Enhancing patient care: Mobile patient app integration for hospital admission and medical consent

Development of a mobile application in the clinical context

February 2024 – Florian Rüffer & Luis Oberste– Universität Mannheim

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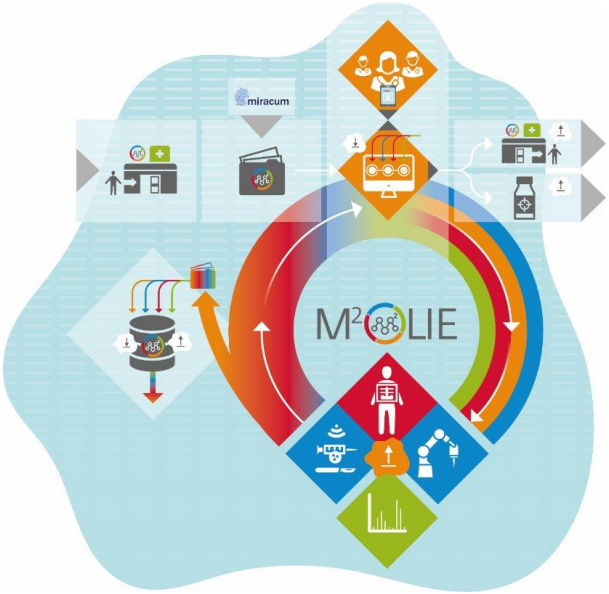
Overview of the M²OLIE-Project

- Up to **90% of cancer patient deaths** due to **metastases**
- Acceleration and improvement of process efficiency ➡️ **Benefit for patients while reducing costs**
- Patient-centered and time-optimized infrastructure for **innovative tumor therapies**
- Through molecular intervention, the treatment of cancer patients with oligometastases should be enabled in a **One-Stop-Shop**



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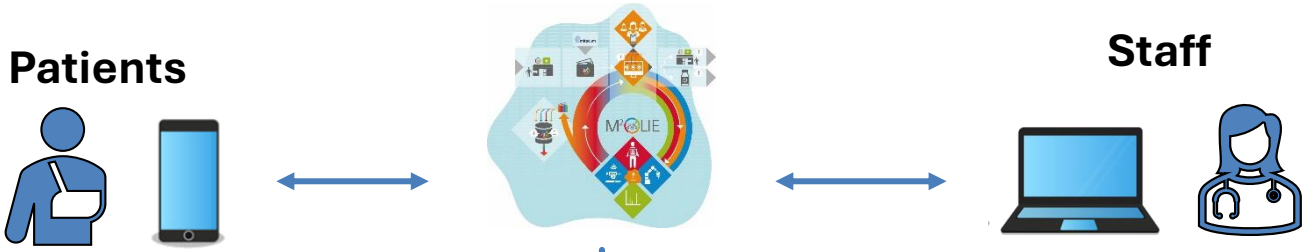
Problem Description & Project Goal

Problem:

- In a highly coordinated process such as the M²OLIE Closed Loop, **patients may become overwhelmed** and struggle to maintain an overview of their treatment journey.

Goal:

- Develop a **mobile solution** to **support patients** throughout the entire Closed Loop process and beyond, with **seamless integration capabilities** into existing hospital information systems.



Initial Contact/ Scheduling

Stay (Pre-Treatment)

M²OLIE Closed Loop

Stay (Post-Treatment)

Follow-up Care

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App Development & Requirements

M²OLIE

UNIVERSITÄT HEIDELBERG ZUKUNFT SEIT 1386

Ways to contribute to this project

A Improve existing features

- Registration and Login
- Appointment Booking
- Upload/Download of Documents
- Treatment Progress Overview
- ...

- Administration Interface
- Tasks and Instructions
- Provision of General Information
- Appointment Scheduling
- ...

B Add planned features

- Connect to hospital systems for **digital document access and consent forms**
- Enable app registration via **patient wristband scanning**
- Provide secure patient-staff **chat functionality**

C Research further features and patient support possibilities

- Conduct **interviews with medical staff**
- Implement **your own ideas**

D Implement FHIR standards

- Ensure **seamless data exchange** between the mobile app and hospital systems across the M²OLIE Closed Loop

FHIR

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Organizational

About the Project

- Team of 4-6 students
- M.Sc. Business Informatics or M. Sc. Data Science
- Duration: 6 Months
- Language: English
- Online: Possible, but some mandatory on-site meetings (Kick-off, final presentation)

About You (Prerequisites)

- Knowledge in software development
- Ideally, knowledge of backend development (REST, OpenAPI, etc.), databases, or application development (mobile, i.e., Android/iOS, or web-based);

About Us



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