Stanford



Lucy Whitmore

Postdoctoral Scholar, General Surgery

Bio

BIO

Lucy Whitmore is a radiation physics researcher at Stanford University working on emerging radiotherapy technologies, with a particular focus on ultra-high dose-rate (FLASH) radiation delivery. Her research combines radiation dosimetry, preclinical irradiation, Monte Carlo simulation, accelerator physics, treatment planning, and quantitative analysis of radiation biology studies. She also works on very-high-energy electron beams, detector response, radiochromic film dosimetry, and the development of reproducible experimental and computational workflows for translational radiotherapy research.

PROFESSIONAL EDUCATION

- Doctor of Philosophy, University of Manchester (2023)
- Master of Science, University of Manchester (2019)
- PhD, University of Manchester , Particle Physics (2023)
- MPhys, University of Manchester , Physics with Theoretical Physics (2019)

STANFORD ADVISORS

- Frederick Dirbas, Postdoctoral Faculty Sponsor

Publications

PUBLICATIONS

- **FLASH reduces radiation-induced oral mucositis in a mouse model of Fanconi anemia.** *Clinical and translational radiation oncology*
  Loo, P., Pan, M., Zhao, M., Melemenidis, S., Schulz, J. B., Chen, D., Whitmore, L., Richter, S., Dirbas, F. M., Casey, K. M., Graves, E. E., Epperly, M. W., Greenberger, et al
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- **SIRT3 Activator Honokiol Prevents Cardiac Dysfunction After Thoracic Irradiation via Mitochondrial Homeostasis**
  Jahng, J., Gao, J., Achter, J., Cho, S., Cao, X., Jousma, J., Wu, D., Hu, E., Whitmore, L., Dirbas, F., Loo, B., Lundby, A., Wu, et al
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- **Volumetric FLASH dosimetryin vivousing real-time radiacoustic imaging.** *Physics in medicine and biology*
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- **FLASH reduces radiation-induced oral mucositis in a mouse model of Fanconi anemia.** *bioRxiv : the preprint server for biology*
  Loo, P., Pan, M., Zhao, M., Melemenidis, S., Chen, D., Whitmore, L., Richter, S., Dirbas, F. M., Casey, K. M., Graves, E. E., Epperly, M. W., Greenberger, J., Loo, et al
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- **A Physics-Informed Neural Network for In Vivo Dosimetry Using Quantitative Radiacoustic Imaging.** *Research square*
  Sun, L., Bjegovic, K., Rodriguez-Gonzalez, L., Xu, Y., Yan, Y., Gonzalez, G., Whitmore, L., Connell, L., Lang, Y., Pandey, P., Ren, L., Sch Ler, E., Chen, et al
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- **Very high-energy electrons as radiotherapy opportunity** *EUROPEAN PHYSICAL JOURNAL PLUS*
  Fischer, J., Whitmore, L., Desrosiers, C., Sheehy, S., Bazalova-Carter, M.
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- **CERN-based experiments and Monte-Carlo studies on focused dose delivery with very high energy electron (VHEE) beams for radiotherapy applications.** *Scientific reports*
  Whitmore, L., Mackay, R. I., van Herk, M., Korysko, P., Farabolini, W., Malyzhenkov, A., Corsini, R., Jones, R. M.
  2024; 14 (1): 11120

- **Focused VHEE (very high energy electron) beams and dose delivery for radiotherapy applications.** *Scientific reports*
  Whitmore, L., Mackay, R. I., van Herk, M., Jones, J. K., Jones, R. M.
  2021; 11 (1): 14013