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

Essay
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By

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ABSTRAT

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.

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DEDICATION

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

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List of Abbreviations

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

MION Monocrystalline Iron Oxide Nanoparticle

MRI Magnetic Resonance Imaging

N Nodal

NPV Negative Predictive Value

NSCLC Non small cell lung cancer

PCR Polymerase Chain Reaction

PET Positron Emission Tomography

PET/CT Positron Emission Tomography and Computed Tomography

PPV Positive predictive value

ROC Receiver operating characteristic

SUV Standard Uptake Value

SPIO Superparamagnetic Iron Oxide

SSPIO Standard Superparamagnetic Iron Oxide

STIR Short Time Inversion Recovery

TBNA Transbronchial Needle Aspiration

TEMLA Transcervical extended mediastinal lymphadenectomy

TNM Tumor, Node, Metastases

TTNA Transthoracic needle aspiration

UICC Union of International Cancer Control

US Ultrasound

USPIO Ultrasmall Superparamagnetic Iron Oxide

VATS Video Assisted Thoracoscopic Surgery

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