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Investigation of Ultrashort Electron Beam Interaction with the DNA Molecule

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Electron linear accelerators are the primary equipment of a modern radiotherapy department. Current research aimed at investigating the possibility of using ultrashort low emittance electron beam pulses for radiation therapy produced by linear electron accelerator at CANDLE, Armenia. High-energy radiation damages genetic material - DNA of cells and thus killing the cancer cells. The study and understanding of the mechanisms of radiation causing damage to DNA is one of the actuality problems for the development of new cancer therapies and effective radiosensitizers.

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