Supplemental Table 1: Descriptives of the study cohort used for serum glutamate quantification.

<table>
<thead>
<tr>
<th>Case</th>
<th>N=</th>
<th>AGE (year)</th>
<th>PSA (ng/ml)</th>
<th>Race (n=)</th>
<th>Gleason (n=)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Mean ± SE&lt;sup&gt;a&lt;/sup&gt;</td>
<td>Median (min, max)</td>
<td>Mean ± SE&lt;sup&gt;a&lt;/sup&gt;</td>
<td>Median (min, max)</td>
</tr>
<tr>
<td>Normal</td>
<td>60</td>
<td>61.4 ± 1.2</td>
<td>61.0 (40.1, 79.3)</td>
<td>0.556 ± 0.03</td>
<td>0.490 (0.22, 1.26)</td>
</tr>
<tr>
<td>Primary PCa</td>
<td>197</td>
<td>62.0 ± 0.6</td>
<td>62.0 (41.0, 78.0)</td>
<td>10.38 ± 2.19</td>
<td>6.0 (0.03, 411.0)</td>
</tr>
<tr>
<td>Aggressiveness Subtype</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Low</td>
<td>80</td>
<td>61.1 ± 0.9</td>
<td>61.3 (41.0, 75.8)</td>
<td>5.03 ± 0.26</td>
<td>4.73 (0.03, 12.94)</td>
</tr>
<tr>
<td>Intermediate</td>
<td>68</td>
<td>62.4 ± 1.0</td>
<td>62.0 (44.0, 78.0)</td>
<td>7.955 ± 0.530</td>
<td>7.0 (2.0, 20.0)</td>
</tr>
<tr>
<td>High</td>
<td>49</td>
<td>62.9 ± 1.0</td>
<td>64.0 (44.5, 75.0)</td>
<td>23.05 ± 8.82</td>
<td>11.10 (0.03, 411.0)</td>
</tr>
<tr>
<td>mCRPCa</td>
<td>109</td>
<td>70.2 ± 1.0</td>
<td>71.0 (44.0, 97.0)</td>
<td>323.74 ± 51.43</td>
<td>118.85 (0.08, 3863.5)</td>
</tr>
</tbody>
</table>

<sup>a</sup>The log-transformed serum PSA levels were found to be significantly different (ANOVA, *P* <0.001) between normal research subjects and patients with primary PCa or metastatic castrate-resistant PCa.

<sup>b</sup>PSA value for this research subject was 28.0 ng/ml.

Abbreviations: CAs, Caucasian Americans; AAs, African Americans; mCRPCa, metastatic-castrate resistant PCa; N/A, not available or not applicable; Med, medium; SE, standard error; Med, medium; PSA, prostate-specific antigen.