

Consumers Can Help Prevent  
Harmful Medication Incidents

## SafeMedicationUse.ca Newsletter

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### Genetic Testing before Starting Chemotherapy with 5-Fluorouracil or Capecitabine Can Save Lives

If you are starting 5-fluorouracil (also known as 5-FU) or capecitabine (Xeloda), your dose must be carefully chosen. This is because some people are at risk of harm due to genetic mutations that prevent the body from breaking down these medications. Genetic testing **before** starting these medications helps your health care team decide the correct medication dose or if a different treatment plan should be recommended to you.

The following are examples of reports received and analyzed by ISMP Canada:

- A person was started on capecitabine. They experienced overdose symptoms, including severe mouth sores, and died a few weeks later. It was later found that the person had a genetic mutation and could not break down the medication.
- A person of non-European ethnicity received standard genetic testing before starting 5-fluorouracil. After a few days, they experienced overdose symptoms of severe nausea, vomiting, diarrhea, and mouth sores, and died a few weeks later. After their death, further testing showed a genetic mutation not identified through standard testing.

**If 5-fluorouracil or capecitabine is prescribed for you, the following steps may reduce your risk of harm:**

- Ask your health care team about genetic testing **before starting treatment.**
  - Standard testing can miss genetic mutations in people of non-European ancestry and additional testing might be recommended
  - If a family member experienced severe side effects with either of these medications in the past, inform your health care team.
- Ask your health care provider about side effects to watch for. **If you experience any severe side effects, go to the emergency department. DO NOT WAIT. There is an antidote available if needed but it must be given within a short timeframe after the last dose.**



This newsletter was developed in collaboration with Best Medicines Coalition and [Patients for Patient Safety Canada](#).

Recommendations are shared with healthcare providers, through the ISMP Canada Safety Bulletin, so that changes can be made together.

This newsletter shares information about safe medication practices, is noncommercial, and is therefore exempt from Canadian anti-spam legislation.

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