

Estimating the impact of indirect action in neutron-induced DNA damage clusters and neutron RBE



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There remains much to learn on the underlying mechanisms of radiation-induced carcinogenesis. In this study, we investigated neutron-induced DNA damage using Monte Carlo simulations, with a particular focus on the impact of indirect radiation action on DNA damage clusters and neutron relative biological effectiveness (RBE).



P220 Radiation Effects dna-damage neutrons radiation radiation-protection radiology rbe

Summary

We studied the impact of indirect action in neutron-induced DNA damage clusters and neutron RBE. We found that indirect action notably aggravates existing DNA damage due to direct action. Our RBE results suggest that the infliction of DNA damage clusters alone does not completely explain the energy dependence of neutron-induced stochastic effects.