

Decoding the Cancer Conundrum: Mitigating Uncertainties for Precision Treatment

Asst. Prof. Lydia J Wilson

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Lecturer: Lydia J Wilson, Assistant Professor, Medical Physicist at Department of Radiation Oncology, Sidney Kimmel Cancer Center and Medical College)

Time and place: May 9, 2024 at 11 am, Lecture hall of Institute for Medical Research and Occupational Health, Ksaverska Cesta 2, Zagreb, Croatia

Abstract

Advanced cancer-care technologies have ushered in an age of precision medicine. Precision medicine involves tailoring treatments to patient-specific anatomic, molecular, and functional characteristics. Unfortunately, uncertainties in patient evaluations and treatment deliveries obscure the full beneficial potential of cutting-edge treatments. This talk will detail three ongoing projects at Thomas Jefferson University that aim to reduce uncertainties for improved patient outcomes. The projects leverage advanced research tools like data mining, 3D printing, and high-resolution radiation detection to address gaps in knowledge in surgical resections and radiopharmaceutical therapy procedures. The knowledge gained will help clinicians make better-informed decisions and offer vulnerable patients with poor prognoses more efficacious treatment options.

Curriculum Vitae

Lydia Wilson is a board-certified medical physicist and assistant professor in the Department of Radiation Oncology at Thomas Jefferson University. She completed her bachelor's degree in physics at the University of California, Berkeley, and her Master's and PhD in medical physics at Louisiana State University. Lydia's passion for scientific investigation led her to seek postdoctoral training at St. Jude Children's Research hospital before pursuing an academic career rooted in research, teaching, and clinical service. Lydia's research aims to improve the length and quality of life for patients who receive cancer diagnoses by developing the next generation of treatment-effect evaluation and prediction tools that will enable highly personalized treatments and survivorship care.

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