

Legends for Supplementary Figures:

Supplementary Figure 1: Radio-responsiveness of A549. Cell survival curves of the A549 cells in response to direct and RCM exposure at doses 1 to 6 Gy, as assessed by colony-forming assay. Error bars represent standard errors obtained from a mean of three independent experiments.

Supplementary Figure 2: Radio-responsiveness of H460. Cell survival curves of the H460 cells in response to direct and RCM exposure at doses 1 to 6 Gy, as assessed by colony-forming assay. Error bars represent standard errors obtained from a mean of three independent experiments.

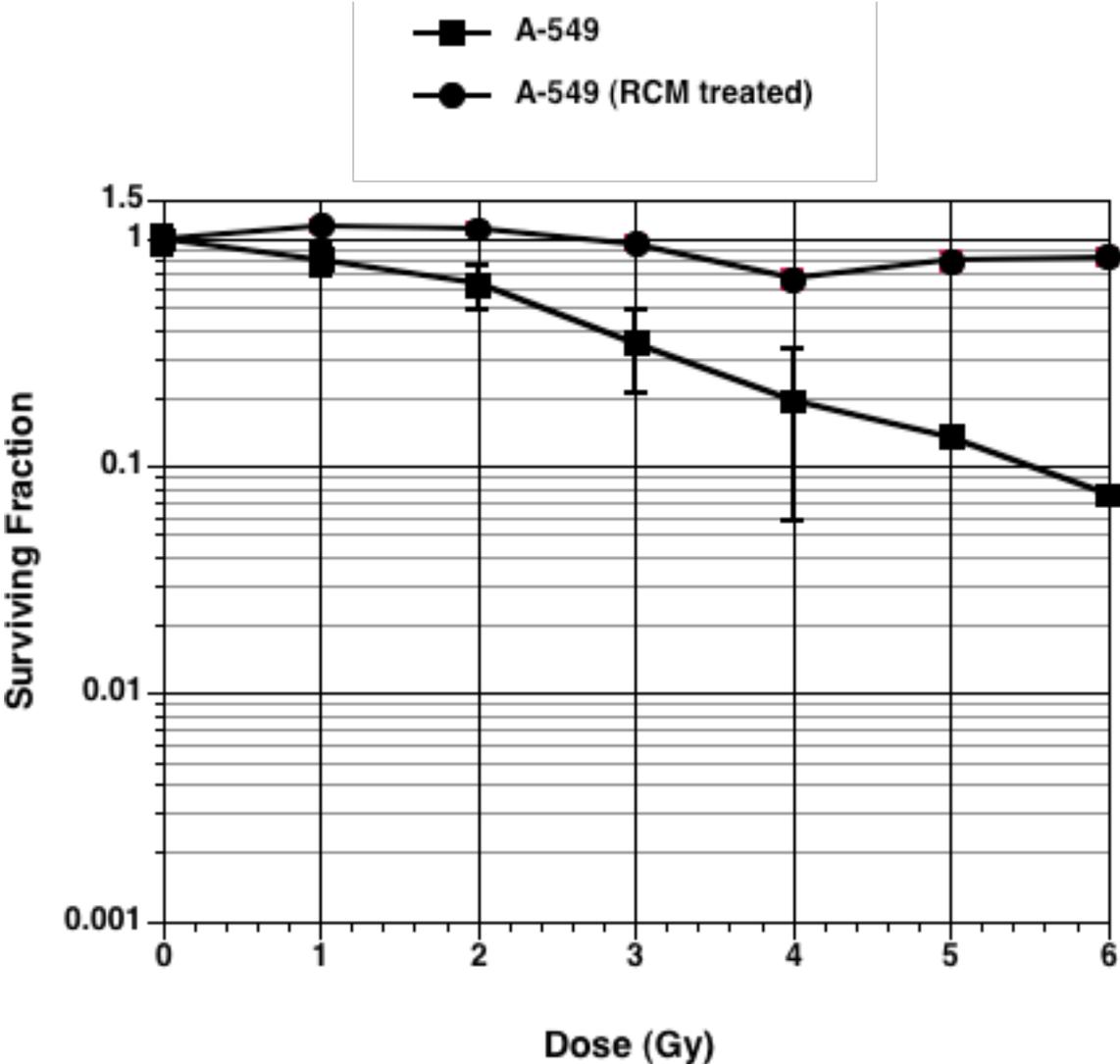
Supplementary Figure 3. Western analysis shows downregulation of EGR-1 by stable Egr1 SiRNA vector expressing A549 cells. A549 cells were stably transfected with either EGR1 SiRNA or a control SiRNA vector. Cells were selected by neomycin. Cells extracts were analyzed for the expression of EGR1 by Western immunoblot.

Supplementary Figure 4. RCM swapping leads to reversal of sensitivity in MEF cells as a function of EGR-1. Figure 5C demonstrated that MEF/EGR1^{+/-} cells were more sensitive to 10 Gy RCM as compared to MEF/EGR1^{-/-} cells. This was observed with iso-RCM transfer. With hetero-RCM transfer, significant cell death was observed in MEF/EGR1^{-/-} cells, suggesting that the factors released from 10 Gy irradiated MEF/EGR1^{+/-} cells had deleterious effect on MEF/EGR1^{-/-} cells.

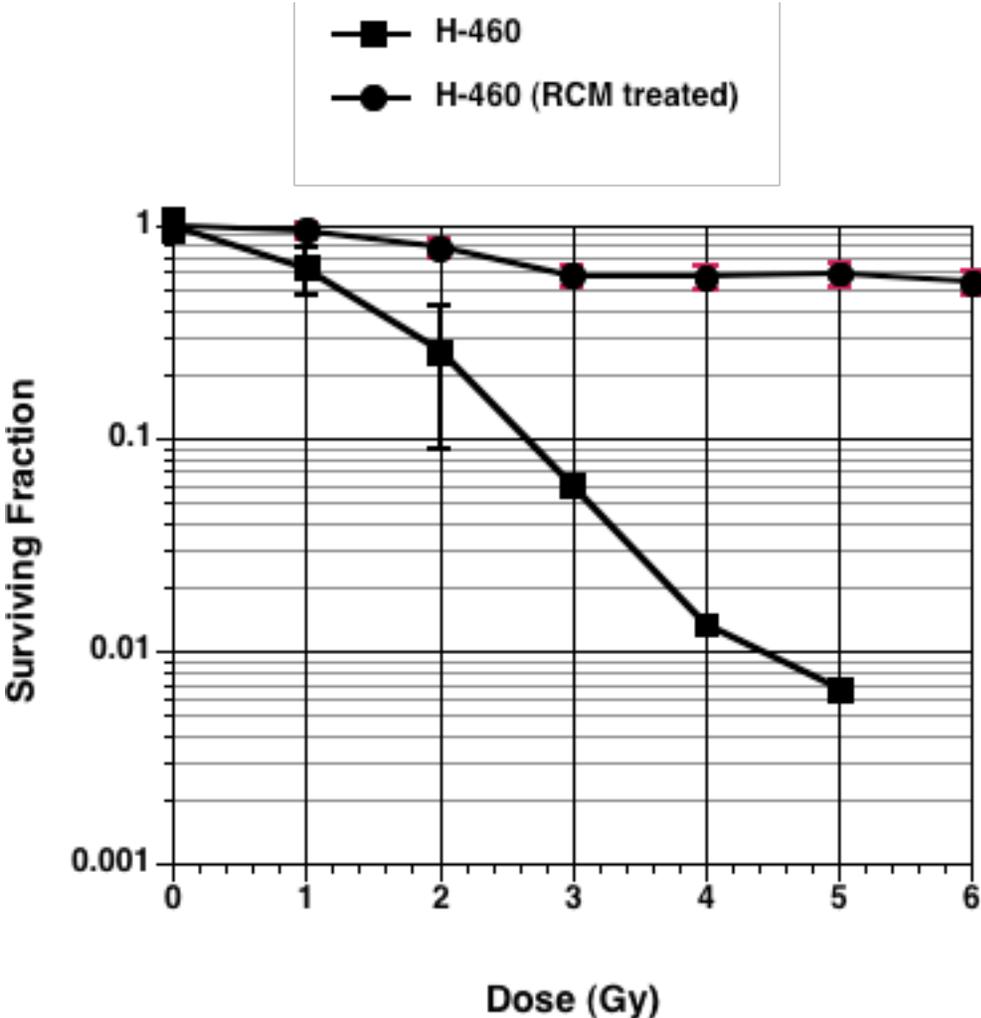
Supplementary Figure 5. Overexpression of EGR-1 in MEF/EGR1^{-/-} restored 10 Gy RCM sensitivity. MEF/EGR1^{-/-} cells were infected either with Ad-GFP or Ad-EGR-1. Western blot analysis in the inset shows the levels of EGR-1 expression in the MEF cells. After ectopic overexpression of EGR-1, these cells were exposed to 10 Gy RCM or 10 Gy RCM plus 2 Gy of

radiation and left for either 24 or 48 hrs and the apoptosis was determined by TUNEL assay. These results demonstrate restoration of induction of apoptosis when EGR-1 protein expression was restored. The error bars represent standard error obtained from the mean of three independent experiments.

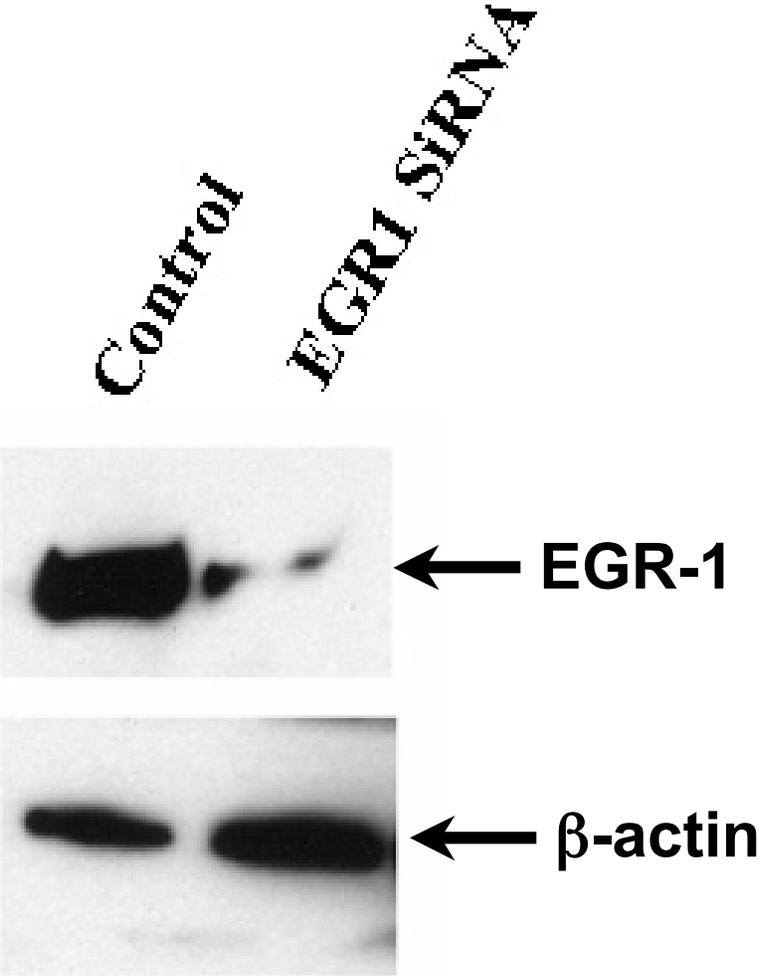
Supplementary Figure 1



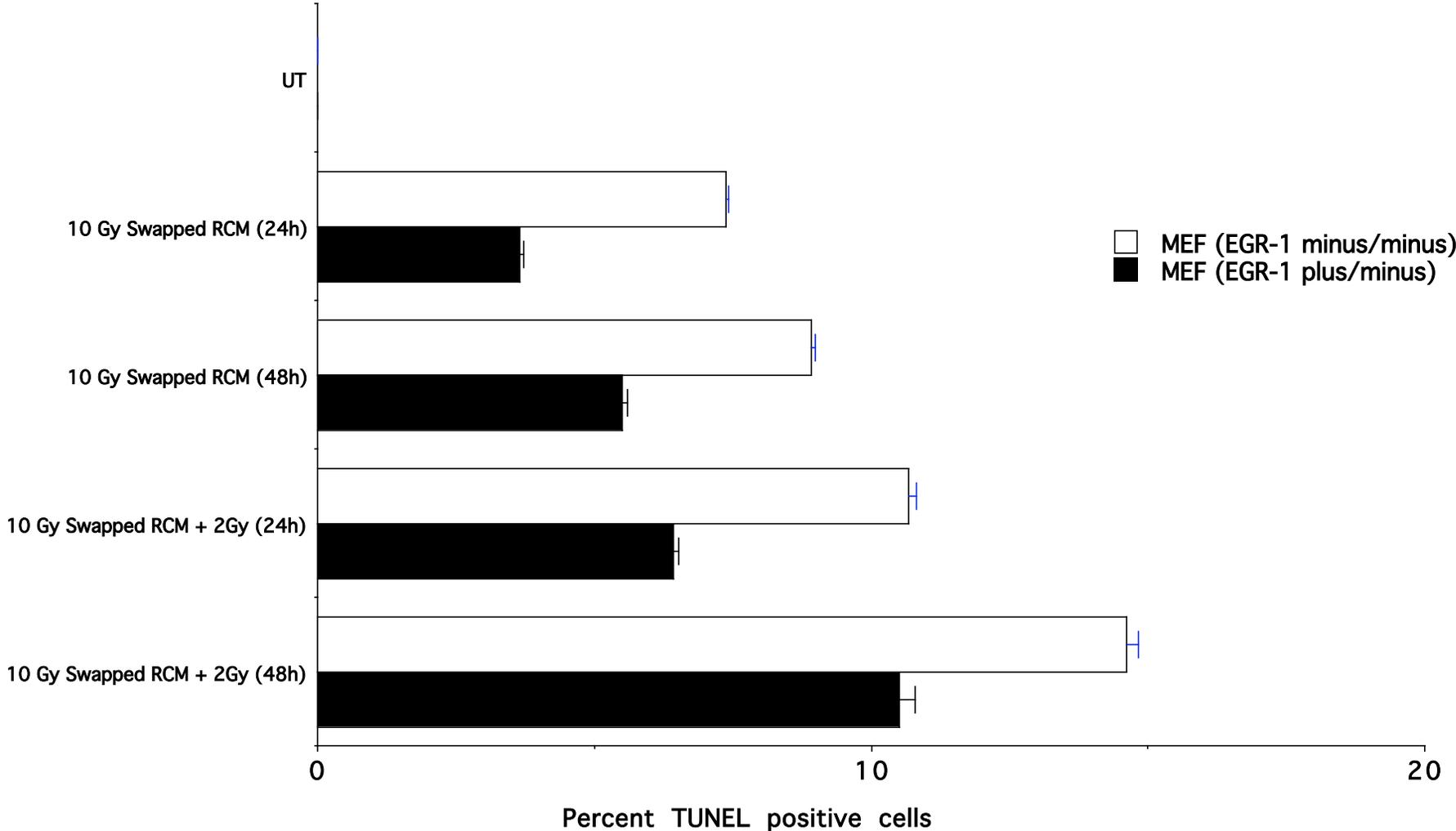
Supplementary Figure 2



Supplementary Figure 3



Supplementary Figure 4



Supplementary Figure 5

