

Background

- Lower urinary tract symptoms (LUTS) in men and urinary incontinence (UI) in women are dynamic conditions with numerous factors contributing to risk and progression.
- Diabetes is known to cause urinary symptoms
 - Natural history of diabetes leading to LUTS and UI is not well characterized.

Objectives

- Categorize trajectories of urinary symptoms (LUTS in men, UI in women) into clusters based on severity of symptoms
- Evaluate how well these trajectories can be predicted among persons with type 1 diabetes (T1DM)
- Describe factors influencing the long-term trajectory of LUTS in men and UI in women with T1DM

Setting

- Longitudinal data from 565 men and 523 women in the UroEDIC ancillary study of urological complications of the Epidemiology of Diabetes Interventions and Complications (EDIC) were used to define LUTS/UI annually over 5 years.

MP04-01 – Longitudinal Subphenotypes of Urinary Symptoms in Type 1 Diabetes

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Results

- Identified 4 subphenotypes for LUTS in men and 3 subphenotypes for UI in women.
- The random forest model achieved a multiclass area-under-the-curve (AUC) of **0.65 for AUASI** and **0.61 for Sandvik** using 10-fold cross-validation.
- Statistically significant predictors
 - **age** ($p = 0.002$) and **autonomic dysfunction** ($p < 0.001$) for LUTS in men
 - **BMI** ($p = 0.02$) for UI in women

Conclusions

- Model may help identify candidates for interventions targeting metabolic factors contributing to variation in symptoms.

