



**SUPPLEMENTARY FIG. S7.** Detection of  $\beta$ -galactosidase activity within the tumor architecture composed by Ad- $\beta$ -galactosidase-transduced MO-MSCs and tumor melanoma cells (A375N). Panels sequence shows that  $\beta$ -galactosidase-transduced cells are located first at the margins of the tumor (24 h, **A**) and later migrate into the inner cell mass (48 h after injection, **B**). *Black dots* correspond to MSCs' nuclei detected after X-Gal reaction. Skin adjacent to the tumor cell mass showing that no  $\beta$ -galactosidase+ signal corresponding to previously transduced MSCs was detected (**C**). Schematics representing the migratory kinetics within a tumor cell mass, with no MSCs migrating from the tumor area into the adjacent skin area.