



GUIDANCE FOR MANAGING TAKE HOME CANCER MEDICATIONS DURING

Ramadan

Authors: May Nguyen BSc PharmD RPh | Rabia Sadiq BSc PharmD RPh | Erica Smith BScH PharmD(c) | April Fievoli, BSc MSc PharmD(c)

◆ Ramadan

Ramadan is the ninth month of the Islamic calendar and the holy month where Muslims fast. Muslims observe Ramadan by abstaining from ingesting anything orally (food, drink and medications) from sunrise to sunset.

Although Muslims are required to fast on the 30 days of Ramadan, there are individuals and situations where someone may be exempt from fasting if they cannot perform fasting safely.^{1,2} For those who cannot fast during Ramadan, it is encouraged that they make up for lost days of fasting later in the year. Those who cannot fast during Ramadan or make up the fast later can pay *fidyah*, a donation to feed those in need.³

Individuals with chronic medical conditions are typically exempt from fasting, yet some may choose to participate in solidarity with their community. The duration of the fast can interfere with their medication schedules and potentially compromise adherence, thus affecting health outcomes.^{1,4} This applies to patients living with cancer and taking Take Home Cancer Drugs (THCD).⁵



Who is exempt from fasting?¹⁻³

- Children
- Elderly
- Pregnant, breastfeeding, and menstruating individuals
- Travellers
- Those living with chronic and acute medical conditions

◆ Supporting your patient

Pharmacists, as easily accessible healthcare providers, are well-placed to assist Muslim patients observing Ramadan. They can guide patients in making informed decisions about fasting safely, suggest adjustments to their medication regimen, and monitor for any medication-related issues.

To better support a patient with cancer in making an informed decision to observe Ramadan safely, consider asking these questions:



Are you planning to celebrate Ramadan and would you like to participate in fasting this year? I am here to support you in making it as safe and comfortable as possible.

Are you confident that you can fast safely while taking your THCD? I want to make sure you feel supported and know that I'm here to help with any questions or concerns you may have.

Can I help by suggesting the best times to take your medication between iftar (the evening meal) and suhoor (the predawn meal)?

✦ Adjust timing of THCD administration⁶⁻²²

Administration instructions for each THCD vary. Refer to the table below for common oral THCD and recommendations on how patients can take the medication during their fast.

| Drug | Administration Instructions | Timing during Ramadan |
|---|---|--|
| THCD indicated for prostate cancer | | |
| Abiraterone | Once daily, on an empty stomach (1 hour before or 2 hours after a meal) | Take one hour before Suhoor or two hours after Iftar to ensure proper absorption and hydration before fasting |
| Prednisone, dexamethasone | Once daily, with food | Take at Suhoor to minimize GI upset and insomnia (if once daily dosing) |
| Darolutamide | With food, usually BID | Consider taking at Suhoor and Iftar if they are about 12 hours apart. No studies have observed less than 12-hour dosing. This recommendation may vary depending on when Ramadan occurs. |
| Enzalutamide | Once daily, with or without food | Take at Suhoor or Iftar (whichever is easier to adhere to) |
| Apalutamide | Once daily, with or without food | Take at Suhoor or Iftar (whichever is easier to adhere to) |
| Relugolix | Once daily, with or without food | Take at Suhoor or Iftar (whichever is easier to adhere to) |
| THCD indicated for breast cancer | | |
| Ribociclib | Once daily, preferably in the morning, with or without food | Take at Suhoor to minimize the risk of QT prolongation. QT prolongation risk is increased when taken in the evening due to the bradycardia which naturally occurs during sleep ¹³ |
| Palbociclib (tablets) | Once daily, with or without food | Take at Suhoor or Iftar (whichever is easier to adhere to) |
| Abemaciclib | Twice daily, with or without food | Take at Suhoor and Iftar – doses must be separated by at least 6 hours ¹⁶ |
| Tamoxifen | Once daily, with or without food | Take at Suhoor or Iftar (whichever is easier to adhere to) |
| Letrozole | Once daily, with or without food | Take at Suhoor or Iftar (whichever is easier to adhere to) |
| Anastrozole | Once daily, with or without food | Take at Suhoor or Iftar (whichever is easier to adhere to) |
| Exemestane | Once daily, with or without food | Take at Suhoor or Iftar (whichever is easier to adhere to) |
| THCD indicated for lung cancer | | |
| Osimertinib | Once daily, with or without food | Take at Suhoor or Iftar (whichever is easier to adhere to) |
| THCD with multiple indications | | |
| Olaparib | With or without food, usually BID | Consider taking at Suhoor and Iftar if they are about 12 hours apart. No studies have observed less than 12-hour dosing. This recommendation may vary depending on when Ramadan occurs. |

Alternative routes of administration²³



The following administration routes may not interfere with fasting:

- Eye and ear drops
- Nasal sprays
- Inhalers
- Anal or vaginal suppositories
- All substances absorbed into the body through the skin (including creams and ointments)
- Injections through the skin, muscle, joints or veins (exception being intravenous feeding)

A patient may decide to refrain from taking these medications or consult their Imam regarding the permissibility of using them.

Physiological effects of fasting

Fasting can cause fatigue, dehydration, headaches, nausea, and disrupted sleep, which can overlap with cancer therapy side effects.²⁴ Therefore, fasting patients may require more frequent monitoring.

Takeaways

Pharmacists play a vital role in assisting patients with medication adjustments during Ramadan. They can help by modifying the timing of Take-Home Cancer Drug (THCD) administration, recommending alternatives for medications that require more than twice-daily dosing, and monitoring as well as managing potential side effects related to fasting.^{1,2}

Patients should consult their pharmacist or healthcare provider before adjusting their medications. This ensures that any changes are made safely and effectively, taking into account their treatment plan, health status, and fasting requirements during Ramadan. Guidance from healthcare professionals is important to maintain the effectiveness of cancer treatments while ensuring patient safety during fasting.

Please note, this document is provided for informational purposes and is not a replacement for clinical judgement.

References

1. Grindrod K, Alsabbagh W. Managing medications during Ramadan fasting. *Can Pharm J*. 2017; 150 (3):146-149. Doi: 10.1177/1715163517700840
2. Awogun A. How Pharmacists Can Optimize Care for Muslim Patients During Ramadan. *Pharmacy Times*. Published April 19, 2021. Accessed February 18, 2025. <https://www.pharmacytimes.com/view/how-pharmacists-can-optimize-care-for-muslim-patients-during-ramadan>
3. Ramadan Rules. Islamic Relief Canada. Accessed February 18, 2025. <https://www.islamicreliefcanada.org/resources/ramadan-for-you/ramadan-rules>
4. Khalife T, Pettit JM, Weiss B. Caring for Muslim Patients Who Fast During Ramadan. *Am Fam Physician*. 2015;91(9):640-642. Accessed February 18, 2025. <https://www.aafp.org/pubs/afp/issues/2015/0501/p640.html>
5. Bragazzi NL, Briki W, Khabbache H, et al. Ramadan Fasting and Patients with Cancer: State-of-the-Art and Future Prospects. *Front Oncol*. 2016;6:27. doi:10.3389/fonc.2016.00027
6. Cancer Care Ontario. ABIRPRED Regimen. Updated August 2024. Accessed February 18, 2025. <https://www.cancercareontario.ca/en/drugformulary/regimens/monograph/46461>
7. Cancer Care Ontario. Dexamethasone. Updated January 2018. Accessed February 18, 2025. <https://www.cancercareontario.ca/en/drugformulary/drugs/infosheet/51976>
8. Cancer Care Ontario. Darolutamide. Updated March 2024. Accessed February 18, 2025. <https://www.cancercareontario.ca/en/drugformulary/drugs/monograph/68626>
9. Cancer Care Ontario. Enzalutamide. Updated June 2024. Accessed February 18, 2025. <https://www.cancercareontario.ca/en/drugformulary/drugs/monograph/44321>
10. Cancer Care Ontario. Apalutamide. Updated January 2025. Accessed February 18, 2025. <https://www.cancercareontario.ca/en/drugformulary/drugs/monograph/57146>
11. BC Cancer. Relugolix. Published November 1, 2024. Accessed February 18, 2025. http://www.bccancer.bc.ca/drug-database-site/Drug%20Index/Relugolix_monograph.pdf
12. Cancer Care Ontario. Ribociclib. Updated April 2021. Accessed February 18, 2025. <https://www.cancercareontario.ca/en/drugformulary/drugs/monograph/54136>
13. BC Cancer. Ribociclib. Published December 1, 2018. Updated September 1, 2022. Accessed February 19, 2025. http://www.bccancer.bc.ca/drug-database-site/Drug%20Index/Ribociclib_monograph.pdf
14. Cancer Care Ontario. Palbociclib. Updated April 2021. Accessed February 18, 2025. <https://www.cancercareontario.ca/en/drugformulary/drugs/monograph/44456>
15. Cancer Care Ontario. Abemaciclib. Updated April 2024. Accessed February 18, 2025. <https://www.cancercareontario.ca/en/drugformulary/drugs/monograph/62406>
16. Eli Lilly. Verzenio Product Monograph. Published April 4, 2019. Updated December 1, 2023. Accessed February 19, 2025. <https://pi.lilly.com/ca/verzenio-ca-pm.pdf>
17. Cancer Care Ontario. Tamoxifen. Updated May 2022. Accessed February 18, 2025. <https://www.cancercareontario.ca/en/drugformulary/drugs/tamoxifen>
18. Cancer Care Ontario. Letrozole. Updated November 2020. Accessed February 18, 2025. <https://www.cancercareontario.ca/en/drugformulary/drugs/letrozole>
19. Cancer Care Ontario. Anastrozole. Updated April 2024. Accessed February 18, 2025. <https://www.cancercareontario.ca/en/drugformulary/drugs/monograph/43916>
20. Cancer Care Ontario. Exemestane. Updated November 2020. Accessed February 18, 2025. <https://www.cancercareontario.ca/en/drugformulary/drugs/monograph/43771>
21. Cancer Care Ontario. Osimertinib. Updated December 2023. Accessed February 18, 2025. <https://www.cancercareontario.ca/en/drugformulary/drugs/monograph/44466>
22. Cancer Care Ontario. Olaparib. Updated December 2024. Accessed February 18, 2025. <https://www.cancercareontario.ca/en/drugformulary/drugs/monograph/54086>
23. Aadi N, Houti IE, Moussamih S. Drug intake during Ramadan. *BMJ*. 2004;329(7469):778-782. doi:10.1136/bmj.329.7469.778
24. The Lancet. Ramadan: health effects of fasting. *The Lancet*. 2009; 374 (9690): 588. doi: 10.1016/S0140-6736(09)61506-3.