

D.1 Stated and Inferred Definitions - Examples

The appendix contains an extended version of [2.3.1 Stated and Inferred Concept Definitions](#) supported by more detailed examples.

Stated View of Concept Definitions

[SNOMED CT concepts](#) are defined by assertions made by [SNOMED CT authors](#). The [concept definitions](#) asserted by [SNOMED CT authors](#) are known as the [stated view](#).

The [stated view](#) is a representation of [concept definitions](#) consisting only of assertions made or revised by [SNOMED CT authors](#).

Notes

- In contrast to the [inferred view](#), the *stated view* does not include inferences generated by applying a [description logic classifier](#).
- The *stated view* is represented by [axioms](#), that conform to the [OWL functional syntax](#). These [axioms](#) are distributed in the [OWL axiom reference set file](#)

Description Logic Classification

A [description logic classifier](#) can apply logical rules to the [stated view](#) to create inferences. The end result of this process is an [inferred view](#) of [concept definitions](#).

Inferred Views of Concept Definitions

The [inferred view](#) is a representation of [concept definitions](#) that is logically derived by applying a [description logic classifier](#) to the [stated view](#).

Notes

- Different *inferred views* can be derived from the same [stated view](#) by applying different rules that selectively exclude some types of assertions.
- Different *inferred views* may be [semantically equivalent](#) to one another provided that assertions are only excluded if they are redundant (i.e. can be *inferred* from assertions that are included). However, in some cases, an *inferred view* may not completely represent the [concept definition](#) but may serve a specific purpose.

Illustration of the Effect of Classification

[Table D.1-1](#) shows the [stated view](#) of the definitions of [710785000 | Laparoscopic repair of hernia|](#). Compare this with the [inferred view](#) of the same concept in [Table D.1-2](#) and you can see that the single [supertype](#) concept [71388002 | Procedure|](#) been replaced by four [supertype](#) concepts in the [inferred view](#).

The [classifier](#) has compared the definition of [710785000 | Laparoscopic repair of hernia|](#) with the concept definitions shown in [Table D.1-3](#) and determined that [710785000 | Laparoscopic repair of hernia|](#) is a subtype of all these concepts.

In fact, the classifier will also have found several other supertypes but the inferred view distributed in the [relationship file](#) only includes proximal supertypes (parents). Other supertype ancestors are excluded from the file because they are redundant ¹.

Table D.1-1: Stated view of the definition of |Laparoscopic repair of hernia|

Concept	Stated View of Concept Definition
710785000 Laparoscopic repair of hernia 	<pre>=== 71388002 Procedure : { 363700003 Direct morphology = 414402003 Hernial opening (morphologic abnormality) , 425391005 Using access device = 86174004 Laparoscope, device , 260686004 Method = 257903006 Repair - action }</pre>

Table D.1-2: Inferred view of the definition of the concept |Laparoscopic repair of hernia|

Concept	Inferred View of Concept Definition
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710785000 Laparoscopic repair of hernia	<pre> === 363321000 Surgical repair procedure by device + 50465008 Hernia repair + 51316009 Laparoscopic procedure + 264274002 Endoscopic operation : { 363700003 Direct morphology = 414402003 Hernial opening (morphologic abnormality) , 425391005 Using access device = 86174004 Laparoscope, device , 260686004 Method = 257903006 Repair - action } </pre>
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Table D.1-3: Stated views of the four supertype concepts in the inferred |Laparoscopic repair of hernia|

Concept	Stated View of Concept Definition
363321000 Surgical repair procedure by device	<pre> === 4365001 Surgical repair : { 405815000 Procedure device = 49062001 Device , 260686004 Method = 257903006 Repair - action } </pre>
50465008 Hernia repair	<pre> === 4365001 Surgical repair : { 363700003 Direct morphology = 414402003 Hernial opening (morphologic abnormality) , 260686004 Method = 257903006 Repair - action } </pre>
<div>4365001 Surgical repair </div> <div>A supertype in the two definitions above</div>	<pre> === 128927009 Procedure by method : 260686004 Method = 257903006 Repair - action </pre>
51316009 Laparoscopic procedure	<pre> === 363687006 Endoscopic procedure : 425391005 Using access device = 86174004 Laparoscope, device </pre>
<div>363687006 Endoscopic procedure </div> <div>A supertype in the definition above</div>	<pre> === 71388002 Procedure : { 425391005 Using access device = 37270008 Endoscope, device , 260686004 Method = 129284003 Surgical action } </pre>
264274002 Endoscopic operation	<pre> === 71388002 Procedure : { 425391005 Using access device = 37270008 Endoscope, device , 260686004 Method = 129284003 Surgical action } </pre>

Footnotes

RefNotes

- Supertype ancestor relationships are not included in the inferred view distributed in the [relationship file](#) because they do not contribute directly to the concept definition and can be reached transitively.