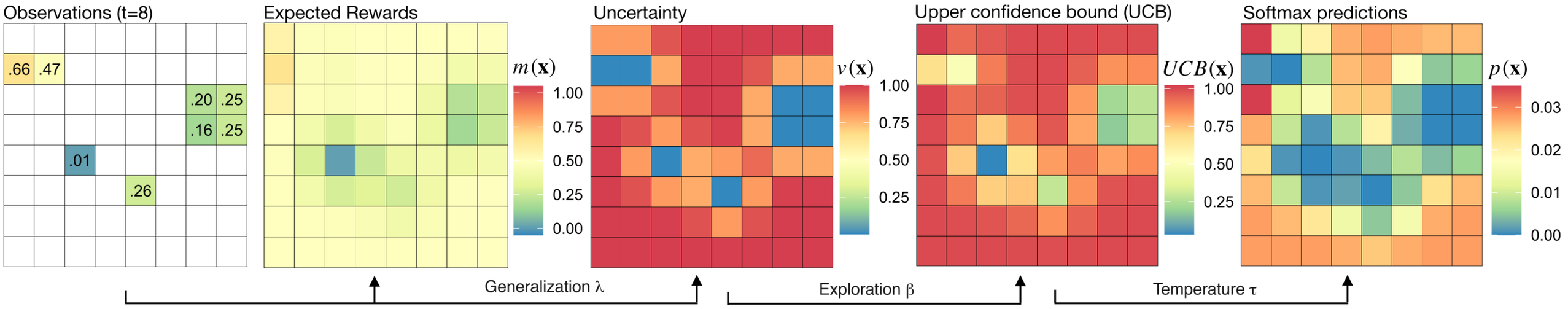
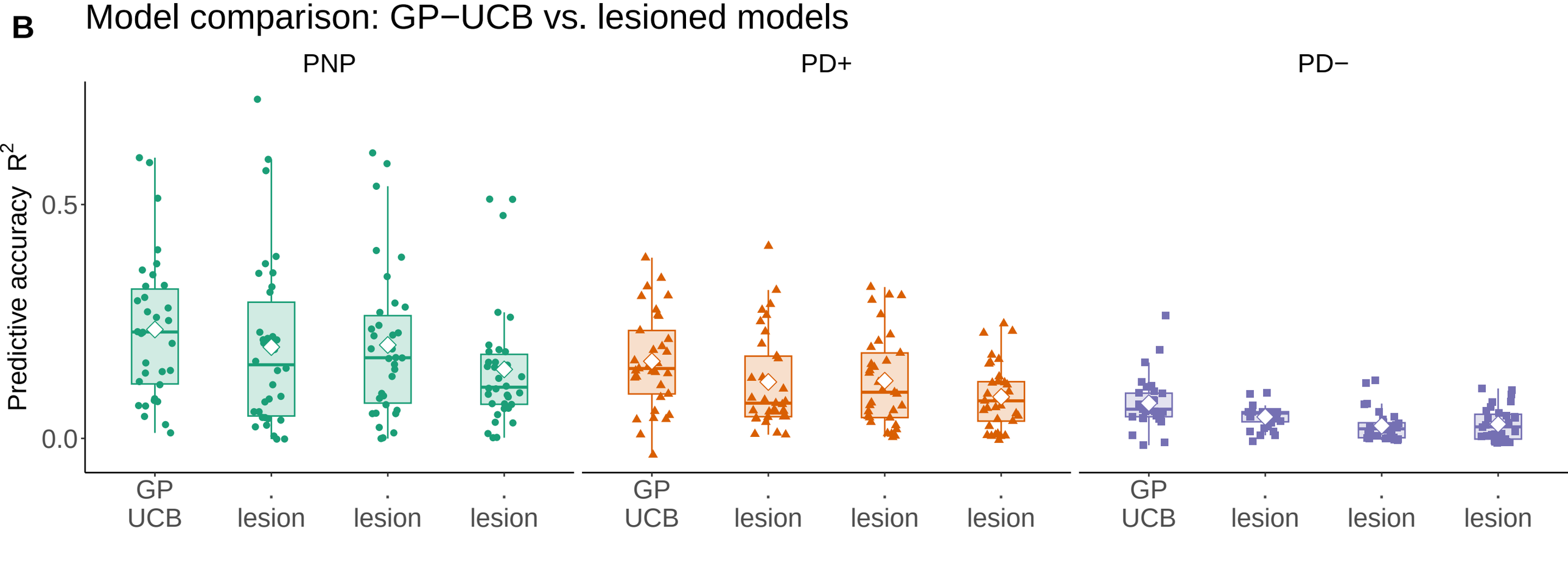
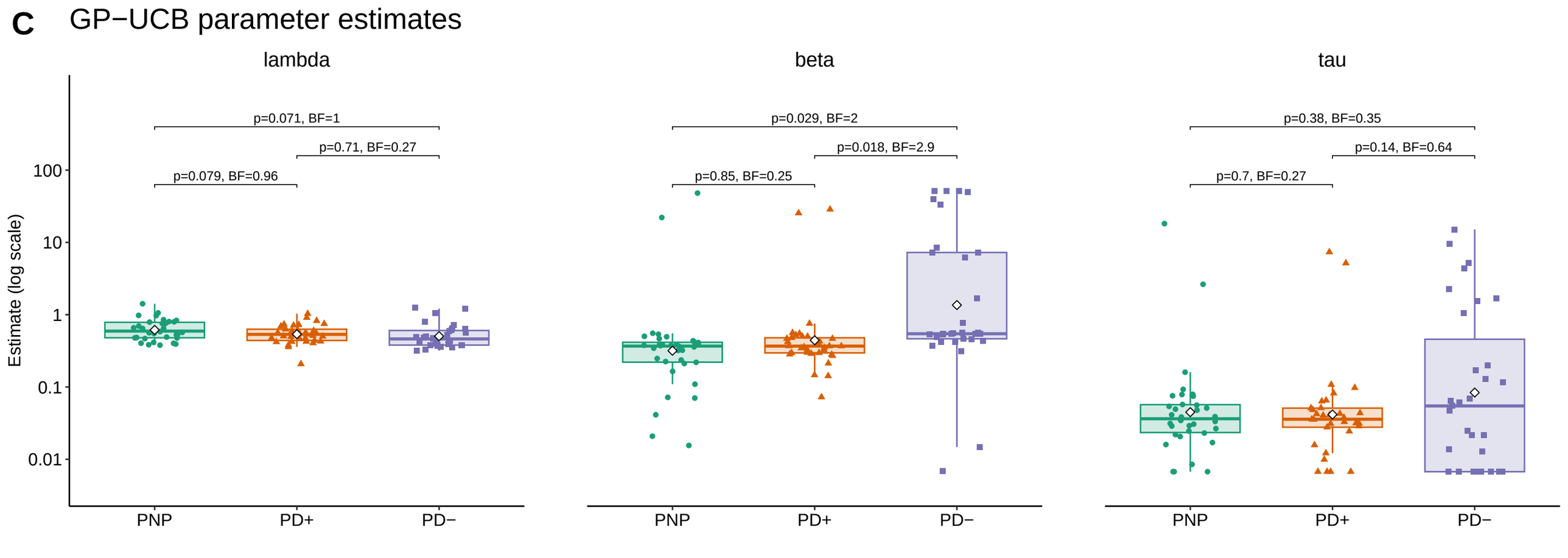
A


Observations (t=8)
.66
.47
.20
.25
.16
.25
.01
.26
Expected Rewards
$m(\mathbf{x})$
1.00
0.75
0.50
0.25
0.00
Uncertainty
$v(\mathbf{x})$
1.00
0.75
0.50
0.25
Upper confidence bound (UCB)
$UCB(\mathbf{x})$
1.00
0.75
0.50
0.25
Softmax predictions
$p(\mathbf{x})$
0.03
0.02
0.01
0.00
Generalization λ
Exploration β
Temperature τ

B


Model comparison: GP−UCB vs. lesioned models
PNP
PD+
PD−
Predictive accuracy R^2
0.5
0.0
GP UCB
. lesion
. lesion
. lesion
GP UCB
. lesion
. lesion
. lesion
GP UCB
. lesion
. lesion
. lesion

C


GP−UCB parameter estimates
lambda
beta
tau
Estimate (log scale)
100
10
1
0.1
0.01
p=0.071, BF=1
p=0.71, BF=0.27
p=0.079, BF=0.96
p=0.029, BF=2
p=0.018, BF=2.9
p=0.85, BF=0.25
p=0.38, BF=0.35
p=0.14, BF=0.64
p=0.7, BF=0.27
PNP
PD+
PD−