Background

Alteration of ADCC-related genes as a novel predictor of efficacy of cetuximab (cet)-based chemotherapy in patients (pts) with metastatic colorectal cancer (mCRC) has been reported. In the JACCRO CC05+CC06 population, poor response to cetuximab (cet)-containing therapy has been associated with rs2236337 (T>C) polymorphism in the PRF1 gene. However, there is no information on whether the polymorphism is associated with clinical outcomes in a cet treatment-naive setting.

Materials and Methods

A total of 77 patients (pts) with mCRC enrolled in the JACCRO CC05+CC06 phase II study (NCT00255934) were analyzed. The PRF1 rs2236337 polymorphism was assessed by polymerase chain reaction-direct DNA sequencing. Expression of PRF1 and GZMB genes was measured using real-time polymerase chain reaction (PCR) and analyzed using a phospho-epitope-mimic tagging (PETT) method.

Results

The median OS was 11.0 (95% CI, 8.0–13.8) months in the cet group and 9.2 (95% CI, 7.0–11.3) months in the oxaliplatin group. The results revealed that the PRF1 rs2236337 polymorphism was significantly associated with OS and progression-free survival (PFS) in both groups (P = 0.016 and P = 0.028, respectively).

Conclusions

The results of this study suggest that the PRF1 rs2236337 polymorphism could be a promising predictor of efficacy of cet-based chemotherapy in patients with mCRC.