

27. Radiation as a therapeutic agent
1 unit, Simon Powell, October 7, 2025

Cellular stress responses

Altered metabolism

DNA damage

Free Radical Stress

Unfolded protein response

Cytosolic DNA (occasionally as micronuclei)

Cytokine release from cells

Inflammatory response

Immune infiltrate

Discussion Paper:

Huang J, Theelen WSME, Belcaid Z, Najjar M, van der Geest D, Singh D, Cherry C, Balan A, White JR, Wehr J, Karchin R, Niknafs N, van den Heuvel MM, Velculescu VE, Smith KN, Baas P, Anagnostou V. Combination of pembrolizumab and radiotherapy induces systemic antitumor immune responses in immunologically cold non-small cell lung cancer. *Nat Cancer*. 2025 Jul 22. doi: 10.1038/s43018-025-01018-w. Epub ahead of print. PMID: 40696153.