Promoter hypermethylation of *p16* predicts outcome in recurrent early-stage HCC

Patients with hepatocellular carcinoma (HCC) have a poor prognosis mainly because of high rates of recurrence, for which prognostic factors are lacking. Ko and colleagues assessed the role of promoter hypermethylation of genes expressed in HCC as prognostic factors of recurrence.

The authors used a methylation-specific polymerase chain reaction technique to analyze the methylation status of seven genes in tissue samples from 265 patients with HCC obtained at surgical resection. Recurrence developed in 38% of patients ($n = 102$). Promoter hypermethylation of *p14 (CDK2AP2)*, *p15 (CDKN2B)*, *p16 (CDKN2A)*, *GSTP1*, *SYK*, *CDH1* and *integrin α4 (ITGA4)* genes was detected in 6%, 21%, 67%, 75%, 12%, 57% and 23% of the tissue samples, respectively. After adjustment for confounding factors, no associations were observed between promoter hypermethylation of any gene and risk of recurrence. Overall survival and survival after recurrence of stage I to II HCC were very poor in patients whose tumors did not express the p16 protein; however, concomitant expression of p53 did not worsen their prognosis. Patients with recurrent stage I to II HCC and *p16* methylation had significantly worse overall survival than similar patients without *p16* methylation (hazard ratio 4.05). Moreover, the risk of treatment failure was approximately 3.80 times higher in patients with recurrent stage I to II HCC and *p16* methylation compared with such patients without *p16* methylation ($P = 0.04$).

These results suggest that *p16* methylation is associated with poor prognosis after surgery in recurrent, early-stage HCC.

Original article Ko E *et al*. (2008) Promoter hypermethylation of the *p16* gene is associated with poor prognosis in recurrent early-stage hepatocellular carcinoma. *Cancer Epidemiol Biomarkers Prev* **17:** 2260–2267

Right-sided colon cancers have a worse prognosis than left-sided cancers

The incidence of right-sided colon cancers has increased since the 1980s, while the incidence of left-sided colon cancers has decreased. Numerous hypotheses have been proposed to explain this phenomenon but whether right-sided and left-sided colon cancers have a different prognosis is still unclear.

Meguid *et al*. retrospectively analyzed data from the Surveillance, Epidemiology and End Results Program (SEER) to compare survival between patients with right-sided and left-sided colon cancers. A total of 77,978 patients who underwent surgical resection for a first primary adenocarcinoma of the colon were included in the study, of whom 57.1% had right-sided colon cancer and 42.9% had left-sided.

The median survival of all patients studied was 83 months. After diagnosis, patients with right-sided colon cancer had a significantly shorter survival time than those with left-sided colon cancer (78 versus 89 months, respectively). Survival for right-sided colon cancer was significantly shorter than for left-sided colon cancer at 5, 10 and 15 years, respectively ($P < 0.001$ for all comparisons). Right-sided colon cancer was associated with an increased risk of mortality compared with left-sided colon cancer.

The authors conclude that patients with right-sided colon cancer have a worse prognosis than those with left-sided colon cancer, even after adjustment for American Joint Committee on Cancer stage, tumor grade, number of lymph nodes examined, year of diagnosis and patients' demographic variables. Further studies are needed to determine the cause of the observed difference in survival.

Original article Meguid RA *et al*. (2008) Is there a difference in survival between right- versus left-sided colon cancers? *Ann Surg Oncol* **15:** 2388–2394

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