Aim: The optimal duration of treatment for patients with metastatic colorectal cancer is still under debate. Maintenance therapy after induction chemotherapy is an increasingly used therapeutic option.

Methods: A systematic review of MEDLINE, EMBASE and Cochrane Systematic reviews databases from January 1966 to May 2014 was performed independently by two Authors. All randomized phase III trials comparing maintenance Bevacizumab or capecitabine plus bevacizumab versus other therapeutic strategies were considered eligible and included into the analysis. The 3-years Overall survival was the primary outcome of the analysis; 1 years OS, 2 years OS, 3 years PFS, 2 years PFS and 1 years PFS were secondary ones. Heterogeneity between the trials was assessed using the Mantel-Haenszel test, and the pooled Odds Ratios (ORs) were calculated using a fixed effects model. An alpha error < 5% was assumed as index of statistical significance. All selected trials were analyzed and pondered using the Jadad score.

Results: 681 patients of two trials and 738 patients of two trials were included into the two different analysis. A significant improvement in PFS at 12 months (OR 0,67 IC 95% 0,5-0,92; p = 0,01) and OS at 36 months (OR 0,62 IC 95% 0,4-0,98; p = 0,04) were observed in subgroup with maintenance therapy with capecitabine + Bevacizumab versus other therapeutic strategies (stop and go therapy and continuous therapy). No differences were observed in OS at 36 months (OR 0,66 IC95% 0,42-1,04; p = 0,07) and PFS at 12 months (OR 0,89 IC95% 0,64-1,24; p = 0,5) in the subgroup analysis with Bevacizumab only maintenance therapy versus other therapeutic strategies.

Conclusions: Our data confirm that maintenance therapy is a effectiveness therapeutic option. Despite this, the standard regimen in the maintenance setting remains unclear. Trials included into the analysis suggest that fluoropyrimidine is a key for effectiveness of maintenance treatment. Further studies comparing Bevacizumab vs fluoropyrimidine + Bevacizumab vs fluoropyrimidine alone is needed to evaluated the gold standard in this setting of therapy.

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