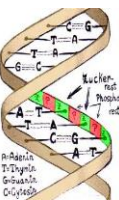


Einschub: UMLS - Unified Medical Language System

- Sehr große, integrierte Datenquelle
- > 100 biomedizinische Vokabulare und Ontologien
- Hauptkomponenten
 - Metathesaurus
 - Semantic Network
 - SPECIALIST Lexicon
- Metathesaurus
 - > 2,8 Mio. Konzepte (CUI = Concept Unique Identifier, UMLS intern)
 - Zahlreiche Synonyme (aus den versch. Vokabularen)
- Halbjährliche Versionen
- **UMLS Terminology Services (UTS)**
 - Web Interfaces + Web Services für Zugriff auf UMLS



Unified Medical Language System® (UMLS®)



Metathesaurus Browser

A service of the U.S. National Library of Medicine | National Institutes of Health



Unified Medical
Language System®

UMLS Terminology Services

Metathesaurus Browser

[UTS Home](#) [Applications](#) [SNOMED CT](#) [Resources](#) [Downloads](#) [Documentation](#) [UMLS Home](#)

Search | **Tree** | **Recent Searches**

Term CUI Code

C1305855

Release: 2014AB

Search Type: EXACT_MATCH

Source:

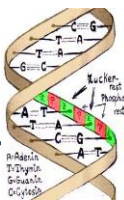
- All Sources
- AIR
- ALT
- AOD
- AOT

Search Results (1)

[C1305855](#) Body mass index

Basic View | **Report View** | **Raw View**

- Concept:** [C1305855] **Body mass index**
- Semantic Types**
 - [Clinical Attribute](#) [T201]
- Definitions**
 - NCI/PT | A general indicator of the body fat an individual is carrying based upon the ratio of weight to height.
 - NCI_CDISC/PT | A general indicator of the body fat an individual is carrying based upon the ratio of weight to height.
 - NCI_NCI-GLOSS/PT | A measure that relates body weight to height. BMI is sometimes used to indicate that
- Atoms (59)** string [AUJ / RSAB / TTY / Code]
 - BMI [A1811057/AOD/NP/0000021594]
 - body mass index [A1811061/AOD/DE/0000001724]
 - body mass index [A18663747/CHV/SY/0000057817]
 - body mass index (BMI) [A18682215/CHV/PT/0000057817]
 - quetelet index [A18589469/CHV/SY/0000057817]
 - BMI [A1811058/CSP/ET/0467-2059]
 - body mass index [A1811062/CSP/ET/0467-2059]
 - Body mass index [A23503079/LNC/CN/MTHU017351]
 - Body mass index [A18360016/LNC/LPN/LP35925-4]

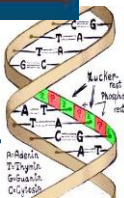


UMLS Metathesaurus

- Concept Unique Identifiers (CUI)
 - Konzept mit einer Bedeutung (mit verschiedenen Bezeichnungen)
- Lexical (term) Unique Identifiers (LUI)
 - Lexikale Varianten eines Strings
- String Unique Identifiers (SUI)
 - Jeder eindeutigen Name / String (für jede Sprache) erhält einen eigenen SUI
 - "alle Synonyme"
- Atom Unique Identifiers (AUI)
 - Konzeptnamen der Quellvokabulare (z.B. SNOMED, MeSH)
 - Jeder String aus jedem Vokabular erhält einen AUI



Bildquelle: http://www.nlm.nih.gov/research/umls/new_users/online_learning/images/CUI_map.jpg



UMLS Semantic Network

- Ziel: konsistente Kategorisierung der UMLS-Konzepte
- Definition und Beschreibung von "Basis"-Typen (Kategorien)
- Hierarchie aus 113 semantischen Typen und 54 Beziehungen
- Hauptgruppen:
 - Entity
 - Organism
 - ...
 - Event
 - Biological Function
 - ...

"Body mass index" C1305855

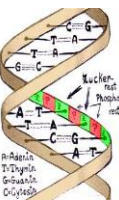
A Entity

A2 Conceptual Entity

A2.3 Organism Attribute

A2.3.1 Clinical Attribute

→ Jedes UMLS Konzept ist mind. 1 semantischen Typ zugeordnet



Beispiele

C1305855 “Body mass index”

A Entity
A2 Conceptual Entity
A2.3 Organism Attribute
A2.3.1 Clinical Attribute

C0005893 “Body mass index procedure”

B Event
B1 Activity
B1.3 Occupational Activity
B1.3.1 Health Care Activity
B1.3.1.2 Diagnostic Procedure

A (Entity) „Diagnosis“ Konzepte

A2 (Conceptual Entity)

A2.1 (Idea or Concept)

A2.1.3 (Quantitative Concept) **C0441942**

A2.2 (Finding) **C0011900**

A2.4 (Intellectual Product)

A2.4.1 (Classification) **C1546899**

“At diagnosis (tumor staging)”

“Diagnosis”

*“Diagnosis Classification -
Diagnosis”*

