High-frequency jet ventilation seems safe for lung ablation

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For percutaneous lung ablation, high-frequency jet ventilation (HFJV) under general anesthesia seems as safe as spontaneous respiration (SR) under moderate sedation, with longer room time for HFJV, according to a study published online Jan. 24 in the *American Journal of*

Roentgenology.

Alexander Graur, from Massachusetts General Hospital in Boston, and colleagues conducted a retrospective study involving consecutive adults who underwent computed tomography (CT)-guided percutaneous cryoablation of one or more lung tumors with HFJV or SR. Major adverse events within 30 days and hospital length of stay (HLOS) at least two days were compared among 139 patients with 310 lung tumors who underwent 208 cryoablations (129 HFJV and 79 SR).

The researchers found that the rates were greater for HFJV versus SR for treatment of multiple tumors per session (43 versus 19%) and nonperipheral tumor location (48 versus 24%). The major adverse event rate did not differ significantly between the groups (8 versus 5%). There were no occurrences of systemic air embolism. HLOS of at least two days occurred in 17% of sessions, with no significant difference noted for HFJV versus SR. No significant difference was seen in procedure time, CT guidance acquisition time, CT guidance radiation dose, or total radiation dose between ventilation modalities. Longer room time was seen for HFJV versus SR (154 versus 127 minutes).

"The choice of ventilation modality in percutaneous lung ablation should be based on patient characteristics and anticipated procedural requirements, as well as operator preference," the authors write.

More information: Alexander Graur et al, High-Frequency Jet Ventilation Versus Spontaneous Respiration for Percutaneous Cryoablation of Lung Tumors: Comparison of Adverse Events and Procedural Efficiency, *American Journal of Roentgenology* (2024). DOI: 10.2214/AJR.23.30557