We recently carried out a broader study dealing with 62 resected lung masses (49 malignant and 13 benign) and ^{99m}Tc-TF SPECT (*5*). The histopathologic findings in the benign lesions in that series were as follows: 6 tuberculomas, 4 hamartomas, 1 aspergilloma, 1 hydatid cyst and 1 fibrotic nodule. None of the lesions had greater uptake than the contralateral symmetrical healthy tissue, although low-intensity uptake was visible. That is to say, the tumor-to-healthy tissue uptake ratio was less than or equal to 1. All the lung masses studied were resectable, not including lesions that showed no morphological or clinical evidence of malignant disease. Kao et al. (*1*) examined the images visually, a circumstance that, together with the early SPECT acquisition and the fact that not all of the lesions they studied were resectable, could explain the discrepancy between their study and ours with respect to uptake by benign lesions.

With respect to malignant lesions, we observed a tumor-to-healthy tissue ratio of greater than 1 in 30 of the 49 lesions. As indicated by Kao et al. (*1*), the absence of uptake by the remaining tumors can be explained by the presence of P-glycoprotein (Pgp) in the tumor cells. Pgp is encoded by the multidrug resistance gene (mdr1). Its overexpression by cancer cell lines is associated with an increased efflux of many cytotoxic drugs from the cells. Many of the drugs that are Pgp substrates are lipophilic cations at physiological pH (*6*), a condition that is fulfilled by both ^{99m}Tc-MIBI and ^{99m}Tc-TF and, in fact, both radiopharmaceuticals are Pgp substrates (*7,8*). On the basis of these premises, we studied 11 patients with non-small cell lung carcinoma (*9*). Our objective was to determine the Pgp distribution in resected tumor tissue samples by flow cytometry and to correlate it with preoperative ^{99m}Tc-TF scintigraphy. Depending on the Pgp expression revealed by flow cytometry, we classified the lung tumors as Pgp-positive or Pgp-negative. The ^{99m}Tc-TF uptake ratio in Pgp-positive tumors was 1.302 (0.232), whereas in Pgp-negative tumors it was 1.845 (0.348). The difference in the ^{99m}Tc-TF uptake ratio between Pgp-positive and Pgp-negative tumors was statistically significant ($p = 0.016$). These data suggest that the absence or low rate of uptake in a pulmonary mass histologically diagnosed as lung cancer is related to the presence of Pgp in the tumor.

In conclusion, ^{99m}Tc-TF SPECT and the determination of ^{99m}Tc-TF uptake ratio, in a selected group, differentiates between malignant and benign disease in the presence of uptake. Like ^{99m}Tc-MIBI (*7*), it also provides a functional image of mdr, with resulting prognostic and therapeutic implications of this information (*10*).

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Maria J. Tabuenca
Juan A. Vargas
Andrés Varela
Clara Salas
Alberto Durántez
José Ortiz Berrocal
Clinica Puerta de Hierro
Madrid, Spain

Drug Labeling Changes

TO THE EDITOR: The Pharmacopeia Committee of the Society of Nuclear Medicine wishes to pass on the following safety-related drug labeling changes approved by the U.S. Food and Drug Administration in October 1997: "For nuclear medicine procedures involving withdrawal and reinjection of blood with the potential of transmission of blood-borne pathogens, procedures should be implemented to avoid administration error and viral contamination of personnel during blood product labeling. A system of checks similar to the ones used for administering blood transfusions should be routine."

Edward B. Silberstein
University Hospital
Cincinnati, Ohio