

MP34-03: Association of manual and automated performance metrics with urinary continence recovery after robot-assisted radical prostatectomy

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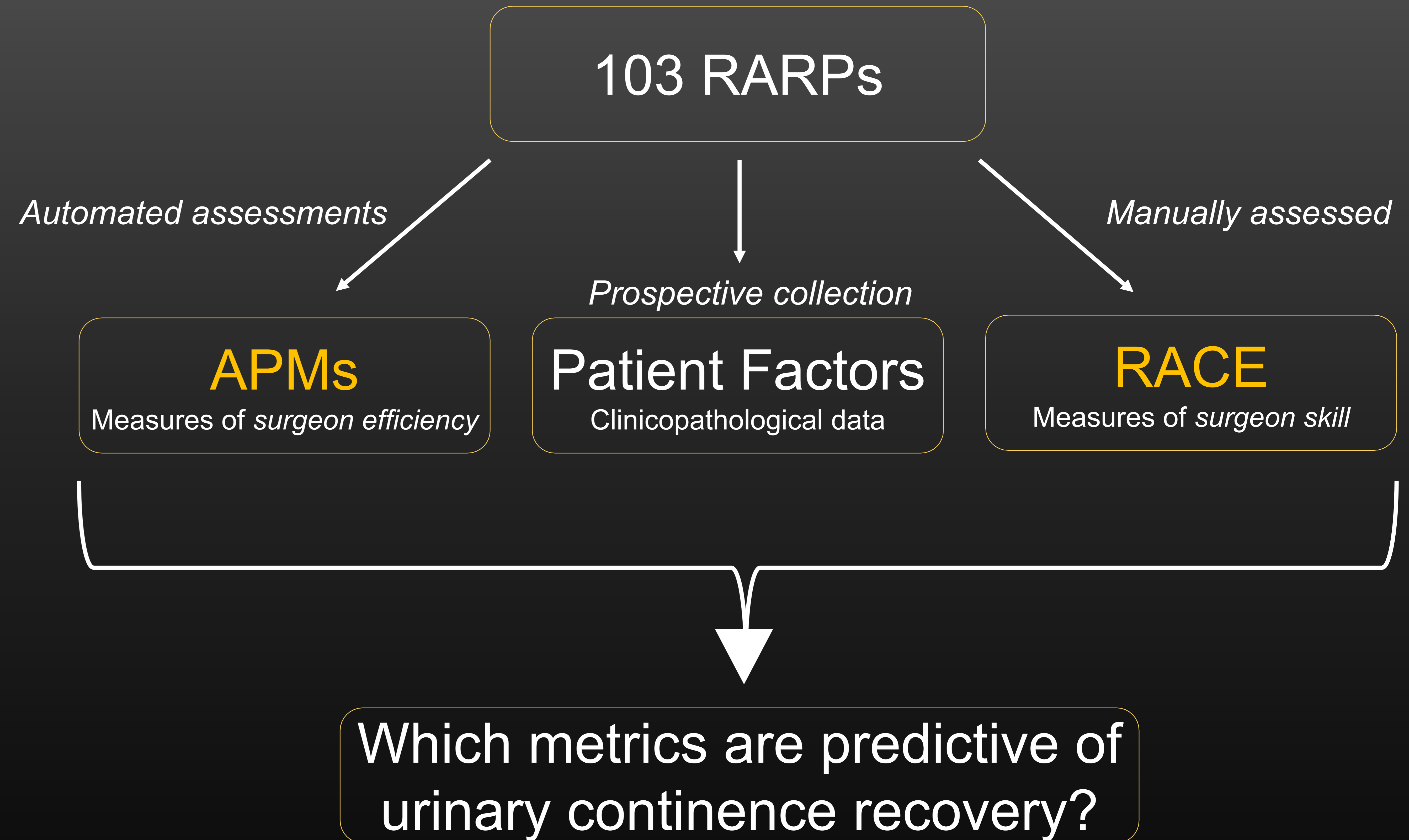
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- Surgeon performance during VUA impacts the time of urinary continence recovery for patients after robot-assisted radical prostatectomy (RARP).
- **APMs** and **RACE** are assessment tools used to evaluate different aspects of surgeon performance.



Results

- **Analysis 1** found a significantly weak correlation between total **RACE** score and **APMs** ($-0.345 < \rho < -0.357$; $p < 0.05$)
- **Analysis 2** (Univariate analysis): 3 **RACE** domains, 3 **APMs**, and 1 **patient factor** found to be predictive.
- **Analysis 3** (Multivariate analysis): predictive features confirmed to be *independently* predictive.
- **Analysis 4** (Likelihood-ratio): relative predictive strength determined and ranked for each feature (table)

Ranking of Predictors	LR p-value
1. Age, years	0.0007
2. RACE - Tissue Approximation	0.0024
3. RACE - Suture Placement	0.0029
4. APM - Dominant instrument wrist articulation (pitch, rad)	0.0032
5. RACE - Needle Positioning	0.0035
6. APM - Linear velocity of dominant instrument (cm/s)	0.0236
7. APM - Moving time of dominant instrument (min)	0.0436

Continence predictors ordered by predictive strength
LR, likelihood ratio

Conclusions

- Measures of surgeon efficiency (**APMs**) and surgeon skill (**RACE**) during the VUA do not highly correlate with each other.
- Measures of surgeon skills, although manually observed, are stronger independent predictors of urinary continence recovery after RARP.