A Phase I Study of the Safety and Pharmacokinetics of DSTP3086S, an Anti-STEAP1 Antibody-Drug Conjugate, in Patients with Metastatic Castration-Resistant Prostate Cancer


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BACKGROUND

Key Eligibility Criteria: metastatic castration-resistant prostate cancer (CRPC), measurable disease per RECIST v1.0 or PSA progression according to PCWG2 criteria, EGOG 0-2

DSTP3086S (0.3-2.8 mg/kg) was given every 3 weeks (q3w) until disease progression or unacceptable toxicity

A traditional 3+3 design was used to determine MTD, followed by cohort expansion at RP2D

Dose limiting toxicity (DLT) was defined as any of the following in Cycle 1 attributed to DSTP3086S exposure

Additional related Grade (G) 3+ AEs reported included: 1 mg/kg: anemia (G3); 1.5 mg/kg: pain in extremity (G3); 2.25 mg/kg: sepsis (G5); GI bleed (G3); 2.8 mg/kg: deep vein thrombosis (G3); lower extremity edema (G3); 2.35 mg/kg: asparaginase (G2); GI bleed (G3); 2.8 mg/kg: hyperglycemia (G2); lower extremity pain (G3)

RESULTS

Patient Demographics and Disease Characteristics

Table 1. Patient Demographics and Disease Characteristics.

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>All Patients (N=28)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age in years, median (range)</td>
<td>67 (34-79)</td>
</tr>
<tr>
<td>ECOG status</td>
<td>1 (0-3)</td>
</tr>
<tr>
<td>Prior radiotherapy, n (%)</td>
<td>27 (96)</td>
</tr>
<tr>
<td>Prior hormonal systemic regimens, n (%)</td>
<td>20 (71)</td>
</tr>
<tr>
<td>Prior non-hormonal systemic regimens, n (%)</td>
<td>7 (26)</td>
</tr>
<tr>
<td>Prior treatment with docetaxel, n (%)</td>
<td>22 (79)</td>
</tr>
<tr>
<td>Prior treatment with cabazitaxel, n (%)</td>
<td>6 (21)</td>
</tr>
<tr>
<td>Baseline PSA ng/mL, median (range)</td>
<td>110 (60-447)</td>
</tr>
<tr>
<td>Sites of metastatic disease, n (%)</td>
<td>4 (11)</td>
</tr>
<tr>
<td>Brain</td>
<td>2 (7)</td>
</tr>
<tr>
<td>Bone</td>
<td>1 (4)</td>
</tr>
<tr>
<td>Liver</td>
<td>1 (4)</td>
</tr>
<tr>
<td>Lung</td>
<td>2 (7)</td>
</tr>
<tr>
<td>Baseline circulating tumor cell count in patients assessed (n=22)</td>
<td>41 (10-146)</td>
</tr>
</tbody>
</table>

Paired Response and Biomarker Data

Figure 3. Correlation between Best Log2 CTC Count Change from Baseline and Antitumor Activity.

Figure 4. Two Patients with RECIST Partial Responses in 2.8 mg/kg Cohort.

Figure 5. Patient with Prostate Cancer Dosed at 2.8 mg/kg with a Partial Response.

ACKNOWLEDGMENTS

- DSTP3086S has an acceptable safety and tolerability profile. Most AEs were Grade 1-2, and the majority of AEs were self-limited that did not require intervention.
- DSTP3086S demonstrated acceptable PK that was linear and predictable.
- Anti-tumor activity was detected in prostate cancer: 2 PRs were observed in patients with HIC 2 or 3+ staining, and additional patients with prolonged stable disease.
- CTC conversions were associated with PSA decreases and RECIST responses in evaluable patients.
- Enrollment in the q2w expansion cohort is ongoing at RP2D

- Thank you to the many patients for their participation in this trial
- Genentech, Inc. provided support for the preparation of this poster

CONCLUSIONS

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Figure 5. Two Patients with RECIST Partial Responses in 2.8 mg/kg Cohort.

Figure 2. Maximum PSA vs. Log CTC Change in Evaluable Patients.

Figure 3. Per-Patient Response and Biomarker Data.

Figure 4. Two Patients with RECIST Partial Responses in 2.8 mg/kg Cohort.

Figure 1. Maximum PSA Change From Start of Treatment By Cohort.