

Supplementary tables

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Table S1. Correlation test summary of 12 hours, 5 kPa

Summary statistics (Quantitative data):

Variable	Observations	Minimum	Maximum	Mean	Std. deviation
Cilia length	68	0.930	4.060	2.165	0.677
Centriole position	68	0.000	100.000	40.618	31.900
Cell area	68	138.050	3041.475	566.284	446.659
Cell height	68	1.938	9.440	4.299	1.492
Cell circularity	68	0.032	0.632	0.152	0.121
Nucleus area	68	61.030	325.116	145.495	48.098

Correlation matrix (Pearson):

Variables	Cilia length	Centriole position	Cell area	Cell height	Cell circularity	Nucleus area
Cilia length	1	0.020	0.402	-0.179	-0.226	0.246
Centriole position	0.020	1	-0.340	-0.086	-0.181	-0.347
Cell area	0.402	-0.340	1	-0.382	-0.129	0.777
Cell height	-0.179	-0.086	-0.382	1	0.155	-0.196
Cell circularity	-0.226	-0.181	-0.129	0.155	1	-0.119
Nucleus area	0.246	-0.347	0.777	-0.196	-0.119	1

P-values (Pearson):

Variables	Cilia length	Centriole position	Cell area	Cell height	Cell circularity	Nucleus area
Cilia length	0	0.869	0.001	0.145	0.064	<0.001
Centriole position	0.869	0	0.005	0.248	0.139	0.004
Cell area	0.001	0.005	0	0.001	0.294	<0.001
Cell height	0.145	0.248	0.001	0	0.208	0.110
Cell circularity	0.064	0.139	0.294	0.208	0	0.332
Nucleus area	<0.001	0.004	<0.001	0.110	0.332	0

Coefficients of determination (Pearson):

Variables	Cilia length	Centriole position	Cell area	Cell height	Cell circularity	Nucleus area
Cilia length	1	0.000	0.161	0.032	0.051	0.237
Centriole position	0.000	1	0.116	0.007	0.033	0.121
Cell area	0.161	0.116	1	0.146	0.017	0.604
Cell height	0.032	0.007	0.146	1	0.024	0.038
Cell circularity	0.051	0.033	0.017	0.024	1	0.014
Nucleus area	0.237	0.121	0.604	0.038	0.014	1

Shaded values in bold are different from 0 with a significance level alpha=0.05

Table S2. Correlation test summary of 24 hours, 5 kPa

Summary statistics (Quantitative data):

Variable	Observations	Minimum	Maximum	Mean	Std. deviation
Cilia length	82	0.690	3.128	2.101	0.601
Centriole position	82	0.000	100.000	54.695	22.696
Cell area	82	85.370	1212.111	312.165	204.708
Cell height	82	1.670	10.460	5.483	1.860
Cell circularity	82	0.029	0.913	0.289	0.225
Nucleus area	82	33.301	299.380	117.826	58.401

Correlation matrix (Pearson):

Variables	Cilia length	Centriole position	Cell area	Cell height	Cell circularity	Nucleus area
Cilia length	1	0.213	0.092	-0.106	0.045	0.163
Centriole position	0.213	1	-0.168	-0.125	-0.006	-0.121
Cell area	0.092	-0.168	1	-0.275	-0.244	0.754
Cell height	-0.106	-0.125	-0.275	1	0.249	-0.012
Cell circularity	0.045	-0.006	-0.244	0.249	1	-0.350
Nucleus area	0.163	-0.121	0.754	-0.012	-0.350	1

P-values (Pearson):

Variables	Cilia length	Centriole position	Cell area	Cell height	Cell circularity	Nucleus area
Cilia length	0	0.055	0.410	0.345	0.687	0.144
Centriole position	0.055	0	0.130	0.265	0.958	0.280
Cell area	0.410	0.130	0	0.012	<0.001	<0.001
Cell height	0.345	0.265	0.012	0	<0.001	0.751
Cell circularity	0.687	0.958	<0.001	<0.001	0	0.001
Nucleus area	0.144	0.280	<0.001	0.751	0.001	0

Coefficients of determination (Pearson):

Variables	Cilia length	Centriole position	Cell area	Cell height	Cell circularity	Nucleus area
Cilia length	1	0.045	0.009	0.011	0.002	0.027
Centriole position	0.045	1	0.028	0.016	0.000	0.015
Cell area	0.009	0.028	1	0.076	0.234	0.569
Cell height	0.011	0.016	0.076	1	0.239	0.001
Cell circularity	0.002	0.000	0.234	0.239	1	0.122
Nucleus area	0.027	0.015	0.569	0.001	0.122	1

Shaded values in bold are different from 0 with a significance level alpha=0.05

Table S3. Correlation test summary of 48 hours, 5 kPa

Summary statistics (Quantitative data):

Variable	Observations	Minimum	Maximum	Mean	Std. deviation
Cilia length	48	0.740	4.170	2.015	0.703
Centriole position	48	0.000	88.000	24.889	20.376
Cell area	48	61.660	1214.780	265.322	204.592
Cell height	48	1.620	9.400	5.590	1.603
Cell circularity	48	0.040	0.950	0.123	0.262
Nucleus area	48	17.890	349.230	99.381	61.225

Correlation matrix (Pearson):

Variables	Cilia length	Centriole position	Cell area	Cell height	Cell circularity	Nucleus area
Cilia length	1	0.138	0.208	-0.041	-0.228	0.120
Centriole position	0.138	1	-0.322	0.290	0.184	-0.161
Cell area	0.208	-0.322	1	-0.508	-0.521	0.711
Cell height	-0.041	0.290	-0.508	1	0.387	-0.424
Cell circularity	-0.228	0.184	-0.521	0.387	1	-0.503
Nucleus area	0.120	-0.161	0.711	-0.424	-0.503	1

P-values (Pearson):

Variables	Cilia length	Centriole position	Cell area	Cell height	Cell circularity	Nucleus area
Cilia length	0	0.247	0.080	0.730	0.054	0.315
Centriole position	0.247	0	0.006	0.013	0.121	0.177
Cell area	0.080	0.006	0	<0.001	<0.001	<0.001
Cell height	0.730	0.013	<0.001	0	0.001	<0.001
Cell circularity	0.054	0.121	<0.001	0.001	0	<0.001
Nucleus area	0.315	0.177	<0.001	<0.001	<0.001	0

Coefficients of determination (Pearson):

Variables	Cilia length	Centriole position	Cell area	Cell height	Cell circularity	Nucleus area
Cilia length	1	0.019	0.043	0.002	0.052	0.014
Centriole position	0.019	1	0.104	0.084	0.034	0.026
Cell area	0.043	0.104	1	0.258	0.271	0.505
Cell height	0.002	0.084	0.258	1	0.150	0.179
Cell circularity	0.052	0.034	0.271	0.150	1	0.253
Nucleus area	0.014	0.026	0.505	0.179	0.253	1

Shaded values in bold are different from 0 with a significance level alpha=0.05

Table S4. Correlation test summary of 12 hours, 50 kPa

Summary statistics (Quantitative data):

Variable	Observations	Minimum	Maximum	Mean	Std. deviation
Cilia length	73	1.150	4.734	2.462	0.734
Centriole position	73	0.000	100.000	47.082	32.225
Cell area	73	164.220	2577.222	627.617	518.858
Cell height	73	1.300	12.140	3.966	2.395
Cell circularity	73	0.015	0.820	0.153	0.151
Nucleus area	73	57.410	403.780	166.737	48.623

Correlation matrix (Pearson):

Variables	Cilia length	Centriole position	Cell area	Cell height	Cell circularity	Nucleus area
Cilia length	1	0.115	0.293	-0.380	-0.268	0.120
Centriole position	0.115	1	-0.017	0.019	-0.087	-0.018
Cell area	0.293	-0.017	1	-0.478	-0.390	0.629
Cell height	-0.380	0.019	-0.478	1	0.714	-0.344
Cell circularity	-0.268	-0.087	-0.390	0.714	1	-0.271
Nucleus area	0.120	-0.018	0.629	-0.344	-0.271	1

P-values (Pearson):

Variables	Cilia length	Centriole position	Cell area	Cell height	Cell circularity	Nucleus area
Cilia length	0	0.333	0.012	0.001	0.022	0.002
Centriole position	0.333	0	0.887	0.848	0.465	0.880
Cell area	0.012	0.887	0	<0.001	0.001	<0.001
Cell height	0.001	0.848	<0.001	0	<0.001	0.003
Cell circularity	0.022	0.465	0.001	<0.001	0	0.020
Nucleus area	0.002	0.880	<0.001	0.003	0.020	0

Coefficients of determination (Pearson):

Variables	Cilia length	Centriole position	Cell area	Cell height	Cell circularity	Nucleus area
Cilia length	1	0.013	0.086	0.144	0.048	0.130
Centriole position	0.013	1	0.000	0.000	0.008	0.000
Cell area	0.086	0.000	1	0.228	0.152	0.395
Cell height	0.144	0.000	0.228	1	0.509	0.118
Cell circularity	0.048	0.008	0.152	0.509	1	0.073
Nucleus area	0.130	0.000	0.395	0.118	0.073	1

Shaded values in bold are different from 0 with a significance level $\alpha=0.05$

Table S5. Correlation test summary of 24 hours, 50 kPa

Summary statistics (Quantitative data):

Variable	Observations	Minimum	Maximum	Mean	Std. deviation
Cilia length	69	1.180	4.860	2.794	0.745
Centriole position	69	0.000	100.000	55.324	33.656
Cell area	69	193.750	3187.163	766.467	585.294
Cell height	69	1.406	4.580	2.486	0.663
Cell circularity	69	0.022	0.283	0.096	0.047
Nucleus area	69	47.563	713.190	208.795	116.711

Correlation matrix (Pearson):

Variables	Cilia length	Centriole position	Cell area	Cell height	Cell circularity	Nucleus area
Cilia length	1	0.128	0.319	-0.155	0.008	0.189
Centriole position	0.128	1	0.047	0.005	0.106	0.052
Cell area	0.319	0.047	1	-0.260	-0.242	0.625
Cell height	-0.155	0.005	-0.260	1	0.048	-0.014
Cell circularity	0.008	0.106	-0.242	0.048	1	-0.283
Nucleus area	0.189	0.052	0.625	-0.014	-0.283	1

P-values (Pearson):

Variables	Cilia length	Centriole position	Cell area	Cell height	Cell circularity	Nucleus area
Cilia length	0	0.294	0.008	0.202	0.945	0.119
Centriole position	0.294	0	0.700	0.967	0.388	0.671
Cell area	0.008	0.700	0	0.031	0.045	<0.001
Cell height	0.202	0.967	0.031	0	0.555	0.907
Cell circularity	0.945	0.388	0.045	0.555	0	0.019
Nucleus area	0.119	0.671	<0.001	0.907	0.019	0

Coefficients of determination (Pearson):

Variables	Cilia length	Centriole position	Cell area	Cell height	Cell circularity	Nucleus area
Cilia length	1	0.016	0.102	0.024	0.000	0.012
Centriole position	0.016	1	0.002	0.000	0.011	0.003
Cell area	0.102	0.002	1	0.068	0.059	0.390
Cell height	0.024	0.000	0.068	1	0.005	0.000
Cell circularity	0.000	0.011	0.059	0.005	1	0.080
Nucleus area	0.012	0.003	0.390	0.000	0.080	1

Shaded values in bold are different from 0 with a significance level alpha=0.05

Table S6. Correlation test summary of 48 hours, 50 kPa

Summary statistics (Quantitative data):

Variable	Observations	Minimum	Maximum	Mean	Std. deviation
Cilia length	66	0.862	3.470	2.222	0.644
Centriole position	66	0.000	100.000 1625.77	51.758	32.874
Cell area	66	98.010	0	506.978	333.198
Cell height	66	1.140	6.180	2.848	1.022
Cell circularity	66	0.010	0.940	0.199	0.244
Nucleus area	66	38.770	841.200	182.080	141.071

Correlation matrix (Pearson):

Variables	Cilia length	Centriole position	Cell area	Cell height	Cell circularity	Nucleus area
Cilia length	1	0.095	0.212	-0.171	-0.184	0.222
Centriole position	0.095	1	-0.086	0.052	-0.081	0.144
Cell area	0.212	-0.086	1	-0.101	-0.455	0.737
Cell height	-0.171	0.052	-0.101	1	0.323	-0.101
Cell circularity	-0.184	-0.081	-0.455	0.323	1	-0.346
Nucleus area	0.222	0.144	0.737	-0.101	-0.346	1

P-values (Pearson):

Variables	Cilia length	Centriole position	Cell area	Cell height	Cell circularity	Nucleus area
Cilia length	0	0.424	0.088	0.169	0.138	0.073
Centriole position	0.424	0	0.494	0.678	0.516	0.249
Cell area	0.088	0.494	0	0.419	<0.001	<0.001
Cell height	0.169	0.678	0.419	0	0.008	0.420
Cell circularity	0.138	0.516	<0.001	0.008	0	0.004
Nucleus area	0.073	0.249	<0.001	0.420	0.004	0

Coefficients of determination (Pearson):

Variables	Cilia length	Centriole position	Cell area	Cell height	Cell circularity	Nucleus area
Cilia length	1	0.009	0.045	0.029	0.034	0.049
Centriole position	0.009	1	0.007	0.003	0.007	0.021
Cell area	0.045	0.007	1	0.010	0.207	0.543
Cell height	0.029	0.003	0.010	1	0.104	0.010
Cell circularity	0.034	0.007	0.207	0.104	1	0.120
Nucleus area	0.049	0.021	0.543	0.010	0.120	1

Shaded values in bold are different from 0 with a significance level alpha=0.05

Table S7. Correlation test summary of 12 hours, coverslips (GPa)

Summary statistics (Quantitative data):

Variable	Observations	Minimum	Maximum	Mean	Std. deviation
Cilia length	85	0.590	5.000	2.579	0.810
Centriole position	85	0.000	78.000	17.565	26.124
Cell area	85	141.120	2400.270	775.747	452.617
Cell height	85	0.830	7.480	2.909	1.434
Cell circularity	85	0.030	0.710	0.162	0.140
Nucleus area	85	63.430	791.510	211.484	133.924

Correlation matrix (Pearson):

Variables	Cilia length	Centriole position	Cell area	Cell height	Cell circularity	Nucleus area
Cilia length	1	-0.383	0.302	0.062	-0.074	0.346
Centriole position	-0.383	1	-0.054	0.287	0.135	-0.217
Cell area	0.302	-0.054	1	0.071	-0.017	0.656
Cell height	0.062	0.287	0.071	1	0.106	-0.240
Cell circularity	-0.074	0.135	-0.017	0.106	1	-0.289
Nucleus area	0.346	-0.217	0.656	-0.240	-0.289	1

P-values (Pearson):

Variables	Cilia length	Centriole position	Cell area	Cell height	Cell circularity	Nucleus area
Cilia length	0	<0.001	0.005	0.570	0.501	<0.001
Centriole position	<0.001	0	0.624	0.008	0.220	0.046
Cell area	0.005	0.624	0	0.518	0.878	<0.001
Cell height	0.570	0.008	0.518	0	0.332	0.027
Cell circularity	0.501	0.220	0.878	0.332	0	0.007
Nucleus area	<0.001	0.046	<0.001	0.027	0.007	0

Coefficients of determination (Pearson):

Variables	Cilia length	Centriole position	Cell area	Cell height	Cell circularity	Nucleus area
Cilia length	1	0.147	0.091	0.004	0.005	0.120
Centriole position	0.147	1	0.003	0.083	0.018	0.047
Cell area	0.091	0.003	1	0.005	0.000	0.430
Cell height	0.004	0.083	0.005	1	0.011	0.058
Cell circularity	0.005	0.018	0.000	0.011	1	0.083
Nucleus area	0.120	0.047	0.430	0.058	0.083	1

Shaded values in bold are different from 0 with a significance level alpha=0.05

Table S8. Correlation test summary of 24 hours, coverslips (GPa)

Summary statistics (Quantitative data):

Variable	Observations	Minimum	Maximum	Mean	Std. deviation
Cilia length	79	1.640	8.650	3.755	1.745
Centriole position	79	0.000	77.000	12.430	21.879
Cell area	79	292.830	5382.100	1624.154	1198.138
Cell height	79	2.120	8.890	4.123	1.416
Cell circularity	79	0.030	0.510	0.113	0.096
Nucleus area	79	95.090	1859.880	494.909	437.966

Correlation matrix (Pearson):

Variables	Cilia length	Centriole position	Cell area	Cell height	Cell circularity	Nucleus area
Cilia length	1	-0.002	0.591	0.123	-0.349	0.698
Centriole position	-0.002	1	0.213	0.032	-0.024	0.181
Cell area	0.591	0.213	1	-0.124	-0.216	0.903
Cell height	0.123	0.032	-0.124	1	0.073	0.063
Cell circularity	-0.349	-0.024	-0.216	0.073	1	-0.311
Nucleus area	0.698	0.181	0.903	0.063	-0.311	1

P-values (Pearson):

Variables	Cilia length	Centriole position	Cell area	Cell height	Cell circularity	Nucleus area
Cilia length	0	0.983	<0.001	0.282	0.002	<0.001
Centriole position	0.983	0	0.060	0.779	0.673	0.111
Cell area	<0.001	0.060	0	0.275	0.056	<0.001
Cell height	0.282	0.779	0.275	0	0.521	0.581
Cell circularity	0.002	0.673	0.056	0.521	0	0.005
Nucleus area	<0.001	0.111	<0.001	0.581	0.005	0

Coefficients of determination (Pearson):

Variables	Cilia length	Centriole position	Cell area	Cell height	Cell circularity	Nucleus area
Cilia length	1	0.000	0.350	0.015	0.122	0.247
Centriole position	0.000	1	0.045	0.001	0.002	0.033
Cell area	0.350	0.045	1	0.015	0.047	0.815
Cell height	0.015	0.001	0.015	1	0.005	0.004
Cell circularity	0.122	0.002	0.047	0.005	1	0.097
Nucleus area	0.247	0.033	0.815	0.004	0.097	1

Shaded values in bold are different from 0 with a significance level alpha=0.05

Table S9. Correlation test summary of 48 hours, coverslips (GPa)

Summary statistics (Quantitative data):

Variable	Observations	Minimum	Maximum	Mean	Std. deviation
Cilia length	90	0.870	4.780	2.658	0.774
Centriole position	90	0.000	100.000	14.578	23.571
Cell area	90	141.120	2526.080	715.698	442.896
Cell height	90	1.110	6.470	2.968	1.374
Cell circularity	90	0.030	0.650	0.195	0.158
Nucleus area	90	66.510	762.590	223.412	128.884

Correlation matrix (Pearson):

Variables	Cilia length	Centriole position	Cell area	Cell height	Cell circularity	Nucleus area
Cilia length	1	-0.214	0.334	0.165	-0.043	0.265
Centriole position	-0.214	1	-0.153	-0.133	-0.221	-0.026
Cell area	0.334	-0.153	1	-0.003	0.053	0.486
Cell height	0.165	-0.133	-0.003	1	0.092	-0.246
Cell circularity	-0.043	-0.221	0.053	0.092	1	-0.292
Nucleus area	0.265	-0.026	0.486	-0.246	-0.292	1

P-values (Pearson):

Variables	Cilia length	Centriole position	Cell area	Cell height	Cell circularity	Nucleus area
Cilia length	0	0.042	0.001	0.121	0.691	0.012
Centriole position	0.042	0	0.149	0.213	0.012	0.805
Cell area	0.001	0.149	0	0.979	0.622	<0.001
Cell height	0.121	0.213	0.979	0	0.387	0.019
Cell circularity	0.691	0.012	0.622	0.387	0	0.005
Nucleus area	0.012	0.805	<0.001	0.019	0.005	0

Coefficients of determination (Pearson):

Variables	Cilia length	Centriole position	Cell area	Cell height	Cell circularity	Nucleus area
Cilia length	1	0.046	0.112	0.027	0.002	0.070
Centriole position	0.046	1	0.023	0.018	0.049	0.001
Cell area	0.112	0.023	1	0.000	0.003	0.526
Cell height	0.027	0.018	0.000	1	0.009	0.060
Cell circularity	0.002	0.049	0.003	0.009	1	0.086
Nucleus area	0.070	0.001	0.526	0.060	0.086	1

Shaded values in bold are different from 0 with a significance level alpha=0.05