Cite this as: Lisha ZHOU, Changsheng DONG, Zhuoming XU, Xinran WANG, Luyi ZHANG, Siyuan CHEN, Jiahao CHEN, Yingying ZHU. NEDD8-conjugating enzyme E2 UBE2F confers radiation resistance by protecting lung cancer cells from apoptosis[J]. Journal of Zhejiang University Science B, 2021, 22(11): 959-965. http://doi.org/10.1631/jzus.B2100170

NEDD8-conjugating enzyme E2 UBE2F confers radiation resistance by protecting lung cancer cells from apoptosis

Key words: **UBE2F, Oxidative stress, Radiosensitization, Apoptosis, Lung cancer**

JZUS-B

Research Summary

This study uncovers a novel mechanism: Neddylation of E2 UBE2F helps lung cancer cells to escape irradiation-induced cell apoptosis and consequently results in radioresistance.

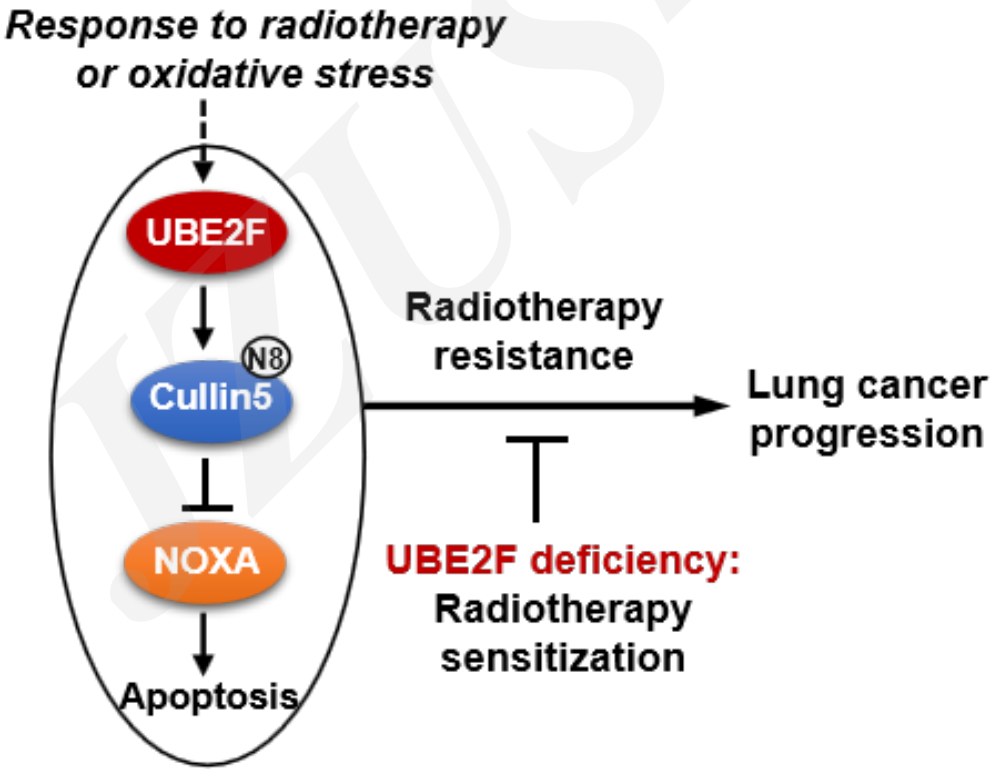


Figure 4D

Innovation points

- **Up-regulation of UBE2F expression by irradiation or other stimulus-induced oxidative stress.**
- **Sensitization of lung cancer cells to irradiation by inhibition of UBE2F, caused by accumulation of pro-apoptotic protein NOXA.**
- **Effect of UBE2F inhibition on lung cancer cells *in vivo*.**
- **Overexpression of UBE2F in human lung adenocarcinoma conferred a poor overall survival.**
- **In summary, inactivation of UBE2F serves as a potent radiosensitizing strategy in lung cancer cells by triggering NOXA-mediated apoptosis.**

IZUSEB