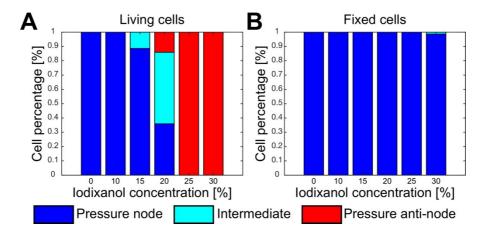
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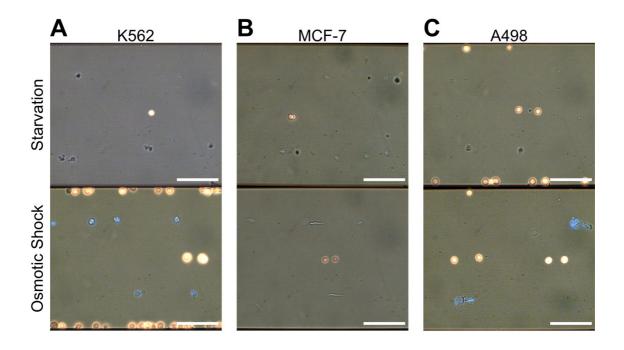
## Supplementary Information: Acoustic separation of living and dead cells using high density medium

Karl Olofsson<sup>1</sup>, Björn Hammarström<sup>1</sup> and Martin Wiklund<sup>1</sup>

<sup>1</sup>Department of Applied Physics, KTH Royal Institute of Technology, SWEDEN



**Supporting figure 1:** The separation efficiency of living and fixed MCF-7 cells depends on lodixanol concentration. To quantify the separation efficiency of living and dead cells using a density modified solution, microscopy images of trapped cells were divided into three zones; pressure node (blue), pressure anti-node (red) and intermediate (cyan). Cells were manually classified as living or dead depending on fluorescence and placed in either of the three zones. The graphs show the percentage of living MCF-7 (**A**) and fixed MCF-7 (**B**) cells found in each zone.



Supporting figure 2: Dead starvation and osmotic shock treated K562 (A), MCF-7 (B) and A498 (C) cells suspended in 30% v/v lodixanol medium are trapped in the pressure node. Scalebars are 100  $\mu$ m.