Supplementary Material

Supplementary Figure 1

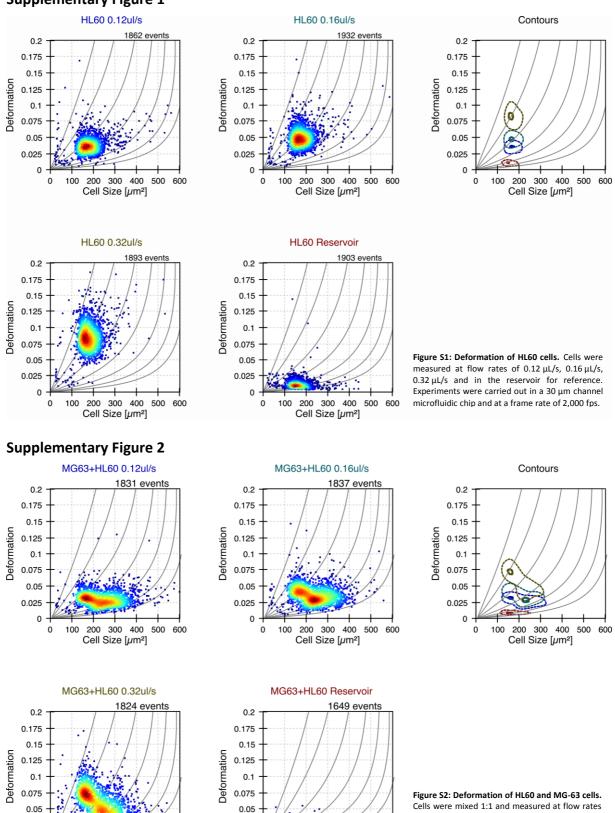
0.025

0

200 300 400

Cell Size [µm2]

500



0.025

0

200 300 400 500

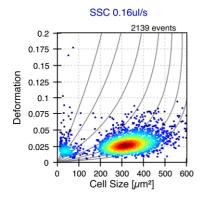
Cell Size [µm²]

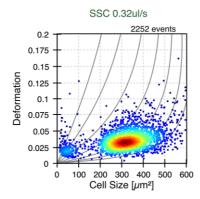
of $0.12\,\mu\text{L/s},~0.16\,\mu\text{L/s},~0.32\,\mu\text{L/s}$ and in the

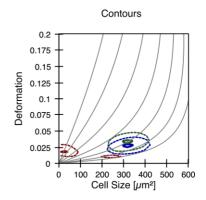
reservoir for reference. Experiments were carried out in a 30 μm channel microfluidic chip and at a

frame rate of 2,000 fps.

Supplementary Figure 3







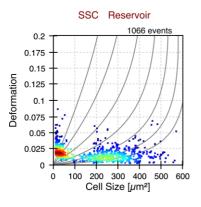
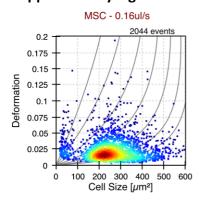
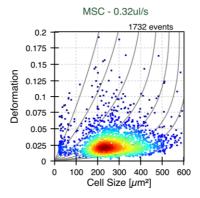
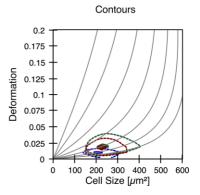


Figure S3: Deformation of SSCs. Cells were measured at flow rates of $0.16\,\mu\text{L/s}$, $0.32\,\mu\text{L/s}$ and in the reservoir for reference. Experiments were carried out in a 30 μ m channel microfluidic chip and at a frame rate of 2,000 fps.

Supplementary Figure 4







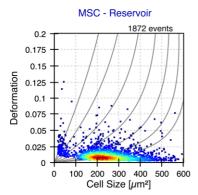
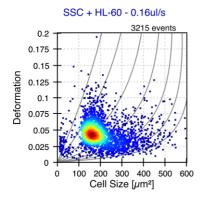
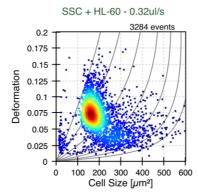
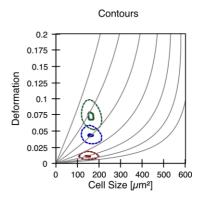


Figure S4: Deformation of MSCs. Cells were measured at flow rates of $0.16\,\mu\text{L/s}$, $0.32\,\mu\text{L/s}$ and in the reservoir for reference. Experiments were carried out in a $30\mu\text{m}$ channel microfluidic chip and at a frame rate of 2,000 fps.

Supplementary Figure 5







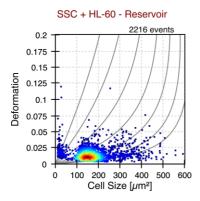
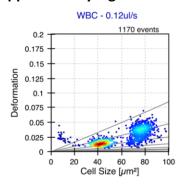
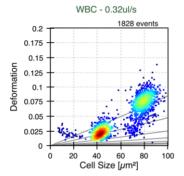
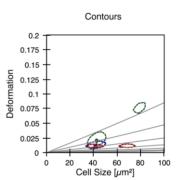


Figure S5: Deformation of SSCs and HL60s. Cells were mixed and measured at flow rates of $0.16~\mu$ L/s, $0.32~\mu$ L/s and in the reservoir for reference. Experiments were carried out in a 30 μ m channel microfluidic chip and at a frame rate of 2,000 fps.

Supplementary Figure 6







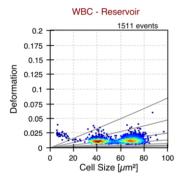


Figure S6: Deformation of WBCs. Cells were measured at flow rates of 0.12 μ L/s, 0.32 μ L/s and in the reservoir for reference. Experiments were carried out in a 30 μ m channel microfluidic chip and at a frame rate of 2,000 fps.

Supplementary Figure 7

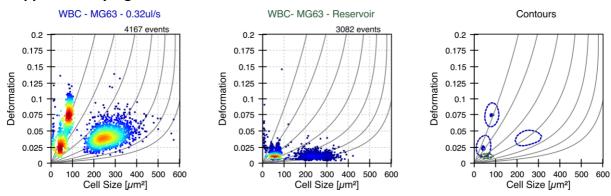
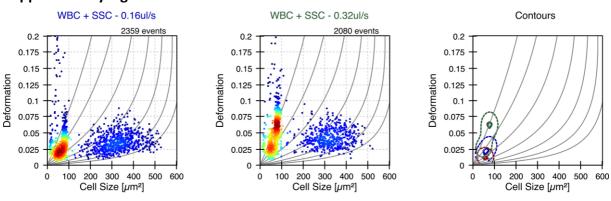


Figure S7: Deformation of WBCs and MG-63. Cells were measured at flow rates of $0.32~\mu$ L/s and in the reservoir for reference. Experiments were carried out in a 30 μ m channel microfluidic chip and at a frame rate of 2,000 fps.

Supplementary Figure 8



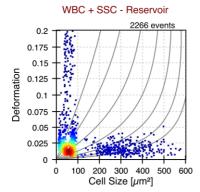


Figure S8: Deformation of WBCs and SSCs. Cells were measured at flow rates of $0.16~\mu\text{L/s}$, $0.32\mu\text{L/s}$ and in the reservoir for reference. Experiments were carried out in a 30 μ m channel microfluidic chip and at a frame rate of 2,000 fps.