ABIRATERONE VERSUS ENZALUTAMIDE IN THE POST-CHEMOTHERAPY SETTING IN METASTATIC CASTRATION-RESISTANT PROSTATE CANCER: POPULATION-BASED STUDY

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INTRODUCTION

- Metastatic castration-resistant prostate cancer (mCRPC) is the last phase of PCa
  - Median survival of from onset of castration-resistance: 2-3 years
- Several oral novel hormonal agents (NHAs) currently available for management of mCRPC:
- NHAs in the *post-docetaxel* setting in mCRPC
  - Abiraterone
    - Approved for public reimbursement in Quebec in 2012
  - Enzalutamide
    - Approved for public reimbursement in Quebec in 2014
  - Both NHAs demonstrated similar efficacy relative to their control arms in their respective phase 3 trials and both were approved for the same indication (post-docetaxel setting in for patients with mCRPC)
- *Absence of HEAD-to-HEAD randomized trials of both NHAs*
- Real-world evidence from observational data may be useful to conduct direct comparisons of effectiveness and safety of both NHAs to further guide clinicians about proper treatment choice

OBJECTIVE

To compare the effectiveness of abiraterone and enzalutamide on overall survival in the post-chemotherapy setting in patients with mCRPC

METHODS

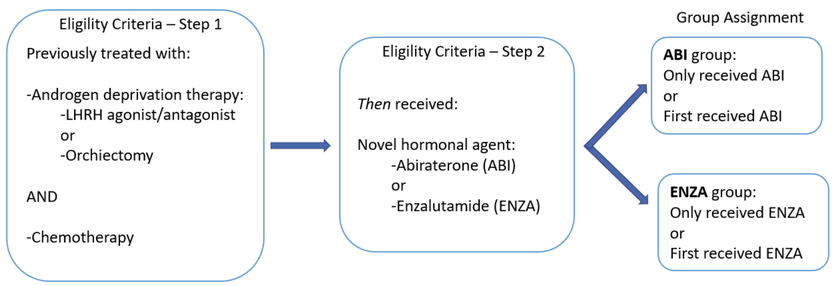
Design :

- Retrospective, observational cohort

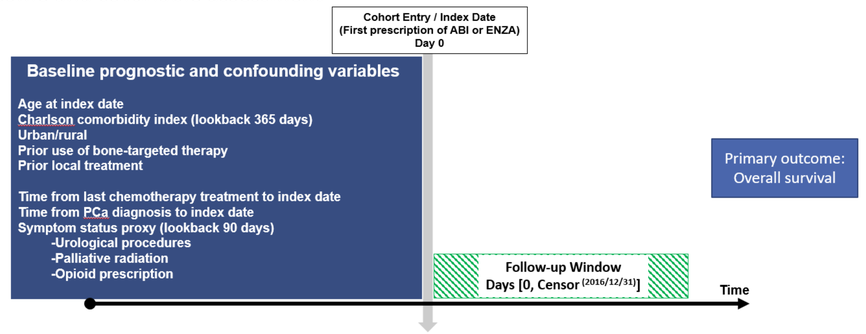
Data sources : Quebec public healthcare administrative databases

- Régie de l'assurance maladie du Québec (RAMQ) and MED-ECHO

Patient selection and group assignment



Primary outcome and covariable assessment



Statistical Analysis

- Unadjusted survival
  - Kaplan-Meier method and log-rank test
- Adjusted survival
  - Multivariable Cox proportional hazards regression
    - Adjusting for baseline prognostic and confounding variables

RESULTS

Table 1: Cohort characteristics

Variables	ENZA (n=79)	ABI (n=542)	P-value
Age			
Median (Q1-Q3)	74 (69-80)	73 (68-79)	
>75	42 (53.2)	315 (58.1)	0.405
≤75	37 (46.8)	227 (41.9)	
Charlson comorbidity score, n(%)			
0-1	54 (68.4)	407 (75.1)	
2-3	20 (25.3)	104 (19.2)	0.414
≥4	5 (6.3)	31 (5.7)	
Residence area, n (%)			
Urban	55 (70%)	355 (66%)	0.470
Rural	24 (30%)	187 (34%)	
Prior localized treatment, n (%)			
Any	26 (32.9)	245 (45.2)	0.070
None	53 (67.1)	297 (54.8)	
Prior bone-targeted therapy, n (%)			
Yes	50 (63.3)	391 (72.1)	0.105
No	29 (36.7)	151 (27.9)	
Time from PCa diagnosis to index date, years			
Median (Q1-Q3)	6 (3-11)	5 (2-10)	
≥ 3 years	49 (62.0)	401 (74.0)	0.026
< 3 years	30 (38.0)	141 (26.0)	
Time from last chemotherapy to index date			
Median (Q1-Q3)	139 (29-243)	85 (30-199)	
≥ 6 months	34 (43.0)	149 (27.5)	0.005
< 6 months	45 (57.0)	393 (72.5)	
Symptomatic status proxy (90 days before index date)			
Yes	38 (48.1)	285 (52.6)	0.456
No	41 (51.9)	257 (47.4)	

Figure 1: Unadjusted overall survival

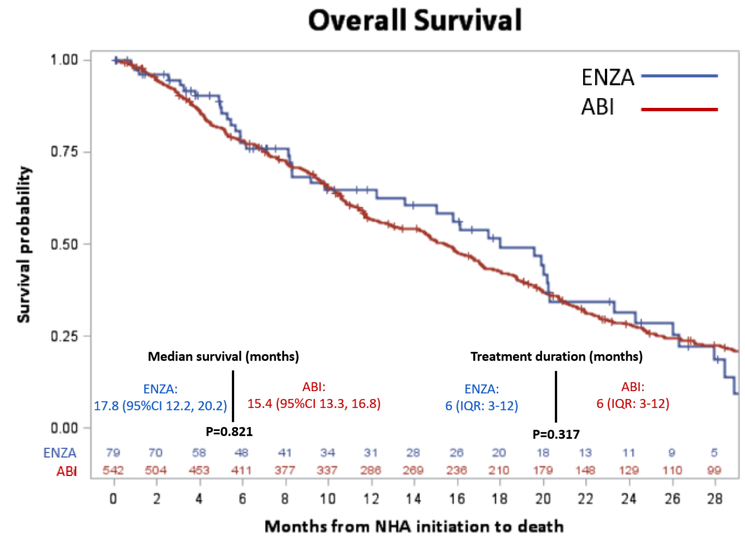


Table 3: Multivariable Cox regression analysis

Factor	Hazard ratio	95%CI		p-value
Group (ref: ENZA)		-		
ABI	1.08	0.79	1.38	0.722
Age (ref: < 75)		-		
≥75	1.41	1.18	1.70	<0.001
Charlson score (ref: <4)		-		
≥ 4	1.33	1.08	1.63	0.008
Prior BTT		-		
Yes	0.96	0.79	1.17	0.687
Prior local treatment (ref: no)		-		
Yes	1.21	0.98	1.48	<0.001
Time from PCa DX to index (ref: ≥ 3 years)				
< 3 years	1.65	1.31	2.09	<0.001
Time from last chemo to index (ref: ≥ 6 months)		-		
< 6 months	1.30	1.05	1.61	0.016
Symptom proxy (ref: no)		-		
Yes	1.69	1.40	2.04	<0.001

LIMITATIONS

- Administrative claims data:
  - Cannot account for clinical and disease variables
    - Performance status
    - PSA level
    - Metastatic volume
    - Initial histology and staging
- Enza group: smaller sample size and shorter follow-up time
- No specific ICD code for mCRPC exists
  - However, identification of cohort using drug therapy extracted from RAMQ is appropriate indirect evidence of mCRPC

CONCLUSION

- Comparison of Abi and Enza in post-chemotherapy setting
  - Similar treatment duration
  - Similar survival
- Ongoing work…
  - Sensitivity analyses
  - Pre-chemotherapy setting effectiveness
  - Adverse effects
  - Healthcare resource use

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