

## Emtree 2022.01 release notes

### General improvements

All new MeSH terms and changes for 2022 as published by the NLM on November 17<sup>th</sup> 2021 were incorporated into Emtree.

The developments on COVID-19 retains our special attention, more detail can be found below.

### Diseases

In total over 400 new disease concepts were added:

- Thorough revision of “Neoplasm” branch was started as a long-term project. Already done (around 200 new concepts):
  - Revision and expansion of “neoplasms of uncertain behavior” branch. As a part of Emtree taxonomy improvement “neoplasms of uncertain behavior” expanded from 23 NTs with 31 diseases in Emtree 2021.02 to 22 NTs with 77 diseases. (46 new concepts were added or moved to this branch, incorrectly assigned altlabels transferred/new concepts created)
  - Revision and expansion of “paraneoplastic syndrome” branch. As a part of Emtree taxonomy improvement “paraneoplastic syndrome” expanded from 4 NTs (4 diseases) in Emtree 2021.02 to 4 NTs with 35 diseases. (31 new concepts were added or moved to this branch, incorrectly assigned altlabels transferred/new concepts created)
  - Revision and expansion of “tumor syndrome” branch. As a part of Emtree taxonomy improvement “tumor syndrome” expanded from 4 NTs with 31 diseases in Emtree 2021.02 to 4 NTs with 122 diseases. (91 new concepts were added or moved to this branch, incorrectly assigned altlabels transferred/new concepts created)
  - “Multiple tumor” branch was created. It contains 3 NTs and 21 diseases.
  - Revision and expansion of “congenital tumor” branch. As a part of Emtree taxonomy improvement “congenital tumor” expanded from only 1 NT in Emtree 2021.02 to 12 NTs with 29 diseases, hierarchy levels were significantly improved. (28 new concepts were added or moved to this branch, incorrectly assigned altlabels transferred/new concepts created)
  - Revision and expansion of “precancer and cancer-in-situ” branch. As a part of Emtree taxonomy improvement “precancer and cancer-in-situ” expanded from 8 NTs with 14 diseases in Emtree 2021.02 to 3 NTs with 70 diseases, hierarchy levels were significantly improved. (56 new concepts were added or moved to this branch, incorrectly assigned altlabels transferred/new concepts created)
  - “Neoplastic pregnancy complications” branch was created. It contains 2 NTs and 11 diseases.
  - Revision and expansion of “trophoblastic tumors” branch. As a part of Emtree taxonomy improvement “trophoblastic tumors” expanded from 3 NTs (3 diseases) in Emtree 2021.02 to 2 NTs with 22 diseases, hierarchy levels were significantly improved. (19 new concepts were added or moved to this branch, incorrectly assigned altlabels transferred/new concepts created)

- Revision and expansion of “experimental neoplasm” branch. As a part of Emtree taxonomy improvement “experimental neoplasm” expanded from 37 NTs with 165 diseases in Emtree 2021.02 to 38 NTs with 198 diseases. (33 new concepts were added or moved to this branch, incorrectly assigned altlabels transferred/new concepts created)
- Revision and expansion of “abdominal tumor” branch. As a part of Emtree taxonomy improvement “abdominal tumor” expanded from 4 NTs with 16 diseases in Emtree 2021.02 to 7 NTs with 37 diseases. (21 new concepts were added or moved to this branch, incorrectly assigned altlabels transferred/new concepts created)
- Revision and expansion of “breast tumor” branch. As a part of Emtree taxonomy improvement “breast tumor” expanded from 3 NTs with 36 diseases in Emtree 2021.02 to 5 NTs with 77 diseases. (41 new concepts were added or moved to this branch, incorrectly assigned altlabels transferred/new concepts created)
- Revision and expansion of “neoplasms of the thorax and thoracic cavity” (renamed to “thoracic tumor”) branch. As a part of Emtree taxonomy improvement “thoracic tumor” expanded from 5 NTs with 26 diseases in Emtree 2021.02 to 8 NTs with 118 diseases, hierarchy levels were significantly improved. (92 new concepts were added or moved to this branch, incorrectly assigned altlabels transferred/new concepts created)
- 10 new diseases added/new concepts created from existing altlabels as a part of MeSH 2022 implementation.
- Revision and expansion of “inflammation”- and “infarction”-branches with 22 resp. 5 new concepts
- Revision and expansion within “eye disease”-branch (mainly 9 “amblyopia”-related concepts)
- Revision and expansion of “musculoskeletal stiffness”-branch by 9 new concepts
- Addition of 6 new “sweat gland disease” concepts
- Revision and expansion of “aneurysm” branch with 9 new concepts
- Addition of 15 new “endometriosis”-related concepts
- Addition of 9 experimental diseases:
  - 3 ‘experimental cancer’
  - 2 ‘experimental infection’

## Drugs and chemicals

- Updates with regards to all sources that are routinely monitored have been provided.
  - The United States Adopted Names published from July 2021 until October 2021 (included) were incorporated.
  - Names of newly approved drugs, drugs under consideration, orphan drug assignments and drug trade names as published by the FDA, EMA and MHRA in the period June 2021 - September 2021 (included) were incorporated.
  - The content of list 125 (published on 30/07/2021) of proposed INNs as published by the WHO was incorporated (229 entries) and published corrections on previous lists were processed.
- Data on COVID-19 related clinical trials as published on ClinicalTrials.gov (database of privately and publicly funded clinical studies conducted around the world, supplied by the US National Library of Medicine) was used to identify relevant new COVID-19/SARS-CoV-2 concepts or additional synonyms for addition within the regular editorial guidelines.

- Taxonomy data on COVID-19 vaccines was updated with (WHO or nationally) approved vaccines and new trade names etc.
- Data on drugs under consideration or approved by the FDA, EMA and WHO to treat COVID-19/SARS-CoV-2 infection was monitored and updated up until mid-November 2021.
- In total, 304 new concepts were added.

### **Medical devices**

- 21 new device concepts have been added to Emtree. There has been an addition of 3 concepts related to drug test kits, 6 software related concepts and added new concepts for consistency of existing concepts (nephelometer, transmission electron microscope, Koeppe type goniolens, (X-ray) diffractometer, homogenizer).
- 77 GMDN terms and definitions have been incorporated to existing and new concepts providing a connection with terms as used by FDA's GUDID. 68 of the 77 added GMDN terms are related to in-vitro diagnostics. 715 GMDN's Collective Term (CT) codes and GMDN definitions have been added to existing terms.
- 645 device trade names have been added, including FDA approved devices till date of editorial freeze. 409 device trade names have been extracted from device manufacturer websites; this will be continued for more device manufacturers.
- In total 886 alternative labels have been added to medical device concepts.

### **Procedures**

- Addition of 74 medical procedures
- Addition of 62 questionnaires under branch 'assessment of humans'
- Revision and expansion of "error"-branch, mainly 17 new "medical error"-related concepts

### **Parameters**

Addition of around 70 parameters of which:

- 5 concepts under branch 'cardiovascular parameters'
- 4 concepts under branch 'epidemiological data'
- Expansion of "environmental parameter"-branch
- Expansion of "socioeconomic parameter"-branch
- Additions within "dental parameter"-branch

### **Anatomy**

Addition of 43 anatomical concepts of which:

- 10 cells
- 3 cell lines

### **Organisms**

- Addition of some medicinal plant, archaeal and bacterial species
- 20 new concepts for SARS-CoV-2 variants (99 new labels), amongst which the recently discovered Omicron variant (Lineage B.1.1.529).
- 81 new concepts (173 new labels) have been added to enhance the Emtree virus branch
- 11 new concepts have been added as part of regular improvements

#### **Society and environment**

- Addition of “vulnerability” branch under “risk”

#### **Chemical, physical and mathematical phenomena**

- Additions to “regression analysis” and “statistical design”-branches

#### **Biological functions**

- Some revision within “mutation”-branch and addition of 10 new concepts