

SCHOOL OF PUBLIC HEALTH RESEARCH SEMINAR SERIES

How frequently should men with low-risk prostate cancer be biopsied on active surveillance? — A stochastic modeling approach

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12PM – 1PM
OHSU Knight Cancer Research Building 1011

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Active Surveillance is an increasingly accepted alternative to immediate treatment for men with low-risk prostate cancer, but there is little consensus about the frequency of surveillance biopsies during followup and no clinical trials comparing biopsy frequencies. Ongoing observational studies of AS are difficult to compare directly as the patient populations may vary in their underlying risk of disease progression and lack the lengthy followup required to ascertain mortality outcomes. These challenges suggest the value of a modeling approach. We first developed a stochastic modeling method to extract rates of underlying disease progression from observed biopsy data in existing cohorts. We then combined this model of underlying disease progression with a model for metastasis and death to project downstream outcomes of different biopsy schedules in simulated cohorts. Ultimately, our results suggest that compared with annual biopsies, biopysing every 3-4 years results in a lower burden of biopsies without substantially increasing risk of metastasis and death.





