

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?

The screenshot displays the 'Common Data Elements - Embolization for cSDH' configuration page. The sidebar on the left includes navigation options: 'Literature Search' (1/1), 'Screening' (96/137), 'Tagging' (96/137), 'Extraction' (0/13), and 'Study Inspector'. The 'Extraction' option is highlighted. The main content area is titled 'Protocol' and contains the following sections:

- Common Data Elements: Prospective studies of embolizing cSDH**
- Background:** Embolization of the middle meningeal artery (MMA) has emerged as a therapeutic option (either alone or with surgery) to treat cSDH. Multiple trials of embolization are active, but they are not collecting "harmonized" (i.e. comparable) data elements, limiting the ability to compare results across trials.
- Objective:** To collect, classify, and count the Data Elements from all published prospective studies of MMA embolization along with all active trials of MMA embolization.
- Inclusion/Exclusion:**

Inclusion Criteria	Exclusion Criteria
Prospective trials of MMA embolization (published or active)	Case reports, case series, retrospective studies
Must report embolization of the MMA either alone or in combination with surgery	Animal studies
Must report clinical outcomes	Editorials, correspondence, opinion articles
	Methods articles
	Guidelines articles or news/updates
	Studies not reporting interventions or outcomes of interest
- Interventions:**
 - MMA embolization alone - broken down into Liquid Embolic, Particles, Glue/BCA, or Other
 - MMA embolization with surgery - broken down into Liquid Embolic, Particles, Glue/BCA, or Other
 - Comparator therapies
- Outcomes of Interest:**

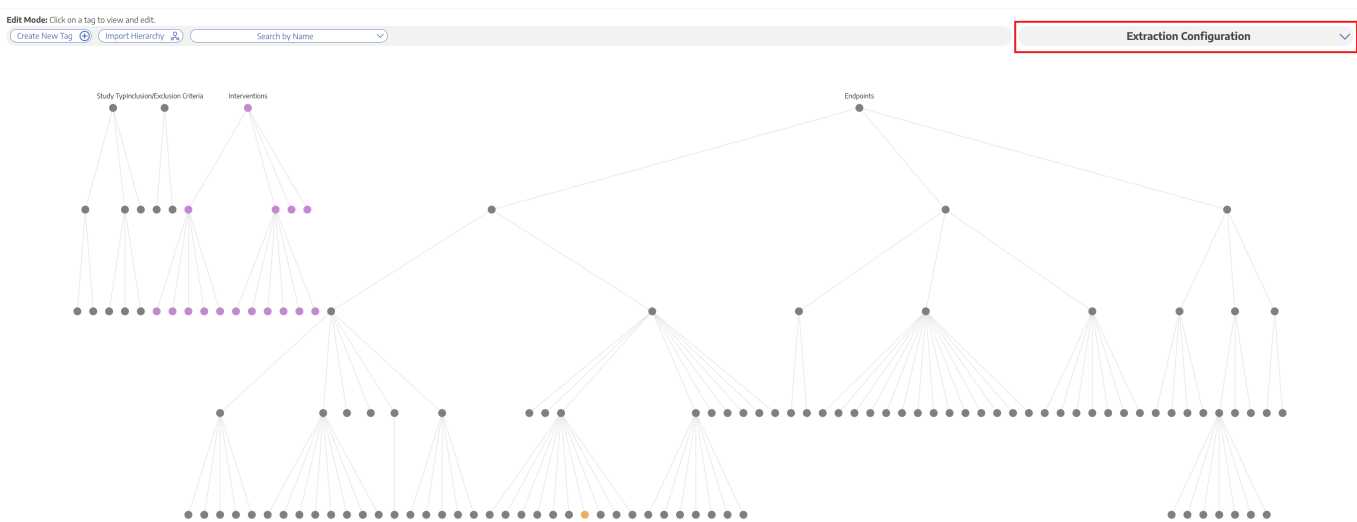
Safety Endpoints	Efficacy Endpoints
Tag all endpoints once per study, whether primary or secondary	Tag all endpoints once per study, whether primary or secondary

Extraction can be configured in two places: in the same location that Tags are configured or under "Configure Extraction" in the Extraction module. Extraction configuration is integrated into tagging configuration in order to use your existing hierarchy to structure your Interventions and Data Elements.

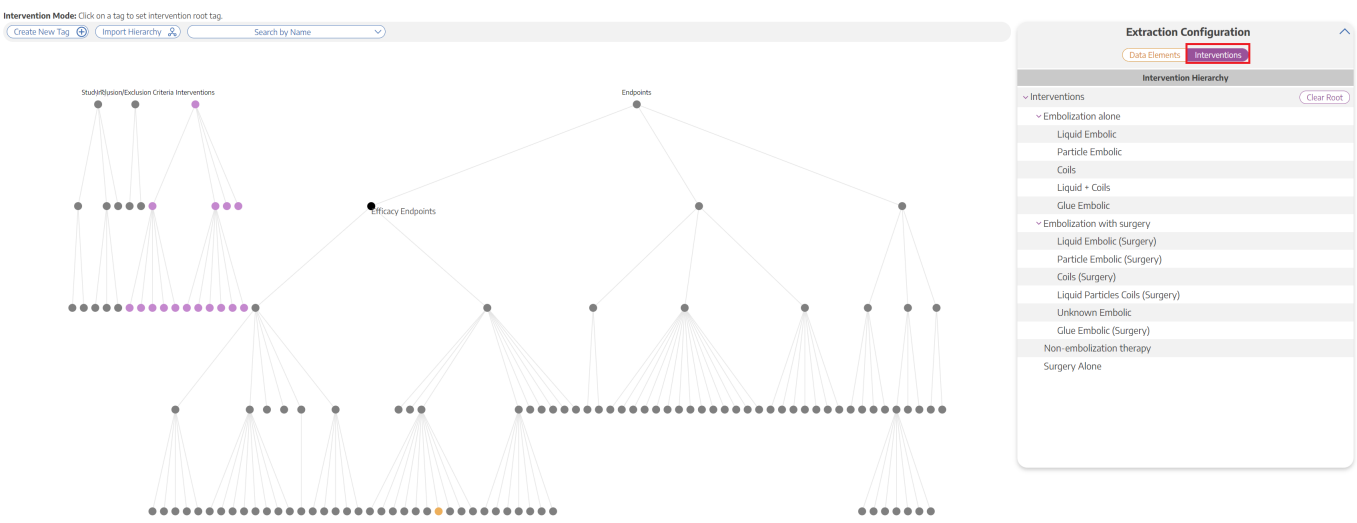
Configuring Interventions

1. Open the Extraction Configuration panel

Expand the "Extraction Configuration" dropdown button on the right.



2. Toggle to Interventions



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

Extraction Configuration

Data Elements Interventions

Intervention Hierarchy

Clear Root

Interventions

Embolization alone

Liquid Embolic

Particle Embolic

Coils

Liquid + Coils

Glue Embolic

Embolization with surgery

Liquid Embolic (Surgery)

Particle Embolic (Surgery)

Coils (Surgery)

Liquid Particles Coils (Surgery)

Unknown Embolic

Glue Embolic (Surgery)

Non-embolization therapy

Surgery Alone

Intervention tags can easily be changed. For example, by simply opening the Interventions tab and clicking “Endpoints”, all tags under “Endpoints” 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

Extraction Configuration

Data Elements Interventions

Intervention Hierarchy

Clear Root

Endpoints

Efficacy Endpoints

Imaging Outcomes

cSDH Width

cSDH Width at 2 weeks

cSDH Width at 6 weeks

cSDH width at 90 days

cSDH Width at 6 months

Width >10mm at 6 months

cSDH Volume

cSDH Volume at 90 days

cSDH Volume at 180 days

Volume Reduction at 60 days

Volume Reduction at 8 weeks

Volume Reduction at 16 weeks

Volume Reduction at 24 Weeks

Percent Volume Change at 6 months

Percent Volume Change at date of First Progression

Midline Shift

Radiographic Resolution

Post-operative imaging methods description, if present

See Sampled Excerpts

cSDH Size

Reduction of cSDH Size at 90 days

Change in SDH size at 6 months

Change in SDH size at 1 day

Change in SDH size at 2 weeks

Change in SDH size at 6 weeks

Clinical Outcomes

Surgical Rescue/Reintervention

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, “Endpoints” tags in the example above) will appear under the Intervention drop-down menu instead of the “Interventions” tags

Last update: 2023/01/23 23:57 [wiki:autolit:extraction:configure](https://wiki.nested-knowledge.com/doku.php?id=wiki:autolit:extraction:configure) <https://wiki.nested-knowledge.com/doku.php?id=wiki:autolit:extraction:configure&rev=1674518273>

[illegible]

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

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		⊕
(ADL) Activities of Daily Living		⊕
Artery Dissection		⊕
Assessments/Surveys		⊕
Barthel Index		⊕
Change in SDH size at 1 day		⊕
Change in SDH size at 2 weeks		⊕
Change in SDH size at 6 months		⊕
Change in SDH size at 6 weeks		⊕
Clinical Outcomes		⊕
CNS Infection		⊕
Coils		⊕
Coils (Surgery)		⊕
Common Exclusion Criteria		⊕
Common Inclusion Criteria		⊕
Completed but Unpublished Trial		⊕
Complications reporting		⊕
Contrast agent allergy or encephalopathy		⊕

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](#)

Extraction Configuration

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		⊖
(ADL) Activities of Daily Living		⊖
Artery Dissection		⊖
Assessments/Surveys		⊖
Barthel Index		⊖
Change in SDH size at 1 day		⊖
Change in SDH size at 2 weeks		⊖
Change in SDH size at 6 months		⊖
Change in SDH size at 6 weeks		⊖
Clinical Outcomes		⊖
CNS Infection		⊖
Coils		⊖
Coils (Surgery)		⊖
Common Exclusion Criteria		⊖
Common Inclusion Criteria		⊖
Completed but Unpublished Trial		⊖
Complications reporting		⊖
Contrast agent allergy or encephalopathy		⊖

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

Study/Study/Exclusion CriteInterventions

Endpoints

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		⊕
(ADL) Activities of Daily Living		⊕
Artery Dissection		⊕
Assessments/Surveys		⊕
180 Day Mortality		

Data Type:

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

Create New Tag

Import Hierarchy

Search by Name

Study/Exclusion Interventions

Endpoints

Extraction Configuration

Data Elements

Interventions

Name	Data Type	
16 week Mortality	Dichotomous	⊖
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246 Week Mortality		⊕
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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 *

Baseline

Outcome

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

Study/Exclusion Interventions

Endpoints

Extraction Configuration

Data Elements

Interventions

Name	Data Type	
16 week Mortality	Dichotomous	⊖
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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

Study/Study/Exclusion Clite/Interventions

Endpoints

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

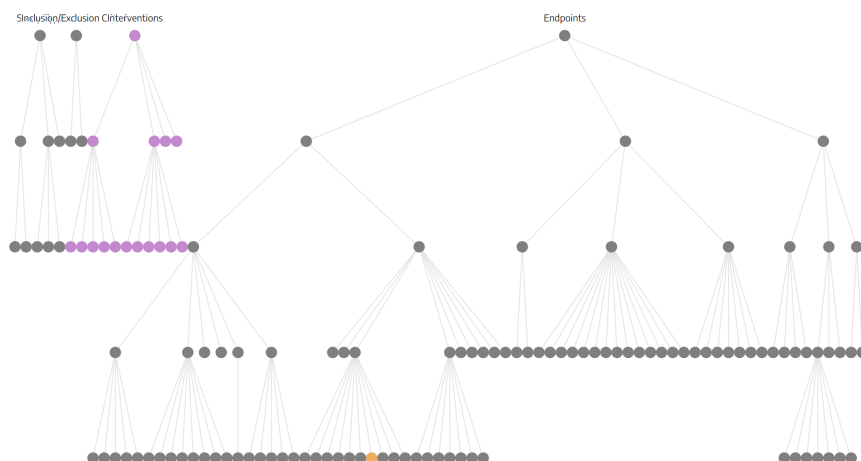
Mean or Median (Mandatory for continuous variables) - After choosing Mean or Median, it will also ask you about “Dispersion Measure” (SD for Mean; IQR or Range for Median)

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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		⊕

180 Day Mortality

Data Type: Continuous

Expected Timepoint: Outcome

Direction: Lower Better

Units: Unit

Central Tendency Measure: Mean

Mean

Median

Close Save

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 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, remembering that the # of Data Elements collected = # of studies * # of Data Elements configured, 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.
- **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

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