This is a provisional PDF only.



ISSN: 0029-540X

e-ISSN: 2300-2115

Stereotactic body radiation therapy for treatment of oligometastatic EGFR-mutated non-small cell lung cancer

Authors: Artur Szymon Bandura, Rafał Dziadziuszko

DOI: 10.5603/NJO.a2022.0055

Article type: Pictures in Oncology

Submitted: 2022-08-07

Accepted: 2022-08-21

Published online: 2022-10-11

How to cite:

Bandura A S, Dziadziuszko R. Stereotactic body radiation therapy for treatment of oligometastatic EGFR-mutated non-small cell lung cancer. NOWOTWORY J Oncol 2022; 72 (Ahead of print).

This article has been peer reviewed and published immediately upon acceptance. It is an open access article, which means that it can be downloaded, printed, and distributed freely, provided the work is properly cited.

Stereotactic body radiation therapy for treatment of oligometastatic EGFR-mutated nonsmall cell lung cancer

Artur Szymon Bandura, Rafał Dziadziuszko

Department of Oncology and Radiotherapy, Medical University of Gdansk, Gdansk, Poland

74-year old female was treated for a disseminated EGFR-mutated lung adenocarcinoma with chemotherapy (cisplatin + pemetrexed in 2010) then docetaxel (2012), erlotinib (2013–2015) and paclitaxel (2016). Finally, because of T790M mutation detected in the tumor, she started Osimertinib in June 2016. In October 2019 solitary metastases in liver were observed. According to ESMO guidelines [1] local therapy and continuation of tyrosine kinase inhibitors (TKI) is an option, therefore she was referred for stereotactic body radiation therapy (SBRT) to liver metastases with 50Gy in 5 fractions (fig. 1 A, B). After 3 months, stabilization of disease was noted in control CT. She remains free of progression with good performance (ECOG 1), and continues osimertinib treatment (progression-free survival after SBRT: 32 months).

This case shows importance of local ablative treatment with oligometastatic lung cancer. Oligoprogression is defined as limited number and locations where progressive disease appears [2]. Hypothetically, when PD is observed in oligoprogressive state, local treatment could eradicate resistant clone of the tumor cells before they seed into other organs. Such management could enable continuation of the same TKI, as it is active in all other affected areas. Although further studies evaluating this concept are needed, local treatment in oligoprogressive NSCLC is one of the options leading to clinical benefit for the patients as shown in this case.

Conflict of interest: none declared

Artur Szymon Bandura

Medical University of Gdansk Department of Oncology and Radiotherapy ul. Smoluchowskiego 17 80-214 Gdańsk, Poland

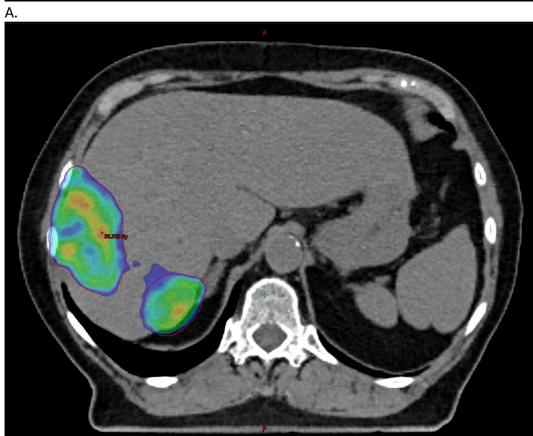
e-mail: artur.bandura@gumed.edu.pl

Received: 7 Aug 2022 Accepted: 21 Aug 2022

References

- 1. Planchard D, Popat S, Kerr K, et al. Metastatic non-small cell lung cancer: ESMO Clinical Practice Guidelines for diagnosis, treatment and follow-up. Ann Oncol 2018 Oct 1;29 Suppl 4(Suppl 4):iv192–237.
- 2. Ramadan S, Quan K, Schnarr K, et al. Impact of stereotactic body radiotherapy (SBRT) in oligoprogressive metastatic disease. Acta Oncol 2022 61(6):705–13.





B.

Figure 1. A. Computer tomography showing delineation of the lesion in liver, green contour – gross tumor volume, red – planning target volume. **B.** Stereotactic body radiotherapy with 50Gy in 5 fractions (98% isodose to planning target volume is shown)