Cancer Research at CHEST 2012 Conference

By Mike Fillon

Pulmonary cancer research was a key focus at CHEST 2012, the American College of Chest Physicians annual meeting in Atlanta in late October.

At the meeting, three organizations that focus on cancer diagnosis, prevention, and treatment were designated Centers of Excellence on the basis of their “innovative programs and services that promote best practices in patient care, quality, safety, or education”:

OSF Saint Francis Medical Center (Peoria, Ill.)—Saint Francis was recognized primarily for best practices for success in their comprehensive pulmonary lung nodule treatment program. During their presentation, officials, led by Patrick Whitten, M.D., said that their lung cancer clinic has decreased diagnosis to treatment time for lung cancer patients in the clinic to 17 days, well below the national average of 90 days.

The Lahey Clinic (Burlington, Mass.)—During their presentation, Lahey officials discussed their experiences with low-dose helical computed tomography (LDCT) in the context of findings from the National Lung Screening Trial (NLST). NLST was a randomized national trial involving 53,454 current and former heavy smokers aged 55–74 years that compared LDCT and standard chest X-ray. NLST participants were required to have a smoking history of at least 30 pack-years and were either current or former smokers without signs, symptoms, or history of lung cancer.

Lahey researchers discussed their own study to date, based on the NSLT and National Comprehensive Cancer Network lung cancer screening guidelines. They said the rate of positive exams and extrapulmonary findings of potential clinical significance of their first 500 patients were similar to NSLT findings, even though Lahey included National Comprehensive Cancer Network group 2 high-risk patients.

However, said Andrea B. McKee, M.D., chairman of the department of radiation oncology, the average length of follow-up after evaluation was only 4.3 months. “This explains why our rate of cancer detection [3/500] is lower than first-year data reported in IELCAP [International Early Lung Cancer Action Program] and the NLST,” said McKee. “We expect our numbers to come in line with these programs as the 120 or so patients with small positive nodules complete 3- and 6-month scheduled follow-up exams, which are now pending.”

The Lahey Clinic has offered free LDCT lung screening since January 2012. “We felt an ethical obligation to provide equal screening access to all persons at high risk regardless of socioeconomic status, which led to the decision to offer LDCT lung screening at no charge until the Center for Medicare and Medicaid Services establishes reimbursement,” said McKee.

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Yale Lung Screening and Nodule Program (New Haven, Conn.)—Yale researchers identified 638 cases of NSCLC among 3,393 consecutive cases of NSCLC. Among the 409 eligible patients, 71 had diabetes and 41 patients used metformin. The researchers found a strong association between metformin use and overall survival, which held even after controlling for age, sex, cancer stage, histology, and smoking status. They found no association between diabetes and overall survival.

According to Samjot Dhillon, M.D., assistant professor of pulmonary medicine and thoracic oncology, the study showed that having diabetes is not associated with inferior survival in early-stage lung cancer while strengthening the argument that metformin can help improve overall survival. He added, however, that “the safety
Researchers Explore Possible Link Between Mesothelioma and Dust Emissions in Southern Nevada

By Leslie Harris O’Hanlon

Malignant mesothelioma is a rare, often fatal cancer of the lining around the lungs, abdomen, and heart. For decades, the main culprit of this disease, which kills approximately 3,000 in the U.S. each year, has been repeated exposure to asbestos used in construction, insulation, and other industries.

Now researchers are uncovering another possible cause for mesothelioma: naturally occurring minerals that form thin crystals, like hair or textile fibers, similar in shape to asbestos. These minerals occur in rocks throughout the U.S. in different geologic settings. Once airborne, these minerals can lodge in the lungs. The lungs eventually scar, setting off inflammation, cellular damage, and other events that can lead to mesothelioma, lung cancer, and other diseases, say researchers studying these minerals.

Unlike asbestos, however, these minerals are not regulated.

Recently, researchers at the University of Nevada, Las Vegas, found some of these minerals in the desert in Clark County, just outside Las Vegas. And researchers from the University of Hawaii Cancer Center in Honolulu have examined cancer data from Nevada, finding unusual cases of malignant mesothelioma in Clark County.

“What we know is there seem to be some mesothelioma cases that need to be explained,” said Rodney Metcalf, Ph.D., an associate professor of geology at UNLV.

“What we have are minerals that have been implicated in mesothelioma cases in other places.”

Francine Baumann, Ph.D., an epidemiologist at the University of Hawaii Cancer...