

MINI-TUMOURS, MAJOR INSIGHTS: EXPLORING THE ROLE OF CANCER-ASSOCIATED FIBROBLASTS UPON TREATMENT OF GASTRIC CANCER USING PATIENT-DERIVED MODELS

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Poster

Oesophagus

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Researchers developed mini-tumour models co-culturing patient-derived gastric cancer organoids with cancer-associated fibroblasts to study treatment resistance and stroma-tumor interactions in gastric cancer.

KEY POINTS

- Three mini-tumour models were established that recapitulate primary tumour characteristics including mutation status (HER2, KRAS, CTNNB1, TP53), tumor-stroma structures, and cancer-associated fibroblast enrichment.
- Most single-agent chemotherapeutics showed to be non-effective in the models, with only a few drug combinations achieving clinically relevant responses ($\leq 50\%$ cell viability).
- Preliminary data shows cancer-associated fibroblast sensitivity to chemotherapy differs between patients, particularly between treatment-naïve and FLOT-treated patients, and appears to resemble patient responses.
- The models display patient-specific features and interpatient heterogeneity, highlighting the need for tailored models to evaluate therapy responses.
- Future work will include spatial profiling with a 42-marker stromal panel and incorporation of immune cells to further characterize resistance mechanisms associated with specific cancer-associated fibroblast subsets.

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