### Supplemental Table 1. Clinical courses of 6 patients who did not receive systemic treatment within 3 months after diagnosis

<table>
<thead>
<tr>
<th>Patient No.</th>
<th>Age/Sex</th>
<th>Site of initial involvement</th>
<th>Initial treatment</th>
<th>Response after Initial treatment</th>
<th>Relapse after Initial treatment (relapse site)</th>
<th>Secondary treatment</th>
<th>Response after secondary treatment</th>
<th>Outcome (cause of death)</th>
<th>(follow-up duration)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>57/M</td>
<td>Pericardial</td>
<td>No therapy</td>
<td>-</td>
<td>No</td>
<td>-</td>
<td>-</td>
<td>CR</td>
<td>(147 months)</td>
</tr>
<tr>
<td>2</td>
<td>98/F</td>
<td>Pleural</td>
<td>Drainage</td>
<td>PR</td>
<td>Yes (4 months) (Pleural)</td>
<td>Drainage</td>
<td>CR</td>
<td>Died</td>
<td>(unknown cause other than lymphoma) (22 months)</td>
</tr>
<tr>
<td>3</td>
<td>85/M</td>
<td>Pleural</td>
<td>Drainage</td>
<td>CR</td>
<td>Yes (29 months) (Pleural, ascites, adrenal mass)</td>
<td>Chemotherapy (R-THP-COP)</td>
<td>PR</td>
<td>Died</td>
<td>(lymphoma) (43 months)</td>
</tr>
<tr>
<td>4</td>
<td></td>
<td>Pleural</td>
<td>Drainage</td>
<td>CR</td>
<td>No</td>
<td>-</td>
<td>-</td>
<td>CR</td>
<td></td>
</tr>
<tr>
<td>87/M</td>
<td>Pleural</td>
<td>Drainage</td>
<td>CR</td>
<td>No</td>
<td>(5 months)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>------</td>
<td>---------</td>
<td>----------</td>
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<td>----</td>
<td>------------</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>78/F</td>
<td></td>
<td>Pleural</td>
<td>CR</td>
<td>No</td>
<td>CR</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Pleural, pleural effusion; Pericardial, pericardial effusion; Drainage, effusion drainage; PD, progressive disease; R-THP-COP, rituximab, pirarubicin, cyclophosphamide, vincristine, and prednisolone; CR, complete response; PR, partial response
Supplemental table 2. Univariate and Multivariate Analysis of Clinical Characteristics for PFS

<p>| Variable | No. | Univariate Analysis | | | Multivariate Analysis | | |
|---|---|---|---|---|---|---|
| | | Hazard ratio (95% CI) | P-value | Hazard ratio (95% CI) | P-value |
| Age | | | | | | |
| &lt; 70 y | 12 | 1.00 | 0.062 | 1.00 | 0.033 |
| ≥ 70 y | 52 | 4.18 (0.93-18.76) | | 5.26 (1.15-24.12) | |
| Sex | | | | | | |
| Male | 40 | 1.00 | | | | |
| Female | 24 | 2.13 (0.85-5.33) | | | | |
| PS | | | | | | |
| 0, 1 | 33 | 1.00 | 0.025 | 1.00 | 0.008 |
| 2-4 | 29 | 3.04 | | 4.19 | |</p>
<table>
<thead>
<tr>
<th></th>
<th>(1.15-8.03)</th>
<th>(1.46-12.01)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>B symptom</strong></td>
<td></td>
<td>0.120</td>
</tr>
<tr>
<td>No</td>
<td>53</td>
<td>1.00</td>
</tr>
<tr>
<td>Yes</td>
<td>8</td>
<td>2.42</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.80-7.35)</td>
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<tr>
<td><strong>Serum LDH level</strong></td>
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<td>0.798</td>
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<tr>
<td>Not elevated</td>
<td>21</td>
<td>1.00</td>
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<tr>
<td>Elevated</td>
<td>42</td>
<td>1.14</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.43-2.99)</td>
</tr>
<tr>
<td><strong>Hb concentration</strong></td>
<td></td>
<td>0.472</td>
</tr>
<tr>
<td>≥ 12 g/dl</td>
<td>30</td>
<td>1.00</td>
</tr>
<tr>
<td>&lt; 12 g/dl</td>
<td>34</td>
<td>1.40</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.56-3.45)</td>
</tr>
<tr>
<td><strong>IPI</strong></td>
<td></td>
<td>0.122</td>
</tr>
<tr>
<td>0-2</td>
<td>13</td>
<td>1.00</td>
</tr>
<tr>
<td>Condition</td>
<td>Value 1</td>
<td>Value 2</td>
</tr>
<tr>
<td>---------------------------------------------------------------------------</td>
<td>---------</td>
<td>---------</td>
</tr>
<tr>
<td>Underlying medical condition leading to fluid retention</td>
<td>4.94</td>
<td>(0.65-37.37)</td>
</tr>
<tr>
<td>No</td>
<td>1.00</td>
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<tr>
<td>Yes</td>
<td>1.44</td>
<td>(0.58-3.56)</td>
</tr>
<tr>
<td>Pleural effusion</td>
<td>0.72</td>
<td>(0.28-1.85)</td>
</tr>
<tr>
<td>No</td>
<td>1.00</td>
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<tr>
<td>Yes</td>
<td>0.57</td>
<td>(0.22-1.47)</td>
</tr>
<tr>
<td>Pericardial effusion</td>
<td>0.57</td>
<td>(0.22-1.47)</td>
</tr>
<tr>
<td>No</td>
<td>1.00</td>
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<tr>
<td>Yes</td>
<td>0.57</td>
<td>(0.22-1.47)</td>
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<tr>
<td>Ascites</td>
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<td>0.022</td>
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<tr>
<td>No</td>
<td>57</td>
<td>1.00</td>
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<tr>
<td>Yes</td>
<td>7</td>
<td>3.73</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(1.21-11.5)</td>
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<tr>
<td>Number of sites of involvement</td>
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<td>0.519</td>
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<tr>
<td>Single lesion</td>
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<tr>
<td>Multiple lesion</td>
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<td>0.73</td>
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<td>Year of diagnosis</td>
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<td>0.837</td>
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<tr>
<td>2011-2014</td>
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<td>1.00</td>
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<td>1998-2010</td>
<td>31</td>
<td>1.12</td>
</tr>
<tr>
<td>CD20 expression</td>
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<td>0.509</td>
</tr>
<tr>
<td>Negative</td>
<td>2</td>
<td>1.00</td>
</tr>
<tr>
<td>Positive</td>
<td>62</td>
<td>0.50</td>
</tr>
<tr>
<td>Cell-of-origin</td>
<td>(0.07-3.86)</td>
<td>0.384</td>
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<tr>
<td>-----------------------</td>
<td>-------------</td>
<td>-------</td>
</tr>
<tr>
<td>GC phenotype</td>
<td>8</td>
<td>1.00</td>
</tr>
<tr>
<td>Non-GC phenotype</td>
<td>30</td>
<td>1.79</td>
</tr>
<tr>
<td></td>
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<td>(0.48-6.63)</td>
</tr>
</tbody>
</table>

**MYC break apart (FISH)**

<table>
<thead>
<tr>
<th></th>
<th>(0.48-6.63)</th>
<th>0.696</th>
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<tbody>
<tr>
<td>Negative</td>
<td>29</td>
<td>1.00</td>
</tr>
<tr>
<td>Positive</td>
<td>7</td>
<td>0.74</td>
</tr>
<tr>
<td></td>
<td>(0.16-3.40)</td>
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</tbody>
</table>

PS, performance status; LDH lactate dehydrogenase; Hb, hemoglobin; IPI, international prognostic index; GC, germinal center; FISH, fluorescent *in situ* hybridization; PFS, progression free survival