The CTC status in the overall cohort and in the VFL and no-VFL groups is shown in Table II. The preoperative CTC detection rate was 39.5%, and the CTC count was 1.6±3.1 [mean±standard deviation (SD)]. The CTC detection results were N, S, and C in 65.1%, 12.8%, and 22.1% of the patients, respectively, and there were no significant differences between the VFL and no-VFL groups. Postoperatively, the CTC detection rate was 57.0%, and the CTC count was 3.0±3.8 (mean±SD). There were 43.0%, 15.1%, and 41.9% of the patients who had N, S, and C CTC results, respectively, and there were also no significant differences between the VFL and no VFL groups. In addition, the change in CTC status beyond surgery was also not significantly different between the two groups (Table III).

In multivariate logistic regression analysis including VFL, tumour vessel invasion, types of CT appearance (solid or not), and size of invasion as covariates, it was revealed that only tumour vessel invasion alone was independent, when the end point was set as detecting any CTC and clustered CTC postoperatively (Table IV).

**Follow-up results.** There were eight cases of death, of which six cases were cancer related. In addition, 25 cancer recurrences were observed, of which 10 cases were distant (5, 2, 1 at the bone, liver, lung, and brain, respectively) and 15 cases were regional (8, 6, 1 at the pleural space, mediastinal lymph nodes, and lung, respectively).

The survival curves according to recurrence and the VFL status are shown in Figure 1. The 2-year OS rates were 94.4%