**Supplement**

|  |  |  |
| --- | --- | --- |
| **Table 1** Prognostic factors associated with overall survival in low risk group | | |
| **Variable** | **Univariate (*P*)**  **Hazard ratio (95% CI)** | **Multivariate (*P*)**  **Hazard ratio (95% CI)** |
| Age, year | 0.03 | 0.04 |
| ≤ 65 | 1 | 1 |
| > 65 | 1.77 (1.04-2.99) | 1.73 (1.02-2.94) |
| Gender | 0.92 |  |
| Male | 1 |  |
| Female | 0.97 (0.54-1.75) |  |
| CEA, ng/mL | 0.11 |  |
| ≤ 5 | 1 |  |
| > 5 | 1.53 (0.91–2.58) |  |
| Surgery | 0.36 |  |
| LAR | 1 |  |
| APR | 1.39 (0.68-2.84) |  |
| Pathologic T | 0.28 |  |
| ypT0-2 | 1 |  |
| ypT3-4 | 1.66 (0.66-4.17) |  |
| Pathologic N | 0.04 | 0.08 |
| ypN0 | 1 | 1 |
| ypN+ | 1.76 (1.03-3.00) | 1.62 (0.95-2.76) |
| Histologic grade | 0.17 |  |
| Low | 1 |  |
| High | 1.75 (0.79-3.86) |  |
| Adjuvant Chemotherapy | 0.35 |  |
| No | 1 |  |
| Yes | 0.66 (0.28-1.57) |  |
| *APR* Abdominoperineal resection, *CEA* Carcinoembryonic antigen, *CI* Confidence interval, *LAR* Low anterior resection | | |

|  |  |  |
| --- | --- | --- |
| **Table 2** Prognostic factors associated with recurrence-free survival in low risk group | | |
| **Variable** | **Univariate (*P*)**  **Hazard ratio (95% CI)** | **Multivariate (*P*)**  **Hazard ratio (95% CI)** |
| Age, year | 0.51 |  |
| ≤ 65 | 1 |  |
| > 65 | 1.13 (0.78-1.64) |  |
| Gender | 0.57 |  |
| Male | 1 |  |
| Female | 1.12 (0.76 – 1.66) |  |
| CEA, ng/mL | 0.06 |  |
| ≤ 5 | 1 |  |
| > 5 | 1.41 (0.99-2.00) |  |
| Surgery | 0.10 |  |
| LAR | 1 |  |
| APR | 1.50 (0.92-2.45) |  |
| Pathologic T | 0.01 |  |
| ypT0-2 | 1 |  |
| ypT3-4 | 2.83 (1.32-6.07) |  |
| Pathologic N | < 0.01 | 0.02 |
| ypN0 | 1 | 1 |
| ypN+ | 2.08 (1.44-3.00) | 1.53 (1.08-2.16) |
| Histologic grade | 0.02 |  |
| Low | 1 |  |
| High | 1.87 (1.09-3.21) |  |
| Adjuvant Chemotherapy | 0.31 |  |
| No | 1 |  |
| Yes | 1.40 (0.73-2.69) |  |
| *APR* Abdominoperineal resection, *CEA* Carcinoembryonic antigen, *CI* Confidence interval, *LAR* Low anterior resection | | |