Non-invasive determination of cardiac output by Doppler echocardiography and electrical bioimpedance

Sir,—Dr Northridge and colleagues (1990;63:93-7) have, inadvertently I am sure, incorrectly cited the proper name of the stroke volume equation currently implemented in NCCOM3. While it is true that the general form of the equation of Sramek et al.1 quoted under patients and methods, describes impedance derived stroke volume in a general, qualitative fashion, it is the quantitative definition of volume of electrically participating tissue (VEPT) in the equation that requires clarification.

In the work cited by Northridge and associates, the VEPT defined by Sramek and colleagues is determined in practice uniquely as a function of body height alone. However, as correctly stated by Northridge et al., VEPT as currently used is a constant derived from both body weight and height. NCCOM3 computes stroke volume from the Sramek equation corrected for body habitus.2,3 This modified equation is now generally cited as the Sramek-Bernstein equation,5 which is the one, apparently, used in this study.

WILLIAM C SHOEMAKER
Editor, Critical Care Medicine, 251 E Imperial Highway, Suite 480, Fullerton, CA 92831, USA

1 Sramek BB, Rose DM, Miyamoto A. Stroke volume equation with a linear base impedance model and its accuracy, as compared to thermodilution and magnetic flow meter techniques in humans and animals. Proceedings of the sixth conference on electrical bioimpedance, Zadar, Yugoslavia, 1983:38