**Supplementary Table 1.** Clinicopathological details of patients with local recurrence

<table>
<thead>
<tr>
<th>No.</th>
<th>Age (yr)</th>
<th>Sex</th>
<th>ND</th>
<th>LVI</th>
<th>Histology</th>
<th>D-grade</th>
<th>H-grade</th>
<th>Radiation dose (cGy)</th>
<th>pT</th>
<th>pN</th>
<th>Recurrence site</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>50</td>
<td>Male</td>
<td>No</td>
<td>No</td>
<td>MEC</td>
<td>Well</td>
<td>Low</td>
<td>6,600</td>
<td>2</td>
<td>0</td>
<td>Op bed</td>
</tr>
<tr>
<td>2</td>
<td>52</td>
<td>Male</td>
<td>Yes</td>
<td>Yes</td>
<td>SDC</td>
<td>High</td>
<td>High</td>
<td>5,040</td>
<td>3</td>
<td>2b</td>
<td>Op bed, skull base</td>
</tr>
<tr>
<td>3</td>
<td>72</td>
<td>Male</td>
<td>Yes</td>
<td>No</td>
<td>MEC</td>
<td>High</td>
<td>High</td>
<td>5,040</td>
<td>2b</td>
<td>3</td>
<td>Op bed</td>
</tr>
<tr>
<td>4</td>
<td>67</td>
<td>Female</td>
<td>No</td>
<td>No</td>
<td>EMC</td>
<td>Well</td>
<td>Low</td>
<td>5,040</td>
<td>3</td>
<td>0</td>
<td>Op bed</td>
</tr>
<tr>
<td>5</td>
<td>62</td>
<td>Male</td>
<td>Yes</td>
<td>Yes</td>
<td>ADC</td>
<td>High</td>
<td>High</td>
<td>5,040</td>
<td>3a</td>
<td>2</td>
<td>Op bed, skin</td>
</tr>
<tr>
<td>6</td>
<td>82</td>
<td>Male</td>
<td>Yes</td>
<td>No</td>
<td>CXPA</td>
<td>Well</td>
<td>Low</td>
<td>5,040</td>
<td>3</td>
<td>1</td>
<td>Op bed</td>
</tr>
<tr>
<td>7</td>
<td>81</td>
<td>Male</td>
<td>Yes</td>
<td>No</td>
<td>ADC</td>
<td>Well</td>
<td>High</td>
<td>5,040</td>
<td>3</td>
<td>1</td>
<td>Op bed</td>
</tr>
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</table>

ND, neck dissection; LVI, lymphovascular invasion; D, differentiation; H, histologic; pT, pathological T stage; pN, pathological N stage; MEC, mucoepidermoid carcinoma; Op, operation; SDC, salivary duct carcinoma; EMC, epithelial-myoepithelial carcinoma; ADC, adenocarcinoma, not otherwise specified; CXPA, carcinoma ex pleomorphic adenoma.

**Supplementary Table 2.** Clinicopathological details of patients with distant metastases

<table>
<thead>
<tr>
<th>No.</th>
<th>Age (yr)</th>
<th>Sex</th>
<th>ND</th>
<th>LVI</th>
<th>Histology</th>
<th>D-grade</th>
<th>H-grade</th>
<th>Radiation dose (cGy)</th>
<th>pT</th>
<th>pN</th>
<th>Recurrence site</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>56</td>
<td>Male</td>
<td>No</td>
<td>No</td>
<td>MEC</td>
<td>Poorly</td>
<td>High</td>
<td>6,210</td>
<td>2</td>
<td>0</td>
<td>Lung</td>
</tr>
<tr>
<td>2</td>
<td>52</td>
<td>Male</td>
<td>Yes</td>
<td>Yes</td>
<td>SDC</td>
<td>Poorly</td>
<td>High</td>
<td>5,040</td>
<td>3</td>
<td>2b</td>
<td>Axilla LN, mediastinum</td>
</tr>
<tr>
<td>3</td>
<td>55</td>
<td>Male</td>
<td>Yes</td>
<td>No</td>
<td>SDC</td>
<td>Poorly</td>
<td>High</td>
<td>5,040</td>
<td>2</td>
<td>0</td>
<td>Lung</td>
</tr>
<tr>
<td>4</td>
<td>58</td>
<td>Male</td>
<td>Yes</td>
<td>Yes</td>
<td>LCC</td>
<td>Poorly</td>
<td>High</td>
<td>5,940</td>
<td>4a</td>
<td>2b</td>
<td>Lung, axilla LN</td>
</tr>
<tr>
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<td>73</td>
<td>Male</td>
<td>Yes</td>
<td>No</td>
<td>SDC</td>
<td>Poorly</td>
<td>High</td>
<td>5,040</td>
<td>4a</td>
<td>0</td>
<td>Lung</td>
</tr>
<tr>
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<td>33</td>
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<td>No</td>
<td>No</td>
<td>SDC</td>
<td>Poorly</td>
<td>High</td>
<td>5,040</td>
<td>4a</td>
<td>0</td>
<td>Lung</td>
</tr>
<tr>
<td>7</td>
<td>81</td>
<td>Male</td>
<td>Yes</td>
<td>No</td>
<td>SDC</td>
<td>Poorly</td>
<td>High</td>
<td>5,040</td>
<td>3</td>
<td>1</td>
<td>Lung</td>
</tr>
<tr>
<td>8</td>
<td>71</td>
<td>Male</td>
<td>Yes</td>
<td>Yes</td>
<td>ADC</td>
<td>Poorly</td>
<td>High</td>
<td>5,040</td>
<td>2</td>
<td>2b</td>
<td>Lung, axilla LN</td>
</tr>
<tr>
<td>9</td>
<td>56</td>
<td>Male</td>
<td>Yes</td>
<td>Yes</td>
<td>ADC</td>
<td>Poorly</td>
<td>High</td>
<td>5,040</td>
<td>4a</td>
<td>0</td>
<td>Lung</td>
</tr>
<tr>
<td>10</td>
<td>65</td>
<td>Male</td>
<td>Yes</td>
<td>Yes</td>
<td>ADC</td>
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<td>High</td>
<td>5,040</td>
<td>2</td>
<td>2b</td>
<td>Lung</td>
</tr>
<tr>
<td>11</td>
<td>72</td>
<td>Female</td>
<td>Yes</td>
<td>No</td>
<td>SCC</td>
<td>Poorly</td>
<td>High</td>
<td>6,000</td>
<td>4a</td>
<td>0</td>
<td>Lung</td>
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<td>Male</td>
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<td>No</td>
<td>SCC</td>
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<td>5,940</td>
<td>4a</td>
<td>2b</td>
<td>Lung</td>
<td></td>
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</table>

ND, neck dissection; LVI, lymphovascular invasion; D, differentiation; H, histologic; pT, pathological T stage; pN, pathological N stage; MEC, mucoepidermoid carcinoma; SDC, salivary duct carcinoma; LN, lymph node; LCC, large cell undifferentiated carcinoma; ADC, adenocarcinoma, not otherwise specified; SCC, squamous cell carcinoma.