A randomized phase II trial of sipuleucel-T with concurrent vs sequential abiraterone acetate plus prednisone in metastatic castration resistant prostate cancer.

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Abstract

PURPOSE: This phase II open-label study evaluated the effect of concurrent or sequential administration of abiraterone acetate plus prednisone (AA + P) on sipuleucel-T manufacture and immune responses in metastatic castration-resistant prostate cancer (mCRPC) patients.

EXPERIMENTAL DESIGN: mCRPC patients received sipuleucel-T followed by AA + P 1 day (concurrent) or 10 weeks (sequential) after the first sipuleucel-T infusion. AA + P treatment continued for 26 weeks. The primary endpoint was cumulative antigen presenting cell (APC) activation, and secondary endpoints included cumulative APC number and total nucleated cell counts. Additional endpoints included in vivo peripheral immune responses to sipuleucel-T (T cell responses, T cell proliferation, humoral responses, and antigen spread) as well as safety.

RESULTS: Sixty-nine mCRPC patients were enrolled, with 35 and 34 patients randomized to the concurrent and sequential arms, respectively. Ex vivo APC activation was significantly greater at the second and third infusions compared with baseline in both arms (p<0.05), indicative of an immunological prime-boost effect. In both arms, sipuleucel-T product parameter profiles and peripheral immune responses were consistent with previously conducted sipuleucel-T phase III trials. Antigen spread was similarly observed in both arms and consistent with the other immunologic endpoints.

CONCLUSIONS: These data suggest that sipuleucel-T can be successfully manufactured during concurrent administration of AA + P without blunting immunologic effects or altering immune parameters that correlate with sipuleucel-T’s clinical benefit. Combining these agents was well tolerated, with no new safety signals emerging.

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