Dual Screening and Adjudication

Dual Screening is a quality-controlled screening process, where two users independently screen each article, and then all screening decisions are adjudicated by an Administrator. Note, this is different than two-pass screening where a user first reviews abstracts and then full-texts of advanced articles. You can, however, perform dual two-pass screening in our software.

The Admin adjudicates any disagreement between the original screeners and sets the final determination for each study. For example, if Screener 1 includes a given study but Screener 2 excludes it for Reason 1, the Adjudicator will then need to choose between Inclusion, Excluding for Reason 1, or choosing to Exclude for Reason 2.

Only those with Admin privileges can serve as Adjudicators, but any user can serve as a Screener.

Configure Exclusion Reasons

You will need to Configuring Exclusion Reasons before screening underlying studies.

Configure Dual Screening

To configure dual screening in a nest, click on the "Settings" link under Nest Home. Once there, scroll down to the Screening section. Then, click on the "Dual" option in the (red box).

Nest Home
Dashboard
Settings

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Configure Screening

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Configure Extraction

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Screening

In Standard Screening, one user screens each record. Inclusion sends the record forward for gathering, such as tagging, extraction, and Risk of Bias assessment. Exclusion does not queue the record for gathering.

In Dual Screening, two users independently screen each record, and then all screening determinations are reviewed by an administrator. The administrator adjudicates any disagreement between the original screeners to set the final determination for each record.

In Two Pass Screening, all records are first rapidly screened using only title and abstract. Records may be advanced from title/abstract screening to more intensive full text screening, where final inclusion is determined.

In Dual Two Pass Screening, two users rapidly screen all records using only title/abstract and these determinations are reviewed and advanced by an administrator. Two users then screen all full texts and final inclusion is determined by the administrator.

Inclusion Modeling

Inclusion models predict the probability of individual records being included during screening, using your past screening decisions. These probabilities help AutoLit determine which studies to show first during the screening process to get you screening faster.

The model can be trained manually or automatically (recommended). If the inclusion model is set to automatic, the model will be retrained after every 10 newly screened records. Otherwise, the model can be trained and retrained manually during screening. Your nest must contain at least 1 inclusion and 10 records in order to train a model.

Hiding the Model

Probabilities predicted by the model may be displayed during screening to speed up work or hidden if you wish to minimize bias. Studies will still be ordered by inclusion probability, even when hidden. To completely remove probabilities and ordering, delete the existing inclusion model and turn off automatic training.

Choose Mode:
- ● **Standard**
- ○ **Two Pass**

Choose number of reviewers:
- ● **Single**
- ○ **Dual**

Choose mode:
- ○ Automatic Training
- View Inclusion Model

Choose:
- ○ Hide Probabilities

Once this is complete, a new "Adjudicate Screening" option will appear in the Nest Menu for all Admins:

Nest Home

Dashboard
Settings

Literature Search (3 / 3)

Other Sources
Duplicate Review
Search Exploration
Query Builder

Dual Screening (403 / 422)

Configure Screening
Adjudicate Screening

Tagging (16 / 22)

Configure Tagging

Extraction (22 / 22)

Configure Extraction

Risk of Bias (22 / 22)

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> ⚠️ **Note:** Toggling back from Dual Screening to Standard Screening (or switching to Two-Pass Screening) will ONLY save final adjudications, so all records without an adjudicated Include or Exclude decision will be reverted to Unscreened and **all data associated with individual users' decisions will be lost**!

Dual Screening Steps

1. Screen each study twice

Before Adjudication can take place, two independent users will need to screen each underlying study

using the same approach as Standard Screening Mode. AutoLit automatically queues the studies to all users until two screening decisions are made; then, the studies are sent forward for adjudication. You may want to view the full text, see instructions on Full Text Upload.

In Dual Screening, it can be useful to view the number of prior reviewers for the current record. This is displayed to the right of the include button (see below). 0 means no decisions have been made about the current record, 1 means 1 reviewer has made a decision, and so on.

However, in Dual modes the status of whether the full text has been uploaded or not by the other reviewer is hidden. This is to avoid bias as the knowledge that the other user has uploaded the record's full text may influence your screening decision. You still have the option to show the full text upload status as well as the full text regardless by clicking "Show Anyways." This action does not affect your screening decisions.

2. [OPTIONAL] Auto-Adjudicate

All studies that have undergone two screening decisions are sent forward for adjudication, and any study that is either Included by both Screeners or Excluded by both Screeners is eligible for Auto-Adjudication.

To Auto-Adjudicate all eligible studies, navigate to Adjudicate Screening, and in the upper right, select "Auto-adjudicate {x} studies" (red box). This will automatically include all studies that both Screeners included, and exclude all studies that both Screeners excluded.

If Screener 1 and Screener 2 selected different Exclusion Reasons, the Auto-Adjudication will select only one of these and apply it as the final Exclusion Reason.


3. Adjudicate Disagreements

For any study that is not Auto-Adjudicated, an Admin will need to manually adjudicate in order to provide a final screening decision. The Admin should choose between selecting the decision of Screener 1 or Screener 2, or if both are incorrect, provide a different option (red box). Once adjudicated, the studies will either be excluded or included and sent forward to Tagging.

Kappa Statistics for Interrater Reliability

After you finish Dual Screening, you can view the Kappa statistics in Activity.

Guidance on Dual Screening Best Practices

For guidance on best practices in Dual Screening, click here.
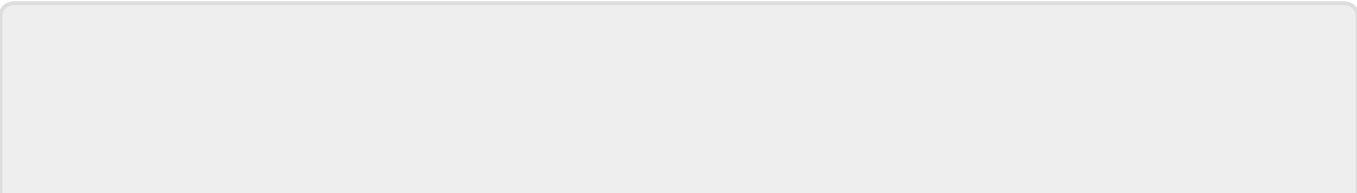
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