



MP79-17: Addition of carboplatin to chemotherapy regimens for metastatic castrate resistant prostate cancer in post-2nd generation hormone therapy setting: does it improve survival?

Mohamed E. Ahmed¹, Jack R. Andrews¹, Giovanni Motterle¹, Manaf Alom¹, R. Jeffrey Karnes¹, Eugene D. Kwon¹, Alan H. Bryce²

¹Department of Urology, Mayo Clinic, Rochester, MN.

²Division of Hematology and Medical Oncology, Mayo Clinic, Scottsdale, AZ.

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Background

- The clinical course in metastatic castrate-resistant prostate cancer (mCRPC) can be complicated when patients have disease progression after prior treatment with 2nd generation hormone therapy (2nd HT), such as enzalutamide or abiraterone. Currently, limited data exists regarding the optimal choice of chemotherapy for mCRPC after failing 2nd generation hormone therapy (2nd HT). We sought to evaluate three common chemotherapy regimens in this setting.

Methods

- We retrospectively identified 150 patients with mCRPC with disease progression on enzalutamide or abiraterone. Of these 150 patients, 92 patients were chemo naïve while 58 patients had previously received docetaxel chemotherapy before started on 2nd HT. After failing 2ndHT, 90 patients were assigned for docetaxel-alone (group A), 33 patients received carboplatin plus docetaxel (group B) while 27 patients received cabazitaxel-alone (Group C). Favorable response was defined by $\geq 50\%$ reduction in PSA from baseline level after complete course of chemotherapy. Survival outcomes were assessed for 30-month overall survival.

Results

- Patients in group (B) were 2.6 times as likely to have a favorable response compared to patients in group (A) (OR= 2.625, 95%CI: 1.15 - 5.99) and almost 3 times compared to patients in group (C) (OR=2.975, 95%CI: 1.04 – 8.54) (p-value=0.0442). 30- overall survival was 70.7%, 38.9% and 30.3% for group (B), (A) and (C) respectively (p-value=0.008). We report a Hazard Ratio of 3.1 (95% CI 1.31-7.35; p=0.0037) between patients in group (A) versus those in group (B) and a Hazard Ratio of 4.18 (95% CI 1.58-11.06; p=0.0037) between patients in group (C) versus those who are in group (B)

Conclusion

- This data demonstrates improved response and overall survival in treatment refractory mCRPC with chemotherapy regimen of docetaxel plus carboplatin when compared to docetaxel alone or cabazitaxel alone. These results would suggest providers to consider carboplatin plus docetaxel in the late mCRPC setting after failing 2nd HT. Further investigations are required.

Treatment response and survival outcomes

Group A: docetaxel; Group B: docetaxel and carboplatin; Group C: cabazitaxel

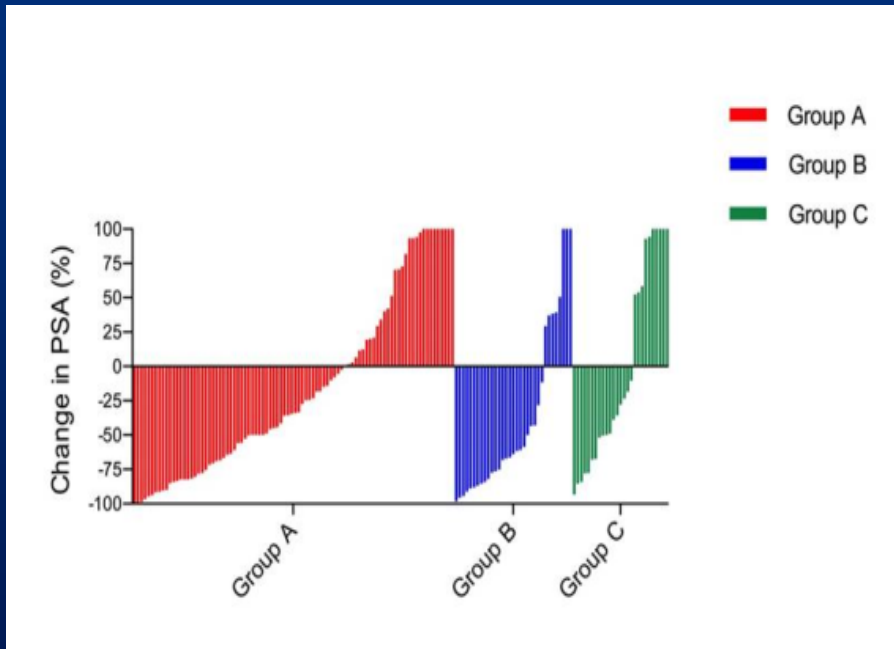


Figure 1: Waterfalls plot of response to chemotherapy agents

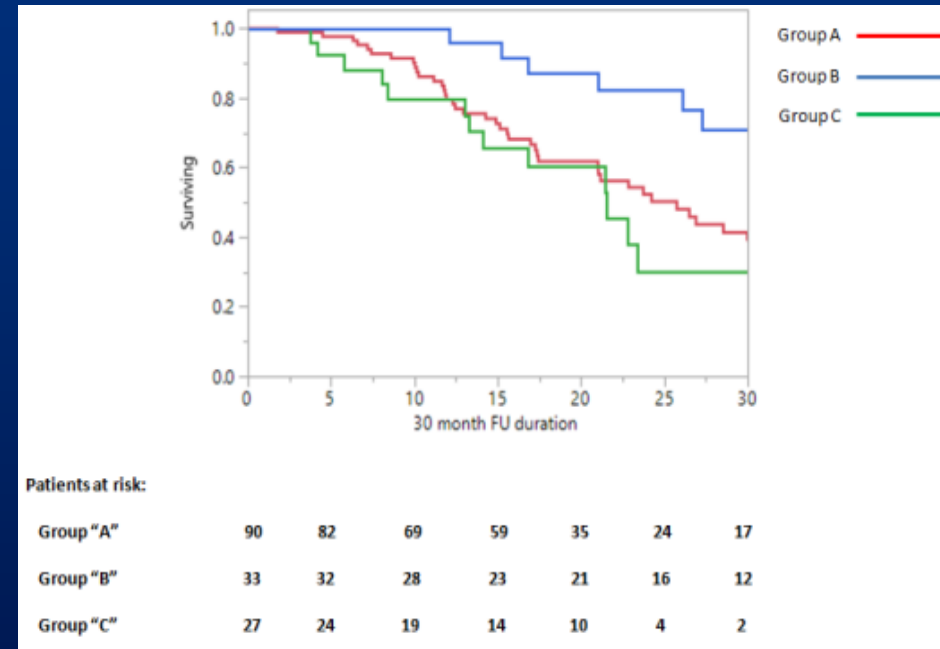


Figure 2: Kaplan-Meier curve showing 30-month overall survival difference between the three chemotherapy regimens (Log-Rank= 0.0081*)