

# **Role of Different Imaging Modalities in N-Staging of Lung Cancer**

Essay

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By

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## **ABSTRACT**

The aim of our study was to reach a proper algorithm for accurate nodal staging and in turn lead to a better prognostic outcome. We found that PET/CT has shown significant improvement in radiologic staging of lung cancer however, it is not enough accurate to substitute mediastinoscopy. DWIBS is an outstanding tool to identify lymph nodes, irrespective of their histological composition so it can be complimentary to nanoparticle-enhanced MRI (SPIO). The histological type of lung cancer can guide the decision to perform invasive staging.

Keywords:

**Imaging Modalities- N- Staging - Lung Cancer**

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## ***DEDICATION***

*To my beloved family, for  
their help, support and  
love*

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# List of Abbreviations

<b>3D</b>	3 Dimensional
<b>3-T MRI</b>	3 Tesla Magnetic Resonance Imaging
<b>ACCP</b>	American Collage of Chest Physicians
<b>AJCC</b>	American Joint Committee on Cancer
<b>ADC</b>	Apparent Diffusion Coefficient
<b>ALNM</b>	Axillary Lymph Node Metastases
<b>CECT</b>	Contrast Enhanced Computed Tomography
<b>CT</b>	Computed Tomography
<b>DWIBS</b>	Diffusion Weighted whole Body Imaging with Background Suppression
<b>EBUS</b>	Endobronchial Ultrasound
<b>EUS</b>	Esophageal endoscopic ultrasound
<b>FDG</b>	Fluorodeoxyglucose
<b>FNA</b>	Fine Needle Aspiration
<b>FSE</b>	Fast Spin Echo
<b>H &amp; E</b>	Hematoxylin & Eosin
<b>IASLC</b>	International Association of the Study of Lung Cancer
<b>IV</b>	Intravenous
<b>IHC</b>	Immunohistochemistry
<b>MDCT</b>	Multi-detector Computed Tomography

<b>MION</b>	Monocrystalline Iron Oxide Nanoparticle
<b>MRI</b>	Magnetic Resonance Imaging
<b>N</b>	Nodal
<b>NPV</b>	Negative Predictive Value
<b>NSCLC</b>	Non small cell lung cancer
<b>PCR</b>	Polymerase Chain Reaction
<b>PET</b>	Positron Emission Tomography
<b>PET/CT</b>	Positron Emission Tomography and Computed Tomography
<b>PPV</b>	Positive predictive value
<b>ROC</b>	Receiver operating characteristic
<b>SUV</b>	Standard Uptake Value
<b>SPIO</b>	Superparamagnetic Iron Oxide
<b>SSPIO</b>	Standard Superparamagnetic Iron Oxide
<b>STIR</b>	Short Time Inversion Recovery
<b>TBNA</b>	Transbronchial Needle Aspiration
<b>TEMLA</b>	Transcervical extended mediastinal lymphadenectomy
<b>TNM</b>	Tumor, Node, Metastases
<b>TTNA</b>	Transthoracic needle aspiration
<b>UICC</b>	Union of International Cancer Control
<b>US</b>	Ultrasound

**USPIO**     Ultrasmall Superparamagnetic Iron Oxide

**VATS**     Video Assisted Thoracoscopic Surgery



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