

**GUIDELINES FOR THE USE OF JET VENTILATION  
DEPARTMENT OF ANESTHESIOLOGY  
STONY BROOK UNIVERSITY MEDICAL CENTER**

Updated 9.22.16

**OBJECTIVE:** To standardize the approach to clinical evaluation, inclusion and management of patients undergoing ablation procedures in the electrophysiology laboratory with the use of the jet ventilator.

**JET VENTILATION EXCLUSION CRITERIA:**

1. Patients with known history of spontaneous pneumothorax (Note: This does NOT include patients who had a traumatic pneumothorax for example)
2. Patients with known bullous emphysema (defined by CT scan, which most RFA patients undergo)
3. Severe COPD – defined by use of home oxygen or bullous disease (see #2)
4. Patients who have severe lung compliance issues – defined by peak inspiratory pressures of greater than or equal to 40cmH<sub>2</sub>O after induction of general anesthesia under conventional ventilation strategy that cannot be simply resolved (examples of causes of elevated peak inspiratory pressures that can easily be resolved include, but not limited to: a kinked endotracheal tube or an endotracheal tube that is too deep into one of the mainstem bronchi)

**NOTE:** BMI of any number is not a reason to exclude a trial of jet ventilation

**JET VENTILATION PROTOCOL:**

1. After induction of general anesthesia, a baseline ABG is obtained while the patient is under conventional ventilation
2. Assuming the peak inspiratory pressures are <40cmH<sub>2</sub>O, a trial of jet ventilation is instituted on ALL patients for no less than 30 minutes. The purpose of this trial is to:
  - a. Confirm that the jet ventilator is functioning appropriately (no catastrophic alarms)
  - b. Confirm ability of oxygenate and ventilate the patient on jet ventilation with two ABGs (15 minutes after instituting jet vent and 30 minutes after instituting jet vent)
3. The Anesthesia team will then resume conventional ventilation and inform the electrophysiologist that either:
  - a. Jet ventilation will be safe to use for the case if no problems are encountered in steps 2a or 2b
  - b. Jet ventilation will not be safe to use for the case if problems are encountered in either step 2a or 2b
4. If Jet ventilation is used for the mapping and ablation, an ABG will be obtained in the following instances:
  - a. 15 minutes after instituting Jet ventilation
  - b. 15 minutes after any change of the ventilator settings while under Jet ventilation
  - c. Every 30 minutes while under Jet ventilation (assuming no changes have been made which would necessitate obtaining an ABG after 15 minutes as in 4a)