Just a Mo' Bro –

a focus on Men's Health

Wednesday 20 November 2024
Zoom webinar

phn BRISBANE NORTH
An Australian Government Initiative

Queensland Government
Metro North Health

Acknowledgement

Metro North Hospital and Health Service and Brisbane North PHN respectfully acknowledge the Traditional Owners of the land on which our services and events are located. We pay our respects to all Elders past, present and future and acknowledge Aboriginal and Torres Strait Islander people across the State.

Show the Mo'!

Tonight's session…

6.30pm	**GPLO update** Dr Caroline Clancy | GPLO Dr James Martin | GPLO
	Nujum Jawa Crisis Stabilisation Update Louise Durant | A/Nursing Director, Clinical Services, Metro North Mental Health
6.45pm	**Men's Mental Health** Anthony Bligh | Director of Psychology, Metro North Mental Health
7.15pm	**Urology** Dr Nick Rukin | Director of Urology, Redcliffe Hospital
7.50pm	**Endocrinology** Dr Liz Wootton | Endocrinology Registrar, RBWH Dr Donald McLeod | Director of Endocrinology, RBWH
8.30pm	**Close**

Social Prescribing

PUTTING PEOPLE FIRST ...

Winner of the 2022 Award for Best International Social Prescribing Project.

I'm a WINNER! Award for the Best International Social Prescribing Scheme

OVER 1,180 PATIENTS SUPPORTED SINCE 2019
to link into local community services

Client testimonial — *"I really appreciated the face to face communication. I was impressed by the high-quality professional and human connection. The Footprints representative was so easy to talk to, I feel she listened and engaged to identify all my needs and how to address these."*

Client testimonial — *"Footprints was fantastic and supportive helping me work through my barriers."*

General Practitioner testimonial — *"Thank you for supporting patients that I have referred to Footprints. You have done an amazing job linking patients to the services that meet their needs."*

General Practitioner testimonial — *"Footprints has done excellent in reaching out to clients and to help them gain valuable insights into health conditions and guiding them to support resources."*

ABOUT FOOTPRINTS

Footprints Community is a well-regarded not-for-profit provider of community-based services, working in the community for over 30 years. We specialise in working with older people, those that experience disability, mental illness, as well as those who are at risk of homelessness.

Footprints adopts a non-discriminatory practice and working alongside people with respect and dignity, to enhance their capacity to live independently in the community, is integral to our service.

Our professionally qualified and highly skilled workforce operate within a client-centred practice framework ensuring principles of strengths-based practice are implemented into service delivery.

We believe in independence, strength and choice. We work with people and their representatives, at their own pace, to empower and support people to reach their goals.

Contact us:

1800 FOOTPRINTS (1800 366 877)
or 07 3252 3488

07 3252 3688

P.O. Box 735 New Farm QLD 4005

www.footprintscommunity.org.au

STAY CONNECTED WITH US

MAY 2024

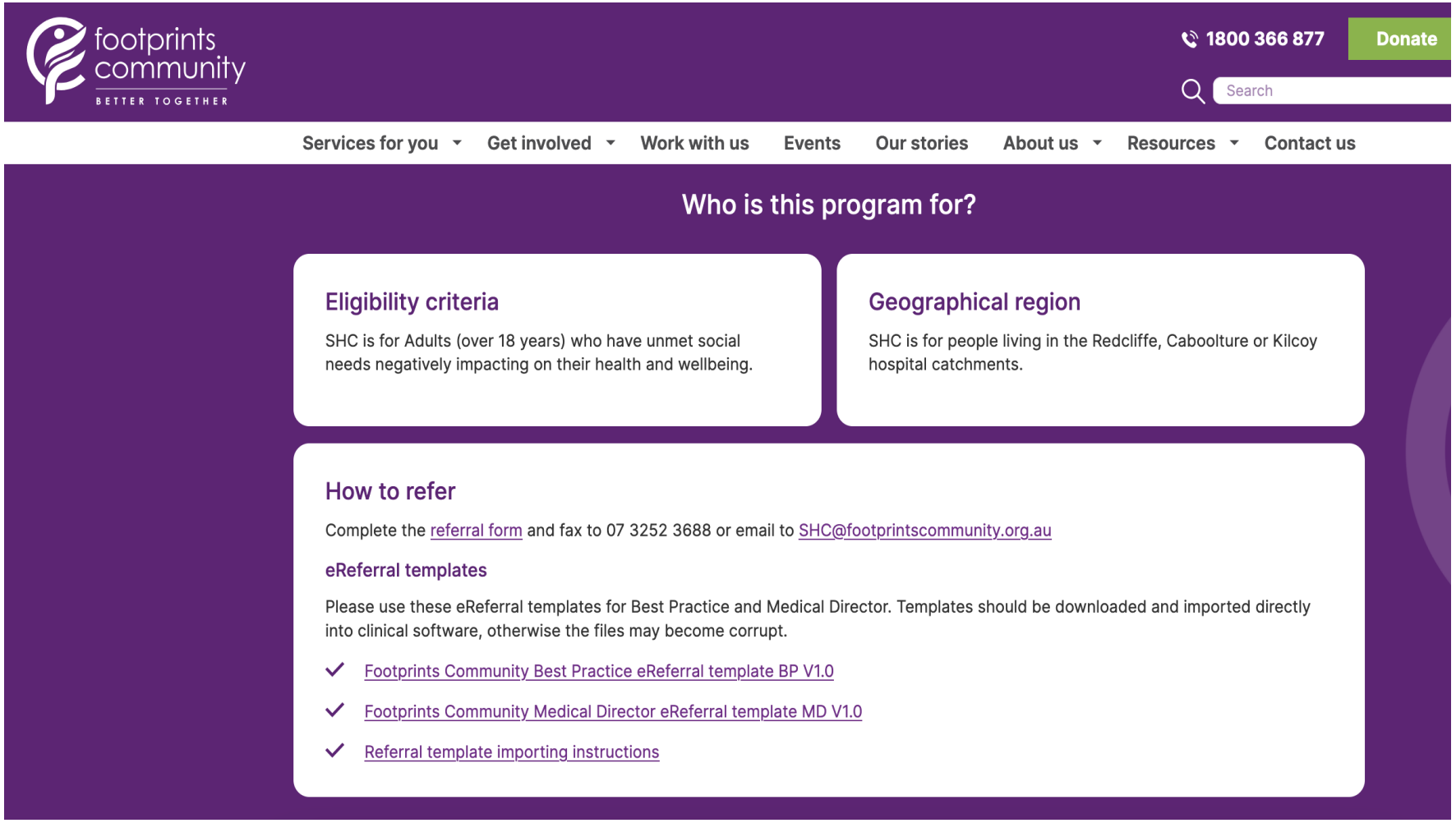
SOCIAL PRESCRIBING AT FOOTPRINTS COMMUNITY

Linking you to supports to manage your health and wellbeing!

footprints community
BETTER TOGETHER

Social Health Connect (SHC)

https://www.footprintscommunity.org.au/services/shc/



1-year Evaluation, UQ:

- 107 clients
- 2/3 female (!)

Average contact:
- 18 weeks
- 44 interactions

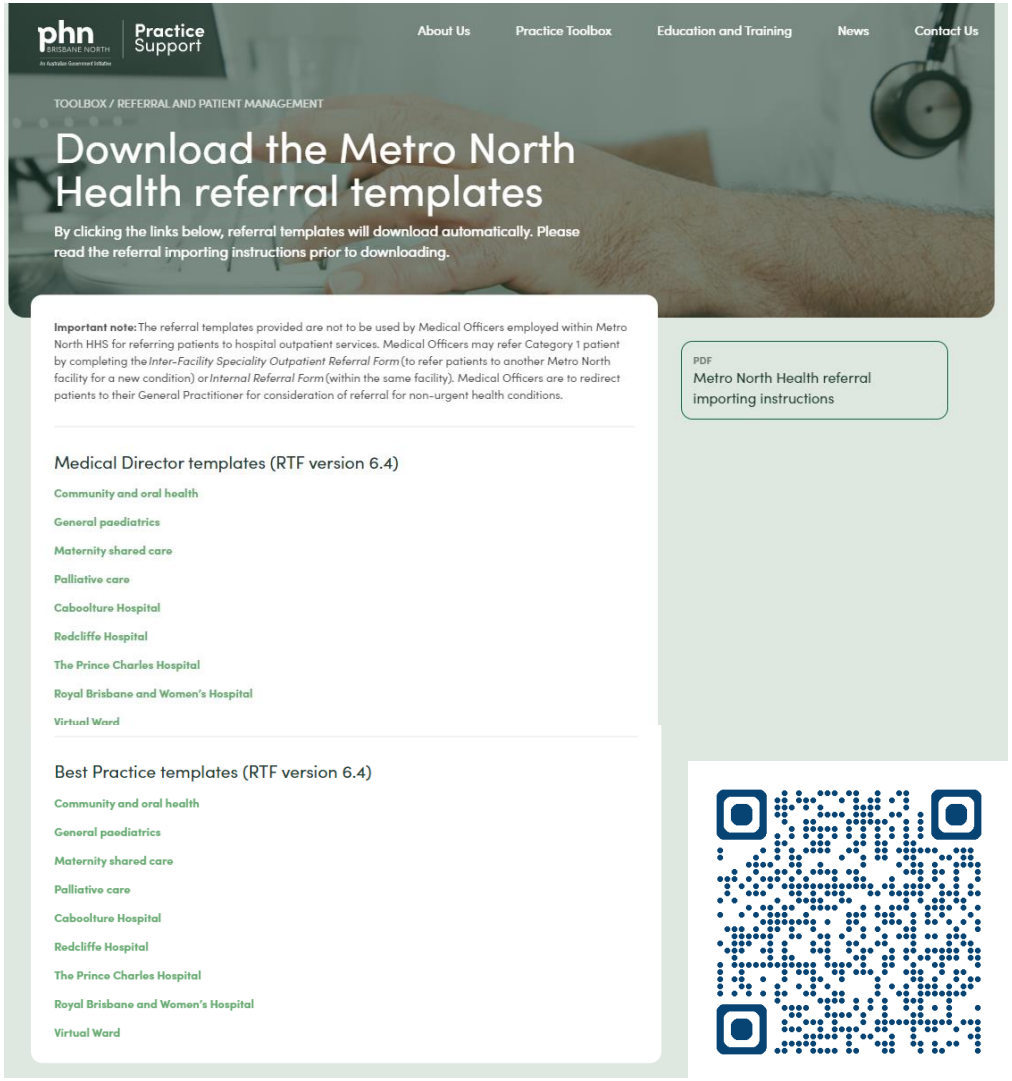
Outcomes
- Improved wellbeing
- Reduced:
  - Loneliness
  - Psychological distress

- Background
- Assessment
- Management
- Request (referral)
- Information

Daily clinical decision support!

AJGP. Volume 53, Issue 11 Suppl, Nov Supplement 2024

Virtual Ward



The Metro North Virtual Ward (VW) is an additional telehealth service that complements the current Virtual Emergency Department, Covid Virtual Ward, and Hospital-in-the-home services available within the Metro North Health region. Given the success of the virtual care model, the Metro North VW can now admit and manage patients with conditions other than COVID.

The VW can assist GP's by providing an inpatient equivalent admission for eligible patients.

On admission patients will be provided with team-based care via regular phone calls and/or video consults. The ward is based at the Royal Brisbane and Women's Hospital, from 0700 to 1930, 7 days a week, with overnight access to medical support. The patients will have access to medical, nursing, pharmacy, and social work support.

What can Virtual Ward provide?

Monitoring determined by patient's primary illness and co-morbidities.

Where required, patients will be provided with the following monitoring equipment free of charge and delivered to their home:

- Oxygen saturation probe
- Blood pressure monitor
- Thermometer
- Scales
- Facilitation of relevant investigations i.e.- Blood tests, medical imaging including MRI, ECG, Echo
- Facilitation of Specialist opinion
- Pharmacy review
- Referral to Allied Health

Which patients are eligible for admission to the VW?

Patients who require a brief period of monitoring and treatment which would otherwise require them to stay in hospital.

Patients at risk of deterioration, which if detected early, can be managed at home with the aim that hospital admission be avoided.

Patients where daily review in between planned GP review would be helpful.

Examples of conditions that may be suitable for admission include:

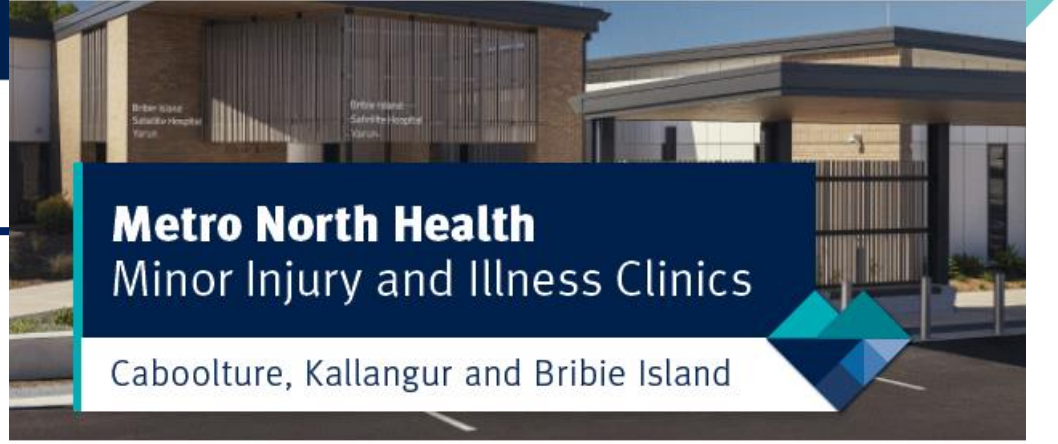
- COVID
- community acquired pneumonia, infective exacerbations of asthma and other chronic obstructive airway conditions
- infections including cellulitis, osteomyelitis, UTI
- severe hypertension without neurological red flags for short term monitoring, medication adjustment
- hyperglycaemia without ketoacidosis for short term monitoring, medication adjustment.
- electrolyte abnormalities requiring monitoring
- supratherapeutic INR for short term monitoring
- serendipitous lumps to expedite investigation and Specialist review.

How to refer your patients to VW?

Phone **(07) 3074 2109** in hours (0800-1700hrs) or phone RBWH switchboard out of hours on **(07) 3646 8111** and ask to speak to the Virtual Ward Consultant.

If your patient is accepted by the Virtual Ward Consultant please complete an electronic referral using Virtual Ward specific, Best Practice or Medical Director, referral templates which can be accessed from the Brisbane North PHN website.

Satellite Hospitals



The Minor Injury and Illness Clinic can be accessed for walk-in, urgent treatment of conditions not anticipated to be life-threatening. The service is free for Medicare cardholders.

The Minor Injury and Illness Clinic is not an emergency department. The safest and fastest way to access help in an emergency is to call 000.

Should I go to the Minor Injury and Illness Clinic or the Emergency Department?

Minor Injury and Illness Clinic
Examples of non-life-threatening conditions

- Fever, coughs, cold
- Earache
- Infections, rashes
- Minor eye issues
- Minor cuts
- Broken bones
- Minor head injury
- Minor burns

Emergency Department / 000
Examples of medical emergencies

- Chest pain
- Difficulty breathing
- Decreased consciousness
- Sudden severe headache
- Severe abdominal pain
- Severe burns
- Late pregnancy complications
- Severely ill children

Caboolture Satellite Hospital
(Kabul)
15 Rowe Street Caboolture
(07) 5433 7555

Kallangur Satellite Hospital
(Kalangoor)
9 Stoker Way Kallangur
(07) 3285 0000

Bribie Island Satellite Hospital
(Yarun)
103 First Ave Bongaree, Bribie Island
(07) 3410 2800

To find options for care when it is urgent but not an emergency visit Urgent Care – Brisbane North Primary Health Network at
brisbanenorthphn.org.au/practice-support/medicare-urgent-care-clinics

metronorth.health.qld.gov.au/hospitals-services/satellite-hospitals

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GP Psychiatry Support Line

ADCAS

Phone consults with medical addiction specialists.

We're here to help

The Alcohol and Drug Clinical Advisory Service (ADCAS) provides on-call specialist support and clinical advice for medical professionals regarding:

- Opioid pharmacotherapy and other prescribing enquiries
- Management of medical and psychiatric complications associated with alcohol and drug use
- Management of withdrawal syndromes, intoxication and toxicity
- Drug interaction information

Patients seeking information should contact adis, 24/7 alcohol & drug support, on 1800 177 833.

ADCAS | **Call 1800 290 928**
8am to 11pm, 7 days.

Queensland Government

Mental Health Resources for Health Workers

- Black Dog Institute's "The Essential Network"
  - suite of resources for health workers particularly those looking to navigate burnout and maintain better mental health

- Doctor's Health in QLD – 3833 4352
  - 24/7 Helpline for confidential colleague-to-colleague support

Metro North Health acknowledges the Traditional Custodians of the land upon which we live, work and walk, and pay our respects to Elders past, present and emerging.

Metro North Health | Queensland Government

We recognise the lived and living experience of people with mental illness, those experiencing harms from alcohol and other drug use, as well as those impacted by suicide and trauma, their families, carers and support people. We respect and value their opinions and their input into service delivery and change.

Crisis Reform project

- Joint initiative of Metro North Mental Health (MNMH) and Brisbane North PHN
  - **Scope, co-design and deliver a strategy with clear vision for crisis reform** in Metro North Mental Health and the Brisbane North Region.
- Successfully address mental health crisis
  - **Shift from singular solutions to a more strategic, connected regional approach**.
- Develop a framework
  - **Emphasises prevention and early intervention, coordinated responses during crises, and the provision of services and supports following a crisis to promote recovery.**

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GOAL: Is to ensure that consumers receive appropriate care in the right place and at the right time.

How do we get there?

What is recommended?

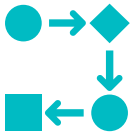
Review existing models and frameworks for crisis care

What do we have?

Service mapping and gap analysis

What do we want?

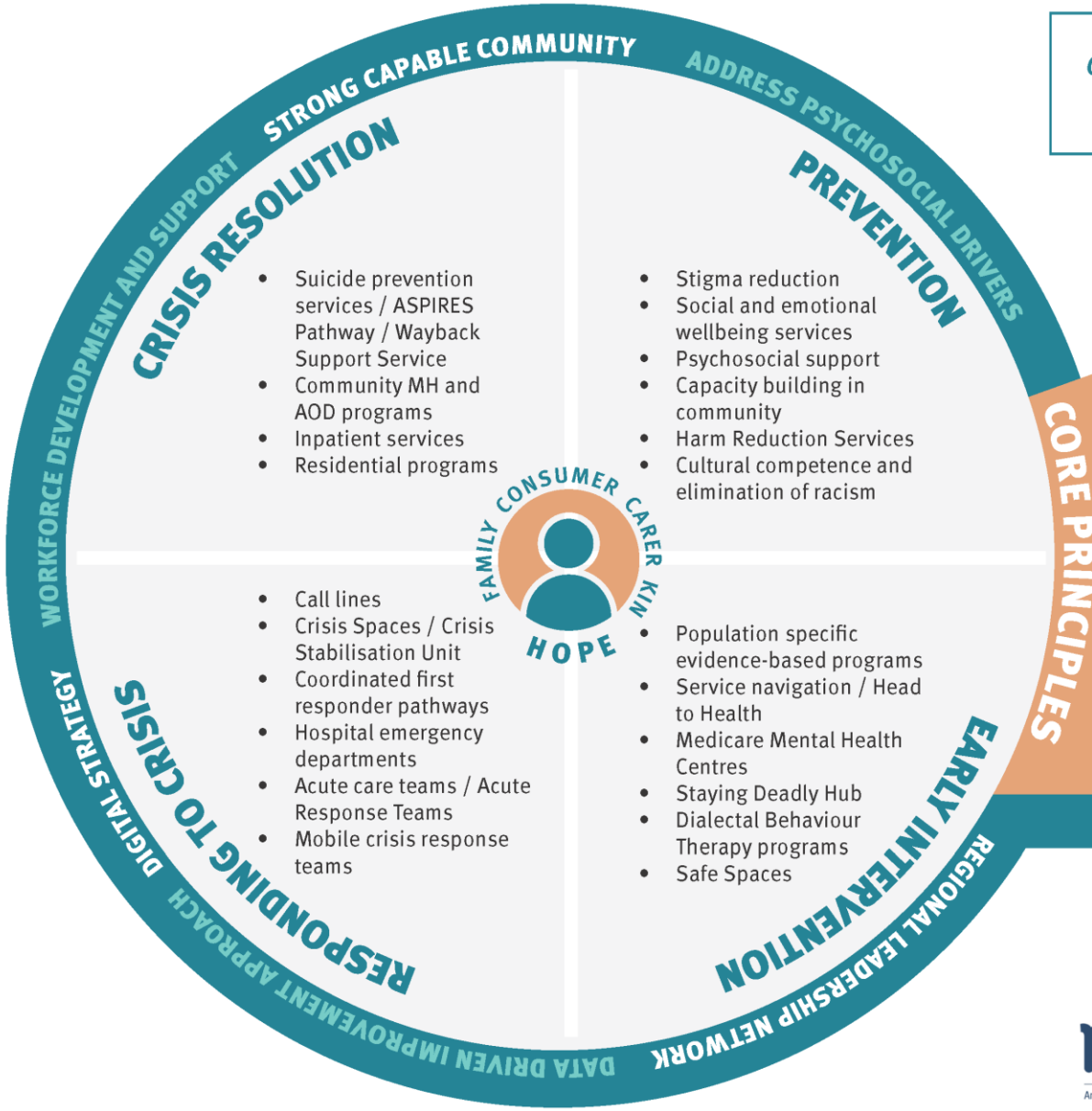
Focus groups, Multiagency Planning Day & Yarning Day



How will we do it?

Strategy development with high level multiagency commitment to action

Framework for Mental Health Crisis Reform



Connected continuum of care to give people the right care, at the right place and time.

Essential Crisis Care Principles

- Compassion and Hope
  Recovery-orientated and trauma-informed services
- Least restrictive approaches
- Inclusive of lived experience, families, carers and community
- Holistic and integrated care aimed at achieving Social and Emotional Wellbeing
- Culturally safe services which promote equity and inclusion
- Restorative Just and Learning Culture

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Thematic analysis of engagement

- 1. Metro North Health staff (including mental health staff, emergency department staff, Executive, and Board members)
- 2. Brisbane North Public Health Network (PHN) and commissioned partners (including PHN staff, networks, and commissioned programs (Safe Space Network, The Way Back Support Services, Head 2 Health).
- 3. People with lived and living experience (including past and present consumers of mental health services in Brisbane North and peak bodies (Mental Health Commission, Queensland Alliance for Mental Health, Mental Health Lived Experience Peak).
- 4. The Aboriginal and Torres Strait Islander community (including Hospital and Health Service (HHS) and community service providers (Urban Institute of Indigenous Health (IUIH), Kurbingui, Moreton Aboriginal and Torres Strait Islander Community Controlled Health Centres (MATSICCHC), and people who use those services and their families)

Definition of Mental Health Crisis

Mental health crisis is defined as an acute and intense experience of distressing mental ill-health symptoms and behaviours, which impacts a person's functioning and where usual coping strategies and resources are overwhelmed. This experience, as defined by the person, their careers and support people or community is rapidly changing and can present with concerns for safety, which requires an immediate health response for the crisis to be resolved.

Core Principles

- Compassion and Hope
- Recovery-orientated and trauma-informed services
- Least restrictive approaches
- Inclusive of lived experience, families, carers and community
- Holistic and integrated mental health services aimed at achieving Social Emotional Wellbeing Being (SEWB)
- Culturally safe services which promote equity and inclusion
- Restorative and Just Learning Culture

Enablers of Crisis Reform

- Regional Leadership Network
- A Connected Continuum of care
  - Prevention
  - Early intervention
  - Crisis response
  - Crisis resolution
- Building a strong capable community through health literacy and investment in capacity to respond to people in crisis.
- Addressing the social and cultural determinants of health
- Data-driven and data-linkages to support continuous improvement
- Digital Strategy
- Workforce Development and Support

Metro North Mental Health Crisis Reform Initiatives 24/25 and beyond

- Enhanced Aftercare support (TPCH ACT)
- ASPIRES Pathway enhancement
- Crisis Spaces in Redcliffe and Caboolture
- Shatter the Stigma Campaign
- PEC Model Of Service and environment re-design
- TPCH-ACT Model of Service Re-design
- **TPCH Crisis Stabilisation Facility**
- Hospital in the Home (RBWH)
- AMCART (RBWH)
- Crisis Spaces – Redcliffe and Caboolture
- MHCall centralisation and enhancements

Men’s Mental Health

Just a Mo’ Bro presentation

20 November 2024

Anthony Bligh
Director of Psychology, Metro North Mental Health

Overview

1. Societal Norms
2. What does the evidence say about the prevalence of mental health for men?
3. What do we miss and why?
    a. E.g. depression and suicide risk, alcohol (and also cannabis) use disorder, and PTSD
4. How men cope with mental health problems?
    a. Helpful and less helpful strategies
5. How to raise motivation for treatment/better coping strategies?

Societal Norms

- ‘masculine norms’ can influence attitudes towards help-seeking and strategies uses when in distress
  - Yousaf O, Popat A, Hunter MS. An investigation of masculinity attitudes, gender, and attitudes toward psychological help-seeking. Psychol Men Masculinity. 2015;16:234–7.
  - Granato SL, Smith PN, Selwyn CN. Acquired capability and masculine gender norm adherence: potential pathways to higher rates of male suicide. Psychol Men Masculinity. 2014;16:246–53.

- ‘masculine norms’ especially important for younger men
  - Rice S, Fallon B,
  - Bambling M. Men and depression: the impact of masculine role norms throughout the lifespan. Aust Educ Dev Psychol. 2011;28:133–44.

Traditional Masculine Norms
- that get in the way of help seeking

- self-reliance
- emotional control
- anti-femininity
- toughness

Men's Mental Health Prevalence – Depression and Anxiety

- Prev of unipolar depression in men is half that for women
- Three main explanations:
  - less likely to experience depression?
  - reluctant to acknowledge symptoms
    - due to male socialization/norms
  - Men experience depression in a specific way? - different symptoms?
    - Normal criteria for depression (e.g. sadness) not as applicable in males?
      - Concept of 'male depressive syndrome'
        - externalizing symptoms (e.g., anger, alcohol misuse, risk-taking) indicative of men's depression - not diagnostically recognised.
          - Source: https://journals.sagepub.com/doi/full/10.1177/0706743718766052#bibr42-0706743718766052
- The same is true for anxiety, men are less likely to experience anxiety and less likely to talk about it.


HEALTHNLY

Men’s Mental Health Prevalence – PTSD

- Men are diagnosed with PTSD less than half as often as women
- around 10% of women have PTSD sometime in life - 4% of men.
  - Men more likely to encounter traumas such as physical assault, accidents, disaster, combat or to see death and injury.
  - Women more prone to rape, sexual assault and sexual abuse as a child.
  - Females more likely to deal with stress by "tending and befriending"
    - nurturing and reaching out to others.
  - Men more fight/flight responses when it comes to stress
    - bottling it up and escaping or fighting back.
- "Achieving a winning performance at all costs is how many men enter stress."
- Performance failure is often the greatest stressor for men.
  - Source: How Men and Women Deal With Stress Differently (webmd.com)

- “Western culture gives no room for men to have and express how they feel. Instead, we spend an inordinate amount of time forcing men to comply with how we think they should feel and if they do not, we cause extreme anxiety and shame. Some men would literally rather die than to admit they have nightmares over what happened to them. The violence perpetrated against their bodies is stuffed down deep inside them leaving them emotionally paralyzed.”
    - Source: Complex Post-Traumatic Stress Disorder and Men: How Men Express the Symptoms | CPTSDfoundation.org

Men’s Mental Health Prevalence – Suicide

- Ages 15 to 44 - suicide among the top 3 sources of men’s mortality.
- Male suicide rate 3 to 7.5 times that of women.
- In Australia in 2022: 2,455 men died by suicide (18.8 deaths per 100,000 population), compared to 794 women (5.9 per 100,000).
  - Men over 85 - highest male age-specific suicide rate (32.7 deaths per 100,000 persons), but smallest proportion (2.9%) of male suicides.
    - most common psychosocial risk factor over 65 years - limitation of activities due to disability.
  - Men 45-49 highest rates (of those under 80), largest proportion of male suicides (10.7%).
- Source: Men - Life in Mind Australia

How men ‘cope’ with mental health problems – AOD use

- Men are 2- to 3-times more likely than women to have a serious alcohol use problem.
  - men disproportionately affected by health impacts of alcohol:
    - global deaths attributable to alcohol use almost 6-times higher for men
  - alcohol dependence strong contributor to suicidality
- Primary care efforts to reduce problem drinking shown to be equally efficacious for men and women.

- Opioid misuse (especially fentanyl) linked to overdose deaths.
- Only recently identified high number of men in these deaths
  - review of fentanyl overdose deaths in British Columbia between 2012 and 2017 found 82% involved men.
  - Some research on gender differences in opioid use but little known about reasons for disparity in overdose deaths.
    - Social influences and coping strategies leading men to overuse alcohol foster affect other forms of substance misuse as well?

- Source: Critical Issues in Men’s Mental Health - Dan Bilsker, Andrea S. Fogarty, Matthew A. Wakefield, 2018 (sagepub.com)

Unhelpful Responses to Mental Health

- Shame and Anxiety
- Fear and Numbness
- Helpless and Hopelessness
- Guilt and Anger
- Inability to Show Affection
  - Source: Complex Post-Traumatic Stress Disorder and Men: How Men Express the Symptoms | CPTSDfoundation.org

Effective Coping Strategies

- Research of 465 Australian Men showed:
- Inverse relationship b/w depression risk and regular prevention strategies including:
  - self-care (e.g., ‘eat healthily’ or ‘exercise’)
  - achievement (e.g., ‘plan out my time’ or ‘set goals for the future’)
  - and cognitive (e.g., ‘use humour to reframe my thoughts and feelings’)
- Decreased symptoms of depression significantly and independently related to regular use of cognitive strategies
  - e.g., ‘notice my thought patterns and try to change my perspective’.
- Diet and exercise help to reduce risk of depression, but may not be as helpful in reducing symptoms (especially diet)
- General broad openness to using strategies not currently employing
  - Men are open to ideas about how to cope better
    - exception of ‘following faith, religion or spiritually’, majority said never use this strategy,
- Source: Positive strategies men regularly use to prevent and manage depression: a national survey of Australian men | BMC Public Health (springer.com)

Top 5 ‘Coping Strategies’ for Depression

- Top 5 strategies men used to prevent depression were:
- eating healthily
- keeping busy
- Exercising
- Humour
- helping others

Top 5 strategies used for management of depression were:

- taking time out
- rewarding myself
- keeping busy
- exercising
- spending time with a pet

How do we motivate men for treatment?

1. **Take Mental Health Language Out of the Initial Communication**
2. **Normalize the Conversation**
3. **Education on Therapy Benefits**
4. **Offer Practical Support**
5. **Highlight Successful Examples**
6. **Promote Online Therapy Options**

- Source: 6 Ways To Support Men's Mental Health, Depression in Men (counselingwellnesspgh.com)

Support Organisations/Online therapy sites

- Mens Wellbeing
- Home | Head to Health
- moodgym - Interactive skills training for depression and anxiety
- Evidence-Based Online CBT for Anxiety and Depression | THIS WAY UP
- Beyond Blue | 24/7 Support for Anxiety, Depression and Suicide Prevention - Beyond Blue
- The Right Help, Anywhere | Online Psychologists Australia
- Telehealth Psychologist QLD, Australia - Phone & Video (psychprofessionals.com.au)

Successful Examples

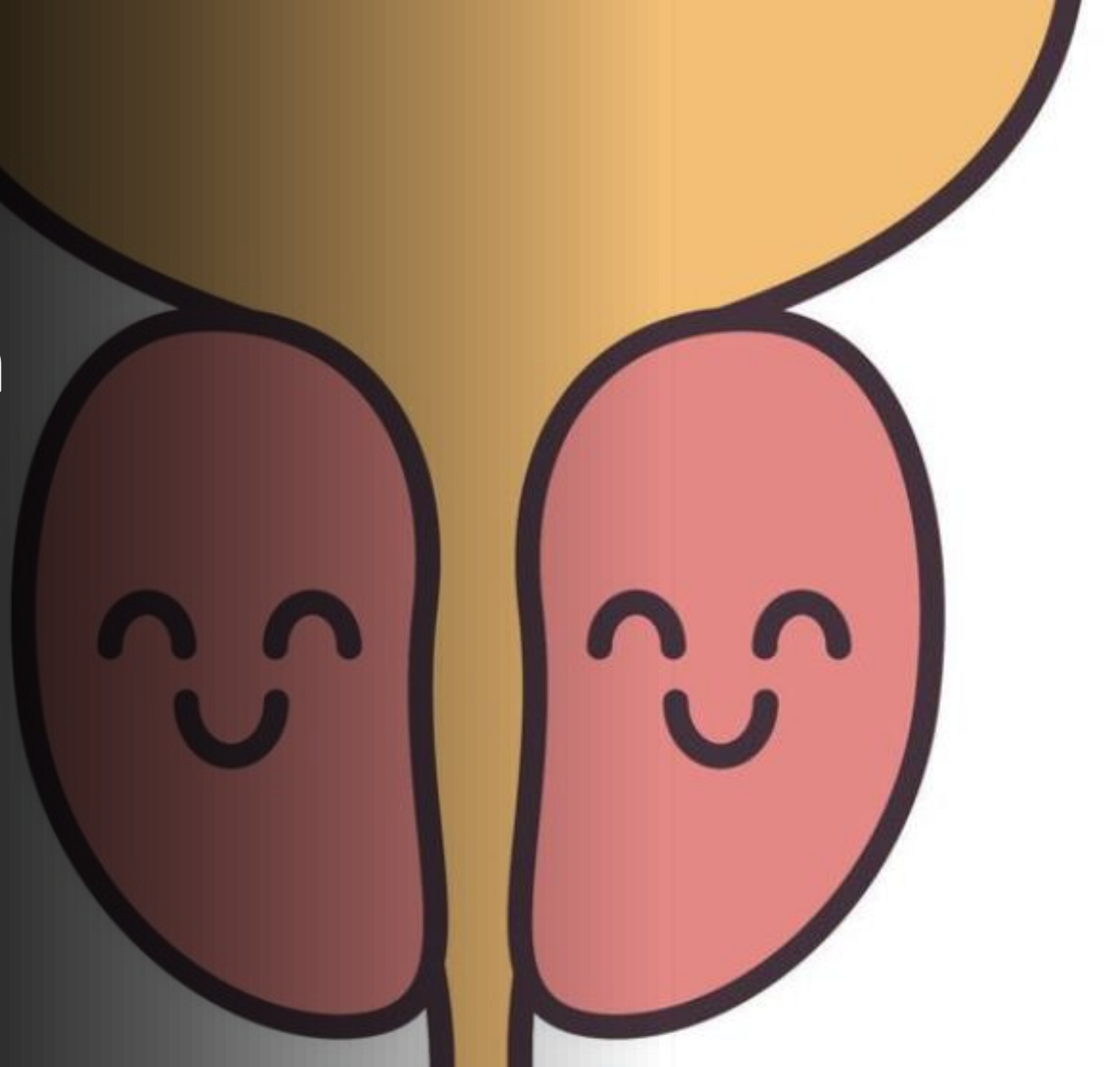
- Prince Harry has been outspoken about mental health, addressing unprocessed grief, anxiety, and PTSD.
- Actor and producer Dwayne “The Rock” Johnson has shared his personal battles with depression.
- Australian Sports Stars Put the Spotlight on Mental Health | Pickstar
- Personal stories of mental health lived experience - Black Dog Institute | Better Mental Health

Prostate Health & Erectile Dysfunction

Nick Rukin

Urological Surgeon

Redcliffe & STARS Hospital

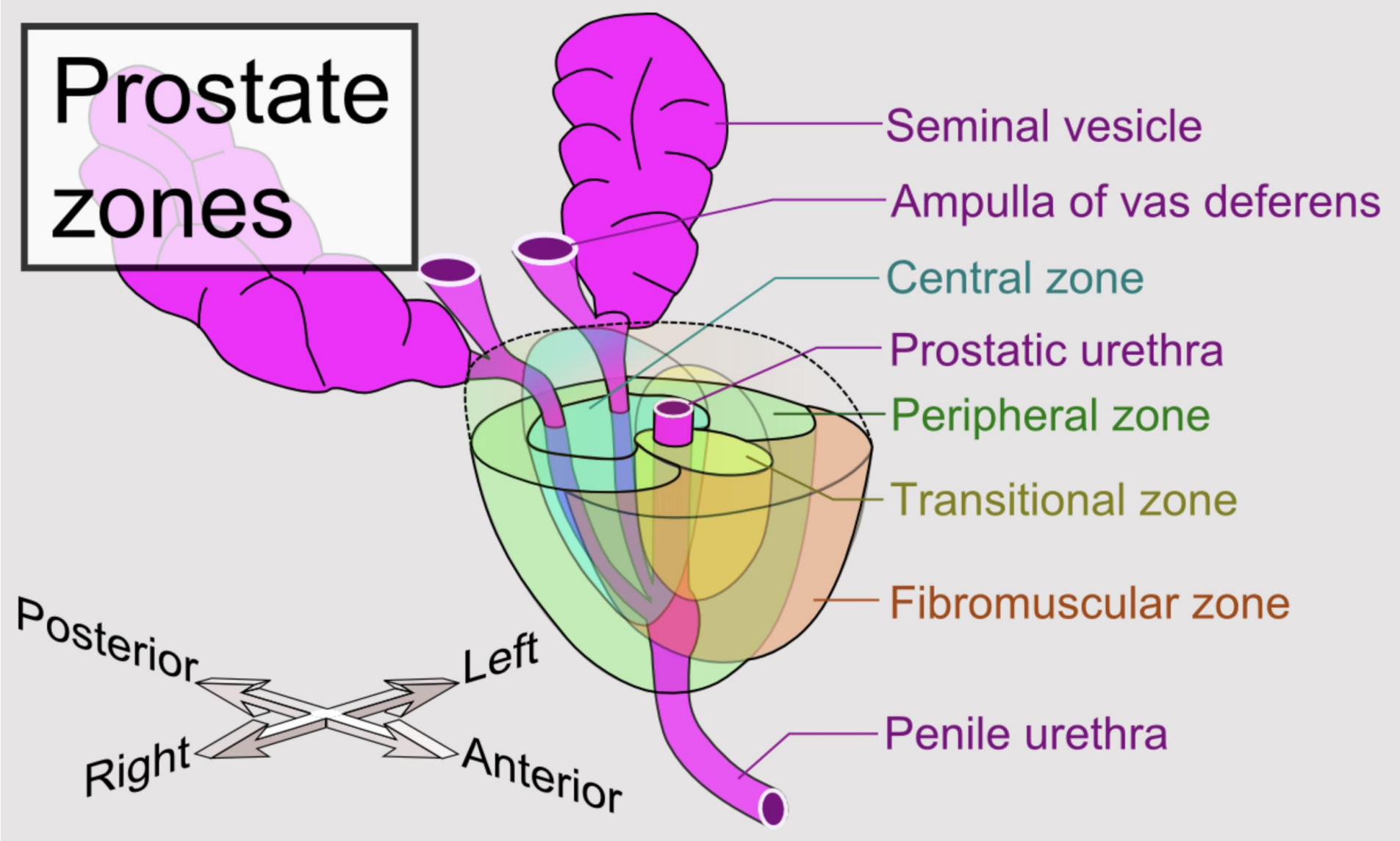


Prostate Health

"Prostate health is an essential part of overall well-being; regular check-ups and awareness can lead to early detection and better outcomes."

1. Benign disease: bladder outflow obstruction
2. PSA and cancer – the basics
3. Erectile dysfunction

Prostate Anatomy



Lower Urinary Tract Symptoms (LUTS)

LUTS is a term used to describe urinary symptoms. LUTS can be classified into 3 categories, with each having different symptoms and suggest different pathologies. When taking a history try to classify symptoms into storage, voiding and post micturition dribble. Storage symptoms often suggest an underlying bladder cause (e.g. overactive bladder), while voiding symptoms are more associated with bladder outflow obstruction. A patient can have one or both of these symptoms.

LUTS and symptoms:

1. **Storage: urgency, frequency, nocturia, incontinence**

2. **Voiding: hesitancy, poor flow, incomplete bladder emptying, terminal dribbling**

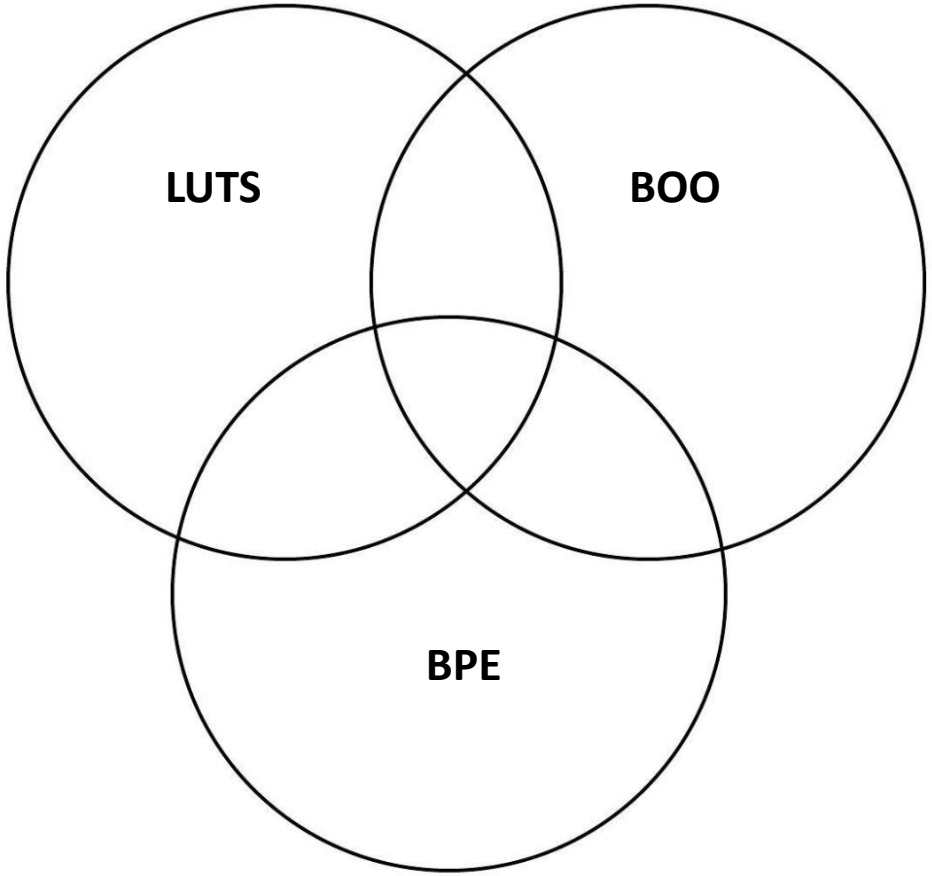
3. **Post micturition dribble: post void dribble, often caused by residual urine in the urethra not drained at the time of voiding.**

Hald's Rings

In the 1980's the idea of LUTS, bladder outflow obstruction (BOO) and benign prostatic enlargement (BPE) were depicted by these 3 overlapping rings.

This highlights the association in which BPE, BOO and LUTS are interrelated but distinct entities with possibly different etiologies and divergent natural histories.

Therefore, just because someone has LUTS does not mean they have BOO. Likewise, BPE doesn't mean they have LUTS.



Slawin K. The Medical Therapy of Prostatic Symptoms Study: What Will We Learn? Rev Urol 2003; 5: S42–S47

Investigations

General Investigations:

Urine dipstick: signs of infection or haematuria

Mid stream urine: if positive for infection/blood or UTI symptoms

Bladder diary (Frequency/Volume chart)

- Frequency and volume voided
- Incontinent episodes

Flow rate test and post void residual scan

Radiological investigations:

Ultrasound Abdomen – to exclude abdominal/pelvic mass and assess upper tracts

Cystoscopy: to exclude bladder pathology and assess bladder capacity

Urodynamics: especially if mixed incontinence and pre-surgical treatment

Bladder Diary / Frequency Volume Chart

Time	Day 1 Date.....			Day 2 Date.....		
	Tick when go to toilet	Volume of urine passed (if known)	Leaks	Tick when go to toilet	Volume of urine passed (if known)	Leaks
12 mn						
1 am						
2 am						
3 am						
4 am						
5 am						
6 am						
7 am						
8 am						
9 am						
10 am						
11 am						
12 noon						
1 pm						
2 pm						
3 pm						
4 pm						
5 pm						
6 pm						
7 pm						
8 pm						
9 pm						
10 pm						
11 pm						

New England Research Institutes 2012 Review, BJUI 2013

3 day frequency volume chart

Can help define:

1. Low bladder capacity (<200 mls)

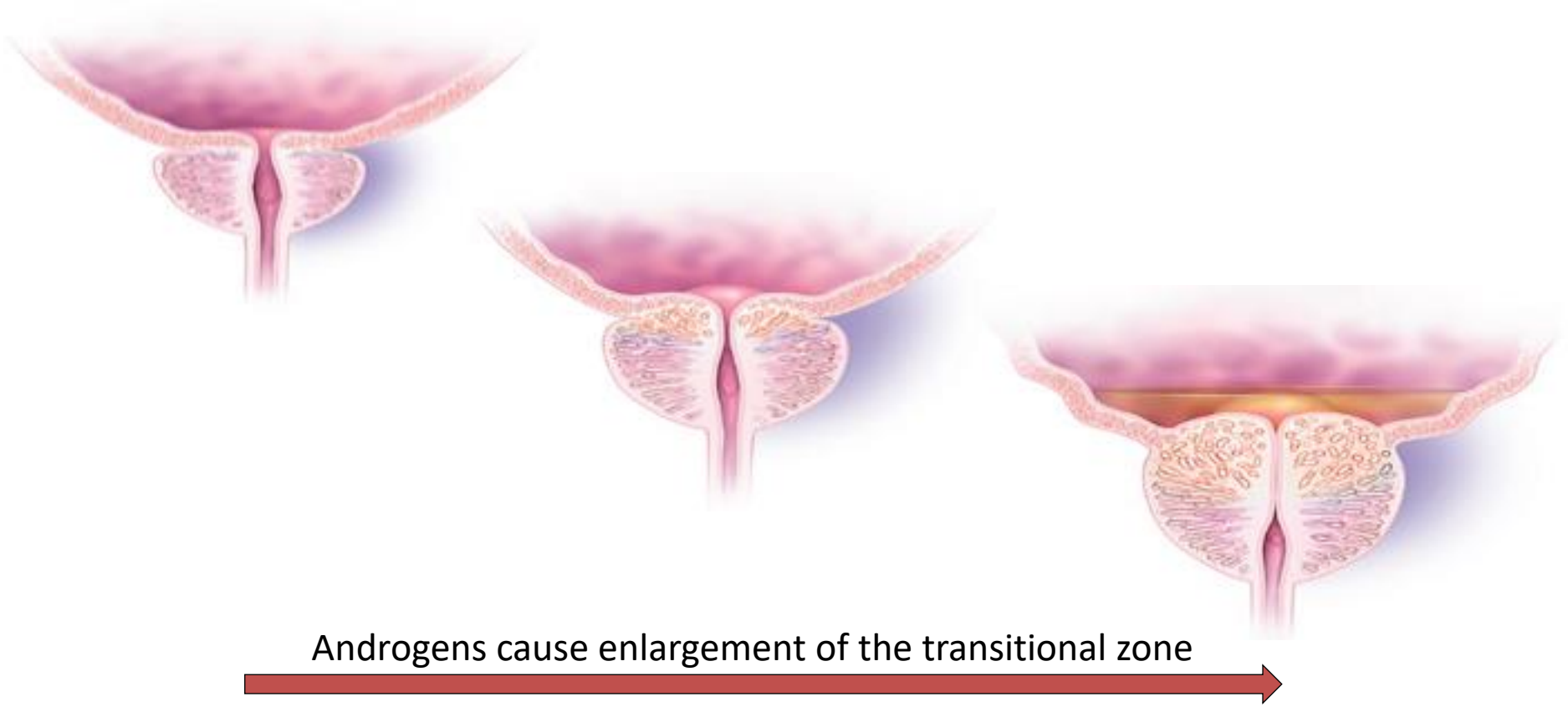
2. Noctural polyuria
(>33% of voided urine overnight)

3. Polyuria (>40ml/kg per day)

4. Mixed aetiology

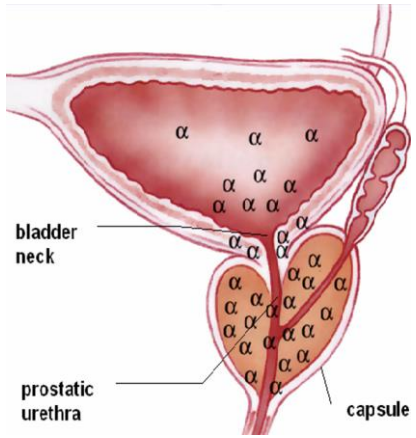
Bladder Outflow Obstruction

BOO is a focal disease of the transition and peri-urethral zones of the prostate, under the influence of male androgens. These zones of the gland will enlarge, occluding the prostatic urethra and affecting flow proportionally.



Medical Therapy

Alpha blocker



USE: up to 40cc monotherapy

SE: retrograde ejaculation, hypotension
(NOT silodosin SS alpha-1A)

Benefits:

1. Improve IPSS
2. Improved flow

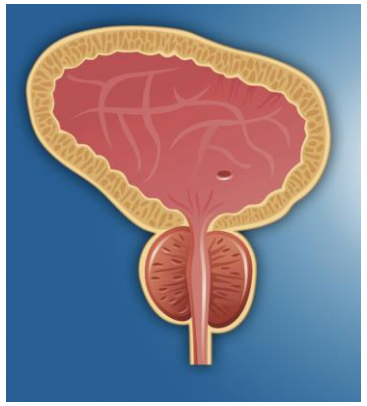
Some common comparisons to help assess prostate size

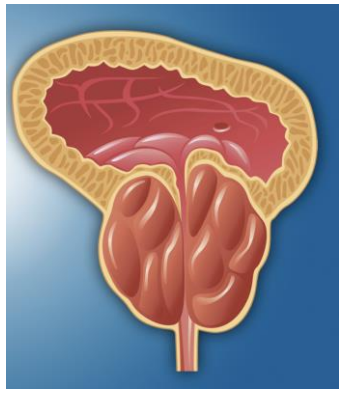
Not to scale

Walnut	Ping Pong Ball	Golf Ball	Clementine	Tennis Ball
3.4 cm diameter	4 cm diameter	4.3 cm diameter	5 cm diameter	6.7 cm diameter
Approx 20 cc	Approx 33 cc	Approx 40 cc	Approx 65 cc	Approx 150 cc

- A DRE typically underestimates the prostate size as verified by transrectal ultrasound (TRUS) by up to 55%, with the degree of underestimation increasing with increasing prostate size.[1]

BOO Treatment Options





30cc 40cc 80cc 100cc 120cc+

Medical:

- *Seronoa repens*
- α – blockers
- *Tadalafil*
- α – blockers + 5ARI (duodart)

Surgical:

- *Rezum vapourisation*
- *Urolift*
- *Greenlight laser prostatectomy*
- *TURP – mono/bipolar*
- *HoLEP – laser enucleation*

Prostate Health: A quick update

Alpha-blockers: Increased prostate compliance, rapid onset, does not affect prostate size. Side effects: hypotension, nasal congestion, headache and retrograde ejaculation. New alpha blocker: Silodosin standard dose 8mg (4mg dose in CKD).

5-alpha-reductase inhibitors: blocks conversion of testosterone to active form (dutasteride/finasteride). Reduces prostate size by 20-30%, but slow onset of action (4-6 weeks). Halves the PSA after 6 months, therefore PSA needs to be doubled for interpretation. Can be used as monotherapy if LUTS and prostate volume >40cc. Side effects: 1-5% ED, decreased libido, gynaecomastia.

PDE5 inhibitor (Tadalafil 5mg daily): low dose approved in Australia for BPH treatment. Tadalafil is now *off-patent*, so cheaper generic. No retrograde ejaculation side effects and helps with ED.

Combination therapy: Duodart (dutasteride and tamsulosin), works best in those with LUTS and patient's prostate volume >40cc.

	Prazosin 1mg	Tamsulosin 400mcg	Silodosin 8mg	Dutasteride 0.5mg	Finasteride 5mg	Tadalafil 5mg	Combination
Private Script	$6.99	$34.99	$38.69	$28.69	$29.99	$29.99	$27.99
Concession	$5.60	*NA*	*NA*	$12	$5.60	*NA*	$9.10

Monthly price of medication, via Chemist Warehouse Website

Tadalafil Shortage – Options Available

1: Branded Cialis 5 mg

This is the original version of the drug, but it costs $80 per month. This will work well and continue to help with erections, but it is prohibitively expensive.

2: Alternative medication

To help voiding, such as silodosin 8 mg or tamsulosin 400 mcg once daily. The side effects of this would include retrograde ejaculation and a 5% risk of low blood pressure. This would not affect erectile quality, and if that is an issue, then you may need to take a 10 mg dose of tadalafil as needed for erections (a separate script is required).

3: Modify tablet

If feasible, source a tadalafil 10mg tablet and cut it in half for a 5mg dose. Alternatively, source a 20mg tablet of tadalafil and cut it into quarters (using a tablet cutter) for a 5mg dose. This should be equally effective but may cost more in the short term until the generic 5mg dose is back.

4. Compounding pharmacy

Contact a compounding pharmacy that may be able to compound the tadalafil 5mg medication.

Definition of BOO Progression

When thinking about treatment options, we are trying to prevent disease progression and harm to the patient. The following can be classified as clinical evidence of disease progression. Once a patients symptoms have progressed, then they need to be reassessed and their treatment be modified. For example if they develop urinary retention despite been on maximal medical therapy then they need to be considered for a surgical treatment.

Disease progression of LUTS:

- Acute urinary retention
- Renal impairment
- Urinary tract infections
- Visible haematuria +/- clot retention
- Bladder stones
- Bladder damage (trabeculation)
- Overflow incontinence (nocturnal enuresis)

Definition of BOO Progression

‘Symptoms progression = reassessment and treatment modified’

Disease progression of LUTS:

- Acute urinary retention
- Renal impairment
- Urinary tract infections
- Visible haematuria +/- clot retention
- Bladder stones
- Bladder damage (trabeculations)
- Overflow incontinence (nocturnal enuresis)

PSA and Prostate Cancer: The Basics

Risk Factors

Age

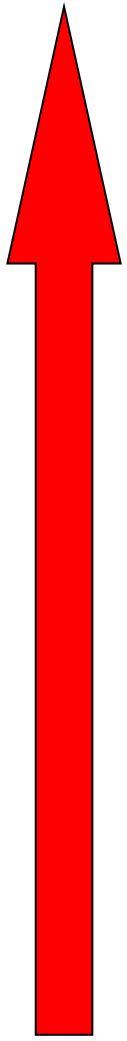
Family History

- 1st degree relative increases RR x2-3
- 5-10% of all CaP and 30-40% of early-onset CaP (<55 years) caused by inherited genes
- Family history: Breast Cancer – BRCA2 gene – RR x5

Ethnicity

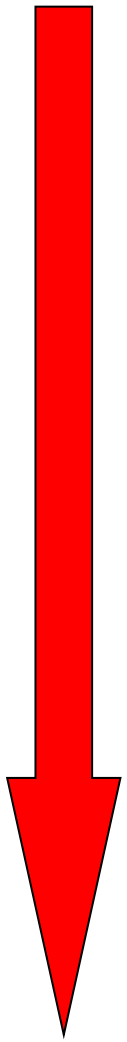
- Afro-Caribbean> White Caucasian > Asian

What affects the PSA level?



Elevated in:

- Prostatitis
- BPH
- Age
- Race
- DRE
- Ejaculation
- Urinary Retention
- Catheterisation
- Trauma
- Prostate Ca



Reduced with:

- Castration (medical or surgical)
- 5 alpha-reductase inhibitors e.g. (finasteride/dutasteride)

Prostate Cancer Screening??

In 1968, the WHO published its criteria for principles and practice of screening (Wilson and Jungner). If we relate these to prostate cancer then we might conclude that not all of these factors can be addressed and therefore we should not screen for prostate cancer in the population.

1. The condition sought should be an important health problem.
2. There should be an accepted treatment for patients with recognized disease.
3. Facilities for diagnosis and treatment should be available.
4. There should be a recognizable latent or early symptomatic stage.
5. There should be a suitable test or examination.
6. The test should be acceptable to the population.
7. The natural history of the condition, including development from latent to declared disease, should be adequately understood.
8. There should be an agreed policy on whom to treat as patients.
9. The cost of case-finding (including diagnosis and treatment of patients diagnosed) should be economically balanced in relation to possible expenditure on medical care as a whole.
10. Case-finding should be a continuing process and not a “once and for all” project.

Screening: the Evidence

Two well-designed, large randomized trials have evaluated the effectiveness of screening for prostate cancer and found somewhat differing results:

European Randomized Study of Screening for Prostate Cancer (ERSPC)

13 years follow up for the group between the ages of 55 and 69, prostate cancer mortality was 21 percent lower in the group offered screening (rate ratio 0.79, 95% CI 0.69-0.91).

Prostate, Lung, Colorectal and Ovarian Cancer (PLCO) Screening Trial (US based)

Seven years of follow-up: there was no reduction in the primary outcome of prostate cancer mortality (rate ratio 1.13, 95% CI 0.75-1.70)

Critasism: >80% of control subjects underwent PSA testing during the study (contamination)

RACGP

Recommendation	Grade
PSA testing in men who are likely to live less than another 7 years is not recommended (as any mortality benefit from early diagnosis of prostate cancer due to PSA testing is not seen within less than 6–7 years from testing).	**Testing not recommended (strong)**
Digital rectal examination is not recommended as a routine addition to PSA testing in asymptomatic men interested in undergoing testing for early diagnosis of prostate cancer.	**Testing not recommended (strong)**

Shared decision making age bar in the general population

0-9	10-14	15-19	20-24	25-29	30-34	35-39	40–44	45–49	50–54	55–59	60–64	65–69	70–74	75–79	≥80

Recommendation	Grade	How often
GPs should not order a prostate-specific antigen (PSA) test for men unless they provide informed consent for screening.	**Practice point**	N/A
Offer men the opportunity to discuss the potential benefits and harms of PSA testing as a screening test for prostate cancer. Evidence-based decision support tools can assist in this discussion.	**Practice point**	N/A
For men aged 50–69 years at average* risk of prostate cancer who have been informed of the benefits and harms of testing and who decide to undergo regular testing for prostate cancer, offer PSA testing every 2 years, and offer further investigation if total PSA is greater than 3.0 ng/mL.	**Conditionally recommended**	Every two years
For men at moderately raised risk* of prostate cancer due to family history, offer testing every 2 years from age 45 to 69 years.	**Conditionally recommended**	Every two years
For men at high risk* of prostate cancer due to family history, offer testing every 2 years from age 40 to 69 years.	**Conditionally recommended**	Every two years
For men aged 50–69 years with initial total PSA >3.0 ng/mL, offer repeat PSA within 1–3 months. For those with initial total PSA >3.0 ng/mL and up to 5.5 ng/mL, measure free-to-total PSA percentage at the same time as repeating the total PSA.	**Practice point**	N/A
Advise men aged ≥70 years who have been informed of the benefits and harms of testing and who wish to start or continue regular testing that the harms of PSA testing may be greater than the benefits of testing in men of their age.	**Practice point**	N/A

PSA and Prostate MRI

PSA testing

2 tests if elevated: 1-3 months interval

Informed decision-making for screening: 50-69 years, every 2 years

- Men <70 years old: >3ng/ml
  (Free to total ratio <25%)

- Men >70 years old: >5.5ng/ml
  (Free to total ratio <25%)

- Abnormal DRE and suspected risk of prostate cancer

- Family history + PSA>2ng/ml: (first degree relative prostate cancer or suspected BRCA 1, BRCA 2 mutation)

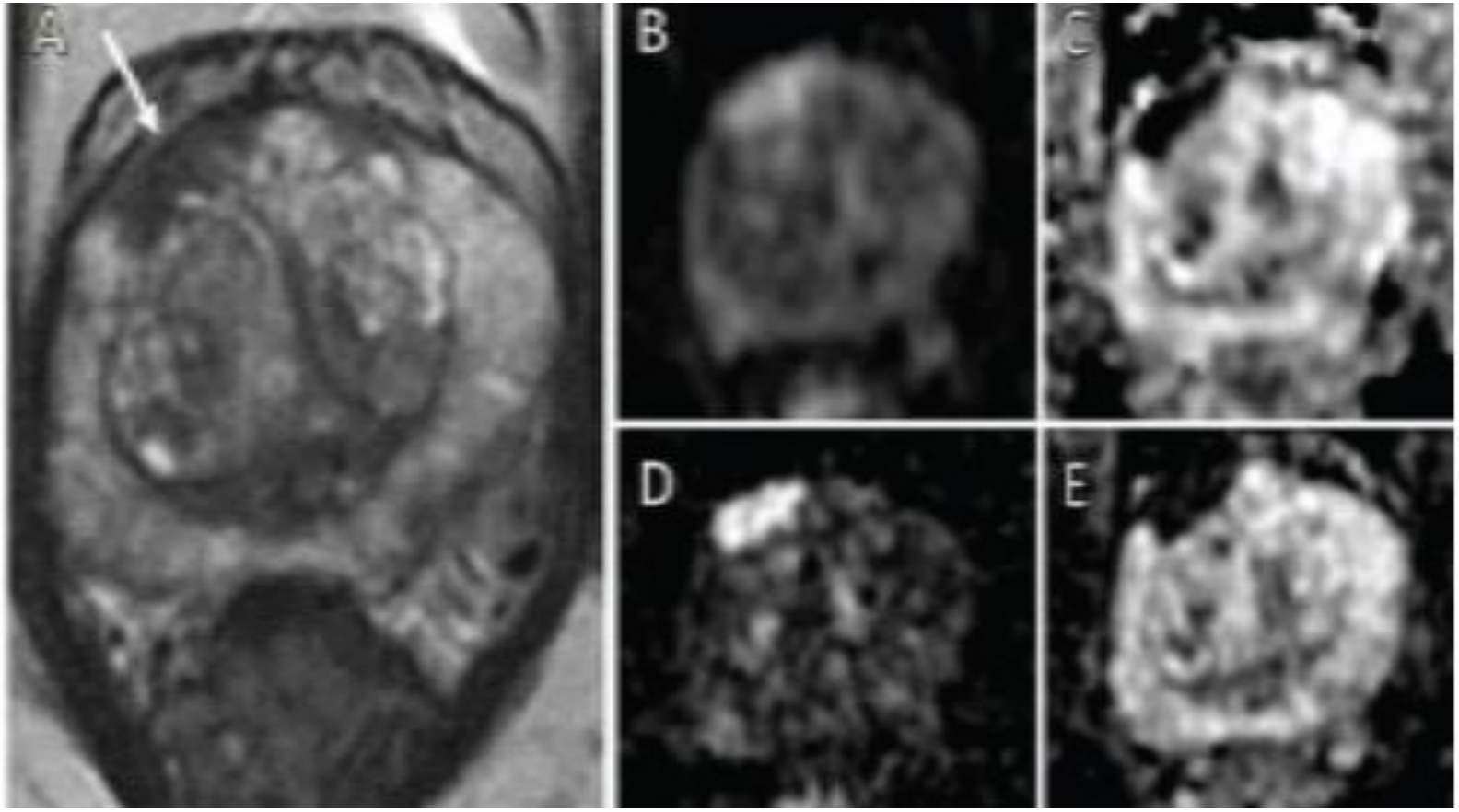
Multi-parametric MRI scan

A multi-parametric MRI (Mp-MRI) scan allows imaging of the prostate gland, along with functional studies to help demonstrate where a cancer might be and the likelihood of cancer. The Mp-MRI allows a clinician to offer targeted biopsies of the suspicious areas in order to increase the diagnostic yield of a biopsy.

If a lesion is detected it is assigned a PI-RADS (Prostate Imaging Reporting and Data System) score, determining its risk of prostate cancer. The scale is based on a score "Yes" or "No" for dynamic contrast-enhanced parameter, and from 1 to 5 for T2-weighted and diffusion-weighted imaging. The score is given for each lesion:

PI-RAD Score	Risk of Prostate Cancer
1	Highly unlikely (<10%)
2	Unlikely (<20%)
3	Equivocal (30-40%)
4	Likely (>70%)
5	Highly likely (>90%)

Mp-MRI



A lesion in the right anterior mid transition zone (arrow). Restricted diffusion is demonstrated with high signal (B, D) and corresponding low signal on the apparent diffusion co-efficient maps (C,E).

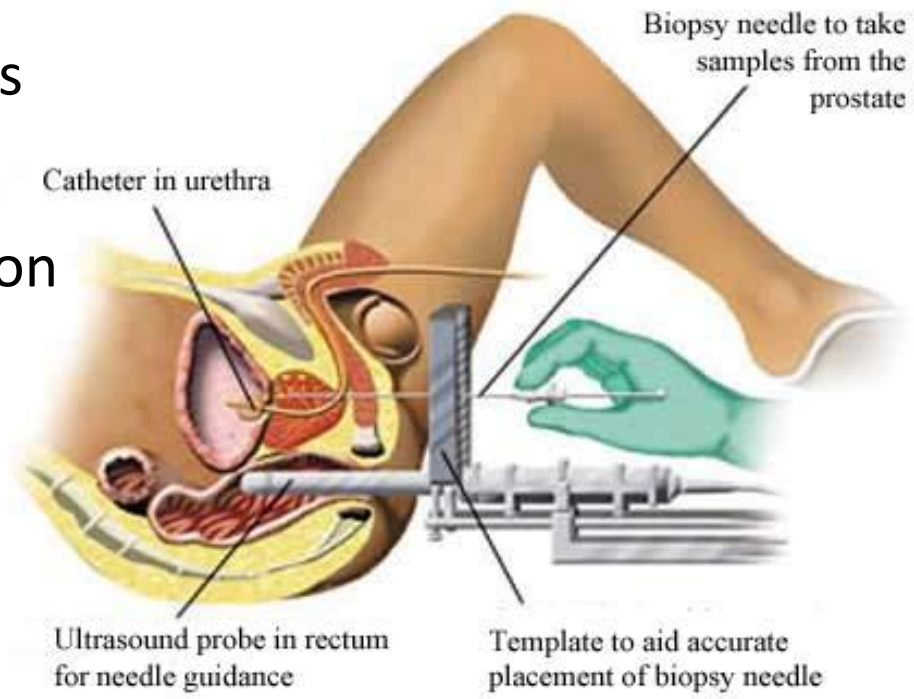
Barrett T. What is Multiparametric-MRI of the Prostate and Why Do We Need It?
J Imag Intervent Rad 2015:1:1-5.

Prostate Biopsy – Trans Perineal

Trans-perineal guided biopsies – often under general anaesthetic

More cores taken, plus targeted areas

Improved sampling and lower infection risk versus TRUS biopsy



Consent:

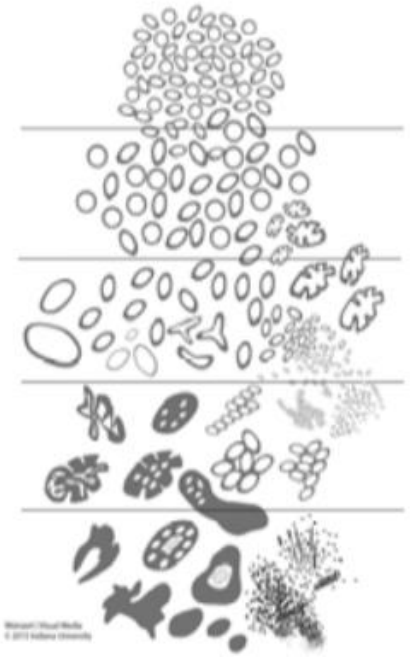
- Bleeding
- Infection – lower than TRUS
- Retention
- False negative

http://www.auanet.org/advnews/hpbrief/view.cfm?i=1088&a=2618

New Pathology Staging 2016

Analysis of multiple prostate cancer specimens and outcomes have resulted in an evolution of prostate cancer pathological staging. Prostate cancer pathology should now be reported as a group, based on the Gleason score. This offers a more simplified staging system and an accurate grade stratification system.

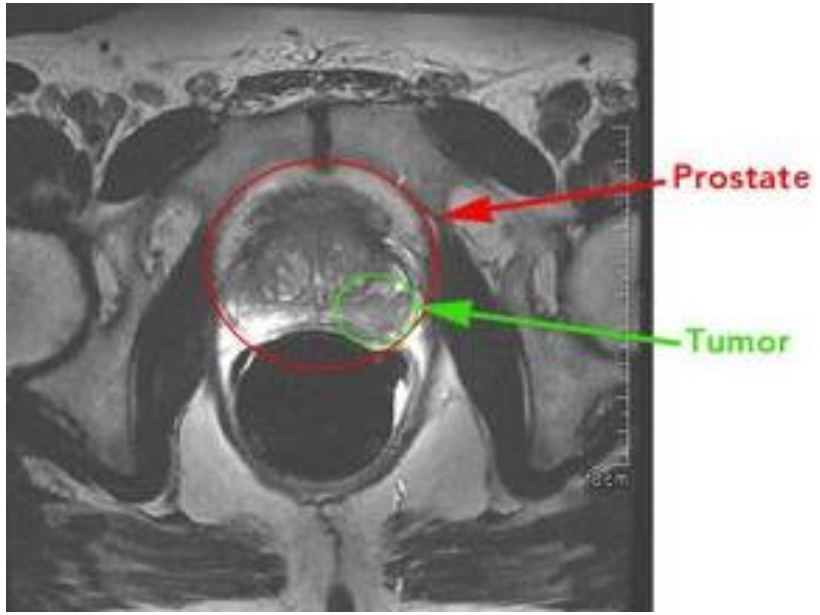
Group	Gleason Score
1	Gleason Score 6
2	Gleason Score 3+4
3	Gleason Score 4+3
4	Gleason Score 8
5	Gleason Score 9-10

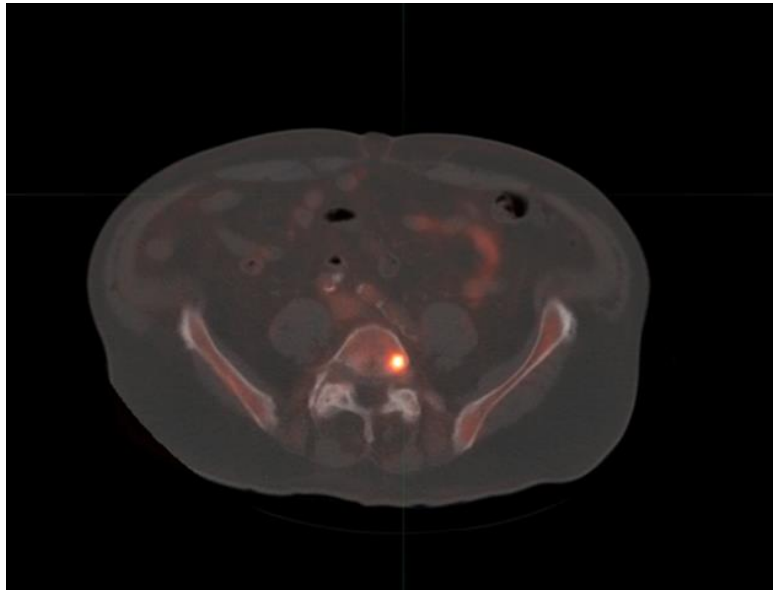


Epstein et al. A contemporary prostate cancer grading system: a validated alternative to the Gleason score. Eur Urol 2016; 69: 428-435.

Staging Imaging

- MRI prostate
  - Local (T) staging
  - Nodes (N)
- PSMA PET CT
  - Metastases (M)





Erectile Dysfunction

Epidemiology

Erectile dysfunction is quite common. Data from the US indicate approximately 40% of men at age 40 have some form of erectile dysfunction. The prevalence of ED in non-institutionalised men age 40-70 year-old was found to be 52%.

	Age 40	Age 70
Mild ED	**17%**	**17%**
Moderate ED	**17%**	**34%**
Complete ED	**5%**	**15%**

Feldman HA, Goldstein I, Hatzichristou DG, et al. Impotence and its medical and psychosocial correlates: results of the Massachusetts Male Aging Study. J Urol 1994 Jan;151(1):54-61.

Classification of Erectile Dysfunction

Organic	Psychogenic
Vascular	Inhibition
Neurogenic	Performance related
Anatomical	Psychological distress
Hormonal	
Drug induced	

Common Causes of ED

Vasculogenic	
-	Cardiovascular disease
-	Hypertension
-	Diabetes mellitus
-	Hyperlipidaemia
-	Smoking
-	Major surgery (RP) or radiotherapy (pelvis or retroperitoneum)
Neurogenic	
Central causes	
-	Degenerative disorders (multiple sclerosis, Parkinson's disease, multiple atrophy etc.)
-	Spinal cord trauma or diseases
-	Stroke
-	Central nervous system tumours
Peripheral causes	
-	Type 1 and 2 diabetes mellitus
-	Chronic renal failure
-	Polyneuropathy
-	Surgery (pelvis or retroperitoneum, radical prostatectomy, colorectal surgery, etc.)
Anatomical or structural	
-	Hypospadias, epispedias
-	Micropenis
-	Congenital curvature of the penis
-	La Peyronie's disease
Hormonal	
-	Hypogonadism
-	Hyperprolactinemia
-	Hyper- and hypothyroidism
-	Hyper- and hypocortisolism (Cushing's disease etc)
Drug-induced	
-	Antihypertensives (diuretics are the most common medication causing ED)
-	Antidepressants (selective serotonin reuptake inhibitors, tricyclics)
-	Antipsychotics (incl. neuroleptics)
-	Antiandrogens; GnRH analogues and antagonists
-	Recreational drugs (alcohol, heroin, cocaine, marijuana, methadone)
Psychogenic	
-	Generalised type (e.g., lack of arousability and disorders of sexual intimacy)
-	Situational type (e.g., partner-related, performance-related issues or due to distress)

Examination

Blood pressure / Pulse

Secondary sexual characteristics

Penis and testes

Rectal exam (>40 years)

General neurology / Vascular

Investigations

Fasting glucose

Fasting Lipids

Serum testosterone, between 8-10am (diurnal variations)

International Index of Erectile Function

Remember: This is a chance for primary prevention of CVS risk factors!

Treatment - Conservative

Psychogenic causes: May need referral to a sex counsellor

Lifestyle: Avoid recreational drugs

Weight loss and increased exercise

Stop smoking

1st Line Treatment - Medical

With the advent of sildenafil (Viagra™) the treatment of ED was revolutionised. Phosphodiesterase type-5 (PDE-5) inhibitors are now the 1st line treatment option for patients with ED. These drugs work by inhibiting the conversion of cGMP to 5' GMP, thus allowing cGMP to accumulate and maintain low levels of intracellular calcium and hence cause vasodilatation (see next slide). There are several PDE-5 inhibitors available:

Sildenafil (Viagra™)

Tadalafil (Cialis™)

Vardenafil (Levitra™)

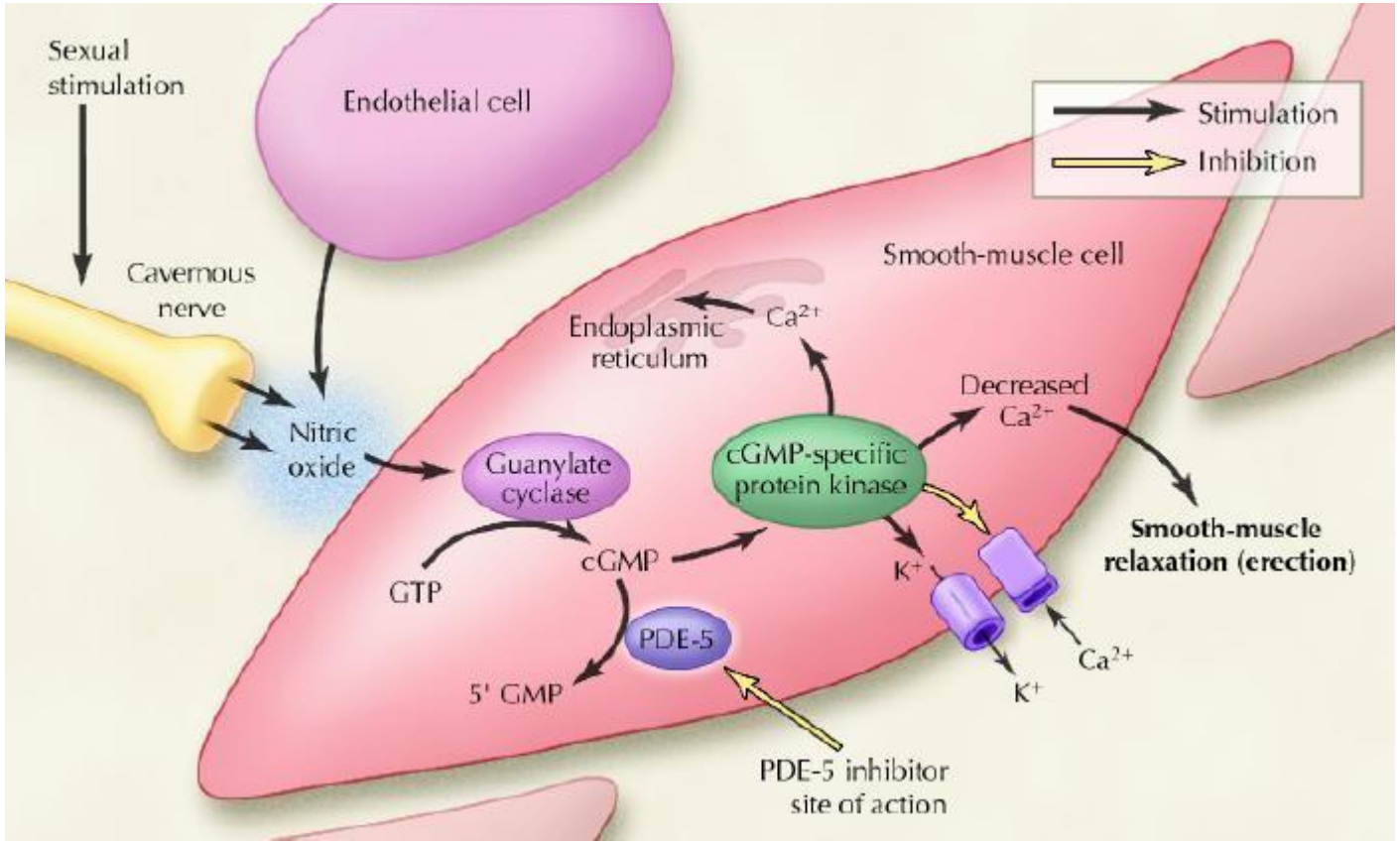
PDE-5 inhibitors are on demand drugs, but Tadalafil is available in a once daily dose to aid spontaneous demand.

CONTRINDICATORED: in patients taking nitrate medication due to profound hypotension

CAUTION: patients taking alpha blocker medication, can perpetuate hypotension

SIDE EFFECTS: dyspepsia, nasal congestion, headache, dizziness, flushing, back pain

Action of PDE-5 Inhibitors



With sufficient sexual stimulation the autonomic nervous system releases nitric oxide (NO). This activates guanylate cyclase resulting in increased cGMP. PDE-5 inhibitors prevent the breakdown of cGMP, thus increasing its effect within the cell. This results in an accumulation of cGMP and lowers intracellular calcium, causing smooth muscle relaxation and subsequent vasodilatation. PDE-5 inhibitors reduce the catabolism of cGMP, therefore increasing its concentration and allowing for improved erectile function.

Treatment Failures

The main reason for treatment failures is inadequate counselling of PDE-5 inhibitors. Common PDE-5 inhibitor problems include:

- Failure of adequate sexual stimulation
- Failure to use an adequate dose
- Failure to wait an adequate amount of time between medication and sexual intercourse (between 15-30 mins)
- Use of black market products (less or no active drug)
- Consumption of alcohol

All failure of primary medical treatment must be reviewed with these factors in mind. Often correcting these issues will result in success with further PDE-5 treatment.

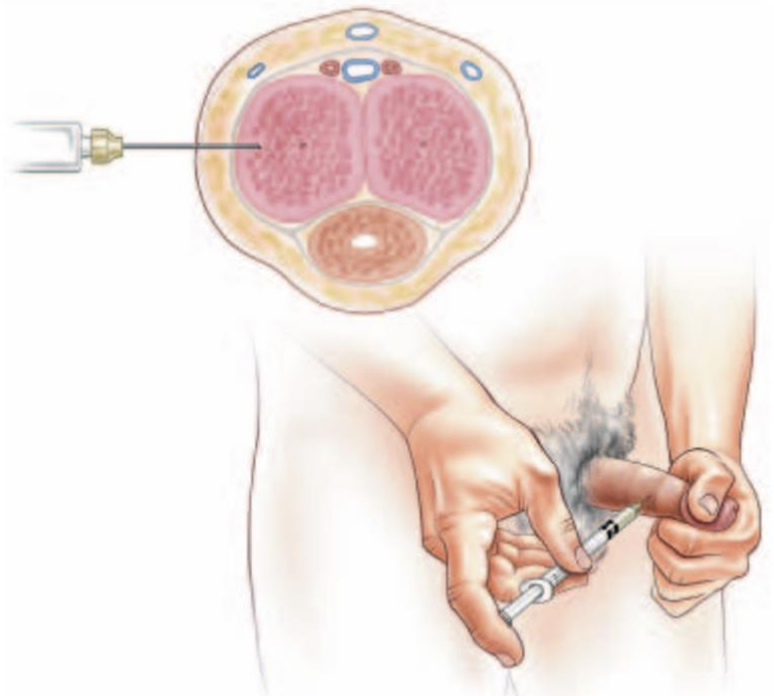
2nd line Treatment

Vacuum Erection Devices (VEDs)

VEDs provide passive engorgement of the corpora cavernosa, together with a constrictor ring placed at the base of the penis to retain blood within the corpora. High efficacy rates regardless of the cause of ED.

Intra-cavernous Injections

Intra-cavernous injection of Alprostadil (Prostaglandin E1) can result in erections, with efficacy dependent on dose. A degree of manual dexterity is needed. Alternatively, alprostadil can be given via an intra-urethral pellet.

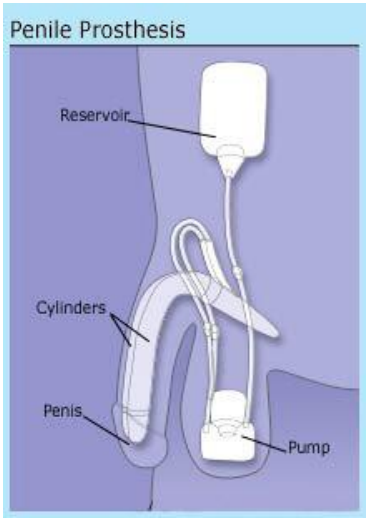


3rd line Treatment

Penile Implants

A penile prosthesis may be considered in patients who do not respond to 1st or 2nd line treatments or those who prefer a permanent solution. The two currently available classes of penile implants include inflatable and malleable devices. This surgical option is irreversible, as any remaining erectile tissue will be destroyed during the implant insertion. Risks of the procedure include implant infection and mechanical failure.

Malleable Implant



Inflatable penile implant

Hypogonadism

The importance of testosterone in aiding erectile function should not be underestimated. ALL patients with ED should have their levels checked and if hypogonadic, replacement therapy maybe considered. This maybe sufficient to allow spontaneous erections to return without further medical treatment.

Testosterone levels should be measure between 8-10am. Serum testosterone between 8-12 nmol/L is a grey area in which the decision to replace if controversial. <8 nmol/L should result in testosterone replacement.

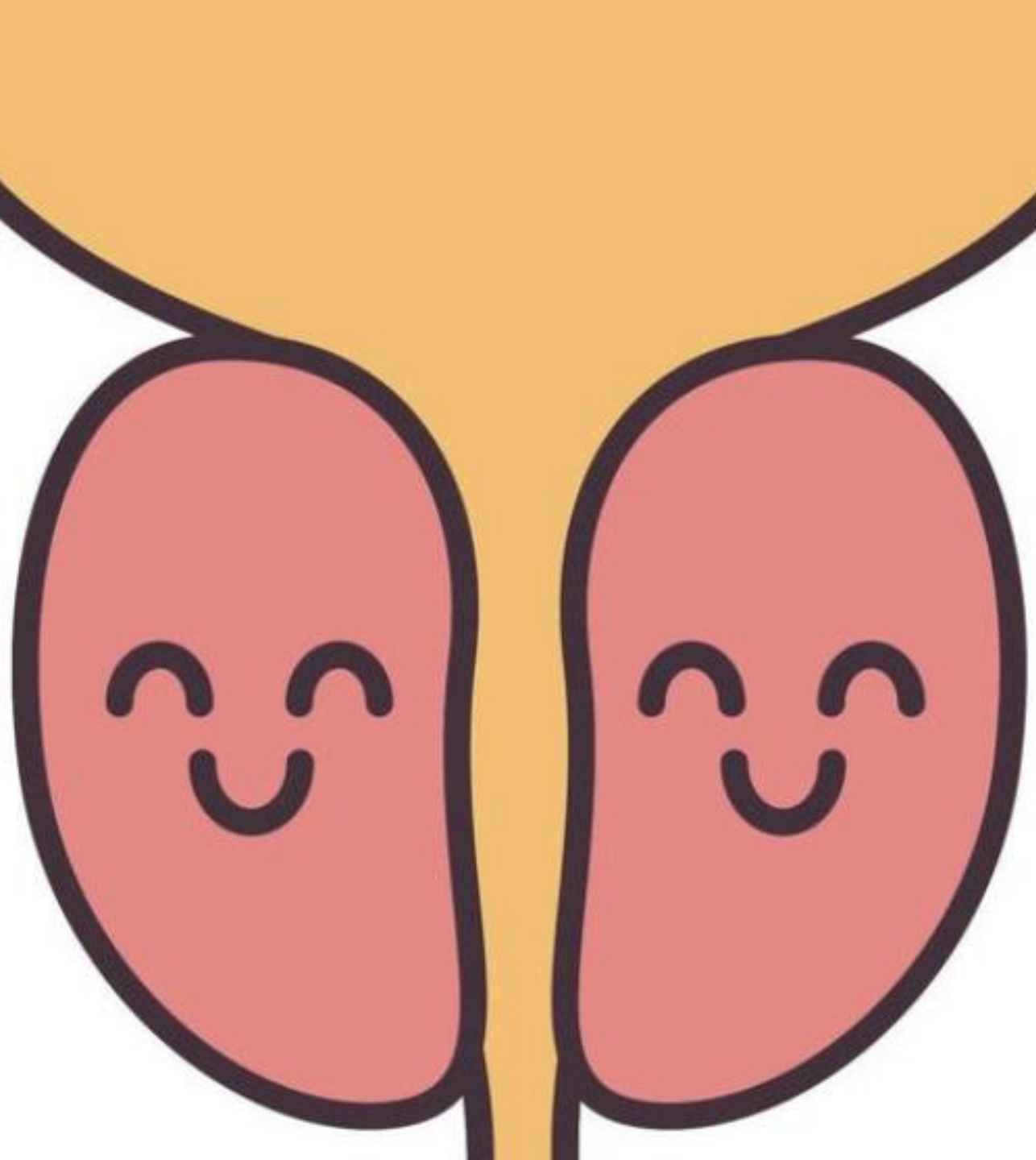
Causes: i. Primary testicular failure

ii. Pituitary/hypothalamic problems

Testosterone replacement therapy (intramuscular or transdermal) is effective, but should only be used once other endocrine causes have been excluded . Before commencing testosterone replacement, digital rectal examination, serum PSA test, liver function tests and lipid profile should be performed. Testosterone therapy is contraindicated in patients with untreated prostate cancer or unstable cardiac disease. At present there is no evidence that testosterone replacement increases prostate cancer risk.

Prostate Health

Any questions?



RBWH Endocrinology

Men’s Health Endocrinology

Dr Elizabeth Wootton

BSc MBChB MMed FRACP

Endocrinologist, RBWH

20th November 2024

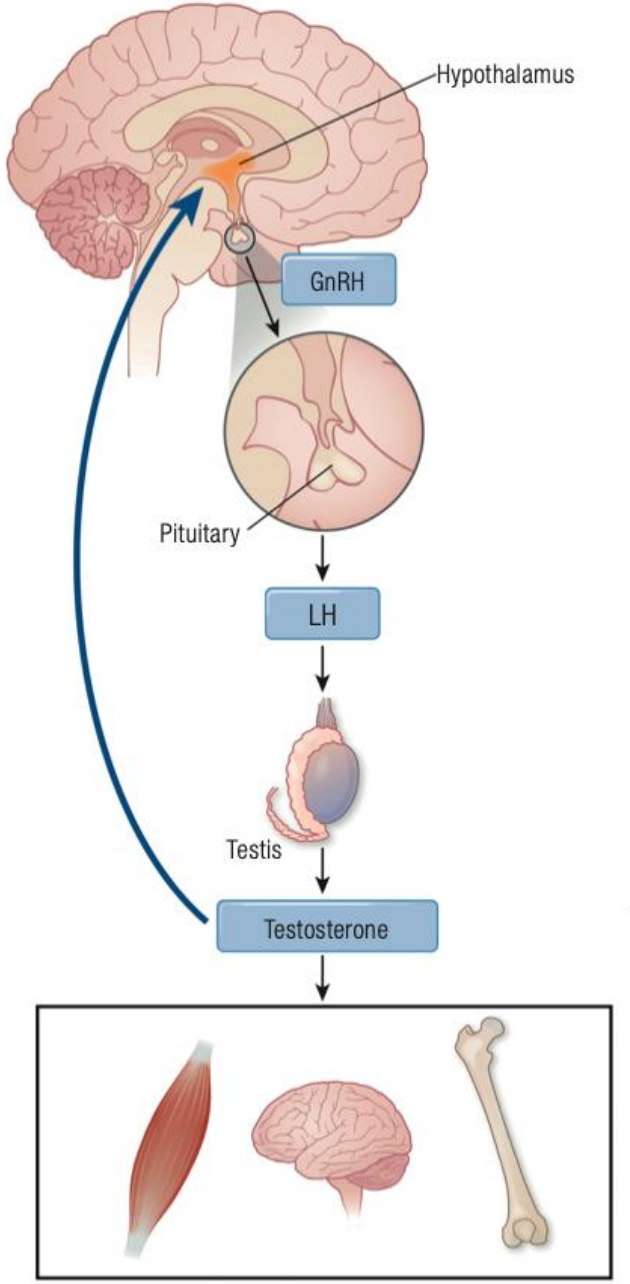
Metro North Health | Queensland Government

Outline

- Testosterone deficiency – who to treat?
- Prostate cancer endocrinopathies
- Questions

Testosterone

- Primary male sex hormone
- Responsible for primary sexual development and regulation of secondary sexual characteristics

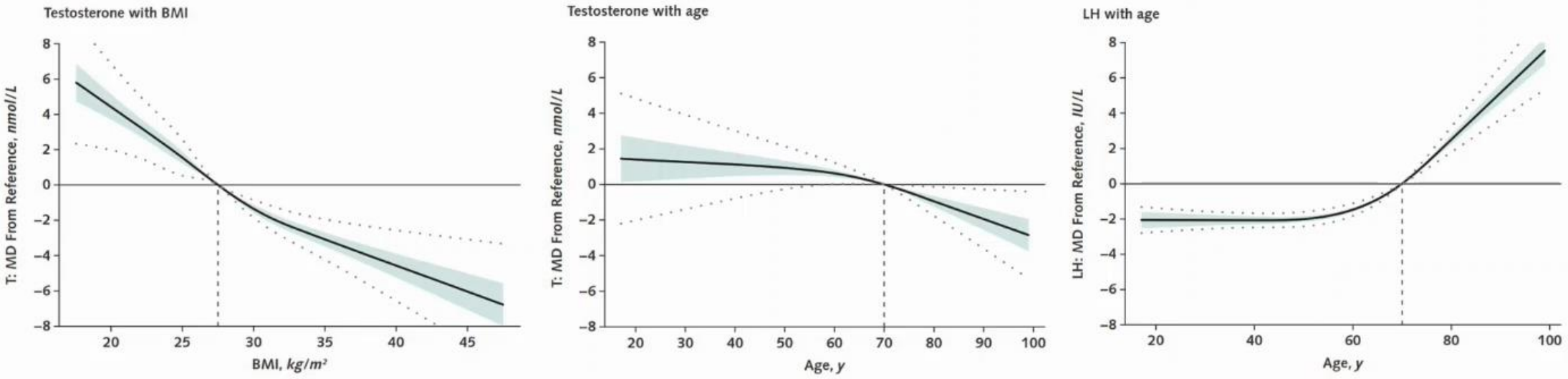


Handelsman, Endocrine Reviews, 2021

Andropause?

Androgens In Men Study: IPD meta-analyses of 21,074 men, 9 prospective cohort studies with LCMS T

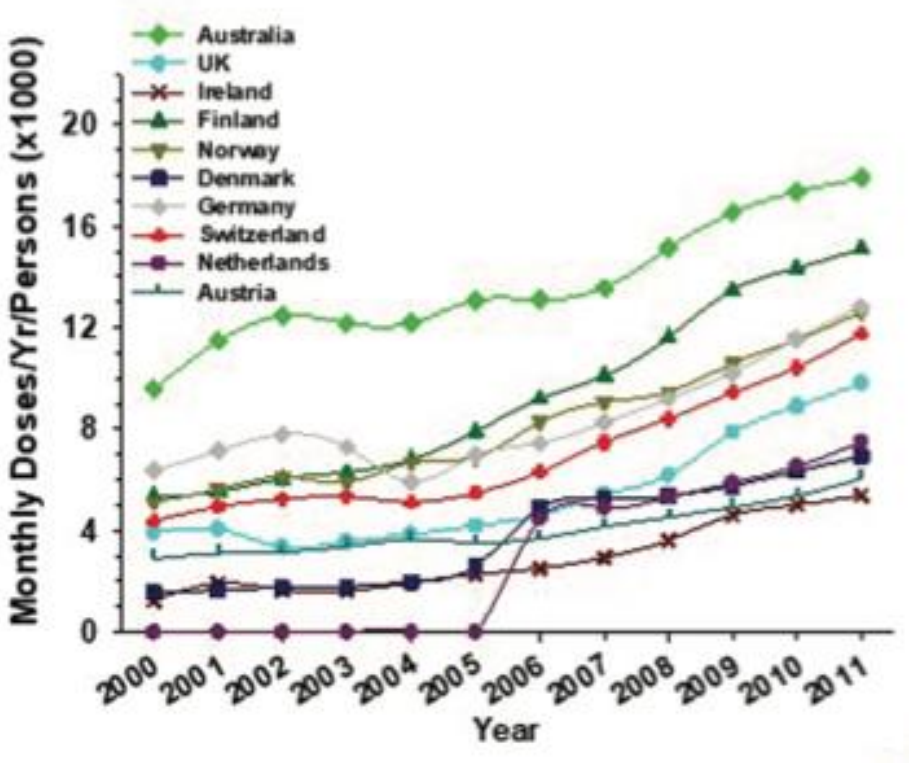
Declining T with increasing BMI, and after age 70 years. Increasing LH after age 70 years

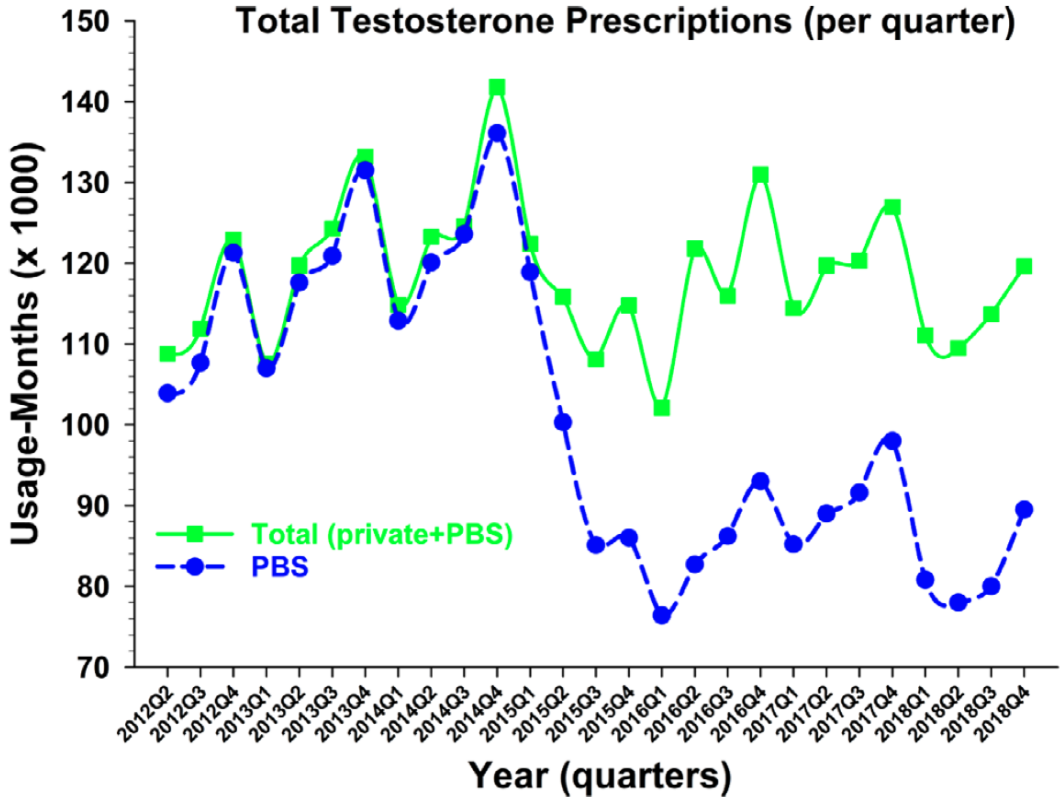


Play

Marriott RJ,…., Yeap BB. Annals Intern Med 2023; 176: 1221-34

Epidemiology





- Testosterone deficiency = <10% of men

Handelsman Endocrine Reviews, 2021
Handelsman Pharmacoepidemiol Drug Saf, 2020

Case 1 – Mr AC

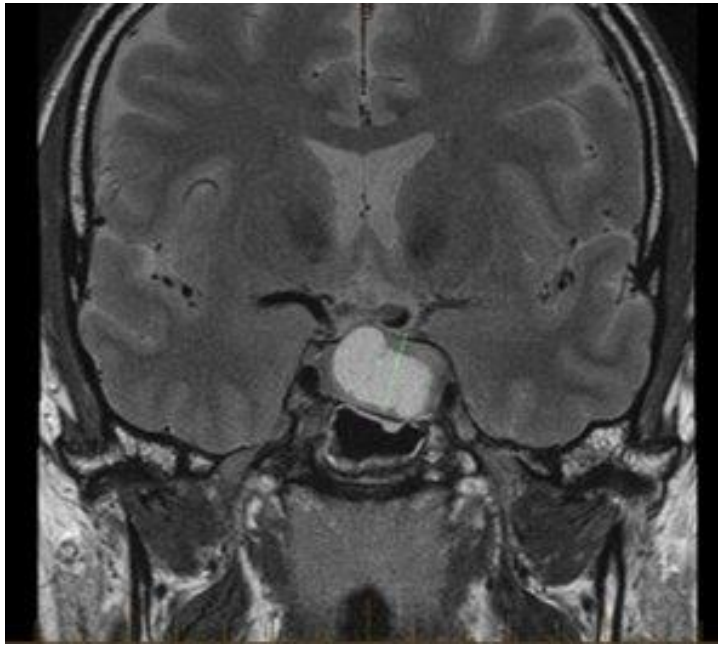
Normal testosterone
10.0-33 nmol/L

52M presented to GP with fatigue and weakness

- Found to have testosterone <0.2 nmol/L with LH <1 IU/L and FSH 1 IU/L

- **Past medical history:** Nil
- **Medications**: Nil
- **Social history**
  - Normal puberty
  - Works as fitter and turner
  - Fathered two children without assistance
  - Smoker 10x daily, no significant alcohol use

Case 1 – Mr AC



Further investigations:

- Pituitary panel: associated deficiencies in cortisol, thyroxine and GH
- MRI pituitary: macroadenoma

Impression:
"Organic" hypogonadism
- Hypogonadotropic secondary to pituitary macroadenoma

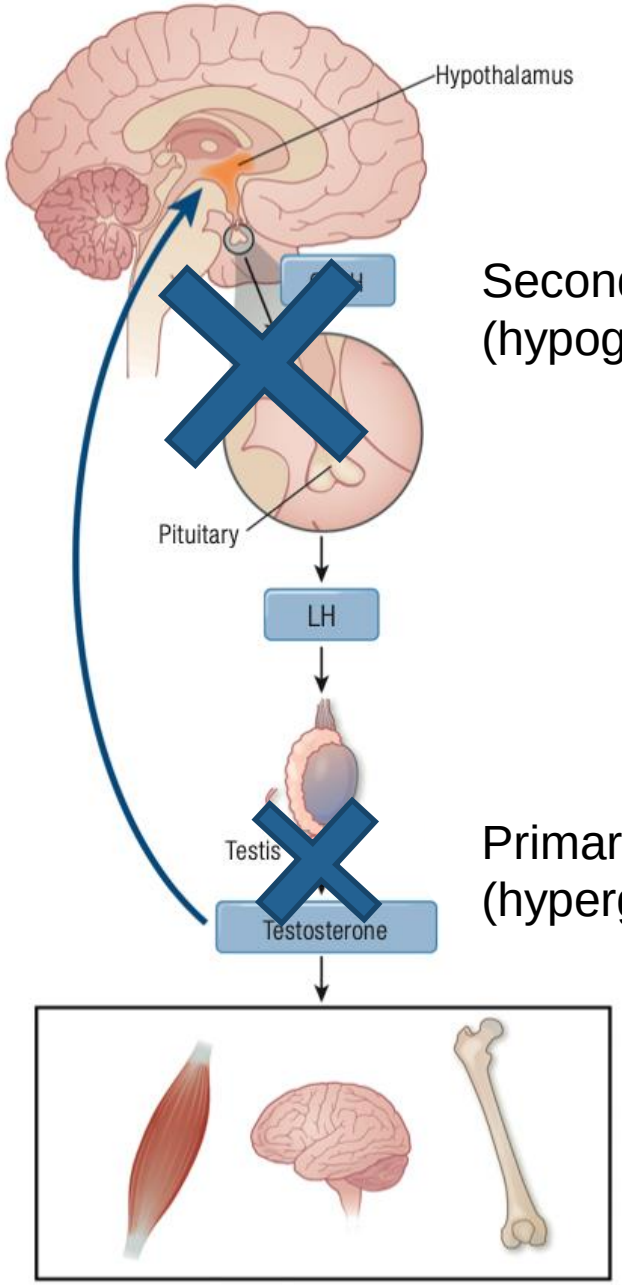
Recommendation:
1. Commenced Testosterone Undecanoate IM 1000mg 12-weekly (+ 6-week booster dose)

Good symptomatic response

“Organic” hypogonadism

- Estimated lifetime prevalence <1%

	Primary	Secondary
LH, FSH	High	Normal or low
Cause	Testicular failure - Chemo, surgery - Mumps - Klinefelter syndrome, Y microdeletion	Hypothalamic/pituitary - Pituitary lesion (opiates, obesity) - Congenital eg Kallman
	- Haemochromatosis	



Secondary (hypogonadotropic)

Primary (hypergonadotropic)

Clinical features

	Symptoms/signs	Investigations
Specific	Very small testes (combined ≤8 cc)	
	Pubertal delay	
	Eunuchoid body proportions	
	Deficient male pattern body hair	
Suggestive	**Low libido**	Unexplained anaemia
	Loss of early morning erections	Osteoporosis or osteopenia
	Gynecomastia	Poor semen quality and/or sperm concentration <15 million/mL
	Vasomotor symptoms	
	Small testes (6-12 cc each testis)	
Nonspecific	Fatigue	
	Low mood	
	Erectile dysfunction	
	Reduced lean-to-fat mass	

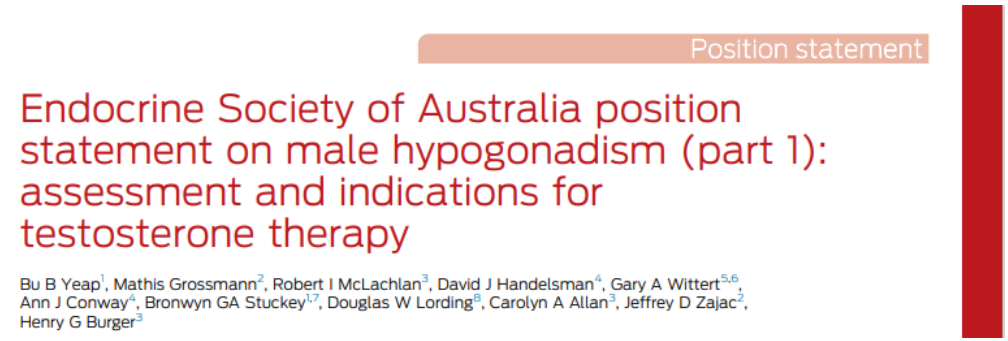
Grossman, Clin Endo, 2023

Diagnosis

- Serum **total** testosterone (with LH and FSH if abnormal)
  - Morning sample, fasting
  - Mass spectrometry more accurate than immunoassay
  - Repeat measurement required
  - SHBG may be helpful

- If level is low on two occasions:
  - **Hypogonadotropic** – iron studies, MRI pituitary and pituitary panel
  - **Hypergonadotropic** – iron studies, karyotype, Y chromosome microdeletion studies

- Baseline FBC, BMD and PSA



Management

- **Treatment indicated regardless of age**
- Ensure diagnostic work up completed
- Consider fertility!
  - If desiring conception -> HCG or clomiphene

- Assess contraindications
  - Prostate or breast cancer -> warrants discussion with treating team
  - Polycythaemia
  - Severe LUTS
  - (Untreated OSA or CV disease)

Preparations

Topical testosterone

- **1% daily**
- **2% daily**
- **5% daily**
- 5mg patch daily

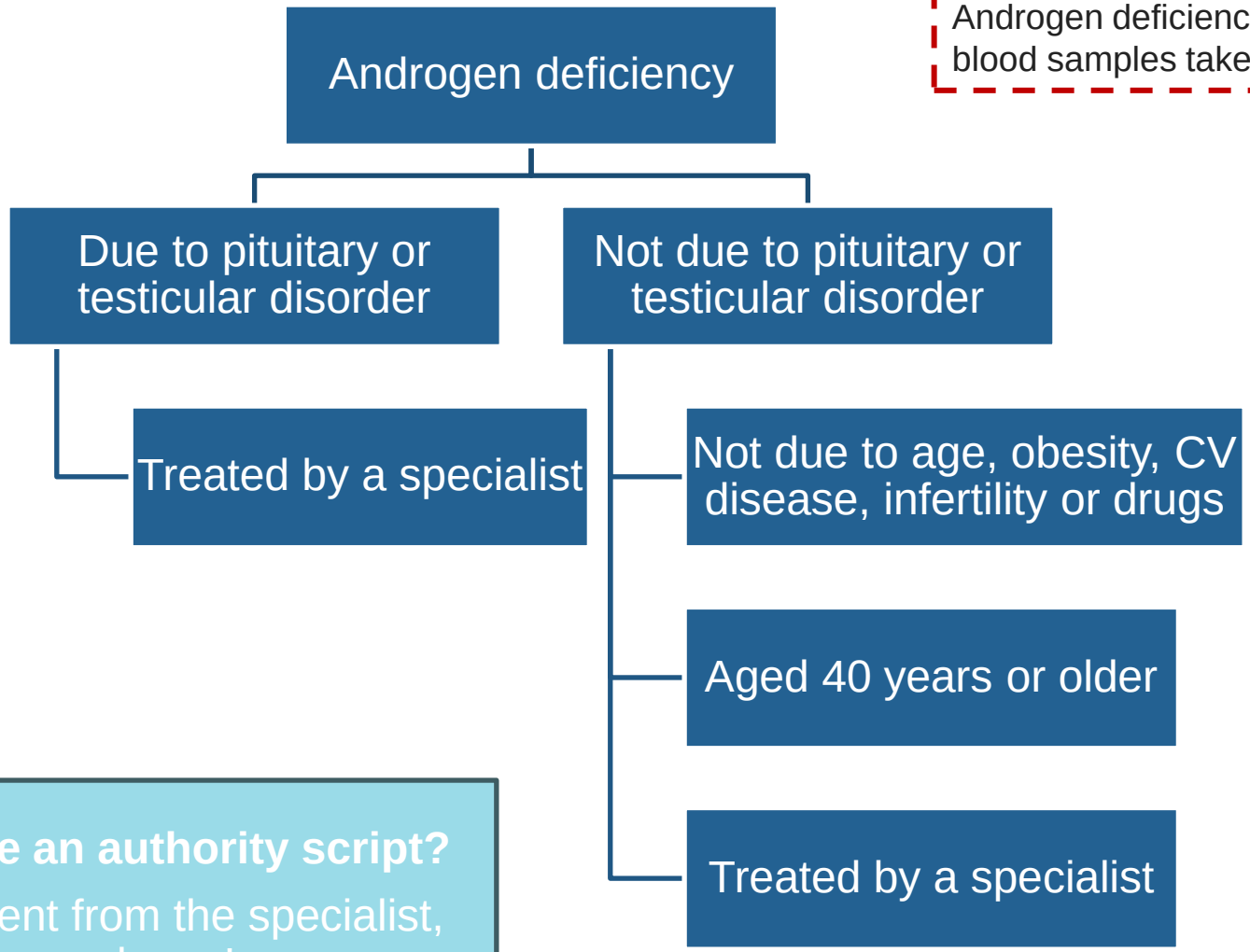
Injectable testosterone (IM)

- **Testosterone undecanoate 1000mg 12 weekly**
- Testosterone isocaproate 250mg 3 weekly
- Testosterone enantate 250mg 3-4 weekly

PBS rules

(i) testosterone level of **<6 nmol/L**; OR
(ii) testosterone level **6 - 15 nmol/L with high LH** (>1.5 times the RR for young men, or >14 IU/L).

Androgen deficiency must be confirmed by at least two morning blood samples taken on different mornings.



Can I write an authority script?

With consent from the specialist, yes please!

Monitoring

- Symptomatic response
- Testosterone level
  - Topical -> **trough** before application, aiming lower end of RR
    - (or **peak** 2 hours after application, aiming mid/upper end of RR)
  - IM depot -> **trough** before the fourth injection, aiming lower end of RR

- FBC after 3 months (LFTs, lipid profile)
- BMD after 1-2 years

- **PSA testing not recommended routinely**

Case 2 – Mr KVS

- 80 year old male referred by GP for **low testosterone**
- Fatigue, low mood, erectile dysfunction

- **Past medical history:**
  - Obesity (150kg, BMI 40), type 2 diabetes, OSA on CPAP, osteopenia, hypertension, CKD, dyslipidaemia, gout, MGUS, previous TIA
- **Medications**: +++
- **Social history**
  - Retired car salesman
  - 6 children to 3 wives without assistance
  - Current smoker, moderate alcohol
  - Sedentary lifestyle
  - Normal puberty

Case 2: Mr KVS

Normal testosterone
9.0-28.3 nmol/L

- Testosterone 7.8 and 6.4 nmol/L, LH 1 IU/L, FSH 2 IU/L
- No change despite best efforts with lifestyle for 12 months
- Quality of life terrible -> suicidal

Impression:
"Functional" hypogonadism due to co-morbidities

Recommendation:
1. Ongoing lifestyle changes
2. Trial of Testosterone gel 1% 2x actuations daily (**private script**) after risk/benefit discussion

(Surprisingly) excellent symptomatic response!

“Functional” hypogonadism

- Suppression of gonadal axis due to systemic condition
  - Obesity, severe systemic disease, endogenous and exogenous Cushing syndrome, hyperprolactinaemia, opiates
  - **Distinct from “pseudo” hypogonadism due to low SHBG**

- Common = 2% of men aged 40-79 years
  - Increased prevalence with increasing age and BMI

- **Similar symptoms** to “organic" hypogonadism and other co-morbidities

Grossman, Clin Endo, 2023

Management

- Screen for sleep apnoea
- Check for other pituitary hormone abnormalities
- Pituitary imaging if very low testosterone (eg <5 nmol/L) or features of pituitary disease on history, examination or bloods
  - Debate over CT vs MRI

- **Treat underlying condition**
  - Eg obesity -> lifestyle intervention for 6-12 months
  - Good evidence for weight loss of 10% or more

- If no response, **consider** trial of testosterone replacement for 3-6 months

Grossman, Clin Endo, 2023

?testosterone replacement

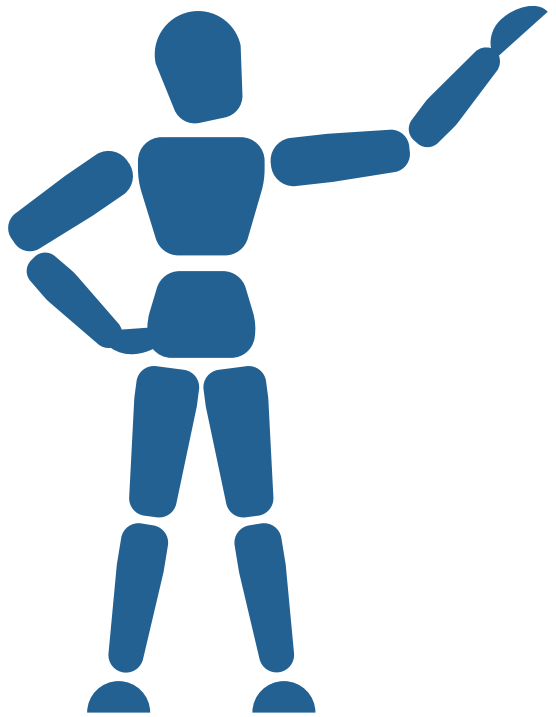
- Evidence from TRAVERSE, T-trials and T4DM

Positive	(probably) neutral	Negative
• Improvement in sexual activity, erectile function • Small effect on vitality and mood • Increased lean mass and strength • Improved bone density • Reduced risk of T2DM	• Prostate cancer • Cardiovascular risk	• Cost • Erythrocytosis • Suppression of endogenous HPT axis • BPH • ??fractures

Case 3: Mr PDT

- 26 year old male referred by GP for **low testosterone**

- **Medical history**: hypertension, under investigation
- **Medications:** nil
- **Social history:**
  - Works as a carpenter
  - Semi-competitive body builder
  - Non-smoker, no alcohol
  - Normal puberty



Mr PDT

Normal testosterone
9.0-28.3 nmol/L

- **Testosterone 2.9 nmol/L,** LH 1 IU/L, FSH 1 IU/L
- Patient concerned about low energy and testicular shrinkage
- Mother concerned about mood
- Admits to using testosterone enanthate, equipoise and propionate for 8-week cycles
  - Reports currently not using

Impression:
Hypogonadism secondary to exogenous testosterone use

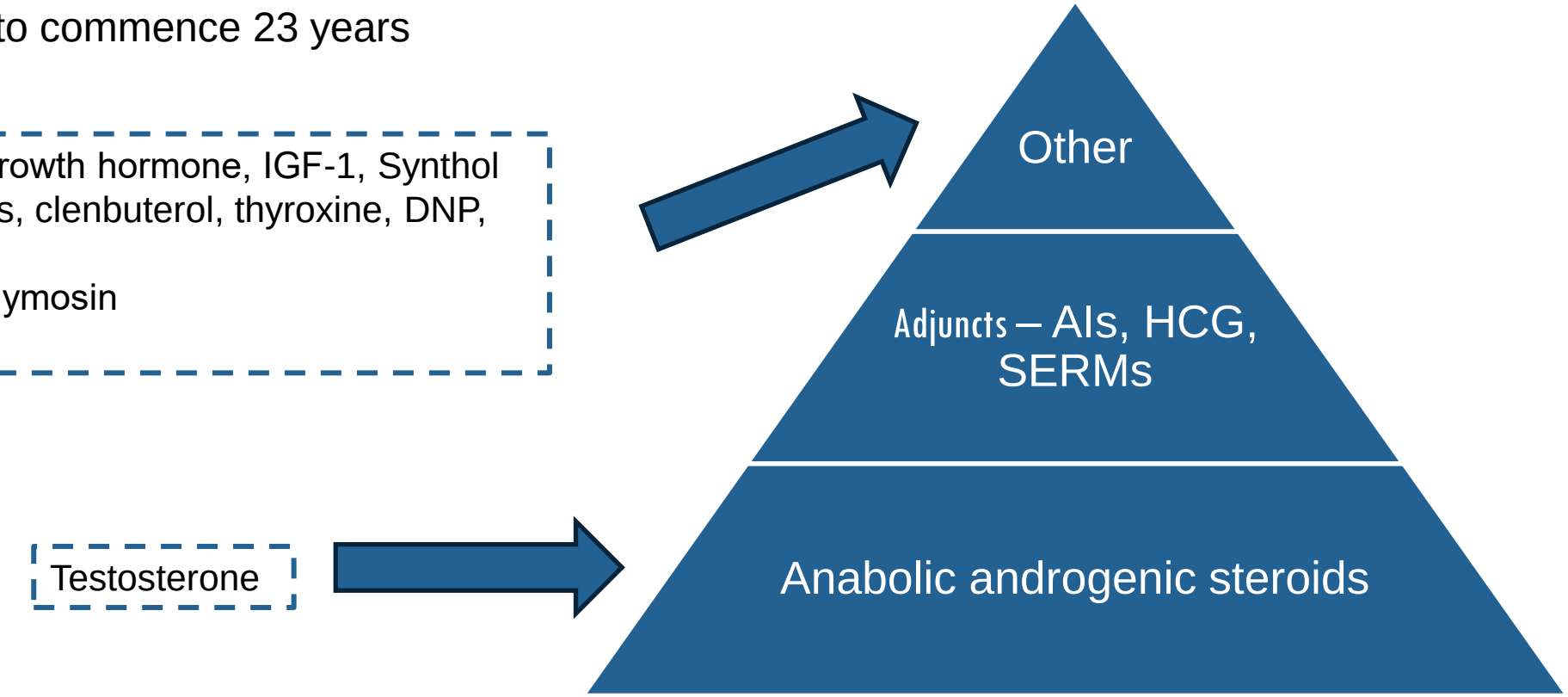
Recommendation:
1. Stop exogenous testosterone
2. See psychologist
3. Monitor LH/testosterone 3-6 monthly

Did not attend follow up

Performance and image enhancing drugs (PIEDs)

- **Worldwide lifetime prevalence 1-5% of men**
  - Non-athlete weightlifters
  - Average age to commence 23 years

- Bulking – insulin, growth hormone, IGF-1, Synthol
- Cutting – stimulants, clenbuterol, thyroxine, DNP, GLP-1 analogues
- Adjuncts – EPO, thymosin
- Etc etc etc



Substances

- Standard formulations
- Methandienone
- Trenbolone
- Stanazolol
- Nandrolon
- Oxandrolone
- SARMs etc

- **“Cycling”, “stacking”, “pyramiding”, “blast and cruise”, “bulking/cutting”, “PCT”**

“Fuvk money

Hard work dedication

I won a Australian title on this

1ml of test prop every 2nd day from week 1 to week The 1st 6 weeks 500mg of Deca per week

Dnp 400mg to 600mg for 10days then clenbutroel for 10days and repeat

With the dnp I would take insuline (dnp and insuline is the most anabolic substance it's poor mans

hgh at 21 iu a day dan duchain claims

Ok at week 6 I would drop the Deca and throw in 1ml of parabolan or tren every 2nd daywith the tren

Last 4 weeks I would put in 50mg of Winstrol injected with 1ml of kynoslen. Kynoslen is cheap man Winstrol it's amazing u buy 100ml from pet barn for 70 bucksworks great to

lean u out.

Last 4 weeks I would take nolvodex or letrozel at high mg to dry u outLast 3 days diuretics

Back stage I would carb up on insuline.”

Risk – physical health

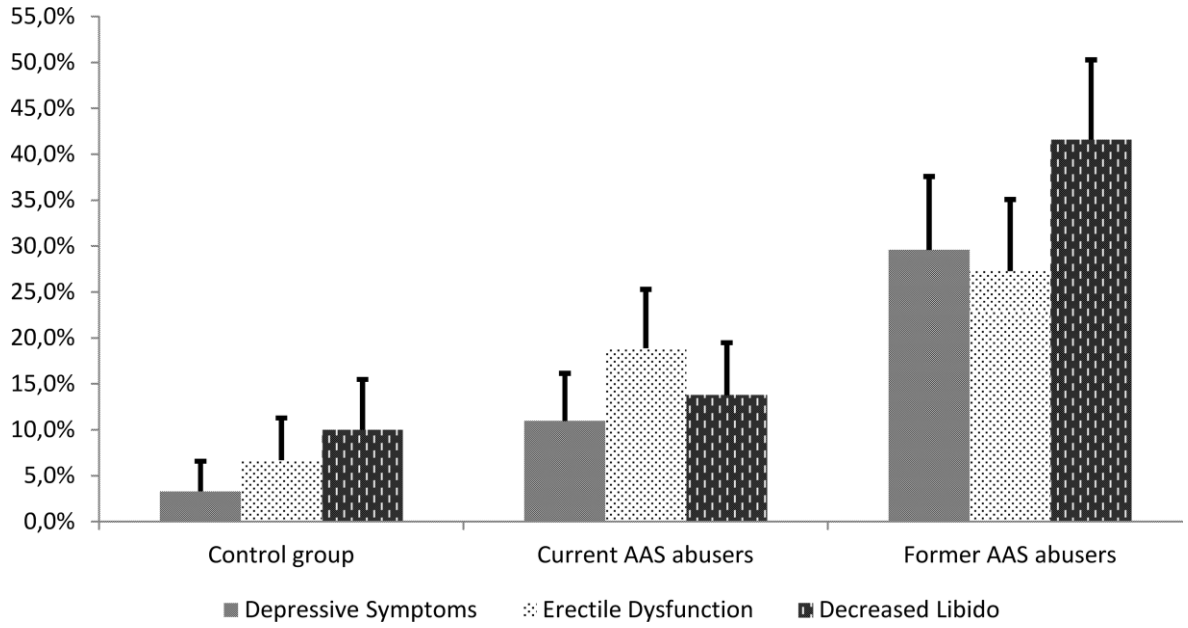
- Blood-borne viruses, abscesses
- Cardiovascular disease
  - Dyslipidaemia -> accelerated atherosclerosis
  - Increased haematocrit -> thrombosis
  - Cardiomyopathy
- Hepatotoxicity
- Acne
- Gynaecomastia
- Premature closure of epiphyses
- Infertility
- **3 x matched population mortality rate**

Horwitz, J Intern Med, 2019

Risks – mental health

- Hypomania
- Increased aggression, violence
  - (“roid rage”)
- Damage to relationships

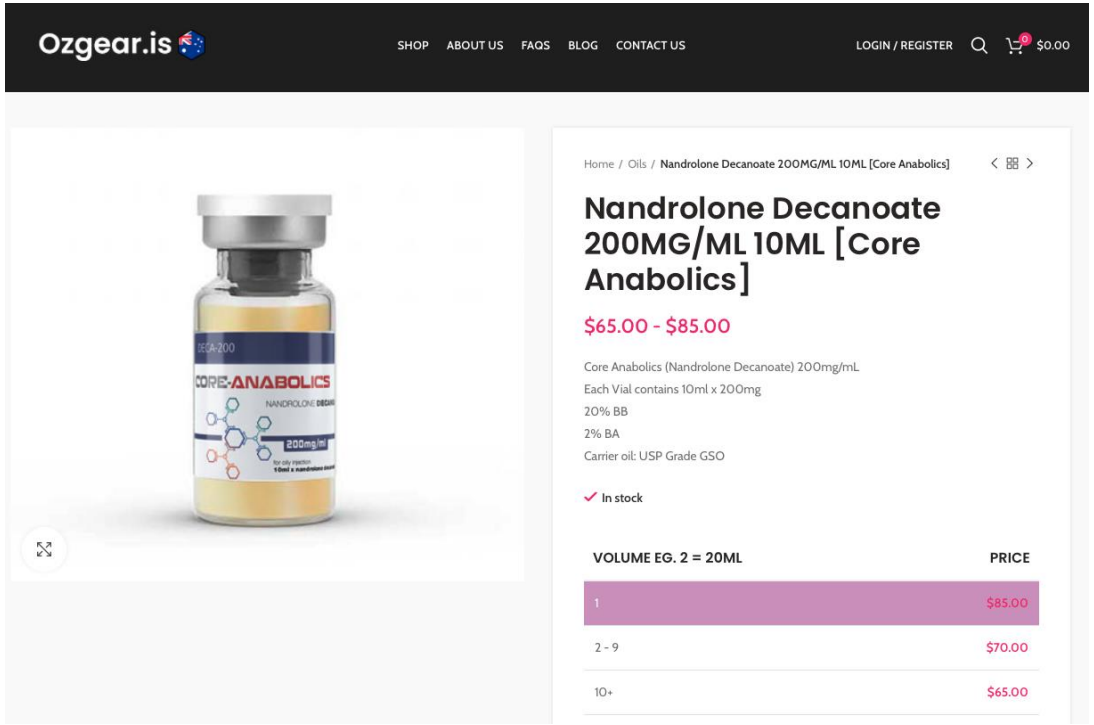
- **Dependence / withdrawal syndrome**



Rasmussen, PLOS One, 2016

Risks – other

- Cost
- No guarantee of content
- Illegal activity
  - **15-25 years imprisonment for possession**



When to suspect?

Clinically

(Enhanced musculature)

Adult-onset truncal acne

Small testes

Male pattern baldness

Mood disturbance

Biochemically

Raised haematocrit/Hb

Unexplained LFT derangement

Low FSH/LH

Low testosterone (*depending on agent*)

No specific tests!

Handelsman, Endocrine Reviews, 2021

What to do?

1. **Discontinuation** testosterone
   - Monitor for recovery of HPT axis 3-6 monthly
   - +/- period of hCG or clomiphene (off-label)

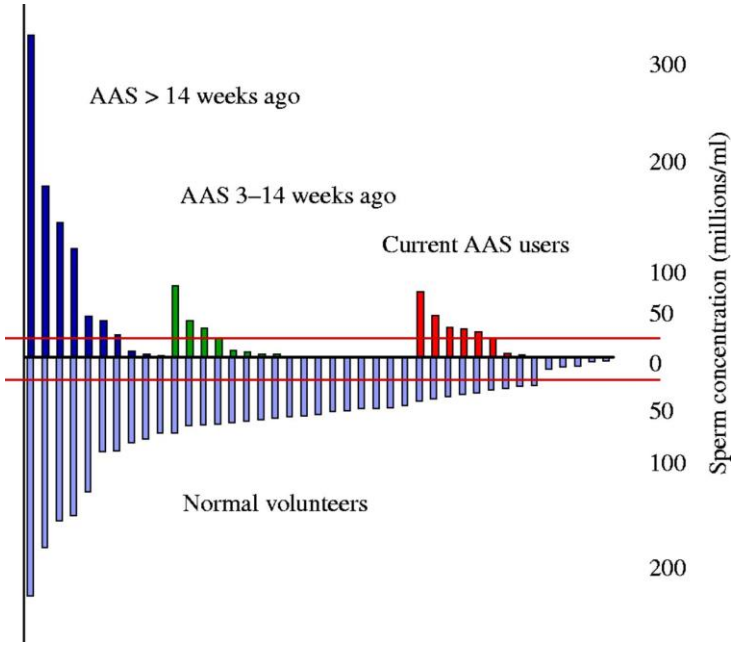
2. Conversion to **prescription testosterone** with tapering

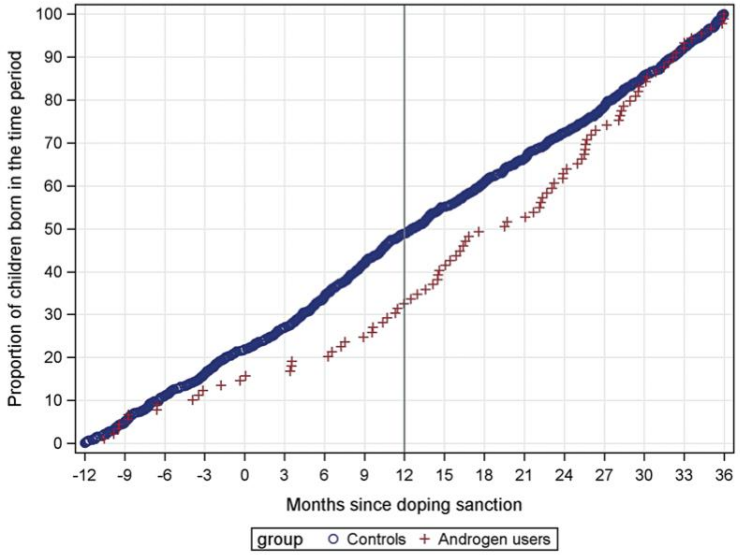
3. Continuation of illicit testosterone with **harm minimisation**

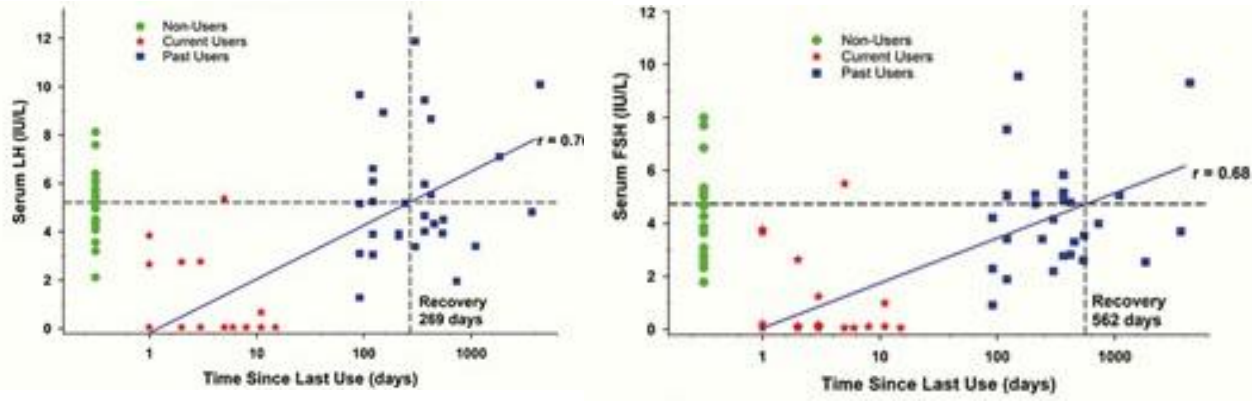
Anawalt, JCEM, 2019

Recovery

- **Testosterone** normalisation after 9-18 months
- **Sperm** recovery at 12-16 months
- **Fertility** recovery within 2.5 years

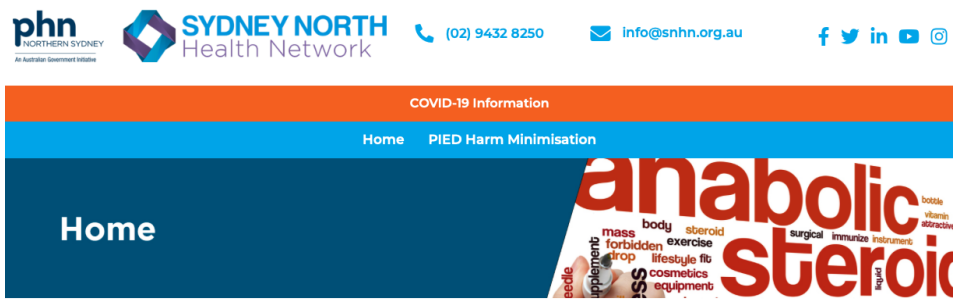






Shankara-Narayana, JCEM, 2020, Nieschlag. EJE, 2015, Windfield-Mathiasen, JCEM, 2021

PIED resources



GP Guide to harm minimisation for patients using non-prescribed anabolic-androgenic steroids (AAS) and other performance and image enhancing drugs (PIEDs)

r/Steroids Wiki

Summary

Who to test?

- Men with symptoms and signs of hypogonadism
- Unexplained anaemia, osteoporosis or abnormal sperm analysis

Who to refer?

- Primary or secondary hypogonadism meeting PBS testosterone replacement
- Other cases with clinical discretion

Who to treat without a referral?

- Symptomatic mildly low testosterone with unsatisfactory response to lifestyle changes
-> consider trial of therapy with pre-specified endpoints

Who not to treat?

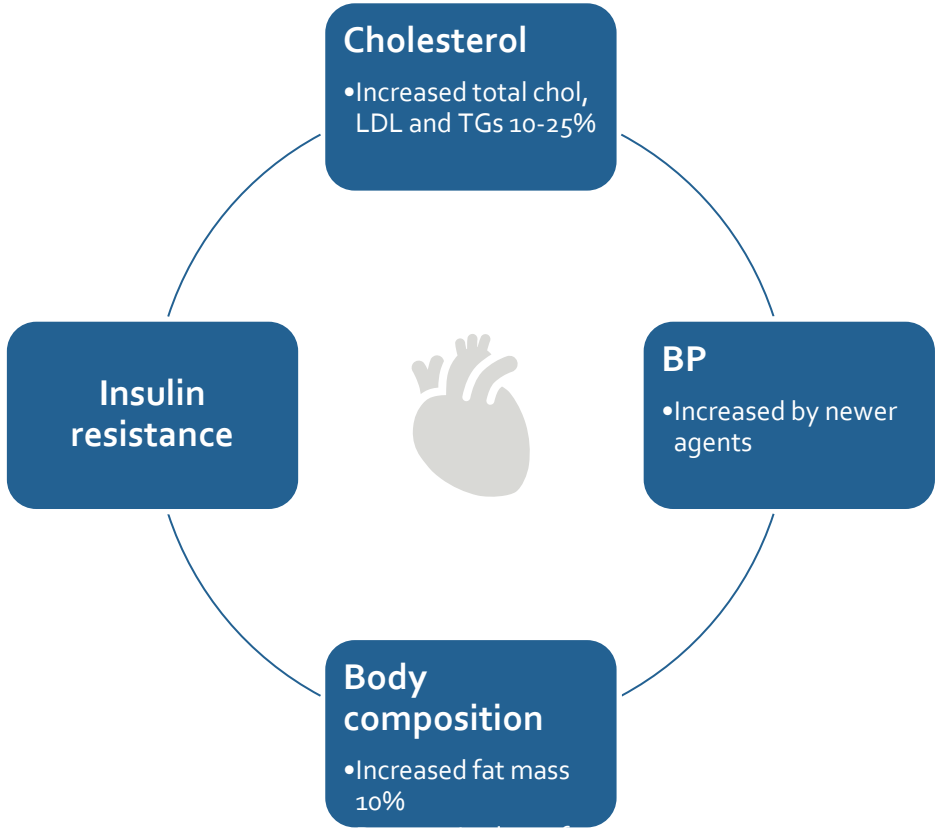
- Normal testosterone
- Asymptomatic mildly low testosterone
- Low total testosterone due to low SHBG

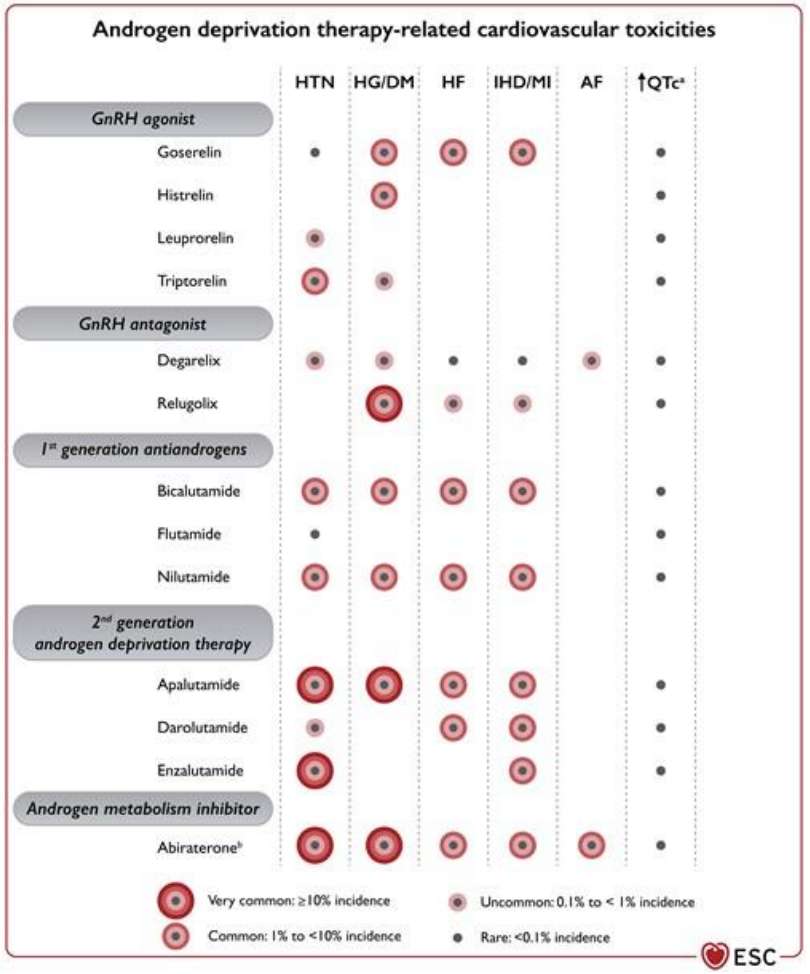
Prostate cancer endocrinopathies

Metro North Health | Queensland Government

Cardiovascular disease in prostate cancer

- **Most common cause of death**
  - 30% vs 27% from prostate cancer itself



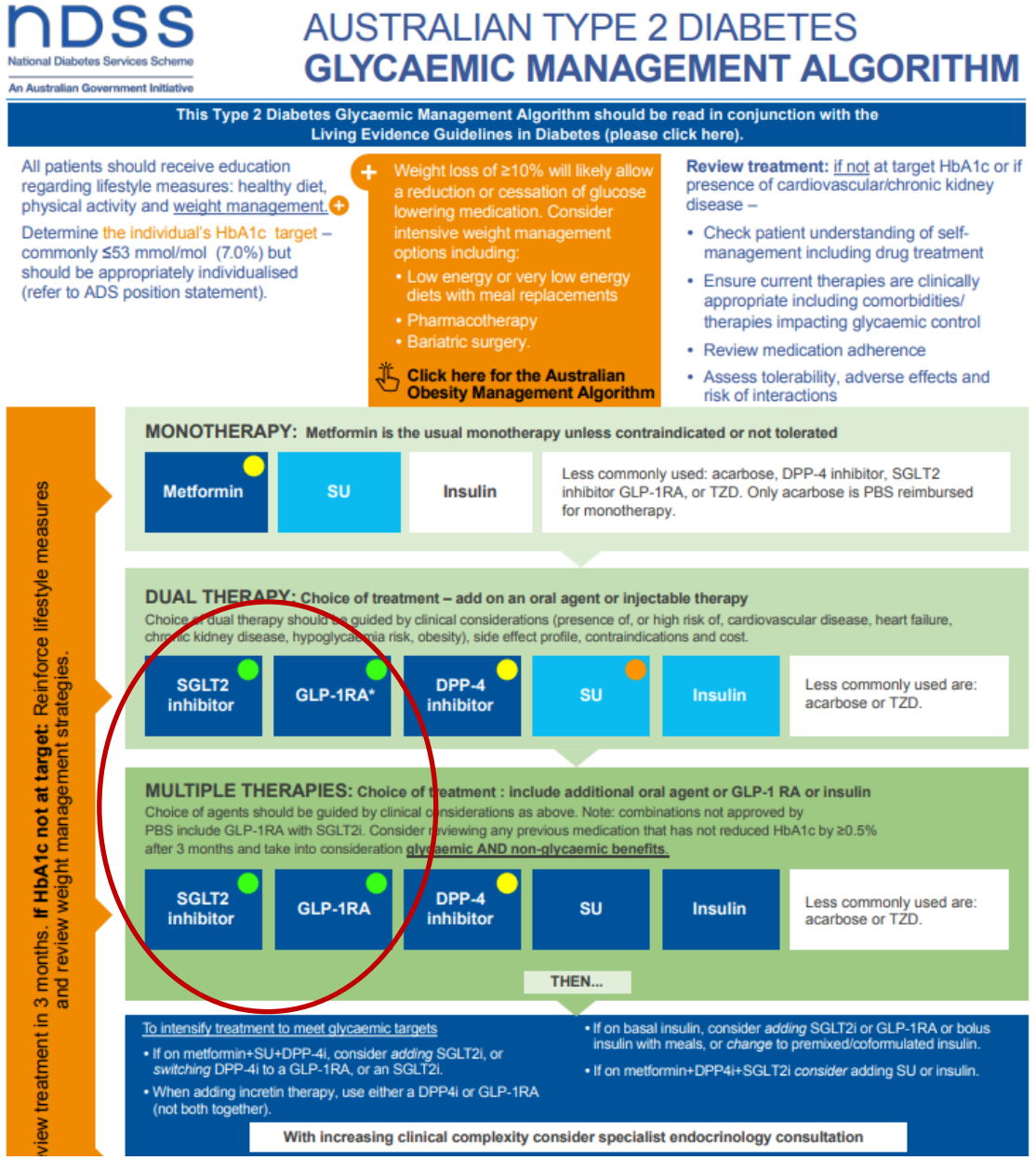


Ye, Frontiers Oncol, 2022

2022 ESC Guidelines on cardio-oncology

Type 2 diabetes in prostate cancer

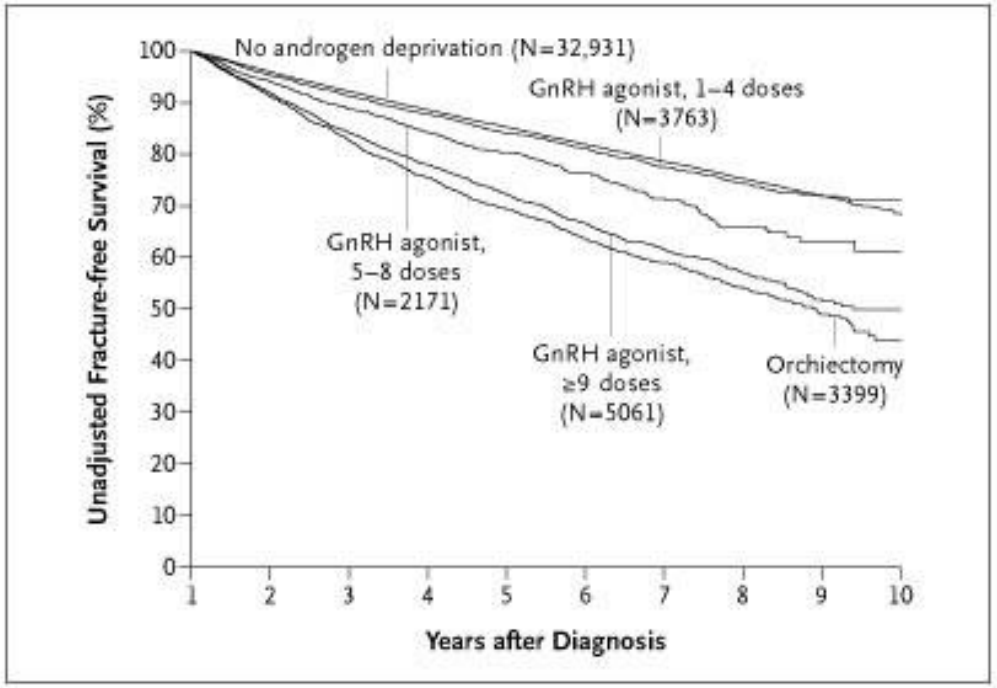
- ADT decreases insulin sensitivity and increases fasting glucose
- Up to 50% increased relative risk of type 2 diabetes
- Risk with <1 year of treatment



Drevinskaite, BMJ Open, 2021

Osteoporosis in prostate cancer

- Reduction in testosterone = reduction in oestrogen
- Bone loss on ADT up to 17% at 2 years, then 2% per year
  - 0.5-1% in healthy ageing men
- 20% fracture within 5 years of ADT



Shahinian, NEJM, 2005
Hussain, Prostate Cancer, 2021

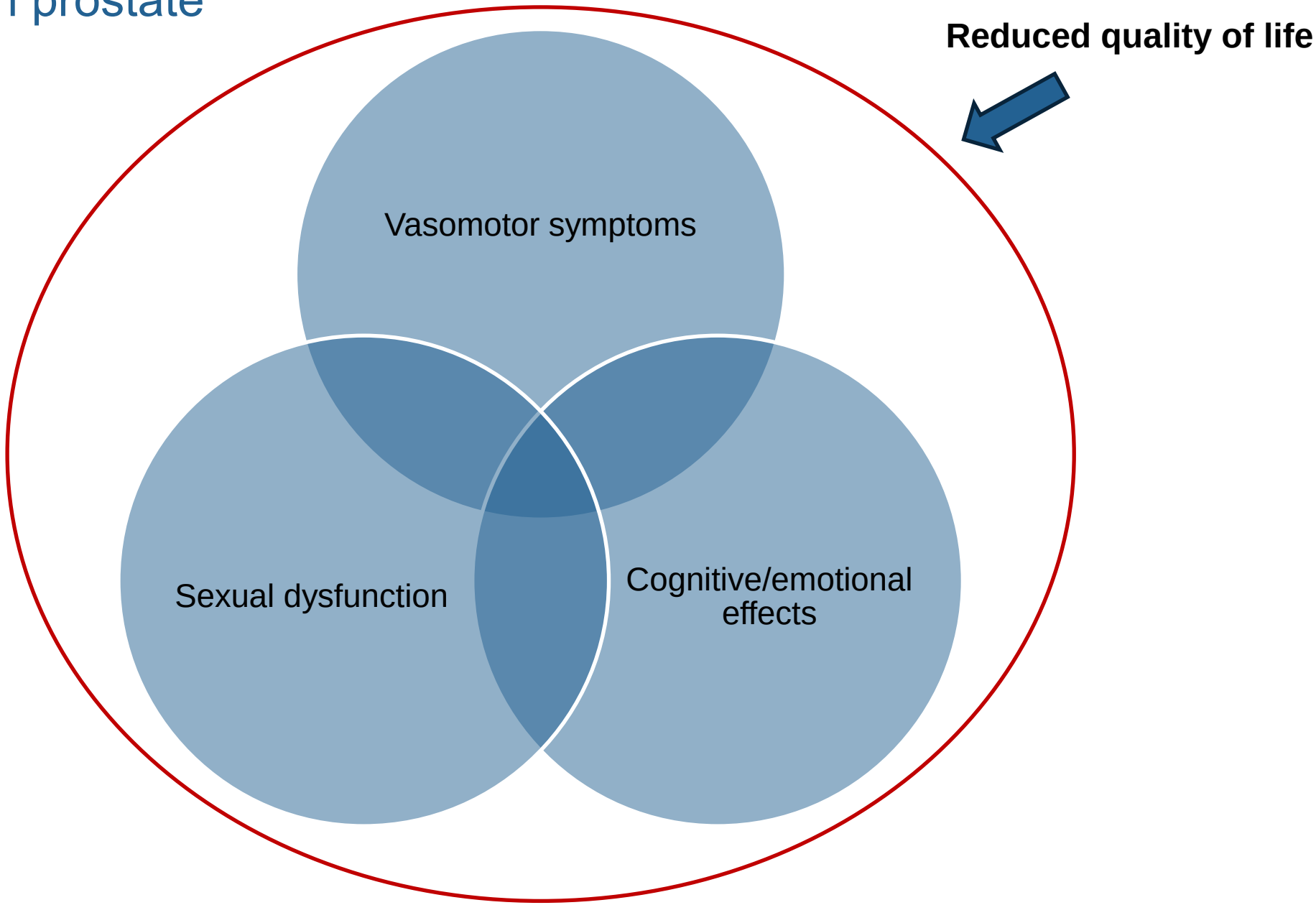
Osteoporosis in prostate cancer

- BMD when commencing ADT then 1-2 yearly

- **Lifestyle changes**
  - Diet = calcium, protein
  - Exercise
  - Smoking and alcohol cessation
  - **Falls risk reduction!**

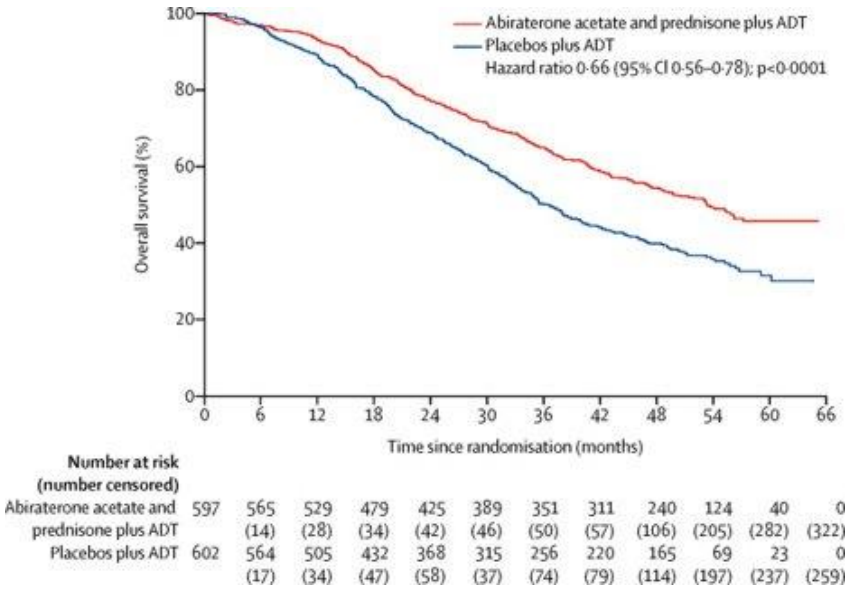
- **Pharmacotherapy**
  - Vitamin D
  - Antiresorptives
  - ?Anabolic agents = teriparatide, romosozumab
  - (?Hormone replacement)

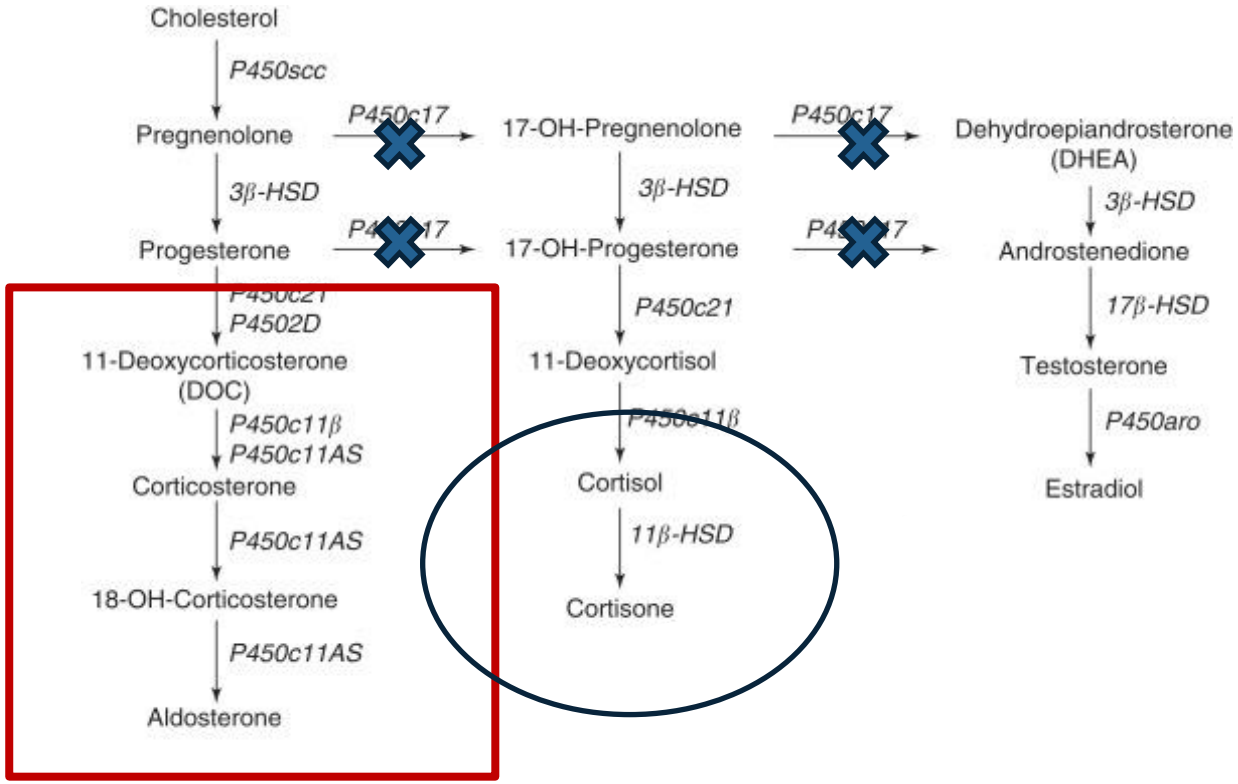
“Andropause” in prostate cancer



Abiraterone

- Decreases testosterone production from adrenal and inside prostate cancer also
- Used with **prednisolone**





Fizazi, Lancet Oncol, 2019

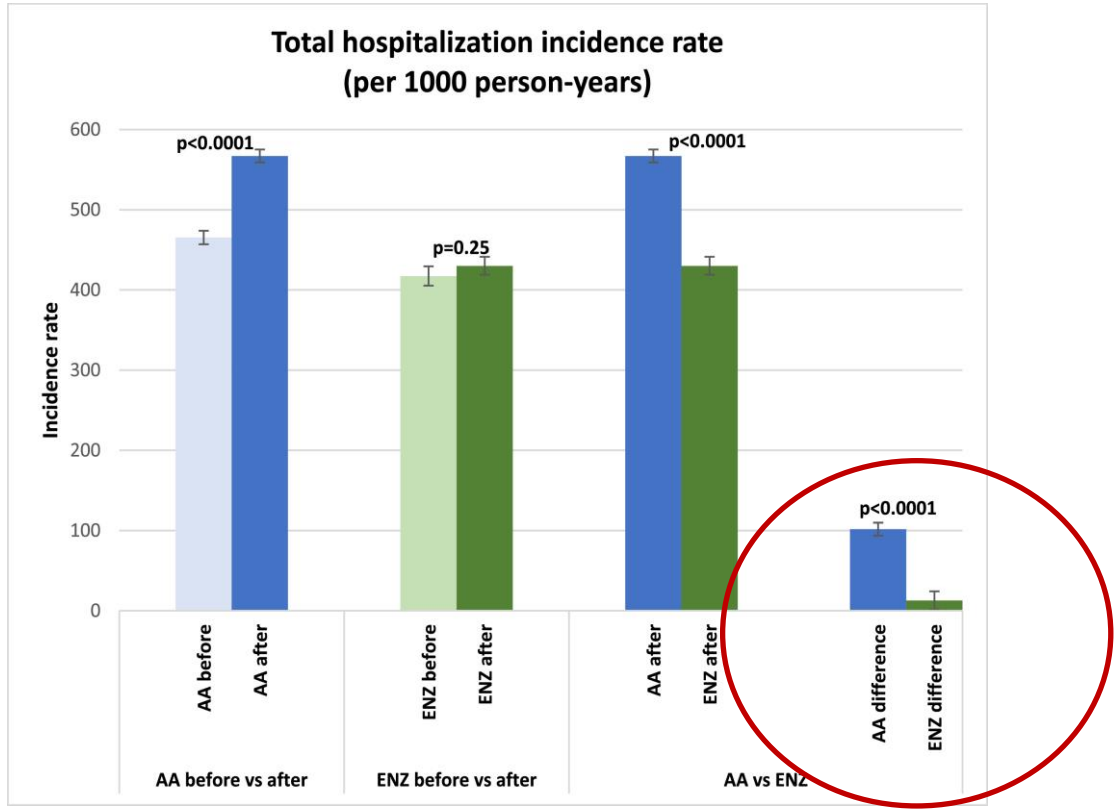
Abiraterone

- Mineralocorticoid excess syndrome
- Supraphysiological glucocorticoid
  - Likely required for decades

  -> Mild Cushing's syndrome

  -> ?adrenal insufficiency

	Abiraterone acetate and prednisone plus ADT (n=597)	Placebos plus ADT (n=602)
Hypertension	**243 (41%)**	144 (24%)
Hepatotoxicity	146 (24%)	109 (18%)
Hypokalaemia	**143 (24%)**	23 (4%)
Cardiac disorders	**95 (16%)**	52 (9%)
Atrial fibrillation	**10 (2%)**	2 (<1%)
Fluid retention or oedema	81 (14%)	71 (12%)
Osteoporosis	**43 (7%)**	27 (4%)
Cataract	**22 (4%)**	8 (1%)



Riekhof, Clin Genitourinary Cancer, 2024

Take home messages

Testosterone deficiency can be "organic" or "functional" – both need investigation and may benefit from testosterone replacement

Testosterone and other PIED use is common and challenging to manage

ADT for prostate cancer is associated with cardiometabolic risk and osteoporosis which warrants screening and early intervention

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Questions?

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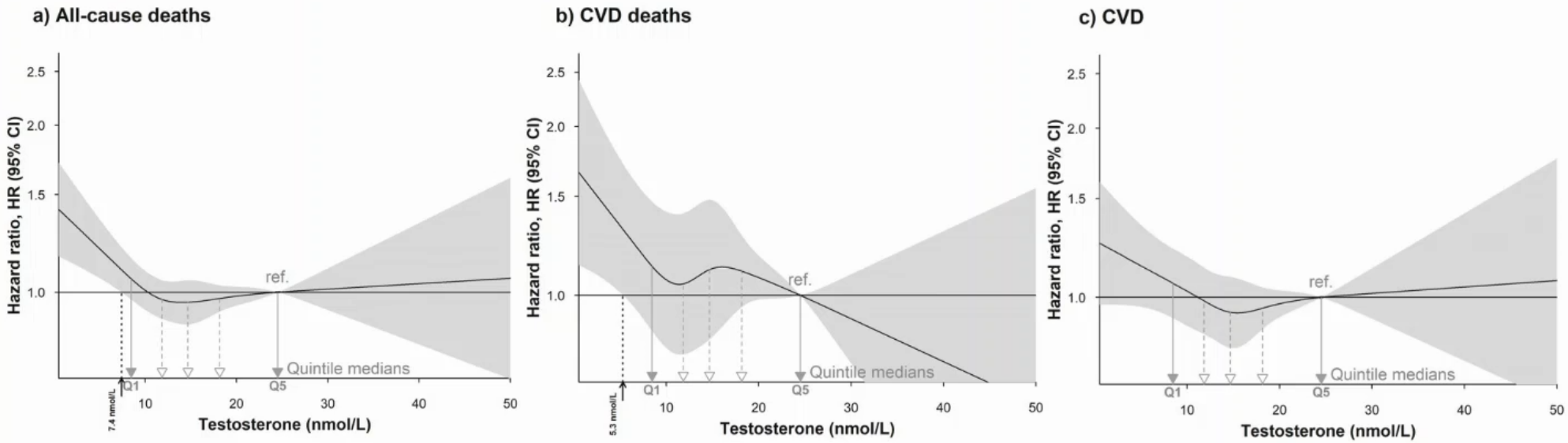
Associations of testosterone (LCMS) with mortality, CVD deaths and incident CVD events

in AIMS IPD meta-analyses of 20,654 men from 9 prospective cohort studies



Missing data imputed
Adjusted for sociodemographic, lifestyle and medical factors

Yeap BB, et al.
Annals Intern Med 2024; 177: 768-781

Thank you!