**Supplementary File 1.**

**Previous regimens, changes in tumor size, and tumor markers**

She was first enrolled in a clinical trial (NCT04310709) for first-line treatment and started on a combination of regorafenib (a multi-kinase inhibitor) and nivolumab (an anti-PD1 antibody) on December 24, 2020. The patient received 80 mg of regorafenib daily and 480 mg of nivolumab every four weeks. After two cycles of treatment, this treatment was stopped due to disease progression. On computed tomography (CT) scan, the sum of the long diameter of the target lesion liver S7 mass increased by 62.3% from 19.1 mm to 31.0 mm, and multiple new metastases occurred in the liver segment 4 (S4). This was considered a progressive disease (PD) according to the Response Evaluation Criteria in Solid Tumors (RECIST, version 1.1).

From February 18, 2021, she was started on 8 mg of lenvatinib once daily (her weight was 58 kg) as second-line therapy. On the CT performed after 2 months, the sum of the long diameters of target lesions increased by 22.7% from 59.8 mm (liver S7 31.0 mm + liver S4 12.0 mm + spleen 16.8 mm) to 73.4 mm (liver S7 35.1 mm + liver S4 16.2 mm + spleen 22.1 mm). Tumor marker Alpha-Fetoprotein (AFP) increased from 16,630 ng/ml to 22,113 ng/ml, and prothrombin induced by vitamin K absence-II (PIVKA-II) increased from 5,137 ng/ml to 5,804 ng/ml.

Since April 19, 2021, she has been on 400 mg of sorafenib twice daily as third-line therapy. However, two months of sorafenib treatment also showed no efficacy. Compared to the previous CT, the sum of the long diameter of target lesions increased by 22.9%, from 73.4 mm to 90.2 mm (liver S7 39.1 mm + liver S4 25.2 mm + spleen 25.9 mm).AFP continued to increase from 22,113 ng/ml to 30,744 ng/ml, and PIVKA-II decreased slightly from 5,804 ng/ml to 4,075 ng/ml.

The next treatment was a combination of nivolumab (1 mg/kg) and the anti-CTLA-4 antibody, ipilimumab (3 mg/kg), administered once every three weeks. Despite treatment with this regimen, the lesions progressed overall, as seen on the CT performed after two cycles. The sum of the long diameters of target lesions increased by 26.1%, from 90.2 mm to 113.7 mm (liver S7 45.3 mm + liver S4 26.3 mm + spleen 42.1 mm).AFP also increased significantly from 30,744 ng/ml to 47,340 ng/ml, and PIVKA-II also increased from 4,075 ng/ml to 5,408 ng/ml. Meanwhile, her performance status deteriorated from ECOG 1 to ECOG 2, and she began to complain of abdominal pain. Analgesic treatment with oral oxycodone 10 mg twice daily was started.