be reviewed by the authors, has received little attention in the literature as a technique to measure airway patency. A standard screening sinus CT scan, performed in the coronal plane, gives an excellent view of the nasal passages and gives a visual estimate of the patency of the nasal airway. The cross-sectional area of each nasal passage can be measured with most scannning equipment and could be used in scientific investigations. More importantly, a sinus CT scan is a widely available tool that can be readily obtained.

A visual and numerical measurement of nasal flow, the forced inspiratory nasal flow volume curve (FINFVC), should be included in the list of tools for the evaluation of nasal airflow obstruction. I have previously reported on the technique and its use to evaluate nasal airflow. It utilizes the measurement of the flow-volume relationship applied to a forced inspiratory maneuver that is measured at the nose. When used with a sinus CT scan, the two techniques more clearly define the processes involved in nasal airflow obstruction than the techniques reviewed by Rappai et al. (Fig 1).

Until tools such as sinus CT scans and the FINFVC are employed to quantify nasal airflow obstruction anatomically and physiologically, the role of nasal airflow obstruction in sleep-disordered breathing will be uncertain. At present, the FINFVC and coronal sinus CT scans are the best tests available.

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To the Editor:

We appreciate Dr. Hooper’s kind comments concerning our article (December 2003).1 In his letter, he also ardently proposes that the coronal CT scan and the “forced inspiratory nasal flow-volume curve,” which he has described elsewhere,2 are the “best tests available” to assess nasal airflow structurally and physiologically.

We agree that CT scanning and MRI are among the appropriate methods with which to evaluate nasal airway structure. We disagree that CT scanning or MRI provides a visual estimate of airway patency, which is necessarily subject to dynamic fluctuations, such as the nasal cycle, alar collapse on forceful inspiration, or the influences of medications or hormones. We reviewed five such modalities for dynamic assessment in our article. Additionally, authors in a well-regarded textbook of otolaryngology specifically recommend rhinoscopy (not CT scanning or MRI) for the initial structural evaluation of nasal airway obstruction.

The forced inspiratory nasal flow-volume curve is an interesting concept that combines nasal inspiratory peak flow with the assessment of nasal vital capacity. As with other measurements of nasal peak flow, this potentially may be useful in the detection of large changes in nasal patency in individual subjects. It also may be among the most economical methods of evaluating nasal patency dynamically. However, it is limited by subjective variables of patient effort, and by observer interpretation of the proper technique and effort, as are other measurements of peak flow, whether nasal (as in nasal obstruction) or oral (as in lower airway obstruction). Nonetheless, this concept may appeal to some clinicians. Rhinometry is the best studied method1,3,4 for measuring nasal flow and resistance, and remains the standard for comparison.

We do not endorse any specific diagnostic modalities. We observe that choice necessarily depends on cost, convenience, individual preference, and an informed knowledge of the strengths and weaknesses of each modality. Due to the dynamic nature of airway obstruction, however, functional assessment is strongly recommended.

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Treatment of a Primary Pulmonary Angiosarcoma

To the Editor:

We read with interest the article by Kojima and colleagues (December 2003) concerning the treatment of a primary pulmonary angiosarcoma (AS). They used simultaneously IV recombinant interleukin-2 (rIL-2) and external radiation therapy (RX) for treating this nonmetastatic inoperable AS. Kojima and associates wrote in their article that “this combination therapy may be a promising strategy to prolong the survival of patients with primary pulmonary angiosarcoma.” Although they obtained a surprising and sustained good response (more than a year) in this case, we would like to make a few comments.

rIL-2 has often been tried to treat different types of cancers. Tumor responses were observed mainly in patients with melanoma and renal cell carcinoma. Kojima et al mentioned the study of Masuzawa et al and wrote that the “systemic administra-
induced the regression of pulmonary metastasis, but these conclusions are drawn from mice only. In human AS, rIL-2 therapy was almost always used with RX or chemotherapy, and, therefore, the potential efficacy of rIL-2 by itself cannot be assessed in AS, since it is also known to be a radiosensitive tumor. Of notice, in the retrospective study (30 patients) performed by Sasaki et al., and referenced by Kojima et al, the four long-term survivors (ie, > 3 years) were patients with nonmetastatic AS who had been treated with rIL-2 but also with curative RX. Finally, several chemotherapeutic drugs were tested in patients with AS. A few of them showed promising activity, except for paclitaxel in skin (ie, face and scalp) ASs. This drug gave interesting results (eight partial and complete responses among nine patients) when used alone without RX, unlike the case with rIL-2. In our opinion, rIL-2 may be valuable in the treatment of patients with AS, but its efficacy should first be evaluated as a single agent before using it in association with RX. Moreover, one should be cautious with rIL-2 because of its potential toxicity, especially at high dosages.

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To the Editor:

We thank Duck and colleagues for their comments on our article (December 2003), and we appreciate the opportunity to respond. They describe in their letter that recombinant interleukin-2 (rIL-2) may be valuable in the treatment of primary pulmonary angiosarcoma (AS), but its efficacy should first be evaluated as a single agent before using it in association with radiotherapy. The patient in our study, who was given high doses of rIL-2 combined with radiotherapy, had no unmanageable side effects and has remained progression-free for 2 years after diagnosis. The excellent clinical outcome is outstanding among those previously reported in primary pulmonary AS patients, who died within months of the initial presentation. Since biological therapies, including those utilizing high-dose IL-2, differ from chemotherapeutic approaches in terms of mechanism of action, toxicity, and response profile, one should interpret the clinical activity with due caution.

We have not been able to conclude from the presented case that rIL-2 itself possesses substantial antitumor activity against primary pulmonary AS, even though evidence has been growing in a fraction of patients with metastatic melanoma and renal cell carcinoma. On the basis of the sensitivity of AS to radiotherapy, it is possible that concomitant radiotherapy may enhance immunogenicity by causing cellular damage and activating IL-2-stimulated cellular effectors. The consequent synergistic effects might be required to achieve the remarkable and durable response that was observed in our patient. Further investigation to explore the molecular and cellular mode of action of the combination of radiotherapy and immunotherapy will be awaited, as well as the more clinically successful experiences of this challenging disease.

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Airway Hyperresponsiveness to Bronchial Mannitol

Where Do We Go From Here?

To the Editor:

I read with interest the recent article in CHEST by Koskela et al (December 2003), which demonstrated that bronchial manni- tol challenge was more sensitive to cold air and was comparable to bronchial histamine challenge at a lower cutoff value. As I understand it, the study looked at patients in whom asthma had recently been diagnosed, albeit with difficulty, but who fell within the realms of both the Finnish Social Insurance Institution criteria and the Global Initiative for Asthma classification. Yet, in a test that was meant to aid clinicians, the sensitivity of bronchial mannitol challenge was only 51% (ie, half the patients with difficult-to-diagnose asthma did not respond). This can be interpreted in the two following ways: half the patients wrongly received a diagnosis of asthma in the first place; or the mannitol bronchial challenge was only half effective in correctly identifying patients with difficult-to-diagnose asthma. I agree that airway hyperresponsiveness is a real and important component of asthma, and therefore should be incorporated into asthma guidelines to aid severity classifications and treatment. However, I am