Utility of FDG PET-CT Scan in Determining Pathological Response to Neo-adjuvant Chemoradiation Therapy in Non-small Cell Lung Cancer (NSCLC)

Eliot L. Friedman MD
Lehigh Valley Health Network, Eliot_L.Friedman@lvhn.org

Michael F. Szwerc MD
Lehigh Valley Health Network, Michael_F.Szwerc@lvhn.org

Robert Kruklitis MD
Lehigh Valley Health Network, Robert.Kruklitis@lvhn.org

Michael J. Weiss MPH
Lehigh Valley Health Network, Michael_J.Weiss@lvhn.org

Robert Rienzo MD
Lehigh Valley Health Network, Robert.Rienzo@lvhn.org

See next page for additional authors

Follow this and additional works at: http://scholarlyworks.lvhn.org/medicine

Part of the Hematology Commons, Medical Pathology Commons, Oncology Commons, and the Therapeutics Commons

Published In/Presented At

This Poster is brought to you for free and open access by LVHN Scholarly Works. It has been accepted for inclusion in LVHN Scholarly Works by an authorized administrator. For more information, please contact LibraryServices@lvhn.org.
Authors
Eliot L. Friedman MD, Michael F. Szwerc MD, Robert Kruklitis MD, Michael J. Weiss MPH, Robert Rienzo MD, and Wen Young MD
Utility of FDG PET-CT Scan in Determining Pathological Response to Neo-adjuvant Chemo-radiation Therapy in Non-small Cell Lung Cancer (NSCLC)

Eliot L. Friedman MD; Michael F. Szwerc MD; Robert J. Kruklitis MD; Michael J. Weiss MPH; Robert J. Rienzo MD; Wen Young MD
Lehigh Valley Health Network, Allentown, Pennsylvania

Background

- Stage IIIA (N2+) non-small cell lung cancer (NSCLC) represents a heterogenous group of diseases
- There is no consensus for the use of chemotherapy, radiation therapy and surgery in the treatment of stage IIIA NSCLC
- Pathological response of N2 lymph nodes is predictive of long term survival (1, 2, 3, 4, 5)
- Data is accumulating indicating that pathological response of the primary tumor may be predictive of long term survival (6, 7, 8, 9)

Patients

- Mean age
  - 57.7 years old (49 – 77)
- Gender
  - 7 male
  - 8 female
- Stage
  - IIIA
    - T1N0M0 – 1 patient
    - T1N1M0 – 5 patients
    - T2N0M0 – 5 patients
  - IIIB
    - T4N0M0 – 3 patients
    - T4N1M0 – 1 patient
- Pathology
  - Adenocarcinoma - 8/15
  - Squamous Cell Carcinoma - 4/15
  - Adenosquamous - 3/15

Conclusions

- FDG PET-CT can detect a decrease in SUVmax within two weeks of completing neo-adjuvant chemotherapy and radiation therapy
- The percent change in SUVmax before and after neo-adjuvant therapy is not predictive of pathological findings at the time of surgery
- FDG PET-CT is useful in identifying metastatic disease that appears after neo-adjuvant therapy, obviating surgery
- Increase of sample size in the future may enable us to demonstrate utility of FDG PET-CT in determining pathological response to therapy

References: