Monocyte to red blood cells ratio (MRR): an innovative haematologic prognostic parameter in FOLFIRI-aflibercept treated patients - a subgroup analysis from the DISTINCTIVE trial

E. Lai[1], S. Murgioni[2], P. Ziranu[1], D. Basile[3], S. Cherri[4], C. Madeddu[1], F. Bergamo[2], G. Piacentini[5], V. Smiroldo[6], M. Squadroni[7], M.C. De Grandis[8], L. Mascia[9], G. Rosati[10], M.G. Zampino[11], A. Spallanzani[12], V. Conca[13], M.A. Palladino[14], V. Flaminio[15], S. Di Bella[16], M. Scartozzi[1]

On behalf of GISCAD (Gruppo Italiano per lo Studio dei Carcinomi dell'Apparato Digerente)

1. Medical Oncology Unit, University Hospital and University of Cagliari, Cagliari, Italy; 2. Medical Oncology Unit 1, Department of Oncology, Veneto Institute of Oncology IOV - IRCCS, Padua, Italy; 3. Department of Oncology, San Bortolo General Hospital, Azienda ULSS8 Berica, Vicenza, Italy; 4. Medical Oncology Unit, Fondazione Poliambulanza, Brescia, Italy; 5. Oncologia Medica, ASST Papa Giovanni XXXIII, Bergamo, Italy; 6. Medical Oncology and Hematology Unit, Humanitas Cancer Center, IRCCS Humanitas Research Hospital, Via Manzoni 56, 20089 Rozzano, Milan, Italy; 7. Oncologia Medica, Humanitas Gavazzeni Bergamo, Italy; 8. 1) Department of Surgery, Oncology and Gastroenterology, University of Padua, Padua, Italy 2) Medical Oncology Unit 1, Department of Oncology, Veneto Institute of Oncology IOV - IRCCS, Padua, Italy; 9. Medical Oncology Unit, ARNAS G. Brotzu, Ospedale Businco, Cagliari; 10. U.O. Oncologia Medica, Ospedale S. Carlo, Potenza, Italy; 11. Divisione di Oncologia Medica Gastrointestinale e Tumori Neuroendocrini Istituto Europeo di Oncologia-IRCCS Milan, Italy; 12. Department of Oncology and Haematology, Division of Oncology, University Hospital of Modena, Modena, Italy; 13. Unit of Medical Oncology 2, Azienda Ospedaliero-Universitaria Pisana, Pisa, Italy. Department of Translational Research and New Technology in Medicine and Surgery, University of Pisa, Pisa, Italy; 14. Oncology & Hematology Department, Oncology Unit, Piacenza General Hospital, Piacenza, Italy; 15. Medical Oncology Unit, Internal Medicine Department "Tor Vergata" University Hospital, Rome, Italy; 16. Alta Specialità Oncologia Medica UO Oncologia Medica ASST Rhodense - Presidio di Garbagnate, Italy

BACKGROUND

Recently, laboratory parameters have been explored as potential prognostic biomarkers in several tumour types. Here we present our findings in the population enrolled in the interim analysis of the DISTINCTIVE trial (NCT04252456), a prospectively stratified, biologically enriched phase II study of second-line FOLFIRI-aflibercept in RAS wild type (wt) metastatic colorectal cancer (mCRC) patients (pts) progressing after first-line anti-epidermal growth factor receptor (EGFR) drugs.
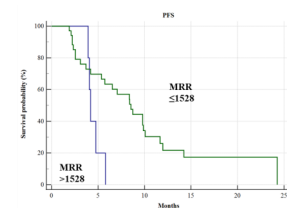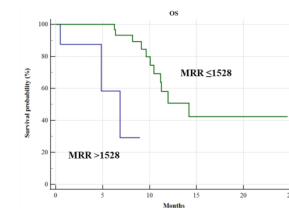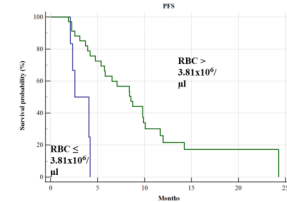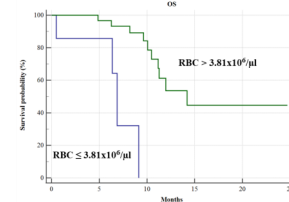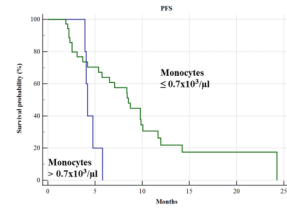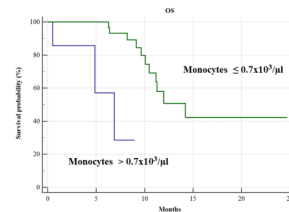
METHODS

RAS wt mCRC pts resistant to first-line oxaliplatin-based chemotherapy + anti-EGFR are administered second-line FOLFIRI-aflibercept. Primary endpoint is overall survival (OS) according to VEGFR2 levels, whereas secondary endpoints are OS, progression free survival (PFS), response rate, safety and angiogenic factors levels. Clinical and laboratory data are collected to evaluate their correlation with outcome. Statistical analysis is performed with MedCalc (survival distribution: Kaplan-Meier; survival comparison: log-rank test; cut off: ROC curves).

E. Lai's COI Disclosure: Nothing to declare

Correspondence to: ele.lai87@gmail.com

RESULTS

Of 73 pts enrolled from 04/2018 to 06/2020, 44 were eligible for interim analysis. Among the laboratory values assessed, monocytes (M), red blood cells (RBC) and M/RBC ratio (MRR) were of particular interest. Better OS was related to lower ($\leq 0.7 \times 10^3/\mu l$) M (14.2 months [95%CI:10.4-14.2] vs 6.8 months [95%CI:0.5-6.8], HR 0.003, p=0.0002) and higher (>$3.81 \times 10^6/\mu l$) RBC (14.2 months [95%CI:10.4-14.2] vs 6.8 months [95%CI:0.5-9.1], HR 0.005, p< 0.0001). Longer PFS was correlated with lower M (8.5 months [95% CI:5.3-24.2] vs 4.2 months [95%CI:3.9-5.8], HR 0.18, p=0.0266) and higher RBC (8.5 months [95% CI:5.7-24.2] vs 2.5 months [95%CI:2.1-4.2], HR 0.04, p=0.0007). Lower MRR (≤ 1528) was related to improved OS (14.2 months [95%CI:10.4-14.2] vs 6.8 months [95%CI:0.5-6.8], HR 0.004, p=0.0003) and PFS (8.5 months [95%CI:5.3-24.2] vs 4.2 months [95%CI:3.9-5.8], HR 0.24, p=0.0492).

CONCLUSIONS

Our analysis confirmed the prognostic role of some haematologic parameters and an innovative and easy-to assess ratio in RAS wt mCRC pts receiving FOLFIRI-aflibercept.

This study was partially supported by Sanofi Genzyme