



The Unpredictability of Social Continence After Radical Prostatectomy

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Introduction

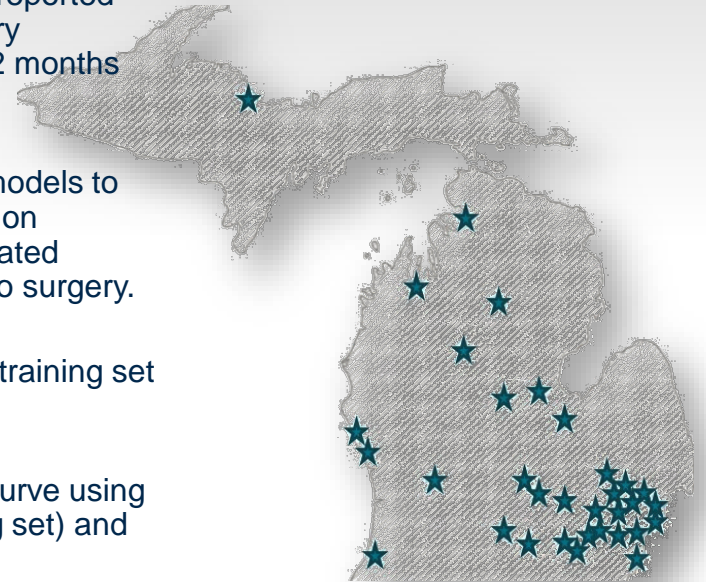
- Patients with prostate cancer (CaP) undergoing radical prostatectomy (RP) commonly develop urinary incontinence requiring the temporary use of pads.
- **Is it possible to individualize a patient's likelihood of experiencing short- and long-term "social continence" after radical prostatectomy?**

Setting

- The Michigan Urological Surgery Improvement Collaborative (MUSIC) is a consortium of 44 diverse urology practices that maintains a prospective registry of men with CaP.

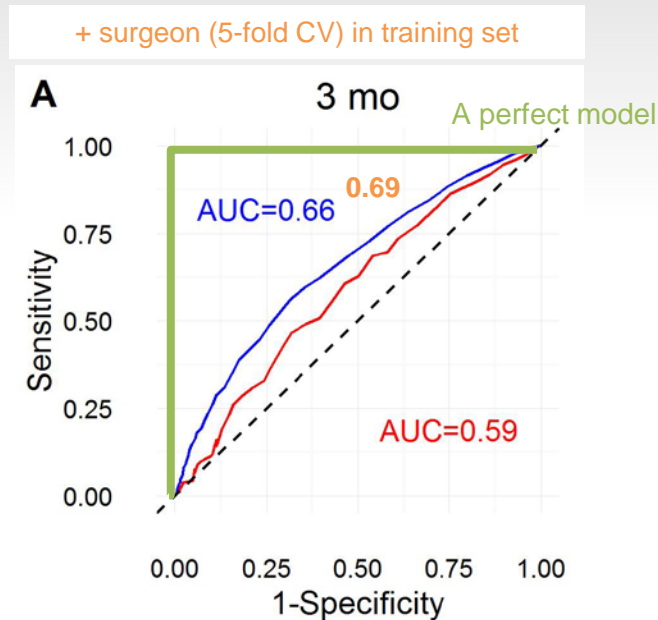
Methods

- Identified men with patient-reported outcomes (PROs) for urinary incontinence at 3, 6, and 12 months after RP.
- Developed random forest models to predict incontinence based on demographic and tumor-related information available prior to surgery.
- Stratified the practices into training set and test set.
- Assessed area-under-the-curve using cross-validation (on training set) and directly on test set



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Area-under-the-curve (AUC) for predicting incontinence at 3 months



Conclusions

- Social continence after RP appears to be difficult to predict based on demographic and tumor characteristics
- Incorporating surgeon helps the model's performance
- Understanding why this is difficult to predict—particularly in the short term—will be important in guiding how patients should be counseled pre-operatively.