State of the art
- Guideline-based knowledge is provided in unstructured, textual form [1]
- Previous guideline modeling and mapping procedures do not consider the specific patient or user context
- Relevant guideline information, which fits the context of the patient, but also of the user (physician), has to be searched for and compared with internal hospital standards
  \[\Rightarrow\] Requires time-consuming searches by physicians [2]

Research question
- How can decision support for the next treatment step be determined from a hospital-specific standard operating procedures (SOP) considering patient context and user experience for a clear and personalized presentation?

Solution approach
- Identify relevant information in a guideline/SOP document
- Using formalized and annotated information to create a contextual model which includes the patient's position in the treatment pathway
- Development of a relevance model to take the user context into account (context-related definition of the relevance threshold)

Preliminary results
- Guideline-based context-sensitive Business Process Model And Notation (BPMN) modeling for malignant melanoma patient treatment was performed and validated with dermatonecologist
- Fast Healthcare Interoperability Resource (FHIR) resources are assigned to modeled decision points to enable patient context sensitively

Collaborations in the Research Training Group
- Investigation of the user-specific level of knowledge (with two other WisPerMed projects “User interaction at the PoC” and “Context-sensitive, personalized search at the PoC”)
- Interdisciplinary Working Group “From (Multimodal) Knowledge Sources to Information Processing Model – Using the Think Aloud Method to Uncover Healthcare Practitioner’s Needs”
- Interdisciplinary Working Group “Determination of Data Quality of Structured EHR Data Including Semi-structured and Unstructured Data”

Integration in the overall Research Training Group WisPerMed

References