Clinical Datawarehouse USZ:
Current Status and Outlook

Emmanuel Eschmann
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- Overview of patient data at the University Hospital Zurich
- Accessibility of patient data for research
- Clinical reports and clinical decision support
- Current Status and Outlook
- Planned Cooperations
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Patient Data at the University Hospital Zurich

- Medical reports
- Diagnostics
- Interventions
- Nursing reports
- ...
Patient Data at the University Hospital Zurich

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NANDA

EHR Perinat

EHR KISIM

RIS

M/LAB

MOLIS
Patient Data at the University Hospital Zurich

great potential for gaining new insights

diversity of data
heterogeneity of data
change of data and change of data definition over time
Accessibility of Clinical & Genomic Data for Research

uniform structured data
one single system

Oracle Translational Research Center (TRC)
Accessibility of Clinical & Genomic Data for Research

Oracle Translational Research Center (TRC)
Accessibility of Clinical & Genomic Data for Research

Oracle Translational Research Center (TRC)

TRC applications

3rd party applications

export

interface to other systems

personalized, pseudonymized, anonymized, or aggregated data
DWH «Oracle Translational Research Center»

Data Integration

Enterprise Data Warehouse / Data Model

Analytics & Reporting
Clinical reports and clinical decision support

Oracle Translational Research Center (TRC)

1. Data to applications, exports, interfaces
2. Clinical reports & decision support

- e.g. treatment recommendation based on analysis of clinical and genomic data

UZH ETHZ

Clinical reports and clinical decision support
Summary of our services

1. Access to patient data
2. Clinical reports & decision support

patient
Current Status and Outlook

- Installation
- Training
- Basic concepts
- UseCase 1: comprehensive view for tumor patients
- UseCase 2: patient recruitment

- UseCase 3 … n

- 01.04.2016
- 01.08.2016
- 28.02.2017
Development of TRC based on UseCases

UseCase 1: «comprehensive view for tumor patients»

Output per tumor patient: clear compilation of relevant data

source systems to be linked:

<table>
<thead>
<tr>
<th>Source system</th>
<th>Data</th>
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</thead>
<tbody>
<tr>
<td>Administrative system (SAP)</td>
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<td>Clinical Diagnoses, Therapies, Drug Prescriptions</td>
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<td>Laboratory Informations systems (PathoPro, Sample Management, MOLIS)</td>
<td>Biomarker, histological Diagnoses</td>
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<td>Sequencer</td>
<td>Genomic Data</td>
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<td>Reference Files</td>
<td>Link Mutation -&gt; Therapy</td>
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Development of TRC based on UseCases

UseCase 2: patient recruitment

- Identification of potential study patients
- Initially exemplary for 3 studies
- Extensible to any desired study
- Multicenter study: expandable to other hospitals using TRC

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Planned Cooperations: Overview

University Medicine Zurich

Zurich - Basel Personalized Health Alliance

DWH Services of the Swiss University Hosp.

Swiss Personalized Health Network
Planned Cooperations: University Medicine Zurich

Research Data Service Center

Lehrstuhl Biomedizininformatik

Lehrstuhl Medizininformatik
Planned Cooperations: Zurich - Basel Personalized Health Alliance
Planned Cooperations: 
DWH Services of the Swiss University Hospitals
Planned Cooperations: SPHN

Swiss Personalized Health Network (SPHN)
Questions?

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Research Data Service Center
Directorate of Research and Education