Device Detects Lung Cancer Cells in Sputum

BY ROBERT FINN

SAN FRANCISCO — An investigational device could make sputum screening a routine part of health examinations in patients at risk for lung cancer, its developers suggested at the World Conference on Lung Cancer.

The Lung Cell Evaluation Device (LuCED) can discriminate normal cells from cancerous cells in sputum with 90% sensitivity and near 100% specificity, according to its manufacturer, VisionGate Inc.

LuCED is available as a research instrument. Dr. Robert Honigberg, VisionGate's consulting chief medical officer, said that the company hopes to receive Food and Drug Administration approval for a noncancer indication—the detection of macrophages in gastroesophageal reflux disease—by 2010, and approval of a lung cancer indication in 2011.

Company officials discussed the device at a press briefing on innovative diagnostics organized by the International Association for the Study of Lung Cancer, which sponsored the conference.

LuCED is based on a patented technology called Cell-CT, which uses light microscopy to assemble highly detailed three-dimensional images of individual cells as they rotate in a capillary tube. The software then quantifies critical morphological features to discriminate normal cells from cancerous ones. The results are entered into a proprietary formula to produce a "LuCED Score" that differentiates cancer cells from normal cells.

"We can get very close to 100% accuracy for normal sputum, and about 90% accuracy on sputum with cancer cells," said Michael Meyer, VisionGate's vice president for image engineering. ■