The TTD Group is a Spanish Cooperative Group with 28 years of history investigating and developing protocols in the digestive tumor field to improve healthcare quality. In the last decade, its research has been focused on the identification of biomarkers to improve and predict treatment outcomes. The MACRO (Maintenance in Colorectal Cancer) study was a phase III study to assess maintenance therapy with single-agent bevacizumab (B) versus B plus chemotherapy (QT) in patients (p) with metastatic colorectal cancer (mCRC). A post hoc analysis of the trial investigated the prognostic value of the circulating tumor cell (CTC) count and KRAS mutation status on patient outcomes and showed that both factors were independent prognostic factors for outcomes. Based on these results, the ongoing VISNU study will screen 750 p previously untreated with mCRC according to CTC count and gene status (RAS, BRAF y PI3K). In VISNU-1 trial (NCT01640405), 350 p with ≥3 CTC will be randomized to receive FOLFOX-6 + B or FOLFOXIRI + B. In VISNU-2 trial (NCT01640444), 240 p with <3 CTC and RAS WT will be randomized to receive FOLFIRI + B or cetuximab (C) according to the status of BRAF y PI3K. The prognostic role of CTC in early CRC has been analyzed in a prospective multicenter study of 519 p with stage III CRC. CTC presence was more frequent in p with higher risk of relapse. Detection of CTC ≥1 and ≥2 appears to be associated with worse disease-free survival and overall survival, in p with stage IIIA. However, a longer follow-up of p in this study is needed. The TTD Group has currently two ongoing studies focused on optimizing the selection of patients. In the SETICC study (NCT01071655) 195 p were randomized to control arm (B + XELOX) or experimental: B + capcitabine or 5-FU + oxaliplatin or irinotecan, selected on the basis of a pharmacogenomic signature (TS-3′UTR and ERCC1-118 genetic polymorphisms). The aim of the phase II ULTRA study (NCT01704703) is to improve outcome results using ultra-selection technology with next generation high sensitivity genotyping of p with mCRC refractory to irinotecan without any mutation on KRAS, PIK3Ca, BRAF and NRAS genes detected with highly sensitive techniques. In summary, highlight the contribution of the research conducted by Cooperative Groups to Precision Oncology.

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