

BACKGROUND

- Rx To Go Pharmacy is the in-house oral oncolytic specialty pharmacy for Florida Cancer Specialists, a system of state-wide outpatient oncology clinics.
- As a medically-integrated oncology pharmacy, pharmacists can access patient's charts, assess therapy, and efficiently communicate with prescribers to help provide value-based care.
- Venetoclax is an oral BCL-2 inhibitor that has demonstrated clinical efficacy in a variety of hematological malignancies.¹
- Given that venetoclax is a major CYP3A4 substrate and minor P-glycoprotein substrate, there are several drug-drug interactions that require dose modifications.¹
- Upon review of a new prescription, clinical pharmacists review for drug-drug interactions and provide clinical interventions to prescribers, recommending dose modifications as necessary, to help prevent an increase in venetoclax toxicity.

PURPOSE

- The purpose of this study was to highlight the impact of pharmacist-led clinical interventions on patient therapy management when assessing drug-drug interactions with venetoclax.

METHODS

Study Design

- Single center, retrospective, descriptive analysis

Inclusion Criteria

- Captured pharmacist-led clinical interventions for patients receiving venetoclax between January 1st, 2023, to June 30th, 2024 from Rx to Go

OUTCOMES

Primary Outcome

- Number of drug-drug interaction clinical interventions for venetoclax

Secondary Outcomes

- Intervention acceptance rates
- Frequency of concomitant interacting medications
- Frequency of concomitant interacting medication discontinuation/change

RESULTS

Table 1. Venetoclax Dose Modification Recommendations Based on Drug-Drug Interactions¹

Concomitant Medication	Recommended Venetoclax Dose Modification
Strong CYP3A Inhibitor	Reduce dose by 75%
Moderate CYP3A Inhibitor	Reduce dose by 50%
P-gp Inhibitor	Reduce dose by 50%

Figure 1. Clinical Intervention Acceptance Rate

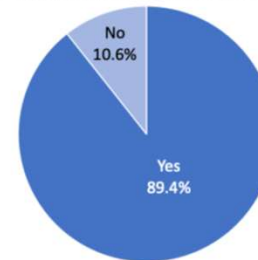
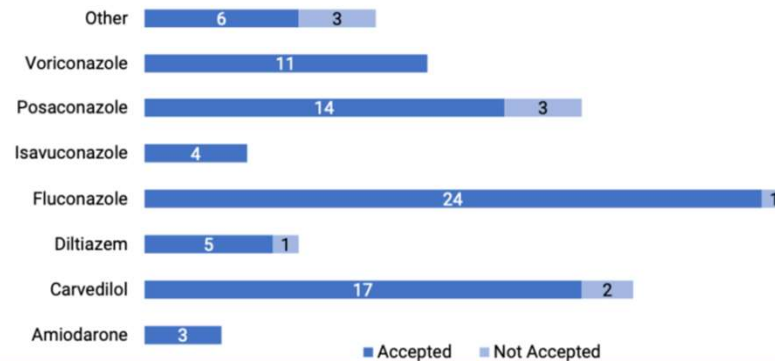


Table 2. Examples of CYP3A and P-gp inhibitors/inducers²

Concomitant Medication	Examples
Strong CYP3A Inhibitors	Clarithromycin, Itraconazole, Ketoconazole, Lopinavir, Posaconazole, Ritonavir, Telaprevir, Voriconazole
Moderate CYP3A Inhibitors	Aprepitant, Cimetidine, Diltiazem, Dronedaron, Fluconazole, Isavuconazole, Verapamil
P-gp Inhibitors	Amiodarone, Carvedilol, Cyclosporine, Dronedaron, Quinidine, Ranolazine, Verapamil
Strong CYP3A Inducer	Apalutamide, Carbamazepine, Enzalutamide, Phenytoin, Rifampin
Moderate CYP3A Inducer	Bosentan, Efavirenz, Etravirine, Modafinil

Figure 2. Frequency of Concomitant Interacting Medication



DISCUSSION

- Venetoclax dose modification recommendations based on drug-drug interactions are highlighted in Table 1.
- Venetoclax is predominantly metabolized by CYP3A4 in vitro.¹
- P-glycoprotein (P-gp) is a transmembrane efflux pump that affects the uptake of drugs such as venetoclax from the gut.¹
- Examples of CYP3A and P-gp inhibitors/inducers are highlighted in Table 2.
- There was a total of 94 clinical interventions related to drug-drug interactions identified with venetoclax within the 18-month period.
- Out of the 94 clinical interventions, 84 (89.4%) were accepted recommendations by the provider and either the dose of venetoclax was decreased accordingly (73.8%) or the concomitant interacting medication was discontinued or changed (26.2%).
- If the clinical intervention was not accepted, it was most often due to the provider deciding to monitor the patient closely (i.e. frequent lab monitoring) while utilizing the concomitant interacting medication.
- In a few cases, the patient was also being treated with another oral oncolytic that interacted with venetoclax but was still needed, such as apalutamide (2.1%) or enzalutamide (2.1%) for prostate cancer.
- The most frequent concomitant interacting medication was fluconazole (26.6%), followed by other triazole antifungals which are commonly utilized for febrile neutropenia prophylaxis during treatment.

CONCLUSION

- Medically-integrated clinical pharmacists play a vital role in identifying drug-drug interactions with venetoclax and can ensure appropriate care through collaboration with providers.

REFERENCES

- Venclexta (venetoclax) [prescribing information]. North Chicago, IL: AbbVie Inc; June 2022.
- Drug development and drug interactions: table of substrates, inhibitors and inducers. US Food and Drug Administration website.

DISCLOSURES

There are no disclosures concerning financial or personal relationships with commercial entities that may have a direct or indirect interest in the subject matter of this presentation.