

Table S4A: Values for quantitation of cilia lengths in normal, PIN, cancer and perineural.

Boxplot all epithelial/cancer cells						
	n (patients with cilia)	n (total patients)	n (total cilia)	Median median cilia length (µm)	Range median cilia length (µm)	P-value
Normal	10	10	592	1.30	1.19-1.78	n/a
PIN	24	24	1385	1.22	0.73-1.63	0.15
PIN LG	13	13	679	1.32	0.75-1.63	0.74 ^a
PIN HG	18	18	706	1.21	0.73-1.55	0.005^a
Ca	74	75	1166	1.0	0.34-2.09	<0.0001
Ca LG	35	35	431	0.86	0.34-2.09	<0.0001^a
Ca HG	39	40	735	1.06	0.58-1.7	0.15 ^a
Peri	14	18	247	0.76	0.46-1.74	<0.0001
Average	29	29	730	1.09	0.64-1.78	trend <0.0001
Boxplot CK5+ cells						
Normal	10	10	445	1.38	0.77-1.75	n/a
PIN	24	24	911	1.38	0.51-2.27	0.615
PIN LG	9	13	395	1.36	1.02-1.67	0.89 ^a
PIN HG	15	18	377	1.39	0.51-2.27	0.41 ^a
Ca	22	75	154	1.31	0.59-4.21	0.77
Ca LG	5	35	25	0.93	0.85-1.34	<0.0001^a
Ca HG	17	40	129	1.36	0.59-4.21	0.34 ^a
Peri	0	18	0	n/a	n/a	n/a
Average	11	29	287	1.3	0.69-2.53	trend=0.998
Boxplot CK5- cells						
Normal	10	10	147	1.2	0.69-2.1	n/a
PIN	24	24	474	0.85	0.42-1.73	0.049
PIN LG	9	13	211	1.04	0.71-1.54	0.99 ^a
PIN HG	15	18	191	0.73	0.42-1.73	<0.0001^a
Ca	74	75	1012	0.93	0.34-2.09	0.093
Ca LG	35	35	406	0.82	0.34-2.09	<0.0001^a
Ca HG	39	40	606	1.01	0.58-1.7	0.997 ^a
Peri	14	18	247	0.76	0.40-1.74	0.001
Average	28	29	403	0.92	0.49-1.84	trend= 0.047
Boxplot stromal cells						
	n (patients with cilia)	n (total patients)	n (total cilia)	Median median cilia length (µm)	Range median cilia length (µm)	P-value
Normal	10	10	178	1.16	0.71-1.66	n/a
PIN	24	24	377	0.93	0.51-1.79	0.41
PIN LG	9	13	196	1.04	0.81-1.79	0.85 ^a
PIN HG	15	18	181	0.89	0.51-1.58	0.16 ^a
Ca	70	75	1316	0.99	0.33-1.73	0.72
Ca LG	33	35	506	1.01	0.33-1.69	0.79 ^a
Ca HG	37	40	810	0.98	0.68-1.73	0.69 ^a
Peri	17	18	343	0.86	0.47-1.53	0.25
Average	27	29	487	0.98	0.54-1.69	trend=0.43

a- A separate linear regression analysis was performed on data for separated grades of PIN and Ca

Table S4B: Values for analysis of cilia lengths in normal, PIN, cancer and perineural.

Bar graph all epithelial/cancer cells				
	Q1 n (patients)	Q1 % (patients)	Q4 n (patients)	Q4 % (patients)
Normal	2	20	2	20
PIN	15	48.4	0	0
PIN LG	5	38.5	0	0
PIN HG	10	55.6	0	0
Ca	52	70.3	2	2.7
Ca LG	29	82.9	1	2.9
Ca HG	23	59.0	1	2.6
Peri	11	78.6	1	7.1
Q1 ≤1.23 μm, Q4>1.7 μm				
Bar graph CK5+ cells				
Normal	2	20	2	20
PIN	9	37.5	8	33.3
PIN LG	3	33.3	3	33.3
PIN HG	6	40	5	33.3
Ca	12	54.5	8	36.4
Ca LG	4	80	0	0
Ca HG	8	47.1	8	47.1
Peri	n/a	n/a	n/a	n/a
Q1 ≤1.32 μm, Q4>1.5 μm				
Bar graph CK5- cells				
Normal	2	20	2	20
PIN	12	50	2	8.3
PIN LG	2	22.2	1	11.1
PIN HG	10	66.7	1	6.7
Ca	30	40.5	13	17.6
Ca LG	19	54.3	5	14.3
Ca HG	11	28.2	8	20.5
Peri	9	64.3	2	14.3
Q1 ≤0.87 μm, Q4 >1.4 μm				
Bar graph stromal cells				
	Q1 n (patients)	Q1 % (patients)	Q4 n (patients)	Q4 % (patients)
Normal	2	20	2	20
PIN	15	62.5	2	8.3
PIN LG	4	44.4	1	11.1
PIN HG	11	73.3	1	6.7
Ca	43	61.4	4	5.7
Ca LG	18	54.5	1	3.0
Ca HG	25	67.6	3	8.1
Peri	5	83.3	0	0
Q1 ≤1.04 μm, Q4 >1.54 μm				