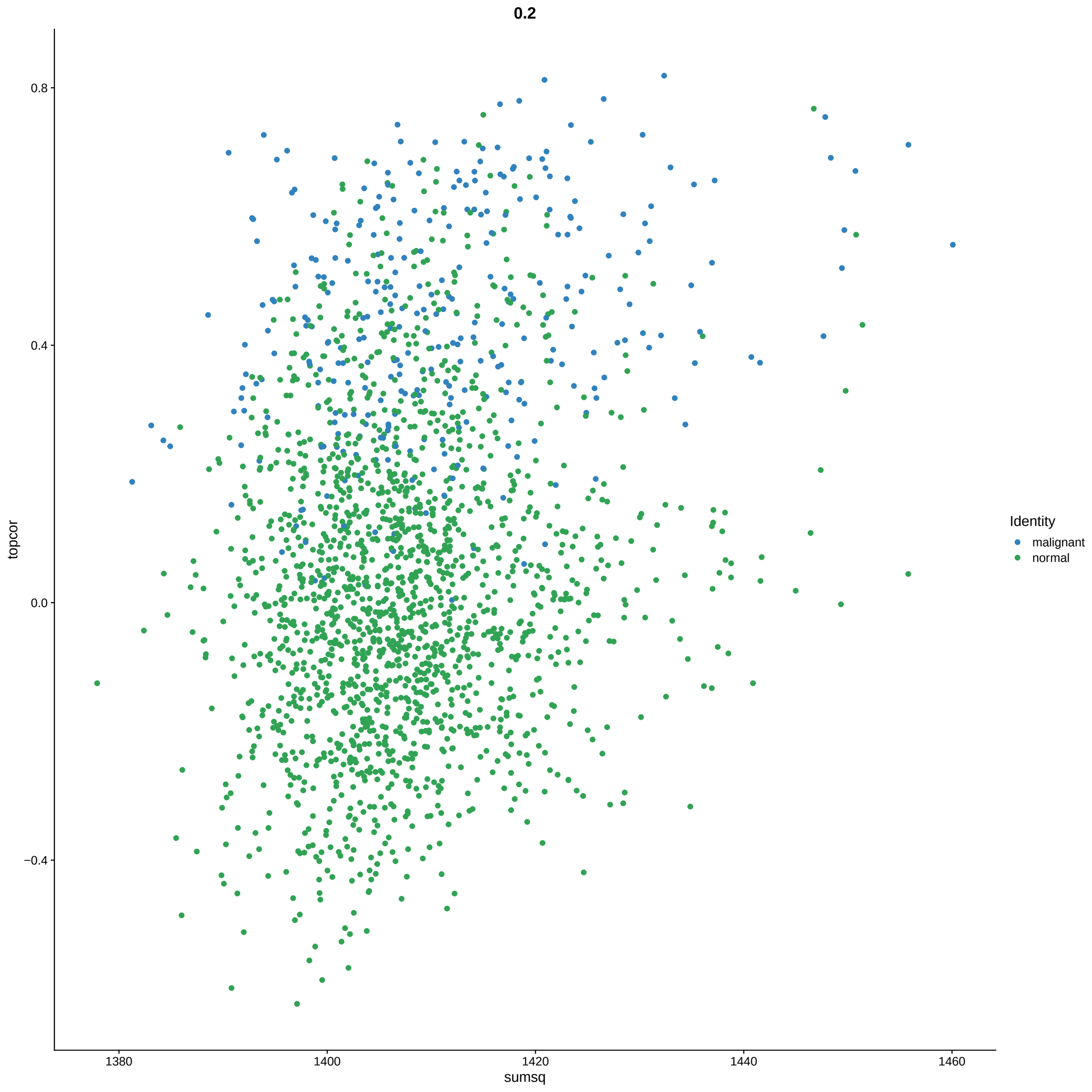
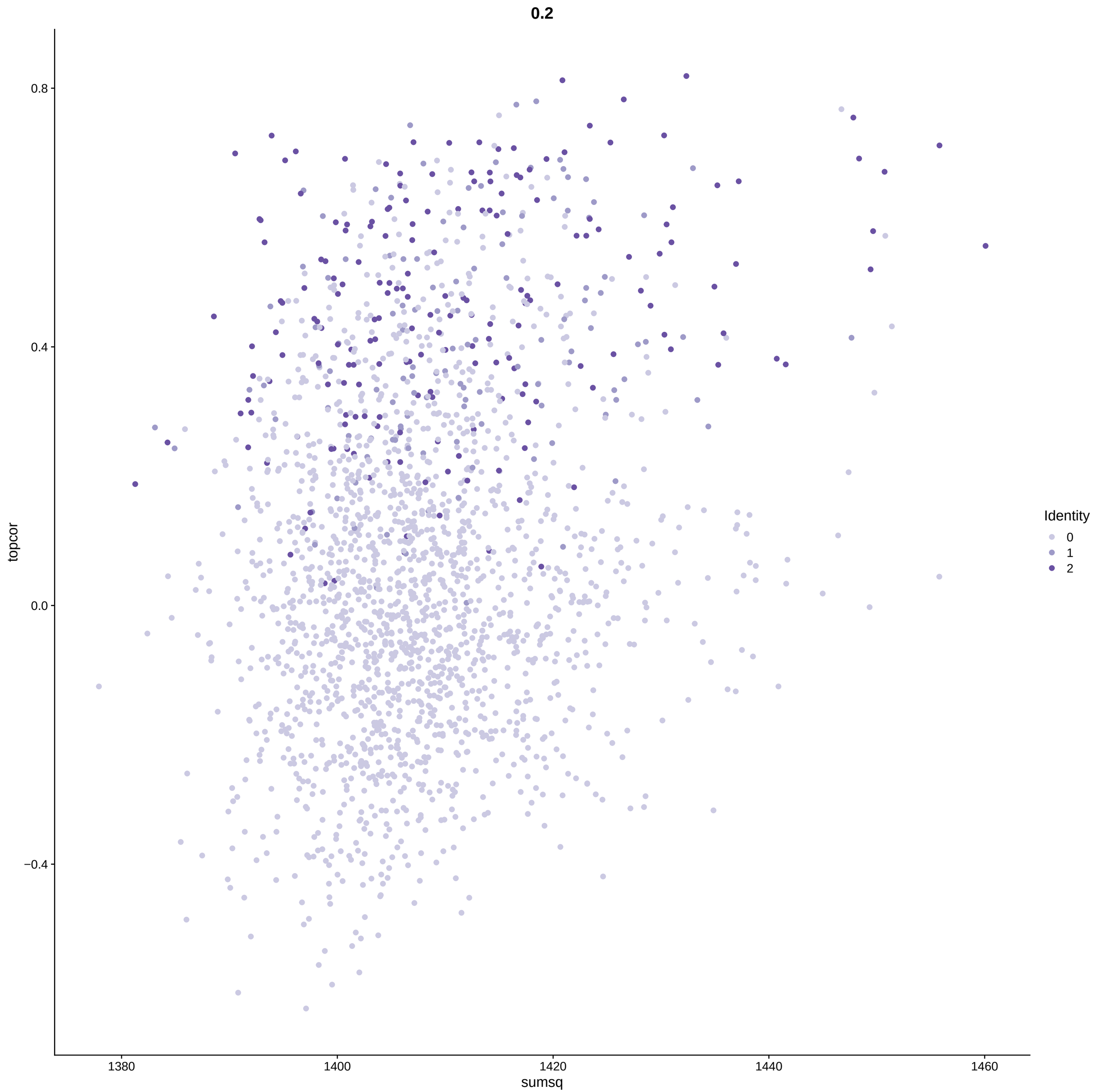
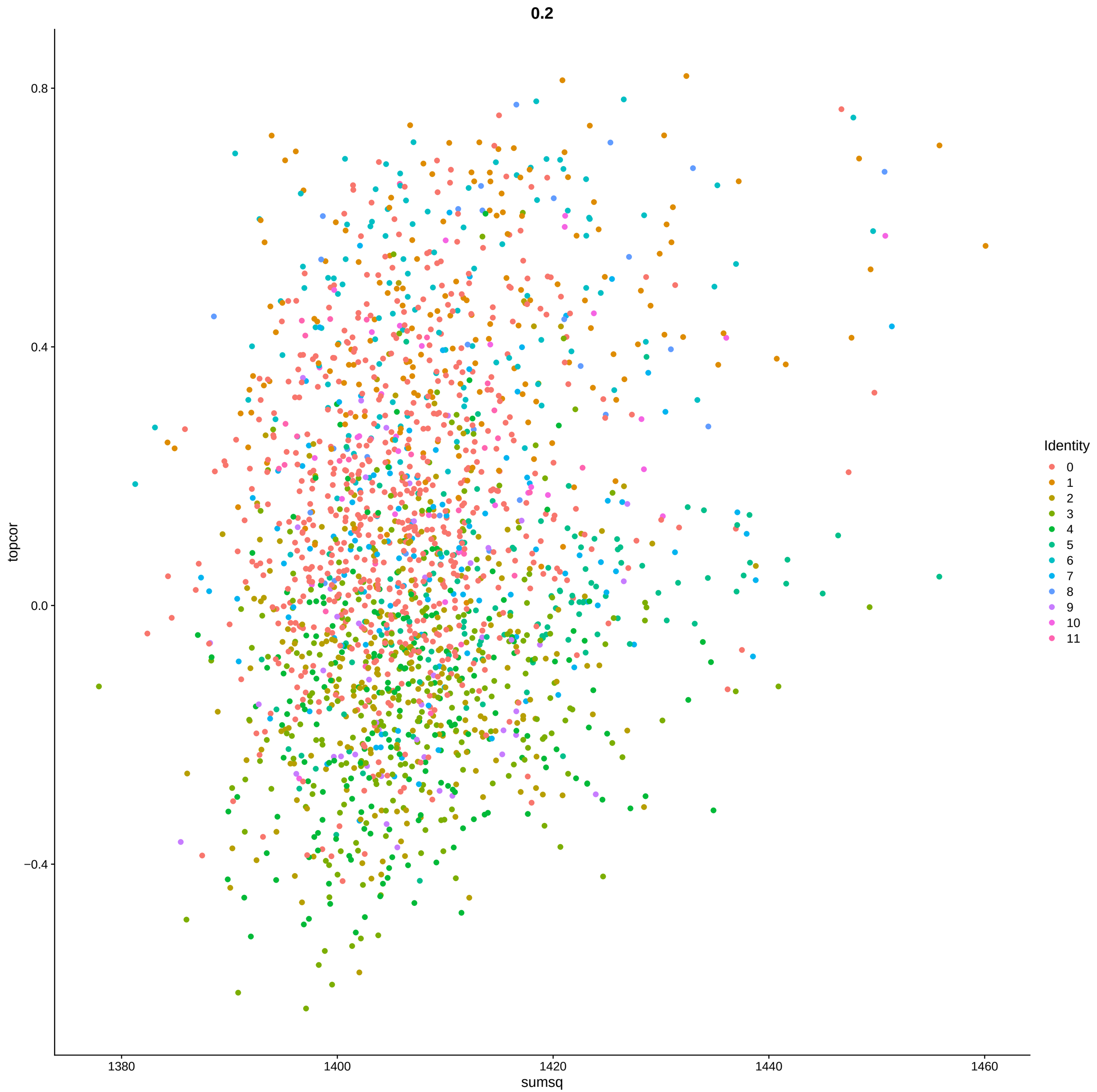
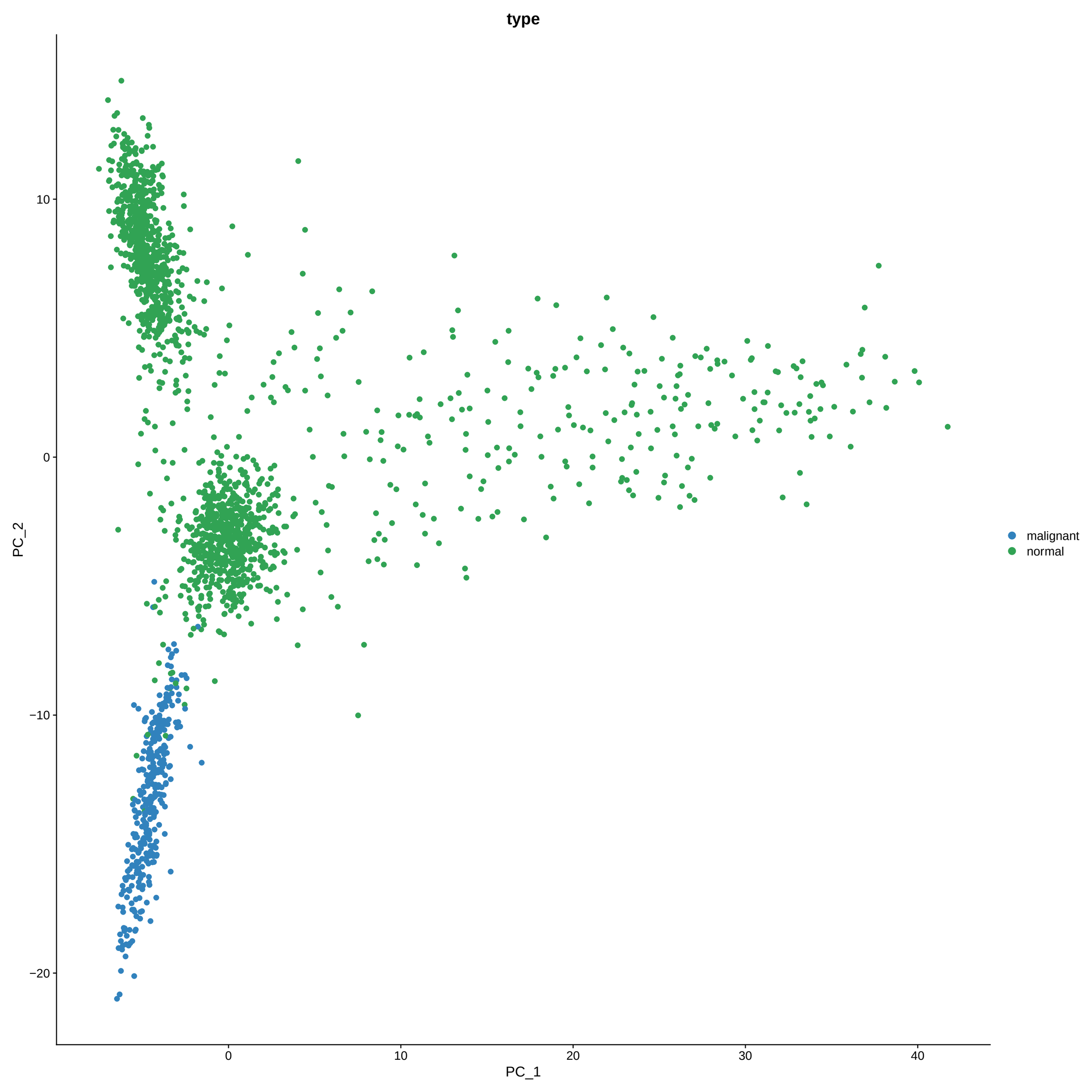
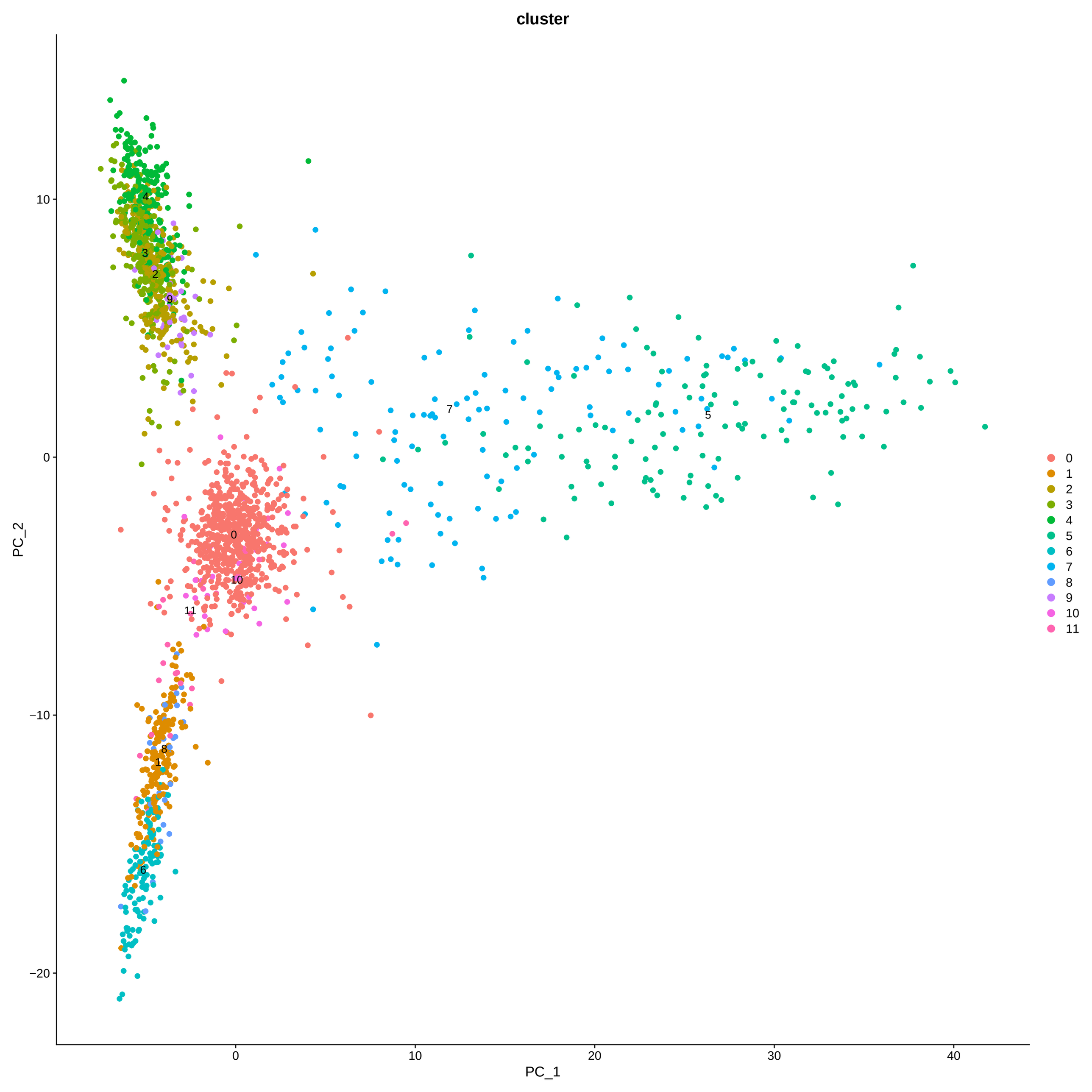

0.2
0.8
0.4
0.0
−0.4
topcor
1380
1400
1420
1440
1460
sumsq
Identity
malignant
normal


0.2
topcor
0.8
0.4
0.0
−0.4
1380
1400
1420
1440
1460
sumsq
Identity
0
1
2


0.2
topcor
0.8
0.4
0.0
−0.4
1380
1400
1420
1440
1460
sumsq
Identity
0
1
2
3
4
5
6
7
8
9
10
11


type
PC_2
10
0
−10
−20
PC_1
0
10
20
30
40
malignant
normal


cluster
10
0
−10
−20
PC_2
0
10
20
30
40
PC_1
4
3
2
9
7
5
0
10
11
8
1
6
0
1
2
3
4
5
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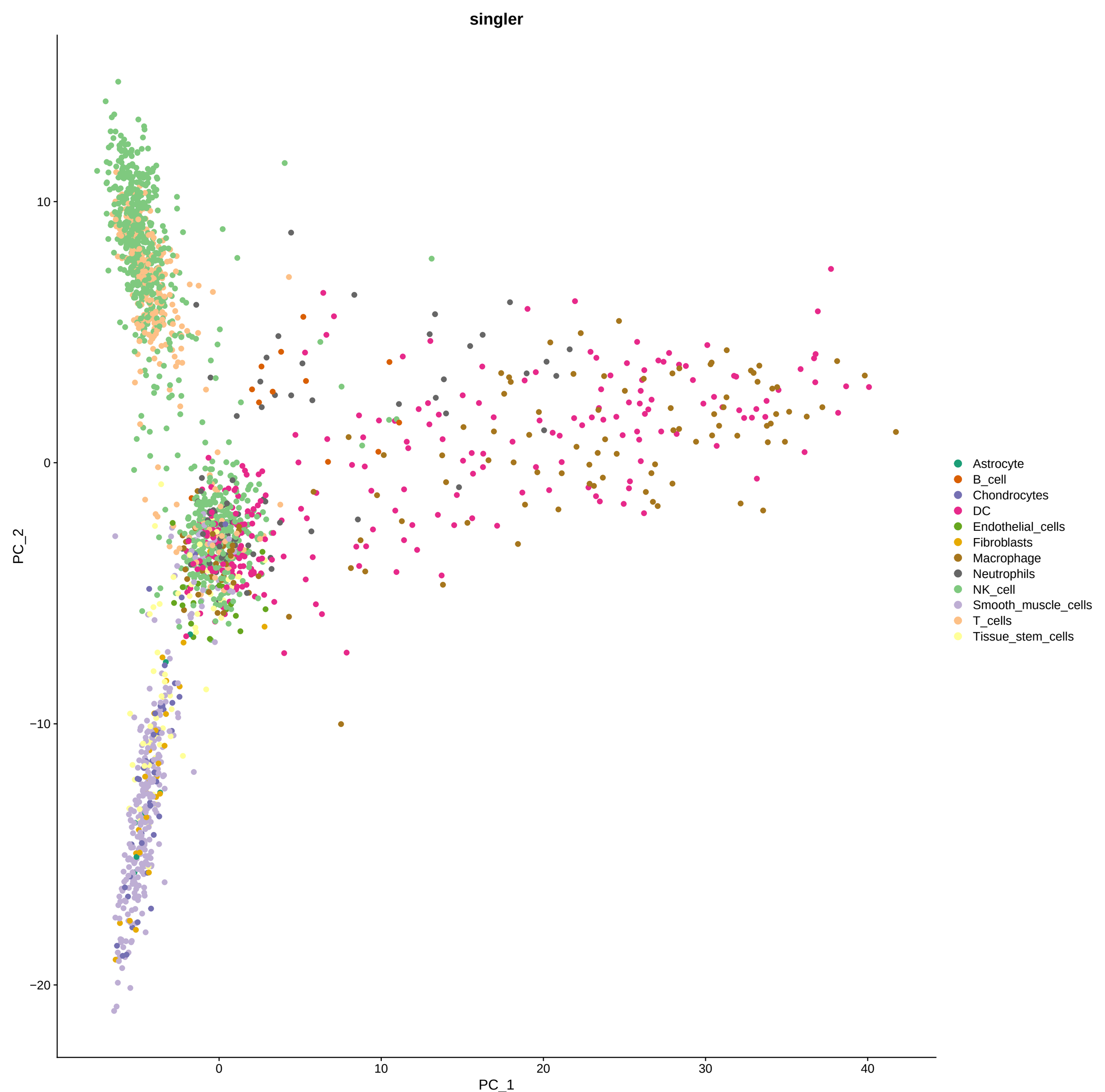
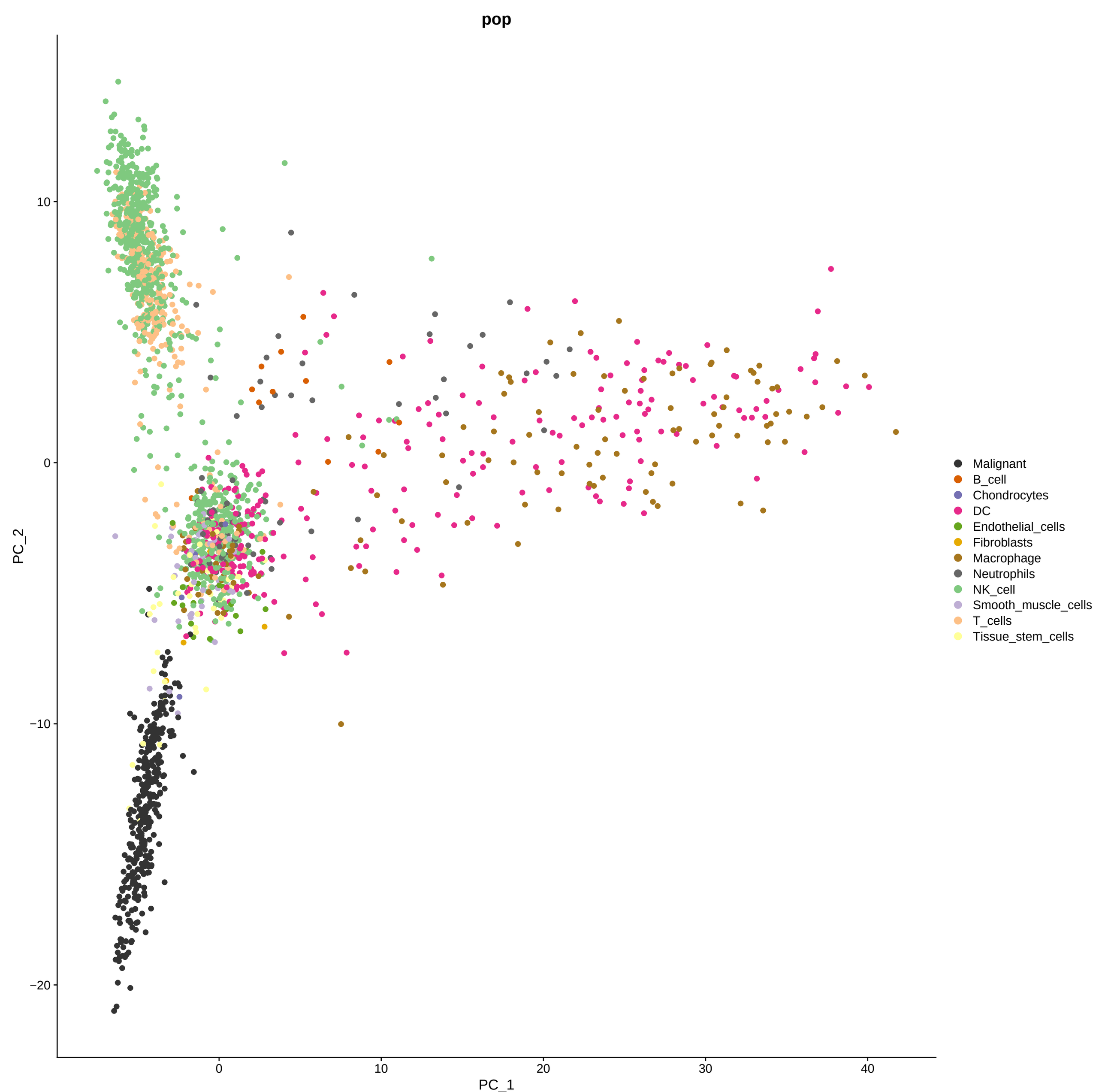
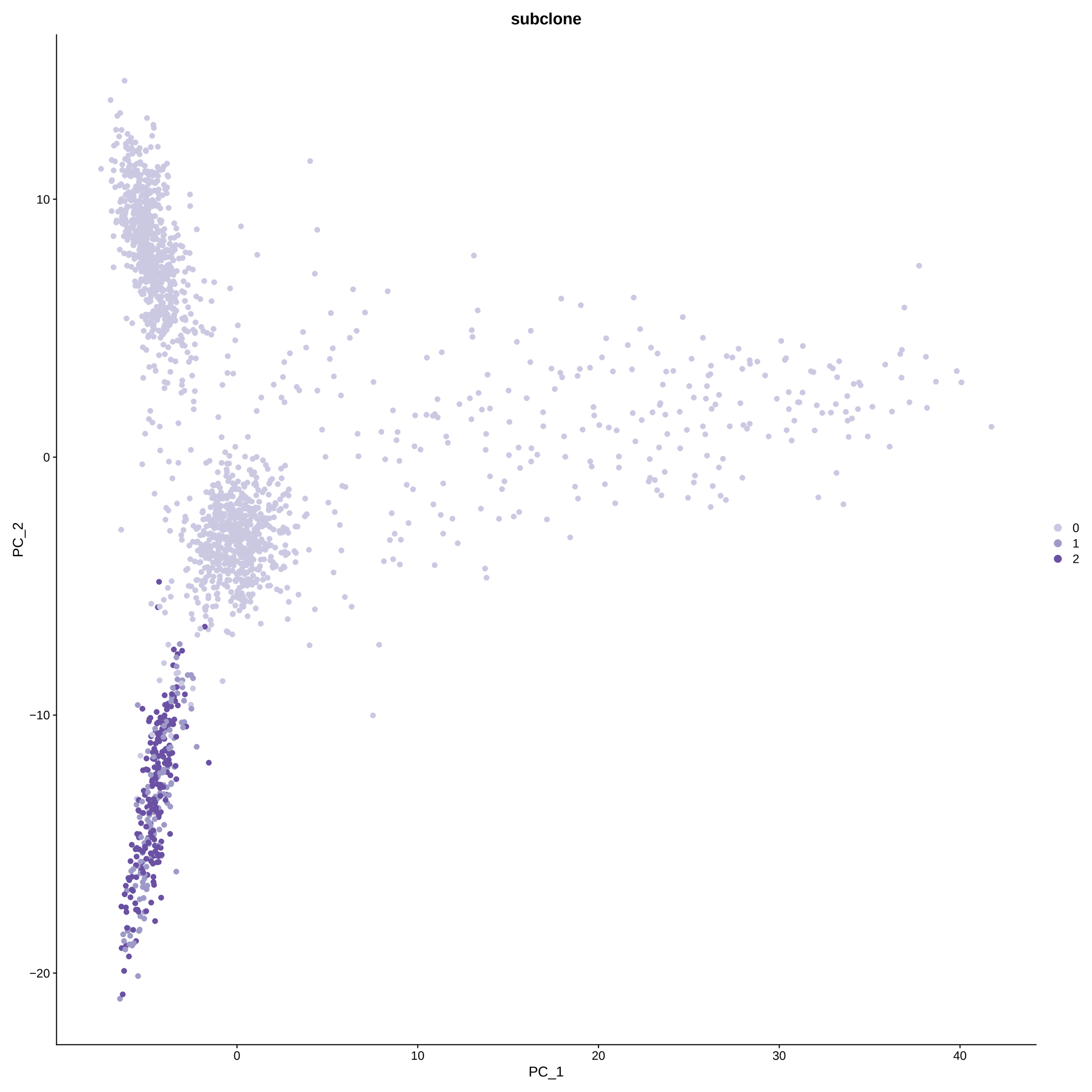
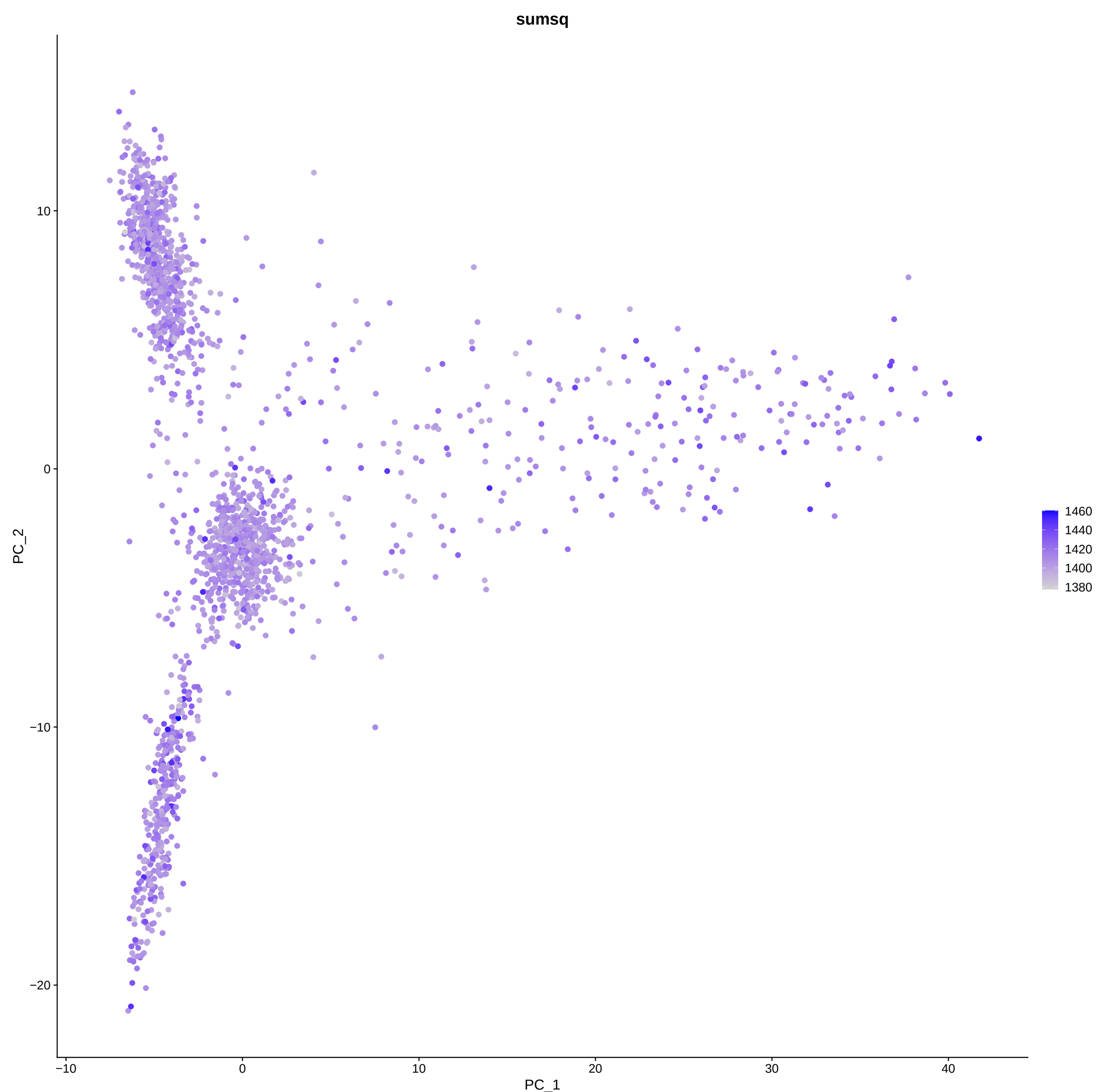
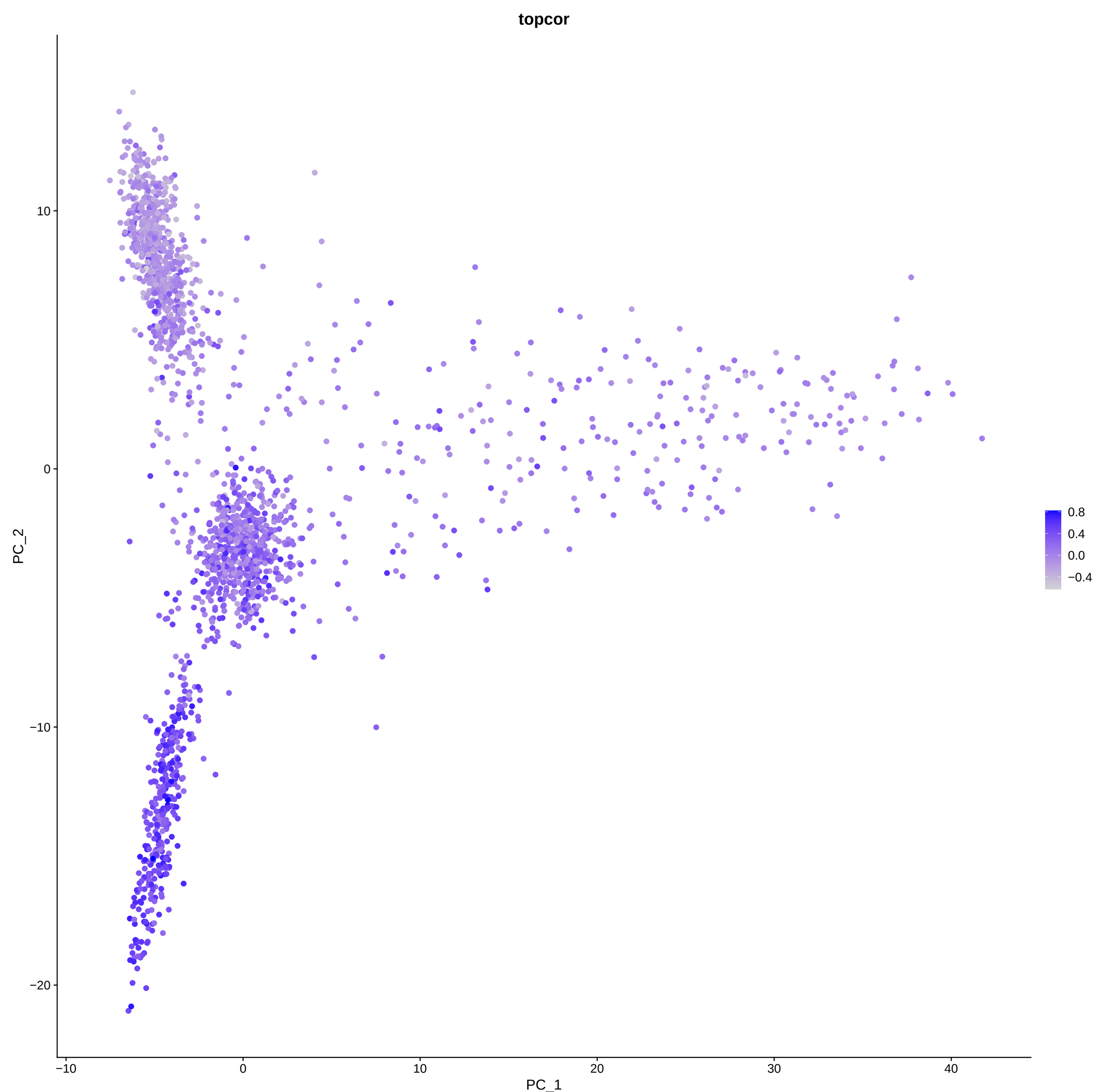
8
9
10
11

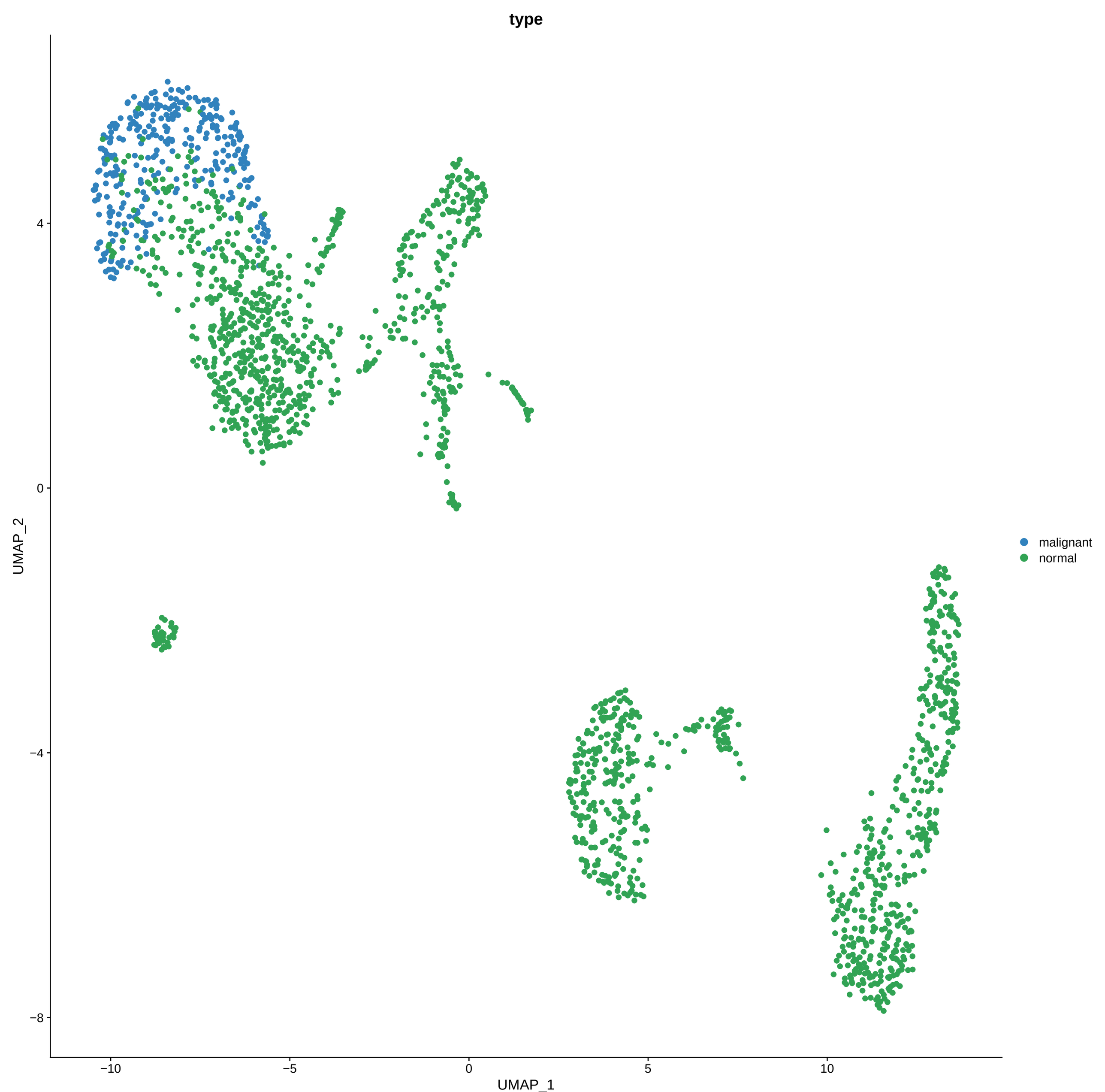

singler
10
0
−10
−20
PC_2
0
10
20
30
40
PC_1
Astrocyte
B_cell
Chondrocytes
DC
Endothelial_cells
Fibroblasts
Macrophage
Neutrophils
NK_cell
Smooth_muscle_cells
T_cells
Tissue_stem_cells

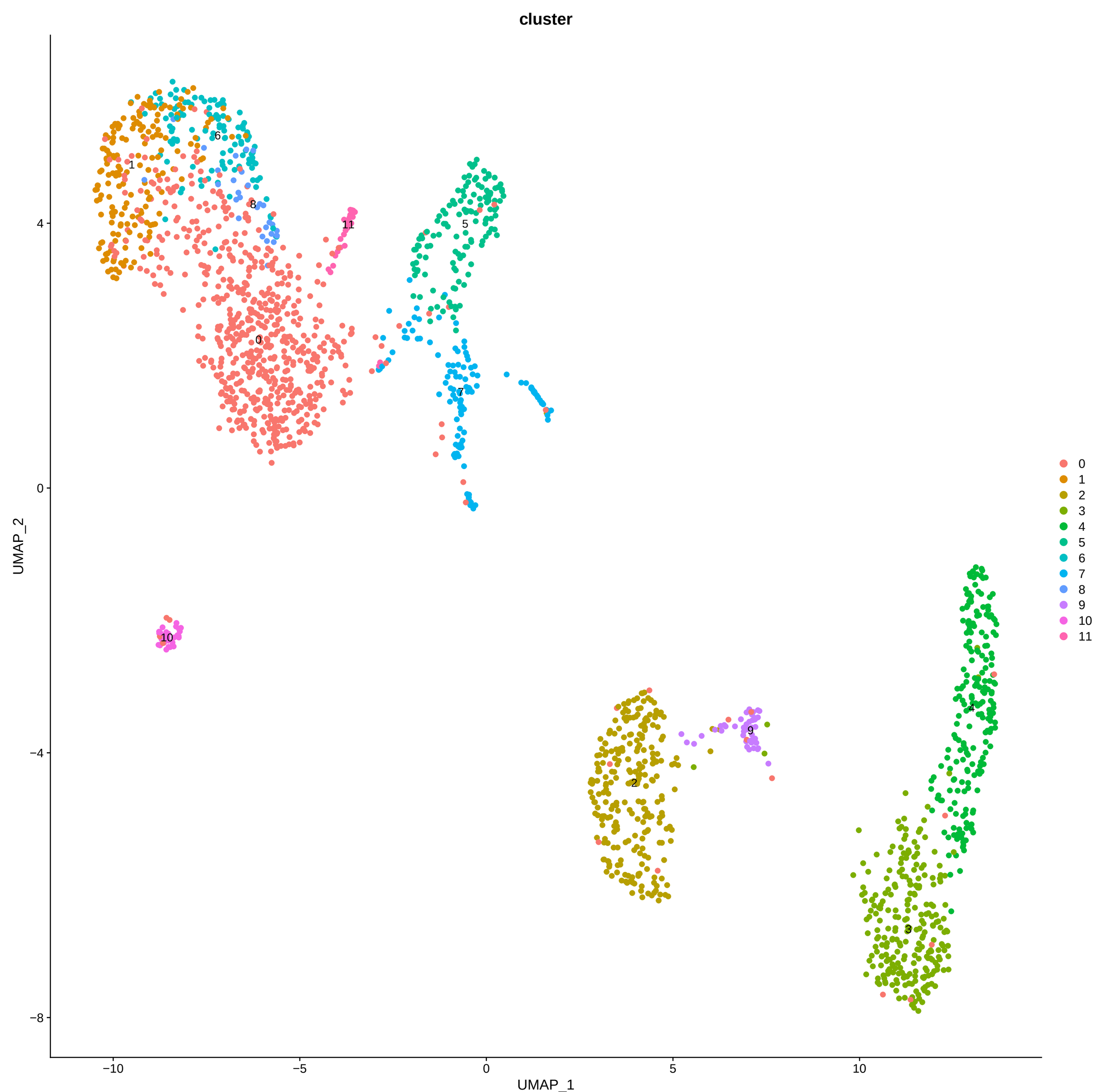

pop
10
0
−10
−20
PC_2
0
10
20
30
40
PC_1
Malignant
B_cell
Chondrocytes
DC
Endothelial_cells
Fibroblasts
Macrophage
Neutrophils
NK_cell
Smooth_muscle_cells
T_cells
Tissue_stem_cells

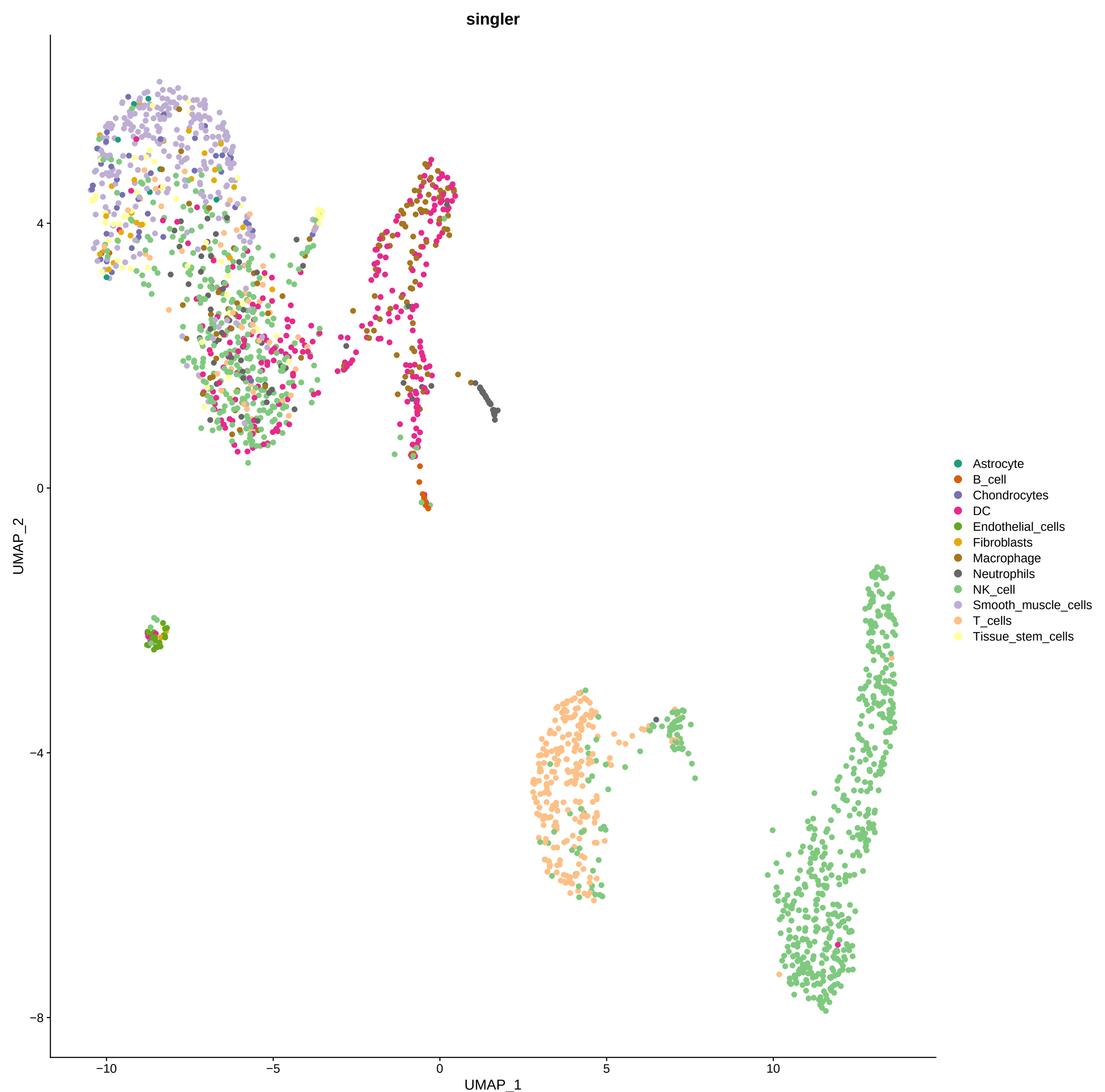

subclone
10
0
−10
−20
PC_2
0
10
20
30
40
PC_1
0
1
2

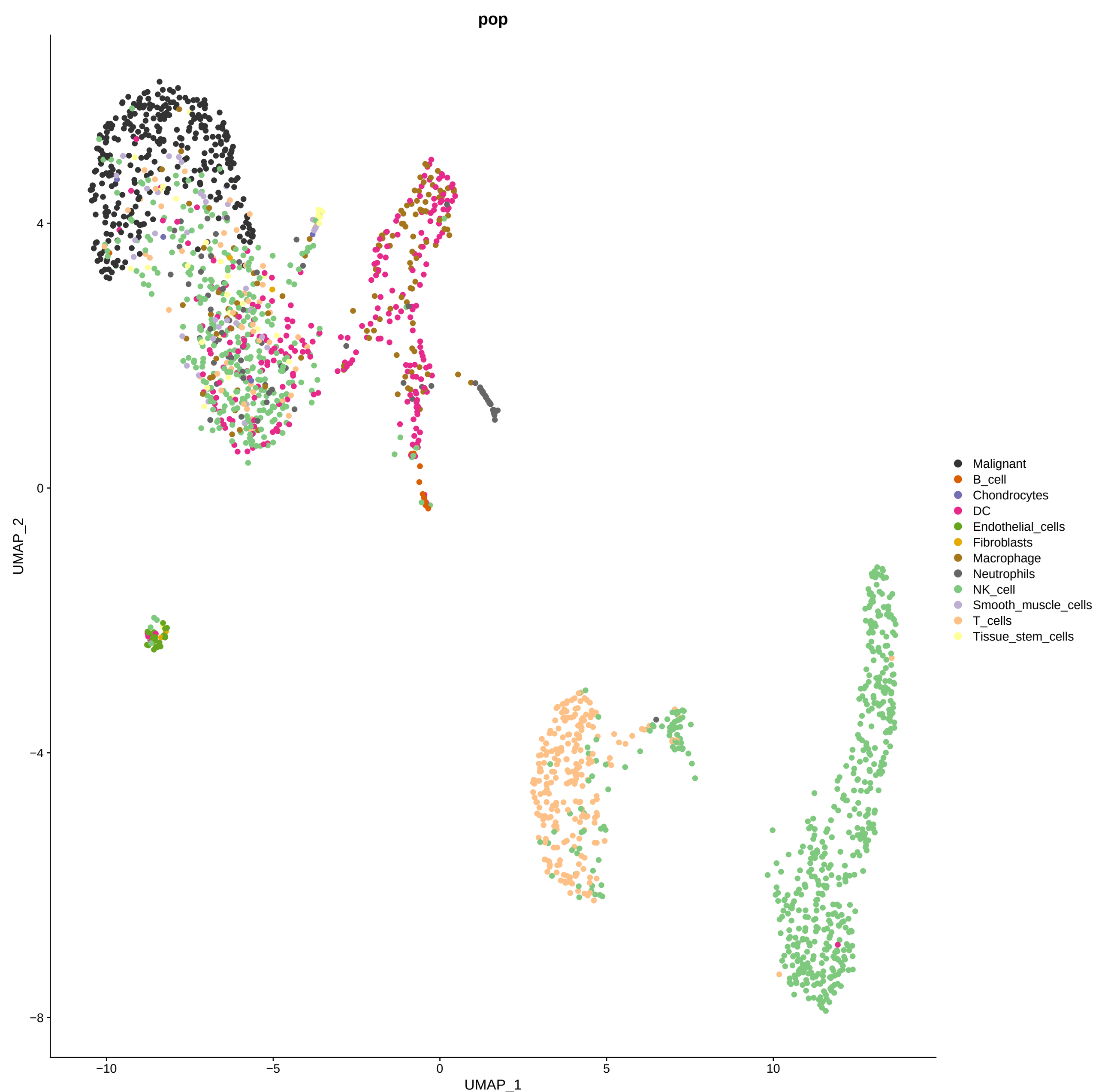

sumsq
10
0
−10
−20
PC_2
−10
0
10
20
30
40
PC_1
1460
1440
1420
1400
1380

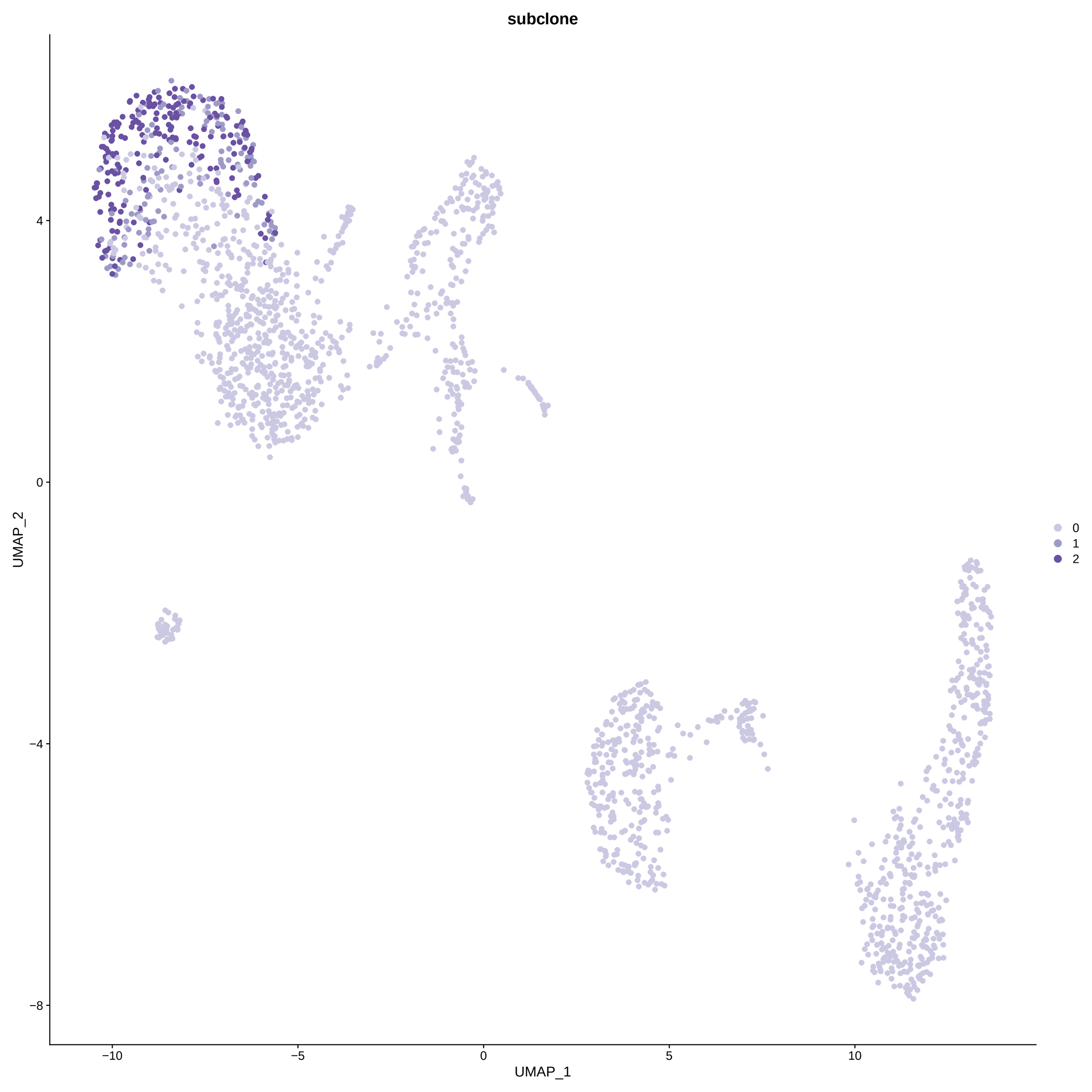

topcor
10
0
−10
−20
PC_2
−10
0
10
20
30
40
PC_1
0.8
0.4
0.0
−0.4

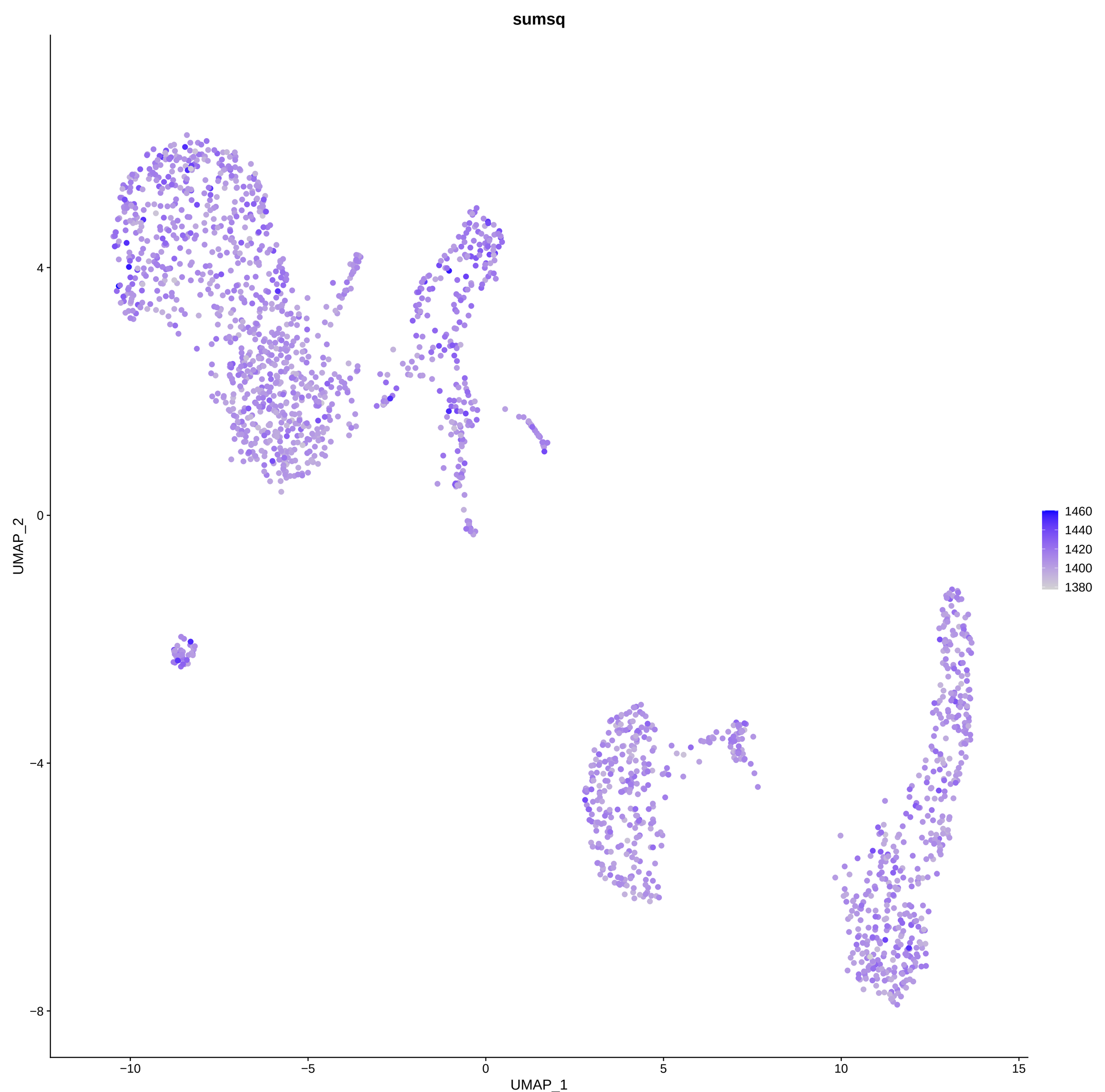

type
malignant
normal
UMAP_2
4
0
−4
−8
−10
−5
0
5
10
UMAP_1

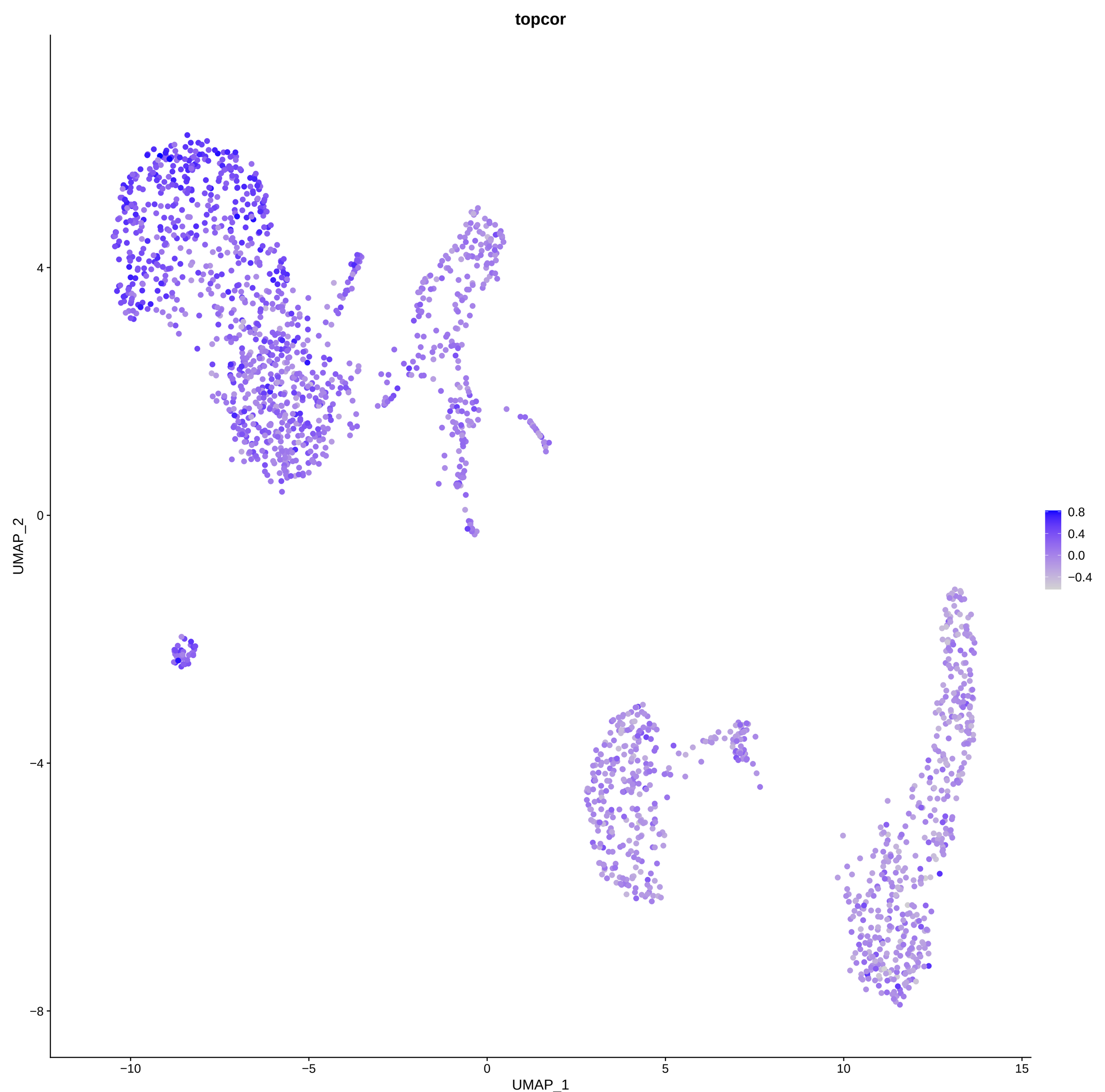

cluster
6
1
8
11
5
0
7
10
9
2
4
3
0
1
2
3
4
5
6
7
8
9
10
11
4
0
−4
−8
−10
−5
0
5
10
UMAP_2
UMAP_1


singler
UMAP_2
4
0
−4
−8
−10
−5
0
5
10
UMAP_1
Astrocyte
B_cell
Chondrocytes
DC
Endothelial_cells
Fibroblasts
Macrophage
Neutrophils
NK_cell
Smooth_muscle_cells
T_cells
Tissue_stem_cells


pop
4
0
−4
−8
UMAP_2
−10
−5
0
5
10
UMAP_1
Malignant
B_cell
Chondrocytes
DC
Endothelial_cells
Fibroblasts
Macrophage
Neutrophils
NK_cell
Smooth_muscle_cells
T_cells
Tissue_stem_cells


subclone
0
1
2
4
0
−4
−8
UMAP_2
−10
−5
0
5
10
UMAP_1


sumsq
UMAP_2
4
0
−4
−8
−10
−5
0
5
10
15
UMAP_1
1460
1440
1420
1400
1380


topcor
UMAP_2
4
0
−4
−8
−10
−5
0
5
10
15
UMAP_1
0.8
0.4
0.0
−0.4