

## Emtree 2023.01 release notes

### General improvements

All new MeSH preferred terms and changes for 2023 as published by the NLM were incorporated into Emtree (see footnote on a minor MeSH data error).

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

### Diseases

Around 433 disease concepts have been added including:

- As a part of long-term project “neoplasm” branch Emtree taxonomy improvement the following changes were done recently:
  - Revision and expansion of “urogenital tract tumor” branch (“urogenital” and “genital tumors” were updated during this period of time, “urinary tract tumor” was done previously). “Urogenital tract tumor” branch expanded from 3 NTs with 358 diseases in Emtree 2022.03 to 4 NTs with 620 diseases in Emtree 2023.01, hierarchy levels were improved
  - Revision and expansion of “pelvis tumor” branch: expanded from 1 NT with 1 disease in Emtree 2022.03 to 6 NTs with 257 diseases in Emtree 2023.01, hierarchy levels were improved
  - Revision and expansion of “musculoskeletal tumor” branch (renamed from “locomotor system tumor”): expanded from 6 NTs with 81 disease in Emtree 2022.03 to 6 NTs with 283 diseases in Emtree 2023.01, hierarchy levels were improved
  - In association with “musculoskeletal tumor” were created / revised:
  - “muscle tissue tumor” branch (contains 6 NTs with 85 diseases) under “soft tissue tumor”
  - “bone tissue neoplasm” branch (contains 8 NTs with 26 diseases) under “connective tissue tumor”
- Hierarchy of "bacterial infection" branch improved – in Emtree 2022.03 it was 34 folders and 25 unclassified concepts with 398 NTs total, in 2023.01 – 12 folders, 14 unclassified concepts with 571 NTs total. 56 new concepts created. Also 6 new concepts added to "central nervous system infection" branch.
- As a reaction to customer notes some errors and inconsistencies around “peripheral occlusive artery disease” which had an NT of “artery occlusion” (should be a BT indeed) "artery occlusion" branch hierarchy was improved, 23 new concepts were added.
- Other areas revised:
  - Revision and expansion of “seizure, epilepsy and convulsion” branch: expanded from 12 NTs with 121 diseases in Emtree 2022.03 to 6 NTs with 302 diseases in Emtree 2023.01, hierarchy levels were improved
  - Minor areas revised: pulmonary eosinophilia, pleural effusion, acute aortic syndrome (including aortic dissection), vertebral artery insufficiency, spondylosis and some others.
  - 8 new concepts added under ‘experimental diseases’ branch.
  - Minor revision of plant diseases branch

- A new branch has been created grouping together “refractory disease” that so far were spread out in different disease-branches, and 26 new concepts were added.
- Expansion and some revision of neuropathy-branch and addition of 24 new concepts.

## Drugs and chemicals

Updates regarding all sources that are routinely monitored have been provided.

- The United States Adopted Names published from July 2022 until October 2022 (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 2022 - September 2022 (included) were incorporated.
- The content of list 127 (published on 21/07/2022 and including addendum on COVID-19 related terms) of proposed INNs as published by the WHO was incorporated (257 entries) and published corrections on previous lists were processed.

Additional COVID-19 related updates have been provided.

- The content of list 128 - COVID-19 special edition (published on 07/08/2022) and its addendum (published on 14/09/2022) of proposed INNs as published by the WHO was incorporated (3 entries).
- 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) until October 2022 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 2022.

In total, 342 new concepts have been added.

## Medical devices

- 737 new alternative labels have been added to the medical device branch of Emtree.
- Of these 737 new alternative labels 699 concern new device trade names. These include FDA’s recently approved devices until the date of editorial freeze. Most of the new trade name labels have been acquired from the websites of their corresponding manufacturers. This is an ongoing effort and will be continued in future releases.
- Part of our maintenance efforts include addition and maintenance of GMDN (Global Medical Device Nomenclature) terms. Two new GMDN terms have been added to existing Emtree concepts as alternative labels in this release. All GMDN terms in Emtree were updated with the most recent information from the GMDN website. By improving and maintaining our coverage of GMDN terms we provide a connection with terms as used by FDA’s GUDID.
- A harmonization effort was undertaken regarding the disambiguator field in the device branch. All disambiguators that had the value ‘device’ are now changed to reflect the name part of the preferred term the labels are associated with.

For example Bold (device) - (device trade name to “compression screw”) is now displayed as Bold (compression screw).

- A need was identified to be able to use drug subheadings for devices where a drug is an intricate part of the device, e.g. drug eluting stents. To facilitate this, such drug-device combinations can be found in the device branch as well as drug branch. This development has been incorporated from previous release onwards. A second batch of these terms has now been introduced to the drug branch of Emtree.

This batch includes

- ‘anesthetic vaporizer’ and its narrower terms (‘desflurane vaporizer’, ‘enflurane vaporizer’, ‘halothane vaporizer’, ‘isoflurane vaporizer’ and ‘sevoflurane vaporizer’)
- ‘drug-eluting balloon catheter’ and its narrower term (‘paclitaxel coated balloon catheter’),
- ‘drug specific delivery device’ and its narrower terms (‘levonorgestrel releasing intrauterine system’, ‘progestin implant’, ‘epinephrine autoinjector’, ‘fentanyl iontophoretic transdermal system’, ‘diclofenac patch’, ‘intrathecal baclofen pump’, ‘somatotropin injection pen’, ‘interferon beta autoinjector’)
- ‘insulin delivery device’ and its narrower terms (‘insulin pump’, ‘implantable insulin pump’, ‘glucose monitoring/insulin pump system’, ‘insulin implant’, ‘artificial beta cell’, ‘implantable insulin pump’, ‘insulin injection pen’, ‘insulin inhaler’, ‘insulin syringe’).

## Anatomy

28 new concepts added, of which:

- 17 under ‘brain’ branch
- 6 under ‘genital system’ branch

## Organisms

In total 279 new terms and 114 new organisms have been added.

58 are new SARS-CoV-2 related organisms, including the new Omicron variants of interest BQ.1 and BQ.1.1

## Procedures

401 new concepts added, of which:

- 353 under ‘medical procedures’ branch
- 82 new questionnaires and assessment scales have been added
- 7 new microscopy, 6 new tomography and 8 new plethysmography concepts were added
- 11 -otomy and 27 -ectomy concepts were added
- A new branch has been created grouping together “paracentesis”-procedures that so far were spread out in different procedure-branches, and 11 new concepts were added.

**Footnote on MeSH data**

- The original MeSH data contains a new heading term “Sophora flavescens”, with a ligature “fl”, while Emtree data sticks to proper distinct characters “fl”. This might not be visible immediately to a user an automatic comparison will show the difference. MeSH acknowledged the error and we expect a fix on their end.