

Supplementary Information

Linc-ing Circulating Long Non-coding RNAs to the Diagnosis and Malignant Prediction of Intraductal Papillary Mucinous Neoplasms of the Pancreas

Short Title: Plasma lncRNAs and Intraductal Papillary Mucinous Neoplasms

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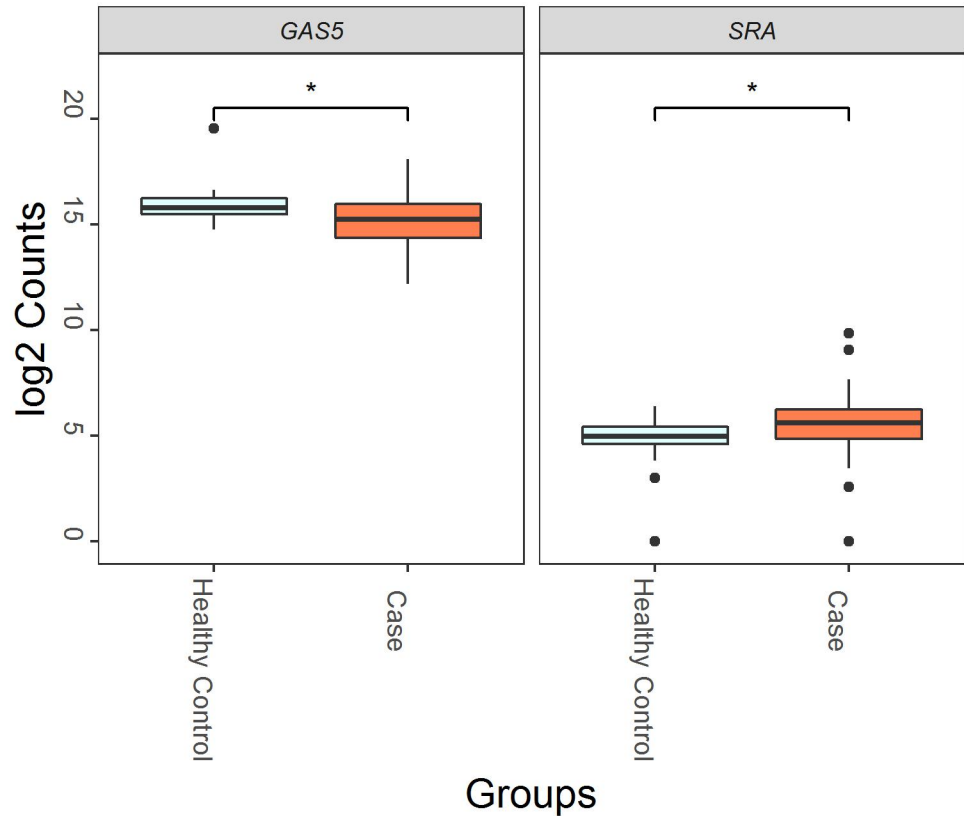
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Supplementary Figure S1

Supplementary Table S1

Supplementary Table S2



Supplementary Table S1. LncRNA expression in IPMN cases versus controls, sorted by the most statistically significant difference between groups

<u>LncRNA</u>	<u>Overall mean</u>	<u>Control mean</u> <u>(n=22)</u>	<u>Case mean</u> <u>(n=51)</u>	<u>Fold Change</u> <u>Cases versus</u> <u>Controls</u>	<u>p value</u> <u>Control</u>	<u>FDR</u>
<i>GAS5</i>	15.4	15.9	15.2	1.0	0.026	0.632
<i>SRA</i>	5.3	4.6	5.5	1.2	0.045	0.632
<i>GLIS3-AS1</i>	12.0	12.6	11.7	0.9	0.111	0.836
<i>AS1DHRS4</i>	13.5	13.9	13.4	1.0	0.119	0.836
<i>PTENP1</i>	6.1	5.3	6.5	1.2	0.175	0.859
<i>HOTTIP</i>	5.6	5.1	5.8	1.1	0.243	0.859
<i>PPP3CB</i>	13.3	12.8	13.5	1.1	0.269	0.859
<i>UCA1</i>	12.2	12.6	12.1	1.0	0.277	0.859
<i>ADARB2-AS1</i>	10.5	10.8	10.4	1.0	0.301	0.859
<i>aHIF</i>	9.4	9.1	9.6	1.1	0.307	0.859
<i>DDX6P</i>	2.7	2.2	2.9	1.3	0.406	0.949
<i>MEG3</i>	10.4	10.8	10.3	1.0	0.407	0.949
<i>LINC00244</i>	0.7	0.4	0.9	2.0	0.482	1.000
<i>lncRNA-p21</i>	5.7	5.4	5.9	1.1	0.512	1.000
<i>H19</i>	15.0	15.1	15.0	1.0	0.656	1.000
<i>MALAT1</i>	10.7	10.5	10.7	1.0	0.692	1.000
<i>XIST</i>	0.9	0.8	0.9	1.1	0.759	1.000
<i>LINC00469</i>	9.7	9.8	9.6	1.0	0.768	1.000
<i>HOXD-AS1</i>	7.1	7.0	7.1	1.0	0.782	1.000
<i>PANDA</i>	8.5	8.7	8.4	1.0	0.787	1.000
<i>LINC00491</i>	9.8	9.6	9.9	1.0	0.862	1.000
<i>TERC</i>	9.2	9.3	9.2	1.0	0.881	1.000
<i>LINC00472</i>	10.4	10.5	10.4	1.0	0.909	1.000
<i>BCYRN1</i>	0.2	0.3	0.2	0.7	0.916	1.000
<i>PVT1</i>	12.2	12.4	12.2	1.0	0.919	1.000
<i>ANRIL</i>	11.8	12.0	11.7	1.0	0.942	1.000
<i>HULC</i>	2.2	2.5	2.1	0.9	0.978	1.000
<i>HOTAIR</i>	6.5	6.4	6.5	1.0	1.000	1.000

Supplementary Table S2. Diagnostic performance of preliminary models to predict malignant IPMN pathology in the study cohort based on 10-fold cross validation

Variables	Accuracy	Sensitivity	Specificity	PPV	NPV
Gender	0.49 (0.39-0.55)	0.07 (0-0.21)	0.83 (0.65-1)	0.21 (0-0.5)	0.52 (0.46-0.56)
Jaundice	0.58 (0.52-0.65)	0.14 (0-0.29)	0.94 (0.94-1)	0.61 (0-0.8)	0.57 (0.53-0.62)
High risk stigmata (HRS)	0.84 (0.84-0.84)	0.86 (0.86-0.86)	0.82 (0.82-0.82)	0.8 (0.8-0.8)	0.87 (0.87-0.87)
Worrisome features (WF)	0.52 (0.45-0.58)	0.16 (0-0.43)	0.81 (0.53-1)	0.41 (0.33-0.6)	0.54 (0.5-0.57)
8-lncRNA signature	0.72 (0.65-0.77)	0.65 (0.5-0.71)	0.77 (0.71-0.82)	0.7 (0.62-0.77)	0.73 (0.67-0.78)
5-miRNA signature	0.65 (0.55-0.74)	0.67 (0.43-0.86)	0.64 (0.53-0.76)	0.6 (0.5-0.69)	0.71 (0.58-0.83)
14-feature radiomic signature	0.7 (0.61-0.77)	0.66 (0.5-0.79)	0.73 (0.71-0.76)	0.67 (0.58-0.73)	0.72 (0.63-0.81)
lncRNA, miRNA	0.76 (0.68-0.81)	0.74 (0.64-0.79)	0.77 (0.71-0.82)	0.73 (0.65-0.79)	0.78 (0.71-0.82)
lncRNA, miRNA, radiomic	0.66 (0.61-0.71)	0.68 (0.57-0.79)	0.65 (0.65-0.65)	0.61 (0.57-0.65)	0.72 (0.65-0.79)
HRS, WF, lncRNA	0.84 (0.84-0.84)	0.86 (0.86-0.86)	0.82 (0.82-0.82)	0.8 (0.8-0.8)	0.87 (0.87-0.87)
HRS, WF, miRNA	0.81 (0.81-0.84)	0.79 (0.79-0.79)	0.83 (0.82-0.88)	0.79 (0.79-0.85)	0.82 (0.82-0.83)
HRS, WF, Radiomic	0.84 (0.84-0.84)	0.86 (0.86-0.86)	0.82 (0.82-0.82)	0.8 (0.8-0.8)	0.87 (0.87-0.87)
HRS, WF, lncRNA, miRNA	0.78 (0.74-0.84)	0.78 (0.71-0.79)	0.78 (0.76-0.88)	0.75 (0.69-0.85)	0.81 (0.76-0.83)
HRS, WF, lncRNA, Radiomic	0.84 (0.84-0.84)	0.86 (0.86-0.86)	0.82 (0.82-0.82)	0.8 (0.8-0.8)	0.87 (0.87-0.87)
HRS, WF, lncRNA, miRNA, Radiomic	0.78 (0.71-0.84)	0.77 (0.64-0.79)	0.78 (0.71-0.88)	0.74 (0.69-0.83)	0.81 (0.72-0.83)
HRS, WF, gender, jaundice, lncRNA, Radiomic, miRNA	0.75 (0.68-0.81)	0.73 (0.57-0.86)	0.76 (0.71-0.82)	0.71 (0.64-0.79)	0.78 (0.68-0.87)
WF, lncRNA	0.67 (0.55-0.74)	0.56 (0.36-0.71)	0.76 (0.65-0.82)	0.66 (0.5-0.75)	0.68 (0.58-0.76)
WF, Radiomic	0.62 (0.52-0.68)	0.51 (0.36-0.64)	0.7 (0.59-0.76)	0.59 (0.45-0.67)	0.64 (0.55-0.71)
WF, miRNA	0.66 (0.55-0.74)	0.55 (0.36-0.64)	0.75 (0.65-0.82)	0.65 (0.5-0.75)	0.67 (0.57-0.74)
WF, lncRNA, Radiomic	0.64 (0.55-0.68)	0.63 (0.5-0.71)	0.64 (0.59-0.71)	0.59 (0.5-0.64)	0.68 (0.59-0.73)
WF, lncRNA, miRNA	0.66 (0.58-0.74)	0.58 (0.43-0.71)	0.74 (0.65-0.82)	0.64 (0.54-0.75)	0.68 (0.61-0.75)
WF, lncRNA, miRNA, Radiomic	0.77 (0.68-0.84)	0.71 (0.64-0.79)	0.82 (0.71-0.88)	0.76 (0.67-0.85)	0.77 (0.71-0.83)
WF, gender, Jaundice, lncRNA, Radiomic, miRNA	0.78 (0.68-0.87)	0.69 (0.57-0.79)	0.86 (0.71-0.94)	0.8 (0.67-0.92)	0.77 (0.68-0.84)

Abbreviations: AUC=Area underneath the curve; PPV=positive predictive value; NPV=negative predictive value