Barnsley Hospital Quality in Care

Barnsley Hospital NHS
NHS Foundation Trust

LUTS and NICE Guidelines 2016

Stephen Mitchell MA MB FRCS (Urol) PhD

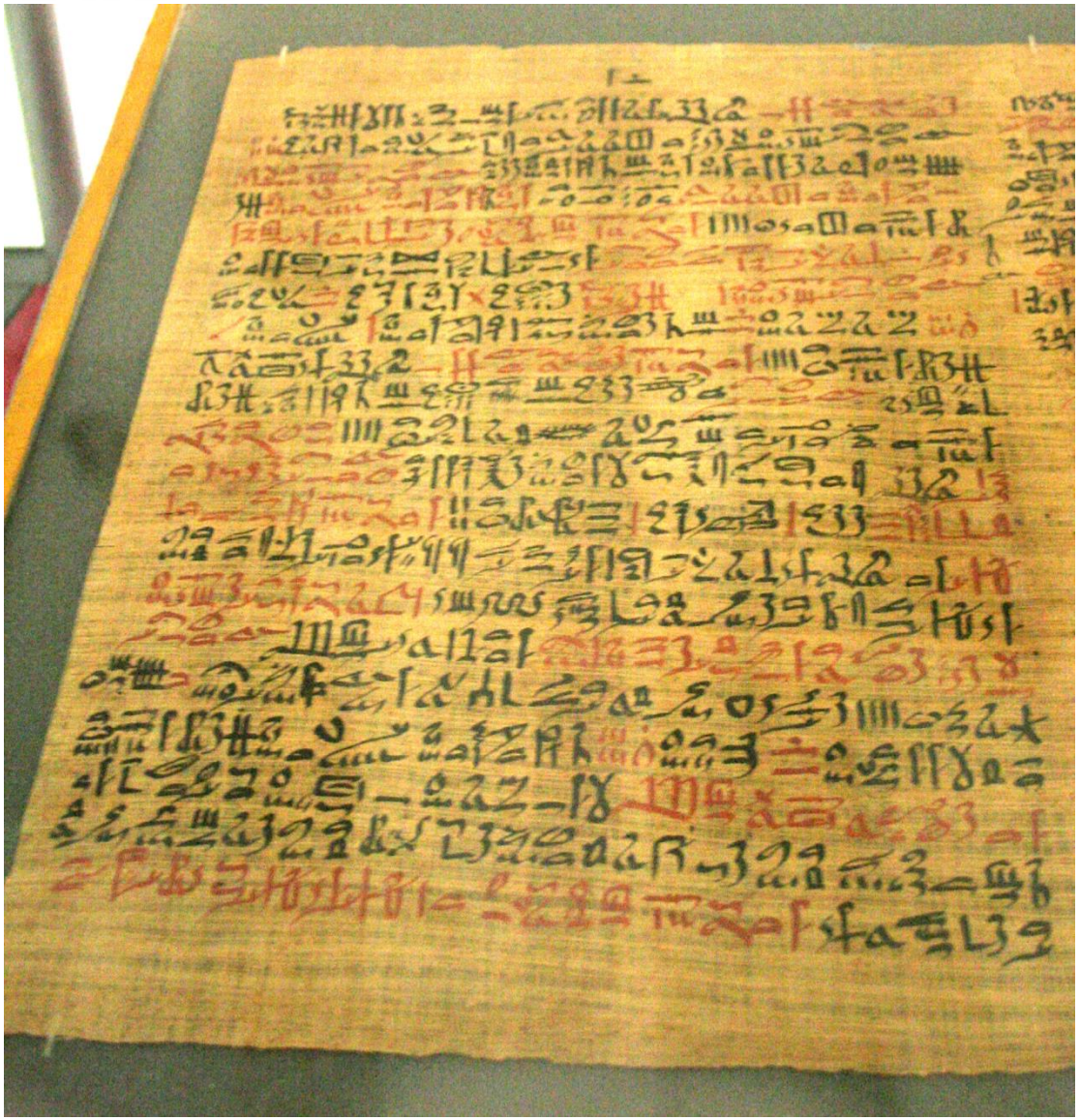
Clinical Lead, Division of General Surgery and Urology, Barnsley Hospital NHS Foundation Trust

Scope of Talk

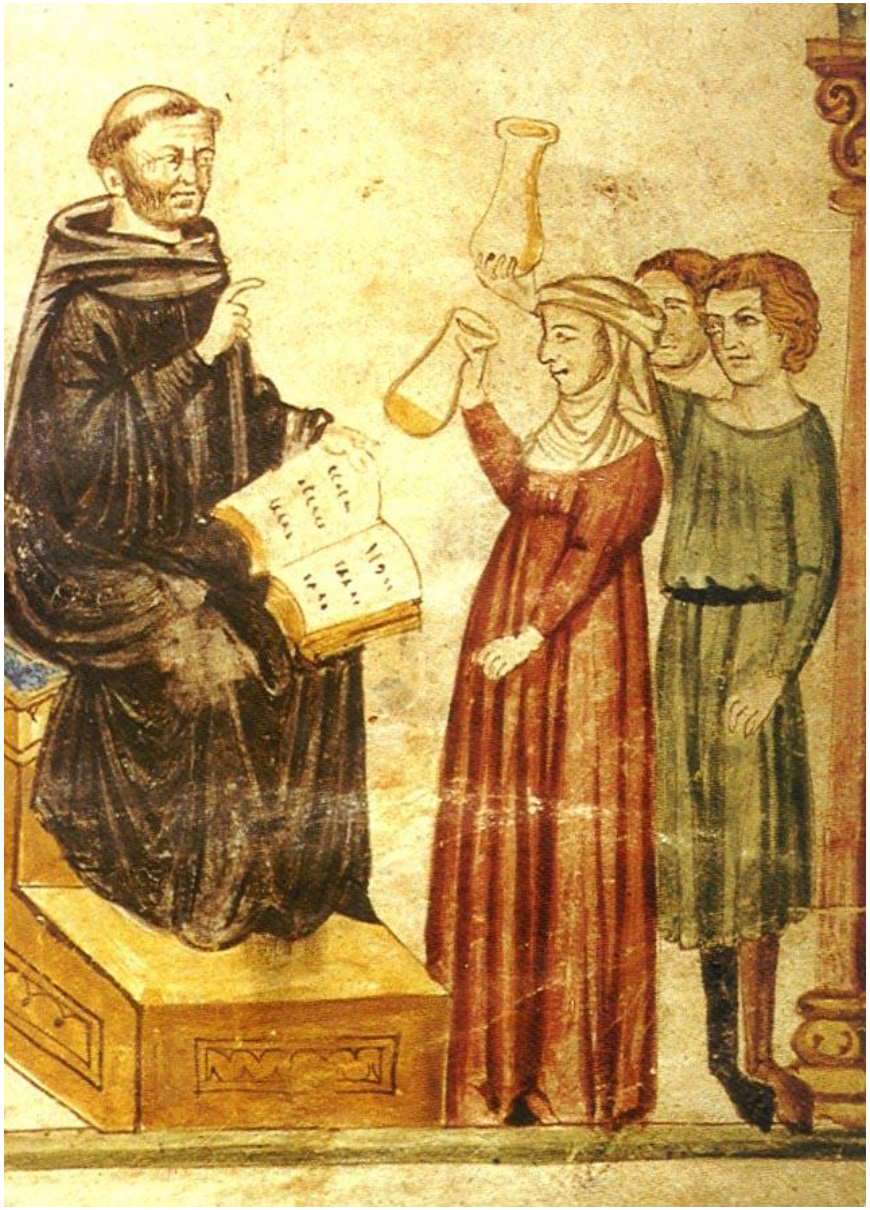
- **History**
- **Terminology**
- **Epidemiology**
- **Pathophysiology**
- **Symptoms**
- **Primary Care Treatment**
- **Secondary Care Treatment**
- **What's New?**

History

Ebers Papyrus c. 1500B.C.



Constantine the African (died 1098-99)



Terminology

Irritative symptoms

Benign prostatic hyperplasia

Lower Urinary Tract Symptoms

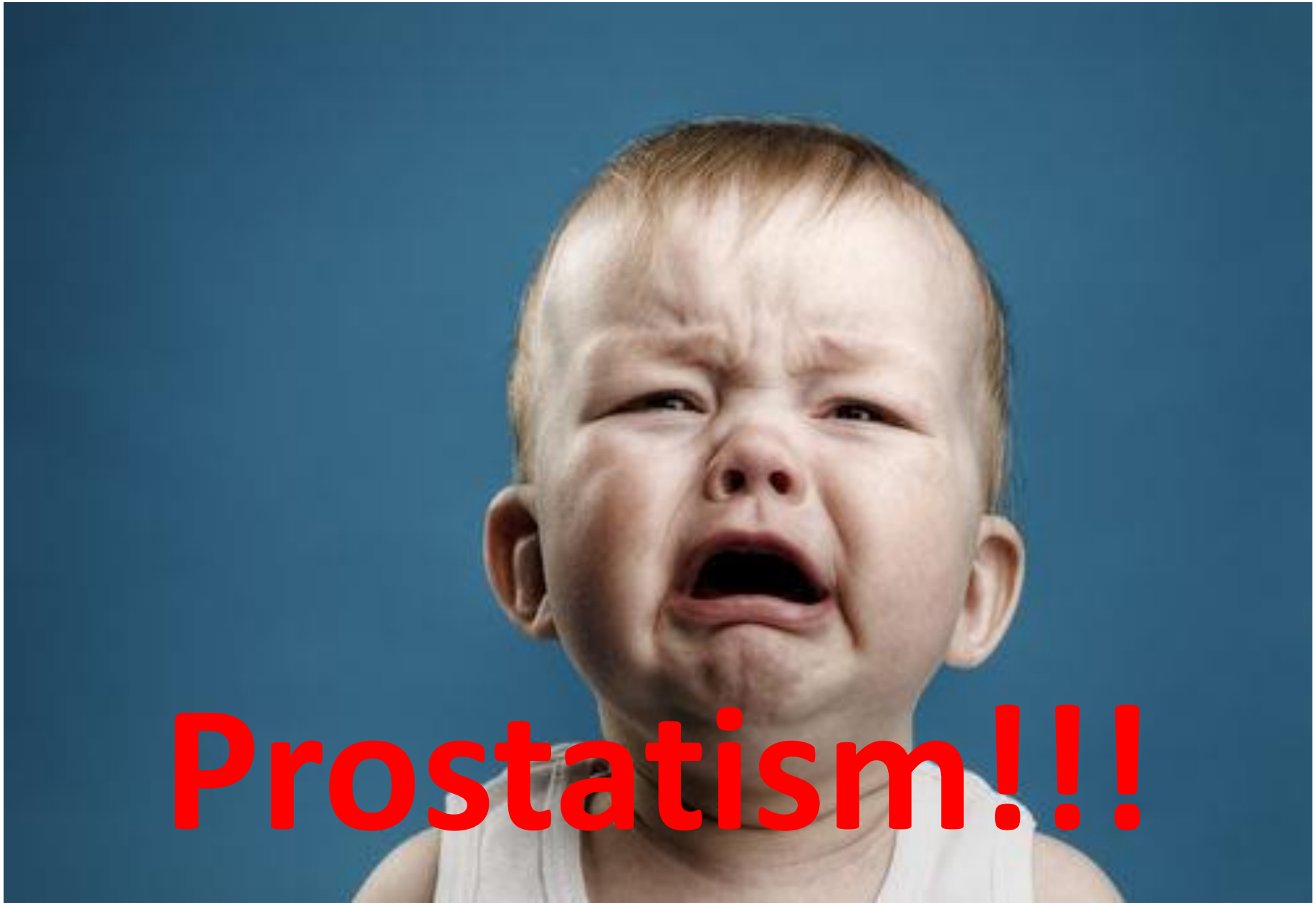
Bladder outflow obstruction

Prostatism

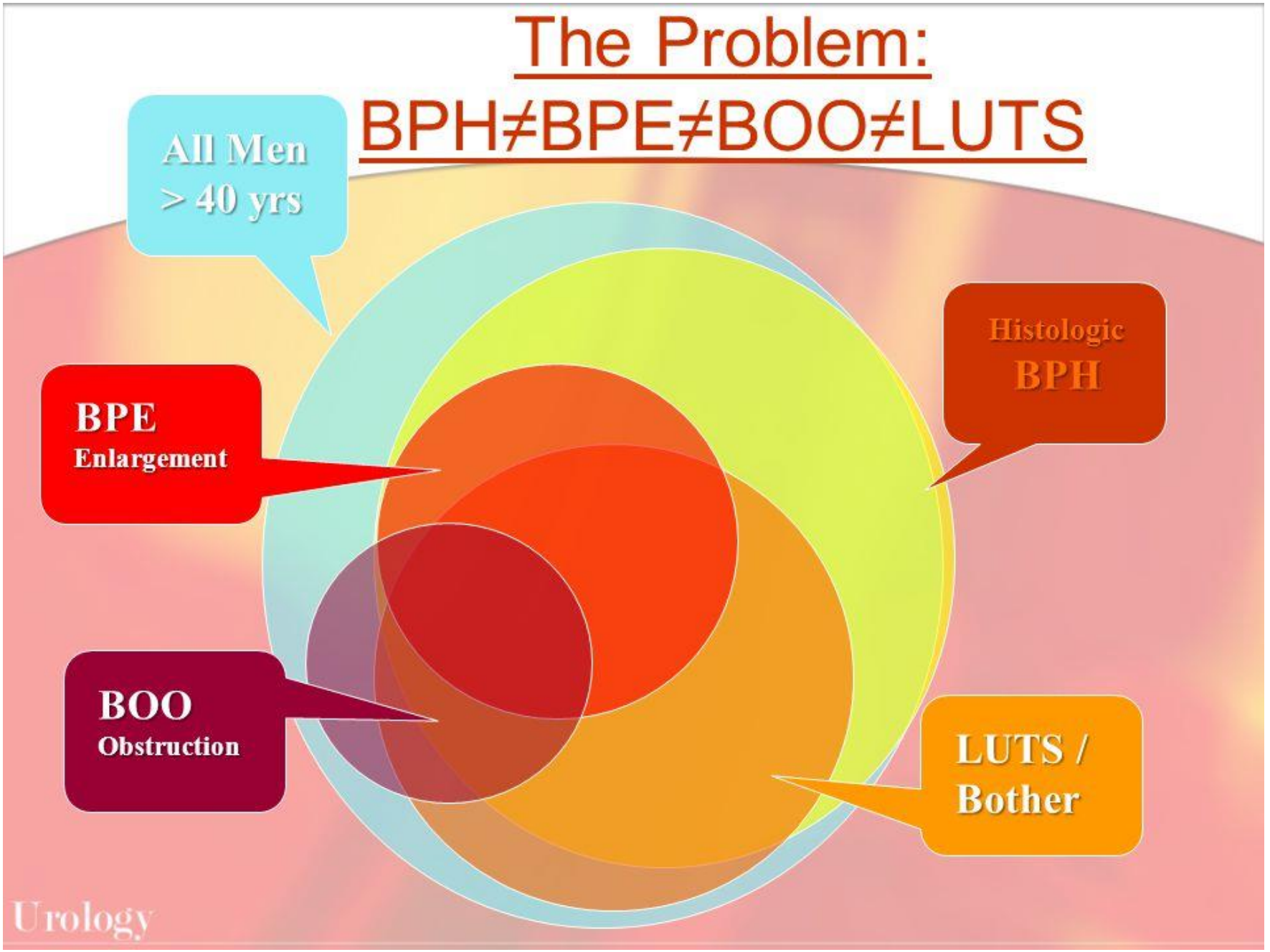
Storage symptoms

Benign prostatic enlargement

Voiding symptoms

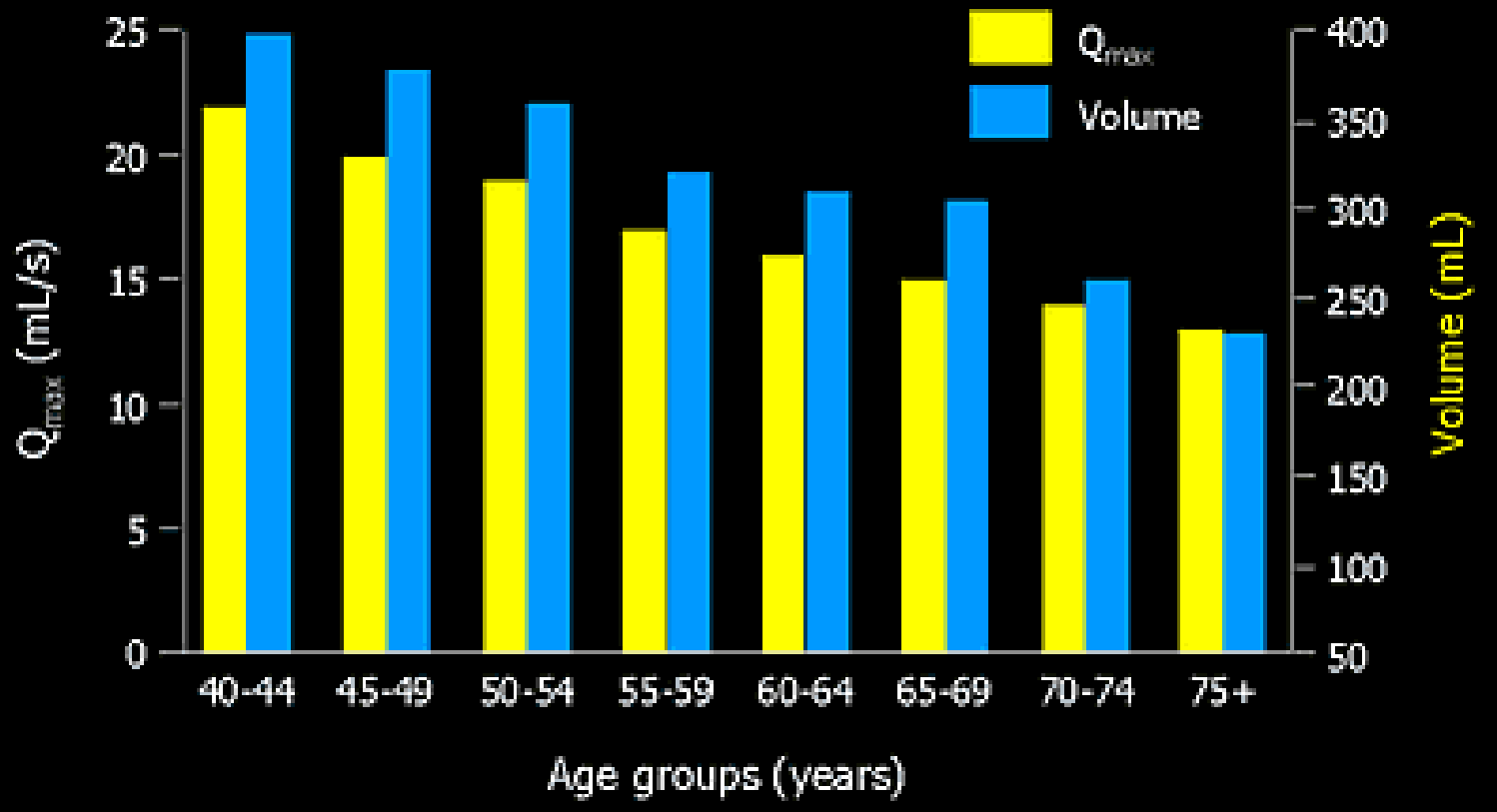

Prostatism!!!

The Problem:
BPH≠BPE≠BOO≠LUTS

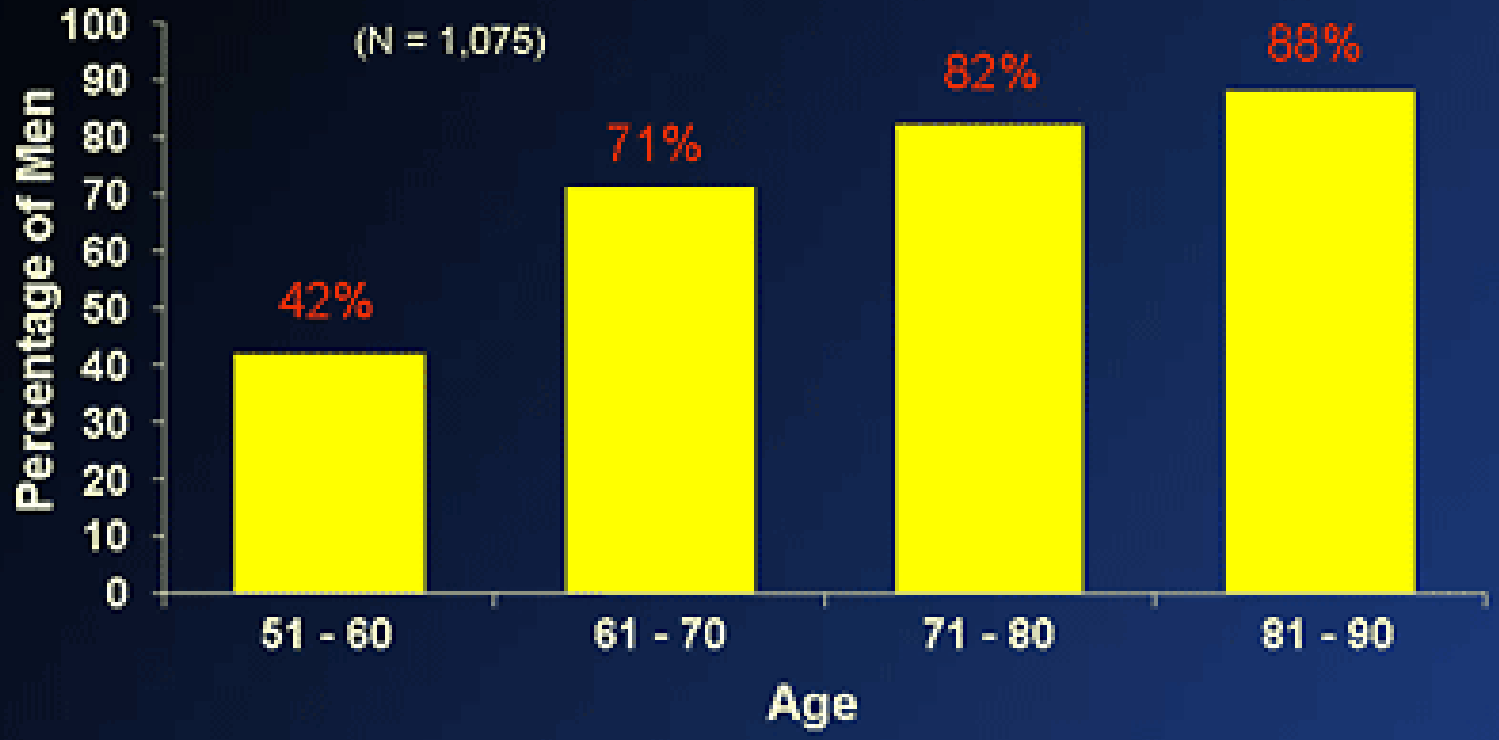


Epidemiology

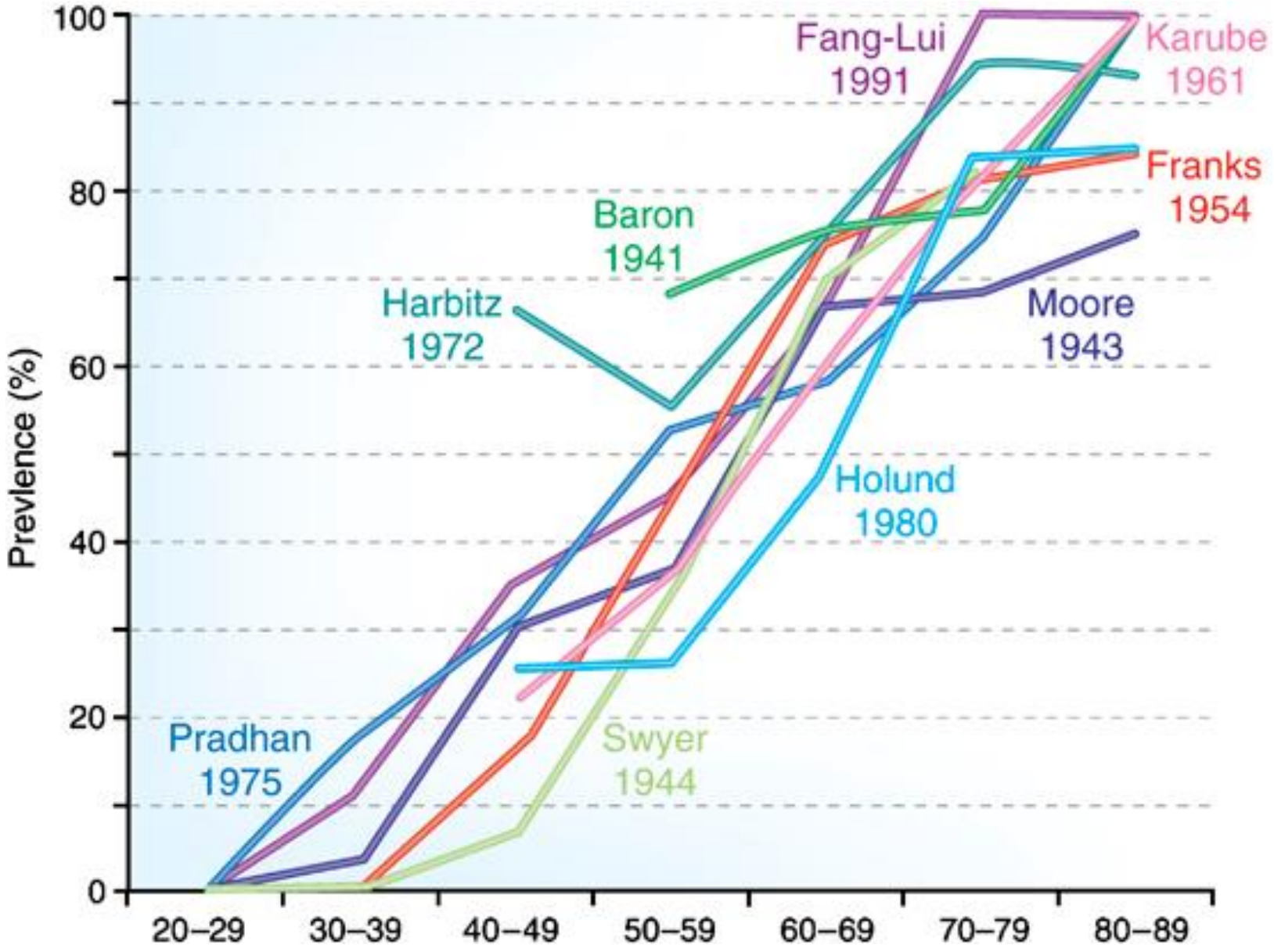
Epidemiology of BPH: Increasing Age and Changes in Peak Flow Rate and Voided Volume (Olmsted County Study)



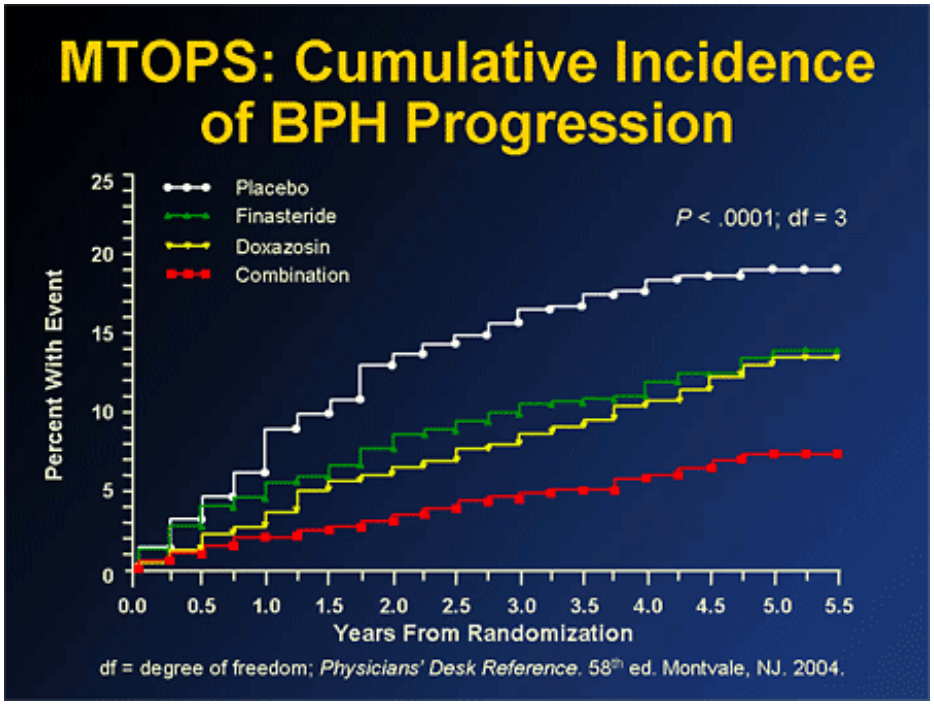
Prevalence of BPH Increases With Age

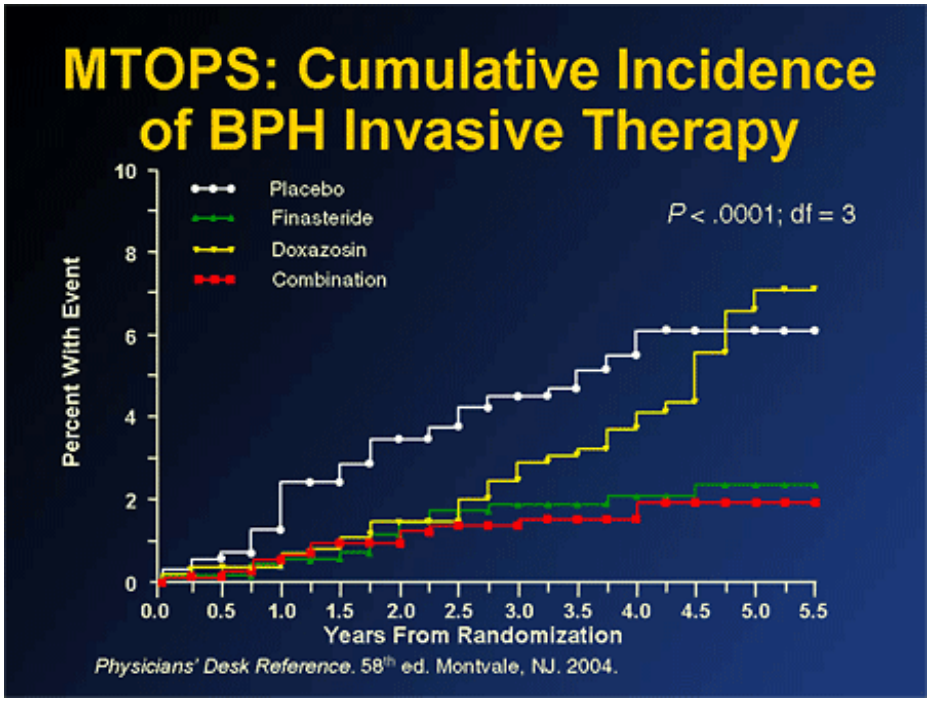


Adapted from Berry SJ, et al. *J Urol.* 1984;132:474-479.

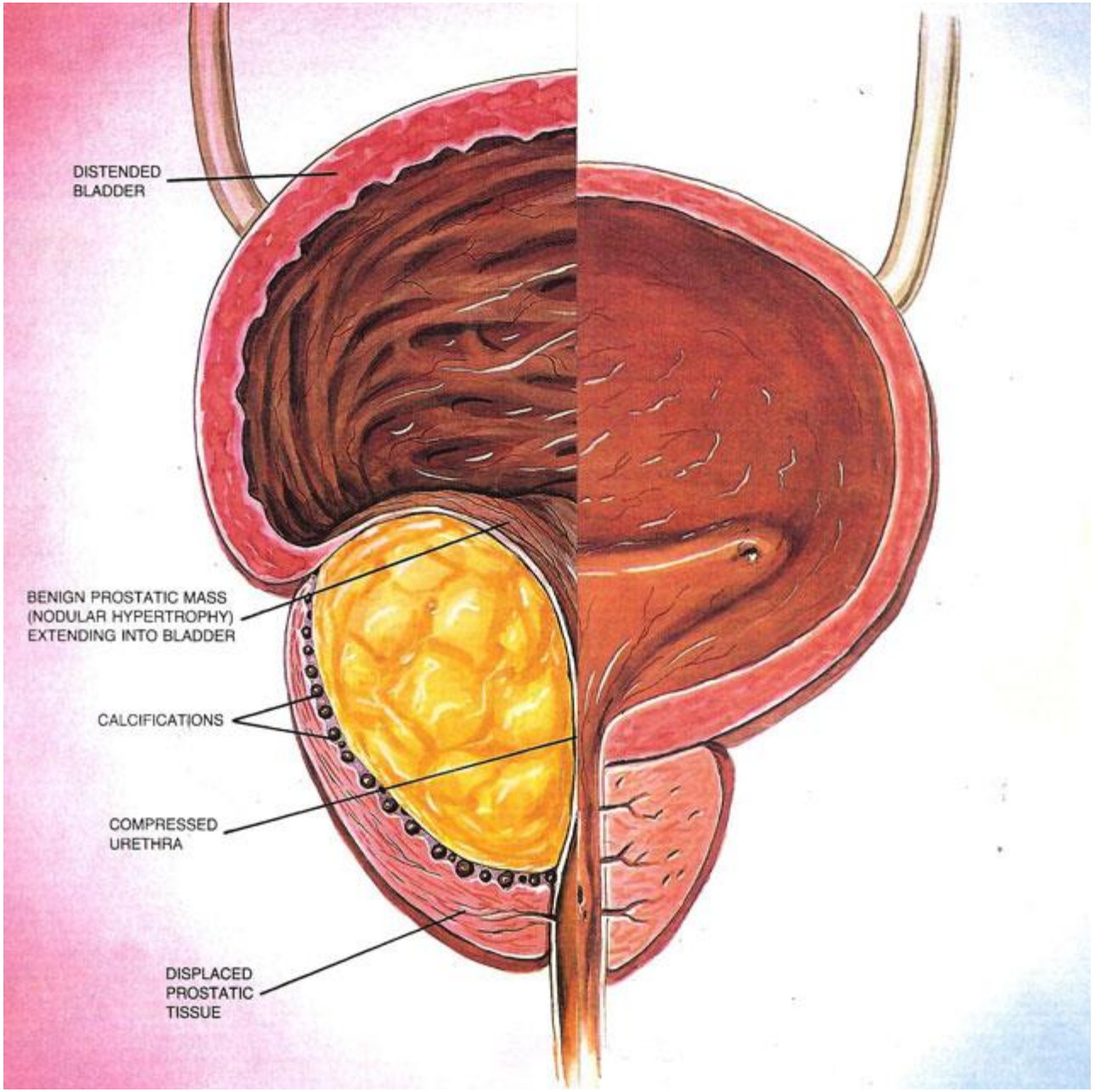

Prevlence (%)
100
80
60
40
20
0
20–29
30–39
40–49
50–59
60–69
70–79
80–89
Fang-Lui
1991
Karube
1961
Franks
1954
Baron
1941
Harbitz
1972
Moore
1943
Holund
1980
Pradhan
1975
Swyer
1944

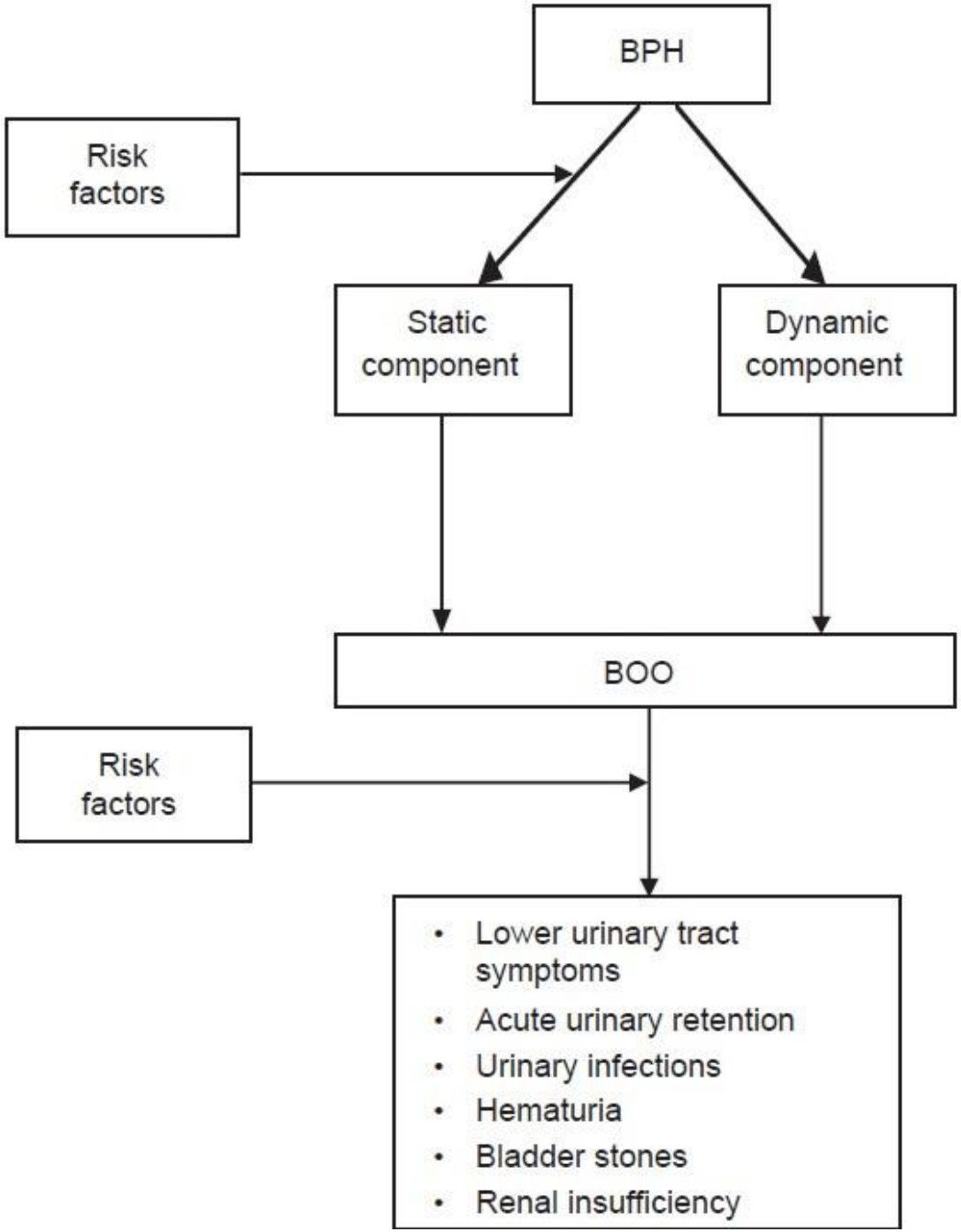
Progression of LUTS





Pathophysiology


DISTENDED BLADDER
BENIGN PROSTATIC MASS (NODULAR HYPERTROPHY) EXTENDING INTO BLADDER
CALCIFICATIONS
COMPRESSED URETHRA
DISPLACED PROSTATIC TISSUE


BPH
Risk factors
Static component
Dynamic component
BOO
Risk factors
• Lower urinary tract symptoms
• Acute urinary retention
• Urinary infections
• Hematuria
• Bladder stones
• Renal insufficiency

Multifactorial Disease

Non-modifiable	Modifiable
Age	Hormones
Genetics	Testosterone
Geography	Dihydrotestosterone
	Estrogen
	Metabolic syndrome
	Obesity
	Diabetes
	Diet
	Physical activity
	Inflammation

LUTS=Lower urinary tract symptoms, BPH=Benign prostatic hyperplasia, DHT=Dihydrotestosterone

Symptoms

A Variety of Symptoms

Storage symptoms	Voiding symptoms	Post micturition symptoms
Altered bladder sensation Increased daytime frequency Nocturia Urgency Urinary incontinence	Hesitancy Intermittency Slow stream Splitting/spraying Straining Terminal dribble	Feeling of incomplete bladder emptying Post micturition dribble

About 2/3 of men with LUTS have symptoms from more than one symptom group

Abrams P et al. Urology 2003;61:37- 49
Sexton CC et al. BJU Int 2009;103(Suppl3):12 -23

Assessment

Initial Assessment (2010)

- History, exam and DRE (!)
- Fluid Volume Chart, (IPSS Score)
- urine dip
- PSA? Patient choice...
- Creatinine?
- Cystoscopy / Renal US scan, flow rate / PVR… All NOT recommended
- Lifestyle and fluids advice

Refer if… **(2010)**

- **Suspected 2WW**
- **Bothersome symptoms unresponsive to conservative Rx**
- **LUTS associated with UTI, urinary retention, renal impairment**

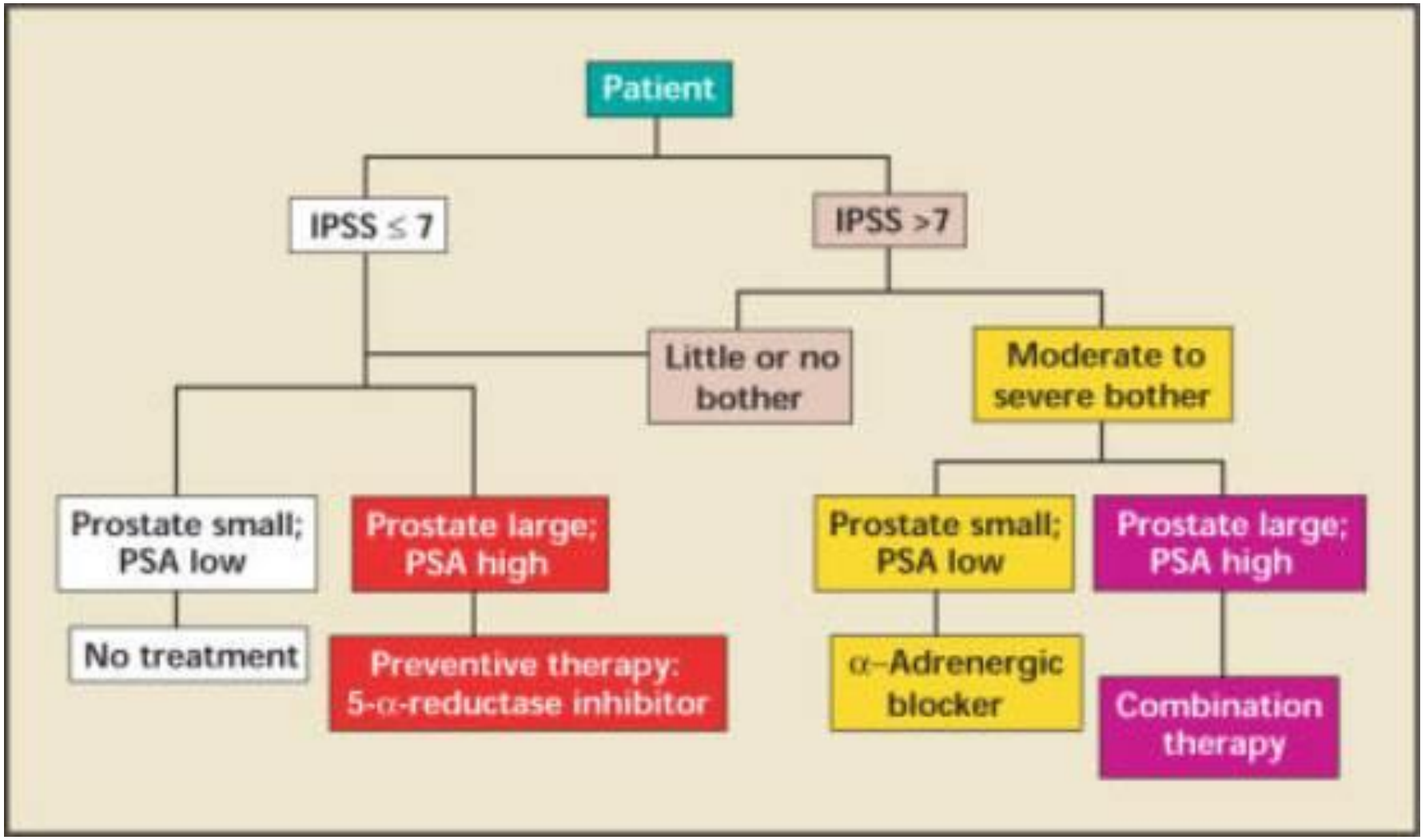
Specialist **Assessment (2010)**

- **All of the above…**
- **Cystoscopy with…UTI, non-vis HU, pyuria, severe symptoms**
- **Renal US with… UTI, non-vis HU, pyuria, retention, severe symptoms**
- **Urodynamics…?**

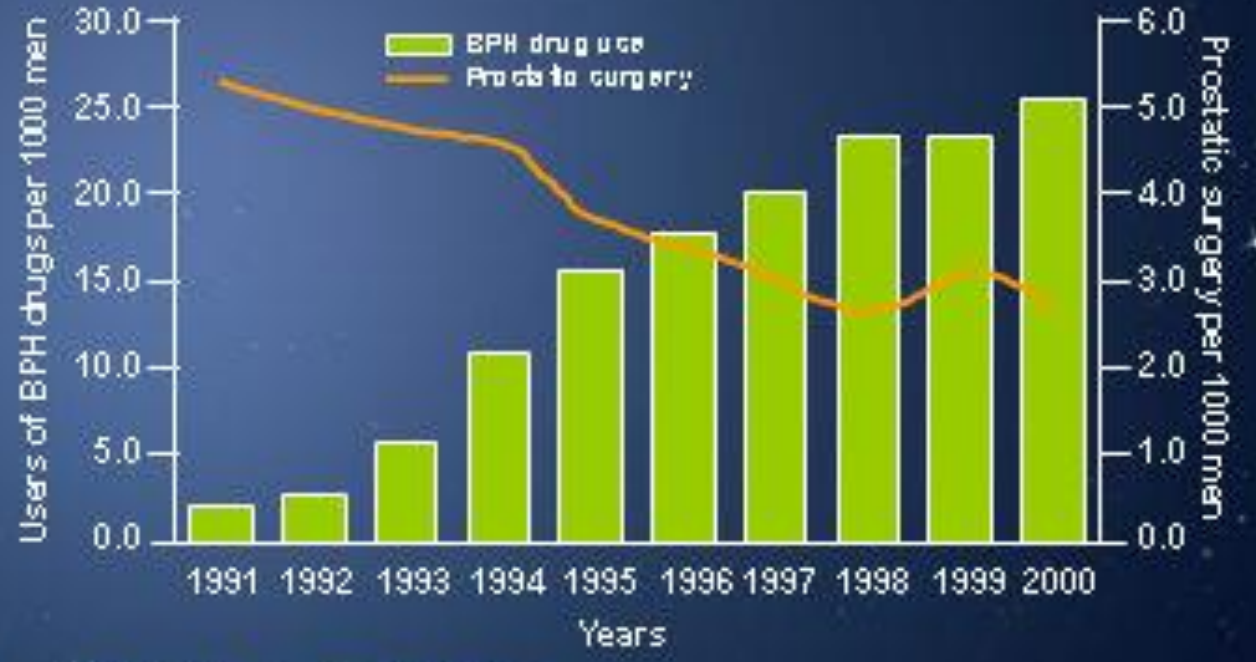
Conservative Management **(2010)**

- **Pads and bladder training for DO and urinary incontinence**
- **ISC better than urethral or SP catheter for retention**
- **Long term catheter for failed medical Rx, surgery inappropriate**
- **Drug treatment with bothersome symptoms…**

Treatment


Patient
IPSS ≤ 7
IPSS >7
Little or no bother
Moderate to severe bother
Prostate small; PSA low
Prostate large; PSA high
Prostate small; PSA low
Prostate large; PSA high
No treatment
Preventive therapy: 5-α-reductase inhibitor
α–Adrenergic blocker
Combination therapy

Drug Therapy for BPH and Hospital Admission



Bouvenain PC et al. *Eur Urol* 2008;48:628-634.

Drug Treatment **(mostly 2010)**

- **α-blocker with mod – severe Sx**
- **Dual therapy if volume > 30cc or PSA > 1.4**
- **Add anticholinergic if storage symptoms persist**
- **Polyuria – loop diuretic / desmopressin**
- **PDE5I NOT for use with LUTS alone (new - 2015)**
- **Do NOT offer phytotherapy (…?)**

What about Finasteride vs Dutasteride?

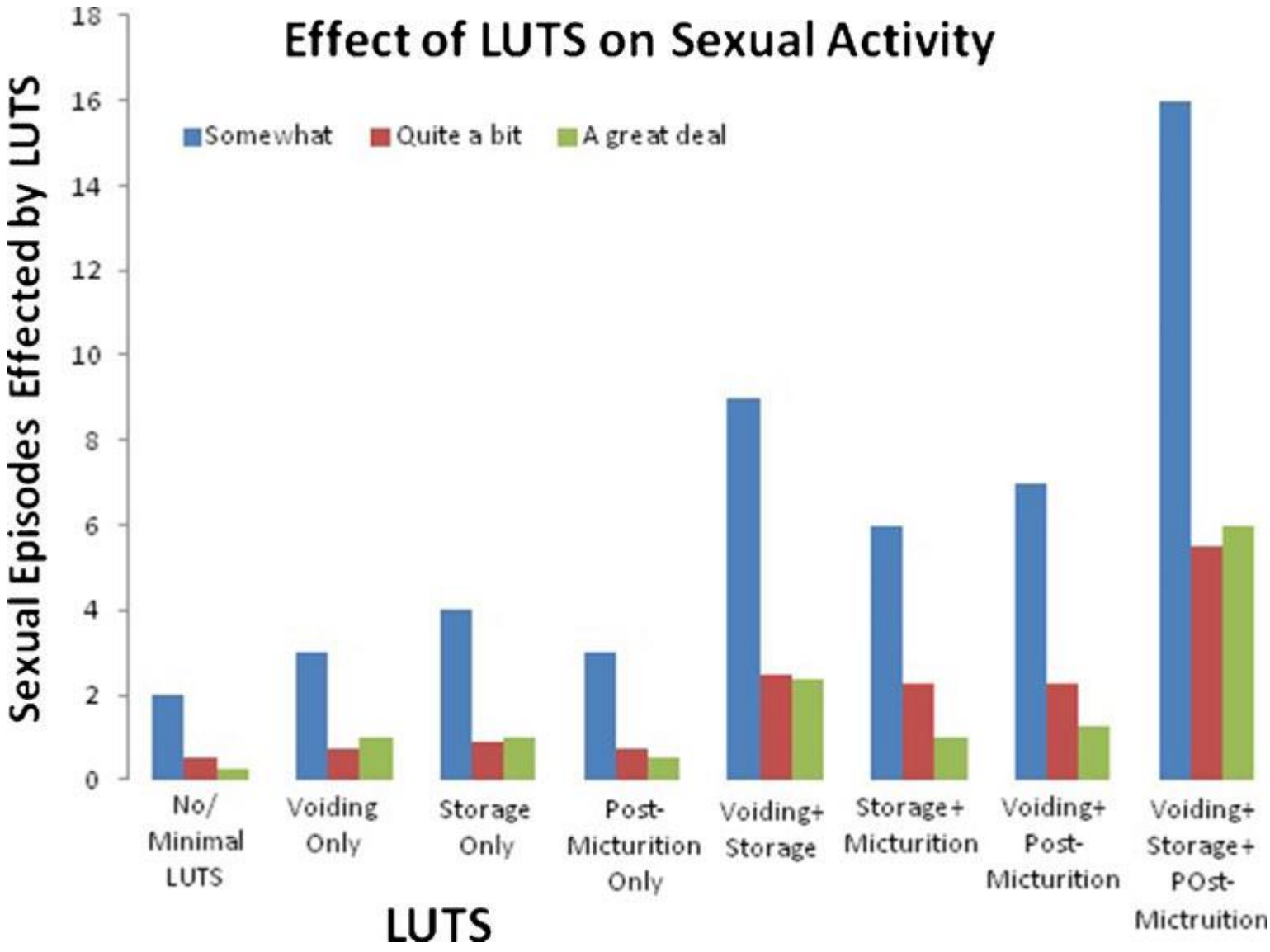
Mean ± S.D.	CombAT[1] (n=4844)	MTOPS[2] (n=3047)
Age (years)	66.1 ± 7.01	62.6 ± 7.3
Total IPSS	16.4 ± 6.16	16.9 ± 5.9
Prostate volume (cc)	55.0 ± 23.58	36.3 ± 20.1
Serum PSA (ng/mL)	4.0 ± 2.08	2.4 ± 2.1
Qmax (mL/sec)	10.7 ± 3.62	10.5 ± 2.6
Post - void residual (mL)	67.7 ± 64.87	68.1 ± 82.9

The EPICS Trial

Comparison of dutasteride and finasteride for treating BPH: the Enlarged Prostate International Comparator Study (EPICS).Nickel JC, Gilling P Tammela TL Morrill B, Wilson TH, Rittmaster RS. BJU Int. (2011) 108:388 - 94.

CONCLUSION:

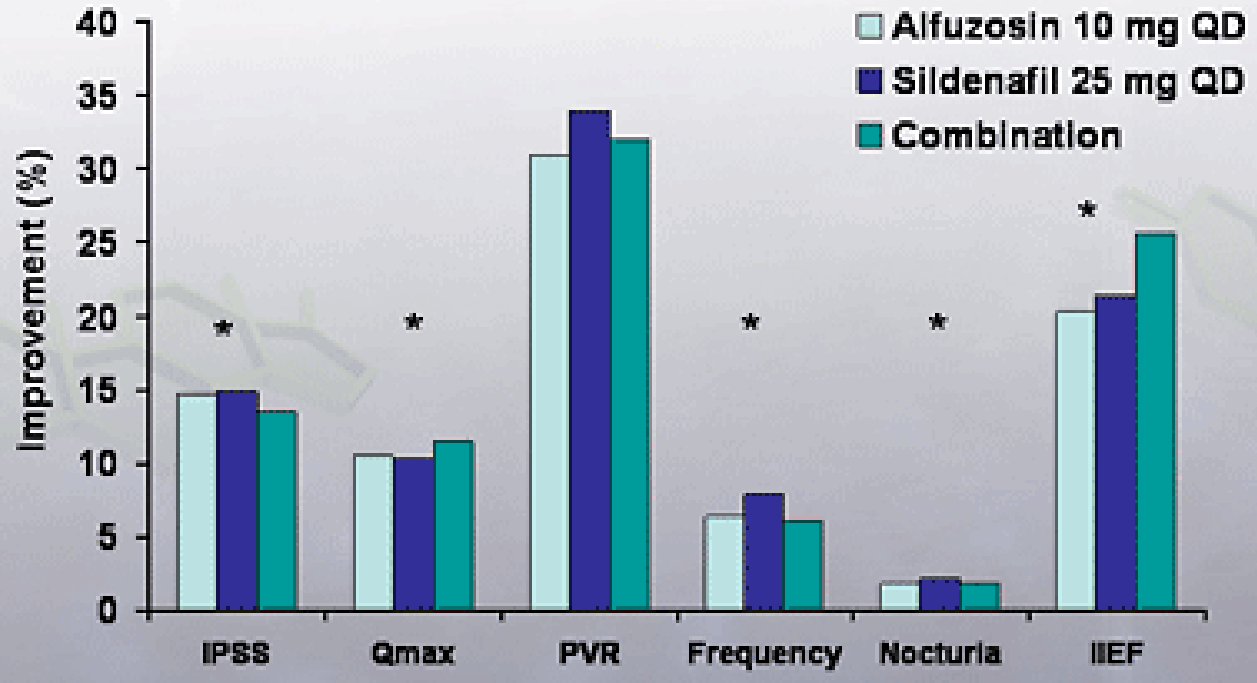
Dutasteride & finasteride, for 12 months, were similarly effective in reducing prostate volume and improving Q(max) and urinary symptoms in men with BPE.


Effect of LUTS on Sexual Activity
Somewhat
Quite a bit
A great deal
Sexual Episodes Effected by LUTS
18
16
14
12
10
8
6
4
2
0
No/ Minimal LUTS
Voiding Only
Storage Only
Post-Micturition Only
Voiding+ Storage
Storage+ Micturition
Voiding+ Post-Micturition
Voiding+ Storage+ POst-Mictruition
LUTS

21st Century Solutions

Alpha Blocker + PDE5 Inhibitor for LUTS and Sexual Dysfunction

Efficacy parameters after 12 weeks of treatment



*Improvement significant for all 3 groups but greatest for combination group

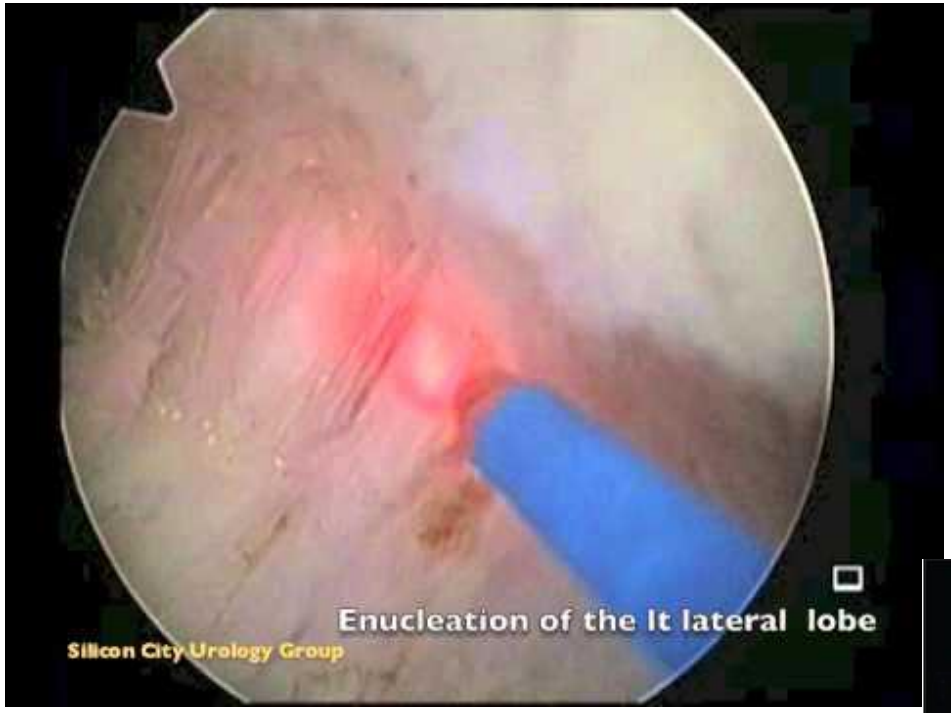
Kaplan SA et al. AUA Annual Meeting Program Abstract 1639;2006.

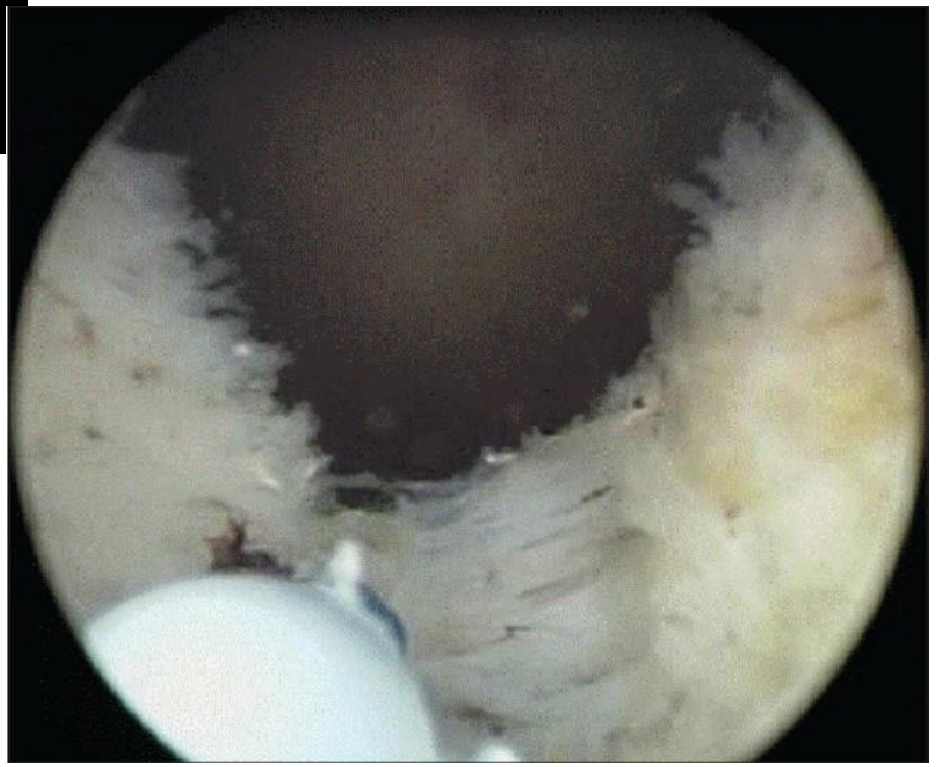
Vesomni (March 2016!!)

- **Flowmaxtra plus solifenacin 6mg**
- **Tariff – same as solifenacin alone**
- **Approved by Area Prescribing Committee**
- **Only for patients prescribed both**

Surgical Treatment **(2010)**

- **Bothersome symptoms despite medical therapy.**
- **TURP, bipolar TURP or HoLEP in specialist centres or with mentorship in place.**
- **TUNA, TUMT, HIFU, TEAP NOT recommended**
- **GLL recommended ONLY as part of RCT**


Enucleation of the lt lateral lobe
Silicon City Urology Group



Surgery for Storage LUTS (2010)

- **Bothersome symptoms despite medical therapy.**
- **Intravesical Botox in men who can perform ISC**
- **Consider cystoplasty in men who can perform ISC**
- **Sacral nerve stimulation in men who have failed on medical therapy**
- **Male slings / injectables only in RCT**

Summary

- **Nearly all men get BPH**
- **Quite a lot have LUTS**
- **Some progress**
- **Conservative / lifestyle important**
- **Medical treatment works well**
- **Surgical treatment is better**
- **Know when to refer**

Questions…?