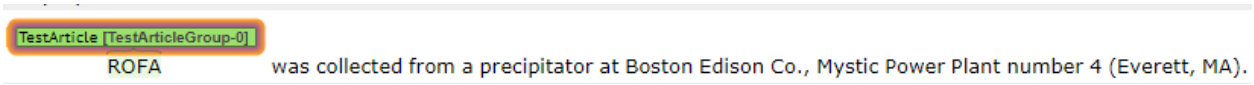
Annotation Guidelines for Grouping Experimental Methods and Endpoints Identification

GROUP ANNOTATION INSTRUCTIONS

This guideline describes how specific mentions from the first phase of annotation should be grouped together. Grouping a document consists of labeling select text with a group tag that indicates the type of group the specific mention belongs to (test article group 0 as in the example below).



Phase II grouping will group related information together (Test Article, Endpoint, Animal).

If a mention was not tagged in Phase 1, do not go back and add a mention tag in Phase 2. Group together existing mention tags. This may result in some groups missing a mention component (e.g. Animal Group may have species, sex but no strain tag).

ANNOTATING GROUPS

Table 2. Types of Groups

Groups	Annotation Tag	Description
TestArticleGroup	TestArticle	Test article or exposure evaluated
	Vehicle	The solution the test article is in
	TestArticlePurity	Purity of test article
	TestArticleVerification	Verification of purity of test article
AnimalGroup	Species	The species names
	Strain	The strain names
	Sex	Sex of the animal group(s)
	Group name (if needed)	Animal group name if multi-generational

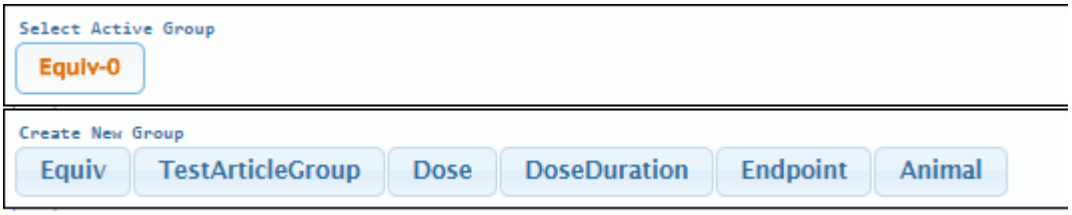
ANNOTATION FEATURES FOR GROUPS WITHIN BRAT

BRAT tool group tagging instructions:

1. Click any of the group type buttons at the bottom of the page to create a new group
2. Select the active group by clicking the group name in the top row of buttons
3. Alt-click labels to toggle membership to the current group
4. Group interface is always present at the bottom of the page
5. Alt-click a group name to delete that group (must be empty)
6. Spans in the currently selected group are highlighted in purple

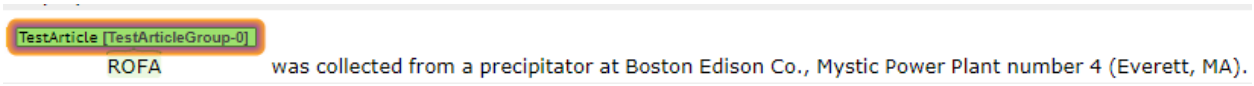
To create a new group – click one of the Create New Group Buttons

New created group will automatically be selected:



Alt+ click: To create a new Group Tag, hold down the alt key and click the tag that you would like to assign as the group.

In this case, ROFA (which was tagged as Test Article) was assigned to the TestArticleGroup-0 via an alt +click.



To un-assign the group just alt + click again. Multiple groups also may be assigned to one tag.

Note: Group numbering begins with 0, 1, 2….

GUIDELINES FOR ANNOTATION OF GROUPS

1. Equivalence Groups Tag

Equivalence Groups should be grouped first. These tags equate similar words/ concepts into one group.

- Equivalence Groups should only be included if the two terms are interchangeable, abbreviations, or symbols (BPA and bisphenol A; hours and hr). If you can "replace" the term within the sentence without changing the meaning then it would be an equivalent term; otherwise it is not considered equivalent.

  For example if a study provided the chemical description Bisphenol A, but also referenced the chemical as BPA later on in the text, these two "test articles" would be grouped as an Equivalence Group. Only tag one instance of "BPA" and "bisphenol A" in the equivalence group, even if it is mentioned multiple times throughout the study. If a study were to only mention BPA throughout the paper, then no equivalence group is necessary.

Mentions may be double tagged for equivalence group.

Different words to describe the same Dose Route should also be tagged in an equivalence group (e.g. “inject”, “injected”, “injection”). Abbreviations like “GD” and “gestational day” should be tagged into an Equivalence Group.

Equivalence groups can be tagged for any of the tags. Tags that typically may have equivalence groups are Test Articles, Species, Sex (female, maternal, dams, etc.), Time Units, and Dose Route.

Notes:

- Equivalence Groups should be created any time there is different text that expresses the same concept (ex. Rat, rats, and rat should be all tagged to the same Equivalence Group).
- Capitalization does NOT matters, so Mice and mice do NOT need to be tagged to an Equivalence Group.
- DO NOT tag Endpoints and Endpoint Unit of Measure into Equivalence Groups.
- Do not tag "oral" and "gavage" Dose Routes into Equivalent Groups. Similarly, "injection" or other general terms should not be tagged to more specific Dose Route mentions as an Equivalent Group.
- Do not add Test Article mentions that are general names that encompass multiple Test Articles into an Equivalent Group with specific test articles. (e.g non-steroidal anti-inflammatory drugs (NSAIDs) is a general term that encompasses multiple drugs).

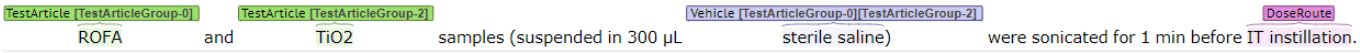
2. Test Article Groups Tag

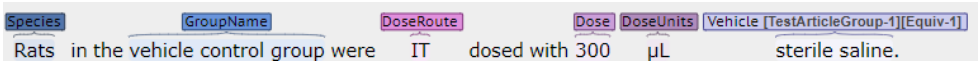
Test Article Groups group together the Test Articles, Vehicle, Test Article Purity and Test Article Verification of different exposure scenarios.

For example:

- TestArticleGroup-0 captures chemical X exposure
- TestArticleGroup-1 captures chemical Y exposure

A Vehicle only exposure will be tagged as a separate Test Article Group.

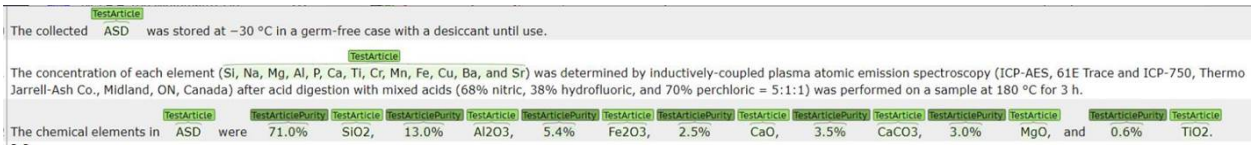




Note:

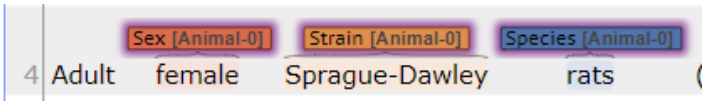
- If there is a Vehicle only exposure group, and there are no other information (Test Article Purity, Test Article Verification) it should STILL be tagged in its own Test Article Group.
- Combination exposures should not be tagged as a Test Article Group.
- If there is no Vehicle or Test Article Purity or Test Article Verification tags for a particular Test Article, still tag the Test Article by itself to a Test Article Group.

- If the study describes components of a Test Article, do not include the components in the Test Article Group, only the main Test Article.



3. Animal Groups

Animal Groups group together the Species, Strain, Sex, and Group Name (for multi-generational studies) of different exposure populations.



Only tag one mention of each species, Strain, Sex into an Animal Group. Cell lines should not be tagged in Animal Groups.

NOTE:

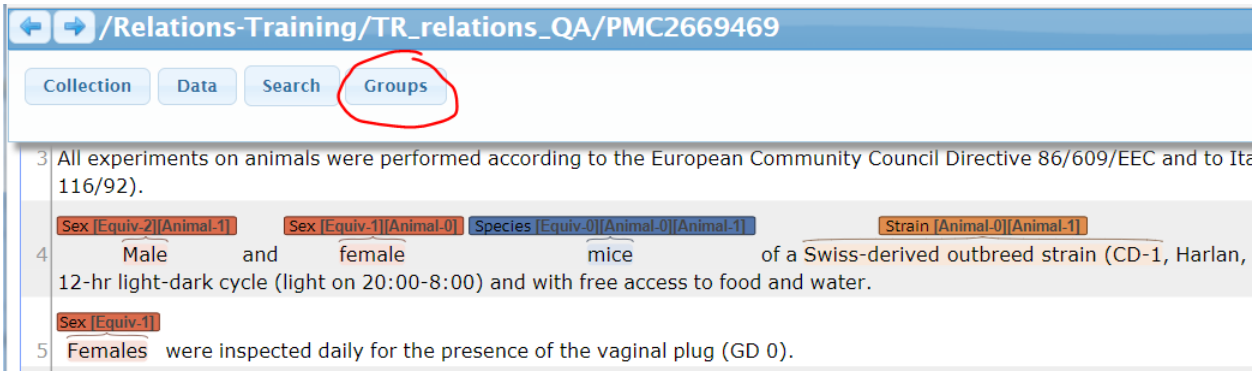
- Different generations (pregnant dams, and then offspring) are considered different Animal Groups and should be tagged as separate Animal Groups. This may require you to include Group Name as part of the Animal Group.

- For studies that crossbred strains, include only the final Strain used in the experiment in the Animal Group.

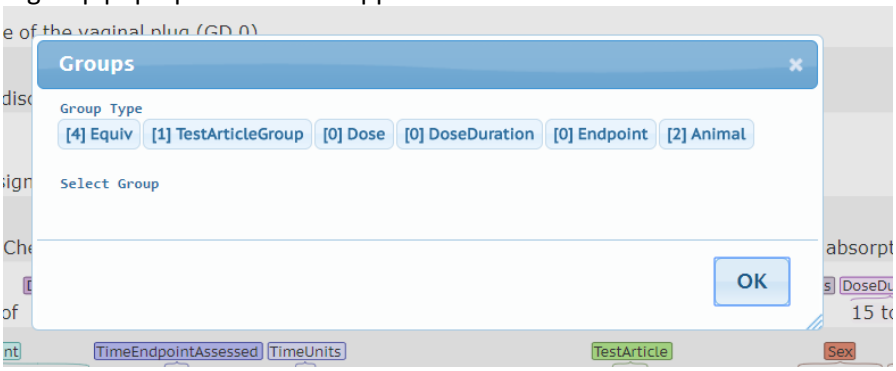
INSTRUCTIONS FOR QA

When performing the QA review, open the QA version of the study in one browser window. Then open Annotator 1's version of the study in another browser window.

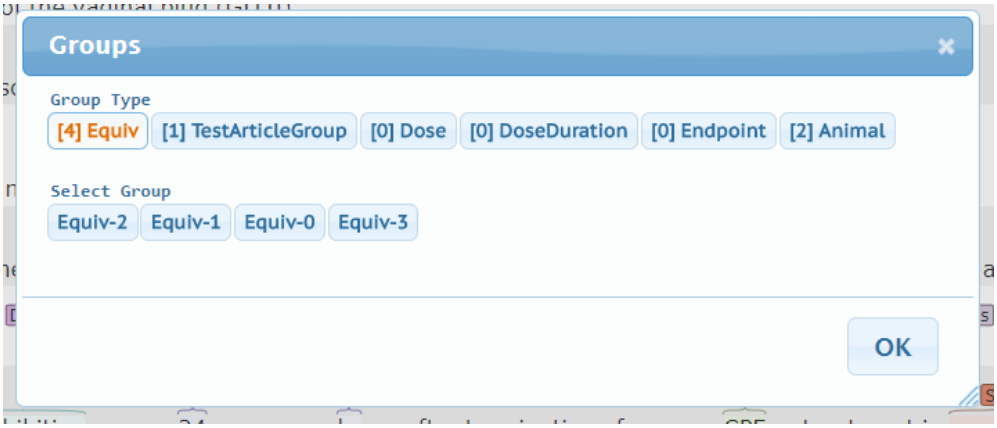
Move your mouse to the top of the browser window until the ribbon appears. Select "Groups".



A group pop-up window will appear



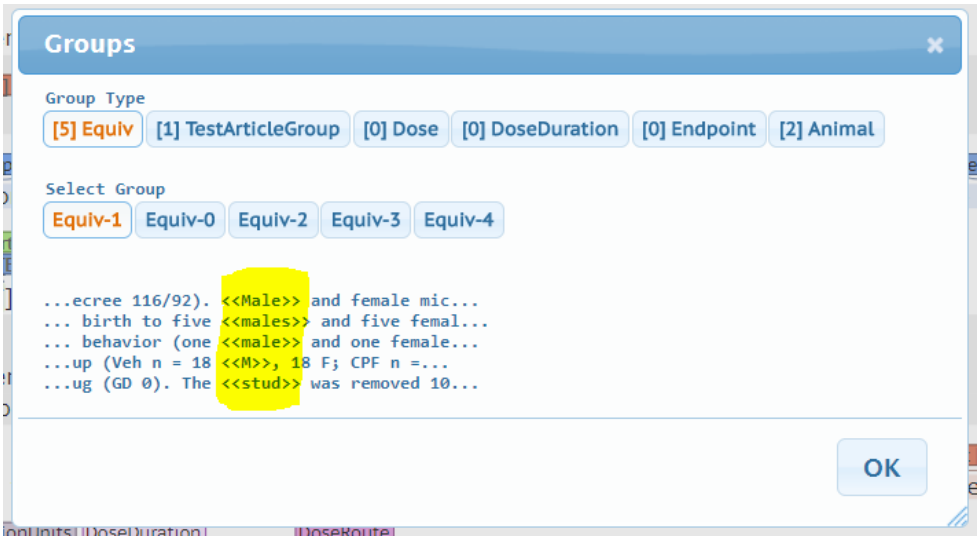
Select a group type (e.g. Equiv or TestArticleGroup).



Then select a specific group within the type. It will show all the mentions that have been tagged to that particular group (Highlighted below). Compare the mentions associated with the groups between Annotator1 and the QA version. NOTE: the group name may not be the same , as in this example the equivalence group with 'male' mentions is Equiv-2 in the QA version and Equiv-1 in Annotator 1's version. This does not matter, as long as the QA version has the correct mentions within the group.

QA's version

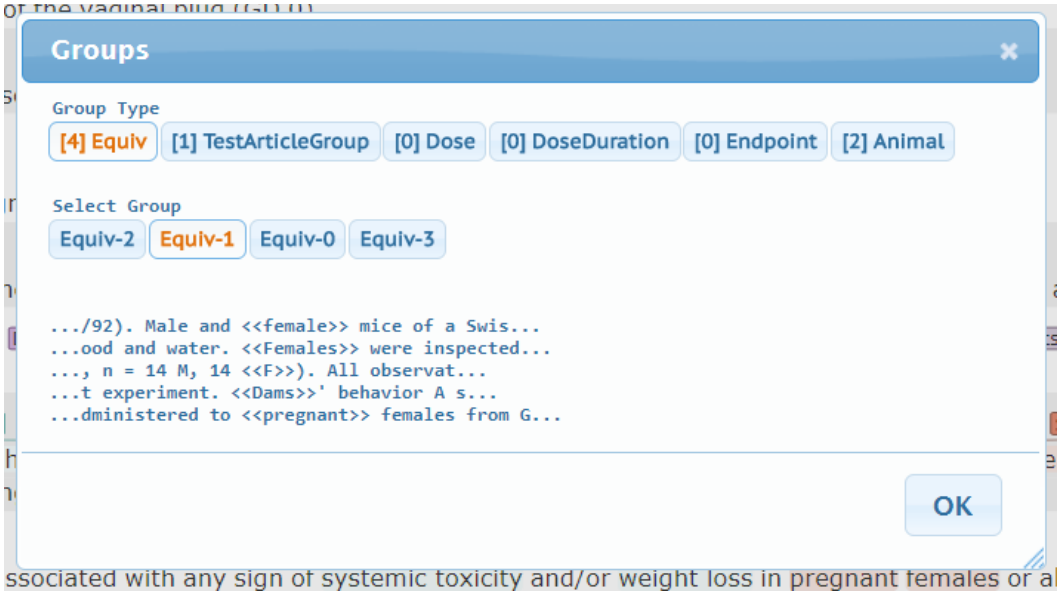
Annotator 1's version



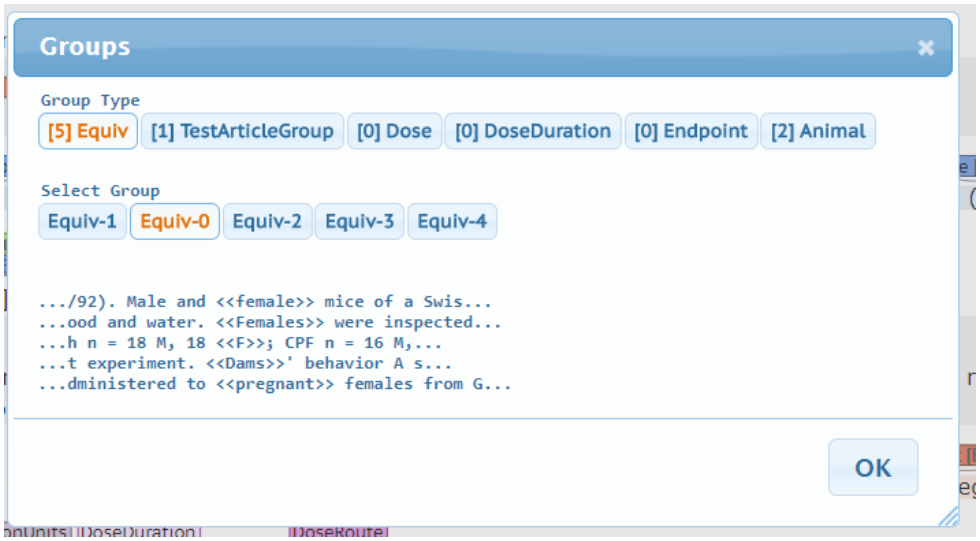
In this example, the only difference is annotator 1 included a lowercase "male" that was not included in the QA version. Since capitalization does not matter, the QA version does not need to add the "male" mention.

For the next group, the two versions are the same, so no action is needed.

QA version

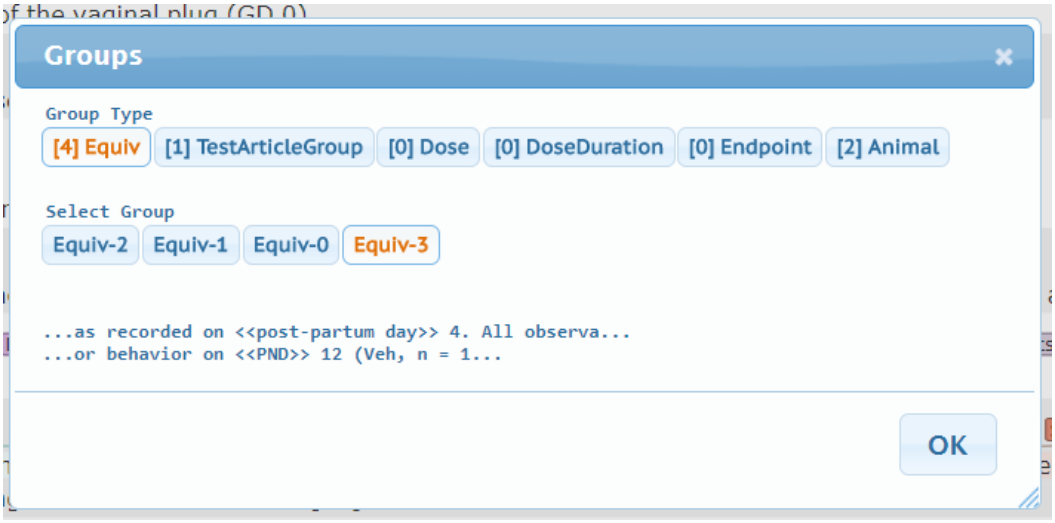


Annotator 1 version

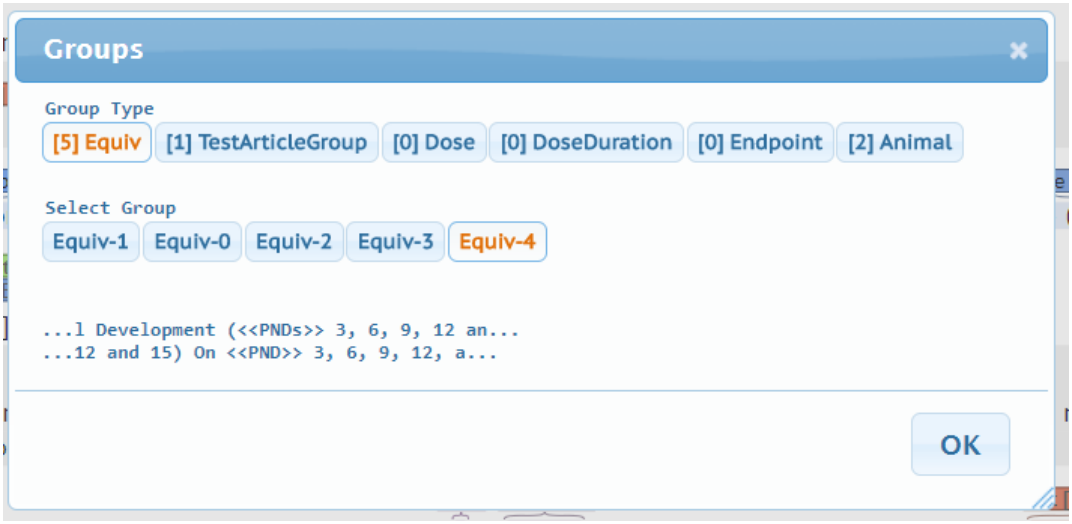


However in this example, there is a missing mention that needs to be added to this group in the QA version, “PNDs”.

QA’s version



Annotator 1’s version



Continue comparing all groups to ensure:

1. Add any mentions that are missing to the correct existing groups, and
2. Add any missing groups.