

**Supplementary Figure 2** The single cell analysis of the GFP-LC3, nuclear and cell areas after the TMZ treatment. (**A**) The graphs show the GFP-LC3 area versus the absolute nuclear (top) and cell (bottom) areas at the three intervals of the single cell tracking analysis; each line represents a single cell followed over time; the gray arrow represents the mean at each time; the red dashed line indicates the division between the NA2 and NA3 and the cP2 and cP3 population, based on Fig. 1F and Fig. 3A, respectively. (**B**) Tracks of the control cells. *Insert:*  detail of the cells without autophagy. (**C**) The single cell tracks for groups of cells that present similar characteristics on D3, D3.5, D4 and D4.5, concerning the nuclear area and the LC3-GFP area. Each colored line in each graph represents a single cell track. The days of analysis are coded by the colored circles (red: day 3; orange: day 3.5; blue: day 4; green: day 4.5). The similar cells in each day are surrounded by an ellipse with a dotted line. (**D**)The tracks of cells that entered apoptosis.