

**Supplementary Table 1: Role of dysregulation in the Notch signaling pathway in cancer development: summary from the literature.**

	<b>Genomic/Genetic alterations</b>	Gene expression and others	Role
<b>Hematopoietic malignancies</b>			
T-ALL	Activating mutation <i>NOTCH1</i> (i.e. PEST region) Traslocation <i>NOTCH1</i> Mutation/deletion <i>FBXW7</i>	<i>NOTCH1, NOTCH3, DLL4</i>	Oncogenic
Multiple Myeloma		<i>NOTCH2, JAG1, JAG2</i>	Oncogenic
B-CLL		<i>NOTCH1, NOTCH2, JAG1, JAG2</i>	Oncogenic
CLL	Activating mutation <i>NOTCH1</i>	Correlation with poor prognosis	Oncogenic
B-ALL		<i>NOTCH1, NOTCH2, NOTCH3, NOTCH4</i> (growth arrest)	Tumor suppressor
Chronic Myelomonocitic Leukemia	Inactivating mutations <i>NCSTN, MAML1, APH1A, NOTCH2</i>	Activation of Notch (reduced differentiation)	Tumor suppressor
Acute myeloid leukemia		<i>NOTCH1, JAG1, JAG2, DLL1</i> Correlation with poor prognosis <i>NOTCH2, DLL4</i>	Oncogenic Tumor suppressor
<b>Solid tumors</b>			
Breast cancer	Gene rearrangements <i>NOTCH1</i> and <i>NOTCH2</i>	<i>NOTCH1</i> (block p53), <i>NOTCH4</i> (tumor initiation), <i>JAG1</i> and <i>JAG2</i>	Oncogenic
Lung cancer (NSCLC)	Activating mutation <i>NOTCH1</i> Translocation <i>NOTCH3</i>	<i>NOTCH1</i> (regulation IGF1 pathway), <i>NOTCH3</i> . Correlation with poor prognosis	Oncogenic
Glioma/Glioblastoma		<i>NOTCH1, NOTCH2, JAG1, DLL1</i> . Correlation with poor prognosis	Oncogenic
Ovary cancer	Mutations and CN gains <i>JAG1, JAG2, NOTCH3</i>		Oncogene
Kidney cancer		Activation of Notch1 and Jagged1	Oncogene
Cholangiocarcinoma		<i>NOTCH1</i>	Oncogenic
Colorectal cancer		<i>NOTCH1, NOTCH2, JAG1, JAG2</i>	Oncogenic
Melanoma		<i>NOTCH1</i>	Oncogenic
ACC	CN gains <i>JAG1</i>	<i>JAG1</i>	Oncogenic?
Head and neck squamous cell cancer	Inactivating mutations <i>NOTCH1, NOTCH2, NOTCH3</i>	Activation of Notch (reduced differentiation) <i>NOTCH1</i>	Tumor suppressor
Skin squamous cancer	Deletions <i>NOTCH1</i>	<i>NOTCH1, NOTCH2</i>	Tumor suppressor
Prostate cancer		<i>NOTCH1</i> <i>JAG1</i>	Tumor suppressor Oncogenic
Cervical cancer		Activation of Notch (growth arrest) <i>NOTCH2, JAG1, JAG2, DLL1</i>	Tumor suppressor Oncogenic
Endometrial cancer		<i>NOTCH1, NOTCH4, DLL1</i>	Tumor suppressor
Pancreatic cancer	CN loss of <i>NOTCH1</i>  CN loss of <i>NOTCH2</i>	<i>NOTCH1, NOTCH2, NOTCH3, NOTCH4, JAG1, JAG2</i>	Oncogenic  Tumor suppressor
Hepatocellular carcinoma		<i>NOTCH1</i> (growth arrest). Correlation with good prognosis Activation of Notch	Tumor suppressor  Oncogenic

Modified from (Carvalho, et al. 2014; Lobry, et al. 2011; Previs, et al. 2014)