

June 4, 2001

1. The control group using conventional ventilation in the SensorMedics study was treated according to prevailing practice at the time the trial was designed. The mortality rate in the control group is high (52% at 30 days). By comparison, 31 to 39.8% mortality, depending on treatment, was found in the ARDS network study (published in the New England Journal of Medicine in May 2000). Current information suggests that conventional ventilation using smaller tidal volumes provides improved results. In light of current practice, are the control group treatments and outcomes in the Sensormedics study adequate to allow evaluation of the HFOV device by comparison to this control group?

2. The study did not meet the prospective endpoint for the combination variable (mortality or survival with respiratory support, including oxygen treatment at 30 days). The prospective endpoint was: not more than 10% worse than control arm with 95% confidence. However, the average survival is better in the HFOV group (63% HFOV vs. 48% CV) at one month, although worse survival with HFOV cannot be excluded with 95% confidence. Can you conclude that there is valid evidence that this device is reasonably safe and effective based on post-hoc criteria?

3. Our premarket evaluation of devices includes review of the labeling. The labeling must identify the patients that can be treated with the device, identify potential adverse effects, and explain how the product should be used to maximize benefits and minimize adverse effects. Is the labeling adequate? Does the revised Operator's Manual, chapter 8, which instructs the user on treatment strategy, adequately reflect the clinical trial protocol and data?

4. Based on the clinical data provided in the panel pack, do you think that additional clinical follow-up or postmarket studies are necessary for this device?