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## Expression of Mina53, a novel c-Myc target gene, is a favorable prognostic marker in early stage lung cancer

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## Abstract

Mina53, a novel target gene product of c-Myc, is overexpressed in various malignancies. We previously demonstrated that Mina53 is overexpressed in lung cancer patients from the early clinical stages. In this paper, the association between disease prognosis and Mina53 expression in lung cancer patients is analyzed; we found that overexpression of Mina53 in lung cancer patients is associated with favorable prognosis. Statistical analysis using the Kaplan–Meier method showed that patients with negative staining for Mina53 had significantly shorter survival than patients with positive staining for Mina53, especially in stage I or with squamous cell carcinoma. Because the major cause of death in lung cancer patients after surgery is distant metastasis, the effect on cancer cell invasiveness was analyzed for the mechanisms involved in the association with favorable outcome. Overexpression of Mina53 in H226B, a lung squamous cell carcinoma cell line, inhibited cancer cell invasion. Transfection with *mina53* shRNA increased the number of invading cells. These results suggest that Mina53 immunostaining is a useful prognostic marker – especially in the early stage of lung cancer – and that Mina53 negative patients should be managed particularly carefully after surgery.

## Keywords

- [Mina53](#)
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