

Checklist for image publishing

Image format

	Focus on relevant image content (e.g. crop, rotate, resize)	<input type="checkbox"/>	Minimal
	Separate individual images	<input type="checkbox"/>	
	Show example image used for quantifications	<input type="checkbox"/>	
	Indicate position of zoom-view/inset in full-view/original image	<input type="checkbox"/>	
	Show images of the range of described phenotype	<input type="checkbox"/>	

Image colors and channels

	Annotation of channels (staining, marker etc.) visible	<input type="checkbox"/>	Minimal
	Adjust brightness/contrast, report adjustments, use uniform color-scales	<input type="checkbox"/>	
	Image comparison: use same adjustments	<input type="checkbox"/>	
	Channel colors: high visibility on the background Best visibility: grayscale	<input type="checkbox"/>	
	Multi-colors: provide grayscale for each color channel	<input type="checkbox"/>	
	Multi-color: if channels are merged, make accessible to color blind	<input type="checkbox"/>	
	Provide intensity scales (calibration bar) for greyscale, color, pseudo color...	<input type="checkbox"/>	Recommended
	Pseudo-colored images: additionally provide grayscale version for comparison	<input type="checkbox"/>	Ideal
	Gamma adjustments: additionally provide linear-adjusted image for comparison	<input type="checkbox"/>	Ideal

Image annotation

	Add scale information (scale bar, image length; in figure/figure legend)	<input type="checkbox"/>	Minimal
	Explain all annotations (in figure/figure legend)	<input type="checkbox"/>	
	Annotations should be legible (line width, size/point size, color)	<input type="checkbox"/>	
	Annotations should not obscure key data	<input type="checkbox"/>	
	Annotate imaging details important for interpreting the figure: <i>Depending on the main message and imaging technique this may be e.g., image pixel size, imaging intervals (time-lapse in movies), exposure time, or anatomical section.</i>	<input type="checkbox"/>	Recommended

Image availability

	Images are shared (lossless compression/microscope images)	<input type="checkbox"/>	Minimal
	Image files are freely downloadable (public database)	<input type="checkbox"/>	Recommended
	Image files are in dedicated image database (added value database or image archive)	<input type="checkbox"/>	Ideal

Checklist for publication of image analysis workflow

Established workflows

	Cite workflow & platform	<input type="checkbox"/>	Minimal
	Key settings	<input type="checkbox"/>	
	Example data	<input type="checkbox"/>	
	Manual ROIs	<input type="checkbox"/>	
	Exact version	<input type="checkbox"/>	
	All settings	<input type="checkbox"/>	Recommended
	Public example	<input type="checkbox"/>	
	Document usage (e.g. screen recording or tutorial)	<input type="checkbox"/>	Ideal
	Cloud hosted or container	<input type="checkbox"/>	Ideal

Novel workflows

	Cite components & platform	<input type="checkbox"/>	Minimal
	Describe sequence	<input type="checkbox"/>	
	Key settings	<input type="checkbox"/>	
	Example data & code	<input type="checkbox"/>	
	Manual ROIs	<input type="checkbox"/>	
	Exact versions	<input type="checkbox"/>	
	All settings	<input type="checkbox"/>	Recommended
	Public example data & code	<input type="checkbox"/>	
	Rationale	<input type="checkbox"/>	
	Limitations	<input type="checkbox"/>	
	Screen recording or tutorial	<input type="checkbox"/>	Ideal
	Easy install & usage, container	<input type="checkbox"/>	Ideal

Machine learning workflows

	Cite original method	<input type="checkbox"/>	Minimal (All models)
	Access to model	<input type="checkbox"/>	
	Example or validation data	<input type="checkbox"/>	
	Train, test & metadata	<input type="checkbox"/>	Recommended (Pre-trained & novel models)
	Code available	<input type="checkbox"/>	
	Limitations	<input type="checkbox"/>	
	Cloud hosted or container	<input type="checkbox"/>	
	Standardized format	<input type="checkbox"/>	Ideal (Novel models)

Bevor Forschende im Labormeeting oder auf einer Konferenz Mikroskopiebilder präsentieren, sollten sie zunächst die beiden Checklisten für die gute Darstellung von wissenschaftlichen Abbildungen durcharbeiten und die wichtigsten Punkte abhaken.

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