Supplementary

Appendix 1: Methods

Data collection

The patient's next of kin provided written informed consent to have her case studies published. The patient's clinical information was collected from electronic medical records. Primary or metastatic tumor samples were obtained by performing fine-needle aspiration or surgically resected biopsies. Immunohistochemistry and HER2 fluorescence in situ hybridization (FISH) were conducted according to the manufacturer's instructions. Targeted gene sequencing was executed using the methodologies as previously specified (23).

Organoid generation, drug treatments, and sensitivity analysis

Tumor samples were washed 3–5 times in phosphate-buffered saline (PBS) and placed in a transfer medium containing 500 μg/mL streptomycin (Gibco, Grand Island, NY, USA), 500 U/mL penicillin (Gibco), and 50 μg/mL nystatin (Sangon Biotech, Shanghai, China). The samples were transported to the laboratory on ice within 2 hours for further processing. Procedures for organoid generation have been detailed in prior research (24). Organoids cultured for 1–2 weeks were harvested and resuspended in a 2.5% Matrigel culture medium. 20 μL droplets of the organoid suspension were seeded into each well of a preheated 48-well plate. After seeding, a fixed dilution of each tested regimen was dispensed using liquid-handling robots. Three technical replicates were tested across three separate plates. 0.2% dimethyl sulfoxide (DMSO) was served as a negative control. The drug-containing medium was renewed every 48 hours. Following 96 hours of drug incubation, cell proliferation activity, and cell viability were assessed using methods previously described (24).

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