## Supplementary

## Single-cell tracking reveals super-spreading brain cancer cells with high persistence

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Figure S1: All mean-squared displacements of individual trajectories (light grey) and the mean MSD (thick colored line) at 25%, 50%, 67%, and 75% ECM concentration. The MSD is given in figure 2.



Figure S2: The entire set of trajectories for both high  $\tau_p$  (upper panel) and low  $\tau_p$  (lower panels) for 25%, 50%, 67%, and 75% ECM concentration, respectively. The redistribution of trajectories in respect to high/low  $\tau_p$  is done on the basis of figure 5.



Figure S3: Scatter plots of average migration speeds,  $\mathcal{V}$  versus persistence times,  $\tau_p$  for 25% (N = 223), 50% (N = 252), 67% (N = 123), and 75% (N = 108) ECM. Using *k*-means clustering, we identified two distinct populations; one that is log-normal distributed around a lower  $\tau_p$  (full color) and one around a higher  $\tau_p$  (lighter color).