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library("spatialLIBD")

## Download the Maynard et al, Nat Neurosci, 2021 data
spe <- fetch_data("spe")

## Visualize the result from a shared-nearest neighbor (k = 50) graph
## cut at 7 clusters (k7), hence SNN_k50_k7. This graph was constructed
## across all samples, such that cluster 1 on sample 1 has the same meaning
## as cluster 1 on samples 2, 3, ... n.
vis_grid_clus(
  spe = spe,
  clustervar = "SNN_k50_k7",
  pdf_file = "grid_SNN_k50_k7.pdf",
  colors = setNames(Polychrome::palette36.colors(7), seq_len(7)),
  point_size = 2,
  alpha = 0.75
)

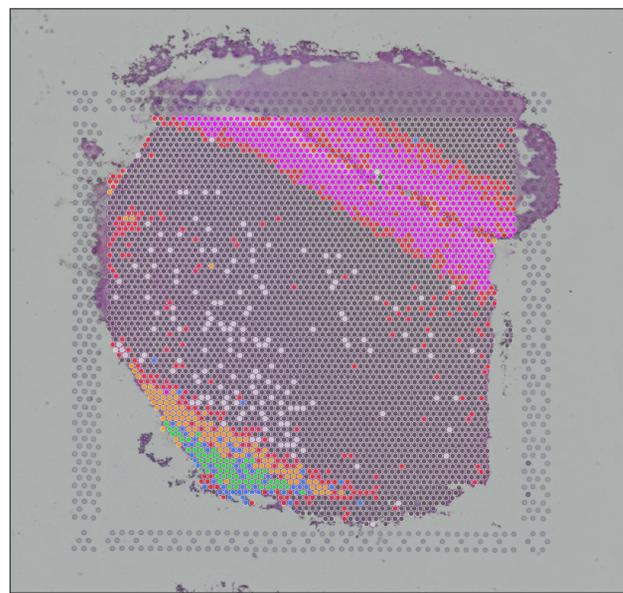
## Visualize the chrM expression ratio across all samples with the
## "magma" color palette in the reverse direction (-1) such that darker colors
## represent higher values
vis_grid_gene(
  spe = spe,
  geneid = "expr_chrM_ratio",
  pdf_file = "grid_expr_chrM_ratio.pdf",
  minCount = -1,
  cont_colors = viridisLite::viridis(21, direction = -1, option = "magma"),
  point_size = 2
)

## Visualize the normalized expression values (logcounts) for the gene
## MOBP which has a higher expression in the white matter. Here we use the
## "plasma" color palette with the regular direction (+1) such that
## higher values are represented with brighter colors.
vis_grid_gene(
  spe = spe,
  geneid = rowData(spe)$gene_search[rowData(spe)$gene_name == "MOBP"],
  pdf_file = "grid_MOBP.pdf",
  minCount = -1,
  cont_colors = viridisLite::viridis(21, direction = 1, option = "plasma"),
  point_size = 2
)

## For reproducibility
packageVersion("spatialLIBD")
# [1] 1.7.13â€™

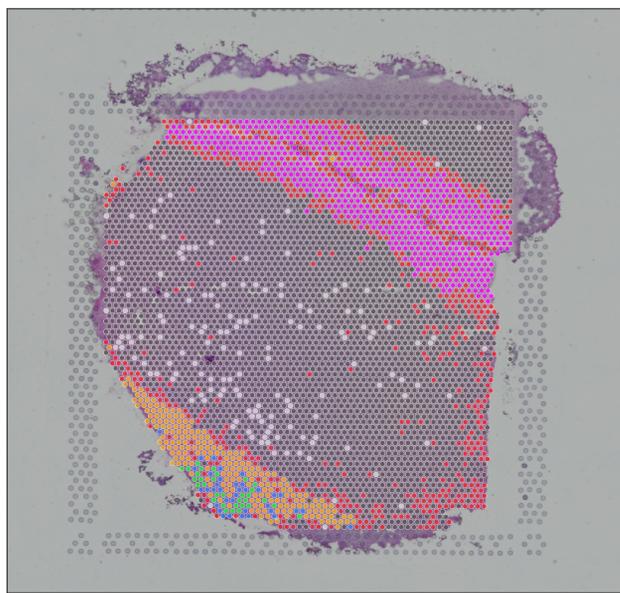
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151507



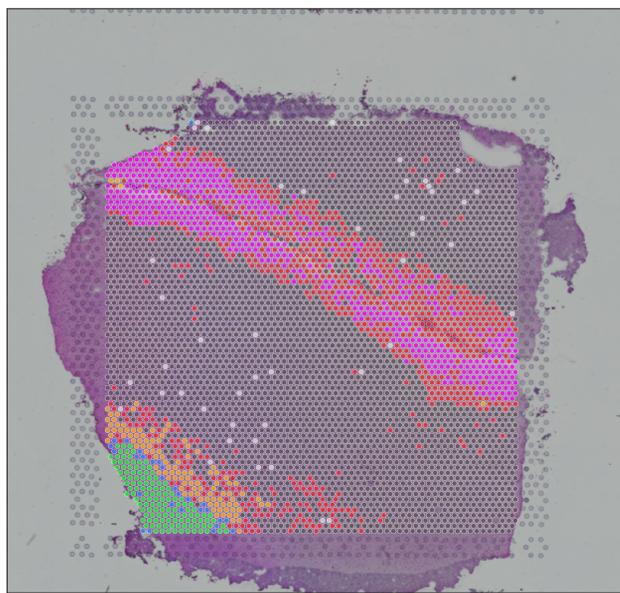
- 1
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151508



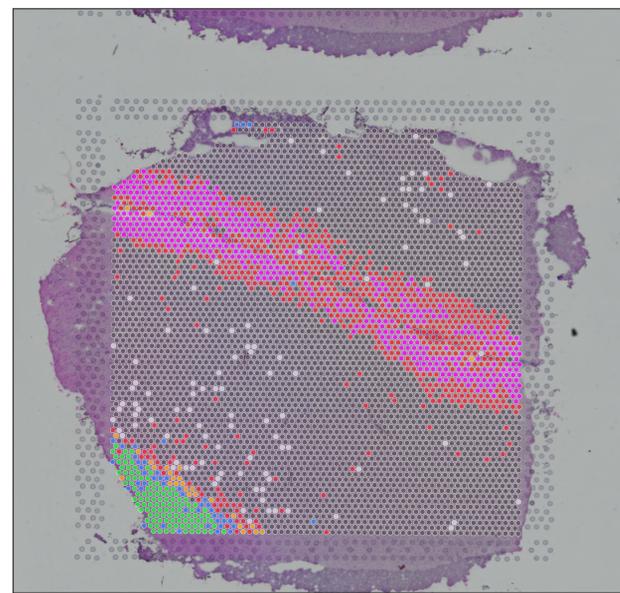
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151509



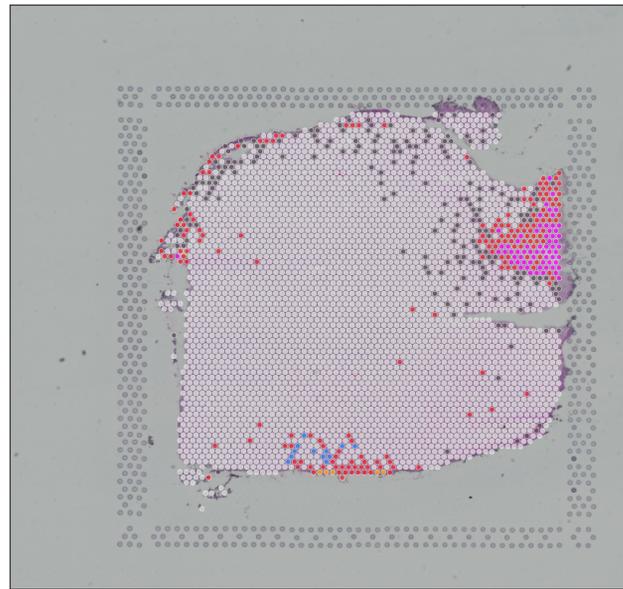
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151510



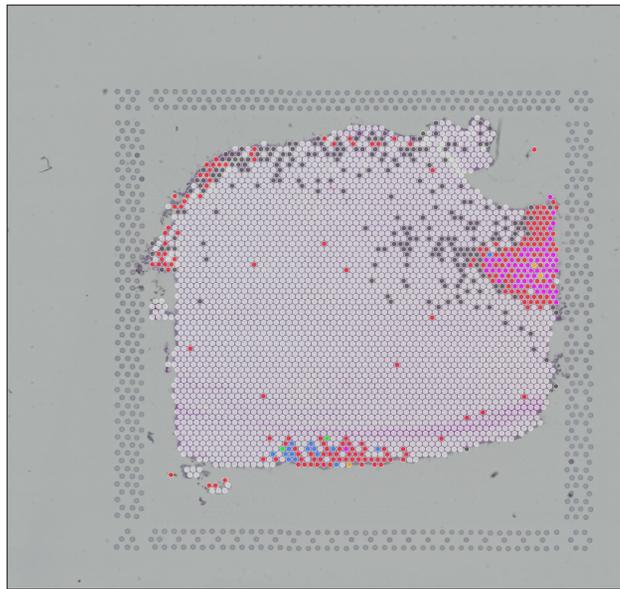
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151669



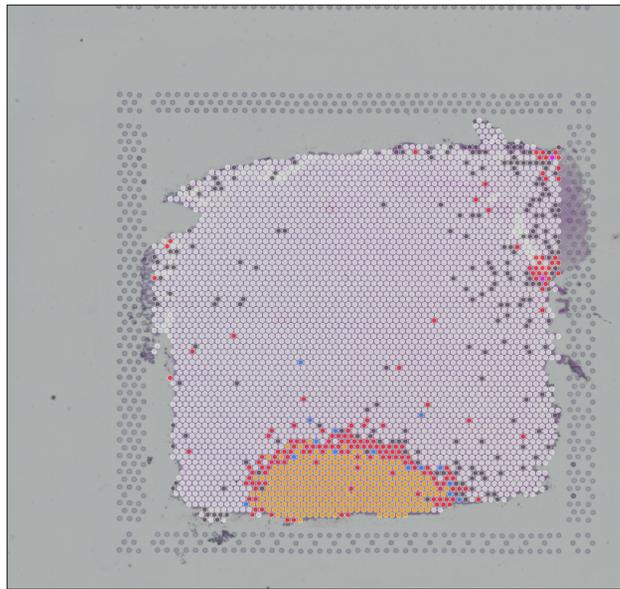
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151670



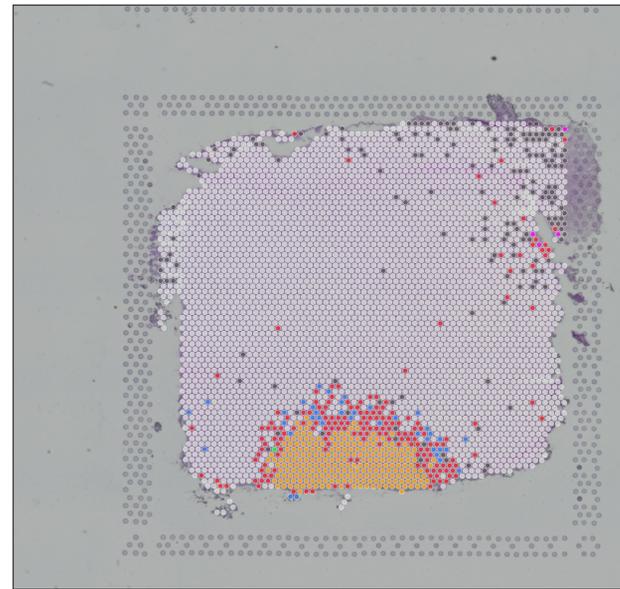
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151671



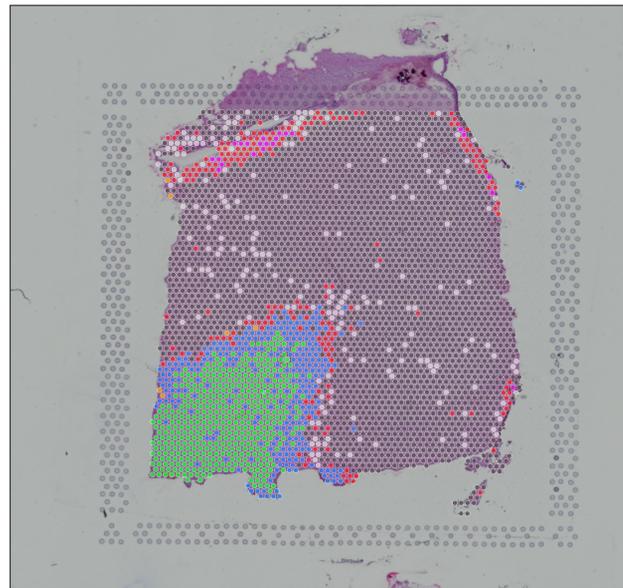
- 1
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151672



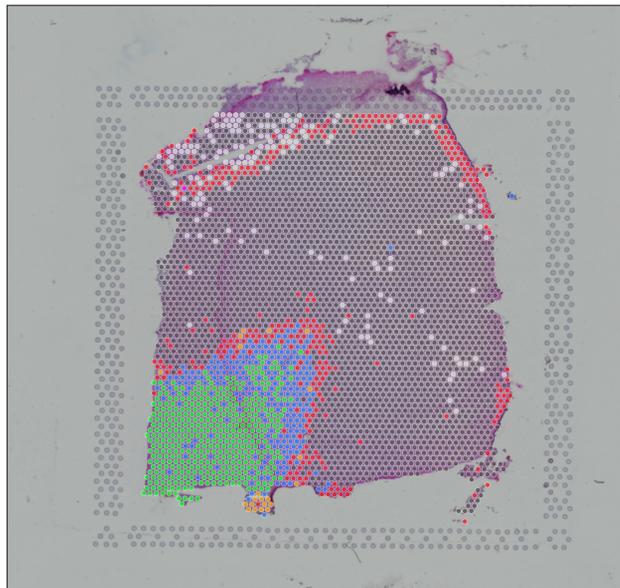
- 1
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- 6
- 7

151673



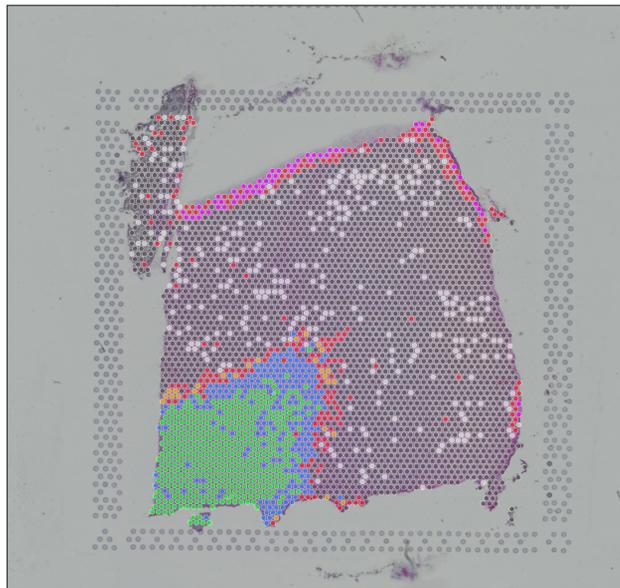
- 1
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- 7

151674



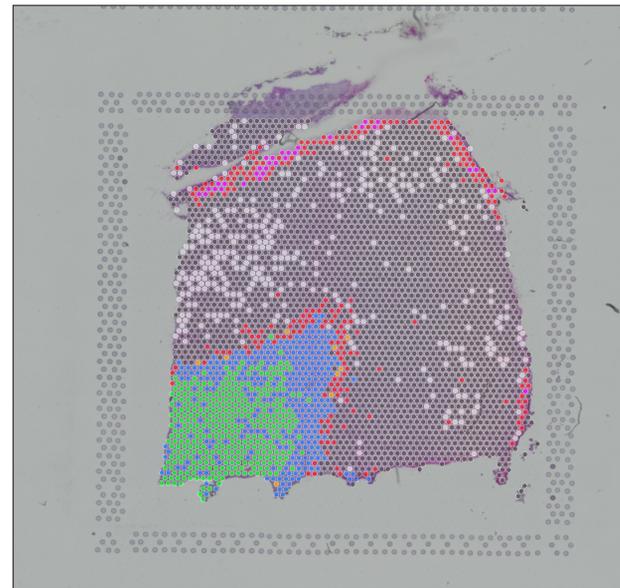
- 1
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151675



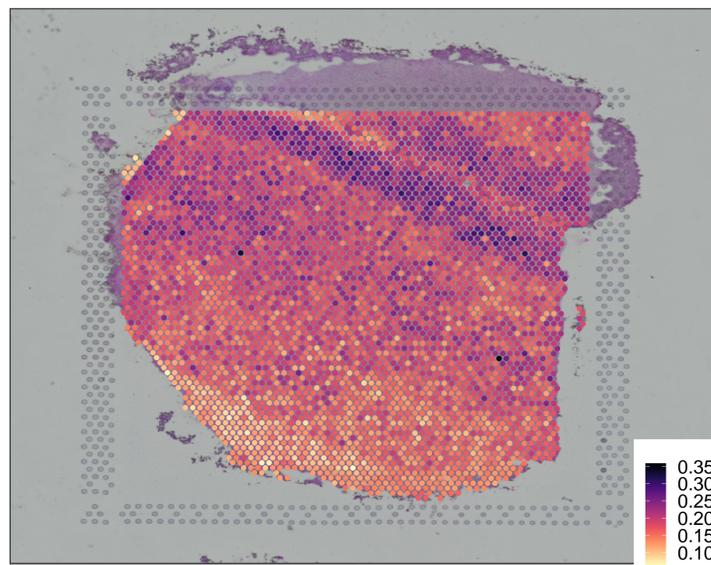
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151676



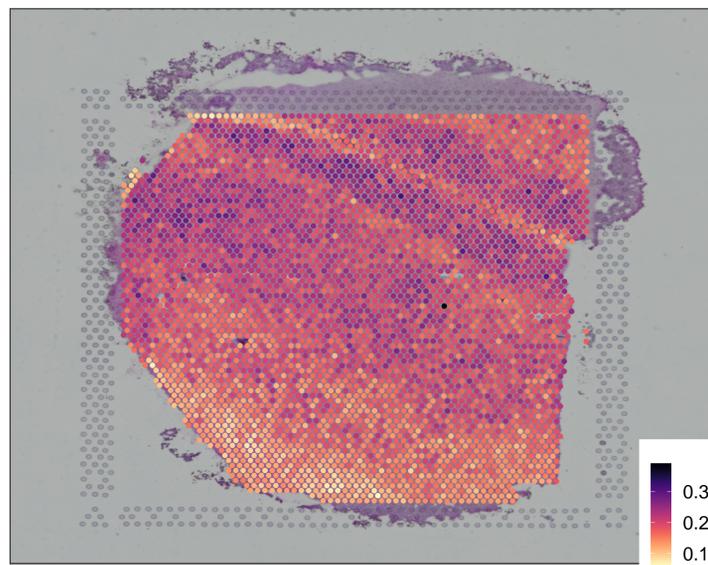
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151507 expr\_chrM\_ratio



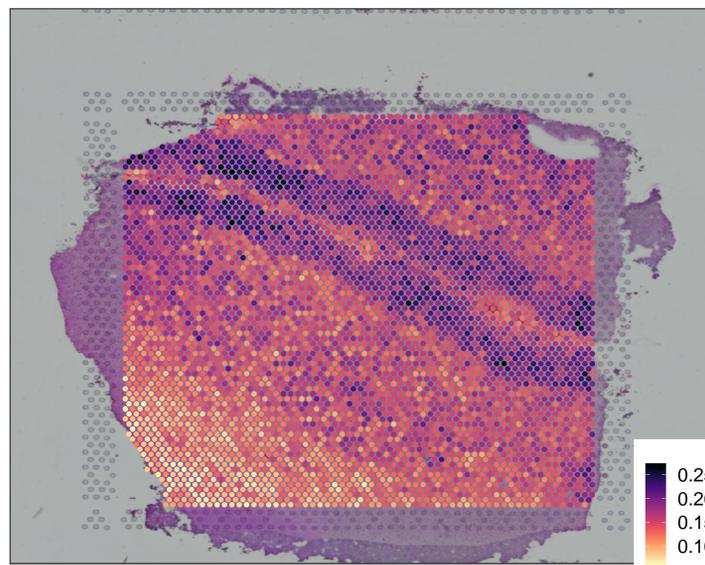
min &gt; -1

151508 expr\_chrM\_ratio



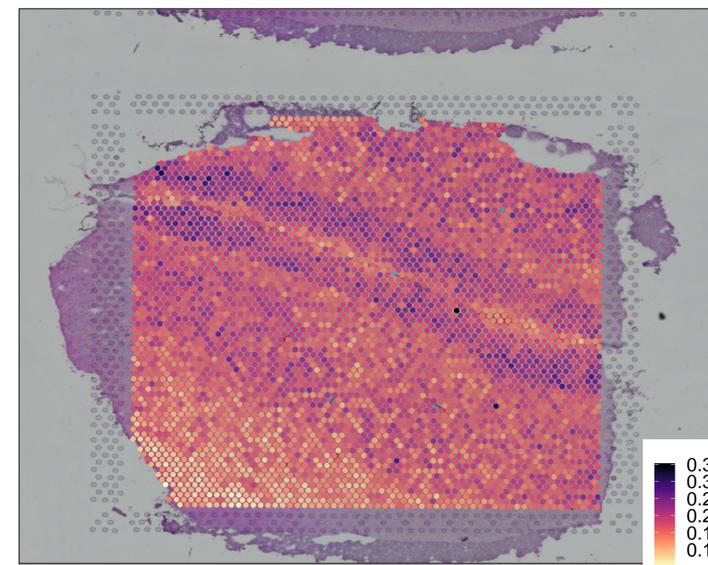
min &gt; -1

151509 expr\_chrM\_ratio



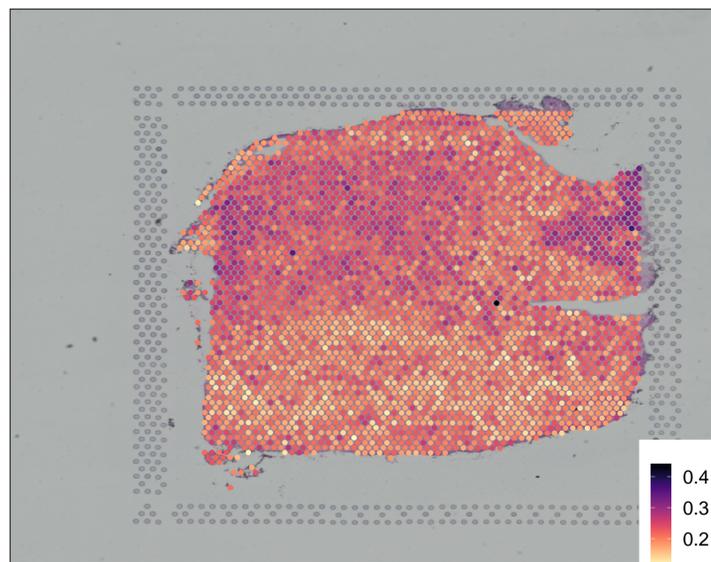
min &gt; -1

151510 expr\_chrM\_ratio



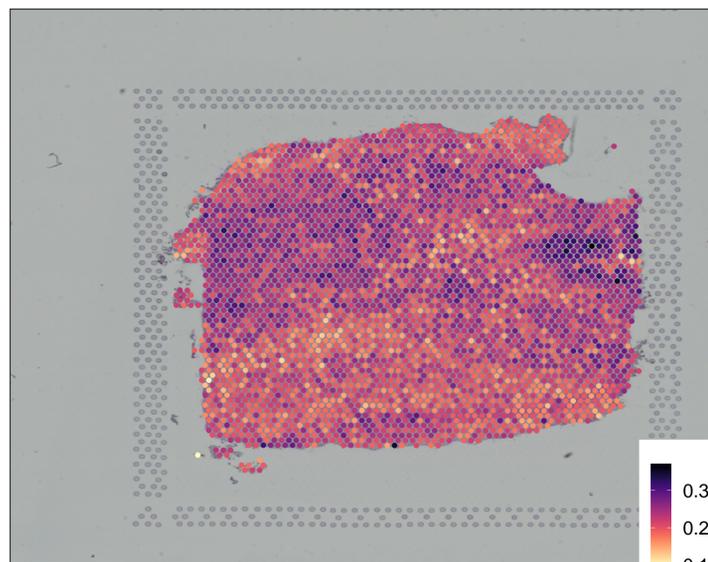
min &gt; -1

151669 expr\_chrM\_ratio



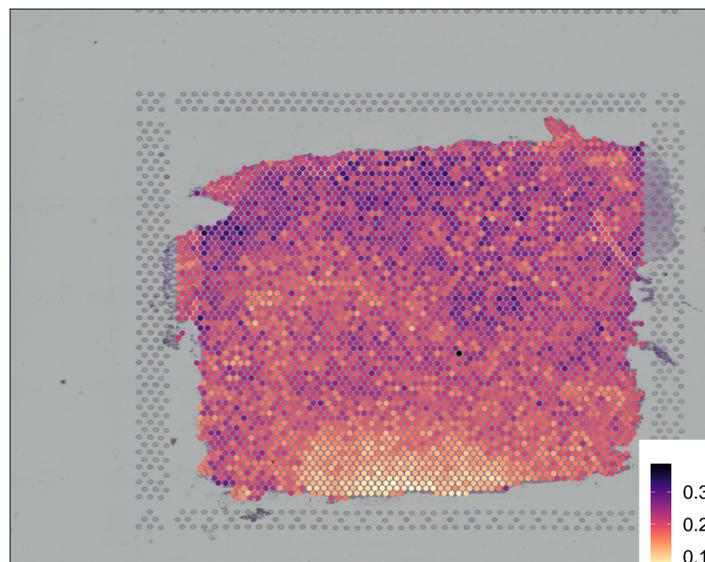
min &gt; -1

151670 expr\_chrM\_ratio



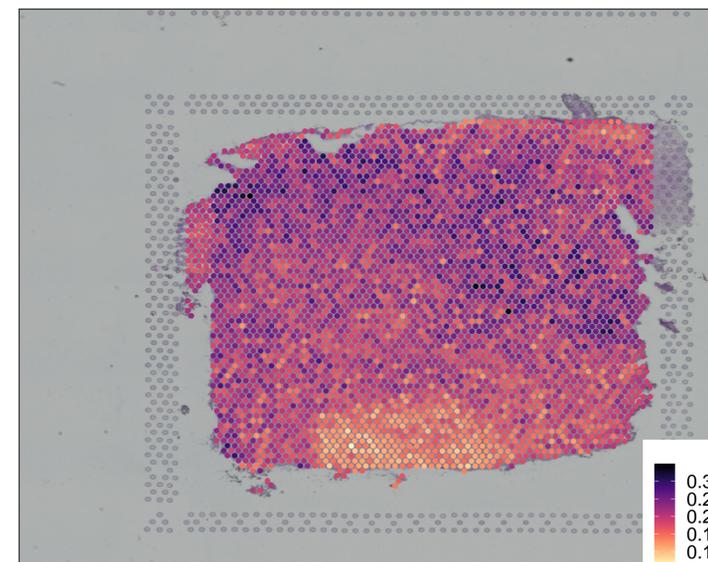
min &gt; -1

151671 expr\_chrM\_ratio



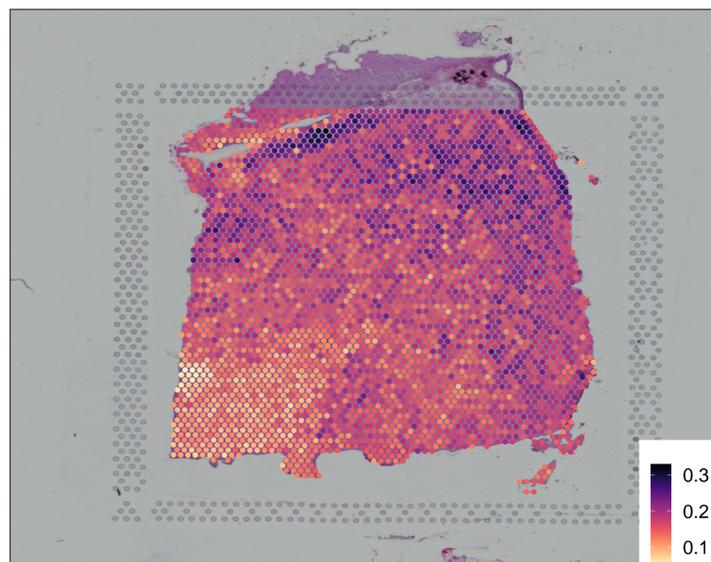
min &gt; -1

151672 expr\_chrM\_ratio



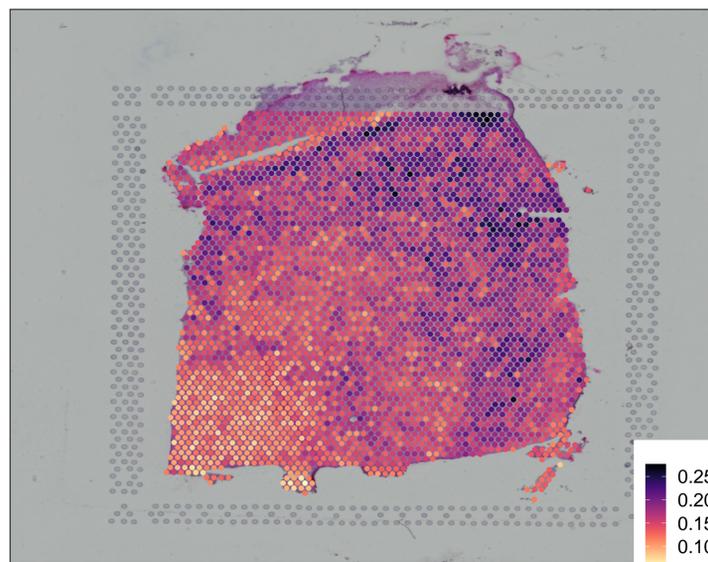
min &gt; -1

151673 expr\_chrM\_ratio



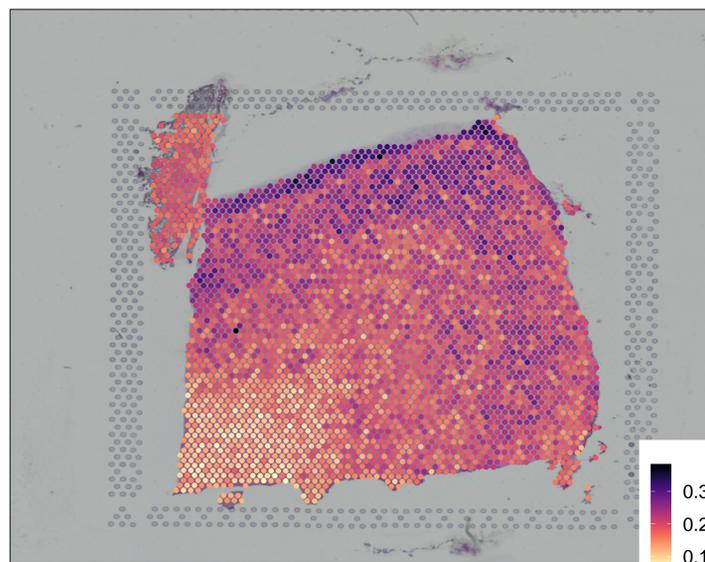
min &gt; -1

151674 expr\_chrM\_ratio



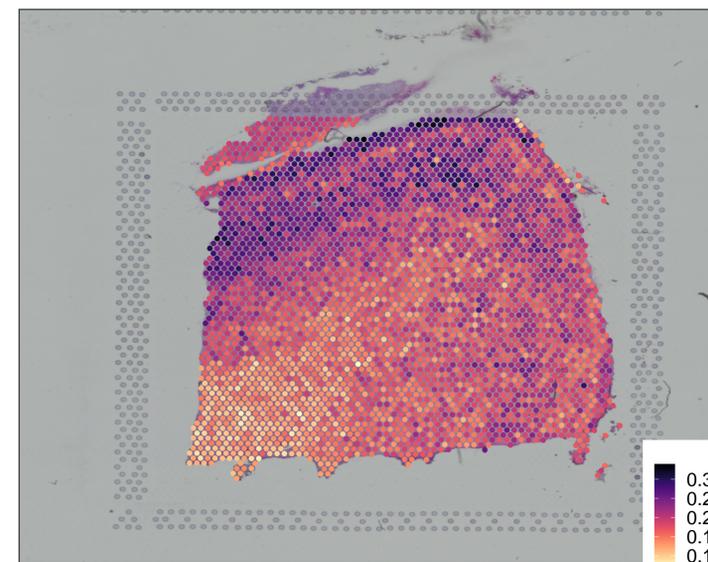
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151675 expr\_chrM\_ratio



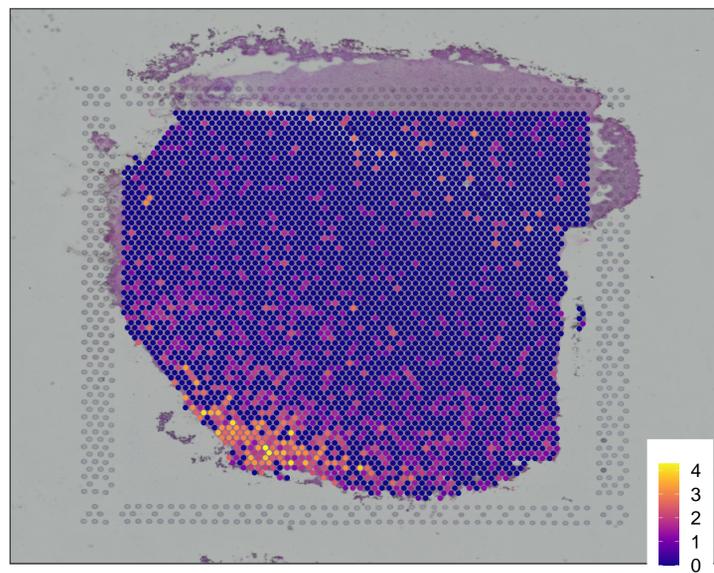
min &gt; -1

151676 expr\_chrM\_ratio



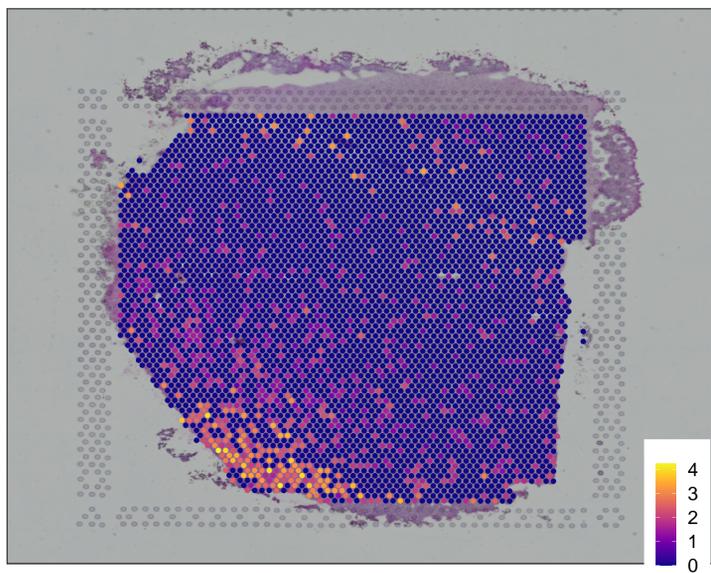
min &gt; -1

151507 MOBP; ENSG00000168314



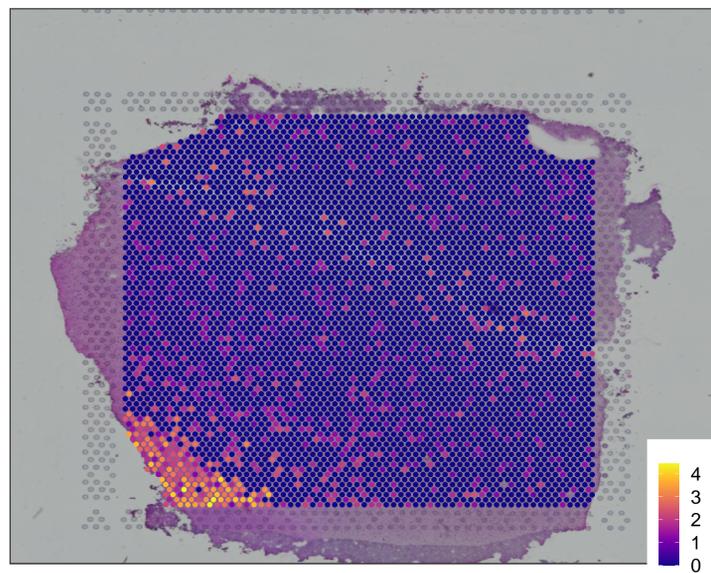
logcounts min &gt; -1

151508 MOBP; ENSG00000168314



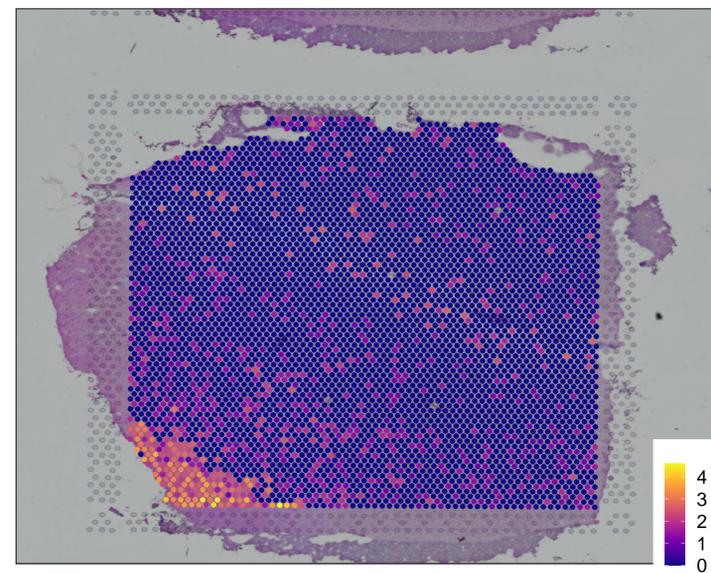
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151509 MOBP; ENSG00000168314



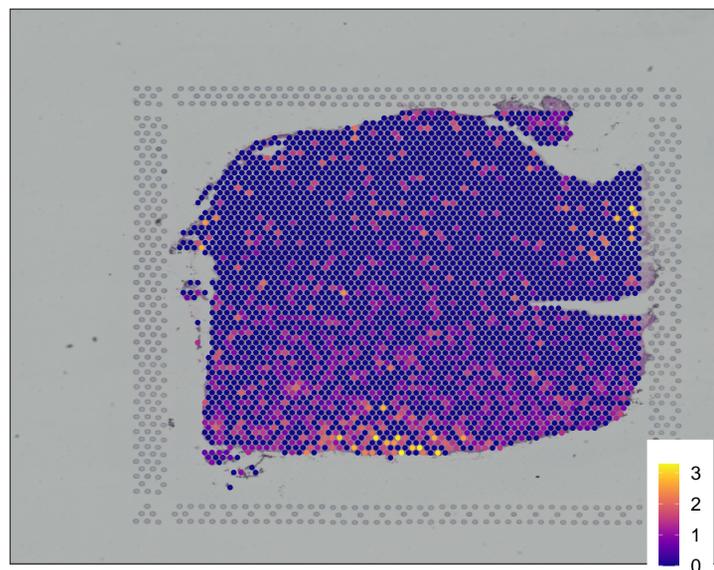
logcounts min &gt; -1

151510 MOBP; ENSG00000168314



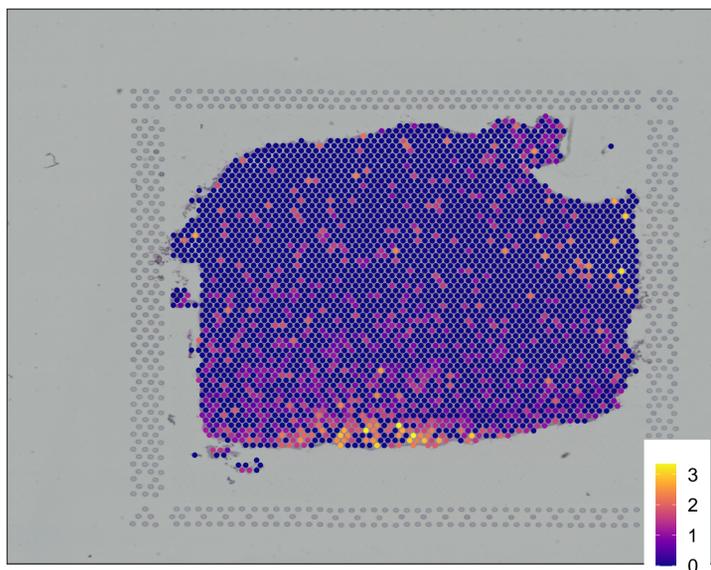
logcounts min &gt; -1

151669 MOBP; ENSG00000168314



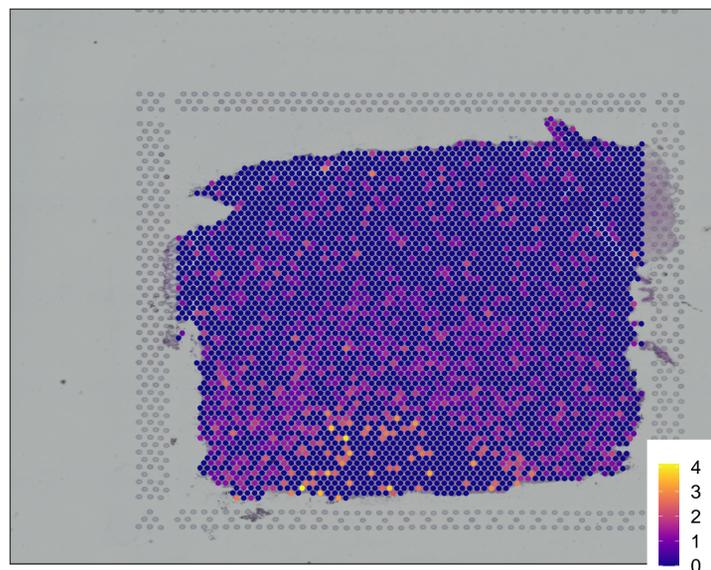
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151670 MOBP; ENSG00000168314



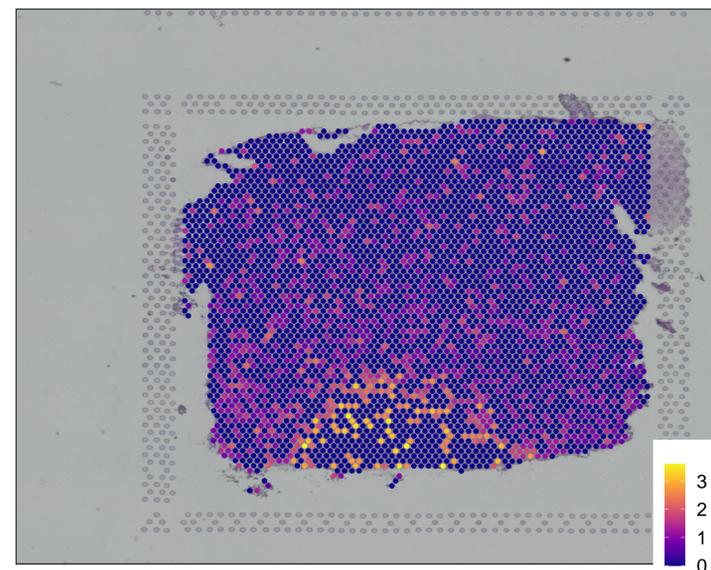
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151671 MOBP; ENSG00000168314



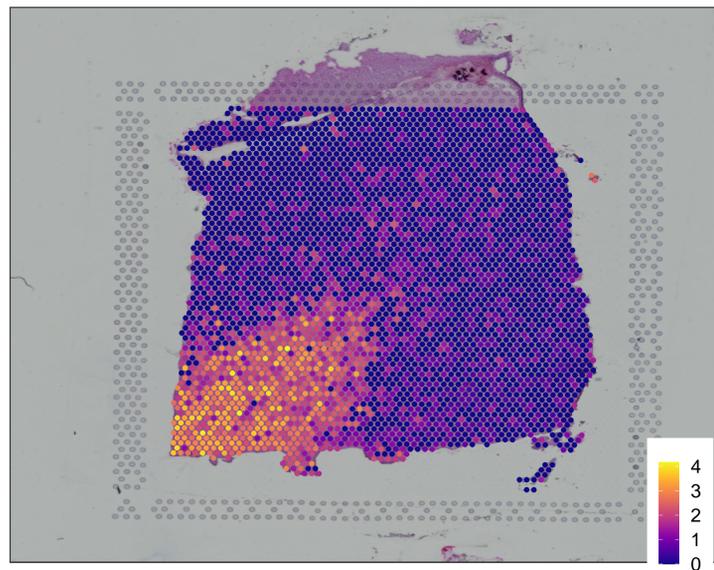
logcounts min &gt; -1

151672 MOBP; ENSG00000168314



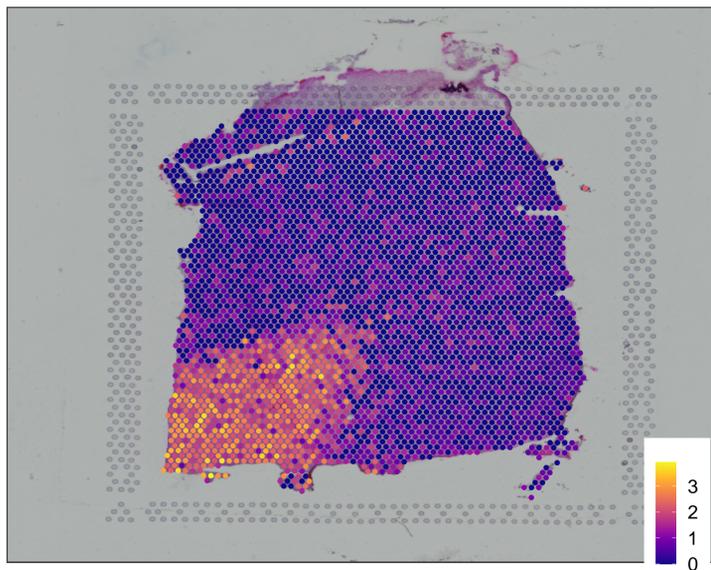
logcounts min &gt; -1

151673 MOBP; ENSG00000168314



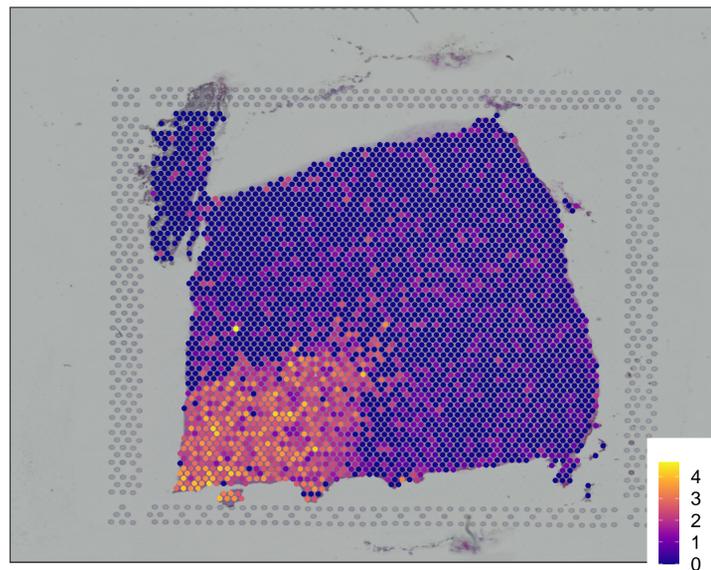
logcounts min &gt; -1

151674 MOBP; ENSG00000168314



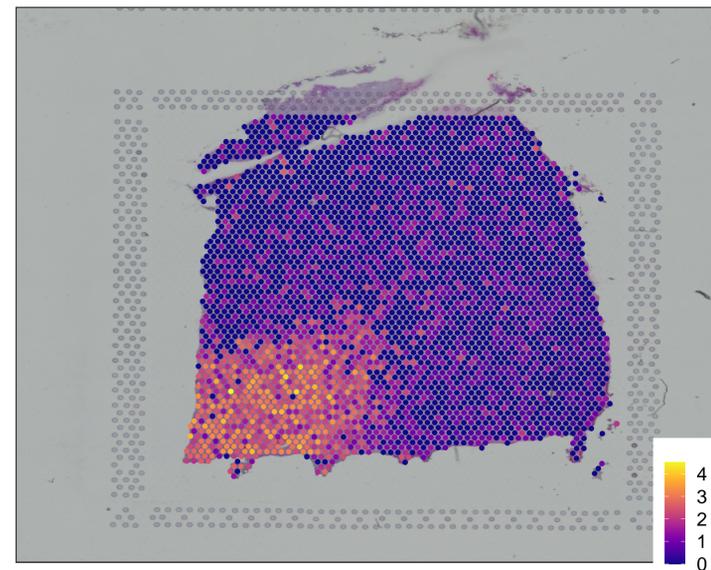
logcounts min &gt; -1

151675 MOBP; ENSG00000168314



logcounts min &gt; -1

151676 MOBP; ENSG00000168314



logcounts min &gt; -1