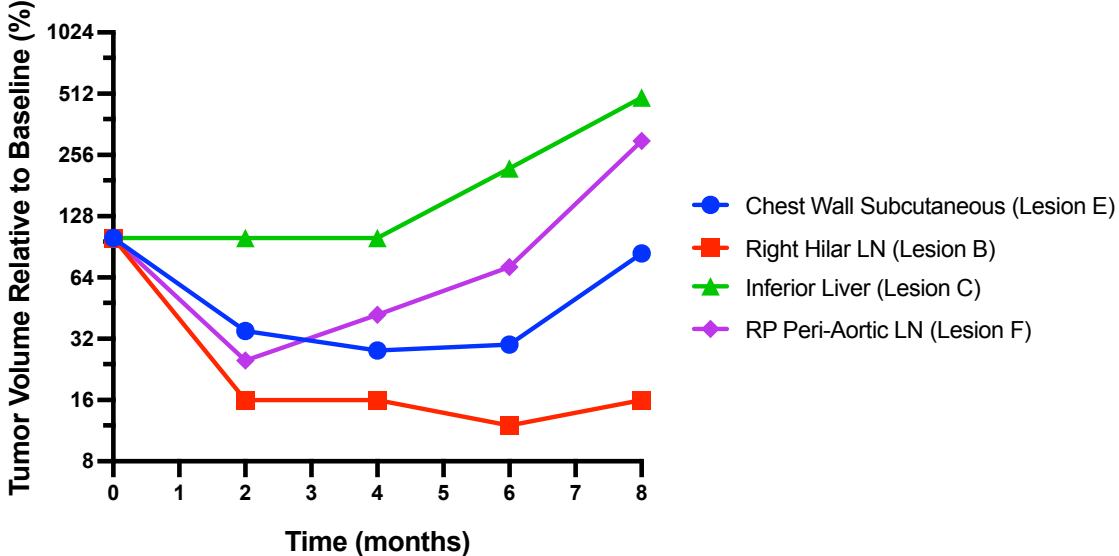


Figure S1.

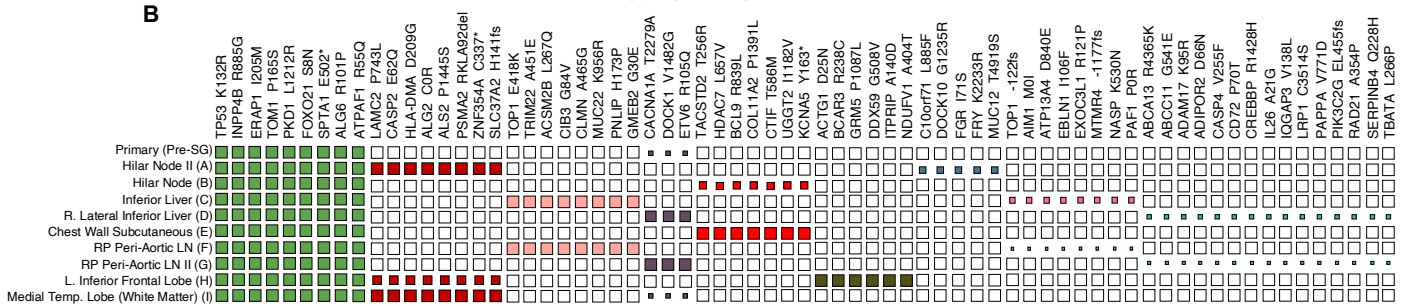


Supplementary Figure S1. Volumetric changes for *TOP1* and *TACSTD2/TROP2* mutation-harboring metastatic lesions of patient MGH-18. Volumes calculated from bi-dimensional measurement of standardized CT images at the indicated times. Time 0 indicates metastatic diagnosis. The indicated lesions correspond to those shown in Figure 2C.

# Figure S2.



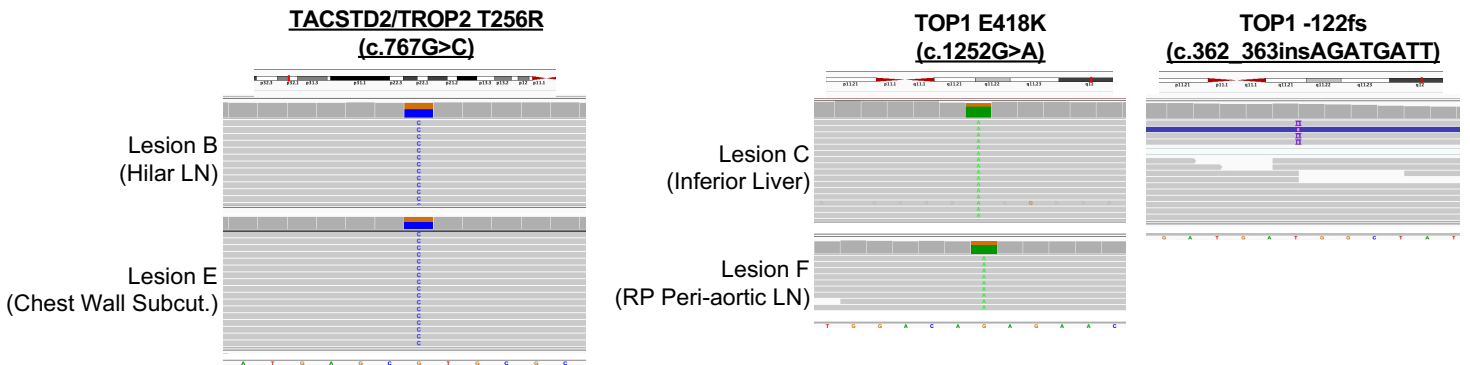
0% TACSTD2/TROP2 T256R  
 0% TOP1 p.-122fs  
 0% TOP1 E418K



**C**

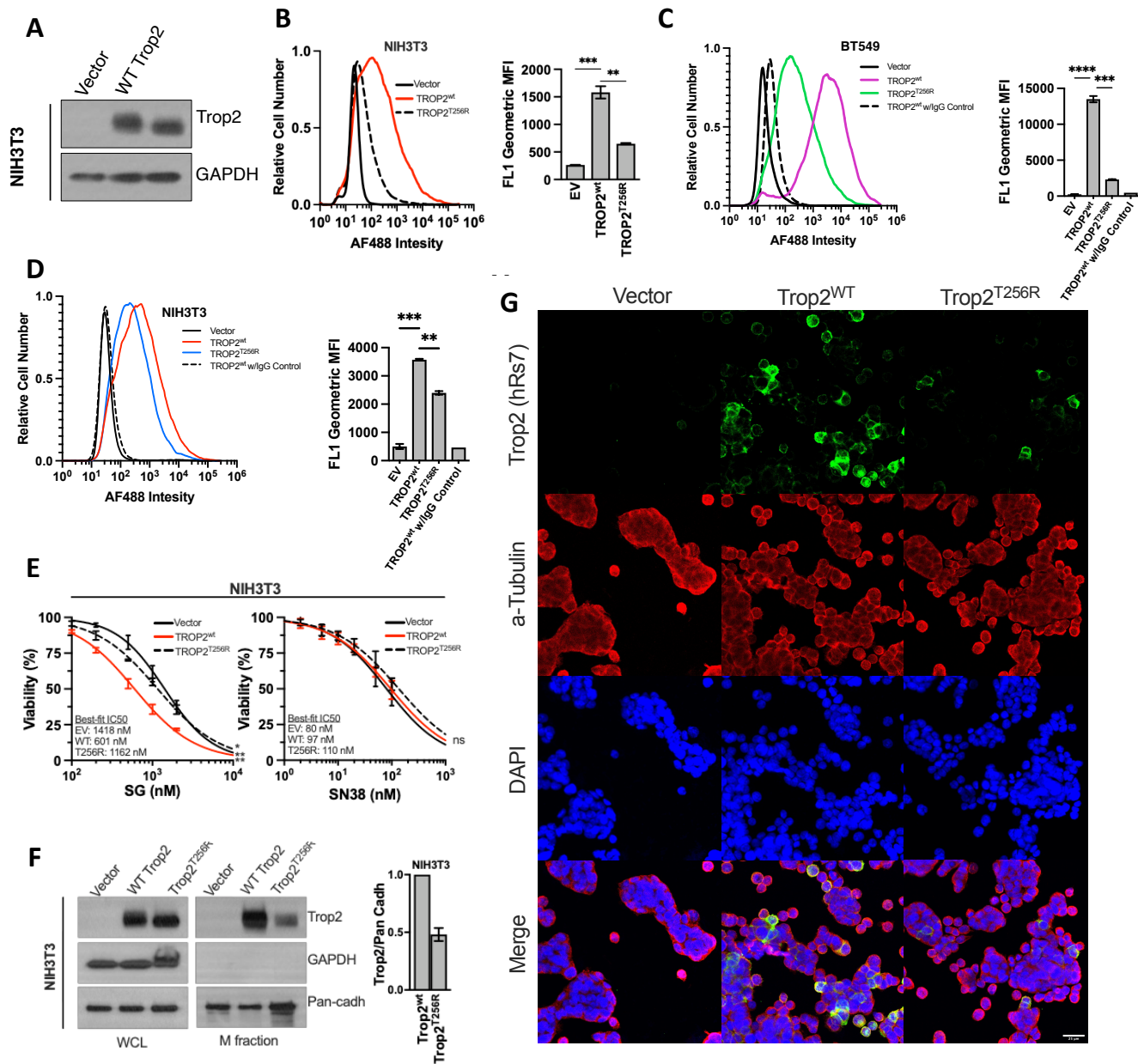
Case Series	Phylogenic	Hugo	Reference	Tumor Seq	t_ref_count	t_alt_count	Protein	Variant Classification	Variant	Cancer Cell
Lesion/Sample ID	Tree Cluster/Branch	Gene Symbol	Allele	Allele	Reads	Reads	Change	Type	Type	Fraction (CCF)
Pre-SG	3	TOP1	G	A	47	0	p.E418K	Missense_Mutation	SNP	0
C	3	TOP1	G	A	88	49	p.E418K	Missense_Mutation	SNP	0.98
F	3	TOP1	G	A	79	30	p.E418K	Missense_Mutation	SNP	0.97
Pre-SG	5	TACSTD2	G	C	62	0	p.T256R	Missense_Mutation	SNP	0
B	5	TACSTD2	G	C	362	155	p.T256R	Missense_Mutation	SNP	0.53
E	5	TACSTD2	G	C	429	76	p.T256R	Missense_Mutation	SNP	0.65
Pre-SG	8	TOP1	-	AGATGATT	35	0	p.-122fs	Frame_Shift_ins	INS	0
C	8	TOP1	-	AGATGATT	118	19	p.-122fs	Frame_Shift_ins	INS	0.34
F	8	TOP1	-	AGATGATT	65	9	p.-122fs	Frame_Shift_ins	INS	0.04

**D**



**Supplementary Figure S2. Extended Lesion Data for Index patient (MGH-18).** (A) Pie charts for remaining lesions from MGH-18 that were not included in main text (Fig. 2C). Colors correspond to phylogenetic tree of index patient in Fig. 2B. These five lesions were found not to harbor *TOP1* nor *TACSTD2/TROP2* mutations at any frequency. (B) Representative clonal and subclonal somatic alterations detected in the indicated tissue specimens. The size of each square represents the estimated tumor proportion of each alteration, with an empty box indicating no detection. A complete list of all somatic mutations for MGH-18 lesions is in Table S3. (C) Further details of reported *TOP1* and *TACSTD2/TROP2* mutation frequencies in index patient lesions as per Fig. 2. Pre-SG (Primary, Pre-Treatment) was not found to harbor any *TOP1* nor *TACSTD2/TROP2* mutations. Lesions not shown in the table contained  $\leq 1$  read counts of *TOP1* or *TACSTD2/TROP2* mutations. (D) IGV snapshots of RNAseq reads (rows) for the indicated Figure 2 lesions of interest from MGH-18. For *TACSTD2/TROP2* and *TOP1* point mutations, the colored boxes at top indicate the tumor cell proportion of the wild-type (top) or mutant (bottom) reads, with the color corresponding to the mutant sequence shown. Reference nucleotide sequences are shown at the bottom. Note, for *TACSTD2/TROP2* and *TOP1* point mutations, only mutant reads are shown.

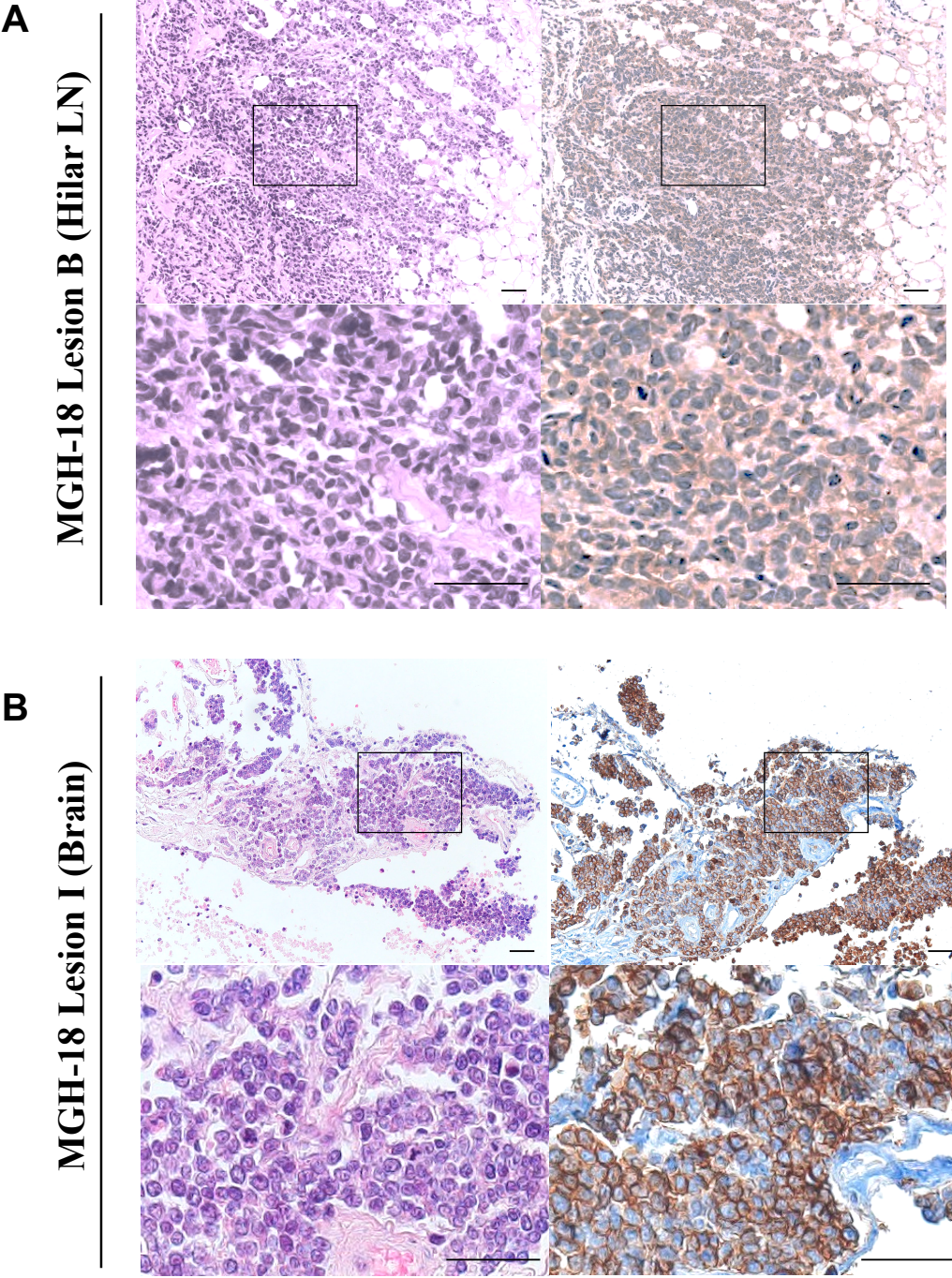
**Figure S3.**





**Supplementary Figure S3. *TACSTD2/TROP2* T256R confers resistance to SG via altered localization and decreased binding to hRS7.** **A**, Western blot of lentivirally-expressed control vector or TROP2 cDNAs in TROP2-negative NIH3T3 cells, showing equivalent expression levels of wild-type (WT) and mutant proteins. **B**, Live-cell flow cytometry of NIH3T3 cells stained with hRS7 reveals a marked decrease in signal intensity for cells harboring TROP2 T256R compared to wild-type. Bar graphs to the right represent geometric mean fluorescent intensity (MFI). Data representative of three independent experiments, and error bars show SD. **C, D**, Live-cell flow cytometry of BT549 (C) and NIH3T3 (D) cells stained with anti-Trop2 polyclonal antibody (AF650) from R&D Systems reveals a marked decrease in signal intensity for cells harboring TROP2 T256R compared to wild-type. Bar graphs to the right represent geometric mean fluorescent intensity (MFI). Data representative of three independent experiments, and error bars show SD. TROP2 T256R mutant confers resistance to SG but not SN38. \*\*\*P<0.001; \*\*P<0.01. \*\*\*\*P<0.0001. **E**, NIH3T3 cells expressing empty vector, WT TROP2, or T256R mutant TROP2 were treated with SG or SN38 at the indicated doses for 4 h and then cultured in fresh medium for 96h before assessing cell viability by using CellTiter Glo. Values plotted represent the mean of quadruplicate wells and an average of three independent experiments. Error bars indicate SD. P-value calculated by two-way ANOVA (cell line, concentration). \*\*P<0.01 (WT vs. Vector); \*P<0.05 (WT vs. T256R); ns, non-significant. **F**, TROP2 T256R has significantly decreased plasma membrane association, shown by comparing WCL and plasma membrane fraction of NIH3T3 cells expressing the vector, WT TROP2, or T256R mutant TROP2. GAPDH and pan-cadherin serve as controls for cytosol and membrane fractions, respectively. Bar graphs at right represent the mean of at least two independent experiments. **G**, hRS7 reveals substantially decreased staining. Vector, WT TROP2, or T256R mutant TROP2. Error bars indicate range. Confocal immunofluorescence using of TROP2 T256R compared to wild-type. BT549 cells on glass coverslip in high-performance plates were washed, then fixed, permeabilized, and blocked prior to staining for TROP2 using hRS7. The samples were maintained in PBS and examined at 40x using a Nikon A1R confocal microscope. Scale bar, 25µm.

**Figure S4.**



**Supplementary Figure S4. TROP2 IHC Staining Comparison of Lesions from MGH-18.** Hematoxylin and eosin (H&E, left) and TROP2 immunohistochemistry (right) revealing tumor TROP2 protein expression is diffusely cytoplasmic in (A) Hilar Lymph Node (Lesion B) metastasis harboring mutant *TACSTD2/TROP2* T256R, but shows intense membrane staining in (B) Brain metastasis with wild-type TROP2 expression (Lesion I). Scale bars, 50um.

**Table S1. Detailed Patient Cohort Characteristics**

Patient ID	Age at primary breast cancer diagnosis	Stage at primary breast cancer diagnosis	Grade of primary breast cancer diagnosis	HER2 IHC Score at Metastatic Diagnosis	HER2 FISH Score at Metastatic Diagnosis	Receptor status of primary breast cancer diagnosis	Receptor status at metastatic breast cancer diagnosis	Age at metastatic breast cancer diagnosis	Overall metastatic breast cancer survival (days)
MGH-18	42	2	3	0 (Liver)	-	ER-/PR-/HER2-	ER-/PR-/HER2-	43	642
MGH-19	45	3	2	2+ (Liver)	1.1	ER+/PR-/HER2-	ER-/PR-/HER2-	59	1738
MGH-20	61	2	3	0-1+ (Lung)	1.0	ER-/PR-/HER2-	ER-/PR-/HER2-	62	793

**Table S2. Patient Treatment History (from Metastatic Diagnosis)**

<b>Participant ID</b>	<b>Treatment Categories</b>	<b>Treatment Regimen</b>	<b>Start Date</b>	<b>End Date</b>
MGH-18	Chemotherapy, Precision/Targeted therapy	eribulin, PD-1 inhibitor	34	125
	Chemotherapy	Platinum, ATR inhibitor	157	178
	Chemotherapy	ADC (trop-2)	252	504
	Chemotherapy	navelbine	511	553
	Chemotherapy	doxorubicin	567	567
	Chemotherapy	capecitabine	575	595
MGH-19	Hormone/Endocrine therapy	SERD	133	225
	Chemotherapy	doxorubicin	255	437
	Chemotherapy	capecitabine, herceptin	498	1016
	Chemotherapy	CMF	1016	1108
	Chemotherapy	paclitaxel	1108	1188
	Chemotherapy	ADC (trop-2)	1244	1393
	Chemotherapy	eribulin	1428	1456
	Precision/Targeted therapy	PI3K inhibitor	1477	1587
	Chemotherapy	eribulin	1589	1638
Chemotherapy	cisplatin	1659	1659	
MGH-20	Precision/Targeted therapy	mTOR inhibitor	0	396
	Chemotherapy, Precision/Targeted therapy	doxorubicin, mTOR inhibitor	410	473
	Chemotherapy, Precision/Targeted therapy	carboplatin, mTOR inhibitor	473	562
	Precision/Targeted therapy	mTOR inhibitor	606	685
	Chemotherapy	ADC (trop-2)	713	746

**Table S3. Somatic mutations by phylogeny cluster (see Fig. 2B)**

Case Series	Phylogenic Tree Cluster	Branch	Lesion Site/Location	Hugo Gene Symbol	Chromoso me	Start_positi on	Reference Allele	Tumor_Se q_Allele	t_ref_count Reads	t_alt_count Reads	Protein_chang e	Variant_Classification	Variant_Type	Cancer Cell Fraction (CCF)
Pre-SG	1	Primary Breast	ACPP	3	132036379	G	T		17	9	p.D27Y	Missense_Mutation	SNP	0.99
A	1	Hilar LN II	ACPP	3	132036379	G	T		125	70	p.D27Y	Missense_Mutation	SNP	1
B	1	Hilar LN	ACPP	3	132036379	G	T		160	61	p.D27Y	Missense_Mutation	SNP	0.98
C	1	Inferior Liver	ACPP	3	132036379	G	T		178	64	p.D27Y	Missense_Mutation	SNP	0.99
D	1	Inferior Liver II	ACPP	3	132036379	G	T		207	120	p.D27Y	Missense_Mutation	SNP	1
E	1	Chest Wall Subcutaneous	ACPP	3	132036379	G	T		225	37	p.D27Y	Missense_Mutation	SNP	1
F	1	RP Peri-aortic LN	ACPP	3	132036379	G	T		123	55	p.D27Y	Missense_Mutation	SNP	1
G	1	RP Peri-aortic LN II	ACPP	3	132036379	G	T		154	76	p.D27Y	Missense_Mutation	SNP	1
H	1	L. Inf. Frontal Lobe	ACPP	3	132036379	G	T		196	44	p.D27Y	Missense_Mutation	SNP	1
I	1	Medial Temp. Lobe (White Matter)	ACPP	3	132036379	G	T		192	140	p.D27Y	Missense_Mutation	SNP	1
Pre-SG	1	Primary Breast	ALG6	1	63870168	G	C		24	21	p.R101P	Missense_Mutation	SNP	0.99
A	1	Hilar LN II	ALG6	1	63870168	G	C		136	91	p.R101P	Missense_Mutation	SNP	1
B	1	Hilar LN	ALG6	1	63870168	G	C		155	61	p.R101P	Missense_Mutation	SNP	0.98
C	1	Inferior Liver	ALG6	1	63870168	G	C		121	60	p.R101P	Missense_Mutation	SNP	0.99
D	1	Inferior Liver II	ALG6	1	63870168	G	C		231	141	p.R101P	Missense_Mutation	SNP	1
E	1	Chest Wall Subcutaneous	ALG6	1	63870168	G	C		215	45	p.R101P	Missense_Mutation	SNP	1
F	1	RP Peri-aortic LN	ALG6	1	63870168	G	C		78	28	p.R101P	Missense_Mutation	SNP	1
G	1	RP Peri-aortic LN II	ALG6	1	63870168	G	C		134	78	p.R101P	Missense_Mutation	SNP	1
H	1	L. Inf. Frontal Lobe	ALG6	1	63870168	G	C		239	38	p.R101P	Missense_Mutation	SNP	1
I	1	Medial Temp. Lobe (White Matter)	ALG6	1	63870168	G	C		109	77	p.R101P	Missense_Mutation	SNP	1
Pre-SG	1	Primary Breast	ATPAF1	1	47133831	C	T		62	8	p.R55Q	Missense_Mutation	SNP	0.99
A	1	Hilar LN II	ATPAF1	1	47133831	C	T		147	37	p.R55Q	Missense_Mutation	SNP	1
B	1	Hilar LN	ATPAF1	1	47133831	C	T		112	31	p.R55Q	Missense_Mutation	SNP	0.98
C	1	Inferior Liver	ATPAF1	1	47133831	C	T		158	30	p.R55Q	Missense_Mutation	SNP	0.99
D	1	Inferior Liver II	ATPAF1	1	47133831	C	T		109	63	p.R55Q	Missense_Mutation	SNP	1
E	1	Chest Wall Subcutaneous	ATPAF1	1	47133831	C	T		116	13	p.R55Q	Missense_Mutation	SNP	1
F	1	RP Peri-aortic LN	ATPAF1	1	47133831	C	T		173	31	p.R55Q	Missense_Mutation	SNP	1
G	1	RP Peri-aortic LN II	ATPAF1	1	47133831	C	T		189	47	p.R55Q	Missense_Mutation	SNP	1
H	1	L. Inf. Frontal Lobe	ATPAF1	1	47133831	C	T		126	27	p.R55Q	Missense_Mutation	SNP	1
I	1	Medial Temp. Lobe (White Matter)	ATPAF1	1	47133831	C	T		343	100	p.R55Q	Missense_Mutation	SNP	1
Pre-SG	1	Primary Breast	ATXN1	6	16328229	C	T		6	2	p.A105T	Missense_Mutation	SNP	0.99
A	1	Hilar LN II	ATXN1	6	16328229	C	T		59	49	p.A105T	Missense_Mutation	SNP	1
B	1	Hilar LN	ATXN1	6	16328229	C	T		76	36	p.A105T	Missense_Mutation	SNP	0.98
C	1	Inferior Liver	ATXN1	6	16328229	C	T		92	46	p.A105T	Missense_Mutation	SNP	0.99
D	1	Inferior Liver II	ATXN1	6	16328229	C	T		71	55	p.A105T	Missense_Mutation	SNP	1
E	1	Chest Wall Subcutaneous	ATXN1	6	16328229	C	T		121	15	p.A105T	Missense_Mutation	SNP	1
F	1	RP Peri-aortic LN	ATXN1	6	16328229	C	T		70	52	p.A105T	Missense_Mutation	SNP	1
G	1	RP Peri-aortic LN II	ATXN1	6	16328229	C	T		73	47	p.A105T	Missense_Mutation	SNP	1
H	1	L. Inf. Frontal Lobe	ATXN1	6	16328229	C	T		87	21	p.A105T	Missense_Mutation	SNP	1
I	1	Medial Temp. Lobe (White Matter)	ATXN1	6	16328229	C	T		177	65	p.A105T	Missense_Mutation	SNP	1
Pre-SG	1	Primary Breast	BAG1	9	33264679	A	C		4	4	NA	5'UTR	SNP	0.99
A	1	Hilar LN II	BAG1	9	33264679	A	C		5	4	NA	5'UTR	SNP	1
B	1	Hilar LN	BAG1	9	33264679	A	C		9	3	NA	5'UTR	SNP	0.98
C	1	Inferior Liver	BAG1	9	33264679	A	C		11	4	NA	5'UTR	SNP	0.99
D	1	Inferior Liver II	BAG1	9	33264679	A	C		6	13	NA	5'UTR	SNP	1
E	1	Chest Wall Subcutaneous	BAG1	9	33264679	A	C		14	2	NA	5'UTR	SNP	1
F	1	RP Peri-aortic LN	BAG1	9	33264679	A	C		9	5	NA	5'UTR	SNP	1
G	1	RP Peri-aortic LN II	BAG1	9	33264679	A	C		6	9	NA	5'UTR	SNP	1
H	1	L. Inf. Frontal Lobe	BAG1	9	33264679	A	C		18	1	NA	5'UTR	SNP	1
I	1	Medial Temp. Lobe (White Matter)	BAG1	9	33264679	A	C		23	11	NA	5'UTR	SNP	1
Pre-SG	1	Primary Breast	C12orf36	12	13527829	C	A		10	5	NA	Intron	SNP	0.99
A	1	Hilar LN II	C12orf36	12	13527829	C	A		56	34	NA	Intron	SNP	1
B	1	Hilar LN	C12orf36	12	13527829	C	A		86	25	NA	Intron	SNP	0.98
C	1	Inferior Liver	C12orf36	12	13527829	C	A		82	14	NA	Intron	SNP	0.99
D	1	Inferior Liver II	C12orf36	12	13527829	C	A		67	12	NA	Intron	SNP	1
E	1	Chest Wall Subcutaneous	C12orf36	12	13527829	C	A		109	13	NA	Intron	SNP	1
F	1	RP Peri-aortic LN	C12orf36	12	13527829	C	A		54	28	NA	Intron	SNP	1
G	1	RP Peri-aortic LN II	C12orf36	12	13527829	C	A		59	30	NA	Intron	SNP	1
H	1	L. Inf. Frontal Lobe	C12orf36	12	13527829	C	A		96	15	NA	Intron	SNP	1
I	1	Medial Temp. Lobe (White Matter)	C12orf36	12	13527829	C	A		84	51	NA	Intron	SNP	1
Pre-SG	1	Primary Breast	C2orf74	2	61390218	C	T		13	3	p.P88S	Missense_Mutation	SNP	0.99
A	1	Hilar LN II	C2orf74	2	61390218	C	T		54	47	p.P88S	Missense_Mutation	SNP	1
B	1	Hilar LN	C2orf74	2	61390218	C	T		102	41	p.P88S	Missense_Mutation	SNP	0.98
C	1	Inferior Liver	C2orf74	2	61390218	C	T		81	27	p.P88S	Missense_Mutation	SNP	0.99
D	1	Inferior Liver II	C2orf74	2	61390218	C	T		93	62	p.P88S	Missense_Mutation	SNP	1
E	1	Chest Wall Subcutaneous	C2orf74	2	61390218	C	T		130	19	p.P88S	Missense_Mutation	SNP	1
F	1	RP Peri-aortic LN	C2orf74	2	61390218	C	T		46	34	p.P88S	Missense_Mutation	SNP	1
G	1	RP Peri-aortic LN II	C2orf74	2	61390218	C	T		80	43	p.P88S	Missense_Mutation	SNP	1
H	1	L. Inf. Frontal Lobe	C2orf74	2	61390218	C	T		101	24	p.P88S	Missense_Mutation	SNP	1
I	1	Medial Temp. Lobe (White Matter)	C2orf74	2	61390218	C	T		84	49	p.P88S	Missense_Mutation	SNP	1
Pre-SG	1	Primary Breast	CDON	11	125853949	T	C		5	14	p.D938G	Missense_Mutation	SNP	0.99
A	1	Hilar LN II	CDON	11	125853949	T	C		46	136	p.D938G	Missense_Mutation	SNP	1
B	1	Hilar LN	CDON	11	125853949	T	C		165	48	p.D938G	Missense_Mutation	SNP	0.98
C	1	Inferior Liver	CDON	11	125853949	T	C		127	65	p.D938G	Missense_Mutation	SNP	0.99
D	1	Inferior Liver II	CDON	11	125853949	T	C		97	216	p.D938G	Missense_Mutation	SNP	1
E	1	Chest Wall Subcutaneous	CDON	11	125853949	T	C		295	38	p.D938G	Missense_Mutation	SNP	1
F	1	RP Peri-aortic LN	CDON	11	125853949	T	C		108	80	p.D938G	Missense_Mutation	SNP	1
G	1	RP Peri-aortic LN II	CDON	11	125853949	T	C		98	134	p.D938G	Missense_Mutation	SNP	1
H	1	L. Inf. Frontal Lobe	CDON	11	125853949	T	C		233	80	p.D938G	Missense_Mutation	SNP	1
I	1	Medial Temp. Lobe (White Matter)	CDON	11	125853949	T	C		74	187	p.D938G	Missense_Mutation	SNP	1
Pre-SG	1	Primary Breast	CDON	11	125853950	C	A		7	13	p.D938Y	Missense_Mutation	SNP	0.99
A	1	Hilar LN II	CDON	11	125853950	C	A		47	134	p.D938Y	Missense_Mutation	SNP	1
B	1	Hilar LN	CDON	11	125853950	C	A		162	49	p.D938Y	Missense_Mutation	SNP	0.98
C	1	Inferior Liver	CDON	11	125853950	C	A		124	67	p.D938Y	Missense_Mutation	SNP	0.99
D	1	Inferior Liver II	CDON	11	125853950	C	A		99	216	p.D938Y	Missense_Mutation	SNP	1
E	1	Chest Wall Subcutaneous	CDON	11	125853950	C	A		303	37	p.D938Y	Missense_Mutation	SNP	1
F	1	RP Peri-aortic LN	CDON	11	125853950	C	A		107	79	p.D938Y	Missense_Mutation	SNP	1
G	1	RP Peri-aortic LN II	CDON	11	125853950	C	A		99	132	p.D938Y	Missense_Mutation	SNP	1
H	1	L. Inf. Frontal Lobe	CDON	11	125853950	C	A		232	85	p.D938Y	Missense_Mutation	SNP	1
I	1	Medial Temp. Lobe (White Matter)	CDON	11	125853950	C	A		75	186	p.D938Y	Missense_Mutation	SNP	1
Pre-SG	1	Primary Breast	CFHR1	1	196801077	G	T		54	21	p.R314L	Missense_Mutation	SNP	0.99
A	1	Hilar LN II	CFHR1	1	196801077	G	T		394	162	p.R314L	Missense_Mutation	SNP	1
B	1	Hilar LN	CFHR1	1	196801077	G	T		288	71	p.R314L	Missense_Mutation	SNP	0.98
C	1	Inferior Liver	CFHR1	1	196801077	G	T		261	118	p.R314L	Missense_Mutation	SNP	0.99
D	1	Inferior Liver II	CFHR1	1	196801077	G	T		464	125	p.R314L	Missense_Mutation	SNP	1
E	1	Chest Wall Subcutaneous	CFHR1	1	196801077	G	T		431	33	p.R314L	Missense_Mutation	SNP	1
F	1	RP Peri-aortic LN	CFHR1	1	196801077	G	T		207	40	p.R314L	Missense_Mutation	SNP	1
G	1	RP Peri-aortic LN II	CFHR1	1	196801077	G	T		294	117	p.R314L	Missense_Mutation	SNP	1
H	1	L. Inf. Frontal Lobe	CFHR1	1	196801077	G	T		404	117	p.R314L	Missense_Mutation	SNP	1
I	1	Medial Temp. Lobe (White Matter)	CFHR1	1	196801077	G	T		297	130	p.R314L	Missense_Mutation	SNP	1
Pre-SG	1	Primary Breast	COL3A1	2	189859303	G	A		37	20	p.G444R	Missense_Mutation	SNP	0.99

A	1	Hilar LN II	COL3A1	2	189859303	G	A	200	144	p.G444R	Missense_Mutation	SNP	1
B	1	Hilar LN	COL3A1	2	189859303	G	A	252	93	p.G444R	Missense_Mutation	SNP	0.98
C	1	Inferior Liver	COL3A1	2	189859303	G	A	252	62	p.G444R	Missense_Mutation	SNP	0.99
D	1	Inferior Liver II	COL3A1	2	189859303	G	A	250	151	p.G444R	Missense_Mutation	SNP	1
E	1	Chest Wall Subcutaneous	COL3A1	2	189859303	G	A	365	39	p.G444R	Missense_Mutation	SNP	1
F	1	RP Peri-aortic LN	COL3A1	2	189859303	G	A	231	96	p.G444R	Missense_Mutation	SNP	1
G	1	RP Peri-aortic LN II	COL3A1	2	189859303	G	A	210	105	p.G444R	Missense_Mutation	SNP	1
H	1	L. Inf. Frontal Lobe	COL3A1	2	189859303	G	A	309	51	p.G444R	Missense_Mutation	SNP	1
I	1	Medial Temp. Lobe (White Matter)	COL3A1	2	189859303	G	A	218	139	p.G444R	Missense_Mutation	SNP	1
Pre-SG	1	Primary Breast	EFHC1	6	52357317	C	T	15	6	NA	3'UTR	SNP	0.99
A	1	Hilar LN II	EFHC1	6	52357317	C	T	44	31	NA	3'UTR	SNP	1
B	1	Hilar LN	EFHC1	6	52357317	C	T	80	10	NA	3'UTR	SNP	0.98
C	1	Inferior Liver	EFHC1	6	52357317	C	T	63	19	NA	3'UTR	SNP	0.99
D	1	Inferior Liver II	EFHC1	6	52357317	C	T	76	48	NA	3'UTR	SNP	1
E	1	Chest Wall Subcutaneous	EFHC1	6	52357317	C	T	85	11	NA	3'UTR	SNP	1
F	1	RP Peri-aortic LN	EFHC1	6	52357317	C	T	32	15	NA	3'UTR	SNP	1
G	1	RP Peri-aortic LN II	EFHC1	6	52357317	C	T	49	29	NA	3'UTR	SNP	1
H	1	L. Inf. Frontal Lobe	EFHC1	6	52357317	C	T	68	9	NA	3'UTR	SNP	1
I	1	Medial Temp. Lobe (White Matter)	EFHC1	6	52357317	C	T	39	26	NA	3'UTR	SNP	1
Pre-SG	1	Primary Breast	ERAP1	5	96136613	G	C	14	25	p.I205M	Missense_Mutation	SNP	0.99
A	1	Hilar LN II	ERAP1	5	96136613	G	C	90	154	p.I205M	Missense_Mutation	SNP	1
B	1	Hilar LN	ERAP1	5	96136613	G	C	187	149	p.I205M	Missense_Mutation	SNP	0.98
C	1	Inferior Liver	ERAP1	5	96136613	G	C	109	121	p.I205M	Missense_Mutation	SNP	0.99
D	1	Inferior Liver II	ERAP1	5	96136613	G	C	110	229	p.I205M	Missense_Mutation	SNP	1
E	1	Chest Wall Subcutaneous	ERAP1	5	96136613	G	C	387	85	p.I205M	Missense_Mutation	SNP	1
F	1	RP Peri-aortic LN	ERAP1	5	96136613	G	C	103	95	p.I205M	Missense_Mutation	SNP	1
G	1	RP Peri-aortic LN II	ERAP1	5	96136613	G	C	99	120	p.I205M	Missense_Mutation	SNP	1
H	1	L. Inf. Frontal Lobe	ERAP1	5	96136613	G	C	283	68	p.I205M	Missense_Mutation	SNP	1
I	1	Medial Temp. Lobe (White Matter)	ERAP1	5	96136613	G	C	75	156	p.I205M	Missense_Mutation	SNP	1
Pre-SG	1	Primary Breast	FBXO21	12	117628239	C	T	12	6	p.S8N	Missense_Mutation	SNP	0.99
A	1	Hilar LN II	FBXO21	12	117628239	C	T	50	46	p.S8N	Missense_Mutation	SNP	1
B	1	Hilar LN	FBXO21	12	117628239	C	T	71	25	p.S8N	Missense_Mutation	SNP	0.98
C	1	Inferior Liver	FBXO21	12	117628239	C	T	71	36	p.S8N	Missense_Mutation	SNP	0.99
D	1	Inferior Liver II	FBXO21	12	117628239	C	T	95	63	p.S8N	Missense_Mutation	SNP	1
E	1	Chest Wall Subcutaneous	FBXO21	12	117628239	C	T	112	21	p.S8N	Missense_Mutation	SNP	1
F	1	RP Peri-aortic LN	FBXO21	12	117628239	C	T	72	33	p.S8N	Missense_Mutation	SNP	1
G	1	RP Peri-aortic LN II	FBXO21	12	117628239	C	T	90	35	p.S8N	Missense_Mutation	SNP	1
H	1	L. Inf. Frontal Lobe	FBXO21	12	117628239	C	T	104	25	p.S8N	Missense_Mutation	SNP	1
I	1	Medial Temp. Lobe (White Matter)	FBXO21	12	117628239	C	T	119	83	p.S8N	Missense_Mutation	SNP	1
Pre-SG	1	Primary Breast	FCRL2	1	157737370	A	G	19	4	NA	Intron	SNP	0.99
A	1	Hilar LN II	FCRL2	1	157737370	A	G	133	65	NA	Intron	SNP	1
B	1	Hilar LN	FCRL2	1	157737370	A	G	123	30	NA	Intron	SNP	0.98
C	1	Inferior Liver	FCRL2	1	157737370	A	G	152	58	NA	Intron	SNP	0.99
D	1	Inferior Liver II	FCRL2	1	157737370	A	G	200	80	NA	Intron	SNP	1
E	1	Chest Wall Subcutaneous	FCRL2	1	157737370	A	G	148	13	NA	Intron	SNP	1
F	1	RP Peri-aortic LN	FCRL2	1	157737370	A	G	148	22	NA	Intron	SNP	1
G	1	RP Peri-aortic LN II	FCRL2	1	157737370	A	G	157	52	NA	Intron	SNP	1
H	1	L. Inf. Frontal Lobe	FCRL2	1	157737370	A	G	171	47	NA	Intron	SNP	1
I	1	Medial Temp. Lobe (White Matter)	FCRL2	1	157737370	A	G	174	83	NA	Intron	SNP	1
Pre-SG	1	Primary Breast	GPR162	12	6933422	C	T	7	6	NA	3'UTR	SNP	0.99
A	1	Hilar LN II	GPR162	12	6933422	C	T	142	87	NA	3'UTR	SNP	1
B	1	Hilar LN	GPR162	12	6933422	C	T	173	80	NA	3'UTR	SNP	0.98
C	1	Inferior Liver	GPR162	12	6933422	C	T	111	81	NA	3'UTR	SNP	0.99
D	1	Inferior Liver II	GPR162	12	6933422	C	T	108	133	NA	3'UTR	SNP	1
E	1	Chest Wall Subcutaneous	GPR162	12	6933422	C	T	200	42	NA	3'UTR	SNP	1
F	1	RP Peri-aortic LN	GPR162	12	6933422	C	T	177	67	NA	3'UTR	SNP	1
G	1	RP Peri-aortic LN II	GPR162	12	6933422	C	T	154	89	NA	3'UTR	SNP	1
H	1	L. Inf. Frontal Lobe	GPR162	12	6933422	C	T	218	53	NA	3'UTR	SNP	1
I	1	Medial Temp. Lobe (White Matter)	GPR162	12	6933422	C	T	212	146	NA	3'UTR	SNP	1
Pre-SG	1	Primary Breast	INPP4B	4	142950057	G	C	1	8	p.R885G	Missense_Mutation	SNP	0.99
A	1	Hilar LN II	INPP4B	4	142950057	G	C	18	55	p.R885G	Missense_Mutation	SNP	1
B	1	Hilar LN	INPP4B	4	142950057	G	C	52	37	p.R885G	Missense_Mutation	SNP	0.98
C	1	Inferior Liver	INPP4B	4	142950057	G	C	32	36	p.R885G	Missense_Mutation	SNP	0.99
D	1	Inferior Liver II	INPP4B	4	142950057	G	C	36	61	p.R885G	Missense_Mutation	SNP	1
E	1	Chest Wall Subcutaneous	INPP4B	4	142950057	G	C	80	17	p.R885G	Missense_Mutation	SNP	1
F	1	RP Peri-aortic LN	INPP4B	4	142950057	G	C	14	17	p.R885G	Missense_Mutation	SNP	1
G	1	RP Peri-aortic LN II	INPP4B	4	142950057	G	C	22	28	p.R885G	Missense_Mutation	SNP	1
H	1	L. Inf. Frontal Lobe	INPP4B	4	142950057	G	C	71	12	p.R885G	Missense_Mutation	SNP	1
I	1	Medial Temp. Lobe (White Matter)	INPP4B	4	142950057	G	C	19	38	p.R885G	Missense_Mutation	SNP	1
Pre-SG	1	Primary Breast	KIAA2018	3	113378370	T	A	9	12	NA	Intron	SNP	0.99
A	1	Hilar LN II	KIAA2018	3	113378370	T	A	112	67	NA	Intron	SNP	1
B	1	Hilar LN	KIAA2018	3	113378370	T	A	189	27	NA	Intron	SNP	0.98
C	1	Inferior Liver	KIAA2018	3	113378370	T	A	142	58	NA	Intron	SNP	0.99
D	1	Inferior Liver II	KIAA2018	3	113378370	T	A	163	88	NA	Intron	SNP	1
E	1	Chest Wall Subcutaneous	KIAA2018	3	113378370	T	A	237	15	NA	Intron	SNP	1
F	1	RP Peri-aortic LN	KIAA2018	3	113378370	T	A	71	48	NA	Intron	SNP	1
G	1	RP Peri-aortic LN II	KIAA2018	3	113378370	T	A	113	80	NA	Intron	SNP	1
H	1	L. Inf. Frontal Lobe	KIAA2018	3	113378370	T	A	181	34	NA	Intron	SNP	1
I	1	Medial Temp. Lobe (White Matter)	KIAA2018	3	113378370	T	A	122	85	NA	Intron	SNP	1
Pre-SG	1	Primary Breast	KLF12	13	74420101	T	C	19	12	p.N178S	Missense_Mutation	SNP	0.99
A	1	Hilar LN II	KLF12	13	74420101	T	C	41	86	p.N178S	Missense_Mutation	SNP	1
B	1	Hilar LN	KLF12	13	74420101	T	C	129	29	p.N178S	Missense_Mutation	SNP	0.98
C	1	Inferior Liver	KLF12	13	74420101	T	C	87	79	p.N178S	Missense_Mutation	SNP	0.99
D	1	Inferior Liver II	KLF12	13	74420101	T	C	72	83	p.N178S	Missense_Mutation	SNP	1
E	1	Chest Wall Subcutaneous	KLF12	13	74420101	T	C	230	15	p.N178S	Missense_Mutation	SNP	1
F	1	RP Peri-aortic LN	KLF12	13	74420101	T	C	83	96	p.N178S	Missense_Mutation	SNP	1
G	1	RP Peri-aortic LN II	KLF12	13	74420101	T	C	156	67	p.N178S	Missense_Mutation	SNP	1
H	1	L. Inf. Frontal Lobe	KLF12	13	74420101	T	C	156	34	p.N178S	Missense_Mutation	SNP	1
I	1	Medial Temp. Lobe (White Matter)	KLF12	13	74420101	T	C	45	107	p.N178S	Missense_Mutation	SNP	1
Pre-SG	1	Primary Breast	KLHL36	16	84690684	G	A	4	10	p.G91S	Missense_Mutation	SNP	0.99
A	1	Hilar LN II	KLHL36	16	84690684	G	A	30	143	p.G91S	Missense_Mutation	SNP	1
B	1	Hilar LN	KLHL36	16	84690684	G	A	78	136	p.G91S	Missense_Mutation	SNP	0.98
C	1	Inferior Liver	KLHL36	16	84690684	G	A	59	69	p.G91S	Missense_Mutation	SNP	0.99
D	1	Inferior Liver II	KLHL36	16	84690684	G	A	40	163	p.G91S	Missense_Mutation	SNP	1
E	1	Chest Wall Subcutaneous	KLHL36	16	84690684	G	A	145	53	p.G91S	Missense_Mutation	SNP	1
F	1	RP Peri-aortic LN	KLHL36	16	84690684	G	A	50	93	p.G91S	Missense_Mutation	SNP	1
G	1	RP Peri-aortic LN II	KLHL36	16	84690684	G	A	54	152	p.G91S	Missense_Mutation	SNP	1
H	1	L. Inf. Frontal Lobe	KLHL36	16	84690684	G	A	105	71	p.G91S	Missense_Mutation	SNP	1
I	1	Medial Temp. Lobe (White Matter)	KLHL36	16	84690684	G	A	71	237	p.G91S	Missense_Mutation	SNP	1
Pre-SG	1	Primary Breast	MCMD2	8	67803085	-	T	19	9	NA	Intron	INS	0.99
A	1	Hilar LN II	MCMD2	8	67803085	-	T	29	58	NA	Intron	INS	1
B	1	Hilar LN	MCMD2	8	67803085	-	T	84	33	NA	Intron	INS	0.98
C	1	Inferior Liver	MCMD2	8	67803085	-	T	121	37	NA	Intron	INS	0.99
D	1	Inferior Liver II	MCMD2	8	67803085	-	T	151	71	NA	Intron	INS	1
E	1	Chest Wall Subcutaneous	MCMD2	8	67803085	-	T	165	17	NA	Intron	INS	1
F	1	RP Peri-aortic LN	MCMD2	8	67803085	-	T	82	28	NA	Intron	INS	1

G	1	RP Peri-aortic LN II	CMCDD2	8	67803085	-	T	122	45	NA	Intron	INS	1
H	1	L. Inf. Frontal Lobe	CMCDD2	8	67803085	-	T	89	20	NA	Intron	INS	1
I	1	Medial Temp. Lobe (White Matter)	CMCDD2	8	67803085	-	T	31	29	NA	Intron	INS	1
Pre-SG	1	Primary Breast	MELK	9	36583674	G	A	10	5	p.V37I	Missense_Mutation	SNP	0.99
A	1	Hilar LN II	MELK	9	36583674	G	A	60	33	p.V37I	Missense_Mutation	SNP	1
B	1	Hilar LN	MELK	9	36583674	G	A	67	27	p.V37I	Missense_Mutation	SNP	0.98
C	1	Inferior Liver	MELK	9	36583674	G	A	63	12	p.V37I	Missense_Mutation	SNP	0.99
D	1	Inferior Liver II	MELK	9	36583674	G	A	109	98	p.V37I	Missense_Mutation	SNP	1
E	1	Chest Wall Subcutaneous	MELK	9	36583674	G	A	97	20	p.V37I	Missense_Mutation	SNP	1
F	1	RP Peri-aortic LN	MELK	9	36583674	G	A	34	19	p.V37I	Missense_Mutation	SNP	1
G	1	RP Peri-aortic LN II	MELK	9	36583674	G	A	66	52	p.V37I	Missense_Mutation	SNP	1
H	1	L. Inf. Frontal Lobe	MELK	9	36583674	G	A	112	15	p.V37I	Missense_Mutation	SNP	1
I	1	Medial Temp. Lobe (White Matter)	MELK	9	36583674	G	A	57	32	p.V37I	Missense_Mutation	SNP	1
Pre-SG	1	Primary Breast	MROH5	8	142487972	G	A	9	13	NA	RNA	SNP	0.99
A	1	Hilar LN II	MROH5	8	142487972	G	A	98	64	NA	RNA	SNP	1
B	1	Hilar LN	MROH5	8	142487972	G	A	143	42	NA	RNA	SNP	0.98
C	1	Inferior Liver	MROH5	8	142487972	G	A	166	63	NA	RNA	SNP	0.99
D	1	Inferior Liver II	MROH5	8	142487972	G	A	160	76	NA	RNA	SNP	1
E	1	Chest Wall Subcutaneous	MROH5	8	142487972	G	A	170	30	NA	RNA	SNP	1
F	1	RP Peri-aortic LN	MROH5	8	142487972	G	A	144	49	NA	RNA	SNP	1
G	1	RP Peri-aortic LN II	MROH5	8	142487972	G	A	130	81	NA	RNA	SNP	1
H	1	L. Inf. Frontal Lobe	MROH5	8	142487972	G	A	165	36	NA	RNA	SNP	1
I	1	Medial Temp. Lobe (White Matter)	MROH5	8	142487972	G	A	175	128	NA	RNA	SNP	1
Pre-SG	1	Primary Breast	MROH7	1	55139729	G	T	21	37	p.R614I	Missense_Mutation	SNP	0.99
A	1	Hilar LN II	MROH7	1	55139729	G	T	77	224	p.R614I	Missense_Mutation	SNP	1
B	1	Hilar LN	MROH7	1	55139729	G	T	131	111	p.R614I	Missense_Mutation	SNP	0.98
C	1	Inferior Liver	MROH7	1	55139729	G	T	112	165	p.R614I	Missense_Mutation	SNP	0.99
D	1	Inferior Liver II	MROH7	1	55139729	G	T	118	148	p.R614I	Missense_Mutation	SNP	1
E	1	Chest Wall Subcutaneous	MROH7	1	55139729	G	T	171	53	p.R614I	Missense_Mutation	SNP	1
F	1	RP Peri-aortic LN	MROH7	1	55139729	G	T	105	177	p.R614I	Missense_Mutation	SNP	1
G	1	RP Peri-aortic LN II	MROH7	1	55139729	G	T	107	224	p.R614I	Missense_Mutation	SNP	1
H	1	L. Inf. Frontal Lobe	MROH7	1	55139729	G	T	161	93	p.R614I	Missense_Mutation	SNP	1
I	1	Medial Temp. Lobe (White Matter)	MROH7	1	55139729	G	T	111	294	p.R614I	Missense_Mutation	SNP	1
Pre-SG	1	Primary Breast	MYH13	17	10248867	G	C	8	9	p.R444G	Missense_Mutation	SNP	0.99
A	1	Hilar LN II	MYH13	17	10248867	G	C	76	133	p.R444G	Missense_Mutation	SNP	1
B	1	Hilar LN	MYH13	17	10248867	G	C	195	105	p.R444G	Missense_Mutation	SNP	0.98
C	1	Inferior Liver	MYH13	17	10248867	G	C	135	136	p.R444G	Missense_Mutation	SNP	0.99
D	1	Inferior Liver II	MYH13	17	10248867	G	C	102	137	p.R444G	Missense_Mutation	SNP	1
E	1	Chest Wall Subcutaneous	MYH13	17	10248867	G	C	316	71	p.R444G	Missense_Mutation	SNP	1
F	1	RP Peri-aortic LN	MYH13	17	10248867	G	C	138	113	p.R444G	Missense_Mutation	SNP	1
G	1	RP Peri-aortic LN II	MYH13	17	10248867	G	C	121	126	p.R444G	Missense_Mutation	SNP	1
H	1	L. Inf. Frontal Lobe	MYH13	17	10248867	G	C	257	65	p.R444G	Missense_Mutation	SNP	1
I	1	Medial Temp. Lobe (White Matter)	MYH13	17	10248867	G	C	67	148	p.R444G	Missense_Mutation	SNP	1
Pre-SG	1	Primary Breast	PHLDA1	12	76424565	G	A	4	4	p.P319P	Silent	SNP	0.99
A	1	Hilar LN II	PHLDA1	12	76424565	G	A	11	29	p.P319P	Silent	SNP	1
B	1	Hilar LN	PHLDA1	12	76424565	G	A	68	11	p.P319P	Silent	SNP	0.98
C	1	Inferior Liver	PHLDA1	12	76424565	G	A	49	17	p.P319P	Silent	SNP	0.99
D	1	Inferior Liver II	PHLDA1	12	76424565	G	A	82	15	p.P319P	Silent	SNP	1
E	1	Chest Wall Subcutaneous	PHLDA1	12	76424565	G	A	73	12	p.P319P	Silent	SNP	1
F	1	RP Peri-aortic LN	PHLDA1	12	76424565	G	A	58	21	p.P319P	Silent	SNP	1
G	1	RP Peri-aortic LN II	PHLDA1	12	76424565	G	A	39	19	p.P319P	Silent	SNP	1
H	1	L. Inf. Frontal Lobe	PHLDA1	12	76424565	G	A	54	16	p.P319P	Silent	SNP	1
I	1	Medial Temp. Lobe (White Matter)	PHLDA1	12	76424565	G	A	18	55	p.P319P	Silent	SNP	1
Pre-SG	1	Primary Breast	PKD1	16	2161533	A	C	7	66	p.L1212R	Missense_Mutation	SNP	0.99
A	1	Hilar LN II	PKD1	16	2161533	A	C	110	472	p.L1212R	Missense_Mutation	SNP	1
B	1	Hilar LN	PKD1	16	2161533	A	C	326	248	p.L1212R	Missense_Mutation	SNP	0.98
C	1	Inferior Liver	PKD1	16	2161533	A	C	242	353	p.L1212R	Missense_Mutation	SNP	0.99
D	1	Inferior Liver II	PKD1	16	2161533	A	C	175	500	p.L1212R	Missense_Mutation	SNP	1
E	1	Chest Wall Subcutaneous	PKD1	16	2161533	A	C	523	147	p.L1212R	Missense_Mutation	SNP	1
F	1	RP Peri-aortic LN	PKD1	16	2161533	A	C	234	405	p.L1212R	Missense_Mutation	SNP	1
G	1	RP Peri-aortic LN II	PKD1	16	2161533	A	C	180	503	p.L1212R	Missense_Mutation	SNP	1
H	1	L. Inf. Frontal Lobe	PKD1	16	2161533	A	C	418	316	p.L1212R	Missense_Mutation	SNP	1
I	1	Medial Temp. Lobe (White Matter)	PKD1	16	2161533	A	C	212	1225	p.L1212R	Missense_Mutation	SNP	1
Pre-SG	1	Primary Breast	PRPF8	17	1554478	C	T	23	35	p.V2259V	Silent	SNP	0.99
A	1	Hilar LN II	PRPF8	17	1554478	C	T	101	229	p.V2259V	Silent	SNP	1
B	1	Hilar LN	PRPF8	17	1554478	C	T	280	184	p.V2259V	Silent	SNP	0.98
C	1	Inferior Liver	PRPF8	17	1554478	C	T	202	228	p.V2259V	Silent	SNP	0.99
D	1	Inferior Liver II	PRPF8	17	1554478	C	T	176	272	p.V2259V	Silent	SNP	1
E	1	Chest Wall Subcutaneous	PRPF8	17	1554478	C	T	487	103	p.V2259V	Silent	SNP	1
F	1	RP Peri-aortic LN	PRPF8	17	1554478	C	T	202	160	p.V2259V	Silent	SNP	1
G	1	RP Peri-aortic LN II	PRPF8	17	1554478	C	T	155	227	p.V2259V	Silent	SNP	1
H	1	L. Inf. Frontal Lobe	PRPF8	17	1554478	C	T	365	97	p.V2259V	Silent	SNP	1
I	1	Medial Temp. Lobe (White Matter)	PRPF8	17	1554478	C	T	150	320	p.V2259V	Silent	SNP	1
Pre-SG	1	Primary Breast	RANBP3	19	5951492	G	A	7	4	p.P65L	Missense_Mutation	SNP	0.99
A	1	Hilar LN II	RANBP3	19	5951492	G	A	64	60	p.P65L	Missense_Mutation	SNP	1
B	1	Hilar LN	RANBP3	19	5951492	G	A	139	35	p.P65L	Missense_Mutation	SNP	0.98
C	1	Inferior Liver	RANBP3	19	5951492	G	A	97	40	p.P65L	Missense_Mutation	SNP	0.99
D	1	Inferior Liver II	RANBP3	19	5951492	G	A	109	66	p.P65L	Missense_Mutation	SNP	1
E	1	Chest Wall Subcutaneous	RANBP3	19	5951492	G	A	111	18	p.P65L	Missense_Mutation	SNP	1
F	1	RP Peri-aortic LN	RANBP3	19	5951492	G	A	91	62	p.P65L	Missense_Mutation	SNP	1
G	1	RP Peri-aortic LN II	RANBP3	19	5951492	G	A	97	57	p.P65L	Missense_Mutation	SNP	1
H	1	L. Inf. Frontal Lobe	RANBP3	19	5951492	G	A	119	21	p.P65L	Missense_Mutation	SNP	1
I	1	Medial Temp. Lobe (White Matter)	RANBP3	19	5951492	G	A	110	90	p.P65L	Missense_Mutation	SNP	1
Pre-SG	1	Primary Breast	RIMKLB	12	8866508	C	G	48	34	p.R16G	Missense_Mutation	SNP	0.99
A	1	Hilar LN II	RIMKLB	12	8866508	C	G	205	126	p.R16G	Missense_Mutation	SNP	1
B	1	Hilar LN	RIMKLB	12	8866508	C	G	306	71	p.R16G	Missense_Mutation	SNP	0.98
C	1	Inferior Liver	RIMKLB	12	8866508	C	G	276	72	p.R16G	Missense_Mutation	SNP	0.99
D	1	Inferior Liver II	RIMKLB	12	8866508	C	G	315	42	p.R16G	Missense_Mutation	SNP	1
E	1	Chest Wall Subcutaneous	RIMKLB	12	8866508	C	G	387	45	p.R16G	Missense_Mutation	SNP	1
F	1	RP Peri-aortic LN	RIMKLB	12	8866508	C	G	161	65	p.R16G	Missense_Mutation	SNP	1
G	1	RP Peri-aortic LN II	RIMKLB	12	8866508	C	G	220	140	p.R16G	Missense_Mutation	SNP	1
H	1	L. Inf. Frontal Lobe	RIMKLB	12	8866508	C	G	305	39	p.R16G	Missense_Mutation	SNP	1
I	1	Medial Temp. Lobe (White Matter)	RIMKLB	12	8866508	C	G	242	127	p.R16G	Missense_Mutation	SNP	1
Pre-SG	1	Primary Breast	SAMD4A	14	55203737	T	C	17	18	NA	Intron	SNP	0.99
A	1	Hilar LN II	SAMD4A	14	55203737	T	C	61	138	NA	Intron	SNP	1
B	1	Hilar LN	SAMD4A	14	55203737	T	C	207	117	NA	Intron	SNP	0.98
C	1	Inferior Liver	SAMD4A	14	55203737	T	C	110	114	NA	Intron	SNP	0.99
D	1	Inferior Liver II	SAMD4A	14	55203737	T	C	122	149	NA	Intron	SNP	1
E	1	Chest Wall Subcutaneous	SAMD4A	14	55203737	T	C	325	58	NA	Intron	SNP	1
F	1	RP Peri-aortic LN	SAMD4A	14	55203737	T	C	128	128	NA	Intron	SNP	1
G	1	RP Peri-aortic LN II	SAMD4A	14	55203737	T	C	92	154	NA	Intron	SNP	1
H	1	L. Inf. Frontal Lobe	SAMD4A	14	55203737	T	C	261	67	NA	Intron	SNP	1
I	1	Medial Temp. Lobe (White Matter)	SAMD4A	14	55203737	T	C	87	195	NA	Intron	SNP	1
Pre-SG	1	Primary Breast	SEC14L4	22	30890129	G	C	3	11	NA	Intron	SNP	0.99
A	1	Hilar LN II	SEC14L4	22	30890129	G	C	23	72	NA	Intron	SNP	1
B	1	Hilar LN	SEC14L4	22	30890129	G	C	70	46	NA	Intron	SNP	0.98

C	1	Inferior Liver	SEC14L4	22	30890129	G	C	45	55	NA	Intron	SNP	0.99
D	1	Inferior Liver II	SEC14L4	22	30890129	G	C	41	66	NA	Intron	SNP	1
E	1	Chest Wall Subcutaneous	SEC14L4	22	30890129	G	C	125	21	NA	Intron	SNP	1
F	1	RP Peri-aortic LN	SEC14L4	22	30890129	G	C	46	43	NA	Intron	SNP	1
G	1	RP Peri-aortic LN II	SEC14L4	22	30890129	G	C	52	47	NA	Intron	SNP	1
H	1	L. Inf. Frontal Lobe	SEC14L4	22	30890129	G	C	98	25	NA	Intron	SNP	1
I	1	Medial Temp. Lobe (White Matter)	SEC14L4	22	30890129	G	C	27	79	NA	Intron	SNP	1
Pre-SG	1	Primary Breast	SMARCA4	19	11106026	G	T	37	19	NA	Intron	SNP	0.99
A	1	Hilar LN II	SMARCA4	19	11106026	G	T	216	163	NA	Intron	SNP	1
B	1	Hilar LN	SMARCA4	19	11106026	G	T	329	104	NA	Intron	SNP	0.98
C	1	Inferior Liver	SMARCA4	19	11106026	G	T	350	151	NA	Intron	SNP	0.99
D	1	Inferior Liver II	SMARCA4	19	11106026	G	T	291	158	NA	Intron	SNP	1
E	1	Chest Wall Subcutaneous	SMARCA4	19	11106026	G	T	378	75	NA	Intron	SNP	1
F	1	RP Peri-aortic LN	SMARCA4	19	11106026	G	T	263	119	NA	Intron	SNP	1
G	1	RP Peri-aortic LN II	SMARCA4	19	11106026	G	T	263	149	NA	Intron	SNP	1
H	1	L. Inf. Frontal Lobe	SMARCA4	19	11106026	G	T	351	88	NA	Intron	SNP	1
I	1	Medial Temp. Lobe (White Matter)	SMARCA4	19	11106026	G	T	403	263	NA	Intron	SNP	1
Pre-SG	1	Primary Breast	SPTA1	1	158641228	C	A	86	21	p.E502*	Nonsense_Mutation	SNP	0.99
A	1	Hilar LN II	SPTA1	1	158641228	C	A	457	167	p.E502*	Nonsense_Mutation	SNP	1
B	1	Hilar LN	SPTA1	1	158641228	C	A	325	128	p.E502*	Nonsense_Mutation	SNP	0.98
C	1	Inferior Liver	SPTA1	1	158641228	C	A	468	125	p.E502*	Nonsense_Mutation	SNP	0.99
D	1	Inferior Liver II	SPTA1	1	158641228	C	A	542	189	p.E502*	Nonsense_Mutation	SNP	1
E	1	Chest Wall Subcutaneous	SPTA1	1	158641228	C	A	475	100	p.E502*	Nonsense_Mutation	SNP	1
F	1	RP Peri-aortic LN	SPTA1	1	158641228	C	A	319	101	p.E502*	Nonsense_Mutation	SNP	1
G	1	RP Peri-aortic LN II	SPTA1	1	158641228	C	A	477	143	p.E502*	Nonsense_Mutation	SNP	1
H	1	L. Inf. Frontal Lobe	SPTA1	1	158641228	C	A	584	83	p.E502*	Nonsense_Mutation	SNP	1
I	1	Medial Temp. Lobe (White Matter)	SPTA1	1	158641228	C	A	573	188	p.E502*	Nonsense_Mutation	SNP	1
Pre-SG	1	Primary Breast	TAS2R20	12	11150248	G	C	8	2	p.S76C	Missense_Mutation	SNP	0.99
A	1	Hilar LN II	TAS2R20	12	11150248	G	C	68	53	p.S76C	Missense_Mutation	SNP	1
B	1	Hilar LN	TAS2R20	12	11150248	G	C	69	33	p.S76C	Missense_Mutation	SNP	0.98
C	1	Inferior Liver	TAS2R20	12	11150248	G	C	43	31	p.S76C	Missense_Mutation	SNP	0.99
D	1	Inferior Liver II	TAS2R20	12	11150248	G	C	53	52	p.S76C	Missense_Mutation	SNP	1
E	1	Chest Wall Subcutaneous	TAS2R20	12	11150248	G	C	90	23	p.S76C	Missense_Mutation	SNP	1
F	1	RP Peri-aortic LN	TAS2R20	12	11150248	G	C	42	11	p.S76C	Missense_Mutation	SNP	1
G	1	RP Peri-aortic LN II	TAS2R20	12	11150248	G	C	63	41	p.S76C	Missense_Mutation	SNP	1
H	1	L. Inf. Frontal Lobe	TAS2R20	12	11150248	G	C	108	19	p.S76C	Missense_Mutation	SNP	1
I	1	Medial Temp. Lobe (White Matter)	TAS2R20	12	11150248	G	C	53	26	p.S76C	Missense_Mutation	SNP	1
Pre-SG	1	Primary Breast	THEM6	8	143808967	C	G	50	25	p.A68G	Missense_Mutation	SNP	0.99
A	1	Hilar LN II	THEM6	8	143808967	C	G	155	115	p.A68G	Missense_Mutation	SNP	1
B	1	Hilar LN	THEM6	8	143808967	C	G	223	48	p.A68G	Missense_Mutation	SNP	0.98
C	1	Inferior Liver	THEM6	8	143808967	C	G	216	184	p.A68G	Missense_Mutation	SNP	0.99
D	1	Inferior Liver II	THEM6	8	143808967	C	G	278	199	p.A68G	Missense_Mutation	SNP	1
E	1	Chest Wall Subcutaneous	THEM6	8	143808967	C	G	263	23	p.A68G	Missense_Mutation	SNP	1
F	1	RP Peri-aortic LN	THEM6	8	143808967	C	G	235	145	p.A68G	Missense_Mutation	SNP	1
G	1	RP Peri-aortic LN II	THEM6	8	143808967	C	G	226	107	p.A68G	Missense_Mutation	SNP	1
H	1	L. Inf. Frontal Lobe	THEM6	8	143808967	C	G	277	82	p.A68G	Missense_Mutation	SNP	1
I	1	Medial Temp. Lobe (White Matter)	THEM6	8	143808967	C	G	402	270	p.A68G	Missense_Mutation	SNP	1
Pre-SG	1	Primary Breast	TOM1	22	35719615	C	T	8	4	p.P165S	Missense_Mutation	SNP	0.99
A	1	Hilar LN II	TOM1	22	35719615	C	T	30	90	p.P165S	Missense_Mutation	SNP	1
B	1	Hilar LN	TOM1	22	35719615	C	T	89	44	p.P165S	Missense_Mutation	SNP	0.98
C	1	Inferior Liver	TOM1	22	35719615	C	T	77	75	p.P165S	Missense_Mutation	SNP	0.99
D	1	Inferior Liver II	TOM1	22	35719615	C	T	46	86	p.P165S	Missense_Mutation	SNP	1
E	1	Chest Wall Subcutaneous	TOM1	22	35719615	C	T	158	32	p.P165S	Missense_Mutation	SNP	1
F	1	RP Peri-aortic LN	TOM1	22	35719615	C	T	75	67	p.P165S	Missense_Mutation	SNP	1
G	1	RP Peri-aortic LN II	TOM1	22	35719615	C	T	37	63	p.P165S	Missense_Mutation	SNP	1
H	1	L. Inf. Frontal Lobe	TOM1	22	35719615	C	T	115	38	p.P165S	Missense_Mutation	SNP	1
I	1	Medial Temp. Lobe (White Matter)	TOM1	22	35719615	C	T	48	115	p.P165S	Missense_Mutation	SNP	1
Pre-SG	1	Primary Breast	TP53	17	7578535	T	C	12	8	p.K132R	Missense_Mutation	SNP	0.99
A	1	Hilar LN II	TP53	17	7578535	T	C	46	85	p.K132R	Missense_Mutation	SNP	1
B	1	Hilar LN	TP53	17	7578535	T	C	134	76	p.K132R	Missense_Mutation	SNP	0.98
C	1	Inferior Liver	TP53	17	7578535	T	C	96	106	p.K132R	Missense_Mutation	SNP	0.99
D	1	Inferior Liver II	TP53	17	7578535	T	C	93	125	p.K132R	Missense_Mutation	SNP	1
E	1	Chest Wall Subcutaneous	TP53	17	7578535	T	C	240	52	p.K132R	Missense_Mutation	SNP	1
F	1	RP Peri-aortic LN	TP53	17	7578535	T	C	80	88	p.K132R	Missense_Mutation	SNP	1
G	1	RP Peri-aortic LN II	TP53	17	7578535	T	C	68	111	p.K132R	Missense_Mutation	SNP	1
H	1	L. Inf. Frontal Lobe	TP53	17	7578535	T	C	165	36	p.K132R	Missense_Mutation	SNP	1
I	1	Medial Temp. Lobe (White Matter)	TP53	17	7578535	T	C	52	153	p.K132R	Missense_Mutation	SNP	1
Pre-SG	1	Primary Breast	TRIM58	1	248039647	C	G	7	23	p.L439L	Silent	SNP	0.99
A	1	Hilar LN II	TRIM58	1	248039647	C	G	41	168	p.L439L	Silent	SNP	1
B	1	Hilar LN	TRIM58	1	248039647	C	G	107	73	p.L439L	Silent	SNP	0.98
C	1	Inferior Liver	TRIM58	1	248039647	C	G	75	134	p.L439L	Silent	SNP	0.99
D	1	Inferior Liver II	TRIM58	1	248039647	C	G	66	222	p.L439L	Silent	SNP	1
E	1	Chest Wall Subcutaneous	TRIM58	1	248039647	C	G	185	55	p.L439L	Silent	SNP	1
F	1	RP Peri-aortic LN	TRIM58	1	248039647	C	G	55	83	p.L439L	Silent	SNP	1
G	1	RP Peri-aortic LN II	TRIM58	1	248039647	C	G	55	138	p.L439L	Silent	SNP	1
H	1	L. Inf. Frontal Lobe	TRIM58	1	248039647	C	G	172	68	p.L439L	Silent	SNP	1
I	1	Medial Temp. Lobe (White Matter)	TRIM58	1	248039647	C	G	39	159	p.L439L	Silent	SNP	1
Pre-SG	1	Primary Breast	USP45	6	99883618	G	A	11	6	p.L807F	Missense_Mutation	SNP	0.99
A	1	Hilar LN II	USP45	6	99883618	G	A	101	70	p.L807F	Missense_Mutation	SNP	1
B	1	Hilar LN	USP45	6	99883618	G	A	84	47	p.L807F	Missense_Mutation	SNP	0.98
C	1	Inferior Liver	USP45	6	99883618	G	A	91	37	p.L807F	Missense_Mutation	SNP	0.99
D	1	Inferior Liver II	USP45	6	99883618	G	A	116	63	p.L807F	Missense_Mutation	SNP	1
E	1	Chest Wall Subcutaneous	USP45	6	99883618	G	A	144	21	p.L807F	Missense_Mutation	SNP	1
F	1	RP Peri-aortic LN	USP45	6	99883618	G	A	73	45	p.L807F	Missense_Mutation	SNP	1
G	1	RP Peri-aortic LN II	USP45	6	99883618	G	A	96	41	p.L807F	Missense_Mutation	SNP	1
H	1	L. Inf. Frontal Lobe	USP45	6	99883618	G	A	165	21	p.L807F	Missense_Mutation	SNP	1
I	1	Medial Temp. Lobe (White Matter)	USP45	6	99883618	G	A	82	55	p.L807F	Missense_Mutation	SNP	1
Pre-SG	1	Primary Breast	ZNF516	18	74091978	C	A	10	2	p.G698*	Nonsense_Mutation	SNP	0.99
A	1	Hilar LN II	ZNF516	18	74091978	C	A	130	79	p.G698*	Nonsense_Mutation	SNP	1
B	1	Hilar LN	ZNF516	18	74091978	C	A	211	40	p.G698*	Nonsense_Mutation	SNP	0.98
C	1	Inferior Liver	ZNF516	18	74091978	C	A	276	122	p.G698*	Nonsense_Mutation	SNP	0.99
D	1	Inferior Liver II	ZNF516	18	74091978	C	A	132	85	p.G698*	Nonsense_Mutation	SNP	1
E	1	Chest Wall Subcutaneous	ZNF516	18	74091978	C	A	226	26	p.G698*	Nonsense_Mutation	SNP	1
F	1	RP Peri-aortic LN	ZNF516	18	74091978	C	A	131	152	p.G698*	Nonsense_Mutation	SNP	1
G	1	RP Peri-aortic LN II	ZNF516	18	74091978	C	A	165	14	p.G698*	Nonsense_Mutation	SNP	1
H	1	L. Inf. Frontal Lobe	ZNF516	18	74091978	C	A	186	32	p.G698*	Nonsense_Mutation	SNP	1
I	1	Medial Temp. Lobe (White Matter)	ZNF516	18	74091978	C	A	181	127	p.G698*	Nonsense_Mutation	SNP	1
Pre-SG	1	Primary Breast	ZNF850	19	37238967	C	A	8	1	p.C992F	Missense_Mutation	SNP	0.99
A	1	Hilar LN II	ZNF850	19	37238967	C	A	102	52	p.C992F	Missense_Mutation	SNP	1
B	1	Hilar LN	ZNF850	19	37238967	C	A	156	42	p.C992F	Missense_Mutation	SNP	0.98
C	1	Inferior Liver	ZNF850	19	37238967	C	A	106	43	p.C992F	Missense_Mutation	SNP	0.99
D	1	Inferior Liver II	ZNF850	19	37238967	C	A	130	70	p.C992F	Missense_Mutation	SNP	1
E	1	Chest Wall Subcutaneous	ZNF850	19	37238967	C	A	229	22	p.C992F	Missense_Mutation	SNP	1
F	1	RP Peri-aortic LN	ZNF850	19	37238967	C	A	83	32	p.C992F	Missense_Mutation	SNP	1
G	1	RP Peri-aortic LN II	ZNF850	19	37238967	C	A	97	40	p.C992F	Missense_Mutation	SNP	1
H	1	L. Inf. Frontal Lobe	ZNF850	19	37238967	C	A	163	23	p.C992F	Missense_Mutation	SNP	1



I	1	Medial Temp. Lobe (White Matter)	ZNF850	19	37238967	C	A	93	44	p.C992F	Missense_Mutation	SNP	1
A	2	Hilar LN II	ALG2	9	101984002	A	G	191	204	p.COR	Missense_Mutation	SNP	0.94
H	2	L. Inf. Frontal Lobe	ALG2	9	101984002	A	G	290	68	p.COR	Missense_Mutation	SNP	0.97
I	2	Medial Temp. Lobe (White Matter)	ALG2	9	101984002	A	G	468	262	p.COR	Missense_Mutation	SNP	0.94
A	2	Hilar LN II	ALS2	2	202572662	G	A	206	110	p.P1445S	Missense_Mutation	SNP	0.94
H	2	L. Inf. Frontal Lobe	ALS2	2	202572662	G	A	337	50	p.P1445S	Missense_Mutation	SNP	0.97
I	2	Medial Temp. Lobe (White Matter)	ALS2	2	202572662	G	A	247	126	p.P1445S	Missense_Mutation	SNP	0.94
A	2	Hilar LN II	BPIFB4	20	31682929	C	T	140	71	p.T456T	Silent	SNP	0.94
H	2	L. Inf. Frontal Lobe	BPIFB4	20	31682929	C	T	208	29	p.T456T	Silent	SNP	0.97
I	2	Medial Temp. Lobe (White Matter)	BPIFB4	20	31682929	C	T	207	96	p.T456T	Silent	SNP	0.94
A	2	Hilar LN II	CASP2	7	142988742	G	C	203	133	p.E62Q	Missense_Mutation	SNP	0.94
H	2	L. Inf. Frontal Lobe	CASP2	7	142988742	G	C	281	71	p.E62Q	Missense_Mutation	SNP	0.97
I	2	Medial Temp. Lobe (White Matter)	CASP2	7	142988742	G	C	232	177	p.E62Q	Missense_Mutation	SNP	0.94
A	2	Hilar LN II	ELAVL2	9	23762155	C	G	196	87	p.S26S	Silent	SNP	0.94
H	2	L. Inf. Frontal Lobe	ELAVL2	9	23762155	C	G	262	48	p.S26S	Silent	SNP	0.97
I	2	Medial Temp. Lobe (White Matter)	ELAVL2	9	23762155	C	G	190	89	p.S26S	Silent	SNP	0.94
A	2	Hilar LN II	FAM129B	9	130293942	C	G	124	59	p.Q57H	Missense_Mutation	SNP	0.94
H	2	L. Inf. Frontal Lobe	FAM129B	9	130293942	C	G	115	37	p.Q57H	Missense_Mutation	SNP	0.97
I	2	Medial Temp. Lobe (White Matter)	FAM129B	9	130293942	C	G	209	126	p.Q57H	Missense_Mutation	SNP	0.94
A	2	Hilar LN II	FAM134A	2	220043327	A	C	37	50	p.T85P	Missense_Mutation	SNP	0.94
H	2	L. Inf. Frontal Lobe	FAM134A	2	220043327	A	C	99	34	p.T85P	Missense_Mutation	SNP	0.97
I	2	Medial Temp. Lobe (White Matter)	FAM134A	2	220043327	A	C	69	116	p.T85P	Missense_Mutation	SNP	0.94
A	2	Hilar LN II	HLA-DMA	6	32917414	T	C	81	64	p.D209G	Missense_Mutation	SNP	0.94
H	2	L. Inf. Frontal Lobe	HLA-DMA	6	32917414	T	C	124	25	p.D209G	Missense_Mutation	SNP	0.97
I	2	Medial Temp. Lobe (White Matter)	HLA-DMA	6	32917414	T	C	113	90	p.D209G	Missense_Mutation	SNP	0.94
A	2	Hilar LN II	LAMC2	1	183203509	C	T	435	141	p.P743L	Missense_Mutation	SNP	0.94
H	2	L. Inf. Frontal Lobe	LAMC2	1	183203509	C	T	558	71	p.P743L	Missense_Mutation	SNP	0.97
I	2	Medial Temp. Lobe (White Matter)	LAMC2	1	183203509	C	T	713	239	p.P743L	Missense_Mutation	SNP	0.94
A	2	Hilar LN II	MYH1	17	10409143	T	C	33	63	p.A720A	Silent	SNP	0.94
H	2	L. Inf. Frontal Lobe	MYH1	17	10409143	T	C	111	14	p.A720A	Silent	SNP	0.97
I	2	Medial Temp. Lobe (White Matter)	MYH1	17	10409143	T	C	17	64	p.A720A	Silent	SNP	0.94
A	2	Hilar LN II	NCS1	9	132980144	G	T	383	187	p.G41G	Silent	SNP	0.94
H	2	L. Inf. Frontal Lobe	NCS1	9	132980144	G	T	464	97	p.G41G	Silent	SNP	0.97
I	2	Medial Temp. Lobe (White Matter)	NCS1	9	132980144	G	T	451	330	p.G41G	Silent	SNP	0.94
A	2	Hilar LN II	PCNXL3	11	65384367	A	T	118	67	p.T76S	Missense_Mutation	SNP	0.94
H	2	L. Inf. Frontal Lobe	PCNXL3	11	65384367	A	T	156	39	p.T76S	Missense_Mutation	SNP	0.97
I	2	Medial Temp. Lobe (White Matter)	PCNXL3	11	65384367	A	T	227	141	p.T76S	Missense_Mutation	SNP	0.94
A	2	Hilar LN II	PIWL2	8	22167467	T	C	22	13	NA	Intron	SNP	0.94
H	2	L. Inf. Frontal Lobe	PIWL2	8	22167467	T	C	20	7	NA	Intron	SNP	0.97
I	2	Medial Temp. Lobe (White Matter)	PIWL2	8	22167467	T	C	24	11	NA	Intron	SNP	0.94
A	2	Hilar LN II	PSMA2	7	42964365	GAGCTAGT-		69	25	p.RKLA91del	In_Frame_Del	DEL	0.94
H	2	L. Inf. Frontal Lobe	PSMA2	7	42964365	GAGCTAGT-		104	6	p.RKLA91del	In_Frame_Del	DEL	0.97
I	2	Medial Temp. Lobe (White Matter)	PSMA2	7	42964365	GAGCTAGT-		39	18	p.RKLA91del	In_Frame_Del	DEL	0.94
A	2	Hilar LN II	SCAND3	6	28540825	A	G	89	69	p.Y947Y	Silent	SNP	0.94
H	2	L. Inf. Frontal Lobe	SCAND3	6	28540825	A	G	139	33	p.Y947Y	Silent	SNP	0.97
I	2	Medial Temp. Lobe (White Matter)	SCAND3	6	28540825	A	G	95	49	p.Y947Y	Silent	SNP	0.94
A	2	Hilar LN II	SLC37A2	11	124949116	C	-	62	127	p.H141fs	Frame_Shift_Del	DEL	0.94
H	2	L. Inf. Frontal Lobe	SLC37A2	11	124949116	C	-	168	58	p.H141fs	Frame_Shift_Del	DEL	0.97
I	2	Medial Temp. Lobe (White Matter)	SLC37A2	11	124949116	C	-	104	185	p.H141fs	Frame_Shift_Del	DEL	0.94
A	2	Hilar LN II	SYBU	8	110588171	T	A	130	61	p.H319L	Missense_Mutation	SNP	0.94
H	2	L. Inf. Frontal Lobe	SYBU	8	110588171	T	A	153	39	p.H319L	Missense_Mutation	SNP	0.97
I	2	Medial Temp. Lobe (White Matter)	SYBU	8	110588171	T	A	169	147	p.H319L	Missense_Mutation	SNP	0.94
A	2	Hilar LN II	UNC80	2	210782663	G	A	19	45	p.G1665E	Missense_Mutation	SNP	0.94
H	2	L. Inf. Frontal Lobe	UNC80	2	210782663	G	A	96	22	p.G1665E	Missense_Mutation	SNP	0.97
I	2	Medial Temp. Lobe (White Matter)	UNC80	2	210782663	G	A	16	36	p.G1665E	Missense_Mutation	SNP	0.94
A	2	Hilar LN II	ZNF354A	5	178139868	G	T	314	79	p.C337*	Nonsense_Mutation	SNP	0.94
H	2	L. Inf. Frontal Lobe	ZNF354A	5	178139868	G	T	206	32	p.C337*	Nonsense_Mutation	SNP	0.97
I	2	Medial Temp. Lobe (White Matter)	ZNF354A	5	178139868	G	T	167	50	p.C337*	Nonsense_Mutation	SNP	0.94
C	3	Inferior Liver	ACSM2B	16	20563560	A	T	48	21	p.L267Q	Missense_Mutation	SNP	0.98
F	3	RP Peri-aortic LN	ACSM2B	16	20563560	A	T	50	14	p.L267Q	Missense_Mutation	SNP	0.97
C	3	Inferior Liver	BLK	8	11418764	G	C	59	66	NA	Intron	SNP	0.98
F	3	RP Peri-aortic LN	BLK	8	11418764	G	C	48	54	NA	Intron	SNP	0.97
C	3	Inferior Liver	C9orf40	9	77567455	C	T	176	106	p.A25T	Missense_Mutation	SNP	0.98
F	3	RP Peri-aortic LN	C9orf40	9	77567455	C	T	234	123	p.A25T	Missense_Mutation	SNP	0.97
C	3	Inferior Liver	CAMSAP3	19	7676431	C	G	69	25	p.S384S	Silent	SNP	0.98
F	3	RP Peri-aortic LN	CAMSAP3	19	7676431	C	G	68	18	p.S384S	Silent	SNP	0.97
C	3	Inferior Liver	CENPA	2	27016123	G	A	108	88	p.R133R	Silent	SNP	0.98
F	3	RP Peri-aortic LN	CENPA	2	27016123	G	A	141	64	p.R133R	Silent	SNP	0.97
C	3	Inferior Liver	CIB3	19	16279043	C	A	152	71	p.G84V	Missense_Mutation	SNP	0.98
F	3	RP Peri-aortic LN	CIB3	19	16279043	C	A	136	56	p.G84V	Missense_Mutation	SNP	0.97
C	3	Inferior Liver	CLMN	14	95670292	G	C	32	45	p.A465G	Missense_Mutation	SNP	0.98
F	3	RP Peri-aortic LN	CLMN	14	95670292	G	C	36	33	p.A465G	Missense_Mutation	SNP	0.97
C	3	Inferior Liver	CRTC3	15	91172702	C	A	113	122	p.H402N	Missense_Mutation	SNP	0.98
F	3	RP Peri-aortic LN	CRTC3	15	91172702	C	A	121	118	p.H402N	Missense_Mutation	SNP	0.97
C	3	Inferior Liver	CSHL1	17	61987824	A	C	133	156	p.S88A	Missense_Mutation	SNP	0.98
F	3	RP Peri-aortic LN	CSHL1	17	61987824	A	C	144	126	p.S88A	Missense_Mutation	SNP	0.97
C	3	Inferior Liver	DENND1C	19	6466685	C	T	158	94	NA	IGR	SNP	0.98
F	3	RP Peri-aortic LN	DENND1C	19	6466685	C	T	143	70	NA	IGR	SNP	0.97
C	3	Inferior Liver	FLG2	1	152325317	G	C	423	161	p.Q1649E	Missense_Mutation	SNP	0.98
F	3	RP Peri-aortic LN	FLG2	1	152325317	G	C	309	63	p.Q1649E	Missense_Mutation	SNP	0.97
C	3	Inferior Liver	GMEB2	20	62250662	C	T	122	56	p.G30E	Missense_Mutation	SNP	0.98
F	3	RP Peri-aortic LN	GMEB2	20	62250662	C	T	112	54	p.G30E	Missense_Mutation	SNP	0.97
C	3	Inferior Liver	GRIK2	6	102247643	C	T	121	67	p.R358C	Missense_Mutation	SNP	0.98
F	3	RP Peri-aortic LN	GRIK2	6	102247643	C	T	103	55	p.R358C	Missense_Mutation	SNP	0.97
C	3	Inferior Liver	HNRNPA1	12	54675246	G	A	136	60	p.R31K	Missense_Mutation	SNP	0.98
F	3	RP Peri-aortic LN	HNRNPA1	12	54675246	G	A	114	67	p.R31K	Missense_Mutation	SNP	0.97
C	3	Inferior Liver	LAMA1	18	7034475	T	C	173	79	NA	Intron	SNP	0.98
F	3	RP Peri-aortic LN	LAMA1	18	7034475	T	C	116	58	NA	Intron	SNP	0.97
C	3	Inferior Liver	MAFA	8	144511711	A	T	278	237	NA	5'UTR	SNP	0.98
F	3	RP Peri-aortic LN	MAFA	8	144511711	A	T	365	223	NA	5'UTR	SNP	0.97
C	3	Inferior Liver	MAS1L	6	29455475	C	T	116	73	p.G69R	Missense_Mutation	SNP	0.98
F	3	RP Peri-aortic LN	MAS1L	6	29455475	C	T	128	62	p.G69R	Missense_Mutation	SNP	0.97
C	3	Inferior Liver	MRPL47	3	179322378	C	G	130	57	p.R12T	Missense_Mutation	SNP	0.98
F	3	RP Peri-aortic LN	MRPL47	3	179322378	C	G	100	32	p.R12T	Missense_Mutation	SNP	0.97
C	3	Inferior Liver	MSC	8	72756185	C	A	183	81	p.V77L	Missense_Mutation	SNP	0.98
F	3	RP Peri-aortic LN	MSC	8	72756185	C	A	167	79	p.V77L	Missense_Mutation	SNP	0.97
C	3	Inferior Liver	MUC22	6	30996075	A	G	178	94	p.K956R	Missense_Mutation	SNP	0.98
F	3	RP Peri-aortic LN	MUC22	6	30996075	A	G	177	91	p.K956R	Missense_Mutation	SNP	0.97
C	3	RP Peri-aortic LN II	MUC22	6	30996075	A	G	285	3	p.K956R	Missense_Mutation	SNP	0.01
G	3	Inferior Liver	NCAPD2	12	6619438	C	G	102	70	NA	Intron	SNP	0.98
F	3	RP Peri-aortic LN	NCAPD2	12	6619438	C	G	75	39	NA	Intron	SNP	0.97
C	3	Inferior Liver	NKPD1	19	45655697	G	C	76	75	p.R444R	Silent	SNP	0.98
F	3	RP Peri-aortic LN	NKPD1	19	45655697	G	C	97	101	p.R444R	Silent	SNP	0.97
C	3	Inferior Liver	NOL6	9	33462156	A	T	141	25	NA	3'UTR	SNP	0.98
F	3	RP Peri-aortic LN	NOL6	9	33462156	A	T	120	56	NA	3'UTR	SNP	0.97
C	3	Inferior Liver	NOTCH1	9	139418481	C	-	115	22	NA	Intron	DEL	0.98

F	3	RP Peri-aortic LN	NOTCH1	9	139418481	C	-	126	55	NA	Intron	DEL	0.97
C	3	Inferior Liver	NRIP2	12	2943868	C	G	169	49	p.K94N	Missense_Mutation	SNP	0.98
F	3	RP Peri-aortic LN	NRIP2	12	2943868	C	G	139	71	p.K94N	Missense_Mutation	SNP	0.97
C	3	Inferior Liver	OCSTAMP	20	45170362	G	C	140	66	p.L418V	Missense_Mutation	SNP	0.98
F	3	RP Peri-aortic LN	OCSTAMP	20	45170362	G	C	131	89	p.L418V	Missense_Mutation	SNP	0.97
C	3	Inferior Liver	OR9Q2	11	57958417	G	T	257	51	p.G152V	Missense_Mutation	SNP	0.98
F	3	RP Peri-aortic LN	OR9Q2	11	57958417	G	T	207	90	p.G152V	Missense_Mutation	SNP	0.97
G	3	RP Peri-aortic LN II	OR9Q2	11	57958417	G	T	299	3	p.G152V	Missense_Mutation	SNP	0.01
C	3	Inferior Liver	OSMR	5	38925442	G	C	93	79	p.T727T	Silent	SNP	0.98
F	3	RP Peri-aortic LN	OSMR	5	38925442	G	C	101	59	p.T727T	Silent	SNP	0.97
C	3	Inferior Liver	PNLIP	10	118313297	A	C	183	101	p.H173P	Missense_Mutation	SNP	0.98
F	3	RP Peri-aortic LN	PNLIP	10	118313297	A	C	181	85	p.H173P	Missense_Mutation	SNP	0.97
C	3	Inferior Liver	PRM3	16	11369842	G	A	213	108	NA	5'Flank	SNP	0.98
F	3	RP Peri-aortic LN	PRM3	16	11369842	G	A	252	57	NA	5'Flank	SNP	0.97
B	3	Hilar LN	SIX3	2	45171832	C	T	415	3	p.T311M	Missense_Mutation	SNP	0.01
C	3	Inferior Liver	SIX3	2	45171832	C	T	214	120	p.T311M	Missense_Mutation	SNP	0.98
F	3	RP Peri-aortic LN	SIX3	2	45171832	C	T	294	104	p.T311M	Missense_Mutation	SNP	0.97
C	3	Inferior Liver	SLC16A11	17	6946749	G	A	101	84	p.S52S	Silent	SNP	0.98
F	3	RP Peri-aortic LN	SLC16A11	17	6946749	G	A	102	90	p.S52S	Silent	SNP	0.97
C	3	Inferior Liver	SLC44A2	19	10736961	G	A	165	55	p.G24R	Missense_Mutation	SNP	0.98
F	3	RP Peri-aortic LN	SLC44A2	19	10736961	G	A	119	64	p.G24R	Missense_Mutation	SNP	0.97
B	3	Hilar LN	TBXAS1	7	139636041	G	A	580	3	p.D129N	Missense_Mutation	SNP	0.01
C	3	Inferior Liver	TBXAS1	7	139636041	G	A	309	146	p.D129N	Missense_Mutation	SNP	0.98
F	3	RP Peri-aortic LN	TBXAS1	7	139636041	G	A	364	138	p.D129N	Missense_Mutation	SNP	0.97
C	3	Inferior Liver	TLE3	15	70350514	C	A	86	89	p.P345P	Silent	SNP	0.98
F	3	RP Peri-aortic LN	TLE3	15	70350514	C	A	77	62	p.P345P	Silent	SNP	0.97
C	3	Inferior Liver	TOP1	20	39729937	G	A	88	49	p.E418K	Missense_Mutation	SNP	0.98
F	3	RP Peri-aortic LN	TOP1	20	39729937	G	A	79	30	p.E418K	Missense_Mutation	SNP	0.97
C	3	Inferior Liver	TRIM22	11	5730733	C	A	136	58	p.A451E	Missense_Mutation	SNP	0.98
F	3	RP Peri-aortic LN	TRIM22	11	5730733	C	A	130	30	p.A451E	Missense_Mutation	SNP	0.97
C	3	Inferior Liver	Unknown	18	53331995	C	T	197	64	NA	IGR	SNP	0.98
F	3	RP Peri-aortic LN	Unknown	18	53331995	C	T	120	53	NA	IGR	SNP	0.97
C	3	Inferior Liver	Y_RNA	7	74310231	A	C	129	25	NA	RNA	SNP	0.98
F	3	RP Peri-aortic LN	Y_RNA	7	74310231	A	C	103	59	NA	RNA	SNP	0.97
C	3	Inferior Liver	ZNF234	19	44661443	A	C	40	59	p.E425A	Missense_Mutation	SNP	0.98
F	3	RP Peri-aortic LN	ZNF234	19	44661443	A	C	39	37	p.E425A	Missense_Mutation	SNP	0.97
C	3	Inferior Liver	ZNF276	16	89805562	C	T	87	81	NA	IGR	SNP	0.98
F	3	RP Peri-aortic LN	ZNF276	16	89805562	C	T	51	51	NA	IGR	SNP	0.97
D	4	Inferior Liver II	CACNA1A	19	13318816	T	C	26	7	p.T2279A	Missense_Mutation	SNP	0.73
G	4	RP Peri-aortic LN II	CACNA1A	19	13318816	T	C	15	7	p.T2279A	Missense_Mutation	SNP	0.98
D	4	Inferior Liver II	DOCK1	10	129213495	T	G	81	58	p.V1482G	Missense_Mutation	SNP	0.73
G	4	RP Peri-aortic LN II	DOCK1	10	129213495	T	G	33	86	p.V1482G	Missense_Mutation	SNP	0.98
D	4	Inferior Liver II	ETV6	12	11992224	G	A	78	0	p.R105Q	Missense_Mutation	SNP	0.73
G	4	RP Peri-aortic LN II	ETV6	12	11992224	G	A	49	27	p.R105Q	Missense_Mutation	SNP	0.98
D	4	Inferior Liver II	TPTE2	13	20056624	T	G	102	59	NA	Intron	SNP	0.73
G	4	RP Peri-aortic LN II	TPTE2	13	20056624	T	G	70	47	NA	Intron	SNP	0.98
D	4	Inferior Liver II	TPTE2	13	20056691	T	C	114	68	NA	Intron	SNP	0.73
G	4	RP Peri-aortic LN II	TPTE2	13	20056691	T	C	77	32	NA	Intron	SNP	0.98
B	5	Hilar LN	ANKEF1	20	10026233	T	G	106	19	p.L236L	Silent	SNP	0.53
E	5	Chest Wall Subcutaneous	ANKEF1	20	10026233	T	G	137	14	p.L236L	Silent	SNP	0.65
B	5	Hilar LN	BCL9	1	147092477	G	T	273	51	p.R839L	Missense_Mutation	SNP	0.53
E	5	Chest Wall Subcutaneous	BCL9	1	147092477	G	T	296	48	p.R839L	Missense_Mutation	SNP	0.65
B	5	Hilar LN	COL11A2	6	33135045	G	A	446	0	p.P1391L	Missense_Mutation	SNP	0.53
E	5	Chest Wall Subcutaneous	COL11A2	6	33135045	G	A	467	16	p.P1391L	Missense_Mutation	SNP	0.65
B	5	Hilar LN	CTIF	18	46385890	C	T	351	0	p.T586M	Missense_Mutation	SNP	0.53
E	5	Chest Wall Subcutaneous	CTIF	18	46385890	C	T	358	14	p.T586M	Missense_Mutation	SNP	0.65
B	5	Hilar LN	DCLRE1C	10	14951064	G	C	84	24	p.G474G	Silent	SNP	0.53
E	5	Chest Wall Subcutaneous	DCLRE1C	10	14951064	G	C	129	13	p.G474G	Silent	SNP	0.65
B	5	Hilar LN	FBLN7	2	112942856	G	A	188	28	p.C296Y	Missense_Mutation	SNP	0.53
E	5	Chest Wall Subcutaneous	FBLN7	2	112942856	G	A	266	25	p.C296Y	Missense_Mutation	SNP	0.65
B	5	Hilar LN	FRK	6	116288804	G	C	117	26	p.L237V	Missense_Mutation	SNP	0.53
E	5	Chest Wall Subcutaneous	FRK	6	116288804	G	C	149	11	p.L237V	Missense_Mutation	SNP	0.65
B	5	Hilar LN	HDAC7	12	48183601	G	C	183	52	p.L657V	Missense_Mutation	SNP	0.53
E	5	Chest Wall Subcutaneous	HDAC7	12	48183601	G	C	208	10	p.L657V	Missense_Mutation	SNP	0.65
B	5	Hilar LN	HECTD4	12	112623196	G	A	120	17	p.R2770W	Missense_Mutation	SNP	0.53
E	5	Chest Wall Subcutaneous	HECTD4	12	112623196	G	A	108	10	p.R2770W	Missense_Mutation	SNP	0.65
B	5	Hilar LN	HGSNAT	8	43047522	C	G	120	0	p.I470M	Missense_Mutation	SNP	0.53
E	5	Chest Wall Subcutaneous	HGSNAT	8	43047522	C	G	145	6	p.I470M	Missense_Mutation	SNP	0.65
B	5	Hilar LN	IMPG2	3	100962864	G	C	280	117	p.Q771E	Missense_Mutation	SNP	0.53
E	5	Chest Wall Subcutaneous	IMPG2	3	100962864	G	C	432	80	p.Q771E	Missense_Mutation	SNP	0.65
B	5	Hilar LN	KCNA5	12	5153802	C	G	259	54	p.Y163*	Nonsense_Mutation	SNP	0.53
E	5	Chest Wall Subcutaneous	KCNA5	12	5153802	C	G	327	27	p.Y163*	Nonsense_Mutation	SNP	0.65
B	5	Hilar LN	KIAA0319	6	24583885	A	G	143	68	p.L347S	Missense_Mutation	SNP	0.53
E	5	Chest Wall Subcutaneous	KIAA0319	6	24583885	A	G	263	21	p.L347S	Missense_Mutation	SNP	0.65
B	5	Hilar LN	LAMA4	6	112493956	G	C	278	53	p.L470V	Missense_Mutation	SNP	0.53
E	5	Chest Wall Subcutaneous	LAMA4	6	112493956	G	C	370	29	p.L470V	Missense_Mutation	SNP	0.65
B	5	Hilar LN	LRRIQ3	1	74507397	C	T	64	6	p.E406E	Silent	SNP	0.53
E	5	Chest Wall Subcutaneous	LRRIQ3	1	74507397	C	T	78	5	p.E406E	Silent	SNP	0.65
B	5	Hilar LN	PCDP1	2	120395874	A	G	215	0	p.T672A	Missense_Mutation	SNP	0.53
E	5	Chest Wall Subcutaneous	PCDP1	2	120395874	A	G	218	11	p.T672A	Missense_Mutation	SNP	0.65
B	5	Hilar LN	PKP3	11	394358	G	A	214	53	p.L22L	Silent	SNP	0.53
E	5	Chest Wall Subcutaneous	PKP3	11	394358	G	A	309	34	p.L22L	Silent	SNP	0.65
B	5	Hilar LN	QPRT	16	29706083	G	G	93	13	NA	Intron	DEL	0.53
E	5	Chest Wall Subcutaneous	QPRT	16	29706083	G	G	115	4	NA	Intron	DEL	0.65
B	5	Hilar LN	STX16-NPEF20	57243162	A	C	183	38	p.I124I	Silent	SNP	0.53	
E	5	Chest Wall Subcutaneous	STX16-NPEF20	57243162	A	C	180	14	p.I124I	Silent	SNP	0.65	
B	5	Hilar LN	TACSTD2	1	59042062	G	C	362	155	p.T256R	Missense_Mutation	SNP	0.53
E	5	Chest Wall Subcutaneous	TACSTD2	1	59042062	G	C	429	76	p.T256R	Missense_Mutation	SNP	0.65
B	5	Hilar LN	TOX	8	60031460	G	A	335	0	p.P29P	Silent	SNP	0.53
E	5	Chest Wall Subcutaneous	TOX	8	60031460	G	A	349	12	p.P29P	Silent	SNP	0.65
B	5	Hilar LN	TTL9	20	30510802	C	A	168	28	p.P204T	Missense_Mutation	SNP	0.53
E	5	Chest Wall Subcutaneous	TTL9	20	30510802	C	A	225	5	p.P204T	Missense_Mutation	SNP	0.65
B	5	Hilar LN	UGGT2	13	96519607	T	C	40	12	p.I1182V	Missense_Mutation	SNP	0.53
E	5	Chest Wall Subcutaneous	UGGT2	13	96519607	T	C	99	6	p.I1182V	Missense_Mutation	SNP	0.65
B	5	Hilar LN	Unknown	10	23580066	C	A	40	4	NA	IGR	SNP	0.53
E	5	Chest Wall Subcutaneous	Unknown	10	23580066	C	A	58	2	NA	IGR	SNP	0.65
B	5	Hilar LN	USP31	16	23116813	G	C	113	33	p.V0V	Silent	SNP	0.53
E	5	Chest Wall Subcutaneous	USP31	16	23116813	G	C	179	0	p.V0V	Silent	SNP	0.65
B	5	Hilar LN	ZNF345	19	37368394	G	C	125	12	p.R221P	Missense_Mutation	SNP	0.53
E	5	Chest Wall Subcutaneous	ZNF345	19	37368394	G	C	147	14	p.R221P	Missense_Mutation	SNP	0.65
B	5	Hilar LN	ZNF714	19	21299713	G	C	111	18	p.E81D	Missense_Mutation	SNP	0.53
E	5	Chest Wall Subcutaneous	ZNF714	19	21299713	G	C	146	10	p.E81D	Missense_Mutation	SNP	0.65
B	5	Hilar LN	ZRANB3	2	135982022	TATTCC	-	74	14	p.RN740del	In_Frame_Del	DEL	0.53
E	5	Chest Wall Subcutaneous	ZRANB3	2	135982022	TATTCC	-	104	5	p.RN740del	In_Frame_Del	DEL	0.65
H	6	L. Inf. Frontal Lobe	ACTG1	17	79479308	C	T	392	128	p.D25N	Missense_Mutation	SNP	0.82
H	6	L. Inf. Frontal Lobe	BCAR3	1	94054751	G	A	369	42	p.R238C	Missense_Mutation	SNP	0.82

H	6	L. Inf. Frontal Lobe	CDH20	18	59166598	C	G	204	37	p.G142G	Silent	SNP	0.82
H	6	L. Inf. Frontal Lobe	DDX59	1	200617640	C	A	174	16	p.G508V	Missense_Mutation	SNP	0.82
H	6	L. Inf. Frontal Lobe	DDX59	1	200617641	C	A	170	15	p.G508C	Missense_Mutation	SNP	0.82
H	6	L. Inf. Frontal Lobe	DUS3L	19	5789536	C	T	343	63	p.E194E	Silent	SNP	0.82
H	6	L. Inf. Frontal Lobe	ELFN1	7	1785890	C	G	248	33	p.A553G	Missense_Mutation	SNP	0.82
H	6	L. Inf. Frontal Lobe	FBXL20	17	37439018	C	T	233	56	p.G195G	Silent	SNP	0.82
H	6	L. Inf. Frontal Lobe	FRZB	2	183703196	A	G	196	49	p.P246P	Silent	SNP	0.82
H	6	L. Inf. Frontal Lobe	GFPT2	5	179779380	C	T	314	42	NA	Intron	SNP	0.82
H	6	L. Inf. Frontal Lobe	GRM5	11	88242139	G	A	278	79	p.P1087L	Missense_Mutation	SNP	0.82
H	6	L. Inf. Frontal Lobe	HAVCR2	5	156533774	C	T	143	36	p.G86G	Silent	SNP	0.82
H	6	L. Inf. Frontal Lobe	ITPRIP	10	106075391	G	T	131	32	p.A140D	Missense_Mutation	SNP	0.82
H	6	L. Inf. Frontal Lobe	LCE1A	1	152800271	G	T	128	10	p.G108V	Missense_Mutation	SNP	0.82
H	6	L. Inf. Frontal Lobe	LUC7L	16	249098	C	T	101	11	p.G217E	Missense_Mutation	SNP	0.82
H	6	L. Inf. Frontal Lobe	NDUFV1	11	67379638	G	A	288	14	p.A404T	Missense_Mutation	SNP	0.82
H	6	L. Inf. Frontal Lobe	NIT2	3	100067639	T	A	142	7	NA	Intron	SNP	0.82
H	6	L. Inf. Frontal Lobe	PCNXL2	1	233372601	T	A	158	8	p.E783V	Missense_Mutation	SNP	0.82
H	6	L. Inf. Frontal Lobe	PFN3	5	176827161	C	T	145	50	NA	3'UTR	SNP	0.82
H	6	L. Inf. Frontal Lobe	PIEZO2	18	10760905	T	A	83	13	NA	Intron	SNP	0.82
H	6	L. Inf. Frontal Lobe	RP4-651E10	1	87099987	G	T	59	10	NA	RNA	SNP	0.82
H	6	L. Inf. Frontal Lobe	SLC15A4	12	129299469	G	C	352	37	p.V231V	Silent	SNP	0.82
H	6	L. Inf. Frontal Lobe	TNFRSF10D8	8	23004503	G	A	227	39	p.S151S	Silent	SNP	0.82
H	6	L. Inf. Frontal Lobe	TRAF3IP3	1	209956260	C	T	352	31	NA	IGR	SNP	0.82
H	6	L. Inf. Frontal Lobe	Unknown	2	203055147	C	T	127	13	NA	IGR	SNP	0.82
A	7	Hilar LN II	BMS1	10	43326373	G	A	123	59	p.K1226K	Silent	SNP	0.29
I	7	Medial Temp. Lobe (White Matter)	BMS1	10	43326373	G	A	332	0	p.K1226K	Silent	SNP	0.19
A	7	Hilar LN II	C10orf71	10	50533243	C	T	49	77	p.L885F	Missense_Mutation	SNP	0.29
I	7	Medial Temp. Lobe (White Matter)	C10orf71	10	50533243	C	T	198	0	p.L885F	Missense_Mutation	SNP	0.19
A	7	Hilar LN II	C18orf63	18	71998128	A	G	85	0	p.Q151R	Missense_Mutation	SNP	0.29
I	7	Medial Temp. Lobe (White Matter)	C18orf63	18	71998128	A	G	34	18	p.Q151R	Missense_Mutation	SNP	0.19
A	7	Hilar LN II	CDC42BPA	1	227259976	C	G	139	3	p.K920N	Missense_Mutation	SNP	0.29
H	7	L. Inf. Frontal Lobe	CDC42BPA	1	227259976	C	G	108	8	p.K920N	Missense_Mutation	SNP	0.01
I	7	Medial Temp. Lobe (White Matter)	CDC42BPA	1	227259976	C	G	56	17	p.K920N	Missense_Mutation	SNP	0.19
A	7	Hilar LN II	CENPF	1	214820037	G	A	154	46	p.G2471E	Missense_Mutation	SNP	0.29
I	7	Medial Temp. Lobe (White Matter)	CENPF	1	214820037	G	A	96	0	p.G2471E	Missense_Mutation	SNP	0.19
A	7	Hilar LN II	COPSTA	12	6837444	C	A	201	0	p.H98Q	Missense_Mutation	SNP	0.29
I	7	Medial Temp. Lobe (White Matter)	COPSTA	12	6837444	C	A	194	29	p.H98Q	Missense_Mutation	SNP	0.19
A	7	Hilar LN II	COPSTA	12	6837445	C	A	201	0	p.L99I	Missense_Mutation	SNP	0.29
I	7	Medial Temp. Lobe (White Matter)	COPSTA	12	6837445	C	A	199	28	p.L99I	Missense_Mutation	SNP	0.19
A	7	Hilar LN II	CSAD	12	53567219	C	T	78	68	p.G12G	Silent	SNP	0.29
I	7	Medial Temp. Lobe (White Matter)	CSAD	12	53567219	C	T	238	0	p.G12G	Silent	SNP	0.19
A	7	Hilar LN II	CWC22	2	180830685	T	C	73	30	p.D412G	Missense_Mutation	SNP	0.29
I	7	Medial Temp. Lobe (White Matter)	CWC22	2	180830685	T	C	109	0	p.D412G	Missense_Mutation	SNP	0.19
A	7	Hilar LN II	DCHS1	11	6644071	C	T	275	127	p.G2946R	Missense_Mutation	SNP	0.29
I	7	Medial Temp. Lobe (White Matter)	DCHS1	11	6644071	C	T	674	0	p.G2946R	Missense_Mutation	SNP	0.19
A	7	Hilar LN II	DOCK10	2	225670954	C	T	52	19	p.G1235R	Splice_Site	SNP	0.29
I	7	Medial Temp. Lobe (White Matter)	DOCK10	2	225670954	C	T	53	0	p.G1235R	Splice_Site	SNP	0.19
A	7	Hilar LN II	DZIP3	3	108373110	AAG	-	375	0	p.K718del	In_Frame_Del	DEL	0.29
I	7	Medial Temp. Lobe (White Matter)	DZIP3	3	108373110	AAG	-	218	47	p.K718del	In_Frame_Del	DEL	0.19
A	7	Hilar LN II	FADS3	11	61646204	-	A	89	42	NA	Intron	INS	0.29
I	7	Medial Temp. Lobe (White Matter)	FADS3	11	61646204	-	A	197	0	NA	Intron	INS	0.19
A	7	Hilar LN II	FGR	1	27950216	A	C	82	113	p.I71S	Missense_Mutation	SNP	0.29
I	7	Medial Temp. Lobe (White Matter)	FGR	1	27950216	A	C	290	0	p.I71S	Missense_Mutation	SNP	0.19
A	7	Hilar LN II	FLRT2	14	86089366	C	T	136	0	p.A503V	Missense_Mutation	SNP	0.29
I	7	Medial Temp. Lobe (White Matter)	FLRT2	14	86089366	C	T	107	79	p.A503V	Missense_Mutation	SNP	0.19
A	7	Hilar LN II	FRY	13	32818189	A	G	231	0	p.K2233R	Missense_Mutation	SNP	0.29
I	7	Medial Temp. Lobe (White Matter)	FRY	13	32818189	A	G	90	169	p.K2233R	Missense_Mutation	SNP	0.19
A	7	Hilar LN II	FRY	13	32818190	G	T	235	0	p.K2233N	Missense_Mutation	SNP	0.29
I	7	Medial Temp. Lobe (White Matter)	FRY	13	32818190	G	T	90	169	p.K2233N	Missense_Mutation	SNP	0.19
A	7	Hilar LN II	GDA	9	74862340	C	T	107	0	p.L429F	Missense_Mutation	SNP	0.29
I	7	Medial Temp. Lobe (White Matter)	GDA	9	74862340	C	T	43	15	p.L429F	Missense_Mutation	SNP	0.19
A	7	Hilar LN II	HECW2	2	197183421	C	T	23	13	p.E731E	Silent	SNP	0.29
I	7	Medial Temp. Lobe (White Matter)	HECW2	2	197183421	C	T	59	0	p.E731E	Silent	SNP	0.19
A	7	Hilar LN II	HIVEP2	6	143089635	T	A	130	59	p.L1742L	Silent	SNP	0.29
I	7	Medial Temp. Lobe (White Matter)	HIVEP2	6	143089635	T	A	98	0	p.L1742L	Silent	SNP	0.19
A	7	Hilar LN II	KIF22	16	29811005	A	T	157	0	p.R349S	Missense_Mutation	SNP	0.29
I	7	Medial Temp. Lobe (White Matter)	KIF22	16	29811005	A	T	229	46	p.R349S	Missense_Mutation	SNP	0.19
A	7	Hilar LN II	LINC00293	8	47754995	G	A	124	0	NA	lincRNA	SNP	0.29
I	7	Medial Temp. Lobe (White Matter)	LINC00293	8	47754995	G	A	69	23	NA	lincRNA	SNP	0.19
A	7	Hilar LN II	MAP1A	15	43817637	C	T	112	0	p.S1322S	Silent	SNP	0.29
I	7	Medial Temp. Lobe (White Matter)	MAP1A	15	43817637	C	T	52	117	p.S1322S	Silent	SNP	0.19
A	7	Hilar LN II	MUC12	7	100648170	A	T	355	0	p.T4919S	Missense_Mutation	SNP	0.29
I	7	Medial Temp. Lobe (White Matter)	MUC12	7	100648170	A	T	387	49	p.T4919S	Missense_Mutation	SNP	0.19
A	7	Hilar LN II	NDUFA7	19	8385752	C	T	225	0	p.E30E	Silent	SNP	0.29
I	7	Medial Temp. Lobe (White Matter)	NDUFA7	19	8385752	C	T	314	49	p.E30E	Silent	SNP	0.19
A	7	Hilar LN II	NID1	1	236208939	G	A	153	66	p.S190S	Silent	SNP	0.29
I	7	Medial Temp. Lobe (White Matter)	NID1	1	236208939	G	A	252	0	p.S190S	Silent	SNP	0.19
A	7	Hilar LN II	NUP188	9	131742927	G	A	267	0	p.G438R	Missense_Mutation	SNP	0.29
I	7	Medial Temp. Lobe (White Matter)	NUP188	9	131742927	G	A	131	76	p.G438R	Missense_Mutation	SNP	0.19
A	7	Hilar LN II	OGFR	20	61436359	G	T	117	1	p.A50S	Missense_Mutation	SNP	0.29
I	7	Medial Temp. Lobe (White Matter)	OGFR	20	61436359	G	T	162	84	p.A50S	Missense_Mutation	SNP	0.19
A	7	Hilar LN II	OR52M1	11	4566909	G	T	91	1	p.L163L	Silent	SNP	0.29
I	7	Medial Temp. Lobe (White Matter)	OR52M1	11	4566909	G	T	79	27	p.L163L	Silent	SNP	0.19
A	7	Hilar LN II	PER2	2	239159365	A	G	131	54	p.H1098H	Silent	SNP	0.29
I	7	Medial Temp. Lobe (White Matter)	PER2	2	239159365	A	G	211	1	p.H1098H	Silent	SNP	0.19
A	7	Hilar LN II	PHF20L1	8	133837500	ATC	-	40	0	NA	Intron	DEL	0.29
I	7	Medial Temp. Lobe (White Matter)	PHF20L1	8	133837500	ATC	-	24	6	NA	Intron	DEL	0.19
A	7	Hilar LN II	PSD	10	104173665	A	G	264	0	p.S472P	Missense_Mutation	SNP	0.29
I	7	Medial Temp. Lobe (White Matter)	PSD	10	104173665	A	G	317	80	p.S472P	Missense_Mutation	SNP	0.19
A	7	Hilar LN II	REEP1	2	86459794	G	A	246	90	p.G183G	Silent	SNP	0.29
I	7	Medial Temp. Lobe (White Matter)	REEP1	2	86459794	G	A	540	0	p.G183G	Silent	SNP	0.19
A	7	Hilar LN II	RFX6	6	117245836	T	A	130	42	p.S520S	Silent	SNP	0.29
I	7	Medial Temp. Lobe (White Matter)	RFX6	6	117245836	T	A	77	0	p.S520S	Silent	SNP	0.19
A	7	Hilar LN II	RP11-114H2	15	78207858	G	A	233	0	NA	lincRNA	SNP	0.29
I	7	Medial Temp. Lobe (White Matter)	RP11-114H2	15	78207858	G	A	90	215	NA	lincRNA	SNP	0.19
A	7	Hilar LN II	SEMA6B	19	4544550	G	A	56	0	NA	Intron	SNP	0.29
I	7	Medial Temp. Lobe (White Matter)	SEMA6B	19	4544550	G	A	87	55	NA	Intron	SNP	0.19
A	7	Hilar LN II	SLCO1B1	12	21331856	GTA	-	134	0	p.210_	Splice_Site	DEL	0.29
I	7	Medial Temp. Lobe (White Matter)	SLCO1B1	12	21331856	GTA	-	56	21	p.210_	Splice_Site	DEL	0.19
A	7	Hilar LN II	STEAP1	7	89793812	CTTCTA	-	48	0	p.LL262del	In_Frame_Del	DEL	0.29
I	7	Medial Temp. Lobe (White Matter)	STEAP1	7	89793812	CTTCTA	-	16	10	p.LL262del	In_Frame_Del	DEL	0.19
A	7	Hilar LN II	TMEM8C	9	136380706	C	T	172	46	p.K141K	Silent	SNP	0.29
I	7	Medial Temp. Lobe (White Matter)	TMEM8C	9	136380706	C	T	299	0	p.K141K	Silent	SNP	0.19
A	7	Hilar LN II	TOMM70A	3	100119596	C	G	261	0	p.R66R	Silent	SNP	0.29
I	7	Medial Temp. Lobe (White Matter)	TOMM70A	3	100119596	C	G	417	99	p.R66R	Silent	SNP	0.19
A	7	Hilar LN II	TOMM70A	3	100119607	G	T	249	0	p.Q63K	Missense_Mutation	SNP	0.29
I	7	Medial Temp. Lobe (White Matter)	TOMM70A	3	100119607	G	T	380	92	p.Q63K	Missense_Mutation	SNP	0.19

A	7	Hilar LN II	UBAP2L	1	154207245	G	A	201	63	NA	Intron	SNP	0.29
I	7	Medial Temp. Lobe (White Matter)	UBAP2L	1	154207245	G	A	420	0	NA	Intron	SNP	0.19
A	7	Hilar LN II	Unknown	1	120384039	C	A	286	139	NA	IGR	SNP	0.29
I	7	Medial Temp. Lobe (White Matter)	Unknown	1	120384039	C	A	545	0	NA	IGR	SNP	0.19
A	7	Hilar LN II	ZC3H18	16	88688677	G	A	142	62	p.K516K	Silent	SNP	0.29
I	7	Medial Temp. Lobe (White Matter)	ZC3H18	16	88688677	G	A	417	0	p.K516K	Silent	SNP	0.19
C	8	Inferior Liver	AGAP1	2	237029004	C	G	361	0	p.N761K	Missense_Mutation	SNP	0.34
F	8	RP Peri-aortic LN	AGAP1	2	237029004	C	G	366	32	p.N761K	Missense_Mutation	SNP	0.04
C	8	Inferior Liver	AIM1	6	106968428	G	T	78	14	p.M0I	Missense_Mutation	SNP	0.34
C	8	Inferior Liver	ATP13A4	3	193156854	A	C	211	16	p.D840E	Splice_Site	SNP	0.34
C	8	Inferior Liver	C1QL3	10	16562888	G	T	346	49	p.I59I	Silent	SNP	0.34
C	8	Inferior Liver	EBLN1	10	22498597	T	A	313	21	p.I106F	Missense_Mutation	SNP	0.34
C	8	Inferior Liver	EXOC3L1	16	67222689	C	G	139	48	p.R121P	Missense_Mutation	SNP	0.34
C	8	Inferior Liver	FAM196A	10	128974153	C	T	274	49	p.K169K	Silent	SNP	0.34
C	8	Inferior Liver	FAM219A	9	34405892	T	C	115	0	p.Y44C	Missense_Mutation	SNP	0.34
F	8	RP Peri-aortic LN	FAM219A	9	34405892	T	C	131	10	p.Y44C	Missense_Mutation	SNP	0.04
C	8	Inferior Liver	GNAL	18	11872357	C	G	40	4	p.D297E	Missense_Mutation	SNP	0.34
C	8	Inferior Liver	HECW1	7	43496013	G	A	134	26	p.G873E	Missense_Mutation	SNP	0.34
C	8	Inferior Liver	ITSN2	2	24494728	C	G	85	7	p.E722Q	Missense_Mutation	SNP	0.34
C	8	Inferior Liver	LGALS9C	17	18380160	G	A	198	15	NA	De_novo_Start_OutOfFrame	SNP	0.34
C	8	Inferior Liver	MTMR4	17	56569081	-	CGAGAGAC	111	9	p.-1177fs	Frame_Shift_Ins	INS	0.34
F	8	RP Peri-aortic LN	MTMR4	17	56569081	-	CGAGAGAC	99	4	p.-1177fs	Frame_Shift_Ins	INS	0.04
C	8	Inferior Liver	NASP	1	46079851	A	C	143	15	p.K530N	Missense_Mutation	SNP	0.34
C	8	Inferior Liver	PAF1	19	39880906	G	C	269	16	p.P0R	Missense_Mutation	SNP	0.34
C	8	Inferior Liver	RASA2	3	141308953	TCCC	-	66	7	NA	Intron	DEL	0.34
C	8	Inferior Liver	RCOR2	11	63681580	G	T	353	85	p.S246Y	Missense_Mutation	SNP	0.34
F	8	RP Peri-aortic LN	RCOR2	11	63681580	G	T	484	18	p.S246Y	Missense_Mutation	SNP	0.04
C	8	Inferior Liver	RIT2	18	40695492	G	A	193	25	NA	5'UTR	SNP	0.34
C	8	Inferior Liver	RPL26L1	5	172395536	C	T	232	28	p.Y81Y	Silent	SNP	0.34
F	8	RP Peri-aortic LN	RPL26L1	5	172395536	C	T	237	14	p.Y81Y	Silent	SNP	0.04
C	8	Inferior Liver	SCARF2	22	20791861	G	T	171	45	NA	Intron	SNP	0.34
C	8	Inferior Liver	TCHHL1	1	152057483	C	A	172	20	p.R892M	Missense_Mutation	SNP	0.34
C	8	Inferior Liver	TOP1	20	39708751	-	AGATGATT	118	19	p.-122fs	Frame_Shift_Ins	INS	0.34
F	8	RP Peri-aortic LN	TOP1	20	39708751	-	AGATGATT	65	9	p.-122fs	Frame_Shift_Ins	INS	0.04
C	8	Inferior Liver	UBE3C	7	157000403	G	A	68	11	p.G528D	Missense_Mutation	SNP	0.34
C	8	Inferior Liver	UBE3C	7	157009457	TCCTGCAC	-	81	8	NA	Intron	DEL	0.34
C	8	Inferior Liver	ZNF425	7	148802278	C	G	284	37	p.G229R	Missense_Mutation	SNP	0.34
B	9	Hilar LN	ABCA13	7	48520751	G	A	288	38	p.R4365K	Splice_Site	SNP	0.06
D	9	Inferior Liver II	ABCA13	7	48520751	G	A	449	0	p.R4365K	Splice_Site	SNP	0.11
G	9	RP Peri-aortic LN II	ABCA13	7	48520751	G	A	309	0	p.R4365K	Splice_Site	SNP	0.06
B	9	Hilar LN	ABCC11	16	48242394	C	T	159	19	p.G541E	Missense_Mutation	SNP	0.06
D	9	Inferior Liver II	ABCC11	16	48242394	C	T	223	0	p.G541E	Missense_Mutation	SNP	0.11
G	9	RP Peri-aortic LN II	ABCC11	16	48242394	C	T	179	0	p.G541E	Missense_Mutation	SNP	0.06
B	9	Hilar LN	AC002310.1:16	30569445	C	T	179	0	p.W20*	Nonsense_Mutation	SNP	0.06	
D	9	Inferior Liver II	AC002310.1:16	30569445	C	T	220	24	p.W20*	Nonsense_Mutation	SNP	0.11	
G	9	RP Peri-aortic LN II	AC002310.1:16	30569445	C	T	228	0	p.W20*	Nonsense_Mutation	SNP	0.06	
B	9	Hilar LN	AC006486.9:19	42747347	T	C	262	0	NA	Intron	SNP	0.06	
D	9	Inferior Liver II	AC006486.9:19	42747347	T	C	145	216	NA	Intron	SNP	0.11	
G	9	RP Peri-aortic LN II	AC006486.9:19	42747347	T	C	231	0	NA	Intron	SNP	0.06	
B	9	Hilar LN	AC073343.1:7	6714659	C	G	142	6	NA	Intron	SNP	0.06	
D	9	Inferior Liver II	AC073343.1:7	6714659	C	G	253	0	NA	Intron	SNP	0.11	
G	9	RP Peri-aortic LN II	AC073343.1:7	6714659	C	G	144	0	NA	Intron	SNP	0.06	
B	9	Hilar LN	ACER3	11	76670187	-	T	52	0	NA	Intron	INS	0.06
D	9	Inferior Liver II	ACER3	11	76670187	-	T	94	29	NA	Intron	INS	0.11
G	9	RP Peri-aortic LN II	ACER3	11	76670187	-	T	77	0	NA	Intron	INS	0.06
B	9	Hilar LN	ACP2	11	47259542	G	T	587	0	NA	IGR	SNP	0.06
D	9	Inferior Liver II	ACP2	11	47259542	G	T	460	263	NA	IGR	SNP	0.11
G	9	RP Peri-aortic LN II	ACP2	11	47259542	G	T	660	0	NA	IGR	SNP	0.06
B	9	Hilar LN	ACP2	11	47259558	G	T	581	0	NA	IGR	SNP	0.06
D	9	Inferior Liver II	ACP2	11	47259558	G	T	454	255	NA	IGR	SNP	0.11
G	9	RP Peri-aortic LN II	ACP2	11	47259558	G	T	623	0	NA	IGR	SNP	0.06
B	9	Hilar LN	ACTRT3	3	169482926	T	C	189	0	NA	IGR	SNP	0.06
D	9	Inferior Liver II	ACTRT3	3	169482926	T	C	326	0	NA	IGR	SNP	0.11
G	9	RP Peri-aortic LN II	ACTRT3	3	169482926	T	C	201	19	NA	IGR	SNP	0.06
B	9	Hilar LN	ADAM17	2	9676904	T	C	198	16	p.K95R	Missense_Mutation	SNP	0.06
D	9	Inferior Liver II	ADAM17	2	9676904	T	C	280	0	p.K95R	Missense_Mutation	SNP	0.11
G	9	RP Peri-aortic LN II	ADAM17	2	9676904	T	C	222	0	p.K95R	Missense_Mutation	SNP	0.06
B	9	Hilar LN	ADGB	6	147045367	C	A	144	4	p.A714D	Missense_Mutation	SNP	0.06
D	9	Inferior Liver II	ADGB	6	147045367	C	A	159	0	p.A714D	Missense_Mutation	SNP	0.11
G	9	RP Peri-aortic LN II	ADGB	6	147045367	C	A	99	0	p.A714D	Missense_Mutation	SNP	0.06
B	9	Hilar LN	ADIPO2	12	1882032	G	A	131	5	p.D66N	Missense_Mutation	SNP	0.06
D	9	Inferior Liver II	ADIPO2	12	1882032	G	A	125	0	p.D66N	Missense_Mutation	SNP	0.11
G	9	RP Peri-aortic LN II	ADIPO2	12	1882032	G	A	118	0	p.D66N	Missense_Mutation	SNP	0.06
B	9	Hilar LN	AGRN	1	981446	G	T	517	0	p.C928F	Missense_Mutation	SNP	0.06
D	9	Inferior Liver II	AGRN	1	981446	G	T	521	0	p.C928F	Missense_Mutation	SNP	0.11
G	9	RP Peri-aortic LN II	AGRN	1	981446	G	T	400	38	p.C928F	Missense_Mutation	SNP	0.06
B	9	Hilar LN	ALDH1A2	15	58302865	C	T	148	0	p.G159R	Missense_Mutation	SNP	0.06
D	9	Inferior Liver II	ALDH1A2	15	58302865	C	T	104	69	p.G159R	Missense_Mutation	SNP	0.11
G	9	RP Peri-aortic LN II	ALDH1A2	15	58302865	C	T	113	0	p.G159R	Missense_Mutation	SNP	0.06
B	9	Hilar LN	ARHGAP31	3	119087314	G	A	312	21	p.R100K	Missense_Mutation	SNP	0.06
D	9	Inferior Liver II	ARHGAP31	3	119087314	G	A	311	0	p.R100K	Missense_Mutation	SNP	0.11
G	9	RP Peri-aortic LN II	ARHGAP31	3	119087314	G	A	282	0	p.R100K	Missense_Mutation	SNP	0.06
B	9	Hilar LN	ATG2B	14	96798695	CTTACTGG	-	203	0	p.PVR470fs	Frame_Shift_Del	DEL	0.06
D	9	Inferior Liver II	ATG2B	14	96798695	CTTACTGG	-	168	24	p.PVR470fs	Frame_Shift_Del	DEL	0.11
G	9	RP Peri-aortic LN II	ATG2B	14	96798695	CTTACTGG	-	171	0	p.PVR470fs	Frame_Shift_Del	DEL	0.06
B	9	Hilar LN	ATP5J2-PTC7	99015199	C	G	135	16	NA	IGR	SNP	0.06	
D	9	Inferior Liver II	ATP5J2-PTC7	99015199	C	G	173	0	NA	IGR	SNP	0.11	
G	9	RP Peri-aortic LN II	ATP5J2-PTC7	99015199	C	G	146	0	NA	IGR	SNP	0.06	
B	9	Hilar LN	ATP6V1E2	2	46739251	C	A	92	5	p.L200L	Silent	SNP	0.06
D	9	Inferior Liver II	ATP6V1E2	2	46739251	C	A	129	0	p.L200L	Silent	SNP	0.11
G	9	RP Peri-aortic LN II	ATP6V1E2	2	46739251	C	A	83	0	p.L200L	Silent	SNP	0.06
B	9	Hilar LN	ATP6V1E2	2	46739252	A	C	92	5	p.L200R	Missense_Mutation	SNP	0.06
D	9	Inferior Liver II	ATP6V1E2	2	46739252	A	C	133	0	p.L200R	Missense_Mutation	SNP	0.11
G	9	RP Peri-aortic LN II	ATP6V1E2	2	46739252	A	C	83	0	p.L200R	Missense_Mutation	SNP	0.06
B	9	Hilar LN	B3GNT3	19	17922438	G	A	139	10	p.G209E	Missense_Mutation	SNP	0.06
D	9	Inferior Liver II	B3GNT3	19	17922438	G	A	175	0	p.G209E	Missense_Mutation	SNP	0.11
G	9	RP Peri-aortic LN II	B3GNT3	19	17922438	G	A	140	0	p.G209E	Missense_Mutation	SNP	0.06
B	9	Hilar LN	BACE2	21	42551412	G	A	322	0	NA	Intron	SNP	0.06
D	9	Inferior Liver II	BACE2	21	42551412	G	A	265	45	NA	Intron	SNP	0.11
G	9	RP Peri-aortic LN II	BACE2	21	42551412	G	A	237	0	NA	Intron	SNP	0.06
B	9	Hilar LN	C14orf177	14	99182635	T	A	366	33	p.L36H	Missense_Mutation	SNP	0.06
D	9	Inferior Liver II	C14orf177	14	99182635	T	A	379	0	p.L36H	Missense_Mutation	SNP	0.11
G	9	RP Peri-aortic LN II	C14orf177	14	99182635	T	A	363	1	p.L36H	Missense_Mutation	SNP	0.06
B	9	Hilar LN	C19orf12	19	30192111	G	A	145	11	NA	5'Flank	SNP	0.06
D	9	Inferior Liver II	C19orf12	19	30192111	G	A	209	0	NA	5'Flank	SNP	0.11
G	9	RP Peri-aortic LN II	C19orf12	19	30192111	G	A	127	0	NA	5'Flank	SNP	0.06

B	9	Hilar LN	C7orf10	7	40535993	T	G	179	10	NA	Intron	SNP	0.06
D	9	Inferior Liver II	C7orf10	7	40535993	T	G	231	0	NA	Intron	SNP	0.11
G	9	RP Peri-aortic LN II	C7orf10	7	40535993	T	G	145	0	NA	Intron	SNP	0.06
B	9	Hilar LN	CACNA1A	19	13419310	C	A	33	3	p.W568C	Missense_Mutation	SNP	0.06
D	9	Inferior Liver II	CACNA1A	19	13419310	C	A	67	0	p.W568C	Missense_Mutation	SNP	0.11
G	9	RP Peri-aortic LN II	CACNA1A	19	13419310	C	A	46	0	p.W568C	Missense_Mutation	SNP	0.06
B	9	Hilar LN	CASP4	11	104820288	C	A	236	17	p.V255F	Missense_Mutation	SNP	0.06
D	9	Inferior Liver II	CASP4	11	104820288	C	A	334	0	p.V255F	Missense_Mutation	SNP	0.11
G	9	RP Peri-aortic LN II	CASP4	11	104820288	C	A	240	0	p.V255F	Missense_Mutation	SNP	0.06
B	9	Hilar LN	CASP8AP2	6	90576828	G	A	197	10	NA	RNA	SNP	0.06
D	9	Inferior Liver II	CASP8AP2	6	90576828	G	A	232	0	NA	RNA	SNP	0.11
G	9	RP Peri-aortic LN II	CASP8AP2	6	90576828	G	A	188	0	NA	RNA	SNP	0.06
B	9	Hilar LN	CCDC108	2	219900321	G	T	180	0	p.V141V	Silent	SNP	0.06
D	9	Inferior Liver II	CCDC108	2	219900321	G	T	192	0	p.V141V	Silent	SNP	0.11
G	9	RP Peri-aortic LN II	CCDC108	2	219900321	G	T	138	16	p.V141V	Silent	SNP	0.06
B	9	Hilar LN	CCDC82	11	96106579	C	A	43	0	p.L348L	Silent	SNP	0.06
D	9	Inferior Liver II	CCDC82	11	96106579	C	A	114	0	p.L348L	Silent	SNP	0.11
G	9	RP Peri-aortic LN II	CCDC82	11	96106579	C	A	68	11	p.L348L	Silent	SNP	0.06
B	9	Hilar LN	CCDC90B	11	82977012	T	-	48	0	p.T202fs	Frame_Shift_Del	DEL	0.06
D	9	Inferior Liver II	CCDC90B	11	82977012	T	-	106	0	p.T202fs	Frame_Shift_Del	DEL	0.11
G	9	RP Peri-aortic LN II	CCDC90B	11	82977012	T	-	47	17	p.T202fs	Frame_Shift_Del	DEL	0.06
B	9	Hilar LN	CD72	9	35617227	G	T	135	0	p.P70T	Missense_Mutation	SNP	0.06
D	9	Inferior Liver II	CD72	9	35617227	G	T	118	52	p.P70T	Missense_Mutation	SNP	0.11
G	9	RP Peri-aortic LN II	CD72	9	35617227	G	T	204	0	p.P70T	Missense_Mutation	SNP	0.06
B	9	Hilar LN	CDKL1	14	50796850	T	C	131	0	NA	IGR	SNP	0.06
D	9	Inferior Liver II	CDKL1	14	50796850	T	C	120	19	NA	IGR	SNP	0.11
G	9	RP Peri-aortic LN II	CDKL1	14	50796850	T	C	90	0	NA	IGR	SNP	0.06
B	9	Hilar LN	CDKL1	14	50863781	GCCGAGTC-	-	105	8	NA	Intron	DEL	0.06
D	9	Inferior Liver II	CDKL1	14	50863781	GCCGAGTC-	-	100	0	NA	Intron	DEL	0.11
G	9	RP Peri-aortic LN II	CDKL1	14	50863781	GCCGAGTC-	-	81	0	NA	Intron	DEL	0.06
B	9	Hilar LN	CHRNA2	2	233409518	GC	-	398	0	p.G429fs	Frame_Shift_Del	DEL	0.06
D	9	Inferior Liver II	CHRNA2	2	233409518	GC	-	561	0	p.G429fs	Frame_Shift_Del	DEL	0.11
G	9	RP Peri-aortic LN II	CHRNA2	2	233409518	GC	-	320	37	p.G429fs	Frame_Shift_Del	DEL	0.06
B	9	Hilar LN	CNTNAP4	16	76523696	C	A	183	9	p.L666I	Missense_Mutation	SNP	0.06
D	9	Inferior Liver II	CNTNAP4	16	76523696	C	A	212	0	p.L666I	Missense_Mutation	SNP	0.11
G	9	RP Peri-aortic LN II	CNTNAP4	16	76523696	C	A	152	0	p.L666I	Missense_Mutation	SNP	0.06
B	9	Hilar LN	COL5A2	2	189929325	C	T	376	1	p.G558G	Silent	SNP	0.06
D	9	Inferior Liver II	COL5A2	2	189929325	C	T	397	0	p.G558G	Silent	SNP	0.11
G	9	RP Peri-aortic LN II	COL5A2	2	189929325	C	T	301	114	p.G558G	Silent	SNP	0.06
B	9	Hilar LN	CREBBP	16	3788671	C	T	275	0	p.R1428H	Missense_Mutation	SNP	0.06
D	9	Inferior Liver II	CREBBP	16	3788671	C	T	256	28	p.R1428H	Missense_Mutation	SNP	0.11
G	9	RP Peri-aortic LN II	CREBBP	16	3788671	C	T	315	0	p.R1428H	Missense_Mutation	SNP	0.06
B	9	Hilar LN	CSF3R	1	36937062	G	-	557	0	p.P419fs	Frame_Shift_Del	DEL	0.06
D	9	Inferior Liver II	CSF3R	1	36937062	G	-	665	81	p.P419fs	Frame_Shift_Del	DEL	0.11
G	9	RP Peri-aortic LN II	CSF3R	1	36937062	G	-	636	0	p.P419fs	Frame_Shift_Del	DEL	0.06
B	9	Hilar LN	CSTF3	11	33129549	T	A	36	0	NA	Intron	SNP	0.06
D	9	Inferior Liver II	CSTF3	11	33129549	T	A	80	0	NA	Intron	SNP	0.11
G	9	RP Peri-aortic LN II	CSTF3	11	33129549	T	A	51	4	NA	Intron	SNP	0.06
B	9	Hilar LN	CUTA	6	33385350	C	A	331	0	p.P55P	Silent	SNP	0.06
D	9	Inferior Liver II	CUTA	6	33385350	C	A	402	88	p.P55P	Silent	SNP	0.11
G	9	RP Peri-aortic LN II	CUTA	6	33385350	C	A	338	0	p.P55P	Silent	SNP	0.06
B	9	Hilar LN	DENND4C	9	19346556	A	T	214	0	p.G978G	Silent	SNP	0.06
D	9	Inferior Liver II	DENND4C	9	19346556	A	T	236	66	p.G978G	Silent	SNP	0.11
G	9	RP Peri-aortic LN II	DENND4C	9	19346556	A	T	264	0	p.G978G	Silent	SNP	0.06
B	9	Hilar LN	DHX57	2	39090553	C	T	169	0	p.V111V	Silent	SNP	0.06
D	9	Inferior Liver II	DHX57	2	39090553	C	T	206	19	p.V111V	Silent	SNP	0.11
G	9	RP Peri-aortic LN II	DHX57	2	39090553	C	T	150	0	p.V111V	Silent	SNP	0.06
B	9	Hilar LN	DIDO1	20	61511915	G	C	340	18	p.A1798G	Missense_Mutation	SNP	0.06
D	9	Inferior Liver II	DIDO1	20	61511915	G	C	304	0	p.A1798G	Missense_Mutation	SNP	0.11
G	9	RP Peri-aortic LN II	DIDO1	20	61511915	G	C	272	0	p.A1798G	Missense_Mutation	SNP	0.06
B	9	Hilar LN	DNAH14	1	225268153	G	A	57	0	p.G881R	Missense_Mutation	SNP	0.06
D	9	Inferior Liver II	DNAH14	1	225268153	G	A	107	5	p.G881R	Missense_Mutation	SNP	0.11
G	9	RP Peri-aortic LN II	DNAH14	1	225268153	G	A	86	0	p.G881R	Missense_Mutation	SNP	0.06
B	9	Hilar LN	DNAH14	1	225465179	G	A	142	7	NA	Intron	SNP	0.06
D	9	Inferior Liver II	DNAH14	1	225465179	G	A	237	0	NA	Intron	SNP	0.11
G	9	RP Peri-aortic LN II	DNAH14	1	225465179	G	A	169	0	NA	Intron	SNP	0.06
B	9	Hilar LN	DNM1	9	131002043	G	C	100	0	p.K510N	Missense_Mutation	SNP	0.06
D	9	Inferior Liver II	DNM1	9	131002043	G	C	123	0	p.K510N	Missense_Mutation	SNP	0.11
G	9	RP Peri-aortic LN II	DNM1	9	131002043	G	C	76	25	p.K510N	Missense_Mutation	SNP	0.06
B	9	Hilar LN	DOCK8	9	304662	G	C	366	10	p.T162T	Silent	SNP	0.06
D	9	Inferior Liver II	DOCK8	9	304662	G	C	591	0	p.T162T	Silent	SNP	0.11
G	9	RP Peri-aortic LN II	DOCK8	9	304662	G	C	499	0	p.T162T	Silent	SNP	0.06
B	9	Hilar LN	DVL2	17	7133144	C	T	102	0	p.E213E	Silent	SNP	0.06
D	9	Inferior Liver II	DVL2	17	7133144	C	T	67	51	p.E213E	Silent	SNP	0.11
G	9	RP Peri-aortic LN II	DVL2	17	7133144	C	T	74	0	p.E213E	Silent	SNP	0.06
B	9	Hilar LN	DYM	18	46904998	C	T	115	0	NA	5'UTR	SNP	0.06
D	9	Inferior Liver II	DYM	18	46904998	C	T	200	22	NA	5'UTR	SNP	0.11
G	9	RP Peri-aortic LN II	DYM	18	46904998	C	T	130	0	NA	5'UTR	SNP	0.06
B	9	Hilar LN	DZIP3	3	108409662	G	A	131	6	p.G1182E	Missense_Mutation	SNP	0.06
D	9	Inferior Liver II	DZIP3	3	108409662	G	A	151	0	p.G1182E	Missense_Mutation	SNP	0.11
G	9	RP Peri-aortic LN II	DZIP3	3	108409662	G	A	132	0	p.G1182E	Missense_Mutation	SNP	0.06
B	9	Hilar LN	EFCAB4A	11	830401	G	A	170	0	NA	Intron	SNP	0.06
D	9	Inferior Liver II	EFCAB4A	11	830401	G	A	273	40	NA	Intron	SNP	0.11
G	9	RP Peri-aortic LN II	EFCAB4A	11	830401	G	A	194	0	NA	Intron	SNP	0.06
B	9	Hilar LN	EGFLAM	5	38462974	A	C	75	0	NA	Intron	SNP	0.06
D	9	Inferior Liver II	EGFLAM	5	38462974	A	C	77	0	NA	Intron	SNP	0.11
G	9	RP Peri-aortic LN II	EGFLAM	5	38462974	A	C	54	7	NA	Intron	SNP	0.06
B	9	Hilar LN	ELMO2	20	45016069	C	T	277	0	p.E145K	Missense_Mutation	SNP	0.06
D	9	Inferior Liver II	ELMO2	20	45016069	C	T	164	64	p.E145K	Missense_Mutation	SNP	0.11
G	9	RP Peri-aortic LN II	ELMO2	20	45016069	C	T	251	0	p.E145K	Missense_Mutation	SNP	0.06
B	9	Hilar LN	FAM71E1	19	50979143	C	T	141	0	p.G103S	Missense_Mutation	SNP	0.06
D	9	Inferior Liver II	FAM71E1	19	50979143	C	T	170	0	p.G103S	Missense_Mutation	SNP	0.11
G	9	RP Peri-aortic LN II	FAM71E1	19	50979143	C	T	101	12	p.G103S	Missense_Mutation	SNP	0.06
B	9	Hilar LN	FAT3	11	92600035	G	A	309	0	p.T3929T	Silent	SNP	0.06
D	9	Inferior Liver II	FAT3	11	92600035	G	A	311	30	p.T3929T	Silent	SNP	0.11
G	9	RP Peri-aortic LN II	FAT3	11	92600035	G	A	359	0	p.T3929T	Silent	SNP	0.06
B	9	Hilar LN	FER1L6	8	125047586	C	T	241	11	p.S785S	Silent	SNP	0.06
D	9	Inferior Liver II	FER1L6	8	125047586	C	T	306	0	p.S785S	Silent	SNP	0.11
G	9	RP Peri-aortic LN II	FER1L6	8	125047586	C	T	251	0	p.S785S	Silent	SNP	0.06
B	9	Hilar LN	FGFR1	8	38271538	G	T	547	0	p.Y730*	Nonsense_Mutation	SNP	0.06
D	9	Inferior Liver II	FGFR1	8	38271538	G	T	763	0	p.Y730*	Nonsense_Mutation	SNP	0.11
G	9	RP Peri-aortic LN II	FGFR1	8	38271538	G	T	445	158	p.Y730*	Nonsense_Mutation	SNP	0.06
B	9	Hilar LN	FKBP1C	6	63921594	A	C	526	0	p.K45Q	Missense_Mutation	SNP	0.06
D	9	Inferior Liver II	FKBP1C	6	63921594	A	C	500	53	p.K45Q	Missense_Mutation	SNP	0.11
G	9	RP Peri-aortic LN II	FKBP1C	6	63921594	A	C	509	0	p.K45Q	Missense_Mutation	SNP	0.06
B	9	Hilar LN	FKBP1C	6	63921616	G	T	550	0	p.G52V	Missense_Mutation	SNP	0.06

D	9	Inferior Liver II	FKBP1C	6	63921616	G	T	513	52	p.G52V	Missense_Mutation	SNP	0.11
G	9	RP Peri-aortic LN II	FKBP1C	6	63921616	G	T	533	0	p.G52V	Missense_Mutation	SNP	0.06
B	9	Hilar LN	FRS3	6	41739127	G	C	99	0	p.P237A	Missense_Mutation	SNP	0.06
D	9	Inferior Liver II	FRS3	6	41739127	G	C	128	0	p.P237A	Missense_Mutation	SNP	0.11
G	9	RP Peri-aortic LN II	FRS3	6	41739127	G	C	104	9	p.P237A	Missense_Mutation	SNP	0.06
B	9	Hilar LN	GAS1	9	89561443	C	A	115	0	p.A84A	Silent	SNP	0.06
D	9	Inferior Liver II	GAS1	9	89561443	C	A	179	0	p.A84A	Silent	SNP	0.11
G	9	RP Peri-aortic LN II	GAS1	9	89561443	C	A	129	18	p.A84A	Silent	SNP	0.06
B	9	Hilar LN	GCK	7	44198667	C	A	338	0	NA	Intron	SNP	0.06
D	9	Inferior Liver II	GCK	7	44198667	C	A	319	104	NA	Intron	SNP	0.11
G	9	RP Peri-aortic LN II	GCK	7	44198667	C	A	361	0	NA	Intron	SNP	0.06
B	9	Hilar LN	GCNT2	6	10556698	TAGTGTAA	-	261	0	NA	Intron	DEL	0.06
D	9	Inferior Liver II	GCNT2	6	10556698	TAGTGTAA	-	263	78	NA	Intron	DEL	0.11
G	9	RP Peri-aortic LN II	GCNT2	6	10556698	TAGTGTAA	-	197	0	NA	Intron	DEL	0.06
B	9	Hilar LN	GCNT3	15	59911455	C	T	200	0	p.R340W	Missense_Mutation	SNP	0.06
D	9	Inferior Liver II	GCNT3	15	59911455	C	T	85	84	p.R340W	Missense_Mutation	SNP	0.11
G	9	RP Peri-aortic LN II	GCNT3	15	59911455	C	T	168	0	p.R340W	Missense_Mutation	SNP	0.06
B	9	Hilar LN	GDF7	2	20871169	C	A	188	5	p.A446D	Missense_Mutation	SNP	0.06
D	9	Inferior Liver II	GDF7	2	20871169	C	A	191	1	p.A446D	Missense_Mutation	SNP	0.11
G	9	RP Peri-aortic LN II	GDF7	2	20871169	C	A	199	0	p.A446D	Missense_Mutation	SNP	0.06
B	9	Hilar LN	GIMAP6	7	150325338	G	A	222	12	p.I116I	Silent	SNP	0.06
D	9	Inferior Liver II	GIMAP6	7	150325338	G	A	259	0	p.I116I	Silent	SNP	0.11
G	9	RP Peri-aortic LN II	GIMAP6	7	150325338	G	A	194	1	p.I116I	Silent	SNP	0.06
B	9	Hilar LN	GK2	4	80328219	A	G	194	16	p.I0T	Missense_Mutation	SNP	0.06
D	9	Inferior Liver II	GK2	4	80328219	A	G	178	0	p.I0T	Missense_Mutation	SNP	0.11
G	9	RP Peri-aortic LN II	GK2	4	80328219	A	G	132	0	p.I0T	Missense_Mutation	SNP	0.06
B	9	Hilar LN	GLRA3	4	175649754	G	T	181	18	p.S121S	Silent	SNP	0.06
D	9	Inferior Liver II	GLRA3	4	175649754	G	T	180	0	p.S121S	Silent	SNP	0.11
G	9	RP Peri-aortic LN II	GLRA3	4	175649754	G	T	144	0	p.S121S	Silent	SNP	0.06
B	9	Hilar LN	GNPTAB	12	102155369	C	A	238	17	p.R963L	Missense_Mutation	SNP	0.06
D	9	Inferior Liver II	GNPTAB	12	102155369	C	A	407	1	p.R963L	Missense_Mutation	SNP	0.11
G	9	RP Peri-aortic LN II	GNPTAB	12	102155369	C	A	236	0	p.R963L	Missense_Mutation	SNP	0.06
B	9	Hilar LN	GPC2	7	99768881	C	T	170	0	NA	Intron	SNP	0.06
D	9	Inferior Liver II	GPC2	7	99768881	C	T	213	0	NA	Intron	SNP	0.11
G	9	RP Peri-aortic LN II	GPC2	7	99768881	C	T	199	13	NA	Intron	SNP	0.06
B	9	Hilar LN	GPR144	9	127214391	C	T	49	0	p.P26P	Silent	SNP	0.06
D	9	Inferior Liver II	GPR144	9	127214391	C	T	73	33	p.P26P	Silent	SNP	0.11
G	9	RP Peri-aortic LN II	GPR144	9	127214391	C	T	69	0	p.P26P	Silent	SNP	0.06
B	9	Hilar LN	GREB1L	18	19079731	G	A	245	0	p.D1145N	Missense_Mutation	SNP	0.06
D	9	Inferior Liver II	GREB1L	18	19079731	G	A	253	0	p.D1145N	Missense_Mutation	SNP	0.11
G	9	RP Peri-aortic LN II	GREB1L	18	19079731	G	A	291	27	p.D1145N	Missense_Mutation	SNP	0.06
B	9	Hilar LN	GREB1L	18	19080582	G	C	141	0	p.D1351H	Missense_Mutation	SNP	0.06
D	9	Inferior Liver II	GREB1L	18	19080582	G	C	158	0	p.D1351H	Missense_Mutation	SNP	0.11
G	9	RP Peri-aortic LN II	GREB1L	18	19080582	G	C	141	17	p.D1351H	Missense_Mutation	SNP	0.06
B	9	Hilar LN	GRINA	8	145065673	C	T	65	0	p.Y94Y	Silent	SNP	0.06
D	9	Inferior Liver II	GRINA	8	145065673	C	T	104	10	p.Y94Y	Silent	SNP	0.11
G	9	RP Peri-aortic LN II	GRINA	8	145065673	C	T	77	0	p.Y94Y	Silent	SNP	0.06
B	9	Hilar LN	GSTA1	6	52661067	C	T	254	12	p.G62E	Missense_Mutation	SNP	0.06
D	9	Inferior Liver II	GSTA1	6	52661067	C	T	347	0	p.G62E	Missense_Mutation	SNP	0.11
G	9	RP Peri-aortic LN II	GSTA1	6	52661067	C	T	237	0	p.G62E	Missense_Mutation	SNP	0.06
B	9	Hilar LN	HERC1	15	63953194	G	T	114	0	p.G3067G	Silent	SNP	0.06
D	9	Inferior Liver II	HERC1	15	63953194	G	T	129	21	p.G3067G	Silent	SNP	0.11
G	9	RP Peri-aortic LN II	HERC1	15	63953194	G	T	88	0	p.G3067G	Silent	SNP	0.06
B	9	Hilar LN	HIST1H4L	6	27841084	C	T	319	1	p.D69N	Missense_Mutation	SNP	0.06
D	9	Inferior Liver II	HIST1H4L	6	27841084	C	T	433	62	p.D69N	Missense_Mutation	SNP	0.11
G	9	RP Peri-aortic LN II	HIST1H4L	6	27841084	C	T	334	0	p.D69N	Missense_Mutation	SNP	0.06
B	9	Hilar LN	HMCN1	1	186121934	T	A	527	0	p.S4983S	Silent	SNP	0.06
D	9	Inferior Liver II	HMCN1	1	186121934	T	A	781	74	p.S4983S	Silent	SNP	0.11
G	9	RP Peri-aortic LN II	HMCN1	1	186121934	T	A	623	0	p.S4983S	Silent	SNP	0.06
B	9	Hilar LN	HNRNPUL2-11	62458807	C	G	377	29	NA	3'UTR	SNP	0.06	
D	9	Inferior Liver II	HNRNPUL2-11	62458807	C	G	470	0	NA	3'UTR	SNP	0.11	
G	9	RP Peri-aortic LN II	HNRNPUL2-11	62458807	C	G	399	0	NA	3'UTR	SNP	0.06	
B	9	Hilar LN	HS3ST4	16	26147134	G	T	217	13	p.E312D	Missense_Mutation	SNP	0.06
D	9	Inferior Liver II	HS3ST4	16	26147134	G	T	261	0	p.E312D	Missense_Mutation	SNP	0.11
G	9	RP Peri-aortic LN II	HS3ST4	16	26147134	G	T	274	0	p.E312D	Missense_Mutation	SNP	0.06
B	9	Hilar LN	HSP90AA4P 4	190396283	C	G	184	9	NA	RNA	SNP	0.06	
D	9	Inferior Liver II	HSP90AA4P 4	190396283	C	G	175	0	NA	RNA	SNP	0.11	
G	9	RP Peri-aortic LN II	HSP90AA4P 4	190396283	C	G	173	0	NA	RNA	SNP	0.06	
B	9	Hilar LN	HTR3E	3	183819289	T	A	245	0	p.L84H	Missense_Mutation	SNP	0.06
D	9	Inferior Liver II	HTR3E	3	183819289	T	A	340	0	p.L84H	Missense_Mutation	SNP	0.11
G	9	RP Peri-aortic LN II	HTR3E	3	183819289	T	A	177	59	p.L84H	Missense_Mutation	SNP	0.06
B	9	Hilar LN	ICAM3	19	10446404	G	T	377	31	p.P198T	Missense_Mutation	SNP	0.06
D	9	Inferior Liver II	ICAM3	19	10446404	G	T	573	0	p.P198T	Missense_Mutation	SNP	0.11
G	9	RP Peri-aortic LN II	ICAM3	19	10446404	G	T	418	0	p.P198T	Missense_Mutation	SNP	0.06
B	9	Hilar LN	IGF2R	6	160461606	G	A	91	10	p.G444R	Missense_Mutation	SNP	0.06
D	9	Inferior Liver II	IGF2R	6	160461606	G	A	111	0	p.G444R	Missense_Mutation	SNP	0.11
G	9	RP Peri-aortic LN II	IGF2R	6	160461606	G	A	108	0	p.G444R	Missense_Mutation	SNP	0.06
B	9	Hilar LN	IGHV1OR21 21	10863039	T	G	239	13	NA	RNA	SNP	0.06	
D	9	Inferior Liver II	IGHV1OR21 21	10863039	T	G	151	0	NA	RNA	SNP	0.11	
G	9	RP Peri-aortic LN II	IGHV1OR21 21	10863039	T	G	172	0	NA	RNA	SNP	0.06	
B	9	Hilar LN	IL26	12	68619475	G	C	188	0	p.A21G	Missense_Mutation	SNP	0.06
D	9	Inferior Liver II	IL26	12	68619475	G	C	198	0	p.A21G	Missense_Mutation	SNP	0.11
G	9	RP Peri-aortic LN II	IL26	12	68619475	G	C	119	35	p.A21G	Missense_Mutation	SNP	0.06
B	9	Hilar LN	IQGAP3	1	156534432	C	A	222	0	p.V138L	Missense_Mutation	SNP	0.06
D	9	Inferior Liver II	IQGAP3	1	156534432	C	A	403	0	p.V138L	Missense_Mutation	SNP	0.11
G	9	RP Peri-aortic LN II	IQGAP3	1	156534432	C	A	264	62	p.V138L	Missense_Mutation	SNP	0.06
B	9	Hilar LN	ITGAL	16	30507880	G	T	122	0	p.V609L	Missense_Mutation	SNP	0.06
D	9	Inferior Liver II	ITGAL	16	30507880	G	T	183	0	p.V609L	Missense_Mutation	SNP	0.11
G	9	RP Peri-aortic LN II	ITGAL	16	30507880	G	T	151	14	p.V609L	Missense_Mutation	SNP	0.06
B	9	Hilar LN	IVL	1	152883965	A	T	283	21	p.E564D	Missense_Mutation	SNP	0.06
D	9	Inferior Liver II	IVL	1	152883965	A	T	398	0	p.E564D	Missense_Mutation	SNP	0.11
G	9	RP Peri-aortic LN II	IVL	1	152883965	A	T	340	0	p.E564D	Missense_Mutation	SNP	0.06
B	9	Hilar LN	JMJ.D7-PLA2	15	42127206	C	A	217	14	p.T86N	Missense_Mutation	SNP	0.06
D	9	Inferior Liver II	JMJ.D7-PLA2	15	42127206	C	A	289	0	p.T86N	Missense_Mutation	SNP	0.11
G	9	RP Peri-aortic LN II	JMJ.D7-PLA2	15	42127206	C	A	187	0	p.T86N	Missense_Mutation	SNP	0.06
B	9	Hilar LN	KCNJ14	19	48965357	C	A	285	9	p.P126T	Missense_Mutation	SNP	0.06
D	9	Inferior Liver II	KCNJ14	19	48965357	C	A	300	0	p.P126T	Missense_Mutation	SNP	0.11
G	9	RP Peri-aortic LN II	KCNJ14	19	48965357	C	A	303	0	p.P126T	Missense_Mutation	SNP	0.06
B	9	Hilar LN	KCNJ2	17	68172337	A	T	299	0	p.E386V	Missense_Mutation	SNP	0.06
D	9	Inferior Liver II	KCNJ2	17	68172337	A	T	151	113	p.E386V	Missense_Mutation	SNP	0.11
G	9	RP Peri-aortic LN II	KCNJ2	17	68172337	A	T	225	0	p.E386V	Missense_Mutation	SNP	0.06
B	9	Hilar LN	KCTD9	8	25293776	G	A	222	0	p.P213L	Missense_Mutation	SNP	0.06
D	9	Inferior Liver II	KCTD9	8	25293776	G	A	171	27	p.P213L	Missense_Mutation	SNP	0.11
G	9	RP Peri-aortic LN II	KCTD9	8	25293776	G	A	166	0	p.P213L	Missense_Mutation	SNP	0.06
B	9	Hilar LN	KDEL.R2	7	6502776	G	C	267	0	p.A212G	Missense_Mutation	SNP	0.06
D	9	Inferior Liver II	KDEL.R2	7	6502776	G	C	286	47	p.A212G	Missense_Mutation	SNP	0.11

G	9	RP Peri-aortic LN II	KDEL2	7	6502776	G	C	207	0	p.A212G	Missense_Mutation	SNP	0.06
B	9	Hilar LN	KIAA0391	14	35778081	-	T	47	0	NA	Intron	INS	0.06
D	9	Inferior Liver II	KIAA0391	14	35778081	-	T	58	0	NA	Intron	INS	0.11
G	9	RP Peri-aortic LN II	KIAA0391	14	35778081	-	T	20	23	NA	Intron	INS	0.06
B	9	Hilar LN	KIAA1683	19	18375264	T	G	229	0	p.K821T	Missense_Mutation	SNP	0.06
D	9	Inferior Liver II	KIAA1683	19	18375264	T	G	246	0	p.K821T	Missense_Mutation	SNP	0.11
G	9	RP Peri-aortic LN II	KIAA1683	19	18375264	T	G	208	20	p.K821T	Missense_Mutation	SNP	0.06
B	9	Hilar LN	KLHDC7A	1	18808916	G	A	228	17	p.E481K	Missense_Mutation	SNP	0.06
D	9	Inferior Liver II	KLHDC7A	1	18808916	G	A	249	0	p.E481K	Missense_Mutation	SNP	0.11
G	9	RP Peri-aortic LN II	KLHDC7A	1	18808916	G	A	181	0	p.E481K	Missense_Mutation	SNP	0.06
B	9	Hilar LN	KLHDC8B	3	49215155	G	A	152	0	NA	IGR	SNP	0.06
D	9	Inferior Liver II	KLHDC8B	3	49215155	G	A	86	53	NA	IGR	SNP	0.11
G	9	RP Peri-aortic LN II	KLHDC8B	3	49215155	G	A	133	0	NA	IGR	SNP	0.06
B	9	Hilar LN	KRT84	12	52777553	G	A	196	0	p.L192L	Silent	SNP	0.06
D	9	Inferior Liver II	KRT84	12	52777553	G	A	156	25	p.L192L	Silent	SNP	0.11
G	9	RP Peri-aortic LN II	KRT84	12	52777553	G	A	188	0	p.L192L	Silent	SNP	0.06
B	9	Hilar LN	LAMC3	9	133967084	C	T	398	0	p.F1546F	Silent	SNP	0.06
D	9	Inferior Liver II	LAMC3	9	133967084	C	T	486	174	p.F1546F	Silent	SNP	0.11
G	9	RP Peri-aortic LN II	LAMC3	9	133967084	C	T	570	0	p.F1546F	Silent	SNP	0.06
B	9	Hilar LN	LEPR	1	66067065	C	T	87	4	NA	Intron	SNP	0.06
D	9	Inferior Liver II	LEPR	1	66067065	C	T	159	0	NA	Intron	SNP	0.11
G	9	RP Peri-aortic LN II	LEPR	1	66067065	C	T	93	0	NA	Intron	SNP	0.06
B	9	Hilar LN	LRP1	12	57595635	G	C	228	18	p.C3514S	Missense_Mutation	SNP	0.06
D	9	Inferior Liver II	LRP1	12	57595635	G	C	213	0	p.C3514S	Missense_Mutation	SNP	0.11
G	9	RP Peri-aortic LN II	LRP1	12	57595635	G	C	317	0	p.C3514S	Missense_Mutation	SNP	0.06
B	9	Hilar LN	LRRFIP1	2	238601128	G	A	138	4	NA	Intron	SNP	0.06
D	9	Inferior Liver II	LRRFIP1	2	238601128	G	A	174	0	NA	Intron	SNP	0.11
G	9	RP Peri-aortic LN II	LRRFIP1	2	238601128	G	A	178	0	NA	Intron	SNP	0.06
B	9	Hilar LN	MAST1	19	12976004	G	T	99	7	NA	Intron	SNP	0.06
D	9	Inferior Liver II	MAST1	19	12976004	G	T	124	0	NA	Intron	SNP	0.11
G	9	RP Peri-aortic LN II	MAST1	19	12976004	G	T	86	0	NA	Intron	SNP	0.06
B	9	Hilar LN	MFS12	19	3557163	G	T	356	21	p.A80D	Missense_Mutation	SNP	0.06
D	9	Inferior Liver II	MFS12	19	3557163	G	T	485	0	p.A80D	Missense_Mutation	SNP	0.11
G	9	RP Peri-aortic LN II	MFS12	19	3557163	G	T	402	0	p.A80D	Missense_Mutation	SNP	0.06
B	9	Hilar LN	MROH5	8	142488855	T	C	112	0	NA	RNA	SNP	0.06
D	9	Inferior Liver II	MROH5	8	142488855	T	C	142	0	NA	RNA	SNP	0.11
G	9	RP Peri-aortic LN II	MROH5	8	142488855	T	C	123	13	NA	RNA	SNP	0.06
B	9	Hilar LN	MROH5	8	142500311	C	A	178	0	NA	RNA	SNP	0.06
D	9	Inferior Liver II	MROH5	8	142500311	C	A	226	0	NA	RNA	SNP	0.11
G	9	RP Peri-aortic LN II	MROH5	8	142500311	C	A	197	47	NA	RNA	SNP	0.06
B	9	Hilar LN	MUC22	6	30996805	T	C	490	0	p.S1199S	Silent	SNP	0.06
D	9	Inferior Liver II	MUC22	6	30996805	T	C	611	0	p.S1199S	Silent	SNP	0.11
G	9	RP Peri-aortic LN II	MUC22	6	30996805	T	C	389	133	p.S1199S	Silent	SNP	0.06
B	9	Hilar LN	MUC6	11	1030700	C	G	191	0	p.Q255H	Missense_Mutation	SNP	0.06
D	9	Inferior Liver II	MUC6	11	1030700	C	G	283	0	p.Q255H	Missense_Mutation	SNP	0.11
G	9	RP Peri-aortic LN II	MUC6	11	1030700	C	G	233	18	p.Q255H	Missense_Mutation	SNP	0.06
B	9	Hilar LN	MYH2	17	10438451	C	T	362	0	NA	Intron	SNP	0.06
D	9	Inferior Liver II	MYH2	17	10438451	C	T	311	0	NA	Intron	SNP	0.11
G	9	RP Peri-aortic LN II	MYH2	17	10438451	C	T	162	104	NA	Intron	SNP	0.06
I	9	Medial Temp. Lobe (White Matter)	MYH2	17	10438451	C	T	257	3	NA	Intron	SNP	0.01
B	9	Hilar LN	MYO16	13	109793652	G	C	108	0	p.A1676P	Missense_Mutation	SNP	0.06
D	9	Inferior Liver II	MYO16	13	109793652	G	C	100	52	p.A1676P	Missense_Mutation	SNP	0.11
G	9	RP Peri-aortic LN II	MYO16	13	109793652	G	C	142	0	p.A1676P	Missense_Mutation	SNP	0.06
B	9	Hilar LN	NASP	1	46083816	G	T	270	0	NA	3'UTR	SNP	0.06
D	9	Inferior Liver II	NASP	1	46083816	G	T	310	0	NA	3'UTR	SNP	0.11
G	9	RP Peri-aortic LN II	NASP	1	46083816	G	T	427	17	NA	3'UTR	SNP	0.06
B	9	Hilar LN	NBEAL1	2	204022518	C	A	34	0	p.P1866H	Missense_Mutation	SNP	0.06
D	9	Inferior Liver II	NBEAL1	2	204022518	C	A	64	10	p.P1866H	Missense_Mutation	SNP	0.11
G	9	RP Peri-aortic LN II	NBEAL1	2	204022518	C	A	59	0	p.P1866H	Missense_Mutation	SNP	0.06
B	9	Hilar LN	NBEAL1	2	204022520	G	A	36	0	p.E1867K	Missense_Mutation	SNP	0.06
D	9	Inferior Liver II	NBEAL1	2	204022520	G	A	61	9	p.E1867K	Missense_Mutation	SNP	0.11
G	9	RP Peri-aortic LN II	NBEAL1	2	204022520	G	A	56	0	p.E1867K	Missense_Mutation	SNP	0.06
B	9	Hilar LN	NDUFA5	7	123182284	C	A	91	12	NA	Intron	SNP	0.06
D	9	Inferior Liver II	NDUFA5	7	123182284	C	A	136	0	NA	Intron	SNP	0.11
G	9	RP Peri-aortic LN II	NDUFA5	7	123182284	C	A	92	0	NA	Intron	SNP	0.06
B	9	Hilar LN	NFIC	19	3381925	G	A	533	13	p.K82K	Silent	SNP	0.06
D	9	Inferior Liver II	NFIC	19	3381925	G	A	667	0	p.K82K	Silent	SNP	0.11
G	9	RP Peri-aortic LN II	NFIC	19	3381925	G	A	566	0	p.K82K	Silent	SNP	0.06
B	9	Hilar LN	NPR2	9	35811373	-	ATC	366	0	NA	IGR	INS	0.06
D	9	Inferior Liver II	NPR2	9	35811373	-	ATC	510	115	NA	IGR	INS	0.11
G	9	RP Peri-aortic LN II	NPR2	9	35811373	-	ATC	461	0	NA	IGR	INS	0.06
B	9	Hilar LN	NR2F2	15	96880729	T	A	341	0	p.S375T	Missense_Mutation	SNP	0.06
D	9	Inferior Liver II	NR2F2	15	96880729	T	A	375	0	p.S375T	Missense_Mutation	SNP	0.11
G	9	RP Peri-aortic LN II	NR2F2	15	96880729	T	A	256	26	p.S375T	Missense_Mutation	SNP	0.06
B	9	Hilar LN	NUPR1L	7	56183967	G	A	145	0	p.A14V	Missense_Mutation	SNP	0.06
D	9	Inferior Liver II	NUPR1L	7	56183967	G	A	137	73	p.A14V	Missense_Mutation	SNP	0.11
G	9	RP Peri-aortic LN II	NUPR1L	7	56183967	G	A	128	0	p.A14V	Missense_Mutation	SNP	0.06
B	9	Hilar LN	OBSCN	1	228504496	G	T	203	15	p.A4458S	Missense_Mutation	SNP	0.06
D	9	Inferior Liver II	OBSCN	1	228504496	G	T	283	1	p.A4458S	Missense_Mutation	SNP	0.11
G	9	RP Peri-aortic LN II	OBSCN	1	228504496	G	T	276	0	p.A4458S	Missense_Mutation	SNP	0.06
B	9	Hilar LN	OC90	8	133049719	G	A	268	0	p.P215P	Silent	SNP	0.06
D	9	Inferior Liver II	OC90	8	133049719	G	A	206	116	p.P215P	Silent	SNP	0.11
G	9	RP Peri-aortic LN II	OC90	8	133049719	G	A	316	0	p.P215P	Silent	SNP	0.06
B	9	Hilar LN	OR2B6	6	27925566	C	A	114	7	p.A183E	Missense_Mutation	SNP	0.06
D	9	Inferior Liver II	OR2B6	6	27925566	C	A	121	0	p.A183E	Missense_Mutation	SNP	0.11
G	9	RP Peri-aortic LN II	OR2B6	6	27925566	C	A	102	0	p.A183E	Missense_Mutation	SNP	0.06
B	9	Hilar LN	OR51F2	11	4843218	C	T	121	6	p.L201L	Silent	SNP	0.06
D	9	Inferior Liver II	OR51F2	11	4843218	C	T	223	0	p.L201L	Silent	SNP	0.11
G	9	RP Peri-aortic LN II	OR51F2	11	4843218	C	T	175	0	p.L201L	Silent	SNP	0.06
B	9	Hilar LN	OR5A2	11	59189861	G	T	202	0	p.S189Y	Missense_Mutation	SNP	0.06
D	9	Inferior Liver II	OR5A2	11	59189861	G	T	240	0	p.S189Y	Missense_Mutation	SNP	0.11
G	9	RP Peri-aortic LN II	OR5A2	11	59189861	G	T	179	29	p.S189Y	Missense_Mutation	SNP	0.06
B	9	Hilar LN	OSBPL9	1	52253148	G	C	185	0	p.Q708H	Missense_Mutation	SNP	0.06
D	9	Inferior Liver II	OSBPL9	1	52253148	G	C	125	49	p.Q708H	Missense_Mutation	SNP	0.11
G	9	RP Peri-aortic LN II	OSBPL9	1	52253148	G	C	225	0	p.Q708H	Missense_Mutation	SNP	0.06
B	9	Hilar LN	OTUD7B	1	149908053	G	C	356	9	NA	IGR	SNP	0.06
D	9	Inferior Liver II	OTUD7B	1	149908053	G	C	603	0	NA	IGR	SNP	0.11
G	9	RP Peri-aortic LN II	OTUD7B	1	149908053	G	C	452	0	NA	IGR	SNP	0.06
B	9	Hilar LN	PANK4	1	2444346	C	T	279	18	p.G570R	Missense_Mutation	SNP	0.06
D	9	Inferior Liver II	PANK4	1	2444346	C	T	222	0	p.G570R	Missense_Mutation	SNP	0.11
G	9	RP Peri-aortic LN II	PANK4	1	2444346	C	T	350	0	p.G570R	Missense_Mutation	SNP	0.06
B	9	Hilar LN	PAPPA	9	118997496	T	A	372	0	p.V771D	Missense_Mutation	SNP	0.06
D	9	Inferior Liver II	PAPPA	9	118997496	T	A	560	0	p.V771D	Missense_Mutation	SNP	0.11
G	9	RP Peri-aortic LN II	PAPPA	9	118997496	T	A	430	25	p.V771D	Missense_Mutation	SNP	0.06
B	9	Hilar LN	PCDHB15	5	140627056	A	G	617	60	p.K637R	Missense_Mutation	SNP	0.06
D	9	Inferior Liver II	PCDHB15	5	140627056	A	G	591	0	p.K637R	Missense_Mutation	SNP	0.11

G	9	RP Peri-aortic LN II	PCDHB15	5	140627056	A	G	569	0	p.K637R	Missense_Mutation	SNP	0.06
B	9	Hilar LN	PGK2	6	49753952	C	A	297	0	p.G317C	Missense_Mutation	SNP	0.06
D	9	Inferior Liver II	PGK2	6	49753952	C	A	380	0	p.G317C	Missense_Mutation	SNP	0.11
G	9	RP Peri-aortic LN II	PGK2	6	49753952	C	A	244	28	p.G317C	Missense_Mutation	SNP	0.06
B	9	Hilar LN	PHTF2	7	77552015	C	T	110	0	p.R347C	Missense_Mutation	SNP	0.06
D	9	Inferior Liver II	PHTF2	7	77552015	C	T	169	0	p.R347C	Missense_Mutation	SNP	0.11
G	9	RP Peri-aortic LN II	PHTF2	7	77552015	C	T	72	24	p.R347C	Missense_Mutation	SNP	0.06
B	9	Hilar LN	PIEZO2	18	10748489	A	T	214	13	p.A1443A	Silent	SNP	0.06
D	9	Inferior Liver II	PIEZO2	18	10748489	A	T	308	0	p.A1443A	Silent	SNP	0.11
G	9	RP Peri-aortic LN II	PIEZO2	18	10748489	A	T	236	0	p.A1443A	Silent	SNP	0.06
B	9	Hilar LN	PIK3C2G	12	18491451	AACT	-	59	0	p.EL455fs	Frame_Shift_Del	DEL	0.06
D	9	Inferior Liver II	PIK3C2G	12	18491451	AACT	-	75	36	p.EL455fs	Frame_Shift_Del	DEL	0.11
G	9	RP Peri-aortic LN II	PIK3C2G	12	18491451	AACT	-	89	0	p.EL455fs	Frame_Shift_Del	DEL	0.06
B	9	Hilar LN	PIK3C3	18	39575963	G	C	132	6	NA	Intron	SNP	0.06
D	9	Inferior Liver II	PIK3C3	18	39575963	G	C	175	0	NA	Intron	SNP	0.11
G	9	RP Peri-aortic LN II	PIK3C3	18	39575963	G	C	113	0	NA	Intron	SNP	0.06
B	9	Hilar LN	PKDREJ	22	46656158	G	A	237	0	p.P1021L	Missense_Mutation	SNP	0.06
D	9	Inferior Liver II	PKDREJ	22	46656158	G	A	209	0	p.P1021L	Missense_Mutation	SNP	0.11
G	9	RP Peri-aortic LN II	PKDREJ	22	46656158	G	A	169	86	p.P1021L	Missense_Mutation	SNP	0.06
B	9	Hilar LN	PLCB2	15	40581081	C	T	155	0	p.M1131I	Missense_Mutation	SNP	0.06
D	9	Inferior Liver II	PLCB2	15	40581081	C	T	150	0	p.M1131I	Missense_Mutation	SNP	0.11
G	9	RP Peri-aortic LN II	PLCB2	15	40581081	C	T	122	17	p.M1131I	Missense_Mutation	SNP	0.06
B	9	Hilar LN	PLEKHG7	12	93135320	C	G	113	6	p.D51E	Missense_Mutation	SNP	0.06
D	9	Inferior Liver II	PLEKHG7	12	93135320	C	G	186	0	p.D51E	Missense_Mutation	SNP	0.11
G	9	RP Peri-aortic LN II	PLEKHG7	12	93135320	C	G	122	0	p.D51E	Missense_Mutation	SNP	0.06
B	9	Hilar LN	PPARG	3	12458229	C	T	144	0	NA	Intron	SNP	0.06
D	9	Inferior Liver II	PPARG	3	12458229	C	T	110	45	NA	Intron	SNP	0.11
G	9	RP Peri-aortic LN II	PPARG	3	12458229	C	T	130	0	NA	Intron	SNP	0.06
B	9	Hilar LN	PRCC	1	156770260	G	C	175	0	NA	3'UTR	SNP	0.06
D	9	Inferior Liver II	PRCC	1	156770260	G	C	207	20	NA	3'UTR	SNP	0.11
G	9	RP Peri-aortic LN II	PRCC	1	156770260	G	C	226	0	NA	3'UTR	SNP	0.06
B	9	Hilar LN	PREX2	8	68864803	C	T	302	0	NA	Intron	SNP	0.06
D	9	Inferior Liver II	PREX2	8	68864803	C	T	427	0	NA	Intron	SNP	0.11
G	9	RP Peri-aortic LN II	PREX2	8	68864803	C	T	307	31	NA	Intron	SNP	0.06
B	9	Hilar LN	PROKR1	2	68882255	C	A	374	0	p.G243G	Silent	SNP	0.06
D	9	Inferior Liver II	PROKR1	2	68882255	C	A	261	135	p.G243G	Silent	SNP	0.11
G	9	RP Peri-aortic LN II	PROKR1	2	68882255	C	A	369	0	p.G243G	Silent	SNP	0.06
B	9	Hilar LN	RAB11FIP1	8	37729004	C	G	98	0	NA	Intron	SNP	0.06
D	9	Inferior Liver II	RAB11FIP1	8	37729004	C	G	168	0	NA	Intron	SNP	0.11
G	9	RP Peri-aortic LN II	RAB11FIP1	8	37729004	C	G	122	12	NA	Intron	SNP	0.06
B	9	Hilar LN	RAB18	10	27827562	A	T	129	0	NA	3'UTR	SNP	0.06
D	9	Inferior Liver II	RAB18	10	27827562	A	T	250	15	NA	3'UTR	SNP	0.11
G	9	RP Peri-aortic LN II	RAB18	10	27827562	A	T	93	0	NA	3'UTR	SNP	0.06
B	9	Hilar LN	RAD21	8	117866585	C	G	194	15	p.A354P	Missense_Mutation	SNP	0.06
D	9	Inferior Liver II	RAD21	8	117866585	C	G	341	0	p.A354P	Missense_Mutation	SNP	0.11
G	9	RP Peri-aortic LN II	RAD21	8	117866585	C	G	184	0	p.A354P	Missense_Mutation	SNP	0.06
B	9	Hilar LN	RAF1	3	12660188	G	C	374	0	p.I11M	Missense_Mutation	SNP	0.06
D	9	Inferior Liver II	RAF1	3	12660188	G	C	243	94	p.I11M	Missense_Mutation	SNP	0.11
G	9	RP Peri-aortic LN II	RAF1	3	12660188	G	C	343	0	p.I11M	Missense_Mutation	SNP	0.06
B	9	Hilar LN	RBPJ	4	26422258	A	C	97	6	p.N149T	Missense_Mutation	SNP	0.06
D	9	Inferior Liver II	RBPJ	4	26422258	A	C	110	0	p.N149T	Missense_Mutation	SNP	0.11
G	9	RP Peri-aortic LN II	RBPJ	4	26422258	A	C	91	0	p.N149T	Missense_Mutation	SNP	0.06
B	9	Hilar LN	RGL4	22	24036583	CT	-	255	0	p.A321fs	Frame_Shift_Del	DEL	0.06
D	9	Inferior Liver II	RGL4	22	24036583	CT	-	163	52	p.A321fs	Frame_Shift_Del	DEL	0.11
G	9	RP Peri-aortic LN II	RGL4	22	24036583	CT	-	216	0	p.A321fs	Frame_Shift_Del	DEL	0.06
B	9	Hilar LN	RNF40	16	30783503	G	A	277	0	p.E941K	Missense_Mutation	SNP	0.06
D	9	Inferior Liver II	RNF40	16	30783503	G	A	222	106	p.E941K	Missense_Mutation	SNP	0.11
G	9	RP Peri-aortic LN II	RNF40	16	30783503	G	A	372	0	p.E941K	Missense_Mutation	SNP	0.06
B	9	Hilar LN	RP11-287D12	74592674	C	T	551	0	NA	5'Flank	SNP	0.06	
D	9	Inferior Liver II	RP11-287D12	74592674	C	T	517	0	NA	5'Flank	SNP	0.11	
G	9	RP Peri-aortic LN II	RP11-287D12	74592674	C	T	474	30	NA	5'Flank	SNP	0.06	
B	9	Hilar LN	RPS10	6	34385275	C	T	339	0	NA	3'UTR	SNP	0.06
D	9	Inferior Liver II	RPS10	6	34385275	C	T	394	32	NA	3'UTR	SNP	0.11
G	9	RP Peri-aortic LN II	RPS10	6	34385275	C	T	350	0	NA	3'UTR	SNP	0.06
B	9	Hilar LN	RSPH4A	6	116949368	C	G	114	6	p.L500V	Missense_Mutation	SNP	0.06
D	9	Inferior Liver II	RSPH4A	6	116949368	C	G	159	0	p.L500V	Missense_Mutation	SNP	0.11
G	9	RP Peri-aortic LN II	RSPH4A	6	116949368	C	G	110	0	p.L500V	Missense_Mutation	SNP	0.06
B	9	Hilar LN	RYR1	19	39051978	C	A	354	0	p.L4170I	Missense_Mutation	SNP	0.06
D	9	Inferior Liver II	RYR1	19	39051978	C	A	296	84	p.L4170I	Missense_Mutation	SNP	0.11
G	9	RP Peri-aortic LN II	RYR1	19	39051978	C	A	365	0	p.L4170I	Missense_Mutation	SNP	0.06
B	9	Hilar LN	RYR1	19	39051979	T	C	355	0	p.L4170P	Missense_Mutation	SNP	0.06
D	9	Inferior Liver II	RYR1	19	39051979	T	C	289	86	p.L4170P	Missense_Mutation	SNP	0.11
G	9	RP Peri-aortic LN II	RYR1	19	39051979	T	C	365	0	p.L4170P	Missense_Mutation	SNP	0.06
B	9	Hilar LN	SECISBP2	9	91961851	G	T	549	1	p.R497L	Missense_Mutation	SNP	0.06
D	9	Inferior Liver II	SECISBP2	9	91961851	G	T	682	0	p.R497L	Missense_Mutation	SNP	0.11
G	9	RP Peri-aortic LN II	SECISBP2	9	91961851	G	T	542	112	p.R497L	Missense_Mutation	SNP	0.06
B	9	Hilar LN	SERPINB4	18	61306503	C	A	114	0	p.Q228H	Missense_Mutation	SNP	0.06
D	9	Inferior Liver II	SERPINB4	18	61306503	C	A	82	30	p.Q228H	Missense_Mutation	SNP	0.11
G	9	RP Peri-aortic LN II	SERPINB4	18	61306503	C	A	69	0	p.Q228H	Missense_Mutation	SNP	0.06
B	9	Hilar LN	SH2D5	1	21050692	G	A	235	0	p.P228L	Missense_Mutation	SNP	0.06
D	9	Inferior Liver II	SH2D5	1	21050692	G	A	217	0	p.P228L	Missense_Mutation	SNP	0.11
G	9	RP Peri-aortic LN II	SH2D5	1	21050692	G	A	95	81	p.P228L	Missense_Mutation	SNP	0.06
B	9	Hilar LN	SHCBP1	16	46615754	G	T	343	0	p.L636M	Missense_Mutation	SNP	0.06
D	9	Inferior Liver II	SHCBP1	16	46615754	G	T	290	78	p.L636M	Missense_Mutation	SNP	0.11
G	9	RP Peri-aortic LN II	SHCBP1	16	46615754	G	T	295	0	p.L636M	Missense_Mutation	SNP	0.06
B	9	Hilar LN	SLC18A2	10	119015018	C	T	355	0	p.S273S	Silent	SNP	0.06
D	9	Inferior Liver II	SLC18A2	10	119015018	C	T	390	0	p.S273S	Silent	SNP	0.11
G	9	RP Peri-aortic LN II	SLC18A2	10	119015018	C	T	254	77	p.S273S	Silent	SNP	0.06
B	9	Hilar LN	SLC38A3	3	50257581	G	A	253	7	NA	RNA	SNP	0.06
D	9	Inferior Liver II	SLC38A3	3	50257581	G	A	264	0	NA	RNA	SNP	0.11
G	9	RP Peri-aortic LN II	SLC38A3	3	50257581	G	A	218	0	NA	RNA	SNP	0.06
B	9	Hilar LN	SPATA31D1	9	84605829	C	T	481	39	p.S148S	Silent	SNP	0.06
D	9	Inferior Liver II	SPATA31D1	9	84605829	C	T	638	0	p.S148S	Silent	SNP	0.11
G	9	RP Peri-aortic LN II	SPATA31D1	9	84605829	C	T	594	0	p.S148S	Silent	SNP	0.06
B	9	Hilar LN	SRCAP	16	30735722	A	C	447	0	p.S1659S	Silent	SNP	0.06
D	9	Inferior Liver II	SRCAP	16	30735722	A	C	403	121	p.S1659S	Silent	SNP	0.11
G	9	RP Peri-aortic LN II	SRCAP	16	30735722	A	C	545	0	p.S1659S	Silent	SNP	0.06
B	9	Hilar LN	SRSF9	12	120903470	C	T	183	0	p.G103G	Silent	SNP	0.06
D	9	Inferior Liver II	SRSF9	12	120903470	C	T	261	0	p.G103G	Silent	SNP	0.11
G	9	RP Peri-aortic LN II	SRSF9	12	120903470	C	T	165	48	p.G103G	Silent	SNP	0.06
B	9	Hilar LN	STXBP2	19	7707672	G	A	341	0	p.R308K	Missense_Mutation	SNP	0.06
D	9	Inferior Liver II	STXBP2	19	7707672	G	A	270	93	p.R308K	Missense_Mutation	SNP	0.11
G	9	RP Peri-aortic LN II	STXBP2	19	7707672	G	A	293	0	p.R308K	Missense_Mutation	SNP	0.06
B	9	Hilar LN	SYNE2	14	64632018	T	C	129	0	NA	Intron	SNP	0.06
D	9	Inferior Liver II	SYNE2	14	64632018	T	C	160	22	NA	Intron	SNP	0.11
G	9	RP Peri-aortic LN II	SYNE2	14	64632018	T	C	128	0	NA	Intron	SNP	0.06



B	9	Hilar LN	TBATA	10	72534089	A	G	128	0	p.L266P	Missense_Mutation	SNP	0.06
D	9	Inferior Liver II	TBATA	10	72534089	A	G	138	48	p.L266P	Missense_Mutation	SNP	0.11
G	9	RP Peri-aortic LN II	TBATA	10	72534089	A	G	179	0	p.L266P	Missense_Mutation	SNP	0.06
B	9	Hilar LN	TBATA	10	72534090	G	T	123	0	p.L266M	Missense_Mutation	SNP	0.06
D	9	Inferior Liver II	TBATA	10	72534090	G	T	137	48	p.L266M	Missense_Mutation	SNP	0.11
G	9	RP Peri-aortic LN II	TBATA	10	72534090	G	T	176	0	p.L266M	Missense_Mutation	SNP	0.06
B	9	Hilar LN	TCHH	1	152083488	C	T	228	14	p.Q735Q	Silent	SNP	0.06
D	9	Inferior Liver II	TCHH	1	152083488	C	T	451	0	p.Q735Q	Silent	SNP	0.11
G	9	RP Peri-aortic LN II	TCHH	1	152083488	C	T	304	0	p.Q735Q	Silent	SNP	0.06
B	9	Hilar LN	TCP11	6	35088076	G	A	145	0	p.S325S	Silent	SNP	0.06
D	9	Inferior Liver II	TCP11	6	35088076	G	A	190	0	p.S325S	Silent	SNP	0.11
G	9	RP Peri-aortic LN II	TCP11	6	35088076	G	A	105	47	p.S325S	Silent	SNP	0.06
B	9	Hilar LN	THADA	2	43801807	C	T	138	0	p.G466E	Missense_Mutation	SNP	0.06
D	9	Inferior Liver II	THADA	2	43801807	C	T	156	13	p.G466E	Missense_Mutation	SNP	0.11
G	9	RP Peri-aortic LN II	THADA	2	43801807	C	T	92	0	p.G466E	Missense_Mutation	SNP	0.06
B	9	Hilar LN	THSD7B	2	138000124	C	T	211	0	p.P750S	Missense_Mutation	SNP	0.06
D	9	Inferior Liver II	THSD7B	2	138000124	C	T	280	0	p.P750S	Missense_Mutation	SNP	0.11
G	9	RP Peri-aortic LN II	THSD7B	2	138000124	C	T	235	14	p.P750S	Missense_Mutation	SNP	0.06
B	9	Hilar LN	TMA7	3	48481983	G	T	196	0	p.E35D	Missense_Mutation	SNP	0.06
D	9	Inferior Liver II	TMA7	3	48481983	G	T	232	0	p.E35D	Missense_Mutation	SNP	0.11
G	9	RP Peri-aortic LN II	TMA7	3	48481983	G	T	168	17	p.E35D	Missense_Mutation	SNP	0.06
B	9	Hilar LN	TMEM214	2	27259641	G	C	274	0	p.D299H	Missense_Mutation	SNP	0.06
D	9	Inferior Liver II	TMEM214	2	27259641	G	C	284	30	p.D299H	Missense_Mutation	SNP	0.11
G	9	RP Peri-aortic LN II	TMEM214	2	27259641	G	C	298	0	p.D299H	Missense_Mutation	SNP	0.06
B	9	Hilar LN	TOM1L1	17	53014469	G	A	168	0	NA	Splice_Site	SNP	0.06
D	9	Inferior Liver II	TOM1L1	17	53014469	G	A	117	27	NA	Splice_Site	SNP	0.11
G	9	RP Peri-aortic LN II	TOM1L1	17	53014469	G	A	117	0	NA	Splice_Site	SNP	0.06
B	9	Hilar LN	TPTE	21	10920100	A	G	152	16	p.V385A	Missense_Mutation	SNP	0.06
D	9	Inferior Liver II	TPTE	21	10920100	A	G	146	0	p.V385A	Missense_Mutation	SNP	0.11
E	9	Chest Wall Subcutaneous	TPTE	21	10920100	A	G	230	4	p.V385A	Missense_Mutation	SNP	0.01
G	9	RP Peri-aortic LN II	TPTE	21	10920100	A	G	101	0	p.V385A	Missense_Mutation	SNP	0.06
B	9	Hilar LN	TRAV17	14	22465978	T	G	71	5	NA	RNA	SNP	0.06
D	9	Inferior Liver II	TRAV17	14	22465978	T	G	80	0	NA	RNA	SNP	0.11
G	9	RP Peri-aortic LN II	TRAV17	14	22465978	T	G	75	0	NA	RNA	SNP	0.06
B	9	Hilar LN	TRAV17	14	22465979	G	T	74	7	NA	RNA	SNP	0.06
D	9	Inferior Liver II	TRAV17	14	22465979	G	T	79	0	NA	RNA	SNP	0.11
G	9	RP Peri-aortic LN II	TRAV17	14	22465979	G	T	79	0	NA	RNA	SNP	0.06
B	9	Hilar LN	TSC1	9	135779128	A	G	370	29	p.R706R	Silent	SNP	0.06
D	9	Inferior Liver II	TSC1	9	135779128	A	G	571	0	p.R706R	Silent	SNP	0.11
G	9	RP Peri-aortic LN II	TSC1	9	135779128	A	G	551	0	p.R706R	Silent	SNP	0.06
B	9	Hilar LN	TTC31	2	74717590	T	A	91	0	p.V151E	Missense_Mutation	SNP	0.06
D	9	Inferior Liver II	TTC31	2	74717590	T	A	133	0	p.V151E	Missense_Mutation	SNP	0.11
G	9	RP Peri-aortic LN II	TTC31	2	74717590	T	A	76	34	p.V151E	Missense_Mutation	SNP	0.06
B	9	Hilar LN	UBAC1	9	138831581	C	T	44	0	p.G301R	Missense_Mutation	SNP	0.06
D	9	Inferior Liver II	UBAC1	9	138831581	C	T	69	0	p.G301R	Missense_Mutation	SNP	0.11
G	9	RP Peri-aortic LN II	UBAC1	9	138831581	C	T	55	15	p.G301R	Missense_Mutation	SNP	0.06
B	9	Hilar LN	Unknown	15	78276756	G	A	229	20	NA	IGR	SNP	0.06
D	9	Inferior Liver II	Unknown	15	78276756	G	A	252	0	NA	IGR	SNP	0.11
G	9	RP Peri-aortic LN II	Unknown	15	78276756	G	A	207	0	NA	IGR	SNP	0.06
B	9	Hilar LN	Unknown	7	121080997	T	A	362	0	NA	IGR	SNP	0.06
D	9	Inferior Liver II	Unknown	7	121080997	T	A	468	31	NA	IGR	SNP	0.11
G	9	RP Peri-aortic LN II	Unknown	7	121080997	T	A	414	0	NA	IGR	SNP	0.06
B	9	Hilar LN	USP31	16	23116895	G	C	87	19	p.POR	Missense_Mutation	SNP	0.06
D	9	Inferior Liver II	USP31	16	23116895	G	C	106	0	p.POR	Missense_Mutation	SNP	0.11
G	9	RP Peri-aortic LN II	USP31	16	23116895	G	C	106	0	p.POR	Missense_Mutation	SNP	0.06
B	9	Hilar LN	USP31	16	23116905	G	C	86	16	NA	Intron	SNP	0.06
D	9	Inferior Liver II	USP31	16	23116905	G	C	92	0	NA	Intron	SNP	0.11
G	9	RP Peri-aortic LN II	USP31	16	23116905	G	C	99	0	NA	Intron	SNP	0.06
B	9	Hilar LN	USP37	2	219414559	G	T	140	16	p.S134R	Missense_Mutation	SNP	0.06
D	9	Inferior Liver II	USP37	2	219414559	G	T	160	0	p.S134R	Missense_Mutation	SNP	0.11
G	9	RP Peri-aortic LN II	USP37	2	219414559	G	T	160	0	p.S134R	Missense_Mutation	SNP	0.06
B	9	Hilar LN	UTRN	6	145079066	G	C	102	0	p.T2812T	Splice_Site	SNP	0.06
D	9	Inferior Liver II	UTRN	6	145079066	G	C	137	54	p.T2812T	Splice_Site	SNP	0.11
G	9	RP Peri-aortic LN II	UTRN	6	145079066	G	C	93	0	p.T2812T	Splice_Site	SNP	0.06
B	9	Hilar LN	VSTM2B	19	30020913	C	T	547	37	p.A162V	Missense_Mutation	SNP	0.06
D	9	Inferior Liver II	VSTM2B	19	30020913	C	T	546	0	p.A162V	Missense_Mutation	SNP	0.11
G	9	RP Peri-aortic LN II	VSTM2B	19	30020913	C	T	527	2	p.A162V	Missense_Mutation	SNP	0.06
B	9	Hilar LN	VWF	12	6220088	C	T	379	0	p.G89G	Silent	SNP	0.06
D	9	Inferior Liver II	VWF	12	6220088	C	T	229	132	p.G89G	Silent	SNP	0.11
G	9	RP Peri-aortic LN II	VWF	12	6220088	C	T	399	0	p.G89G	Silent	SNP	0.06
B	9	Hilar LN	ZBTB9	6	33423311	G	T	156	6	p.G145V	Missense_Mutation	SNP	0.06
D	9	Inferior Liver II	ZBTB9	6	33423311	G	T	195	0	p.G145V	Missense_Mutation	SNP	0.11
G	9	RP Peri-aortic LN II	ZBTB9	6	33423311	G	T	131	0	p.G145V	Missense_Mutation	SNP	0.06
B	9	Hilar LN	ZNF148	3	125032371	C	A	259	0	p.V38V	Silent	SNP	0.06
D	9	Inferior Liver II	ZNF148	3	125032371	C	A	201	97	p.V38V	Silent	SNP	0.11
G	9	RP Peri-aortic LN II	ZNF148	3	125032371	C	A	259	0	p.V38V	Silent	SNP	0.06
B	9	Hilar LN	ZNF277	7	111970176	A	-	78	0	p.K236fs	Frame_Shift_Del	DEL	0.06
D	9	Inferior Liver II	ZNF277	7	111970176	A	-	132	37	p.K236fs	Frame_Shift_Del	DEL	0.11
G	9	RP Peri-aortic LN II	ZNF277	7	111970176	A	-	108	0	p.K236fs	Frame_Shift_Del	DEL	0.06
B	9	Hilar LN	ZNF568	19	37488383	G	A	210	13	p.G564E	Missense_Mutation	SNP	0.06
D	9	Inferior Liver II	ZNF568	19	37488383	G	A	213	0	p.G564E	Missense_Mutation	SNP	0.11
G	9	RP Peri-aortic LN II	ZNF568	19	37488383	G	A	174	0	p.G564E	Missense_Mutation	SNP	0.06
B	9	Hilar LN	ZNF696	8	144378807	A	G	152	0	p.H321R	Missense_Mutation	SNP	0.06
D	9	Inferior Liver II	ZNF696	8	144378807	A	G	159	42	p.H321R	Missense_Mutation	SNP	0.11
G	9	RP Peri-aortic LN II	ZNF696	8	144378807	A	G	183	0	p.H321R	Missense_Mutation	SNP	0.06
B	9	Hilar LN	ZNF786	7	148771479	C	T	144	19	p.W99*	Splice_Site	SNP	0.06
D	9	Inferior Liver II	ZNF786	7	148771479	C	T	146	0	p.W99*	Splice_Site	SNP	0.11
G	9	RP Peri-aortic LN II	ZNF786	7	148771479	C	T	91	0	p.W99*	Splice_Site	SNP	0.06
B	9	Hilar LN	ZNF862	7	149557878	C	T	342	0	p.L543L	Silent	SNP	0.06
D	9	Inferior Liver II	ZNF862	7	149557878	C	T	314	0	p.L543L	Silent	SNP	0.11
G	9	RP Peri-aortic LN II	ZNF862	7	149557878	C	T	222	30	p.L543L	Silent	SNP	0.06
B	9	Hilar LN	ZSCAN21	7	99654810	G	T	137	31	p.E61*	Nonsense_Mutation	SNP	0.06
D	9	Inferior Liver II	ZSCAN21	7	99654810	G	T	228	0	p.E61*	Nonsense_Mutation	SNP	0.11
G	9	RP Peri-aortic LN II	ZSCAN21	7	99654810	G	T	207	0	p.E61*	Nonsense_Mutation	SNP	0.06
B	9	Hilar LN	ZSCAN21	7	99654811	A	T	133	31	p.E61V	Missense_Mutation	SNP	0.06
D	9	Inferior Liver II	ZSCAN21	7	99654811	A	T	213	0	p.E61V	Missense_Mutation	SNP	0.11
G	9	RP Peri-aortic LN II	ZSCAN21	7	99654811	A	T	204	0	p.E61V	Missense_Mutation	SNP	0.06
B	9	Hilar LN	ZSCAN32	16	3433334	G	A	261	0	NA	IGR	SNP	0.06
D	9	Inferior Liver II	ZSCAN32	16	3433334	G	A	303	41	NA	IGR	SNP	0.11
G	9	RP Peri-aortic LN II	ZSCAN32	16	3433334	G	A	334	0	NA	IGR	SNP	0.06
B	9	Hilar LN	ZSWIM2	2	187702125	T	A	186	17	p.L217L	Silent	SNP	0.06
D	9	Inferior Liver II	ZSWIM2	2	187702125	T	A	381	0	p.L217L	Silent	SNP	0.11
G	9	RP Peri-aortic LN II	ZSWIM2	2	187702125	T	A	219	0	p.L217L	Silent	SNP	0.06
B	9	Hilar LN	ZSWIM6	5	60839345	-	AAGT	227	0	p.-951fs	Frame_Shift_Ins	INS	0.06
D	9	Inferior Liver II	ZSWIM6	5	60839345	-	AAGT	94	50	p.-951fs	Frame_Shift_Ins	INS	0.11
G	9	RP Peri-aortic LN II	ZSWIM6	5	60839345	-	AAGT	198	0	p.-951fs	Frame_Shift_Ins	INS	0.06

**Table S4. Antibodies Used.**

Target	Catalog number (Provider)
GAPDH	MAB374 (EMD Millipore)
Pan-cadherin	4068S (Cell Signaling Technologies)
Trop2 (hRS7)	Immunomedics/Gilead
Trop2	90540S (Cell Signaling Technologies)
Trop2 (EPR20043)	ab214488 (Abcam)
Trop2	AF650 (R&D systems)
Alexa Fluor 594 anti- $\alpha$ -tubulin	ab195889 (Abcam)
DyLight 488-AffiniPure Donkey anti-Goat IgG +IgM	109-485-044 (Jackson ImmunoResearch)
Cy5- AffiniPure Goat anti-Rabbit IgG	111-175-144 (Jackson ImmunoResearch)
DyLight 488-AffiniPure Goat anti-Human IgG	109-485-044 (Jackson ImmunoResearch)