GURC Algorithm Disclaimer

The algorithms are intended to guide therapy by highlighting commonly selected treatment sequences. They are inspired by clinical evidence, but based primarily on clinical opinion stemming from discussion among multi-disciplinary experts. As they do not represent all available treatment options or reflect all available evidence, they should not be considered definitive or replace evidence-based clinical guidelines or consensus statements.

As individual patient needs are the primary consideration in therapeutic strategy, clinicians should consider suggested treatment options or clinical trial enrolment in light of disease characteristics and history, patient preference, available evidence and, ideally, in the context of a multi-disciplinary discussion.

Management algorithm for prostate cancer patients with a biochemical recurrence post-radical local therapy

Patient with rising PSA and no metastases (post-radical local therapy)

Definition of biochemical recurrence:
- Post-Radiation therapy: PSA nadir +2 ng/ml
- Post-Radical prostatectomy: PSA >0.2 ng/ml

Consider early referral for *local salvage therapy*:
- Post-RT: if prostate biopsy shows local recurrence and PSA <5ng/ml, consider referral for local salvage options (ie: surgery, brachytherapy, cryotherapy).
- Post-RP: the optimal time to refer for consideration for salvage RT is when PSA >0.1 ng/ml (and <2 ng/ml).

If:
- Post RT PSA >10 ng/ml or Post-RP PSA >5 ng/ml*1
- PSA dt*2 ≤10 months

Consider

If:
- PSA nadir ≥1 ng/ml*3
- Off-treatment interval <10 months

Consider

Observation → Intermittent ADT (iADT) → Continuous ADT (cADT)

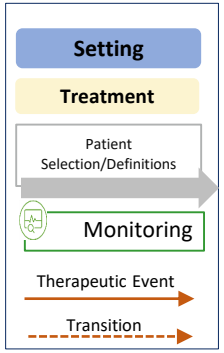
Monitoring

1. **PSA/Testosterone:** Every 3-6 months
2. **Imaging:** CT abdominal/pelvis and bone scan (BS) if rapid rise in PSA, PSA >20 ng/ml in the off-period of iADT, or rising PSA despite cADT

Progression to nmCRPC: Test ≤1.7nmol/l,*4 rising PSA (≥2 ng/ml) and no mets on CT/BS

Begin treatment for nmCRPC

Legend



Points of Consideration:

*1 Clinicians should consider a lower PSA threshold when there is no prostate in-situ

*2 PSA doubling time can be easily calculated using an online calculator: MSKCC

*3 Clinicians should consider switching from iADT to cADT if patients do not achieve a PSA nadir of at least 1 after 6 mos of iADT

*4 Lower testosterone levels (Test ≤0.7 nmol/L) have been associated with improved outcomes; secondary hormonal manipulations (switch ADT or add anti-androgen) may be considered if Test >0.7 nmol/L [Klotz et al 2018]

*** This algorithm does not address other aspects of care such as bone health and cardiovascular health.*

Abbreviations: *AA: antiandrogen; (c/i)ADT: (continuous/intermittent) androgen deprivation therapy; BS: bone scan; CRPC: castration-resistant prostate cancer; CT, computed tomography; dt: doubling time; mets: metastases; nm: non-metastatic; PSA: prostate-specific antigen; pts: patients; RP: radical prostatectomy; RT: radiation therapy; test, testosterone*

nmCRPC

Test≤1.7nmol/l,*4 rising PSA (≥2 ng/ml) and no mets on CT/BS

Consider multidisciplinary consult

Continue androgen deprivation*6

High-risk
PSA dt*2 ≤10 months

Low-risk
PSA dt*2 >10 months

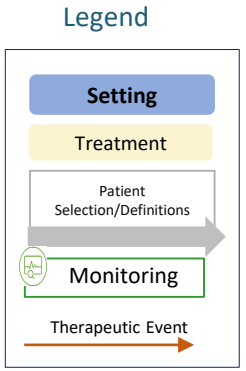
Observation + monitoring

Apalutamide or enzalutamide*7

Observation + monitoring

High-risk monitoring
PSA/Test: q 3 months
CT/BS: q 3- 6 months or symptoms

Low-risk monitoring
PSA/Test: q 3-6 months
CT/BS: q 6 months - 1 year, or symptoms



Points of Consideration:

*2 PSA doubling time can be easily calculated using an online calculator: MSKCC

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*5 Participation in clinical trials at each treatment juncture is encouraged whenever possible

*6 There is emergent evidence for the benefit of local therapy in select nmCRPC patients

*7 Pending Health Canada approval; apalutamide and enzalutamide have recently shown a statistically significant improvement in the primary endpoint of metastasis-free survival in phase 3 trials; overall survival data not yet mature

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