pressure\textsuperscript{2-5} from an anesthetic, which may not have included a narcotic. Anesthesiologists have directly observed the development of pulmonary edema after but one or two forceful inspiratory efforts against a stridorous or closed glottis. Immediate intervention—further reversal of muscle relaxants, narcotics, or both, repositioning of the airway, etc.—does not obviate the complication of acute pulmonary edema. One "negative pressure" obstructed breath is all it takes.

Mu opioids cause thoracic, glottic rigidity, or both,\textsuperscript{6} but the situation is ameliorated with concomitant use of muscle relaxants. I reject the notion that "The mechanism of pulmonary edema may be an allergic reaction to buprenorphine, not an overdose."\textsuperscript{7} A patient with small pupils, a respiratory rate of eight breaths per minute, and buprenorphine intake\textsuperscript{8} may experience the untoward features of mu opioids. Pulmonary edema in such a patient comes from the sequelaee of her upper airway obstruction.

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Ordering Chest CTs
Benefits vs Cost and Risk

To the Editor:

In their editorial, "Is Thoracic CT Performed Often Enough?" by Naidich and colleagues (Chest 1994; 106:331-32), the authors fail to recognize that contrary to our wishes the radiologist is often not "integrated into the overall decision making process." Although ideally our radiology colleagues—who are extremely helpful in difficult cases—should be informed at all times about the details of the history and physical examination of our patients, usually this is not the case. Thus when an asymptomatic young black female marathon runner is found to have bilateral hilar adenopathy on her chest x-ray film, the radiologist does not have this information, which would make further imaging unnecessary in most cases.\textsuperscript{1} Similarly, the man with a hilar mass who gives a story of developing a febrile illness 2 weeks after passing through a dust storm in Las Vegas and whose cocci serology and sputum studies are pending, does not need immediate imaging. The patient with a large cavitary lesion at the apex of his lung whose sputum smears will be ready in 48 h does not need a computed tomography (CT) scan to assist us in the diagnosis of tuberculo-
sis. Yet the tendency of the last 10 years has been for radiologists to look at an x-ray film and assume they have sufficient information to make recommendations for the clinician. This puts the general internist and general practitioner in the uncomfortable role of finding an x-ray film report recommending a CT scan whereas the consulting pulmonologist recognizes that although the CT would be very interesting to look at, the CT is unnecessary for diagnosis and management of the patient. Indeed only the clinician managing the case—in this case usually a pulmonologist—can decide what the priority of x-ray films and other tests should be for a proper cost-effective and efficient workup of the patient. This is the reason that CTs are performed too often.

Hopefally, Dr. Naidich et al in their spectacular presentations of the future will stress the importance of taking a proper history and physical examination and collecting appropriate sputum studies before making any decision as to whether further x-ray films are necessary. In certain academic centers the radiologist has all of this information at his disposal when he makes his recommendation. My own experience, however, at both academic centers and private practice indicates otherwise and this is the reason that Drs. DiMarco and Renston (Chest 1994; 106:332-33) are indeed correct in saying that we should be more judicious in ordering these interesting but often unnecessary high technology tests.

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REFERENCE

Choose the Tidal Volume Wisely

To the Editor:

The December 1993 issue of Chest (Chest 1993; 104:1833-59) included an expert panel consensus statement forwarding guidelines for mechanical ventilation. One of the primary themes of the guidelines was that selection of the parameters for mechanical ventilation ought to be based on physiologic variables. Trainees are commonly taught that the appropriate tidal volume for mechanically ventilated patients is 10 mL/kg. Such a notion is not unreasonable in patients with normal lungs, ventilated for short periods as is the case in most operative patients. However, patients in medical and surgical ICUs frequently arrive with cardiopulmonary diseases. The extrapolation of the 10 mL/kg rule to this population has been inappropriate; it inherently denies the uniqueness of each patient's pathophysiology. Nevertheless, trainees and respiratory therapists require general rules by which to guide ventilator management. Utilizing 7 to 10 mL/kg tidal volumes at the initiation of mechanical ventilation is reasonable. However, trainees should be taught to adjust tidal volumes based on respiratory system mechanics once the patient has been stabilized on the ventilator. As is implicit in the guidelines, static (respiratory system) pressure is the most appropriate index for determining the tidal volume for any given patient on any given day. Tidal breathing in nonventilated human beings, healthy and unhealthy, is determined by the balance of muscle strength and the pressure-volume characteristics of the respiratory system. We should learn from nature. I suggest that the 10 mL/kg rule be supplanted by another very simple principle: the tidal volume yielding a static (plateau) pressure of 15 to 20 cm H2O above the PEEP. Obviously, such a clinical rule has exceptions. For example, in patients with stiff lungs or chest walls, higher plateau