

# Scaling up image screening for Reviewed Preprints

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## eLife's new model

eLife reviews preprints in the life sciences and medicine, and is committed to improving peer review to better convey the assessments made by editors and reviewers. We launched a new publishing model in January 2023 in which we no longer make accept/reject decisions after peer review. Instead, all the papers we send for review are published as Reviewed Preprints, with public reviews and an eLife assessment.

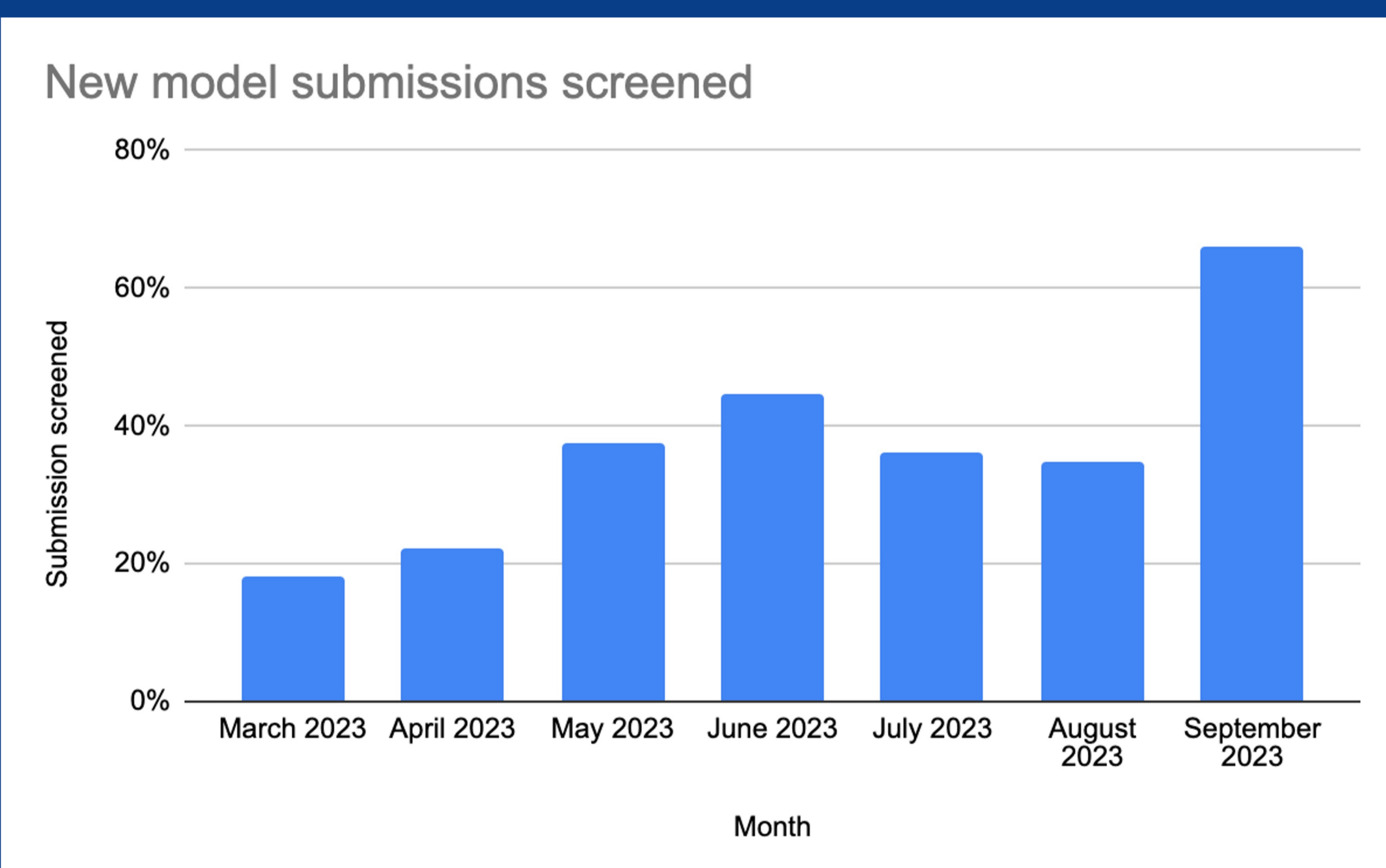
Work submitted to eLife  
 Decision to peer review  
 Consultative peer review  
 Published as Reviewed Preprint  
 Author revisions (optional)  
 Version of Record (optional)

## 1. Image screening

A process where we visually check the images from submitted eLife papers to identify inappropriate image manipulation. We screen the integrity of images for both previous and new model submissions.

## 2. Ramp up new model image screening

We screen new model submissions that we decide to peer review. From March 2023, we began screening 25 submissions a month, then gradually scaled this up with the aim of screening the majority of these submissions by Q1 2024.



## 5. Follow up with editors/authors

- New model – for the cases where staff followed up with editors/authors, all issues were satisfactorily addressed by the authors (e.g. satisfactory author reply/no further action necessary and/or slight changes needed to be made to submission).
- Previous model – small number of cases (~2%) the author did not satisfactorily address the image concerns (e.g. editors' trust in the quality of the data was undermined and the papers were declined).

## 3. Comparison of screening

- We routinely screen all suitable images in submissions including gels/blots and micrographs.
- Previous model submissions (screen ~20% revised submissions).
- New model submissions (screen ~75% submissions by January 2024 (data not shown)).

The table below shows a comparison of 300 submissions screened between the two models.

	Previous model	New model
<b>Image screen</b>	Revised submissions	Preprints we send for review
<b>Period observed</b>	~3 years (Sep 2020 to 2023)	~5 months (April 2023 to Sept 2023)
<b>% papers flagged for image integrity</b>	28%	32%
<b>Follow up with editors/authors</b>	17%	5%

## 4. Key observations between the two models

- Previous model submissions screening takes place at a later stage and we screen a smaller % of these.
- No major difference observed between the two models in terms of the proportion of papers (28% vs 32%) initially flagged for image integrity concerns.
- Fewer new model papers require follow up with the editors/authors (5% as opposed to 17%).

## Conclusion

The difference between the % submissions escalated to editors between the two models may be affected by the stage at which the image screening is performed. In the previous model, authors are required to provide the individual image files at an earlier stage, whereas for new model submissions we only require the figures be included within the main article file, which could result in reduced image resolution.

The scaling up of our new model image screening process has progressed smoothly, with coverage of up to 75% submissions reviewed in January 2024.