

## **Prognostic value of P53 for colorectal cancer after surgical resection of pulmonary metastases**

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**PURPOSE:** Pulmonary metastases occur in up to 25% of colorectal cancer (CRC) patients. Many studies have reported that pulmonary metastasectomy might increase 5-year survival of these patients. The aim of this study was to describe our experience with pulmonary metastasectomy for metastatic colorectal cancer and to explore the prognostic value of P53 overexpression and other factors.

**METHODS:** Between June, 2002 and December 2013, the clinicopathological data of 88 patients who underwent complete pulmonary resection of metastatic colorectal carcinoma were retrospectively reviewed and analyzed. Clinical, investigative and operative data, and expression of P53 were prospectively collected. Immunohistochemical staining for P53 was performed on paraffin-embedded 5-um sections using mouse anti-human P53 monoclonal mutant protein (DO-7, Dako, Denmark). Overall survival (OS) was calculated from resection of pulmonary metastases to death.

**RESULTS:** There were 58 men and 30 women in this study, and their median age was 55 (range: 31 to 85). Video-assisted thoracoscopic surgery (VATS) was performed in 59 cases (78%) and 29 patients (19%) underwent thoracotomy. Lung wedge resection and pulmonary lobectomy were performed in 52 (59.1%) and 36 patients (40.9%), respectively. After a median follow-up duration of 44 months, the cumulative 5-year survival was 45.4%, and the median overall survival was 57.8 months. A significantly longer survival was observed in patients with normal Preoperative serum C-reactive protein (CRP) level compared with those with CRP level exceeding 10mg/L (62.6 months vs 34.3 months,  $p=0.011$ ). The expression of P53 also significantly influenced survival. In patients with P53 protein overexpression, we observed a median OS of 46.1 months, whereas the median OS of patients with negative protein expression of P53 was 62.6 months ( $p=0.047$ ). In multivariate analysis, preoperative CRP level and P53 protein expression were found to be independent significant prognostic factors for survival.

**CONCLUSIONS:** Pulmonary resection of metastatic colorectal cancer might offer a chance to prolong survival including those patients with other metastases. Preoperative serum CRP level and P53 protein expression were identified as prognosis-related factors for surgery.