CLINICAL – POSTGRADUATE COURSE

1. PG20 PHYSIOLOGY OF MECHANICAL VENTILATION IN ARDS

**Date:** May 14, Saturday

**Time:** 8:00 am – 4:00 pm

**Location:** Moscone Centre, Room 3011 (West Building, Level 3)

**Speaker:** L. Brochard, Driving Pressure

CLINICAL – CRITICAL CARE TRACK

1. A4 NEW ERA OF EVIDENCE GENERATION: MEASURING EFFECTIVENESS IN CRITICAL CARE

**Date:** May 15, Sunday

**Time:** 9:00 – 11:00 am

**Location:** Moscone Centre, Room 3000/3002/3004 (West Building, Level 3)

**Speaker:** B. Cuthbertson, To Ask or Not To Ask? Ethics, Informed Consent, and Stopping Rules in Comparative Effectiveness Trials in Critical Illness
POSTER

1. A25 CRITICAL CARE: FUNCTIONAL OUTCOMES IN ICU SURVIVORS

Date: May 15, Sunday

Time: 9:00 – 11:00 am

Location: Moscone Centre, Room 3001 (West Building, Level 3)

711 - Burden of Comorbid Illness Is Associated with 1-Year Survival but Not Early Disability After Critical Illness: Results from the RECOVER Program

2. A28 FROM PE TO CTEPH: FADE AWAY OR NOT?

Date: May 15, Sunday

Time: 9:00 – 11:00 am

Location: Moscone Centre, Room 3014 (West Building, Level 3)

903 - Serial Imaging Over 1 Year by Perfusion (Q) Scanning and CT Pulmonary Angiography (CTPA) After a First Episode of Pulmonary Embolism (PE): Results of the ELOPE Study

904 - Do Baseline or Follow-Up Imaging Variables Correlate with Exercise Capacity on Cardio-Pulmonary Exercise Testing (CPET) 1 Year Post Pulmonary Embolism (PE)? Results from the ELOPE STUDY

905 - Elucidating the Cause of Exercise Limitation 1 Year Post Acute Pulmonary Embolism (PE) Using Wasserman’s Algorithm: Results of the ELOPE Study

3. A104 CRITICAL CARE: SEPSIS TRANSLATIONAL INSIGHTS

Date: May 15, Sunday

Time: 2:15 – 4:15 pm

Location: Moscone Centre, Room 3001 (West Building, Level 3)

722 - Heat Shock Protein 90 (HSP90) Stabilizes a Molecular Complex of Caspase-8 and Toll-Like Receptor-4 (TLR-4) to Prolong Polymorphonuclear Neutrophil (PMN) Survival and Regulate Respiratory Burst Activity
4. A105 CRITICAL CARE: VARIABILITY IN CARE, OPPORTUNITIES FOR ADOPTION OR DEADOPITION

Date: May 15, Sunday
Time: 2:15 – 4:15 pm
Location: Moscone Centre, Room 3011 (West Building, Level 3)

808 - Permissive Underfeeding or Standard Enteral Feeding in Critically Ill Adults at High and Low Malnutrition Risk

5. A108 MICRO RNAs, RNA SEQ, LNCRNA: BIOLOGY AND FUNCTION
Date: May 15, Sunday
Time: 2:15 – 4:15 pm
Location: Moscone Centre, Room 2024 (West Building, Level 2)

614 - Identification of MiR-124 as a Major Regulator of Enhanced Endothelial Cell Glycolysis in Pulmonary Arterial Hypertension

6. B22 BURDEN OF PULMONARY AND CRITICAL CARE MEDICINE: COST AND UTILIZATION
Date: May 16, Monday
Time: 9:00 – 11: am
Location: Moscone Centre, Room 304 (South Building, Esplanade Level)

219 - Male Predominance in Admission to Intensive Care Units (ICU) Disappears After Surviving One ICU Admission

224 - Intermediate Care Resource Utilization Among Patients Hospitalized with Pneumonia
7. B28 ADVANCES IN STEM CELLS IN INJURY AND REPAIR FOR 2016

Date: May 16, Monday

Time: 9:00 – 11:00 am

Location: Moscone Centre, Room 2014 (West Building, Level 2)

505 - Human Umbilical Cord Mesenchymal Stromal/Stem Cells Reduce Lung Injury in Rodent E. Coli Pneumonia by Modulating Innate Immunity

522 - The Fate and Function of Mesenchymal Stromal Cells in a Septic Model of ARDS

8. B102 STRATEGIES TO IMPROVE CARE QUALITY IN PULMONARY AND CRITICAL ILLNESS

Date: May 16, Monday

Time: 2:15 – 4:15 pm

Location: Moscone Centre, Room 304 (South Building, Esplanade Level)

208 - Sepsis Now a Priority: A Quality Improvement Initiative for Early Sepsis Recognition and Care
C.M. McDonald, S. West, C. Soong, D. Dushenski, S.E. Lapinsky, M. Ashby, K. Van Den Broek, G. Wilde-Friel, C. Kan, M. McIntyre, A.M. Morris, Toronto, Canada, p.A4360

9. B104 RESPIRATORY FAILURE: LUNG REGIONAL AND TRANSLATIONAL MECHANISMS IN ARDS

Date: May 16, Monday

Time: 2:15 – 4:15 pm

Location: Moscone Centre, Room 3001 (West Building, Level 3)

710 - Parametric Response Mapping for the Analysis of Regional Inflation in the Prone Position

711 - Imaging the Progression of Ventilator Induced Lung Injury
10. B108 ADVANCES IN PEDIATRIC LUNG FUNCTION TESTING

Date: May 16, Monday

Time: 2:15 – 4:15 pm

Location: Moscone Centre, Room 3011 (West Building, Level 3)

803 - Correlation of Lung Clearance Index (LCI) with Hyperpolarized 129Xe Pulmonary Magnetic Resonance Imaging (MRI): A Preliminary Study of Well-Controlled Asthmatics

11. C26 FAMILY CENTERED CRITICAL CARE WITHIN AND BEYOND THE ICU

Date: May 17, Tuesday

Time: 9:00 – 11:00 am

Location: Moscone Centre, Room 309 (South Building, Esplanade Level)

309 - Caregiver Priorities During a Child’s Recovery from Critical Illness

12. C30 ACUTE LUNG INJURY: CELL FUNCTION, SIGNALING AND STRETCH

Date: May 17, Tuesday

Time: 9:00 – 11:00 am

Location: Moscone Centre, Room 2024 (West Building, Level 2)

608 - Lung Microenvironment Profiles in Mouse Models of Acute Respiratory Distress Syndrome (ARDS)

13. C105 RESPIRATORY FAILURE: MECHANISTIC INSIGHTS FROM LUNG INJURY MODELS

Date: May 17, Tuesday

Time: 2:15 – 4:15 pm

Location: Moscone Centre, Room 3001 (West Building, Level 3)

714 - Human mesenchymal stem/stromal cells produce distinct M1-and M2-like macrophage phenotypes, enhance reactive oxygen species production and augment phagocytosis and bacterial killing in macrophages from healthy volunteers and from patients with severe seps
14. C108 ADVANCES IN LUNG FUNCTION ASSESSMENT

Date: May 17, Tuesday

Time: 2:15 – 4:15 pm

Location: Moscone Centre, Room 2024 (West Building, Level 2)

620 - Technique and Validity of Sniff Airway Pressure and Sniff Diaphragm Thickening to Assess Diaphragm Function

15. D28 NOVEL IMAGING METHODS TO STUDY LUNG DISEASE

Date: May 18, Wednesday

Time: 9:00 – 11:00 am

Location: Moscone Centre, Room 2024 (West Building, Level 2)

611 - Imaging-Based Measurement of the Risk of Lung Injury Progression

16. D103 CRITICAL CARE: IMPROVING PALLIATIVE AND END OF LIFE CARE IN THE ICU

Date: May 18, Wednesday

Time: 1:30 – 3:30 pm

Location: Moscone Centre, Room 3001 (West Building, Level 3)

710 - Citizen’s Views Regarding Important Outcomes and Treatment Options During Weaning from Mechanical Ventilation
K.E.A. Burns, S. Karottaiyamvelil Jacob, V.A. Aguirre, J. Gomes, S. Mehta, L. Rizvi, Toronto, Canada, p.A7601

17. D104 CRITICAL CARE: PRE-ICU, RAPID RESPONSE, AND INITIAL TREATMENT FOR SEPSIS

Date: May 18, Wednesday

Time: 1:30 – 3:30 pm

Location: Moscone Centre, Room 3024 (West Building, Level 3)

1023 - Effect of Care Fragmentation on Outcomes of Rehospitalizations For Severe Sepsis Survivors
M. Hua, M.N. Gong, A. Miliades, H. Wunsch, New York, NY, p.A7635
18. D105 RESPIRATORY FAILURE: ROLE OF THE DIAPHRAGM AND SKELETAL MUSCLES

Date: May 18, Wednesday
Time: 1:30 – 3:30 pm
Location: Moscone Centre, Room 3011 (West Building, Level 3)

802 - Sepsis Induces an Early but Reversible Diaphragm Dysfunction

803 - ICU Acquired Diaphragm and Limb Muscles Weakness: Respective Prevalence, Risk Factors and Prognostic Impact – A Prospective Study

806 - Diaphragm Inactivity and Eccentric Contractile Activity Are Common and Impair Diaphragm Function During Mechanical Ventilation

807 - Electrical Activity to Determine the Start of Diaphragm Activity in Mechanically Ventilated Patients: An Observational Study
THEMATICS

1. A34 ARDS AND LUNG INJURY

Date: May 15, Sunday

Time: 9:00 am – 4:15 pm

Location: Moscone Centre, Area E, Hall D (North Building, Lower Level)

P515 - Human Mesenchymal Stromal Cell Derived Exosomes and Conditioned Medium Are Nebulisable by Aerogen Vibronic Micropump and Retain Anti-Inflammatory Properties

2. A52 CRITICAL CARE: ICU PROCEDURES, PROCESSES OF CARE, AND NOVEL TECHNIQUES

Date: May 15, Sunday

Time: 9:00 am – 4:15 pm

Location: Moscone Centre, Area H, Hall D (North Building, Lower Level)

P913 - Standard and Deferred Consent in the Age of Transfused Blood (ABLE) Trial in Critically Ill Adults
K.E.A. Burns, P. Hebert, D. Fergusson, J. Lacroix, Toronto, Canada, p.A1811

P919 - Remifentanil Target-Controlled Infusion for ICU Thoracic Procedures Generating Pain or Discomfort: Feasability, Safety and Tolerance Evaluation

3. A53 RESPIRATORY FAILURE: RISK FACTORS AND OUTCOMES IN ARDS

Date: May 15, Sunday

Time: 9:00 am – 4:15 pm

Location: Moscone Centre, Area E, Hall D (North Building, Lower Level)

P537 - Respiratory Mechanics in Acute Respiratory Distress Syndrome: Variables and Indexes Associated with Clinical Outcome

P545 - Risk Stratification of the Toronto ARDS Cohort Using RECOVER Program Disability Groups
4. **A54 CRITICAL CARE CASE REPORTS: ACUTE HYPOXEMIC RESPIRATORY FAILURE/ARDS**

**Date:** May 15, Sunday  
**Time:** 9:00 am – 4:15 pm  
**Location:** Moscone Centre, Area E, Hall D (North Building, Lower Level)  
**Facilitator:** E.C. Goligher, MD, Toronto, Canada, P595-605

5. **A55 CRITICAL CARE CASE REPORTS: NEURO CRITICAL CARE AND TOXICOLOGY**

**Date:** May 15, Sunday  
**Time:** 9:00 am – 4:15 pm  
**Location:** Moscone Centre, Area H, Hall D (North Building, Lower Level)  
**Facilitators:** A. Goffi, MD, Toronto, Canada; D.A. Kelmenson, MD, Aurora, CO, p93194

6. **A73 LUNG FIBROSIS: NEW DIRECTIONS TO INFORM THE FUTURE**

**Date:** May 15, Sunday  
**Time:** 9:00 am – 4:15 pm  
**Location:** Moscone Centre, Area D, Hall D (North Building, Lower Level)  

**P433 - The Role of HMGB1 and MIP3A in the Pathogenesis of Idiopathic Pulmonary Fibrosis**  

7. **B46 CRITICAL CARE: ICU EPIDEMIOLOGY AND OUTCOMES**

**Date:** May 16, Monday  
**Time:** 9:00 am – 4:15 pm  
**Location:** Moscone Centre, Area K, Hall D (North Building, Lower Level)  
**Facilitators:** H. Wunsch, MD, MSc, Toronto, Canada; G.L. Anesi, MD, MBE, Philadelphia, PA  

**P1146 - High Fluoride Levels with Isoflurane Critical Care Sedation Does Not Cause Nephrotoxicity**  
A. Jerath, A. Steel, N. Ferguson, M. Wasowicz, Toronto, Canada, p.A3639

**P1149 - Marital Status Does Not Explain the Male Predominance of ICU Admission Among Home Care Clients**  
8. B47 CRITICAL CARE: CLINICAL RESEARCH DISCOVERIES, EPIDEMIOLOGY, AND HEALTH SERVICES FOR SEPSIS

Date: May 16, Monday

Time: 9:00 am – 4:15 pm

Location: Moscone Centre, Area K, Hall D (North Building, Lower Level)

Facilitators: A. Amaral, MD, Toronto, Canada; H.C. Prescott, MD, MA, Ann Arbor, MI, P1189-1197

Facilitators: D.C. Scales, MD, PhD, Toronto, Canada; D.W. Ford, MD, MSCR, Charleston, SC, P1198-1208

9. C49 RESPIRATORY FAILURE: CLINICAL AND TRANSLATIONAL ASPECTS OF VILI AND LUNG PROTECTIVE MV

Date: May 17, Tuesday

Time: 9:00 am – 4:15 pm

Location: Moscone Centre, Area G, Hall D (North Building, Lower Level)

P729 - Human Umbilical Cord Mesenchymal Stem/Stromal Cells Reduce Inflammation and Injury in Rodent E Coli Pneumonia and in Monocytes from Patients with Severe Sepsis

Facilitators: L.J. Brochard, MD, Toronto, Canada; E.L. Burnham, MD, Aurora, CO, P703-714

10. C50 CRITICAL CARE: DELIRIUM AND SEDATION IN THE ICU

Date: May 17, Tuesday

Time: 9:00 am – 4:15 pm

Location: Moscone Centre, Area G, Hall D (North Building, Lower Level)

P744 - Clonidine for Sedation in the Critically Ill: A Systematic Review and Meta-Analysis
11. C51 RESPIRATORY FAILURE: HIGH FLOW OXYGEN, LIBERATION, NON-INVASIVE, AND PROLONGED VENTILATION

**Date:** May 17, Tuesday

**Time:** 9:00 am – 4:15 pm

**Location:** Moscone Centre, Area G, Hall D (North Building, Lower Level)

**P769 - Effects of Alternative Spontaneous Breathing Trial Techniques on Clinical Outcomes: A Systematic Review and Meta-Analysis**


**P774 - Pleural Effusion During Weaning from Mechanical Ventilation**


**P782 - Feasibility and Tolerability of Neurally Adjusted Ventilatory Assist in High Cervical Spinal Cord Injury**


**Facilitator:** E. Fan, MD, PhD, Toronto, Canada P788-801

12. C53 CRITICAL CARE CASE REPORTS: MULTISYSTEM ORGAN FAILURE

**Date:** May 17, Tuesday

**Time:** 9:00 am – 4:15 pm

**Location:** Moscone Centre, Area G, Hall D (North Building, Lower Level)

**Facilitators:** A.N. Chesnutt, MD, Portland; N. Adhikari, MD, MS, Toronto, Canada, P847-858

13. C76 VENTILATORY CONTROL: GETTING ON MY NERVES

**Date:** May 17, Tuesday

**Time:** 9:00 am – 4:15 pm

**Location:** Moscone Centre, Area N, Hall D (North Building, Lower Level)

**Facilitator:** C.A. Sinderby, PhD, Toronto, Canada, P1539-1547
14. C78 NOT STRANGERS IN THE NIGHT: SLEEP AND THORACIC DISEASES

Date: May 17, Tuesday

Time: 9:00 am – 4:15 pm

Location: Moscone Centre, Area N, Hall D (North Building, Lower Level)

**P1567 - Fluid Shifts in Pulmonary Hypertension in Those with and Without Sleep Apnea**
C.G. Carvalho, M. Minic, J.T. Granton, C.M. Ryan, Toronto, Canada, p.A5992

15. D40 CRITICAL CARE: DIAGNOSING AND TREATING BACTERIAL AND VIRAL INFECTIONS IN THE ICU

Date: May 18, Wednesday

Time: 9:00 am – 3:30 pm

Location: Moscone Centre, Area G, Hall D (North Building, Lower Level)

**P691 - Critically Ill Patients with the Middle East Respiratory Syndrome (MERS): A Multicenter Study**

**P692 - Critically Ill Healthcare Workers with the Middle East Respiratory Syndrome (MERS)**

Facilitators: R.G. Wunderink, MD, Chicago, IL; A. Leligdowicz, MD, PhD, Toronto, Canada P700-708

16. D45 CRITICAL CARE: CIRCULATORY HEMODYMANICS, SHOCK, CARDIOVASCULAR DISEASE, AND FLUID MANAGEMENT

Date: May 18, Wednesday

Time: 9:00 am – 3:30 pm

Location: Moscone Centre, Area C, Hall D (North Building, Lower Level)

**P328 - Study of Ventilation During Cardio Pulmonary Resuscitation (CPR): A New Model Using Thiel Cadavers**
17. D53 THE PROMISED LAND: CLINICAL STUDIES IN PULMONARY HYPERTENSION

**Date:** May 18, Wednesday

**Time:** 9:00 am – 3:30 pm

**Location:** Moscone Centre, Area H, Hall D (North Building, Lower Level)

**P955 -** A Phase 2 Placebo-Controlled, Randomized, Double-Blind Clinical Study to Assess the Efficacy, Safety and Tolerability of Two Doses of Pulsed, Inhaled Nitric Oxide (iNO) in Patients with WHO Group 1 Pulmonary Arterial Hypertension (PAH): 12 Month Interim A

MINI SYMPOSIUM - ORAL

1. A96 CLINICAL TRIALS AND NOVEL INTERVENTIONS IN PULMONARY REHABILITATION

**Date:** May 15, Sunday

**Time:** 2:15 – 4:15 pm

**Location:** Moscone Centre, Room 3010/3012 (West Building, Level 3)

**Presenters:** S. Mathur, T. Torres, P. Mendes, D. Dance, J. Cameron, N. Cote, E. Fan, J. Flannery, W. Gage, M.S. Herridge, V. Lo, Toronto, Canada, p.A2621, Electrical Muscle Stimulation In MSICU Patients Mechanically Ventilated for \(^3\) 7 Days: Results of a Nested Randomized Controlled Pilot Trial Within Towards RECOVER

2. B95 CRITICAL CARE: NEW CLINICAL TRIALS

**Date:** May 16, Monday

**Time:** 2:15 – 4:15 pm

**Location:** Moscone Centre, Room 3006/3008 (West Building, Level 3)

**Presenters:** S. Goddard, E. Fan, V. Manoharan, G.D.Rubenfeld, Toronto, Canada, p.A4292, READS - Randomized Educational ARDS Diagnosis Study: A LUNG-SAFE Sub-Study

3. C14 FINDING THE SWEET SPOT BETWEEN TOO MUCH AND TOO LITTLE CARE

**Date:** May 17, Tuesday

**Time:** 9:00 – 11:00 am

**Location:** Moscone Centre, Room 307 (South Building, Esplanade Level)

**Presenters:** L. Munshi, E. Fan, H. Wunsch, H. Gershengorn, N.D. Ferguson, T. Stukel, G.D. Rubenfeld, Toronto, Canada, p.A4557, Adoption and De-Adoption of Adjuvant Treatments for Acute Respiratory Failure

4. C95 OUTSTANDING EPIDEMIOLOGY AND HEALTHSERVICES RESEARCH IN CRITICAL CARE

**Date:** May 17, Tuesday

**Time:** 2:15 – 4:15 pm

**Location:** Moscone Centre, Room 3003/3005 (West Building, Level 3)

**Chairing:** H. Wunsch, MD, MSc, Toronto, Canada; A.J. Walkey, MD, MSc, Boston, MA

**Presenters:** E.A. Vail, H.B. Gershengorn, M. Hua, A.J. Walkey, H. Wunsch, New York, NY, p.A6148, Epidemiology of Vasopressin Use Among Adults with Septic Shock in the United States

5. D16 CRITICAL CARE: REDUCING VARIATION IN USUAL CARE

Date: May 18, Wednesday

Time: 9:00 – 11:00 am

Location: Moscone Centre, Room 3003/3005 (West Building, Level 3)

Chairing: G.D. Rubenfeld, MD, MSc, Toronto, Canada; H.B. Gershengorn, MD, Bronx, NY; A.J. Walkey, MD, MSc, Boston, MA

6. D93 RESPIRATORY FAILURE: ADVANCED MECHANISTIC INSIGHTS INFORMING TRANSLATION IN ACUTE LUNG INJURY/ARDS

Date: May 18, Wednesday

Time: 1:30 – 3:30 pm

Location: Moscone Centre, Room 3006/3008 (West Building, Level 3)

Chairing: C.C. Dos Santos, MD, Toronto, Canada; C. Mikacenic, MD, Seattle, WA; J.R. Jacobson, MD, Chicago, IL
**BASIC – BEHAVIORAL – CLINICAL – TRANSLATIONS, SCIENTIFIC SYMPOSIUM**

1. **B91 AJRCCM: LEADING JOURNAL IN RESPIRATORY, CRITICAL CARE AND SLEEP MEDICINE. KEY PAPERS, PUBLICATION ETHICS, NEW INITIATIVES**

   **Date:** May 16, Monday
   **Time:** 2:15 am – 4:15 pm
   **Location:** Moscone Centre, Room 2002/2004 (West Building, Level 2)
   **Chairing:** L. Brochard, MD, Toronto, Canada; J.A. Wedzicha, MD, PhD, London, United Kingdom
   **Speaker:** L. Brochard, Highlights in Critical Care in AJRCCM

**BASIC – CLINICAL – TRANSLATIONAL, CRITICAL CARE TRACK**

1. **B4 MECHANISMS OF ORGAN FAILURE IN SEPSIS**

   **Date:** May 16, Monday
   **Time:** 9:00 – 11:00 am
   **Location:** Moscone Centre, Room 3000/3002/3004 (West Building, Level 3)
   **Chairing:** C.C. Dos Santos, MD, Toronto, Canada; I.S. Douglas, MD, Denver, CO; J. Chiche, MD, PhD, Paris, France
   **Speaker:** C.C. Dos Santos, Is All Organ Failure Created Equal?

**CLINICAL – YEAR IN REVIEW**

1. **B1 CLINICAL YEAR IN REVIEW 2**

   **Date:** May 16, Monday
   **Time:** 9:00 – 11:00 am
   **Location:** Moscone Centre, Gateway Ballroom 102-104 (South Building, Lower Level)
   **Speaker:** D. Scales, Sepsis
BEHAVIORAL – CLINICAL – CRITICAL CARE TRACK

1. C84 THE NEW ICU RECOVERY TOOLKIT: 5 HAMMERS LOOKING FOR THE RIGHT NAIL

Date: May 17, Tuesday
Time: 2:15 – 4:15 pm
Location: Moscone Centre, Room 3000/3002/3004 (West Building, Level 3)
Speaker: E. Wilcox, Do it Ourselves (with a Post-ICU Clinic)

BEHAVIORAL – CLINICAL – SCIENTIFIC SYMPOSIUM

1. C91 OPTIMIZING ICU ROUNDS: EVIDENCE-BASED APPROACHES FOR IMPROVING PATIENT CARE AND TEACHING

Date: May 17, Tuesday
Time: 2:15 – 4:15 pm
Location: Moscone Centre, Room 3006/3008 (West Building, Level 3)
Chairing: A. Amaral, MD, Toronto, Canada; D.K. Costa, PhD, RN, Ann Arbor, MI
Speaker: A. Amaral, Integrating the Evidence for Effective Rounding in the ICU

2. D88 THE PATIENT-CENTERED JUGGERNAUT: THE RIGHT MOVE FOR CLINICAL CARE, POLICY, AND RESEARCH?

Date: May 18, Wednesday
Time: 1:30 – 3:30 pm
Location: Moscone Centre, Room 303/305 (South Building, Esplanade Level)
Speaker: G.D. Rubenfeld, CON: Patient and Family Satisfaction is a Key Quality Metric in Critical Care

BASIC – CLINICAL – TRANSLATIONAL, ATS KEYNOTE SERIES

Date: May 18, Wednesday
Time: 8:00 – 8:45 am
Location: Moscone Centre, Room 135 (North Building, Lower Level)
Speaker: Brian P. Kavanagh, K8 - ARDS: Mechanisms and Professional Societies