S-100B PREDICTS SURVIVAL IN MELANOMA

Melanoma incidence is increasing in the Netherlands and disease recurrence and metastases are common after surgical treatment. Serum lactate dehydrogenase (LDH) has been found to be an independent prognostic factor in stage IV melanoma. The S-100B protein has also been shown to be a tumor marker for recurrence in stage III and IV melanoma. Kruijiff and colleagues carried out a study to investigate whether perioperative measurement of S-100B had prognostic value in patients with stage III melanoma who were selected for therapeutic lymph-node dissection.

Between January 2004 and January 2008, 56 patients with stage III melanoma and palpable lymph-node metastases underwent therapeutic lymph-node dissection. S-100B and LDH levels were measured the day before surgery and on days 1, 2 and 7 postoperatively.

Preoperatively, 48% of patients had elevated S-100B concentration and 36% had increased LDH levels. No association was found between S-100B and LDH levels on the day before surgery or 1, 2 and 7 days after surgery.

Tumor recurrence was diagnosed in 43% of patients during the median follow-up of 14.2 months. In patients with elevated preoperative S-100B levels, 2-year DFS was 34% compared with 61% in patients without elevated preoperative S-100B levels. In patients with increased postoperative S-100B, 2-year DFS was 30% compared with 51% in patients without postoperative S-100B increase. Multivariate analysis revealed that elevated preoperative S-100B concentration was significantly associated with decreased DFS.

This study demonstrates a potential prognostic value of preoperative S-100B level in patients who underwent therapeutic lymph-node dissection. "S-100B could be used to select patients for adjuvant systemic treatment in the stratification for new therapeutic trials" commented the researchers.

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Original article Kruijiff, S. *et al.* S-100B concentrations predict disease-free survival in stage III melanoma patients. *Ann. Surg. Oncol.* **16**, 3455–3462 (2009)