

Step4: Differential Analysis

Region of Interest (ROI) Definition

Define spatial regions for comparative analysis using three flexible approaches:

- Cluster-based:** Select domains from spatial clustering results
- Cell type-based:** Leverage annotated cell types for region definition
- Interactive selection:** Manually delineate regions using lasso or rectangular tools

After defining ROIs, click 'Add as treatment group' or 'Add as control group'. Use 'Clear selection' to reset. Finalize with 'Finish Selection' for downstream analysis.

ROI Selection Parameters

ROI definition method:

Cluster-based

Base visualization modality:

Merge

Define regions and assign to treatment and control groups:

Select clusters as treatment group:

1, 26

Select clusters as control group:

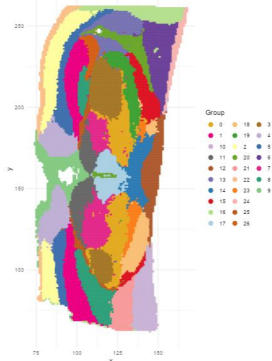
17

Clear selection

Finish selection

ROI Assignment Summary

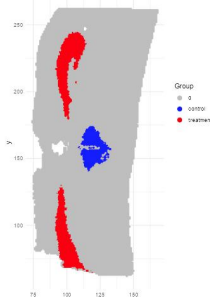
Group	Region	X_Min	X_Max	Y_Min	Y_Max	Point_Count
treatment	Cluster_1_26	92.00	119.00	65.00	244.00	1158
control	Cluster_17	109.00	133.00	141.00	174.00	419



Spatial Region Assignment

Final ROI assignment for differential analysis:

- Treatment:** Experimental regions (e.g., disease foci)
- Control:** Reference regions (e.g., healthy tissue)



Export ROI assignments

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