

Abstract:

Prostate cancer is the most common cancer among men. In Sweden, more than 10,000 men are diagnosed yearly and 2,500 die of the disease. Today's prostate cancer diagnostic workflow is inefficient – the sensitivity is insufficient leading to many men with aggressive cancer being diagnosed too late, and it generates significant over-diagnostics (diagnosis of indolent prostate cancer which would not have harmed the patient if left undiagnosed and untreated). In addition, new improved drugs are not efficiently used for treatment due to low response rates and lack of predictive markers. This leads to harm to individuals and unnecessary health care costs.

We are currently developing and implementing an individualized prostate cancer diagnosis pipeline in clinical care, which will markedly improve diagnostics and treatment of prostate cancer. In this talk, we will highlight and describe the fundamental role of statistics in general and prediction models in particular in tomorrow's prostate cancer management. In the near future, a statistician is more likely than a clinician to make decisions about diagnostic workup of a man with suspicion for prostate cancer or about treatment decisions in diagnosed patients.