

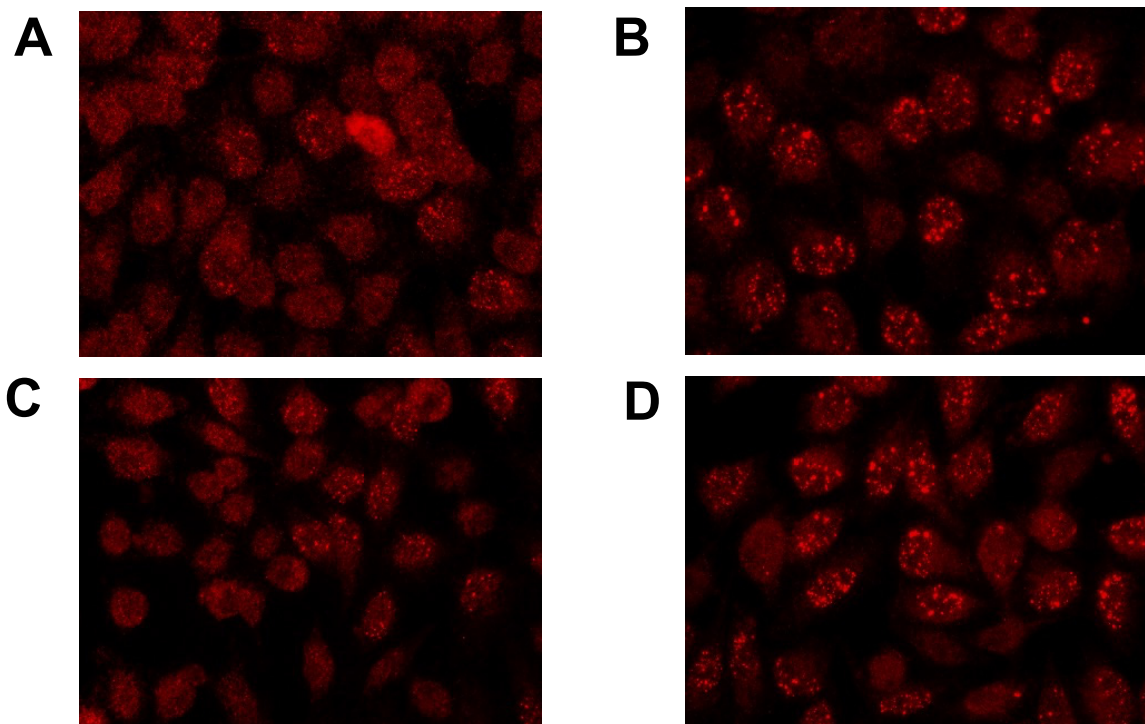
## Impact of manganese and chromate on specific DNA double strand break repair pathways

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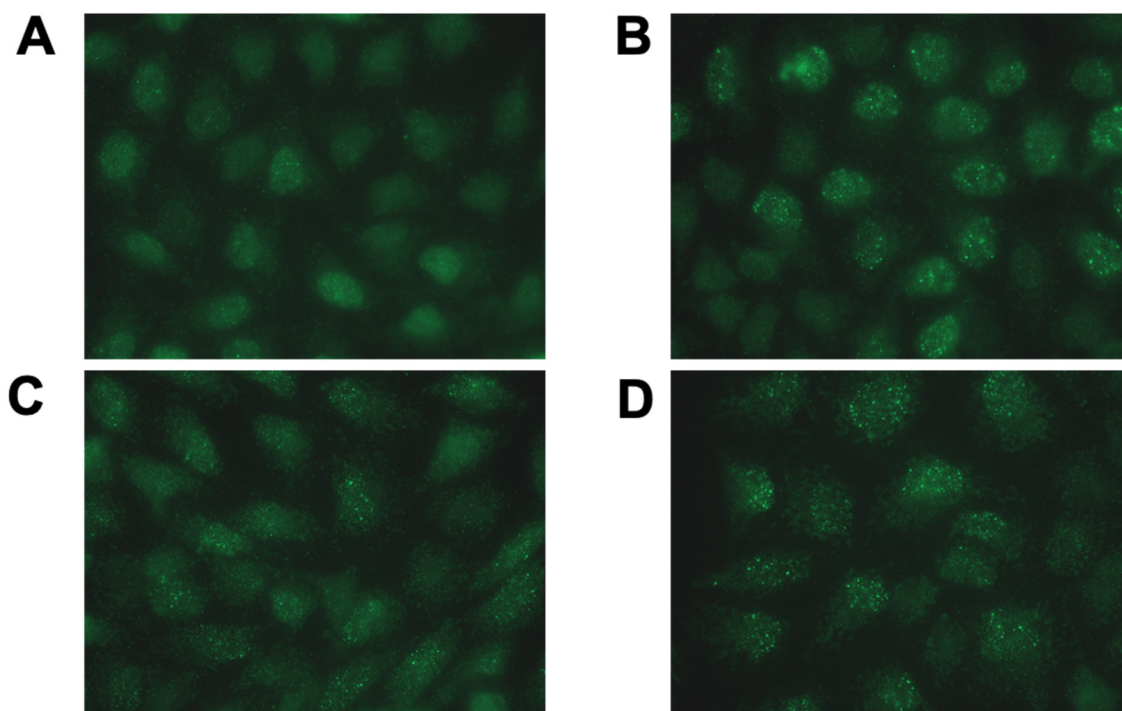
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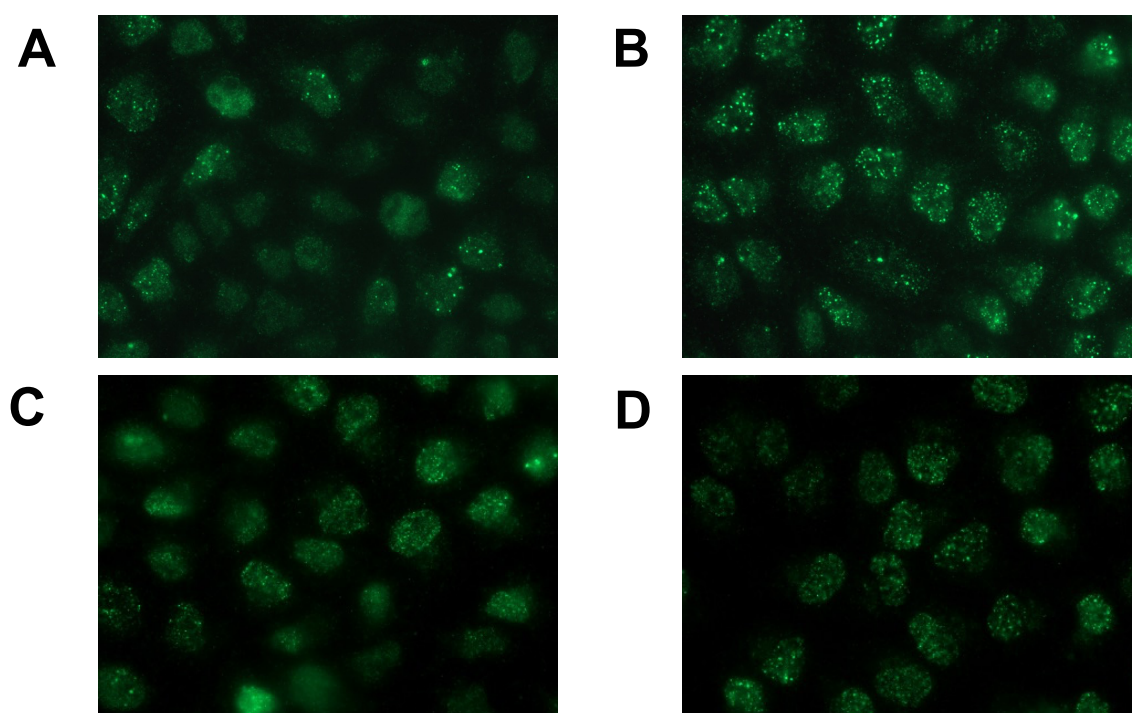
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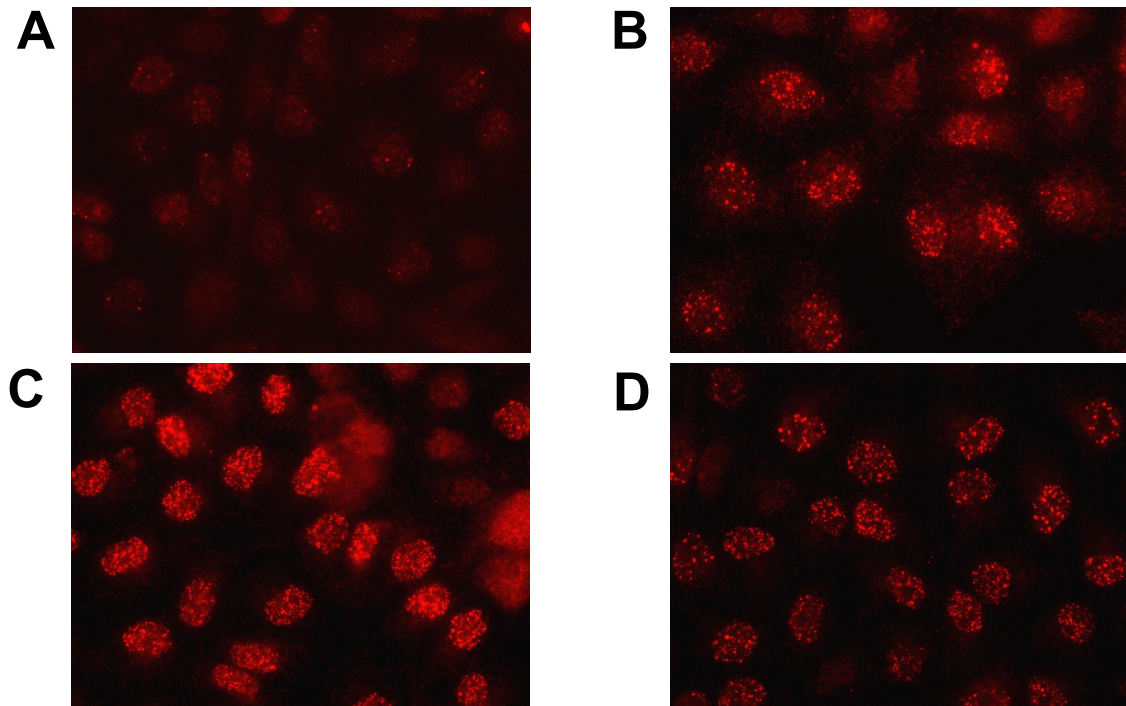
**Figure S1.** Impact on Rad51 foci formation by manganese and irradiation in HeLa S3 cells. A: Control; B: Irradiation with 1 Gy; C: 64 + 8 h manganese treatment (250 µM); D: 64 h pre-incubation with 250 µM manganese, 1 Gy irradiation and 8 h post-incubation with manganese.



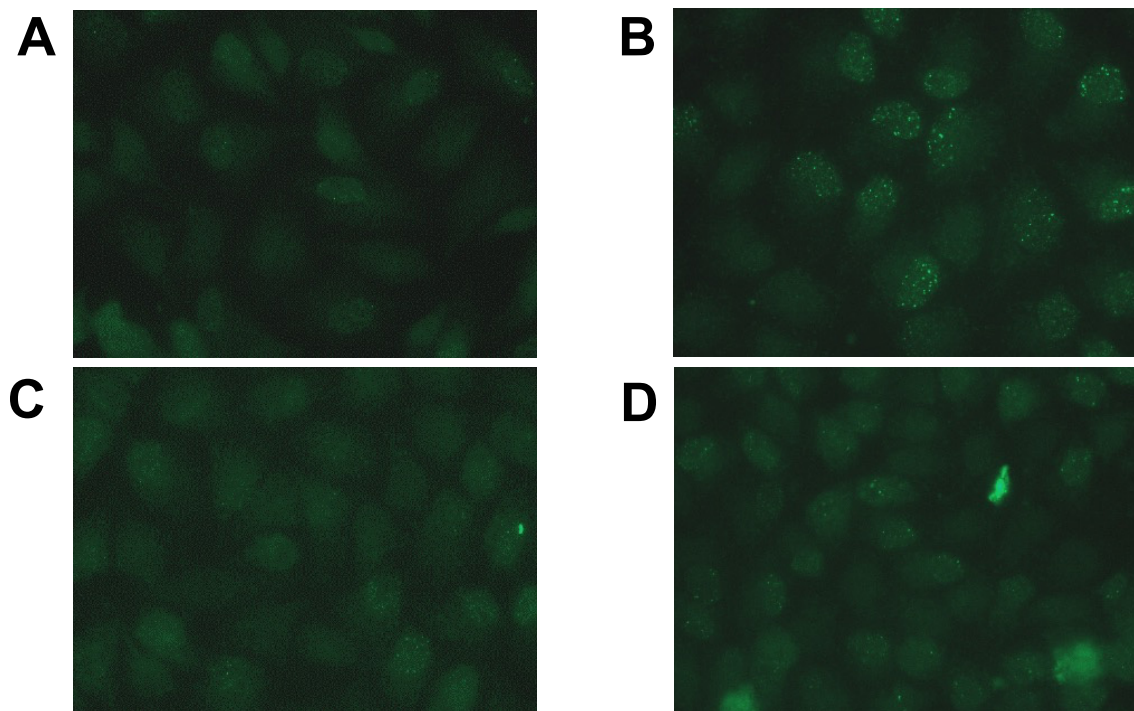
**Figure S2.** Impact on Rad54 foci formation by manganese and irradiation in HeLa S3 cells. A: Control; B: Irradiation with 1 Gy; C: 64 + 8 h manganese treatment (250  $\mu$ M); D: 64 h pre-incubation with 250  $\mu$ M manganese, 1 Gy irradiation and 8 h post-incubation with manganese.



**Figure S3.** Impact on BRCA1 foci formation by Cr(VI) and irradiation in HeLa S3 cells. A: Control; B: Irradiation with 1 Gy; C: 64 + 8 h Cr(VI) treatment (2.5  $\mu$ M); D: 64 h pre-incubation with 2.5  $\mu$ M K<sub>2</sub>Cr<sub>2</sub>O<sub>7</sub>, 1 Gy irradiation and 8 h post-incubation with K<sub>2</sub>Cr<sub>2</sub>O<sub>7</sub>.



**Figure S4.** Impact on RAD51 foci formation by Cr(VI) and irradiation in HeLa S3 cells. A: Control; B: Irradiation with 1 Gy; C: 64 + 8 h Cr(VI) treatment (2.5  $\mu$ M); D: 64 h pre-incubation with 2.5  $\mu$ M  $K_2Cr_2O_7$ , 1 Gy irradiation and 8 h post-incubation with  $K_2Cr_2O_7$ .



**Figure S5.** Impact on RAD54 foci formation by Cr(VI) and irradiation in HeLa S3 cells. A: Control; B: Irradiation with 1 Gy; C: 64 + 8 h Cr(VI) treatment (2.5  $\mu$ M); D: 64 h pre-incubation with 2.5  $\mu$ M  $K_2Cr_2O_7$ , 1 Gy irradiation and 8 h post-incubation with  $K_2Cr_2O_7$ .