

LOINC®-Mapping der Labore des UK Erlangen



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Einleitung

Single-Source-Ansätze am UK Erlangen

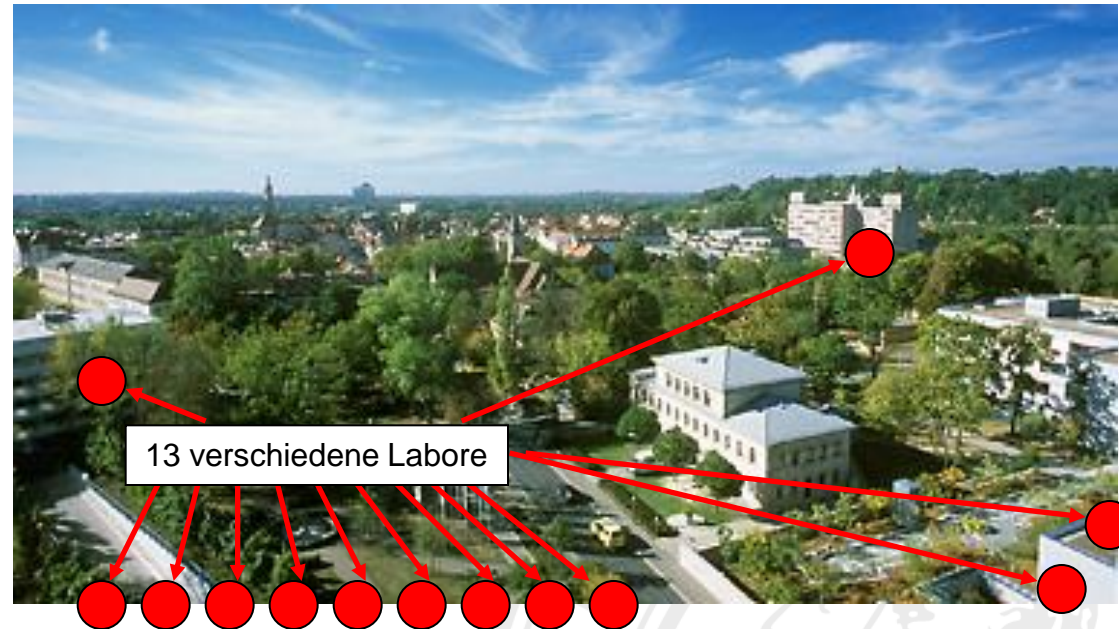
- Aufbau des Erlanger Enterprise Data Dictionary (E2D2)
- E2D2 als Terminologieserver für vielfältige Single-Source-Anwendungen
- Integraler Bestandteil des E2D2-Projekts: LOINC®-Mapping der UK-Labore



Einleitung

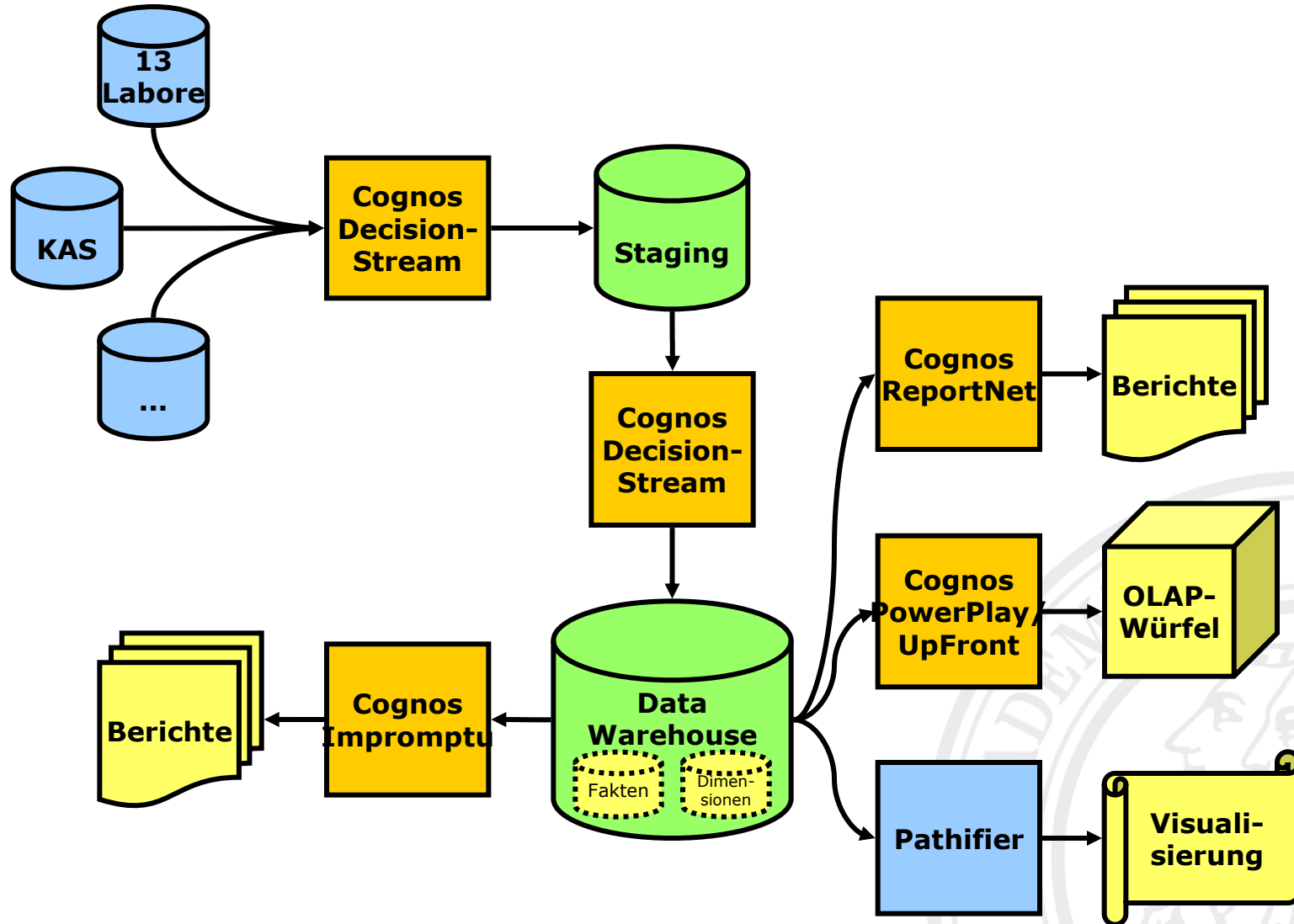
LOINC®-Mapping am UK

- 13 verschiedene Labore am UK
- z.T. Überlappung der Diagnostischen Spektren
- eigenständige Benennung in Swisslab®
- nicht übergreifend auswertbar



Einleitung

cDWH – logische Sicht



Einleitung

LOINC-Mapping: Ziele

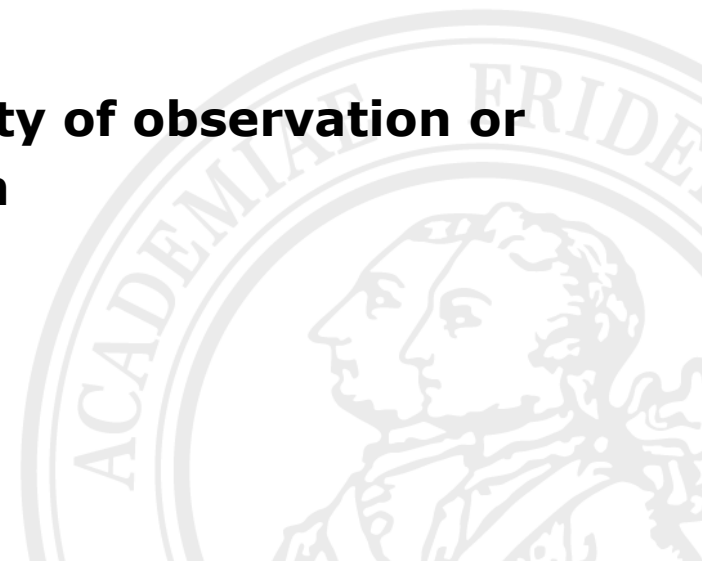
- Mapping der idiosynkratischen interface terms für die Analyte auf LOINC® als Referenzterminologie
- Evaluation des Mappings
- Rahmenbedingungen für Einführung und Verstetigung des LOINC® untersuchen



Grundlagen

LOINC®

- **L**ogical **O**bservation **I**dentifiers **N**ames and **C**odes
- Klassifikationssystem für Laborwerte
- Vergabe von numerischen Codes für verschiedene Laborwerte
- Berücksichtigung auch von unterschiedlichen Einheiten, Messmethoden etc.
- **<Analyte/component>:<kind of property of observation or measurement>:<time aspect>:<system (sample)>:<scale>:<method>**



Grundlagen

LOINC®

| | |
|---------|---|
| 2692-2 | Osmolality of Serum or Plasma |
| 18182-6 | Osmolality of Serum or Plasma by calculation |
| 2000-8 | Calcium [Moles/volume] in Serum or Plasma |
| 2777-1 | Phosphate [Mass/volume] in Serum or Plasma |
| 14879-1 | Phosphate [Moles/volume] in Serum or Plasma |
| 13454-4 | Calcium-phosphorus product [Units/volume] in Serum or Plasma |
| 3084-1 | Urate [Mass/volume] in Serum or Plasma |
| 3091-6 | Urea [Mass/volume] in Serum or Plasma |
| 2160-0 | Creatinine [Mass/volume] in Serum or Plasma |
| 33914-3 | Glomerular filtration rate/1.73 sq M.predicted by Creatinine-based formula (MDRD) |
| 1975-2 | Bilirubin.total [Mass/volume] in Serum or Plasma |
| 1968-7 | Bilirubin.direct [Mass/volume] in Serum or Plasma |
| 1971-1 | Bilirubin.indirect [Mass/volume] in Serum or Plasma |
| 14628-2 | Bile acid [Moles/volume] in Serum |
| 2601-3 | Magnesium [Moles/volume] in Serum or Plasma |
| 2160-0 | Creatinine [Mass/volume] in Serum or Plasma |
| 2160-0 | Creatinine [Mass/volume] in Serum or Plasma |
| 2160-0 | Creatinine [Mass/volume] in Serum or Plasma |

Methoden

Swisslab®: Analytstammdaten

| CODE | KENNUNG | EBENE | ANAKURZ | BESCHREIBUNG | EINHEIT | DEFMATERIALX | MATERIAL | ANAKOSTSTELLNR | VERFAHREN |
|--------------|---------|-------|------------------|---|-----------------|--------------|------------------|----------------|-----------|
| BEF351x | 11 | 2 | CD34-Befund | Befund CD34 pos. Vorl.-Zellen | | | | | |
| 0010 | 1 | 3 | Behandelnd. Arzt | Behandelnder Arzt | | | | | |
| 35ALLGD1 | 7 | 3 | Allg. Daten | Allgemeine Daten | | | | | |
| 35AKTZ1 | 1 | 4 | Aktenz. | Aktenzeichen | | | | 93612310 | |
| 35MOBTH1 | 1 | 4 | Mob.-Therap.-Sch | Mobilisierungs-Therapieschema | | | | 93612310 | |
| 35DATCHEM1 | 1 | 4 | Dat. Chemotherap | Datum der letzten Chemotherapie | | | | 93612310 | |
| 35MAT1 | 1 | 4 | Material | Probenmaterial | | | | 93612310 | |
| 35MESS1 | 1 | 4 | Messprinzip | Messprinzip | | | | | |
| 35CD34Q | 7 | 3 | CD34 Quant. | Quantifizierung CD34 positiver Zellen | | | | 93612310 | |
| 35LEUK1 | 1 | 4 | Leuko | Leukozyten | /µl | | 8 Sondermaterial | 93612310 | |
| 35CD34P | 1 | 4 | CD34+ Zellen | CD34+ Zellen | % d. Leukozyten | | 8 Sondermaterial | 93612310 | |
| 35CD34 | 1 | 4 | CD34+ Zellen | CD34+ Zellen | /µl | | 8 Sondermaterial | 93612310 | |
| 35Hinweise1 | 1 | 3 | Hinweise | Hinweise | | | | | |
| 35UNTERS1 | 1 | 3 | Unterschrift | Unterschrift | | | | | |
| BEF352x | 11 | 2 | Kl. Immunstatus | Kleiner Immunstatus | | | | | |
| 35ALLGD2 | 7 | 3 | Allg. Daten | Allgemeine Daten | | | | | |
| 35MAT2 | 1 | 4 | Material | Probenmaterial | | | | 93612310 | |
| 35MESS2 | 1 | 4 | Messprinzip | Messprinzip | | | | | |
| 35KLIMM | 7 | 3 | Kl. Immunstatus | Kleiner Immunstatus | | | | 93612310 | |
| 35LEUK2 | 1 | 4 | Leuko | Leukozyten | /µl | | 8 Sondermaterial | | |
| 35CD3CD4P | 1 | 4 | CD3+/CD4+ | T-Helfer-Zellen (CD3+/CD4+) | % d. Leukozyten | | 8 Sondermaterial | | |
| 35CD3CD4 | 1 | 4 | CD3+/CD4+ | T-Helfer-Zellen (CD3+/CD4+) | /µl | | 8 Sondermaterial | | |
| 35CD3 | 1 | 4 | CD3+/CD4- | CD3+/CD4- (überwiegend zytotoxische T-Zellen) | % d. Leukozyten | | 8 Sondermaterial | | |
| 35CD19 | 1 | 4 | CD19+ | B-Lymphozyten (CD19+) | % d. Leukozyten | | 8 Sondermaterial | | |
| 35CD4LOW | 1 | 4 | CD4 niedrig | CD4 niedrig, CD3- (überwiegend Monozyten) | % d. Leukozyten | | 8 Sondermaterial | | |
| 35Anmerkung2 | 1 | 3 | Anmerkungen | Anmerkungen | | | | | |
| 35UNTERS2 | 1 | 3 | Unterschrift | Unterschrift | | | | | |

Methoden

Automatisiertes Mapping, Begutachtung gegen validierten Standard

| CODE | NENNUNG | EBENE | ABKÜRZ | BESCHREIBUNG | HEINHEIT | DEFMATERIAL | MATERIAL | ANWISSTESTNR | VERFAHREN |
|--------|---------|-------|-------------|-----------------------------|----------|-------------|----------|--------------|-----------|
| BE293a | 1 | 1 | CD4-Befund | Befund CD4-Zellen vor 30min | | | | | |
| BE10 | 1 | 1 | Beratungskz | Beratungskz | | | | | |
| BE344 | 2 | 1 | Beratungskz | Beratungskz | | | | | |
| BE344Q | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE344L | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE344T | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE344B | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE344C | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE344D | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE344E | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE344F | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE344G | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE344H | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE344I | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE344J | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE344K | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE344L | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE344M | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE344N | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE344O | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE344P | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE344Q | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE344R | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE344S | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE344T | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE344U | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE344V | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE344W | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE344X | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE344Y | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE344Z | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE345 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE346 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE347 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE348 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE349 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE350 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE351 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE352 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE353 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE354 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE355 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE356 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE357 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE358 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE359 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE360 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE361 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE362 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE363 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE364 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE365 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE366 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE367 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE368 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE369 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE370 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE371 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE372 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE373 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE374 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE375 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE376 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE377 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE378 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE379 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE380 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE381 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE382 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE383 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE384 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE385 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE386 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE387 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE388 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE389 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE390 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE391 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE392 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE393 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE394 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE395 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE396 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE397 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE398 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE399 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE400 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE401 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE402 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE403 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE404 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE405 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE406 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE407 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE408 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE409 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE410 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE411 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE412 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE413 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE414 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE415 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE416 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE417 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE418 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE419 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE420 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE421 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE422 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE423 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE424 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE425 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE426 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE427 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE428 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE429 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE430 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE431 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE432 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE433 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE434 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE435 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE436 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE437 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE438 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE439 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE440 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE441 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE442 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE443 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE444 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE445 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE446 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE447 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE448 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE449 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE450 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE451 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE452 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE453 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE454 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE455 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE456 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE457 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE458 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE459 | 2 | 1 | BE10 | Beratungskz | | | | | |
| BE460 | 2 | 1 | BE10 | Beratungskz | | | | | |

Quelltabelle



Methoden

Automatisiertes Mapping, Begutachtung gegen validierten Standard

| CODE | BEZEICHNUNG | EBENE | ANALYSE | BESCHREIBUNG | Einheit | DEFMATERIAL | MATERIAL | ANWANDSTELLE | VERFAHREN |
|--------|-------------|-------|------------|-------------------------|---------|-------------|----------|--------------|-----------|
| BEP29 | Bilanz | 1 | 204 Bilanz | Bilanz 204 aus Vor-Jahr | | | | | |
| BES1 | Brennprobe | 1 | | | | | | | |
| BES10 | Brennprobe | 1 | | | | | | | |
| BES11 | Brennprobe | 1 | | | | | | | |
| BES12 | Brennprobe | 1 | | | | | | | |
| BES13 | Brennprobe | 1 | | | | | | | |
| BES14 | Brennprobe | 1 | | | | | | | |
| BES15 | Brennprobe | 1 | | | | | | | |
| BES16 | Brennprobe | 1 | | | | | | | |
| BES17 | Brennprobe | 1 | | | | | | | |
| BES18 | Brennprobe | 1 | | | | | | | |
| BES19 | Brennprobe | 1 | | | | | | | |
| BES20 | Brennprobe | 1 | | | | | | | |
| BES21 | Brennprobe | 1 | | | | | | | |
| BES22 | Brennprobe | 1 | | | | | | | |
| BES23 | Brennprobe | 1 | | | | | | | |
| BES24 | Brennprobe | 1 | | | | | | | |
| BES25 | Brennprobe | 1 | | | | | | | |
| BES26 | Brennprobe | 1 | | | | | | | |
| BES27 | Brennprobe | 1 | | | | | | | |
| BES28 | Brennprobe | 1 | | | | | | | |
| BES29 | Brennprobe | 1 | | | | | | | |
| BES30 | Brennprobe | 1 | | | | | | | |
| BES31 | Brennprobe | 1 | | | | | | | |
| BES32 | Brennprobe | 1 | | | | | | | |
| BES33 | Brennprobe | 1 | | | | | | | |
| BES34 | Brennprobe | 1 | | | | | | | |
| BES35 | Brennprobe | 1 | | | | | | | |
| BES36 | Brennprobe | 1 | | | | | | | |
| BES37 | Brennprobe | 1 | | | | | | | |
| BES38 | Brennprobe | 1 | | | | | | | |
| BES39 | Brennprobe | 1 | | | | | | | |
| BES40 | Brennprobe | 1 | | | | | | | |
| BES41 | Brennprobe | 1 | | | | | | | |
| BES42 | Brennprobe | 1 | | | | | | | |
| BES43 | Brennprobe | 1 | | | | | | | |
| BES44 | Brennprobe | 1 | | | | | | | |
| BES45 | Brennprobe | 1 | | | | | | | |
| BES46 | Brennprobe | 1 | | | | | | | |
| BES47 | Brennprobe | 1 | | | | | | | |
| BES48 | Brennprobe | 1 | | | | | | | |
| BES49 | Brennprobe | 1 | | | | | | | |
| BES50 | Brennprobe | 1 | | | | | | | |
| BES51 | Brennprobe | 1 | | | | | | | |
| BES52 | Brennprobe | 1 | | | | | | | |
| BES53 | Brennprobe | 1 | | | | | | | |
| BES54 | Brennprobe | 1 | | | | | | | |
| BES55 | Brennprobe | 1 | | | | | | | |
| BES56 | Brennprobe | 1 | | | | | | | |
| BES57 | Brennprobe | 1 | | | | | | | |
| BES58 | Brennprobe | 1 | | | | | | | |
| BES59 | Brennprobe | 1 | | | | | | | |
| BES60 | Brennprobe | 1 | | | | | | | |
| BES61 | Brennprobe | 1 | | | | | | | |
| BES62 | Brennprobe | 1 | | | | | | | |
| BES63 | Brennprobe | 1 | | | | | | | |
| BES64 | Brennprobe | 1 | | | | | | | |
| BES65 | Brennprobe | 1 | | | | | | | |
| BES66 | Brennprobe | 1 | | | | | | | |
| BES67 | Brennprobe | 1 | | | | | | | |
| BES68 | Brennprobe | 1 | | | | | | | |
| BES69 | Brennprobe | 1 | | | | | | | |
| BES70 | Brennprobe | 1 | | | | | | | |
| BES71 | Brennprobe | 1 | | | | | | | |
| BES72 | Brennprobe | 1 | | | | | | | |
| BES73 | Brennprobe | 1 | | | | | | | |
| BES74 | Brennprobe | 1 | | | | | | | |
| BES75 | Brennprobe | 1 | | | | | | | |
| BES76 | Brennprobe | 1 | | | | | | | |
| BES77 | Brennprobe | 1 | | | | | | | |
| BES78 | Brennprobe | 1 | | | | | | | |
| BES79 | Brennprobe | 1 | | | | | | | |
| BES80 | Brennprobe | 1 | | | | | | | |
| BES81 | Brennprobe | 1 | | | | | | | |
| BES82 | Brennprobe | 1 | | | | | | | |
| BES83 | Brennprobe | 1 | | | | | | | |
| BES84 | Brennprobe | 1 | | | | | | | |
| BES85 | Brennprobe | 1 | | | | | | | |
| BES86 | Brennprobe | 1 | | | | | | | |
| BES87 | Brennprobe | 1 | | | | | | | |
| BES88 | Brennprobe | 1 | | | | | | | |
| BES89 | Brennprobe | 1 | | | | | | | |
| BES90 | Brennprobe | 1 | | | | | | | |
| BES91 | Brennprobe | 1 | | | | | | | |
| BES92 | Brennprobe | 1 | | | | | | | |
| BES93 | Brennprobe | 1 | | | | | | | |
| BES94 | Brennprobe | 1 | | | | | | | |
| BES95 | Brennprobe | 1 | | | | | | | |
| BES96 | Brennprobe | 1 | | | | | | | |
| BES97 | Brennprobe | 1 | | | | | | | |
| BES98 | Brennprobe | 1 | | | | | | | |
| BES99 | Brennprobe | 1 | | | | | | | |
| BES100 | Brennprobe | 1 | | | | | | | |

LOINC Mapping

Quelltabelle

Relma



Methoden

Automatisiertes Mapping, Begutachtung gegen validierten Standard

Import Local Terms from Delimited File

Name of Local Term File:

Default Lab Section:

You may create a new lab section by typing a name in the box.

Choose the delimiter that separates your fields:

Tab
 Semicolon
 Comma
 Space
 Other:

First Row Contains Column Headers

Text Qualifier:

To assign a column of data to one of the fields, click on the second header row of the grid, click on the arrow to the right of the drop down list, and select the field into which you desire your data to be imported. TestCode and Test Description are required fields.

| | #1 | #2 | #3 | #4 | #5 | #6 | |
|----|-----------|---------------|--------------|---------------|---------------------------------|----------------------|------|
| | Test Code | Ignore Field | Ignore Field | Ignore Field | Test Description | Units | Ig |
| 1 | CODE | KENNUNG | EBENE | ANAKURZ | BESCHREIBUNG | EINHEIT | DEFM |
| 2 | BEF200x | Befundgruppe | 2 | Gesamtbefundx | Gesamtbefundx(Kumul1) | | |
| 3 | 2Hinweise | Einzelanalyse | 3 | Hinweise | Hinweise | | |
| 4 | 2DIALYSE | Einzelanalyse | 3 | Dialyse | Dialyse | | |
| 5 | 2GERHIN | Einzelanalyse | 3 | Inf.Gerinnung | Klin. Informationen (Gerinnung) | | |
| 6 | 2BEFEDTA | Befundgruppe | 3 | EDTA | EDTA - Blut | | |
| 7 | 2AMM | Einzelanalyse | 3 | Ammoniak | Ammoniak | N-□g/dl | |
| 8 | 2AMMON | Einzelanalyse | 3 | Ammoniak | Ammoniak | □mol/l | |
| 9 | 2BEFBB | Befundgruppe | 3 | BEFBB | BEFBB | | |
| 10 | 2BBHIN | Einzelanalyse | 4 | Abnahme | Blutbild Abnahme | | |
| 11 | 2HB | Einzelanalyse | 4 | H□moglobin | H□moglobin | g/dl | |
| 12 | 2HK | Einzelanalyse | 4 | H□matokrit | H□matokrit | % | |
| 13 | 2ERY | Einzelanalyse | 4 | Erythrozyten | Erythrozyten | x 10 ⁶ /□ | |
| 14 | 2MCV | Einzelanalyse | 4 | MCV | MCV | fl | |
| 15 | 2MCH | Einzelanalyse | 4 | MCH | MCH | □g | |

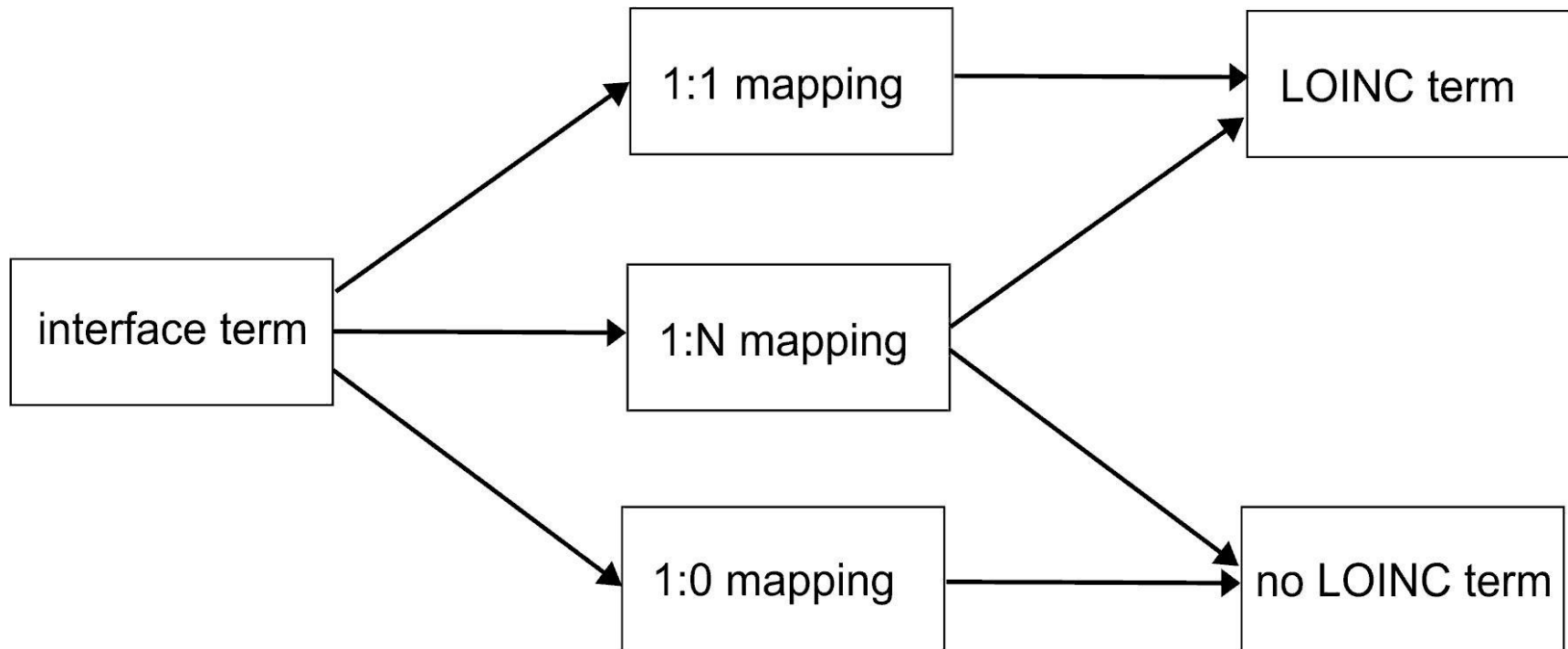
Case-sensitive Import

| CODE | KENNUNG | EBENE | ANAKURZ | BESCHREIBUNG |
|-----------|---------|-------|--------------|--------------|
| BEF200x | 1 | 200 | Befund | Befund |
| 2Hinweise | 2 | 2 | Hinweise | Hinweise |
| 2DIALYSE | 2 | 2 | Dialyse | Dialyse |
| 2GERHIN | 2 | 2 | Gerinnung | Gerinnung |
| 2BEFEDTA | 2 | 2 | EDTA | EDTA |
| 2AMM | 2 | 2 | Ammoniak | Ammoniak |
| 2AMMON | 2 | 2 | Ammoniak | Ammoniak |
| 2BEFBB | 2 | 2 | BEFBB | BEFBB |
| 2BBHIN | 2 | 2 | Abnahme | Abnahme |
| 2HB | 2 | 2 | Hmoglobin | Hmoglobin |
| 2HK | 2 | 2 | Hmatokrit | Hmatokrit |
| 2ERY | 2 | 2 | Erythrozyten | Erythrozyten |
| 2MCV | 2 | 2 | MCV | MCV |
| 2MCH | 2 | 2 | MCH | MCH |



Methoden

Automatisiertes Mapping, Begutachtung gegen validierten Standard



Methoden

Automatisiertes Mapping, Begutachtung gegen validierten Standard

Import Local Terms from Delimited File

Name of Local Term File:

Default Lab Section:

You may create a new lab section by typing a name in the box.

Choose the delimiter that separates your fields:

Tab Semicolon Comma Space Other:

First Row Contains Column Headers

Text Qualifier:

To assign a column of data to one of the fields, click on the second header row of the grid, click on the arrow to the right of the drop down list, and select the field into which you desire your data to be imported. TestCode and Test Description are required fields.

| | #1 | #2 | #3 | #4 | #5 | #6 | |
|----|-----------|---------------|--------------|---------------|---------------------------------|-----------------------|------|
| | Test Code | Ignore Field | Ignore Field | Ignore Field | Test Description | Units | Ig |
| 1 | CODE | KENNUNG | EBENE | ANAKURZ | BESCHREIBUNG | EINHEIT | DEFM |
| 2 | BEF200x | Befundgruppe | 2 | Gesamtbefundx | Gesamtbefundx(Kumul1) | | |
| 3 | 2Hinweise | Einzelanalyse | 3 | Hinweise | Hinweise | | |
| 4 | 2DIALYSE | Einzelanalyse | 3 | Dialyse | Dialyse | | |
| 5 | 2GERHIN | Einzelanalyse | 3 | Inf.Gerinnung | Klin. Informationen (Gerinnung) | | |
| 6 | 2BEFEDTA | Befundgruppe | 3 | EDTA | EDTA - Blut | | |
| 7 | 2AMM | Einzelanalyse | 3 | Ammoniak | Ammoniak | N-□g/dl | |
| 8 | 2AMMON | Einzelanalyse | 3 | Ammoniak | Ammoniak | □mol/l | |
| 9 | 2BEFBB | Befundgruppe | 3 | BEFBB | BEFBB | | |
| 10 | 2BBHIN | Einzelanalyse | 4 | Abnahme | Blutbild Abnahme | | |
| 11 | 2HB | Einzelanalyse | 4 | H□moglobin | H□moglobin | g/dl | |
| 12 | 2HK | Einzelanalyse | 4 | H□matokrit | H□matokrit | % | |
| 13 | 2ERY | Einzelanalyse | 4 | Erythrozyten | Erythrozyten | x 10 ^{^6} /□ | |
| 14 | 2MCV | Einzelanalyse | 4 | MCV | MCV | fl | |
| 15 | 2MCH | Einzelanalyse | 4 | MCH | MCH | pg | |

Case-sensitive Import

| CODE | KENNUNG | EBENE | ANAKURZ | BESCHREIBUNG |
|-----------|---------|-------|--------------|--------------|
| BEF200x | 1 | 200 | Befund | Befund |
| 2Hinweise | 2 | 2 | Hinweise | Hinweise |
| 2DIALYSE | 2 | 2 | Dialyse | Dialyse |
| 2GERHIN | 2 | 2 | Gerinnung | Gerinnung |
| 2BEFEDTA | 2 | 2 | EDTA | EDTA |
| 2AMM | 2 | 2 | Ammoniak | Ammoniak |
| 2AMMON | 2 | 2 | Ammoniak | Ammoniak |
| 2BEFBB | 2 | 2 | Befund | Befund |
| 2BBHIN | 2 | 2 | Blutbild | Blutbild |
| 2HB | 2 | 2 | Hämoglobin | Hämoglobin |
| 2HK | 2 | 2 | Hämatokrit | Hämatokrit |
| 2ERY | 2 | 2 | Erythrozyten | Erythrozyten |
| 2MCV | 2 | 2 | MCV | MCV |
| 2MCH | 2 | 2 | MCH | MCH |



Methoden

Automatisiertes Mapping, Begutachtung gegen validierten Standard

| CODE | NENNUNG | EBENE | ANAUJZ | BESCHREIBUNG | ENHEIT | DEFMATERIAL | MATERIAL | ANANGSTELLNR | BEFAHREN |
|--------|---------|-------|--------|--------------|------------------|-------------|----------|--------------|----------|
| BEF20x | 1 | 1 | 1 | 204 Befund | Befund | 204x01a | 101_204n | | |
| BEF20x | 2 | 2 | 1 | Gesamtaufg | Gesamtaufg | | | | |
| BEF20x | 3 | 3 | 1 | Hinweise | Hinweise | | | | |
| BEF20x | 4 | 4 | 1 | Diagnostik | Diagnostik | | | | |
| BEF20x | 5 | 5 | 1 | Inf.Germung | Inf.Germung | | | | |
| BEF20x | 6 | 6 | 1 | EDTA | EDTA | | | | |
| BEF20x | 7 | 7 | 1 | Ammoniak | Ammoniak | | | | |
| BEF20x | 8 | 8 | 1 | Ammoniak | Ammoniak | | | | |
| BEF20x | 9 | 9 | 1 | Ammoniak | Ammoniak | | | | |
| BEF20x | 10 | 10 | 1 | Abnahme | Blutbild Abnahme | | | | |
| BEF20x | 11 | 11 | 1 | Hämoglobin | Hämoglobin | | | | |
| BEF20x | 12 | 12 | 1 | Hämokrit | Hämokrit | | | | |
| BEF20x | 13 | 13 | 1 | Erythrozyten | Erythrozyten | | | | |
| BEF20x | 14 | 14 | 1 | MCV | MCV | | | | |
| BEF20x | 15 | 15 | 1 | MPV | MPV | | | | |

Quelltabelle

LOINC Mapping

Import Local Terms from Delimited File

Name of Local Term File: Relma

Default Lab Section:

Choose the delimiter that separates your data

Tab Semicolon

First Row Contains Column Headers Text Qualifier

To assign a column of data to one of the fields, click on the second header row of the grid. click on the arrow to the right of the drop down list, and select the field into which you desire your data to be imported. Text Code and Text Description are required fields.

| #1 | #2 | #3 | #4 | #5 | #6 | |
|-----------|--------------|---------------|--------------|------------------|-------------------------------|-----------------------|
| Text Code | Ignore Field | Ignore Field | Ignore Field | Text Description | Units | DEFM |
| 1 | CODE | KENNUNG | EBENE | ANAUJZ | BESCHREIBUNG | ENHEIT |
| 2 | BEP20x | Befundgruppe | 2 | Gesamtaufg | Gesamtaufg(Kumul) | |
| 3 | 2Hinweise | Einzelanalyse | 3 | Hinweise | Hinweise | |
| 4 | 2DIALYSE | Einzelanalyse | 3 | Dialyse | Dialyse | |
| 5 | 2GERMIN | Einzelanalyse | 3 | Inf.Germung | Klin. Informationen (Germung) | |
| 6 | 2BEFEDA | Befundgruppe | 3 | EDTA | EDTA - Blut | |
| 7 | 2AMNH | Einzelanalyse | 3 | Ammoniak | Ammoniak | N-Cg/dl |
| 8 | 2AMNHON | Einzelanalyse | 3 | Ammoniak | Ammoniak | Cma/dl |
| 9 | 2BEFB | Befundgruppe | 3 | BEFB | BEFB | |
| 10 | 2BBHN | Einzelanalyse | 4 | Abnahme | Blutbild Abnahme | |
| 11 | 2HB | Einzelanalyse | 4 | Hämoglobin | Hämoglobin | g/dl |
| 12 | 2HC | Einzelanalyse | 4 | Hämokrit | Hämokrit | % |
| 13 | 2ERY | Einzelanalyse | 4 | Erythrozyten | Erythrozyten | x 10 ⁴ /Cl |
| 14 | 2MCV | Einzelanalyse | 4 | MCV | MCV | f |
| 15 | 2MPV | Einzelanalyse | 4 | MPV | MPV | cc |

Case-sensitive import

Import Terms Exit

Methoden

Automatisiertes Mapping, Begutachtung gegen validierten Standard

| CODE | NENNUNG | EBENE | ANALYZ | BESCHREIBUNG | EH | DEFMATERIAL | MATERIAL | ANALYSTSTELLE | BEFORDER |
|----------|---------|-------|--------------|---------------------------|----|-------------|----------|---------------|----------|
| BEP20x | | 1 | CD4 Befund | Befund CD4 zell Vor-30min | | | | | |
| BEP20x | | 2 | Befundgruppe | Befundgruppe | | | | | |
| 2HINW | | 3 | Hinweise | Hinweise | | | | | |
| 2GSRHIN | | 3 | GSRHIN | GSRHIN | | | | | |
| 2BEPEDTA | | 3 | EDTA | EDTA | | | | | |
| 2AMNH | | 3 | Ammoniak | Ammoniak | | | | | |
| 2AMNHON | | 3 | Ammoniak | Ammoniak | | | | | |
| 2BEFB | | 3 | BEFB | BEFB | | | | | |
| 2BHBIN | | 4 | Abnahme | Blutbild Abnahme | | | | | |
| 2HB | | 4 | Hb | Hb | | | | | |
| 2HMC | | 4 | HMC | HMC | | | | | |
| 2ERY | | 4 | Erythrozyten | Erythrozyten | | | | | |
| 2MVC | | 4 | MCV | MCV | | | | | |
| 2MPH | | 4 | MPH | MPH | | | | | |

Quelltabelle

LOINC Mapping



validierte Daten

Goldstandard Begutachtung

Relma

Import Local Terms from Delimited File

Name of Local Term File: []

Default Lab Section: []

Choose the delimiter that separates the fields in your data: []

First Row Contains Column Headers: Text Qualifier: [None]

To assign a column of data to one of the fields, click on the second header row of the grid, click on the arrow to the right of the drop-down list, and select the field into which you desire your data to be imported. Test Code and Test Description are required fields.

| #1 | #2 | #3 | #4 | #5 | #6 |
|-----------|--------------|---------------|--------------|------------------|---------------------------------|
| Test Code | Ignore Field | Ignore Field | Ignore Field | Test Description | Units |
| 1 | CODE | NENNUNG | EBENE | ANALYZ | BESCHREIBUNG |
| 2 | BEP20x | Befundgruppe | 2 | Gesamtbefund | Gesamtbefund(kumuliert) |
| 3 | 2HINW | Einzelanalyse | 3 | Hinweise | Hinweise |
| 4 | 2GSRHIN | Einzelanalyse | 3 | Dialyse | Dialyse |
| 5 | 2GSRHIN | Einzelanalyse | 3 | Inf.Gerinnung | Klin. Informationen (Gerinnung) |
| 6 | 2BEPEDTA | Befundgruppe | 3 | EDTA | EDTA - Blut |
| 7 | 2AMNH | Einzelanalyse | 3 | Ammoniak | Ammoniak |
| 8 | 2AMNHON | Einzelanalyse | 3 | Ammoniak | Ammoniak |
| 9 | 2BEFB | Befundgruppe | 3 | BEFB | BEFB |
| 10 | 2BHBIN | Einzelanalyse | 4 | Abnahme | Blutbild Abnahme |
| 11 | 2HB | Einzelanalyse | 4 | Hb | Hb |
| 12 | 2HMC | Einzelanalyse | 4 | HMC | HMC |
| 13 | 2ERY | Einzelanalyse | 4 | Erythrozyten | Erythrozyten |
| 14 | 2MVC | Einzelanalyse | 4 | MCV | MCV |
| 15 | 2MPH | Einzelanalyse | 4 | MPH | MPH |

Case-sensitive Import Import Terms Exit

Methoden

Evaluation des Mappings

- Stichproben von je $n=100$ interface terms
- Überprüfung durch 2 Experten aus jeweiligem Labor unabhängig voneinander
- Qualifikation: FA Laboratoriumsmedizin gem. WBO d. LÄK



Ergebnisse

- Mapping der Analytstammdaten aus 2 Laboren
- 2148 interface terms aus 2 Laboren verarbeitet
- Bei 1660 (0.77) eindeutiges Mapping möglich
- 1208 verschiedene LOINCs
- Teilweise identische Tests in unterschiedlichen Laboren



Ergebnisse

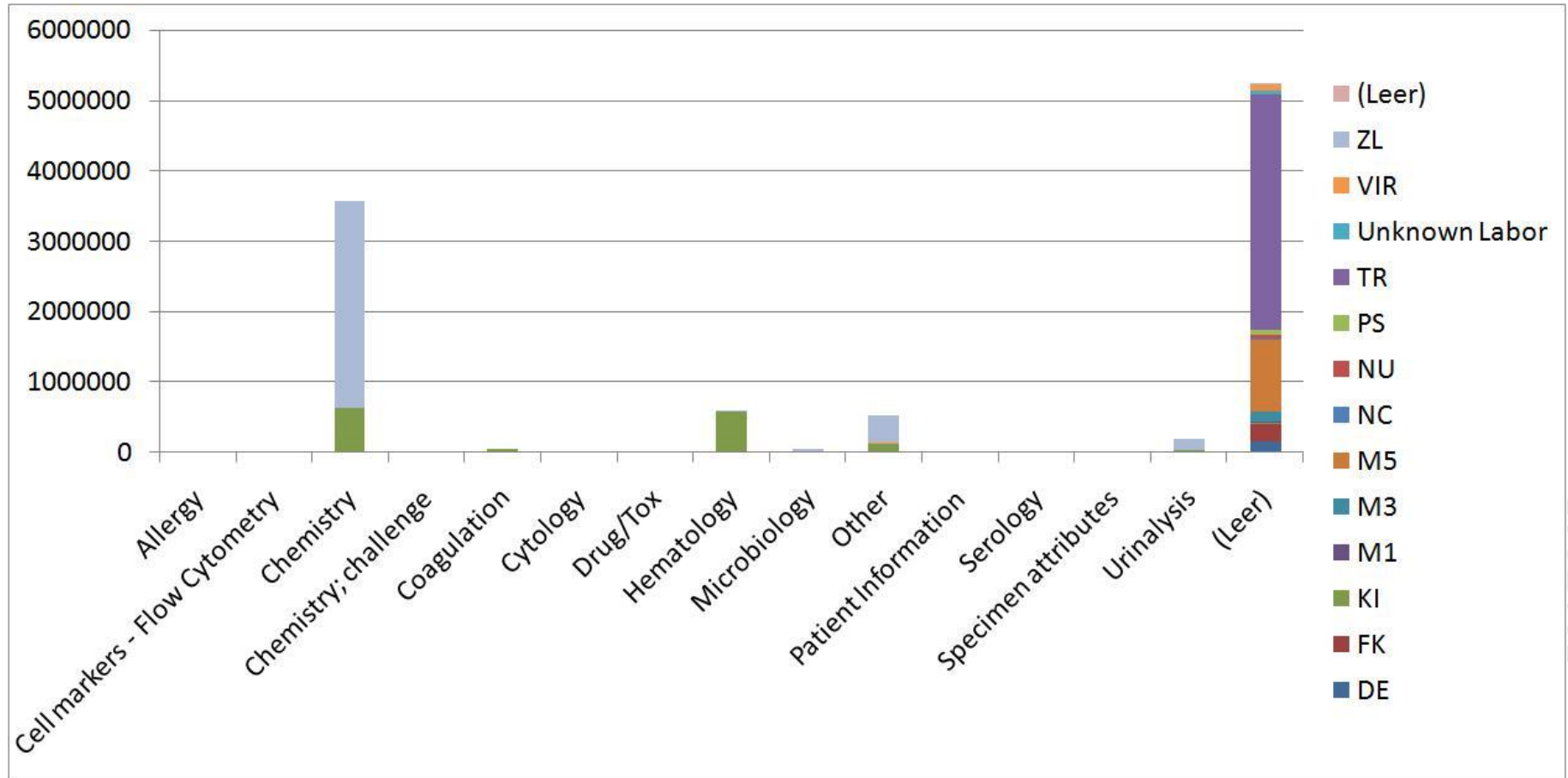
Swisslab® auf LOINC®

| Labor | Σ Analyte | gemappt | genutzt | WH-Menge |
|--------------|------------------|---------|---------|----------|
| Zentrallabor | 787 | 642 | 399 | 0.99 |
| Kinderklinik | 1361 | 1018 | 961 | 0.99 |

| Labor | Σ Analyte | Precision | Recall | F-score | Cohen's κ |
|--------------|------------------|-----------|--------|---------|------------------|
| Zentrallabor | 100 | 0.98 | 0.91 | 0.95 | 0.96 |
| Kinderklinik | 100 | 0.98 | 0.90 | 0.95 | 1 |

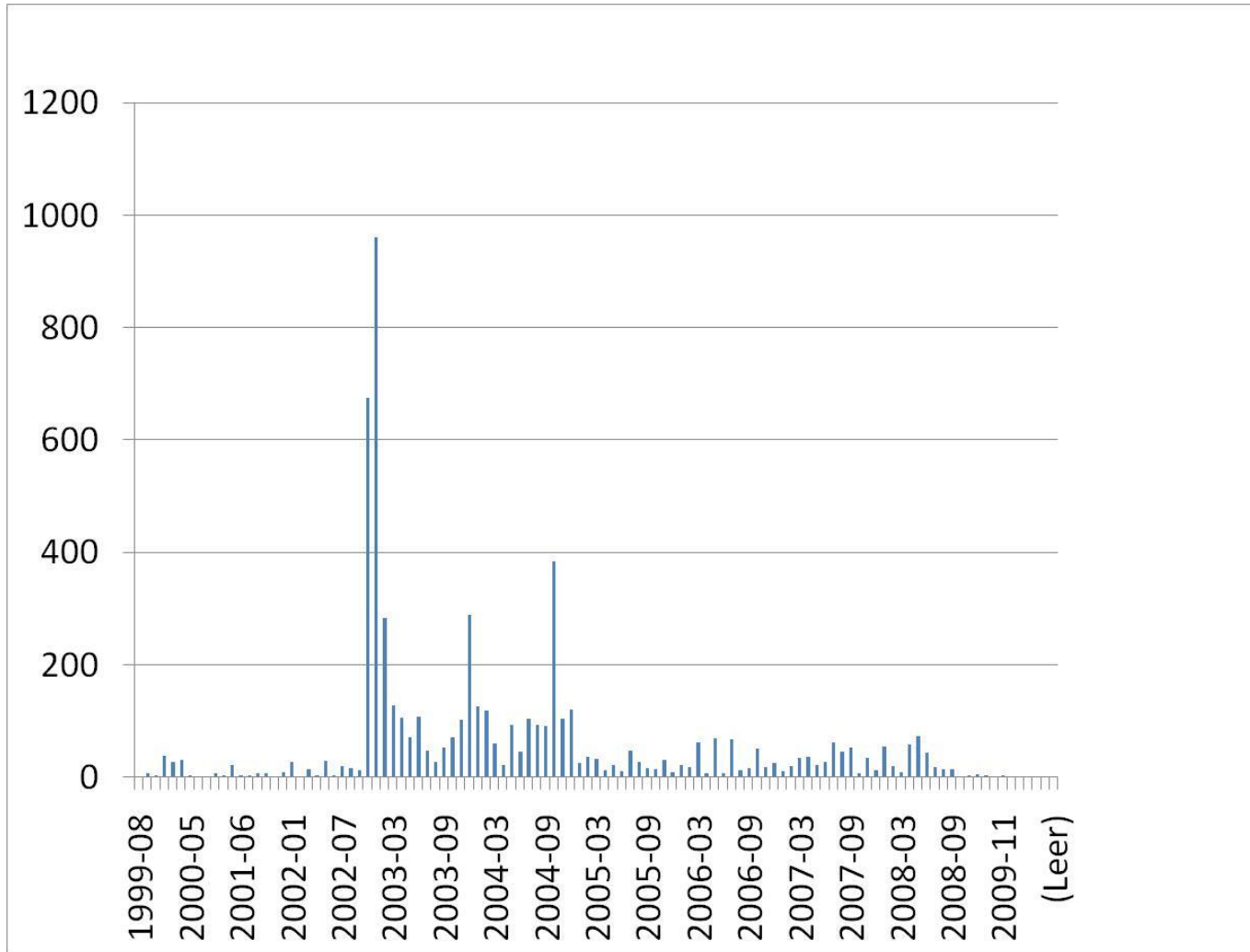
Ergebnisse

Analyte nach Befundmenge



Ergebnisse

neue Analyte pro Monat



Diskussion

Mapping-Verfahren

- RELMA ® deutlich schneller als manuelles Mapping
- Fehlerrate mit manuellem Mapping vergleichbar
- Statisches Mapping, aber auch dynamisch denkbar

- Kein vollautomatischer Prozess
- Strukturierte Quelldaten erforderlich



Diskussion

LOINC

- Vielfältige Single-Source-Anwendungen mit LOINC als Referenzterminologie möglich
- Ontologische Darstellung aller Untersuchungen aus unterschiedlichen Labors

- Kein vollständiges Mapping
- Vergleichbarkeit der Werte/Referenzbereich



Ausblick

weiteres Vorgehen

- Mapping weiterer Labore mit großer exportierter Befundmenge
- Direkte Übernahme neuer Analyte in Swisslab® mit entsprechendem LOINC®
- Validierung durch Laborpersonal erweitern



**VIELEN DANK FÜR IHRE
AUFMERKSAMKEIT**

