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

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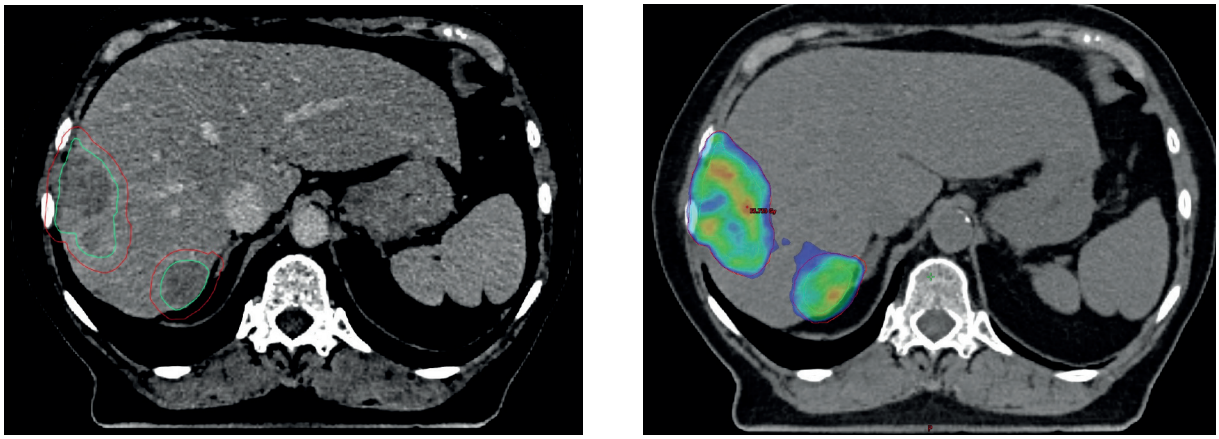

Figure 1. A: CT showing delineation of the lesion in the liver; green – gross tumor volume; red – planning target volume; **B:** SBRT with 50 Gy in 5 fractions

A 74-year old female was treated (from 2010) for a disseminated EGFR-mutated lung adenocarcinoma with chemotherapy (cisplatin + pemetrexed) then docetaxel, erlotinib and paclitaxel. Finally, because of *T790M* mutation detected in the tumour, she started osimertinib. In October 2019, solitary metastases in the liver were observed. According to ESMO guidelines [1], local therapy and continuation of tyrosine kinase inhibitors (TKI) was an option, therefore she was referred for SBRT to liver metastases with 50 Gy in 5 fractions (fig. 1). After 3 months, stabilization of the 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 the importance of local ablative treatment with oligometastatic lung cancer. Oligoprogression is defined as a limit on the number and locations where progressive disease appears [2]. Hypothetically, when PD is observed in oligoprogressive state, local treatment could eradicate resistant clones 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. Local treatment in oligoprogressive NSCLC is one of the options leading to clinical benefit for the patients as shown in this case.

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