Overview of pathways affected after 2 and 0.05 Gray. * = p < 0.05



Sumoylation Pathway -		*		*	
RAR Activation -		*		*	
Colanic Acid Building Blocks Biosynthesis -		*			
Role of CHK Proteins in Cell Cycle Checkpoint Control -		*			
Tec Kinase Signaling -		*			-log(p-value)
Sirtuin Signaling Pathway -		*		*	3
Breast Cancer Regulation by Stathmin1 -		*		*	1
CXCR4 Signaling -		*		*	Predicted state (z-score)
Growth Hormone Signaling -		*	*	*	Activated Inactivated
Molecular Mechanisms of Cancer -		*	*	*	
Pancreatic Adenocarcinoma Signaling -		*	*	*	
Chronic Myeloid Leukemia Signaling -		*	*	*	
Prolactin Signaling -		*	*	*	
Cell Cycle: G1/S Checkpoint Regulation -		*		*	
Role of Pattern Recognition Receptors in Recognition of Bacteria and Viruses -	*				
ILK Signaling -	*		*	_	
HMGB1 Signaling -	*				
Aryl Hydrocarbon Receptor Signaling -	*				
ErbB2–ErbB3 Signaling -	*		*		
Endocannabinoid Cancer Inhibition Pathway -	*			*	
Systemic Lupus Erythematosus In B Cell Signaling Pathway -	*			*	
Role of Cytokines in Mediating Communication between Immune Cells -	*				



Web Figure 7: Shared pathways from low and high dose ionizing radiation experiments. Gy = Gray.

Overview of pathways only affected after 2 Gray. * = p < 0.05

Gap Junction Signaling -	*	
Basal Cell Carcinoma Signaling -	*	
HOTAIR Regulatory Pathway -	*	
CCR3 Signaling in Eosinophils -	*	
Wnt/Ca+ pathway -	*	
Dopamine–DARPP32 Feedback in cAMP Signaling -	*	
DNA Double–Strand Break Repair by Homologous Recombination -	*	
Mitochondrial Dysfunction -	*	
Sertoli Cell–Sertoli Cell Junction Signaling -	*	
VEGF Signaling -	*	
Cardiomyocyte Differentiation via BMP Receptors -	*	
Synaptic Long Term Potentiation -	*	
EIF2 Signaling -	*	
Wnt/b–catenin Signaling -	*	
Ovarian Cancer Signaling -	*	
Cyclins and Cell Cycle Regulation -	*	
UVC–Induced MAPK Signaling -	*	
Gluconeogenesis I -	*	
Epithelial Adherens Junction Signaling -	*	
Glycolysis I -	*	
Mouse Embryonic Stem Cell Pluripotency -	*	
Factors Promoting Cardiogenesis in Vertebrates -	*	
BER pathway -	*	
Estrogen–Dependent Breast Cancer Signaling -	*	
BMP signaling pathway -	*	
Glioma Signaling -	*	
NER Pathway -	*	
GNRH Signaling -	*	
Regulation of the Epithelial–Mesenchymal Transition Pathway -	*	
Role of NFAT in Cardiac Hypertrophy -	*	
ErbB4 Signaling -	*	
Ephrin B Signaling -	*	
Nucleotide Excision Repair Pathway -	*	
PD-1. PD-L1 cancer immunotherapy pathway -	*	
D-mvo-inositol (3.4.5.6)-tetrakisphosphate Biosynthesis -	*	
D-mvo-inositol (1.4.5.6)-Tetrakisphosphate Biosynthesis -	*	
14–3–3–mediated Signaling -	*	
Role of Macrophages. Fibroblasts and Endothelial Cells in Rheumatoid Arthritis	*	
EGF Signaling -	*	
Renal Cell Carcinoma Signaling -	*	
Non-Small Cell Lung Cancer Signaling -	*	
Antiproliferative Role of TOB in T Cell Signaling -	*	
Iron homeostasis signaling pathway -	*	
FAT10 Cancer Signaling Pathway -	*	
fMLP Signaling in Neutrophils -	*	
Ephrin A Signaling -	*	
Prostanoid Biosynthesis -	*	
Endoplasmic Reticulum Stress Pathway -	*	
Circadian Rhythm Signaling -	*	
Acute Myeloid Leukemia Signaling -	*	
Hereditary Breast Cancer Signaling	*	
Endometrial Cancer Signaling	*	
Melonomo Cignaling	*	

Melanoma Signaling Ephrin Receptor Signaling -PDGF Signaling -IL-3 Signaling -Ga12/13 Signaling -Ceramide Signaling -Unfolded protein response -ERK/MAPK Signaling -Erythropoietin Signaling -TGF-b Signaling -Opioid Signaling Pathway -SPINK1 General Cancer Pathway -Prostate Cancer Signaling -HGF Signaling -CNTF Signaling -Rac Signaling -ERK5 Signaling -Germ Cell–Sertoli Cell Junction Signaling -T Cell Exhaustion Signaling Pathway -UVA-Induced MAPK Signaling -HIPPO signaling -LPS-stimulated MAPK Signaling -IL–6 Signaling -CD27 Signaling in Lymphocytes -IL-8 Signaling -FLT3 Signaling in Hematopoietic Progenitor Cells -* * BAG2 Signaling Pathway -* ErbB Signaling -* CD28 Signaling in T Helper Cells -* Synaptogenesis Signaling Pathway -* Cholecystokinin/Gastrin-mediated Signaling -* RANK Signaling in Osteoclasts -* Phospholipase C Signaling -NRF2-mediated Oxidative Stress Response -* * Glioma Invasiveness Signaling -* Heparan Sulfate Biosynthesis (Late Stages) -* Reelin Signaling in Neurons -* Type I Diabetes Mellitus Signaling -* Paxillin Signaling -Role of p14/p19ARF in Tumor Suppression -* * Insulin Receptor Signaling -Role of IL-17A in Arthritis -* CD40 Signaling -Hepatic Fibrosis Signaling Pathway -Glucocorticoid Receptor Signaling -Clathrin-mediated Endocytosis Signaling -Cardiac Hypertrophy Signaling -NGF Signaling -Myc Mediated Apoptosis Signaling -Polyamine Regulation in Colon Cancer -Role of Tissue Factor in Cancer mTOR Signaling -SAPK/JNK Signaling -AMPK Signaling -Parkinson's Signaling -

4 3 2 1 0 Predicted state (z-score) Activated Inactivated NA

-log(p-value)

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Web Figure 8: Pathways only affected in high dose ionizing radiation experiments. Gy = Gray.

IL–17 Signaling -

Experiment