

## 3D IMAGING OF THE RESPONSE TO CDC25 PHARMACOLOGICAL INHIBITION IN MULTICELLULAR SPHEROIDS.

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Multicellular tumor spheroids closely mimic the 3D organization of avascular microregions within tumors and thereby represent a valuable model for the evaluation of anticancer drugs [1,2]. In this study, we performed a 3D imaging analysis of the response to the CDC25 phosphatase [3] inhibitor IRC-083864 in HCT116 spheroids. Continuous exposure to IRC-083864 strongly inhibits the growth of spheroids and is shown to correlate with a decrease in Ki-67 positive cells. The cytotoxicity induced by IRC-083864 was examined by two-photon laser microscopy imaging and 3D reconstruction. Visualization in 3D allowed us to demonstrate that IRC-083864 treatment results in the inhibition of mitosis and induces cell death specifically localized in the outer proliferative cell layers of the spheroid structure. These results emphasize the importance of 3D models and of *in toto* analysis for the evaluation of anticancer drugs cytotoxicity [4].

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