

# Prognostic factors of patients with AFP-positive colorectal cancer: a case-control study

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## BACKGROUND

- $\alpha$ -Fetoprotein-positive colorectal cancer (AFPP-CRC) is a rare type of colorectal cancer (CRC), and there have been no comprehensive investigations on prognostic factors of AFPP-CRC.
- The aim of this study was to elucidate the prognostic factors of AFPP-CRC.

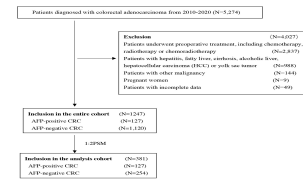
## METHODS

- We studied patients diagnosed with colorectal adenocarcinoma in the Sixth Affiliated Hospital of Sun Yat-sen University from 2010 to 2020. Patients who were tested serum AFP preoperatively and without preoperative chemotherapy, or chemoradiotherapy were considered as AFP-positive group when the level of serum AFP levels were greater than 8.78 ng/ml based on the reference of this variable in our hospital.
- We utilized a Person's  $\chi^2$  test to measure the differences among variables according to baseline characteristics. Survival curves were estimated by the Kaplan-Meier method and differences were evaluated by the log-rank test.
- Prognostic factors were investigated using univariate and multivariate Cox regression model. Furthermore, univariate analysis and multivariate logistic regression were used to estimate potential risk factors for good and poor prognosis in AFPP-CRC patients
- Sensitivity analysis was used to verify the results.

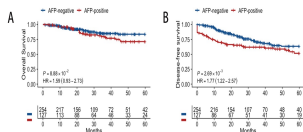
## RESULTS

- The clinicopathological characteristics of AFP-positive CRC were summarized.
- The Kaplan-Meier curves, univariate and multivariate analysis showed that patients with AFP-positive have worse outcome.

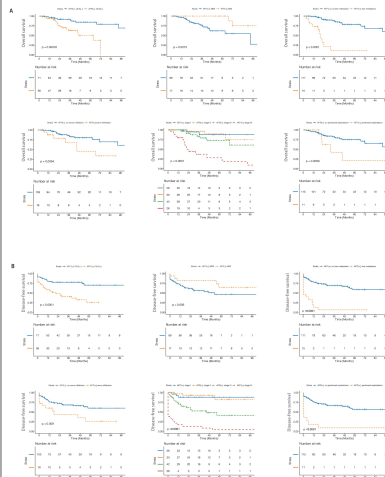
**Figure 1** Flow chart of patient's selection.



**Figure 2** Overall survival (OS) (A) and disease-free survival (DFS) (B) and related to AFP-positive and AFP-negative colorectal cancer after propensity score matching (PSM).



**Figure 3** Overall survival (OS) related to CEA, microsatellite status, liver metastasis, perineural invasion, pathologic stage, and peritoneal implantation in AFP-positive colorectal cancer. (A) Disease-free survival (DFS) related to CEA, microsatellite status, liver metastasis, perineural invasion, pathologic stage, and peritoneal implantation in AFP-positive colorectal cancer. (B)



## CONCLUSION

- We found higher serum AFP level before surgery was associated with worse DFS in patients with CRC, even adjusting for tumor stage.
- Besides, we found AFPP-CRC patients with MSI might had a good prognosis, which could help us to guide the treatment for this group of patients

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