A 52-year-old female was diagnosed with right lung adenocarcinoma (T3N2M0IIIA) complicated by cervical lymph and hilar lymph node metastasis 5 months previously. Genetic testing revealed a RET gene fusion, and she was enrolled in a phase 1/2 clinical trial in which a novel tyrosine kinase inhibitor called KL590586 was used orally to inhibit the proliferation of tumors with RET gene mutations. After 2 weeks of the medication, her ophthalmic examination showed a best-corrected visual acuity (BCVA) of 20/20 OU. Slitlamp examination and fundus photography showed no anterior or posterior segment abnormalities. Optical coherence tomography (OCT) of the macular area. The central subfield thickness was 254 μm OD and 240 μm OS, and the central subfield volume was 10.5 mm3 OD and 10.3 mm3 OS. Fourteen weeks after starting the medication, the patient had a second ophthalmic examination. Her BCVA and fundus photographs remained the same as before, whereas the high-definition OCT showed thickening of the interdigitation zone (IZ) without an obvious change of autofluorescence. The patient was asked to follow up while continuing to take the medication.

Three weeks later, she reported a mild yellowish central scotoma in both eyes. Her BCVA was still 20/20 OU and the autofluorescence remained normal, but the OCT showed further thickening of the IZ combined with a fovea-involved focal neurosensory retinal detachment bilaterally. The maximum width and height of the detached area were 1412 μm and 78 μm OD and 1451 μm and 60 μm OS, respectively.