LOWER URINARY TRACT SYMPTOMS:

ASSESSMENT and MANAGEMENT

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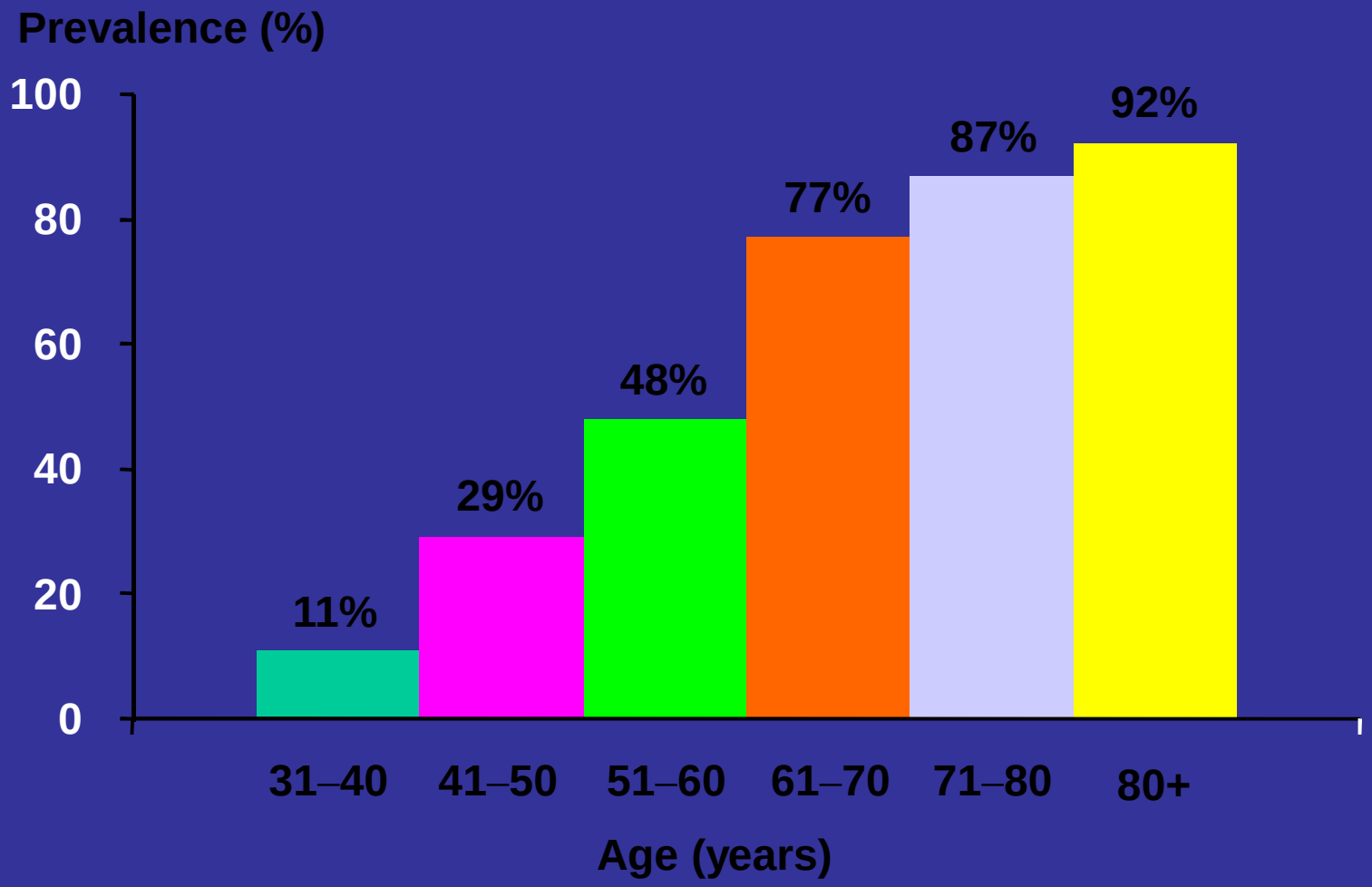
Main Disorders of the Prostate

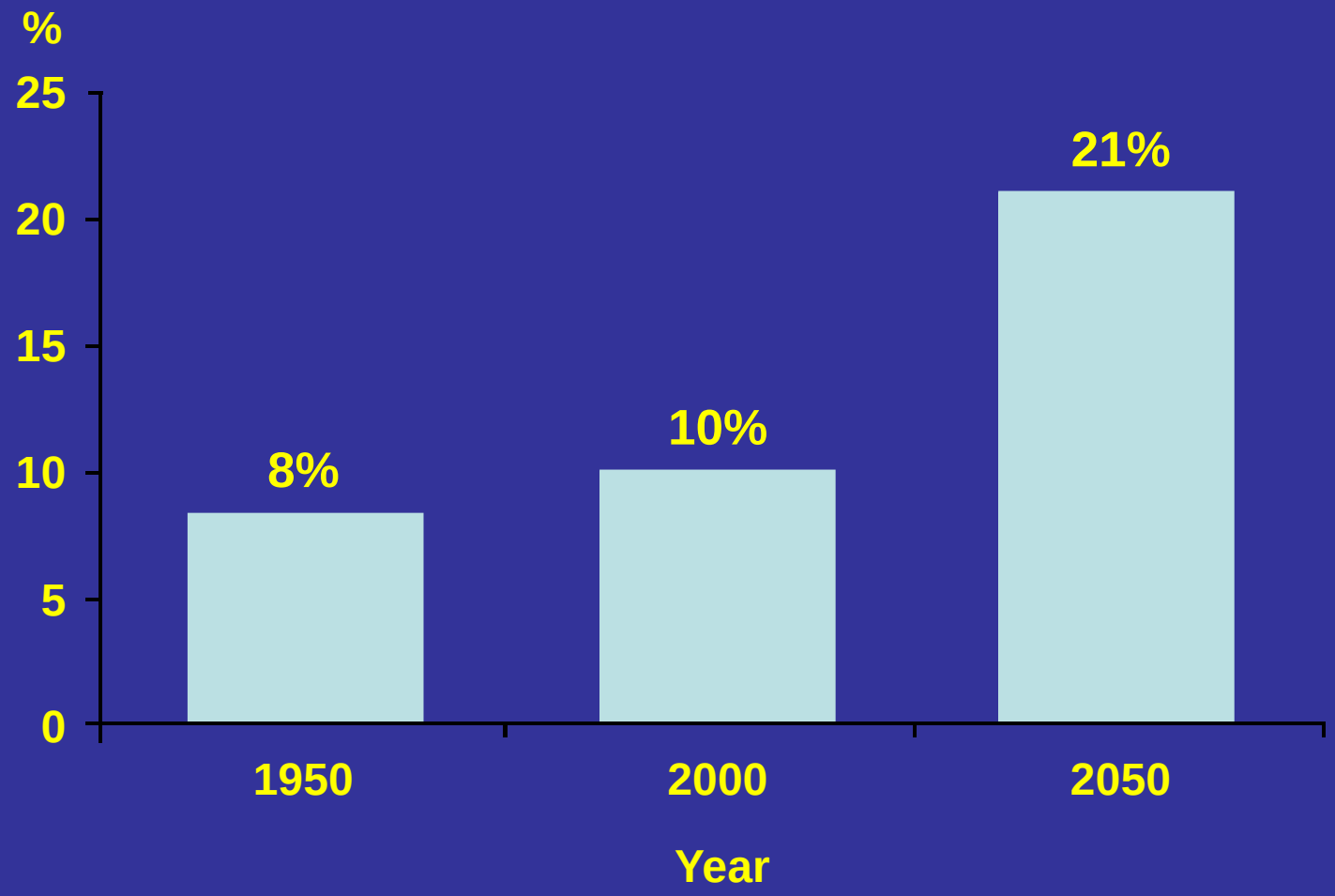
- Prostatitis <50yrs
- Benign Enlargement (BPH) >40yrs
- Cancer >50yrs

Prevalence of histological BPH by age

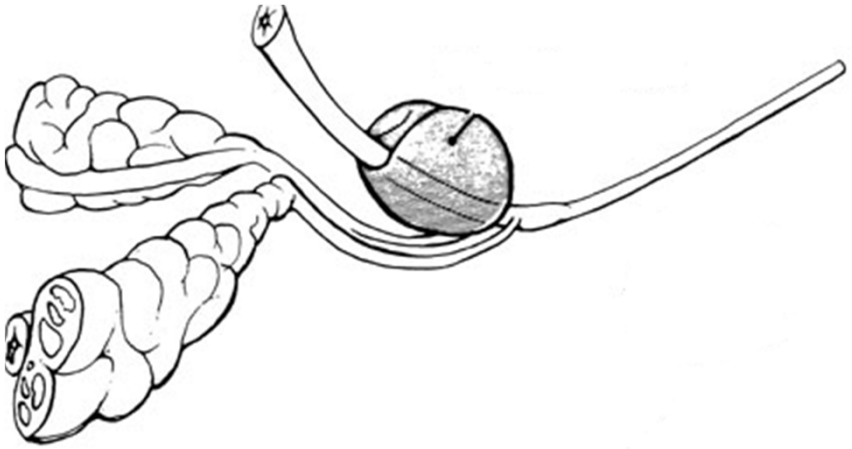


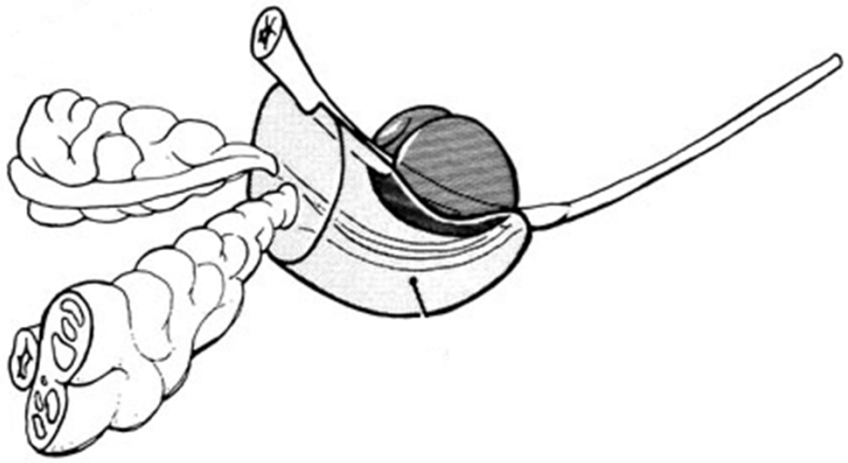
Berry *et al* (1984)

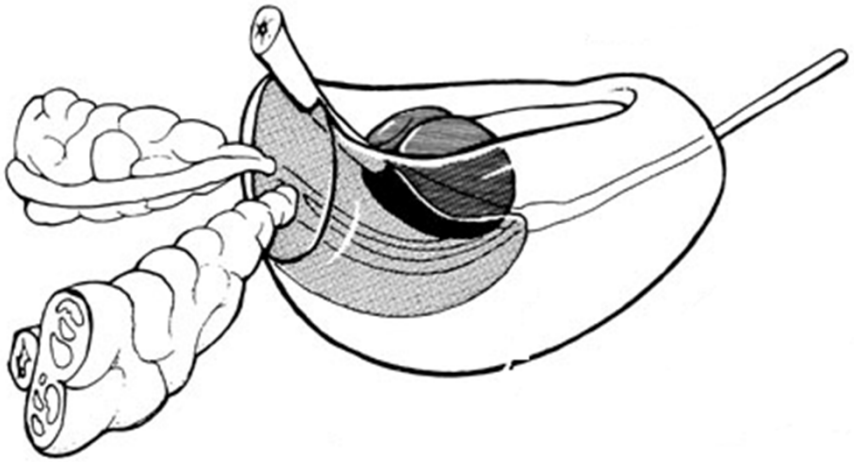
Proportion of world population 60 years or older: 1950–2050

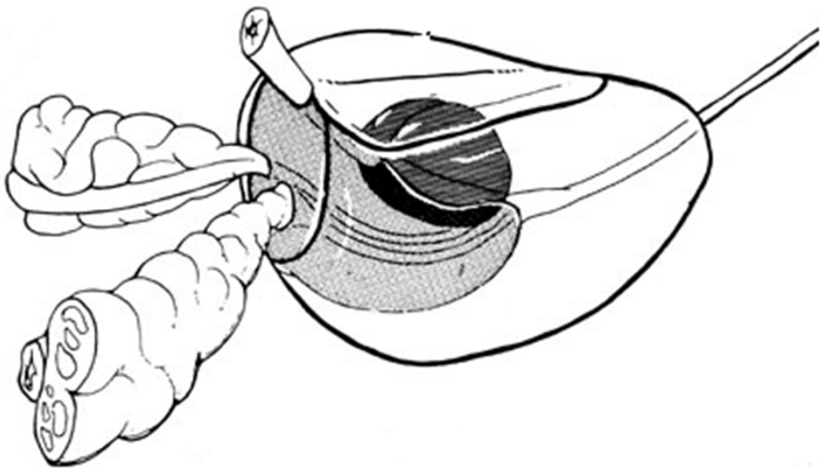


United Nations (2001)









Benign Prostatic Hyperplasia

- Size increases with age
- Most enlargement takes place after the age of 40 years.
- 60% of 60yr olds (90% of 90yr olds) have BPH

Lower Urinary Tract Symptoms (LUTS)

- VOIDING (obstructive)

  - Slow stream, Hesitancy , Intermittent flow, Terminal dribbling, Emptying is incomplete.

- STORAGE (irritative)

  - Frequency, Urgency, Nocturia

Other Causes of LUTS

- Drugs causing bladder dysfunction
  anticholinergics, nasal decongestants, antihistamines, antidepressants
- Constipation
- Ca Prostate
- Urethral Stricture
- Phimosis
- Diabetes/Heart Failure
- Neurological Problem

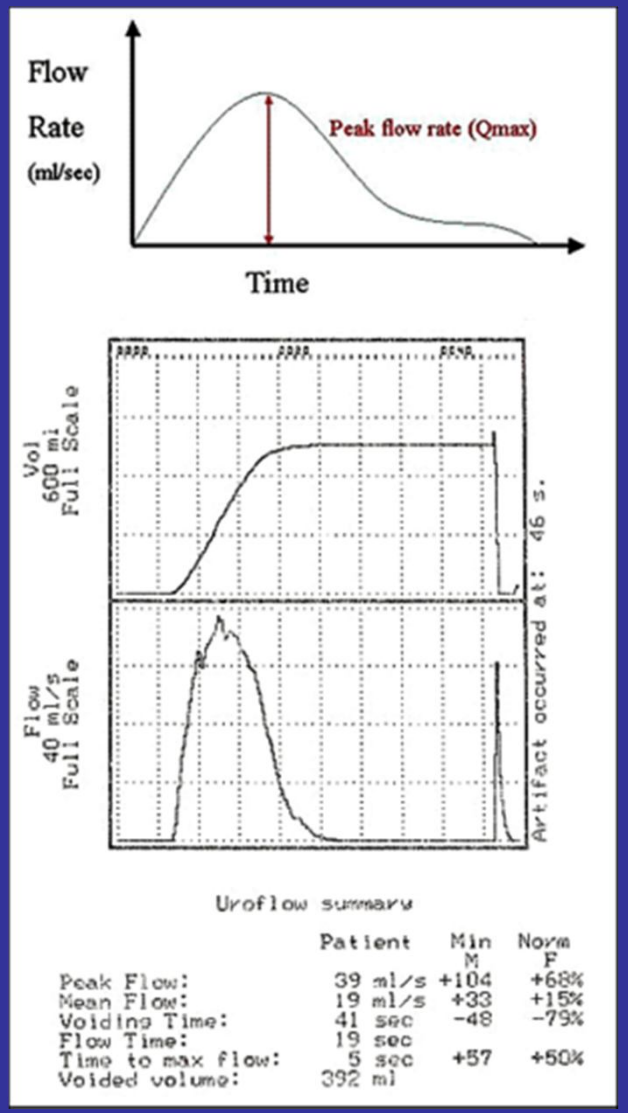
Assessment of LUTS

- History - Impact of symptoms (IPSS)
- Examination incl DRE
- Urinalysis
- Blood Test +/- PSA
- Flow Rate
- Ultrasound Scan
- +/-Cystoscopy

International Prostate Symptom Score (IPSS)

- Related to lower urinary tract symptoms
- Series of 7 questions (scale 0-5)
- One QOL index score 0-6

- Maximum score 35
- Mild 0-8; moderate 9-19, severe >20


Flow
Rate
(ml/sec)
Peak flow rate (Qmax)
Time
Vol
600 ml
Full Scale
Flow
40 ml/s
Full Scale
Artifact occurred at: 46 s.
Uroflow summary
Patient
Min
M
Norm
F
Peak Flow: 39 ml/s +104 +68%
Mean Flow: 19 ml/s +33 +15%
Voiding Time: 41 sec -48 -79%
Flow Time: 19 sec
Time to max flow: 5 sec +57 +50%
Voided volume: 392 ml

Complications of BPH

BPH is progressive and can have significant consequences including :

- Increased risk of acute urinary retention (AUR)

- Increased risk of renal impairment

- Increased risk of surgery

- Increased risk of symptom deterioration

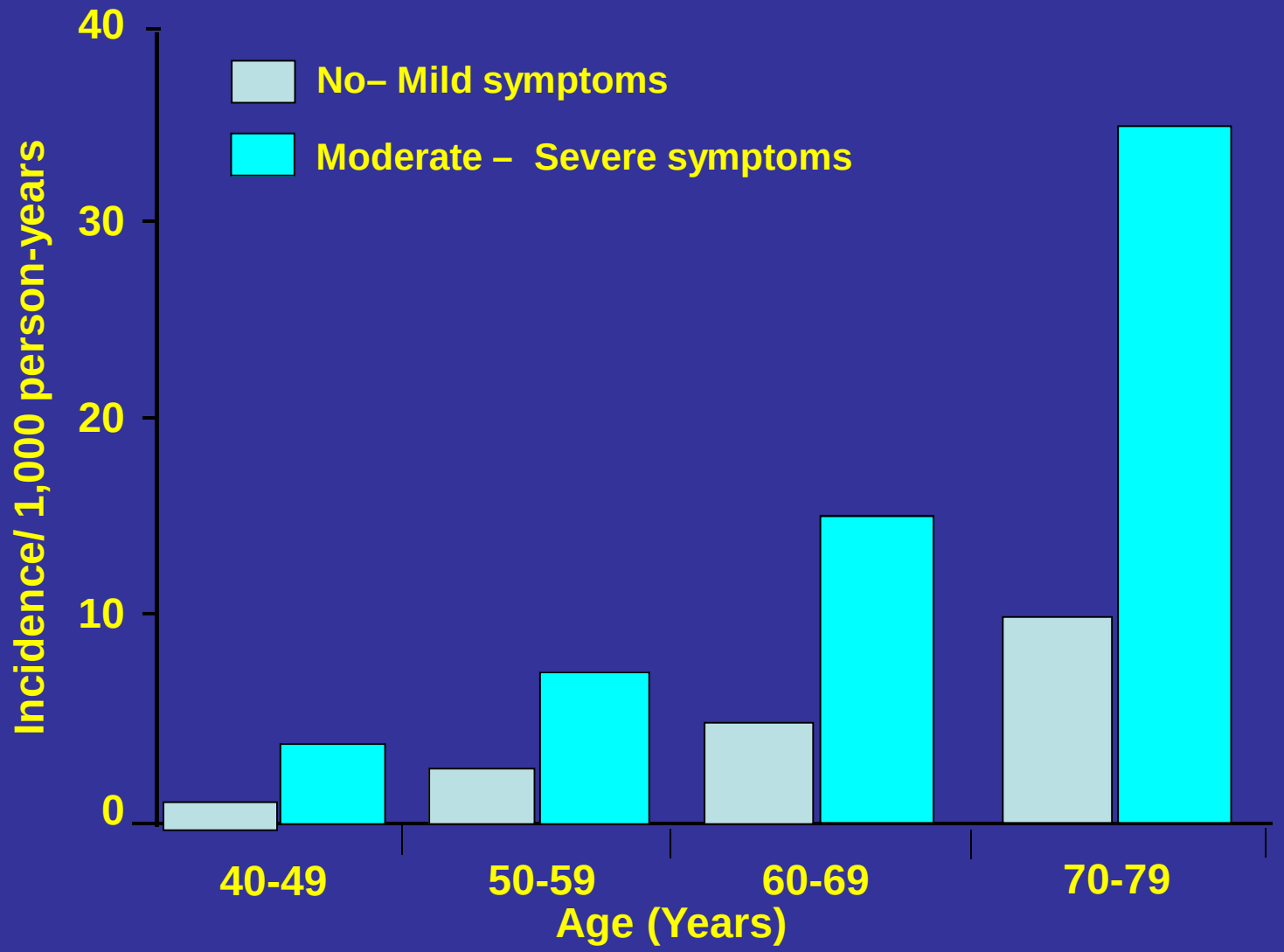
- UTI, Pyelonephritis, Epididymo-orchitis

- Bladder Calculi

- Haematuria

Cumulative Risk of AUR

Olmsted County Study - *Jacobsen et al (1997)*



Cumulative Risk of AUR

A 60 year old man has a 23% chance of developing AUR if he lives to 80 years

Predicting Patients at Risk of Progression

Two key risk factors have been identified that increase the risk of BPH progression

- *Prostate Volume*

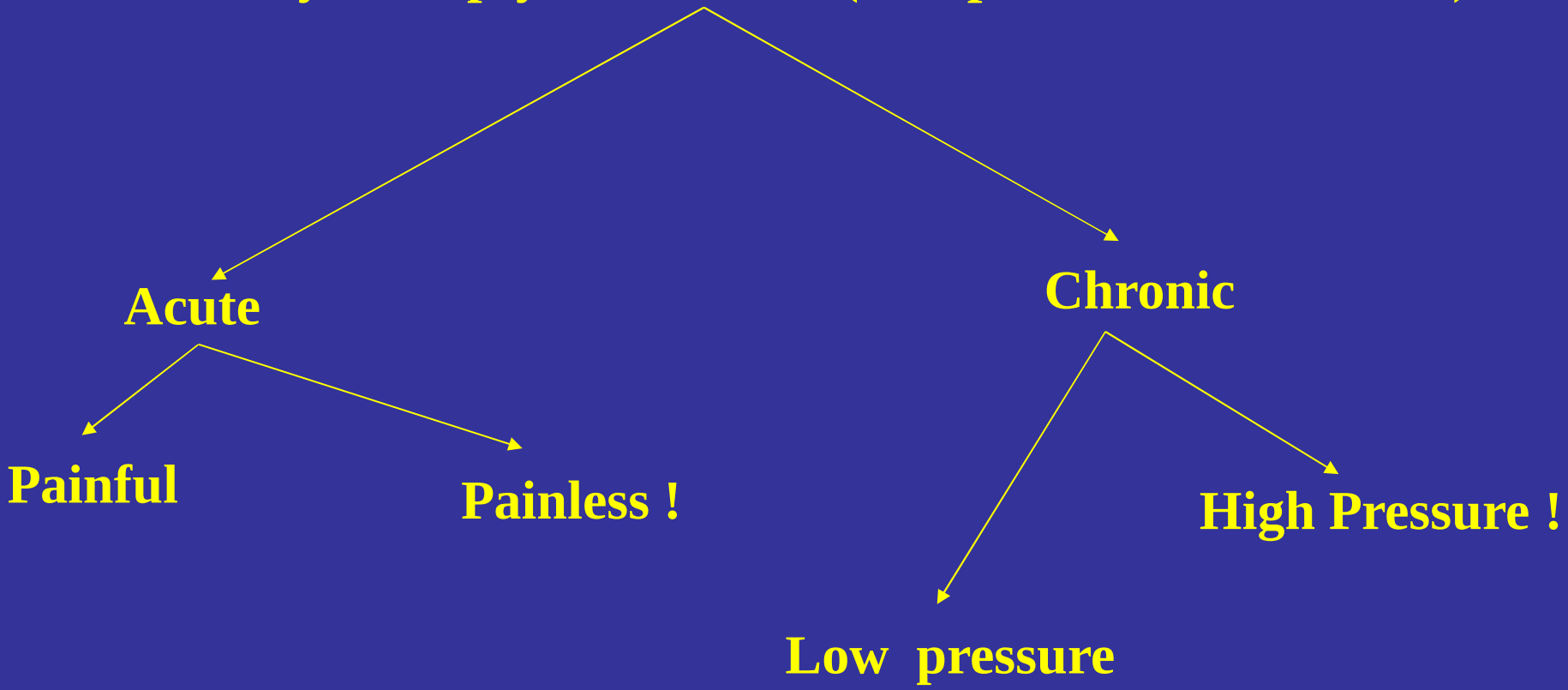
- *Prostate Specific Antigen (PSA)*

Baseline Prostate Volume and the Risk of BPH Progression

Men with larger prostates are more likely to have :

- Greater rate of prostate growth
- Decreased flow
- 3 x higher rate of moderate/severe symptoms
- 3 x increased risk of AUR
- 3 x increased risk of requiring surgery

RETENTION of URINE



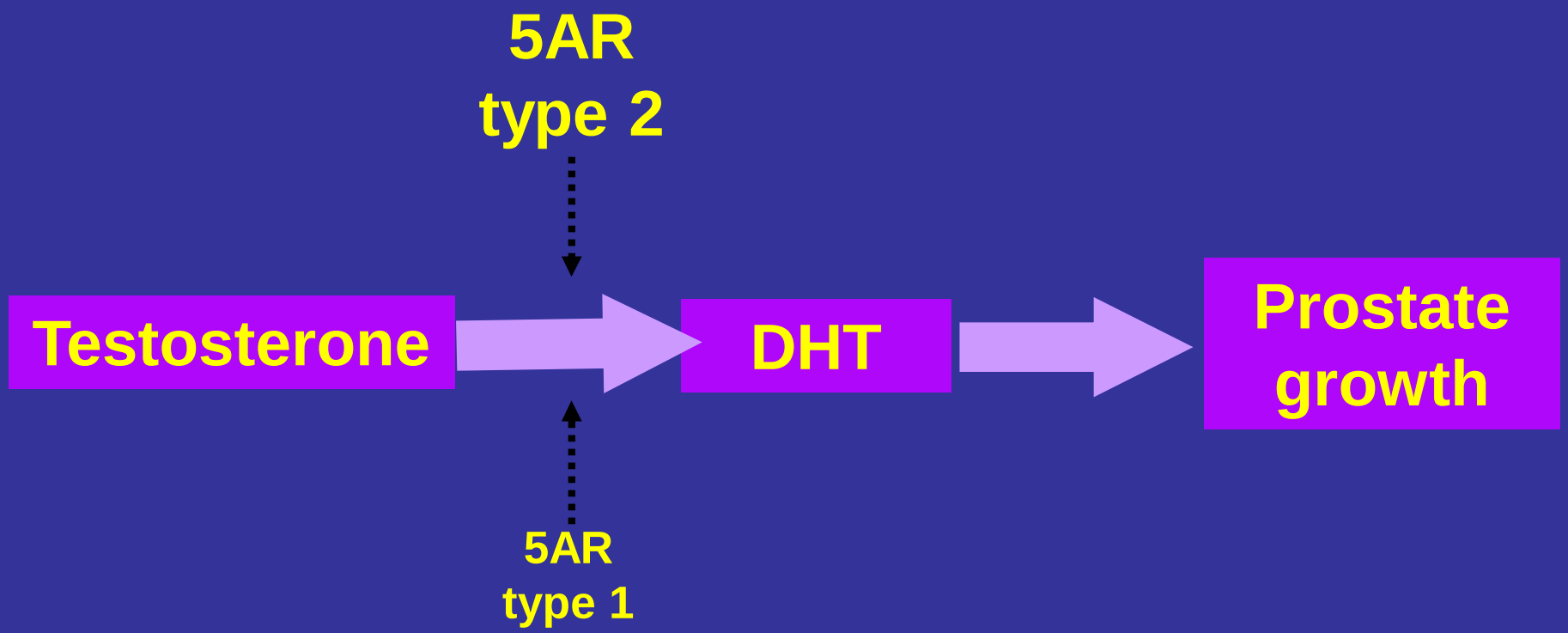
Treatment of BPH

- Conservative
- Pharmacotherapy (α–blockers, 5αRI, herbal)
- Surgical Intervention

Targeting Disease Progression

- Prevent further prostatic growth
  - *5 alpha reductase inhibitors*
- Prevent symptom deterioration
  - *Selective alpha blockers*

Role of 5 Alpha Reductase



BEWARE ! REDUCED serum PSA

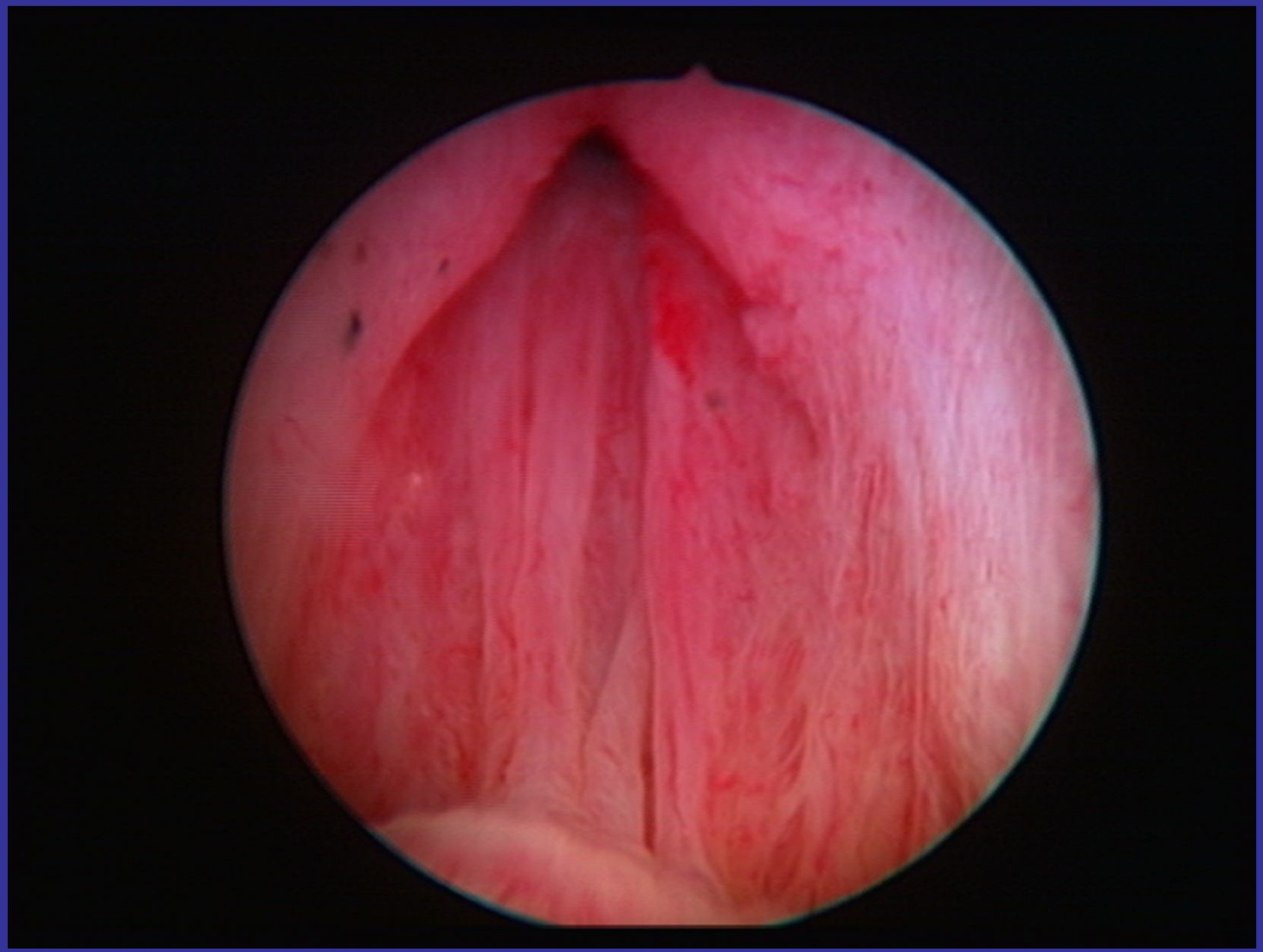
Indications for Surgery

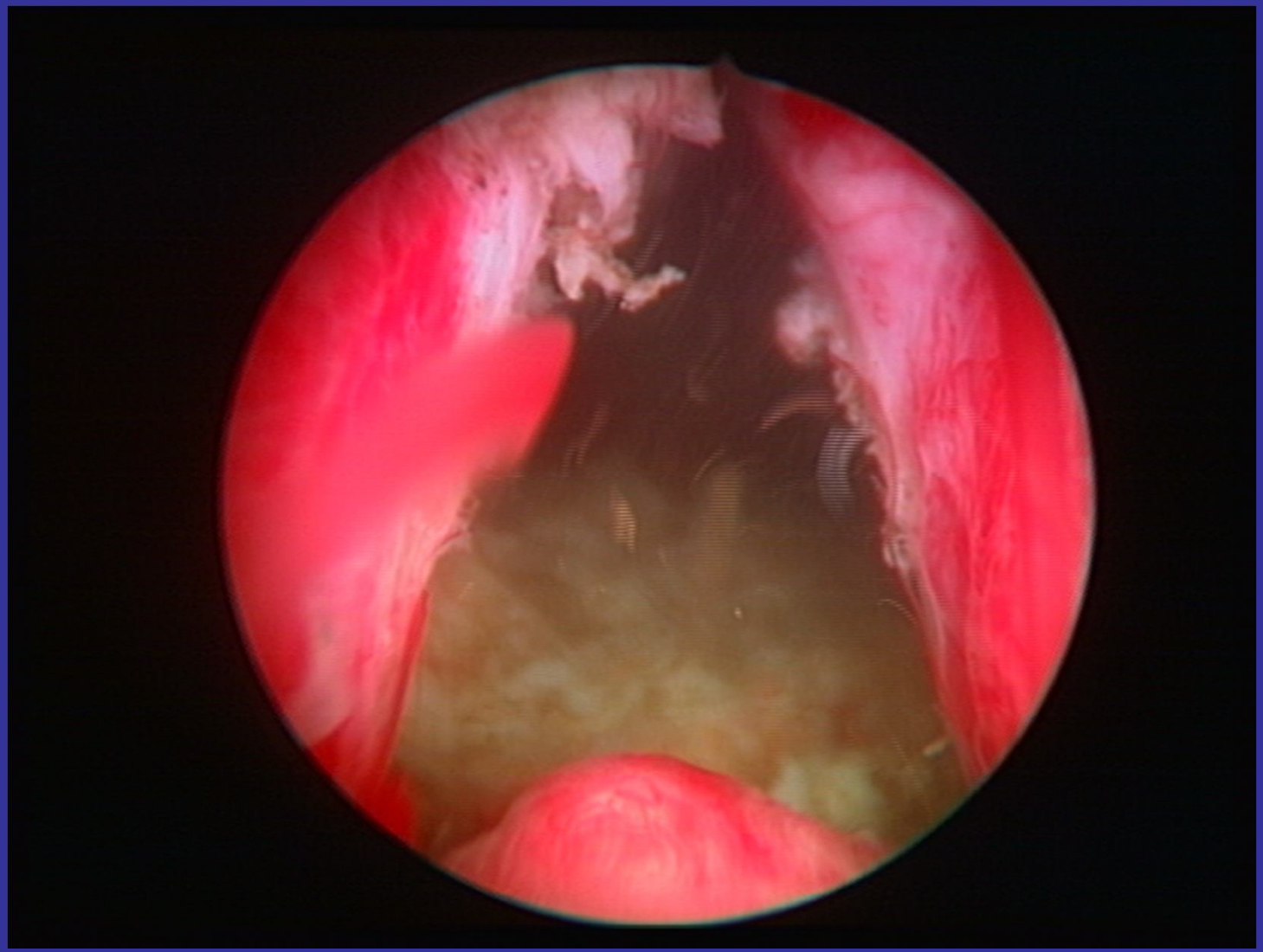
- Symptoms unresponsive to medical treatment/side effects/patient choice
- Significant Residual Urine >200 mls +/- associated with renal impairment
- Complications of BPH

Surgical Intervention

- Transurethral Incision of Prostate (TUIP)
- Transurethral Resection of Prostate (TURP)
- Laser resection/vaporisation
- Open Prostatectomy
- Prostatic Stent

Greenlight HPS
Photoselective Vaporization
of the Prostate





Conclusions

BPH increases with age + Increase shift to longevity

Prevalence of BPH is increasing

Conclusions

IPSS and QOL

Size

MSU and PSA

Q_{max}

Residual volume

Management options