- **Emtree 2024.01 release notes**

General improvements

All new MeSH preferred terms and changes for 2024 as published by the NLM were incorporated into Emtree. Please note that we don't use ambiguous terms, which is why we have not added 9 MeSH terms over the years, as they appear in MeSH, but with disambiguation information (see statistics).

Developments around COVID 19 / SARS COV II respectively are no longer a strong focus but are still being observed and added to the taxonomy.

Diseases

- 8 new experimental diseases were added.

- As a part of long-term project "neoplasm" branch Emtree taxonomy improvement the following changes were done recently:

  - ✓ Around 300+ disease concepts have been added in 2024.01 under head and neck tumor.

  - ✓ Revision and expansion of "head and neck tumor" branch (including "benign" and "malignant" head and neck tumors were updated)

- The "head and neck tumor" branch expanded from 5 sub-branches with 496 diseases in Emtree 2023.03 to 6 sub-branches with 788 diseases in Emtree 2024.01.

- A new sub-branch of head and neck tumors, Upper Aero-Digestive Tract tumors (UADT) has been created and improved based on the classification in Mesh, NCI Meta thesaurus, and Gray's anatomy.

- Hierarchy levels were improved with special emphasis on head and neck cancers and otorhinolaryngologic neoplasms.

- In further releases as a part of the ongoing project "neoplasm" there will be attention to "classification of neoplasms by anatomical site" for hematopoietic, reticuloendothelial, central nervous systems along with "classification of neoplasms by histologic type"

- As a part of ongoing project of taxonomy enrichment "metabolic disorder"

  - The hierarchy of " metabolic disorder " branch improved – while in Emtree 2023.03 we had 18 subbranches with 893 narrower terms total, in 2024.01 – 18 subbranches contain 1346 narrower terms total.453 new concepts were created.

  - Disorders of carbohydrate metabolism, carboxylic acid metabolism disorders, mitochondrial myopathies, hormone metabolism disorders were revised.

  - In further releases, there will be updates on genetic & DNA repair disorders, fatty acid oxidation disorders, glycogen storage disorders.

- Synonyms containing "…demise" and "…decease" were added to relevant concepts throughout the "death"-branch.

- Synonym-enrichment within the "amyloidosis"-branch.
- Addition of 7 new concepts under "visual disorder"-branch.
- Addition of 4 new edema-related concepts.
- Some revision of hierarchy and additions within the "erythrocyte disorder"-branch, mainly of "hemoglobinopathy"- and "dyshemoglobinemia"-related concepts.

Drugs and chemicals

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

- The content of list 129 (published on 06/08/2023) of proposed INNs the including the COVID-19 special edition plus addendum as published by the WHO was incorporated (228 entries) and published corrections on previous lists were processed.
- The United States Adopted Names published from July 2023 until October 2023 (included) were incorporated.
- Names of newly approved drugs, drugs under consideration and drug trade names as published by the FDA, EMA and MHRA in the period June 2023 - September 2023 (included) were incorporated.
- The classification for allergen extracts has been expanded.

In total, 321 new concepts have been added.

Medical devices

- 442 new alternative labels have been added to the medical device branch of Emtree.
- Of these 442 new alternative labels 325 comprise 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.
- 18 new concepts have been added.
  - 9 new concepts were added to improve the field transistor branch ('metal oxide semiconductor field effect transistor', 'junction field effect transistor', 'bipolar transistor', 'ion sensitive field effect transistor', 'tunnel field effect transistor', 'high electron mobility transistor', 'graphene field effect transistor', 'organic field effect transistor', 'carbon nanotube field effect transistor')
  - Preferred label 'pericardial implant' was introduced to disambiguate concept 'pericardial patch' from 'cardiovascular patch'.
  - Other concepts added include: 'dashboard camera', 'wearable camera', 'wrist-worn device', 'wrist-worn accelerometer', 'MEMS accelerometer', 'rotation sensor', 'gyroscope sensor', 'navigation system', 'surveillance camera', 'clinical dashboard', 'Fourier transform infrared spectrometer'.
- Part of our maintenance efforts include addition and maintenance of GMDN (Global Medical Device Nomenclature) terms. 13 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.

Anatomy

19 new anatomical concepts were added

Procedures

144 new procedures added, 121 of which under 'assessment of humans' branch

Organisms

89 new organisms have been added, including 60 new SARS-CoV-2 related organisms. The most important are the newly emerged variants of SARS-CoV-2 Omicron, of which "Eris" and "Pirola" are the latest.

294 new synonyms were introduced, amongst which various culture collection IDs for type strains as well as name variations for organisms.

Society

- Brought together various "…participation" and "engagement"-concepts to also reside under "conation"-branch
- Update to some controversial Preferred labels and synonyms under "ancestry group".
- Additions of synonyms and 3 new concepts under "health care access".
- Addition of "patient visit"-branch.
- Bringing together various "good … practice"-concepts to also reside under "good practice standard".
- Bringing together various "… protocol"-concepts to also reside under "protocol".

Physical phenomena

- Revision and expansion of "noise"-branch for better distinction between noise in signal or noise as sound.