Continuous glucose and exhaled breath analysis in the Intensive Care Unit

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This thesis covers studies on continuous glucose and exhaled breath analysis in the ICU. It is divided into three parts. First, we aimed to compare and test different (continuous) blood glucose measurement methods (part I). Second, we aimed to predict blood glucose levels by analysis of exhaled breath in intubated and ventilated ICU patients (part II). Finally, we aimed to investigate further development of exhaled breath analysis techniques and data analysis methods (part III). We hope that the results of the research in this thesis will enhance the understanding of (continuous) blood glucose measurements and exhaled breath analysis in ICU patients.

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