



ABIRATERONE

INSTRUCTIONS FOR THE PHARMACIST

Prescription

- All orders should be written on a **pre-printed order**; if not, compare prescription to standard regimens in the Systemic Therapy Manual to confirm the dosing and instructions
 - The order must be signed by BOTH the prescriber (at the bottom) AND at least one other oncology health professional (nurse or hospital pharmacist) who has verified the order
- The prescription may **not** be filled as a continuing care prescription
 - If the prescriber has written for refills, contact the oncology team or prescriber and do **not** dispense until they call back to authorize the refill; blood work must be checked for each cycle.
 - Do not dispense until you have confirmed that the blood work has been checked.
- Always check for drug-drug interactions, especially before the first cycle, as described below. Consult the **Drug Interactions Table**, in this Toolkit.
 - Drug interactions are often missed by community pharmacy computer systems
 - Check with patient for any other medications filled at different pharmacies, OTCs, NHPs

Handling and Dispensing

- When handling this drug, disposable gloves should be worn at all times by any woman of child-bearing potential. Counting trays and other equipment directly exposed to the drug should be cleaned with **soap and water**, followed by rinsing with copious amounts of water (wear gloves).
- Do not crush tablets in an open air environment and risk inhalation of powder.

Patient Counseling and Follow-up

- Counsel the patient, including the key messages listed below. Use the **Initial Assessment and Patient Counseling Visit- Pharmacist Guide ①** and the **Medication Info Sheet ②** for this drug. Be sure that you know the specific treatment schedule and that this is clearly communicated to the patient.
- Call the patient within the first week to identify any problems with adverse drug reactions or adherence.
 - When speaking with the patient and during call backs, ask the patient to identify any problems with medication adherence. Use the **First Follow-Up Call/Visit- Pharmacist Guide ①**.
- Continuing follow up calls between clinic visits are necessary for ADR identification and prevention and for adherence management. Contact the oncology clinic nurse or hospital pharmacist to negotiate who will do follow-up calls between clinic visits. Tell the patient that you plan to call back to check on their progress. Consider the suggested call-back schedule (pg. 2), with specific questions for each contact.
 - When speaking with the patient and during call backs, ask the patient to identify any problems with medication adherence. Use the **Continuing Follow-Up Calls/Visits - Pharmacist Guide ①**.
- If the patient reports any adverse effects, consider the management strategies suggested in the **Adverse Drug Reaction Management Guide ②**.
- ALWAYS document your findings in the patient profile of your pharmacy computer system
- ALWAYS contact the patient's cancer care team or prescriber of any findings and your actions to address any problems.
- ALWAYS **watch for any unusual or unexpected symptoms or problems** (such as an adverse reaction that appears too soon or too severe) and contact the cancer care team or prescriber promptly if something seems wrong with the patient experience.



CLINICAL INDICATIONS



Abiraterone is clinically indicated for: Metastatic, castration-resistant prostate cancer

DRUG ADMINISTRATION

- Abiraterone may be given once daily.
- Abiraterone should be taken on an empty stomach, at least one hour before and two hours after food.
- Swallow whole tablets with a glass of water- Do not crush, split, chew or dissolve the tablets.
- Keep out of reach of children.
- If a dose is missed, do not take a double dose the next day to make up for it.

PATIENT COUNSELLING- INITIAL AND FOLLOW-UP CALLS

- In addition to other printed materials, use the **Medication Info Sheet** from the Cancer Care Nova Scotia website, and consider the more detailed suggestions in this toolkit.
- It is important that the patient is ordered and adherent to **both** Abiraterone AND Prednisone for the duration of treatment: Failure to adhere to prednisone will lead to an excessive mineralocorticoid effect from the Abiraterone and serious or life-threatening hypokalemia and hypernatremia

	Key Messages
Initial counselling- At time of dispensing	<ul style="list-style-type: none"> • How to take the medication properly • Symptoms to watch for- signs of hypokalemia, heart failure, leg or foot edema, UTI • When to call back to the cancer care team for urgent care • Use the Initial Assessment and Patient Counseling Visit- Pharmacist Guide ❶ and the drug-specific Medication Info Sheet ❷
First call-back – Within first week: 	<ul style="list-style-type: none"> • Identify any initial problems with understanding or adherence • Use the First Follow-Up Call/Visit- Pharmacist Guide ❶ and the Medication Info Sheet ❷ (if needed) • Reinforce initial key messages <ul style="list-style-type: none"> ○ How and when treatment is taken ○ Barriers to adherence- remembering to take medication; reluctance to take treatment; financial issues; nausea, vomiting or other adverse effects; trouble with packaging; felt better off medication; other concerns ○ Suggest strategies to ensure adherence; reminder that full dose is needed for cancer control- partial doses may be ineffective. • Identify any early adverse effect symptoms; suggest management strategies
Second call-back – After 2-3 weeks: (telephone or return visit to Pharmacy) 	<ul style="list-style-type: none"> • Identify any adverse effects (PROBE for evidence of hypokalemia- muscle weakness, muscle twitching, palpitations; heart failure- chest pain, irregular heartbeat, rapid heart rate; leg or foot edema; UTI- burning on urination or cloudy urine) • Use the Continuing Follow-Up Calls/Visits- Pharmacist Guide ❶ <ul style="list-style-type: none"> ○ If any identified, contact oncologist or oncology nurse, and consider the information below under Adverse Effects • Identify any emergent or continuing problems with adherence (see above)
Second call-back – After 2-3 months: (telephone or return	<ul style="list-style-type: none"> • Remind patient to continue taking pills on a regular basis- when prescription should be finished, ask if there are any pills left over and, if so, PROBE to determine any barriers to treatment adherence (see above)

visit to Pharmacy)	<ul style="list-style-type: none"> Identify any adverse effects, as above
Subsequent cycles	<ul style="list-style-type: none"> Negotiate with patient and cancer care team for ongoing needs for counseling and timely follow up calls (at least once every 2-3 months) Use the Continuing Follow-Up Calls/Visits- Pharmacist_Guide 1 Adherence assessment and support is an important issue for reinforcement at each visit and mid-cycle call-back as treatment continues

ADVERSE EFFECTS: PREVENTION AND MANAGEMENT SUGGESTIONS

If you identify any of the following, you should contact the oncologist and tell the patient to call the oncologist or go directly to the Emergency Department of the nearest hospital right away ✎ :

- Symptoms of hypokalemia (muscle weakness, muscle twitching, palpitations)
- Symptoms of arrhythmia and angina (chest pain, irregular heartbeat, rapid heart rate)
- Symptoms of heart failure (shortness of breath, fatigue, swollen feet and ankles)
- Symptoms of liver toxicity (Nausea, upper stomach pain, itching, loss of appetite, dark urine, clay-coloured stools, jaundice)

The following are the common adverse effects from Abiraterone.

<p>More Common</p> <p><u>Cardiovascular disorders</u></p> <ul style="list-style-type: none"> High blood pressure † <p><u>Gastrointestinal disorders</u></p> <ul style="list-style-type: none"> Diarrhea ★ <p><u>General disorders</u></p> <ul style="list-style-type: none"> Peripheral edema- fluid accumulation in legs or feet † Hot flushes ★ Cough † Urinary tract infections † <p><u>Metabolic disorders</u></p> <ul style="list-style-type: none"> Hypokalemia (muscle weakness, muscle twitching, palpitations) ✎ <p><u>Musculoskeletal disorders</u></p> <ul style="list-style-type: none"> Joint swelling or pain ★ Muscle Pain ★ 	<p>Less Common</p> <p><u>Cardiovascular disorders</u></p> <ul style="list-style-type: none"> Chest pain, irregular heartbeat, rapid heart rate, heart failure ✎ <p><u>Gastrointestinal disorders</u></p> <ul style="list-style-type: none"> Stomach upset ★ <p><u>General disorders</u></p> <ul style="list-style-type: none"> Shortness of breath † Upper and lower respiratory infection † Flu-like symptoms (rare) † Urinary frequency †, nocturia † Bone break (fracture) † <p><u>Hepatic disorders</u></p> <ul style="list-style-type: none"> Liver function test increases † Hepatotoxicity (rare) ✎ <p><u>Metabolic disorders</u></p> <ul style="list-style-type: none"> Hypertriglyceridemia †, increased serum creatinine †
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★ For detailed recommendations on the management of these adverse drug reactions, see the **ADR Management** tool on the Cancer Care Nova Scotia website, next to the button for this Dispensing Toolkit

† For management of these symptoms, the patient should see his/her physician

✎ These symptoms require urgent attention- advise the patient to go to the Emergency Department or contact their doctor (see instructions above)

DRUG INTERACTIONS

Take a **thorough medication history** (call other pharmacies if necessary) and determine the potential for all other drugs to increase or decrease Abiraterone plasma concentration.

- **REPORT any potential interaction** to the prescribing oncologist- either the Abiraterone or the interaction drug may need to be dose altered or discontinued.



LIST OF IMPORTANT DRUG-DRUG INTERACTIONS WITH ABIRATERONE- *This is not a complete list*

NOTE: Abiraterone is metabolized by the CYP3A4 enzyme. Avoid concomitant use with strong CYP3A4 inhibitor and inducers. Abiraterone is a strong inhibitor of CYP2D6. Avoid concomitant use with CYP2D6 substrates that have a narrow therapeutic index (e.g. Thioridazine); if combination cannot be avoided, consider a dose reduction of the CYP2D6 substrate. Abiraterone is also a strong inhibitor of CYP1A2 and CYP2C8. It is a moderate inhibitor of CYP2C9, CYP2C19, and CYP3A4.

- ARIPiprazole: may increase the serum concentration of ARIPiprazole by inhibiting CYP2D6 and CYP3A4. Monitor for increase aripiprazole effects and adjust aripiprazole dose as required.
- AtomoXetine: may increase serum concentration by inhibiting CYP2D6. Start Atomoxetine at reduced dose (adults up to 70 kg: 0.5 mg/kg/day; patients 70 kg or more: 40 mg/day)
- Budesonide (systemic, oral inhalation): may increase the serum concentration of Budesonide by inhibiting CYP3A4. Consider reducing Budesonide dose. Monitor patient for signs/symptoms of excess corticosteroids.
- Carvedilol: may increase the serum concentration of Carvedilol by inhibiting CYP2C9
- Citalopram: may increase serum concentration of Citalopram by inhibiting CYP2C19. Limit Citalopram dose to a maximum of 20 mg/day. Monitor patient closely for evidence of Citalopram toxicity (serotonin syndrome, QT prolongation, etc.).
- Clopidogrel: may decrease serum concentration of active metabolites of Clopidogrel by inhibiting CYP2C19.
- Codeine: may decrease therapeutic effect of Codeine by inhibiting CYP2D6 (prevents conversion to active metabolite morphine)
- Colchicine: may increase serum concentration of Colchicine by inhibiting CYP3A4 and P-glycoprotein. Patient may require a dose reduction in Colchicine. Use extra caution in patients who have impaired renal/hepatic function.
- CYP1A2 and CYP2D6 substrates: Abiraterone may increase the serum concentration of CYP1A2 substrates. Do not use Abiraterone with CYP2D6 substrates that have a narrow therapeutic index.
- CYP2C8, CYP2C9, CYP2C19 substrates: Abiraterone may decrease metabolism of these substrates by inhibiting these CYP450 enzymes.
- CYP3A4 Inducers: may increase the metabolism of CYP3A4 substrates
- CYP3A4 Inhibitors: may decrease metabolism of CYP3A4 substrates
- CYP3A4 substrates: Abiraterone may decrease the metabolism of CYP3A4 substrates
- Dabigatran: may increase serum concentration of the active metabolites of Dabigatran. Dabigatran dose reductions may be necessary.
- Enzalutamide: may increase the serum concentration. Avoid using Abiraterone and Enzalutamide concurrently if possible. If combination is necessary, reduce Enzalutamide dose to 80 mg once daily.
- FentaNYL: may increase the serum concentration of Fentanyl by inhibiting CYP3A4. Monitor patients closely; Fentanyl dose reductions may be needed.
- Metoprolol: may increase serum concentration of Metoprolol by inhibiting CYP2D6.
- Pimozide: may increase the serum concentration of Pimozide by inhibiting CYP2D6 and CYP3A4 (*avoid combination*)

- Pioglitazone: may increase serum concentration of Pioglitazone by inhibiting CYP2C8. Limit Pioglitazone adult maximum dose to 15 mg/day when used in combination.
- Silodosin: may increase serum concentration of Silodosin (*avoid combination*)
- Spironolactone: may diminish therapeutic effect of Abiraterone
- Thioridazine: may decrease metabolism of Thioridazine (*avoid combination*)
- TraMADol: may decrease therapeutic effect of TraMADol

It is strongly recommended that you check this oral chemotherapy agent for interactions with other medications on your patient's profile. The pharmacy IT system may not provide a complete interaction cross-check. Try one of the following comprehensive programs for checking drug interactions.

<p>Online Programs for Drug Interaction Checking-Publicly available:</p> <ul style="list-style-type: none"> • http://www.drugs.com/drug_interactions.php • http://reference.medscape.com/drug-interactionchecker • http://www.healthline.com/druginteractions • http://cpref.goldstandard.com/inter.asp?r=8084 • http://umm.edu/health/medical/drug-interaction-tool • http://online.epocrates.com/ (free account required) 	<p>Other Interaction Checkers- Subscription required:</p> <ul style="list-style-type: none"> • Lexicomp • Micromedex
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