

Quality of Life and Symptoms Relief Support Prostatic Artery Embolization for Patients with Acute Urinary Retention due to Benign Prostatic Hyperplasia.

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Disclosure

I have no conflict of interest.

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PAE – Phase II Pilot Study



- Multidisciplinary Group (University of Sao Paulo)
 - Urology, Diagnostic Radiology, Intervention Radiology
- Prospective Phase II Pilot Study from June 2008 to November 2011
- Prostatic Artery Embolization (PAE) for the Treatment of Benign Prostatic Hyperplasia (BPH)

PAE – Phase II Pilot Study

- **Purpose**

- The aim of this study is to evaluate PAE in patients with acute urinary retention managed by indwelling urethral catheters due to BPH concerning:
 - **Lower Urinary Tract Symptoms (LUTS)**
 - **Quality of Life (QoL)**

PAE – Phase II Pilot Study

- **Baseline QoL questionnaire:**

“If you were to spend the rest of your life with your urinary condition just the way it is now, how would you feel about that?”

- **Answers ranged from 6 to 0**

- **Terrible, unhappy, mostly dissatisfied, mixed, mostly satisfied, pleased and delighted.**

PAE – Phase II Pilot Study

- **Patient Selection**

- Technical feasibility, safety and outcomes
 - 11 patients - prostates 30 to 90 grams
 - TURP candidates
 - Refractory to selective alpha-blockers
 - Mean age - 68.5 y/o (range, 59 to 78 y/o)

PAE – Phase II Pilot Study

- **Patient Evaluation (@ 1, 3, 6 and 12 months)**
 - Digital rectal examination
 - **Magnetic resonance imaging**
 - **Urodynamic testing (before and every 12 months)**
 - Prostate specific antigen
 - Transrectal ultrasound
 - Prostate biopsy (PSA)
 - IPSS (International Prostate Symptom Score)
 - IIEF (International Index of Erectile Function)

PAE – Intervention

- Local anesthesia
- Seldinger technique
- Unilateral approach
- Pelvic and IIA arteriogram
- Bilateral PAE
- Microcatheter
- Embospheres® 300-500µm

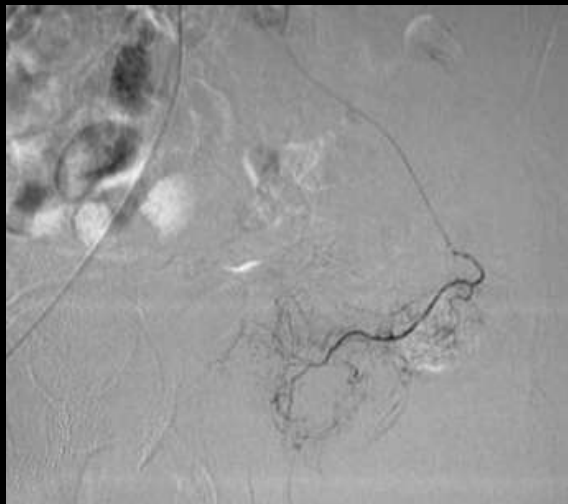
Angiography

Superselective Study (Bilaterally)

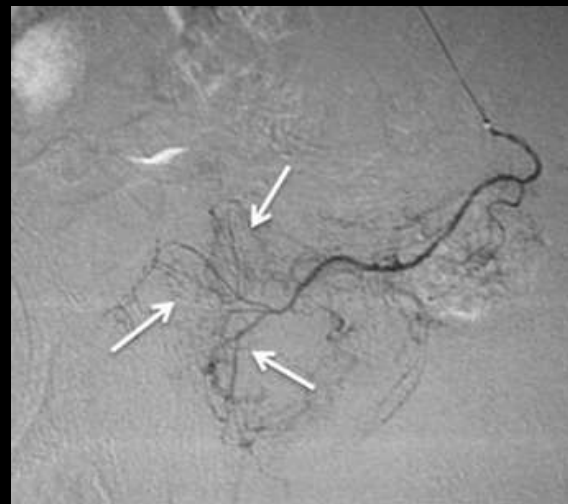
- superior vesical artery
- inferior vesical artery
- obturator artery
- middle rectal artery
- internal pudendal artery

PAE – Technical Goals

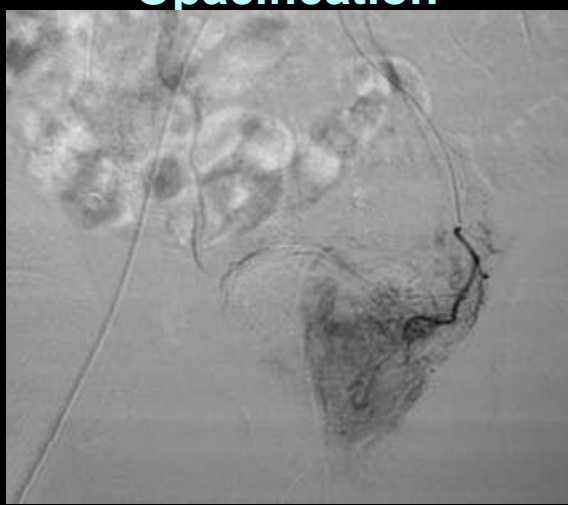
Inferior Vesical Artery



Prostatic Branches



Left Prostatic Lobe Opacification

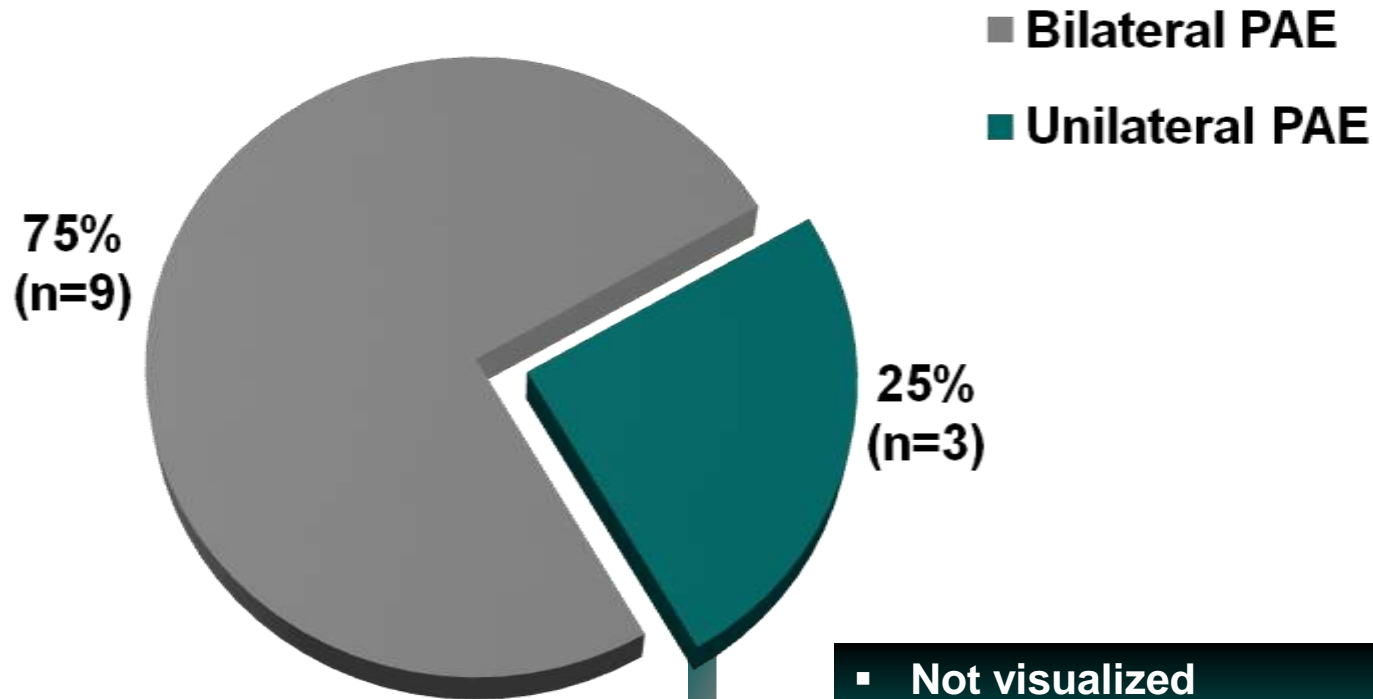


Stasis



Prostatic Artery Embolization

Technical Success = 75% (9/12)

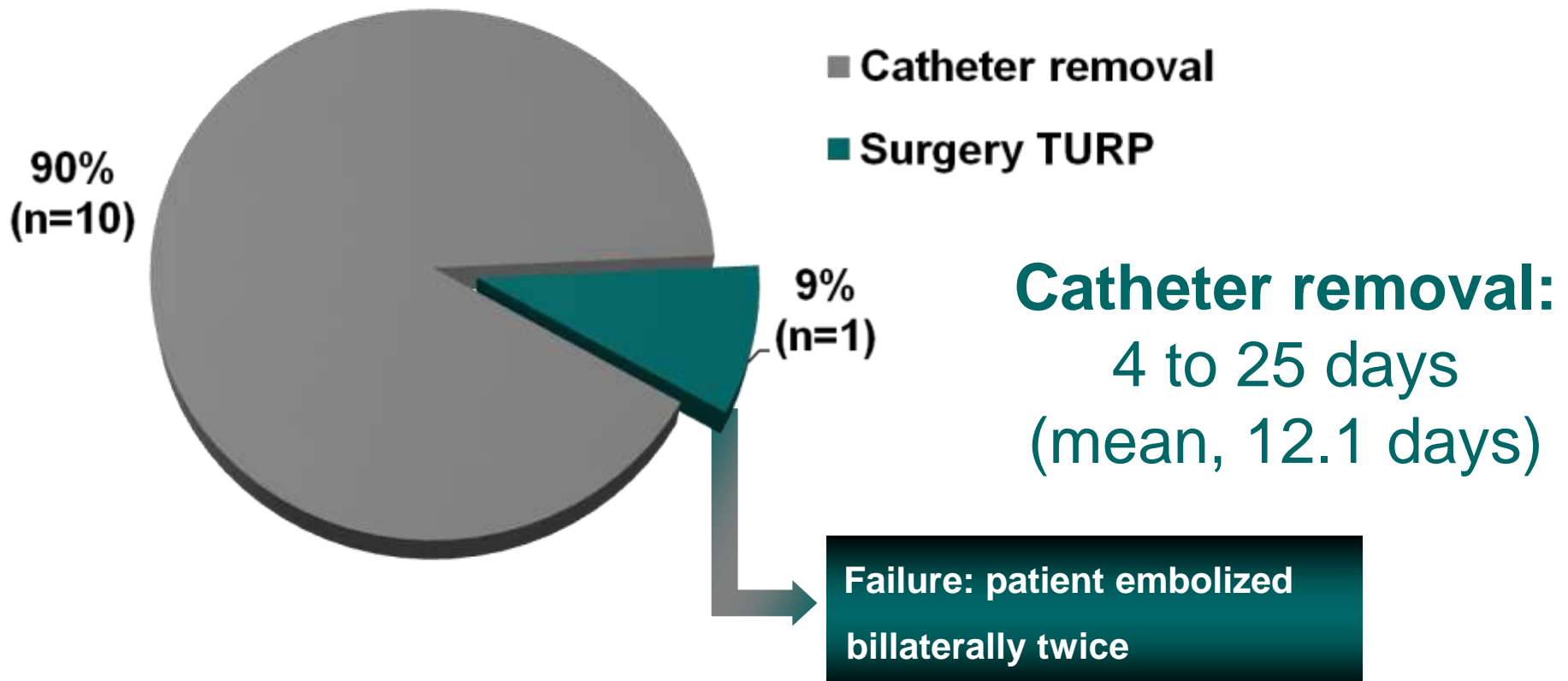


- Not visualized (prostatic asymetry)
- No microcatheter progression over the wire
- IVA dissection

Prostatic Artery Embolization

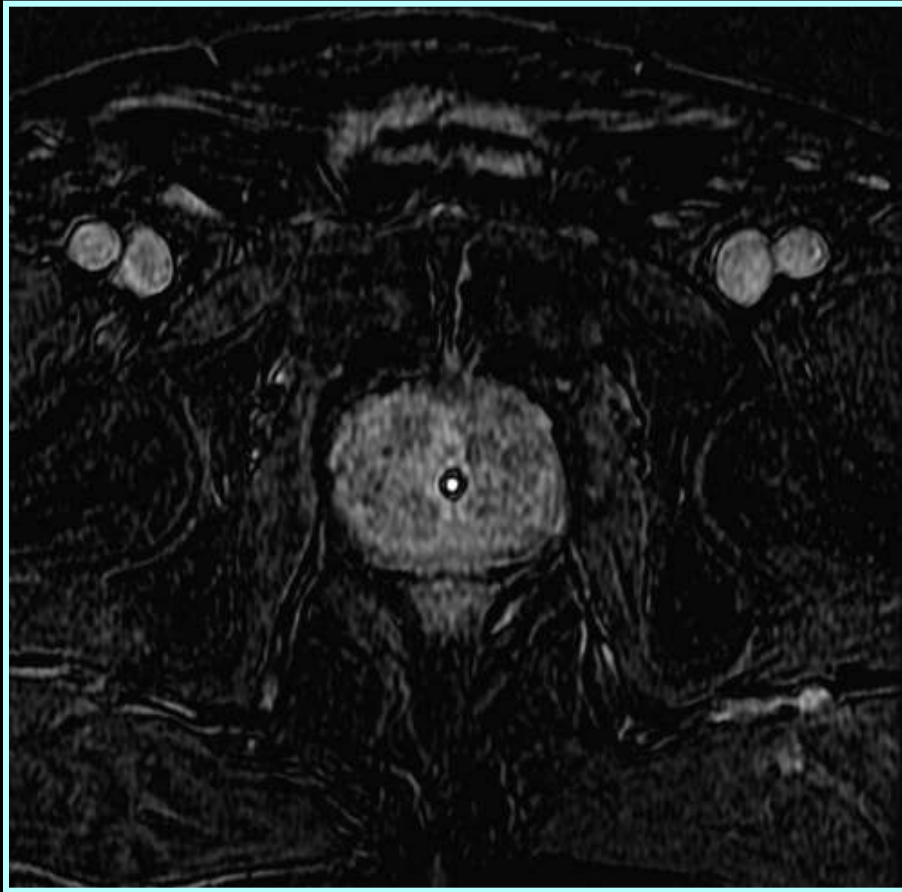
Clinical Success = 91% (10/11)

no recurrence (16-45 months)



PAE – Imaging Results

Magnetic Resonance Imaging



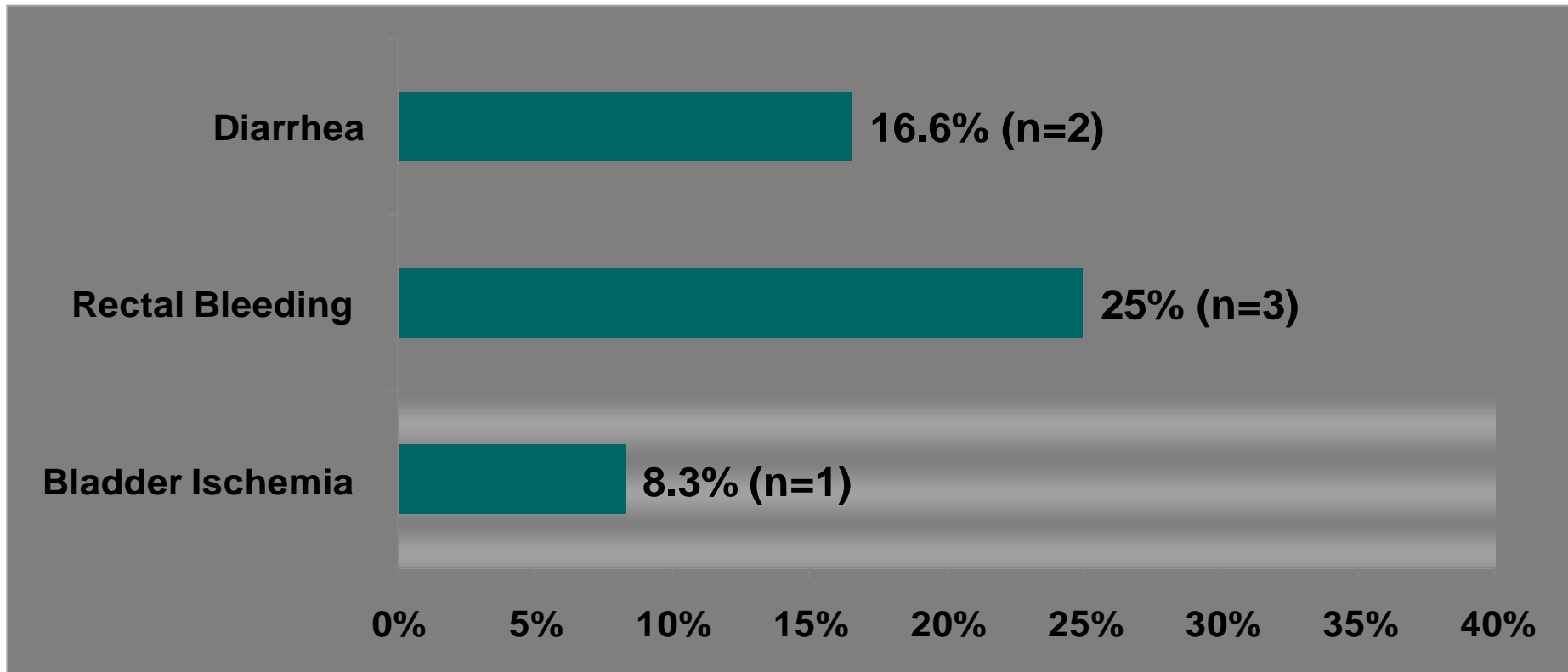
Before PAE – 75g



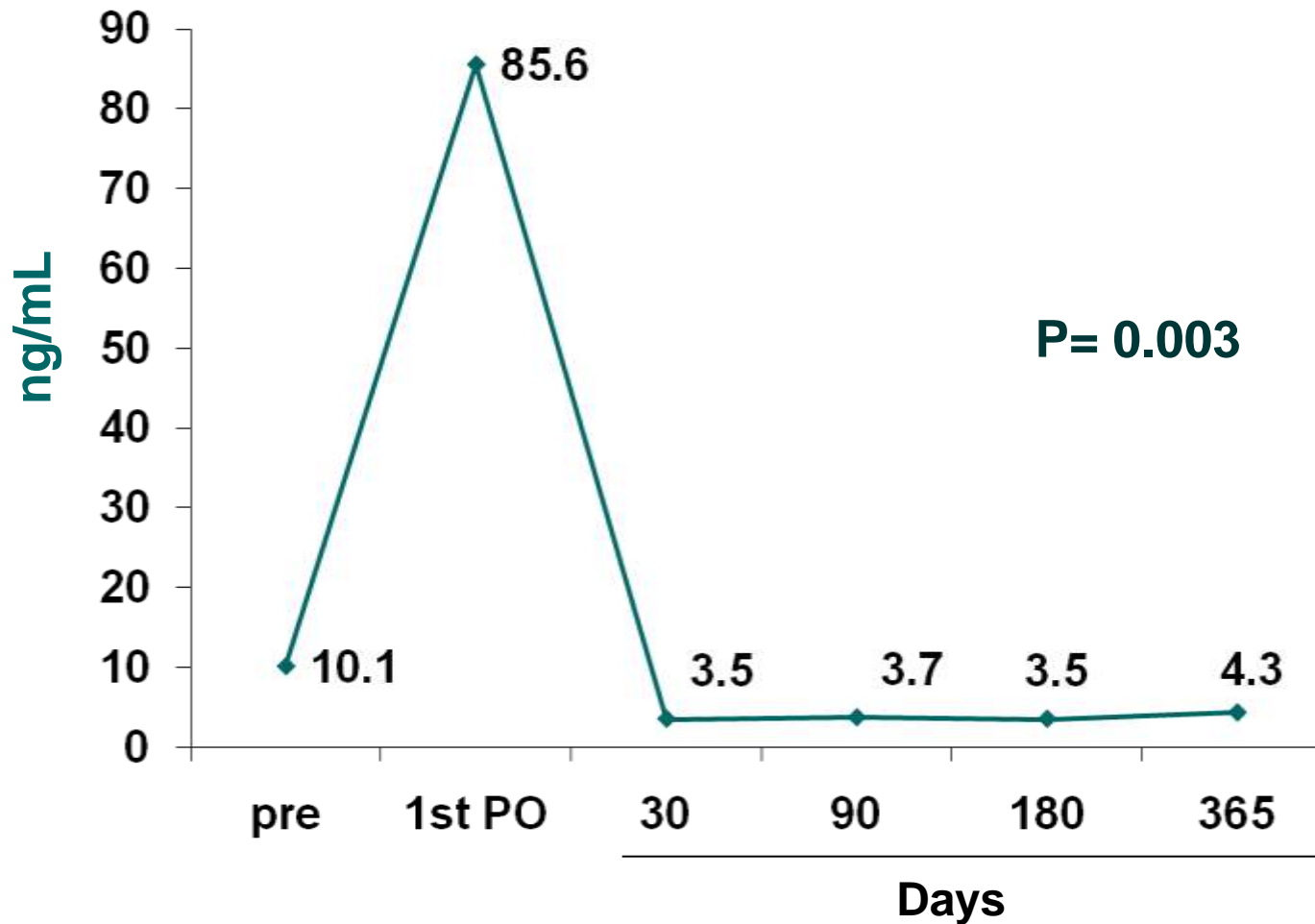
30 days – 46g (38.7%)

Prostatic Artery Embolization

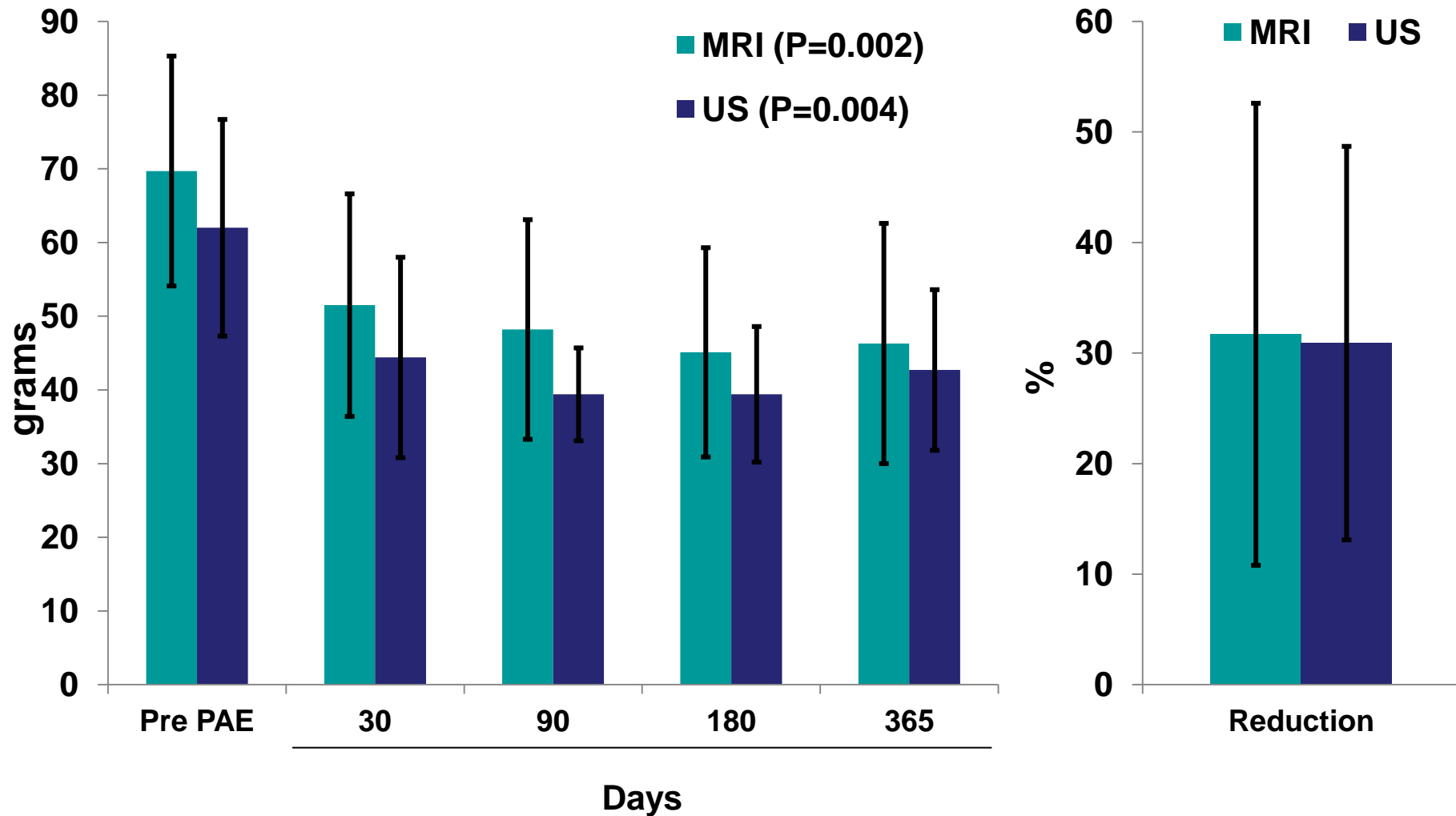
Minor Complications



PSA – Mean Average Change

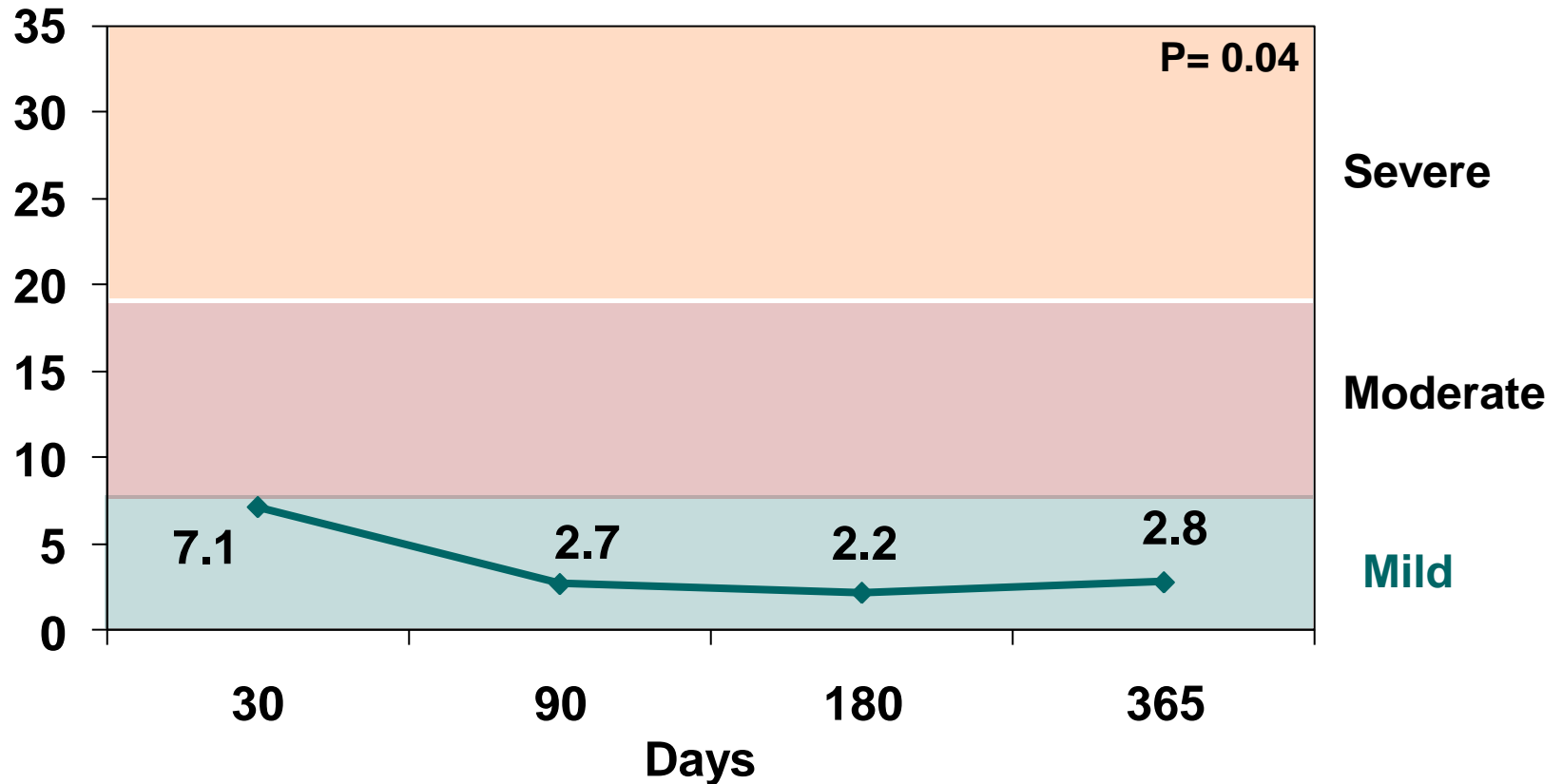


Imaging Prostate Reduction



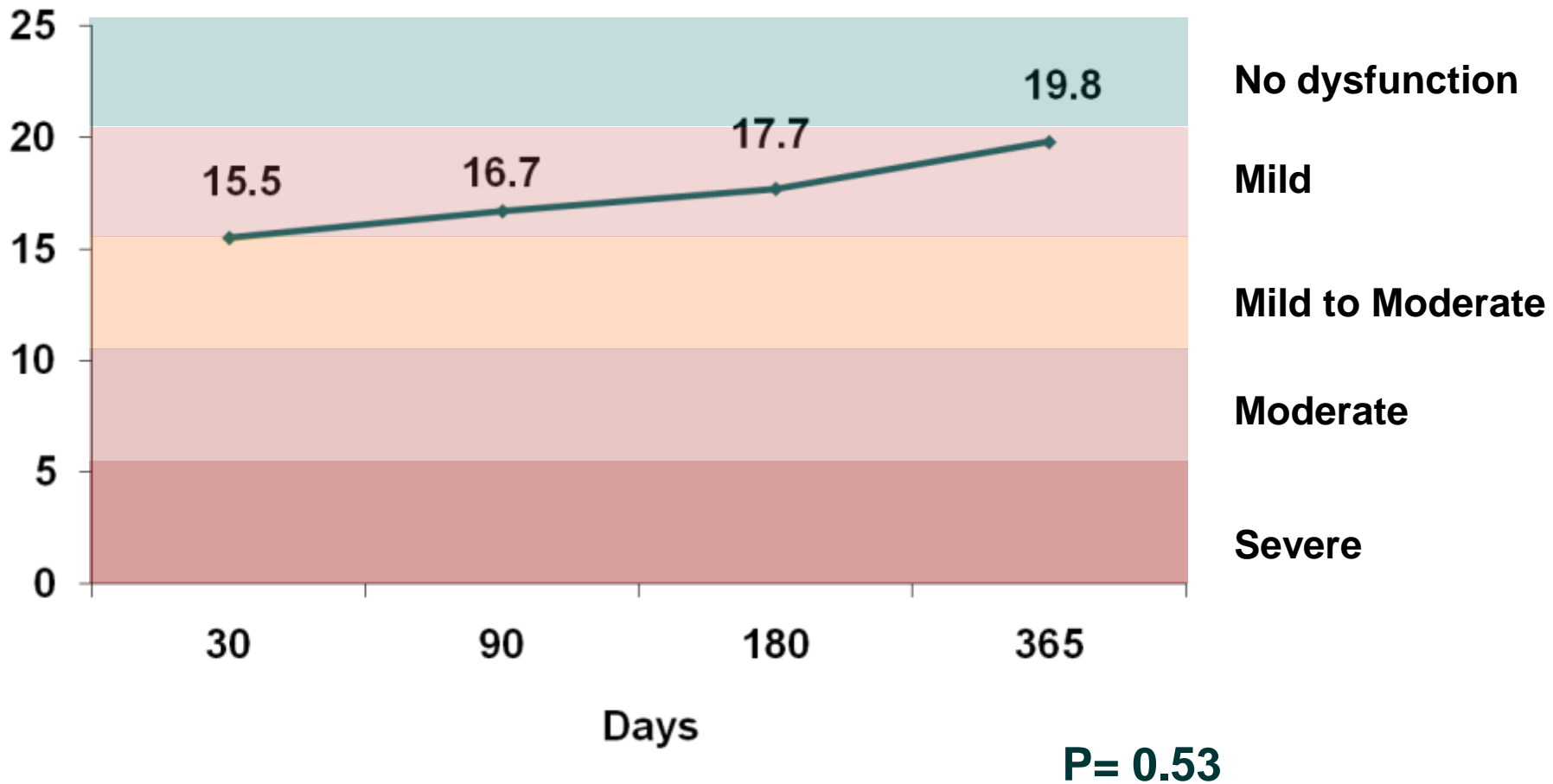
Prostatic Artery Embolization

Mean Symptoms Score (IPSS)



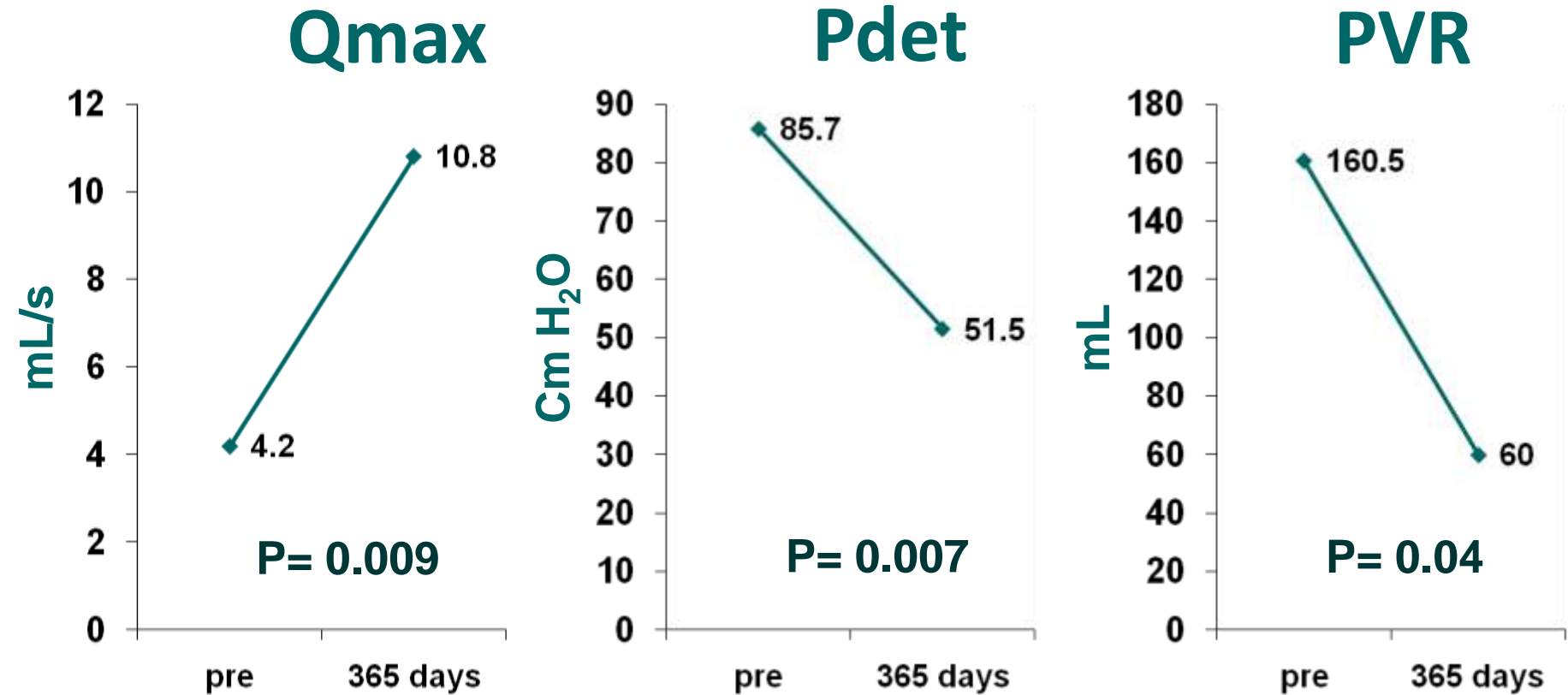
Prostatic Artery Embolization

Mean Erectile Function (IIEF)



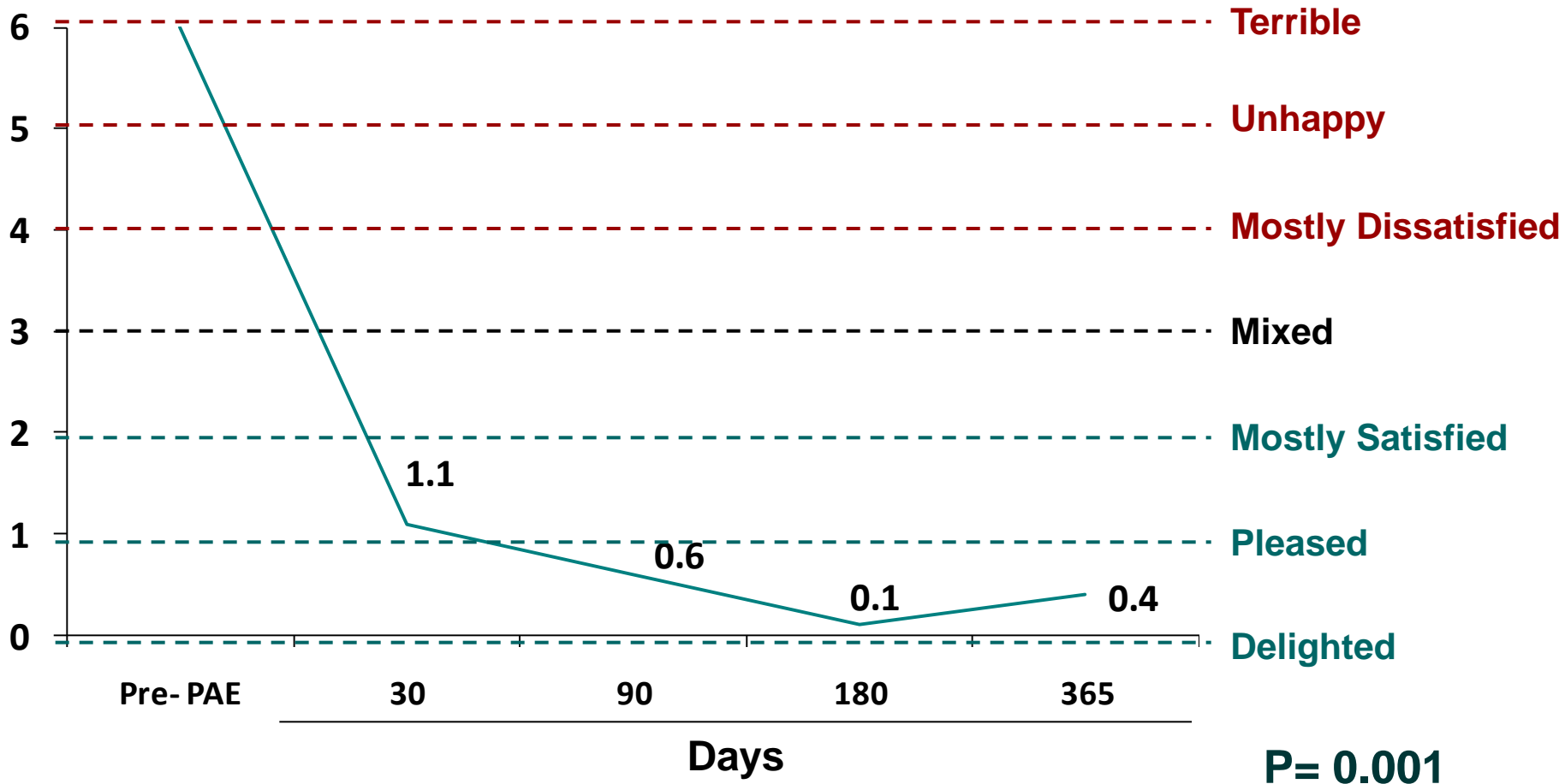
Prostatic Artery Embolization

Urodynamic Findings (mean)



Prostatic Artery Embolization

Quality of Life (mean)





Prostatic Artery Embolization

- Feasible, safe and effective procedure
- Low side effects and no major complications
- Prostate volume reduction of 30%
- LUTS relief significantly without symptoms recurrence
- Significantly improvement in QoL and urodynamic findings.