



# 分子病理学实验室

## Laboratory for Molecular Pathology

### Micropapillary component in colorectal carcinoma is associated with lymph node metastasis in T1-2 stage and decreased survival time in TNM stage I-II

Fangying Xu, Jinping Xu, Zhongming Lou, Meijuan Di, Fenjuan Wang, Hu Hu, Maode Lai



Am J Surg Pathol, 2009 ,33(9):1287-92.

IF:4.02

#### Introduction

Although micropapillary carcinoma has been reported in several organs including breast, lung, urinary bladder and salivary gland, there are only two previous reports in the colorectum. Micropapillary structure(MP) is identified as tight neoplastic cell tufts which lack central fibrovascular cores and are surrounded by cleft-like spaces. The presence of MP predicted more frequent lymphovascular invasion, lymph node metastasis and distant metastasis, and higher tumor stage. Haupt et al demonstrated that the presence of MP was an independent predictor of regional lymph node metastasis using multivariate regression analysis.

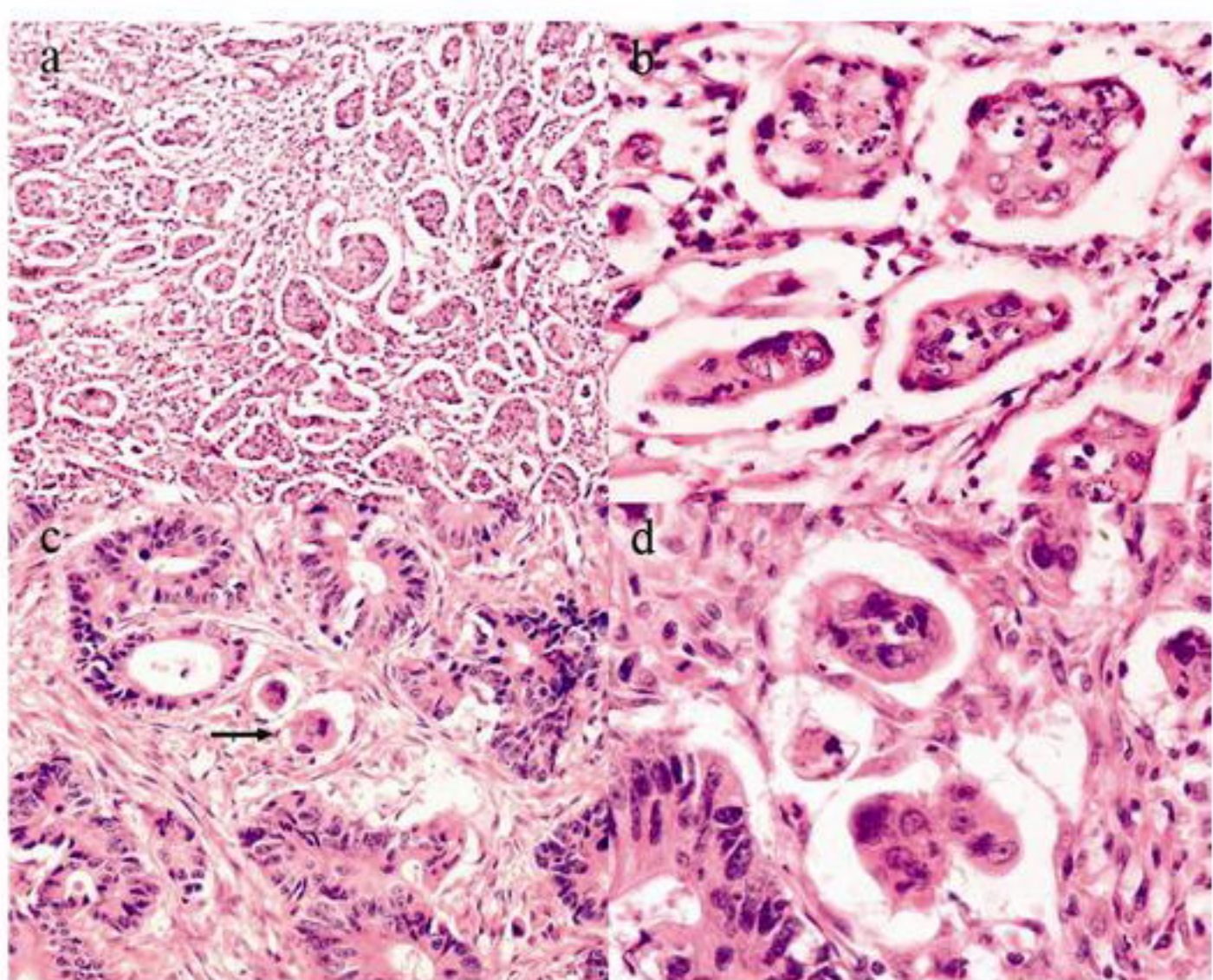
To our knowledge, survival analysis of MP in colorectal carcinoma has not been investigated. In this study, we studied 221 colorectal carcinomas, all with follow-up, to identify differences in pathological and immunohistochemical markers between colorectal carcinoma with and without MP. In addition, we evaluated the prognostic significance of MP as a histological marker, in an attempt to assist clinicians to discriminate patients in the same TNM stage.

#### Materials and Methods

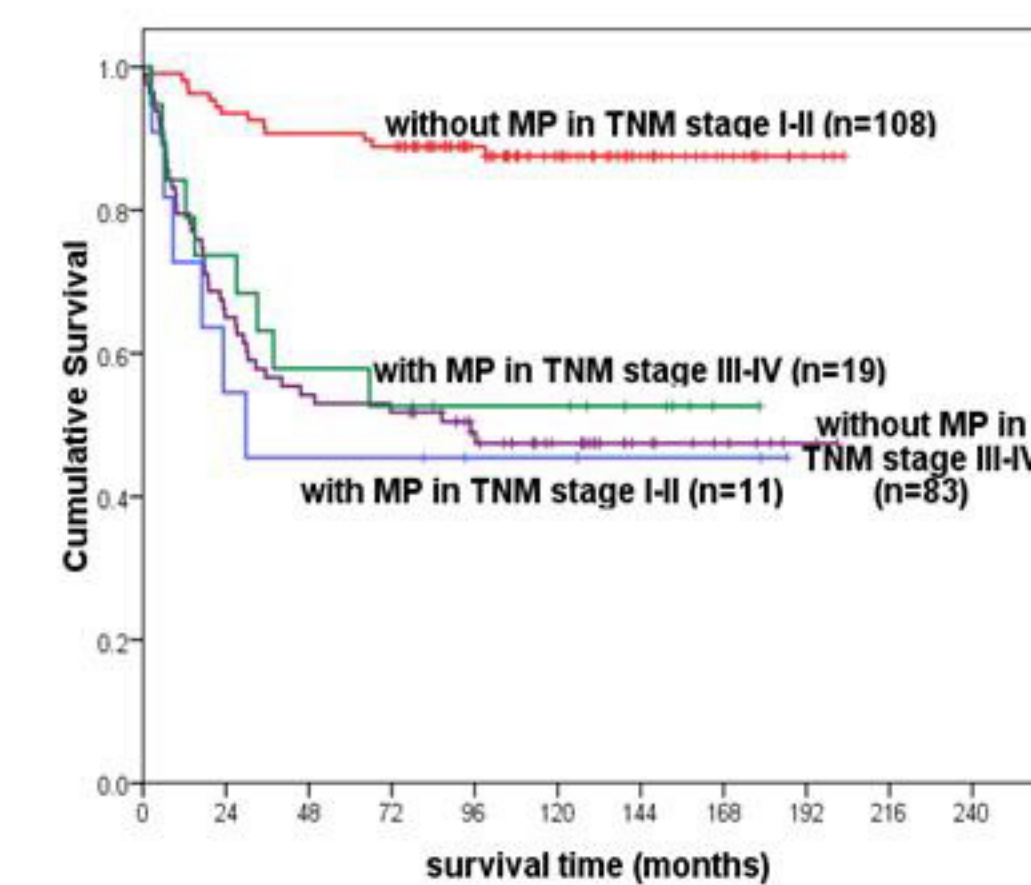
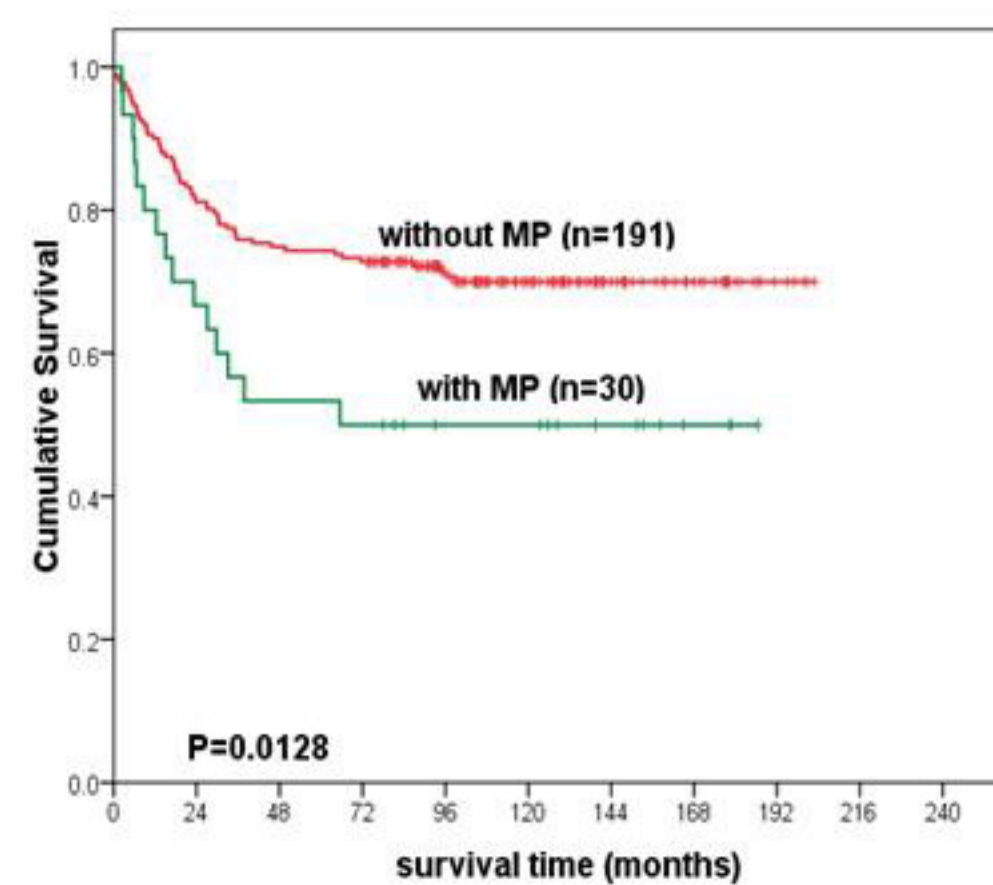
221 patients with colorectal carcinoma, of whom 30 had MP, were from Xiaoshan District, Zhejiang Province, China(follow-up range from 1 to 203 months) . Pathological indicators and immunohistochemical scores of each section were independently evaluated by two pathologists blinded to patient outcome.

Univariate survival analyses were performed and survival curves were constructed using the Kaplan-Meier method. The differences between curves were tested by the log-rank test. Cumulative survival rates were calculated by the life-table method. Multivariate analysis was performed using the COX proportional hazard model and a forward stepwise method was used to bring variables into the model. A significant difference was identified for p values less than 0.05. Comparison of colorectal carcinoma with and without MP was made by  $\chi^2$  test or Fisher's exact test.

#### Results



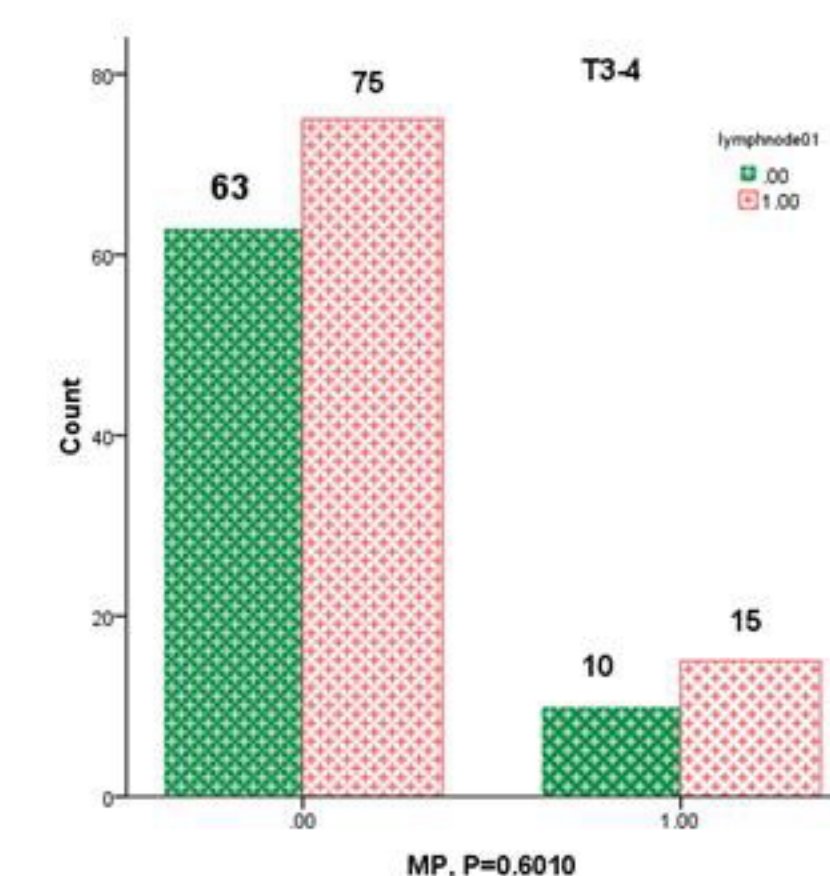
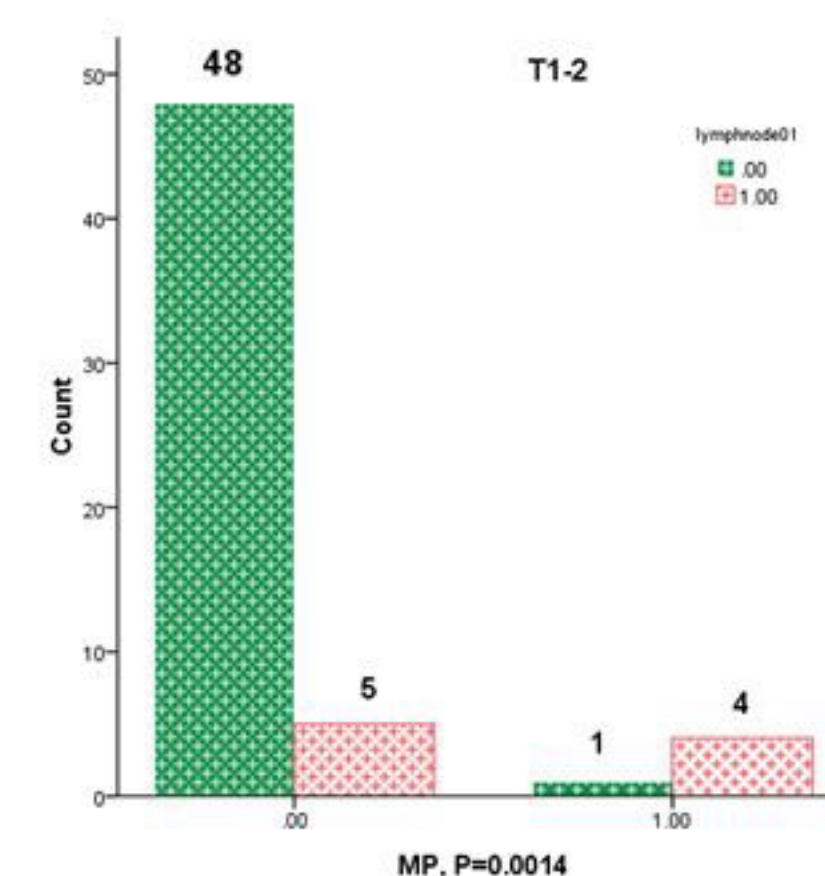
The micropapillary component in colorectal carcinoma. a: Colon carcinoma with micropapillary component (MP) diffusely infiltrates tissue (H&E:  $\times 100$ ). b: MP is defined as tight tufts surrounded by cleft-like space and lacking true fibrovascular cores (H&E:  $\times 400$ ). c: MP in tubular adenocarcinoma (H&E:  $\times 200$ ). d: Tumor cells appear abundant eosinophilic cytoplasm (H&E:  $\times 400$ ).



Survival curves drawn by the Kaplan-Meier method (log-rank test). a: survival curves of 221 patients according to the presence of MP. b: survival curves of patients according to the presence of MP in TNM stage I-II ( $P<0.0001$ ) and TNM stage III-IV ( $P=0.7223$ ). The difference between TNM stage I-II and III-IV in carcinoma with MP is not statistically significant ( $P=0.6062$ ).

The results of multivariate COX proportional hazard model in 119 colorectal carcinomas with TNM stage I-II

variable	RR (95%CI)	P value
MP	8.275(3.027-22.619)	<0.0001
Bcl2	3.064 (1.217-7.718)	0.0175



The presence of micropapillary component predicted more frequent lymph node metastasis in T1-2 stage not in T3-4 stage.

#### Conclusion

In conclusion, the diagnosis of patients with MP would be valuable in identifying high-risk patients in TNM stage I-II. Colorectal carcinoma with MP differs from carcinoma without MP by shorter survival time in TNM stage I-II, more lymph node metastasis in patients with T1-2 stage, more aggressive behavior, and lower differentiation status.