

## عنوان مقاله:

Evaluation of delayed changes in pulmonary perfusion scan and pulmonary function tests after radiotherapy for breast cancer

## محل انتشار:

مجله پزشکی هسته ای ایران، دوره 32، شماره 1 (سال: 1403)

تعداد صفحات اصل مقاله: 7

## نویسندگان:

Siamak Derakhshan - *Department of Radiotherapy, Faculty of Paramedical Medicine, Kurdistan University of Medical Sciences, Sanandaj, Iran*

Zeinab Salehi - *Department of Radiotherapy, Faculty of Paramedical Medicine, Kurdistan University of Medical Sciences, Sanandaj, Iran*

Sabah Hasani - *Department of Internal Medicine, Faculty of Medicine, Kurdistan University of Medical Sciences, Sanandaj, Iran*

Farideh Elahimanesh - *Department of Radiotherapy, Faculty of Paramedical Medicine, Kurdistan University of Medical Sciences, Sanandaj, Iran*

## خلاصه مقاله:

**Introduction:** The application of radiotherapy after performing surgery plays a vital role in the breast cancer treatment. In the current study, we investigated the effects of the radiotherapy for breast cancer on pulmonary perfusion scan (PPS) and pulmonary function tests (PFTs). **Methods:** Fifty patients diagnosed with breast cancer with no history of lung diseases who had received radiotherapy after breast surgery and chemotherapy were selected. Mean lung dose (MLD) and volume percentage of the ipsilateral lung receiving a dose equal to or greater than 20 Gy (V<sub>20</sub>) were calculated for all patients. Quantitative PPS along with SPECT imaging as well as PFTs were performed on each patient before and 6 to 9 months after radiotherapy. For Data analysis, independent Samples t-Test and Pearson's correlation coefficient were used. **Results:** There were 27 and 23 patients with right and left breast cancer, respectively. In both groups, the relative perfusion of the lung on the radiotherapy side decreased by an average of 5%, which was significant (P-value < 0.05). Among 27 patients (54%), lung perfusion defects were observed in the SPECT images. No significant changes were observed between the PFTs before and after radiotherapy (P-value > 0.05). No significant relationship was investigated between V<sub>20</sub> and mean lung dose (MLD) with relative perfusion of the irradiated lung (P-value > 0.05). **Conclusion:** In this investigation, we demonstrated that quantitative PPS and lung perfusion SPECT were more reliable than PFTs for evaluating lung following radiotherapy for breast cancer. However, the relative lung perfusion bore no relevancy to V<sub>20</sub> and MLD.

## کلمات کلیدی:

Pulmonary perfusion scan, Radiotherapy, Breast cancer, Lung irradiation

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/1897349>

