

**Table S1** Survival outcomes of all participants

| Year | Intra-pelvic progression free survival (95% CI) | Distant metastasis-free survival (95% CI) | Overall survival (95% CI) |
|------|-------------------------------------------------|-------------------------------------------|---------------------------|
| 1    | 88.46% (68.36–96.13)                            | 84.62% (64.04–93.93)                      | 96.67% (78.61–99.52)      |
| 2    | 84.62% (64.04–93.93)                            | 73.08% (51.69–86.15)                      | 83.33% (64.50–92.70)      |
| 3    | 84.62% (64.04–93.93)                            | 73.08% (51.69–89.15)                      | 66.67% (46.92–80.47)      |

CI, confidence interval.

**Table S2** Correlation between  $\gamma$ -H2AX and overall survival and distant metastatic free survival using univariable cox analysis

| No. of PBMCs collection | Overall survival |         | Distant metastatic-free survival |         |
|-------------------------|------------------|---------|----------------------------------|---------|
|                         | HR (95% CI)      | P value | HR (95% CI)                      | P value |
| 2                       | 1.16 (0.55–2.48) | 0.706   | 1.20 (0.50–2.90)                 | 0.699   |
| 3                       | 1.01 (0.47–2.19) | 0.980   | 1.27 (0.54–3.01)                 | 0.588   |
| 4                       | 1.34 (0.65–2.78) | 0.443   | 1.43 (0.62–3.32)                 | 0.415   |
| 5                       | 1.24 (0.58–2.59) | 0.578   | 1.28 (0.53–3.07)                 | 0.588   |

pCR, pathologic complete response; PBMCs, peripheral blood mononuclear cells; HR, hazard ratio; CI, confidence interval.

**Table S3** Correlation between  $\gamma$ -H2AX and Lymphocyte count

| No. of PBMCs collection | Pearson correlation coefficients | P value |
|-------------------------|----------------------------------|---------|
| 2                       | -0.0026                          | 0.990   |
| 3                       | 0.0401                           | 0.846   |
| 4                       | -0.1123                          | 0.586   |
| 5                       | 0.2536                           | 0.222   |

PBMCs, peripheral blood mononuclear cells.

**Table S4** Correlation between  $\gamma$ -H2AX and WBC count

| No. of PBMCs collection | Pearson correlation coefficients | P value |
|-------------------------|----------------------------------|---------|
| 2                       | 0.2957                           | 0.127   |
| 3                       | 0.0903                           | 0.661   |
| 4                       | 0.2250                           | 0.270   |
| 5                       | 0.0392                           | 0.853   |

PBMCs, peripheral blood mononuclear cells; WBC, white blood cell.