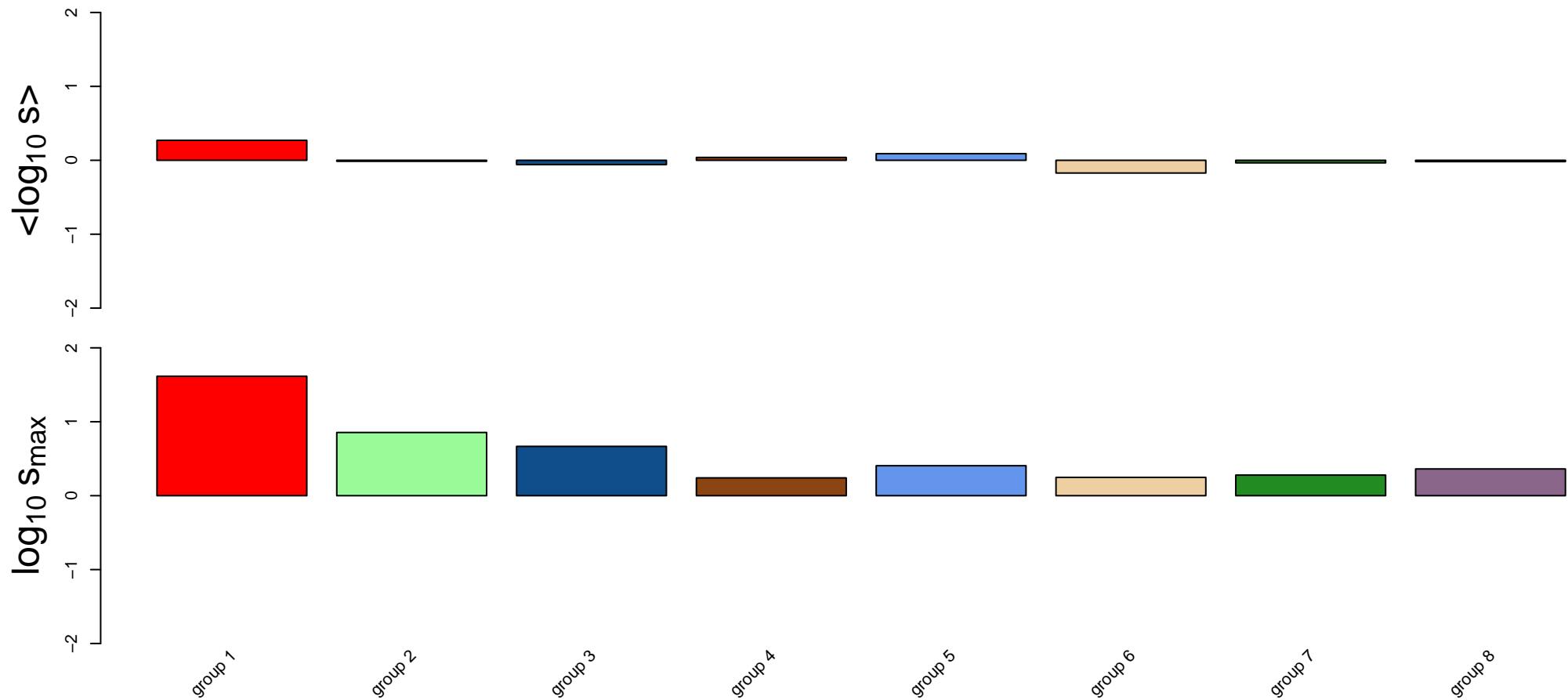
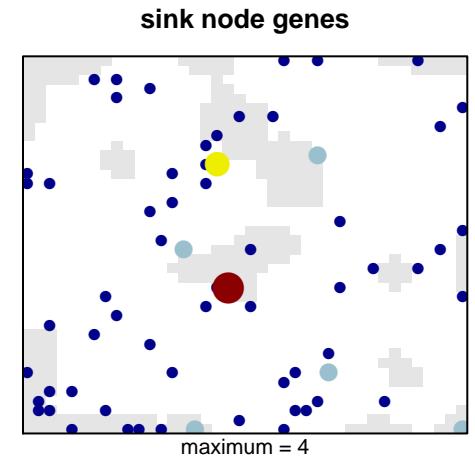
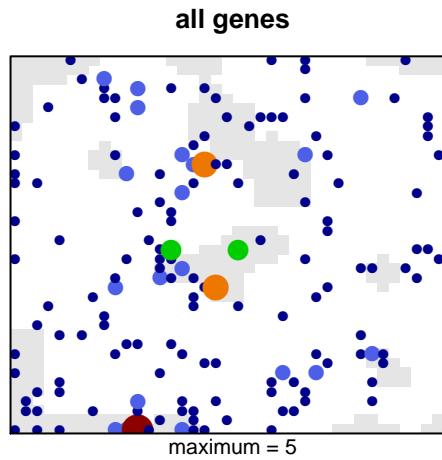


Pancreatic cancer



Pancreatic_cancer
genes with data

Chromosome Unstable (CIN) pathway

Normal duct

PanIN-1A (Pancreatic intraepithelial neoplasia)

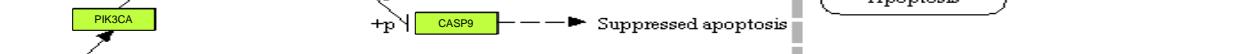
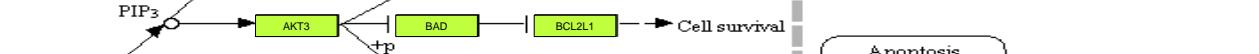
PanIN-1B

PanIN-2

PanIN-3

Adenocarcinoma

Pancreatic ductal cell



Genetic alterations

Oncogenes: K-Ras, HER2/neu

Tumor suppressors: p16, p53, Smad4, BRCA2

p53 signaling pathway

DNA damage → TP53 → DNA damage response

CDKN2A → CDK4/CCND1 → +p RB1 → E2F1 → G1/S progression

GADD45G → BAX/BAK1 → DDB2/POLK → Uncontrolled proliferation Increased survival Genomic instability

TP53 → BAX/BAK1 → DDB2/POLK → Loss of growth inhibitory effects of TGFβ

BRCA2/RAD51 → DNA damage response (dsDNA breaks) → Failed repair of genes

Pancreatic_cancer sink nodes

Chromosome Unstable (CIN) pathway

Normal duct

PanIN-1A (Pancreatic intraepithelial neoplasia)

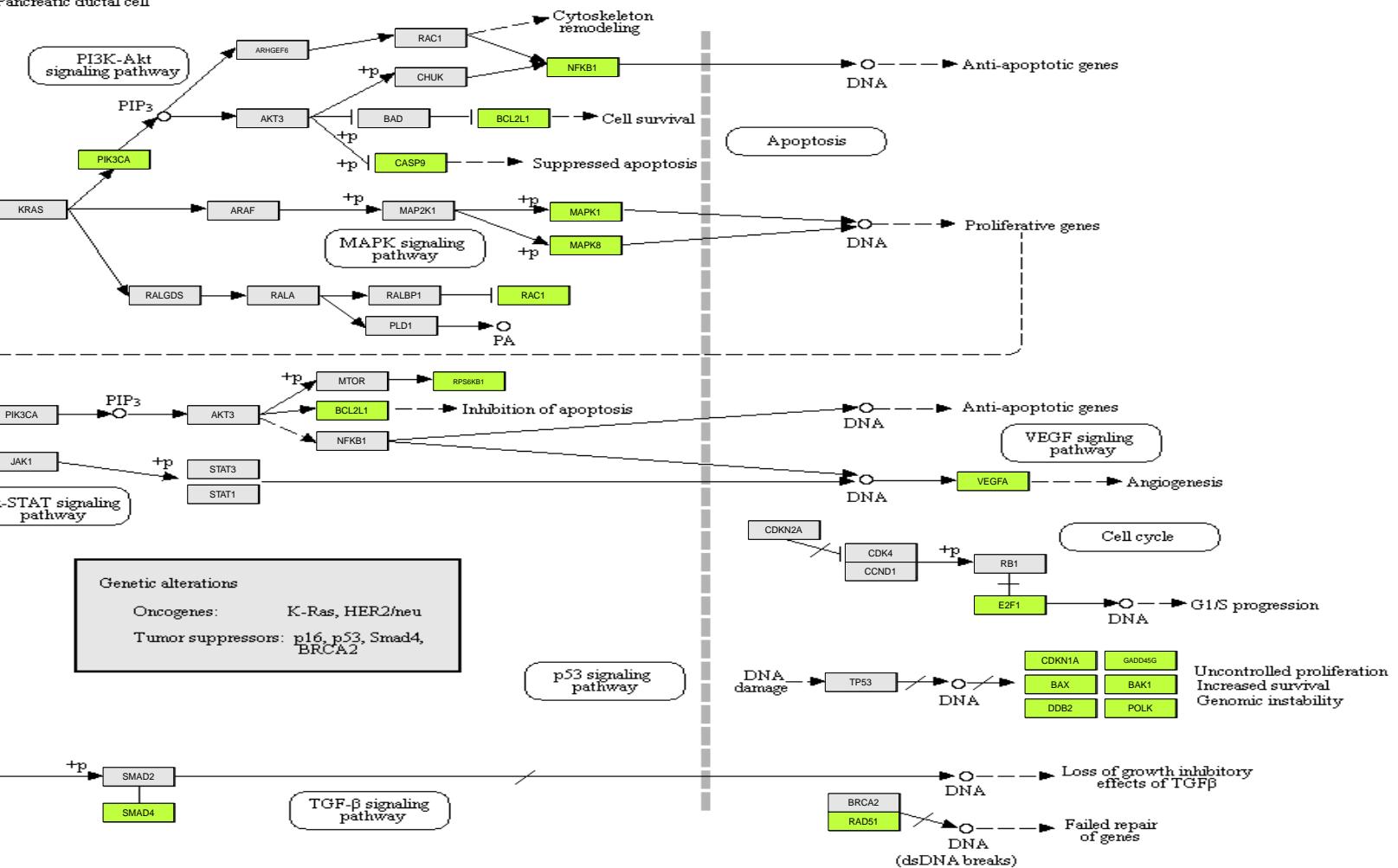
PanIN-1B

PanIN-2

PanIN-3

Adenocarcinoma

Pancreatic ductal cell



Pancreatic_cancer
group 1

Chromosome Unstable (CIN) pathway

Normal duct

PanIN-1A (Pancreatic intraepithelial neoplasia)

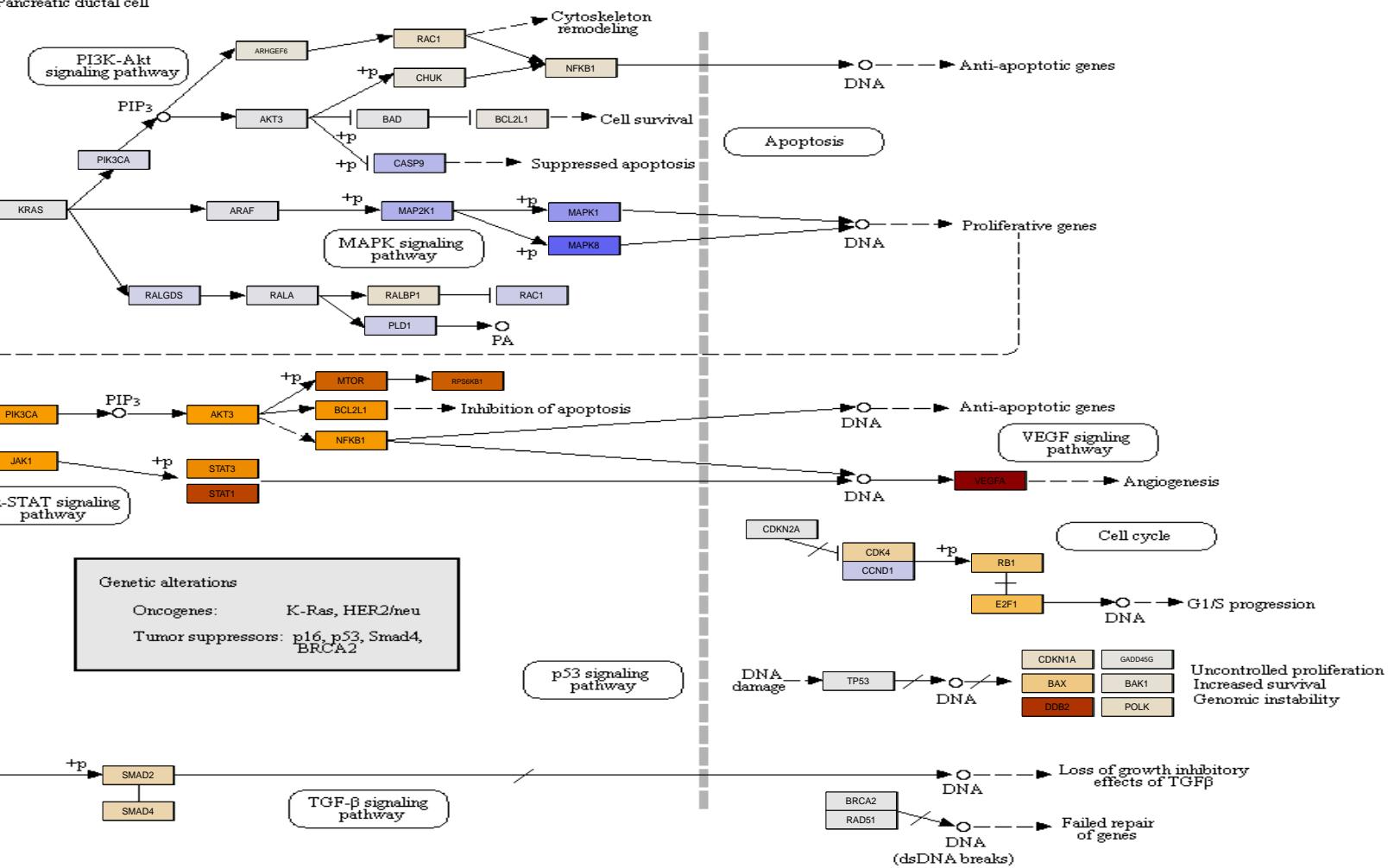
PanIN-1B

PanIN-2

PanIN-3

Adenocarcinoma

Pancreatic ductal cell



Pancreatic_cancer group 2

Chromosome Unstable (CIN) pathway

Normal duct

PanIN-1A (Pancreatic intraepithelial neoplasia)

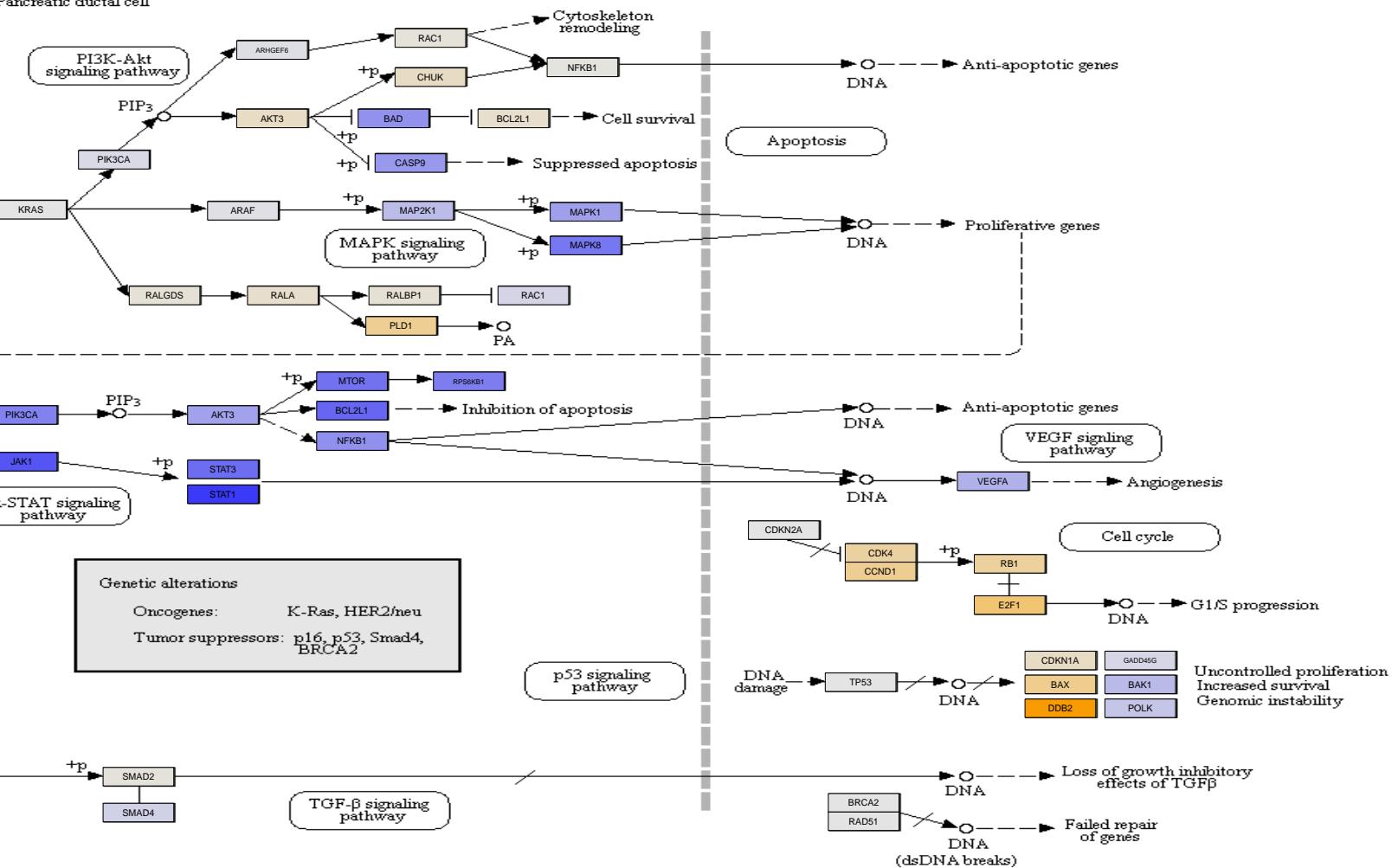
PanIN-1B

PanIN-2

PanIN-3

Adenocarcinoma

Pancreatic ductal cell



Pancreatic_cancer
group 3

Chromosome Unstable (CIN) pathway

Normal duct

PanIN-1A (Pancreatic intraepithelial neoplasia)

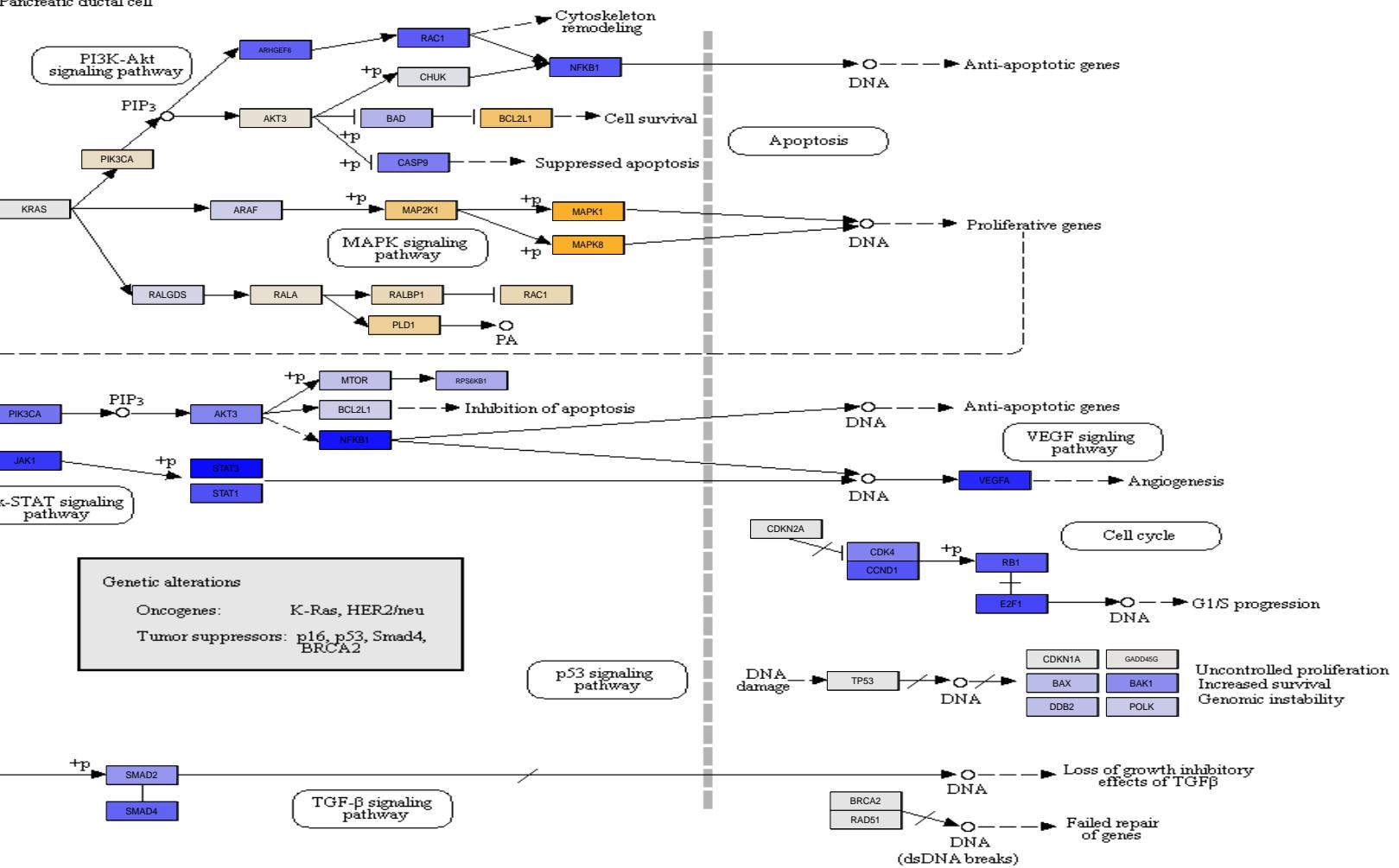
PanIN-1B

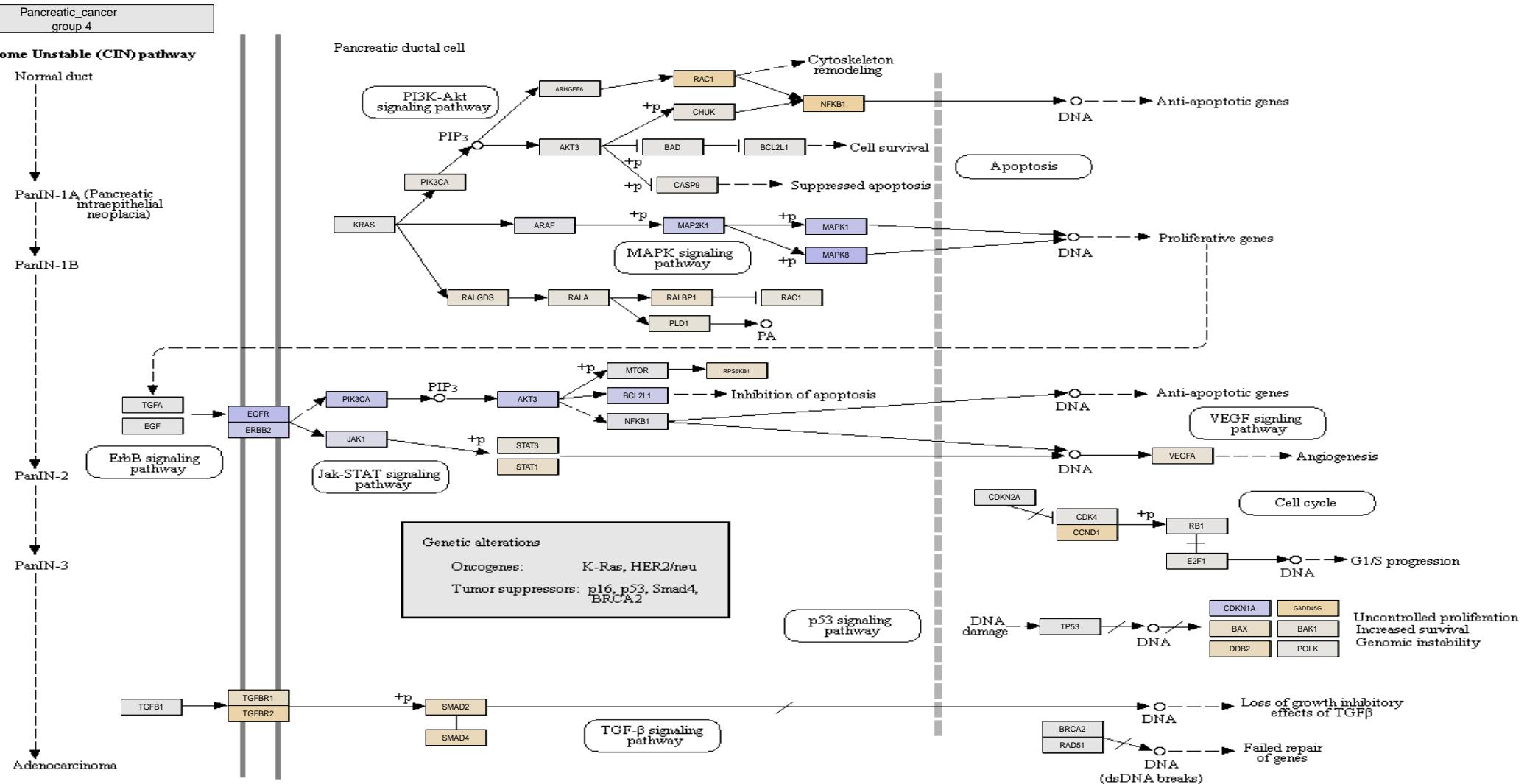
PanIN-2

PanIN-3

Adenocarcinoma

Pancreatic ductal cell





Pancreatic_cancer
group 5

Chromosome Unstable (CIN) pathway

Normal duct

PanIN-1A (Pancreatic intraepithelial neoplasia)

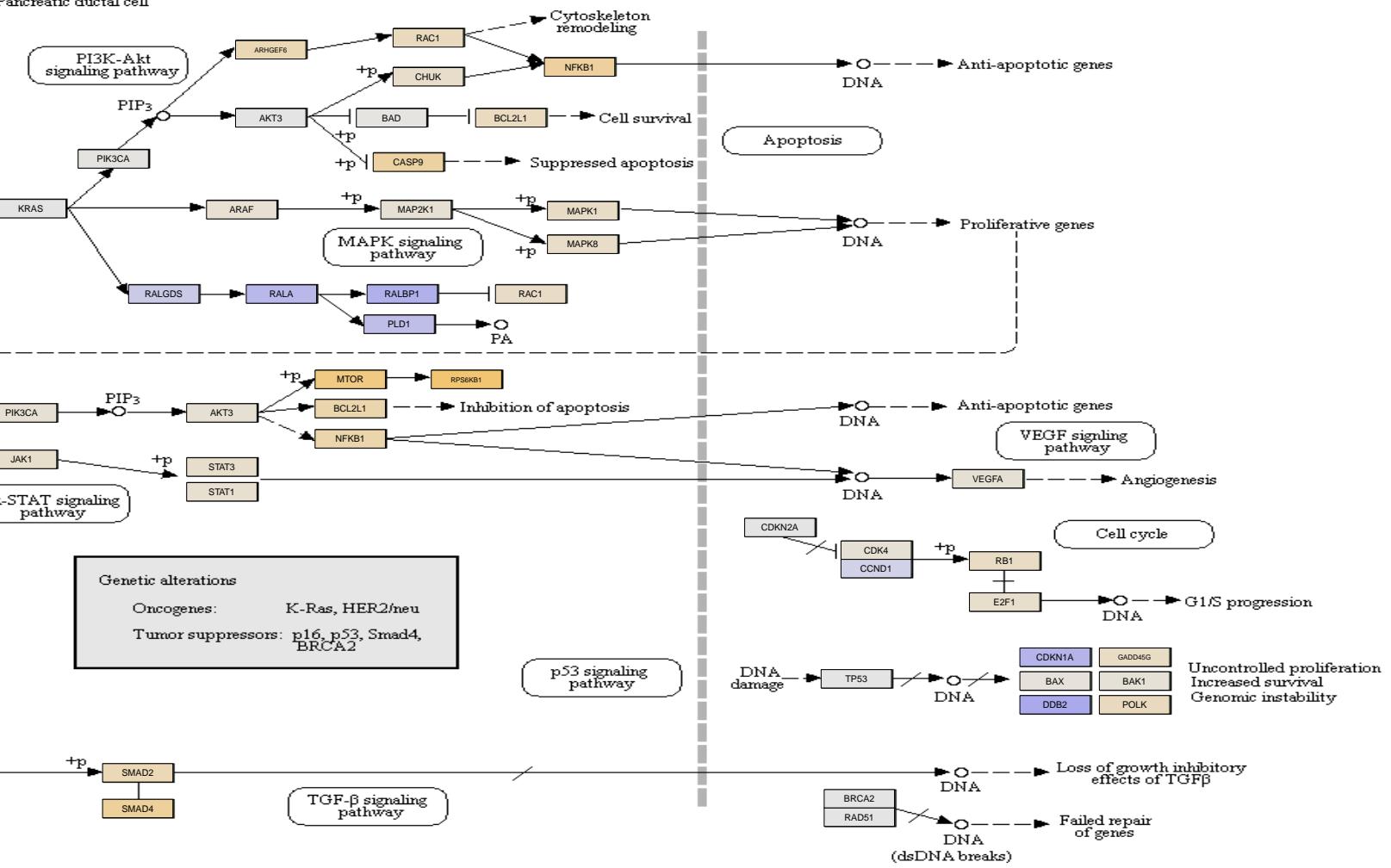
PanIN-1B

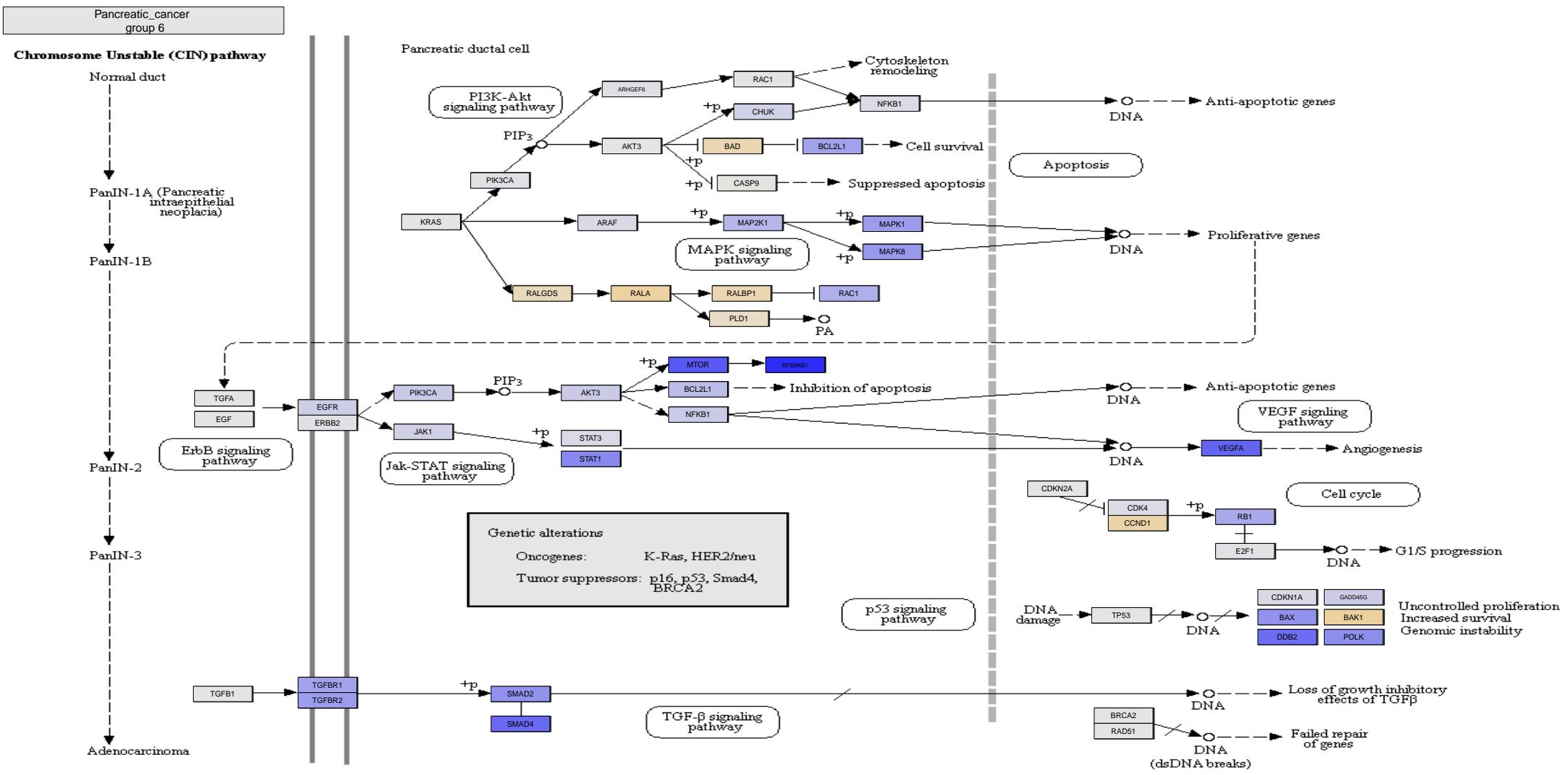
PanIN-2

PanIN-3

Adenocarcinoma

Pancreatic ductal cell





Pancreatic_cancer
group 7

Chromosome Unstable (CIN) pathway

Normal duct

PanIN-1A (Pancreatic intraepithelial neoplasia)

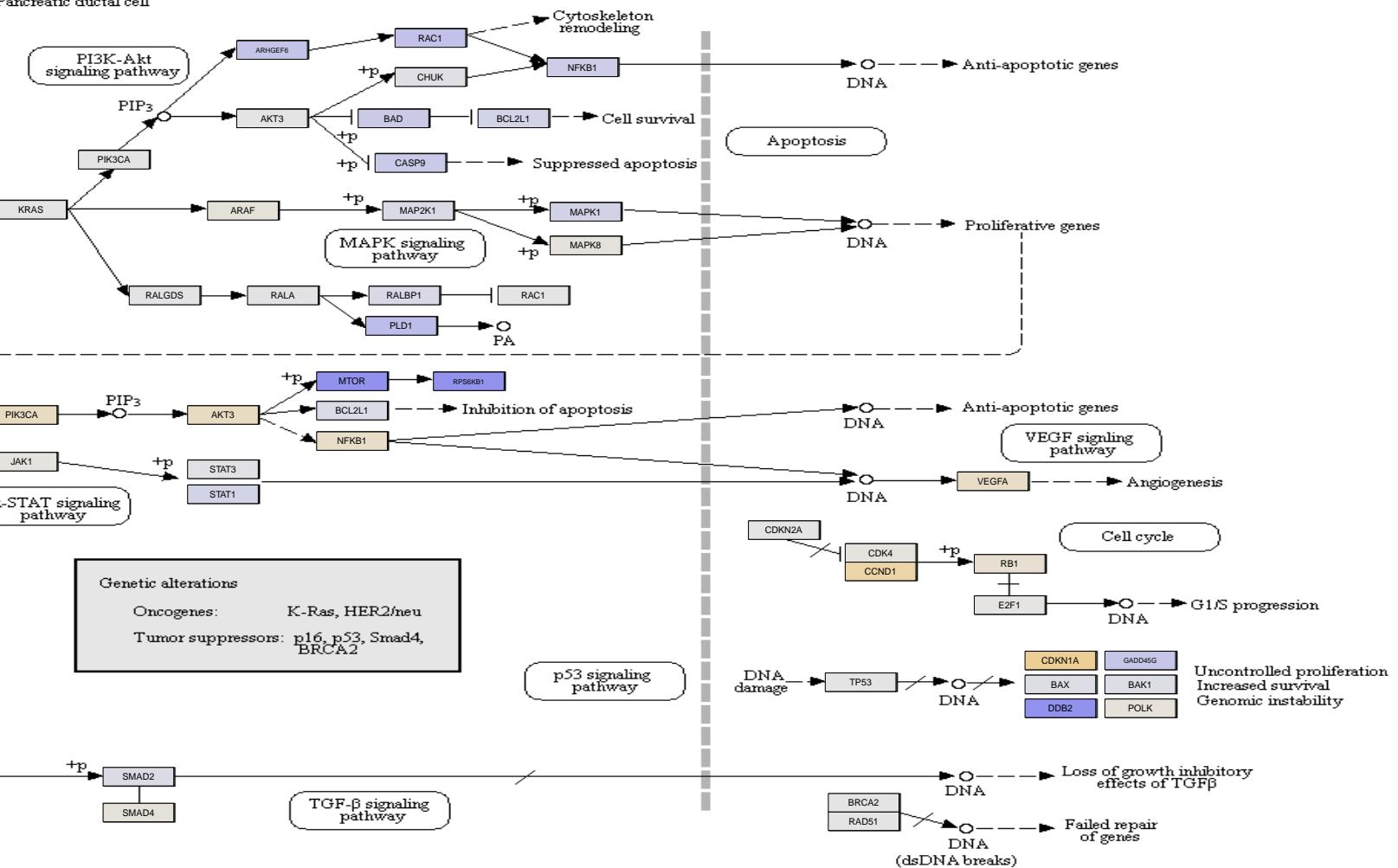
PanIN-1B

PanIN-2

PanIN-3

Adenocarcinoma

Pancreatic ductal cell



Pancreatic_cancer group 8

Chromosome Unstable (CIN) pathway

Normal duct

PanIN-1A (Pancreatic intraepithelial neoplasia)

PanIN-1B

PanIN-2

PanIN-3

Adenocarcinoma

Pancreatic ductal cell

