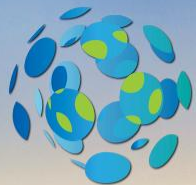


25<sup>th</sup> ASIA-PACIFIC PROSTATE CANCER CONFERENCE



**APCC**  
**2025 SYDNEY**  
21 - 23 AUGUST  
HILTON SYDNEY | AUSTRALIA

[prostatecancerconference.org.au](http://prostatecancerconference.org.au)

Proudly presented by

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**Together in Discovery & Care**

# ANDROGEN DEPRIVATION THERAPY AND QUALITY OF LIFE

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## Researcher-Clinician



RESEARCHER



CLINICIAN





## From the Chair

**Experience from  
25 years of 50-minute hours**



# Disclosure Andrew Matthew, PhD., C.Psych

- None





## Outcomes of the AUSTRALIAN Convening (January 2025)

**THE GOAL:** To understand how to improve access to sexual health for more Australians with prostate cancer.



**Care coordination**  
between treating  
physicians, primary  
care and allied health



Staged approach to  
**workforce training**



Increased  
**dissemination of  
patient education  
and material**



Improve sexual health care through  
**primary care physicians**



Patients with **advanced** prostate  
**cancer** are an overlooked



## Prostate Cancer and ADT

Estimates: **45-50%** of men will receive ADT during the course of their disease (MENG 2002, Gilbert 2011)

➤ Radiation Treatment with **adjuvant androgen deprivation therapy** (Herr 2023)

- **Grade Group 5:** 81.4% received ADT
- **Grade Group 4:** 73.8% received ADT
- **Grade Group 3:** 51.2% received ADT
- **Grade Group 2:** 37.2% received ADT
- **Grade Group 1:** 14.2% received ADT

**Often time limited:  
6months to 2-3 years**

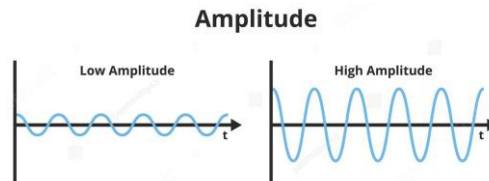
➤ **~30%** of patients present with **advanced disease or disease recurrence** and patients will be treated with ADT (Batra 2021)





## Prostate Cancer and ADT

- Side-effects occur within 2 months of initiating ADT (Gray 2005)
- Incidence and severity of side-effects increase with duration of therapy (Grossman 2011)
- Impact may increase with age of patient (Mohile et al., 2009)
- Patients vary significantly in expression of ADT side-effect profile
  - Not well understood



## ADT and Quality of Life

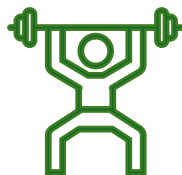
Physical



Cognitive



Masculinity



Sexual Functioning



NOTE: Metabolic and  
cardiovascular consequences

Emotional





01

PHYSICAL



# Fatigue, Hot Flashes, and Sleep Disturbances

## **FATIGUE** (Story 2011, Casey 2012)

- 40% of men on ADT will experience fatigue
- The 2<sup>nd</sup> most distressing side-effect next to sexual dysfunction

## **HOT FLASHES** (Frisk 2010)

- 80% of men on ADT will experience hot flashes
- 27% most bothersome side-effect

## **SLEEP DISTURBANCE** (Gonzalez et al., 2017)

- 59% of men report poor sleep
- Hot flashes
- Nocturia



# Intervention: Fatigue, Hot Flashes and Sleep

## FATIGUE

- **EXERCISE** (Segal 2003, Yuan 2023)

## HOT FLASHES

- Hormonal Agents (e.g. megestrol acetate, estrodial) (Jones 2012)
  - Could interfere with ADT, plus side-effects
- SSRI (e.g. Escitalopram) and SNRI (e.g. Venlafaxine)
- Neuroleptic agents (e.g. Gabapentin) (Loprinzi 2009)
- Acupuncture, Meditation/ Relaxation/ Deep Breathing (Jones 2012)
- Behaviour Modification – layered sheets, clothing, fans

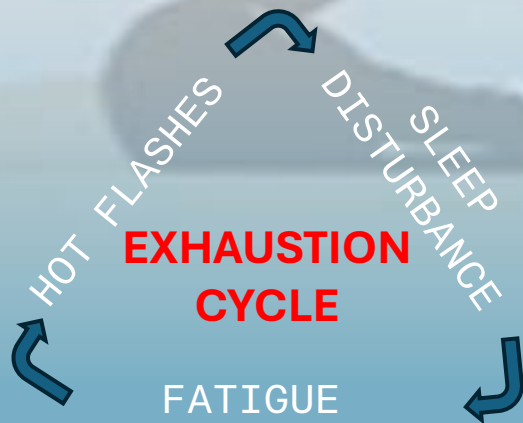
## SLEEP

- **EXERCISE** (Segal 2003, Yuan 2023)
- CBTi – building sleep drive (Meyers et al., 2022)





## From the Chair



- Loss of engagement in joyful activities
- Loss of motivation
- Reduction in productivity
- Depression (Scott 2021)
- Reduction in coping and resilience
- Loss of meaning



# Weight Gain, Muscle Loss, and Loss in BMD

## WEIGHT GAIN

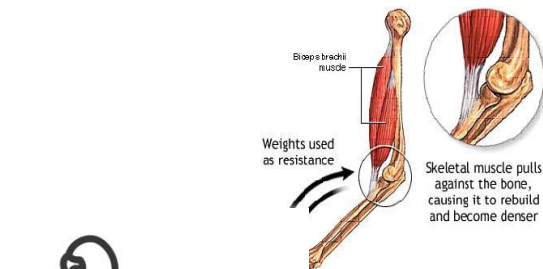
- In the 1<sup>st</sup> year on ADT fat mass increase by 10% and lean mass decrease by 3% (Nguyen 2015)

## LOSS in BMD

- Some men will experience reductions in BMD

## MUSCLE LOSS

- Men on ADT will experience muscle loss and reduced muscle strength (Storer 2012)



# Intervention:

## Weight Gain, Muscle Loss, Loss in BMD

### WEIGHT GAIN AND MUSCLE LOSS

- **EXERCISE** (Algoter 2021, Yuen 2023)
  - Rx: Hypertrophy training (muscle building)
  - Resistant more than aerobic
  - Pre-habilitation and Rehabilitation

### LOSS in BMD (Poon 2018)

- Calcium, Vitamin D
- Stop smoking
- Biophosphonates and Denosumab





# 02 COGNITIVE



# Cognitive Function



- Research: a history of mixed results
  - Largest prospective study on ADT and Cognitive Function – no effect (Alibhai 2010)
  - Review – 47% to 69% experience impairment in at least one cognitive domain (Nelson 2008)
  - Strongest evidence (incl. Meta-analysis) for: (Jamadar 2012; McGinty 2014)
    - Losses in verbal & spatial memory
    - Declines in visuospatial processing



- The thought of losing cognitive capacities is extremely anxiety-provoking

- Conceptualizing Cognitive Dysfunction is like conceptualizing an Electric Shock
  - Dr. Google can be alarmist about ADT and cognition
  - Patients become hypersensitive to cognitive “mistakes” e.g. wordfinding
  - Can result in significant distress
- 
- Importance of providing a realistic and balanced expectation for patients
    - University Professor– Mathematician, 12 years on ADT





# 03 SEXUAL FUNCTIONING



## Loss of Sexual Desire

- **94%** of men on ADT will experience loss of sexual desire (Ng 2022, Kinnaird 2025)
- The most distressing side-effect of ADT (Casey 2012)



## From the Chair

- Loss of Sexual Fantasy and Sexual Dreams
  - Men think about sex a lot
    - Results vary but it appears that men have sexual thoughts about 19 times per day (Fisher 2012)
    - Not including erotic dreams
  - Men will describe a void in their lives (loss/grief)



# Erectile Dysfunction and Orgasmic Dysfunction

➤ 82% suffer Erectile Dysfunction (Wibowo 2019)

➤ Delayed or difficulty reaching orgasm (Mazzola et al., 2016)

➤ Loss of ejaculate volume (Elliot et al., 2010)

➤ Anorgasmia (Gryzinski et al., 2022)





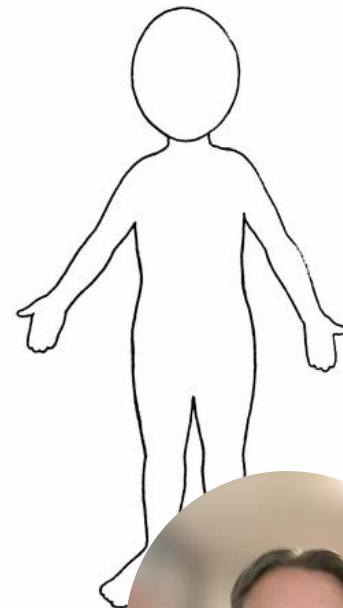
## Body Image Concerns

- Breast growth (15% men on ADT)
- loss of body hair
- genital shrinkage
- loss of muscle mass

(DiLorenzo 2005, Gentili et al., 2019)



Body Feminization



## From the Chair

- Interferes with pleasurable and healthy activity
  - Swimming at the beach (No Bondi)
  - Going to the gym
    - Showering becomes problematic



### INTERVENTION

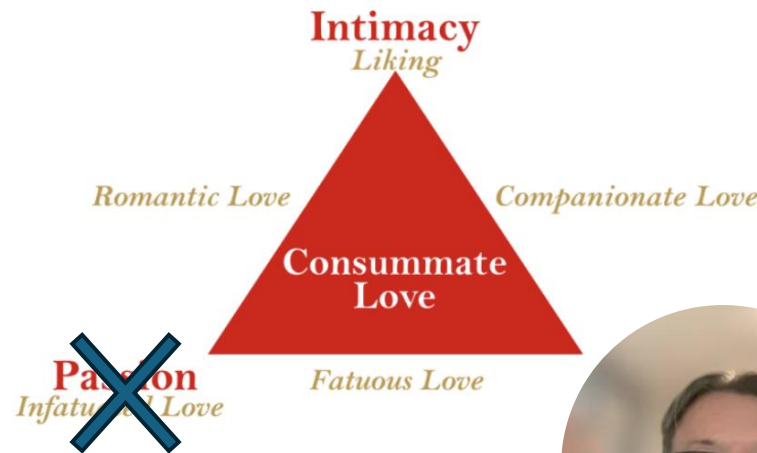
- Breast Growth - RT, Tamoxifen (Bautista-Vi)
- Compression clothing
- Behavioral adjustment – shower at h





# Sexual Functioning – Intimacy Concerns

- **83% - 93% Sexual Activity Cessation**  
(Ng 2012)
- Distressing for Partner
- Distressing for Couple
  - Reductions in overall relationship intimacy  
(Walker 2015)



# Intervention: Sexual Functioning

## BIO-PSYCHOSOCIAL APPROACH TO SEXUAL REHABILITATION (Wittman 2022)

- Integration of physical, emotional, cognitive and social factors

### LOSS OF DESIRE

- Hardest to treat
- Acceptance & Adaptation

### ERECTILE DYSFUNCTION

- PDE5I's, ICI, VED, Surgical Implants
- PDE5i's less effective in context of ADT
- Non-Penetrative Sexual Activity

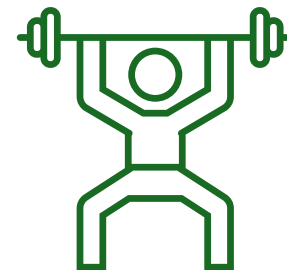
### INTIMACY CONCERNS

- Open communication with partner (avoid assumptions)
- Intimacy Counselling





# 04 MASCULINITY



## “Male Traits” and ADT

Testosterone is associated with: (Archer 2006, Carre 2015, Can Honk 2010)

- Competitiveness
- Physical Strength
- Sexual Prowess
- Reactive aggression... assertiveness (Vigor)
- Stoic emotional regulation
- Decisiveness
- High energy



## “Male Traits” and ADT

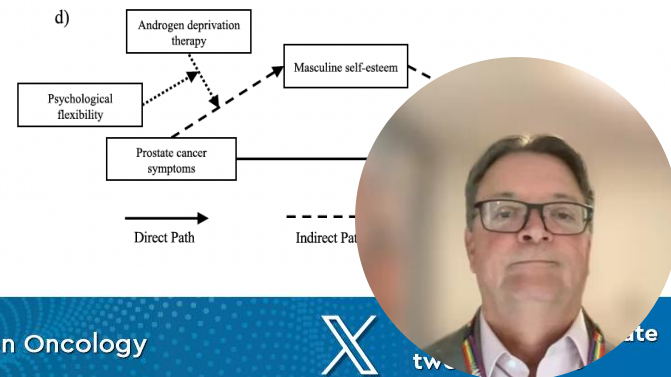
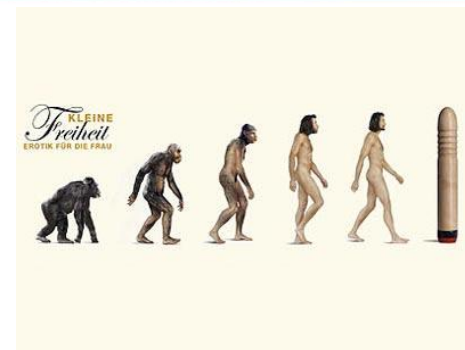
ADT is associated with losses in: (Ng 2006, 2012, Oliffe 2006, Donovan 2015, Harrington 2009)

- Competitiveness
- Physical Strength
- Sexual Prowess
- Reactive aggression... assertiveness (Vigor)
- Stoic emotional regulation
- Decisiveness
- High energy



# Intervention: Masculinity

- **Psychological Flexibility** (Hoffman 2019)
- **Broader perspective of masculine identity through Psychological Flexibility** (Spendelow 2018, Bowie 2022)
- **Less effective in PrCa patients on ADT** (Hulburt-Williams 2015)
- **Likely due to severity of symptoms**





# 05 EMOTIONAL



## Emotional Lability

- Exaggerated changes in emotion (Cherrier 2009, Cary 2014)
  - More irritable or angry
- Becoming Spontaneously Tearful
  - Difficulty maintaining ***stoic emotional expression***

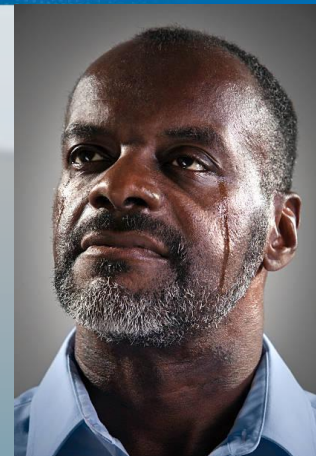


## From the Chair

### ➤ ***INABILITY TO MAINTAIN STOIC EMOTIONAL EXPRESSION***

- e.g. Sentimental Movie
- Public Embarrassment - Politician

### ➤ **Unmanly, shameful**



### **INTERVENTION**

- Awareness for potential exaggerated mood
  - Sensitivity – embrace rather than view as weakness/vulnerability (mean)
  - Tearfulness – let intimate others know



# Depression

- Research: a history of mixed results (variable methodological rigor, small sample sizes)
  - 11% depression in the **general male population** (significant symptoms) (Lee 2015)
  - 8% to 25% - depression in **men with prostate cancer** (Nead 2021)
  - **39%** - depression in men with prostate cancer **treated with ADT** (Lee 2015, Watson 2014)





DSM V DIAGNOSTIC CRITERIA FOR DEPRESSION	ADT SIDE-EFFECT PROFILE
Low Mood / Irritability	Depression, Emotional Lability
Loss of Interest/Motivation	Loss of vigor/competitiveness
Weight Gain or Loss	Weight Gain
Poor Sleep	Hot Flushes – Sleep Disturbance
Psychomotor Retardation	
Fatigue/Low Energy	Fatigue/Low Energy
Diminished Concentration	Cognitive Impairment/Memory
Indecisiveness	
Worthlessness	Losses In Masculinity
Suicidality	Elevated In Men On ADT
Reduced Sexual Activity/Libido	Reduced Sexual Activity/Loss of Instinct



DSM V DIAGNOSTIC CRITERIA FOR DEPRESSION	ADT SIDE-EFFECT PROFILE
Low Mood / Irritability	Depression, Emotional Lability
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Poor Sleep	Insomnia
Psychomotor Retardation	Depression
Fatigue/Low Energy	Fatigue
Diminished Concentration	Memory
Indecisiveness	Depression
Worthlessness	Losses In Masculinity
Suicidality	Elevated In Men On ADT
Reduced Sexual Activity/Libido	Reduced Sexual Activity/Loss of Instinct

**Under the conditions of ADT's physical and cognitive side effect profile men are highly susceptible to depressed mood**



# Intervention: Depression

- Anti—Depressant Medications
  - ADT-based depression may be resistant to anti-depressants (Sountoulides 2013)
  - Better for more severe depression (Fournier 2010)
- Psychosocial Interventions
  - Cognitive Behaviour Therapy effective for depression (Rock 2012)
- **EXERCISE** (Rock 2012, Galvao 2012, Yuan 2023)
  - Targeting physiological etiology

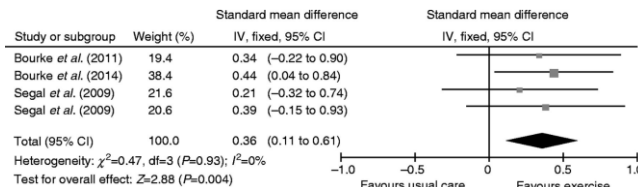


## Key Takeaways

- 1) Importance of an interdisciplinary team
- 2) Invite/include partner
- 3) Provide up-front biopsychosocial education
  - Sexual dysfunction
  - Fatigue, Hot Flashes, Sleep
  - Body image
  - Cognitive Function
  - Mood
- Inquire throughout patient's journey
- Inquire about the partner and couple's journey

### 4) *Highlight the importance of EXERCISE*

- Strength and physical function
- Mental health
- Self image
- Sexual Function (not including libido)





# Thank you

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