11:00 – 11:25
**Cardiac Dysfunction in COPD: “Coincidence? I think not!”**
*Dr. Benjamin Smith*

Chronic obstructive pulmonary disease (COPD) and heart disease are leading causes of mortality. These two common diseases often coexist; for example, approximately one third of patients hospitalized for heart failure have COPD when tested systematically, and the prevalence of clinical or subclinical cardiovascular disease is increased in the presence of COPD, independent of shared risk factors.

While the mechanisms underlying this observation are incompletely understood, recent evidence suggests direct pathophysiological interactions between the heart and lungs may contribute to the coexistence of COPD and heart disease. From inflammatory spillage to endothelial dysfunction to mechanical heart-lung interactions, several viable mechanisms are actively under investigation. In several of these studies, emerging COPD endotypes are associated with distinct patterns of cardiac dysfunction.

Coexistence of COPD and heart disease is common. Understanding the pathophysiological basis of this observation will advance our understanding of each disease, and may lead to novel strategies to manage these partners in crime.

At the end of this session, participants will be able to:
- Summarize the epidemiology of co-existent COPD and heart disease;
- Describe the clinical significance of cardiac dysfunction in COPD; and
- Review the scientific evidence supporting mechanisms of COPD-mediated cardiac dysfunction.

11:25 – 11:50
**Does Sleep Apnea-Plus Mean Cardiac Disease Plus?**
*Dr. Nick Vozoris*

The focus of this session will be to review and discuss the literature relating to "sleep apnea-plus" (i.e., comorbid obstructive sleep apnea and insomnia) and cardiovascular disease. During this session, some background information on sleep apnea-plus will also be reviewed, including syndrome prevalence, risk factors, and pathophysiology.
At the end of this session, participants will be able to:
- Define and describe the sleep apnea-plus syndrome;
- Discuss the association between sleep apnea-plus and cardiovascular disease; and
- Manage individuals presenting with sleep apnea-plus with increased knowledge and skill.

11:50 – 12:15

**Lung Cancer Screening: Dollars and Sense**

*Dr. Erika Penz*

Lung cancer remains the most commonly diagnosed cancer in Canada and the leading cause of cancer death worldwide. Early detection and prevention of the disease through tobacco avoidance and screening are a few ways in which the burden of disease may be minimized. The National Lung Screening Trial is a pivotal trial demonstrating reduction in mortality with low dose CT scan screening for lung cancer in heavy smokers – ultimately raising hope for clinicians and patients that the burden of lung cancer may one day be reduced significantly. The feasibility of lung cancer screening however remains uncertain with the impact on health system capacity and additional healthcare resource utilization not yet defined. Although endorsed by many specialty societies and now recommended by the US Preventative Task Force, formal lung cancer screening programs have not yet universally been adopted. Despite the reported clinical benefits, health policy makers and health care payers are increasingly demanding evidence that there is value for money invested in adopting lung cancer screening. In general, health economics research is one method to assist decision makers in determining value for money of new technologies. Using a Canadian-based simulation model, I will discuss preliminary estimates of the incremental cost-effectiveness of lung cancer screening and some of the potential factors influencing whether implementing lung cancer screening is cost-effective.

At the end of this session, participants will be able to:
- Summarize the clinical evidence and current recommendations for lung cancer screening;
- Discuss outstanding issues related to implementing lung cancer screening at a population level;
- Describe how health economics research can be used to address some of the questions raised regarding lung cancer screening from the perspective of policy makers; and
- Using a Canadian-based simulation model, review preliminary estimates of the cost-effectiveness of lung cancer screening and highlight potential factors influencing whether lung cancer screening may be considered good value for money from the perspective of the health care payer.

12:15 – 13:15

**Break**
13:15 – 13:45

Demystifying the Obesity Hypoventilation Syndrome
Dr. Marcus Povitz

Obesity is increasingly common in Canada with numbers of individuals with extremely elevated body mass index continuing to increase. One consequence of extreme obesity is the obesity hypoventilation syndrome and chronic respiratory failure. The precise cause and prevalence of OHS remains unknown though increasing evidence is being generated. This session will review risks for OHS, and its clinical presentation in the acute and chronic contexts. Additionally it will discuss the diagnostic approach to OHS and initiation of therapy.

At the end of this session, participants will be able to:
- Identify those at risk of the obesity hypoventilation syndrome;
- Recognize the different clinical presentations of the obesity hypoventilation syndrome;
- Diagnose OHS; and
- Contrast the therapeutic options for OHS.

13:45 – 14:15

In Flanders Fields 1914-2014
Dr. John Gjevre

2014 is the centenary of the First World War, which was a turning point in Canadian history. This session will review Canada's participation in the Great War and specifically review lung complications from warfare. Penetrating and blast trauma effects to the lungs will be contrasted along with a brief review of chemical/gas warfare. Infectious lung diseases including the Spanish Flu pandemic and tuberculosis will be discussed.

At the end of this session, participants will be able to:
- Describe war-related lung injury; and
- Identify infectious lung diseases related to war.

14:15 – 14:45

Break

14:45 – 15:45

Prevention of Acute Exacerbations of COPD: CHEST-CTS Guideline Update
Drs. Jerry Criner and Jean Bourbeau

This session will provide a comprehensive overview of the 2014 Prevention of Acute Exacerbations of COPD: CHEST CTS Guideline. This guideline is unique because it is the first guideline that is entirely focused on the prevention of acute exacerbations. It is also unique because the guideline represents a joint effort of the CTS and CHEST to create a clinically relevant document using a rigorous methodic approach to data abstraction and recommendation grading. Additionally, a team of multidisciplinary clinicians representing pulmonary medicine and rehabilitation led the process. The session will briefly review the guideline development process and specifically review the three PICO guidelines that address the non-pharmacologic, inhaled and oral medications that can be considered for use in the prevention of COPD exacerbations.
At the end of this session, participants will be able to:
- Discuss why the prevention of COPD exacerbations is important;
- Recognize the types of non-pharmacologic therapies that may be useful in the prevention of acute COPD exacerbations;
- Assess the pros and cons of the various inhaled therapies that have been used to prevent COPD exacerbations; and
- Discuss the values and preferences of the various oral therapies that can be used in the prevention of COPD exacerbations.

15:45-16:15

**Endemic Fungal Infections in the Pacific Northwest:**
**Location, Lungs and Management**

*Dr. Chris Mody*

Fungal infections present great challenges to respirologists because of the complexities of taxonomy, breadth of differential diagnosis, and the potential life-threatening nature of the illness. However, the correct treatment, if instituted early, can be highly effective, which makes it important to quickly pursue appropriate investigations and management. The skilled physician brings much to this diagnostic challenge by recognizing clinical and radiologic patterns of presentation, understanding the importance of geographic exposure, and knowledge of predisposing defects in host defense. For example, the importance of geographic exposure has recently been highlighted with the emergence of a 3rd Canadian endemic mycosis. By contrast, neutrophil vs. defective cell mediated immunity predisposes patients to very different pathogens that steer appropriate diagnostic testing and management. Finally, new insights into host pathogen interactions promise to lead to important advances in detection and therapeutics.

At the end of this session, participants will be able to:
- Identify the three major endemic areas for fungal infections in Canada;
- Describe how geography and host defense contribute to pulmonary mycosis;
- State the appropriate antifungal agent for different pulmonary mycosis; and
- Describe recent advances in our understanding of host defense to fungi.

16:15 – 17:00

**CTS Honorary Lecture: Making an Early Diagnosis of Pulmonary Tuberculosis**

Dr. Richard Long

Pulmonary Tuberculosis (TB) is the most common phenotypic expression of TB disease and the one which accounts for most transmission events. No single demographic, clinical or laboratory finding is likely to lead to an early or timely diagnosis of pulmonary TB; rather a constellation of findings, taken together, usually prompts consideration of pulmonary TB and submission of sputum or other airway secretion for acid-fast bacilli smear and culture. These include: epidemiologic risk (with respect to these there are some differences between Canada and the United States); the combination of organ-specific and constitutional symptoms, the relative absence of dyspnea, the subacute or chronic nature of the symptoms, a failure to respond to broad-spectrum antibiotics, the presence of one or more risk factors known to increase the risk of reactivation of latent TB infection (if present), and readily available laboratory test results. In particular, a
complete blood count (looking for an anemia of chronic infection and a relatively normal total leukocyte count) and an abnormal plain chest radiograph (typical findings being a unilateral or bilateral upper lung zone infiltrate, with or without cavitation). Early or timely diagnosis of pulmonary TB is critical to the interruption of transmission, a major obstacle to TB elimination.

At the end of this session, participants will be able to:
- Describe the pathogenesis of the major clinical and laboratory features of pulmonary tuberculosis;
- Discuss the major epidemiologic trends in tuberculosis in the Canada and the United States; and
- Recognize and demonstrate the importance of the typical plain chest radiographic features of pulmonary tuberculosis.

18:30 – 20:00  
CTS Member Reception
Austin Hilton Hotel