# BC Cancer Protocol Summary of Therapy for Metastatic Castration Sensitive Prostate Cancer using Abiraterone and predniSONE

***Protocol Code:*** *GUMCSPABI*

***Tumour Group:*** *Genitourinary*

***Contact Physician:*** *Dr. Christian Kollmannsberger*

**ELIGIBILITY:**

Patients must have:

- metastatic castration sensitive prostate cancer (mCSPC) who are either:
  - chemotherapy naïve or have received prior chemotherapy containing DOCEtaxel

  AND
  - no prior androgen deprivation therapy (ADT) or have received ADT for not more than 6 consecutive months for metastatic castration sensitive prostate cancer (mCSPC) immediately prior to starting current protocol

Patients should have:

- ECOG performance status 0 to 2
- Serum potassium greater than 3.5 mmol/L

Notes:

- Patients with mCSPC are eligible to receive any of the following, but not their sequential use:
  - apalutamide (GUMCSPAPA),
  - enzalutamide (GUMCSPENZ),
  - abiraterone (GUMCSPABI), or
  - darolutamide with DOCEtaxel (UGUMCSPDD)
- Patients treated with abiraterone for mCSPC and develop castration resistant disease are:
  - Eligible to receive enzalutamide (UGUPENZ)
  - NOT eligible to receive abiraterone (UGUPABI, UGUPAVOABI, UGUPAVNABI)

**CAUTION:**

- Uncontrolled hypertension (systolic blood pressure greater than 160 mmHg or diastolic greater than 95 mmHg)

**TESTS:**

- Baseline: CBC & Diff, total bilirubin, ALT, alkaline phosphatase, creatinine, random glucose, sodium, potassium, testosterone, PSA
- Baseline if clinically indicated: total protein, albumin, GGT, LDH, TSH, calcium, MUGA scan or echocardiogram
- Cycles 1 to 3, every 4 weeks: CBC & Diff, total bilirubin, ALT, alkaline phosphatase, creatinine, random glucose, sodium, potassium, blood pressure, PSA
- Cycles 1 to 3, every 2 weeks: potassium, ALT, total bilirubin, alkaline phosphatase, blood pressure
- Cycles 4 onward, before each physician visit: CBC & Diff, ALT, alkaline phosphatase, total bilirubin, creatinine, random glucose, sodium, potassium, blood pressure, PSA
- If clinically indicated: total protein, albumin, GGT, LDH, TSH, calcium, testosterone, MUGA scan or echocardiogram

**TREATMENT:**

Androgen ablative therapy (e.g., LHRH agonist, LHRH antagonist) should be maintained.

| Drug | Dose | BC Cancer Administration Guideline |
|---|---|---|
| abiraterone | 1000 mg | PO daily |
| predniSONE* | 10 mg daily or 5 mg twice daily<br>OR<br>5 mg daily** | PO daily |

* Dexamethasone may be substituted for patient or physician preference, based upon toxicity and patient tolerance. When substituting dexamethasone for predniSONE the dose is:

- PredniSONE 10 mg PO daily: dexamethasone 1.5 mg PO daily.
- PredniSONE 5 mg PO daily: dexamethasone 0.5 mg PO daily

**More mineralocorticoid side effects were observed with the lower dose of predniSONE

One cycle consists of 4 weeks (30 days).

For cycles 1 to 3: Dispense 30 day supply with each physician visit.

For cycles 4 onwards: Dispense 90 day supply with each physician visit.

Treat until disease progression or unacceptable toxicity.

**DOSE MODIFICATIONS:**

**1. Hepatic dysfunction:**

| Bilirubin | | ALT | Dose |
|---|---|---|---|
| Less than or equal to ULN – 1.5 x ULN | and | Less than or equal to ULN to 2.5 x ULN | 100% |
| 1.5 – 3 x ULN | and | 2.5 – 5 x ULN | 100%<br>Monitor liver tests at least weekly until grade 1 (Bilirubin less than 1.5 x ULN, ALT less than 2.5 x ULN) |
| greater than 3 x ULN | or | greater than 5 x ULN | Hold abiraterone.<br>Monitor liver tests at least weekly until grade 1 (Bilirubin less than 1.5 x ULN, ALT less than 2.5 x ULN)<br>Reduce dose of abiraterone by 250 mg and resume only after liver tests less than or equal to grade 1 |

ULN = upper limit of normal

**2. Hypokalemia Management:**

Hypokalemia has been observed and should be aggressively managed. Serum potassium should be monitored closely in patients who develop hypokalemia.

| Serum potassium (mmol/L) | Grade of Hypokalemia | Action | Further Action or Maintenance |
|---|---|---|---|
| Low potassium or History of hypokalemia | | Weekly (or more frequent) laboratory electrolyte evaluations. | Titrate dose to maintain potassium greater than 3.5 mmol/L and less than 5.0 mmol/L (greater than 4.0 mmol/L recommended) |
| less than 3.5 – 3.0 | Grade 1 | Initiate oral or IV potassium supplementation. Consider monitoring magnesium and replacement if needed. | Titrate dose to maintain potassium greater than 3.5 mmol/L and less than 5.0 mmol/L (greater than 4.0 mmol/L recommended) |
| less than 3.5 – 3.0 Symptomatic | Grade 2 | Withhold abiraterone until potassium corrected. Initiate oral or IV potassium supplementation. Consider monitoring magnesium and replacement if needed. | Titrate dose to maintain potassium greater than 3.5 mmol/L and less than 5.0 mmol/L (greater than 4.0 mmol/L recommended) |
| less than 3.0 – 2.5 | Grade 3 | Withhold abiraterone until potassium corrected. Initiate oral or IV potassium and cardiac monitoring. Consider monitoring magnesium and replacement if needed. | |
| less than 2.5 | Grade 4 | Withhold abiraterone until potassium corrected. Initiate oral or IV potassium and cardiac monitoring. Consider monitoring magnesium and replacement if needed | |

**PRECAUTIONS:**

1. **Fluid retention:** Fluid retention can occur due to mineralocorticoid excess caused by compensatory adrenocorticotropic hormone (ACTH) drive. The administration of predniSONE will help reduce incidence and severity of fluid retention.
2. **Hypertension:** Patients with hypertension should exercise caution while on abiraterone. Rigorous treatment of blood pressure is necessary, since abiraterone can cause a rapid onset of high blood pressure. Blood pressure will need to be monitored once every 2 weeks for the first three months of abiraterone therapy. Temporary suspension of abiraterone is recommended for patients with severe hypertension (greater than 200 mmHg systolic or greater than 110 mmHg diastolic). Treatment with abiraterone may be resumed once hypertension is controlled (see also http://www.hypertension.ca).
3. **Renal impairment:** No dosage adjustment is necessary for patients with renal impairment.
4. **Hepatic Dysfunction:** Abiraterone undergoes hepatic metabolism. Hepatic dysfunction (particularly elevated AST and ALT) may occur during the first 3 months after starting treatment so a more frequent monitoring of liver function tests is required (every 2 weeks in the first three months and monthly thereafter).

**Call Dr. Christian Kollmannsberger or tumour group delegate at (604) 877-6000 or 1-800-663-3333 with any problems or questions regarding this treatment program.**

**References**:


1. Fizazi K, Tran N, Fein L, et al. Abiraterone plus prednisone in metastatic, castration sensitive prostate cancer. N Engl J Med. 2017, 377(17): 1696-1697
2. Chi KN, Protheroe A, Rodriguez-Antolin A, et al. Patient-reported outcomes following abiraterone acetate plus prednisone added to androgen deprivation therapy in patients with newly diagnosed metastatic-naïve prostate cancer (LATITUDE): an international, randomised phase 3 trial. Lancet Oncol. 2018;19(2):194-206