

Monitoring treatment response in patients with metastatic colorectal cancer using cfDNA fragmentomics testing: the DOLPHIN trial

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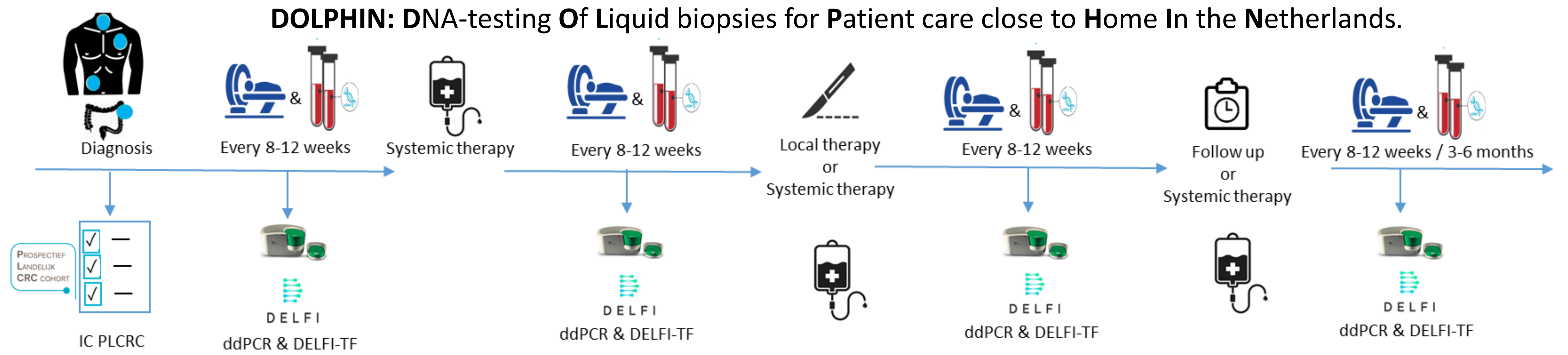
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Background

- Accurate monitoring of therapy response is important for treatment decision-making in patients with metastatic colorectal cancer (mCRC)
- Currently, clinical response is determined by imaging
- Analysis of cell-free DNA (cfDNA) fragmentation patterns may offer a sensitive, inexpensive, tissue agnostic approach to monitor treatment response in mCRC patients

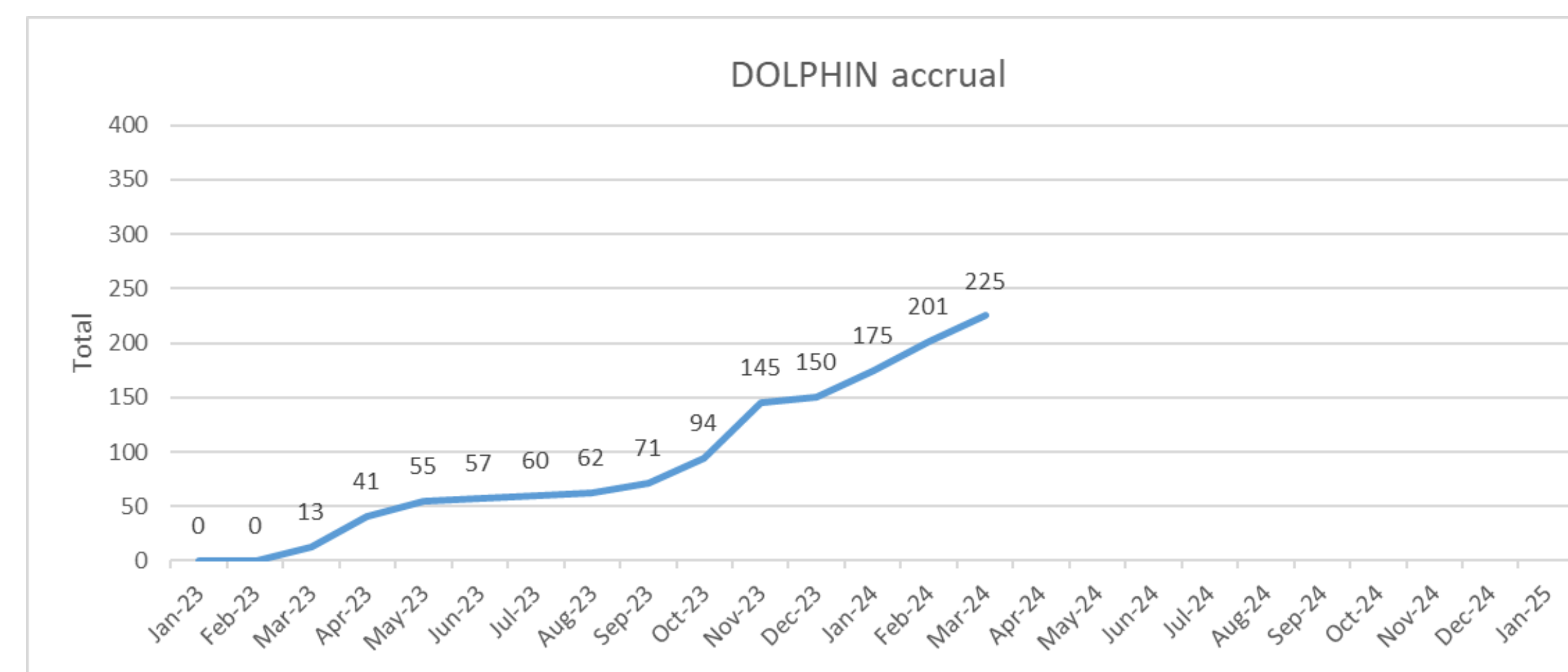
Study design



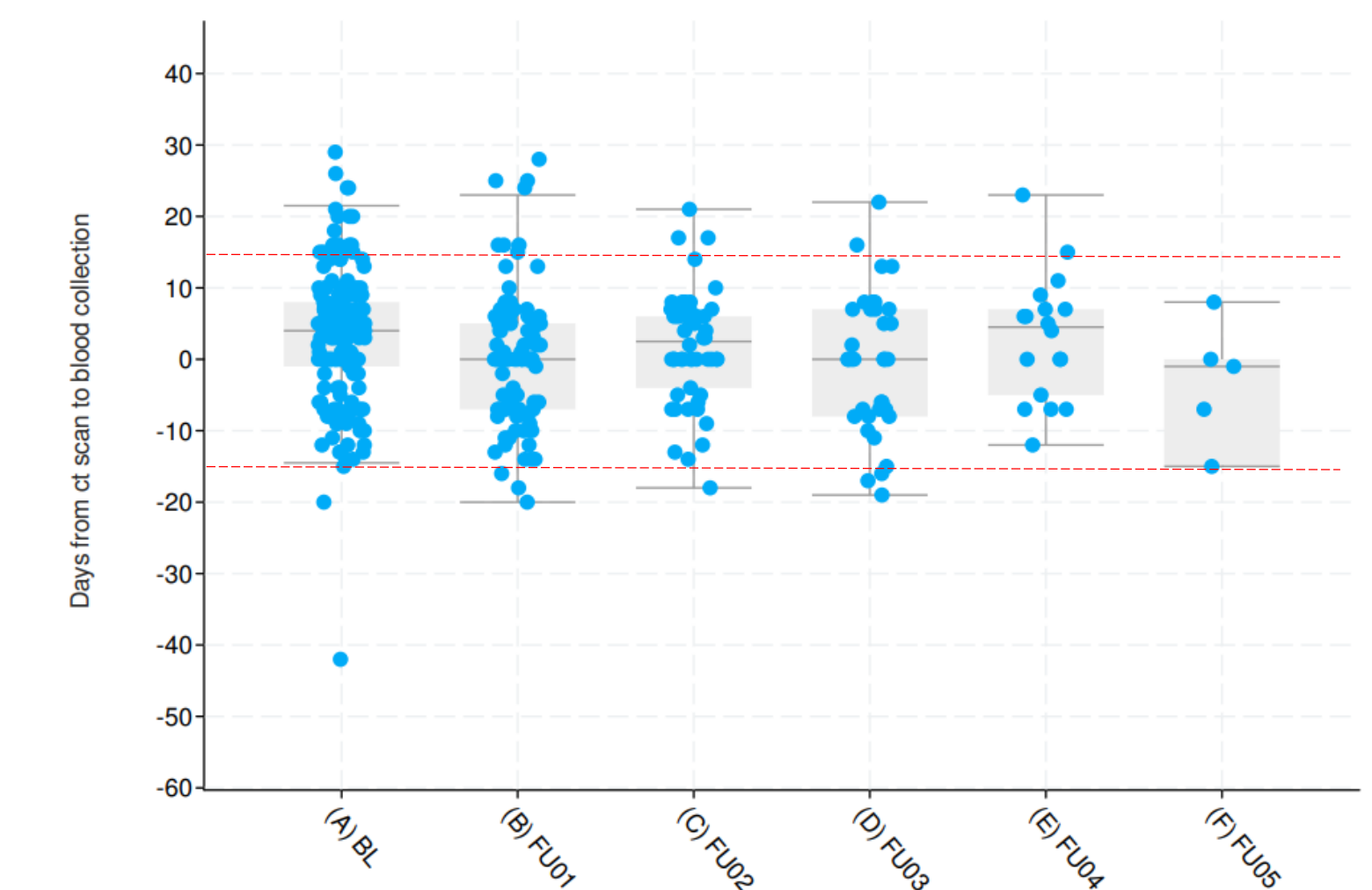
- DOLPHIN is a prospective, observational study within the Prospective Dutch ColoRectal Cancer cohort (PLCRC, <https://plcrc.nl/for-international-visitors>)
- Longitudinal blood collection: every 8-12 weeks in conjunction with imaging
- After local treatment: blood collection at follow-up appointments every 3-6 months

- All blood samples are sent to The Netherlands Cancer Institute.
- Clinical data is collected by the PLCRC team and The Netherlands Comprehensive Cancer Organisation
- Images will be collected centrally using Health RI XNAT

Patient inclusion



Blood samples and CT images collection



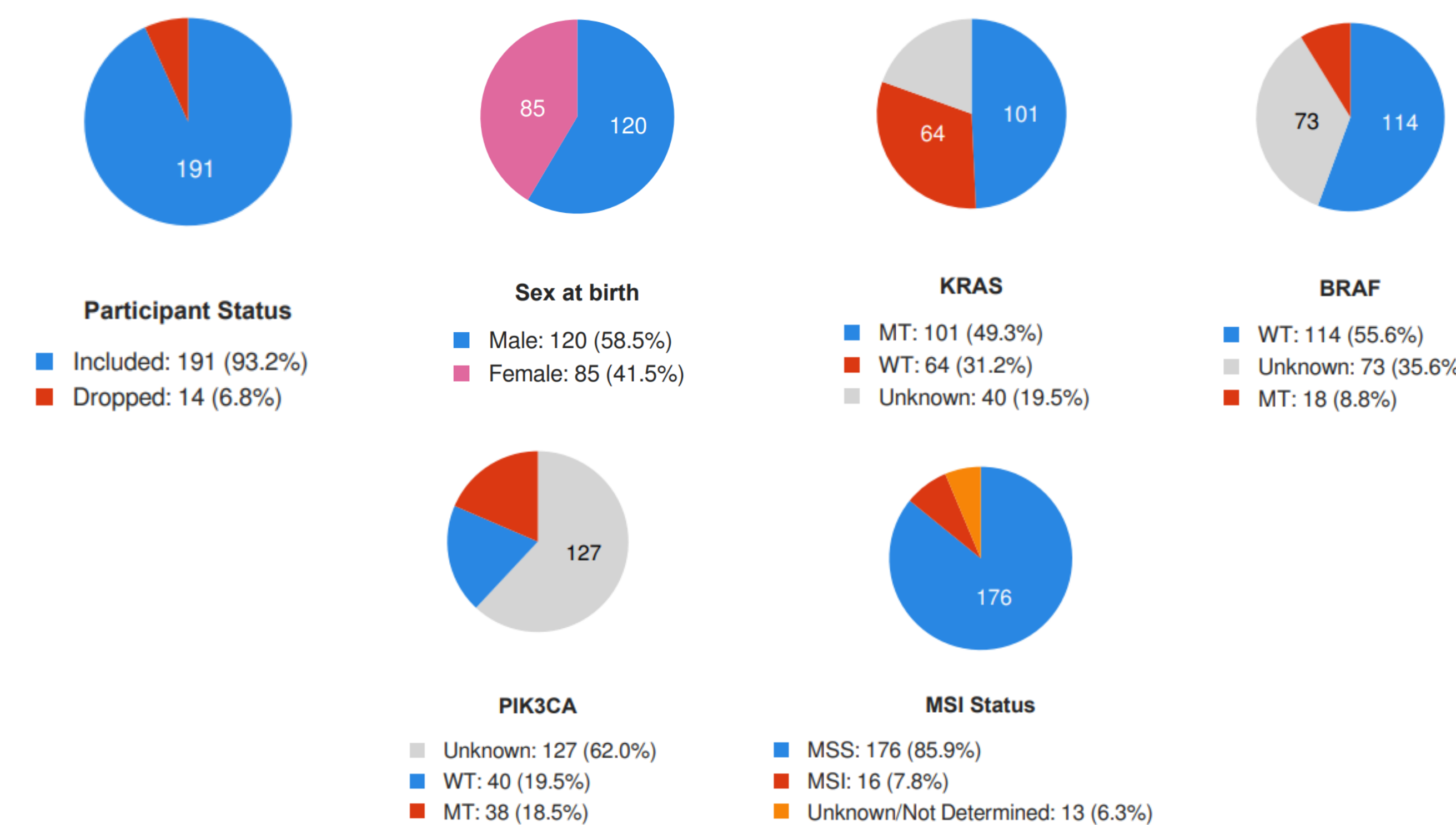
Study Goal

Investigate the added clinical value of longitudinal ctDNA-testing compared to imaging in treatment response monitoring of patients with mCRC

Study population

- mCRC patients
- PLCRC informed consent, including additional blood withdrawal
- Treatment with systemic therapy +/- local therapy
- Before start second line of therapy

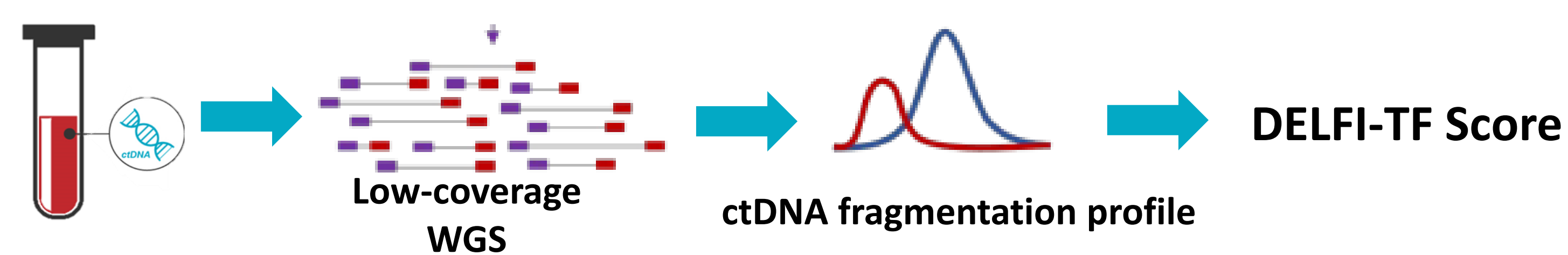
Patient characteristics



Next steps and future plans

- Complete patient inclusion: December 2024
- 2 years follow-up completion: 2026
- Complete collection of clinical, imaging and molecular data
- Sample analysis

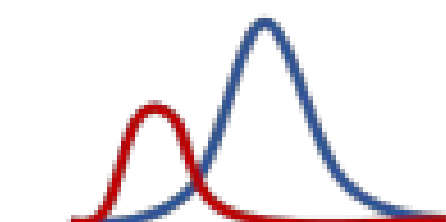
DELFI tumor fraction (DELFI-TF)



ddPCR testing



DELFI-TF



- Health technology assessment
- Integration and data analysis: cBioPortal

