Detection of circulating tumor DNA (ctDNA) by whole genome sequencing enables prediction of recurrence in stage III colorectal cancer patients with great inter-lab reproducibility.

Key points:
- Whole-genome sequencing at 20x coverage enables detection of circulating tumor DNA (ctDNA)
- Processing of paired samples in two independent laboratories shows great inter-lab reproducibility
- De-novo mutation calling of high-burden ctDNA samples identifies novel genomic alterations exclusive to plasma samples

Pre-surgery ctDNA detection

Post-surgery ctDNA detection

Effect of adjuvant chemotherapy

ctDNA post adjuvant chemotherapy

Inter-lab reproducibility

Study summary

Tumor characteristics

Novel changes in plasma

ctDNA results

Disease surveillance using ctDNA

Tumor fraction

Extraction of circulating free DNA

Release of DNA from tumor cells

Whole-genome sequencing