INTRODUCTION
Phase 3 trials have proven the benefit of addition of second line systemic treatment to androgen deprivation therapy (ADT) in newly-diagnosed metastatic prostate cancer (ndMPC). These treatments include docetaxel, abiraterone acetate (AA) and apalutamide and are highly recommended to be combined with ADT in ndMPC. Herein, we describe the changes in systemic treatment of ndMPC in a “real-world” setting over time. In addition, we explored the reasons of non-compliance to add second line systemic treatment to the patient.

MATERIALS AND METHODS
Since 2014, patients with ndMPC are prospectively registered at our center. Patients were grouped into 4 time periods: group 1 (January 2014-July 2015), group 2 after introduction of docetaxel (August 2015-July 2017), group 3 after introduction of AA (August 2017-February 2018) and group 4 after introduction of apalutamide (March 2018-October 2021). For every time period, we evaluated the initiated systemic treatment. In case the patient received a treatment that was not compliant with strong recommendations in the contemporary guidelines, the reason for non-compliance was explored.

RESULTS
In total, 243 patients were included. Median age was 70 years (range: 45-96) and median PSA was 45 ng/ml (range: 0.5-8580). A progressive decline in ADT monotherapy from 85% to 29% over time was observed (figure 1). The proportion of patients receiving additional systemic treatments increased from 34% to 59%. Forty percent of patients were not treated according to contemporary SOC, but this percentage varied strongly per TP (10%, 67%, 53% and 32% from TP1 to TP4 respectively) (table 1). Reasons for these variations were heterogenous and varied across the 4 TPs. Patients being unfit for treatment and treating physicians failing to consider ASTs were the most prevalent reasons. The proportion of patients unfit for additional systemic therapy decreased from 18% to 4% over time. Estimated 2y-mCRPCFS was 45 (±7)% with ADT + chemotherapy and this was significantly lower than the 62 (±4)% with ADT monotherapy (p=0.016) and the 73 (±8)% with ADT + ARTA (p=0.006). The mCRPCFS between ADT monotherapy and ADT + ARTA was not significantly different (p=0.322).

CONCLUSION
Use of ADT monotherapy declined gradually after the introduction of additional systemic treatments. The proportion of patients unfit for additional systemic treatment declined as more treatments became available. Although compliance to SOC increased over time, these real world data show that adherence to clinical practice guidelines remains suboptimal. Efforts should be made by clinicians to increase the adherence to practice guidelines.