Reviewer's report

**Title:** The Prognostic Values of EGFR Expression and KRAS Mutation in Patients with Synchronous or Metachronous Metastatic Colorectal Cancer

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**Reviewer:** ingrid Ljuslinder

**Reviewer's report:**

Review

The Prognostic Values of EGFR Expression and KRAS Mutation in Patients with Synchronous or Metachronous Metastatic Colorectal Cancer by dr Ching-Wen Huang and colleagues.

This is a retrospective study to determine the prognostic values of EGFR expression and KRAS mutation in patients with metastatic CRC (mCRC) based on synchronous or metachronous status. 205 patients with mCRC were included and analyzed for clinicopathological features according to EGFR expression and KRAS mutation status.

Moreover, the study investigated the prognostic values of EGFR expression and KRAS mutation among these patients. EGFR mutation was present in (83.8%) and KRAS mutation (42.9%).

In patients with metachronous mCRC, positive EGFR expression was significantly correlated with well- and moderately-differentiated tumors, poorer disease-free survival, and overall survival.

The study also showed that positive EGFR expression was a significant independent prognostic factor of DFS and in metachronous mCRC patients.

KRAS mutation status was not significantly related to DFS and OS of patients with metachronous mCRC; likewise, KRAS mutation status was not significantly different in the progression-free survival and OS of patients with synchronous mCRC.

The present study demonstrated that EGFR expression has prognostic value only for patients with metachronous mCRC. However, KRAS mutation did not have prognostic value in patients with metachronous or synchronous mCRC.

Major comments: This is a retrospective study showing that EGFR status has a prognostic value and that KRAS status did not. Unfortunately, none of these observations are novel even though there are few studies that has investigated it by grouping the metastases into syn/metachrone. The level of EGFR mutation is rather high even if there are other studies that have reported high levels of EGFR positive tumours.
Minor comments; I think the methods used in the study should be mentioned in the abstract. I also think a short explanation of the terms mets/synchrone should be explained in the introduction. Even though it is a nice study with a well written discussion the study presents few new data.

So:
1. Is the question posed by the authors well defined? Yes
2. Are the methods appropriate and well described? Yes
3. Are the data sound? Retrospective but yes
4. Does the manuscript adhere to the relevant standards for reporting and data deposition? yes
5. Are the discussion and conclusions well balanced and adequately supported by the data? yes
6. Are limitations of the work clearly stated? Yes
7. Do the authors clearly acknowledge any work upon which they are building, both published and unpublished? Yes
8. Do the title and abstract accurately convey what has been found? Yes
9. Is the writing acceptable; Yes

**Level of interest:** An article of limited interest

**Quality of written English:** Acceptable

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

I declare that I have no competing interests