Cells were irradiated at the Bio-resources Centre (BRC), Melbourne, Australia using a Gammacell® 40 Irradiator (Best® Theratronics – Ottawa Canada). This machine delivered 0.9967584Gy/Min. Dose Uniformity (typical) was ±7% over a 260mm diameter and 100mm height chamber. Cells were irradiated using a single dose of 10Gy with control cells receiving 0Gy (no radiotherapy). This dosing regime was developed after consultation with radiation oncologists and review of existing literature estimating the surface dose of irradiation with thermo-luminescent dosimeters as about 10-20% of total dose targeting the underlying tumour. However, this surface dose is expected to be much higher in a clinical situation (up to 40-50%), where oblique or multi-beam therapy is used and entry, exit along with scatter of the beams must be accounted for 62. The experimental dose also accounts for the difference between cells in *in vivo* and *in vitro* culture, suggesting the total dose required to induce the same damage is about 5 times lower in cell culture 63. Using 50-70Gy as an average total dose and conducting several pilot studies to screen and observe effects of 2-15Gy doses; we decided on 10Gy as a single dose as it is clinically relevant, consistent with current literature, guided by current expert opinion and allowed further study of the *sublethal* effects of radiotherapy. Fractionated dose regime of 2Gy given in 5 fractions, were also screened as part of the pilot study. Results determined there was no significant difference in the overall direction of effect, e.g. proliferation was reduced in both single and fractionated groups, therefore for *invitro* experimentation a single 10Gy dose was utilised (data not shown).

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