15 P.M. - 3:45 P.M.

Target Audience
Basic and translational scientists and clinicians

Objectives
At the conclusion of this session, the participant will be able to:

- provide an update on recent research emphasizing the growing importance of small airwaydiseases in patients with asthma and chronic obstructive pulmonary disease (COPD)
- understand how small airways have been assessed in clinical studies and how their changesrelate to patients' outcomes
- understand what are the newest strategies to target small airways in chronic airway diseases

The small airway wall structure can be altered very early in life, and can indeed precede airway wall inflammation and thus may present as a primary event in asthmatic lungs. Understanding how early life, or even prenatal, risk factor exposures may be mechanistically linked to small airway structural and functional changes later in life will be both highly interesting from a scientific perspective as well as highly important for understanding how bronchial asthma evolves into fixed airflow limitation and early COPD.

2:15 Small Airways and Origins of Airway Disease: Pathobiological Considerations

2:30 Repatterning of the Small Airways: A New Pathological Feature of Airways Diseases?

2:45 Single Cell Atlas of the Small Airways in the Obstructed Patient: What Have We Learned So Far

3:00 Small Airway Microbiome: Association with Airway Disease Progression

3:15 Small Airways and Mucus Plugging: A New Biomarker of Airway Disease?

3:30 Small Airway Across the Lifespan: How Asthma Morphes into COPD

BEHAVIORAL • CLINICAL

PUBLIC ADVISORY ROUNDTABLE SYMPOSIUM

B91 BREATH OF COLLABORATION: ACCELERATING DIVERSE PATIENT ACCRUAL IN RESPIRATORY TRIALS

ATS Public Advisory Roundtable

2:15 P.M. - 3:45 P.M.

Target Audience
Individuals involved in clinical, translational, and basic science research trials. All who are involved in patient recruitment and interested in increasing the success of the accrual of members from underrepresented communities in clinical trials.

Objectives
At the conclusion of this session, the participant will be able to:

- understand best practices for recruiting diverse populations in pulmonary and critical care clinical trials
- identify ways organizations can collaborate to improve representation and engagement with underrepresented communities in clinical research
- discuss and define metrics for measuring success in achieving greater diversity in clinical trials

This session will focus on the efforts of funding organizations and industry to increase diverse participation in clinical trials. It will discuss ways that collaboration can overcome the challenges of low enrollment and bring to light effective initiatives to increase the involvement of diverse populations and reduce barriers to participation. This symposium aims to explore ways these groups can leverage their collective resources, expertise, and influence and explore a collaborative approach that can lead to more efficient resource use, broader reach, and, ultimately, more representative and impactful clinical research.

2:15 Welcome Remarks

2:20 PAR Award Presentations

2:40 NHLBI: Discovering and Promoting Best Practices of Inclusive Excellence in Conducting Clinical Trials

2:55 Implementing Decentralized Clinical Trial Models to Reduce Geographical Barriers to Participation

3:10 Community-Engaged Research Approaches: Ensuring Studies Are Relevant to Diverse Populations

3:25 Panel Discussion

Tuesday Morning, May 20

MEET THE EXPERT SEMINARS

Pre-registration and additional fees required. Attendance is limited.
$100 Member/Non-Members
$70 LMIC Member/LMIC Non-Members

10:45 a.m. - 11:45 a.m.

MTE23 DON'T MISS IT: IDENTIFYING AND MANAGING EXPOSURES LINKED TO SARCOIDOSIS

MTE24 LEVERAGING CLINICAL POLYSOMNOGRAPHY AND ELECTRONIC HEALTH RECORD DATA FOR RESEARCH

MTE25 IMMUNOLOGIC UNDERPINNINGS OF COPD

MTE26 THE ABC'S OF VENTILATOR WAVEFORMS

MTE27 BRONCHIECTASIS: FOLLOWING THE UPDATED GUIDELINES AND ASSESSING NEW THERAPEUTICS

MTE28 CARE DELIVERY MODELS FOR CRITICAL ILLNESS RECOVERY

MTE29 ARTIFICIAL INTELLIGENCE AND THE FUTURE OF PULMONARY MEDICINE

MTE30 GRAY AREAS - MANAGEMENT OF PAH IN THE PATIENT WITH COMORBIDITIES

MTE31 HOW TO DIAGNOSE BOS IN PEDIATRIC HSCT PATIENTS

MTE32 ADVANCED USE OF ASTHMA BIOLOGICS: A CASE-BASED MASTER CLASS

KEYNOTE SERIES

8:00 a.m. -8:45 a.m.

K3 NASA'S ENVIRONMENTAL DATA ON POLLUTION, CLEAN AIR, AND ENVIRONMENTAL IMPACT

The ATS Keynote Series focuses on timely topics of high relevance to the pulmonary, critical care, and sleep medicine community. Keynote lectures feature leaders who have made major contributions in the important themes programmed at the conference and are unopposed by any other programming.

CLINICAL

YEAR IN REVIEW

C1 CLINICAL YEAR IN REVIEW

9:15 A.M. - 10:45 A.M.

Target Audience
Pulmonary, critical care, and sleep providers. The program will discuss topics of interest to a broad group of providers. The program is relevant to not only clinicians, but also to researchers and administrators.

Objectives
At the conclusion of this session, the participant will be able to:

- be able to apply new clinical research knowledge to clinical practice
- learn new findings about key conditions in pulmonary, critical care and sleep
- have new strategies to manage the care of common conditions in pulmonary, critical care, and sleep

This program has been developed to include core topics in pulmonary, critical care, and sleep medicine. The goal of the session is to discuss critical state-of-the-art topics and evolving concepts. The learner will be exposed to a carefully curated review of the current literature by emerging leaders in the field. After the course, participants will better understand novel concepts in each specific domain that we hope will translate to improved patient care.

9:15 **Bronchiectasis (CF/Non-CF)**

9:37 **Interstitial Lung Disease**

10:00 **Lung Transplant**

10:22 **Pneumonia and Pulmonary Infections**

BASIC • BEHAVIORAL • CLINICAL • TRANSLATIONAL

CLINICAL TOPICS IN PULMONARY MEDICINE

C2 TYPE 2 INFLAMMATION IN COPD: A PRO AND CON DEBATE

Assemblies on Clinical Problems, Allergy, Immunology and Inflammation, Respiratory Cell and Molecular Biology, Respiratory Structure and Function

9:15 A.M. - 10:45 A.M.

Target Audience
Clinicians, basic and translations scientists

Objectives
At the conclusion of this session, the participant will be able to:

- discuss the recent therapeutic trial results of biologicals that have targeted Th2 pathways in COPD
- explore the future of therapeutic development of type 2 immune modulators in COPD
- identify the important molecules and effector immune cells involved in type 2 airway inflammation in COPD

While it has been long-recognised that COPD is an inflammatory lung disease, dissimilar to asthma, type 2 inflammation was thought to play a minor role. However, recent studies suggest that in approximately one third of patients with COPD, type 2 inflammation may be an important driver of disease and a potential therapeutic target. Importantly, the immune cells and molecules involved in COPD-related type 2 immunity may be significantly different from those observed in severe asthma. Here, we discuss the recent therapeutic trial results of biologicals that have targeted these pathways and explore the future of therapeutic development of type 2 immune modulators in COPD.

9:15 **Type 2 Inflammation in COPD: Is It Just Asthma? Pros**

9:30 **Type 2 Inflammation in COPD: Is It Just Asthma? Cons**

9:45 **Eosinophils as a Treatable Trait in COPD: Pros**

10:00 **Eosinophils as a Treatable Trait in COPD: Cons**

10:15 **Highly Targeted T2 Biologics Will Have Limited Usefulness in Clinical Practice. Pros**

10:30 **Highly Targeted T2 Biologics Will Have Limited Usefulness in Clinical Practice: Cons**

CLINICAL • TRANSLATIONAL

CLINICAL TOPICS IN PULMONARY MEDICINE

C3 PEDIATRIC CLINICAL CHEST ROUNDS

Assembly on Pediatrics

9:15 A.M. - 10:45 A.M.

Target Audience
Clinicians, advanced practice providers, trainees

Objectives
At the conclusion of this session, the participant will be able to:

- Will depend on the cases selected from those submitted at the time of abstract submission
- will depend on the cases selected from those submitted at the time of abstract submission
- will depend on the cases selected from those submitted at the time of abstract submission

Pediatric Clinical Chest Rounds is one of the most popular pediatric symposia focused on discussion of 4 challenging or clinically intriguing cases of pediatric lung disease. The cases are chosen from case reports submitted at time of abstract submission. The case presentation done by a trainee is followed by discussion of the case and its related literature and clinical pearls by expert discussants

Cases and Discussants To Be Announced

CLINICAL • TRANSLATIONAL

CRITICAL CARE TRACK

C4 DON'T BE "AVERAGE," BE AN INDIVIDUAL! BRINGING EVIDENCE-BASED PERSONALIZED MEDICINE TO CRITICAL CARE

Assemblies on Critical Care, Clinical Problems

9:15 A.M. - 10:45 A.M.

Target Audience
Pulmonary and critical care, emergency room, and hospitalist physicians and trainees; researchers and clinicians involved with the treatment of critically ill patients.

Objectives
At the conclusion of this session, the participant will be able to:

- describe limitations of current RCT results, which report average treatment effects, and explain how heterogeneity of treatment effect (HTE) is a powerful vehicle for personalizing medicine
- understand how modern analytic tools, including machine learning, have been used predict the effect of treatment on outcome for individual patients through real-world examples in critical care
- evaluate barriers to and potential solutions for applying these new approaches to guide clinical care

In critical care, evidence-based medicine relies on average treatment effects from RCTs (evidence-based but not personalized), and personalized medicine relies on clinician intuition and experience (personalized but not evidence-based). However, advances in machine learning have created the potential to use RCT data to estimate how treatment will impact individual patients. This session will prepare clinicians and researchers to understand and contribute to the coming era of evidence-based personalized medicine in critical care by discussing cutting-edge methods, how to optimize discovery through granular data collection, how to harness heterogeneity when designing clinical trials, and approaches to translating models to the bedside.

9:15 **From One-Size-Fits-All to One-Size-Fits-One: Merging Evidence-Based Medicine with Personalized Medicine**

9:30 **Beyond Subgroups: How Machine Learning Can Predict Individualized Treatment Effects**

9:45 **Data and Knowledge Gathering in a New Era of Personalized Medicine**

10:00 **Designing RCTs to Leverage Heterogeneity to Generate Personalized Results**

10:15 **The AI Will See You Now: Translating Machine Learning Analyses into Personalized Clinical Care**

10:30 **Roundtable Discussion**

BASIC • CLINICAL • TRANSLATIONAL

SCIENTIFIC SYMPOSIUM

C5 TEMPORAL TRAJECTORIES OF INFLAMMATION AND RECOVERY IN CRITICAL ILLNESS

Assemblies on Critical Care, Allergy, Immunology and Inflammation, Pulmonary Rehabilitation

9:15 A.M. - 10:45 A.M.

Target Audience
Clinicians , researchers, and trainees in critical care who wish to better understand the role of timing and disease course in therapy and research

Objectives
At the conclusion of this session, the participant will be able to:

- understand that heterogenous outcomes in critical care may arise from dynamic factors in addition to durable features of patients
- discuss dynamics of inflammatory markers and their correlation with acute illness and recovery
- recognize role of past events in critical illness outcome

This session will focus on trajectories of immune and clinical events as important contributors to heterogenous outcomes in critical care. Critical illness is a series of discrete states during acute illness and recovery. Speakers will discuss the likelihood that transitions between various states, and thus the effect of interventions, may be different at different times. Speakers will address the role that past events play in determining outcome focusing on the examples of trained immunity, co-morbidities, and initial events such as pathogen load. Finally, speakers will discuss emerging data on the immunology of post-ICU recovery.

9:15 **Treatable Moments in Critical Care: Finding Meaning from ARDS Immunologic Dynamics**

9:30 **Dynamic Subphenotypes: What Matters and When?**

9:45 **Dynamics of the Innate Response to Lung Injury**

10:00 **Immune Health Recovery After ARDS and COVID-19**

10:15 **Trajectories Before and After Critical Illness**

10:30 **Learning from the Past: Trained Immunity and Lung Repair Trajectory**

BASIC • CLINICAL • TRANSLATIONAL

SCIENTIFIC SYMPOSIUM

C6 TARGETING MYELOID IMMUNE RESPONSES IN THE LUNG TUMOR MICROENVIRONMENT FOR CANCER THERAPY

Assemblies on Thoracic Oncology, Respiratory Cell and Molecular Biology

9:15 A.M. - 10:45 A.M.

Target Audience
Researchers in basic, translational, and clinical fields interested in understanding the immune mechanisms involved in lung cancer pathogenesis and novel immunotherapeutic developments, including recent cancer vaccine clinical trials.

Objectives
At the conclusion of this session, the participant will be able to:

- better understand the composition and functions of the myeloid cells in the lung tumor microenvironment
- understand the dynamic interplay between the myeloid compartment and both the lymphoid and non-immune components of the tumor microenvironment
- understand novel therapeutic interventions that target myeloid cells in lung cancer

Immunotherapy with checkpoint inhibitors has revolutionized lung cancer treatment. Effective anti-tumor responses depend on intricate interactions between innate and adaptive immune components within the tumor microenvironment (TME). Myeloid cells, including macrophages, monocytes, neutrophils, and dendritic cells, are pivotal in modulating these interactions, either promoting or inhibiting tumor progression. This session will examine how myeloid cells in non-small cell lung cancer (NSCLC) influence both innate and adaptive immunity, with a focus on therapeutic strategies targeting these cells to enhance anti-tumor responses. Key insights from recent clinical trials, including dendritic cell vaccination in advanced NSCLC, will be highlighted.

9:15 **Uncovering the Pathological Role of Innate Immune Regulators in Lung Inflammatory-related Conditions and Cancer**

9:33 **Heterogeneity and Plasticity of Tumor-Associated Macrophages in Lung Cancer: Toward Tailored Immunotherapies**

9:51 **In Situ Vaccination with Gene-modified Dendritic Cells in NSCLC**

10:09 **Targeting the CXCR1/2 Axis Inhibits Neutrophil Function in NSCLC**

10:27 **Leveraging Immune Archetypes and their Myeloid Biology for Novel Therapies for Cancers**

BEHAVIORAL • CLINICAL • TRANSLATIONAL

SCIENTIFIC SYMPOSIUM

C7 NEXT STEPS: ENHANCING RESEARCH TRIALS IN PULMONARY REHABILITATION TO IMPROVE REAL WORLD IMPLEMENTATION

Assemblies on Pulmonary Rehabilitation, Behavioral Science and Health Services Research, Clinical Problems, Nursing

9:15 A.M. - 10:45 A.M.

Target Audience
Clinicians and researchers in the field of Pulmonary Rehabilitation interested in developing skills which will extend their abilities to include patients in PR trials. Trialists, methodolgists, health economists, funders and commissioners.

Objectives
At the conclusion of this session, the participant will be able to:

- understand how novel or complex trial designs could be successfully applied to PR research, including the use of big data/ routinely collected data
- describe how to evaluate PR trials from health economic and implementation science perspectives
- increase engagement in PR trials by learning how to include ‘seldom heard’ communities

This session will consider how the field of pulmonary rehabilitation (PR) can move forwards from the research gaps identified in the latest clinical practice guidelines (2023) and describe the challenges with the traditional randomized controlled trial (RCT). The aim is to consider how we enhance PR trials by describing novel trial design and other strategies to best address current research priorities that are directed toward reducing the global burden of chronic respiratory disease through enhancing access to and delivery of pulmonary rehabilitation. We will consider clinical and cost-effectiveness of trials. The session will be relevant for clinicians in the field to understand how best to

implement research findings into real world settings and how to include seldom heard communities.

9:25 **Generating Actionable Evidence for Pulmonary Rehabilitation, A Complex Healthcare Intervention**

9:45 **Economic Evaluation of Pulmonary Rehabilitation Trials**

10:05 **Using Implementation Science Tools To Get Research into Practice**

10:25 **Hearing from the Seldom Heard Communities in PR Trials**

BASIC • CLINICAL • TRANSLATIONAL

SCIENTIFIC SYMPOSIUM

C8 THE LIVER-LUNG AXIS IN PULMONARY VASCULAR DISEASE: BENCH TO BEDSIDE

Assembly on Pulmonary Circulation

9:15 A.M. - 10:45 A.M.

Target Audience
Physician-scientists, basic scientists, pulmonary and critical care physicians, advanced practice practitioners, trainees and students who care for or study liver diseases or pulmonary vascular disease.

Objectives
At the conclusion of this session, the participant will be able to:

- describe how hepatic metabolic reprogramming may play a role in mediating pulmonary vasculopathy and perivascular inflammation in pulmonary arterial hypertension and portopulmonary hypertension
- define new strategies to incorporate liver dysfunction as a marker of disease severity and/or prognosis in pulmonary arterial hypertension
- apply evidence-based practice toward the evaluation of patients with portopulmonary hypertension and hepatopulmonary syndrome and understand the role, considerations for and timing of liver transplantation

This session will comprehensively explore the relationship between the liver and the pulmonary circulation in pulmonary vascular diseases, encompassing topics from cellular biology to clinical outcomes. Speakers will present novel evidence in how dysfunctional metabolism in the liver is involved in the inflammatory response, novel endophenotypes of liver dysfunction in pulmonary hypertension, how single and spatial transcriptomic approaches are uncovering cell signaling pathways that are important to liver-lung crosstalk and temporal trends in liver transplant for portopulmonary hypertension and hepatopulmonary syndrome.

9:15 **Metabolism and the Liver-Lung Axis**

9:30 **Glycolytic Programming Is Controlled by Fatty-Acid Binding Proteins Across a Apectrum of PAH, PoPH and Hepatopulmonary Syndrome**

9:45 **Bone Morphogenetic Protein and Hepatic Endothelial Dysfunction Link the Liver and Lungs in Pulmonary Hypertension**

10:00 **Liver Stiffness Is Associated with Prognosis in Pulmonary Hypertension**

10:15 **Novel Endophenotypes of Subclinical Liver Disease in Pulmonary Hypertension**

10:30 **Hepatopulmonary Syndrome and Portopulmonary Hypertension Outcomes and Liver Transplantation**

BASIC

SCIENTIFIC SYMPOSIUM

C9 MANY FACES OF ALVEOLAR TYPE II CELLS- PLASTICITY IN HEALTH AND DISEASE

Assemblies on Respiratory Cell and Molecular Biology, Respiratory Structure and Function

9:15 A.M. - 10:45 A.M.

Target Audience
Basic and clinical researchers, clinicians and trainees who are interested in understanding the functions and regulations of alveolar epithelial cells in homeostasis, aging and during disease progression

Objectives
At the conclusion of this session, the participant will be able to:

- learn new experimental evidence showing that AT2s have multiple functions and such functions are well regulated and integrated during homeostasis and aging, and the disruption of such integration are related to various lung diseases
- learn novel molecular mechanisms that regulate the plasticity and integrative functions of AT2s, how dysregulations of these mechanisms lead to various diseases, and how this

knowledge may lead to the discovery of noveltherapeutic targets

- learn the state-of-the-art techniques to study various aspects of AT2s, e.g. novel animal models, single-cell RNA-sequencing, organoid cultures etc

Alveoli is the functional unit of the lung responsible for gas exchange. Alveolar epithelium is composed of two types of cells. Alveolar type I cells (AT1) mediate gas exchange whereas alveolar type II cells (AT2) produce surfactant. In addition, AT2s have other functions including modulating the alveolar barrier integrity and innate immunity. Furthermore, AT2s can also function as stem cells to repair the distal lung after injury. The goal of this session is to understand how AT2s integrate their distinct functions during homeostasis, aging and in response to injury, and how dysregulation of these integrative functions leads to lung diseases.

9:15 **Subpopulation of AT2s and Fibrosis**

9:33 **Lost After Translation: Lessons from Surfactant Biology for the Role Of Alveolar Epithelial Dysfunction in Parenchymal Lung Diseases**

9:51 **AT2 Epithelial Stem Cells and Integrated Stress Response**

10:09 **MicroRNA let-7 Maintains AT2 Cell Plasticity and Serves as a Molecular Brake to Oncogene Dysregulation in Pulmonary Fibrosis**

10:27 **Metabolic Shifts of AT2s in Response to Lung Injury**

BEHAVIORAL • CLINICAL • TRANSLATIONAL

SCIENTIFIC SYMPOSIUM

C10 ENHANCING RECRUITMENT AND RETENTION OF MINORITY AND UNDERREPRESENTED POPULATIONS

Assemblies on Nursing, Behavioral Science and Health Services Research, Critical Care, Pulmonary Rehabilitation

9:15 A.M. - 10:45 A.M.

Target Audience
Researchers, Nurses, Physicians, Allied health professionals, Junior physicians, Patients & family members

Objectives
At the conclusion of this session, the participant will be able to:

- describe at lease two reasons why it is important to increase the recruitment and retention of minority and underrepresentated participants in clinical research
- identify at lease two strategies to increase the recruitment of diverse and underrepresented participants in clinical research
- describe at lease two strategies to increase retention of diverse and underrepresented participants in clinical research

In this session we will discuss the importance of enhancing diversity in clinical research and building upon implementation strategies discussed in the official ATS research statement titled: Enhancing Recruitment and Retention of Minority Populations for Clinical Research in Pulmonary, Critical Care and Sleep Medicine (2021). We will present lessons learned across multiple institutions related to recruiting, retaining, and engaging minorities and underrepresented populations in research. We will discuss foundational strategies to increase community engagement among minority populations including collaborating with patient advocacy groups, community and faith-based organizations and interpersonal-level strategies such as returning individual research results to participants and infographics.

9:15 **Introduction**

9:25 **Community-Based Participartory Research**

9:37 **Institutional Level Strategies to Enhancing Recruitment and Retention of Minority and Underrepresented Populations**

9:49 **What Research Teams Need to Know about Engaging with Research Participants**

10:01 **Infographics and Benefits Among Low Health Literacy and Limited English Proficiency**

10:13 **Institutional-Level Strategies to Increase Recruitment and Retention**

10:25 **Conclusion**

10:30 **Question and Answer**

CLINICAL • TRANSLATIONAL

SCIENTIFIC SYMPOSIUM

C11 MICROPLASTICS AND THEIR IMPACT ON HEALTH

Assemblies on Environmental, Occupational and Population Health, Clinical Problems, Respiratory Cell and Molecular Biology

9:15 A.M. - 10:45 A.M.

Target Audience
Scientists, clinicians (pulmonology, Occupational Medicine, Environmentalists. pediatrics, Geriatricians, public health/global health practitioners, trainees interested in respiratory diseases, biologists, and PhD students

Objectives
At the conclusion of this session, the participant will be able to:

- enhance attendees' knowledge of the sources, exposure routes, and potential health impacts of microplastics
- equip healthcare professionals with evidence-based strategies for assessing and managing microplastic exposure in patients
- promote interdisciplinary collaboration among healthcare providers, researchers, and environmental health experts to develop and share best practices for addressing the health impacts of microplastics

Our symposium is designed to boost awareness and comprehension of the impact of microplastics on health among healthcare professionals, researchers, and the public. We aim to spark collaboration across various fields, promoting evidence-based practices, sharing recent research, and circulating clinical guidelines. As we drive advancements and novel approaches, we're fostering innovation and improving public health outcomes. By focusing on the health implications of microplastics, we aim to enhance our understanding of their effects, thus developing strategies to mitigate risks and promote well-being.

9:15 **The Invisible Threat: Microplastics in Our World**

9:35 **A Plastic Journey: How Microplastics Enter Our Bodies**

9:55 **A Cause for Concern? Potential Health Risks of Microplastics**

10:15 **Microplastic and Lung Health**

10:30 **Minimizing Our Microplastic Footprint: Solutions and Strategies**

CLINICAL • TRANSLATIONAL

SCIENTIFIC SYMPOSIUM

C13 CHALLENGES IN TOBACCO CONTROL: NICOTINE CONCENTRATIONS, SYNTHETIC NICOTINE, AND FLAVORINGS

Assembly on Thoracic Oncology

9:15 AM – 10:45 AM

Target AudiencE
Providers of lung health; those caring for patients with tobacco dependence; tobacco scientists, implementation researchers, policy makers, those interested in advocacy. policy, and health disparities

Objectives
At the conclusion of this session, the participant will be able to:

- understand the public health impact of high nicotine concentrations, synthetic nicotine, and flavorings, particularly among populations experiencing tobacco-related disparities
- understand the scope, limitations, and challenges of the FDA in regulating these products
- learn how to support and work with federal, state, and local authorities to advocate for strong tobacco control policies

This symposium will address three topics that pose threats to tobacco control efforts: products with high nicotine concentrations, nicotine analogs and synthetic nicotine, and flavorings, including menthol. Within each topic, speakers will discuss their impact on public health and FDA's role in regulation of these products. Speakers will showcase how coordinated efforts across federal, state, and local levels can safeguard public health. We will close by inviting our expert panel to discuss how ATS members can work with the FDA to support tobacco control policies and how to collaborate with state and local tobacco control policies to address regulatory gaps.

MEDICAL EDUCATION SEMINAR

ME103 MYTH BUSTERS: DEBUNKING MENTORSHIP MYTHS FROM THE MENTEE'S PERSPECTIVE

Pre-registration and additional fee required. Attendance is limited.

Assembly on Behavioral Science and Health Services Research

10:45 AM – 11:45 AM

Objectives
At the conclusion of this session, the participant will be able to:

- Present an evidence based argument for why mentorship should be a professional priority
- debunk three common mentorship myths through a panel discussion.
- describe how to create a "mentorship-map" to equip participants with a practical tool for future mentorship.

This is an interactive session that comprises of 1) a panel discussion that debunks common mentorship myths from the perspective of a mentee 2) an overview of the evidence supporting mentorship 3) guidance on creation of and time to complete a "mentorship-map" to help plan for future mentor-mentee interactions 4) advice from a seasoned mentor on how to maximize the mentor-mentee relationship. This session is geared towards trainees and early career faculty members with a wide range of clinical and research focuses.

11:45 a.m.- 1 p.m.

PLENARY SESSION

We are honored to welcome Len Geiger, a dynamic advocate, speaker, and double lung transplant recipient, as our speaker.

The Plenary Session is open to all registered attendees and will also include the ratification of the 2025-2026 slate of leaders, as well as remarks from outgoing president Irina Petrache, MD, ATSF, and incoming president Raed A. Dweik, MD, MBA, ATSF. In addition, the following awards will be presented:

- Outstanding Educator Award
- Research Innovation & Translation Award
- Outstanding Clinician Award
- Philip Hopewell Prize for Leaders in Global Respiratory Health

The ATS thanks GSK for its support of the ATS 2025 Plenary Session.

CLINICAL

ADULT CLINICAL CORE CURRICULUM

CC5 ADULT SLEEP CLINICAL CORE CURRICULUM

Education Committee

2:15 P.M. - 3:45 P.M.

Target Audience
Physicians, trainees, students, advanced practice providers

Objectives
At the conclusion of this session, the participant will be able to:

- Integrate new sleep medicine guidelines in to clinical practice.
- Better counsel patients on treatment options available for sleep disordered breathing.
- Identify knowledge gaps in the treatment of patients with sleep related disorders.

The goal of the core is to support clinicians who are engaged in maintenance of certification activities by providing updates on subjects included in recertification requirements. The ATS Clinical Core Curriculum Symposia focus on key topics in the areas of Adult and Pediatric Pulmonary, Critical Care, and Sleep Medicine. The topics are aligned with corresponding MOC Medical Knowledge modules. This symposium is intended to help clinicians stay up to date with important information relevant to their medical practices, and to provide an opportunity for clinicians to evaluate their individual knowledge and skills while earning MOC Medical Knowledge points

2:15 **Sleep and Aging**

2:40 **Sleep and Menopause**

3:05 **Sleep and Disadvantaged Populations**

3:14 **Pro: PPF**

3:23 **Con: PPF**

3:40 **Wrap up**

CLINICAL • TRANSLATIONAL

CLINICAL TOPICS IN PULMONARY MEDICINE

C81 ALPHABET SOUP! ILA, IPAF, PPF: AN INTERSTITIAL LUNG DISEASE PRO-CON

Assembly on Clinical Problems

2:15 P.M. - 3:45 P.M.

Target Audience
ILD clinicians, ILD translational scientists, general pulmonologists, rheumatologists, pathologists, radiologists, trainees

Objectives
At the conclusion of this session, the participant will be able to:

- explore and understand why and how the ILA, IPAF, and PPF definitions were proposed and the evidence base behind each definition
- describe the limitations of the ILA, IPAF, and PPF definitions and define important future directions for future investigation
- understand and discuss the clinical implications of the ILA, IPAF, and PPF criteria

The past decade has seen the emergence of guidelines and position papers defining key entities in interstitial lung disease (ILD): interstitial lung abnormalities (ILA), interstitial pneumonia with autoimmune features (IPAF), and progressive pulmonary fibrosis (PPF). However, consensus on their utility and application remains limited. This scientific session facilitates a Pro-Con debate questioning the practicality of these definitions: do they delineate clinically meaningful types, or unnecessarily complicate the alphabet soup of ILD? Attendees will gain insight into the nuanced areas of consensus and controversy and how these should inform future research and clinical application.

2:15 **Introduction and Overview**

2:20 **Pro: ILA**

2:29 **Con: ILA**

2:47 **Pro: IPAF**

2:56 **Con: IPAF**

CLINICAL • TRANSLATIONAL

CLINICAL TOPICS IN PULMONARY MEDICINE

C82 COPD CLINICAL TRIALS - WHERE DO WE GO FROM HERE?

Assemblies on Clinical Problems, Respiratory Cell and Molecular Biology

2:15 P.M. - 3:45 P.M.

Target Audience
Clinicians, Researchers, Trainees, Fellows

Objectives
At the conclusion of this session, the participant will be able to:

- recognize emerging pathogenic mechanisms to target in COPD trials
- describe recent trial designs, non-pharmacologic interventions, and COPD outcomes
- integrate clinical trials and clinical practice

Clinical trials are the most rigorous studies for assessing effective patient care. This session discusses the latest developments, such as novel pathogenic mechanisms, recent study designs, new imaging outcomes, non-pharmacologic interventions, and challenges in COPD trials. It aims to guide research priorities and integrate clinical trials with clinical practice.

2:15 **A Patient's Perspective**

2:20 **Gaps and Challenges with COPD Clinical Trials**

2:37 **Targeting Novel COPD Pathogenic Mechanisms**

2:54 **Imaging Endpoints, Are They Ready for Prime Time?**

3:11 **Non-Pharmacologic Interventions in COPD: Focus on Rehabilitation and Physical Activity**

3:28 **Advances in COPD Trials: Opportunities for New, Real-World Study Designs**

BEHAVIORAL • CLINICAL

CRITICAL CARE TRACK

C83 END-OF-LIFE CARE IN THE ICU: CONTROVERSIES AND CONVERSATIONS

Assemblies on Critical Care, Behavioral Science and Health Services Research, Clinical Problems, Pediatrics

2:15 P.M. - 3:45 P.M.

Target Audience
Physicians, Nurses, Respiratory Therapists, Educators, Trainees

Objectives
At the conclusion of this session, the participant will be able to:

- define existing controversies in end-of-life care in the ICU
- examine evidence-based and expert-guided approaches to withholding or discontinuation of life-sustaining therapies in the ICU
- integrate new approaches to end-of-life care to improve patient- and family-centered outcomes

This session is proposed to address highly relevant and at times controversial topics in the care of patients dying in the intensive care unit (ICU). During this symposium, speakers will address approaches to the withholding or discontinuation of life-sustaining therapies (e.g., mechanical ventilation, hydration and nutrition, and extracorporeal life support) and will also discuss the challenging gray area that exists between cure and comfort. Controversial aspects of these approaches will be reviewed, and time will be allotted for discussion among audience and panel members.

2:15 **Welcome and Introduction**

2:20 **Medications, Hydration, and Nutrition: To Continue or Discontinue**

2:35 **Withdrawal of Mechanical Ventilation: Best Practices and Ethical Considerations**

2:50 **Discontinuation of Mechanical Circulatory Support: Intricate End-of-life Care**

3:05 **Navigating the Area Between Cure and Comfort**

3:20 **Conversations with the Panel (1)**

3:25 **Conversations with the Panel (2)**

3:30 **Conversations with the Panel (3)**

3:35 **Conversations with the Panel (4)**

3:40 **Closing Remarks**

CLINICAL

SCIENTIFIC SYMPOSIUM

C84 PULMONARY-CRITICAL CARE ADVOCACY: CLOSING THE RESEARCH-POLICY GAP

Assemblies on Behavioral Science and Health Services Research, Environmental, Occupational and Population Health, Nursing; Health Policy Committee, Environmental Health Policy Committee

2:15 P.M. - 3:45 P.M.

Target Audience
Inter-professional groups of pulmonary-critical care clinicians, researchers, trainees, nurses, pharmacists, respiratory therapists, patient advocates, and policy experts

Objectives
At the conclusion of this session, the participant will be able to:

- Describe examples of successful advocacy within pulmonary-critical care to promote wide-scale equitable care.
- Identify potential barriers to translating research into meaningful policy change.
- Illustrate effective strategies to engage constituency groups and legislative partners in research and clinical work.

Translating research into impactful healthcare policy change is challenging, and the large gap between research and policy exacerbates existing healthcare disparities for patients with serious illnesses. Identifying effective strategies to translate research findings into actionable practice and collaborate with legislative partners is essential to maximize the impact of healthcare research. This symposium will consist of real-world examples from pulmonary-critical care leaders with diverse expertise who have successfully implemented evidence-based practice into positive change for patients and are leading cutting-edge, policy-focused initiatives to improve healthcare outcomes and reduce healthcare disparities.

2:15 **ATS in Action: Advocacy for Respiratory Health**

2:27 **Becoming a Change Agent: Using Effective Communication to Broaden the Impact of Your Research and Clinical Findings**

2:34 **PalliPulm to Policy - The Physician Advocate**

2:41 **Exploring Equity and Uncertainty in Pulse Oximeter Accuracy**

2:53 **A Breath of Fresh Air: ATS Successes in Supplemental Oxygen Reform**

3:05 **Sounding the Alarm: Steering U.S. Environmental Policy Towards Protecting Patients from the Effects of Climate Change**

3:17 **Examining the Evolving Regulatory Landscape of Big Data: Promoting Scientific Advancement in Critical Care Research While Ensuring Patient Privacy**

3:29 **Panel Discussion**

CLINICAL

SCIENTIFIC SYMPOSIUM

C85 ATS GUIDELINES: CONTROVERSIES IN THE MANAGEMENT OF CAP AND ARDS

Committees on Program Review and Document Development and Implementation

2:15 P.M. - 3:45 P.M.

Target Audience
Clinicians caring for patients with respiratory infections, ARDS

Objectives
At the conclusion of this session, the participant will be able to:

- understand how evidence is used to inform diagnostic and treatment recommendations
- improve patient outcomes by applying recommendation from recently published clinical practice guidelines
- learn new strategies in the management of community-acquired pneumonia and acute respiratory distress syndrome

This session is proposed as the 10th annual scientific symposium sponsored by the Documents Development and Implementation Committee. This symposium will focus on controversial topics in recently published clinical practice guidelines, with presentations of pro and con positions on recommendations related to the management of committee acquired pneumonia (CAP) and acute respiratory distress syndrome (ARDS).

2:15 **Welcome and Introduction**

2:18 **Corticosteroids in CAP: PRO**

2:29 **Corticosteroids in CAP: CON**

2:40 **Questions From the Audience: Corticosteroids in CAP**

2:47 **Antibiotics in CAP with Positive Viral Testing: PRO**

2:58 **Antibiotics in CAP with Positive Viral Testing: CON**

3:09 **Questions From the Audience: Antibiotics in CAP with Positive Viral Testing**

3:16 **Neuromuscular Blocking Agents in ARDS: PRO**

3:27 **Neuromuscular Blocking Agents in ARDS: CON**

3:38 **Questions From the Audience: NMBA in ARDS**

BASIC • TRANSLATIONAL

SCIENTIFIC SYMPOSIUM

C86 HOW NOVEL INFLAMMATORY INTERACTIONS IN ASTHMA CONTRIBUTE TO DISEASE AND SEVERITY

Assembly on Allergy, Immunology and Inflammation

2:15 P.M. - 3:45 P.M.

Target Audience
Asthma providers, Asthma Researchers, Providers who care for asthma patients

Objectives
At the conclusion of this session, the participant will be able to:

- identify non Type-2 pathways described in asthma and how these pathways contribute to disease
- describe how the interaction of non-Type 2 inflammatory pathways with Type-2 inflammation and with each other may contribute to severe asthma and complicate the response to current asthma therapies

This session will focus on new discoveries on inflammatory pathways in asthma. Specifically, this symposia will examine how different inflammatory pathways may interact to produce challenging and difficult to treat asthma in patients, along with strategies for future work in developing novel asthma treatments beyond Type-2 targeted therapies alone.

2:15 **Natural Killer Cell Dysfunction and Impaired Inflammation Resolution Circuits Provoke Non-Type 2 Inflammation in Severe Asthma**

2:30 **Overlap of Eosinophilic (Type 2) and Neutrophilic (Type 1) Inflammation Associates with Severe Asthma and Lung Function Decline**

2:45 **Airway Autoimmunity: Looking Beyond T2 Response in Asthma Airways**

3:00 **Differential Effects of T1 and T2 Inflammation on Airway Hyperreactivity**

3:15 **A Virally-Driven Dual T2-T1 Endotype Drives Poor Asthma Control**

BASIC • CLINICAL • TRANSLATIONAL

SCIENTIFIC SYMPOSIUM

C87 SLEEP AND SUDDEN DEATH

Assemblies on Sleep and Respiratory Neurobiology, Clinical Problems, Critical Care, Environmental, Occupational and Population Health, Nursing, Pediatrics

2:15 P.M. - 3:45 P.M.

Target Audience
Pediatric and adult clinicians and researchers in sleep and respiratory medicine.

Objectives
At the conclusion of this session, the participant will be able to:

- identify shared and distinct mechanisms of respiratory control and arousal that are involved in various sudden death syndromes during sleep
- apply new knowledge about the pathobiology of sudden death during sleep to identify high risk patients
- more effectively counsel patients and their families with conditions at high risk for sudden death during sleep

Sudden death during sleep is a devastating event for patients and families, while also a significant public health problem. This session will review contemporary issues in 4 main areas: (1) the complex relationships between opioids, sleep, and sudden death; (2) pathomechanisms and management of CCHS; (3) recent insights into ventilatory control in sudden death syndromes (SUDEP, SIDS, & SUDC); and (4) the risk of sudden death in sleep apnea. The session will be of interest to adult and pediatric clinicians and researchers in pulmonary, neurology, and sleep medicine; sleep and respiratory physiologists; and experts in population health.

2:15 **Opioids, Sleep, and Sudden Death 1**

2:33 **CCHS and Sudden Death: Mechanisms and Prevention 2**

2:51 **SUDEP, SIDS, and SUDC: Insights into Ventilatory Control 3**

3:09 **Sleep Apnea and Sudden Death: Can We Prevent It? 4**

3:27 **Panel Discussion 5**

BASIC • CLINICAL • TRANSLATIONAL

SCIENTIFIC SYMPOSIUM

C88 YES, A WHOLE SESSION ON MUCUS: LATEST RESEARCH INSIGHTS)

Assemblies on Respiratory Structure and Function, Allergy, Immunology and Inflammation, Clinical Problems, Respiratory Cell and Molecular Biology

2:15 P.M. - 3:45 P.M.

Target Audience
Basic and translational scientists and healthcare professionals

Objectives
At the conclusion of this session, the participant will be able to:

- learn what are the precise molecular and cellular mechanisms that lead to the formation of mucus plugs in different lung diseases and how do genetic factors influence mucus production and plug formation
- learn how do respiratory infections influence the formation and persistence of mucus plugs andwhat is the interplay between chronic infections and mucus plug dynamics in diseases like COPD
- understand what biomarkers can reliably predict the presence and impact of mucus plugs in lung diseases

Mucus plugs are a common and serious issue in chronic lung diseases. Mucus plugs form due to excessive mucus production,impaired mucus clearance, frequent respiratory infections, and inflammation, which result in symptoms like shortness of breath, coughing, and wheezing. Managing mucus plugs involves medications, hydration, chest physiotherapy, and avoiding irritants to improve breathing and reduce complications.

2:15 **Not All Plugs Are the Same: Understanding the Heterogeneity of Mucus Plugs**

2:30 **Genetic Susceptibility to Mucus Plugging: Novel Discoveries**

2:45 **Imaging Features of Mucus Plugs in Th2 Inflammation**

3:00 **Blunted Mucociliary Clearance and Mucus Hypersecretion: The Key Driver of Mucus Plugging**

3:15 **How Mucus Plugs Reshape Small Airways: Cutting-Edge Findings:**

3:30 **Airway Wall Thickening and Mucus Plugs in Chronic Airway Diseases: are they reliable biomarkers?**

BASIC • TRANSLATIONAL

SCIENTIFIC SYMPOSIUM

C89 FROM AIR TO AILMENTS: UNDERSTANDING THE IMPACT OF AIRBORNE POLLUTANTS AND PARTICULATE MATTER FROM DIFFERENT SOURCES ON HEALTH

Assemblies on Environmental, Occupational and Population Health, Allergy, Immunology and Inflammation, Respiratory Cell and Molecular Biology

2:15 P.M. - 3:45 P.M.

Target Audience
Researchers, physicians, physician-scientists, trainees, early career clinical fellows, epidemiologists, and investigators studying chronic lung diseases and their underlying mechanisms related to environmental and occupational exposures.

Objectives
At the conclusion of this session, the participant will be able to:

- understand the negative effects of particulate matter on pulmonary and overall health using animal models and epidemiological data
- identify specific biomarkers for predicting and understanding respiratory diseases caused by PM2.5 exposure
- stay updated on new technological advancements and animal models in PM2.5 research

The discussion around particulate matter (PM) highlights the diverse compositions and sources of these pollutants, ranging from environmental to occupational exposures such as exposures to wildfire-PM, PM-metalloids present near mining areas, agricultural dust, and at deployment sites. While much of the focus is often on PM, the detrimental effects of heavy metals, toxic gases, and hydrocarbons are equally significant and demand attention. This symposium delves into the various sources of environmental and occupational particulate matter exposures, and the mechanisms causing respiratory illnesses. Additionally, this symposium also aims to discuss disproportionate environmental PM exposures in low social economic communities and vulnerable populations.

2:15 **Particulate Air Pollution: Catalyst for Systemic Oxidative Stress and Persistent Inflammation**

2:30 **Real-world Particulate Matter on Pulmonary Health: Mechanistic Insights**

2:45 **Occupational Asthma in Firefighters: Biomarkers of World Trade Center Particulate Matter Exposure .**

2:57 **Effects of Wildfire Smoke Exposure on Early Childhood Respiratory Health**

3:09 **Outdoor Air Particulate Matter Exposure as a Potential Cause of Pulmonary Health Disparity**

3:21 **From Battlefield to Home: Analyzing PM Exposure and its Toxicity**

3:33 **Technical Advancement: Seeing the Unseen: Visualizing PM2.5 Uptake in 3-Dimensional Label-Free Visualization by Optical Diffraction Tomography**

BASIC • CLINICAL • TRANSLATIONAL

SCIENTIFIC SYMPOSIUM

C90 EARLY STAGES OF TUBERCULOSIS INFECTION: UPDATES ON AN EVER-CHANGING PARADIGM

Assembly on Pulmonary Infections and Tuberculosis

2:15 P.M. - 3:45 P.M.

Target Audience
Clinical and translational researchers and TB care providers with interests in understanding the intricacies of the establishment of TB infection.

Objectives
At the conclusion of this session, the participant will be able to:

- develop a comprehensive understanding of early TB stages: attendees will be able to apply new definitions (initial, incipient, minimal, and subclinical) and differentiate between the early stages of TB infection

- identify and assess risk factors for establishment of TB infection.
- generate new research avenues in early TB infection

The early stages of tuberculosis (TB) infection are critical, yet often overlooked, phases in the disease's natural history and are increasingly recognized as contributors to TB burden. Our symposium will provide a platform for experts to discuss ongoing research and new definitions for stages of TB infection, including initial, incipient, minimal, and subclinical phases.

2:15 Early Stages of TB Infection, History and Why We Care About Definitions

2:30 Epidemiology of TB and Latent/Subclinical/Incipient TB

2:45 What Basic Evidence Do We Have About Establishment of TB Infection?

3:00 Risk Factors for TB Infection

3:10 Pro: Keep the Term Latent TB"

3:20 Con: Redefining Establishment of TB Infection

3:30 Q&A

BEHAVIORAL • CLINICAL

SCIENTIFIC SYMPOSIUM

C91 AN ADVOCACY FRAMEWORK FOR TOBACCO: EVIDENCE, POLICY, AND REGULATION ACROSS THE LIFESPAN

Assemblies on Pediatrics, Behavioral Science and Health Services Research, Environmental, Occupational and Population Health; Tobacco Action Committee Pediatric Advocacy Committee Health Policy Committee

2:15 P.M. - 3:45 P.M.

Target Audience
Physicians, health services researchers, tobacco researchers, epidemiologists, public policy advocates, behavioral science researchers and clinicians

Objectives
At the conclusion of this session, the participant will be able to:

- learn the scientific basis of the latest harmful tobacco products marketed to youth and young adults, including those exploiting regulatory loopholes
- incorporate advocacy in professional life to influence tobacco policy at local and regional levels
- understand racial disparities in tobacco policy and lawmaking

Tobacco use (including e-cigarettes) poses an ongoing threat to the respiratory health of people of all ages and is a major contributor to health disparities. Our session will present a framework for tobacco-related advocacy. Tobacco researchers, clinicians, and advocates will provide examples of different interventions, including successful past and potential future local and federal legislation, government regulation, and public health interventions in the US and abroad. Presenters will identify targets for future research and policy intervention. Much of the session will focus on youth and young adults, as this is a crucial time to reduce tobacco-related health disparities through advocacy.

2:15 Tobacco 21 to Tobacco-Free Generation: From Effective Local Policy to National Policy

2:35 Tobacco Regulation: Current Evidence and Future Opportunities

2:55 The Use of Cigars/Cigarillos in Minority Populations

3:15 A School-Based Anti-Tobacco Curriculum in Mexico

3:35 patient voice

Wednesday Morning, May 21

MEET THE EXPERT SEMINARS

Pre-registration and additional fees required. Attendance is limited.
$100 Member/Non-Members
$70 LMIC Member/LMIC Non-Members.

10:15 a.m. - 11:15 a.m.

MTE33 AIRWAY AND PLEURAL COMPLICATIONS MANAGEMENT IN LUNG TRANSPLANT

MTE34 FROM FEATHERS TO ANTIFIBROTICS: EXPOSURES, TREATMENT, AND PROGNOSIS IN HYPERSENSITIVITY PNEUMONITIS

MTE35 HOW TO IMPLEMENT A COMPREHENSIVE LUNG NODULE PROGRAM

MTE36 MYOSITIS-ASSOCIATED ILD: UPDATES ON DIAGNOSTIC AND TREATMENT CHALLENGES

CLINICAL

YEAR IN REVIEW

D1 CLINICAL YEAR IN REVIEW

8:15 A.M. - 9:45 A.M.

Target Audience
Pulmonary, critical care, and sleep providers. The program will discuss topics of interest to a broad group of providers. The program is relevant to not only clinicians, but also to researchers and administrators.

Objectives
At the conclusion of this session, the participant will be able to:

- be able to apply new clinical research knowledge to clinical practice
- learn new findings about key conditions in pulmonary, critical care and sleep
- have new strategies to manage the care of common conditions in pulmonary, critical care, and sleep

This program has been developed to include core topics in pulmonary, critical care, and sleep medicine. The goal of the session is to discuss critical state-of-the-art topics and evolving concepts. The learner will be exposed to a carefully curated review of the current literature by emerging leaders in the field. After the course, participants will better understand novel concepts in each specific domain that we hope will translate to improved patient care.

8:15 COPD

8:37 Pulmonary Vascular Disease

9:00 Pulmonary Rehab

9:22 Lung Cancer

CLINICAL • TRANSLATIONAL

CRITICAL CARE TRACK

D2 WHEN ONE SIZE DOESN'T FIT ALL: EMBRACING HETEROGENEITY IN SEPSIS MANAGEMENT

Assembly on Critical Care

8:15 A.M. - 9:45 A.M.

Target Audience
clinicians who take care of patients with sepsis, researchers studying heterogeneity of critical illness

Objectives
At the conclusion of this session, the participant will be able to:

- describe new findings about sources of heterogeneity in sepsis, including immune response, pathogen, trajectory, and response to treatment
- understand how existing practice variation in sepsis treatment can make it challenging to study heterogeneity but also reflects that clinicians may already be considering heterogeneity in their practice

- evaluate the strengths and limitations of current approaches to incorporating heterogeneity in clinical trials and understand how findings from these trials may be applied in practice to improve sepsis care

Sepsis is a heterogenous syndrome. Over the past few years, researchers have identified important inflammatory subphenotypes based on clinical characteristics and biomarkers. However, there are many unique sources of heterogeneity in sepsis, from the inciting pathogen to a patient's trajectory and the treatment they receive. Understanding factors that drive heterogeneity may help us better target treatments. This session will highlight cutting-edge research from early career investigators studying sources of heterogeneity in sepsis and will explore how ongoing trials are accounting for heterogeneity, focusing on how clinicians can interpret and apply novel findings to embrace heterogeneity in their management of sepsis.

8:15 **Back to Basics: Why the Host's Biology Matters**

8:28 **Catching the Bug: Why the Pathogen Matters**

8:41 **A Moving Target: Why A Patient's Trajectory Matters**

8:54 **Heterogeneity on Heterogeneity: Why Practice Variation Matters**

9:07 **Power of Prediction: Targeting Treatment by Predicting a Patient's Response**

9:20 **Fine-Tuning: Targeting Treatment Through Precision Medicine**

CLINICAL • TRANSLATIONAL

CLINICAL TOPICS IN PULMONARY MEDICINE

D3 CHICKEN OR EGG: DISENTANGLING THE ROLE OF COMORBIDITIES IN FIBROTIC INTERSTITIAL LUNG DISEASES

Assemblies on Clinical Problems, Behavioral Science and Health Services Research, Sleep and Respiratory Neurobiology

8:15 A.M. - 9:45 A.M.

Target Audience
Target audience includes all involved in pulmonary patient care (physicians, nurses, respiratory therapists, other allied health professionals) and researchers in the field of interstitial lung disease and sleep medicine.

Objectives
At the conclusion of this session, the participant will be able to:

- improve understanding of the prognostic implications of concomitant comorbidities in fibrotic interstitial lung diseases to improve the delivery of patient care
- learn novel research methods to help elucidate the causal role of comorbidities in the development and progression of fibrotic interstitial lung diseases
- learn current knowledge gaps that need to be addressed to implement a clinical trial that tests the effect of managing comorbidities in fibrotic interstitial lung diseases

Co-morbidities such as cardiovascular disease, diabetes, and acid reflux are highly prevalent in patients with idiopathic pulmonary fibrosis (IPF) and other fibrotic interstitial lung diseases (ILDs) compared with the general population. There has been an ongoing interest among clinicians and researchers in whether these co-morbidities have a causal role in the development and progression of fibrotic ILDs. We propose a symposium that reviews the current knowledge and research regarding co-morbidities in fibrotic ILD and specifically discusses whether it is plausible that management of these illnesses may improve clinical outcomes and warrant prospective, intervention trials.

8:15 **Introduction**

8:25 **Cardiovascular Disease and Metabolic Factors in Fibrotic ILD: Targetable Traits for a Clinical Trial?**

8:40 **Sleep-Disordered Breathing and ILD**

8:55 **Can't Seem To Quit You: What We Know (and Don't Know) About Acid Reflux's Role in ILD**

9:10 **Methods to Draw Stronger Causal Inference on Comorbidities in ILD**

CLINICAL • TRANSLATIONAL

CLINICAL TOPICS IN PULMONARY MEDICINE

D4 AI-DRIVEN INNOVATIONS IN PULMONARY AND CRITICAL CARE MEDICINE: A LOOK AHEAD

Assemblies on Clinical Problems, Critical Care; Programing Committee chairs of the Critical Care Assembly are supportive to discuss this proposal as joint symposium

8:15 A.M. - 9:45 A.M.

Target Audience
Clinicians, researchers, Fellows

Objectives
At the conclusion of this session, the participant will be able to:

- describe applications of AI in clinical and research environments
- comprehend the benefits and risks of AI for healthcare institutions, providers, and patients
- acknowledge the importance of involvement in AI development to prevent biases and address concerns effectively

The integration of AI in healthcare is expanding rapidly, particularly in lung imaging diagnostics, clinical decision-making, and scientific research. Clinicians and researchers are increasingly utilizing data-driven, automated tools. However, concerns remain regarding the effects and risks these AI-enabled tools pose to the quality of care, health disparities, and patient safety. This session will explore AI applications in lung disease diagnosis and treatment, delve into the development and implementation processes of AI technologies, and discuss potential biases and harms. The goal is to offer new insights into the role of AI in science and healthcare.

8:15 AI in Health Care: Opportunities and Challenges

8:33 Imaging Deep Learning: The Case of COPD

8:51 AI in Medicine: Navigating Biases and Health Disparities

9:09 Next-Generation Diagnostic Support: Large Language Models in the Care of Critically Ill Patients

9:27 Personalizing the Treatment of Critical Care Patients: Moving the Frontiers with Augmented Intelligence

BASIC • BEHAVIORAL • CLINICAL

SCIENTIFIC SYMPOSIUM

D5 RACE &GENETIC ANCESTRY: RELATIONSHIPS BETWEEN A SOCIAL CONSTRUCT AND BIOLOGY

Assembly on Behavioral Science and Health Services Research

8:15 A.M. - 9:45 A.M.

Target Audience
-Health professionals developing health equity interventions -Scientists who wish to understand connections between genetic ancestry, race, and biology. -Educators who wish to understand relationships between genetic ancestry, racism and outcomes.

Objectives
At the conclusion of this session, the participant will be able to:

- be able to describe the multiple ways in which racism impacts biology, such as epigenetic changes in relation to stress and increased disease progression due to environmental exposure
- be able to describe applications of genetic ancestry in identification of genetic drivers of disease and contrast this to the inappropriate use of genetic ancestry as a tool to identify "biologic" differences between races
- be able to describe the most up to date guidelines on reporting of race in biomedical research, as well as use of race in genetic research

Discuss the complex ways in which the social construct of race interacts with biology. The session will discuss the multiple levels of racism and the role of race as a social construct. There will then be a description of the biology of genetic ancestry and how this is and is not related to "race." Finally, we will discuss how race and genetic ancestry can be used effectively in research to address disparities. This session will focus primarily on anti-Black racism in North America to illustrate these concepts.

8:15 The Social Construct of Race

8:30 Reporting Race and Ethnicity in 2025

8:45 Genetic Ancestry as a Marker of Race-Specific Variation and Historical Exposures

9:00 Race and Biology -from Scientific Racism to Health Equity

9:15 Panel Discussion -1

9:21 Panel Discussion -2

9:27 Panel Discussion -3

9:33 Panel Discussion -4

9:39 Panel Discussion -5

BASIC • CLINICAL • TRANSLATIONAL

SCIENTIFIC SYMPOSIUM

D6 PREDICTING STRUCTURE FUNCTION RELATIONSHIPS IN IPF

Assemblies on Respiratory Structure and Function, Pulmonary Circulation, Respiratory Cell and Molecular Biology

8:15 A.M. - 9:45 A.M.

Target Audience
Scientists and physician scientists interested in understanding the relationship between structure and function during IPF disease progression. Such knowledge will inform diagnosis, mechanisms, and treatments.

Objectives
At the conclusion of this session, the participant will be able to:

- identify opportunities for novel investigation into understudied aspects of IPF (patho)physiological mechanisms and mechanobiology
- define new strategies to manage patient care
- learn how advances in structural imaging, spatial omics, vascular remodeling, lung mechanics, and mechanobiology are revealing new mechanisms of IPF and novel therapeutic targets

Advances in molecular, cellular, tissue, whole-body measurements, as well as immunological, vascular and mechanobiological aspects, have evoked new opportunities for structure function studies. For example, measurements of lung mechanics, tissue structure, and/or cellular mechanotransduction, together with mathematical models, have helped to decode both causes and effects of airway remodeling, parenchymal stiffening, and extracellular matrix remodeling. Talks from leading experts in the field will reveal pertinent advances, with the goal to improve mechanistic understanding, clinical diagnosis, and eventually, to develop better treatments.

8:15 **The State of the Art in IPF Research: From Bench to Bedside and Back to Bench**

8:30 **Drug Discovery and Development in IPF: Challenges and Opportunities**

8:45 **The Importance of Patient-Derived 3D Human Tissue Based Models in IPF Modeling and Drug Discovery**

9:00 **PRO-C3 Assay, a Fibrogenesis Marker of Fibroblast Activity to Understand Structure-Function Changes in Pre-Clinical and Clinical Trials of IPF and ILD**

9:15 **Multifactorial Biomarker Integration to Expand Preclinical Drug Research Against Fibrosis**

9:30 **Emergent Structure-Function Relations Deduced from Experimental Measurements in Fibrotic Human Precision Cut Lung Slices**

CLINICAL

SCIENTIFIC SYMPOSIUM

D7 TECHNOLOGICAL ADVANCEMENTS IN PEDIATRIC PULMONOLOGY: REMOTE DATA AND DECISION SUPPORT

Assembly on Pediatrics

8:15 A.M. - 9:45 A.M.

Target Audience
Clinicians and researchers in lung health, including pediatric and adult pulmonologists, critical care physicians, and allied health professionals in lung health.

Objectives
At the conclusion of this session, the participant will be able to:

- describe the role for remote technologies and clinical decision support systems across different disciplines in respiratory health
- understand the benefits and challenges of these technologies based on current evidence
- identify ways to decrease biases in respiratory care using these technologies

The use of remote monitoring, mobile health, and clinical decision support systems has increased drastically in respiratory medicine over the past 5 years. In this interdisciplinary symposium, experts from pediatric pulmonology, otolaryngology, and critical care will review evidence on the use of clinical decision support systems in the intensive care, inpatient, and outpatient settings and to reduce systemic bias in respiratory health such as in patients with asthma, sleep-disordered breathing, and technology dependence. Additionally, they will discuss the role of mobile health and remote monitoring in asthma self-management, machine learning to predict outcomes in sleep-disordered breathing, and technologies to evaluate the impact of changing climates on respiratory health.

9:25 **Introduction**

8:15 **Implementation of Evidence-Based Digital Care Pathways in Electronic Medical Record Systems to Guide Practice**

8:29 **Harnessing Clinical Decision Support Systems to Reduce Bias and Inequity in Respiratory Health Care**

8:43 **Predictive Deep Learning Algorithms in Pediatric Sleep Disordered Breathing**

8:57 **Using Mobile Health to Improve Education and Asthma Self-Management**

9:11 **Telemonitoring and Clinical Decision Support Systems in Medical Transport and Intensive Care Setting**

9:30 **Q&A and Panel Discussion**

CLINICAL • TRANSLATIONAL

SCIENTIFIC SYMPOSIUM

D8 25 YEARS OF SEVERE ASTHMA RESEARCH PROGRAM: DISCOVERIES AND BEYOND

Assemblies on Allergy, Immunology and Inflammation, Environmental, Occupational and Population Health, Pediatrics, Respiratory Cell and Molecular Biology

8:15 A.M. - 9:45 A.M.

Target Audience
Clinicians (physicians, nurses, fellows, residents, pharmacists), researchers, administrators, regulators and policymakers: anyone involved in delivery of care and the science of patients with asthma

Objectives
At the conclusion of this session, the participant will be able to:

- learn how the Severe Asthma Research Program evolved related to phenotypes, exacerbations, imaging and pathobiology in SARP and explore the impact of asthma biologics and the COVID pandemic on severe asthma endotypes
- better understand the current status of knowledge in the longitudinal clinical course and biomechanics of severe asthma
- improve understanding of new findings and remaining research gaps in severe asthma research. At the conclusion of this session, participants will be able to identify research gaps and begin to develop methods/research questions to address those gaps

The Severe Asthma Research Program (SARP) is a 25-year observational study investigating biological mechanisms in severe asthma. The program is the longest running research program involving patients with severe asthma. SARP has comprehensively characterized severe asthma patients and identified severe asthma clinical and molecular phenotypes and uncovered novel pathophysiobiologic mechanisms. This symposium will review the prior and new discoveries from SARP including phenotypes, exacerbations, biomarkers and imaging and explore the impact of clinical practice changes and the COVID pandemic. The session will enhance understanding of the evolution of severe asthma research and identify future research needs.

8:15 **Introduction and Overview of SARP**

8:20 **Changes in the Clinical Characteristics of Severe Asthma in SARP**

8:35 **Asthma Exacerbations and the Effect of the COVID Pandemic**

8:50 **New Imaging Biomarkers in Severe Asthma**

9:05 **The Metabolic Syndrome and Systemic Aspects of Severe Asthma**

9:20 **The Way Forward in Severe Asthma**

9:35 **Conclusion and Next Steps**

BASIC • TRANSLATIONAL

SCIENTIFIC SYMPOSIUM

D9 SHARED MECHANISTIC INSIGHTS IN INTERSTITIAL LUNG DISEASE AND PULMONARY HYPERTENSION: THE ENDOTHELIAL CONNECTION

Assemblies on Pulmonary Circulation, Respiratory Cell and Molecular Biology

8:15 A.M. - 9:45 A.M.

Target Audience
Basic and Translational Scientists Studying Endothelial Biology and PH and ILD.

Objectives
At the conclusion of this session, the participant will be able to:

- describe new findings in research on the links between vascular dysfunction and pulmonary fibrosis
- learn about new therapeutic strategies that might be effective for both PH and ILD
- learn about novel models to study endothelial contributions to PH and ILD

The role of the vasculature in the development of pulmonary fibrosis hasbeen underappreciated and understudied. However, recently there have been several new papers and several excellent review papers in this area. In this symposium, we will discuss novel data linking vascular dysfunction to PH and ILD. We will emphasize group 3 PH patients with co-existing PH and ILD. Usually considered separately, with sessions in different assemblies, this is a much-needed session to facilitate discussion about links between different disease phenotypes in vessels of different sizes all within the lung. We will highlight the interplay between the vascular compartment with mesenchymal cells and discuss novel model systems to study these endothelial cells in the context of PH and ILD.

8:15 Introduction to Endothelial Contributions to ILD and PH

8:21 Microvascular Progenitor Dysfunction in Chronic Lung Disease

8:33 The Role of Aging Vasculature in Fibrosis

8:45 Lung Extracellular Matrix in Vascular Remodeling in Chronic Lung Disease

8:57 Injury-Induced Endothelial Cell States in Lung Disease

9:09 The Role of mTOR in Pulmonary Vascular Remodeling in Lymphangioleiomyomatosis

9:21 Modeling Chronic Lung Disease with Vascularized Organoids

9:33 iPS Derived Endothelial Cells for Modeling Chronic Lung Diseases

BASIC • CLINICAL • TRANSLATIONAL

SCIENTIFIC SYMPOSIUM

D10 INSIGHTS INTO ACUTE LUNG INJURY REVEALED THROUGH LUNG TRANSPLANTATION

Assemblies on Respiratory Cell and Molecular Biology, Allergy, Immunology and Inflammation, Critical Care

8:15 A.M. - 9:45 A.M.

Target Audience
Researchers, Individuals with interest in acute lung injury, critical care providers, lung transplantation providers

Objectives
At the conclusion of this session, the participant will be able to:

- To improve understanding of primary graft dysfunction as a form of acute lung injury.
- To understand key mechanisms that drive both primary graft dysfunction and acute respiratory distress syndrome pathogenesis.
- To integrate findings from the study of lung transplant primary graft dysfunction with our understanding of acute respiratory distress syndrome

Up to 1/3 of lung transplant recipients will develop primary graft dysfunction (PGD), a severe form of acute lung injury that manifests following ischemia-reperfusion injury. PGD shares basic clinical definitions with Acute Respiratory Distress Syndrome (ARDS) and has no known medical therapies. This session will explore recent advances in our understanding of acute lung injury pathogenesis through the lens of lung transplantation. Emphasis will be placed on multi-omic approaches and insights that have critical implications for novel treatments. Talks will focus on key findings in PGD that are applicable to ARDS.

8:15 Diagnosing PGD in the lung transplant patient in the ICU

8:25 ICU Managment of PGD in the Lung Transplant Patient

8:35 Primary graft dysfunction insights gained from donor and recipient genomics

8:45 Immune Mediated Repair in ARDS Relevant to PGD

8:55 Local complement activity in primary graft dysfunction

9:05 **Cell-free hemoglobin in acute lung injury**

9:15 **Tissue and circulating gene expression profiling in acute lung injury after transplantation**

9:25 **Natural killer cells, neutrophils and their crosstalk in pulmonary ischemia-reperfusion injury**

BASIC • CLINICAL • TRANSLATIONAL

SCIENTIFIC SYMPOSIUM

D11 LONG-TERM CONSEQUENCES OF RESPIRATORY VIRAL INFECTIONS AND CHRONIC PULMONARY DISEASES: LONG-COVID, ASTHMA, ILD AND LUNG TRANSPLANT

Assembly on Pulmonary Infections and Tuberculosis; ATS Vaccine and Immunization Initiative Committee

8:15 A.M. - 9:45 A.M.

Target Audience
Adult and pediatric clinicians and investigators interested in respiratory viruses in the etiology of chronic lung diseases, mechanisms, data supporting preventive efforts and identification of key unanswered questions.

Objectives
At the conclusion of this session, the participant will be able to:

- review evidence for the role of respiratory viruses in chronic respiratory and health outcomes
- describe long term benefits of routine vaccination and infection prevention
- outline the gaps in our current understanding of long-term health outcomes and promoting lung health following respiratory viral infection

The goal of this session is to describe the long-term consequences of SARS-CoV-2, RSV and other respiratory viral respiratory infections and to review the literature and gaps in our knowledge on the impact of infection prevention on these outcomes. Experts from multiple disciplines, including pediatrics, asthma, critical care, post-ICU care, vaccine research, and public health will be involved as moderators and speakers. The talks will focus on the long-term sequelae of COVID, RSV and the role of respiratory viral infections in pulmonary fibrosis and lung transplant allograft function.

8:15 **Impact of COVID on Long Term Pulmonary and Health Outcomes**

8:40 **Long-term Sequelae of Respiratory Virus Infection in Transplant and Chronic Lung Disease**

9:05 **Could RSV Vaccines Prevent Asthma? Current Evidence and Research Agenda**

9:30 **Discussion / Q & A**

PEDIATRIC CLINICAL CORE CURRICULUM

PCC3 PEDIATRIC CLINICAL CORE CURRICULUM

Education Committee

9:30 A.M. - 10:30 A.M.

Target Audience
Clinicians, trainees, students, advanced practice providers

Objectives
At the conclusion of this session, the participant will be able to:

- Integrate new pediatric pulmonary and critical care guidelines into clinical practice.
- Identify knowledge gaps in the treatment of pediatric patients with pulmonary disease and critical illness.
- Better counsel pediatric patients and families on treatment options available for management of pulmonary diseases and critical illness.

The goal of the core is to support clinicians who are engaged in maintenance of certification activities by providing updates on subjects included in recertification requirements. The ATS Clinical Core Curriculum Symposia focus on key topics in the areas of Adult and Pediatric Pulmonary, Critical Care, and Sleep Medicine. The topics are aligned with corresponding MOC Medical Knowledge modules. This symposium is intended to help clinicians stay up to date with important information relevant to their medical practices, and to provide an opportunity for clinicians to evaluate their individual knowledge and skills while earning MOC Medical Knowledge points

9:30 **PFTs from A to Z: Updates in Pulmonary Function Testing**

9:50 **Running into the Future: Updates in Exercise Testing**

10:10 **Panel Discussion**

CLINICAL

ADULT CLINICAL CORE CURRICULUM

CC6 ADULT SLEEP CLINICAL CORE CURRICULUM

Education Committee

11:00 A.M. - 12:30 P.M.

Target Audience
Physicians, trainees, students, advanced practice providers

Objectives
At the conclusion of this session, the participant will be able to:

- Integrate new sleep medicine guidelines in to clinical practice.
- Better counsel patients on treatment options available for sleep disordered breathing.
- Identify knowledge gaps in the treatment of patients with sleep related disorders.

The goal of the core is to support clinicians who are engaged in maintenance of certification activities by providing updates on subjects included in recertification requirements. The ATS Clinical Core Curriculum Symposia focus on key topics in the areas of Adult and Pediatric Pulmonary, Critical Care, and Sleep Medicine. The topics are aligned with corresponding MOC Medical Knowledge modules. This symposium is intended to help clinicians stay up to date with important information relevant to their medical practices, and to provide an opportunity for clinicians to evaluate their individual knowledge and skills while earning MOC Medical Knowledge points

11:00 OSA and Obesity Medications

11:25 OSA in the Perioperative Setting

11:50 Sleep and Critical Illness Survivorship

Wednesday Mid-day, May 21

BASIC • TRANSLATIONAL

MID-DAY SYMPOSIUM

MD31 LUNGMAP PHASE 3- HIGH RESOLUTION MOLECULAR PROFILING OF LUNG DISEASES

Division of Lung Diseases, NHLBI, NIH

12:00 P.M. - 1:00 P.M.

Target Audience
Providers of lung health, medical fellows in training, and basic and clinical researchers interested in lung biology, developmental biology, lung disease, multi-omics, bioinformatics, and systems biology

Objectives
At the conclusion of this session, the participant will be able to:

- learn the innovative technologies for single-cell multiomics, spatial multiomics, and data analysis of the lung
- learn the newest discoveries from LungMAP that could inform lung research
- learn how to access and use the LungMAP resources

The overall goal of LungMAP is to build a molecular and cellular atlas of the human lung to serve as a reference to better understand both normal biology and disease pathobiology. LungMAP Phase 3 aims to utilize the power of single-cell omics and other innovative technologies to identify the pathogenic mechanisms of lung disease at cellular resolution, including cell

types critical to disease initiation and progression, aberrant molecular pathways in abnormal and diseased cell states, and targets for novel lung disease therapies. Speakers will describe progress on profiling pediatric and adult diseases using single-cell multiomics and spatial multiomics.

12:00 Mapping Airway Epithelial Cell-Immune Cell Interactions in Asthma and COPD

12:12 Cell-Cell and Cell-Matrix Interactions Driving Progressive Fibrosis in Interstitial Lung Diseases

12:24 Single-Cell and Spatial Multiomics Understanding of Childhood Interstitial Lung Disease

12:36 Single Cell-Resolution Cross-Comparison of Pediatric and Adult Lung Diseases

12:48 Postnatal Human Lung Development Identify Multiple Stages of Lineage Differentiation

CLINICAL

MID-DAY SYMPOSIUM

MD32 NHLBI- SUPPORTED PEDIATRIC COHORTS TO ELUCIDATE THE GROWING LUNG

Division of Lung Diseases, NHLBI, NIH

12:00 P.M. - 1:00 P.M.

Target Audience
Neonatologists, pediatric pulmonologists, clinical researchers, respiratory therapists, epidemiologists, data scientists

Objectives
At the conclusion of this session, the participant will be able to:

- learn new findings about effects of antenatal late preterm steroids on lung function at Age 6 years
- learn new findings about the impact of early life breathing patterns on Lung function and sleep at preschool age
- learn from experiences in cohort retention and pulmonary function testing in young children

Longitudinal birth cohorts elucidate the impact of early life events on lung function. This session describes 4 NHLBI-supported observational studies of newborn cohorts, retained and studied at preschool/school age. Cohort retention strategies, analyses and results will be presented. The 'Antenatal Late Preterm (ALPS)' follow-up study examines impact of antenatal steroid administration on pulmonary/ neurocognitive outcomes at age 6 years.'HYdrocortisone for BPD Respiratory and Developmental (HYBRiD) Outcomes', evaluates outcomes of receiving hydrocortisone post-natally upon motor, cognitive, academic, and pulmonary function at school-age. The Post-Vent study follows deeply phenotyped preterm infants during their stay in the Neonatal Intensive Care Unit - 'Pre-Vent Study' newborns at pre-school age, for asthma, sleep, and neurodevelopmental outcomes.

12:00 The Antenatal Late Preterm Steroid (ALPS) Trial and Follow-Up Studies

12:15 HYdrocortisone for BPD Respiratory and Developmental (HYBRiD) Outcomes Study- Retaining the Cohort for Long-Term Outcomes

12:30 The Pre-Vent Study Deep Phenotyping in an Extremely Preterm Cohort in the NICU

12:45 The Post-Vent Study- a Follow Up of the Pre-Vent Cohort at School Age

CLINICAL

MID-DAY SYMPOSIUM

MD33 BREATHING EASY: UNCOVERING DETERMINANTS AND TREATMENTS OF POST-SURGICAL PULMONARY COMPLICATIONS

Division of Lung Diseases, NHLBI, NIH

12:00 P.M. - 1:00 P.M.

Target Audience
Many healthcare providers (e.g. pulmonary doctors, other internists, anesthesiologists, surgeons, nurses, respiratory therapists, physical therapists) trainees caring for patients undergoing surgery; researchers in lung and perioperative lung injury.

Objectives
At the conclusion of this session, the participant will be able to:

- Be able to more appropriately refer to reliable and up-to-date li terature in the field of perioperative pulmonary complications.
- Will integrate new strategies to manage the care of surgical pa tients, particularly those at high risk for pulmonary complicatio ns.
- Be able to apply new data to stratify patients on their risk to de velop postoperative pulmonary complications.

Postoperative pulmonary complications are a major contributing factor for morbidity and mortality in the US with very few evidence-based interventions. To develop and implement pre-, intra-, and post-operative interventions to reduce complications, the NHLBI supported program "An Anesthesia-Centered Bundle to Reduce Postoperative Pulmonary Complications" was initiated. In this session, speakers will address the current state of the art in the field, report on the primary outcomes of the study, and present a secondary analysis of the effects of sex and mechanical power on outcomes.

12:00 Update on Postoperative Pulmonary Complications

12:15 An Anesthesia-Centered Bundle to Reduce Postoperative Pulmonary Complications

12:30 The Effects of Sex and Mechanical Power to Modulate Pulmonary Outcomes after Surgery

12:45 Incentive Spirometry: Is It Still a Thing?

BASIC • CLINICAL

MID-DAY SYMPOSIUM

MD34 ARTIFICIAL INTELLIGENCE ON CHEST CT TO IMPROVE THE DEFINITION OF LUNG DISEASES AND THEIR SUBTYPES

Division of Lung Diseases, NHLBI, NIH

12:00 P.M. - 1:00 P.M.

Target Audience
The target audience will include researchers, physicians, and vendors that are interested in the role of chest CT in defining the diseases and their subtypes and the latest development of AI/ML models on chest CT.

Objectives
At the conclusion of this session, the participant will be able to:

- provide evidence showcasing how AI/ML can expedite the interpretation of chest CT results, improving diagnostic efficiency
- discuss the vision for the integration of AI/ML in regular clinical practice concerning chest CT analysis
- speakers will interact with attendees to understand their needs and concerns

In recent years, breakthroughs in artificial intelligence (AI) and machine learning (ML) have significantly transformed various sectors in healthcare and medicine, including ways to enhance processing and analysis of chest CT scans. This session will showcase innovative models that utilize large datasets of chest CT images, employing both supervised and unsupervised training techniques. This session will present AI/ML models that are capable of identifying novel imaging features and biomarkers that remain elusive through conventional analysis and examples of specific diseases (e.g., COPD and Fibrotic Lung Disease) and their subtypes that benefit from these discoveries.

12:00 AI/ML to Go Deeper to Define Subtypes of Emphysema and COPD

12:15 Harnessing Foundation Models and Synthetic Data for Chest Disease Quantification and Progression Analysis

12:30 From Pixels to Prognosis: Unlocking the Potential of Deep Learning in Fibrotic Lung Disease Imaging Analysis

12:45 Machine Learning and Texture-Based CT Radiomics Analysis for Predicting COPD Outcomes

CLINICAL

MID-DAY SYMPOSIUM

MD35 UPDATES ON ARDS, PNEUMONIA, AND SPESIS PHENOTYPING CONSORTIUM

Division of Lung Diseases, NHLBI, NIH

12:00 P.M. - 1:00 P.M.

Target Audience
providers of lung health, investigators in lung physiology and pathophysiology, specific patient groups or multiple groups

Objectives
At the conclusion of this session, the participant will be able to:

- learn the APS phenotype consortium progress
- understand the APS phenotype consortium center-specific projects
- learn about the APS consortium ancillary studies, data and biospecimen and how to access

ARDS, pneumonia, and sepsis are common critical illness syndromes with substantial heterogeneity. NHLBI and NIGMS issued awards to fund the ARDS, Pneumonia, and Sepsis (APS) Phenotyping Consortium to conduct a longitudinal cohort study of 4,000 participants with ARDS, pneumonia, or sepsis, and collect multidimensional data for up to one year from the time of

hospitalization to allow for rigorous phenotyping. This session will inform the research community on the progress of the consortium and the availability of ancillary study as well as data and biospecimen.

12:00 APS Consortium Progress

12:10 Update on Ancillary Study Requests

12:20 Center-Specific Projects-1

12:25 Center-Specific Projects-2

12:30 Center-Specific Projects-3

12:35 Center-Specific Projects-4

12:40 Center-Specific Projects-5

12:45 Center-Specific Projects-6

12:50 Q/A Session

BASIC • TRANSLATIONAL

MID-DAY SYMPOSIUM

MD36 HIGHLIGHTS ON PRECLINICAL MODELS OF IPF - AN NHLBI CONSORTIUM

Division of Lung Diseases, NHLBI, NIH

12:00 P.M. - 1:00 P.M.

Target Audience
Those with research interests involving the study of idiopathic pulmonary fibrosis and other fibrotic lung diseases.

Objectives
At the conclusion of this session, the participant will be able to:

- learn new findings regarding the pathogenesis of IPF from its onset through disease progression
- increase awareness among the broader IPF research community of the availability of new and improved model systems to study IPF
- appropriately design research studies involving IPF by leveraging model systems uniquely suited to uncover specific types of disease mechanisms, as well as improve model selection for screening and testing new drugs/biologics that target IPF

The lack of preclinical model systems that effectively reproduce the pathologic features of human idiopathic pulmonary fibrosis (IPF) and can also be exploited to assess drug efficacy, is a significant impediment to the realization of clinical treatments for this devastating disease. To breach this gap, the NHLBI created the IPF Models Consortium. At conclusion of this initiative, this session will provide the attendees with an overview of the consortium, will highlight achievements for each of the five U01 projects, and will increase audience's awareness of the availability and utility of these models for the study of IPF.

12:00 Novel Mouse Models for Advancing Pre-Clinical Discoveries in Idiopathic Pulmonary Fibrosis

12:12 Development of In Vitro Models of Progressive Fibrosis for Drug Screening

12:24 Revealing the Epithelial-Mesenchymal Cross-Talk in Pulmonary Fibrosis through iPSC Models

12:36 A Novel Ferret Model of IPF Exhibits Persistent Fibrosis and Airway Remodeling

12:48 Characterizing the Role of ECM and Fibroblasts in Pulmonary Fibrosis

CLINICAL

MID-DAY SYMPOSIUM

MD37 BIOMARKER-DIRECTED THERAPIES FOR ASTHMA - LESSONS LEARNED IN THE PRECISE NETWORK

Division of Lung Diseases, NHLBI, NIH

12:00 P.M. - 1:00 P.M.

Target Audience
Researchers and pulmonary physicians desiring up to date information on individualized care for patients with severe asthma

Objectives
At the conclusion of this session, the participant will be able to:

- understand how biomarker-directed clinical trials are designed and conducted and how the results of these trials should be interpreted
- understand lessons learned in the PrecISE network that should inform future precision medicine trials in asthma and related diseases
- recognize opportunities for future use of CT imaging and sputum analyses to select therapies for individual patients with severe asthma

This session reports recent data from the PrecISE Network, which recently completed biomarker-directed trials of five

interventions in severe asthma. Attendees will learn about the study design, how to interpret the trial results, and how CT imaging and sputum analyses may be used in the future to inform the selection of treatments for individual patients who respond poorly to standard therapies.

12:00 Design of the PrecISE Network and It's Trial Protocol

12:12 Potential Role of CT Imaging in Endotypes of Severe Asthma

12:24 Potential Role of Sputum Analyses in Endotypes of Severe Asthma

12:36 Protocol Adaptations in PrecISE, Statistical Analysis, and Interpretation of Biomarker-directed Clinical Trial Data

12:48 Questions and Discussion

Wednesday Afternoon, May 21

BASIC • CLINICAL • TRANSLATIONAL

CRITICAL CARE TRACK

D81 LUNG-BRAIN INTERACTION IN CRITICAL ILLNESS: CLINICAL IMPLICATIONS OF MECHANICAL VENTILATION

Assemblies on Critical Care, Clinical Problems, Respiratory Structure and Function

11:00 A.M. - 12:30 P.M.

Target Audience
Physicians, nurses, physiotherapies, respiratory therapists, medical students, residents, health care students

Objectives
At the conclusion of this session, the participant will be able to:

- Summarize the Pathophysiology of Cerebral Changes in Mechanically Ventilated Patients and its Neurological Consequences
- Describe Mechanical Ventilation in Acute Brain Injury
- Define Current Landscape of Pharmacological Management of Delirium in ICU: A Focus on Mechanically Ventilated Patients and Ventilator-Associated Brain Injury: Evolving paradigms

Critically ill patients are often affected by complex, pathophysiological interactions between the lungs and the brain, significantly impacting their clinical course. Mechanical ventilation and currently utilized ventilatory strategies may precipitate

primary or secondary brain injury. Understanding the bidirectional crosstalk between lungs and brain is paramount for developing targeted management strategies that may improve patient outcomes. Further exploration of the mechanisms underlying lung-brain interactions and targeted management strategies, we can optimize outcomes for critically ill patients, emphasizing the importance of a multidisciplinary approach and collaboration in the intensive care setting.

11:00 **Introduction**

11:06 **Pathophysiology of Cerebral Changes in Mechanically Ventilated Patients**

11:18 **Neurological Consequences of Acute Respiratory Failure**

11:30 **Multimodal Neuromonitoring Techniques for Early Detection and Management of Neurologic Complications**

11:42 **Mechanical Ventilation in Acute Brain Injury: Individualized clinical advice**

11:54 **Current Landscape of Pharmacological Management of Delirium in ICU: A Focus on Mechanically Ventilated Patients**

12:06 **Ventilator-Associated Brain Injury: Evolving paradigms**

12:18 **Q & A**

BASIC • TRANSLATIONAL

SCIENTIFIC SYMPOSIUM

D82 RESPIRATORY CONVERSATIONS: ADVANCES IN ORGAN-ORGAN CROSSTALK IN PULMONARY PATHOBIOLOGY

Assemblies on Respiratory Cell and Molecular Biology, Allergy, Immunology and Inflammation, Respiratory Structure and Function

11:00 A.M. - 12:30 P.M.

Target Audience
Basic and translational as well as physician scientists and clinicians with an interest in translational lung research

Objectives
At the conclusion of this session, the participant will be able to:

- describe the complex interactions of the lung with other organs
- identify organ-organ crosstalk particularly important in specific pathobiologies
- understand the application of novel methods to study organ-organ crosstalk

This symposium will present the emerging field of organ-organ crosstalk, focusing on its pivotal role in pulmonary pathobiology. Understanding the complex interactions between the lungs and other organs can provide critical insights into disease mechanisms and therapeutic approaches. The session aims to bring together leading researchers to discuss the latest discoveries, technological advancements, and clinical implications of organ-organ communication in respiratory health and disease.

11:00 **The Lung-Kidney Axis: Interactions and Implications in Pulmonary and Renal Pathophysiology**

11:18 **The Lung-Gut Axis: Microbiome Interactions and Their Impact on Pulmonary Health**

11:36 **Lung-Bone Marrow Crosstalk: Immune System Interactions in Pulmonary Health and Disease**

11:54 **Neuro-Respiratory Interactions: The Role of the Brain in Pulmonary Health and Disease**

12:12 **Lung-Liver Crosstalk: Lung Conversations with Systemic Immunity for Fighting Respiratory Infection**

CLINICAL

SCIENTIFIC SYMPOSIUM

D83 POST-INFECTIOUS PULMONARY COMPLICATIONS: TB, SARS-COV-2, AND BEYOND

Assemblies on Pulmonary Infections and Tuberculosis, Respiratory Cell and Molecular Biology

11:00 A.M. - 12:30 P.M.

Target Audience
Basic scientists exploring models of chronic lung injury after infection; clinicians who see patients who after severe pneumonia; clinicians who practice in regions endemic for TB or are interested in bronchiectasis

Objectives
At the conclusion of this session, the participant will be able to:

- understand the breadth of post-infectious pulmonary complications following infections from many different pathogens
- explore mechanisms of pathogen-mediated damage and aberrant host responses that result in remodeling that underpin the development of post-infectious pulmonary complications
- understand the abilities and limitations of current animal models and real-world patient-based clinical trials to solve existing research gaps

Continued improvements in the treatment of pulmonary infections has paradoxically resulted in a rise in survivors with post-infectious pulmonary complications (PIPCs). PIPCs have been increasingly recognized following tuberculosis and SARS-CoV-2. Independent of pathogen, most studies of pulmonary infections focus on mortality and not long-term morbidity among survivors. In this session, we establish a conceptual scope for PIPCs and discuss globally significant pulmonary pathogens, examining how these pathogens can damage different components of the lung, resulting in a spectrum of PIPCs, and explore mechanisms for the transition from acute infection to PIPC. This session summarizes highlights from a 2024 ATS Official Document, and concludes with a proposed research agenda for the audience to act upon.

11:00 **The Broad Scope and Myriad Manifestations of Post-Infectious Pulmonary Complications**

11:15 **Walking a Tightrope: Balancing the Host Response After Pulmonary Infections**

11:30 **Preclinical Models of PIPCs: Paving the Path Forward**

11:45 **Intersecting Interstitial Lung Disease and Post-Infectious Fibrosis**

12:00 **The Vicious Vortex of Bronchiectasis: The Role of Recurrent Infections in Evolving PIPCs**

12:15 **Charting the Course for Next-Gen Clinical Trials of PIPCs**

CLINICAL

SCIENTIFIC SYMPOSIUM

D84 STRATEGIES TO IMPROVE PATIENT-CENTEREDNESS AND DIVERSITY IN CLINICAL TRIALS OF OSA CARE

Assembly on Sleep and Respiratory Neurobiology

11:00 A.M. - 12:30 P.M.

Target Audience
This symposium is targeted at researchers and clinicians who conduct clinical trials in sleep medicine or implement evidence from trials.

Objectives
At the conclusion of this session, the participant will be able to:

- better understand current best practices around including patients in trial design and leadership
- apply best practices to improve trial generalizability and reach marginalized communities
- apply practical strategies to implement best practices around patient engagement in OSA trials

As we design new clinical trials for OSA, there are increasing calls to include patients who are representative of those we care for in usual practice, including patients with symptoms and those of underserved racial and ethnic minority groups. Past efforts to include such patients have been limited in part due to the burdens of trial participation and ineffective patient outreach. To develop high-quality evidence, it is critical that we understand and overcome challenges to recruitment and retention. Through state-of-the-art reviews and an in-depth panel discussion, trialists and patients will review strategies to design randomized trials with patients in mind.

11:00 **Achieving Patient Involvement in Trial Design and Leadership**

11:15 **Patient-Centered Design of Clinical Trials**

11:30 **Recruiting Diverse Populations**

11:45 **Expanding Population Reach with Pragmatic Trial Designs**

11:55 **Panel Discussion: Engaging Patients and Communities in Trial Design and Completion**

12:00 **Panel Discussion: Engaging Patients and Communities in Trial Design and Completion**

12:05 **Panel Discussion: Engaging Patients and Communities in Trial Design and Completion**

12:11 **Panel Discussion: Engaging Patients and Communities in Trial Design and Completion**

12:16 **Panel Discussion: Engaging Patients and Communities in Trial Design and Completion**

12:21 **Panel Discussion: Engaging Patients and Communities in Trial Design and Completion**

CLINICAL • TRANSLATIONAL

CLINICAL TOPICS IN PULMONARY MEDICINE

D85 RESPIRATORY MANIFESTATIONS OF ANCA-ASSOCIATED VASCULITIS: LESSONS FROM RECENTLY COMPLETED RCTS

Assemblies on Clinical Problems, Allergy, Immunology and Inflammation, Critical Care

11:00 A.M. - 12:30 P.M.

Target Audience
Clinicians caring for patients with symptoms involving the upper and/or lower respiratory tract, clinical and translational researchers

Objectives
At the conclusion of this session, the participant will be able to:

- increase recognition of respiratory manifestations of ANCA-associated vasculitis
- apply new treatment approaches to respiratory manifestations of ANCA-associated vasculitis
- improve the quality of life/health status of patients with respiratory manifestations of ANCA-associated vasculitis through minimization of systemic glucocorticoids

Respiratory manifestations of ANCA-associated vasculitis (AAV) are commonly the presenting features of the disease and significantly impact quality of life. However, effective treatment options for ENT and lung features of AAV have historically been very limited, and they have rarely been the focus of trials. In this session, we will review results of multiple recent randomized controlled trials that have provided data on new treatment options for these challenging issues.

11:00 **Approach to Interstitial Lung Disease and Pulmonary Parenchymal Involvement in ANCA-Associated Vasculitis**

11:15 **Expanding Therapeutic Options in EGPA (Eosinophilic Granulomatosis with Polyangiitis)**

11:30 **New Insights into Diffuse Alveolar Hemorrhage Due to ANCA-Associated Vasculitis**

11:45 **Interventions for Airway Involvement in ANCA-Associated Vasculitis**

12:00 **Maintenance of Remission in ANCA-Associated Vasculitis: Who, When, With What, and Why?**

BEHAVIORAL

SCIENTIFIC SYMPOSIUM

D86 COMMUNITY ENGAGEMENT FOR PULMONARY AND ENVIRONMENTAL HEALTH RESEARCH: LESSONS LEARNED FROM COMMUNITY PARTNERS, SITE ACCESS, AND RECRUITMENT

Assemblies on Environmental, Occupational and Population Health, Behavioral Science and Health Services Research

11:00 A.M. - 12:30 P.M.

Target Audience
pulmonary and critical care clinicians; clinical epidemiology researchers; environmental health scientists, trainees

Objectives
At the conclusion of this session, the participant will be able to:

- understand the ethical arguments for the importance of community engagement in environmental health research
- compare how community engagement strategies differ across research and cultural contexts (e.g., Border, global, and Indigenous research foci)
- increase confidence in discussing community engaged research opportunities with patients and communicating the results of community-engaged results to patients in relevant communities

As environmental health problems become increasingly complex, successful community partnerships are vital to impactful research. However, real world challenges and logistical barriers to carrying out community engagement research protocols are not well documented in peer-reviewed literature. This session offers insights regarding both successes and failures in pulmonary and environmental health research with community engagement approaches across public, border, global, tribal

health, and even from a patient's perspective. The symposium will include multidisciplinary insights into how best to approach community engagement in environmental health research, including implementation science and bioethics and policy considerations.

11:00 Session Introduction

11:05 A Community-Based Organization's Perspective on Environmental Health Research

11:20 The Binational Early Asthma and Microbiome Study: Prioritizing Consistent Data Collection across the US-MX Border

11:32 From Household Air Pollution to Mentored Tuberculosis Research in Uganda

11:44 The Healthy Hogans Project: Collaborating with the Navajo Nation to Install Air Cleaners inside Navajo Homes

11:56 Engaging Communities: Implementing Approaches to Participatory Research in Respiratory Health

12:08 The Ethical Importance of Community Partnerships: Challenges and Opportunities

12:20 Discussion

12:00 Breathe Easy: Home Ventilator Diagnostics

12:20 Vent Check: Inpatient Ventilator Diagnostics

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