S1. Tables of p-values for statistically significant differences for the data with an asterisk in Fig. 1, 2, and 5

**Table A.** P-values for Fig. 1C days 6 and 9

<table>
<thead>
<tr>
<th>Density (10^6/mL)</th>
<th>Day 6</th>
<th>Day 9</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.6</td>
<td>0.00165</td>
<td>0.00232</td>
</tr>
<tr>
<td>1.5</td>
<td>0.00030</td>
<td>0.00047</td>
</tr>
<tr>
<td>2</td>
<td>0.00050</td>
<td>0.00087</td>
</tr>
</tbody>
</table>

**Table B.** P-values for Fig. 1D days 6 and 9

<table>
<thead>
<tr>
<th>Density (10^6/mL)</th>
<th>Day 6</th>
<th>Day 9</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.6</td>
<td>0.00306</td>
<td>0.00347</td>
</tr>
<tr>
<td>1.5</td>
<td>0.00248</td>
<td>0.00256</td>
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<tr>
<td>2</td>
<td>0.00208</td>
<td>0.00204</td>
</tr>
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</table>

**Table C.** P-values for Fig. 1E days 6 and 9

<table>
<thead>
<tr>
<th>Density (10^6/mL)</th>
<th>Day 6</th>
<th>Day 9</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.6</td>
<td>0.00216</td>
<td>0.00603</td>
</tr>
<tr>
<td>1.5</td>
<td>0.00148</td>
<td>0.00473</td>
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<tr>
<td>2</td>
<td>0.00090</td>
<td>0.00365</td>
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**Table D.** P-values for Fig. 1F days 2, 4, and 6

<table>
<thead>
<tr>
<th>Density (10^6/mL)</th>
<th>Day 2</th>
<th>Day 4</th>
<th>Day 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.5</td>
<td>0.04900</td>
<td>0.02786</td>
<td>0.00437</td>
</tr>
<tr>
<td>0.6</td>
<td>0.04515</td>
<td>0.02482</td>
<td>0.00417</td>
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<tr>
<td>1</td>
<td>0.04719</td>
<td>0.02718</td>
<td>0.00413</td>
</tr>
</tbody>
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**Table E.** P-values for Fig. 2A

<table>
<thead>
<tr>
<th></th>
<th>3D-CSC</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>day 4</td>
<td>0.02595</td>
<td>0.01135</td>
</tr>
<tr>
<td>day 6</td>
<td>0.02640</td>
<td>0.00717</td>
</tr>
</tbody>
</table>

**Table F.** P-values for Fig. 2B

<table>
<thead>
<tr>
<th></th>
<th>3D-CSC</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>day 4</td>
<td>0.02334</td>
<td>0.00251</td>
</tr>
<tr>
<td>day 6</td>
<td>0.02227</td>
<td>0.00249</td>
</tr>
</tbody>
</table>

**Table G.** P-values for Fig. 2C

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>day 4</td>
<td>0.03493</td>
<td>0.00470</td>
</tr>
<tr>
<td>day 6</td>
<td>0.03467</td>
<td>0.00469</td>
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**Table H.** P-values for Fig. 2D

<table>
<thead>
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</thead>
<tbody>
<tr>
<td>day 4</td>
<td>0.04560</td>
<td>0.01334</td>
</tr>
<tr>
<td>day 6</td>
<td>0.04116</td>
<td>0.01352</td>
</tr>
</tbody>
</table>
### Table I. P-values for Fig. 5B

<table>
<thead>
<tr>
<th>Modulus (kPa)</th>
<th>2</th>
<th>5</th>
<th>25</th>
<th>50</th>
<th>70</th>
</tr>
</thead>
<tbody>
<tr>
<td>MCF7</td>
<td>0.00638</td>
<td>_</td>
<td>0.00405</td>
<td>0.00341</td>
<td>0.00372</td>
</tr>
<tr>
<td>MDA</td>
<td>0.00035</td>
<td>_</td>
<td>0.00007</td>
<td>0.00024</td>
<td>0.00059</td>
</tr>
<tr>
<td>HCT116</td>
<td>0.00310</td>
<td>0.00325</td>
<td>_</td>
<td>0.00294</td>
<td>0.00401</td>
</tr>
<tr>
<td>U2OS</td>
<td>0.00878</td>
<td>0.00592</td>
<td>0.00412</td>
<td>_</td>
<td>0.01015</td>
</tr>
<tr>
<td>AGS</td>
<td>0.02295</td>
<td>0.02131</td>
<td>_</td>
<td>0.02586</td>
<td>0.02100</td>
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### Table J. P-values for Fig. 5C

<table>
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<tr>
<th>Modulus (kPa)</th>
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<th>70</th>
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</thead>
<tbody>
<tr>
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<td>MDA</td>
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<td>0.00025</td>
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<td>0.00127</td>
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<tr>
<td>HCT116</td>
<td>0.00013</td>
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<td>0.00013</td>
</tr>
<tr>
<td>U2OS</td>
<td>0.00556</td>
<td>0.00556</td>
<td>0.03642</td>
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<td>0.00556</td>
</tr>
<tr>
<td>AGS</td>
<td>0.00241</td>
<td>0.00241</td>
<td>_</td>
<td>0.02529</td>
<td>0.00241</td>
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### Table K. P-values for Fig. 5D

<table>
<thead>
<tr>
<th>Modulus (kPa)</th>
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<th>5</th>
<th>25</th>
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</thead>
<tbody>
<tr>
<td>MCF7</td>
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<td>0.00300</td>
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<tr>
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<td>0.00131</td>
</tr>
<tr>
<td>HCT116</td>
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<tr>
<td>U2OS</td>
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<td>0.00650</td>
<td>0.00423</td>
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<td>0.01012</td>
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<tr>
<td>AGS</td>
<td>0.01744</td>
<td>0.02445</td>
<td>_</td>
<td>0.04837</td>
<td>0.02172</td>
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**Table L.** P-values for Fig. 5F for MCF7-CD44

<table>
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<th>25</th>
<th>50</th>
<th>70</th>
</tr>
</thead>
<tbody>
<tr>
<td>day 6</td>
<td>0.04331</td>
<td>_</td>
<td>0.01432</td>
<td>0.00852</td>
<td>0.00701</td>
</tr>
<tr>
<td>day 9</td>
<td>0.00893</td>
<td>_</td>
<td>0.00629</td>
<td>0.00251</td>
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</table>

**Table M.** P-values for Fig. 5F for MCF7-ABCG2

<table>
<thead>
<tr>
<th>Modulus (kPa)</th>
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<th>25</th>
<th>50</th>
<th>70</th>
</tr>
</thead>
<tbody>
<tr>
<td>day 6</td>
<td>0.01157</td>
<td>_</td>
<td>0.00815</td>
<td>0.00726</td>
<td>0.00653</td>
</tr>
<tr>
<td>day 9</td>
<td>0.00146</td>
<td>_</td>
<td>0.00113</td>
<td>0.00052</td>
<td>0.00031</td>
</tr>
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</table>

**Table N.** P-values for Fig. 5F for MDA231-CD44

<table>
<thead>
<tr>
<th>Modulus (kPa)</th>
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<th>25</th>
<th>50</th>
<th>70</th>
</tr>
</thead>
<tbody>
<tr>
<td>day 6</td>
<td>0.00974</td>
<td>_</td>
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<td>0.00094</td>
<td>0.00074</td>
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<tr>
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<td>0.00686</td>
<td>_</td>
<td>0.00457</td>
<td>0.00082</td>
<td>0.00044</td>
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**Table O.** P-values for Fig. 5F for MDA231-EGFR

<table>
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<tr>
<th>Modulus (kPa)</th>
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<th>25</th>
<th>50</th>
<th>70</th>
</tr>
</thead>
<tbody>
<tr>
<td>day 6</td>
<td>0.01350</td>
<td>_</td>
<td>0.00863</td>
<td>0.00192</td>
<td>0.00045</td>
</tr>
<tr>
<td>day 9</td>
<td>0.00691</td>
<td>_</td>
<td>0.00243</td>
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</table>

**Table P.** P-values for Fig. 5F for HCT116-CD44

<table>
<thead>
<tr>
<th>Modulus (kPa)</th>
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<th>5</th>
<th>25</th>
<th>50</th>
<th>70</th>
</tr>
</thead>
<tbody>
<tr>
<td>day 6</td>
<td>0.00447</td>
<td>0.03851</td>
<td>_</td>
<td>0.01159</td>
<td>0.00755</td>
</tr>
<tr>
<td>day 9</td>
<td>0.00084</td>
<td>0.00453</td>
<td>_</td>
<td>0.00119</td>
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</table>
**Table Q.** P-values for Fig. 5F for HCT116-TGFβ

<table>
<thead>
<tr>
<th>Modulus (kPa)</th>
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<th>5</th>
<th>25</th>
<th>50</th>
<th>70</th>
</tr>
</thead>
<tbody>
<tr>
<td>day 6</td>
<td>0.00321</td>
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<td>0.00052</td>
<td>0.00015</td>
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<td>0.00086</td>
<td>0.00732</td>
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**Table R.** P-values for Fig. 5F for U2OS-CD44

<table>
<thead>
<tr>
<th>Modulus (kPa)</th>
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<th>5</th>
<th>25</th>
<th>50</th>
<th>70</th>
</tr>
</thead>
<tbody>
<tr>
<td>day 6</td>
<td>0.00521</td>
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<td>0.00157</td>
<td>0.00491</td>
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**Table S.** P-values for Fig. 5F for U2OS-CD133

<table>
<thead>
<tr>
<th>Modulus (kPa)</th>
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<th>25</th>
<th>50</th>
<th>70</th>
</tr>
</thead>
<tbody>
<tr>
<td>day 6</td>
<td>0.00731</td>
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<td>0.01473</td>
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<td>0.01731</td>
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<td>0.00153</td>
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**Table T.** P-values for Fig. 5F for AGS-CD44

<table>
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<th>Modulus (kPa)</th>
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<th>5</th>
<th>25</th>
<th>50</th>
<th>70</th>
</tr>
</thead>
<tbody>
<tr>
<td>day 6</td>
<td>0.00415</td>
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<td>_</td>
<td>0.04279</td>
<td>0.00678</td>
</tr>
<tr>
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<td>0.00096</td>
<td>0.00269</td>
<td>_</td>
<td>0.00478</td>
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**Table U.** P-values for Fig. 5F for AGS-OCT4

<table>
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<th>5</th>
<th>25</th>
<th>50</th>
<th>70</th>
</tr>
</thead>
<tbody>
<tr>
<td>day 6</td>
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