Cureus

Open Access
Abstract

Cureus

Stereotactic Body Radiotherapy (SBRT) Treatment of Lung Lesions (Primaries, Recurrent, and Metastases)

Mark Sueyoshi [1] , Afshin Rashtian [2] , Munir Zaman [3]

1. Medical School, University of California Riverside 2. Riverside CyberKnife and Radiation Oncology, Riverside Cyberknife and Radiation Oncology, Riverside, CA 3. Medical Physics, Riverside Community Hospital

Corresponding author: Mark Sueyoshi, msuey001@medsch.ucr.edu

Categories: Cardiac/Thoracic/Vascular Surgery, Radiation Oncology
Keywords: sbrt, stereotactic body radiotherapy

How to cite this abstract
Sueyoshi M, Rashtian A, Zaman M (November 02, 2017) Stereotactic Body Radiotherapy (SBRT) Treatment of Lung Lesions (Primaries, Recurrent, and Metastases). Cureus 9(11): a257

Abstract

Objectives: To assess response rate with regards to SUV of patients treated with SBRT using the CyberKnife Robotic Radiosurgery system.

Methods: 45 lesions were able to be evaluated that had both a pre and post PET/CT scan treated with SBRT from Jan. 2013 – Dec. 2016. Response rate was determined by reduction or stabilization of SUV at first follow-up imaging. First post treatment PET/CT was usually obtained 3-4 months after treatment. A sub-analysis was performed on T2b or greater lung cancers assessed by tumor size response rate determined by reduction or stabilization of size after first follow-up imaging.

Results: In our examination of 45 lesions treated with SBRT, the median pre-treatment max SUV was 7.9 (range of 0 – 27.0, n = 45) and post-treatment median max SUV measured at 3.4 (range of 0 – 7.2, n = 45) at first follow-up. Response rate as measured by SUV was 82% (37/45). Sub-analysis of nine T2b or greater primary pulmonary tumors showed a response rate of 77% (7/9).

Conclusions: Treatment of lung cancers with SBRT using the CyberKnife system has excellent response as measured by max SUV. The assessment of treating T2b or greater pulmonary lesions showed promising response rates with regards to tumor size. Further study of the effectiveness in treating T2b or greater lung tumors needs to be studied to assess SBRT's role.

Open Access
Abstract
Published 11/02/2017

Copyright
© Copyright 2017
Sueyoshi et al. This is an open access article distributed under the terms of the Creative Commons Attribution License CC-BY 3.0., which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

Distributed under
Creative Commons CC-BY 3.0