Pulmonary continued from page 10

“Of all the patients that come here, we make a diagnosis of PE in about 10% to 20% of patients,” Dr. Lim said.

However, given the deadly nature of the condition, the old adage of “better safe than sorry” still applies. “Keeping in mind that as a cause of sudden death massive PE is second only to sudden cardiac death, it is certainly a risk category that should be not overlooked,” Dr. Harper said.

Physicians should keep particularly close watch on patients older than 80 years who have a significantly increased risk for PE, according to Dr. Harper. In addition, physicians may want to give extra attention to women who are pregnant; black patients, who tend to also have increased mortality from PE; overweight patients; those who are otherwise healthy but have had a recent surgery; or those who have recently traveled for long periods involving immobility.

Going with the gut

If a physician does not have D-dimer testing or one of these clinical decision making tools available, it is still possible to ask questions that can uncover red flags. Questions outlined in the PIER module on pulmonary embolism include the following:

■ Does the patient have a history of cancer, recent trauma, surgery or a period of immobilization?
■ Is the patient pregnant or taking a form of estrogen such as oral contraceptives or postmenopausal hormone therapy?
■ Is there a history of venous thromboembolism in the family?

Asking these questions, as well as having an ongoing awareness of symptoms, will help to ensure that patients who may have PE get the treatment that they need quickly. However, clinicians shouldn’t rely only on textbook definitions, according to Dr. Hornbake. “For example, you may see a young woman who is reporting symptoms and has just been put on oral contraceptives, and also has a sister who had a fatal PE,” Dr. Hornbake said. “Using the Wells criteria, she would be considered low risk, and she may also have a normal D-dimer level. But using clinical judgment, a physician may still elect to do a CT scan.”

Ultimately, Dr. Hornbake said, physicians should be informed by all the evidence accumulated in the last 15 years but should not underestimate the value of their own clinical judgment. “Admittedly, many physicians still use clinical judgment and probably incorporate some of these pretest probability algorithms informally to decide whether PE is a likely diagnosis or not,” Dr. Lim said. She added that in certain cities in Canada where there are specialized thrombosis clinics, it is routine for primary care clinicians to refer the patient to these clinics for diagnostic testing.

Whether using clinical judgment or the more proven pretest probability scores, Dr. Hornbake said that if PE is likely, treatment should begin promptly. “The decision of how and where to treat will vary based on the physician’s comfort level with treating PE,” Dr. Hornbake said. “You have to pick the fastest means of getting the first dose into the patient.”

Biennial mammography and disease-stage diagnoses

Women age 66 to 89 years who undergo biennial screening mammography have similar risk of advanced-stage disease and lower cumulative risk of a false-positive mammography study than those who are screened annually, regardless of comorbidity, a study found.

Researchers sought to evaluate the impact of biennial versus annual mammographic screening in older women, and specifically whether the stage of disease detected using this screening pattern would be affected by the presence of comorbid illness in this population.

Data were prospectively collected on 2,993 older women age 66 to 89 with invasive breast cancer or ductal carcinoma in situ and 137,949 older women without breast cancer who underwent mammography from January 1999 to December 2006, and were then matched to Medicare claims. The presence of comorbid illness in both groups was quantified using the Charlson index, a method that assigns a weighted score to specific medical conditions and provides an indicator of disease burden; patients with a Charlson score of 0 in the study were considered to have no comorbid illness present.

Study results were published online Feb. 5 by the Journal of the National Cancer Institute.

The proportion of women with adverse tumor characteristics was similar among patients screened annually and biennially, and there were no more adverse tumor characteristics at diagnosis associated with less frequent screening. Additionally, there was no association of tumor stage in patients with comorbid illness versus those without comorbidities as assessed by the Charlson index, in contrast with previous studies.

Cumulative probability of a false-positive result over 10 years of screening in women at the lower age range of the study group (66 to 74 years) was higher among those screened annually than among those screened biennially regardless of comorbidity: 48% (95% CI, 46.1% to 49.9%) of women screened annually would have a false-positive result compared with 29.0% (95% CI, 28.1% to 29.9%) of those screened biennially.

Among women at the higher age range of the study group (75 to 89 years) with comorbidity, the rate of false-positives was 48.4% (95% CI, 46.1% to 50.8%) with annual screening and 27.4% (95% CI, 26.5% to 28.4%) with biennial screening. Slightly lower estimates were obtained for women in this age group with no comorbidity.

Researchers noted that there are 4.9 million U.S. women age 66 to 89 years with comorbidities and 14.3 million women without comorbidities. They concluded, “If these women undergo annual instead of biennial mammography, this could result in approximately one million additional false-positive examinations and 0.29 million additional false-positive biopsy recommendations among women with comorbidity plus 2.86 million additional false-positive examinations and 0.86 million additional false-positive biopsy recommendations among women without comorbidity. Thus, if older women undergo annual screening without consideration of the presence of comorbidity, it could result in substantial morbidity from screening mammography.”

The authors also noted that a randomized, controlled trial of mammography in older women is unlikely to be performed, and therefore more high-quality observational studies that look at additional measures of comorbidity and breast cancer mortality “may facilitate improved understanding of the benefits and harms of different screening mammography frequencies among older women and, ultimately, inform clinical and policy decisions about the appropriate use of screening in this growing population.”