Clinical and Histological Clearance of VP-315: Exploratory Results of an Investigational Non-surgical Immunotherapy in Subjects with Biopsy Proven Basal Cell Carcinoma

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BACKGROUND

• Basal Cell Carcinoma (BCC) is primarily treated with surgical intervention. However, an alternative first-line non-surgical option for patients would be a welcome addition to treatment options, as many patients prefer not to undergo a surgical procedure or may not be surgical candidates.
• VP-315 is a de novo designed intratumorally injected, chemotherapeutic, oncolytic peptide currently under investigation as a non-surgical immunotherapeutic treatment for patients with BCC.
• In addition to its direct oncolytic effect, tumor cell death following VP-315 injection results in the release of danger signals (DAMPs) and a broad repertoire of tumor specific antigens that activates the adaptive immune system to recognize, infiltrate, and attack the tumor cells.2-4

Figure 1. VP-315 Dual Mechanism of Action2

ATP=adenosine triphosphate; DAMPs=danger-associated molecular pattern molecules; DC=dendritic cell; CTLs=cytotoxic CD8+ T lymphocytes; HMGB1=high mobility group box protein 1; TME=tumor microenvironment.

LTX-315 is being studied as VP-315 in BCC.


• We previously reported the primary objective results from Part 1 of a 2 Part study assessing the safety of ascending doses (2-8 mg) of VP-315 given intratumorally to BCC lesions.5
• VP-315 demonstrated a promising safety and tolerability profile with no dose-limiting toxicities or serious adverse events, only expected cutaneous reactions, observed over the entire dose range.

OBJECTIVE

• The exploratory objective of Part 1 of the study was to evaluate the antitumor efficacy of VP-315, determined by clinical and histological clearance of treated lesions.

METHODS

• Ten subjects received once daily dosing of ascending doses (2-8 mg) of VP-315, administered intratumorally in up to 2 biopsy-proven BCC lesions for up to 6 treatments over a 2-week period.
• Six of these 10 subjects (1 lesion in each subject) were treated at the 8 mg dose.
• Post-treatment clinical assessment and excisions were performed at Day 49 (Range 35-70), followed by histological evaluation.

RESULTS

• Full tumor necrosis was observed within 2 weeks of initial dosing, in all 6 subjects/6 BCC lesions treated with the 8 mg dose of VP-315.

Table 1. Phase 2, Part 1 Study Results

<table>
<thead>
<tr>
<th>Subject #</th>
<th>Body Lesion Location</th>
<th>Full Necrosis Observed</th>
<th>Residual Tumor (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>R Upper Arm (R Clavicle)</td>
<td>YES</td>
<td>0% Residual Tumor</td>
</tr>
<tr>
<td>2</td>
<td>Left arm/Forearm</td>
<td>YES</td>
<td>70% Residual Tumor</td>
</tr>
<tr>
<td>3</td>
<td>Back LL</td>
<td>YES</td>
<td>0% Residual Tumor</td>
</tr>
<tr>
<td>4</td>
<td>Back LR</td>
<td>YES</td>
<td>0% Residual Tumor</td>
</tr>
<tr>
<td>5</td>
<td>Back LL</td>
<td>YES</td>
<td>0% Residual Tumor</td>
</tr>
<tr>
<td>6</td>
<td>Chest UL</td>
<td>YES</td>
<td>5% Residual Tumor</td>
</tr>
</tbody>
</table>

• Importantly, there was consistent clinical and histological clearance of these lesions observed by Day 49 post-treatment, with 4 of 6 subjects (67%) demonstrating complete BCC clearance.
• Necrosis is a suggestive early indicator of tumor elimination evidenced by 4 of 6 subjects achieving 0% residual tumor after treatment with VP-315.

Figure 2. Clinical and Histological Clearance Results

Subjects 4 and 5 presented with BCC and received three consecutive daily doses of 8 mg VP-315.
Complete lesion clearance achieved.

* Visual confirmation of necrosis or a DLT resulted in termination of dosing.

CONCLUSIONS

• These early encouraging results from Part 1 support VP-315 as a potential, first-line non-surgical therapeutic approach for treatment of BCC.
• Optimization of the 8 mg dosing regimen is currently under investigation in Part 2 of the study.

References

Disclosures
The author affiliations are: N Bhatia, L Kantor; L Green; J Weiss; C Willson; S Cutler; J Rieger; D Glover; P Rumney; G Goldenberg. (I= clinical trial investigator; C= consultant; E= employee.) This study was sponsored by Verrica Pharmaceuticals Inc. Editorial support was provided by Versant Learning Solutions, Inc, and funded by Verrica Pharmaceuticals Inc.