

Advance Program

ATS 2024
International
Conference



San Diego, CA | May 17-22
conference.thoracic.org



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ATS 2024 INTERNATIONAL CONFERENCE MAY 17-22, San Diego, CA

This ATS International Conference Advance Program is published by the ATS as a service to attendees. This publication contains the programs and speakers for the postgraduate courses, scientific and educational sessions presented at the conference.

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The information contained in this program is up to date as of January 20, 2024.

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

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ATS: COMMITTED TO EXCELLENCE IN CONTINUING MEDICAL EDUCATION AND SCIENTIFIC EXCHANGE

The American Thoracic Society is committed to providing education and scientific exchange of the highest quality at our International Conference and other programs.

As an accredited provider of the Accreditation Council for Continuing Medical Education (ACCME), the ATS must ensure objectivity, scientific rigor, balance, and freedom from commercial bias in Conference presentations.

ATS relies on the assistance of Conference Session organizers, chairs and presenters, Assembly Program Committees, the ATS Education Committee, and the ATS International Conference Committee to accomplish this. In keeping with ACCME standards and ATS policies on management of conflict of interest, all moderators and speakers must complete conflict of interest review and resolution prior to the Conference.

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



PG1A CRITICAL CARE ULTRASOUND AND ECHOCARDIOGRAPHY I

R This is part 1 of a two-part course which includes PG1B on Saturday, May 18. Those registering for PG1A will be registered for PG1A and PG1B. Pre-registration and additional fees required. Attendance is limited.

Member: \$1230

LMIC Member: \$1,165

Non-Member: \$1640

In-Training Member: \$935

LMIC In-Training Member: \$655

In-Training Non-Member: \$1060

Assembly on Critical Care

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

Target Audience

Providers of critical care or emergency medicine

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 **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 2024: A COMPREHENSIVE, HANDS-ON GUIDE TO BASIC BRONCHOSCOPY, EBUS, AND GUIDED BRONCHOSCOPY

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

Member: \$620	In-Training Member: \$395
LMIC Member: \$435	LMIC In-Training Member: \$280
Non-Member: \$725	In-Training Non-Member: \$520

Assemblies on Clinical Problems; Critical Care; 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 and children 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 and navigational 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 Outcomes in High Risk Patients

8:55 Role of Flexible Bronchoscopy in Management of Hemoptysis

9:20 Pediatric Flexible Bronchoscopy for the Adult and Pediatric Bronchoscopist

9:45 Break

10:00 The Fundamentals of Lineal EBUS

10:25 Navigational Bronchoscopy: From Fluoroscopy to Robotics

10:50 Bronchoscopic Lung Volume Reduction

11:15 Lunch

11:55 Practical Skills Session:

- Bronchoscopy With Biopsy and Needle Aspiration of Endobronchial Lesion
- Bronchoscopic Management of Hemoptysis
- Management of the Difficult Airway Including Tracheostomy 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

1:35 Break

3:55 Questions and Wrap-Up

CLINICAL

POSTGRADUATE COURSE

PG3 HOME MECHANICAL VENTILATION: EVIDENCE AND HANDS ON EXPERIENCE WITH THE EXPERTS

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

Member: \$620	In-Training Member: \$395
LMIC Member: \$435	LMIC In-Training Member: \$280
Non-Member: \$725	In-Training Non-Member: \$520

Assembly on Sleep and Respiratory Neurobiology

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

Target Audience

Health care providers who care for patients with chronic respiratory failure including use of invasive and noninvasive ventilation in the home; physicians, advanced practice providers, nurses, respiratory therapists, fellows

Objectives

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

- know evidence based management of chronic hypercapnic respiratory failure syndromes including neuromuscular disease, hypercapnic COPD, obesity hypoventilation syndrome
- learn strategies in transitioning patients with chronic respiratory failure from hospital to home
- develop expertise on management of Noninvasive and invasive ventilation including advanced respiratory assist devices and home mechanical ventilators

This combined didactic and skills-based course aims to highlight state of the art, evidenced based management of chronic respiratory failure syndromes including neuromuscular disease, hypercapnic COPD, obesity hypoventilation, and other hypoventilation disorders. The skills-based section will focus on state of the art management of invasive and noninvasive ventilation including home mechanical ventilation and daytime ventilation practices. Attendees will have the opportunity to become familiar and comfortable with device algorithms, modes, interpretation of device downloads, and apply these skills towards specific disease states to optimize patient care.

- 8:00 Introduction
- 8:05 Initiation of NIV in Neuromuscular Disease: Lung Function, Insurance Stipulations, and More
- 8:40 Is the Sleep Lab Needed for Initiation and Titration of NIV?
- 9:15 Pressures, Volumes, and Algorithms: Does Ventilator Mode Matter?
- 9:50 Break
- 10:10 Can PAP and NIV Keep COPD Patients Out of the Hospital?
- 10:45 Smoothing Transitions From Hospital to Home for Serious Respiratory Disorders
- 11:20 What Is the Role of Tracheostomy for Chronic Respiratory Failure in 2024?
- 11:55 Lunch
- 12:45 Practical Skills Session:
 - Respiratory Assist Devices (ST/VAPS)
 - Home Mechanical Ventilators and Daytime/Sip Ventilation (Vivo45, Luisa, and VOSCN Ventilators)
 - Home Mechanical Ventilators and Daytime/Sip Ventilation (Astral and Evo Ventilators)
 - Mastering Downloads for Home Ventilators
 - Mechanical Airway Clearance Devices
- 2:30 Break

CLINICAL

POSTGRADUATE COURSE

PG4 PEDIATRIC ADVANCED DIAGNOSTIC AND INTERVENTIONAL BRONCHOSCOPY

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

Member: \$620	In-Training Member: \$395
LMIC Member: \$435	LMIC In-Training Member: \$280
Non-Member: \$725	In-Training Non-Member: \$520

Assembly on Pediatrics

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

Target Audience

Clinicians, Pediatric Pulmonologists, and Clinical Fellows Who Perform Bronchoscopy

Objectives

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

- describe new advanced diagnostic and interventional bronchoscopy techniques in children.
- more appropriately refer and provide care to children who could benefit from advanced diagnostic and therapeutic bronchoscopy procedures.
- define likely complications and management strategies for advanced bronchoscopic procedures in children.

This course will introduce attendees to a broad spectrum of advanced diagnostic and interventional pediatric flexible bronchoscopy techniques including cryotherapy, electrocautery and TEF repair, transbronchial biopsy, endobronchial ultrasound, navigational biopsies, and endobronchial valves. Indications, risks and benefits will be discussed as well as strategies for partnering with adult pulmonologists. This will be followed with hands-on practice under the guidance of leaders in the field of advanced pediatric bronchoscopy. The course will offer insights relevant to both trainees and experienced bronchoscopists.

- 8:00 The Definition, Growth, and Development of Pediatric Advance Diagnostic and Interventional Bronchoscopy**
- 8:30 Flexible Bronchoscopic Cryotherapy**
- 9:00 Indications and Outcomes for Endobronchial Valves in Children**
- 9:30 Break**
- 9:40 Endoscopic Management of Tracheoesophageal Fistulas**
- 10:10 Peripheral Lung Nodule Biopsy**
- 10:40 EBUS and EUS in Children**
- 11:10 Management of the Complications of Advanced Procedures**
- 11:40 Lunch**
- 12:38 Practical Skills Session:**
- Endoscopic Cryotherapy
 - Endobronchial Ultrasound
 - Endobronchial Valves
 - Navigational Biopsy
 - Endoscopic Electrocautery
 - Title Management of Complications From Advanced Procedures
- 2:05 Break**

CLINICAL**POSTGRADUATE COURSE**

PG5 LET ME CATCH MY BREATH: BEST PRACTICES IN PULMONARY FUNCTION TESTING

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

Member: \$455

LMIC Member: \$320

Non-Member: \$560

In-Training Member: \$265

LMIC In-Training Member: \$190

In-Training Non-Member: \$395

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.

Objectives

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

- gain further understanding of 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 the new technical standards published in the past several years 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 Winds of Change: Updates in Spirometry Measurement and Interpretation

8:50 Step Into My Phonebooth: Interpretation of Static Lung Volumes

9:20	Classy Gases: Diffusing Capacity Assessment and Interpretation
9:50	Break
10:05	Awwww! - PFT Application in Pediatrics
10:35	The Exhalation Station – Real-time Demonstration of PFT Assessment and Troubleshooting
11:15	Panting and Ranting: Small Group PFT Case Discussions
12:15	Lunch
1:00	The Future Is Now - Use of Forced Oscillation Technique in Clinical Practice
1:30	Provocateurs in Pipes: Direct and Indirect Bronchial Challenge Testing
2:10	Break
2:25	Respiration Classification - Complex Patterns in Pulmonary Function
2:55	I'll Huff and I'll Puff: Expert Panel Case Debate
3:55	Concluding Remarks

CLINICAL

POSTGRADUATE COURSE

PG6 COPD 2024: STATE OF THE ART

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

Member: \$455	In-Training Member: \$265
LMIC Member: \$320	LMIC In-Training Member: \$190
Non-Member: \$560	In-Training Non-Member: \$395

Assemblies on Clinical Problems; Allergy, Immunology and Inflammation; Pulmonary Rehabilitation; Respiratory Structure and Function

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

Target Audience

Clinicians, nurses, other allied health staff, researchers, investigators in basic and clinical pertinent to COPD, and sponsors of research

Objectives

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

- improve knowledge on COPD pathophysiology, clinical presentation, and assessment
- gain competence in providing pharmacological and Non-pharmacological management to patients with COPD

- recognize unmet needs for future research in the field
- This course will provide a state of the art update on the understanding of the pathophysiology, clinical course, assessment and management of COPD. It will shed light on recent and ongoing clinical trials and outline evidence-based pharmacological and non-pharmacological management strategies. Attendees will be updated on understanding COPD phenotypes, endotypes and biomarkers as well as recent advances in disease management. The course will also outline unmet and future research needs.

8:00	Welcome and Introduction
8:05	Immunologic Underpinnings of COPD
8:20	Shedding Light on Genetics of COPD
8:35	Role of Microbiome in COPD
8:50	COPD in Non-Smokers
9:05	Physiologic Impairment in COPD, Beyond FEV1
9:20	Questions and Answers
9:35	Break
10:05	Diagnosis of COPD: Reclassification Considerations
10:25	Informative Biomarkers in COPD: Are We There Yet?
10:45	Update on Radiologic Imaging in COPD
11:05	Revisiting COPD Exacerbations
11:25	Questions and Answers
11:40	Lunch
12:40	GOLD 2024 - What Is New?
1:00	Revisiting Inhaled Therapies for COPD
1:20	Biologics for COPD
1:40	Questions and Answers
1:55	Break
2:25	Advances in Bronchoscopic Approaches to COPD
2:40	Non-Invasive Ventilation in COPD
2:55	Telehealth and Home Pulmonary Rehabilitation
3:10	Inhaled Delivery Systems and Oxygen Therapy in COPD: Progress and Hurdles
3:25	Managing the Multimorbidity of COPD
3:40	Questions and Answers
3:55	Closing Remarks

BASIC • CLINICAL • TRANSLATIONAL

POSTGRADUATE COURSE

PG7 A PRIMER ON HEALTH EQUITY RESEARCH FOR CLINICAL, TRANSLATIONAL, AND BASIC SCIENTISTS

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

Member: \$455	In-Training Member: \$265
LMIC Member: \$320	LMIC In-Training Member: \$190
Non-Member: \$560	In-Training Non-Member: \$395

Assemblies on Behavioral and Health Services Research; Respiratory Cell and Molecular Biology; Health Equity and Diversity Committee

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

Target Audience

Clinicians and scientists interested in health equity research and basic or translational scientists interested in incorporating social determinants of health into preclinic research.

Objectives

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

- construct a research question grounded in equity theories and frameworks
- propose a research agenda using tailored methods that center marginalized groups
- create a dissemination plan that maximizes reach and policy impact

Marginalized patients with pulmonary, critical care, and sleep-related illnesses often experience poor health outcomes due to structural barriers to high-quality medical care. However, few scientists have formal training in health equity research methods, limiting the conduct of high-quality studies to promote equitable care. The target audience for this postgraduate course is all scientists who are new to health equity research. The overall goal is to share current best practices of health equity research. This session will leverage case studies and facilitated small group exercises to introduce principles of health equity research and allow participants to apply these principles in real time to practice developing or deepen their own research agenda.

- 8:00 Introduction to Seminar and Learning Objectives
- 8:15 Lecture and Case Study: Health Equity Research Theory and Framework
- 8:45 Lecture and Case Study: Hormonal Regulation of Immunity as a Contributor to Health Disparities
- 9:15 Breakout Session #1: Generating a Health Equity Research Question
- 9:45 Break
- 10:15 Lecture: Social Determinants of Health
- 10:45 Lecture: Centering the Margins
- 11:15 Lecture: Selecting and Applying Quantitative Methods in Equity Research
- 11:45 Lecture: Unique Aspects of Qualitative Methods in Equity Research
- 12:15 Lunch
- 1:15 Lecture and Case Study: A Mixed-Methods Evaluation of Disparities in Clinician Communication
- 1:45 Breakout Session #2: Generating a Health Equity Research Agenda
- 2:10 Break
- 2:40 Panel Discussion: Unknowns in Health Equity Research Across the Translational Research Spectrum
- 3:20 Breakout Session #3: Writing a Health Equity Research Proposal
- 3:45 Review and Wrap-up



ATS 2024
International
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ATS 2024 San Diego, CA

Saturday, May 18

CLINICAL

POSTGRADUATE COURSE

PG1B CRITICAL CARE ULTRASOUND AND ECHOCARDIOGRAPHY II

📌 This is part 2 of a two-part course which includes PG1A on Friday, May 17. Pre-registration and additional fees required. Attendance is limited. See PG1A for course fees.

Assembly on Critical Care

8:00 A.M. - 8:00 A.M.

Target Audience

Providers of critical care or emergency medicine

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: DVT Evaluation

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 Neuro Ultrasound**
- 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 CPR
 - Ask the Exper

CLINICAL • TRANSLATIONAL

POSTGRADUATE COURSE

PG8 BRONCHIECTASIS AND NTM PULMONARY DISEASE: RISK FACTORS, MANAGEMENT, AND RECENT ADVANCES

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

Member: \$455

In-Training Member: \$265

LMIC Member: \$320

LMIC In-Training Member: \$190

Non-Member: \$560

In-Training Non-Member: \$395

Assembly on Pulmonary Infections and Tuberculosis

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

Target Audience

Nurses, respiratory therapists, pulmonologists/respirologists, postgraduate trainees, inclusive/advanced practitioner, those seeing patients with NTM and bronchiectasis without easy or frequent access to expert guidance.

Objectives

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

- understand recent developments in translational and clinical studies related to bronchiectasis and NTM pulmonary disease
- review treatment approaches for bronchiectasis, including evolving data on etiologies, exacerbations, and suppressive inhaled antibiotics and macrolides
- become familiar with current guideline-based treatment of NTM pulmonary disease

The diagnosis and management of bronchiectasis and nontuberculous mycobacteria (NTM) pulmonary infections remains challenging due to a paucity of evidence-based management strategies. There have been recent advances in strategies to suppress and manage bacterial infections such as *Pseudomonas aeruginosa* in those with bronchiectasis, but treatment of NTM pulmonary disease remains substantially more complex. The most recent ATS/IDSA treatment guidelines for NTM pulmonary disease have aided in this insight. The session will review our current knowledge of bronchiectasis and NTM pulmonary disease epidemiology, environmental sources, etiologies, microbiome, existing and evolving therapies, and current clinical trials.

- 8:00 Introduction**
- 8:05 Epidemiology of Bronchiectasis and NTM**
- 8:35 Species and Sources of NTM Acquisition**
- 8:55 Etiologies of Bronchiectasis**
- 9:20 Bronchiectasis and the Altered Microbiome**
- 9:45 Break**
- 10:15 Airway Clearance Modalities**
- 10:50 Antimicrobial Management in Bronchiectasis: Guideline and Current Data**
- 11:15 Breakout Discussion: Bronchiectasis Cases**
- 12:00 Lunch**
- 1:00 Host Vulnerability and Screening for NTM Infection**
- 1:25 Guideline-Based Therapy: Management of MAC and MAB PD**
- 1:50 Breakout Discussion: Complex NTM Cases/What to Do When It's Not MAC or Treatment Isn't Working**
- 2:35 Break**
- 3:05 Current Clinical Trials/What Is in Pipeline: NTM**
- 3:30 Current Clinical Trials/What Is in the Pipeline: Bronchiectasis**
- 3:55 Conclusion**

CLINICAL • TRANSLATIONAL

POSTGRADUATE COURSE

PG9 STATE OF THE ART: LUNG CANCER IN 2024

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

Member: \$455
LMIC Member: \$320
Non-Member: \$560

In-Training Member: \$265
LMIC In-Training Member: \$190
In-Training Non-Member: \$395

Assembly on Thoracic Oncology

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

Target Audience

All providers caring for patients with lung nodules/lung cancer (pulmonologist, thoracic surgeons, radiation oncologist, medical oncologist, NP/PA) there is interested in the translational research being done in this field.

Objectives

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

- better counsel patients on lung cancer screening
- better utilize biomarkers across the spectrum of lung cancer from early detection to treatment response
- better apply recent advances and changes in the treatment of lung cancer to the care of your patients

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

- 8:00 Introduction**
- 8:05 Tobacco Treatment Across the Continuum of Lung Cancer**
- 8:25 Updates in Lung Cancer Screening: Engagement, Progress, Challenges, and Disparities**
- 8:45 Lung Cancer Screening in Asia**
- 9:05 Pulmonary Nodules: Guideline and Management Updates**
- 9:30 Break**

- 9:55 **Interactive Tumor Board**
- 10:25 **The Molecular Basis of Lung Carcinogenesis**
- 10:50 **Biomarkers Across the Lung Cancer Continuum**
- 11:15 **Lunch**
- 12:15 **Advances in the Bronchoscopic Treatment of Lung Cancer**
- 12:40 **Lung Cancer Staging: Changes and Impact on Patient Outcomes**
- 1:05 **Updates in the Medical Treatment of Lung Cancer**
- 1:30 **Updates in Surgical Treatment of Lung Cancer**
- 1:55 **Updates in Radiation Oncology in the Treatment of Lung Cancer**
- 2:20 **Break**
- 2:40 **Interactive Tumor Board**
- 3:05 **The Top 5 in Thoracic Oncology**
- 3:35 **Panel Discussion With the Experts**

BEHAVIORAL

POSTGRADUATE COURSE

PG10 WOMEN IN MEDICINE: EMPOWERING AND DEVELOPING THE NEXT GENERATION OF WOMEN LEADERS IN MEDICINE

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

Member: \$455	In-Training Member: \$265
LMIC Member: \$320	LMIC In-Training Member: \$190
Non-Member: \$560	In-Training Non-Member: \$395

Assemblies on Critical Care; Women In Critical Care

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

Target Audience

Women investigators at all stages (fellows, junior faculty, mid-career, senior) in medicine and leaders in pulmonary medicine invested in increasing the diversity of leadership in pulmonary and critical care medicine and sleep.

Objectives

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

- review the known gender disparities in academic medicine that exist and highlight the extent to which these disparities have been addressed

- identify common barriers to promotion in academic medicine and successful strategies to overcome them
- list actionable items to help continue growing your career in academic medicine as mid- and senior career women

Women in medicine 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 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 become the next division chief to considering alternative career pathways will be covered.

8:00 Introductions

8:15 Women in Medicine: Where Are We Now?

8:35 Breaking Barriers: Strategies for Interview Success for Division Chief or Chair Positions

9:20 Panel Discussion

9:35 How to Prepare to Lead?

9:55 Navigating Sinkholes While Shattering Glass Ceilings: Getting to Promotion

10:15 Small Group Breakout

10:45 Break

10:50 Protecting and Promoting URIM Women Faculty?

11:10 How to Get What You Want, When You Want It

11:30 Should I Leave or Should I Stay?

11:50 Lunch

12:45 Is Medicine for Me Anymore?

1:05 The Duality of Women in Medicine

1:25 Publish or Perish: The Vicious Cycle of Academic Publishing, and How to Break It

1:45 Small Group Breakout

2:15 Break

2:20 Fertility and Reproductive Health

2:40 Mid-Career Blues

3:00 Mentoring the Next Generation: Tips/Tricks

3:20 Small Group Breakout

3:50 Closing Remarks

CLINICAL

POSTGRADUATE COURSE

PG11 STATE OF THE ART IN CARDIOPULMONARY EXERCISE TESTING: PRINCIPLES AND BEST PRACTICES

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

Member: \$455	In-Training Member: \$265
LMIC Member: \$320	LMIC In-Training Member: \$190
Non-Member: \$560	In-Training Non-Member: \$395

**Assemblies on Pulmonary Rehabilitation; Clinical Problems;
Respiratory Structure and Function**

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

Target Audience

Current and future directors of CPET labs, attending physicians, respiratory therapists, clinical physiologists, research trainees and clinical fellows, industry partners for clinical trials, other interested health care providers.

Objectives

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

- to better understand the physiologic principles underlying pulmonary and cardiac function during exercise in cardiopulmonary diseases
- to better understand the utility of CPET to assess safety and prescription for exercise training or pulmonary rehabilitation; stratify disease severity or prognosis; or diagnose mechanisms of exercise limitation
- to develop confidence in application, practice and interpretation of CPET in clinical practice

This course focuses on cardiopulmonary exercise testing (CPET), combining education on CPET guidelines and quality control with introduction to state of the art methods for assessing the upper airway and central hemodynamics during exercise. Interpretive strategies are covered in didactic sessions and by practice-based learning in an interactive small group setting, led by content experts from around the world. The session will also include a live CPET demonstration to reinforce the practical and multidisciplinary aspects of high-quality CPET performance. The session is distinct and complementary to the postgraduate course on pulmonary function testing: delegates are encouraged to attend both to maximize learning opportunities.

8:00 Physiologic Basis for CPET

8:45 Exercise and the Heart: Invasive CPET

- 9:30 Break
- 9:45 Exercise and the Lung: Assessing DH, EIB, and the Upper Airway
- 10:15 Essential Exercise Assessments for Entry Into Pulmonary Rehabilitation
- 10:45 Conducting the Test: Practical Issues
- 11:15 Lunch
- 11:45 Demonstration: Cardiopulmonary Exercise Test With Q&A
- 12:30 Quality Control and Troubleshooting
- 1:00 Data Analysis From Graphic Display
- 1:30 Break
- 1:45 Reference Values
- 2:15 Typical CPET Responses Among Disease States
- 2:45 Making the Case

BASIC • CLINICAL • TRANSLATIONAL

POSTGRADUATE COURSE

PG12 NAVIGATING LONGITUDINAL CARE TRANSITIONS FOR INFANTS, CHILDREN, AND ADULTS WITH BRONCHOPULMONARY DYSPLASIA

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

Member: \$455	In-Training Member: \$265
LMIC Member: \$320	LMIC In-Training Member: \$190
Non-Member: \$560	In-Training Non-Member: \$395

**Assemblies on Pediatrics; Clinical Problems; Critical Care;
Pulmonary Circulation**

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

Target Audience

Neonatal, Critical Care and Pulmonary Fellows, Neonatologists, Pediatric Pulmonologists and Critical Care, Adult Pulmonary and Critical Care, Respiratory Therapists, Neonatal, Pulmonary and Critical Care Nurses and Nurse Practitioners, Ethicists

Objectives

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

- apply evidence based approaches to guide escalation and de-escalation between non-invasive and invasive respiratory strategies when treating severe BPD

- identify care needs amongst transitions in longitudinal BPD care, including unique clinical care and support needs in ICU, inpatient, long-term care, and home settings
- to identify gaps in care and develop novel integrated strategies to enhance the effectiveness of care over the lifespan as the patient moves through infant, child, adolescent, and adult care settings

This course will explore transitions of care encountered by preterm infants affected by severe bronchopulmonary dysplasia (sBPD) from infancy to childhood to adulthood. Selected topics focus on three major transition periods in patients' lives: neonatal admission/hospitalization, transition to home, and transition from pediatric to adult care. Invited faculty will review the physiological evolution during the early course of sBPD, psychosocial support for transition home with medical technology, and in-hospital through post-hospital management of sBPD at patient-based and system-based levels. The need for longitudinal monitoring and follow-up will be emphasized.

- 8:00 BPD Pathogenesis and Progression Across the Lifespan**
- 8:30 Transitions From Acute to Chronic Ventilation Within 'Evolving' BPD**
- 9:00 The Psychology of Escalating Respiratory Support: When Re-Intubation is Not a Failure**
- 9:30 Break**
- 9:45 NICU to PICU Transitions: Site-Specific Challenges in Chronic Respiratory Failure Management**
- 10:15 Discharge Planning for Technology-Dependent Infants With BPD**
- 10:45 Psychology of Transitions: How Do Families Manage Early-Life BPD Care Transitions? (Patient Panel)**
- 11:15 Lunch**
- 11:45 Unexpected Transitions: ICU Readmissions for Infants and Children With BPD**
- 12:15 Development of a BPD Bounce Back Team: Addressing a Community Need for a "BPD Medical Home" Within the PICU**
- 12:45 Approaches to Outpatient Ventilator Weaning and Decannulation Timing for Tracheostomy-Dependent Children With BPD**
- 1:15 Should Former Premies Without BPD Be Followed by a Pulmonologist?**
- 1:45 Break**

- 2:00 Development of an Adult BPD Follow-Up Clinic: Is BPD Also Asthma, COPD, or COBPD?**
- 2:30 Adult Cardiopulmonary Manifestations of BPD**
- 3:00 Adolescence and Adult Experience: How Do Adults Living with BPD Manage Adolescent BPD Care Transitions? (Patient Panel)**
- 3:30 Panel Introduction Regarding: A Collaborative Examination of Knowledge Gaps and Opportunities for Improvement**
- 3:40 Panel Discussion: A Collaborative Examination of Knowledge Gaps and Opportunities for Improvement**

BASIC • CLINICAL • TRANSLATIONAL

POSTGRADUATE COURSE

PG13 TYPE 2 ASTHMA AND BEYOND: MOLECULAR MECHANISMS, PHYSIOLOGY, AND TREATMENT

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

Member: \$455

In-Training Member: \$265

LMIC Member: \$320

LMIC In-Training Member: \$190

Non-Member: \$560

In-Training Non-Member: \$395

Assemblies on Allergy, Immunology and Inflammation; Respiratory Cell and Molecular Biology

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

Target Audience

Clinicians, clinical investigators, and basic investigators focused on immune-mediated airways disease such as asthma and COPD as well as lung immunology in general.

Objectives

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

- understand mechanisms of airway inflammation with a focus on type 2 inflammation. Review methods for scientific investigation in immune-mediated airway disease such as asthma and COPD
- understand the physiology and environmental factors that drive asthma and COPD pathophysiology
- discuss the current and future state of advanced therapies for asthma and COPD. Special sessions dedication to discussion of disparities in therapy and considerations for pediatric asthma.

This session will provide a state of the art summary of the current understanding of the mechanisms, physiology and management of immune mediated airway diseases such as asthma and COPD, with a focus on type 2 inflammation. The course will also present a comprehensive review of the factors that influence disease progression and the current management paradigm.

- 8:00 Welcome**
- 8:05 The Immunology of Type 2 Inflammation in Asthma: What a Pulmonologist Needs to Know**
- 8:35 Environmental and Microbiome Interactions in Asthma: Beyond Allergens and Viruses**
- 9:05 Type 2 Inflammation in COPD**
- 9:35 Type 2 Inflammation in Non-Asthmatic Disorders - Vasculitis, CF, Other Organs**
- 10:05 Break**
- 10:20 Non-Type 2 Asthma - Mechanisms**
- 10:50 Small Airways Dysfunction in Asthma and COPD**
- 11:20 Molecular Phenotyping in Asthma**
- 11:50 Lunch**
- 1:00 Disparities in Asthma Epidemiology and Treatment**
- 1:30 Pediatric Asthma - Special Considerations and Treatment**
- 2:00 Current Asthma Management Highlights - Which Biologic for Which Patient?**
- 2:30 New Therapeutic Targets for Asthma**
- 3:00 Break**
- 3:15 Case Discussion with Faculty Panel**

CLINICAL

POSTGRADUATE COURSE

PG14 INTERSTITIAL LUNG DISEASE: IMPLEMENTING GUIDELINES FOR PATIENT CENTERED CARE

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

Member: \$455	In-Training Member: \$265
LMIC Member: \$320	LMIC In-Training Member: \$190
Non-Member: \$560	In-Training Non-Member: \$395

Assemblies on Clinical Problems; Allergy, Immunology and Inflammation; Behavioral 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:

- apply a consistent, effective strategy to ILD/IPF diagnosis
- understand the range of therapeutics available for ILD and how and when to prescribe them
- 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 New Guidelines for the Diagnosis of ILD

8:35 Applying the Guidelines: Clinical Evaluation of the New ILD Patient

9:00 Recognizing CT Patterns

9:25 Risk Factors, Natural History of Disease, and Monitoring

9:50 Break

10:20 Critically Ill Patients with ILD and Lung Tx

10:45 Speed MDD

11:55 Lunch

12:55 Therapies for Pulmonary Fibrosis

1:20 Therapies for CTD-ILD

1:45 Non-Pharmacologic Care in ILD

2:10 Break

2:40 Tough Cases

3:50 Wrap Up

CLINICAL

POSTGRADUATE COURSE

PG15 YOU'RE THE SWAN THAT I WANT!: A PRIMER ON RIGHT HEART CATHETERIZATION

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

Member: \$225	In-Training Member: \$130
LMIC Member: \$160	LMIC In-Training Member: \$100
Non-Member: \$280	In-Training Non-Member: \$200

Assemblies on Pulmonary Circulation; Critical Care

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

Target Audience

Current trainees (e.g. residents and clinical fellows) and recent graduates of pulmonary/critical care medicine and critical care medicine fellowships

Objectives

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

- learn expert technique for RHC, including how to identify and prevent complications, troubleshooting, ICU-specific nuances to insertion and data interpretation, and common indications for hemodynamic monitoring in the ICU
- interpret RHC waveforms and hemodynamics, how factors including comorbid disease and mechanical ventilation can affect results, and the benefits and drawbacks of different techniques for cardiac output measurement and exercise challenge
- apply RHC data to the diagnosis and risk stratification of patients, and understand how this information can influence patient management decisions in both the inpatient and outpatient setting

This program will review the technical and procedural considerations when performing right heart catheterizations (RHCs) in the outpatient and intensive care settings, discuss interpretation of hemodynamic data and waveform analysis, and provide an overview of how these data can be synthesized to guide diagnostic and management decisions. The session will also address the emerging utility of exercise during RHC and its clinical applications. Through a combination of didactic instruction and case-based problem solving, participants will build a practical skillset that can be readily implemented in the clinical setting.

12:00 Nuts and Bolts of Performing Right Heart Catheterization

12:20 Case Based Discussion

12:45 Break

12:50 Waveforms, Cardiac Output Calculations and Vasoreactivity Testing, Oh My!

1:20 Case Based Stations: Learners Will Breakout Into Small Groups and Rotate Through Expert-Led Case "Stations"

1:50 Break

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

2:20 Small Group Discussion

2:50 Break

3:00 Exercise RHC: Who, What, When, Why and How

3:30 Case Based Discussion

CLINICAL

POSTGRADUATE COURSE

PG16 FUNCTIONAL ASSESSMENT OF THE LUNG: A STATE OF THE ART REVIEW OF OLD AND EMERGING TOOLS

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

Member: \$225	In-Training Member: \$130
LMIC Member: \$160	LMIC In-Training Member: \$100
Non-Member: \$280	In-Training Non-Member: \$200

Assemblies on Respiratory Structure and Function; Allergy, Immunology and Inflammation; Clinical Problems; Environmental, Occupational and Population Health

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

Target Audience

Clinicians, trainees and clinical researchers in pulmonary medicine, allergy/immunology occupational medicine and general internal medicine

Objectives

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

- describe how each tool assesses pulmonary function
- more appropriately apply each tool to manage individual pulmonary patients
- incorporate the tools and the new guidelines to the diagnosis and treatment of pulmonary patients

This course will use a case-based format to review the clinical tools that are currently available for assessing lung function, including pulmonary function test, oscillometry, ventilation-perfusion scan, CT scan, and functional MRI. Each

session will cover the historic and the state of the art aspects of the test so the audience will have a complete understanding in how to apply these tools to their practice.

- 12:00 Pulmonary Function Test: Where Are We Today?**
12:40 Oscillometry: A Test That Has Come a Long Way to Adults
1:40 Break
1:50 Ventilation-Perfusion Scan: Its Role in 21st Century Medicine
2:20 Mosaic Attenuation on CT Scan: What Does It Mean?
3:10 Hyperpolarized 129Xe MRI: What Additional Information Does It Provide?
3:50 Panel Discussion

CLINICAL

POSTGRADUATE COURSE

PG17 COMPREHENSIVE APPROACH TO MANAGEMENT OF COMMON PLEURAL DISEASES

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

Member: \$225	In-Training Member: \$130
LMIC Member: \$160	LMIC In-Training Member: \$100
Non-Member: \$280	In-Training
Non-Member: \$200	

Assembly on Clinical Problems

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

Target Audience

Pulmonologists, thoracic surgeons, hospitalists, APPs and trainees in these fields.

Objectives

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

- apply a patient-centered approach to the management of common pleural diseases
- incorporate newer quality data and guideline recommendations into every day practice
- appropriately determine when we should intervene, when not, and when we should refer

There are some key aspects in the management of common pleural diseases that lack quality data, or for which practice remains institution and physician-dependent. It is for these that certain inaccuracies have been propagated into traditional teaching

that are not backed by literature, albeit limited. Through this session, we aim to discuss the best-approach pathways for these common conditions, in an interactive, fun and educational manner.

- 12:00 Initial and Subsequent Evaluation of Pleural Effusion: What Tests Are Needed?**
12:20 Pragmatic Approach to Diagnosing Suspected Malignant Pleural Effusions
12:40 Decision-Making Between Pleurodesis and Indwelling Pleural Catheters for the Definitive Management of Malignant Pleural EffusionsBreak
1:00 Role of Indwelling Pleural Catheters for Palliating Recurrent Benign Pleural Effusions
1:40 VATS Versus Intrapleural Enzyme Therapy First for Empyema?
2:10 Non-Operative Management of Traumatic and Non-Traumatic ChylothoraxBreak
2:30 Break
2:50 Primary Spontaneous Pneumothorax: When to Intervene and How?
3:10 Algorithmic Approach for Persistent Air LeaksCase Discussion

BASIC • TRANSLATIONAL

POSTGRADUATE COURSE

PG18 PATHOPHYSIOLOGICAL MECHANISMS IN COPD FROM THE MULTI-OMICS PERSPECTIVE

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

Member: \$225	In-Training Member: \$130
LMIC Member: \$160	LMIC In-Training Member: \$100
Non-Member: \$280	In-Training Non-Member: \$200

Assemblies on Respiratory Cell and Molecular Biology; Allergy, Immunology and Inflammation

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

Target Audience

Health professionals who treat patients with COPD, basic researchers with expertise in lung pathophysiology, bioinformaticians with an interest in chronic lung disease.

Objectives

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

- present the latest multiomic findings as they relate to the pathobiology of COPD for all lung cellular compartments (immune, epithelium, endothelium, mesenchymal)
- define clinically relevant cellular molecular states for COPD therapeutics/biomarker development
- discuss applications of different omics modalities and exemplify the implications they can make to clinical practice

This course will shed light on the revolutionary impact that multi-omics technologies have had in understanding the major pathophysiological mechanisms of COPD. By exploring the latest findings, our goal is to highlight the implications of these advancements in clinical practice and equip participants with a comprehensive understanding at a cellular and molecular level. Through didactic lectures and interactive discussions on various technologies, including genomics, proteomics, metabolomics and the microbiome, participants will gain practical knowledge about how these technologies have the potential to impact the diagnosis, classification and development of targeted therapies, ultimately improving patient outcomes and enhancing personalized treatment approaches.

Airway Inflammation and Immunity in COPD

- 12:01 Epigenetic Regulation of Macrophage Populations in COPD**
- 12:18 Functional Remodelling of Neutrophils and Their Progenitors in Early-Stage COPD**

12:35 T-cell Subtypes in COPD

12:52 5-Prime Sequencing and the Rold of B Cells in COPD

1:09 Break

Maintaining Distal Airway and Alveolar Homeostasis in COPD

1:35 Transcriptomic Signatures of Airway Inflammation in COPD

1:52 Single-cell Sequencing and Impaired Maintenance of Alveolar Homeostasis

2:09 Cellular Senescence and Its Impact on COPD

2:26 Impaired Development Pathways and Distal Airway Disease

2:43 Break

Multi-Omics Applications in COPD Research

3:09 Lung Tissue Destruction in COPD With the Lens of Spatial Proteomics

3:26 COPD Genetics and the Role of Fibroblasts

3:43 Microbiome in Health and COPD

NETWORKING SUPER CENTER


Stop by one of the Learning Studios for specialized programming where you can participate in studio talks, panel discussions and networking opportunities

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 the terrace by the Sails Pavilion 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



ATS 2024
International
Conference

ATS 2024 San Diego, CA

Sunday 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

11:30 a.m. - 12:30 p.m.

- MTE1 THE CUTTING EDGE OF LEARNING: EXPLORING AI IN MEDICAL EDUCATION**
- MTE2 BIOLOGIC THERAPIES IN SEVERE ASTHMA: WHICH AGENT FOR WHAT PATIENT**
- MTE3 LUNG TRANSPLANTATION FOR PATIENTS WITH INTERSTITIAL LUNG DISEASE**
- MTE4 NAVIGATING THE EVOLVING THERAPEUTICS IN MANAGEMENT OF PULMONARY SARCOIDOSIS**
- MTE5 REVOLUTIONIZING PNEUMONIA TREATMENT: THE PROMISING ROLE OF BACTERIOPHAGES**
- MTE6 CAUSATION FROM OBSERVATION: HOW WILL OBSERVATIONAL “TRIALS” INFORM CRITICAL CARE IN 2025?**
- MTE7 CELLULAR ALTERATIONS OF AGED LUNGS AND PULMONARY DISEASES CAUSED BY ENVIRONMENTAL FACTORS**
- MTE8 PATHOPHYSIOLOGY, MANAGEMENT, AND TRANSPLANT CONSIDERATIONS IN PORTOPULMONARY HYPERTENSION**
- MTE9 IS EMPYEMA A MEDICAL OR SURGICAL DISEASE IN 2024? A PRO/CON DEBATE.**

MTE10 PULMONARY HYPERTENSION AND LUNG DISEASE: CURRENT APPROACH

MTE11 CREATING A PIPELINE FOR WORKFORCE DIVERSITY: INCLUSIVE RECRUITMENT STRATEGIES FOR TRAINING PROGRAMS

MTE12 FROM FEATHERS TO ANTIFIBROTICS: UPDATES IN EXPOSURES, TREATMENT, AND PROGNOSIS IN HYPERSENSITIVITY PNEUMONITIS

K1: KEYNOTE SERIES

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

The Fran Comi Keynote Lecture will focus on: **Artificial Intelligence in medicine**. With the increasing use of AI in healthcare presenters will focus on the general pros and cons of using AI in the healthcare setting.

YEAR IN REVIEW

A1 CLINICAL YEAR IN REVIEW 1

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

Target Audience

Pulmonary; critical care and sleep providers

Objectives

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

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

The program will discuss general topics of interest to a broad group of providers, inside and outside of these subspecialties. The program is relevant to not only clinicians, but also to researchers and administrators.

9:15 ARDS

9:37 Asthma

9:59 Health Equity

10:22 Lung Cancer

COMMITTEE SPONSORED

A2 AJRCCM, JAMA AND NEJM. DISCUSSION ON THE EDGE: REPORTS OF RECENTLY PUBLISHED PULMONARY RESEARCH

9:15 a.m. - 11:15 a.m.

This session will provide a forum for attendees to interact with the authors and editors about papers published in the American Journal of Respiratory and Critical Care Medicine, Journal of the American Medical Association, and the New England Journal of Medicine.

Papers presented will be recent publications, selected by the editors, and of significant importance to the field of pulmonary medicine. Attendees will have the opportunity to hear presentations directly from the author and address questions to both the authors and editors. The discussion is intended to provide a unique insight into these papers, the selection process, and how the research applies directly to the field of pulmonary medicine.

Speakers and Talks to be Announced

CLINICAL

CLINICAL TOPICS IN PULMONARY MEDICINE

A3 FELLOWS CASE CONFERENCE

Assemblies on Behavioral and Health Services Research; Training Committee

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

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:

- recognize clinical, radiographic, and pathologic findings of rare diseases
- gain insight into clinical decision-making skills demonstrated by master clinicians, radiologists, and pathologists which will improve the quality of learners' practice and potentially improve the quality of care for the learner's patients

- develop strategies to evaluate patients with common symptoms that include uncommon/ rare diseases in the differential diagnosis when appropriate

In this session, five unknown cases will be presented by fellows to a panel of experts in a traditional Clinical Pathology Conference (CPC) format. The panel of experts includes three clinician experts (Anne Dixon, Patricia Rivera, and Eric Schmidt), an expert radiologist (Brett Elicker), and an expert pathologist (Jeffrey Myers). The panel of clinician experts will discuss the key clinical elements of the history and a differential diagnosis. The expert radiologist and pathologist will interpret the imaging and pathology, respectively, which the expert clinicians will then use to further the discussion and ultimately make a diagnosis.

9:15 Expert Clinicians

10:09 Expert Radiologists

Speakers and talks to be announced

CLINICAL

CRITICAL CARE TRACK

A4 ICU EARLY MOBILIZATION: SHOULD WE KEEP MOVING OR MOVE ON?

Assemblies on Critical Care, Pulmonary Rehabilitation

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

Target Audience

Practicing clinicians in critical care, clinical researchers

Objectives

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

- define the implications of important heterogeneity in the definition, timing, and intensity of ICU early mobilization and rehabilitation within existing rigorous landmark clinical trials
- identify controversies of how, when, and if early mobilization should be implemented
- specify key features of future clinical trials to help address the remaining gaps in knowledge

Clinical trials of early mobilization have produced conflicting results, which has created uncertainty as to whether this highly resource-intensive multidisciplinary intervention still has a place in ICU clinical practice. This symposium will provide a comprehensive and nuanced discussion of the current evidence-base, its limitations, and future directions for clinical practice and research.

- 9:15** **What Is in a Name? The Many Definitions of Early Mobilization in Randomized Trials**
- 9:28** **Intensity of Intervention Matters for ICU Rehabilitation**
- 9:41** **Timing of ICU Rehabilitation Matters**
- 9:54** **If You Build It, We Can Move: Lessons in Implementing Mobilization Programs in Clinical Practice**
- 10:07** **Implementation of Mobilization Programs in Low Resource Settings**
- 10:20** **The Future State of Randomized Trials of Early Rehabilitation to Address Gaps in Evidence**
- 10:33** **Where Do We Go From Here?**

BASIC

BASIC SCIENCE CORE

A5 **MULTI-OMIC AND SINGLE CELL APPROACHES FOR ELUCIDATING CELLULAR BIOLOGY AND PATHOBIOLOGY OF LUNG DISEASE**

9:15 a.m. - 11:15 a.m.

High-throughput technologies have revolutionized biomedical research. The advent of genotyping arrays and whole-genome sequencing enabled large-scale genome-wide association studies that shed light on genetic determinants of health and disease, or genomics. Subsequently, high-throughput methods for measuring DNA methylation, chromatin accessibility, transcript levels, proteins and metabolome gave rise to downstream omic sciences. Each omics profile provides valuable information about specific regulatory and metabolic aspects of a biological system, but simultaneous analysis of multiple omics - multi-omics - is necessary to gain holistic insight into disease risk factors, pathogenesis, and the preclinical and clinical manifestations of disease states. Accordingly, multi-omics analyses have high potential to improve disease prevention, diagnosis, treatment, and prognosis. More recently developed single cell technologies have enabled unprecedented cataloging and characterization of cell populations and their transcriptional profiles; they have become an integral part of studies of pathobiology of lung disease. Building on the success of single cell transcriptomics, methods that enable multi-omic profiling of individual cells are beginning to reveal regulatory and functional mechanisms underlying cell state and activity in health and

disease. Finally, spatially resolved omic technologies are providing spatial context and cell-cell interaction data that are critical in understanding disease heterogeneity throughout the lung. This session will highlight recent applications of multi-omic methods, integrated with clinical and other data types, that have made major advances in understanding the role of specific cell types in pathobiology of lung diseases.

Speakers and Talks to be Announced

BASIC • CLINICAL • TRANSLATIONAL

SCIENTIFIC SYMPOSIUM

A6 **ROLE OF SEX IN PULMONARY DISEASE ACROSS THE LIFESPAN**

Assemblies on Pediatrics; Respiratory Cell and Molecular Biology

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

Target Audience

Physicians, advanced practice providers, researchers

Objectives

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

- apply new knowledge in using translationally relevant experimental models and approaches to interrogate the role of sex chromosomes in lung diseases
- describe the role of X- or Y-chromosomes in mediating lung disease pathophysiology
- define the mechanisms by which sex modulates gene expression and distinct biological pathways leading to sex-specific susceptibility or resilience in lung diseases

Sex-specific differences underlie the pathogenesis of many lung diseases. Sex hormones are often considered to underlie differences in susceptibility or resilience to disease. Mammalian cells show intrinsic sex-specific differences suggesting a role of sex chromosomes in differences in prevalence and susceptibility to lung diseases, particularly since genes on the X and Y chromosomes are differentially expressed between male and female cells because of X-chromosome inactivation, gene dosage, or genomic imprinting. The effect of sex chromosomes (X and Y) on the modulation of pulmonary diseases have been recently highlighted in pulmonary diseases ranging the lifespan. This symposium session will address knowledge gaps in the understanding of the contribution of sex to lung diseases across the lifespan.

- 9:15 **Sex Chromosomes Mediate Sex-Specific Differences in Lung Diseases Across the Lifespan.**
- 9:20 **Role of Sex Chromosomes in Neonatal Lung Injury**
- 9:36 **The Role of Y Chromosome in Pulmonary Hypertension**
- 9:52 **Airway Disorders and the Role of Sex as a Biological Variable**
- 10:08 **X Chromosome Associations with Chronic Obstructive Pulmonary Disease and Related Phenotypes**
- 10:24 **Role of Sex on Lung Function Trajectories After Preterm Birth: Links to COPD?**
- 10:40 **Session Wrap Up**

CLINICAL

SCIENTIFIC SYMPOSIUM

A7 WE'RE REALLY COOKING NOW! PRO-CON DEBATE ON GAS STOVE RISKS TO LUNG HEALTH

Assemblies on Environmental, Occupational and Population Health; Behavioral and Health Services Research; International Health Committee

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

Target Audience

Providers of lung health and public health, crossing the majority of respiratory disease states. Particularly interesting to those focused on preventive care, occupational medicine, and air pollution.

Objectives

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

- describe the risks and benefits of cooking with liquified petroleum gas (LPG) in both resource rich and resource poor regions
- better counsel patients on their personal risk of exposure if they use gas stoves and ways to mitigate the risk
- describe health policy implications of promoting or limiting access to gas stoves

Are gas stoves good, bad, or maybe both? In this session, debate will ensue to evaluate the harms and benefits of gas stove cooking in high and low income countries, and the implications of potential policy change to the cooking landscape.

- 9:15 **Are Gas Stoves the Problem? A High-Income Country Pro-Con Debate; Pro: Gas Stoves Cause Lung Disease**
- 9:27 **Are Gas Stoves the Problem? Con: Just the Facts, Please**
- 9:39 **Rebuttal - Are Gas Stoves the Problem? Pro: Gas Stoves Cause Lung Disease**
- 9:42 **Rebuttal - Are Gas Stoves the Problem? Con: Just the Facts, Please**
- 9:45 **Are Gas Stoves the Solution? Pro: Gas Stoves Are the Best Interim Solution for Household Air Pollution in Low- and Middle- Income Countries**
- 9:57 **Are Gas Stoves the Solution? Con: Randomized Trials of LPG Stoves Have Not Improved Studied Health Outcomes in Low- and Middle- Income Countries**
- 10:09 **Rebuttal - Are Gas Stoves the Solution? Pro: Gas Stoves Are the Best Interim Solution for Household Air Pollution in LMICs**
- 10:12 **Rebuttal - Are Gas Stoves the Solution? Con: Randomized Trials of LPG Stoves Have Not Improved Studied Health Outcomes in LMICs**
- 10:15 **Should We Get Rid of Gas Stoves? A Policy Debate; Pro: Getting Rid of Gas Stoves Will Prevent Asthma in the US**
- 10:27 **Should We Get Rid of Gas Stoves? A Policy Debate; Con: Who Will Pay for Electrification in Homes?**
- 10:39 **Rebuttal - Should We Get Rid of Gas Stoves? A Policy Debate; Pro: Getting Rid of Gas Stoves Will Prevent Asthma in the US**
- 10:42 **Rebuttal - Should We Get Rid of Gas Stoves? A Policy Debate; Con: Who Will Pay for Electrification in Homes?**

BEHAVIORAL • CLINICAL

SCIENTIFIC SYMPOSIUM

A8 IMPLICATIONS OF COGNITION, MOOD AND INTERVENTIONAL APPROACHES

Assemblies on Pulmonary Rehabilitation; Behavioral and Health Services Research; Clinical Problems

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

Target Audience

Clinicians and researchers working with patients with chronic lung disease given the high prevalence of cognitive impairment and mood alterations in this patient population.

Objectives

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

- appreciate the prevalence of cognitive impairment and mood disorders in patients with chronic lung disease
- understand the clinical implications of cognition and mood on symptoms, daily activities and respiratory exacerbations
- better counsel patients in their practice on available management strategies such as coaching, mindfulness, and psychosocial interventions

The learner will be able to acquire skills to recognize impairments in cognition and mood in patients with chronic lung disease in their clinical and/or research practices. An overview of pulmonary rehabilitation, health coaching and behavioral interventions will be highlighted.

- 9:15 Patient Speaker to Share Their Lived Experiences**
- 9:20 Effects of Cognition and Dyspnea on Daily Function in Chronic Lung Disease**
- 9:35 Importance of Evaluating Anxiety and Depression in Chronic Lung Disease**
- 9:50 Psychosocial Interventions in Chronic Lung Disease**
- 10:10 Interventions to Facilitate Behavior Change in Chronic Lung Disease**
- 10:30 Panel and Audience Discussion**

BEHAVIORAL • CLINICAL

SCIENTIFIC SYMPOSIUM

A9 TRANSFORMING HEALTHCARE: CHATGPT AND LANGUAGE MODELS IN CLINICAL PRACTICE AND SCIENTIFIC RESEARCH

Assemblies on Behavioral and Health Services Research

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

Target Audience

Nurses, Physicians, Allied health professionals, Junior physicians, Hospital administrators Policy makers

Objectives

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

- understand the current landscape of LLMs, including their design and existing applications
- identify the future applications of LLMs in pulmonary and critical care clinical practice and scientific research
- recognize the technical, social, and ethical concerns with LLMs and the need for guardrails to ensure safe and appropriate LLM use

This scientific symposium presents a unique platform for the pulmonary and critical care communities to explore the transformative applications of Language Models (LLMs) in clinical practice and research. We will discuss the potential of LLMs in enhancing diagnosis, treatment, and patient care as well as opportunities for data analysis, clinical decision-making, and risk prediction in pulmonary and critical care medicine. The symposium will also address challenges such as manuscript authorship, data privacy, model interpretability, and integration of LLMs into existing healthcare systems. Speakers will offer their perspectives on the future of LLMs implementation in pulmonary and critical care fields.

- 9:15 Promise and Perils of LLMs in Pulmonary and Critical Care Medicine**
- 9:30 Unleashing the Power of Language Models in Clinical Practice**
- 9:45 From Manuscripts to Machines: Exploring the Changing Landscape of Peer Review with Language Models**
- 10:00 The Quirks of Research Superpowers: Applying LLMs to Qualitative and Quantitative Methods**
- 10:15 The Natural Language of Clinical Education**
- 10:25 Panel Discussion**

BASIC • CLINICAL • TRANSLATIONAL

SCIENTIFIC SYMPOSIUM

A10 UNLOCKING THE THERAPEUTIC POTENTIAL OF TRAINED IMMUNITY IN RESPIRATORY DISEASES

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

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

Target Audience

Pulmonary scientists seeking to gain novel insights into how trained immunity, a durable form of innate immune cell reprogramming, may be modulated to maintain lung health or inhibit existing respiratory disease progression.

Objectives

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

- to learn about the latest findings in the field of trained immunity and the evidence for its role in the host response to different infectious and inflammatory stimuli
- to understand how knowledge about trained immunity can be translated to address clinical challenges such as vaccine development and modulation of host immune responses to respiratory infections or pathological sterile inflammation
- to become aware of new strategies that have the potential to engage both innate and adaptive immune memory to favor enhanced protection against infectious and Non-infectious inflammatory diseases

This symposium will provide the learner with a comprehensive introduction and overview of trained immunity in the context respiratory and systemic inflammatory diseases. The aim is to explore how functional reprogramming of innate immune cell subsets contributes to protective or pathological responses in the lung. The influence of trained immunity on systemic inflammatory diseases such as sepsis will also be discussed. Individual speakers will review the basic concepts and principles of innate immune memory, the roles played by epigenetics and altered cellular metabolism, as well as potential therapeutic approaches to modulate trained immunity.

- 9:15 Harnessing of Trained Immunity for Vaccine Development Against Mycobacterial and Viral Pathogens**
- 9:33 Trained Immunity of Alveolar Macrophages Enhances Resistance to Bacterial Pneumonia**
- 9:51 Trained Immunity in the Asthma Trajectory from Pregnancy to Childhood**
- 10:09 Trained Immunity Exacerbates Diaphragm Pathology in Muscular Dystrophy**
- 10:27 What's Next? Perspectives on Future Scientific and Clinical Opportunities in Trained Immunity**

BASIC • CLINICAL • TRANSLATIONAL

SCIENTIFIC SYMPOSIUM

A11 LEVERAGING MULTI-OMICS TO ADVANCE PRECISION MEDICINE IN BRONCHOPULMONARY DYSPLASIA

Assemblies on Pediatrics; Respiratory Cell and Molecular Biology

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

Target Audience

Pediatrics pulmonologists, neonatologists, clinical translational and basic researchers interested in pulmonary development and molecular mechanisms of lung injury.

Objectives

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

- to review cutting edge -omics methods and technologies in the study of infants born preterm at risk for BPD
- to develop an understanding of novel insights into the molecular basis of BPD pathogenesis based on recent findings from multi-omic studies
- to identify gaps in knowledge and future directions for clinical-translational research programs that accelerate the discovery of precision therapeutics for preterm infants who are at risk for BPD

Bronchopulmonary dysplasia (BPD) prevention and treatment strategies largely adhere to a “one-size-fits all approach” with little regard given to patient level-heterogeneity, differential clinical phenotypes, and anticipated variable responses to interventions. Integration of multi-omics studies provides a comprehensive understanding of molecular changes contributing to normal development, cellular response, and disease. Multi-omic approaches allow construction of comprehensive causal relationships between molecular signatures and phenotypic manifestations of a particular disease. Resulting information can be utilized to inform diagnostic, treatment, and prevention strategies including the discovery of novel biomarkers and precision therapeutics for infants and children with BPD.

- 9:15 Introduction**
- 9:20 Integrated Single-Cell RNA Sequencing Across Lung Development**
- 9:35 Multi-Omic Characterization of Human Lung Development: Systems-Level Exploration of the Lung Using LungMAP**

- 9:50 Early Airway Microbial Metagenomic and Metabolomic Signatures as Therapeutic Targets for BPD Prevention and Treatment**
- 10:05 Objective Approaches to Multi-Dimensional Phenotyping Infants with Established BPD**
- 10:20 Panel Question and Answer Session**

BEHAVIORAL • CLINICAL
SCIENTIFIC SYMPOSIUM
A12 FORGOTTEN POPULATIONS: DETERMINING RESEARCH PRIORITIES IN HISTORICALLY UNDERSTUDIED VULNERABLE COMMUNITIES

Assemblies on Behavioral and Health Services Research; Health Equity and Diversity Committee

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

Target Audience

Clinicians practicing in pulmonary and/or critical care settings, health disparities researchers

Objectives

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

- identify common challenges to leading respiratory health equity research among Indigenous, SGM, and incarcerated communities
- understand successful strategies for engaging underrepresented communities through community-based participatory research.
- develop new strategies for implementing community-focused interventions to mitigate health disparities in Indigenous, SGM, and incarcerated communities

Achieving equity in respiratory health is a key component of the ATS mission, yet large gaps exist for disparities among many priority populations. Intervention development that is specifically relevant to populations identifying as from Indigenous, sexual and/or gender minority, and currently or formerly incarcerated backgrounds is particularly limited. This symposium will achieve the following objectives: 1) highlight the unique challenges to rigorous research that takes place in understudied priority populations; 2) understand successful strategies of needs-focused community-partnered research to facilitate partnership with understudied priority populations; and 3) identify

the role that community-based participatory research can play in balancing these numerous tensions. Needs Assessment and Introduction of Speakers Patient Speaker How to Tailor Smoking-Cessation Interventions to Indigenous Communities Fulfilling Unmet Needs for LGBT Patients Experiencing Palliative Illness: Safeguarding End-of-Life Care Equity in Sexual and Gender Minority Communities Equitable and Ethical Research for Patients Behind Bars Community-Based Participatory Research: Equitable Solutions Generated by Patients Themselves Panel Discussion

MEDICAL EDUCATION SEMINAR
ME101 RESCUING THE STRUGGLING LEARNER: BEST PRACTICES FOR REMEDIATION

10:30 AM - 11:30 AM

Objectives

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

- identify the struggling learner in multiple levels of graduate medical education training
- improve assessment skills for a struggling fellow to aid in remediation efforts
- develop a collaborative intervention for a struggling learner

Remediation of struggling learners in pulmonary and critical care fellowship programs is a challenge, even for experienced medical educators. This session will use a combined didactic and case-based approach to increase participants' confidence in fellow remediation, and improve their communication skills to aid in delivering formative feedback to different levels of learners.

CLINICAL
ADULT CLINICAL CORE CURRICULUM
CC1 ADULT PULMONARY CLINICAL CORE CURRICULUM

11:30 AM - 1:00 PM

Objectives

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

- integrate current guidelines into the care of people with community acquired pneumonia

- discuss the management of infectious complications in people with bronchiectasis
- describe the current identification and management of people with pulmonary tuberculosis
- 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 Put on Your Thinking CAP: The Latest Evidence in Community-Acquired Pneumonia**
- 11:55 Cough It Up: Infectious Causes and Complications of Bronchiectasis**
- 12:20 Atypical Situation: What's New in the World of Non-Tuberculous Mycobacteria**
- 12:45 Question and Answer**

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. \$30 members/non-members



ATS 2024
International
Conference

ATS 2024 San Diego, CA

Sunday Mid-day, May 19

ASSEMBLY ON AMERICAN JOURNAL OF RESPIRATORY CELL AND MOLECULAR BIOLOGY

MID-DAY SESSION

MD1 RED IN ACTION I: LUNG RESEARCH HIGHLIGHTS FROM AJRCMB

Assembly on American Journal of Respiratory Cell and Molecular Biology

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

Target Audience

individuals interested in basic mechanisms and pathobiology of lung disease; individuals who publish basic mechanistic and translational lung research; individuals interested in the peer review and editorial process for Am J Respir Cell Mol Biol

Objectives

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

- describe new findings about emerging breakthroughs of molecular 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 interaction.
- better understand the features of mechanism-deciphering lung pathobiology research, and elements that create potential for future impact in the field.

The audience-interactive session will include both the early career author presentations of exemplary recent and in-press articles on basic mechanisms of lung disease in the American Journal of

Respiratory Cell and Molecular Biology and will highlight the review process for these articles. Chaired by Associate Editors, novelty and relevance of the work will be highlighted alongside critical comments from external reviewers that were addressed to achieve acceptance. Discussion will highlight how the authors were able to meet reviewer requirements.

- 12:00 Introduction**
- 12:05 Associate Editor summary of review process and potential impact of featured paper**
- 12:15 Summary of recent featured research paper from AM J Respir Cell Mol Biol**
- 12:40 Audience interaction- discussion**

AMERICAN JOURNAL OF RESPIRATORY CELL AND MOLECULAR BIOLOGY

MID-DAY SESSION

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

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:

- apply bronchodilator responsiveness to treatment of patients with uncontrolled asthma
- better diagnose early onset and precursors of chronic lower respiratory disease in young adults.
- apply social network strategies for identification and enrollment of participants for clinical research studies

The purpose of the session is to discuss ongoing research initiatives within the American Lung Association Airways Clinical Research Centers network.

- 12:00 Introduction**
- 12:05 Social Media Recruitment Strategies in an Online Asthma Trial**
- 12:15 Improving Medication Adherence with Telehealthcare Medication Therapy Management to**

Change Health Care Outcomes in Adolescents and Young Adults (MATCH

- 12:25 LEEP / COVID Part 2**
- 12:35 Bronchodilator response in asthma**
- 12:45 Questions**

NATIONAL HEART, LUNG, BLOOD INSTITUTE, NIH

MID-DAY SESSION

MD3 COPDGENE: UPDATES IN COPD EPIDEMIOLOGY, IMAGING, AND BIOMARKERS

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

Target Audience

Researchers, medical trainees, those with an interest in COPD pathogenesis

Objectives

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

- learn about how COPD is affected by social determinants of health
- learn about imaging in the COPDgene study
- learn about COPD epigenetics and other omics

Genetic Epidemiology of COPD (COPDgene) is an NHLBI-funded multi-site longitudinal cohort study of current and former smokers to better understand risk factors, natural history, and genetic contributions of COPD as well as other smoking-related diseases. COPDgene uses extensive longitudinal imaging, physiology, and Omics molecular data in combination w/genetics in the COPDgene cohort to identify high-risk subgroups with distinct diagnostic, prognostic, and therapeutic implications. Funded for 15 years, COPDgene originally enrolled 10,000 participants w/significant smoking history. COPDgene study investigators will describe progress and recent findings ranging from how social determinants of health impact COPD to identifying COPD subtypes using omics data.

- 12:00 COPDgene Progress and Clinical Translation**
- 12:12 Social Determinants of Health and COPD**
- 12:24 Advances in COPD Imaging**
- 12:36 Innovation, Advances and Opportunities in COPD Epigenetics**
- 12:48 COPD Subtyping with Omics**

NIEHS

MID-DAY SESSION

MD4 PRECISION ENVIRONMENTAL HEALTH AND ALL OF US: AN OPPORTUNITY FOR PULMONARY MEDICINE

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

Target Audience

Clinicians, clinician scientists, basic research scientists, fellows and residents

Objectives

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

- gain knowledge on the intersection between genetic predisposition and exposure to environmental agents/chemicals that may initiate and/or exacerbate preexisting pulmonary morbidities.
- educating and promoting participation of diverse populations into All of Us prospective cohort and access to data for evaluating genetic and exposure relationships in pulmonary diseases.
- tools for integrating large data sets from cohorts, clinical, genetic, and health data as well as geospatial exposure data for predicting exposure-response relationships in disease etiology.

The NIH All of Us Research Program aims to enroll more than one million participants to build a large-scale health database in the USA. The overarching goal of All of Us is to understand risk factors, ranging from environmental factors, lifestyle choices, and family health history, that may associate with disease at the individual level. The NIEHS is collaborating with All of Us to integrate precise exposure data that will help unravel the complexities of environmental factors in the etiology and predisposition to diverse morbidities. This session will focus on opportunities for access to characterize environmental influences in pulmonary morbidity.

12:00 Introduction

12:05 Leveraging the All of Us Research Program to Advance Pulmonary Disease Research

12:22 Disentangling Racial Disparities in Asthma Readmission using a Causal Inference Approach in the All of Us Research program

12:39 Incorporating Environmental Exposure Data Into Established Cohorts

12:56 Q&A

NHLBI

MID-DAY SESSION

MD5 PRECISIONS - APPLYING PRECISION MEDICINE APPROACHES TO PULMONARY FIBROSIS

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

Target Audience

Those with research interests or clinical responsibilities focused on interstitial lung disease

Objectives

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

- discuss the central goals of precision medicine and what is being done in the field of pulmonary fibrosis to meet these goals.
- highlight the PRECISIONS-IPF trial rationale, status, and key outcomes to be tested.
- learn new multi-omics findings generated by the PRECISIONS study and derived from the PFF foundation biobank.

PRECISIONS is a research program with an overall objective of bringing a precision medicine approach to pulmonary fibrosis. This session at ATS will provide the following information: (1) an overview of the PRECISIONS research program and its mission, (2) resources and data generated that are available for other investigators with particular encouragement for early-stage investigators, and (3) data generated by PRECISIONS ancillary studies related to different omics platforms and disease monitoring approaches in idiopathic pulmonary fibrosis and other interstitial lung disease types.

12:00 Introduction and Rationale for the PRECISIONS-IPF Study

12:15 Multi-Omics in PRECISIONS-IPF

12:30 Home Spirometry in PRECISIONS-IPF

12:45 Ancillary Studies in PRECISIONS-IPF and Concluding Remarks

ATS, AARC, ERS

MID-DAY SESSION

MD6 FUTURE STANDARDIZATION OF VENTILATOR ? PATIENT RESEARCH AND CLINICAL CARE INTERACTIONS

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

Target Audience

Clinical Science Translational Clinicians Data Scientists All attendees Biomedical Engineers Medical Educators Nurses

Objectives

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

- diagnose the presence of mechanical ventilator-patient discordance. The learner will recognize the patterns and will be able to highlight differences in nomenclature leading to improved patient care and outcomes.
- have new targets to implement research regarding patient-ventilator interactions and recognize best practices when quantifying them.
- learn the current state of the field of patient ventilator interactions and how these affect patient outcomes.

Critical Care providers must be knowledgeable in patient-ventilator interactions as this has implications in patient experience and outcomes. Although there is a large amount of literature published on the topic, there is discrepancy in nomenclature, methods to measure and quantify and how we define outcomes. This session will highlight current knowledge and discuss future research strategies and organization to promote homogeneity in nomenclature and to define meaningful end-point parameters to be used in such clinical research on interventions to reduce ventilator-patient discordances. A joint session amongst the leading societies in critical care and respiratory care will help pave the way for a unified statement.

- 12:00 The Current State of Nomenclature in Patient-Ventilator Interactions**
- 12:15 How Do We Define and Measure Synchrony**
- 12:27 Linking Patient-Ventilator Discordances to Patient Outcomes**
- 12:39 Current areas of clinical uncertainty and research direct in Patient-ventilation Interactions**
- 12:53 Questions and Discussions for Presenters**

NHLBI, NIH

MID-DAY SESSION

MD7 THE MOLECULAR ATLAS OF LUNG DEVELOPMENT (LUNGMAP), PHASE 2

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, pediatric lung disease, multi-omics, bioinformatics, and systems biology

Objectives

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

- learn the newest datasets of LungMAP that could inform lung research
- learn the innovative technologies for molecular profiling, imaging, and data analysis of the developing lung.
- learn how to access and use the LungMAP resources.

Molecular Atlas of Lung Development (LungMAP) is an NHLBI-sponsored program. The overall goal of this program is to establish an open-access reference resource by creating a comprehensive molecular atlas of the late-stage developing human lung with data and reagents available to the research community. Speakers will demonstrate how developmental biology, multi-omics technologies, and bioinformatic approaches can be used to inform processes in development that are recapitulated in disease and repair. The session will illustrate the LungMAP data pipeline which integrates high resolution multi-omics and imaging data.

- 12:00 Single Cell Mapping of Bronchopulmonary Dysplasia**
- 12:12 Multi-Omics Analyses of the Developing Lung in Health and Disease**
- 12:24 Neurotrophic Factor-Mediated Alveolar Capillary Injury and Repair**
- 12:36 Exploring Spatial Heterogeneity in Chronic Lung Disease**
- 12:48 History and Future of the LungMAP BRINDL Biorepository to Advance Human Lung Research**

USDA

MID-DAY SESSION

MD8 PULMONARY UPDATE FROM THE US FOOD AND DRUG ADMINISTRATION**12:00 P.M. - 1:00 P.M.****Target Audience**

Clinicians in practice, academic researchers, pharmacists, pharmaceutical representatives, international regulators

Objectives

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

- provide a better understanding of the regulatory considerations regarding chronic cough drug development programs
- provide an update regarding regulatory considerations around drug development programs in fibrotic lung disease, e.g. IPF
- provide an update of regulatory activities over the past year

The most recent FDA actions, including recent drug approvals for pulmonary and critical care diseases, research endeavors, safety issues, and other hot topics that we have navigated over the past year in the Division of Pulmonology, Allergy, and Critical Care will be presented and discussed.

12:00 Regulatory Considerations for Chronic Cough Drug Development Programs

12:20 Regulatory Considerations for IPF Drug Development Programs

12:40 Hot Topics in the Division of Pulmonology, Allergy, and Critical Care

12:50 Question and Answer Period

NIAID

MID-DAY SESSION

MD9 AIRWAY DISEASE ENDOTYPING USING OMICS**12:00 P.M. - 1:00 P.M.****Target Audience**

Clinicians, basic and clinical researchers

Objectives

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

- describe the circulation patterns of common respiratory viruses during the pandemic and their influence on SARS-CoV-2 susceptibility, as well as airway gene expression patterns that predispose to SARS-CoV-2 infection.
- describe differential methylation patterns in nasal epithelia defining the endotype frequent asthma exacerbations in a pediatric cohort, and the potential role of the nervous system in the frequent exacerbator asthma phenotype.
- define inverse relationships between T2 genes and antimicrobial genes in children with allergic asthma and rhinitis

This session will highlight NIAID-funded programs utilizing airway omics to endotype lung diseases, including viral respiratory infection, exacerbation prone asthma and the relationship between allergic rhinitis and asthma.

12:00 Human Rhinoviruses Influence SARS-CoV-2 Infection Through Modulation of Airway Interferon Levels

12:20 Omics of the Asthma Frequent Exacerbator

12:40 Type-2 Inflammation Inversely Associates with Antimicrobial Immune Responses in the Airway Epithelium

CDC - NATIONAL INSTITUTE FOR
OCCUPATIONAL SAFETY AND HEALTH

MID-DAY SESSION

MD10 NIOSH OCCUPATIONAL RESPIRATORY DISEASE HEALTH HAZARD EVALUATIONS AND FIELD STUDIES**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:

- counsel patients with work-related respiratory disease about whether and how to seek a NIOSH health hazard evaluation in their workplace.
- recognize when blastomycosis should be considered as a potential cause for outbreaks of pneumonia.
- describe new findings about silicosis related to working with engineered stone.

The session will provide attendees with an overview of NIOSH's unique authorities to study and address occupational respiratory diseases through health hazard evaluations and field studies and examples of efforts to address contemporary work-related outbreaks of blastomycosis and engineered stone-related silicosis.

- 12:00 Introduction to Session**
- 12:03 Overview of NIOSH Authority to Conduct Health Hazard Evaluations and Industry-Wide Studies**
- 12:22 Health Hazard Evaluation: Blastomycosis Outbreak in a Paper Mill**
- 12:41 Industry-Wide Study: Respirable Crystalline Silica Exposure and Silicosis in Engineered Stone Workers**

**NIH/NATIONAL INSTITUTE OF ALLERGY AND
INFECTIOUS DISEASES**

MID-DAY SESSION

MD11 SYSTEMS BIOLOGY IN INFECTIOUS DISEASES

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

Target Audience

pulmonary, critical care and infectious diseases researchers, clinical/translational and basic sciences

Objectives

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

- apply a systems biology approach to studying clinical infectious disease outcomes.
- define strategies to improve the ability to model lung immunity.
- increase their awareness of NIH resources for studies of host immunity and microbial pathogenesis.

The NIH/NIAID employs a variety of funding mechanisms to support research in serious infections, including severe viral, fungal, tuberculosis, and antibiotic-resistant bacterial pathogen infections. A systems biology approach to these pathogens, host response, and diseases relevant to the pulmonary and critical care community will be illustrated.

- 12:00 T Cell Responses During Severe SARS-CoV-2 Pneumonia**
- 12:13 Decoding Persistent MRSA and Candida Bloodstream Infections**

12:26 Dissecting the Viral Immunosphere Using Systems Serology and Viral Genomics

12:39 Code-A-Thon As a Model to Handle Big Data Analysis

12:52 Questions

NHLBI, NIH

MID-DAY SESSION

MD12 THE NHLBI LUNG TRANSPLANT CONSORTIUM

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.

This session will review recent research findings generated by investigators within the NHLBI Lung Transplant Consortium, which encompasses a series of observational cohort studies that aim to understand the impact of site-specific lung transplant selection criteria and clinical management strategies on donor lung utilization and/or early post-transplant outcomes in recipient

12:00 The PROMISE-LUNG Study

12:15 CATCH: Creating Access To Transplant For Candidates Who Are High Risk

12:30 Lung Transplant Recipient Exosome Phenotypes And The Risk Of Primary Graft Dysfunction And Acute Lung Allograft Dysfunction

12:45 Vaccination Responses In Lung Transplant Recipients

NHLBI, NIH

MID-DAY SESSION

MD13 TWO DECADES OF PROGRESS FROM THE GENETIC DISORDERS OF MUCOCILIARY CLEARANCE CONSORTIUM

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

Target Audience

Physician scientists, health providers, researchers, clinicians, nurses and educators interested in primary ciliary dyskinesia, non-cystic fibrosis bronchiectasis and other disorders of mucociliary clearance. Junior professionals interested in rare lung disease research.

Objectives

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

- learn new technologies to investigate the pathogenic mechanisms and prediction of rare suppurative lung diseases
- understand the pathogenesis, genetic, and risk factors for exacerbations in rare suppurative lung diseases in order to have new strategies to manage the care of patients with these diseases
- improve clinical phenotyping for rare suppurative lung diseases to be able to better diagnose patients with these diseases

This session will focus on rare lung disease research with presentations highlighting past and recent progress from cohort studies within the Genetic Disorders of Mucociliary Clearance Consortium (GDMCC). Study teams will provide a summary of diverse disease phenotypes, genetics, disease burden and influence of exacerbation risk factors for rare suppurative lung diseases. The scientific talks from the GDMCC will focus on progress made during the last five years from three cross-sectional and/or longitudinal studies. The session will conclude with a general discussion on future directions and needs for rare lung disease research.

12:00 Introduction to the GDMCC

12:05 Cross-Sectional Study Defining the Genetic Bases of Non-Cystic Fibrosis Suppurative Lung Disease

12:20 Longitudinal Study Assessing the Effect of Respiratory Exacerbations on Quality of Life and Disease Progression

12:35 Cross-Sectional Study Examining and Comparing the Clinical Impact of the Otolaryngological Manifestations of PCD and PID

12:50 Discussion

PEDIATRIC CLINICAL CORE CURRICULUM

PCC1 PEDIATRIC CLINICAL CORE CURRICULUM 1

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

Objectives

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

- discuss the management of pediatric ARDS, massive hemoptysis, and severe asthma in the ICU
- explain the role of the pediatric pulmonologist in a cardiovascular ICU
- identify strategies to approach discussions around tracheostomy and for planning effective transition out of the ICU

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

12:00 Staying Current: Updates in Pediatric ARDS Diagnosis and Management

12:25 Navigating Severe Asthma in the PICU

12:50 Question and Answer



ADULT CLINICAL CORE CURRICULUM

CC2 ADULT SLEEP CLINICAL CORE CURRICULUM

2:15 PM - 3:45 PM

Objectives

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

- describe the use of currently available wearable monitors in the evaluation and management of sleep disorders
- discuss updates in the management of sleep disorders in pediatric and underserved populations
- explain current approaches to managing hypersomnia, insomnia, and circadian rhythm 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 "But My Watch Says...": Wearables and Sleep

2:40 New Therapeutics on the Block: Hypersomnia Disorders

3:05 Taking Sleep to the People: Expanding Sleep Access in Underserved Areas

3:30 Question and Answer

BASIC • BEHAVIORAL • CLINICAL • TRANSLATIONAL

YEAR IN REVIEW

A81 PEDIATRIC YEAR IN REVIEW

Assembly on Pediatrics

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

Target Audience

Any provider of lung health for children, as well as clinical and translational researchers who study pediatric respiratory health and disease.

Objectives

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

- learn about the latest advances in cystic fibrosis, asthma, primary ciliary dyskinesia, and respiratory manifestations of neuromuscular disorders
- better understand the role of "omics" technologies and personalized medicine in improving clinical outcomes in pediatric patients with respiratory disease
- discuss the impact of access to care and medication costs on patient outcomes and health disparities

This session will provide an update with state-of-the-art information on four topics in Pediatric Pulmonary Medicine: (1) cystic fibrosis, (2) asthma, (3) primary ciliary dyskinesia and bronchiectasis, and (4) neuromuscular disorders.

2:15 Introduction

2:17 Update on Cystic Fibrosis: Modulators and Beyond

2:36 Questions - CF

2:39 Precision Medicine in Asthma: Omics and Biologics

2:58 Questions – Asthma

3:01 Management of Neuromuscular Disorders in Children

3:20 Questions - Neuromuscular Disorders

3:23 Primary Ciliary Dyskinesia and Non-CF Bronchiectasis

3:42 Questions - PCD and Bronchiectasis

COMMITTEE SPONSORED

A82 NEJM, JAMA, AJRCCM DISCUSSIONS ON THE EDGE: REPORTS OF RECENTLY PUBLISHED CRITICAL CARE RESEARCH**2:15 p.m. - 4:15 p.m.**

This session will provide a forum for attendees to interact with the authors and editors about papers published in the New England Journal of Medicine, Journal of the American Medical Association, and the American Journal of Respiratory and Critical Care Medicine.

Papers presented will be recent publications, selected by the editors, to be of significant importance to the field of critical care medicine. Attendees will have the opportunity to hear presentations directly from the author and address questions to both the authors and editors. The discussion is intended to provide a unique insight into these papers, the selection process, and how the research applies directly to the field of critical care medicine.

Speakers and Talks to be Announced

CLINICAL

CLINICAL TOPICS IN PULMONARY MEDICINE

A83 GREAT CASES: CLINICAL, RADIOLOGIC, AND PATHOLOGIC CORRELATIONS BY MASTER CLINICIANS**2:15 P.M. - 3:45 P.M.****Target Audience**

Clinicians in adult and pediatric PCCM

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

Pulmonary fellows or medical residents present interesting cases to a multidisciplinary panel of master clinicians to demonstrate a team approach to diagnosing and managing challenging clinical cases. The session will shed light on both common and rare pathologies in pulmonary and critical care medicine enhancing medical knowledge, diagnostic and management skills.

2:15 Master Pathologist**2:33 Master Clinicians****3:09 Master Radiologist****3:27 Master Clinician**

Speakers and talks to be announced

CLINICAL • TRANSLATIONAL

CLINICAL TOPICS IN PULMONARY MEDICINE

A84 COMBINED PULMONARY FIBROSIS AND EMPHYSEMA: FROM PATHOGENESIS TO DIAGNOSIS AND THERAPEUTIC IMPLICATIONS**Assembly on Clinical Problems****2:15 P.M. - 3:45 P.M.****Target Audience**

Providers who see patients with chronic obstructive pulmonary disease (COPD) and/or interstitial lung disease (ILD) and researchers with a basic or clinical research background in COPD and/or ILD.

Objectives

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

- define new strategies to manage the care of patients with combined pulmonary fibrosis and emphysema in order to improve their quality of life and symptom burden
- better diagnose patients with combined pulmonary fibrosis and emphysema
- integrate/incorporate new guidelines from the official 2022 ATS research statement on CPFE into current practice

Combined pulmonary fibrosis and emphysema (CPFE) is a clinical entity that is not well defined as discussed in the ATS/ERS/JRS/ALAT Research Statement published in 2022. This session is well suited for both clinicians and researchers who want to gain a deeper understanding into the pathogenesis and biologic mechanisms behind the development of fibrosis and emphysema, key radiologic signatures of disease and available therapeutic

options for CPFE patients. This knowledge base will help us define critical research priorities, the crucial next step given the known poor outcomes in this patient population who unfortunately have an underdiagnosed and understudied disease.

- 2:15 Patient Speaker**
- 2:20 Combined Pulmonary Fibrosis and Emphysema: What We Know and Need to Know**
- 2:25 Diagnostic Categorization of Combined Pulmonary Fibrosis and Emphysema**
- 2:35 Questions for Dr. Vincent Cottin**
- 2:39 Biological Implications and Pathways of Fibrosis and Emphysema Development**
- 2:49 Questions for Dr. Timothy Blackwell**
- 2:53 Clinical Manifestations of the Syndrome of Combined Pulmonary Fibrosis and Emphysema**
- 3:03 Questions for Dr. Tamera Corte**
- 3:07 Imaging Features in Combined Pulmonary Fibrosis and Emphysema and Quantifying Disease Severity**
- 3:17 Questions for Dr. Rachel Putnam**
- 3:21 Therapeutic Options for Patients with Combined Pulmonary Fibrosis and Emphysema**
- 3:31 Questions for Dr. Sara Tomassetti**
- 3:35 Panel Discussion**

BASIC

BASIC SCIENCE CORE

A85 FROM MECHANISM TO PREDICTION: APPLICATION OF METABOLOMICS ACROSS THE PULMONARY/CRITICAL CARE SPECTRUM

2:15 p.m. - 4:15 p.m.

Impaired metabolism is implicated in numerous disease states. Advanced technologies for mitochondrial and metabolomic assessment are increasingly applied to pulmonary and critical care diseases, allowing for enhanced characterization of disease mechanisms as well as clinical prognostication. Often "omics" feel inaccessible to clinicians and clinical researchers due to the vast volume of data, and can be difficult to apply to clinically meaningful outcomes for basic scientists. The goal of this session is to allow all audience members to see how these state-of-the-art techniques

can be applied across disease states, informing disease mechanisms as well as enhancing prognostication across various pulmonary and critical care diseases.

Speakers and Talks to be Announced

CLINICAL

CRITICAL CARE TRACK

A86 BEYOND THE BUNDLE: SEPSIS CARE BEFORE ARRIVAL AND AFTER SURVIVAL

Assemblies on Critical Care; Behavioral and Health Services Research

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

Target Audience

Clinicians, researchers, trainees, and other providers, including nurses, social workers, and physical therapists, who care for patients with sepsis across the course of their illness- from before hospital arrival through recovery.

Objectives

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

- identify opportunities for performance improvement at two key understudied time points in sepsis: before hospital arrival and after survival
- describe new research findings about pre-hospital sepsis management, including sepsis prevention and pre-hospital interventions
- improve the recovery and quality of life of sepsis survivors by applying evidence-based tools to de-escalate invasive care and recognize and treat post-sepsis syndrome

Despite improvement over the past few decades, sepsis remains a major cause of morbidity and mortality worldwide. Sepsis research and quality improvement initiatives have traditionally focused on recognition and prompt treatment upon arrival to the hospital. The pre-hospital and recovery periods are also important, yet understudied, time points for interventions. Specifically, this session will highlight opportunities for improving sepsis care before arrival to the hospital and after survival, both in the hospital and post-discharge, leveraging novel technologies and system-based and global interventions.

2:15 Sepsis: A Patient's Journey

2:20 Stopping Sepsis Before It Starts: Addressing the Global Burden of Sepsis through Prevention

- 2:32 **Moving Care Upstream: Pre-Hospital Sepsis Trajectories and Interventions**
- 2:44 **Your Patient Turned the Corner, Now What?**
- 2:56 **Staying on the Right Path: Promoting Recovery and Preventing Re-Admission**
- 3:08 **Catching Patients Downstream: Starting Post-Sepsis Care Pre-Discharge**
- 3:20 **The Road to Recovery: Lessons Learned from Post-ICU Interventions**
- 3:32 **Panel Discussion and Questions**

BASIC • BEHAVIORAL • CLINICAL
SCIENTIFIC SYMPOSIUM
A87 IS IT IN THE AIR? EMERGING RISKS FOR LUNG CANCER

Assemblies on Thoracic Oncology; Environmental, Occupational and Population Health; Tobacco Action Committee

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

Target Audience

Clinicians with patients who vape or smoke cannabis or are at risk for lung cancer. Those with clinical, research, or administrative responsibilities related to lung cancer risk. Researchers interested in inhalational exposures.

Objectives

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

- identify established lung cancer risk factors beyond combustible tobacco
- increase understanding of life-course implications of secondhand smoke exposure
- describe mechanisms for how novel exposures increase carcinogenesis

The proportion of lung cancers diagnosed in never tobacco users is nearing 20% and is expected to continue to rise, while tobacco use also does not account for all cancer risk in patients who have smoked. Emerging evidence supports a causal role of air pollution and other life-course exposures in lung cancer risk. New recreational products and the expanded legality of cannabis have implications for respiratory tract cancers in the future as more people habitually use these products. This session will discuss emerging evidence about risks for lung cancer other than

personal combustible tobacco use. The session will feature a patient perspective related to Non-smoking related lung cancer and a Q and A discussion about bridging research gaps to help inform future clinical practice.

- 2:15 **Introduction: Lung Cancer Not Attributable to Smoking**
- 2:18 **Lung Cancer in Persons who Have Never Smoked: A Patient Perspective**
- 2:23 **Patterns of Vaping and Cannabis Product Use: New Products, New Challenges**
- 2:36 **What Did I Just Inhale? Vaping, Cannabis Use and the Risk of Cancer**
- 2:49 **Air Pollution and PM-2.5 as a Potential Environmental Lung Carcinogen**
- 3:02 **Secondhand Smoke and Other Inheritable and Non-Inheritable Risks**
- 3:15 **Deployment-Related Risks for Lung Cancer: Lessons Learned from Veteran Research**
- 3:28 **Q&A-Summing it up**

CLINICAL • TRANSLATIONAL
SCIENTIFIC SYMPOSIUM
A88 POST-TB LUNG DISEASE: FROM GLOBAL BURDEN TO MOLECULAR MECHANISMS

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

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

Target Audience

Researchers, clinicians, and public health practitioners who study or care for people with TB and post-TB chronic lung disease.

Objectives

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

- describe current understanding of the burden and clinical nature of post-TB lung disease
- describe current understanding of molecular mechanisms of tissue damage after TB infection in model systems

- provide data to better diagnose post-TB lung disease and care for TB survivors

This symposium will provide a review of recent advances in the field of post-TB lung disease, from the burden and epidemiology to the clinical overlap with diseases such as NTM pulmonary disease, COPD, bronchiectasis, and fibrotic lung diseases to the pathogenesis, biomarkers and potential therapeutics to improve long-term outcomes among TB survivors.

- 2:15 Post-TB Lung Disease: Assessing the Global Burden**
- 2:30 Patterns of Post-TB Lung Disease: Overlap with COPD, Bronchiectasis, and Fibrotic Lung Diseases**
- 2:45 Post-TB Pathogenesis: Matrix Destruction and Remodeling**
- 3:00 Circulating Biomarkers and Potential Therapeutics for Post-TB Lung Disease**
- 3:15 Patient-Reported Outcomes After TB and Caring for TB Survivors**
- 3:30 Round Table Q&A**

BASIC • TRANSLATIONAL

SCIENTIFIC SYMPOSIUM

A89 MECHANICAL FORCES IN LUNG DISEASE

Assemblies on Respiratory Structure and Function; Respiratory Cell and Molecular Biology; PhD; Basic and Translational Scientist Working Group

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

Target Audience

Scientists and Physician Scientists interested in understanding how mechanical forces in the lung alter the lung environment in health and disease.

Objectives

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

- the audience will learn the gaps in our knowledge about the functional impact of mechanical forces in lung disease
- the audience will learn the importance of researching the functional impact of mechanical forces to elucidate its role in lung pathology. These studies are integral for the development of targeting treatment strategies

- the audience will learn the current experimental methods for examining mechanotransduction with the goal of spurring more research and collaborations in this field

Multiple endothelial, epithelial and mesenchymal mechanotransducers have been identified, including those in cell adhesion protein complexes, primary cilia, mechanically gated ion channels and integrin-related cell-ECM interactions. In addition to their role in normal respiration, physical forces are also integral for the development and progression of acute and chronic lung diseases. The experts presenting at this symposium will provide insight into the contribution of biophysical forces to the normal function of the lung as well as how the perturbations in these forces both drive and reinforce lung disease. In addition, the presenters will highlight novel cutting-edge molecular techniques to study these forces in vitro and in vivo.

- 2:15 The Role of Matrix Stiffness on the Regulation of the Fibrotic Response**
- 2:30 Fibroblast-Extracellular Matrix Interactions and Modulation of the Mechanical and Biochemical Microenvironment**
- 2:45 Microenvironmental Cues at the Alveolar Capillary Barrier in Lung Injury**
- 3:00 Microenvironmental Mechanics and Alveolar Epithelial Cells Synergistically Drive Fibroblast Activation in 3D Lung Models**
- 3:15 Stiffness, Contraction, and Stretch-Responsiveness of Human Precision Cut Lung Slices**
- 3:30 Crystal Ribcage: A Platform To Probe Lung Mechanobiology**

BASIC

SCIENTIFIC SYMPOSIUM

A90 METABOLITE INTERACTIONS IN HEALTH AND DISEASE: UNVEILING THE MUTUAL FEEDING BETWEEN HOST AND MICROBIOTA

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

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

Target Audience

Basic and translational researchers, clinicians

Objectives

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

- learn how integrative analysis of multi-omic data sets, in this case, 16s sequencing and metabolite profiling can be integrated in lung disease- e.g. asthma and COPD
- determine how, if you have a multi-omic data set and you have some microbe hits or metabolites that have been identified, to bring it to the next level mechanistically to see if your observations are worth pursuing therapeutically
- gain an overview of the current methods needed to study small metabolites in the airspaces as well as specific pathogens- correcting one pathogen at a time in chronic lung disease

This session aims to offer a detailed and systematic understanding of the metabolic interaction between the host and microorganism within the airspaces of the lung.

- 2:15 The Interplay of Microbiome, Metabolism, and Immune Response in Asthma and COPD**
- 2:33 Unveiling Active Microbial Metabolism through Functional Genomic Profiling of the Lower Airways**
- 2:51 Harnessing Itaconate: Pseudomonas aeruginosa's Strategy of Redirecting Host-Derived Metabolite to Fuel Biofilm Formation.**
- 3:09 Metabolomic Profiles in Serum that Indicate Defects in Fatty Acid Oxidation Distinguish Subphenotypes of Acute Respiratory Distress Syndrome**
- 3:27 Exploiting Host-Derived Metabolites as Weapons Against Antibiotic Resistance**

- describe major challenges to global lung health
- define how local context affects the magnitude of the problem and effective solutions
- define strategies for how global respiratory societies can work together to improve global lung health and decrease disparities

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% residing outside the United States. Common challenges face members in all countries although context matters. This symposium invites perspectives from peer respiratory societies to address the question, "What are the greatest global challenges to lung health?"

- 2:15 Opening Remarks**
- 2:20 Equitable Access to Treatment and Health Care**
- 2:37 Air Pollution**
- 2:54 Tobacco**
- 3:11 Poverty**
- 3:28 Panel Discussion**

CLINICAL

SCIENTIFIC SYMPOSIUM

A91 WHAT ARE THE GREATEST GLOBAL CHALLENGES TO LUNG HEALTH?

Assembly on International Health Committee

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

Target Audience

Attendees from various backgrounds and levels of expertise can benefit from the discussion. All individuals with a general interest in global health or those seeking to expand their knowledge on the topic should be encouraged to attend.

Objectives

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



ATS 2024
International
Conference

ATS 2024 San Diego, CA

Monday 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

11:30 a.m. - 12:30 p.m.

- MTE13 SMALL AIRWAYS DISEASE: WHEN IT'S NOT ASTHMA**
- MTE14 NON-PHARMACOLOGICAL MANAGEMENT OF PATIENTS AFTER HOSPITALIZATION WITH AN EXACERBATION OF COPD**
- MTE15 FROM EMINENCE TO EVIDENCE-BASED PRACTICE: THE INTERVENTIONAL PULMONOLOGY OUTCOMES GROUP**
- MTE16 ALVEOLAR ORGANIDS - BEST PRACTICES**
- MTE17 COMPLEX IN VITRO MODELS OF THE LUNG: BRIDGING THE GAP BETWEEN COMPLEX LUNG PATHOBIOLOGY AND THERAPEUTICS**
- MTE18 COMPLICATED SARCOIDOSIS MANAGEMENT: MIMICS AND DISEASE PROGRESSION**
- MTE19 PEDIATRIC PULMONARY CHRONIC GRAFT VERSUS HOST DISEASE: ADVANCES IN DIAGNOSIS AND MONITORING**
- MTE20 RECRUITING AND RETAINING DIVERSE TRAINEES AND FACULTY - TIPS TO GET IT DONE**
- MTE21 REMOTE RESCUE : CASE- BASED TROUBLESHOOTING FOR PEDIATRIC VENTILATION DATA DOWNLOADS**

MTE22 RISK STRATIFICATION SIMPLIFIED IN PAH MANAGEMENT!

MTE23 BRIDGING THE NETWORKING GAP FOR WOMEN FACULTY USING THE SCIENCE OF NETWORKING

MTE24 LUNG NODULE: TRANSBRONCHIAL BIOPSY, ARE WE CLOSE TO 100% DIAGNOSTIC YIELD?

K2: KEYNOTE SERIES

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

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 2023 conference and are unopposed by any other programming.

Monday's Keynote Lecture will focus on: **The history of modern mechanical ventilation and the 70th anniversary of the first intensive care unit.**

YEAR IN REVIEW

B1 CLINICAL YEAR IN REVIEW 1

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

Target Audience

Pulmonary, critical care and sleep providers.

Objectives

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

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

The program will discuss general topics of interest to a broad group of providers, inside and outside of these subspecialties. The program is relevant to not only clinicians, but also to researchers and administrators.

9:15 COPD

9:37 Critical Care

9:59 Global Lung Health

10:23 Tuberculosis

BASIC • CLINICAL • TRANSLATIONAL**CLINICAL TOPICS IN PULMONARY MEDICINE****B2 BRING YOUR BEST BIOMARKER: MOLECULAR SUCCESS STORIES IN CHRONIC LUNG DISEASE****Assemblies on Clinical Problems; Allergy, Immunology and Inflammation****9:15 A.M. - 10:45 A.M.****Target Audience**

Providers of lung health including pulmonologists, nurses and allied health practitioners; those serving ILD, bronchiectasis and COPD patient groups; those with interest in the study and clinical application of biomarker in lung disease

Objectives

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

- develop a comprehensive understanding of biomarkers development. Learners will be better able to understand the methods and barriers for biomarker development, validation, and implementation into clinical practice
- promote and seek interdisciplinary and cross-subspecialty collaboration. By the end of the session, learners will have an understanding of the importance of collaborative discovery in biomarker research to enhance patient care
- understand the performance and utility of disease-specific biomarkers in chronic respiratory disease. At the end of this session, learners will understand the role of biomarkers to improve patient outcomes

Biomarker development is an arduous process, with few molecular findings translated into clinical practice. Once a biomarker with potential clinical relevance is identified, multiple critical steps are required to move the biomarker from discovery to deliverable. Nearly all biomarker research is performed in single pulmonary conditions. As chronic lung disease remains a leading cause of death worldwide, it is imperative that we collectively capitalize on successful biomarker development and learn from biomarker failures. This scientific symposium will discuss what constitutes a clinically relevant biomarker, necessary steps for developing clinically relevant biomarkers and highlight biomarker successes in COPD, ILD and bronchiectasis.

9:15 Introduction to Session: What Is a Clinically Relevant Biomarker?

9:25 Discussion

9:30 The Hunt for COPD's Best Biomarker

9:45 Discussion

9:50 Pushing the Paradigm Towards Precision: ILD's Best Biomarkers

10:05 Discussion

10:10 Probing the Inflammatory Milieu: Biomarkers for Bronchiectasis

10:25 Discussion

10:30 Best Bronchoscopic Biomarkers: It Will All Come Out in the Wash

10:40 Discussion

BASIC • BEHAVIORAL • CLINICAL • TRANSLATIONAL**CLINICAL TOPICS IN PULMONARY MEDICINE****B3 SPECIAL CONSIDERATIONS FOR PATIENTS WHO ARE TRANSGENDER OR NonBINARY IN PULMONARY MEDICINE****Assemblies on Clinical Problems; Behavioral and Health Services Research; Clinical Problems; Pediatrics****9:15 A.M. - 10:45 A.M.****Target Audience**

Pediatric and adult providers of pulmonary medicine, clinicians who provide care to transgender and non-binary patients, clinical and translational researchers.

Objectives

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

- gain awareness of current gender minority health inequities in complex lung diseases, improve cultural humility for gender minorities, and implications of gender-affirming care on pulmonary disease to improve quality of life for gender minorities
- identify knowledge gaps in clinical and translational research and demonstrate the importance of representing gender identity in pulmonary research in order to improve health outcomes of transgender and non-binary individuals

- understand the impact of sex hormones on lung physiology and complex lung diseases such as cystic fibrosis, and asthma, and the potential impact of gender-affirming therapy on people with complex lung disease

Transgender and non-binary individuals experience pervasive healthcare disparities and disproportionate exposure to risk factors of pulmonary disease. Much of clinical research utilizes sex as a variable but does not consider the role of gender or gender-affirming therapies such as chest binding, surgical intervention, or hormone therapy. This symposium will highlight healthcare disparities in the transgender and Non-binary population, educate clinicians on the impact of sex and gender on pulmonary disease, and review the impact of sex hormones on pulmonary disease such as asthma and cystic fibrosis.

- 9:15 Health Inequities and Pulmonary Considerations for People who are Transgender or Non-Binary**
- 9:34 Interpretation of Pulmonary Function Testing in People who are Transgender or Non-Binary**
- 9:53 Sex Hormones and Asthma**
- 10:12 Potential Impact of Gender Affirming Therapy on People with Cystic Fibrosis**
- 10:31 General Discussion**
- 10:40 Patient Speaker**

CLINICAL

CRITICAL CARE TRACK

B4 EXTRACORPOREAL MEMBRANE OXYGENATION (ECMO) FOR SEVERE ACUTE RESPIRATORY DISTRESS SYNDROME IN A POST-PANDEMIC WORLD

Assembly on Critical Care

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

Target Audience

All practicing healthcare providers, all levels

Objectives

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

- review the current state of evidence regarding the use of VV-ECMO for ARDS and best practices for management, so that attendees can apply these concepts in patient care and research in the future

- describe ongoing research in VV-ECMO and ARDS to demonstrate ongoing areas of uncertainty and identify future applications within critical care
- identify factors that contribute to inequity and disparities in the use of VV-ECMO for ARDS and be cognizant of strategies for mitigation to provide equitable care

The use of veno-venous (VV) extracorporeal membrane oxygenation (ECMO) as therapy for severe acute respiratory distress syndrome (ARDS) has increased exponentially due to advances in technology, prior respiratory pandemics, and emerging high-quality evidence. The recently released 2023 ARDS Practice Guidelines strongly recommend in favor of ECMO for the treatment of severe ARDS. The COVID pandemic shed light on the clinical, logistical, and ethical challenges faced when offering VV-ECMO during a time of healthcare strain. Clinical availability remains uneven, and treatment disparities are common. This symposium will foster discussion on how to enhance collaboration, promote best practices, and improve the availability and equitable allocation of ECMO going forward, as we prepare for the next pandemic.

- 9:15 Introduction**
- 9:20 State of the in Veno-Venous ECMO**
- 9:35 Innovations on the Horizon: Future Trends in ECMO for Respiratory Failure**
- 9:50 The Equitable Use of Extracorporeal Life Support in Respiratory Pandemics and Beyond**
- 10:05 Who Knows Best? Controversies & Best Practices in Lung Protection**
- 10:20 Preparing for the Next Pandemic: Building a System that Works for All**
- 10:35 Roundtable Panel Discussion**

BASIC • CLINICAL • TRANSLATIONAL

BASIC CORE

B5 COPD AS AN ENDOTHELIAL DISORDER: ENDOTHELIAL INJURY LINKING LESIONS IN THE LUNGS AND OTHER ORGANS

Assemblies on Respiratory Cell and Molecular Biology; Clinical Problems; Pulmonary Circulation; Respiratory Structure and Function

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

Target Audience

Basic and translational scientists and clinicians involved in COPD research and/or management

Objectives

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

- to learn the cellular and molecular mechanisms of endothelial dysfunction in COPD
- to understand the relationship between endothelial dysfunction and systemic inflammation in COPD
- to learn about the latest therapeutic interventions targeting the endothelium in COPD

COPD patients develop varying degrees of emphysema, small and large airway disease, and various co-morbidities. It has not been clear whether these co-morbidities share common underlying pathogenic processes with the pulmonary lesions. Recently, cigarette smoke-induced endothelial injury has been linked to pulmonary lesions in COPD and systemic co-morbidities. Herein, we review the evidence linking endothelial injury to COPD, and the pathways underlying endothelial injury and the “vascular COPD phenotype.”

- 9:15** **When Not All Is Lost: Reversal of Emphysema by Restoration of Pulmonary Endothelial Cells**
- 9:30** **Endothelial Injury Linking Lesions in the Lungs and Other Organs in COPD**
- 9:45** **Capillary Endothelial Cells: The Fuse or the Fuel of Persistent Alveolar Inflammation in Advanced COPD?**
- 10:00** **The Unusual Suspect: Lymphatic Vessels in COPD**
- 10:15** **Vascular Pruning in COPD: A Hard Nut to Crack**
- 10:30** **Targeting the Endothelium in COPD: Insights from Clinical Trials**

CLINICAL
SCIENTIFIC SYMPOSIUM

B6 INTEGRATING EVIDENCE FROM RANDOMIZED TRIALS AND OBSERVATIONAL COHORTS IN SLEEP DISORDERED BREATHING

Assemblies on Sleep and Respiratory Neurobiology

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

Target Audience

This symposium is aimed at clinicians, researchers, and clinicians who are interested in understanding the evidence-base underlying therapies for sleep disordered breathing.

Objectives

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

- review existing methods for approaching causal inference
- review clinical evidence for SDB treatment’s impact on cardiovascular disease both from experimental and observational data
- contrast the strengths and limitations of observational and experimental evidence for SDB treatment’s impact on cardiovascular disease, including generalizability and sample diversity

Randomized clinical trials (RCTs) have been the primary approach to causal inference in medicine. However, RCTs often include highly selected populations, limiting generalizability. Newer observational methodologies offer alternatives to analyze the efficacy of treatments using representative cohorts. However, these observational approaches can be limited by biases including the healthy adherer effect. Recently, RCTs and observational studies have had disparate findings around the efficacy of treatments for sleep-disorder breathing (SDB) on cardiovascular outcomes. These discrepancies will be debated during this session, examining the strengths and pitfalls from both sides. Finally, panelists will discuss the insights of these studies for future research.

- 9:15** **Patient Speaker**
- 9:20** **Tools and Keys to Examining Causal Inference**
- 9:31** **“Does OSA Treatment Provide Cardiovascular Benefit?” Answers from RCTs**
- 9:42** **“Does OSA Treatment Provide Cardiovascular Benefit?” Answers from Real Life Data**
- 9:53** **“Should We Treat Central Sleep Apnea in Chronic Heart Failure Patients?” Answers from RCTs**
- 10:04** **“Should We Treat Central Sleep Apnea in Patients with Chronic Heart Failure ?” Answers from Real Life Data**
- 10:15** **Panel Discussion: “How Do We Derive Valid Inferences That Represent Our Large and Diverse Population?”**

BASIC • CLINICAL • TRANSLATIONAL

SCIENTIFIC SYMPOSIUM

B7 PATHOGENIC CONCEPTS IN PAH REVISITED? A MULTIGENERATIONAL PERSPECTIVE

Assembly on Pulmonary Circulation

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

Target Audience

Physician-scientists conducting basic, translational and clinical research in pulmonary vascular biology as well as clinicians treating patients with pulmonary hypertension.

Objectives

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

- apply a broad understanding of newer unbiased analytic approaches to research ideas, even within the context of traditional hypothesis-driven research, and understand how to best leverage each frame in order to further discovery
- describe new multi-omics findings in PH, including the discovery of emergent endophenotypes, and understand their relevance in the context of known, classical pathobiologic pathways and traditional disease classification frameworks
- describe new 2022 ESC/ERS guidelines regarding modern imaging methods (e.g. use of CMR, TAPSE/PASP) and understand how precision imaging augments our understanding of disease pathobiology and may aid in predicting patient outcomes

This session will pair senior investigators with junior investigators in the field of vascular biology, pulmonary hypertension and right heart failure in a pro/con debate of the research directions, disease paradigms, and treatment approaches over the past 40 years. The ideas covered will span basic, translational, and clinical topics.

9:15 Unbiased Approaches to Multi-Omic Datasets Can Unravel PAH Pathobiology

9:27 A Priori Hypothesis Generation and Reductionist Biology Decipher Mechanisms

9:39 Discussion

9:45 PAH Endo-Phenotypes and Tailored Treatments: One Drug for One Patient

9:57 Don't Mistake the Forest for the Trees: One Drug for All

10:09 Discussion

10:15 Novel Imaging Approaches for Understanding Disease Pathogenesis and Predicting Clinical Outcomes

10:27 Tried and True: Simplicity is the Ultimate Sophistication Amidst Complexity

10:39 Discussion

CLINICAL • TRANSLATIONAL

SCIENTIFIC SYMPOSIUM

B8 SEVERE CHILDHOOD ASTHMA: NEW PERSPECTIVES ON PHENOTYPES, MANAGEMENT, AND DISEASE REMISSION

Assemblies on Pediatrics; Allergy, Immunology and Inflammation

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

Target Audience

This session will appeal to pediatric pulmonologists, pediatric allergists, fellows in training, advanced health care providers, and nurses who care for children with severe asthma, as well as scientists conducting research in this field.

Objectives

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

- learn new evidence on how to phenotype and select the best biologic and non-biologic therapy for children with severe asthma
- discuss how low lung function should be monitored and managed in children with severe asthma
- review the definition of disease remission and if remission is possible in children with severe asthma

Children with severe asthma account for up to 50% of pediatric asthma costs. In this scientific symposium, a panel of experts in the field will review emerging evidence on the pathogenesis, evaluation, and phenotyping of severe asthma in the pediatric population. In addition, they will discuss recent studies on biologic and non-biologic therapies approved for the management of severe asthma in children and how these therapies could modify the natural history of the disease, potentially leading to its remission.

9:15 Patient Speaker

- 9:20 **Management of Children with Severe Asthma Before Starting a Biologic**
- 9:37 **Breaking Down the Current Evidence on How to Select a Biologic for the Management of Severe Childhood Asthma**
- 9:54 **Low Lung Function in Severe Childhood Asthma: Determinants, Progression, and Management**
- 10:11 **Severe Asthma Phenotypes in the Pediatric Population: More Than Just Eosinophils, IgE, and FeNO**
- 10:28 **What Is Disease Remission and Is it Achievable for Children with Severe Asthma?**

contemporary understanding of the genetic and environmental origins of dysanapsis and its expanding relevance to lung health in the 21st century.

- 9:15 **The Past 50 Years: A Brief History of Dysanapsis**
- 9:30 **Dysanapsis in Early Life: Origins, Trajectories and Clinical Relevance**
- 9:45 **Dysanapsis in Later Life: Clinical Outcomes and Host Environment Interactions**
- 10:00 **Defining Dysanapsis: Spirometry and Beyond**
- 10:15 **Omic Insights into the Origins of Dysanapsis**
- 10:30 **The Next 50 Years: Summary and Panel Discussion**

CLINICAL • TRANSLATIONAL
SCIENTIFIC SYMPOSIUM

BASIC • CLINICAL • TRANSLATIONAL
SCIENTIFIC SYMPOSIUM

B9 50 YEARS OF DYSANAPSIS: WHAT WE HAVE LEARNED AND WHERE WE ARE GOING

Assemblies on Respiratory Structure and Function; Environmental, Occupational and Population Health; Pediatrics

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

Target Audience

Clinical and research trainees and providers

Objectives

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

- understand the concept of dysanapsis and its contribution to chronic obstructive lung disease risk
- describe the early-life origins of dysanapsis and the potential opportunities to promote resilient lung development for lifelong lung health
- appreciate the advantages and limitations of current methods to assess dysanapsis and the need to develop better techniques

The term “dysanapsis” was introduced in 1974 to describe a hypothesis that disproportionate airway tree growth may be relevant to obstructive lung physiology and disease risk. Over the past 50 years, this prescient hypothesis has been confirmed using state-of-the art measures and its clinical relevance across the lifespan has been demonstrated in multiple large cohorts. Attendees of this scientific symposium will gain a historical and

B10 NON-ANTIBIOTIC THERAPY FOR PNEUMONIA

Assemblies on Pulmonary Infections and Tuberculosis; Clinical Problems; Nursing; Pediatrics

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

Target Audience

Scientists, clinicians (pulmonology, Infectious Disease, pediatrics, Geriatricians), public health/global health practitioners, and trainees interested in respiratory infections.

Objectives

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

- understand the potential of non-antibiotic therapies in the management of pneumonia and their role in combating antibiotic resistance
- explore the mechanisms of action and efficacy of specific non-antibiotic treatments, such as cytokine therapy, steroid therapy, and bacteriophage therapy, in the context of pneumonia
- discuss the challenges and opportunities associated with the implementation of non-antibiotic therapies in clinical practice, including considerations of safety, patient selection, and optimizing treatment outcomes

Our symposium is designed to boost awareness and comprehension of non-antibiotic pneumonia treatments among healthcare professionals, researchers, and the public. We aim to spark collaboration across various fields, promoting evidence-based practice, sharing recent research, and circulating

clinical guidelines. As we drive advancements and novel approaches, we're fostering innovation and improving patient outcomes. By focusing on non-antibiotic treatments, we aim to enhance personalized interventions, thus maximizing efficacy and minimizing side effects.

- 9:15 Beyond Antibiotics: Unleashing the Power of Non-Antibiotic Therapies in Pneumonia Management**
- 9:25 Harnessing the Potential of Cytokine Therapy in Pneumonia Management**
- 9:40 Beyond Inflammation: Unveiling the Potential of Steroid Therapy in Pneumonia Management**
- 9:55 Phage Power: Harnessing Bacteriophages for Pneumonia Treatment and Prevention**
- 10:05 Monoclonal Antibody-Based Therapies for Bacterial Infections**
- 10:20 Breaking the Barrier: Conquering Pathogenic Biofilms in Pneumonia**
- 10:30 Unlocking the Potential of Therapies in Mitigating Long-Term Mortality and Cardiovascular Events Following Pneumonia**

CLINICAL • TRANSLATIONAL

PRESIDENT SYMPOSIUM

B11 PRESIDENT'S SYMPOSIUM PASSION, PERSEVERANCE, AND QUANTUM LEAPS: CELEBRATING ADVANCES IN LUNG CANCER

9:15 AM - 10:45 AM

Target Audience:

All attendees interested in lung cancer

Speakers and talks to be announced.

BEHAVIORAL • CLINICAL

SCIENTIFIC SYMPOSIUM

B12 QUITTING IS WINNING: TOBACCO AND E-CIGARETTE CESSATION

Assemblies on Behavioral and Health Services Research; Environmental, Occupational and Population Health;

Nursing; Pediatrics; Thoracic Oncology; Pediatric Advocacy Subcommittee; Tobacco Action Committee

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

Target Audience

Clinicians, trainees and multidisciplinary allied health personnel

Objectives

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

- describe the differences between various types of tobacco, nicotine, and vaping products and how this affects risk and nicotine dependence
- appropriately evaluate and treat patients of all ages with nicotine dependence, utilizing both behavioral and pharmacologic interventions based on new guideline recommendations and best practices
- improve the quality of care provided to those with nicotine dependence by understanding how to develop inpatient and outpatient treatment services

The primary goal of this session is to provide a high-yield, evidence-based update on nicotine and e-cigarette use with a focus on screening and interventions. This session will cover the assessment and treatment of nicotine dependence, e-cigarette and vaping associated lung injury (EVALI) and its aftereffects, and the new and evolving area of cannabinoid vaping. The course will also include an up-to-date overview of current priorities of the FDA's Center for Tobacco Products (CTP). Course faculty are multidisciplinary clinical, research, and advocacy experts. The session will cover the approach to both adolescent and adult patients, and will share evidence-based approaches to screening and cessation that can be both applied broadly and individualized in diverse clinical settings.

- 9:15 Opening Remarks**
- 9:20 Pharmacologic Treatment of Nicotine Dependence**
- 9:40 Aftereffects of Vaping: An Adolescent Treatment Approach**
- 10:00 Current Tobacco Policy and Regulation Updates**
- 10:20 What's Next After E-Cigarettes?: Cannabinoids, Including Dual Use**
- 10:40 Closing Remarks**

MEDICAL EDUCATION SEMINAR

ME102 WINNING WITH WORDS: PUBLIC SPEAKING SKILLS FOR CLINICIANS, EDUCATORS & SCIENTISTS

 Pre-registration and additional fee required. Attendance is limited.
\$100 Member/Non-Member

10:30 A.M. - 11:30 A.M.

Target Audience

Clinicians (physicians, nurses, and other clinicians), educators, researchers, early career professionals - extremely broad appeal to all ATS members who give talks, oral presentations, didactics, and more.

Objectives

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

- apply public speaking skills such as pacing, body language, eye contact, and avoid fillers, to improve their next oral presentation or public speaking event.
- incorporate and apply public speaking strategies into improving running rounds, delivering scientific presentations, running meetings, or speaking on public-facing media such as podcasts, television, or radio.
- apply patient and family-centered communication skills to improve patient and public trust in the patient-clinician relationship.

In this interactive 1-hour Meet the Expert workshop, participants will learn how to effectively improve their public speaking skills, thus elevating their performance while delivering scientific presentations, leading clinical rounds, teaching educational sessions, running effective meetings, and more. We will discuss the data for why public speaking skills are critically important, discuss the role of implicit bias in public speaking, employ effective strategies to improve public speaking skills, and learn quick pearls for different public speaking settings, such as presentations, meetings, didactics, rounds, meetings, podcasts, and more.



ATS 2024
International
Conference

 San Diego, CA

Monday Mid-day, May 20

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.

 Pre-registration and an additional fee are required.
\$30 members/non-members

ADULT CLINICAL CORE CURRICULUM

CC3 ADULT PULMONARY CLINICAL CORE CURRICULUM

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

Objectives

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

- integrate current guidelines into the care of people with community acquired pneumonia
- discuss the management of infectious complications in people with bronchiectasis

- describe the current identification and management of people with pulmonary tuberculosis

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 The Road Ahead: The Changing Epidemiology of Tuberculosis**
- 11:55 RIPE for the Picking: Updates in the Treatment of Tuberculosis**
- 12:20 Hiding in Plain Sight: Latent Tuberculosis Screening and Treatment**
- 12:45 Question and Answer**

ATS SCHOLAR

MID-DAY SESSION

MD14 FROM THE ATS SCHOLAR EDITORS: PEARLS AND PITFALLS IN HEALTH PROFESSIONS EDUCATION RESEARCH

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

Target Audience

Clinician educators (physicians, nurses, respiratory therapists) who seek to publish work related to their education and quality improvement projects.

Objectives

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

- apply the standards of excellence in educational scholarship while incorporating a framework of developing research questions for health professions education manuscripts
- apply the Kirkpatrick model for levels of evidence of educational research to determine meaningful and measurable for publishable educational projects.

- understand and apply ATS Scholar journal standards of publication for different manuscript types to projects in common areas of health professions education research

ATS Scholar is the only journal of the 4 ATS peer-reviewed journals focused on publishing content related to health professions education. Clinician educators are the fastest growing group in academic Pulmonary/Critical Care/Sleep medicine, but many clinician educators have not received adequate training in the steps that are necessary to study an educational project in such a manner that the output is a publishable manuscript. The Senior Editors of ATS Scholar will provide a roadmap on how to do this, with pearls of wisdom as well as pitfalls to avoid.

- 12:00 Introduction**
- 12:05 Understanding Educational Scholarship**
- 12:15 Panel Question and Answer 1**
- 12:20 Panel Question and Answer 2**
- 12:25 Meaningful Outcomes in Educational Research**
- 12:35 Panel Question and Answer 3**
- 12:40 Panel Question and Answer 4**
- 12:45 ATS Scholar Standards of Publication for Educational Research**
- 12:55 General Discussion**

AMERICAN JOURNAL OF RESPIRATORY CELL AND MOLECULAR BIOLOGY

MID-DAY SESSION

MD15 RED IN ACTION II: LUNG RESEARCH HIGHLIGHTS FROM AJRCMB

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

Target Audience

individuals interested in basic mechanisms and pathobiology of lung disease; individuals who publish basic mechanistic and translational lung research; individuals interested in the peer review and editorial process for Am J Respir Cell Mol Biol

Objectives

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

- describe new findings about emerging breakthroughs of molecular mechanisms for lung disease, as reported in Am J Respir Cell Mol Biol

- better understand the features of mechanism-deciphering lung pathobiology research, and elements that create potential for future impact in the field.
- better understand the peer review process, in particular critical elements necessary for publication of research articles in the Red Journal.

The session will feature two presentations from early career researcher of new exemplary articles that are accepted for publication in the American Journal of Respiratory Cell and Molecular Biology. Presenters will highlight cellular and molecular mechanisms of lung disease, inflammation, tissue repair and innovative research approaches. Associate Editors will also provide commentary on the novelty and relevance of the work, and the critical elements that led to publication of the work in the Red Journal.

- 12:00 Introduction
- 12:05 Featured Article #1
- 12:25 Questions and Answers
- 12:30 Featured Article #2
- 12:50 Questions and Answers
- 12:55 Closing Comments and Discussions

**ATS RESEARCH PROGRAM;
AM. LUNG ASSOCIATION; NHLBI, NINR, PCORI**

MID-DAY SESSION

MD16 RESEARCH FUNDING OPPORTUNITIES

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

Target Audience

This sessions 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.
- 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. Time will also be provided for audience members to ask questions of the panel of speakers.

- 12:00 Introduction
- 12:02 National Heart Lung Blood Institute
- 12:10 American Lung Association
- 12:18 Patient Centered Outcomes Research Institute
- 12:26 ATS Research Program
- 12:34 National Institute of Nursing Research
- 12:42 Pulmonary Hypertension
- 12:50 Conclusion and Q&A

**ATS RESEARCH PROGRAM; ALA;
NHLBI, NINR, PCORI**

MID-DAY SESSION

MD17 ASTHMA ACROSS SPECIES: A COMPARATIVE APPROACH TO UNDERSTANDING PATHOLOGY AND THE MICROBIOTA

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

Target Audience

1. Clinician-scientists treating asthma, seeking to learn from across disciplines. 2. Scientists interested in cross-species asthma models. 3. Clinicians and researchers interested in cross-species collaborations or interest in asthma microbiome.

Objectives

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

- improve awareness of two large animal models of allergic and severe asthma useful in human pre-clinical trials. Goal: to improve cross-species translational collaborations and enhance study of long-term remodeling effects of current asthma therapies.
- understand respiratory dysbiosis associated with airway inflammation. Goal: to relate airway dysbiosis of animal models with human asthma and identify gaps in understanding that can be improved with animal models.

- learn about changes in airway microbiome and inflammation of animals, and correlate these changes with large airway physiology that could improve understanding of human asthma.

While asthma has benefitted from work in induced murine models, results may not translate well to human patients. Cats and horses spontaneously develop asthma similar to humans in anatomy, physiology, and immunology and may serve as important pre-clinical models. Cats develop allergic asthma with airway eosinophilia. Horses develop neutrophilic asthma. Asthma can be studied in pet cats or induced with clinically relevant aeroallergens in research cats. Asthma exacerbation and remission can be studied in horses by exposure to naturally offending antigens. Complex genetics, shared environmental exposures, and airway dysbiosis increase the relevance of these spontaneous asthma models for humans. Both animal models allow us to study unexplored issues of human asthma in a unique way and possibly yield novel therapeutics.

- 12:00 Heterogeneity of Asthma Immunology in Humans**
- 12:15 Feline Asthma: A Model Concordant with Human Eosinophilic Asthma and its Airway Microbiome**
- 12:30 Equine Asthma: A Non-Eosinophilic Model of Human Asthma and Study of its Airway Microbiome**
- 12:45 Human Asthma and the Microbiome: What Can We Learn from Other Species?**

**NATIONAL HEART, LUNG
AND BLOOD INSTITUTE, NIH**

MID-DAY SESSION

**MD18 NEW OMICS FINDINGS FROM THE
NHLBI PVDOMICS PROGRAM IN
PULMONARY HYPERTENSION
PATIENTS**

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

Target Audience

Health providers, trainees, and researchers

Objectives

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

- learn about how RNAomics (genomics) of blood can aid in the discovery of mechanisms that contribute to pulmonary hypertension.

- learn about metabolomics and right ventricular function in pulmonary hypertension.
- learn about sleep disordered breathing-metabolomics work in relation to clinical outcomes

Pulmonary hypertension (PH) has no cure, and PH research remains a high priority for NHLBI. The current PH classification is difficult to apply clinically for precision medicine therapy. In 2014, NHLBI launched a multi-center clinical study named: Redefining Pulmonary Hypertension through Pulmonary Vascular Disease Phenomics (PVDOMICS), which includes 1 Data Coordinating Center & 6 clinical centers to conduct an observational study in PH patients. The overall goal of the PVDOMICS is to perform deep phenotyping across all PH groups and intermediate phenotypes in order to reconstruct the traditional classification and define new meaningful subclassifications. About 1200 participants have been enrolled, and the clinical and omics results from these subjects will be presented at this noon session.

- 12:00 PVDOMICS - Metabolomics and Right Ventricular Function**
- 12:15 Sleep Disordered Breathing-Metabolomics Work in Relation to Clinical Outcomes**
- 12:30 RNA Sequencing Analysis, Delving into the Surprising and Unknown**
- 12:45 Person-Specific Network Analyses**

CENTERS FOR DISEASE CONTROL AND PREVENTION

MID-DAY SESSION

**MD19 OVERVIEW OF CDC'S SUPPORT,
COLLABORATION, AND RESPONSE WORK
RELATED TO WILDLAND FIRES**

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

Target Audience

Clinicians and public health professionals interested in population health issues relating to wildland fire.

Objectives

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

- better understand the public health importance and burden of wildland fire on population health.

- better understanding of programmatic work and partnerships at the federal level to assess and address issues associated with wildland fire.
- identify areas where participants and their communities may be impacted by wildland fire and its smoke as well as actions that they can take to prepare and respond to these issues.

Climate change, policies that led to un-natural accumulations of fuels, and urban expansion have resulted in a 4-fold increase in acreage burned by wildfires in the United States between 1985 and 2019. Wildland fire smoke now accounts for more than 50% of PM2.5 concentrations in many western states. The 2023 wildfires demonstrated that this is a transnational problem. This session will discuss the efforts of the Centers for Disease Control and Prevention’s (CDC) and its partner organizations to assess and address the cumulative public health impacts of wildland fire in regard to prevention, mitigation, preparedness, response, and recovery.

- 12:00** The Impact of Wildland Fire Smoke on Human Health
- 12:20** Assessing the Air Quality and Corresponding Ecological and Public Health Impacts of Wildland Fire Smoke
- 12:40** The Land Management Perspective of the Population Health Burden and Impact of Wildland Fire

NHLBI, NIH
MID-DAY SESSION

MD20 AN UPDATE FROM THE PRECISION INTERVENTIONS FOR SEVERE AND/OR EXACERBATION-PRONE ASTHMA (PRECISE) NETWORK

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

Target Audience

physician scientists, PhD researchers, trainees, students

Objectives

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

- apply how precision medicine-based adaptive trial platform designs can be used to evaluate novel interventions in chronic lung disease
- describe key characteristics of a severe asthma cohort that is symptomatic in spite of current therapeutic regime

- understand how biomarkers can be used to define patient subpopulations for stratified clinical trials

The goal of the PrecISE Network is to accelerate the use of precision based treatment approaches for management and secondary prevention of asthma in well-phenotyped patients with severe and/or exacerbation-prone asthma to improve patient outcomes and potentially modify disease expression. As well, it is expected that new knowledge will be generated regarding phenotypes, predictive and monitoring biomarkers, trial outcomes, the natural history of disease, and therapeutic responsiveness. The PrecISE trial is currently enrolling nationwide, using an innovative adaptive platform design to test five novel interventions in severe asthma. In this session we will describe the demographics and clinical baseline characteristics of the study cohort, and provide an update on study progress.

- 12:00** PrecISE Protocol and Update Cohort and Baseline Characteristics
- 12:15** PrecISE Cohort Baseline Characteristics
- 12:30** PrecISE Cohort Population Strata
- 12:45** Discussion and Questions

NASA APPLIED SCIENCES PROGRAM
MID-DAY SESSION

MD21 CONNECTING NASA EARTH SCIENCE APPLICATIONS WITH AIR QUALITY AND RESPIRATORY HEALTH

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:

- describe cross-cutting environmental health applications of the NASA Health and Air Quality Program, relevant for pulmonary clinicians and researchers.
- notify clinicians and researchers about ongoing NASA projects and missions that examine pulmonary and cardiovascular disease risks and provide resources about local, state, national and international levels on air pollution and extreme heat.

- evaluate at least three examples where NASA satellite data can be applied to air pollution or extreme heat as global health risks.

Earth science data provide an in-depth view of how natural and anthropogenic phenomena impact public health, especially in our changing environmental world. This session will describe how NASA satellite data can strengthen cross-cutting environmental health research applications and valuable community stakeholder partnerships to address emerging risks like climate change. It will highlight a subset of current NASA projects and missions that assess potential health risks associated with poor air quality and extreme heat events, which can ultimately support clinical practice and policy decision-making within health and air quality sectors.

- 12:00 Linking Earth Science Applications to Understand Respiratory Health Risks: Updates from NASA Health and Air Quality Applications**
- 12:15 The NASA TEMPO Mission: Hourly Daytime Air Pollution Observations from Geostationary Orbit for Advanced Health and Air Quality Applications**
- 12:30 Weekly Briefing of Fire and Air Quality (FireAQ): Progresses and Lessons in 2023**
- 12:45 Extreme Heat and Health Collaborations to Reduce Health Disparities**

NHLBI, NIH

MID-DAY SESSION

MD22 ARDS, PNEUMONIA, AND SEPSIS PHENOTYPING CONSORTIUM

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:

- understand the goal and scope of the APS phenotype consortium
- learn the resource available from the APS consortium for the broader community
- participate in discussions related to the use of APS consortium data and biospecimens

NHLBI/NIGMS awarded the ARDS, Pneumonia, and Sepsis (APS) consortium on 5/1/23. APS goals: 1) understand the heterogeneity and underlying mechanisms of critical illness syndromes and recovery, specifically in adults w/ARDS, pneumonia, and/or sepsis; Understand the relationship and biological overlap among these syndromes; 2) collect/disseminate data and biospecimens as a resource to the broader research community. One coordinating center/six clinical centers will enroll approximately 5000 patients and conduct consortium-wide studies and center-specific studies. This platform will highlight/showcase the research goals, scopes, and novel findings and advocate the available resource for the broader community to further facilitate research and future knowledge in this field.

- 12:00 Overview of APS Consortium**
- 12:12 APS Consortium Scientific Vision**
- 12:24 Study Protocols**
- 12:36 Long-Term Outcomes**
- 12:48 Data and Biospecimen Sharing**

CENTERS FOR DISEASE CONTROL AND PREVENTION

MID-DAY SESSION

MD23 TUBERCULOSIS (TB) RESEARCH AND PROVIDER/COMMUNITY ENGAGEMENT UPDATES FROM CDC

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 global burden of TB and the current landscape of clinical trials in drug-susceptible TB and new CDC-sponsored trial S38/CRUSH-TB.
- describe the importance of socio-behavioral research and its ability to improve patient experiences and provider perceptions and practices of TB prevention and treatment and inform future work to engage with providers on TB testing and treatment.
- apply new strategies to reduce disparities in TB through provider outreach and community engagement efforts.

The session will orient participants about the global burden and risk factors for TB by highlighting the status of clinical trials for drug-susceptible TB and an overview of the CDC-sponsored global clinical trial of 4-month treatment regimens using newer TB drugs. The session will also include a review of previous and proposed socio-behavioral work within CDC's Tuberculosis Trials Consortium (TBTC) and the importance of integrating socio-behavioral perspectives in both TBTC governance and future research. Learners will also gain knowledge of U.S.-based providers' self-reported TB testing and treatment practices for latent TB infection (LTBI) based on the results of a national survey. Finally, session participants will learn about provider outreach strategies and community engagement efforts through the U.S.-based Tuberculosis Elimination Alliance.

- 12:00** **CDC-Sponsored Trial S38/CRUSH-TB: A Study of Two Investigational Four-Month Regimens For Drug-Susceptible TB.**
- 12:15** **Incorporating Socio-behavioral Research into TB Clinical Trials to Improve Patient Experiences and Provider Perceptions**
- 12:30** **Tuberculosis Testing and Latent Tuberculosis Infection Treatment Practices Among Health Care Providers**
- 12:45** **Provider Outreach and Community Engagement Efforts to Reduce TB Health Disparities**

NHLBI, NIH

MID-DAY SESSION

MD24 NEW FINDINGS FROM THE SUBPOPULATIONS AND INTERMEDIATE OUTCOMES IN COPD STUDY (SPIROMICS) FAMILY OF STUDIES: SPIROMICS, SOURCE, SPIROMICS HF

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
- understand how the COVID-19 pandemic may have affected COPD patients

SPIROMICS is a clinical observational study intended to identify different subpopulations of individuals w/COPD and ultimately define endotypes within this heterogeneous disease that are responsive to mechanism-specific interventions. SPIROMICS is performing intensive longitudinal phenotyping of a cohort that consists of individuals w/smoking history with and without COPD, and control participants without smoking history. SPIROMICS studies include: SOURCE, a cohort-design investigating COPD Origins; SPIROMICS Heart Failure, collecting cardiovascular measures in a subset of the SPIROMICS cohort; and C4R, a cohort of cohorts to determine factors that predict disease severity and long-term health impacts of COVID-19. Updates on SPIROMICS study results and progress of other studies

- 12:00** **How Do Different Categories of "Pre-COPD" Fit Together?**
- 12:15** **Investigating the Origins of Early COPD in the SOURCE**
- 12:30** **Sex-Based Differences in the Right Ventricle (RV) in COPD in SPIROMICS HF**
- 12:45** **Implications of COVID-19 for COPD (C4R study in SPIROMICS)**

NATIONAL INSTITUTE ON AGING

MID-DAY SESSION

MD25 UPDATES ON LUNG HALLMARKS OF AGING

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

Target Audience

Clinicians, physiologists, molecular biologists, epidemiologists, and all points in between

Objectives

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

- update on hallmarks of lung aging
- determine whether lung and pulmonary vasculature aging/cellular senescence is related to disease pathogenesis
- describe new findings about other cellular perturbations and lung aging in chronic lung diseases

Lung aging is associated with molecular and physiological changes that cause alterations in lung function, diminished pulmonary remodeling and regenerative capacity, and increased susceptibility to acute and chronic lung diseases. Recent findings show diverse mechanisms that support a role for several aging hallmarks including senescence, oxidative damage, telomeric maintenance failure, inflammation and metabolic dysfunction that contribute to lung aging. The purpose of this session is to have presentations on state of the science findings on the molecular and cellular mechanisms of aging which contribute to the pathological features of lung aging and pulmonary dysfunction.

- 12:00 Cellular Hallmarks of Human Lung Aging - Lesson from Single Cell and 'Omics' Analyses**
- 12:15 The Extracellular Matrix as a Contributor to the Hallmarks of Lung Aging**
- 12:30 Immune Mechanisms of Lung Aging Based on Infections**
- 12:45 Cellular Senescence, Senolytics, and Respiratory Disorders and Diseases**

VETERAN'S ADMINISTRATION

MID-DAY SESSION

MD26 RESEARCH IN VHA'S LPOP PROVIDES IMPORTANT OPPORTUNITIES TO IMPROVE LUNG CANCER SCREENING

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

Target Audience

Providers of lung health; those interested in and/or overseeing lung cancer screening programs; those with interests in public and population health; those interested in lung cancer; those interested in interventional pulmonary medicine.

Objectives

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

- apply new strategies in selecting patients for lung cancer screening, such as prediction-augmented approaches.
- better counsel patients who are active cigarette smokers in a screening program in the value of committing to use of aggressive approaches for smoking cessation.
- describe new findings about the relationships between baseline health status and whether the patient will be likely to benefit from lung cancer screening.

Lung cancer is a leading cause of death. VHA has embarked on the Lung Precision Oncology Program (LPOP) that includes a focus on screening. Selecting patients for screening by age and cigarette smoking improves lung cancer mortality but is resource-intensive, identifies lung cancer in less than 5%, and is under used overall and possibly over used in frail patients. This session will describe research projects in LPOP that identify more efficient approaches for selection, determine how baseline health status affects outcomes, examine how cigarette smoking can be treated effectively, and evaluate impacts of program organizational structure on uptake and access.

- 12:00 Prediction-Augmented Approach to Patient Selection for Lung Cancer Screening in LPOP.**
- 12:10 Radiomic Approach to Risk Stratification for Patients Undergoing Lung Cancer Screening in LPOP**
- 12:20 Overcoming Barriers to the Integration of Smoking Cessation into Lung Cancer Screening**
- 12:30 Lung Cancer Screening Organizational Characteristics and Program Performance in LPOP**
- 12:40 Lung Cancer Screening for Veterans in LPOP: Measuring Real-World Benefit and Harm**
- 12:50 Discussion, Q&A**

NHLBI, NIH

MID-DAY SESSION

MD27 TRANS-OMICS FOR PRECISION MEDICINE (TOPMED) PHASE 2: FROM WGS TO FUNCTIONAL GENOMICS

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

Target Audience

The target audience will include researchers, physicians, and vendors that are interested in molecular and cellular basis of lung diseases and precision medicine.

Objectives

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

- understand the progress report of TOPMed as a resource for genomics study
- learn from omics data on aging, gender, and lung diseases.
- understand recent progress in the discovery of genetic basis of common, complex diseases like COPD and IPF.

NHLBI's Trans-Omics for Precision Medicine (TOPMed) is to create a large genomic dataset supporting research communities' efforts on precision medicine. In Its first phase, TOPMed has generated 200,000 whole genome sequencing (WGS) data.

Starting its second phase, TOPMed is moving toward the functional genomics and will generate 270,000 multi-omics data (RNA-seq, methylome, metabolome, and proteome). Overall, this session aims to showcase the work of TOPMed as a community resource for precision medicine research. It will highlight the diverse applications of TOPMed data in studying asthma, COPD, and IPF, and emphasize the potential for improving diagnosis, treatment, and prevention strategies in these respiratory conditions.

12:00 TOPMed Data and How to Access It

12:15 Lifecourse Omics from Asthma to COPD

12:30 IPF, a Rare Disease with Complex Genetic Basis

12:45 Integrative Genomics Analysis of COPD

12:00 Unlocking Potential: The Pediatric Pulmonologist Role in the CVICU

12:25 From Cough to Crisis: Managing Hemoptysis and Pulmonary Hemorrhage

12:50 Question and Answer

PEDIATRIC CLINICAL CORE CURRICULUM

PCC2 PEDIATRIC CLINICAL CORE CURRICULUM 2

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

Objectives

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

- discuss the management of pediatric ARDS, massive hemoptysis, and severe asthma in the ICU
- explain the role of the pediatric pulmonologist in a cardiovascular ICU
- identify strategies to approach discussions around tracheostomy and for planning effective transition out of the ICU

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.



ADULT CLINICAL CORE CURRICULUM

CC4 ADULT SLEEP CLINICAL CORE CURRICULUM

2:15 PM - 3:45 PM

Objectives

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

- describe the use of currently available wearable monitors in the evaluation and management of sleep disorders
- discuss updates in the management of sleep disorders in pediatric and underserved populations
- explain current approaches to managing hypersomnia, insomnia, and circadian rhythm 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 **Beyond CBT-I: What Else for Insomnia?**
- 2:40 **What's New in Pediatric Sleep Testing?**
- 3:05 **Against the Clock: Critical Illness and Circadian Rhythm**

3:30 **Question and Answer**

BEHAVIORAL • CLINICAL • TRANSLATIONAL

YEAR IN REVIEW

B81 NURSING YEAR IN REVIEW: IMPLEMENTATION IN PULMONARY, CRITICAL CARE AND SLEEP

Assemblies on Nursing; Behavioral and Health Services Research

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

Target Audience

This session will be of interest to any clinician or clinician scientist who seeks to improve the care of patients by enhancing the uptake of evidence based care practices in the areas of pulmonary care, critical care, and sleep.

Objectives

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

- attendees will be able to define implementation and describe its role in translational research and the delivery of evidence-based care
- attendees will be able to provide an example of how an implementation approach was used to overcome a challenge in the delivery of or adherence to evidence-based care for patients with pulmonary disease, critical illness, or sleep disorders
- attendees will be able to describe an implementation framework or strategy they could apply in their research or clinical care

This Nursing Year in Review session will provide an overview of implementation (definitions, frameworks, and methodologies). This will be followed by presentations by nurse scientists from the fields of pulmonary disease, critical illness, and sleep. In their presentations, each will describe exemplar studies from 2023 that utilized implementation approaches to enhance the delivery of evidence-based care in their respective clinical fields.

2:15 **Implementation : Definitions, Theories, Frameworks and Strategies**

2:30 **Implementation Approaches in Pulmonary Care**

2:50 **Implementation Approaches in Critical Care**

3:10 **Implementation Approaches in Sleep Care**

3:30 Moderated Discussion of Implementation Approaches

BASIC • BEHAVIORAL • CLINICAL • TRANSLATIONAL

CLINICAL TOPICS IN PULMONARY MEDICINE

B82 SCREENING AND EARLY DIAGNOSIS OF ILD IN PATIENTS WITH CONNECTIVE TISSUE DISEASE

Assembly on Clinical Problems

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

Target Audience

ILD clinicians, ILD translational scientists, general pulmonologists, rheumatologists, and radiologists

Objectives

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

- understand the current state of screening for ILD in CTD and integrate new ACR guidelines into current practice
- describe the current utility and limitations of clinical, blood-based, and radiomic biomarkers in CTD-ILD diagnosis and understand how to incorporate these biomarkers in clinical decision-making
- better counsel patients on management options after early diagnosis of CTD-ILD

Interstitial lung disease (ILD) is a serious complication of connective tissue disease (CTD), leading to significant morbidity and mortality. With several therapeutics known to improve outcomes, early recognition is critical. While HRCT is the current gold standard for diagnosis, it is not universally utilized as a screening tool in all high-risk patients. This symposium will review the current state of screening for CTD-ILD, highlight the 2023 American College of Rheumatology ILD Guidelines, explore the application of clinical, blood-based, and radiomic biomarkers, and review interventions after early CTD-ILD diagnosis. This multi-disciplinary panel comprises pulmonologists, rheumatologists, and radiologists.

2:15 Introduction and Overview

2:18 Patient Speaker

2:23 Current State of CTD-ILD Screening and Diagnosis

2:38 Question and Answer

2:43 Radiomics in CTD-ILD

2:58 Question and Answer

3:03 Clinical and Blood-Based Biomarkers of CTD-ILD

3:18 Question and Answer

3:23 Management Decisions After Early Detection of CTD-ILD

3:38 Question and Answer

CLINICAL

CLINICAL TOPICS IN PULMONARY MEDICINE

B83 ARTIFICIAL INTELLIGENCE IN THE RADIOLOGICAL ASSESSMENT OF INTERSTITIAL LUNG DISEASE

Assemblies on Clinical Problems; Pulmonary Circulation

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

Target Audience

General and ILD Pulmonologists and Radiologists Hospital administrators considering whether to invest in novel technology. Clinical trialists, the pharmaceutical industry and representatives from the FDA and NIH Trainees and Fellows

Objectives

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

- better understand the limitations associated with current radiological tools used for assessing patients with interstitial lung disease both in terms of diagnosis and prognostication and the opportunities which novel imaging techniques may hold
- better understand the different AI scientific approaches applied to CT scans in patients with interstitial lung disease
- develop a nuanced appreciation for the challenges associated with approval of new therapies using existing clinical trial end points and the opportunities which AI derived imaging biomarkers hold

This session will provide a cutting-edge update on the role of AI in the radiological assessment of ILD by exploring the new available technology and different scientific approaches employed. We will review the published literature and the emerging opportunities. We will evaluate the potential role of AI to expedite the diagnosis of ILD and to prognosticate from a baseline CT scan stratifying patients with the goal of earlier diagnosis and treatment. We will explore the barriers to adoption of novel technology in routine healthcare and regulatory challenges to establishing novel clinical trial endpoints to facilitate the approval of new therapies.

- 2:15 Introduction to the Symposium
- 2:17 Current Perspectives on the Use of AI and Machine Learning in the Diagnosis and Management of Fibrotic Lung Disease
- 2:32 The Quest to Dig Deeper into a CT Scan of the Chest
- 2:47 From COVID-19 to IPF: Developing Imaging Biomarkers that Impact Diagnosis and Course of Disease
- 3:02 Sharpening Our Tools. Finding Value in AI for ILD Biomarker Discovery
- 3:17 Seeing is Believing; Success in ILD Clinical Trials Using Novel Imaging Tools
- 3:32 Panel Discussion and Conclusions

BEHAVIORAL • CLINICAL
CRITICAL CARE TRACK
B84 INTEGRATING GERIATRIC PRINCIPLES AND PRACTICES INTO CRITICAL CARE AND ICU RECOVERY

Assembly on Critical Care

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

Target Audience

Clinician scientists studying critical illness and recovery; Physicians, nurses, pharmacists, social workers, physical and occupational therapists who care for patients in the ICU, on hospital wards, and in primary care and specialty clinics

Objectives

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

- integrate geriatric care principles into ICU care to reduce the incidence and impact of disability in survivors
- apply key geriatric principles of judicious medication management into clinical care in the ICU and in the outpatient setting
- learn to develop care plans that assess issues in transitions of care and fear of falls after critical illness

As the population ages, older adults represent an increasing proportion of the patients admitted to intensive care units. Barriers remain to integrating evidence-based geriatric concepts and person-centered care models into the care of older adults during and after critical illness. This session brings together a diverse range of experts from geriatrics, physiotherapy,

pulmonary and critical care medicine, nursing, and pharmacy to discuss recommendations for further integrating person-centered, geriatrics-focused care into the practice of critical care medicine.

- 2:15 Polypharmacy In and After ICU
- 2:30 Screening for Cognitive Impairment Following Critical Illness
- 2:45 Addressing Social Determinants of Health to Promote Recovery
- 2:55 Addressing Fear of Falls Among Older Survivors of ICU
- 3:05 Panel Q&A
- 3:20 Mitigating Long-Term Disability After Critical Illness: Lessons Learned From Geriatric Care Models
- 3:35 Aging, Families, and Transitional Care After Critical Illness

BASIC • TRANSLATIONAL
BASIC CORE
B85 LUNG HARMONY: UNRAVELLING THE SYNERGY BETWEEN MACROPHAGES AND ALVEOLAR EPITHELIAL CELLS IN DISEASE

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

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

Target Audience

Anyone interested in basic and translational research, trainees, fellows, scientists,

Objectives

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

- provide and up to date review on the distinct role of alveolar macrophages and alveolar epithelial cells in the alveolar space and how this niche is central to lung homeostasis and response to infection and injury
- understand new innovative techniques such as 3D culture, spatial transcriptomics, and diving deep into the biology of how these two cell types work together to respond to infection and injury
- learn how to utilise existing multi-omic data sets to bring these omic studies to the next level and mechanistically interrogate the interactions of cell types in lung compartment such as the alveoli

This session will provide an up-to-date overview of the synergistic role between airspace macrophages and alveolar epithelial cells in the lung and how the two work in tandem to fight lung infection and disease. There are many papers assessing the contribution of macrophages or AEC2 cells to lung health and disease but few looking at the interactions and how the two work in tandem to respond to infection or injury. With the development of new cutting edge 3D models to assess macrophage epithelial cell interactions in the lung this session is timely and can also build on data generated from multi-omic approaches.

- 2:15 AT2-Derived GM-CSF: A Crucial Signal for Initiating and Sustaining Alveolar Macrophage Differentiation from Pre- to Postnatal Stages and into Adult**
- 2:33 Forging an Antibacterial Alliance: How Legionella-Infected Macrophages Leverage Alveolar Epithelium to Metabolically Reprogram Myeloid Cells**
- 2:51 Metabolic Signalling Unleashed: Unraveling the Role of Diverse Myeloid Cell Metabolism in Fibrotic Lung Disease.**
- 3:09 Unveiling the Impact of Macrophage-Epithelial Paracrine Crosstalk in Viral Infection and Beyond**
- 3:27 Unraveling the Path to COPD: Monocyte Extravasation and Alveolar Epithelial Cell Injury at the Crossroads of Disease Development**

BASIC • BEHAVIORAL • CLINICAL • TRANSLATIONAL

SCIENTIFIC SYMPOSIUM

B86 AN INCONVENIENT TRUTH: HEALTH DISPARITIES AND HEALTH CARE INEQUALITY IN RESPIRATORY MEDICINE

Assemblies on Pulmonary Circulation; Allergy, Immunology and Inflammation; Behavioral Science and Health Services Research; Clinical Problems; Nursing; Pulmonary Infections and Tuberculosis; Pulmonary Rehabilitation; Respiratory Cell and Molecular Biology; Respiratory Structure and Function; Sleep and Respiratory Neurobiology; Council of Chapter Representatives Committee; Health Policy Committee

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

Target Audience

Cardiologists; General Medicine Physicians; Physicians in

Training; Physician Assistant; Pulmonary Physicians, Registered Nurses.

Objectives

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

- describe the association between race/ethnicity, social determinants of health and environmental stress with clinical outcomes in patients with chronic lung diseases
- define new strategies in the management of minority patients affected by with chronic lung diseases
- describe new findings of precision medicine, OMICS and deep phenotyping in minority patients afflicted by chronic lung diseases

Disparities in respiratory medicine are common, and linked to social, economic, and environmental inequalities, affecting individuals of different backgrounds with different respiratory conditions. Here, we review different drivers of disparities and healthcare inequality, in respiratory medicine (race/ethnicity, social determinants of health, environmental stress, OMICS), differences on interpretation of diagnostic tests (oximetry, spirometry) or access to therapies (pulmonary rehabilitation), with case examples highlighting different chronic lung diseases such as asthma, sleep breathing disorders, pulmonary hypertension, COVID-19. We discuss future steps in the global task of assuring justice and equality in access to health care.

- 2:15 Addressing Race-Based Disparities in Respiratory Medicine - I**
- 2:27 Addressing Race-Based Disparities in Respiratory Medicine - II**
- 2:35 Race/Ethnicity as Drivers of Inequality: The Case of Pulse Oximetry**
- 2:45 Spirometry Testing as a Driver of Disparity**
- 2:55 Race/Ethnicity and Beyond: Advancing the Promise of Precision Medicine, OMICS, and Deep Phenotyping Across Respiratory Disease to Minorities**
- 3:05 Barriers to Optimal Care: The Case of Pulmonary Rehabilitation**
- 3:15 Traditional and Novel Social Determinants of Health: Insights from PAH**
- 3:25 Environmental Stress and Disparities: Sleep Breathing Disorders**
- 3:35 Role of Policy and Advocacy in Addressing Disparities**

BASIC • TRANSLATIONAL

SCIENTIFIC SYMPOSIUM

B87 IMMUNE MECHANISMS OF ACUTE LUNG INJURY FROM COVID AND BEYOND

Assemblies on Allergy, Immunology and Inflammation;
Respiratory Cell and Molecular Biology

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

Target Audience

Physicians, scientists, lung injury researchers, critical care clinicians, pulmonologists

Objectives

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

- discuss the diverse populations of lung immune cells in health and injury
- discuss the role of the immune cell transcriptome in ARDS
- discuss potential therapeutic targets to treat pulmonary inflammation

The innate and adaptive immune system play a significant role in the pathophysiology of lung injury. However, the precise mechanisms by which immune cells improve or exacerbate lung injury is poorly understood. The use of "omics" approaches in human cells and tissues has brought us closer to understanding these complex mechanisms of lung injury. Despite these advances, there remain several challenges in untangling the massive data sets generated from "omics". In this symposium, leaders in the field of lung injury immune cell omics will share their approaches and lessons learned. By further understanding the patient-specific molecular mechanisms underlying immune-mediated lung injury, we can come closer to personalized therapies for acute lung tissue injury induced by inflammation.

2:15 Monocyte and Macrophage Diversity in the Healthy Lung

2:33 Alveolar Macrophage Transcriptome and ARDS Outcomes

2:51 Monocyte Gene Signatures in ARDS

3:09 An Omics Approach to Immune-Mediated Lung Injury from COVID-19

3:27 Multiple T Cell Responses are Associated with Protection Against COVID-19 Disease and Lung Injury

BASIC • BEHAVIORAL • CLINICAL • TRANSLATIONAL

SCIENTIFIC SYMPOSIUM

B88 CUTTING EDGE VACCINE DEVELOPMENT FOR THE PULMONARY SUB-SPECIALTY COMMUNITY: VACCINE IMMUNOLOGY, RESEARCH, DEVELOPMENT, AND PRACTICE SOLUTIONS

Assemblies on Pulmonary Infections and Tuberculosis;
Pediatrics

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

Target Audience

ATS clinicians and members interested in vaccine development and implementation

Objectives

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

- improve patient health through promotion of vaccines and immunization
- describe vaccine development as a potential tool to combat multi-drug resistant bacteria
- understand the role current and developing vaccines play in improving respiratory health in adults

Vaccines have had a significant impact on global health, reducing mortality from or even eradicating several devastating infections. However, vaccine-preventable illnesses remain a threat due to low vaccine coverage among adults, particularly important for those with chronic lung disease. The goal of this session is to outline challenges to and highlight strategies for improving global vaccination to combat a variety of respiratory illnesses and to emphasize the impact vaccines have on improving respiratory health and preventing respiratory morbidity. Multiple perspectives will be represented, including infectious diseases, behavioral, community engagement, health disparities, and public health policy. Vaccines to Address the Growing Threat of Antimicrobial Resistance
The Future of mRNA Vaccines for Infectious Diseases and Cancer Immunotherapy
Toward a Universal Flu Vaccine
The Future for Pediatric RSV Vaccination is Now
Discussion
Discussion

BEHAVIORAL • CLINICAL

SCIENTIFIC SYMPOSIUM

B89 INTERNATIONAL PERSPECTIVE ON TOBACCO/VAPING PRODUCT/HEATED TOBACCO PRODUCT DEPENDENCE AND CONTROL

Assemblies on Environmental, Occupational and Population Health; Behavioral and Health Services Research; Pediatrics; Thoracic Oncology

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

Target Audience

Physicians, health services researchers, tobacco researchers, epidemiologists, public policy advocates, public policy decision makers.

Objectives

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

- describe the successes and challenges facing tobacco control efforts in low and middle income countries, describe the types of tobacco products used, and describe populations at risk
- describe the impacts on international tobacco control of the tobacco industry, the the US Food and Drug Administration Center for Tobacco Products, and the World Health Organization Framework Convention on Tobacco Control (FCTC)
- be able to articulate new understandings of the harms of electronic nicotine delivery systems and heated tobacco products

Tobacco and nicotine products are a threat to global health. Electronic nicotine delivery systems (e-cigarettes) and heated tobacco products threaten to expand the global tobacco epidemic. United States tobacco product policies and the international tobacco product companies have an substantial impact on the global tobacco policy. This session aims to an international perspective on tobacco product dependence and tobacco product control with a focus on low and middle income countries.

- 2:15 Tobacco Dependence Treatment in Latin America**
- 2:35 Tobacco and Vaping Product Control in Low and Middle Income Countries: Challenges and Successes**
- 2:55 What Tobacco and Vaping Products are Used in the Developing World?**
- 3:10 New Understandings of Vaping Product and Heated Tobacco Product Toxicity**

3:25 Education and Counter-Marketing Campaigns in Latin America to Prevent Tobacco and Vaping Product Initiation and Increase Cessation of Use

3:35 General Discussion

TRANSLATIONAL

SCIENTIFIC SYMPOSIUM

B90 IMPACT OF THE GUT-LUNG AXIS ON RESPIRATORY HEALTH ACROSS THE LIFESPAN

Assemblies on Pediatrics; Clinical Problems

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

Target Audience

providers of lung health, trainees, basic researchers, translational researchers

Objectives

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

- describe new findings about mechanisms through which gut microbiota may impact respiratory health
- define new strategies to manage the care of respiratory disorders through modulation of gut microbiota
- at the conclusion of this session, the learner will be better able to apply multi-omic approaches to studying interactions between lung and gut health

Multi-omics studies of gut and respiratory microbiota have identified relevant links between these systems with implications for clinical management and advancing understanding of respiratory disease pathophysiology. This session will discuss current state-of-the art knowledge of the impact of the gut-lung axis on pediatric and adult respiratory diseases, and how consideration of the gut-lung axis may advance lung health.

- 2:15 Introduction**
- 2:20 Patient Speaker**
- 2:25 The Role of Gut Microbiota in Early Immune Priming and Childhood Asthma**
- 2:45 Relevance of the Gut Microbiome for Lung Health in Cystic Fibrosis**
- 3:05 The Role of the Gut-Lung Axis in Bronchiectasis**
- 3:25 Impact of Gut Microbiota on Critical Illness**

CLINICAL • TRANSLATIONAL

SCIENTIFIC SYMPOSIUM

**B91 WHERE ARE THEY NOW?
FUNCTIONAL LUNG IMAGING
NEARING CLINICAL APPLICATION****Assemblies on Respiratory Structure and Function****2:15 P.M. - 3:45 P.M.****Target Audience**

Clinicians and Researchers with an interest in Novel Lung Imaging Methods

Objectives

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

- describe the main functional lung imaging technologies that are available for clinical application
- identify clinical and research cases where functional lung imaging could improve clinical care, patient outcomes, or scientific rigor
- apply functional lung imaging in clinical practice or research projects

In this session, several novel lung imaging techniques will be presented and discussed. Each speaker will provide an introduction to the imaging technology in which they focus, and provide some of the most relevant clinical questions that their imaging techniques can answer. These talks will be followed by a clinician with expertise in the use of imaging who will provide additional context on how imaging may be of benefit in the clinic. After these presentations, each speaker will participate in a panel discussion aiming to highlight the strengths, weaknesses, and most relevant applications of each technique.

2:15 Quantitative CT Imaging: From Research to Clinical Application

2:30 Computational Fluid Dynamics: New Insights into Airflow in the Airways and Lungs

2:45 X-Ray Velocimetry for 4D Functional Lung Imaging

3:00 Research and Clinical Applications of Hyperpolarized ¹²⁹Xe MRI

3:15 Room to Grow: Clinical Applications Where Functional Lung Imaging is Most Needed, and Obstacles to Adoption

3:30 Panel Discussion



MEET THE EXPERT SEMINARS

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

\$100 Member/Non-Members

\$70 LMIC Member/LMIC Non-Members

11:30 a.m. - 12:30 p.m.

- MTE25 MILITARY PULMONARY TOXIC EXPOSURES**
- MTE26 CRITICAL THINKING AND CLINICAL REASONING: IS ARTIFICIAL INTELLIGENCE INTELLIGENT?**
- MTE27 BRONCHIECTASIS: GUIDELINES BASED APPROACH TO CHALLENGING PATIENTS**
- MTE28 HOW TO CREATE A CENTRALIZED LUNG CANCER SCREENING PROGRAM**
- MTE29 MORE THAN JUST INITIAL SETTINGS: ADJUSTING NIV FOR PATIENTS WITH PROGRESSIVE NEUROMUSCULAR DISEASE**
- MTE30 ALL YOU CAN LEARN: IMMUNIZATION FOR PATIENTS WITH RESPIRATORY PROBLEMS**
- MTE31 ARE WE READY TO DITCH ALBUTEROL AS-NEEDED IN ASTHMA OR NOT YET?**
- MTE32 TEACHING IN THE ICU AT NIGHT**
- MTE33 ADDRESSING BARRIERS TO PALLIATIVE CARE IN PULMONARY ARTERIAL HYPERTENSION- THE WAY FORWARD**
- MTE34 FAILING FORWARD: TURNING “FAILURE” INTO GROWTH**

MTE35 SELECTION AND MANAGEMENT OF “HIGH RISK” LUNG TRANSPLANT CANDIDATES

MTE36 SICKLE CELL LUNG DISEASE MULTIDISCIPLINARY CARE ACROSS THE LIFESPAN: BEST PRACTICES TO ESTABLISH A CLINIC AT YOUR INSTITUTION

K3: KEYNOTE SERIES

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

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 2023 conference and are unopposed by any other programming.

Tuesday's Keynote Lecture will focus on:
Immigrant Health

YEAR IN REVIEW

C1 CLINICAL YEAR IN REVIEW 1

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

Target Audience

Pulmonary, critical care and sleep providers.

Objectives

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

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

The program will discuss general topics of interest to a broad group of providers, inside and outside of these subspecialties. The program is relevant to not only clinicians, but also to researchers and administrators.

9:15 Interstitial Lung Disease

9:37 Medical Education

9:59 Sepsis

10:23 Occupational/Environmental Lung Disease

CLINICAL

CLINICAL TOPICS IN PULMONARY MEDICINE

C2 DECENTRALIZED CLINICAL TRIALS: EASIER FOR PATIENTS AND PULMONOLOGISTS

Assemblies on Clinical Problems; Allergy, Immunology and Inflammation; Behavioral and Health Services Research; Critical Care; Nursing; Sleep and Respiratory Neurobiology

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

Target Audience

Individuals who design and implement clinical trials, as well as end-users of information developed from clinical trials (patients, caregivers, clinicians, policymakers).

Objectives

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

- define decentralized clinical trials (DCTs)
- describe the potential impact of DCTs on participant enrollment and generalizability of study results to real-world practice
- identify examples of remote participant consent and monitoring of outcomes in DCTs

We will explore the growing interest of decentralized clinical trials (which allow some or all trial-related activities to take place in participants' homes or other convenient locations) instead of research sites from four perspectives: 1) regulator; 2) practicing clinician; 3) researcher; and, 4) funder.

- 9:15 Welcome and Session Overview**
- 9:20 Clinical Trials: Why Are They So Difficult to Successfully Complete?**
- 9:30 Decentralized Clinical Trials: FDA perspective**
- 9:40 Moderated Q&A and Introduction of Next Speaker**
- 9:45 Decentralized Clinical Trials: A Practicing Clinician Perspective**
- 9:55 Decentralized Clinical Trials: Researcher Perspective About the Use of Remote Monitoring**
- 10:05 Moderated Q&A and Introduction of Next Speaker**
- 10:10 Division of Lung Disease / NHLBI Perspective**
- 10:20 Moderated Q&A and Introduction of Next Speaker**
- 10:25 Panel Discussion**

CLINICAL

CLINICAL TOPICS IN PULMONARY MEDICINE

C3 PEDIATRIC CLINICAL CHEST ROUNDS

Assembly on Pediatrics

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

Target Audience

Pediatric pulmonary clinicians and trainees (including students, physicians, advanced practice providers, nurses, therapists) interested in the diagnosis and management of challenging cases.

Objectives

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

- TBD depending on the selected cases.
- TBD depending on the selected cases.
- TBD depending on the selected cases.

Pediatric Clinical Chest Rounds is an annual symposium focused on the diagnosis and management of 4 challenging cases, selected from reports submitted to the PEDS Assembly. Each case is presented by a trainee (typically a Ped Pulm fellow), followed by a discussion of the main points of the case (typically an expert in the field). This session is one of the most attended by Pediatric Assembly membership.

- 9:15 Case #1**
- 9:27 Discussant #1**
- 9:37 Case #2**
- 9:50 Discussant #2**
- 10:00 Case #3**
- 10:12 Discussant #3**
- 10:22 Case #4**
- 10:35 Discussant #4**

BEHAVIORAL • CLINICAL

CRITICAL CARE TRACK

C4 CARE OF THE DYING IN THE ICU: END OF LIFE CARE IN 2024 AND BEYOND

Assembly on Critical Care

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

Target Audience

This session is intended for all those that work in an ICU including MDs (both trainees and Non-trainees), RNs, APPs, RTs, PTs, Dieticians, social workers and Spiritual Care Providers

Objectives

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

- recognize the acutely dying patient in the ICU in order to improve the transition to comfort focused care
- improve the dying process for patients and families by adopting initiatives such as the Three Wishes Program
- describe epistemic injustice at the end of life and identify strategies to combat injustices

This session will focus on recognizing the acutely dying patient in the ICU and providing tangible strategies to care for providers, patients, and families in the current modern era that we live and practice in. The session will focus on dying with dignity in a highly technological society and environment where we have a myriad of interventions to offer and will cover challenging end of life scenarios and health disparities at the end of life.

- 9:15 Dying in the ICU: Setting the Stage**
- 9:20 Recognition and Management of the Acutely Dying Patient**
- 9:35 Epistemic Injustice in Serious Illness**
- 9:55 Symptom Management at the End of Life**
- 10:10 Communication as the Key to Care of the Patient and Family at the End of Life**
- 10:25 Adopting the 3 Wishes Program (3WP) at Your Institution**
- 10:40 Wrap Up, Q&A with Speakers and Audience**

CLINICAL • TRANSLATIONAL

SCIENTIFIC SYMPOSIUM

**C5 WHAT'S FAT GOT TO DO WITH IT?
NEW EVIDENCE FOR THE INFLUENCE
OF OBESITY ON CHRONIC AIRWAYS
DISEASE**

Assemblies on Respiratory Structure and Function; Clinical Problems

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

Target Audience

Clinicians and translational scientists who care for and/or study patients with chronic airways disease, as well as interdisciplinary specialists (e.g. endocrinology, family medicine and general internal medicine)

Objectives

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

- gain perspective on the potential altered immune and inflammatory pathways in the airways associated with obesity and metabolic dysregulation
- learn new findings about the influence of obesity and metabolic dysregulation on airway structure and physiology, including bronchial hyperresponsiveness, that may contribute to the pathophysiology of chronic airways disease
- increase awareness of the clinical implications of obesity, metabolic dysfunction and chronic airways disease, as well as emerging novel therapeutics for difficult-to-treat asthma and COPD among patients with obesity

The growing epidemic of obesity across the life-course has amplified the importance of identifying mechanisms by which adiposity and associated metabolic derangements influence airways dysfunction and obstructive lung diseases. This session will focus on the evidence for molecular, cellular, and physiologic alterations in the lung induced by obesity that predispose these individuals towards asthma and COPD, and inform potential targets for future therapies.

- 9:15 Introduction to the Session**
- 9:25 Airway Epithelial Metabolic Dysregulation as a Driver of Downstream Inflammation and Bronchial Hyperresponsiveness**
- 9:40 Obesity Induces Airway Smooth Muscle Cell Hyperresponsiveness**
- 9:55 Insulin Resistance and Dysglycemia - Bystanders or Contributors to Asthma in Obesity**
- 10:10 Physiological Phenotyping in the Evaluation and Treatment of Obese Asthma**
- 10:25 The Obesity Paradox in COPD**
- 10:40 Conclusion**

BASIC • BEHAVIORAL • CLINICAL

PUBLIC ADVISORY ROUNDTABLE SYMPOSIUM

C6 ENVIRONMENTAL INFLUENCE ON LUNG HEALTH

Assembly on ATS Public Advisory Roundtable

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

Target Audience

Providers of lung health and allied services

Objectives

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

- describe new findings with regard to the environmental influence on lung health
- define new strategies to manage the care of individuals with chronic lung conditions to help mitigate the negative effects of air pollutants
- better counsel patients on treatment options and preventive strategies to improve quality of life and optimize health outcomes

This session will focus on the effect that the environment has on lung health. Recently airborne particulates from forest fires brought home the impact of air quality, especially for individuals with compromised breathing. Presentations will discuss the consequences of a warming climate, severe weather events, and flooding on this community. It is well known that higher levels of air pollution can lead to increased symptoms, worse lung function, and more hospitalizations in patients with airway diseases such as asthma and chronic obstructive pulmonary disease (COPD) and interstitial lung diseases (ILD). We also know that air quality is linked to poor health outcomes for patients with other lung conditions and conditions like heart disease or stroke.

9:15 PAR Award Presentations

9:30 Patient Speaker

9:45 The Climate Crisis and Lung Health: An Urgent Call to Action

10:05 Environmental Exposures and Life Course Lung Health: Timing is Everything

10:25 Environmental Contributions to Health Disparities in Obstructive Airway Disease

BEHAVIORAL • CLINICAL

SCIENTIFIC SYMPOSIUM

C7 MOVING THE NEEDLE TO IMPROVE SUPPLEMENTAL OXYGEN DELIVERY QUALITY

Assemblies on Nursing; Behavioral and Health Services Research; Clinical Problems

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

Target Audience

Target audience includes physicians, advanced practice professionals (APPs), nurses, physical therapists and respiratory therapists who are involved in caring for patients who require supplemental oxygen outside of the acute care/inpatient setting.

Objectives

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

- improve the quality of life/health status of patients receiving long term oxygen therapy by identifying the key drivers of quality of life and incorporating these findings into supplemental oxygen management
- better counsel patients on the limitations and advantages of pulse flow and continuous flow portable compressed gas cylinders, oxygen concentrators, and liquid canister oxygen devices
- describe new findings about the impact of the Competitive Bidding reimbursement model on supplemental oxygen services and what legislative efforts are in place to improve access to medically appropriate long- term oxygen

This session addresses the effective and evidence-based delivery of supplemental oxygen to patients with chronic lung disease. It updates information presented two years ago at the 2022 ATS conference and identifies persisting barriers as well as the progress made in improving oxygen delivery. This multidisciplinary session addresses the urgent need to access and disseminate clinical, financial, and patient-reported outcome data to improve supplemental oxygen delivery services. Specific guidance is included for clinician assessment of patients' oxygen needs, and prescription of appropriate equipment, as recommended in the ATS Oxygen Clinical Practice Guidelines. The impact of, and current research around, technology innovation, reimbursement models, and legislative efforts are presented.

9:15 Introduction Including Taped Presentation from Patient with PH Using Sup Oxygen

- 9:20 Patient Speaker**
- 9:25 Quality of Life for Patients Using Supplemental Oxygen**
- 9:40 The Cost Impact of Competitive Bidding on Supplemental Oxygen Users: A CMS Analysis in Patients with COPD**
- 9:55 Getting Portable Oxygen to Your Patients: What Clinicians Need to Know**
- 10:10 Oxygen Innovation: Remote Control, Auto-titration, High Continuous Flow**
- 10:20 Legislative Progress for Improving Oxygen Service Quality**
- 10:30 Summary of Session and Q & A**

CLINICAL

SCIENTIFIC SYMPOSIUM

C8 MOVING THE NEEDLE IN THE RIGHT DIRECTION: A PRO-CON DEBATE ON STRATEGIES FOR LUNG NODULE BIOPSIES

Assembly on Thoracic Oncology

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

Target Audience

Clinicians, nurses, allied health staff and researchers in primary care and respiratory diseases, including chest physicians, interventional pulmonologists, thoracic/general surgeons, oncologists, junior staff and scientists

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: Understand and address challenges and limitations in robotic bronchoscopy relative to traditional procedures
- identify the options for advanced imaging techniques and know how to implement them into their bronchoscopy practice
- define and apply the adjunctive role of ROSE and OCT in confirmation of biopsy site and evaluation of an adequate tissue sample

This symposium engages experts and attendees in a thought-provoking discussion about the use of new technology and techniques in peripheral lung nodule biopsy. Designed as a pro-con debate, by presenting arguments from both sides, this

session seeks to explore the benefits/ limitations of recent advances in lung nodule biopsy. Debate topics will include 1) Necessity of robotic bronchoscopy 2) Advantage of intra-operative imaging (eg. Cone beam CT) 3) Necessity of Rapid On-site Evaluation (vs no ROSE or other modalities such as OCT) and 4) Importance of cryobiopsy for biopsy of peripheral pulmonary nodules (vs other tools including various needle sizes)

- 9:15 Robotic Bronchoscopy is Necessary for Peripheral Lung Nodule Biopsy: Con**
- 9:26 Robotic Bronchoscopy is Necessary for Peripheral Lung Nodule Biopsy: Pro**
- 9:37 Cone Beam Imaging is Needed during Peripheral Nodule Biopsy: Con**
- 9:48 Cone Beam Imaging is Needed during Peripheral Nodule Biopsy: Pro**
- 10:00 Cryobiopsy Should be Used During Peripheral Nodule Biopsy: Con**
- 10:12 Cryobiopsy Should be Used During Peripheral Nodule Biopsy: Pro**
- 10:24 Rapid On-Site Evaluation is necessary During Peripheral Nodule Biopsy: Con**
- 10:34 Rapid On-Site Evaluation is necessary During Peripheral Nodule Biopsy: Pro**

BASIC • TRANSLATIONAL

SCIENTIFIC SYMPOSIUM

C9 RHINOVIRUS INFECTION OF THE AIRWAY EPITHELIUM IN ASTHMA

Assemblies on Allergy, Immunology and Inflammation; Respiratory Cell and Molecular Biology

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

Target Audience

Researchers and clinicians with an interest in understanding the effects of epithelial rhinovirus infection on the regulation of inflammation in asthma.

Objectives

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

- describe new findings about the regulation of inflammation relevant to asthma that occurs in response to rhinovirus infection

- understand the regulation of inflammation through cell-to-cell interactions among epithelial cells and innate cells within the epithelium
- gain insights into the prevention of rhinovirus mediated exacerbations of asthma

Rhinovirus infection is common at asthma onset and during exacerbation and progression. Rhinovirus infection of the airway epithelium induces a strong type-1 immune response but leads clinically to features of type-2 (T2) inflammation in some individuals who are susceptible to or have asthma. Recent work in this area has revealed new insights into the alterations in antiviral immune responses in asthma, potential modulators of this response and connections between rhinovirus infection of the susceptible epithelium and the origin of the accentuated inflammatory response in asthma.

- 9:15 The Importance of Respiratory Viral Infection in the Pathogenesis of Asthma**
- 9:20 Inflammatory Responses to Rhinovirus C Infection Involve Cross-Talk Between Epithelial Subsets**
- 9:40 Differential Epigenetic Responses to Rhinovirus A at Asthma-Associated Loci in Bronchial Epithelial Cells**
- 10:00 Antiviral Responses in Epithelial Cells from Individuals with Asthma**
- 10:20 Cross Talk Between the Epithelium and Mast Cells in the Context of Rhinovirus A Infection**
- 10:40 Summary: The Influence of Rhinovirus Infection of the Airway Epithelium in Asthma**

CLINICAL

SCIENTIFIC SYMPOSIUM

C10 BEYOND TOBACCO: Non-SMOKING CAUSES OF COPD

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, PhD scientists, respiratory health workers, environmental and urban health experts and members of environmental/ global health researchers and agencies.

Objectives

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

- increase awareness about Non-smoking related causes of COPD across the lifespan
- review the evidence for specific Non-smoking related causes of COPD, including perinatal insults, post-infectious, occupational and environmental exposures
- learn strategies to recognize and address Non-smoking related causes of COPD in clinical practice

There is a growing need to address key contributors to COPD beyond tobacco use. This session highlights major drivers of Non-tobacco related COPD, and the impact of modifiable environmental exposures on COPD morbidity and mortality. Through this session, we will identify key knowledge gaps, highlight modifiable risk factors and provide practical guidance to address occupational and environmental drivers of COPD in clinical practice.

9:15 The State of the : What Do We Know About Non-Smoking Related Causes of COPD?

9:30 Setting the Stage: the Role of In Utero and Early Life Exposures

9:45 Infectious Causes of COPD

10:00 Occupational COPD

10:15 Indoor and Outdoor Air Pollution: Environmental Interventions to Improve Outcomes in COPD

10:30 Integrating the Epidemiology into Clinical Care: How Should We Address Non-Smoking Related Causes of COPD in the Office?

BASIC • CLINICAL • TRANSLATIONAL

SCIENTIFIC SYMPOSIUM

C11 COHORT STUDIES IN PULMONARY HYPERTENSION - DEFINING NOVEL PHENOTYPES

Assembly on Pulmonary Circulation

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

Target Audience

Pulmonary hypertension physicians and researchers

Objectives

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

- describe new findings from global pulmonary hypertension registries and tissue banks

- understand how to access data generated by the global pulmonary hypertension registries
- understand how to access sample resources in the various pulmonary hypertension registries

Representatives of large cohort pulmonary hypertension biobanks and studies around the world discuss findings from their studies, as well as how to access their resources. **Patient Speaker** The Pulmonary Hypertension Breakthrough Initiative (PHBI), Powering Discovery for 18 Years Multi-Omics Analyses in UK PAH Cohort Studies to Define Novel Phenotypes Precision Medicine Through the Pulmonary Vascular Disease Phenomics (PVD Omics) Cohort PAH-Targeted Therapies in Non-PAH Groups in PVRI GoDeep, a Worldwide PH Meta-Registry The US Chronic Thromboembolic Pulmonary Hypertension Registry: Enrollment Characteristics and Initial Results New Susceptibility Loci Associated with Pulmonary Embolism and CTEPH: a GWAS Analysis from the Beijing Cohort

BEHAVIORAL
SCIENTIFIC SYMPOSIUM

C12 CARING FOR THE HEALERS

Assemblies on Nursing; Sleep and Respiratory Neurobiology; Health Equity & Diversity Committee; Council of Chapter Representatives; Membership Committee

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

Target Audience

Practicing healthcare workers, researchers, trainees, educators, healthcare administrators, and policy-makers.

Objectives

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

- list individual and institution-level determinants of wellbeing / burnout among healthcare workforce
- identify groups of healthcare workers at increased risk for wellbeing / mental health issues
- describe specific interventions to improve wellbeing of the healthcare workforce

As healthcare providers and researchers, ATS members experience many stressors that can erode wellbeing, resulting in high rates of burnout, depression, substance abuse, and suicide. This session will review the scope of the lack of wellbeing among nurses, providers, and researchers, including the negative impacts on patient care and healthcare institutions. This session

will also provide approaches to address these problems. The speakers will review successful, evidence-based approaches to promote wellbeing and address mental health issues for providers, nurses, researchers, and other members of the healthcare workforce.

- 9:15 Introduction**
- 9:25 An Overview of Healthcare Provider Wellbeing and What Happens When Providers are Not Well**
- 9:35 Supporting the Wellbeing of PhDs**
- 9:45 Clinician Wellbeing - A Nursing Perspective**
- 9:55 The Role of Sleep in Clinician Wellbeing**
- 10:05 The Importance of Belonging: The Intersection of Wellbeing and Inclusion**
- 10:15 Health Systems Solutions to Improve Provider Wellbeing**
- 10:30 Question and Answer Period**

CLINICAL • TRANSLATIONAL
SCIENTIFIC SYMPOSIUM

C13 REASSESSING THE VALUE OF PHYSIOLOGIC ENDOTYPES IN UNDERSTANDING OSA HETEROGENEITY

Assemblies on Sleep and Respiratory Neurobiology

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

Target Audience

Clinicians, researchers, and others interested in using pathophysiological insights to inform the care of patients with sleep-disordered breathing.

Objectives

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

- describe the OSA physiological endotypes and the evidence supporting the role of each in producing the OSA syndrome
- review the robustness of evidence that physiologic endotypes can explain the heterogeneity in OSA and impact clinical decision-making on the diagnosis and treatment in patients seeking care for OSA
- define next steps necessary using physiologic endotypes or other strategies to individualize the care of patients with OSA

This session will critically evaluate the physiological endotype theory of obstructive sleep apnea pathogenesis, assess the robustness of findings resulting from this paradigm, and consider how to better utilize physiologic insights to advance an understanding of OSA heterogeneity and individualization of care.

- 9:15** Why the Basic Assumptions for OSA Physiologic Endotypes are Problematic
- 9:35** Physiologic Endotypes Have Not Informed the Diagnosis of OSA
- 9:55** Physiologic Endotypes Have Not Informed Treatment Decisions for OSA
- 10:15** What is the Future Potential for Endotyping to Explain OSA Heterogeneity?
- 10:30** What are Alternative Pathways to Explain OSA Heterogeneity?



ADULT CLINICAL CORE CURRICULUM

CC5 ADULT CRITICAL CARE CLINICAL CORE CURRICULUM

2:15 PM - 3:45 PM

Objectives

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

- discuss the management of unstable arrhythmias in people admitted to the intensive care unit
- describe current approaches to addressing hemodynamic instability in the intensive care unit including vasopressors, inotropes and mechanical support
- explain the clinical evaluation prior to starting ECMO and basic troubleshooting for issues that arise during its use


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 "The Rhythm is Gonna Get You": Managing Unstable Arrhythmias in the ICU

- 2:40 "Under Pressure": Use of Vasopressors for Hemodynamic Support
- 3:10 "Total Eclipse of the Heart": Management of PE and RV Failure
- 3:35 Question and Answer

MEDICAL EDUCATION SEMINAR

ME103 INFLUENCE, INSPIRE, INNOVATE: DEVELOPING LEADERSHIP SKILLS ACROSS HEALTHCARE DISCIPLINES

 Pre-registration and additional fee required. Attendance is limited.
\$100 Member/Non-Member

10:30 A.M. - 11:30 A.M.

Target Audience

All Health Professionals at any level of training (student, trainee, and faculty), including: Research Scientists, Dietitians, Pharmacists, Respiratory Therapists, Rehabilitation Therapists, Nurses, Advanced Practice Providers, and Physicians.

Objectives

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

- develop an appreciation for personal leadership development and its crucial role in achieving personal and professional objectives
- cultivate best practices for identifying and enhancing essential leadership skills needed to flourish in your current and future roles
- identify and commit to the development of two specific leadership skills utilizing an individualized leadership development plan

Recognizing that in medicine leadership is often "accidental" with technical expertise rather than leadership skills and experience often guiding promotion, this session will focus on developing effective leadership skills for health professionals across all disciplines and at any career stage. We aim to: (1) Demonstrate the tangible advantages of fostering individual leadership growth, including increased team performance, improved patient care, and greater career satisfaction. (2) Explore core leadership skills such as effective communication, emotional intelligence, and decision-making. (3) Present proven strategies for health professionals, which will allow them to identify and develop the specific leadership skills required to flourish in their present and future roles.

CLINICAL

CLINICAL TOPICS IN PULMONARY MEDICINE

C81 CURRENT AND EVOLVING STRATEGIES FOR MANAGEMENT OF PULMONARY SARCOIDOSIS

Assembly on Clinical Problems

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

Target Audience

All providers including physicians, trainees, allied health professionals and advanced practice providers who care for patients with sarcoidosis.

Objectives

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

- describe the health disparities that persist in the field of sarcoidosis
- review recent insights on pathophysiology of pulmonary sarcoidosis
- discuss available therapeutic options and future research in pulmonary sarcoidosis and advanced pulmonary sarcoidosis

The majority of patients with pulmonary sarcoidosis have a good prognosis but a small subset progress to severe disease described as Advanced Pulmonary Sarcoidosis (APS). The variable nature of this disease and lack of understanding of the reasons of this variability make management of pulmonary sarcoidosis challenging. There needs to be better recognition of different (and especially progressive and severe) disease patterns and effective management strategies of pulmonary sarcoidosis and APS. We will discuss current understanding of (and knowledge gaps in) disease mechanisms, recent advances in management and ongoing/ future research endeavors on pulmonary sarcoidosis and APS.

2:15 **Demographics and Disparities in Pulmonary Sarcoidosis**

2:30 **Inflammation and Anti-Inflammatory Treatment in Pulmonary Sarcoidosis**

2:45 **Fibrosis in Pulmonary Sarcoidosis**

3:00 **Sarcoidosis Associated Pulmonary Hypertension (SAPH)**

3:15 **Lung Transplantation and Holistic Care in APS**

3:30 **Panel Discussion and Q/A Session 1**

3:35 **Panel Discussion and Q/A Session 2**

3:40 **Panel Discussion and Q/A Session 3**

CLINICAL • TRANSLATIONAL

CLINICAL TOPICS IN PULMONARY MEDICINE

C82 PRO CON DEBATE ON PROGRESSIVE PULMONARY FIBROSIS: IMPROVING UNDERSTANDING OF A DISEASE PHENOTYPE**Assembly on Clinical Problems****2:15 P.M. - 3:45 P.M.****Target Audience**

ILD clinicians, physician-scientists, and clinical and industry trialists

Objectives

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

- understand and discuss the impact of PPF in clinical care
- understand and discuss the extent to which precision medicine can predict or allow for early identification of PPF
- understand the benefits and challenges of defining clinical trial populations using the PPF phenotype

Progressive pulmonary fibrosis (PPF) designates a subset of fibrotic ILDs with a shared phenotype - characterized by irreversible progression, worsening respiratory symptoms, declining lung function, and premature mortality. PPF was included in the most recent international clinical practice guidelines and has been used as inclusion criteria in clinical studies. Undoubtedly, PPF is shaping the ILD clinical and research landscape - and yet there is limited consensus on how it should be defined, identified, or applied. In this scientific session, we propose a Pro-Con debate designed to evaluate the evolutionary state of PPF with the goal of identifying areas of consensus and controversy that should guide future investigation and application.

2:15 Progressive Pulmonary Fibrosis: Taking Stock**2:20 Pro: PPF - Is It a Meaningful Diagnosis?****2:29 Con: PPF - Is It a Meaningful Diagnosis?****2:38 Audience Discussion and Debate****2:47 Pro: Can Precision Medicine Predict PPF? Are We There Yet?****2:56 Con: Can Precision Medicine Predict PPF? Are We There Yet?****3:05 Audience Discussion and Debate****3:14 Pro: Should the PFF Designation Be Used for Future ILD Clinical Trial Design?****3:23 Con: Should the PFF Designation Be Used for Future ILD Clinical Trial Design?****3:32 Audience Discussion and Debate****3:41 Progressive Pulmonary Fibrosis: Where Do We Go From Here?**

CLINICAL • TRANSLATIONAL

CRITICAL CARE TRACK

C83 WHEN SEPSIS GOES VIRAL: RECONSIDERING SEPSIS IN THE POST-COVID ERA**Assemblies on Critical Care; Clinical Problems; Pediatrics; Pulmonary Infections and Tuberculosis****2:15 P.M. - 3:45 P.M.****Target Audience**

All who care for patients with sepsis and/or research sepsis epidemiology, outcomes, pathophysiology, and/or treatments

Objectives

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

- define the contribution of viral pathogens to the overall burden of sepsis and describe challenges in applying traditional methods of sepsis surveillance to identify viral sepsis
- discuss intersection between existing sepsis phenotyping efforts and viral sepsis for understanding pathophysiology of sepsis and implications for previous and future interventional trials
- describe implications of viral sepsis for current sepsis treatment protocols and potential need for policy change to address one-size-fits-all approach to sepsis

Sepsis is the syndrome of life-threatening organ dysfunction caused by a dysregulated host response to infection. While all consensus definitions of sepsis have been agnostic to the type of pathogen which triggers this host response, clinicians, policymakers, and researchers have historically equated sepsis primarily with bacterial infections. The SARS-CoV-2 pandemic raised awareness that viral infections are (and always have been) important contributors to the total burden of sepsis for both adults and children, with important implications for the understanding of sepsis epidemiology, pathophysiology, and ideal treatment approaches.

- 2:15 Introduction**
- 2:21 Undercounted: Best Estimates and Challenges in Measuring the Burden of Viral Sepsis**
- 2:35 Overtreated: Reconciling Viral Sepsis with Surviving Sepsis**
- 2:49 Undifferentiated: Causative Pathogen Type as Potential Key to Unpacking Sepsis Heterogeneity**
- 3:03 Dysregulated: How the Immune Response Varies in Viral vs Bacterial Sepsis and What it Means for Immunomodulating Therapies**
- 3:17 A Trialist's Dilemma: Enroll or Exclude?**
- 3:31 Lessons from Littles: What We Can Learn from Pediatric Sepsis, Where Viruses Have Long Ruled**

BASIC • CLINICAL • TRANSLATIONAL

SCIENTIFIC SYMPOSIUM

C84 NOVEL AND NEGLECTED ENVIRONMENTAL EXPOSURES AND LUNG HEALTH

Assemblies on Respiratory Structure and Function; Environmental, Occupational and Population Health; Respiratory Cell and Molecular Biology

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

Target Audience

Pulmonologists, environmental scientists, occupational medicine specialists, basic and clinic public health professionals

Objectives

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

- understand the various types of novel environmental and occupational exposures affecting lung health and the cellular and molecular mechanisms underlying their damaging effects
- describe new findings about detection of exposure and lung damage to inhaled toxicants using novel screening and imaging techniques
- more appropriately refer or counsel patients earlier on the basis of increased knowledge of the risks and consequences of environmental and occupational exposures

This symposium will highlight the impact of environmental exposures to various inhaled toxins and pollutants, describing the mechanisms underlying their toxicity and potential for initiating or exacerbating lung diseases. The speakers will focus on the risks and

consequences of exposure to respirable silica, wildfire smoke and microplastics for both exposed workers and the wider community, highlighting the disparities between high, middle and low income countries. This session will also explore preventative measures, regulatory strategies, and novel approaches for surveillance of those exposed and at risk of environment-induced respiratory conditions.

- 2:15 Engineered Stone Dust: A Lot of Silica and More**
- 2:30 Are Airborne Microplastics the New Threat to Our Lungs?**
- 2:45 Effects of Pollution Caused by Burning Sugar Cane and Forest Fires on Health - Evidence from Brazilian Research**
- 3:00 Environmental Exposures Adding to the Burden of Existing Lung Disease**
- 3:15 Monitoring the Environment and Biomonitoring Workers for Ultrafine Particle Exposure**
- 3:30 The Challenge of Detecting Small Airways Disease Associated with Deployment**

CLINICAL

SCIENTIFIC SYMPOSIUM

C85 ATS DOCUMENTS: ADVANCING AND IMPROVING CLINICAL PRACTICE

Assemblies on Behavioral Science and Health Services Research; Clinical Problems; Critical Care; Sleep and Respiratory Neurobiology; This proposal is jointly sponsored by the PRS and the Quality Improvement and Implementation Committee chairs.; Documents Development and Implementation Committee

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:

- understand how evidence is used to inform diagnostic and treatment recommendations
- improve patient outcomes by applying recommendations from recently published clinical practice guidelines
- learn new strategies to approach: scleroderma-related interstitial lung disease, pediatric obstructive sleep apnea

following adenotonsillectomy, the management of ARDS, as well as time-limited trials in critical care

This session is proposed as the 9th annual scientific symposium highlighting ATS documents, with a focus on clinical practice guidelines, as requested by the ATS Executive Committee. This year's symposium will highlight the following guidelines: Management of ARDS, Treatment of Scleroderma-related Interstitial Lung Disease, and Pediatric OSA following Adenotonsillectomy. Additionally, the symposium will highlight the following workshop report: Defining Time-Limited Trials in Critical Care. Speakers will describe how ATS documents provide the foundation for advancing and improving clinical practice.

- 2:15 Welcome and Introduction**
- 2:20 Clinical Practice Guideline Methodology**
- 2:25 ATS Clinical Statements: A New Document Type**
- 2:35 Clinical Practice Guideline: Management of ARDS (1)**
- 2:42 Clinical Practice Guideline: Management of ARDS (2)**
- 2:50 Clinical Practice Guideline: Treatment of Scleroderma-Related Interstitial Lung Disease**
- 3:05 Clinical Practice Guideline: Pediatric Obstructive Sleep Apnea following Adenotonsillectomy**
- 3:20 Workshop Report: Defining Time-Limited Trials in Critical Care**
- 3:35 Implementation of Clinical Practice Guidelines**

TRANSLATIONAL

SCIENTIFIC SYMPOSIUM

C86 PULMONARY REHABILITATION - KEEPING THE WHEEL ROLLING FORWARD

Assembly on Pulmonary Rehabilitation

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

Target Audience

Practitioners involved in chronic respiratory disease care across the spectrum of disciplines of medicine, nursing and allied health.

Objectives

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

- identify the barriers, both physical and psychological, for people in engaging with pulmonary rehabilitation

- critically review current practice in pulmonary rehabilitation for addressing barriers to participation
- creatively consider new potential directions for pulmonary rehabilitation

Pulmonary rehabilitation is impactful in improving health outcomes for diverse people with chronic respiratory conditions, with exercise being the core. However, patient participation rates remain sub-optimal and an inability to engage patients in positive behavior change remains a challenge. A re-conceptualization of pulmonary rehabilitation may be the next step in addressing this issue. The core of exercise becomes the hub while future orientated allied health and nursing approaches are the complementary "spokes" and design for accessibility that are a wraparound "rim". This symposium will explore the evidence for new strategies and support clinicians to create a futuristic model for pulmonary rehabilitation.

- 2:15 From the Patient's Perspective**
- 2:20 A New Wheel is Needed to Move PR Forward - Defining a Hub and Spoke Model for PR**
- 2:30 The Breadth and Depth of Nursing and Allied Health for Pulmonary Rehabilitation**
- 2:45 Cognitive Behavioral Therapy and Motivational Interviewing for Deeper Engagement in Rehabilitation**
- 2:55 Education and Empowerment for Self-Management**
- 3:05 Completing the Wheel with the Rim - Designing for Digital and Health Literacy**
- 3:15 Completing the Rim - Designing for Accessibility and Appeal**
- 3:25 Futuristic Wheels - What Alternatives Could Be the Next Frontier?**
- 3:30 Panel Discussion**

TRANSLATIONAL

SCIENTIFIC SYMPOSIUM

C87 MACHINE LEARNING IN PEDIATRIC PULMONOLOGY

Assemblies on Pediatrics, Respiratory Cell and Molecular Biology

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

Target Audience

researchers and clinicians

Objectives

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

- understand how machine learning can help define disease process
- learn about previous studies which have used machine learning approaches in the field of pediatric pulmonology
- understand pros and cons of these approaches in the field of pediatric pulmonology

The goal of this session would be to understand how machine learning tools can be used to better understand disease phenotype in neonates and children. A number of basic studies are based on being able to better identify patient populations and understand disease severity. This session will focus on tools to help researchers with the same. We will demonstrate how advanced machine learning has been used in pulmonary disease such as asthma and BPD.

- 2:15 **Discovering Pediatric Asthma Phenotypes Using Machine Learning**
- 2:35 **Developing Artificial Intelligence Technology For Pediatric Pulmonology: Lessons from COVID-19.**
- 2:55 **Machine Learning in BPD**
- 3:15 **Innovations in Health Information Technologies for Chronic Pulmonary Diseases**
- 3:35 **Discussion**

BASIC • BEHAVIORAL • CLINICAL • TRANSLATIONAL
SCIENTIFIC SYMPOSIUM

C88 HEALTH EQUITY ACROSS PEDIATRIC PULMONARY DISEASES

Assembly on Pediatrics

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

Target Audience

Providers of pediatric lung health, all health equity researchers

Objectives

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

- describe how a wide range of factors (social, environmental, healthcare, genetic) contribute to health disparities in patient outcomes in pediatric pulmonary diseases, such as BPD, CF, asthma, sickle cell disease

- integrate new guidelines on using race and ethnicity in PFTs into clinical practice and research
- improve patients' outcomes and quality of life by addressing factors known to contribute to health disparities in pediatric pulmonary diseases

Health disparities exist across many pulmonary diseases occurring in children. Speakers will address the latest health disparities research and how we move to equity for all pediatric lung diseases. This will discuss social determinants of health, structural and environmental factors, healthcare system, and biological factors contributing to disparities in many pediatric lung diseases.

- 2:15 **Session Introduction**
- 2:20 **Social Determinants of Health in Pediatric Lung Diseases**
- 2:35 **Structural Neighborhood and Environmental Factors Contributing to Disparities**
- 2:50 **How the Healthcare System Creates Disparities**
- 3:05 **Disparities Down To Epigenetics and Beyond**
- 3:20 **Where Do We Go Next? Achieving Health Equity in all Pediatric Pulmonary Diseases**
- 3:40 **A Call For Action To Achieve Health Equity**

BASIC • CLINICAL • TRANSLATIONAL
SCIENTIFIC SYMPOSIUM

C89 HIV-RELATED LUNG DISEASE: UPDATES IN PATHOPHYSIOLOGY, CLINICAL TRIALS AND FUTURE DIRECTIONS

Assemblies on Pulmonary Infections and Tuberculosis; Allergy, Immunology and Inflammation; Environmental, Occupational and Population Health

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

Target Audience

Providers of lung health, particularly those who provide clinical care for people living with HIV; basic, clinical and translational researchers with a focus on HIV-related lung disease; global health agencies and stakeholders

Objectives

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

- understand the epidemiology of HIV-related lung disease across the spectrum of high and low/middle-income countries and how these differences may impact priorities for research and practice in improving the lung health of people living with HIV
- integrate recent findings related to the pathophysiology and management of HIV-related lung disease
- apply specific recommendations unique to providing care to improve the lung health of people living with HIV

Lung disease is one of the most important and prevalent complications of HIV. This session will provide updates on the: 1) epidemiology of HIV-related lung disease with a focus on differences between high and low/middle-income countries; 2) pathophysiologic mechanisms of HIV-related lung disease, including the disproportionate impact of smoking on lung health in HIV; 3) RCTs in HIV-related lung disease, including the ongoing DEPTH Trial; 4) clinical considerations in the pulmonary care of people with HIV; and 5) future directions for research and research priorities.

- 2:15 HIV-Related Lung Disease Epidemiology: A Global Perspective**
- 2:27 Smoking and HIV-Related Lung Disease: Why Is It So Much Worse?**
- 2:39 Pathobiology of HIV and HIV-Associated Influences on Lung Disease**
- 2:51 RCTs in HIV-Related Lung Disease: DEPTH and Other RCTs**
- 3:03 Clinical Considerations When Caring for People with HIV and Lung Disease**
- 3:15 The NHLBI Perspective on the Future of HIV and Lung Disease**
- 3:27 Q&A**

BEHAVIORAL • CLINICAL • TRANSLATIONAL

SCIENTIFIC SYMPOSIUM

C90 STATE OF THE ON ICU DELIRIUM

Assemblies on Critical Care; Behavioral and Health Services Research

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

Target Audience

ATS attendees from all disciplines who care for patients in the

ICU or after discharge from the ICU (i.e., in the hospital or in the outpatient setting)

Objectives

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

- describe the current understanding of delirium research related to detection, prevention and treatment to facilitate understanding of the past and present state of delirium research and clinical care
- explore existing controversies in delirium research and clinical care and describe novel data from studies advancing the of delirium detection, prevention, and treatment
- improve attendees' perspective of delirium and its long-term consequences through the perspective of a survivor of critical illness and emerging long-term data

Delirium in ICU patients is strongly associated with adverse outcomes, including increased mortality, longer lengths of stay, poor long-term functional outcomes, and long-term cognitive impairment. Substantial progress has been made in the of delirium in recent years. This session will feature new data on long-term outcomes from a landmark study of delirium in ICU patients, novel methods for delirium detection, a patient perspective, a world leader in aging research, and a discussion of recent delirium trials to provide a high-yield update on the state of the in ICU delirium.

- 2:15 The 30,000 Foot View: the Past, Present, and Future of Delirium Research**
- 2:30 The Lived Experience of Delirium**
- 2:42 Advancing the of Delirium Detection**
- 2:54 Critical Care Trials in ICU Delirium: New Evidence and the Path Forward**
- 3:06 Rethinking Nonpharmacologic Prevention and Treatment for ICU Delirium**
- 3:18 Long-Term Outcomes After ICU Delirium: 10-Year Follow-Up from the BRAIN-ICU Study**
- 3:30 Panel Discussion**

BEHAVIORAL • CLINICAL • TRANSLATIONAL

SCIENTIFIC SYMPOSIUM

C92 SUBSTANCE USE DISORDERS IN PULMONARY, CRITICAL CARE, AND SLEEP MEDICINE

Assemblies on Allergy, Immunology and Inflammation; Behavioral and Health Services Research; Critical Care; Environmental, Occupational and Population Health; Nursing; Pediatrics; Pulmonary Infections and Tuberculosis; Pulmonary Rehabilitation; Respiratory Cell and Microbiology

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

Target Audience

Pulmonologists, Critical Care Physicians, Sleep Physicians, Nurses, Pharmacists,, Behavioral Specialists.

Objectives

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

- describe new findings about the changing epidemiology of recreational drug use, and better understand the causes of increasing morbidity and mortality related to drug use in the U.S. and abroad
- identify the impact that various recreational drugs have on pulmonary health, sleep quality/quantity, and critical care medicine
- define new strategies for respiratory health providers to manage the care of patients with substance use disorders through harm reduction approaches and advocacy

This interdisciplinary session including pulmonary, critical care, and sleep physicians and representatives from nursing, psychiatry, pediatrics, and local community advocacy will highlight the various ways that drug use impacts respiratory health. It includes a series of talks on the impact of substance use on the airways, the pulmonary vasculature, sleep, and the way that substance use impacts critical care medicine. Speakers will also focus on the changing epidemiology of various recreational substances including marijuana, methamphetamine, opiates/opioids, and cocaine. Panel experts will then discuss ways we as respiratory health providers can combat substance use disorders through harm reduction approaches and advocacy.

2:15 Patient Perspective: Developing Lung Disease from Recreational Drug Use

2:21 The Impact of Recreational Drugs and Vaping on the Airways

2:33 The Impact of Recreational Drugs on the Pulmonary Vasculature

2:45 The Impact of Substance Use in the Intensive Care Unit

2:57 The Impact of Recreational Drugs and Opiate Use Disorders and Sleep

3:09 A Harm Reduction Approach to Recovery from Substance Use Disorders

3:21 Advocacy for Drug Reform on a Local and State Level

3:33 Panel Discussion/Questions



ATS 2024
International
Conference

ATS 2024 San Diego, CA

Wednesday Morning, May 22

MEET THE EXPERT SEMINARS

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

\$100 Member/Non-Members

\$70 LMIC Member/LMIC Non-Members.

10:30 a.m. - 11:30 a.m.

- MTE37 ALPHA-1 ANTITRYPSIN DEFICIENCY: STATE OF THE ART**
- MTE38 PREPARING THE CLINICAL WORKFORCE FOR THE INFORMATION AGE: CLINICAL INFORMATICS IN TRAINING AND BEYOND**
- MTE39 METHAMPHETAMINE AND PULMONARY ARTERIAL HYPERTENSION, WHAT YOU NEED TO KNOW**
- MTE40 BRING JOY BACK- MANAGING PULMONARY CLINIC EFFECTIVELY IN THE ERA OF INBASKETS**
- MTE41 THE KEY ROLE OF PATIENTS AND CARE PARTNERS IN PATIENT-ENGAGED RESEARCH**
- MTE42 READING BETWEEN THE LINES: THE EVALUATION AND TREATMENT OF PULMONARY HYPERTENSION ASSOCIATED WITH CHRONIC LUNG DISEASE (PH-CLD)**
- MTE43 CRITICAL CARE MANAGEMENT OF THE LUNG TRANSPLANT RECIPIENT**
- MTE44 CHRONIC COUGH IN CLINICAL PRACTICE**
- MTE45 IMPLEMENTING A MULTIDISCIPLINARY PERT WITH AN EMPHASIS ON QUALITY AND OUTCOMES**

MTE46 MORE THAN JUST MEDICATIONS: A COMPREHENSIVE APPROACH TO END-STAGE LUNG DISEASE

YEAR IN REVIEW

D1 CLINICAL YEAR IN REVIEW 1

8:15 A.M. - 9:45 A.M.

Target Audience

Pulmonary, critical care and sleep providers.

Objectives

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

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

The program will discuss general topics of interest to a broad group of providers, inside and outside of these subspecialties. The program is relevant to not only clinicians, but also to researchers and administrators.

8:15 Tobacco Control

8:37 Ecmo

8:59 Pulmonary Vascular Disease

9:22 Sleep

BEHAVIORAL • CLINICAL • TRANSLATIONAL

CRITICAL CARE TRACK

D2 A NEW REALITY FOR CRITICAL CARE AFTER DOBBS

Assemblies on Critical Care; Behavioral and Health Services Research; Ethics and Conflicts of Interest Committee

8:15 A.M. - 9:45 A.M.

Target Audience

Bedside ICU physicians and nurses, including CCM trainees; healthcare policy makers; patient advocates; and any clinicians and scientists interested in obstetric critical care, healthcare policy, and healthcare access and equity.

Objectives

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

- update their differential diagnoses of life-threatening complications stemming from reduced access to abortion; the implications that has for therapy; and the ways that may disproportionately impact racialized patients
- develop concrete skills in navigating the conflict between patient needs and barriers to access to standard care imposed by either hospital institutional risk avoidance or true legal barriers
- identify specific actions pulmonary and critical care clinicians and researchers can take to advocate for and improve their colleagues and their patients' safety

Since the Supreme Court's Dobbs' ruling in 2022, state abortion prohibitions have led to increased morbidity for pregnant patients, including life-threatening sepsis, and a growing body of research raises concerns for critically ill pregnant patients under these restrictions. This symposium will address the post-Dobbs critical care landscape: first hearing from a patient who needed urgent obstetric care in a state that banned access to that care, attendees will then learn how to manage clinical emergencies patients and providers face, navigate the moral and legal challenges providers confront, and participate in work being done to keep our patients and providers safe.

- 8:15 The Impact of Restricted Access to Care I Needed (Patient Speaker)**
- 8:20 The Rapidly Changing Landscape of Abortion Care**
- 8:28 Managing Life-threatening Complications, Maternal Critical Illness, and Decreased Access to Abortion**
- 8:42 The Racialized Impacts of Making Care Illegal or Difficult**
- 8:51 Do No Harm: Survival Tips for Clinicians in an Impossible Situation**
- 9:05 Good Trouble Indiana on How To Fight New Threats to Clinical Autonomy**
- 9:14 The Ripple Effect of Dobbs: Changing the Conversation in the UK and Ireland**
- 9:23 Question and Answer**

CLINICAL • TRANSLATIONAL**CLINICAL TOPICS IN PULMONARY MEDICINE****D3 INTERSTITIAL LUNG ABNORMALITIES: MOVING THE NEEDLE TOWARDS THERAPEUTIC CLINICAL TRIALS****Assembly on Clinical Problems**

8:15 A.M. - 9:45 A.M.

Target Audience

Clinicians who care for patients at risk for developing interstitial lung abnormalities and interstitial lung disease (ILD) o Clinical and translational researchers interested in methods of early detection, diagnosis and treatment of ILA and ILD

Objectives

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

- improve understanding of ILA, its classification, and features of radiologic ILA progression
- learn about potential methods to further evaluate ILA and risk of progression, such as radiologic features, serum biomarkers, and optical imaging modalities with capabilities to assess and identify microscopic features of ILA not visible by CT
- learn new information about steps needed for the conduct of therapeutic clinical trials, which will be needed to inform future clinical management and follow-up for patients with ILA

In this session, we will discuss interstitial lung abnormalities (ILA), their role as an identifiable precursor to symptomatic pulmonary fibrosis, and the potential use of existing and novel technologies to get the field closer to therapeutic clinical trials in ILA cohorts. We will discuss the steps and tools needed for conduct of therapeutic clinical trials in ILA, the pros and cons of screening for ILA, and novel biologic and imaging biomarkers that may be leveraged for prognostic enrichment and outcome/therapeutic response prediction.

- 8:15 Therapeutic Clinical Trials in ILA: What Do We Need and How Do We Get There?**
- 8:30 The Pros and Cons of ILA Screening**
- 8:45 High Resolution EB-OCT Imaging as a Novel Method for Prognostic Enrichment in ILA**
- 9:00 Proteomics for Prognostic and Predictive Biomarkers in ILA**
- 9:15 Using Spatial Transcriptomics in ILA to Identify New Biomarkers and Therapeutic Targets**
- 9:30 Panel Discussion and Questions**

BASIC • CLINICAL • TRANSLATIONAL

CLINICAL TOPICS IN PULMONARY MEDICINE

D4 LYMPHANGIOLEIOMYOMATOSIS: AT THE FOREFRONT OF SCIENTIFIC AND CLINICAL PROGRESS

Assemblies on Clinical Problems; Respiratory Cell and Molecular Biology; Respiratory Structure and Function

8:15 A.M. - 9:45 A.M.

Target Audience

all pulmonary providers, fellows in training, lab-based researchers

Objectives

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

- manage patients with LAM while integrating the latest evidence into their practice
- describe new findings about our current understanding of LAM
- apply cutting edge technologies to elucidate disease pathobiology

Lymphangiomyomatosis (LAM) is a female-predominant, progressive, cystic lung neoplasm caused by mutations in the Tuberous Sclerosis Complex genes. Recent years have seen a tremendous progress in elucidating the genetic and molecular alterations that drive the pathobiology of LAM. The recent application of cutting-edge technologies such as single cell RNA sequencing and spatial transcriptomics has transformed our understanding of LAM, and offered new avenues for translation. Close partnership and integration of scientists, clinicians and patients has ensured seamless bedside translation of the scientific progress. This session will highlight the most recent advances in basic, translational and clinical progress in LAM. Patient Speaker Molecular Pathogenesis of LAM Mechanisms of Matrix Degradation in LAM New Insights into LAM Pathobiology Clinical Advances in LAM Panel Discussion

BEHAVIORAL • CLINICAL

SCIENTIFIC SYMPOSIUM

D5 TIME-LIMITED TRIALS IN CRITICAL CARE

Assemblies on Behavioral and Health Services Research; Critical Care

8:15 A.M. - 9:45 A.M.

Target Audience

(1) Interprofessional and interdisciplinary professionals who care for patients with critical illness (2) Health services and clinical researchers (3) ICU medical directors, managers, and leaders within health systems

Objectives

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

- identify the essential elements of a time-limited trial in critical care and employ these elements when using time-limited trials in clinical practice
- define a time-limited trial for patients with critical illness
- describe how, if used inappropriately, time-limited trials could perpetuate unintended harm and inequities in critical care

For more than two decades, the approach to patient care known as a "time-limited trial" has been discussed and endorsed by experts in palliative and critical care. Yet, there is a lack of consensus about what constitutes a time-limited trial, including its definition and essential elements. In 2022, ATS sponsored a Workshop working group within the BSHSR Assembly to address this gap. This symposium will present the committee's findings, including a consensus definition, the essential elements necessary to conduct a time-limited trial, and the most pressing controversies and remaining questions about this approach.

8:15 Advocating for the Voice of Patients and Families in Time-Limited Trials

8:25 What We Know About the Current Use of Time-Limited Trials in Critical Care

8:35 I Know It When I See It? An Operational Definition of Time-Limited Trials in Critical Care

8:45 The Essential Elements for Conducting a Time-Limited Trial for Patients with Critical Illness

8:55 Rejoice in Tension: Rethinking Family Relationships Through Time-Limited Trials

- 9:05 **Ethical Controversies in Time-Limited Trials: Pragmatic Solutions, Potential Hazards**
- 9:15 **The Challenge of Promoting Equity Through Time-Limited Trials**
- 9:25 **Putting Time-Limited Trials into Context**
- 9:35 **Q&A and Roundtable Discussion**

BASIC • TRANSLATIONAL
SCIENTIFIC SYMPOSIUM

D6 WHAT CAUSES SARCOIDOSIS?

Assemblies on Allergy, Immunology and Inflammation; Clinical Problems; Environmental, Occupational and Population Health; Respiratory Cell and Molecular Biology

8:15 A.M. - 9:45 A.M.

Target Audience

Clinical and translational research pulmonologists, basic scientists and clinicians interested in host and environment interactions manifesting as interstitial lung disease and systemic inflammation.

Objectives

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

- apply new disease models and advanced technologies to advance understanding of sarcoidosis disease pathogenesis.
- describe new findings linking exposure to environmental antigens or autoantigens to sarcoidosis disease progression.
- define new strategies to prevent sarcoidosis progression based on improved knowledge of the interactions between the host immune system and the environment that promote sarcoidosis disease progression.

Despite decades of research the cause of sarcoidosis remains unclear, which is a source of frustration for healthcare providers, researchers and patients. Recent developments, including new disease models and research technologies, have provided novel insights into sarcoidosis disease pathogenesis, and will be featured in this session. These recent discoveries have important implications for guiding future mechanistic research and for developing more effective treatments and biomarkers for sarcoidosis.

Introduction, What is the Cause of Sarcoidosis?
Patient Speaker The role of sarcoidosis-specific T-cell receptors and environmental antigens in sarcoidosis pathogenesis
Multi-omic signatures of sarcoidosis predicting sarcoidosis disease progression
Disrupted autophagy and

impaired antigen clearance in sarcoidosis. Altered intracellular pathogen responses promote sarcoidosis granuloma formation

BEHAVIORAL • CLINICAL
SCIENTIFIC SYMPOSIUM

D7 WHERE CHILDREN LEARN AND BREATHE: THE IMPACT OF SCHOOL-BASED EXPOSURES ON CHILDHOOD RESPIRATORY HEALTH

Assemblies on Pediatrics; Behavioral and Health Services Research; Environmental, Occupational and Population Health; Nursing

8:15 A.M. - 9:45 A.M.

Target Audience

Our target audience is broad and includes clinical pediatric and adult pulmonologists, fellows and trainees, researchers, other multidisciplinary clinicians (nurses, social workers, etc.), and public health professionals.

Objectives

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

- identify indoor and adjacent outdoor school air pollutants and understand the associated risks to childhood respiratory health on both an individual and population level
- describe the latest recommendations and findings regarding the regulatory oversight of school air quality and the engineering of school ventilation systems
- describe evidence-based advocacy interventions necessary to limit exposure to school-based environmental health pollutants in the US and abroad, thereby improving quality of life and outcomes for children with respiratory disease

Children spend many hours in school and are susceptible to respiratory effects of poor classroom air quality from indoor materials, pathogens, and pollution. However, there are no federal recommendations on school indoor air. This session will feature experts in indoor air quality who will discuss the effects of classroom exposures on respiratory health, the omics of these effects, the of indoor air ventilation from an engineering perspective, and strategies to partner with neighborhood organizations to improve indoor air. Attendees will be equipped to advocate for improved school indoor air quality to improve pediatric respiratory health and academic inequities.

- 8:15 Why the Lack of Federal Regulation on School Indoor Air Quality Should Concern Clinicians and Scientists**
- 8:20 School Classroom Ventilation: Where Engineering Intersects with Medicine**
- 8:37 Ventilation matters: Respiratory effects of aerosolized virus in classrooms and daycare centers**
- 8:54 The Respiratory Effects of Particulate Matter in School Indoor Air**
- 9:11 The Impact of School-Associated Traffic-Related Air Pollution on Classrooms**
- 9:28 Improving School Indoor Air Through School Community Partnerships**

BASIC • CLINICAL • TRANSLATIONAL

SCIENTIFIC SYMPOSIUM

D8 GLOBAL PERSPECTIVES OF PULMONARY HYPERTENSION BIOLOGY AND MANAGEMENT? AN ATS/ERS JOINT SYMPOSIUM

Assemblies on Pulmonary Circulation, European Respiratory Society

8:15 A.M. - 9:45 A.M.

Target Audience

Physicians, researchers and nurses from all fields interested in learning about state-of-the-art translational research and pulmonary vascular disease management from a global perspective.

Objectives

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

- facilitate discussion from a global health perspective on new translational findings with the goal to enable the development of effective treatment for PH and PVD.
- engage in discussions about the global perspective on clinical trial design/achievements and disease management for development of novel therapeutics for PH and PVD.
- identify and discuss approaches that can be leveraged to push the pulmonary vascular field forward at the translational research and clinical trial levels with the goal to improve patient outcomes.

A collaborative session between the American Thoracic Society and European Respiratory Society, this symposium partners talks from global perspectives and highlights key scientific insights and technologies that are used to understand disease and cellular heterogeneity, the current biomarker landscape for early diagnosis and disease management in pulmonary hypertension (PH) and pulmonary vascular disease (PVD), and the current clinical trial landscape in North America and Europe.

- 8:15 Complex Disease in Context: Bioengineering Approaches to Study Cell-Specific Processes in PH and PVD**
- 8:30 Complex Disease in Context: Leveraging Large Datasets to Understand Cellular Heterogeneity in PH and PVD**
- 8:45 Current Biomarker Landscape for Early Diagnosis of PH and PVD: Integrating Cardiac MRI and Omics Data in the RV**
- 9:00 Current Biomarker Landscape for Early Diagnosis of PH and PVD: Omics and Databases**
- 9:15 Current Clinical Trial Landscape for PH and PVD in North America**
- 9:30 Current Clinical Trial Landscape for PH and PVD in Europe**

BASIC

SCIENTIFIC SYMPOSIUM

D9 LINKING NOVEL MULTI-OMICS WITH MACHINE LEARNING TO UNLOCK LUNG PATHOPHYSIOLOGY

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

8:15 A.M. - 9:45 A.M.

Target Audience

Basic and clinical scientists interested in how emerging methods such as spatial transcriptomics and single-cell RNA and ATAC sequencing can elucidate the integrative biology of the lung and the manifold causes of airway inflammation and asthma.

Objectives

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

- apply emerging 'omics modalities to their own research questions and model systems, and integrate their current

thinking more deeply with computational approaches and paradigms.

- apply computational frameworks to a range of research questions in lung disease pathophysiology, understand the capabilities of machine learning approaches and how they can open up new areas of inquiry.
- describe new findings in the research literature including systems biology, computational biology and integrative biology of chronic lung disease.

Emerging modalities to collect high-dimensional molecular profiles at single-cell and now with spatial resolution offer new potential to understand the cellular components of healthy lung tissue and its dysfunction in disease. They also present a profound opportunity to define molecular mechanisms responsible for patient heterogeneity, such as asthma endotypes. To realize these goals, it is necessary to develop and apply novel computational approaches and define new algorithms to extract biological meaning from these datasets. This session will bring together the leaders in computational of multi-omics data who are pioneering its application to high resolution lung systems biology.

8:15 Cellular Cross-Talk Understanding Mechanisms Underlying Asthma Susceptibility

8:45 Determining Asthma Endotypes and Outcomes: Complementing Existing Clinical Practice with Modern Machine Learning

9:00 Mapping the geography of airway mucosa to chart the foundations of lung physiology

9:15 Unlocking Lung Health and Disease Using Novel Algorithms for Integrated Multi-Omics

9:30 Cell Atlases as Roadmaps to Understand and Treat Disease

CLINICAL

SCIENTIFIC SYMPOSIUM

D10 TEAMWORK MAKES THE DREAM WORK: MULTIDISCIPLINARY APPROACHES FOR HIGH-QUALITY LUNG CANCER SCREENING

Assembly on Thoracic Oncology

8:15 A.M. - 9:45 A.M.

Target Audience

The target audience includes pulmonologists and interventional

pulmonologists, thoracic radiologists, thoracic surgeons, primary care providers, cancer epidemiologists, public health experts, and behavioral health and implementation scientists.

Objectives

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

- describe the benefits of multidisciplinary approaches to lung cancer screening across the continuum, including identifying eligible individuals, implementing high-quality screening, and tracking LCS patients for optimizing annual adherence
- define best practices for engaging interdisciplinary collaborators within an institution to promote high-quality lung cancer screening.
- apply team-based approaches to reduce health inequities in early detection of lung cancer.

The proposed session focuses on the multidisciplinary approach to lung cancer screening (LCS) and includes speakers from critical subspecialty partners for Pulmonary Medicine including Thoracic Surgery, Thoracic Radiology, Primary Care, Population , and Cancer Epidemiology. Topics will cover the continuum of lung cancer early detection, from defining lung cancer risk and engaging primary care physicians to managing LCS results and improving screening equity, with an emphasis on interdisciplinary cooperation and engagement.

8:15 Patient Speaker

8:20 Defining population-based lung cancer risk at national and local levels

8:37 Engaging primary care providers for identification of LCS-eligible individuals

8:54 Leveraging the electronic medical record for reporting and tracking LCS results

9:11 Programmatic approaches for building effective interdisciplinary LCS teams

9:28 Improving health equity in LCS at a safety-net hospital

PEDIATRIC CLINICAL CORE CURRICULUM

PCC3 PEDIATRIC CLINICAL CORE CURRICULUM 3

9:30 AM - 10:30 AM

Objectives

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

- discuss the management of pediatric ARDS, massive hemoptysis, and severe asthma in the ICU
- explain the role of the pediatric pulmonologist in a cardiovascular ICU
- identify strategies to approach discussions around tracheostomy and for planning effective transition out of the ICU

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.

10:30 To Trach or Not To Trach: Navigating Discussions in the ICU

10:55 Transitioning Patients with Tracheostomy Out Of the ICU, A Roadmap

11:20 Question and Answer

ADULT CLINICAL CORE CURRICULUM

CC6 ADULT CRITICAL CARE CLINICAL CORE CURRICULUM

11:00 AM - 12:30 PM

Objectives

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

- discuss the management of unstable arrhythmias in people admitted to the intensive care unit
- describe current approaches to addressing hemodynamic instability in the intensive care unit including vasopressors, inotropes and mechanical support
- explain the clinical evaluation prior to starting ECMO and basic troubleshooting for issues that arise during its use

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 "I Got the Power:" Updates in Internal Cardiac Support Devices

11:25 "I Will Survive": ECMO Evaluation and Outcomes

11:50 "Stayin' Alive": ECMO Circuit Setup and Troubleshooting

12:15 Question and Answer



MD28 NAVIGATING A SUCCESSFUL CAREER: POSITIONING YOURSELF FOR A NATIONAL PRESENCE

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

Target Audience

The target audience includes all members of ATS from early to senior faculty who practice in academic and/or community settings with an interest in medical education, academic medicine, clinical practice, and/or research.

Objectives

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

- (1) establish a national presence through ATS membership, (2) get involved in assemblies/committees, (3) network during national meetings, and (4) going from poster presentations to presenting other conference sessions.
- identify strategies for successful contract negotiations in academia and medicine
- educate session attendees on how to create academic currency for your career and how involvement in ATS can create scientific currency and capital. Attendees will be able to apply learned knowledge to their own career development.

This session will provide information to members of ATS ranging from early to senior faculty. The goal of the session is to share strategies to create academic/scientific capital and currency for one's career, and how membership and involvement in ATS can foster collaboration, mentorship, and leadership – all tools

necessary to establish a national presence. Speakers from academic and community centers will discuss how to get involved in ATS, navigating Assemblies/Committees, negotiating contracts, promotion & tenure, career development, and leadership.

12:00 Introduction

12:10 How to Navigate ATS as an Early Career Members

12:25 Thriving as a Mid-Career Faculty: A Plateau or Springboard

12:40 Negotiations

12:55 Creating Academic Currency for Your Career

1:10 Conclusion and Q&A



MD29 THE PEDIATRIC ADENOTONSILLECTOMY TRIAL FOR SNORING (PATS): KEY OUTCOMES AND IMPLICATIONS

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

Target Audience

Sleep medicine specialists, pediatricians, otolaryngologists, clinical trialist

Objectives

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

- improve the ability to identify children with snoring who may benefit the most from adenotonsillectomy, and to improve the ability to refer appropriate subgroups for surgical intervention.
- improve the utilization of polysomnography for managing children with snoring or at risk for SDB.
- better understand the role of adenotonsillectomy on health care utilization and progression of SDB.

Adenotonsillectomy (AT) is the second most common pediatric surgical procedure. High-level evidence of adenotonsillectomy as a treatment for children with snoring and infrequent apneas (mild SDB, MSDD) is lacking. PATS is a 12-month randomized clinical trial of children with MSDB, ages 3 - 12 years, randomized to adenotonsillectomy vs watchful waiting with supportive care. Session will present primary and key secondary data: comparing AT vs watchful waiting in regards to primary neurobehavioral and secondary outcomes (apnea hypopnea index, blood pressure,

behavior, obstructive sleep apnea-related quality of life, and sleep symptoms, addressing key knowledge gaps and presenting data to inform future guidelines.

12:00 Introduction

12:02 Changes in Health Care Utilization with Adenotonsillectomy in Children with Mild Sleep Disordered Breathing

12:16 Changes in Health Care Utilization with Adenotonsillectomy in children with mild Sleep Disordered Breathing

12:28 Social and Environmental Factors that Influence SDB Severity and Response to Treatment

12:40 Subgroup Differences in Response to Adenotonsillectomy and Implications for Clinical Management

12:54 Q&A

NHLBI, NIH

MID-DAY SESSION

MD30 CLINICAL TRIAL STRATEGIES FOR RARE LUNG DISEASE AND DIFFICULT TO REACH POPULATIONS

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:

- define the safety and efficacy of low dose sirolimus in patients, and determine its useability to prevent disease progression
- better understand histaminic signaling and blockade in pulmonary arterial hypertension. To increase awareness of drug repurposing in cardiopulmonary diseases.
- evaluate the feasibility, tolerability, and adherence with wearable actigraphy devices in young children with/without PAH. Explore the ability of these devices to detect differences in activity intensity and heart rate between the two groups.

Clinical trials for rare diseases can present inherent challenges because of small participant pools, incomplete understanding of natural history, lack of sensitive biomarkers, and clinical outcome measures. This session will focus on challenges and innovations in drug development for three rare diseases and difficult to reach

populations, and conclude with a discussion on future directions for conducting clinical trials. The MILED trial Team will present safety and efficacy of low dose sirolimus in patients with LAM to prevent disease progression. The other studies will address usage famotidine in a randomized placebo-controlled trial and actigraphy in children with pulmonary arterial hypertension

12:00 Measurement of Physical Activity by Actigraphy in Infants and Young Children with Pulmonary Arterial Hypertension

12:12 Repurposing a Histamine Antagonist to Benefit Patients with Pulmonary Hypertension

12:24 Multicenter Interventional Lymphangiomyomatosis (LAM) Early Disease Trial (MILED)

12:36 Prenatal Vitamin C, In Utero Smoke Exposure, and Offspring Lung Function

12:48 Q & A

USDA

MID-DAY SESSION

MD31 GENERIC DRUG DEVELOPMENT FOR RESPIRATORY PRODUCTS, US FOOD AND DRUG ADMINISTRATION UPDATE

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

This 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 What is a Generic Drug, Anyway, and What Does It Mean for Me?****12:20 Emerging Concepts and New Technologies for Bioequivalence of Orally Inhaled and Nasal Drug Product****12:37 Update for Generic Orally Inhaled and Nasal Drug Products****12:54 Question and Answer Session**

Postoperative pulmonary complications are a major factor for morbidity and mortality to the 28 million patients a year undergoing hospital-based surgery in the US. The session will present the NHLBI program "An Anesthesia-Centered Bundle to Reduce Postoperative Pulmonary Complications". Based on a national network of 17 academic centers, the program aims to develop and implement pre-, intra- and post-operative interventions to reduce those complications. We will discuss specific topics of perioperative research, study design, preliminary physiological investigations, and implementation and initial results of the recently concluded national study on 750 patients undergoing major abdominal surgery with mechanical ventilation.

12:00 Postoperative Pulmonary Complications: Relevance, International Studies, and Challenges of Perioperative Research**12:15 Phase I/II Study, Personalized Intraoperative Mechanical Ventilation, Trial Design, and Implementation****12:30 Mechanism and Biomarkers of Perioperative Lung Injury****12:45 The Impact of a Bundle of Perioperative Interventions in the Improvement of Postoperative Pulmonary Outcomes**

NHLBI, NIH

MID-DAY SESSION

MD32 POSTOPERATIVE PULMONARY COMPLICATIONS: FROM PHYSIOLOGY AND BIOLOGY TO A PREVENTIVE PERIOPERATIVE CLINICAL TRIAL

12:00 P.M. - 1:00 P.M.**Target Audience**

Health care providers (i.e., internists; anesthesiologists; surgeons; nurses; respiratory, physical/occupational therapists) and trainees caring for patients undergoing surgery; researchers interested in lung injury 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 literature in the field of perioperative pulmonary complications.
- have new strategies to manage the care of patients, particularly high risk patients, undergoing surgery.
- be able to apply different strategies to stratify patients on their risk to develop postoperative pulmonary complications.



ATS 2024
International
Conference

ATS 2024 San Diego, CA

Wednesday Afternoon, May 22

CLINICAL

CRITICAL CARE TRACK

D81 MONEY AND THE ICU: FINANCIAL MOTIVATORS AND CONSEQUENCES OF CRITICAL CARE

Assemblies on Critical Care; Behavioral and Health Services Research; Nursing

11:00 A.M. - 12:30 P.M.

Target Audience

All providers of critical care

Objectives

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

- describe new findings about the cost of critical care to patients
- describe the impact of financial incentives on ICU utilization
- apply knowledge about financial incentives for healthcare systems to better optimize ICU triage

Critical care delivery has financial implications for patients, payers, and providers. Because ICU care is expensive, understanding the costs to society and to patients is important. This session will highlight recent research into understanding both how financial incentives impact ICU utilization and the financial consequences of ICU utilization on various stakeholders in the healthcare system.

11:00 Introductory Remarks

11:04 Changes in ICU Utilization Following Private Equity Acquisition

- 11:12 Effect of Nursing Shortages on ICU Operations
- 11:20 Structural Differences in International ICU Financing
- 11:28 Impact of ICU Care on Ability to Afford Future Medical Care for Patients and Their Families
- 11:36 Comparison of Patient Cost-Sharing Between Selected European Countries and the United States
- 11:44 Sociology of Money and Recovery from Critical Illness
- 11:52 Association of NICU Admission with Changes in Financial Status
- 12:00 Panel and General Discussion
- 12:20 Transition Time

BASIC • CLINICAL

CLINICAL TOPICS IN PULMONARY MEDICINE

D82 WHO WHAT WHERE WHY HOW? INHALATIONAL EXPOSURES AND ILD

Assemblies on Clinical Problems; Environmental, Occupational and Population Health

11:00 A.M. - 12:30 P.M.

Target Audience

Pulmonary medicine providers and trainees would both benefit from this session. Specifically, any individual desiring to broaden their knowledge of ILD evaluation and pathogenesis through the lens of inhalational exposures will be the target audience.

Objectives

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

- identify relevant inhaled risk factors for ILD
- understand the pathobiology and mechanisms by which exposures cause and propagate ILD
- recognize assessment methods that exist for clinical identification of inhalational exposures in individual ILD patients

A growing body of evidence demonstrates the contributions of environmental and occupational exposures to many forms of interstitial lung disease (ILD), from increased risk of disease development, disease progression and associated mortality. This session will discuss mechanistic, workplace, and patient-related factors that contribute to exposure-related burden of disease across all subtypes of ILD patients. After this session, learners

will understand common inhalational exposures associated with Non-HP ILD, the occupational and domestic environments in which they will occur, overall mechanisms of disease, and learn how to assess for these exposures in clinical practice.

- 11:00 What Are They? Current Evidence on Environmental Exposures in ILDs**
- 11:15 Who is affected? Susceptible Workers and ILD**
- 11:30 Why Does It Happen? Mechanisms of Exposure and Disease in ILD**
- 11:45 Where You Live Matters: Air Pollution and ILD**
- 12:00 How Do We Check? Opportunities and Challenges for Exposure Assessment**
- 12:15 Moderated Q&A/Panel Discussion**

BASIC • CLINICAL • TRANSLATIONAL
SCIENTIFIC SYMPOSIUM

D83 RESPIRATORY HEALTH IMPACTS OF HUMAN MADE DISASTERS AND NATURAL DISEASTERS, WILDFIRES, EARTHQUAKES, AND VOLCANOES.

Assemblies on Environmental, Occupational and Population Health; Allergy, Immunology and Inflammation; Behavioral and Health Services Research; Clinical Problems; Pulmonary Infections and Tuberculosis

11:00 A.M. - 12:30 P.M.

Target Audience

Scientists, clinicians (pulmonology, cardiology, pediatrics, gerontology), public health/global health practitioners, and trainees interested in environmental impact of health.

Objectives

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

- explain the impacts of natural and human-made disasters on respiratory morbidity and mortality and importance of the holistic approach to the problem.
- analyze the mechanisms underlying effects of dust particles and wildfire particles, irritants, and toxicants on the respiratory health.
- encourage other ATS members and others to become involved and respond to the health challenges posed by natural and human-made disasters through influencing policy makers.

Natural and human-made disasters such as massive earthquakes, volcanos and wildfires have a devastating impact on human lives. Victims may be exposed to extremely high concentrations of dust, particulate matter (PM) and toxic gases that may cause both acute and chronic respiratory problems such as pulmonary injury, bronchospasm, chronic cough, persistent bronchial hyperreactivity. This session will focus on impacts of inhaled irritants and air pollutants, which are associated with natural and human-made hazards, on respiratory health. Leading scientists will discuss scale of the problem, clinical aspects, mechanisms, and holistic approach to the problem and a policy development for intervention and mitigation.

- 11:00 To Survive a Wildfire, from a Patient/Survivor's Perspective**
- 11:06 Natural Disasters and Human-Made Disasters; Are They Increased?**
- 11:18 Igniting the Connection: Exploring the Link Between Wildfire and Climate Change**
- 11:30 Wildfires and Respiratory Impacts; Underlying Mechanisms**
- 11:42 Earthquakes and Respiratory Health; Is There a Risk?**
- 11:54 Volcanos, a Source of Inhalational Disasters**
- 12:06 Human-Made Disasters, Terrorism, and Respiratory Impacts**
- 12:18 Respiratory Impacts of Disaster from One Health Perspective**

CLINICAL • TRANSLATIONAL
SCIENTIFIC SYMPOSIUM

D84 EMERGENT RESISTANCE TO NEW DRUGS FOR MDR-TB TREATMENT

Assemblies on Pulmonary Infections and Tuberculosis

11:00 A.M. - 12:30 P.M.

Target Audience

US-based attendees interested in tuberculosis and antimicrobial resistance, International attendees with interest and experience with drug-resistant tuberculosis, public health focused attendees

Objectives

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

- define new strategies to treat MDR-TB based on new WHO-endorsed MDR-TB treatment regimens
- apply next generation genotypic and phenotypic drug-susceptibility testing and better understand the epidemiology and risk factors for emergent drug-resistance during treatment of MDR-TB
- anticipate the direction and limitations of future TB diagnostics in the context of new challenges to global TB control.

Multi-drug resistant tuberculosis (MDR-TB) is a challenge for global lung health and represents a growing proportion of all TB cases. Recent studies using entirely novel regimens demonstrate excellent outcomes and lower mortality in MDR-TB treatment. However, resistance to these new antimycobacterial agents is present at baseline and rapidly emerging undermining their promise. Here we present new genomic, basic/translational, and operational insights into antimicrobial resistant tuberculosis and describe new clinical, epidemiologic, and translational strategies to combat this new evolution in drug-resistant tuberculosis.

- 11:00 Landscape of New Treatments for MDR-TB**
- 11:15 Operational Outcomes from New MDR-TB Treatment Regimens and Emergent Resistance**
- 11:40 Opportunities and Limitations of Genomics for Diagnosing Bedaquiline-Resistant Tuberculosis: an Individual Isolate Meta-Analysis**
- 11:50 Known Unknowns: Resistance Mechanisms to New and Repurposed Drugs to Treat TB**
- 12:00 Nanoluciferase Mycobacteriophage for Rapid Phenotypic TB Diagnosis and Drug-Susceptibility Testing**
- 12:20 Strategies Going Forward to Prevent Emergent Resistance and Optimize MDR-TB Treatment Outcomes**

BASIC • TRANSLATIONAL

SCIENTIFIC SYMPOSIUM

D85 ONE TO RULE THEM ALL? IMMUNE CELLS CONTROL STEM CELL CAPACITY IN THE LUNG

Assemblies on Respiratory Cell and Molecular Biology

11:00 A.M. - 12:30 P.M.

Target Audience

Basic researchers and clinicians (clinical scientist) looking for a deeper understanding of the pathomechanisms of COPD.

Objectives

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

- understand the effects of innate and adaptive immune cell signaling on alveolar epithelial proliferation and differentiation.
- provide insight on how cutting-edge technological advances can delineate immune cell-epithelium crosstalk.
- learn how immune targeted pro-regenerative approaches toward reprogramming the alveolar immune niche can open up novel avenues for the treatment of COPD.

This session will highlight the important contribution of immune cells to lung regeneration and their crosstalk with lung progenitor cells. It will provide insight on how recent technological advances in omics technologies and human ex vivo lung models can delineate immune cell-epithelium crosstalk and expedite precision pro-regenerative approaches toward reprogramming the alveolar immune niche to treat COPD.

11:00 Immunomechanisms of Lung Regeneration

11:24 Immunometabolic Reprogramming of Epithelial Repair

11:46 Inflammaging Regulates Epithelial Progenitor Function

12:08 Understanding the Immune Niche One Cell at a Time

BASIC • CLINICAL

SCIENTIFIC SYMPOSIUM

D86 AMBULATORY CRITICAL CARE: A BENCH TO BEDSIDE UNDERSTANDING OF CHRONIC RESPIRATORY FAILURE

Assemblies on Sleep and Respiratory Neurobiology; Clinical Problems

11:00 A.M. - 12:30 P.M.

Target Audience

Sleep, pulmonary and critical care clinicians who may care for patients on home ventilation. Outpatient and inpatient respiratory therapists. Scientists interested in the effects of CO₂ on the body.

Objectives

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

- understand potential mechanisms by which elevated CO₂ may increase mortality and morbidity
- identify reduction in PCO₂ as an important treatment strategy for patients with chronic hypercapnic respiratory failure
- more effectively utilize both the sleep lab and home monitoring strategies to manage patients on NIV

Chronic hypercapnia has long been seen as simply a marker of severity of disease as opposed to a condition that is treatable. Recent studies have shown the high mortality and health care utilization associated with chronic hypercapnia.

Non-invasive ventilation (NIV) has been shown to improve survival in patients with COPD, OHS, and ALS. This session will provide the biological mechanisms by which chronically elevated PCO₂ may increase morbidity and mortality, review clinical research (Jimenez et al, Respiratory Care, 2023) demonstrating the importance of reductions in PCO₂ over time, and compare in-lab versus at home monitoring strategies to optimize home mechanical ventilation.

11:00 Introduction to Session

11:05 Under Attack: Co₂ Effects on Host Immune Defenses

11:22 Skeletal Muscle Dysfunction: An Added Insult in Chronic Hypercapnic Respiratory Failure

11:39 Hypercapnic No More: Mobilizing CO₂ Stores with NIV to Improve Survival

11:56 Not Just Apnea: Sleep Lab Optimization of Niv

12:13 Home Monitoring: Novel Strategies for Niv Optimization



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