Human Leukocyte Antigen-ABDR Genes in Pulmonary Adenocarcinoma Cell Lines

To the Editor:

We read with great interest the article in CHEST (July 2002) by Masakazu et al.¹ who observed a haplotype loss of class I human leukocyte antigens (HLAs) in several newly established lung cancer cell lines and identified it as a mechanism of tumor escape from the immunosurveillance system of the host. However, as for the HLA genes of lung cancer cell lines passing for many generations, such as the A549 and Calu-6 cell lines, there have been few reports, and the results have been inconclusive. Rimmelzwaan et al² reported that the genetic types of HLA-AB in A549 cell line become HLA-A30/–, HLA-B08/–, HLA-DR17/DR 52 (Calu-6 cell line). Also, there is a haplotype loss in the Calu-6 cell line. Hence, our study results strongly support the fact that there is a haplotype loss of HLA ABDR in the A549 cell line (CCL-185 in the American Type Culture Collection) and in the Calu-6 cell line (HTB-56 in the American Type Culture Collection) via the polymerase chain reaction-sequence-specific priming method⁴ as follows: (1) HLA-A30/–, HLA-B44/–, HLA-DR7/HLA-DR53 (A549 cell line); and (2) HLA-A01/–, HLA-B08/–, HLA-DR17/DR 52 (Calu-6 cell line).

The reason for the different results in the two previously published studies²–³ on the A549 cell line may be the 97.6% homology between HLA-A25 and HLA-B44/HLA-B18, while Hanagiri et al³ reported that the presentation of HLA-A in the A549 cell line becomes HLA-A30/HLA-A26. We present our results on genetic type HLA-ABDR in the A549 cell line (CCL-185 in the American Type Culture Collection) and in the Calu-6 cell line (HTB-56 in the American Type Culture Collection) via the polymerase chain reaction-sequence-specific priming method as follows: (1) HLA-A30/–, HLA-B44/–, HLA-DR7/HLA-DR53 (A549 cell line); and (2) HLA-A01/–, HLA-B08/–, HLA-DR17/DR 52 (Calu-6 cell line).

The HLA-I gene is present in many kinds of tumor cells, such as lung cancer cells. Intriguingly, in spite of continuing for many generations, the two cell lines wholly retain the HLA-DR genes. The result is different from a reported study⁶ in which there was also found to be a haplotype loss of HLA class I genes in all of the three newly established lung cancer cell lines. The correlative mechanisms of “haplotype loss” and “whole retention” of HLA class I/II genes are novel, and it is necessary to determine their cause as the next step in research.

Bo Deng, MD  
Ru-Wen Wang, MD  
Yao-Guang Jiang, MD  
Yi-Dan Lin, MD  
Qun-You Tan, MD  
Tong Xing, MD  
Zheng Ma, MD  
Daping Hospital Third Military Medical University  
Chongqing, People’s Republic of China

Obstructive Sleep Apnea and Perioperative Complications

To the Editor:

We thank Hwang et al.⁷ for their work that correlates sleep-disordered breathing with postoperative complications; however, we would like to raise a few issues in this respect:

1. The authors have opined that screening modalities of obstructive sleep apnea (OSA) have largely been based on expert opinion with lack of clinical evidence. Such is clearly not the case: questionnaires like Berlin,² STOP (Snoring, Tiredness during daytime, Observed apnea, high blood Pressure), and STOP-Bang (Body mass index, Age, Neck size, Gender)³ are available and have been clinically validated. The STOP and STOP-Bang questionnaires are particularly concise, easy to administer, and particularly validated in surgical patients and show high sensitivity for moderate-to-severe OSA.³ Clearly, use of such validated simple methods would be less cumbersome than the use of nocturnal oximetry as used here, and these could be used for future studies.

2. It has been established that OSA³ is associated with increased perioperative morbidities more so with general anesthesia and perioperative use of opioids. A sizable proportion of patients (62 of 172) underwent surgeries (gynecologic, urologic, and orthopedic), which, depending on site and type of surgery, could either have been done under regional or general anesthesia. The authors have not clarified the type of anesthetic administered in these; nor have they clarified the protocol of general anesthesia, whether it was standardized for all patients, the analgesic used on site and type of surgery, could either have been done under regional or general anesthesia. The authors have not clarified the protocol of general anesthesia, whether it was standardized for all patients, the analgesic used.

3. The inclusion of complications (GI bleed and intraperitoneal bleed) completely unrelated to the topic under inves-