



# **SNOMED CT May 2024 International Edition - SNOMED International Release notes**



## Content Tracker

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## Table Of Contents

- [Introduction](#)(see page 6)
  - [Background](#)(see page 6)
  - [Purpose](#)(see page 6)
  - [Scope](#)(see page 6)
  - [Audience](#)(see page 7)
  - [Important Information](#)(see page 7)
- [Content Development Activity](#)(see page 8)
  - [Summary](#)(see page 8)
  - [Quality Initiative](#)(see page 9)
    - [Inactivation of 115221000|Specialized gonadal neoplasm \(morphologic abnormality\)| and Update Subtypes](#)(see page 9)
    - [Remodel Fetal Procedures](#)(see page 10)
  - [Body Structure](#)(see page 10)
    - [Update Upper/Lower Gastrointestinal Tract](#)(see page 10)
    - [Update Jejunal and Ileal wall](#)(see page 10)
    - [Update Duodenal Wall](#)(see page 10)
    - [Update Gastric Gland](#)(see page 11)
    - [Update Esophagus](#)(see page 11)
    - [SEP and Laterality Anatomy Reference Sets](#)(see page 11)
  - [Clinical Finding](#)(see page 11)
    - [Update 81854007|Alexander's disease \(disorder\)| and Subtypes](#)(see page 11)
  - [Procedure](#)(see page 12)



- Update Descendants of 277132007 |Therapeutic procedure (procedure)|(see page 12)
- Collaboration/Harmonization Agreements(see page 12)
  - Convergent Medical Terminology (CMT)(see page 12)
  - Orphanet(see page 13)
  - Cancer Synoptic Reporting(see page 13)
  - International League Against Epilepsy (ILAE)(see page 13)
  - Gravity Project(see page 13)
  - Social Care(see page 14)
- Internal Quality Improvement(see page 14)
  - Machine Readable Concept Model (MRCM) Changes(see page 14)
  - OWL Axiom Expressions for Annotation Properties(see page 15)
- SNOMED CT derived products(see page 15)
  - ICD-10 map(see page 15)
  - Content Development Activity Summary(see page 16)
  - SNOMED CT to OWL conversion and classification(see page 16)
- Technical notes(see page 17)
  - Known Issues(see page 17)
  - Resolved Issues(see page 18)
  - Technical updates(see page 20)
    - RF2 package format(see page 20)
    - Changes to the International Edition package format(see page 20)
    - Proposed change to the Annotations Refset format(see page 21)
    - Early visibility of impending changes in the upcoming 2024 Monthly International Edition releases(see page 21)
    - Document links(see page 22)





## **Introduction**

### **Background**

SNOMED CT terminology provides a common language that enables a consistent way of indexing, storing, retrieving, and aggregating clinical data across specialties and sites of care.

SNOMED International maintains the SNOMED CT technical design, the content architecture, the SNOMED CT content (includes the concepts table, the descriptions table, the relationships table, a history table, and ICD mappings), and related technical documentation.

### **Purpose**

This document provides a summarized description of the content changes included in the May 2024 release of SNOMED Clinical Terms<sup>®</sup> (SCT) International Edition.

It also includes notes detailing the known content or technical issues where the root cause is understood, the fix has been discussed and agreed to, but has yet to be implemented.

The SNOMED International release notes are available alongside the May 2024 International Edition.

### **Scope**

This document is written for the purpose described above and is not intended to provide details of the technical specifications for SNOMED CT or encompass every change made.



## Audience

The audience includes National Release Centers, WHO-FIC release centers, vendors of electronic health records, terminology developers and managers who wish to have an understanding of changes that have been incorporated into the May 2024 International Edition.

*Please note, you may have to register for a Confluence user account in order to access the links included in these release notes.*

## Important Information

### **NOTICE**

#### **UPCOMING CHANGES TO THE ANNOTATIONS REFSET FORMAT**

After discussions with the community, SNOMED International has agreed to make changes to the coverage of language in the Annotations refsets in the following way:

- The languageCode field was specified as the two characters of ISO-639-1 code for the language of the annotation text. The change is to include support for specifying dialect when it is applicable by adhering to RFC 5646, which allows the combination of two characters of ISO 639-1 code and two uppercase letters of country code (ISO 3166) separated by a hyphen.
- The "languageCode" changed to "languageDialectCode" in the field column.
- 1296895003|Language code (foundation metadata concept)| inactivated and replaced by 1304275002 |Language or dialect code (foundation metadata concept)|
- The changes apply to both the Member Annotations String Value Reference Set + Component Annotation String Value reference set

These changes will be implemented in one of the 2024 monthly International Edition releases, once the development work has been completed and tested. We will notify the community which release contains the changes once this has been confirmed.



## Content Development Activity

### Summary

Continuous quality improvement and enhancement of existing content is an ongoing process undertaken by SNOMED International in preparation for every release. The May 2024 International Edition has seen a continuation of the work driven by contributions from: Kaiser Permanente i.e. Convergent Medical Terminology (CMT), Global Medical Device Nomenclature Agency (GMDNA), Orphanet and other domain specific collaborations as well as requests received via the Content Request System (CRS).

Additionally quality improvement activities are advanced via project driven initiatives summarized below. Additional work items impacting every release are updates to the SNOMED CT derived maps such as ICD-10 and ICD-O; details are included in these release notes.

Information about editorial decisions may be found in the SNOMED CT Editorial Guide; mapping guidance for ICD-10 can be found [here](#).





## Quality Initiative

The Quality Initiative (QI) project is the implementation of the Quality Strategy. After a successful pilot project for the July 2018 Edition release, the next stage has been implemented for subsequent releases including May 2024.

Quality improvement tasks are being deployed to improve internal structural consistency and ensure compliance with editorial policy related to the stated modeling of content. Additionally, correction or addition of defining relationships is being carried out to accurately reflect current clinical knowledge and ensure the semantic reliability of descriptions associated with a concept.

### Inactivation of 115221000|Specialized gonadal neoplasm (morphologic abnormality)| and Update Subtypes

45 concepts in the subhierarchy of 115221000 |Specialized gonadal neoplasm (morphologic abnormality)| have been updated to align with the WHO Blue Book, 5th edition.

A new top level concept has been added 1332419003 |Sex cord-stromal tumor (morphologic abnormality)| and the subtypes arranged under this new concept, child concepts of 1332421008 |Malignant sex cord-stromal tumor (morphologic abnormality)|, new concept 1332424000 |Sex cord-stromal tumor of uncertain behavior (morphologic abnormality)| and existing 703597005 |Sex cord-stromal tumor, benign (morphologic abnormality)|.

Not all sex cord stromal tumors occur in gonadal cells. The grouper |Specialized gonadal neoplasm (morphologic abnormality)| has been inactivated as outdated (not in WHO Blue Book, 5th edition). Also, 1162600009 |Sex cord-gonadal stromal tumor of uncertain behavior (morphologic abnormality)| has been inactivated as duplicate to 1332424000 |Sex cord-stromal tumor of uncertain behavior (morphologic abnormality)| and the description added as a synonym.

23 subtypes of 237058000 |Sex cord tumor of ovary (disorder)| have been remodeled to proximal primitive parent.

Number of concepts edited (approx): 45



## Remodel Fetal Procedures

Fetoscopic procedures have been remodeled to align with the updated model for fetal procedures to include the occurrence of the fetal period.

Number of concepts edited (approx): 6

## Body Structure

### Update Upper/Lower Gastrointestinal Tract

The upper gastrointestinal tract usually refers to the structures from the mouth to the duodenum, whilst the lower gastrointestinal tract refers to all structures distal to the duodenojejunal flexure, i.e. small and large bowels to the anal verge - this was not entirely reflected in the anatomical hierarchy which has been edited to clarify these relationships. The digestive tract is distinguished from the gastrointestinal tract in that the former also includes the mouth and pharynx.

### Update Jejunal and Ileal wall

1332050005 |Structure of wall of jejunum (body structure)| and 1332052002 |Structure of wall of ileum (body structure)| have been added and assigned subtypes.

Number of concepts edited (approx): 8

### Update Duodenal Wall

1331939007 |Structure of wall of duodenum (body structure)| has been added to align with the hierarchies of other regions of the gastrointestinal tract. In addition other concepts have been moved under 'part of duodenum' to be consistent with other anatomical structures.



## Update Gastric Gland

1331936000 |Structure of gastric gland (body structure)| has been added and the glands of the stomach have been reorganized under this supertype associating all glands with the gastric mucosa in addition to their regional association.

## Update Esophagus

The regions of the esophagus have been rationalized. Specifically the lateral region of the esophagus has been restructured and the relationship between the cervical, thoracic and abdominal regions have been integrated with the upper, middle and lower third sections.

1306837006 |Structure of esophageal epithelium (body structure)| has been added with updates to hierarchical relationships of esophageal glands and mucosa.

360961009 |Structure of esophageal muscle (body structure)| includes both striated and smooth muscle, two new subtypes have been added 1306830008 |Structure of smooth muscle esophageal muscularis propria (body structure)| and 1306829003 |Structure of striated esophageal muscularis propria (body structure)|.

1306803003 |Structure of superior esophageal sphincter (body structure)| has been added and subtypes moved under this new concept.

## SEP and Laterality Anatomy Reference Sets

The release file for the lateralizable body structure reference set has been updated and validated.

The release file for the SEP reference set has been updated and validated.

## Clinical Finding

### Update 81854007|Alexander's disease (disorder)| and Subtypes|

After review, this hierarchy has been modified to align with the 2 class system:



- 81854007|Alexander's disease (disorder)| - FSN and PT updated 81854007 |Alexander disease (disorder)|.
- 1259106002|Alexander disease infantile form (disorder)| - FSN and PT updated 1259106002 |Alexander disease type I (disorder)|.
- New concept added - 1332388003 |Alexander disease type II (disorder)|.

The following concepts have been inactivated:

- 1259108001|Alexander disease juvenile form (disorder)| inactivated.
- 1259068001|Alexander disease adult form (disorder)| inactivated.

## Procedure

### Update Descendants of 277132007 |Therapeutic procedure (procedure)|

The immediate subtypes of <277132007 |Therapeutic procedure (procedure)|, excluding <<416608005 |Drug therapy (procedure)|, have been reviewed for appropriate presence or absence of the Has intent (attribute) according to the Editorial Guide.

A potential concept model for 416608005 |Drug therapy (procedure)| and for 276239002 |Therapy (regime/therapy)| requires further consultation. 277132007 |Therapeutic procedure (procedure)| will remain active until this work can be undertaken.

## Collaboration/Harmonization Agreements

### Convergent Medical Terminology (CMT)

253 new concepts have been added. The focus area was musculoskeletal with smaller additions to other domains such as cardiology, neurology and injuries.



## Orphanet

Working in collaboration with Orphanet (<http://www.orpha.net/consor/cgi-bin/index.php>), efforts are ongoing to update rare disease concepts in SNOMED CT to maintain alignment with Orphanet for the annual update of the SNOMED CT to Orphanet Maps.

All of the concepts added for the Orphanet project have been mapped to ICD-10.

## Cancer Synoptic Reporting

Cancer synoptic reports are used by many member countries to record pathology examination of cancer specimens including the College of American Pathologists (US and Canada), Royal College of Pathology (UK), Royal College of Pathology Australasia (Australia, New Zealand), PALGA (The Netherlands), Swedish Society of Pathology, and others.

For more information about this project, please see Cancer Synoptic Reporting Clinical Project Group

## International League Against Epilepsy (ILAE)

In line with approved harmonized terminology, this project is working on alignment including restructuring to update the hierarchy << 313307000 |Epileptic seizure (finding)|.

Further information about the project is available here

## Gravity Project

Five concepts related to housing have been added to the Clinical Finding hierarchy to support the Gravity work.



## Social Care

Sixteen concepts were promoted from national extensions to support Social Care for older people in relation to activities of daily living.

The primitive grouper concept 248536006 |Finding of functional performance and activity (finding) has been inactivated as part of the social care work. This inactivation will improve subsumption for content in the hierarchy.

## Internal Quality Improvement

### Machine Readable Concept Model (MRCM) Changes

Changes made to MRCM for the attribute in group cardinality for the May 2024 release:

- "characterizes"
- "precondition"
- "technique"
- "component"

These changes are being made to support the implementation of role group changes to observables and evaluation procedures planned for July 2024 release for further information please see [here](#).

The domain "administration via specific route (procedure)" has been removed and the attribute "route of administration" will be optional for the domain of procedure.

Future changes that are currently in progress can be viewed via the [MRCM Daily Build Browser](#)

Please see [early visibility](#) for future planned changes to MRCM.



## OWL Axiom Expressions for Annotation Properties

The new annotation properties are represented in the OWL expression axiom refset as follows:

- The 1295447006 |Annotation attribute (attribute)| is correctly represented as subClassOf
  - 01300ccd-d1d7-417d-a70a-f688e72c4d8c 20231201 1 900000000000012004 733073007 1295447006 SubClassOf(:1295447006 :246061005)
- All subconcepts of 1295447006 |Annotation attribute (attribute)| are represented as "SubAnnotationPropertyOf", instead of "subClassOf" as they previously were
  - e6cd65fe-cb81-4db4-9ac4-040dc74fce28 20231201 1 900000000000012004 733073007 1295448001 SubClassOf(:1295448001 :1295447006)
  - 3729ce47-a96e-4dc7-9eff-83c34740c414 20231201 1 900000000000012004 733073007 1295449009 SubClassOf(:1295449009 :1295447006)

These axiom updates are published in the March 2024 International Edition release. The authoring tool has been updated to ensure all new subconcepts of 1295447006 |Annotation attribute (attribute)| are represented as SubAnnotationPropertyOf(). Other tools will be updated to correctly consume the updated syntax. This will be carefully tested and rolled out over the next few months.

## SNOMED CT derived products

### ICD-10 map

The SNOMED CT to the International Statistical Classification of Diseases and Related Health Problems, Tenth Revision (© World Health Organization 1994) 2016 Version map (SNOMED CT to ICD-10 Map) is included in the SNOMED CT International Edition as a Baseline. The SNOMED CT to ICD-10 Map was created to support the epidemiological, statistical and administrative reporting needs of SNOMED International member countries and WHO Collaborating Centers.

The SNOMED CT to ICD-10 Map is released in Release Format 2 (RF2) only. It is located in the file der2\_iisssccRefset\_ExtendedMapFull\_INT\_20200731.txt, which is in the Map folder under Refset, in each of the three RF2 Release Type folders.

The SNOMED CT to ICD-10 Map is released as Refset 447562003 |SNOMED CT to ICD-10 extended map (foundation metadata concept).



The ICD-10 Mapping Technical Guide (including exemplars) is hosted here <https://confluence.ihtsdotools.org/display/DOCICD10>

## Content Development Activity Summary

The map is a directed set of relationships from SNOMED CT source concepts to ICD-10 target classification codes. The SNOMED CT source domains for the MAP are limited to subtypes of 404684003 |clinical finding|, 272379006 |event| and 243796009 |situation with explicit context|. The target classification codes are ICD-10 2016 release.

Mapped content for May 2024

The map provided for the May 2024 International Edition has been updated, and now represents a complete map from SNOMED CT International Edition to ICD-10 2016 version.

- 446 newly authored concepts have been added and mapped.
- The SNOMED to ICD-O (morphology) map has 6 additional concepts added as a result of the ICD-O 3.2 review or added due to CRS requests.

We would welcome feedback on any issues that users of the map may detect when using the map. Issues should be submitted via [mapping@snomed.org](mailto:mapping@snomed.org)

## SNOMED CT to OWL conversion and classification

The repository containing the toolkit enabling simple SNOMED CT to OWL conversion and classification can be found here, including documentation on its use: <https://github.com/IHTSDO/snomed-owl-toolkit>

Please contact SNOMED International at [support@snomed.org](mailto:support@snomed.org) if you would like to provide any feedback on ways to extend and improve the new toolkit.





## Technical notes

### Known Issues

Known Issues are content or technical issues where the root cause is understood, and the resolution has been discussed and agreed but has yet to be implemented. This can be due to a number of reasons, from lack of time within the new monthly editing cycles, to the risk of impact to the stability of SNOMED CT if the fix were to be deployed at that stage in the Product lifecycle.

For the current SNOMED CT International edition, the following Known Issues were identified, and agreed to be resolved in future editing cycles:

Key	Summary	Description
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No issues found



## Resolved Issues

Resolved issues are Known Issues which were not fixed as part of the previous release lifecycle, but which have now been resolved in the latest release. They can also be issues found during testing of the current release, which were resolved before the final deployment of the Production release. Finally they can be issues which were reported or found during the testing phase, but which have been closed without any action taken.

The Resolved Issues for the current SNOMED CT International edition can be found here:



Key	Summary	Description	Resolved
ISRS-2307	International Edition releases, 2024-05-01, ARCHIVE_STRUCTUREAL, 64d2ee43-f611-3e87-9774-3da2064ac39d, 2024-04-09T08:21:51	<p>RF2 Archive Structural test failed for file der2_sscRefset_MRCMAAttributeRangeSnapshot_INT_20240501.txt</p> <p>Total number of failures: 1</p> <p>Report URL: <a href="https://prod-rvf.ihtsdotools.org/api/result/1712652020844?storageLocation=international/international_edition_releases/2024-04-09T08:21:51">https://prod-rvf.ihtsdotools.org/api/result/1712652020844?storageLocation=international/international_edition_releases/2024-04-09T08:21:51</a></p> <p>First 1 failures:</p> <ul style="list-style-type: none"> <li>• { "conceptId": "", "conceptFsn": null, "detail": "Structural test FileSizeTest for file der2_sscRefset_MRCMAAttributeRangeSnapshot_INT_20240501.txt failed at row-column 0-0 with error: expected 'The file der2_sscRefset_MRCMAAttributeRangeSnapshot_INT_20240501.txt must be equal to or greater in size than previous release file der2_sscRefset_MRCMAAttributeRangeSnapshot_INT_20240401.txt' but got 'The file der2_sscRefset_MRCMAAttributeRangeSnapshot_INT_20240501.txt (55 KB) is less than previous release file der2_sscRefset_MRCMAAttributeRangeSnapshot_INT_20240401.txt (55 KB)'" , "componentId": null, "fullComponent": null }</li> </ul> <p>RESOLUTION: Confirmed to be a false positive due to the changes being intentional - the snapshot files get slightly smaller as a result of the changes, but this is due to the nature of the MRCM files. The only action required is for the validation assertion to be tweaked to ensure that these type of valid changes are not highlighted going forward.</p>	2024-Apr-09

1 issue



## Technical updates

### RF2 package format

The RF2 package convention dictates that all relevant files are included, regardless of whether or not there is content to be included in each release. Therefore, the package contains a mixture of files which contain both header rows and content data, and files that (intentionally) include only header records. The reason that these "empty" files are included in the package is to draw a clear distinction between:

1. ...files that have been deprecated (and therefore removed from the package completely), due to the content no longer being relevant to RF2 in future releases
2. ...files that happen to contain no data in this particular release (and are therefore included in the package with just a header record), but are still relevant to RF2, and could therefore contain content in future releases.

This allows users to easily distinguish between the two scenarios, as otherwise if files in option 2 were left out of the package it could be interpreted as an error, rather than an intentional lack of content in that release.

### Changes to the International Edition package format

In line with the new implementation of Annotations, two new refsets have been added to the International Edition Release package, from December 2023 onwards:

- der2\_scsRefset\_ComponentAnnotationStringValueSnapshot\_INT\_20240101.txt
- der2\_sscsRefset\_MemberAnnotationStringValueSnapshot\_INT\_20240101.txt

These refset files are empty for the May 2024 release, whilst content is authored in future editing cycles. However, they will then be populated with Annotations data from one of the future 2024 International Edition releases onwards (date to be confirmed). These improvements were introduced in the December 2023 International Edition release, and will be used in all future International Edition releases until further notice.

***If you have any feedback on the format of these new files please provide it URGENTLY, as changes can potentially be made now (subject to relevant approvals), before the files are populated.***

## Proposed change to the Annotations Refset format

### **i NOTICE**

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After discussions with the community, SNOMED International has agreed to make changes to the coverage of language in the Annotations refsets in the following way:

- The languageCode field was specified as the two characters of ISO-639-1 code for the language of the annotation text. The change is to include support for specifying dialect when it is applicable by adhering to RFC 5646, which allows the combination of two characters of ISO 639-1 code and two uppercase letters of country code (ISO 3166) separated by a hyphen.
- The "languageCode" to be changed to "languageDialectCode" in the field column.
- 1296895003|Language code (foundation metadata concept)| to be inactivated and replaced by 1304275002 |Language or dialect code (foundation metadata concept)|
- The changes will apply to both the Member Annotations String Value Reference Set + Component Annotation String Value reference set

These changes will be implemented in one of the 2024 monthly International Edition releases, once the development work has been completed and tested. We will notify the community which release contains the changes once this has been confirmed.

## Early visibility of impending changes in the upcoming 2024 Monthly International Edition releases

Please see the early visibility Confluence page for details of forthcoming changes.



## Document links

All links provide information that is correct and current at the time of this Release. Updated versions may be available at a later date, but if so these will need to be requested from the relevant SNOMED International teams.

**NOTE:** To access any of the links in the pdf document, please visit the Release Notes @ <https://confluence.ihtsdotools.org/display/RMT/SNOMED+CT+May+2024+International+Edition+-+SNOMED+International+Release+notes>(see page 2)