



LIQUID BIOPSY ANALYSES - ASSAY DEVELOPMENT AND SAMPLE TESTING

INTRODUCTION

Liquid biopsy analyses of circulating nucleic acids (cfDNA, cfRNA, miRNA, etc.) or proteins in various body-fluids can significantly improve clinical diagnosis, patient stratification and therapy monitoring. Although most of these applications are known from the cancer field, this approach has also been successfully provided for systemic and infectious diseases.

To this purpose, various multiplex technologies have been developed and successfully applied in minimally invasive diagnostics at our institute over the past 15 years. In addition, extensive know-how for the entire sample analysis and bioinformatic workflows could be developed. In the context of several liquid biopsy projects, we have so far analyzed several thousand cfDNAs from plasma in our laboratory using highly sensitive methylation and mutation analysis methods. In addition, we have developed expertise in the analysis of cfRNA and miRNA (extracellular vesicles from plasma, serum and saliva).

Both full laboratory and data analytics, which have been proven in various research projects, are available for contract research.

We offer as a service our support in the analysis of your samples and bioinformatic data generation.

DETAILS

SAMPLE TYPES

- Plasma, serum, saliva and other bodyfluids

ANALYTES

- DNA mutations / 0,1% variant allele frequency
- DNA methylation
- cfRNA (including microRNA)

TECHNOLOGIES

- Established pre-analytics (cfNA and EV preparation) and quality control procedures
- NGS: Capture and amplification based workflows
- Multiplexed high-throughput and standard qPCR, digital PCR
- Established bioinformatics workflows
- Secured in-house high performance computing

your analyte & target
of interest (cfDNA, cfRNA,
protein)

assays conception
& laboratory
development

performance testing
& optimisation

bioinformatics
workflow
development

lab transfer a/o
sample analysis

SERVICES

Study conception

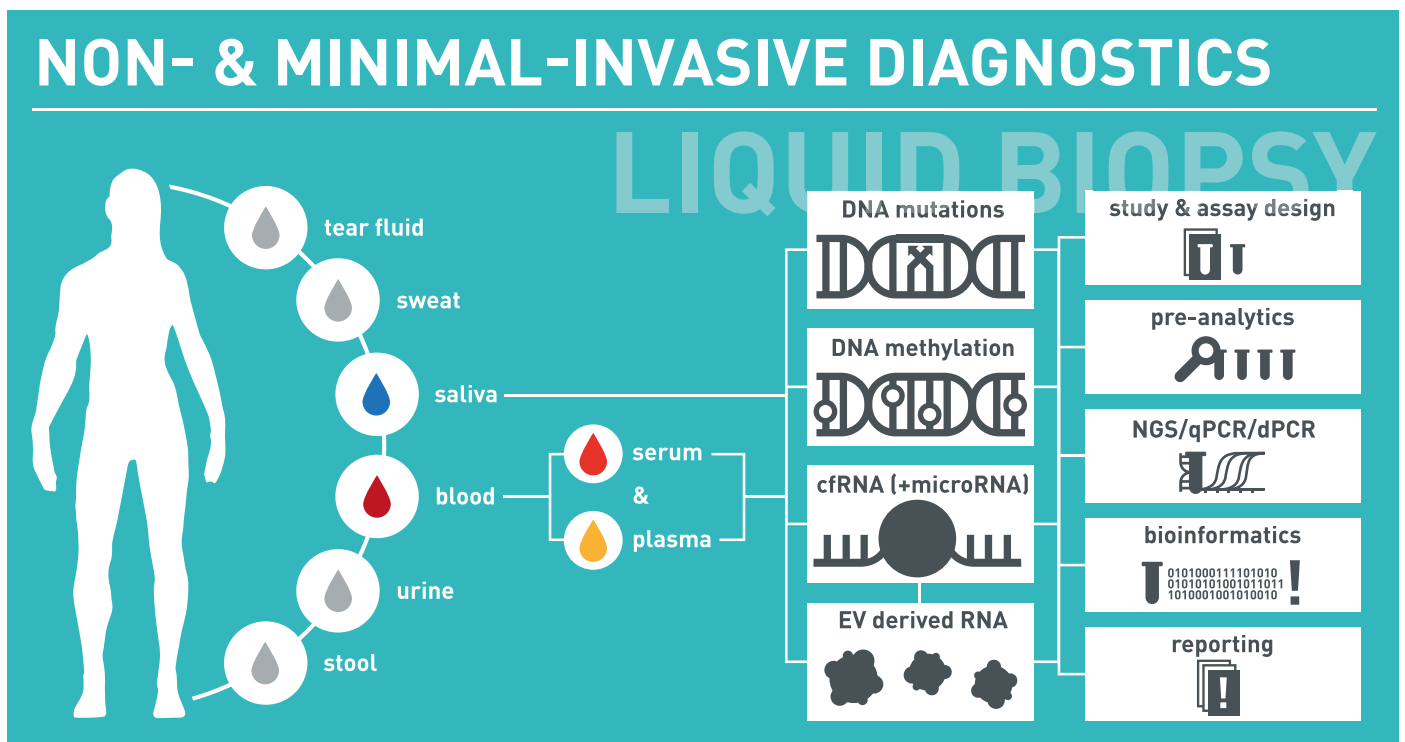
- Align available molecular analysis formats to clinical research question
- Expert advice on analysis options, study design, sample size and bioinformatics
- solutions for your specific project
- Expert advice on established assay formats and customised solutions
- development of custom assays and solutions including standardised reporting from data
- Training and support & implementation in your lab-process
- Quality management support

Procedure

- Study Design: definition of matrix, analyte, analysis technology, sample requirements, sample size, reporting requirements
- Sample shipment using trusted partners
- Assay design and analytical qualification (if needed)
- Sample analysis
- Data analysis - we provide either raw data or a full in-depth analysis report including interpretation.

Customised support

- We provide support and advice on workflow and provide long term conception & support aligned to your project & developmental pathway from screening to validated assays.
- We have the right platform and analytical solution for screening, confirmation & validation.



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