REIMS: ENABLING FAST METABOLOMICS AND LIPIDOMICS WITHOUT SAMPLE PREPARATION

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Work @ LCA

Optimize REIMS parameters on fresh fecal samples from healthy volunteers using optimal DOE

Apply REIMS with optimized parameters on fecal samples of healthy individuals and CRC patients (n = 100)

Construct multivariate models to fast and accurately discriminate between healthy individuals and CRC patients and between CRC stages

Validate in clinical setting to test applicability as alternative CRC screening method

Explore potential for other diseases e.g. IBD, food allergies,…

Elucidate CRC pathways

CRC treatment follow-up

Working principle

Established applications

snoring

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<th>Groups</th>
<th>Diseased</th>
<th>Healthy</th>
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OPLS-DA score plot

Cholangiocarcinoma
Squamous cell carcinoma
Mucinous carcinoma
Neuroendocrine carcinoma
Normal associated mucosa
Cancer
Adenoma

Golf (2015) Discrimination between 3 schedules stages

Maslowska (2017) Discrimination between 3 schedules stages

Cholangiocarcinoma (RMS grade IV)
Squamous cell carcinoma (RMS grade IV)
Mucinous carcinoma (RMS grade IV)
Normal associated mucosa
Adenoma

REIMS Rapid Evaporative Ionization Mass Spectrometry

iKnife

Patient recruitment at UZ Ghent and UZ Antwerp


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