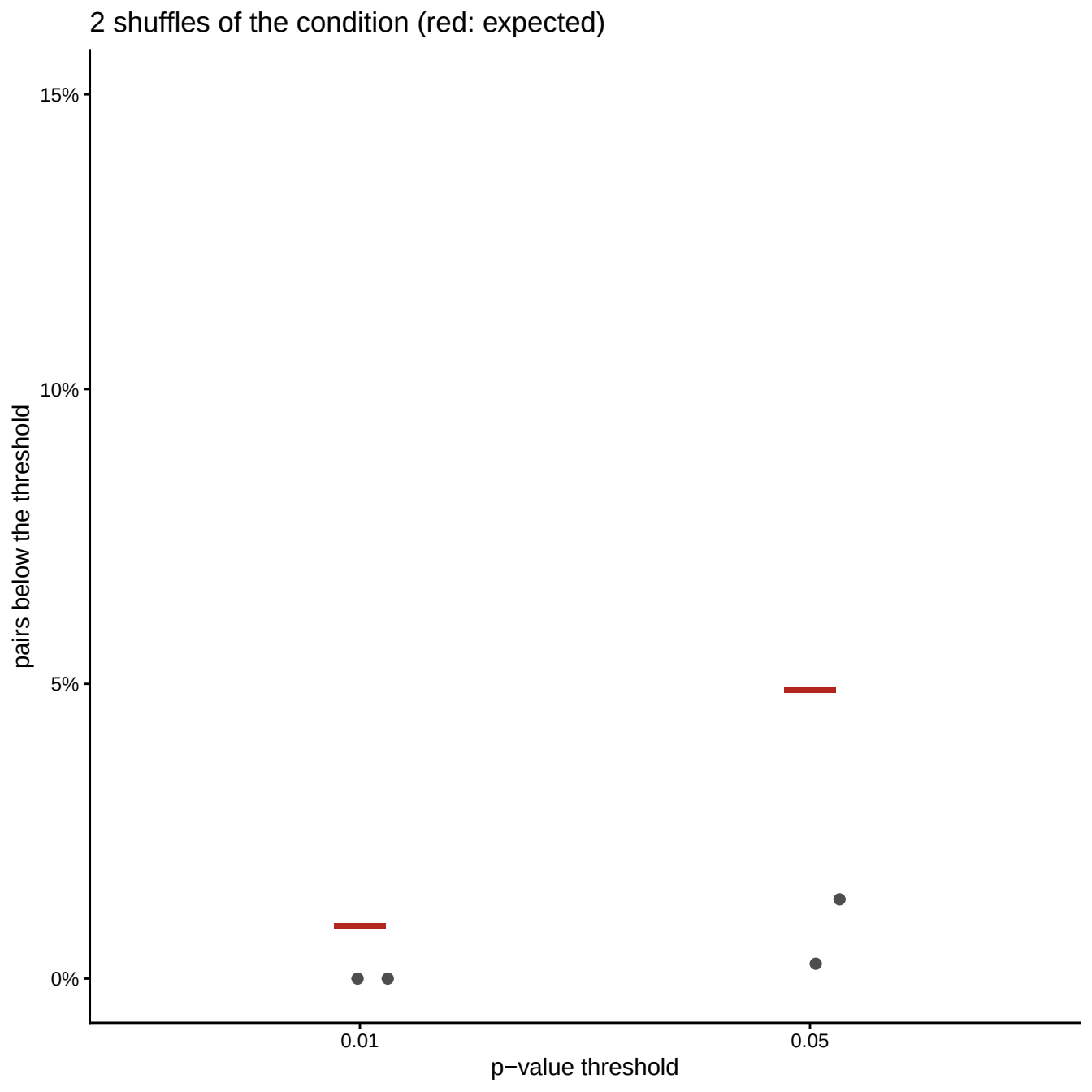
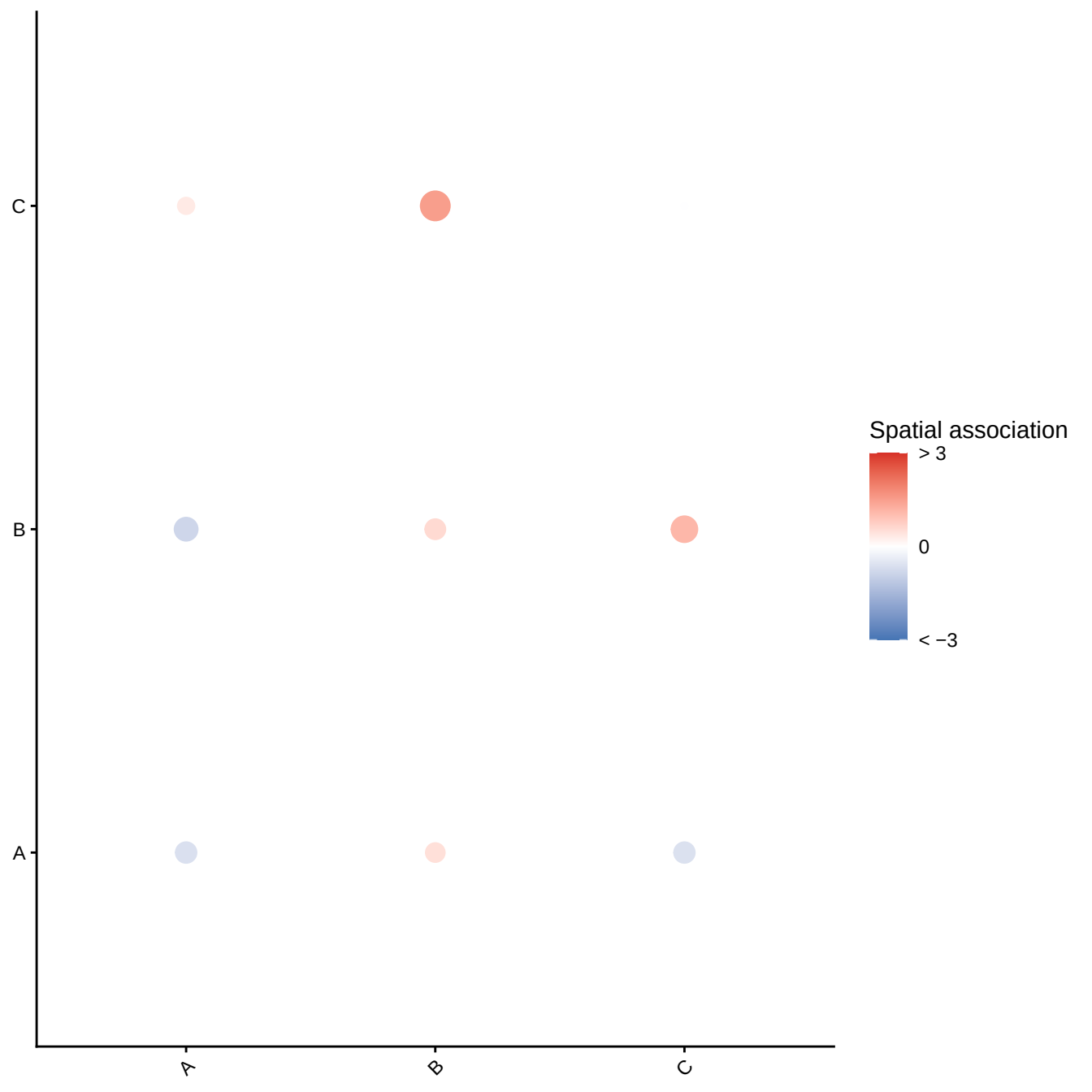
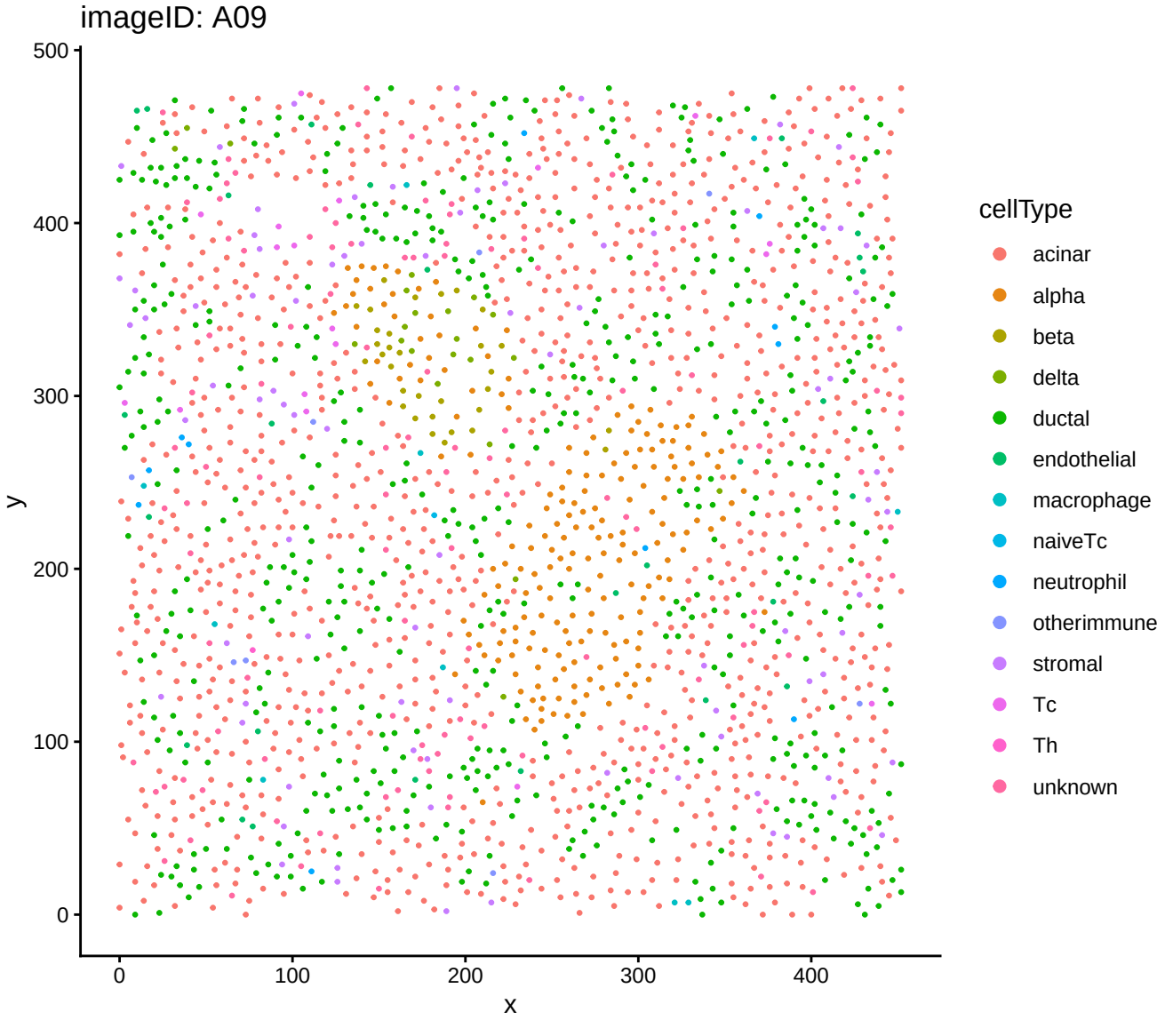
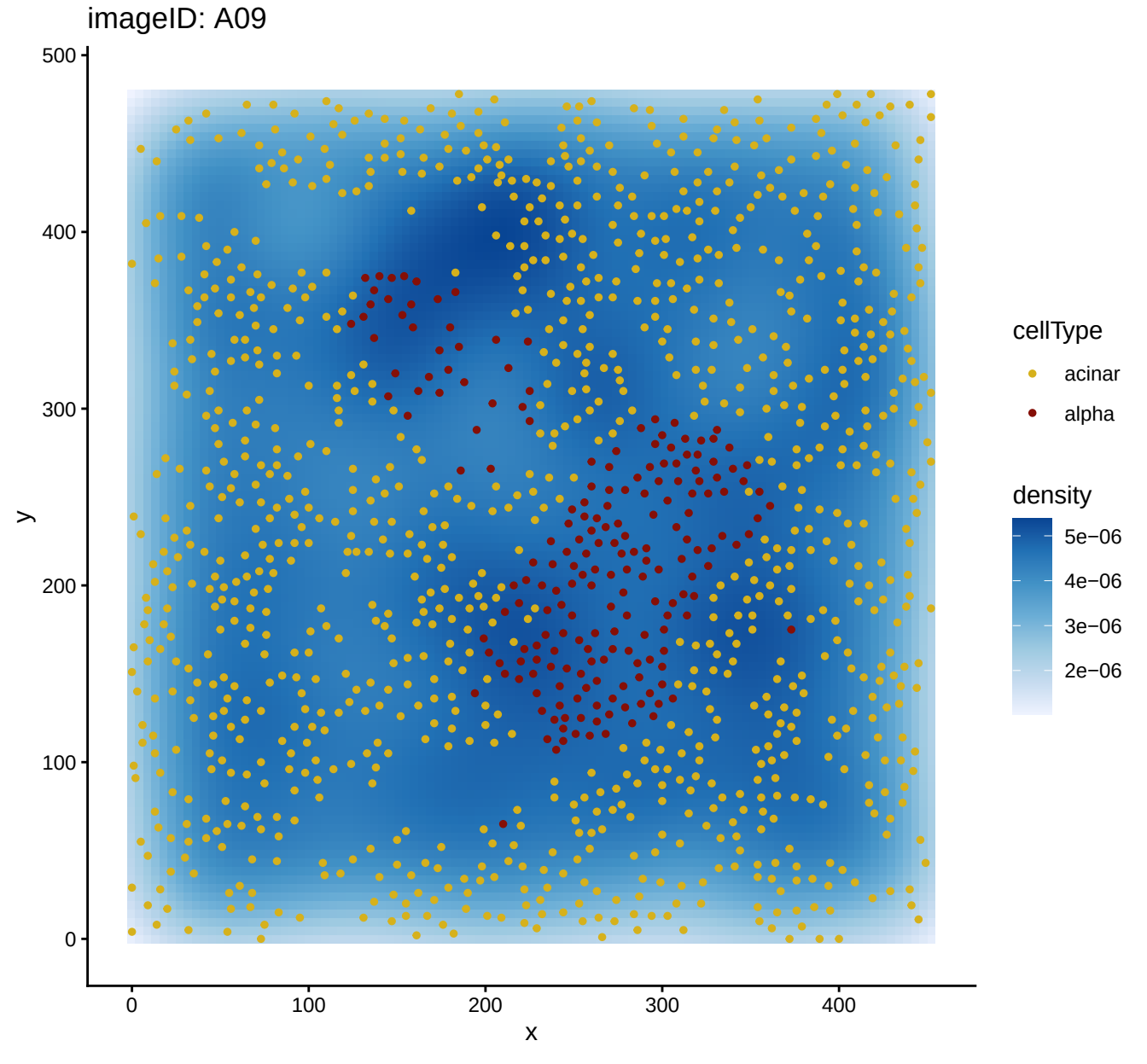
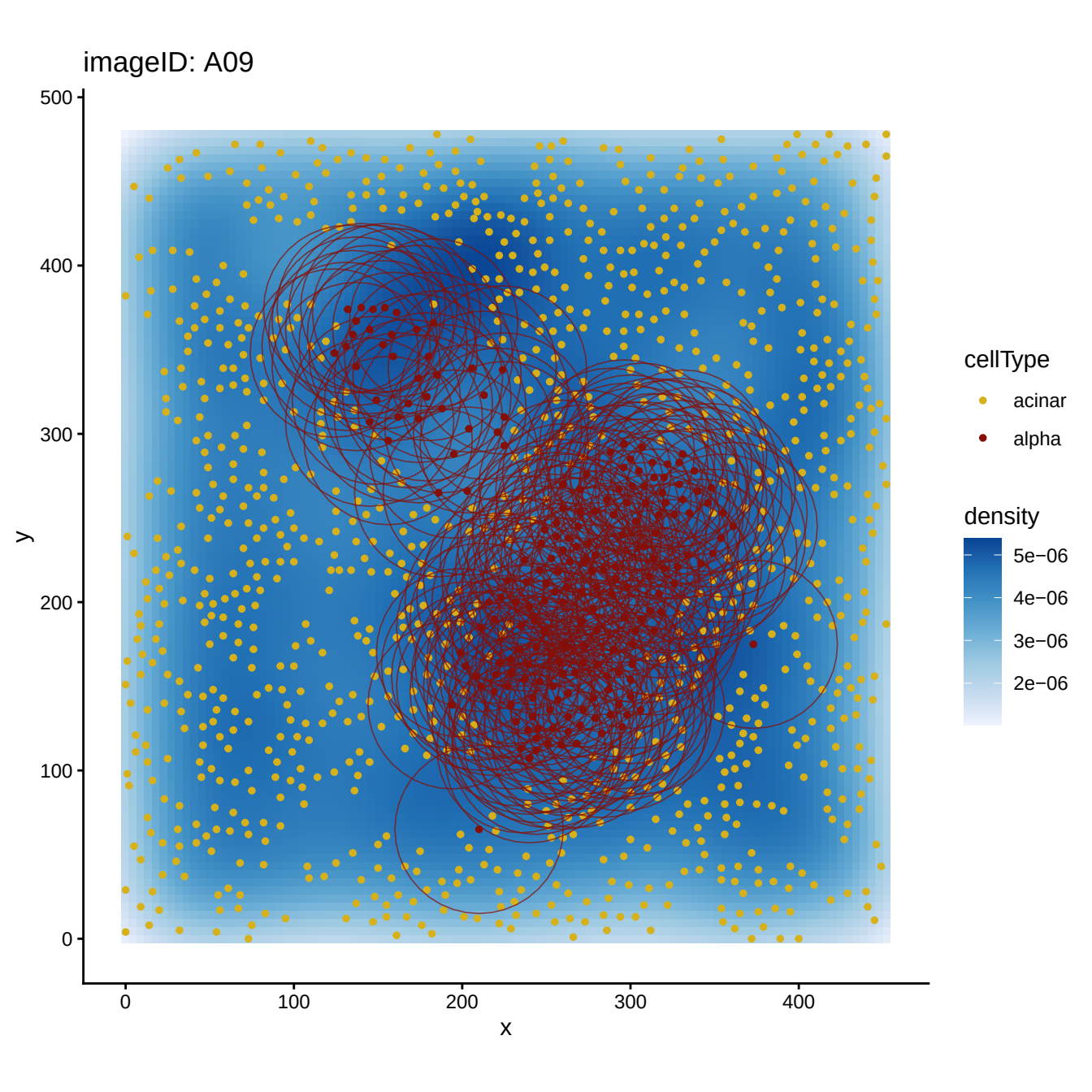
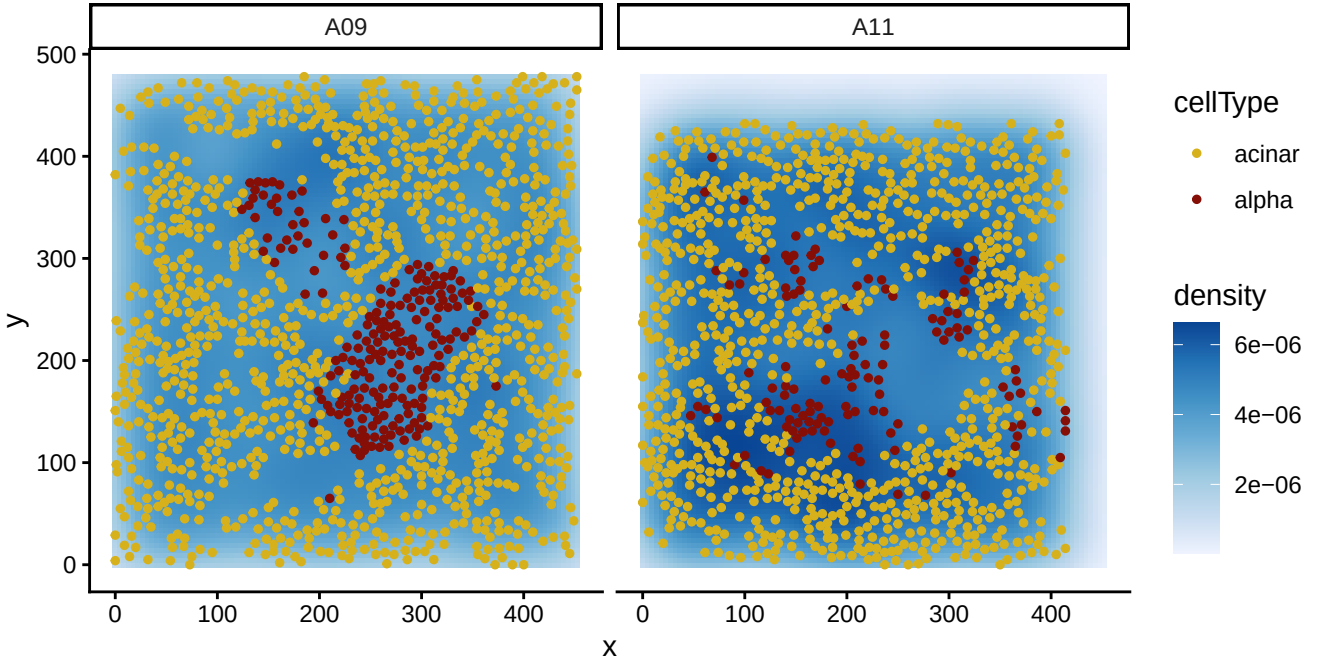

2 shuffles of the condition (red: expected)
15%
10%
5%
0%
pairs below the threshold
0.01
0.05
p−value threshold

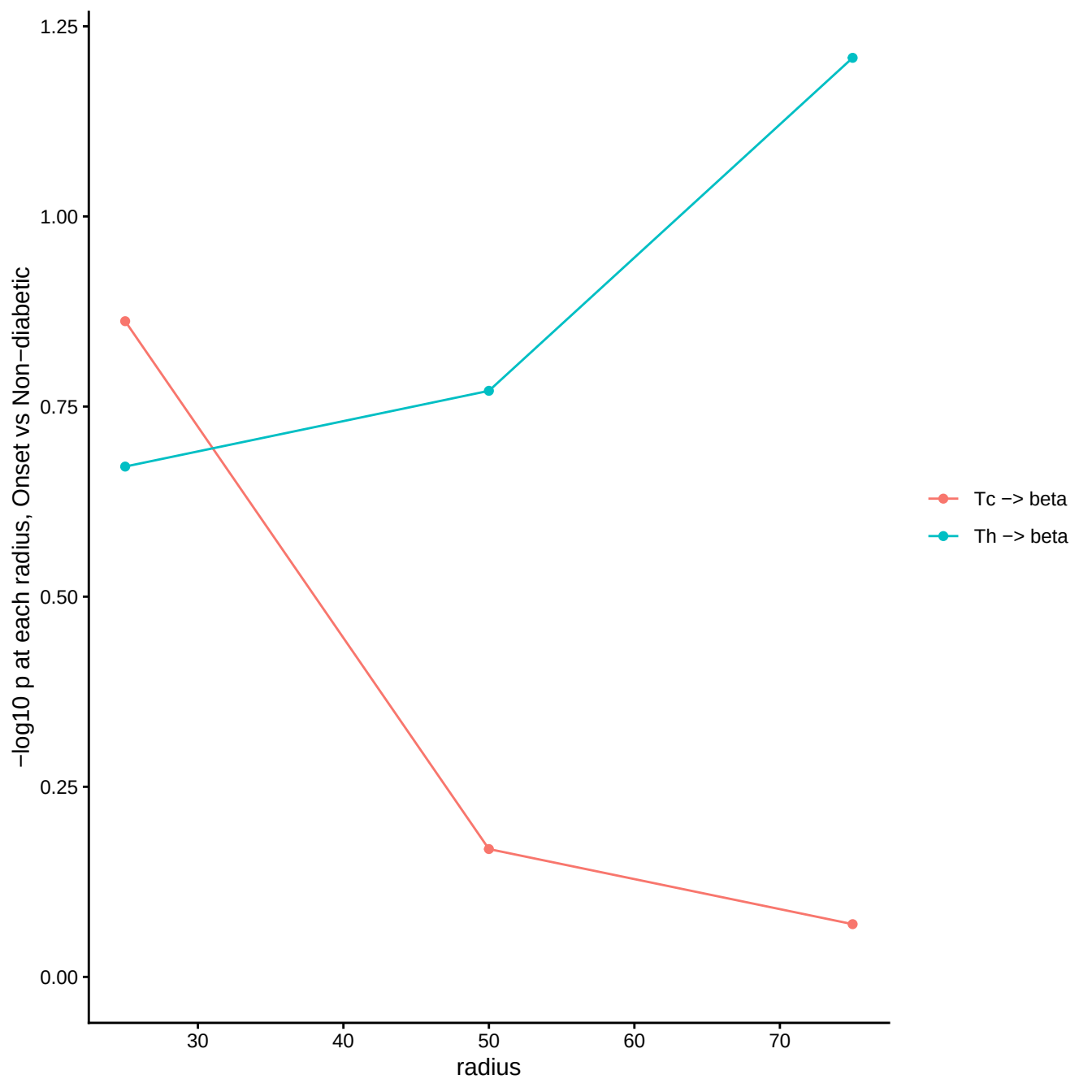

C
B
A
A
B
C
Spatial association
> 3
0
< −3

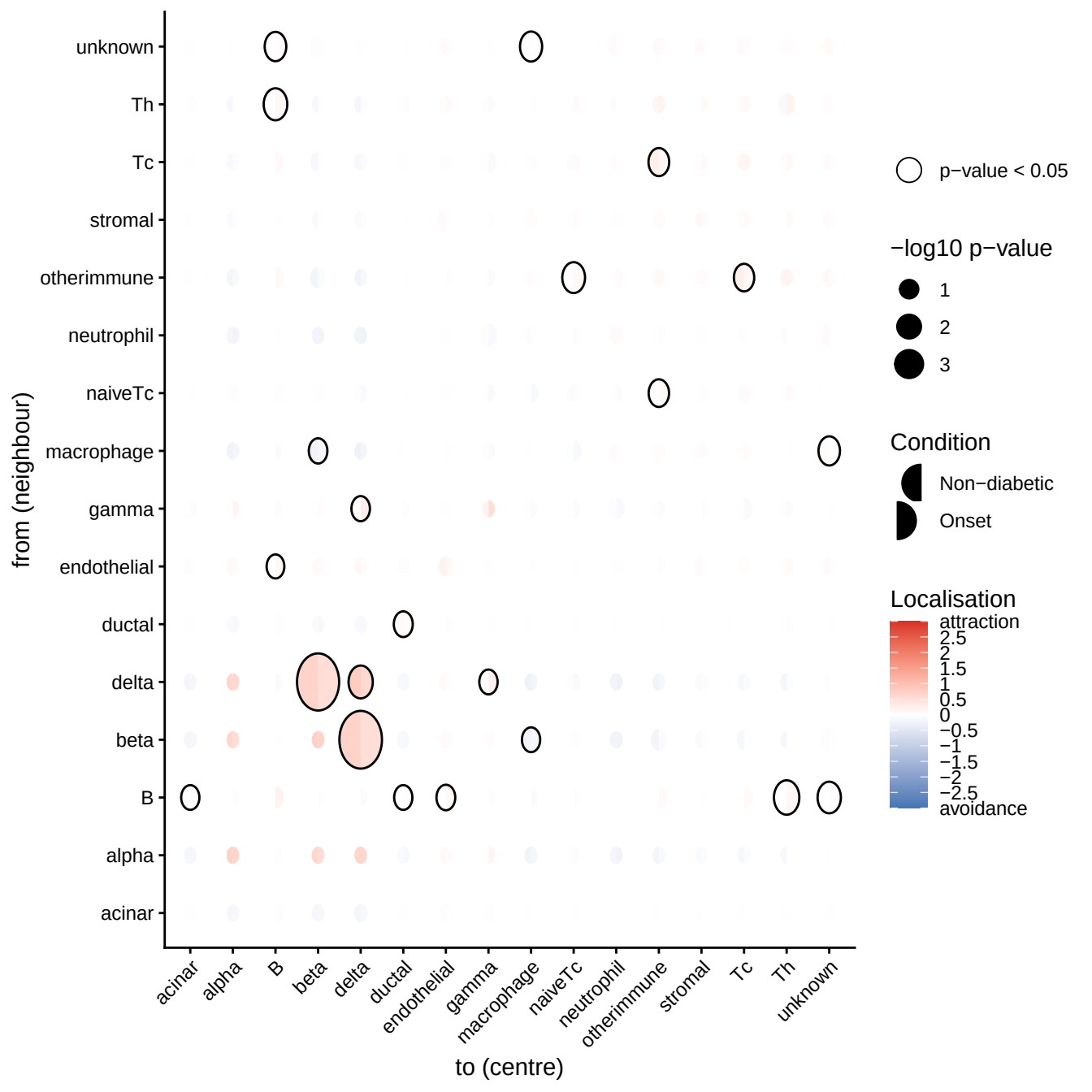

imageID: A09
500
400
300
200
100
0
y
0
100
200
300
400
x
cellType
acinar
alpha
beta
delta
ductal
endothelial
macrophage
naiveTc
neutrophil
otherimmune
stromal
Tc
Th
unknown

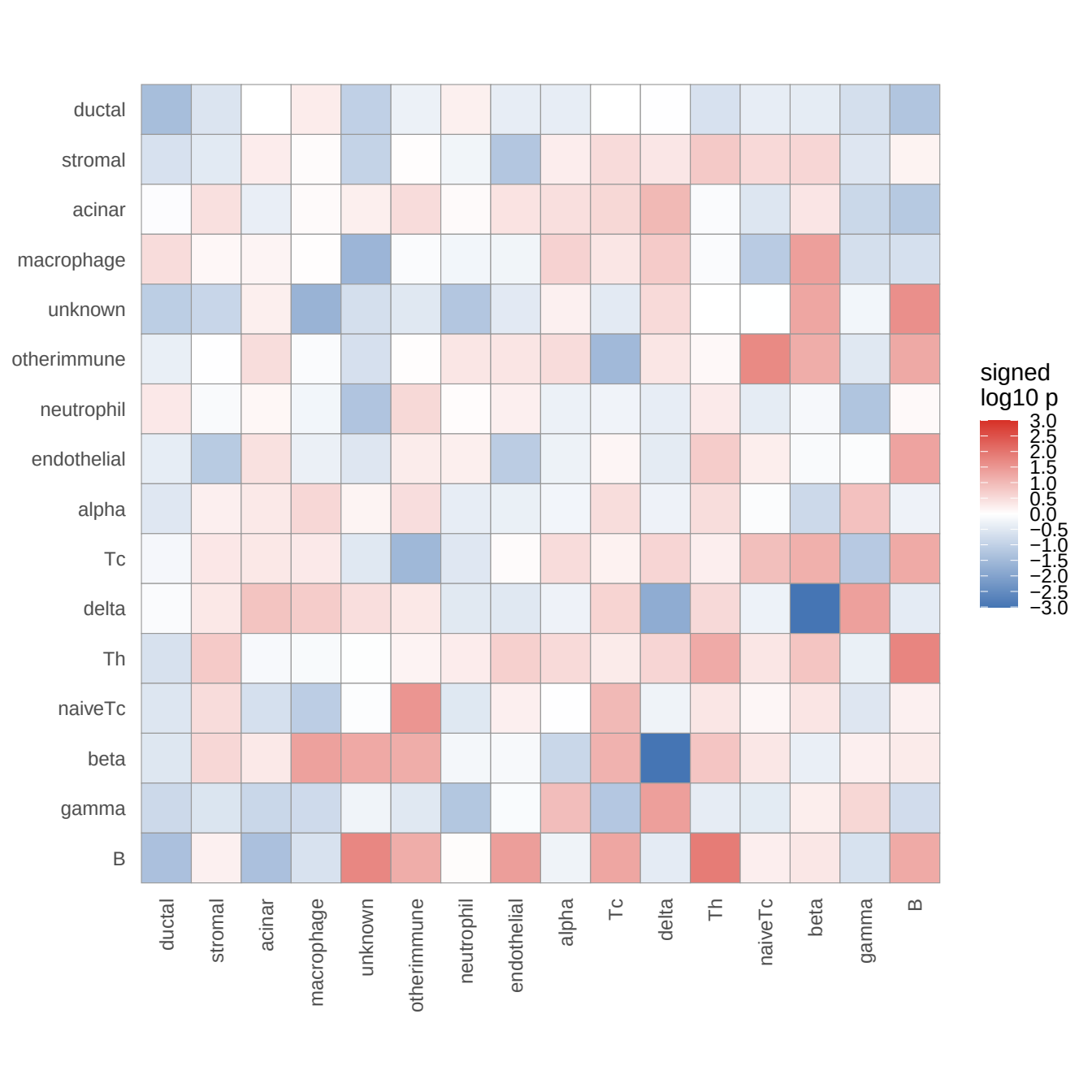

imageID: A09
500
400
300
200
100
0
y
0
100
200
300
400
x
cellType
acinar
alpha
density
5e−06
4e−06
3e−06
2e−06

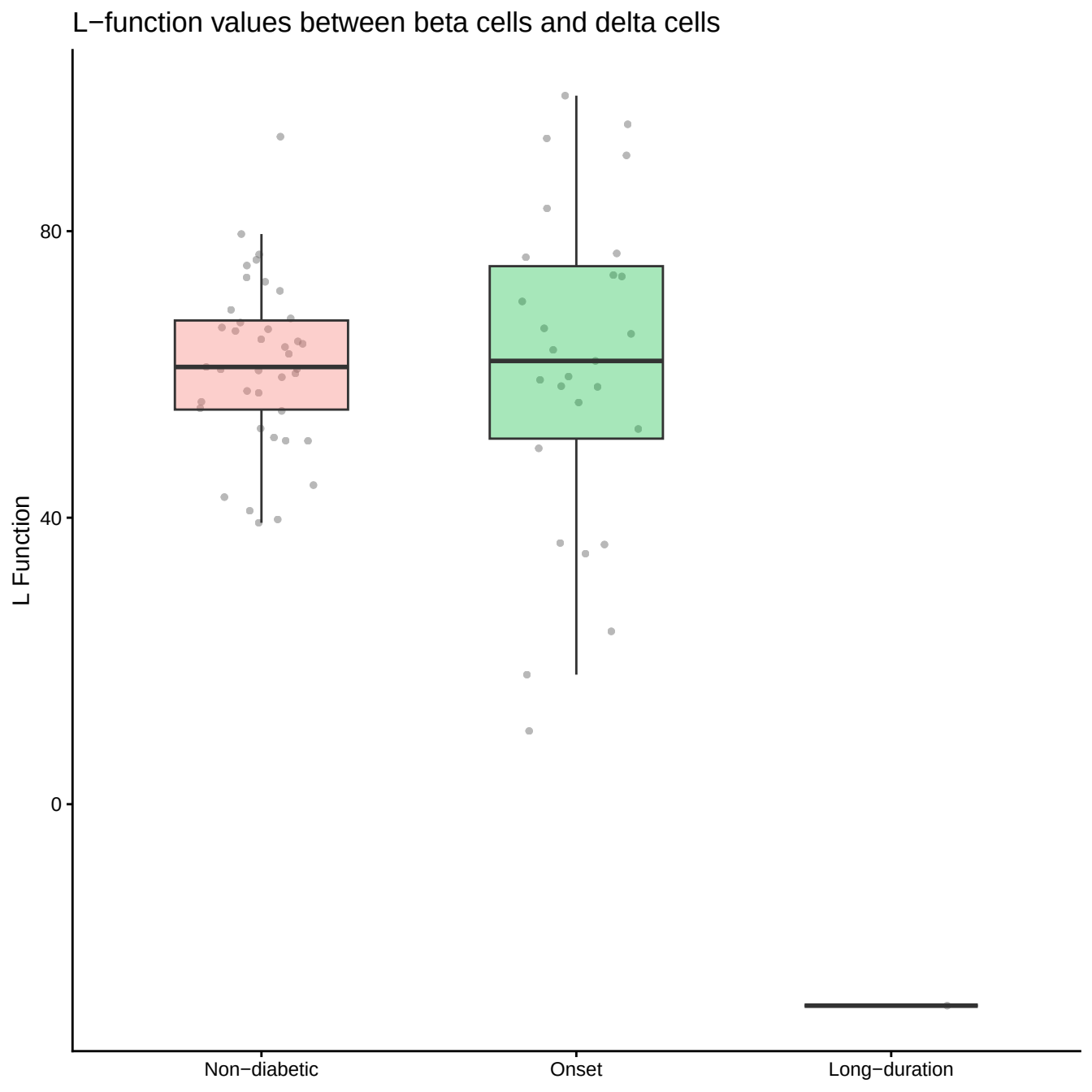

imageID: A09
500
400
300
200
100
0
y
0
100
200
300
400
x
cellType
acinar
alpha
density
5e−06
4e−06
3e−06
2e−06

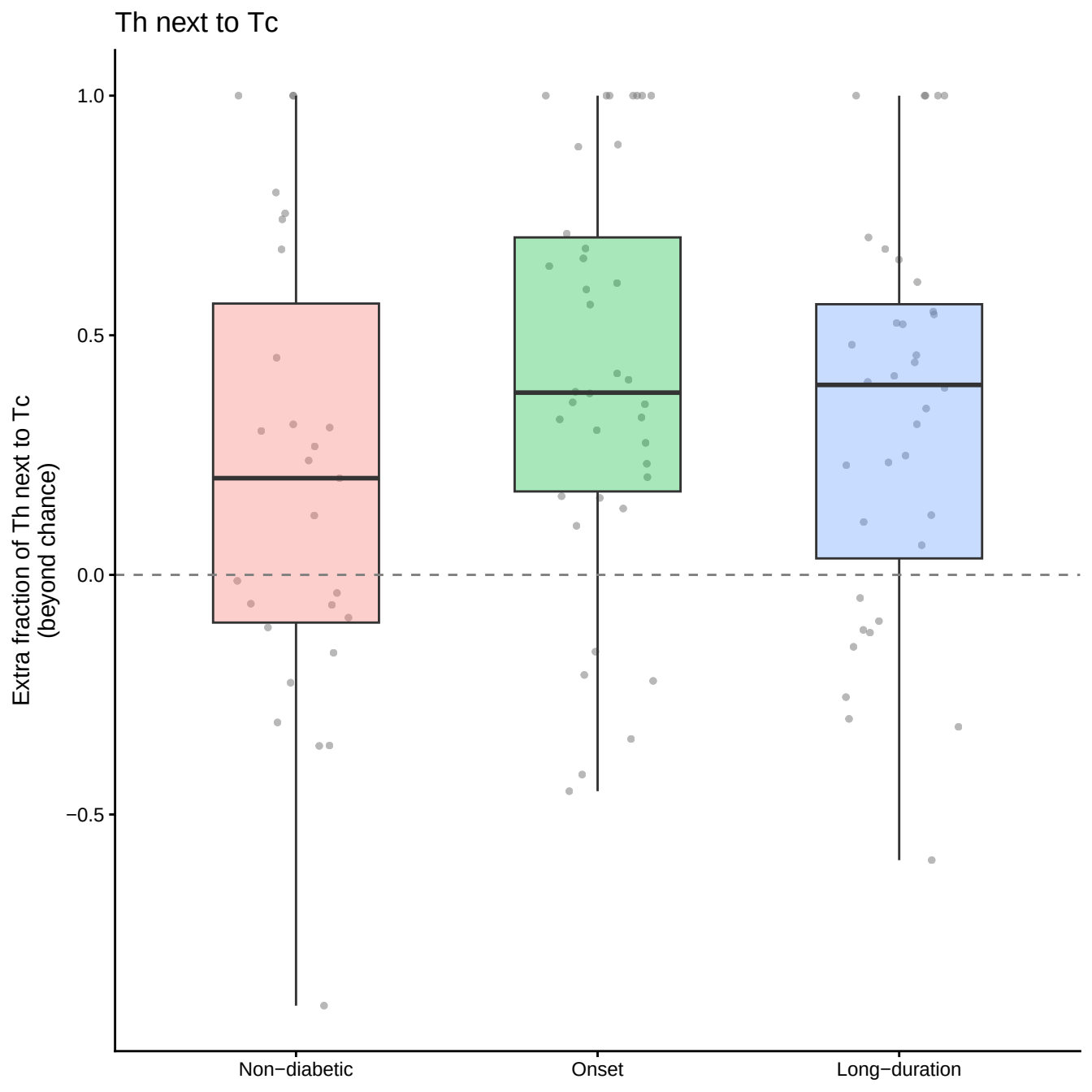

A09
A11
500
400
300
200
100
0
y
0
100
200
300
400
x
cellType
acinar
alpha
density
6e−06
4e−06
2e−06


1.25
1.00
0.75
0.50
0.25
0.00
−log10 p at each radius, Onset vs Non−diabetic
30
40
50
60
70
radius
Tc −> beta
Th −> beta


from (neighbour)
unknown
Th
Tc
stromal
otherimmune
neutrophil
naiveTc
macrophage
gamma
endothelial
ductal
delta
beta
B
alpha
acinar
to (centre)
acinar
alpha
B
beta
delta
ductal
endothelial
gamma
macrophage
naiveTc
neutrophil
otherimmune
stromal
Tc
Th
unknown
p−value < 0.05
−log10 p−value
1
2
3
Condition
Non−diabetic
Onset
Localisation
attraction
2.5
2
1.5
1
0.5
0
−0.5
−1
−1.5
−2
−2.5
avoidance


ductal
stromal
acinar
macrophage
unknown
otherimmune
neutrophil
endothelial
alpha
Tc
delta
Th
naiveTc
beta
gamma
B
signed log10 p
3.0
2.5
2.0
1.5
1.0
0.5
0.0
−0.5
−1.0
−1.5
−2.0
−2.5
−3.0


L−function values between beta cells and delta cells
L Function
80
40
0
Non−diabetic
Onset
Long−duration


Th next to Tc
Extra fraction of Th next to Tc
(beyond chance)
1.0
0.5
0.0
−0.5
Non−diabetic
Onset
Long−duration