

AFATINIB AS FIRSTLINE TREATMENT FOR ADVANCED LUNG ADENOCARCINOMA IN A PATIENT HARBOURING EXON 19 DELETION IN EGFR: A CASE REPORT

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Background

Somatic mutations in the tyrosine kinase domain of EGFR, including in-frame deletions in exon 19 (exon 19 del) and the L858R point mutation in exon 21, are common mutations accounting for 80% to 90% of EGFR mutations in NSCLC. Non-small cell lung cancer (NSCLC) with these types of mutation is particularly sensitive to afatinib treatment which covalently binds to and irreversibly blocks signalling from all homo- and heterodimers formed by the ErbB family members EGFR (ErbB1), HER2 (ErbB2), ErbB3 and ErbB4.

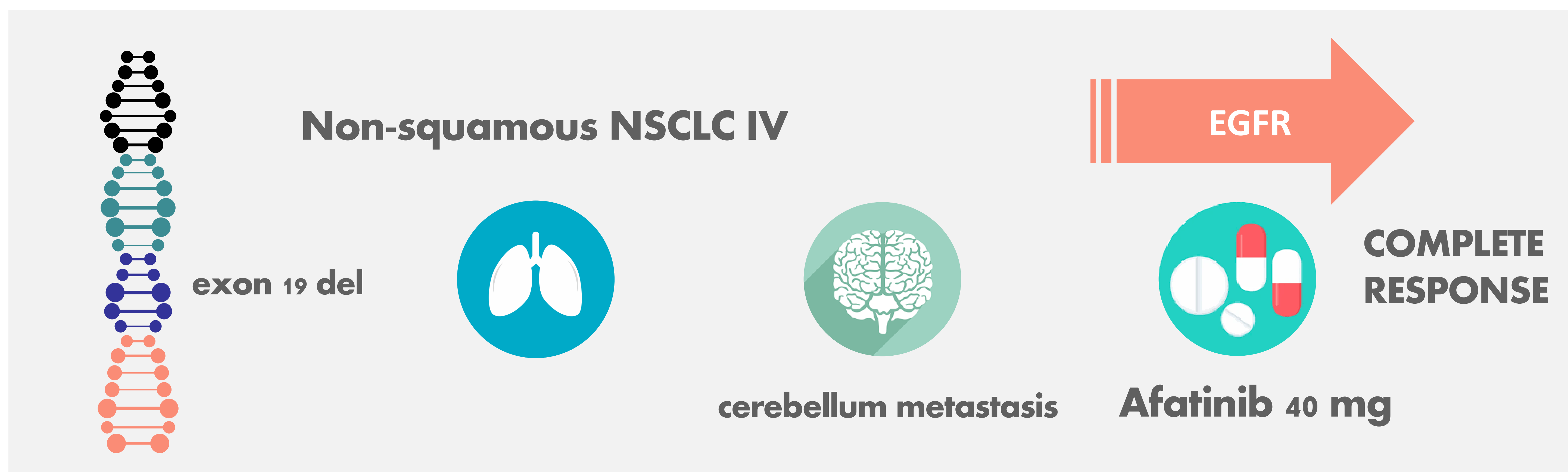
Objective

We present the case of a never-smoking male patient diagnosed with stage IV NSCLC harbouring an exon 19 deletion mutation who achieved complete response to first-line afatinib treatment.

Material and Methods

This was an observational retrospective study of the use of afatinib in a 46-years-old man diagnosed with NSCLC. Data were obtained of the electronic medical records.

Results



This patient was diagnosed with non-squamous NSCLC stage IV in February-2019. He had a considerable lesion localised in right lower lobe (RLL), 6.28x5.27-cm size in its transverse and craniocaudal diameter and metastatic lesions (cerebellum metastasis (2.4x2.1 cm)). This patient did not suffer from any comorbidities. He started treatment with afatinib 40 mg/day in February-19. After 10 months, the RLL lesion diminished considerably, from 6.28x5.27 cm to 4.4x3.2 cm and cerebellum metastasis from 2.4x2.1 cm to 1.6x1.8 cm achieving a durable partial response. In February-20, he underwent a right lower lobectomy and lymphadenectomy and in March a brain radiosurgery reaching a complete response which is maintained. This patient goes on his treatment after 19 months.

As to side effects, this patient only suffered from grade 1 diarrhoea which allowed him to continue his treatment without any delays.

Conclusion

Afatinib represents an important first-line option for patients with advanced NSCLC harbouring an EGFR-sensitizing mutation, having definitely been shown to prolong PFS (Progression Free Survival) compared with chemotherapy and the first-generation EGFR TKI. Moreover, sub-analyses of the prospective LUX-Lung 3, 6, and 7 and FLAURA trials indicate that afatinib and osimertinib are active in patients with CNS lesions. These agents should be considered as first-line treatments of choice in patients with EGFR mutation-positive NSCLC and brain metastases.