

6.5 Expression With Nested Refinements

It is also possible to nest [expressions](#), one inside the other. Any valid [expression](#) may be enclosed in a pair of brackets, and included as the value of an attribute in another [expression](#). For example, the following [expression](#) describes a medication product that has a single dose form, which is both a spray and a suspension:

```
373873005 |Pharmaceutical / biologic product| :  
411116001 |Has dose form| = ( 421720008 |Spray dose form| + 7946007 |Drug suspension| )
```

In the example above, note the use of round brackets (i.e. "()") to identify a nested [expression](#), as opposed to braces (i.e. "{ }"), which is used to identify attribute groups.

The following examples show how complex [expressions](#) may be build up from simple ones, a layer at a time. This first [expression](#) describes a left hip structure:

```
24136001 |Hip joint structure| :  
272741003 |Laterality| = 7771000 |Left|
```

This next expression uses the "left hip" [expression](#) above to describe a procedure to replace it:

```
397956004 |Prosthetic arthroplasty of the hip| :  
363704007 |Procedure site| = ( 24136001 |Hip joint structure| :  
272741003 |Laterality| = 7771000 |Left| )
```

Applying a further grouped [refinement](#) to the above describes a procedure to replace a left hip by inserting a prosthesis. Note that this example mixes an ungrouped qualification and a grouped qualification. Where this is done, the [canonical representation](#) of the expression includes all ungrouped attributes before the grouped ones (see [Terminology Services Guide](#) for more details). Please also note that in the previous version of this standard a comma was not permitted between the last ungrouped attribute and the first attribute group – however this comma is now optional to avoid unexpected syntax errors.

```
397956004 |Prosthetic arthroplasty of the hip| :  
405814001 |Procedure site - indirect| = ( 24136001 |Hip joint structure| : 272741003 |Laterality| = 7771000 |Left| ),  
{ 363699004 |Direct device| = 304120007 |Total hip replacement prosthesis| ,  
260686004 |Method| = 425362007 |Surgical insertion - action| }
```

Finally, the above [expression](#) may be included within a contextual wrapper, to describe a procedure that has been performed on a patient to replace a left hip by inserting a prosthesis.

```
243796009 |Situation with explicit context| :  
{ 408730004 |Procedure context| = 385658003 |Done| ,  
408731000 |Temporal context| = 410512000 |Current or specified| ,  
408732007 |Subject relationship context| = 410604004 |Subject of record| ,  
363589002 |Associated procedure| =  
( 397956004 |Prosthetic arthroplasty of the hip| :  
405814001 |Procedure site - indirect| = ( 24136001 |Hip joint structure| :  
272741003 |Laterality| = 7771000 |Left| )  
{ 363699004 |Direct device| = 304120007 |Total hip replacement prosthesis| ,  
260686004 |Method| = 425362007 |Surgical insertion - action| } ) } }
```