

Short abstract	Background information	Your Notes
<p><b>Precision medicine applied to metastatic colorectal cancer using tumor-derived organoids<sup>i</sup> and in-vitro sensitivity testing: a phase 2, single-center, open-label, and non-comparative study<sup>1</sup></b></p> <p>[The successful TICC-1 trial] enrolled 90 patients with metastatic colorectal cancer (mCRC) following progression on or after standard therapy. [Functional drug sensitivity testing] was performed on percutaneous transhepatic metastasis biopsies [with IndiTreat<sup>®</sup> using] a panel of drugs with proven activity in phase II or III trials. The drug with the highest relative activity was offered.</p> <p>The precision cohort of 34 patients started treatment and the primary endpoint, progression-free survival (PFS) at two months was met in 17 patients (50%, 95% CI 32–68), exceeding the pre-defined level (14 of 45; 31%).</p> <p>This is the largest prospective, interventional clinical trial of last-line systemic therapy in colorectal cancer based on functional drug sensitivity test results obtained using tumor-derived organoids<sup>i</sup>. No safety issues were recorded. All pre-specified primary endpoints were met.</p>	<p><i>Named “Denmark's Best Hospital for Cancer Treatment”<sup>2</sup>, this paper from the Department of Oncology, University Hospital of Southern Denmark, is so far the world’s largest prospective, interventional clinical trial of last-line systemic therapy in colorectal cancer based on patient-derived three dimensional tumoroids.</i></p> <p><i>Tumoroids replicate the architecture of the tumor microenvironment (TME) and extracellular matrix (ECM). IndiTreat analyzes patient-derived tumoroids and provides an in-vitro functional drug sensitivity testing of metastatic tumor tissue responses towards approved drug regimens for which no biomarkers exist.</i></p> <p><i>IndiTreat<sup>®</sup> tests informed the researchers about which chemotherapies impair the individual patient’s tumoroid growth the most. Following that recommendation exceeded outcome expectations.</i></p> <p><i>IndiTreat<sup>®</sup> is the first CE-marked test to support oncologists with personalizing also the main chemotherapeutic drugs and drug combinations for the majority of patients with mCRC.</i></p>	

<sup>i</sup> Editorial note – Erratum: Tumoroids were used by the research group.

<sup>1</sup> Jensen, L.H., Rogatto, S.R., Lindebjerg, J. et al. Precision medicine applied to metastatic colorectal cancer using tumor-derived organoids and in-vitro sensitivity testing: a phase 2, single-center, open-label, and non-comparative study. J Exp Clin Cancer Res 42, 115 (2023). <https://doi.org/10.1186/s13046-023-02683-4>

<sup>2</sup> <https://dagensmedicin.dk/vejle-er-tilbage-paa-toppen-vi-maa-ikke-gaa-paa-kompromis-med-kvaliteten-af-kraeftbehandlingen/>