

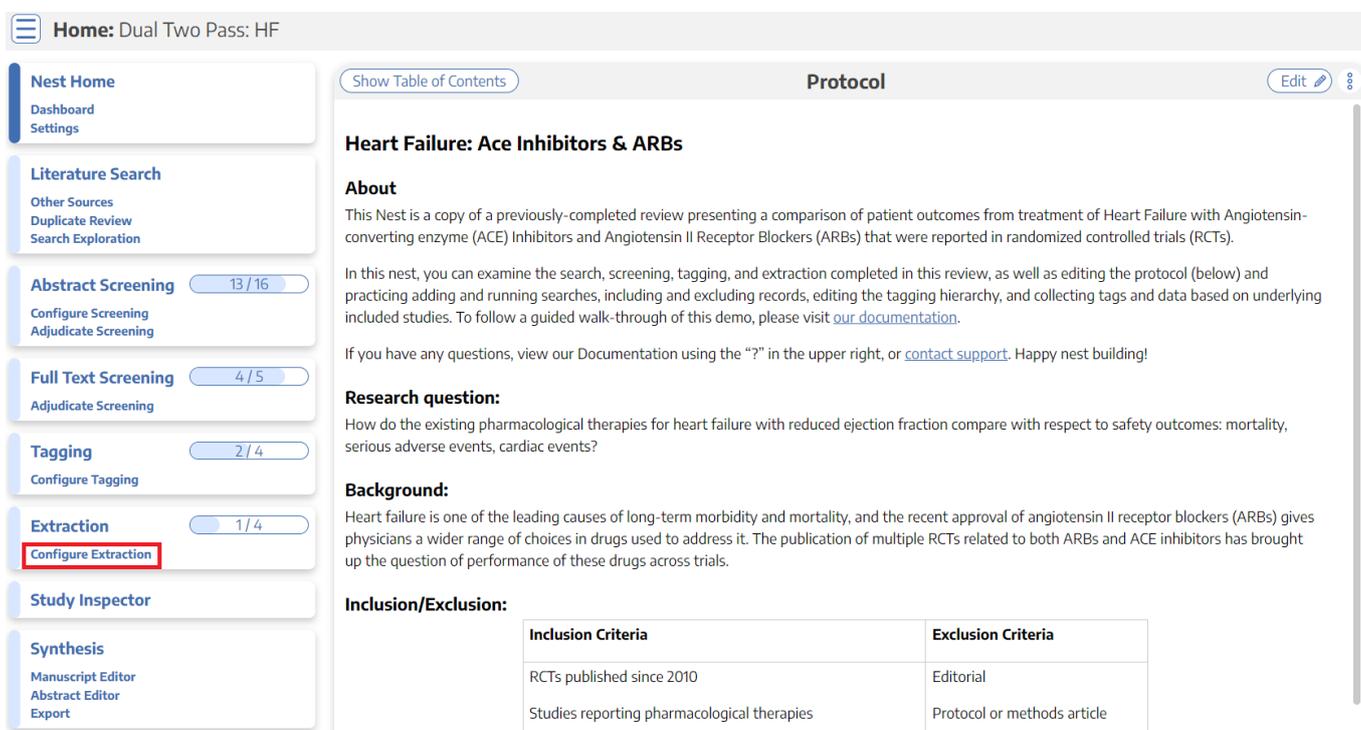
Configure Intervention and Data Elements

In order to Extract, you first need to Configure Interventions and Data Elements, which you do from the Configure Study Tags page in order to reuse the structure you built during the Tagging stage.

Interventions correspond to the types of therapies/treatments/medications etc. that were compared across the articles and appear as purple in the Tagging Hierarchy. **Data Elements** refer to all other relevant data from the article that will be extracted and appear as gold in the Tagging Hierarchy.

Note: Only one hierarchy can be designated as your Intervention hierarchy, but any node in your hierarchy can be configured as a Data Element. There is no requirement, however, that every tag be configured as a data element!

Where does Extraction Configuration take place?



Extraction can be configured “Configure Extraction” in the Extraction module. *Note:* this page is the same as the “Configure Tagging” page, but with the extraction section automatically open.

Extraction configuration is integrated into tagging configuration in order to use your existing hierarchy to structure your Interventions and Data Elements.

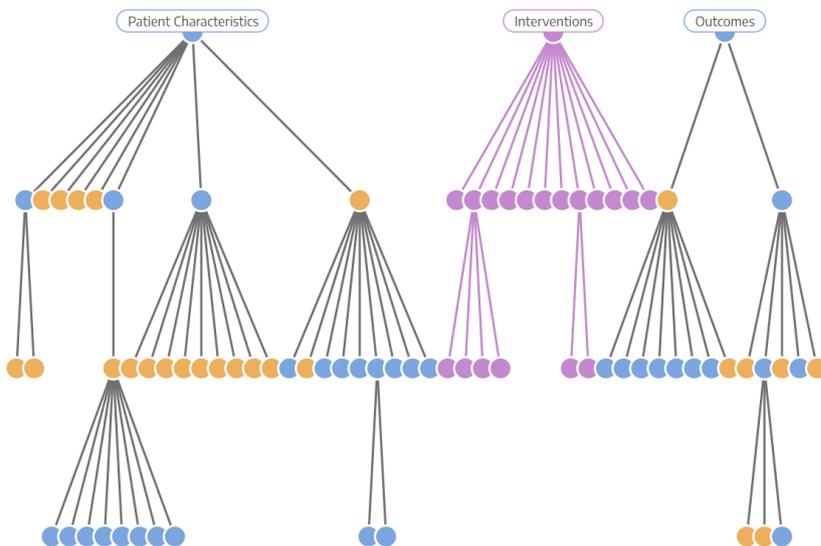
Configuring Interventions

1. Open the Extraction Configuration panel

If it isn't already, expand the "Extraction Configuration" dropdown button on the right.

Data Element Mode: Click on a tag to set a data element.

Create New Tag (+) Import Hierarchy (🔄) Search by Name (v)



Extraction Configuration (v)

Data Elements Interventions

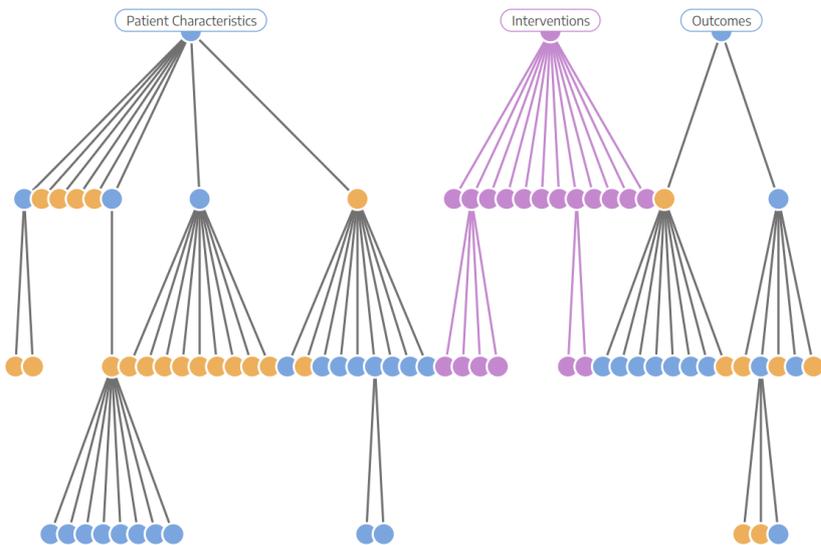
Name	Data Type	
ACE Inhibitors		(+)
Acute Kidney Injury		(+)
Age		(+)
Aldosterone Antagonists		(+)
All causes death	Dichotomous	(-)
Angina Pectoris		(+)
Angioedema		(+)
ARBs		(+)
ARNI		(+)
Atrial Fibrillation		(+)
Beta-Blockers		(+)
BMI	Continuous	(-)
Cardiac glycosides		(+)
Cardiac resynchronization therapy		(+)
Cardiovascular Death	Dichotomous	(-)
Change in KCCQ Clinical Summary Score		(+)
Clinical Outcomes		(+)
Clinical Values		(+)

Click a row to configure

2. Toggle to Interventions

Intervention Mode: Click on a tag to set intervention root tag.

Create New Tag (+) Import Hierarchy (🔄) Search by Name (v)



Extraction Configuration (v)

Data Elements **Interventions**

Intervention Hierarchy

(v) Interventions (Clear Root)

- Placebo
- (v) Sacubtil/valsartan
 - Combination: Sacubtil/Valsartan AND...
 - Pre Discharge sacubtil/valsarta
 - Post-discharge sacubtil/valsarta
 - rhBNP and sacubtil/valsartan
 - Empagliflozin
 - Enalapril
 - Eplerenone
 - Dapagliflozin
 - Sotagliflozin
- (v) Valsartan
 - Valsartan BID
 - Valsartan QD
 - Omecamtiv mecarbil
 - Vericiguat
 - Ivabradine
 - rhBNP (recombinant human BNP)

3. Click on the "Interventions" Root Tag

The Intervention list on the right corresponds to all of the tags underneath the "Intervention" root tag

Intervention Mode: Click on a tag to set intervention root tag.

Create New Tag (+) Import Hierarchy (🔗) Search by Name (v)

Extraction Configuration

Data Elements Interventions

Intervention Hierarchy

- Interventions (Clear Root)
- Placebo
- Sacubtril/valsartan
 - Combination: Sacubtril/Valsartan AND...
 - Pre Discharge sacubtril/valsarta
 - Post-discharge sacubtril/valsarta
 - rhBNP and sacubtril/valsartan
 - Empagliflozin
 - Enalapril
 - Eplerenone
 - Dapagliflozin
 - Sotagliflozin
- Valsartan
 - Valsartan BID
 - Valsartan QD
 - Omecamtiv mecarbil
 - Vericiguat
 - Ivabradine
 - rhBNP (recombinant human BNP)

Intervention tags can easily be changed. For example, by simply opening the Interventions tab and clicking "Implants", all tags under "Implants" are now Interventions for your Extraction.

Intervention Mode: Click on a tag to set intervention root tag.

Create New Tag (+) Import Hierarchy (🔗) Search by Name (v)

Extraction Configuration

Data Elements Interventions

Intervention Hierarchy

- Implants (Clear Root)
- Implantable cardioverter-defibrillator
- Cardiac resynchronization therapy

This is important to note because if you accidentally leave the incorrect hierarchy as the Interventions and then you go to extract, these incorrect Interventions options (for instance, “Implants” tags in the example above) will appear under the Intervention drop-down menu instead of the “Interventions” tags

Luckily, this is easily fixed: just navigate back to the Data Elements Menu within the Tagging Hierarchy, click on the “Interventions” root tag, and viola, your Interventions are Interventions once again!

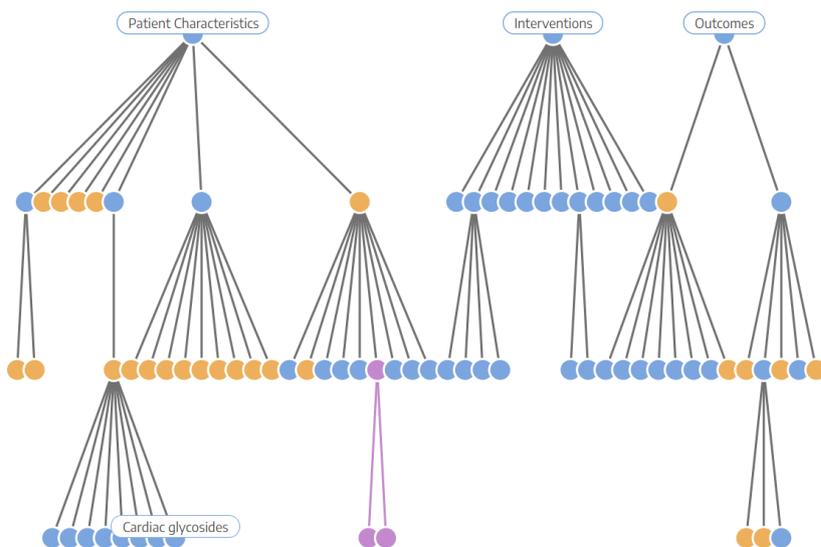
Configuring Data Elements

1. View the Data Elements Menu

Navigate to the Data Elements Menu and click “Data Elements”

Data Element Mode: Click on a tag to set a data element.

Create New Tag (+) Import Hierarchy (🔄) Search by Name (v)



Extraction Configuration

Data Elements (highlighted) Interventions

Name	Data Type	⊕
ACE Inhibitors		⊕
Acute Kidney Injury		⊕
Age		⊕
Aldosterone Antagonists		⊕
All causes death	Dichotomous	⊖
Angina Pectoris		⊕
Angioedema		⊕
ARBs		⊕
ARNI		⊕
Atrial Fibrillation		⊕
Beta-Blockers		⊕
BMI	Continuous	⊖
Cardiac glycosides		⊕
Cardiac resynchronization therapy		⊕
Cardiovascular Death	Dichotomous	⊖
Change in KCCQ Clinical Summary Score		⊕
Clinical Outcomes		⊕
Clinical Values		⊕

Click a row to configure

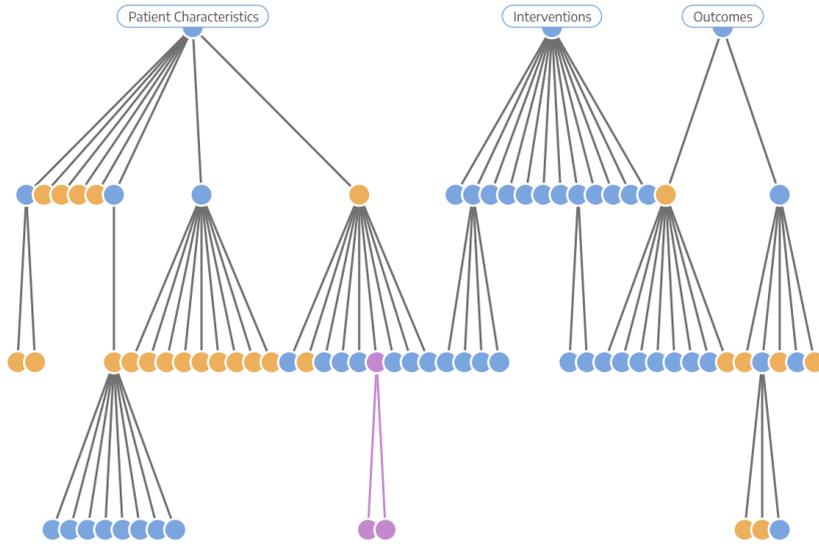
The data elements tab will show you a list of all tags, which you can select either in the list or by clicking on the tag node.

2. Turn tag into Data Element

Click the plus sign next to a tag to turn the tag into a Data Element

Data Element Mode: Click on a tag to set a data element.

Create New Tag Import Hierarchy Search by Name



Extraction Configuration		
Data Elements		Interventions
Name	Data Type	🔗
ACE Inhibitors		+
Acute Kidney Injury		+
Age		+
Aldosterone Antagonists		+
All causes death	Dichotomous	-
Angina Pectoris		+
Angioedema		+
ARBs		+
ARNI		+
Atrial Fibrillation		+
Beta-Blockers		+
BMI	Continuous	-
Cardiac glycosides		+
Cardiac resynchronization therapy		+
Cardiovascular Death	Dichotomous	-
Change in KCCQ Clinical Summary Score		+
Clinical Outcomes		+
Clinical Values		+

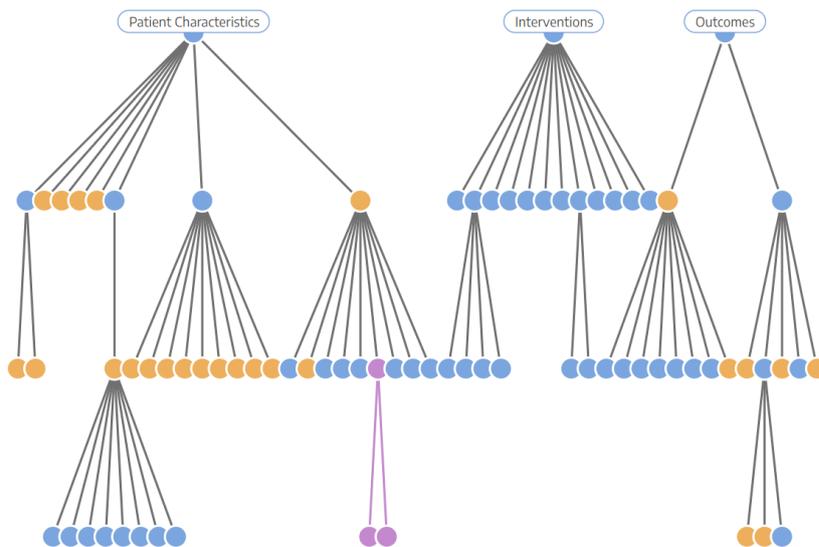
Click a row to configure

3. Select the Data Type

Continuous, Dichotomous, or Categorical (Mandatory)

Data Element Mode: Click on a tag to set a data element.

Create New Tag (+) Import Hierarchy (🔄) Search by Name (v)



Extraction Configuration

Data Elements Interventions

Name	Data Type	⊕
ACE Inhibitors		⊕
Acute Kidney Injury		⊕
Age		⊕
Aldosterone Antagonists		⊕
All causes death	Dichotomous	⊖
Angina Pectoris		⊕
Angioedema		⊕
ARBs		⊕
ARNI		⊕
Atrial Fibrillation		⊕
Beta-Blockers		⊕
BMI	Continuous	⊖
Cardiac glycosides		⊕
Cardiac resynchronization		⊕
rhBNP and sacubitril/valsartan		⊕

Data Type: (v)

- Continuous
- Dichotomous
- Categorical

Depending on the data type, different inputs will populate. For example, if a data element is categorical, you will be able to specify the different categories.

4. Select the Expected Timepoint

Baseline or Outcome - Choose the Expected Timepoint based on whether the data was collected at Baseline or as an Outcome (Mandatory)

Data Type: *

Continuous

Expected Timepoint: *

Baseline

Outcome

Units:

Unit

Central Tendency Measure *

Close Save

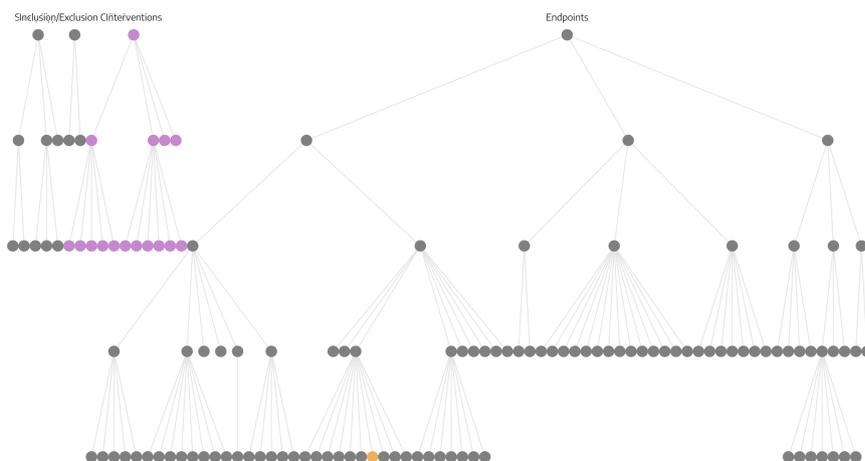
If the data element can be both a Baseline and an Outcome, choose Baseline.

5. Select the Direction

Higher Better or Lower Better (if applicable) - For example, the Data Element is "Mortality", Lower Better would most likely be appropriate

Data Element Mode: Click on a tag to set a data element.

Create New Tag Import Hierarchy Search by Name



Extraction Configuration

Data Elements Interventions

Name	Data Type	
16 week Mortality	Dichotomous	⊖
180 Day Mortality		⊕
246 Week Mortality		⊕
30 day Mortality		⊕
60 day Mortality		⊕
7 day Mortality		⊕
8 Week Mortality		⊕
90 day mortality		⊕
Active Cohort Study (prospective)		⊕
Active Non-Randomized Trial		⊕
Active Randomized Controlled Trial		⊕
Active Trials		⊕

180 Day Mortality

Data Type: *

Continuous

Expected Timepoint: *

Outcome

Direction:

Higher Better

Lower Better

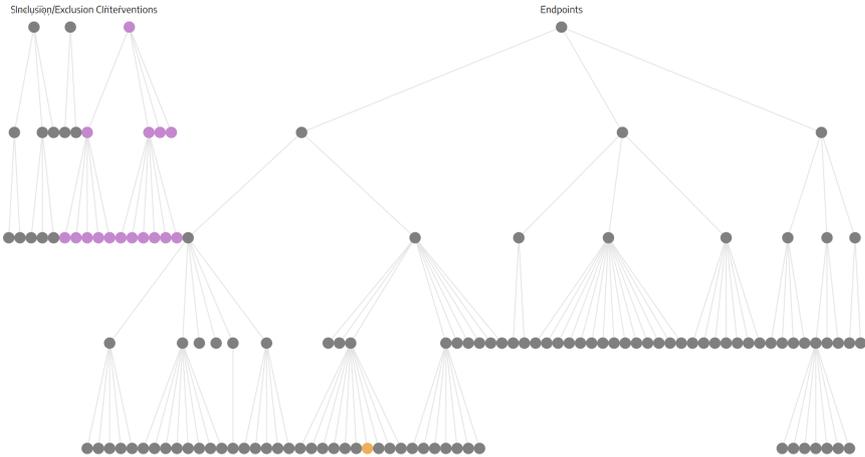
Close Save

6. Add the Measurement Units

Example: Mintues, mL, kg (if applicable)

Data Element Mode: Click on a tag to set a data element.

Create New Tag (+) Import Hierarchy (🔗) Search by Name (🔍)



Extraction Configuration

Data Elements Interventions

Name	Data Type	
16 week Mortality	Dichotomous	⊖
180 Day Mortality		⊕
246 Week Mortality		⊕
30 day Mortality		⊕
60 day Mortality		⊕
7 day Mortality		⊕
8 Week Mortality		⊕
90 day mortality		⊕
Active Cohort Study (prospective)		⊕
Active Non-Randomized Trial		⊕
Active Randomized Controlled Trial		⊕
Active Trials		⊕

180 Day Mortality

Data Type: Continuous

Expected Timepoint: Outcome

Direction: Lower Better

Units: Unit

Central Tendency Measure

Close Save

7. Add the Central Tendency Measurement

Mean or Median (Mandatory for continuous variables) - After choosing Mean or Median, it will also ask you about "Dispersion Measure" (SD for Mean; IQR or Range for Median)

Data Element Mode: Click on a tag to set a data element.

The screenshot shows the 'Extraction Configuration' interface. On the left is a hierarchical tree diagram with nodes and colored dots. On the right is the 'Extraction Configuration' panel for '180 Day Mortality'. The panel includes a table of data elements, a 'Data Type' dropdown set to 'Continuous', an 'Expected Timepoint' dropdown set to 'Outcome', a 'Direction' dropdown set to 'Lower Better', and a 'Units' dropdown. A 'Central Tendency Measure' dropdown is highlighted with a red box, showing options for 'Mean', 'Median', and 'Close'. A 'Save' button is visible at the bottom right of the configuration panel.

8. Click Save

Confirm that the configuration worked based on whether the node turned gold, and move on to configure any other Data Elements of interest

How many Data Elements should you create?

When configuring your Data Elements, it is vital to recognize that **every Data Element you configure must be:**

1. collected as a metric across all studies, adding time to your project, and
2. presented on Synthesis, potentially confusing readers as to which Data Elements are vital to your review/meta-analysis.

It is also important to understand that, unlike with primary studies, multivariate comparisons are limited in meta-analytical research by the aggregated nature of the data. Thus, all Data Elements should be of direct interest to compare among Interventions of interest.

There is no exactly 'correct' number of Data Elements. However, remember that: the minimum # of metrics collected = # of study arms * # of Data Elements configured, and this can increase if multiple timepoints are collected.

Therefore, the following **suggested guidelines** may help estimate the appropriate number of Data Elements and project timelines:

- **1-3 Data Elements:** <5 min per study, highly focused Synthesis. May provide too little context for key outcomes, but optimizes project timelines & ease of quality control.
- **4-7 Data Elements:** 5-10 min per study, focused Synthesis. Likely represents the primary & secondary outcomes of interest, as well as high-value background data.
- **8-10 Data Elements:** 10-20 min per study, detailed Synthesis. Likely represents all primary & secondary outcomes of interest, subsidiary endpoints, and any background data of interest. Data sparsity may be a problem. **Recommended that you keep your review to this size or smaller!**
- **10-20 Data Elements:** Up to an hour per study, intensively detailed Synthesis. Likely represents most data elements reported in underlying studies; may represent an unfocused research question. Should be reserved only for extensive reviews where the endpoints of interest are undefined, or review types that require going beyond conventional methods.
- **20+ Data Elements:** Several hours per study, potentially overwhelming Synthesis. Can introduce not only data sparsity but collection quality concerns. May reflect an unfocused research question or unconventional review type. Recommended that such reviews be split into smaller pieces if they must be undertaken.

These are suggestions only, but can have major impact on the quality, focus, and timeliness of projects. If you have any questions on this guidance, feel free to [Contact Support!](#)

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