INTRODUCTION & OBJECTIVE
Enzalutamide and abiraterone acetate plus prednisone (henceforth referred to as abiraterone) are both androgen receptor targeting treatments for metastatic castration-resistant prostate cancer (mCRPC).

The objective was to evaluate and compare treatment changes in serum androgens for enzalutamide and abiraterone.

MATERIAL & METHODS
Patients with progressive metastatic prostate cancer on androgen deprivation therapy (testosterone <1.7 nmol/L) were randomised (1:1) to either first-line enzalutamide (160 mg/day) and abiraterone (1000 mg abiraterone acetate and 10 mg prednisone/day).

Fasting serum androgens, including:
- Testosterone
- Androstenedione
- Dehydroepiandrosterone sulphate (DHEAS)
- 17-Hydroxyprogesterone (17-OHP)
were measured by the gold standard assay liquid chromatography – tandem mass spectrometry at baseline and at 12-week post-intervention (Figure 1).

The treatment difference in changed androgens was compared with mixed models analysis, and the within-subject change for each treatment group was analysed with paired samples t-test.

EudraCT no. 2017-000099-27

RESULTS
A larger decline in testosterone, androstenedione and DHEAS was found for abiraterone than enzalutamide. In the enzalutamide group, testosterone and DHEAS increased from baseline to week 12, whereas decreased in the abiraterone group. No treatment difference was found for 17-OHP (Figure 2).

CONCLUSION
In men on androgen deprivation therapy, with remaining androgens mainly derived from the adrenal production, enzalutamide and abiraterone both inhibit the androgen stimulation of prostate cancer, but by different mechanism of action resulting in different androgen profiles.

DISCLOSURE STATEMENT
The first and presenting author (KKT) have no conflicts of interest to declare.
This study was funded by Department of Urology, Herlev and Gentofte Hospital. The internal research fund of Herlev and Gentofte, Scandinavian Prostate Cancer Group research fund, Torben og Alice Frimodts foundation, and Christina Larsen og Dommer Ellen Larsen Scholarship.