

Accurate Localization of 13mm Nodule Key in Diagnosis



LOCALIZATION OF A RIGHT LOWER LOBE NODULE

Authors

Dr. Cole Burks | IP
Dr. Sohini Ghosh | IP Fellow
Dr. Jason Long | Thoracic Surgeon

University of North Carolina Hospitals
Chapel Hill, North Carolina

Patient Information: 58 y/o, M

Scan Protocol: Veran Inspiration/Expiration CT Scan Protocol

Nodule: 13mm RLL

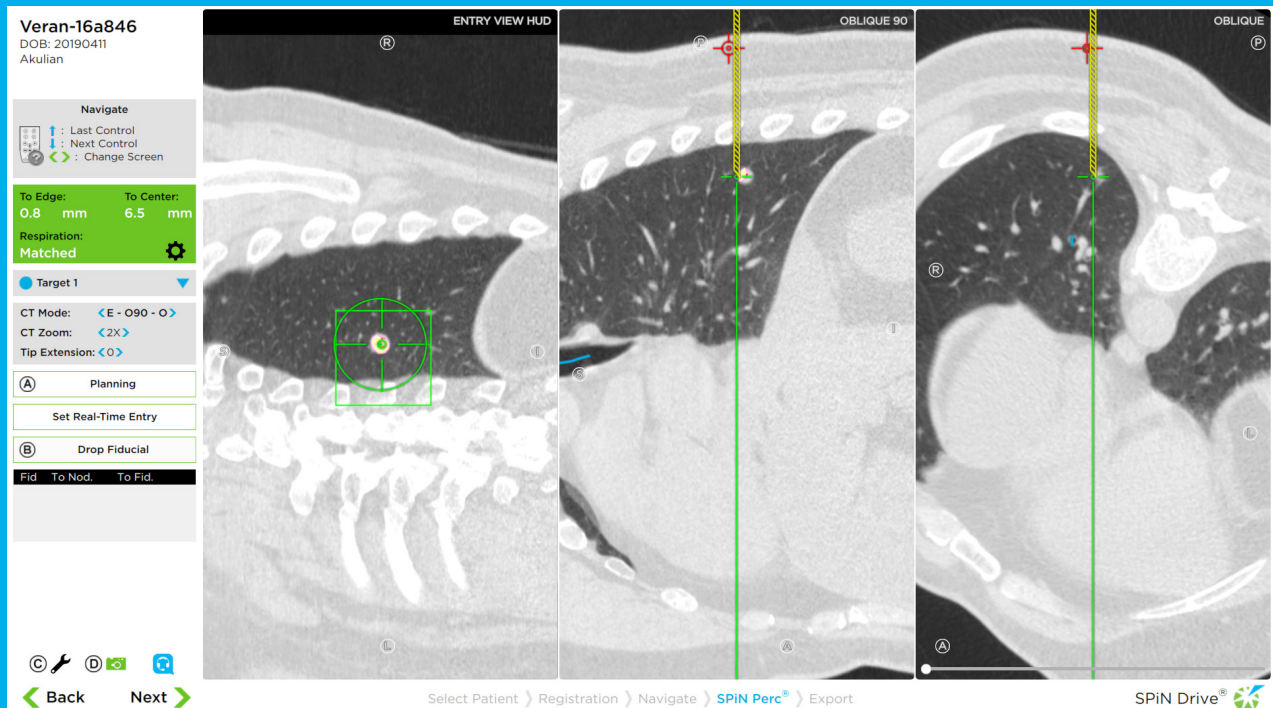
Biopsy Result: Malignant

Instruments Used: Always-On Tip Tracked® Guidewire & SPiN Perc™ Kit

Conclusion: Metastatic Melanoma

Observations

“This nodule would have been extremely difficult to identify without an accurate localization with the Veran SPiN Thoracic Navigation System™. The dye marking was spot on the small pulmonary nodule and easily confirmed by pathology.”



Patient History

This patient was previously diagnosed and treated for melanoma in 2018. During a routine follow-up scan, multiple nodules were found in the right lower and right middle lobes of the lung. The largest nodule of 13mm was selected for a diagnostic resection with Dr. Jason Long, Thoracic Surgeon.

Planning

The patient was scanned in the right lateral decubitus position using Veran scan protocol. Upon reviewing the CT scan, Interventional Pulmonologist Dr. Burks and IP Fellow Dr. Ghosh identified and segmented the right lower lobe nodule using Veran SPiN Planning™ software. It was noted during the expiration scan review the nodule moved over twice its size (30.6mm) during each respiratory cycle. Respiratory gating would be extremely important to accurately mark the nodule. Dr. Ghosh easily planned an entry point on the patient's skin and trajectory to reach the nodule.

Procedure

Dr. Burks and Dr. Ghosh first used the Always-On Tip Tracked® Guidewire to perform endobronchial registration with the patient already in the lateral decubitus position for surgery. The procedure transitioned to SPiN Perc™ for percutaneous localization. When respiration was matched, Dr. Ghosh advanced the SPiN Perc™ introducer needle through the chest wall to reach the targeted nodule. She then injected 1cc of dye into the nodule, using half to make a trail to the chest wall. To ease Dr. Long's surgical approach, Dr. Ghosh also made a second marking on the nodule with an entry point from a slightly more posterior angle. This localization process took a total of 10 minutes. Dr. Long began his resection using VATS. As expected, he was unable to digitally palpate the nodule due to its location and size. Dr. Long resected a wedge containing the area marked with dye. Pathology confirmed an accurate marking of the nodule of interest in the specimen and a diagnosis of metastatic melanoma. The accurate localization and diagnosis of the nodule allowed the patient care team to immediately plan treatment of the patient's recurrence of cancer.

