

Selection Criteria Used to Guide Surgical Approach for Management of Peyronie's Disease

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Disclosures

AbbVie – Consultant, Speaker
Absorption Pharmaceuticals – Officer
American Medical Systems – Consultant
Auxilium – Consultant, Speaker
Coloplast – Consultant, Speaker

And...

Aims

- To evaluate surgical outcomes, refine surgical approach & establish realistic post-op expectations based upon our surgical algorithm

Factors Determining Selection of Surgical Approach

- Erectile function
- Degree of curvature
- Presence of hinge effect
- Penile length

Surgical Algorithm

- Satisfactory erections +/- PDE5i
 - Tunica albuginea plication (TAP)
 - Curvature < 60°
 - No hinge effect
 - Partial plaque excision & Grafting (PEG)
 - Curvature > 60°
 - Destabilizing hinge
 - +/- severe shortening
- Unsatisfactory erections +/- PDE5i
 - Placement of IPP w/ straightening maneuvers
 - Intracorporal scratch/stretch
 - Manual modeling
 - Plaque incision +/- grafting
 - +/- Plication

Goal of Surgical Algorithm

- Provide functionally straight erection $\leq 20^\circ$
- Preserve or improve rigidity
- Minimize shortening

NB – Some variation due to pt preference - 1°
fear of \downarrow length with TAP or refusing IPP

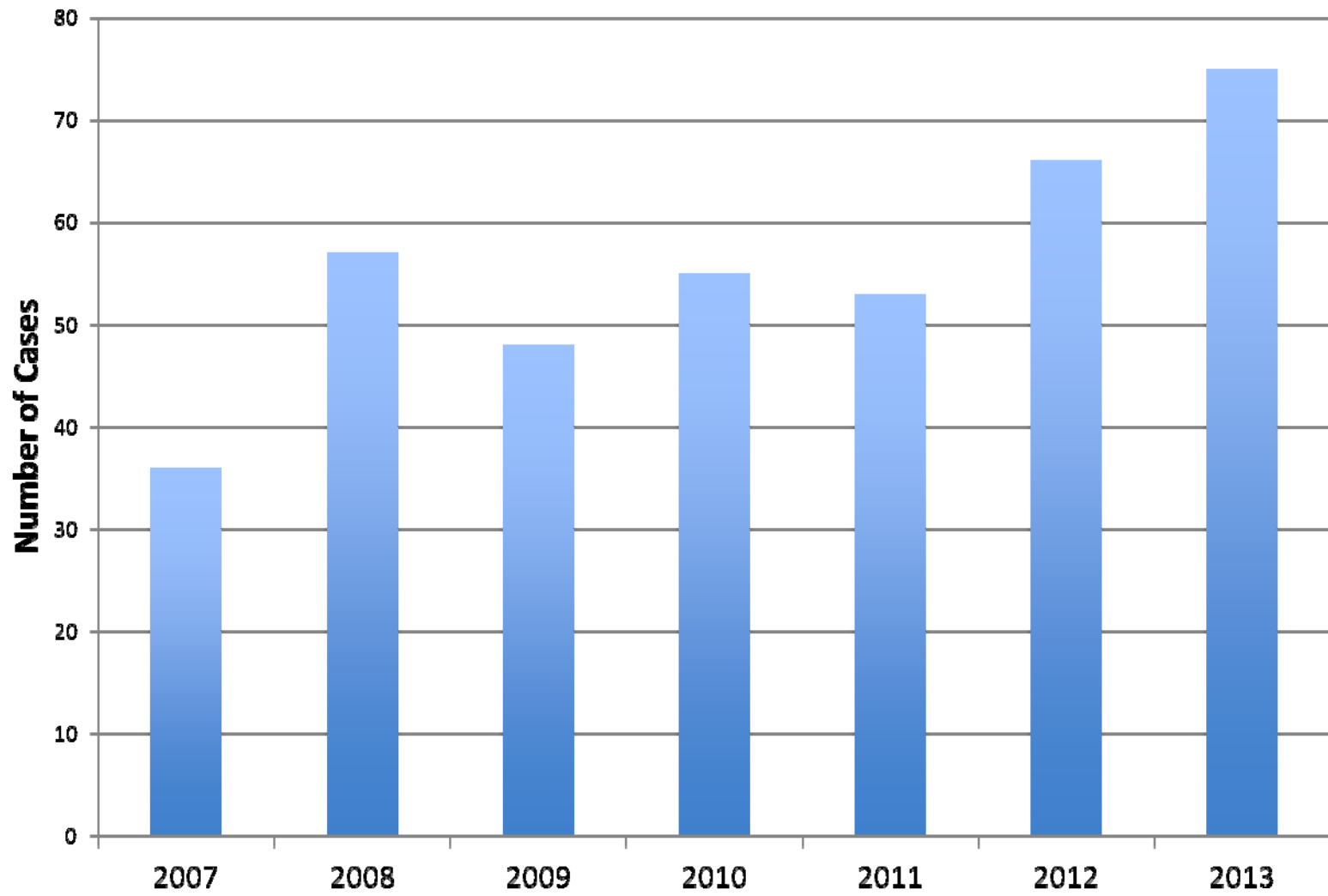
Materials & Methods

- Population - 389 men w/ PD had surgery at Rush Medical Center from 2007-2013
- Pre-op Eval:
 - Hx
 - Presence of Vascular risk factors
 - HTN, DM, ↑ lipids, smoking
 - Published PD intake questionnaire
 - PDQ when available
 - Duplex U/S w/ vasoactive injection
 - Rigidity assessment by pt & during duplex compared to home
 - 0-10, 7 = stuffable

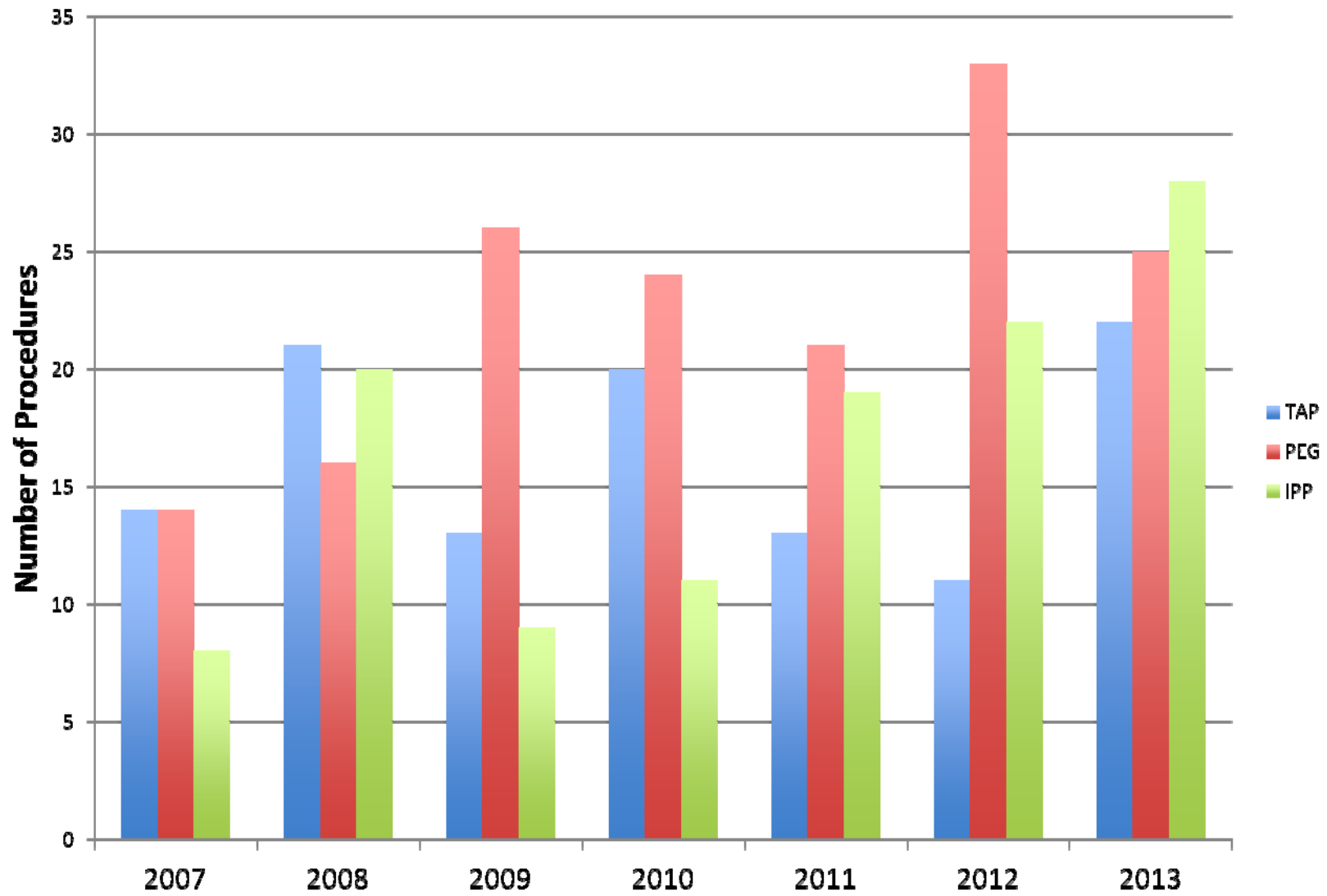
Patient Information

	TAP	PEG	IPP
Number of Patients	114	159	117
Mean Age (range)	54.6 (25-71)	54.4 (28-71)	58.6 (30-79)
Diabetes Mellitus	8.7%	8.9%	32.8%
Hypertension	32.5%	27.8%	61.5%
Dyslipidemia	47.4%	35.2%	52.1%
History of Smoking	38.6%	38%	47.9%
Hypogonadism	17.5%	21.5%	23.1%

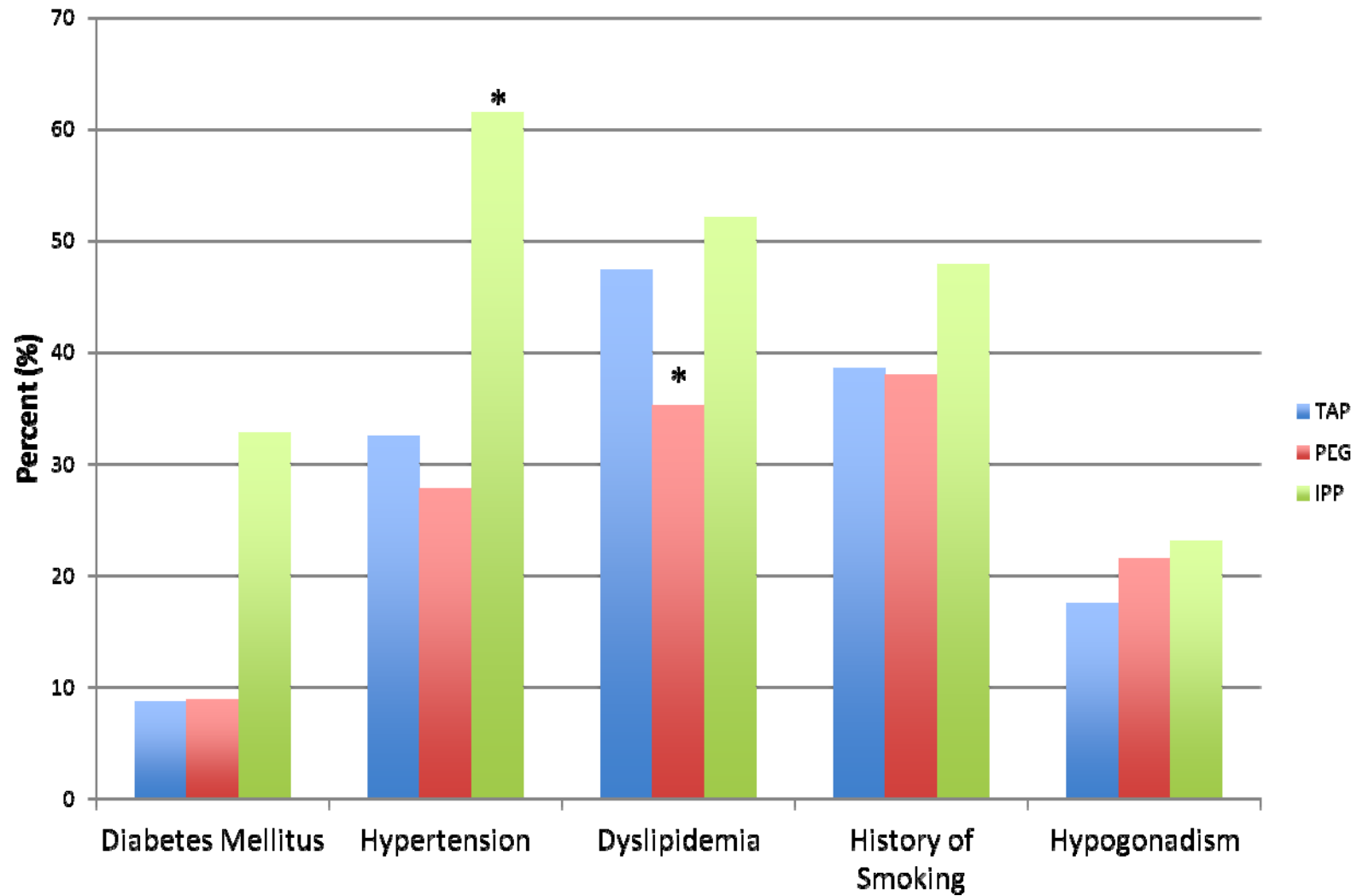
Annual Number of All PD Cases



Type of Procedure, Per Year



Preoperative Comorbidities



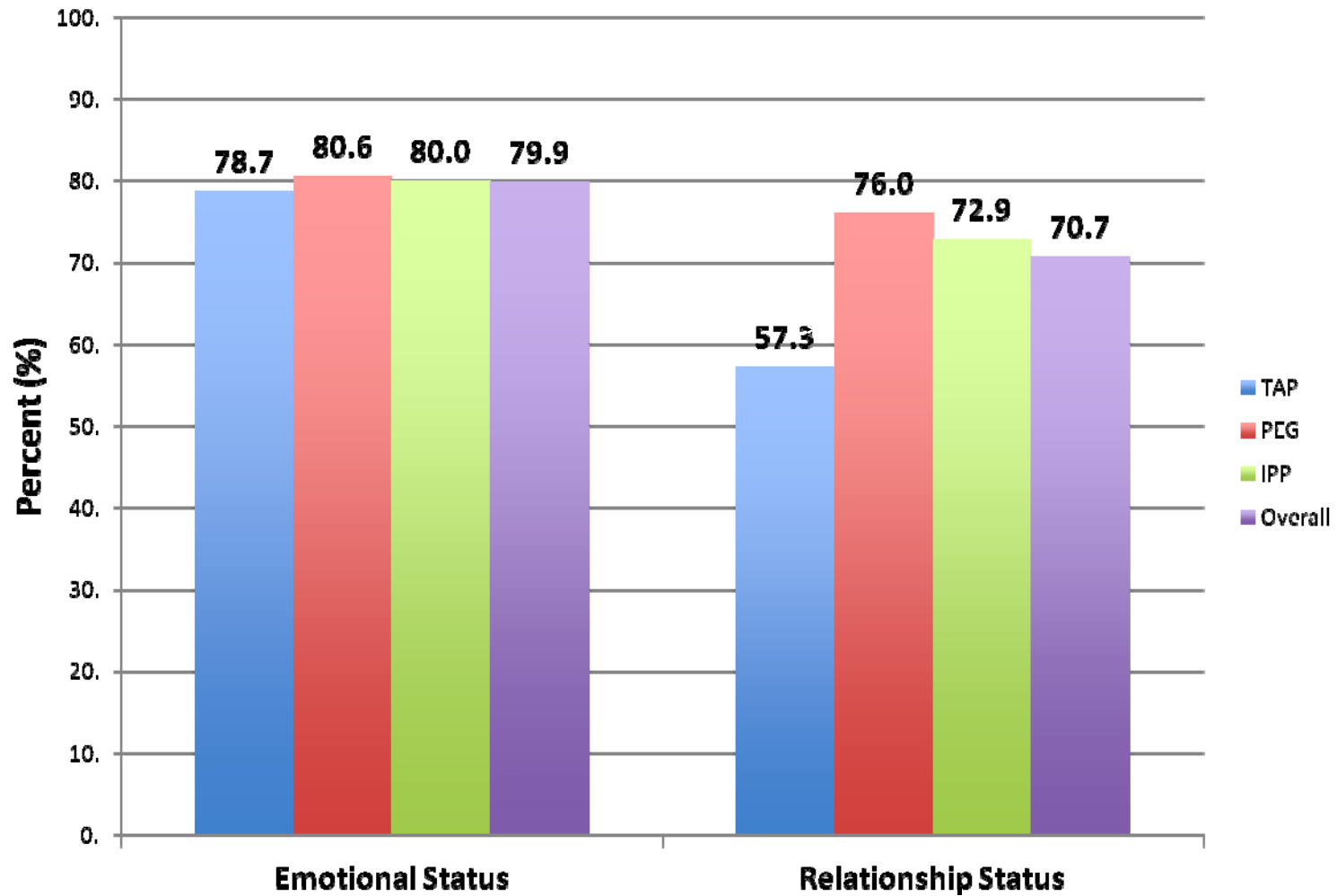
* indicates $p < 0.05$

Preoperative Erectile Function

	TAP	PEG	IPP
Preoperative Rigidity (1-10) (subjective)	7.7 *	8.4 *	5.5 *
Percent with Diminished Rigidity Compared to Pre- Peyronie's	78.9%	63.9%	96.8% *
PDE5i Use	20.1% *	8.0% *	38.5% *

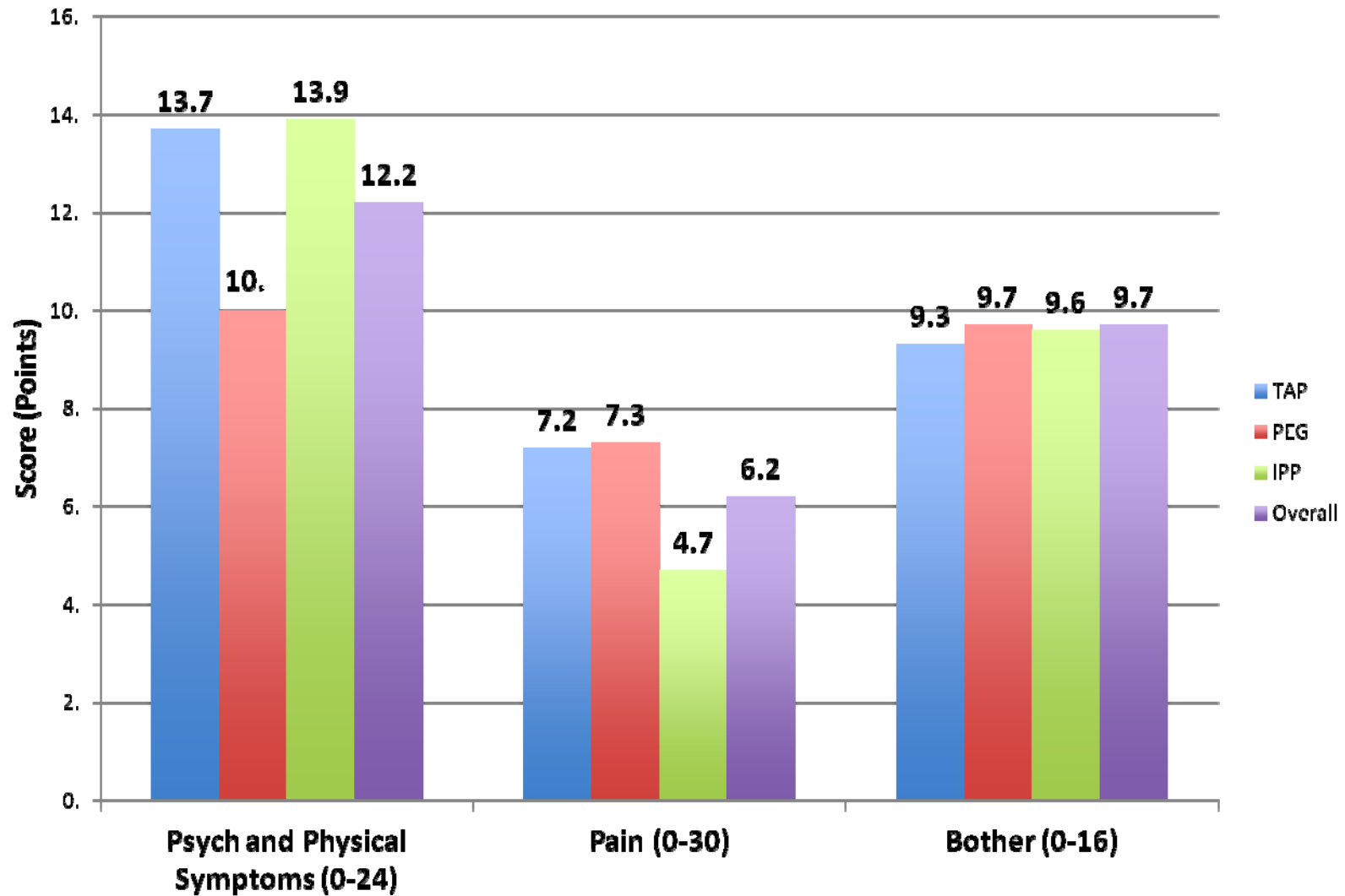
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Effect of Peyronie's on Personal Life



* indicates $p < 0.05$

Peyronie's Disease Questionnaire Results



* indicates p<0.05

Peyronie's Disease Questionnaire Results

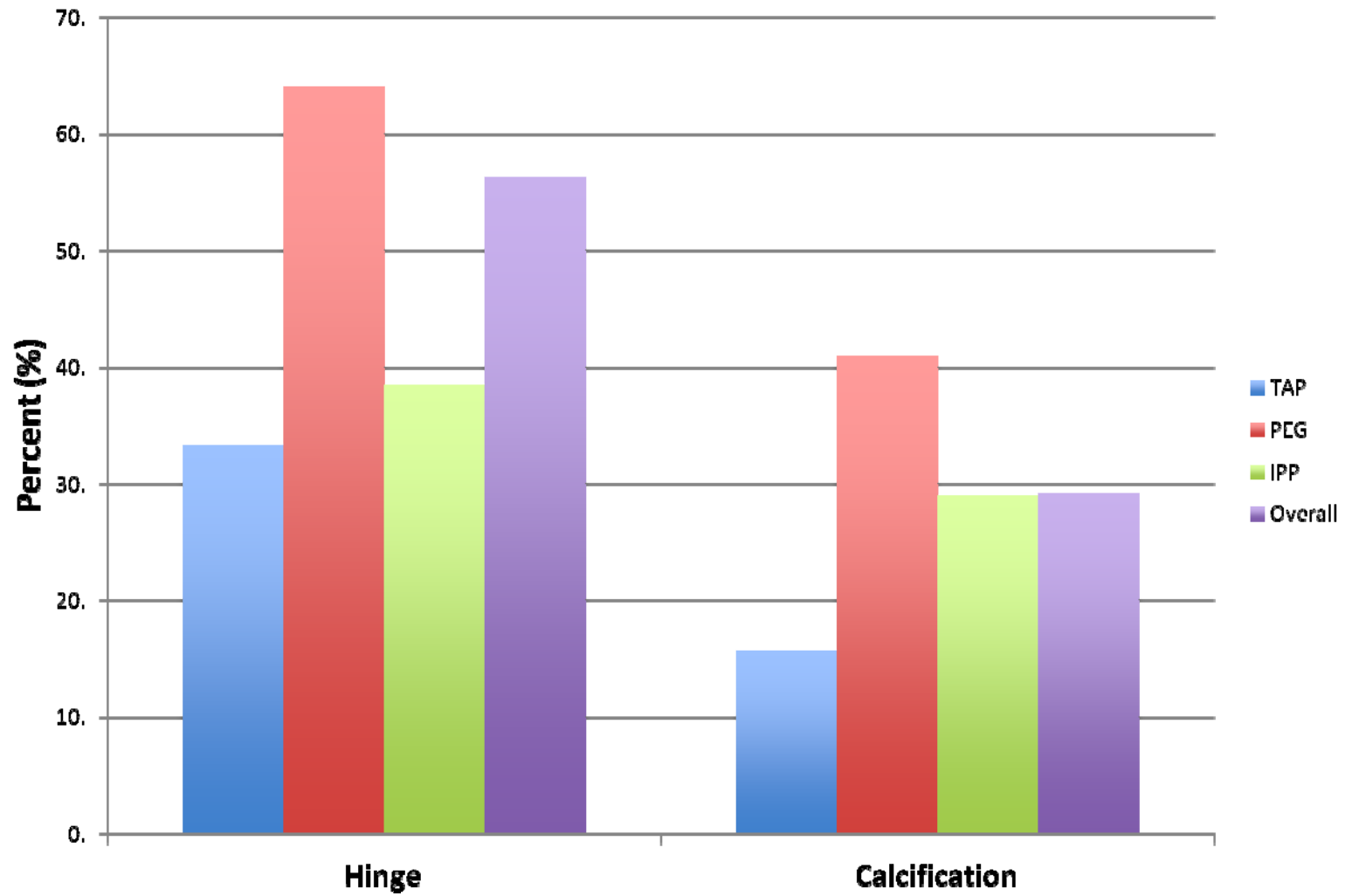
	TAP	PEG	IPP
Effect on Emotional Status	78.7%	80.6%	80.0%
PDQ Bother Score (0-16)	9.3	9.7	9.6

Duplex Ultrasound Findings

	TAP	PEG	IPP
Mean Rigidity (1-10)	8.2 *	8.8 *	6.9 *
Mean Total Curvature (Degrees)	59	79 *	63.5
Hinge Effect	33.3%	64.1% *	38.5%
Calcification	15.7%	41.0% *	29.0%

* indicates p<0.05

Duplex Ultrasound Features



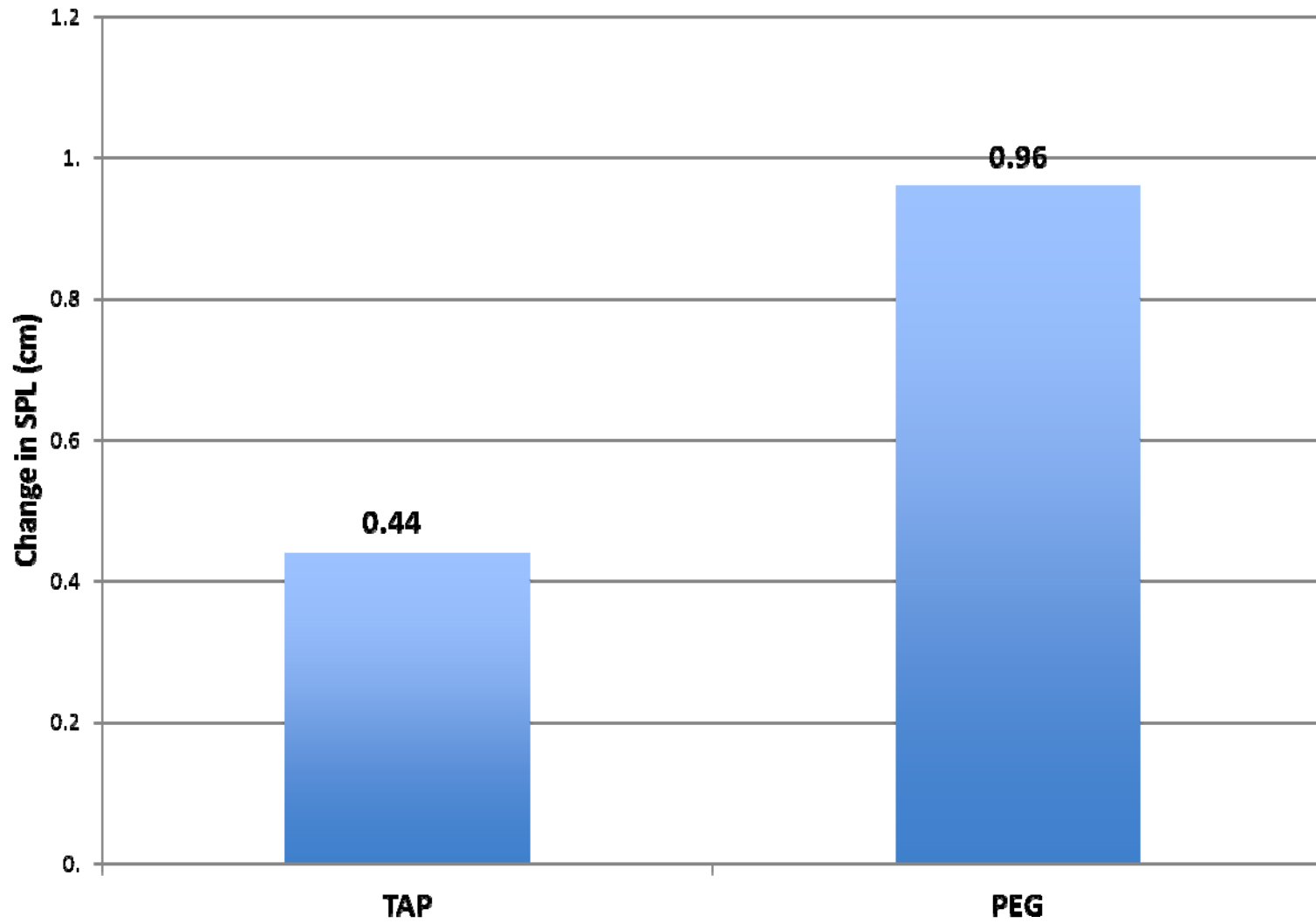
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Postoperative Outcomes

	TAP	PEG	IPP
Mean Follow Up Duration in Months (range)	15.7 (0 – 75.4)	13.9 (0 – 63.4)	18.4 (0 – 84.0)
Change in SPL in cm (range)	0.44 (-2 to +3) *	0.96 (-2 to +4) *	n/a
Percent Satisfied with Penile Rigidity	66.2%	72.4%	n/a
Percent Engaging in Penetrative Sex	93.8%	83.3%	87.0%
Percent with Residual Bothersome Curvature	17.4%	18.4%	26.1%

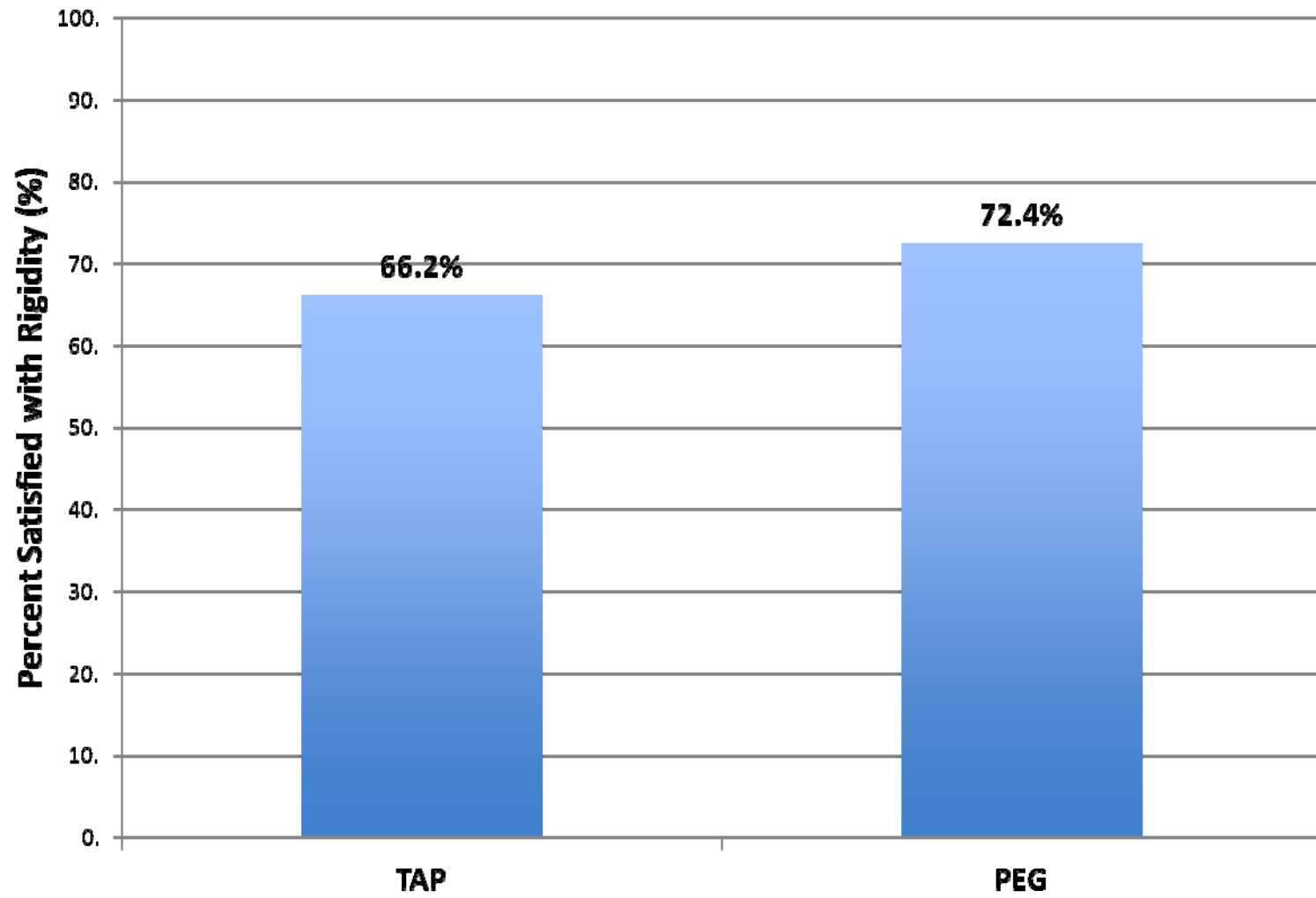
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Change in SPL Postoperatively *

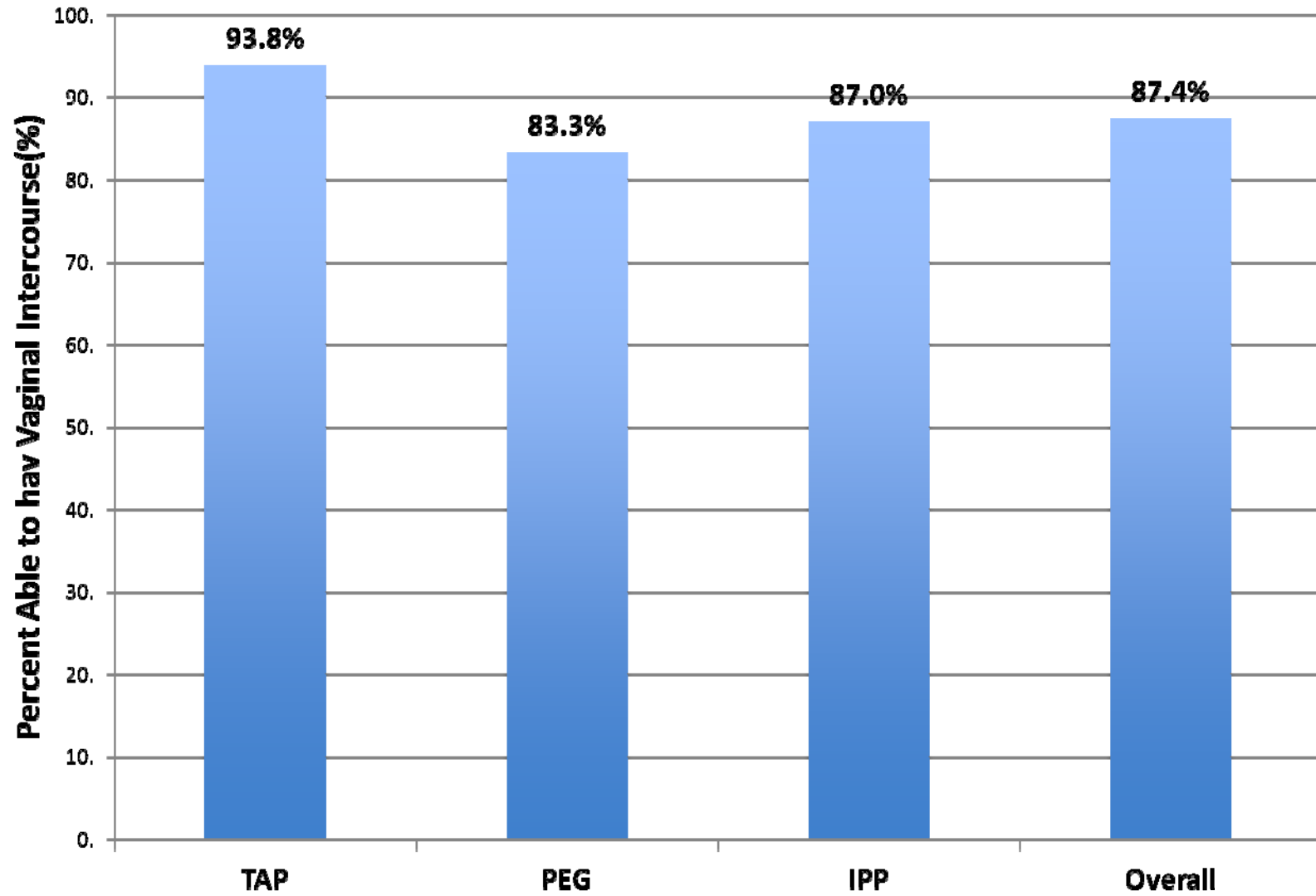


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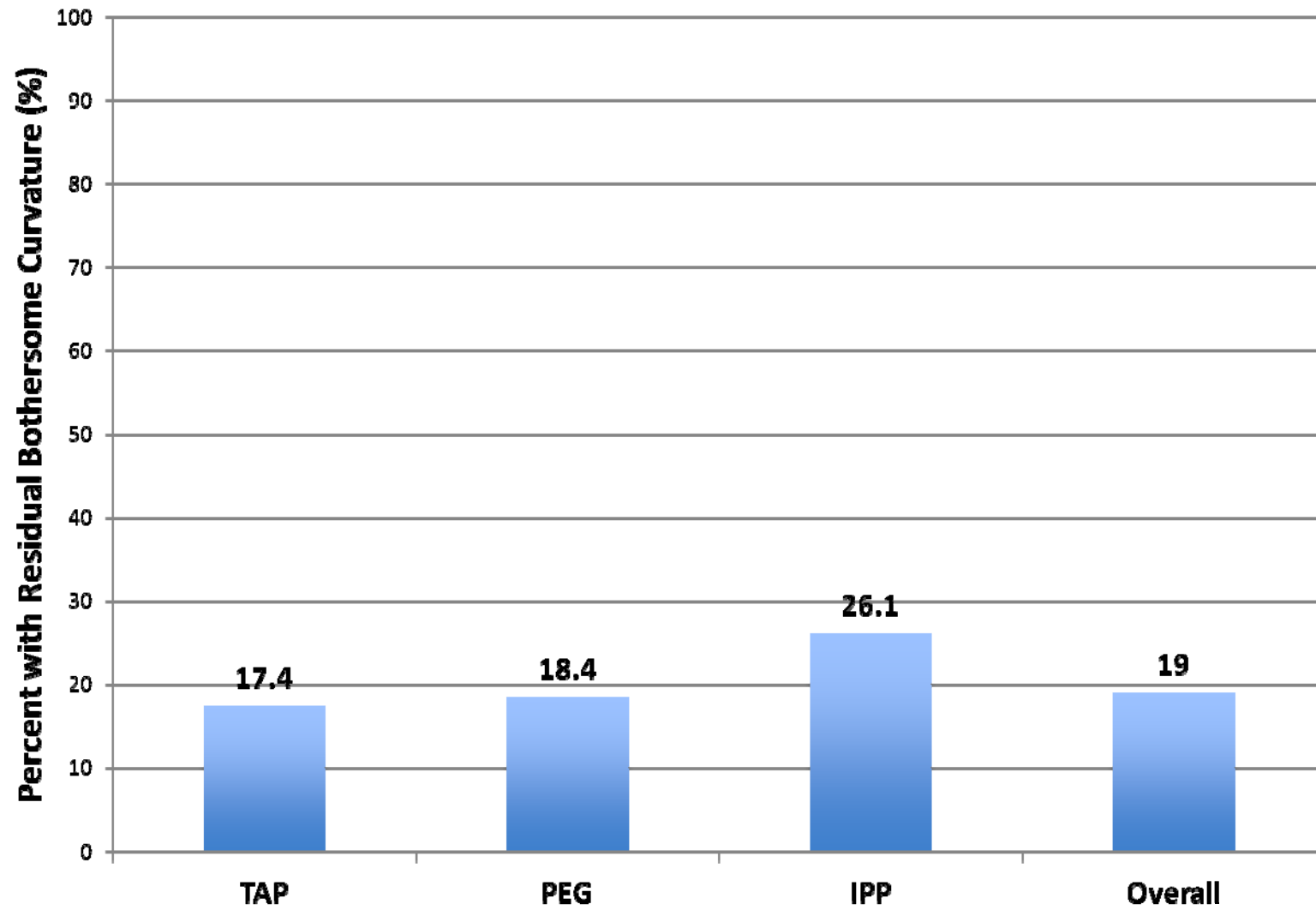
Post-Op Satisfaction with Rigidity



Post-Op Ability to Engage in Intercourse



Post-Op Residual Bothersome Curvature



Discussion

- IPP candidates more likely to have vascular risk factors, more severe ED & use pre-op PDE5i's
- Psychological effects of PD creates similar high levels of distress across entire population
- Grafting remains viable approach in properly selected pts – careful counseling re: post-op ED critical
- Additional length loss following surgery unlikely – but must counsel pt re: low likelihood of restoration of pre-op length

Conclusions

- Our surgical algorithm appears effective to obtain satisfactory surgical outcomes by:
 - Separating patients by erectile capacity & severity of deformity
 - Stratifying by curvature severity ($\pm 60^\circ$) appears to avoid significant subjective & measured length loss
 - Duplex U/S & pre-op subjective erectile status still good predictors of post-op erectile function & coital capacity
 - Does not necessarily address pre-op psychological distress & satisfaction with surgical outcome – all groups had similar high levels of distress and bother
 - Must recognize effects of patient preference on algorithm
 - Fear of length loss
 - Refusing IPP