

Supplementary Figures

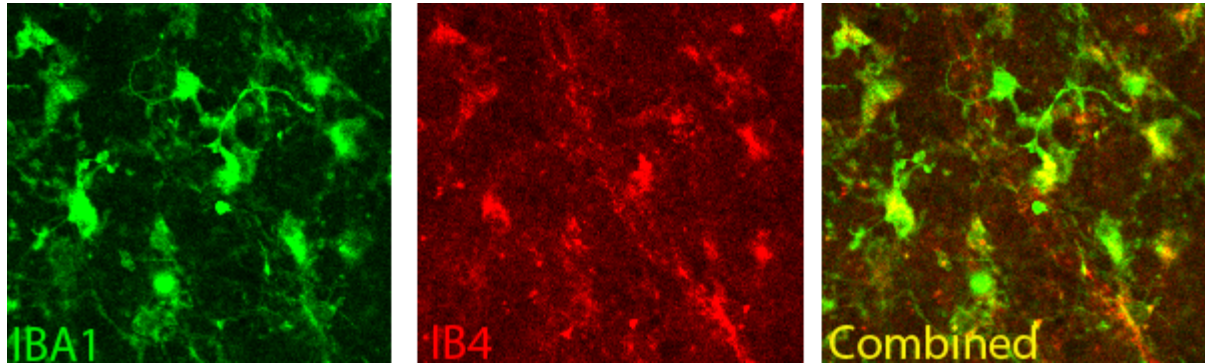


Figure 1: Confocal image analysis from PDGF-driven slice culture stained with an anti-Iba1 antibody conjugated to Cy5 which labels microglia specifically is shown in green (A) and the same field viewed in the Rhodamine channel shows the staining with Rhodamine-IB4 isolectin in red (B). The combined field indicates that the large majority of cells are Iba1+/IB4+ in yellow (C).

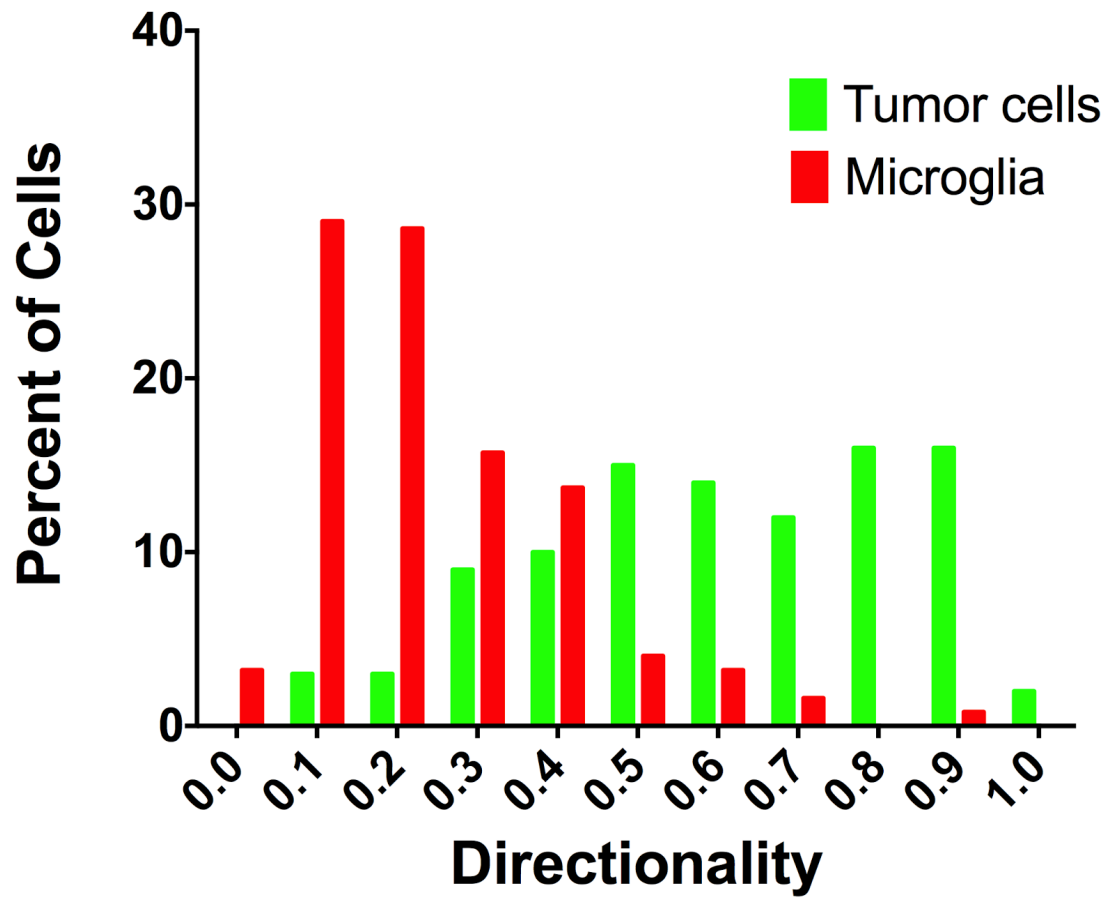


Figure 2: Percent of cells categorized by their directionality as measured by confinement ratio. Tumor cells (green) exhibit higher directionality than microglia (red).

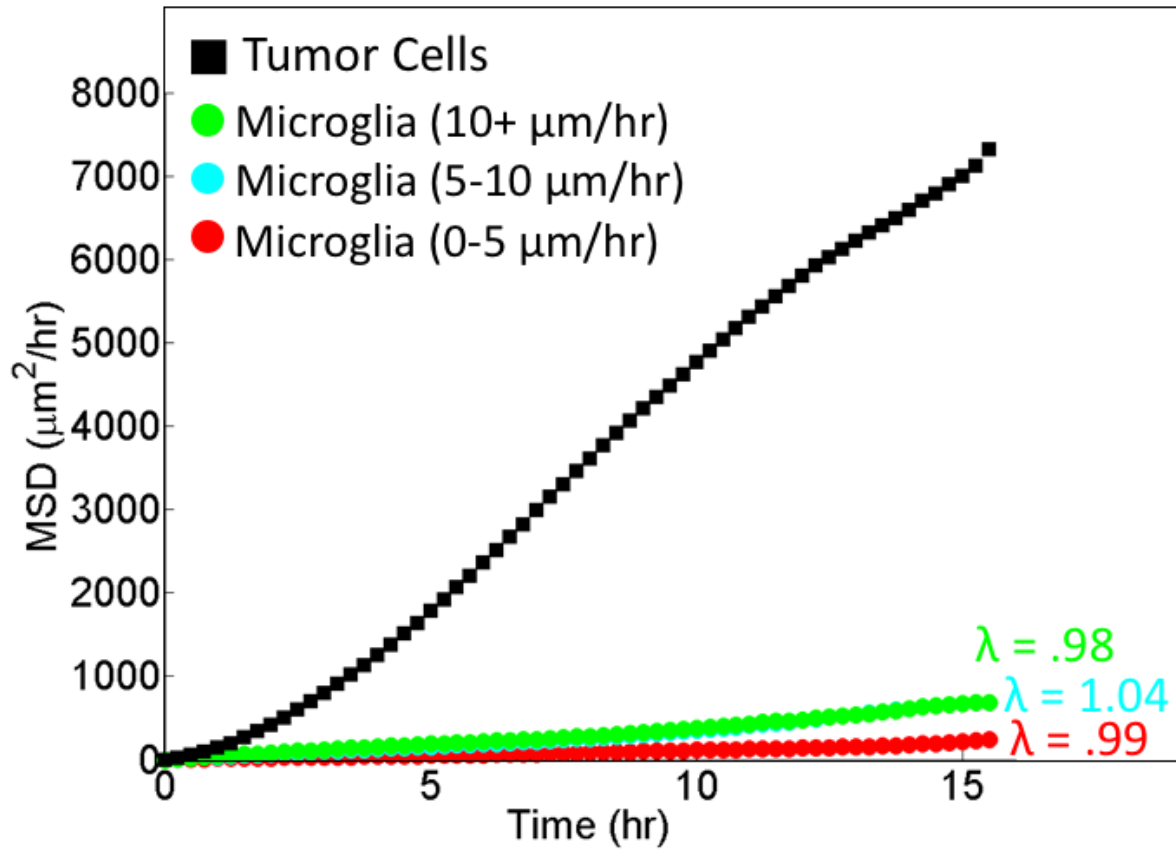


Figure 3: MSD versus time of tumor cells and microglia (split into three divisions of speed). Black squares represent all tumor cells. Microglia tracks were split by whether they moved greater than 10 $\mu\text{m}/\text{hr}$ (green), between 5-10 $\mu\text{m}/\text{hr}$ (cyan), and 0-5 $\mu\text{m}/\text{hr}$ (red). Tumor cells move much greater distances, even compared to the fastest microglia. After log transforming the axes to compute diffusion type, all three subdivisions of microglia exhibit simple diffusion because lambda for each speed subdivision is approximately 1.

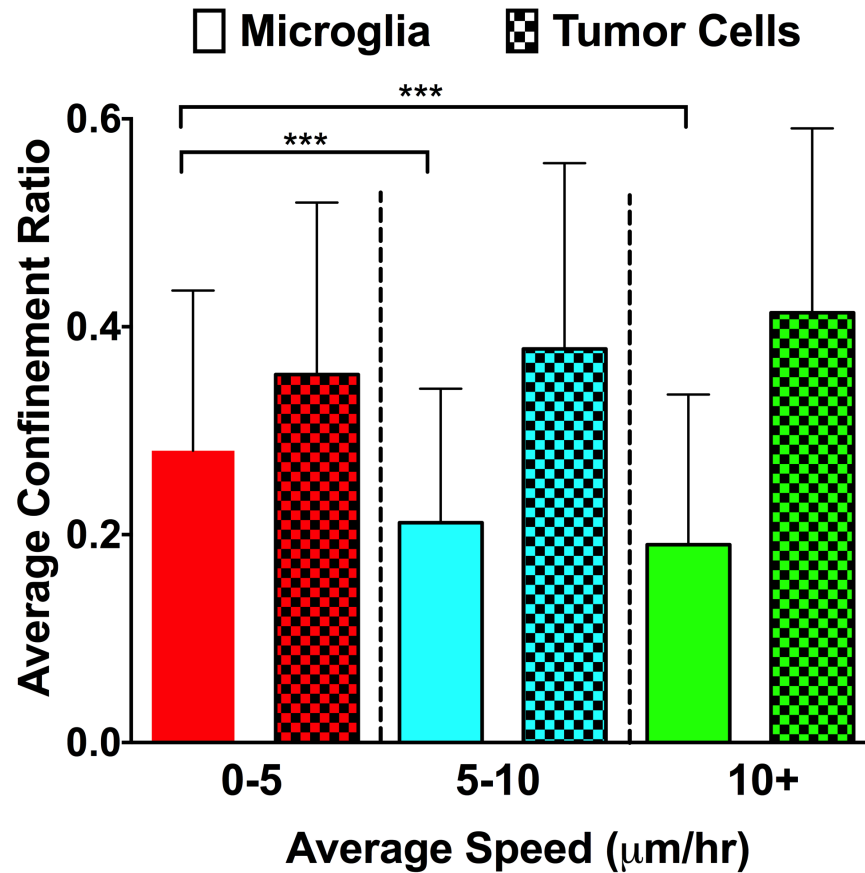


Figure 4: Individual tracks of tumor cells and microglia split into average speed groups of 0-5 $\mu\text{m/hr}$ (red), 5-10 $\mu\text{m/hr}$ (cyan), and 10+ $\mu\text{m/hr}$ (green). Boxes that are shaded represent tumor cell tracks. Average confinement ratio of microglia and tumor cells were computed based on the cell tracks within each speed group. As average speed of microglia increased, average directionality (confinement ratio) decreased.

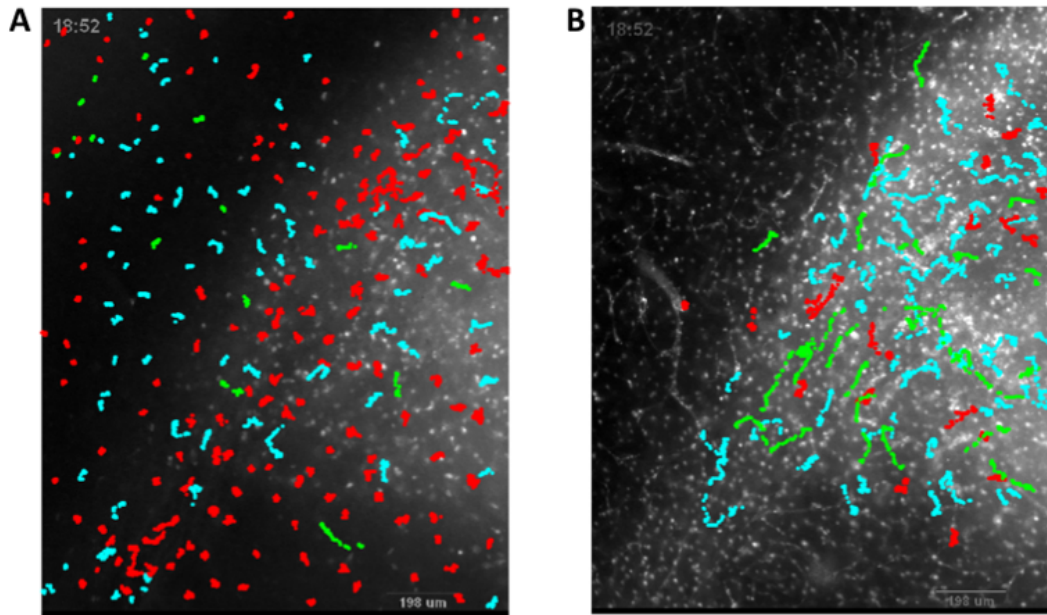


Figure 5: Cell tracking data colored by confinement ratio. Red is confinement ratio < 0.25 , cyan: $0.25 - 0.50$, green: ≥ 0.50 . Red tracks demonstrate the least directional movement, while green demonstrated the greatest. (A) Tracked microglia cells plotted on top of tumor background. (B) Tumor cell tracking data plotted on top of microglia background.

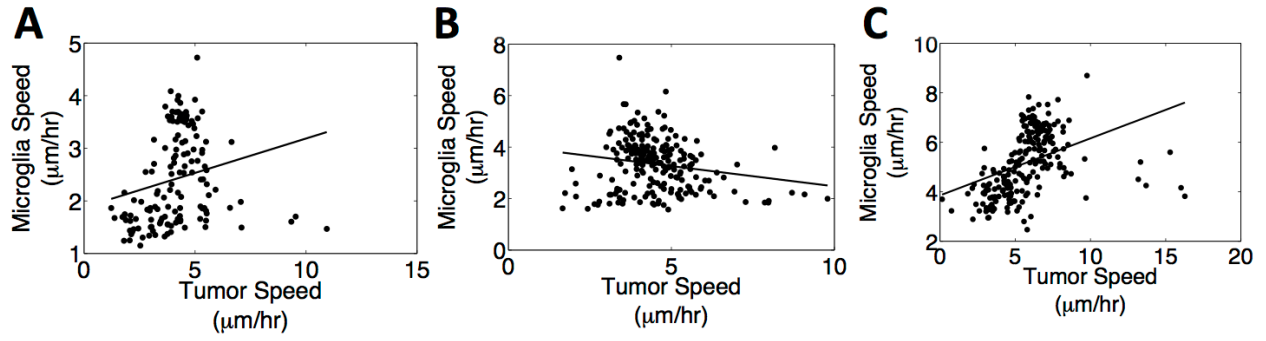


Figure 6: PIV Analysis of microglia and tumor cell speed correlations. Weak and variable correlations existed for microglia speed and tumor speed in slices from three different PDGF-induced tumors. A: $R^2 = 0.04$, B: $R^2 = 0.03$, and C: $R^2 = 0.16$