

Background

- Metastatic castrate resistant prostate cancer (mCRPC) treatment strategies have advanced with the option of two new oral hormonal therapies, abiraterone acetate and enzalutamide^{1,2}
- Despite the fact that oral chemotherapy agents offer convenience and increased quality of life, they still pose financial challenges and unique toxicities leading to the need for these medications to be filled at specialty pharmacies
- Ambulatory pharmacy services at the University of Iowa Clinical Cancer Center (CCC) were fully established in the genitourinary clinic in September of 2014 to assist with education and monitoring of complex regimens. The clinic is internally associated with a dispensing specialty pharmacy allowing for more frequent follow-up

Objectives

- Evaluate time to progression in mCRPC patients prescribed abiraterone acetate or enzalutamide through a pharmacist-staffed academic oncology clinic
- Assess pharmacist involvement in prostate cancer medication management

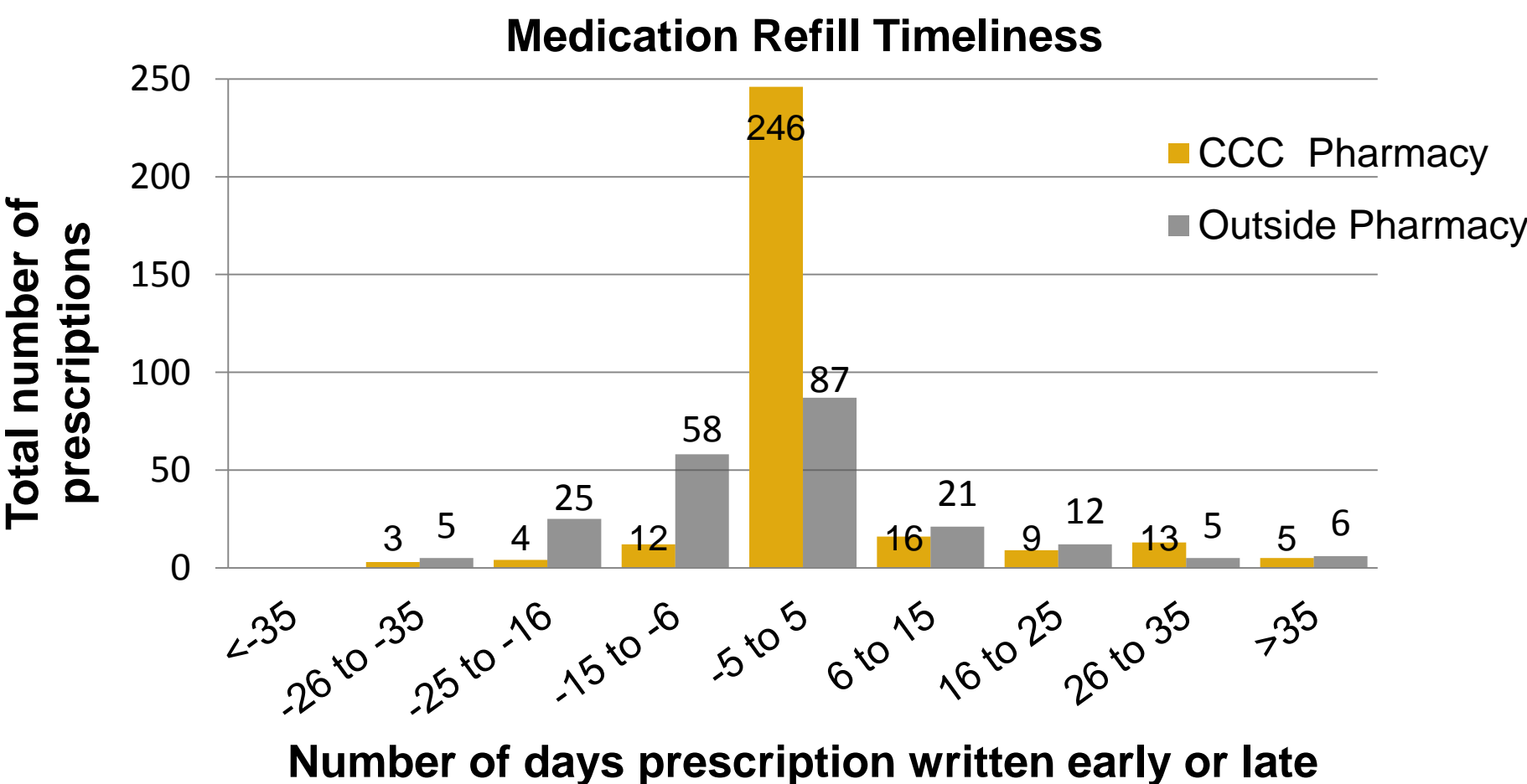
Methods

- Single center, retrospective chart review of eligible adult males with a diagnosis of mCRPC receiving enzalutamide or abiraterone acetate plus prednisone from August 2012 through September 2015. Identified using electronic medical records and manual chart review
- Primary outcome was median time to progression (progression free survival, PFS) defined as radiographic-confirmed progression, chart specified progression, transfer to hospice, or death from any cause evaluated using Kaplan-Meier
- Secondary outcomes included:
 - Timeliness of medication refills evaluated using independent student's t-test
 - Number of pharmacist interventions
 - Median time to progression based on Gleason Score, PFS in enzalutamide vs. abiraterone initially, PFS in chemotherapy naïve patients vs. patients previously treated with chemotherapy, and type of specialty pharmacy care (CCC vs. Other) evaluated using cox proportion hazard model enter method
- For all tests a p<0.05 was considered significant

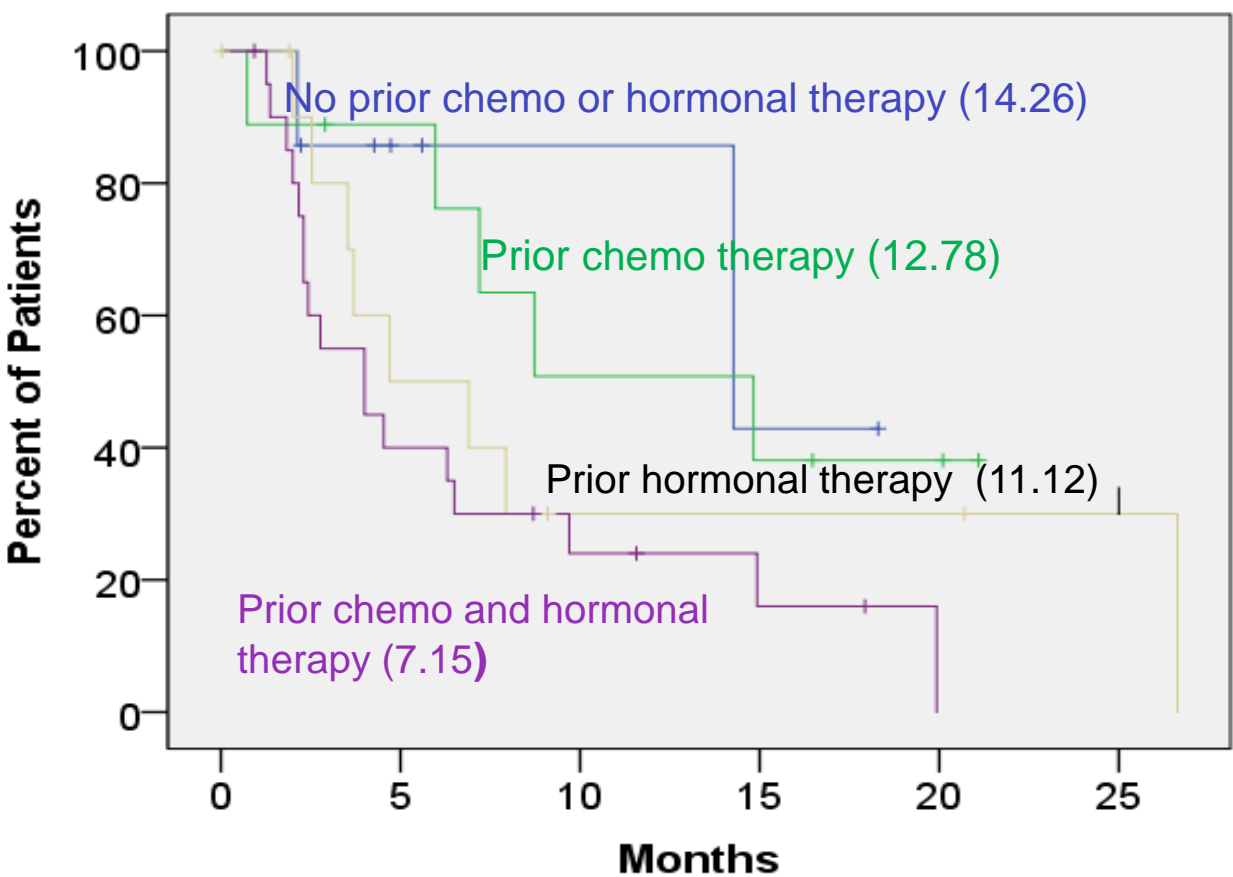
Results

- 351 interventions occurred in individuals receiving their medications from CCC Specialty Pharmacy compared to 28 interventions for those receiving medications from an outside pharmacy
- Enzalutamide received from CCC Specialty Pharmacy was associated with an increase in median time to progression
- Enzalutamide and abiraterone acetate were filled significantly sooner at outside pharmacies compared to the CCC Specialty Pharmacy (9.98 days vs. 3.18 days; P<0.001). However, there was not a significant difference found in late refills (14.51 days vs. 12.51 days; P=0.56)
- Results of Kaplan-Meier PFS are displayed in months (m) and were found to be similar to that in the literature

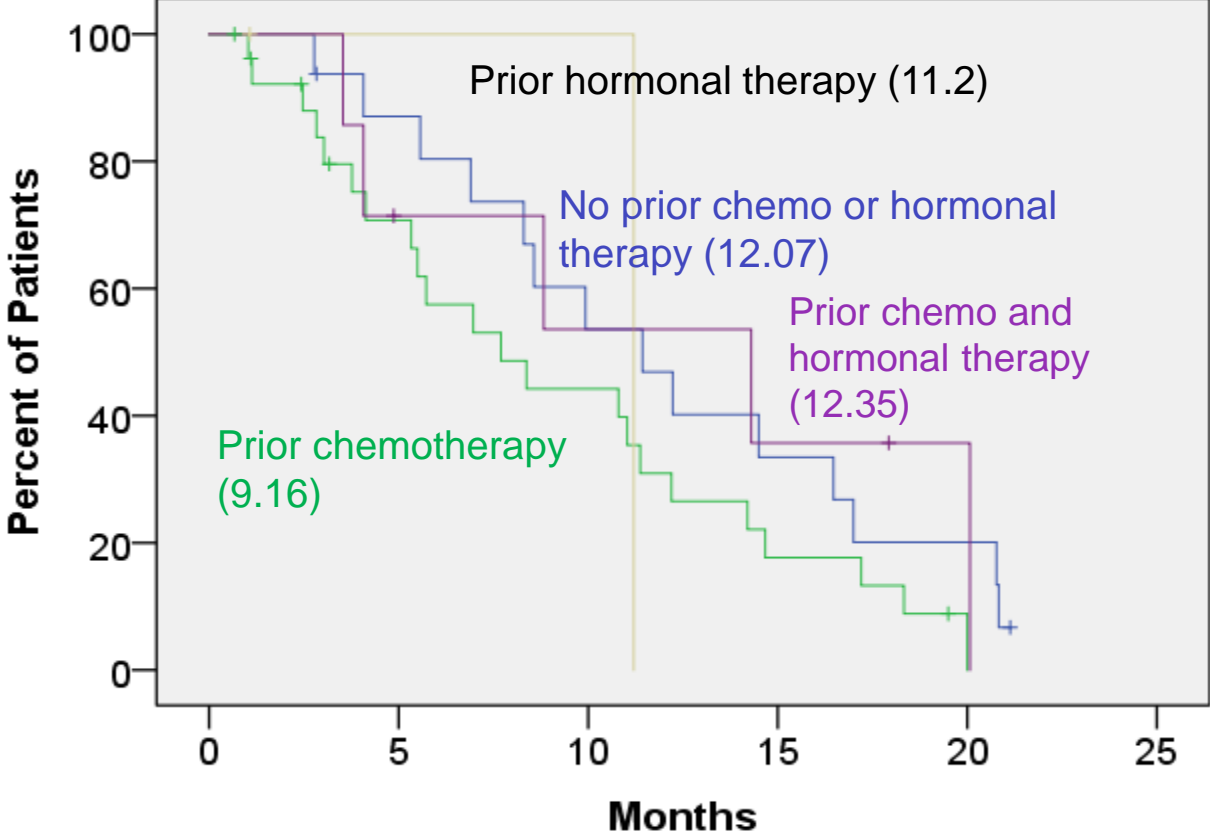
Subgroup Analysis				
	Enzalutamide		Abiraterone	
	Hazard Ratio (95% CI)	P value	Hazard Ratio (95% CI)	P value
Gleason Score	1.01 (0.49-2.08)	0.978	0.886 (0.46-1.70)	0.716
Prior Chemotherapy	1.46 (0.67-3.18)	0.338	1.55 (0.79-3.00)	0.209
Prior Hormonal Therapy	2.30 (0.99-5.36)	0.053	0.794 (0.33-1.89)	0.603
Order of Therapy	0.40 (0.14-1.18)	0.096	0.818 (0.29-2.35)	0.709
Received at UIHC CCC	0.55 (0.33-0.92)	0.021	0.785 (0.46-1.33)	0.368



Progression Free Survival Enzalutamide



Progression Free Survival Abiraterone



Conclusions

- Patients that received their medication from CCC Pharmacy had more pharmacist interventions
- Patients that received enzalutamide from CCC had an increased time to progression compared to those receiving from other pharmacies
- The significant decrease in number of days a patient received their medications early from the CCC Pharmacy may result in a decrease in medication waste
- PFS does not differ with regards to order of medication use for mCRPC
- Pharmacist and physicians work together to determine the best therapy based on other disease states and interacting medications

References

- Hoffman-Censits et al. *Clin Cancer Res.* 2013;19(6):1335-1339.
- Ning YM et al. *Clin Cancer Res.* 2013;19(22):6067-6073.