

1 **LEGEND SUPPLEMENTAL FIGURE.**

2 **FIG. 1- Supplemental data.** ROC curves for the genes exhibiting higher sensitivity and specificity. By
3 convention, sensitivity (the proportion of true positive results) is shown on the y axis, going from 0 to 1
4 (0–100%), and specificity (the proportion of false positive results) is shown on the x axis, going from 0 to
5 1 (0–100%). Genes *KLK1*, *PVALB* and *ALDHL1* had higher sensitivity and specificity, as described in
6 Table 2.

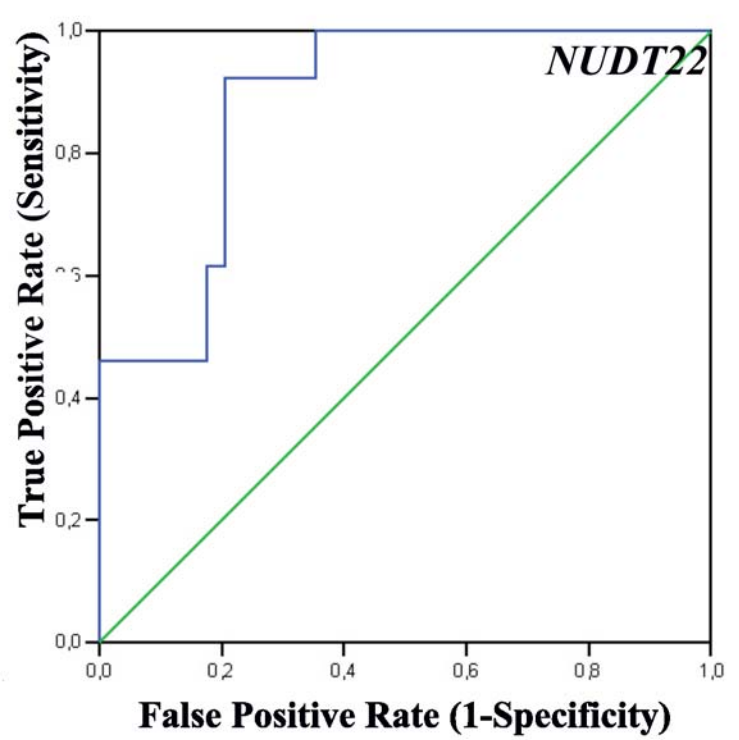
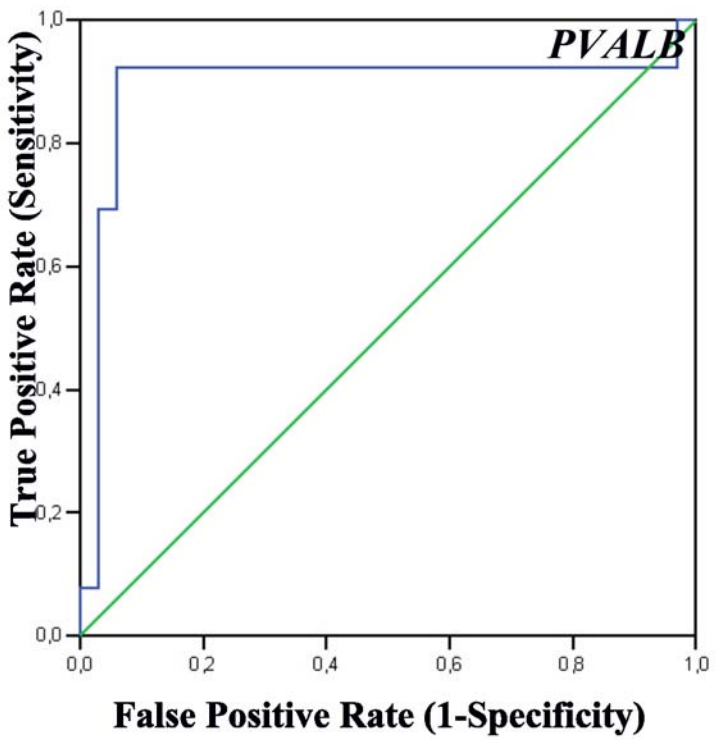
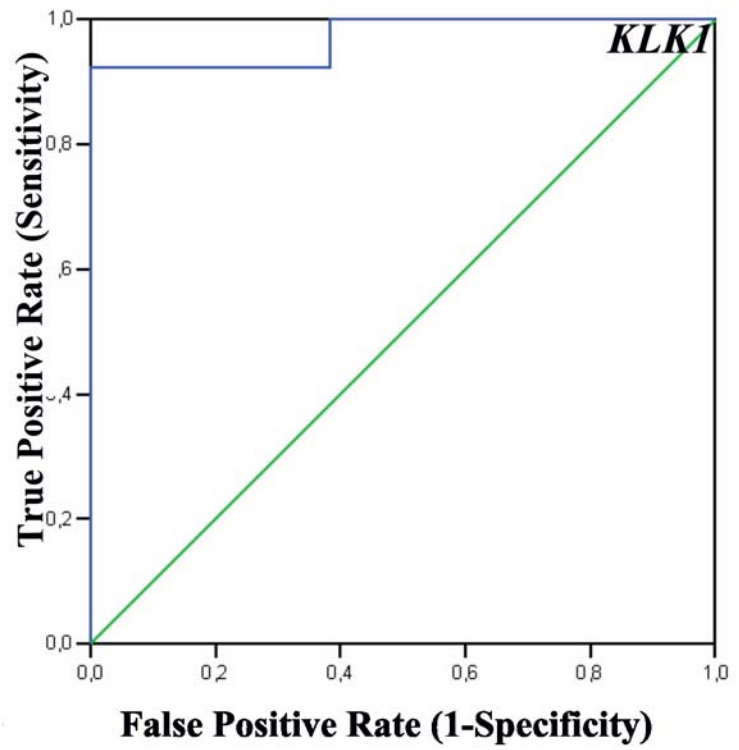
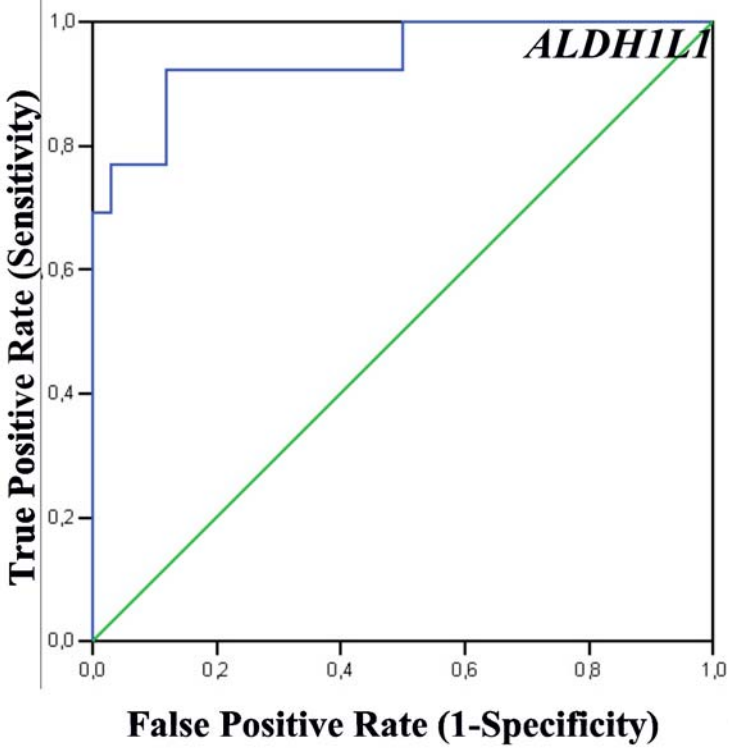


Table 1 (supplemental data). Descriptive analysis of log transformed (RE gene) in malignant and HCA

Gene	Group	Mean	Std. Deviation	Min-max	Median	P*
1. <i>ALDH1L1</i>	Malignant	0.37051037	0.879370962	0.0005-0.8559	0.0893	<0.001
	HCA	46.74766452	57.360577322	0.0915-187.5877	19.8728	
2. <i>TUSC2</i>	Malignant	1.44599763	2.988562344	0.0027-14-2169	0.4295	0.003
	HCA	1.70553562	0.949375302	0.4195-3.3967	1.7966	
3. <i>ATF5</i>	Malignant	1.84529303	7.170469118	0.1351-42.1759	0.2632	<0.001
	HCA	14.87352667	20.625176325	0.3412-74.0852	9.0468	
4. <i>OBSCN</i>	Malignant	32.00369349	124.898407528	0.0137-701.9978	0.4373	0.003
	HCA	6.87543103	8.169669248	0.2638-22.1657	3.1365	
5. <i>KLK4</i>	Malignant	1.70744457	8.387344174	0.0000-49.1027	0.0617	<0.001
	HCA	62.79872260	112.567142580	0.0156-376.9591	6.4808	
6. <i>KLK1</i>	Malignant	0.13090717	0.257011296	0.0001-1.2381	0.0096	<0.001
	HCA	158.10513977	271.086233395	0.0283-959.5691	30.7293	
7. <i>CHUK</i>	Malignant	0.99558597	1.757443629	0.0027-9.0252	0.2576	0.008
	HCA	1.95722047	1.512363097	0.0128-4.8876	1.5850	
8. <i>GFTP1</i>	Malignant	0.89153437	1.164060913	0.0014-26.3909	0.4925	0.003
	HCA	2.13396696	1.433657194	0.2394-4.2836	1.9029	
9. <i>DVL3</i>	Malignant	1.73175502	4.476256031	0.0149-26.3909	0.6498	<0.001
	HCA	4.06925749	3.332169453	0.5295-12.3899	4.3434	
10. <i>PVALB</i>	Malignant	6.57819651	35.817827452	0.0007-209.0357	0.0420	<0.001
	HCA	54.17919077	84.251602374	0.0008-311.6550	34.4557	
11. <i>SH3BGRL</i>	Malignant	1.31941803	2.349553817	0.0294-9.9788	0.3527	<0.001
	HCA	4.53989502	4.474752201	0.3030-15.9028	2.8283	

12. <i>SMARCD3</i>	Malignant	0.98472291	1.247502369	0.0067-5.5083	0.4448	0.001
	HCA	3.09693702	3.000702556	0.4048-10.8039	2.4006	
13. <i>TBC1D1</i>	Malignant	0.58220360	0.726497484	0.0090-2.3654	0.2099	<0.001
	HCA	6.14380989	6.194029382	0.2974-21.0959	5.7598	
14. <i>ATP1A3</i>	Malignant	6.58205804	19.834864174	0.0028-106.0833	0.4873	0.002
	HCA	314.67070191	660.879803350	0.0068-2138.6533	20.1683	
15. <i>NUDT22</i>	Malignant	0.65802017	0.807754042	0.0020-3.3173	0.3163	<0.001
	HCA	4.01525516	3.777828206	0.4618-12.9287	1.4063	
16. <i>TSPAN3</i>	Malignant	1.91795662	3.459421884	0.001-16.4054	0.4057	<0.001
	HCA	8.27254695	6.841383698	0.4386-20.5505	6.0797	
17. <i>ENAH</i>	Malignant	1.01441112	1.395766138	0.5010-6.6048	0.6302	0.013
	HCA	3.37526668	3.426557664	0.3002-9.3615	2.8213	

* Mann-Whitney test, using the RE gene log transformed.

Table 2 (supplemental data). Expression of all markers investigated in the panel of paraffin-embedded thyroid samples.

Samples	Diagnosis	PVALB	KLK1	ITM1	ARG2	C1orf24	DDIT3
1	FTA	-	-	-	-	-	-
2	FTA	-	-	-	-	-	-
3	FTA	-	-	-	-	-	-
4	FTA	-	-	-	-	-	-
5	FTA	-	-	-	-	-	-
6	FTA	-	-	-	+	-	-
7	FTA	-	-	-	-	-	-
8	FTA	-	-	-	+	-	+
9	FTA	-	-	-	-	-	-
10	FTA	-	-	-	-	-	-
11	FTA	-	-	-	-	-	-
12	FTA	-	-	-	-	-	-
13	FTA	-	-	+	+	-	+
14	FTA	-	-	-	-	-	-
15	FTA	-	-	-	-	-	-
16	FTA	-	-	+	-	-	-
17	HCA	+	+	+	+	+	+
18	HCA	+	+	+	+	+	+
19	HCA	+	+	+	+	+	+
20	HCA	+	+	+	+	+	+
21	HCA	+	-	+	+	+	+
22	HCA	+	-	+	+	+	+
23	HCA	+	+	+	+	+	+
24	HCA	+	+	+	+	+	+
25	HCA	+	+	+	+	+	+
26	HCA	+	+	+	+	+	+
27	HCA	+	+	+	+	+	+
28	HCA	+	+	+	+	+	+
29	HCA	+	+	+	+	+	+
30	HCA	+	+	+	+	+	+
31	HCA	+	+	+	+	+	+
32	HCA	+	+	+	+	+	+

33	HCA	+	+	+	+	+	+
34	HCA	+	+	+	+	+	+
35	HCA	+	+	+	+	+	+
36	HCA	+	+	+	+	+	+
37	HCA*	-	+	+	+	+	+
38	HCA	+	+	+	+	+	+
39	HCA	+	+	+	+	+	+
40	FTC	-	-	+	+	+	+
41	FTC	-	-	+	+	+	+
42	FTC	-	+	+	+	+	+
43	FTC	-	-	+	+	+	+
44	FTC	-	-	+	+	+	+
45	FTC	-	-	+	+	+	+
46	FTC	-	-	+	+	+	+
47	FTC	-	-	+	+	+	+
48	FTC	-	-	+	+	+	+
49	FTC	-	-	+	+	+	+
50	FTC	-	-	+	+	+	+
51	FTC	-	-	+	+	+	+
52	FTC	-	-	+	+	+	+
53	FTC	-	+	+	+	+	+
54	FTC	-	-	+	+	+	+
55	HCC	-	-	+	+	+	+
56	HCC	-	+	+	+	+	+
57	HCC	-	-	+	+	+	+
58	HCC	-	+	+	+	+	+
59	HCC	-	+	+	+	+	+
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62	HCC	-	-	+	+	+	+
63	HCC	-	+	+	+	+	+
64	HCC	-	+	+	+	+	+
65	HCC	-	+	+	+	+	+
66	HCC**	+	+	+	+	+	+
67	HCC	-	+	+	+	+	+
68	HCC	-	+	+	+	+	+

69	HCC	-	-	+	+	+	+
70	HCC	-	+	+	+	+	+
71	HCC	-	-	+	+	+	-
72	HCC**	+	+	+	+	+	+
73	FVPTC	-	-	+	+	+	+
74	FVPTC	-	+	+	+	+	+
75	FVPTC	-	-	+	+	+	+
76	FVPTC	-	-	+	+	+	+
77	FVPTC	-	-	+	+	+	+
78	FVPTC	-	-	+	+	+	+
79	FVPTC	-	-	+	+	+	+
80	FVPTC	-	-	+	+	+	+
81	FVPTC	-	-	+	+	+	+
82	FVPTC	-	-	+	+	+	+

* PVALB was positive in 22/23 HCAs. Sample # 27 was negative for PVALB.

** PVALB was positive in 2/43 malignant tumors. Samples # 66 and 72