Washington Statistical Society Statistical Seminar Event

Title: Statistical Issues in Prediction-Based Medicine: Example of Lung Cancer Screening

Speaker: Dr. Hormuzd Katki, PhD, Principal Investigator, Biostatistics Branch, DCEG, NCI
Chair: Yan Li, Program Chair, Washington Statistical Society (WSS)
Date: Monday, June 6, 2022
Time: 11:00AM – 12:00PM EST

Abstract:

Dr. Katki will discuss 4 topics in prediction-based approaches to screening. First, he will discuss why using prediction models is better than simple ad hoc criteria, and statistical considerations for choosing a model and threshold for action. Second, he will present an approach to continually updating risk during screening with screening test results and show how such an approach might provide superior management of people during screening. Third, he will present a new approach to eligibility based on predicted individualized life-years gained from screening, a measure of benefit which naturally combines considerations of individual risk and individual life-expectancy and could prove to be a superior approach to individual risk. Finally, he will discuss algorithmic fairness from use of prediction models, focusing on racial/ethnic disparities in eligibility for screening. Throughout the talk, he will demonstrate how prediction models provide a simplified, consistent, and fair basis for guidelines via the principle of "Equal management of equal risk/benefit".

About the speaker: Dr. Katki is a Senior Investigator in the Biostatistics Branch of the NCI. His research focuses on understanding how epidemiologic findings could be used for screening and prevention, especially individualized prediction-based approaches to cancer screening. His methodologic research focuses on estimating individual absolute risk, strategies for risk-based screening and management, and metrics for evaluating risk models and biomarkers.

For additional information, please contact Yan Li (yli6@umd.edu), WSS Methodology Program Chair.

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