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THE EFFECT OF TREATMENT WITH CHEMOTHERAPY OR ENZALUTAMIDE ON COGNITIVE FUNCTION IN OLDER ADULTS WITH METASTATIC CASTRATE-RESISTANT PROSTATE CANCER.

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Introduction: Increasing data have shown chemotherapy-related cognitive effects whereas cognitive effects of androgen deprivation remain controversial. However, there are no data on the effects of chemotherapy in older men with prostate cancer, nor have cognitive effects of androgen receptor agents been examined.

Objectives: To evaluate the effects of treatment with chemotherapy (CHEMO), abiraterone (ABI), or enzalutamide (ENZA) on cognitive function in older men with metastatic castrate-resistant prostate cancer (mCRPC).

Methods: To date 68 participants age 65 or older with mCRPC have been enrolled in this observational study at two participating Canadian academic centres: the Princess Margaret Cancer Centre and Sunnybrook Health Sciences Centre. Three treatment cohorts were examined: CHEMO, ABI, or ENZA.
Three short yet reliable and sensitive measures in older adults were administered at baseline and final visit using the Montreal Cognitive Assessment (MoCA), Trails A, and Trails B to assess multiple cognitive domains, attention, and executive function, respectively. Changes in cognitive scores over time were analyzed using multivariable linear regression.

Results: 26 participants who had completed or discontinued treatment are included in this analysis. The number of participants in the ABI cohort is <5 and are not analyzed further. Mean age of participants is 74 years (range 64-90). The mean number of CHEMO cycles was 6 (range 3-9). The mean duration of ENZA was 4.4 months (range 1-8). From baseline till end of treatment MoCA total scores increased 3.5% (95% CI -3.2%, 4.7%) in the CHEMO cohort (n=18) and 6.2 % (5.0%, 15.7%) in the ENZA cohort (n=5). Trails A showed 13.3% (-33.2%, 22.8%) decline for CHEMO and 17.7% (-26.1%, 2.08%) decline for ENZA (p=0.78). Trails B declined 7.2% (-31.9%, 18.6%) and 35.5% (-45.3%, 11.6%) in the CHEMO and ENZA cohorts, respectively (p=0.74). Declines of one or more points in MoCA sub-domains were infrequent or are generally less than 5% for all domains for both CHEMO and ENZA cohorts.

Conclusion: Although our sample size is limited it appears that attention and executive function in men receiving ENZA declined more than in men receiving CHEMO but for global cognition as measured with the MoCA the results show slight improvement in both, likely secondary to practice effect. MoCA subdomains showed little decline in either CHEMO or ENZA groups. This study is still recruiting.

Disclosure of Interest: None Declared

Keywords: chemotherapy, cognitive function, metastatic castrate resistant prostate cancer, older adults