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Dr. Ronald Myers
Science Editor
JOVE

Dear Dr. Myers,

I am pleased to submit a protocol for the Tumor Microenvironment Methods Collection entitled 'Analysis of DNA damage and repair mechanisms by immunofluorescence technique after neutron mixed-beam irradiation used in boron neutron capture therapy in colon cancer cells' for consideration for publication in JOVE.

In this manuscript, we show that radiation-induced foci of repair proteins are useful markers for immunofluorescent detection of DNA repair and damage activated by boron neutron capture therapy (BNCT). Mechanisms of DNA repair activated by BNCT have not been fully determined. We present immunofluorescence assay in colon cancer cells after irradiation by the neutron-mixed beam.

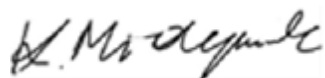
We believe that this manuscript is appropriate for publication by JOVE because it demonstrates immunofluorescence procedure which will allow biological effects at the cellular level in protein levels at DNA-double strand breaks sites not only in BNCT therapy but also could be useful in the evaluation of biological effects in other anti-cancer therapies. Moreover, the immunofluorescence method of detection of DNA damage response and DNA repair could be a general potential method for assessing tumor detection.

This manuscript has not been published and is not under consideration for publication elsewhere. We have no conflicts of interest to disclose.

Thank you for your consideration!

Sincerely,

Kamila Maliszewska-Olejniczak



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