Smoking damages mainly the lungs, so what better way to counteract that damage than to go in like the smoke itself—through the airways?” says Roman Perez-Soler, M.D., professor of medicine and oncology division chief. Dr. Perez-Soler and his co-investigator, Yiyu Zou, Ph.D., associate professor of medicine (oncology), are using this strategy against lung cancer, which kills about 150,000 Americans each year and is the leading cause of cancer death.

Lung cancer is so lethal because it has usually spread to other organs by the time it’s detected. But what if it could be found much earlier? “In smokers, cells in the bronchial epithelium (lung lining) are hit by carcinogen-laden smoke, which damages DNA,” explains Dr. Perez-Soler, who is also associate director of clinical research and co-leader of the Developmental Therapeutics Program at the Albert Einstein Cancer Center, and chair and chief of oncology at Montefiore Medical Center, the University Hospital and academic medical center for