Neutropenia as an indicator of trifluridinetipiracil efficacy in metastatic colorectal cancer

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BACKGROUND AND IMPORTANCE

Trifluridine-tipiracil (TAS102) is indicated in third- and/or fourth-line metastasic colorectal cancer (mCRC) after progression with standard treatments based on overall survival benefit shown in the RECOURSE and J003 studies. Longer survival is demonstrated in patients who develop neutropenia as a toxicity.

OBJECTIVES

Analysis of correlation between efficacy of TAS102 and neutropenia.

METHODS

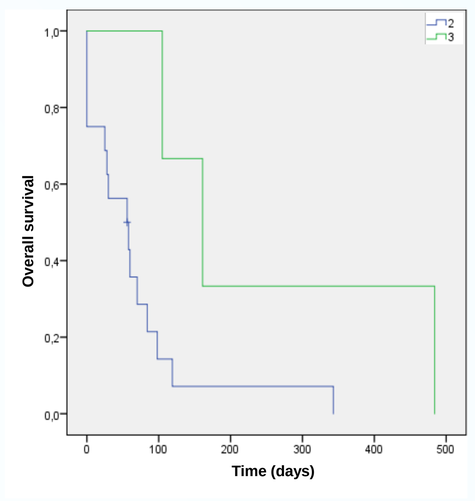
43 patients with mCRC treated with this drug between January 2018 and September 2021 at Juan Ramón Jiménez Hospital (Huelva). Variables described: age, sex, KRAS mutation, Performance Status (PS), line of treatment and toxicities. Relationship between overal survival (OS) and progression-free survival (PFS) and the grade of neutropenia analyzed by means of a Cox regression analysis, obtaining a Hazard Ratio. Survival medians presented using Kaplan-Meier curves.

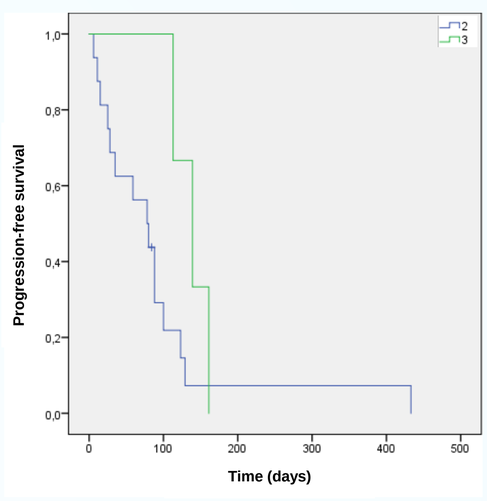
RESULTS

Median age, 66 years. 58.3% were men. Only 6 patients with PS > 2. 97.5% had neutropenia (51.3% grade 1, 41% grade 2 and 7.7% grade 3). All patients progressed, 79.1 died so far.

The regression analysis was statistically significant (p=0.05); the variables grades of neutropenia and G3 neutropenia (neutrophils < 1000-500/mm3 according to CTCAE) were significant for overall survival (p=0.009; HR=2.83; CI: 1.35-5.9 and p=0.028; HR=5.36; CI:1.199-23.985, respectively). There is also a correlation between PFS and neutropenia (p=0.004), but not with degrees of neutropenia.

The median OS in patients with neutropenia G2 was 1.8 months (CI: 0,67-3,61), and 5,3 months for G3 neutropenia (CI:8.6-25.27). Median PFS for patients with neutropenia G2 was 2.6 months (CI: 1.09-4.66), and 4.6 months for G3 neutropenia (CI:2.59-6.58).





CONCLUSION

Neutropenia is a common adverse effect and the main dose-limiting toxicity. Data published in a Japanese series (Yohei Nose, et al; Katsuya Makihara, et al and T. Yoshino, et al) suggest a correlation between severity of neutropenia and survival. Similar outcomes were obtained in our study, with more favorable data mainly in OS in patients with grade 3 neutropenia. We understand neutropenia as a possible efficacy predictor for TAS-102. More studies with a larger number of patients are necessary.