ABSTRACT 4172: Results from ADVANCE, a Phase I/II open-label non-randomised safety and efficacy study of the viral vectored ChAdOx1-MVA 5T4 (VTP-800) vaccine in combination with PD-1 checkpoint blockade in metastatic prostate cancer

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BACKGROUND

Based on encouraging safety and exceptional T cell immunogenicity of the ChAdOx1-MVA 5T4 (VTP-800) vaccine vectors in the VANCE study in localised prostate cancer (NCT02393003), the phase I/II ADVANCE (NCT03815942) trial was undertaken to test VTP-800 safety and efficacy in combination with PD-1 blockade (Nivolumab) in metastatic castrate resistant prostate cancer (mCRPC).

METHODS

Objectives: To describe the safety, efficacy and immunogenicity of VTP-800 (ChAdOx1-MVA 5T4 and anti-PD-1) (Nivolumab) in patients with metastatic castrate resistant prostate cancer.

Study Design

Regimen: ChAdOx1-MVA 5T4 was administered intramuscularly in an extremity (e.g. thigh) at a dose of 2.5 x 10^11 virus particles and MVA ST4 administered via the same route at a dose of 2 x 10^9 plaque forming units. Nivolumab was administered as a flat dose of 480 mg over approximately 60 minutes via i.v. infusion.

Primary endpoints

- To assess safety of the viral vectored ChAd/MVA 5T4 vaccine when administered in combination with anti-PD-1 mAb
- To assess efficacy of the viral vectored ChAd/MVA 5T4 vaccine when administered in combination with anti-PD-1 mAb by a composite response defined as one of the following: reduction of circulating tumour DNA, - serum PSA decrease

Secondary endpoints

- To assess the magnitude of immune responses in the periphery generated by ChAd/MVA 5T4 vaccine in combination with anti-PD-1 mAb
- Radiographic progression-free survival at 6 and 12 months post enrolment
- To evaluate overall survival at 6 and 12 months post enrolment

Statistical Methods

- Kaplan–Meier analyses are planned to perform time-to-event analyses
- ORRs with two-sided 90% confidence intervals (CIs) are planned

RESULTS

23 out of a planned 24 patients with mCRPC were recruited between 21/02/19 and 01/10/19. Due to COVID-19, study recruitment was terminated early and the first pre-planned analysis was performed after 6 months of follow up.

Table 1: Baseline Demographics and Disease Characteristics

Table 2: Treatment emergent Adverse Events

Table 3: Radiological responses by RECIST 1.1

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CONCLUSIONS

- VTP-800 and Nivolumab treatment led to a >50% reduction in PSA in 22% of patients in the ADVANCE trial
- ChAdOx1-MVA 5T4 (VTP-800) and Nivolumab were safe and well tolerated in this group of patients with advanced castrate resistant prostate cancer
- No evidence that genetic factors are implicated in the high PSA response rate
- Clinical studies of new therapeutic multi-antigen ChAdOx1/MVA vaccine vectors containing 5T4 are in development

ACKNOWLEDGEMENTS

We thank the patients who participated in the study and their supportive families, as well as the investigators and clinical research staff from the study centers. The study (NCT03815942) was sponsored by Oxford University and is funded by the European Union Seventh Framework Programme under grant agreement No. 602765 (Project IMPROVE) and by Vaccinex Ltd.

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REFERENCES

Disclosures

Dr. Mark Tuthill is Consulting/Advisory board member for Vaccinex Limited, Pfizer, Novavax, Lilly, Janssen, Boeh, and University. Past speaking engagements and educational support from Novavax, Pfizer, Novo, Janssen, and University.

(3) The disclosure of the other conflict(s) available on request.

On behalf of the ADVANCE trial investigators.

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