

Welcome!



I am delighted to have the privilege of ushering in this first issue of our newsletter. The newsletter is designed to foster communication among investigators conducting population science research at MSKCC. Many of you will be puzzled by the acronym, SOAR. This stands for “Survivorship, Outcomes and Risk”, and we fully expect research in population science to “take off” under this new banner. It replaces “PCPR”, a stodgy acronym, but one that has nonetheless served us well over the past 10 years. This change of title has been made in anticipation of our Core Grant review next

year. We feel it reflects better the current strengths and focus of the program. The Core Grant review is itself a big event in the life cycle of the institution. As directors of the SOAR program, Kevin Oeffinger, Ken Offit and I are currently preparing this component of the Core grant renewal application,

New Guidelines for Lung Cancer Screening

Experts now recommend that lung cancer screening with low-dose chest CT (LDCT) be offered to current and former smokers aged 55 to 74 with a smoking history of 30 or more pack-years. These evidence-based guidelines were released by the American College of Chest Physicians (ACCP) and the American Society of Clinical Oncology (ASCO) in May, 2012 and endorsed by the American Thoracic Society (ATS).

These new recommendations are based on a systematic evidence review published in *JAMA*. Led by **Peter Bach**, Director of the Center for Health Policy and Outcomes and Attending Physician at MSKCC, the review addressed potential benefits and harms of lung cancer screening with LDCT. Most of the evidence supporting screening was from the National Lung Screening Trial

based on your reports of research accomplishments. Similarly, this newsletter itself will only be a success if you all contribute. The newsletter editors will be contacting you throughout the year to learn about your projects and achievements. I hope you will use this new forum to share information with your SOAR colleagues, bridging the institutional divisions that separate us and facilitating collaboration across our disciplines.

- **Colin Begg**

Mark your calendar

July 28- August 2

Joint Statistical Meeting
San Diego, CA

September 11
4:00 PM
M-107

SOAR Seminar
Claire Snyder, PhD
Johns Hopkins
“From Cancer Patient to Cancer Survivor: Found in Transition”

There are no SOAR seminars in July and August

(NLST) which found a 20% reduction in the relative risk of lung cancer death among subjects randomized to annual screening with LDCT compared with those who had chest x-rays. The new guidelines recommend offering screening to adults whose age and smoking history are the same as the NLST participants.

While the NLST found a significant mortality benefit, screening with LDCT was also associated with a high rate of false-positive results, many of which led to invasive diagnostic procedures. Screening is not recommended for individuals with less than 30 pack-years of smoking, who are younger than 55 or older than 74, those who quit smoking more than 15 years ago, or who have other serious medical conditions that limit their life expectancy. The new guidelines also suggest that screening take place in large academic centers or hospitals that can provide comprehensive follow-up care.

ORGANIZATION	TYPE OF STATEMENT	FOR ADULTS WHO MEET NLST CRITERIA*	BASIS
AATS American Association for Thoracic Surgery	Clinical guidelines	Recommended [†]	Not specified (selective literature)
ACCP American College of Chest Physicians	Evidence-based guideline	Suggest it be offered	Systematic review, meta-analysis, grading of evidence
ACS American Cancer Society	Interim guidance	May be considered	Interim guidance pending full evidence review
ALA American Lung Association	Guidance	Recommended	Not specified (selective literature)
ASCO American Society of Clinical Oncology	Evidence-based guideline	Suggest it be offered	Systematic review, meta-analysis, grading of evidence
ATS American Thoracic Society	Evidence-based guideline	Suggest it be offered	Systematic review, meta-analysis, grading of evidence
IASLC International Association for the Study of Lung Cancer	Statement	Discuss with physician	Not specified
NCCN National Comprehensive Cancer Network	Consensus guidelines	Recommended [†]	Not specified (selective literature)

* Current and former smokers aged 55-74 with 30+ pack-years smoking history

† Screening also recommended for some individuals who do not meet NLST entry criteria

SOAR Faculty Present Research Findings at ASCO Annual Meeting

Shrujal Baxi (Medicine) presented, "Competing Causes of Mortality in Long-Term Survivors of Head and Neck Cancer." Using data from the population-based SEER cancer registry, Baxi found that people who survived at least 3 years after a diagnosis of head and neck cancer were more likely to die of a secondary cancer (31% of all deaths) than their primary head and neck cancer (24% of deaths). Long-term survivors also faced an increased risk of death due to cardiovascular disease (CVD). These results support the importance of close surveillance for new cancers and for CVD in head and neck cancer survivors.

Chaya Moskowitz (Biostatistics) presented, "New Insights into the Risk of Breast Cancer in Childhood Cancer Survivors Treated with Chest Radiation: A Report from the Childhood Cancer Survivor Study (CCSS) and the Women's Environmental Cancer and Radiation Epidemiology (WECARE) Study." In a cohort of women who had a history of chest radiation for Hodgkin lymphoma, the probability of developing breast cancer by age 50 was 30%. This risk was nearly identical to the 31% cumulative incidence of breast cancer by age 50 in a cohort of *BRCA1/2* mutation carriers.

Susan Oliveria (Dermatology) presented, "Treatment Patterns and Comorbidities in a Population-Based Cohort of Glioblastoma Patients Diagnosed 1997-2008." Oliveria and her colleagues studied more than 800 patients diagnosed with glioblastoma multiforme (GBM) in the Henry Ford Health Care System in Michigan. The most commonly received treatment was surgery (81% of patients) followed by radiation therapy (75%) and chemotherapy (67%). Median overall survival after diagnosis was 1.4 years.

Allison Snyderman (Health Outcomes) presented, "Long-Term Central Venous Catheter Use among Cancer Patients in Administrative Claims Data." Snyderman and her colleagues studied 54,000 colorectal cancer patients in the linked SEER-Medicare dataset. Long-term catheter insertions within 2 years of cancer diagnosis were identified in Medicare claims for 21% of patients. The most common claim was for a port/pump catheter, and 74% of all catheterized patients had intravenous chemotherapy. Catheter use was more likely in patients who were female, black or had comorbid illness. Identifying catheters in administrative data sources may aid efforts to reduce catheter-related infections in cancer patients.

Emily Tonorezos (Medicine) presented, "Contribution of Diet and Physical Activity to Metabolic Parameters among Survivors of Childhood Leukemia." Tonorezos and her colleagues studied more than 100 adult survivors of childhood acute lymphoblastic leukemia (ALL). Survivors who adhered to a Mediterranean diet pattern had lower insulin resistance, body fat, waist circumference and body mass index (BMI). Higher dairy intake was associated with greater insulin resistance. Physical activity was associated with lower BMI.

Gene is Associated with Smoking Addiction in African Americans

In a study of more than 32,000 African Americans, researchers identified a gene associated with smoking addiction. Individuals who had a specific variant of the gene were likely to smoke more cigarettes per day than those who did not have the gene variant. The study was published in the May issue of *Translational Psychiatry*.

Participants in the Study of Tobacco in Minority Populations (STOMP) were asked whether they ever smoked, the age at which they started smoking, the number of cigarettes they smoked daily and whether they had quit smoking. Researchers found a single-nucleotide polymorphism (SNP), in a gene called *CHRNA5*, which increased the amount that people smoked by one cigarette per day. **Helena Furberg-Barnes**, Assistant Attending Epidemiologist in the Department of Epidemiology and Biostatistics at MSKCC, was one of the lead authors of the study. "Our research suggests that willpower is not the only factor that influences how much a person smokes," Furberg said. "Genes play a role as well."



The STOMP Genetics Consortium includes researchers from more than 50 institutions nationwide and genetic samples from more than 32,000 African-American study participants. Although African Americans are generally older when they start smoking and tend to smoke fewer cigarettes per day, they have a higher incidence of lung cancer and they are less likely to successfully quit smoking than adults of European descent. The *CHRNA5* gene on chromosome 15 encodes a nicotinic acetylcholine receptor, a protein involved in nicotine addiction. The relationship between *CHRNA5* and quantity of cigarettes smoked had been identified previously in adults of European descent, but not in African Americans.

Researchers are now studying the relationship between the *CHRNA5* variant and lung cancer in African Americans. Widespread genetic testing of smokers is not advised, but studies that identify genetic variants associated with smoking behavior and nicotine addiction may help scientists and public health experts design more effective smoking cessation techniques.

SOAR Investigators Use Unique Pathology Resource at MSKCC

Since 2006 the Department of Laboratory Medicine has been storing unused patient serum samples for research purposes. This "discard" serum bank now contains more than 700,000 specimens. **Jennifer Brooks**, Instructor, and **Jonine Bernstein**, Attending Epidemiologist, in the Department of Epidemiology and Biostatistics, are studying the feasibility of using serum bank samples from breast cancer patients, linked with clinical information from the Institutional Database, to evaluate relationships between serum biomarkers, treatment response and breast cancer outcomes. Nearly 144,000 serum samples from breast cancer patients seen at MSKCC have been banked, with some women contributing as many as 10 samples. Brooks and Bernstein will link these samples to information about each patient's diagnosis, treatment and outcomes in order to assess the potential value of the serum bank for biomarker studies in breast cancer.

In a separate study **Sara Olson**, Associate Attending Epidemiologist in the Department of Epidemiology and Biostatistics, used serum bank samples to examine the relationship between serum immunoglobulin-E (IgE) and pancreatic cancer survival. In prior research Olson found that self-reported allergies were associated with improved pancreatic cancer survival. However, self-reported allergies are not always concordant with IgE, a robust and reliable measure of sensitization to allergens. Olson and her colleagues identified 106 participants from a case-control study who also had samples in the discard serum bank. They measured serum IgE and linked these values with information collected in the case-control study, including self-reported allergies, smoking history and demographic characteristics. Contrary to expectations, they found that elevated IgE was associated with poorer pancreatic survival. Olson credits the serum bank with providing useful preliminary data to support the development of larger, prospective studies in this area.

Did you know?

Kevin Oeffinger has run 13 marathons!



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