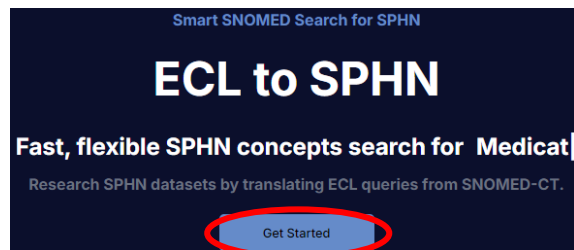


## S4 Tool User Guide

The purpose of this document is to give a brief introduction to the Smart SNOMED Search for SPHN (S4) tool and to describe how it is intended to be used. The following step by step user guide can be followed to quickly learn the basic functionalities of the tool.

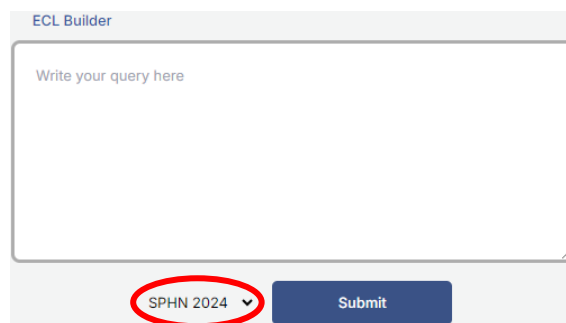
### 1. HOME SCREEN



Click on “Get Started” to reach the translation tool. Clicking on “SPHN” in the top right corner will bring you to the SPHN homepage for further information.

### 2. MAIN TOOL PAGE

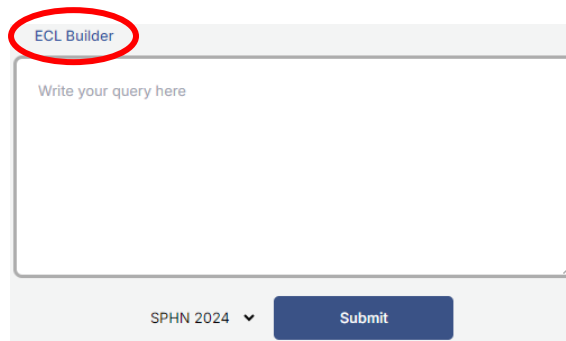
On the main page, you will find the search box on the left side of the screen. If you are already comfortable with SNOMED CT, you can go ahead and write out the ECL expression you wish to use to query the system, or simply copy/paste the code that you wish to use. Once that is done, you can choose which version of the SPHN dataset you wish to query by clicking on the “SPHN 2024” button under the search box.



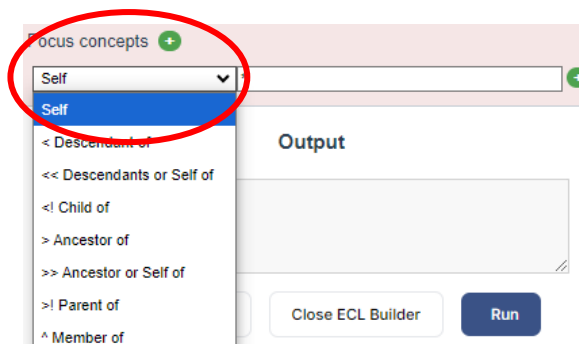
The 2023 and 2024 versions are available. You can then click on the “Submit” button under the search box to get your results. Jump to part 5 for the results section.

### 3. ECL BUILDER

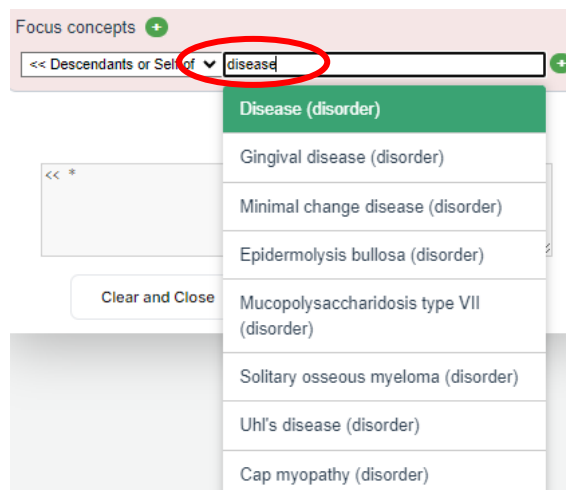
If you are not yet comfortable with writing out your own SNOMED CT expression, you can click on the “ECL Builder” button on the top left corner of the search box.



This will bring up the ECL builder, which is very similar to one present in the [SNOMED Browser](#) you may be familiar with. Once in the ECL Builder, the focus concept, which is the part of the expression which is being refined, is entered in the first line. First, choose whether you want to refine only the concept chosen, or also its descendants, ancestors, or other options in the left side scroll down menu.



Then, start typing the concept you wish to refine (focus concept) in the free text bar on the right side. As you type, options will begin to appear, again in the same way as it does on the SNOMED Browser. Choose your concept from the drop-down list.



If you only want to search for a single concept, you can go ahead and the “Run” button on the bottom right corner of the ECL Builder. Jump to part 5 for the results section.

Focus concepts +

Self ▼ \*

Output

\*

Clear and Close Close ECL Builder Run

#### 4. REFINEMENTS

Then, you can choose to refine this concept with some attributes to create an expression. To do this, click on the green “+” button on the right of the search bar to bring up the refinement options.

Focus concepts +

Self ▼ \* +

Output

\*

Clear and Close Close ECL Builder Run

The refinement options work the same way as the concept search. You must first choose which attribute to use on the top line (1.), then which value the attribute takes on the bottom line (2.).

Focus concepts +

Self ▼ \* +

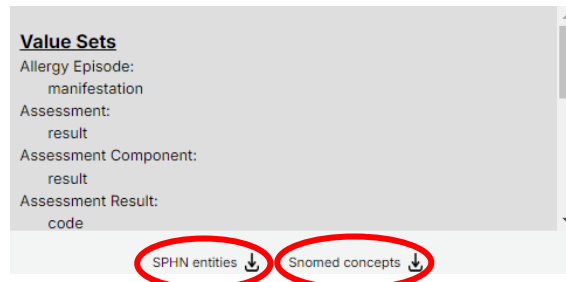
With attribute << Descendants or Self of 1.

= << Descendants or Self of 2.

As you choose attributes and values, the expression will write itself out in the text box under the “Output” heading. Once this is done, you can add more attributes or press “Run” to execute the query.

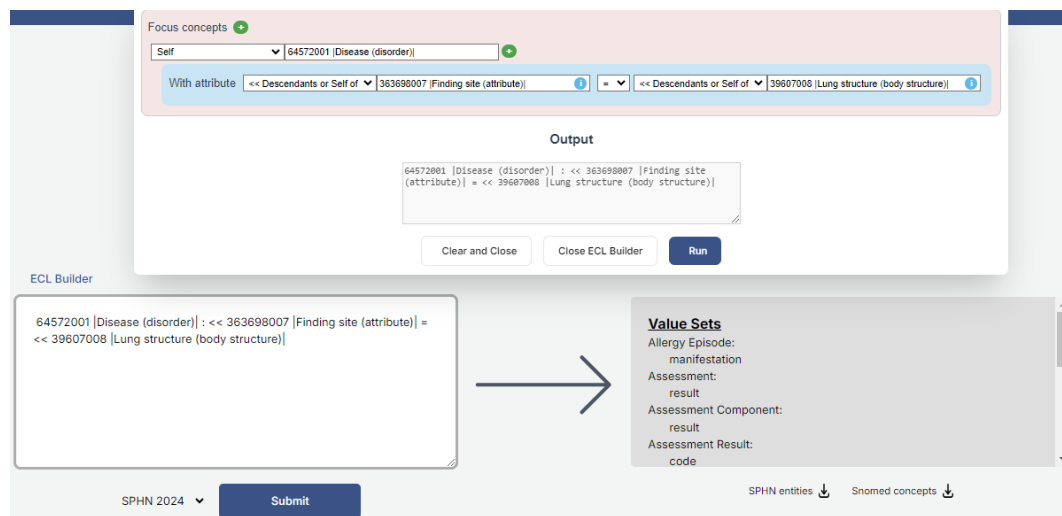
#### 5. SEARCH RESULTS

Once the search has been run, the results will appear in the box on the right side of the main screen. You can use the scroll bar on the right-hand side to see all the results. They are separated into three categories: SPHN concepts, SPHN concept value sets, and SNOMED CT concepts. Results will vary depending on the query. To view these results in a tabular format, you can conveniently click the buttons below the results box to download either the SPHN concepts and/or value sets or the SNOMED CT concepts (or both) in CSV format.



## 6. COMPLETE EXAMPLE

The example given during this tutorial, an expression to search for diseases which affect the lung, looks like this when fully shown on the home screen:



Thank you for following this guide, we hope it has been helpful in helping you use the S4 tool and that this will help you in your SPHN related research.

The S4 Team