Safety and changes in laboratory parameters associated with sipuleucel-T in patients with metastatic
castration-resistant prostate cancer: phase 2 ProACT study
Thomas Gerdner; Daniel Petrylak; John Corman; Simon Hall; Ralph Weinstein; Robert Sims; Todd DeVries; Celestia
Higano

Introduction and Objectives
Sipuleucel-T is an autologous cellular immunotherapy for asymptomatic or minimally symptomatic metastatic
castration-resistant prostate cancer (mCRPC). Sipuleucel-T prepared using the FDA-approved concentration of
10μg/mL PA2024 (PAP-GM-CSF antigen) stimulates immune responses and prolongs overall survival (OS). ProACT
(P07-2; NCT00715078) is an ongoing phase 2 study to evaluate immune responses and OS of sipuleucel-T when
manufactured using three different concentrations (2, 5 or 10μg/mL) of PA2024. Here we report the preliminary safety
analysis and changes in laboratory parameters.

Methods
Patients (pts) with asymptomatic or minimally symptomatic mCRPC received sipuleucel-T manufactured using 2, 5 or
10μg/mL PA2024 for a total of 3 infusions with 2-week intervals. Adverse events (AEs) were recorded continuously
and laboratory samples for assessment were taken 2, 4 and 6 months (mos) after the first infusion.

Results
120 pts were included in the safety analysis (2μg/mL, n=40; 5μg/mL, n=40; 10μg/mL, n=40). Baseline characteristics
were balanced across the arms. The most common AEs (occurring in >20% of pts in the total population) were
fatigue (44.2%), back pain (30.8%), nausea (30.8%), arthralgia (25.6%) and chills (25.8%), with a consistent incidence
of these AEs across treatment arms. AEs occurring within 1 day of infusion (in >20% of pts in the total
population) included fatigue (23.3%) and chills (20.8%). Treatment-related serious AEs occurred in 4 pts (3.3%), with
fatigue (n=3) and dehydration (n=2) the only events occurring in more than 1 pt. Globulin protein levels increased
significantly (p<0.05) from baseline at all time points in the 5μg/mL and 10μg/mL arms and at 2 mos in the 2μg/mL
arm. Significant increases in eosinophil counts from baseline were observed at 2 mos in the 5μg/mL and 10μg/mL
arms (p<0.05). There was no significant difference between treatment arms in immune responder frequencies (any
immune response at any time point).

Conclusions
Increases in globulin protein and transient increases in eosinophil counts are consistent with previous studies, which
showed that these changes in laboratory parameters positively correlate with immune response and OS, respectively,
and thus may be surrogates for immune response. Furthermore, these data suggest that sipuleucel-T manufactured
using 3 different concentrations of PA2024 has an acceptable safety profile.