

Cutaneous squamous cell carcinoma risk factors: Are current criteria still valid? - A retrospective, monocenter analysis

Maike Kaufhold , Sepideh Asadi , Yalda Ghoreishi , Annika Brekner , Stephan Grabbe , Henner Stege; Universitätsmedizin Mainz and Hadrian Nassabi; SRH Wald-Klinikum Gera

Introduction: Cutaneous squamous cell carcinoma (cSCC) is the second most common skin cancer entity in Germany, following basal cell carcinoma. Its incidence has increased fourfold over the past three decades. Early diagnosis and treatment are essential for achieving favorable outcomes. Our study aims to identify prognostic factors based on real-world data to improve follow-up protocols and raise clinical vigilance.

Methods: We conducted a retrospective, monocenter analysis with a total of 124 patients with at least one cSCC thicker than 3mm, treated at the Department of Dermatology, University Medical Center Mainz, between 2010 and 2020. Tumor-specific criteria were correlated with patient-specific data, such as gender, age, immunosuppression,

UV-exposure and mortality.

Results: A higher incidence of cSCC was found on UV-exposed skin (91.1%); however, tumors on non-UV-exposed skin were in average thicker (6.55mm vs. 9.25mm, $p = 0.011$) and associated with higher metastasis rates (10.6% vs. 63.3%, $p < 0.001$, Figure 1). The development of metastases had a notable impact on 5Y-OS (Figure 2). Patients without metastases had a significantly higher 5Y-OS rate of 83.9%, compared to 46.1% in those with metastases

Immunosuppression was strongly associated with a younger age at diagnosis (74 years vs. 81 years), a higher metastasis rate (29% vs. 10.8%, $p = 0.021$) and a worse 5Y-OS-rate (36.1% vs. 97.8%, $p = 0.04$, Figure 3). SLNB was performed in 8 patients, with one positive SLN identified (12.5%). Local recurrence was observed in 18.1% ($n = 21$) of patients who did not experience SLNB, whereas no local recurrences (0%) were reported in patients

with SLNB ($n = 0.349$).

Discussion: Tumors on non-UV-exposed areas were thicker and more often metastatic, suggesting delayed detection or more aggressive tumor subtypes. Immunosuppression was associated with worse outcomes, underscoring the need for intensified follow-up. SLNB was rarely performed, larger studies are needed to assess its role.

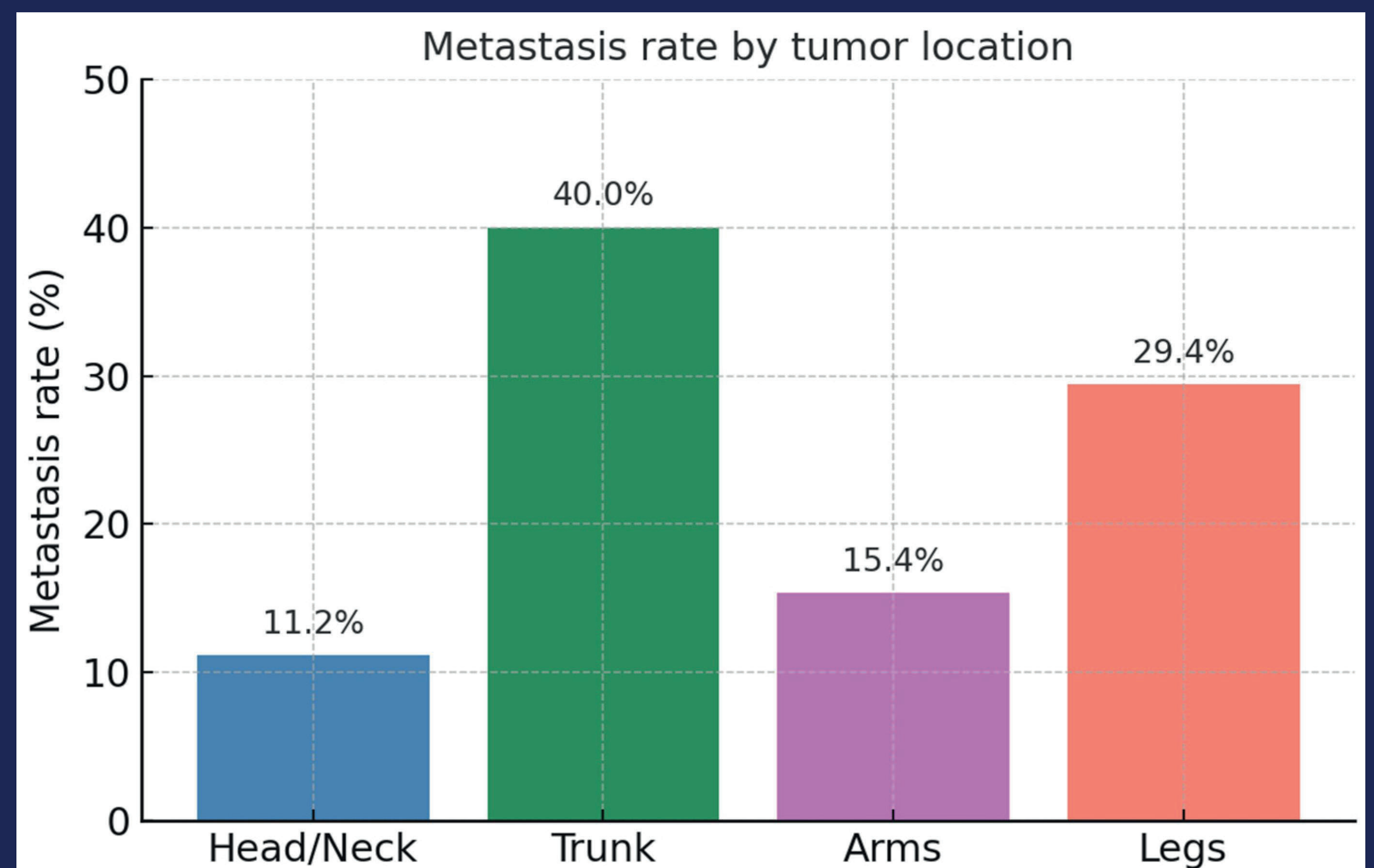


Figure 1 – Metastasis rate according to tumor location

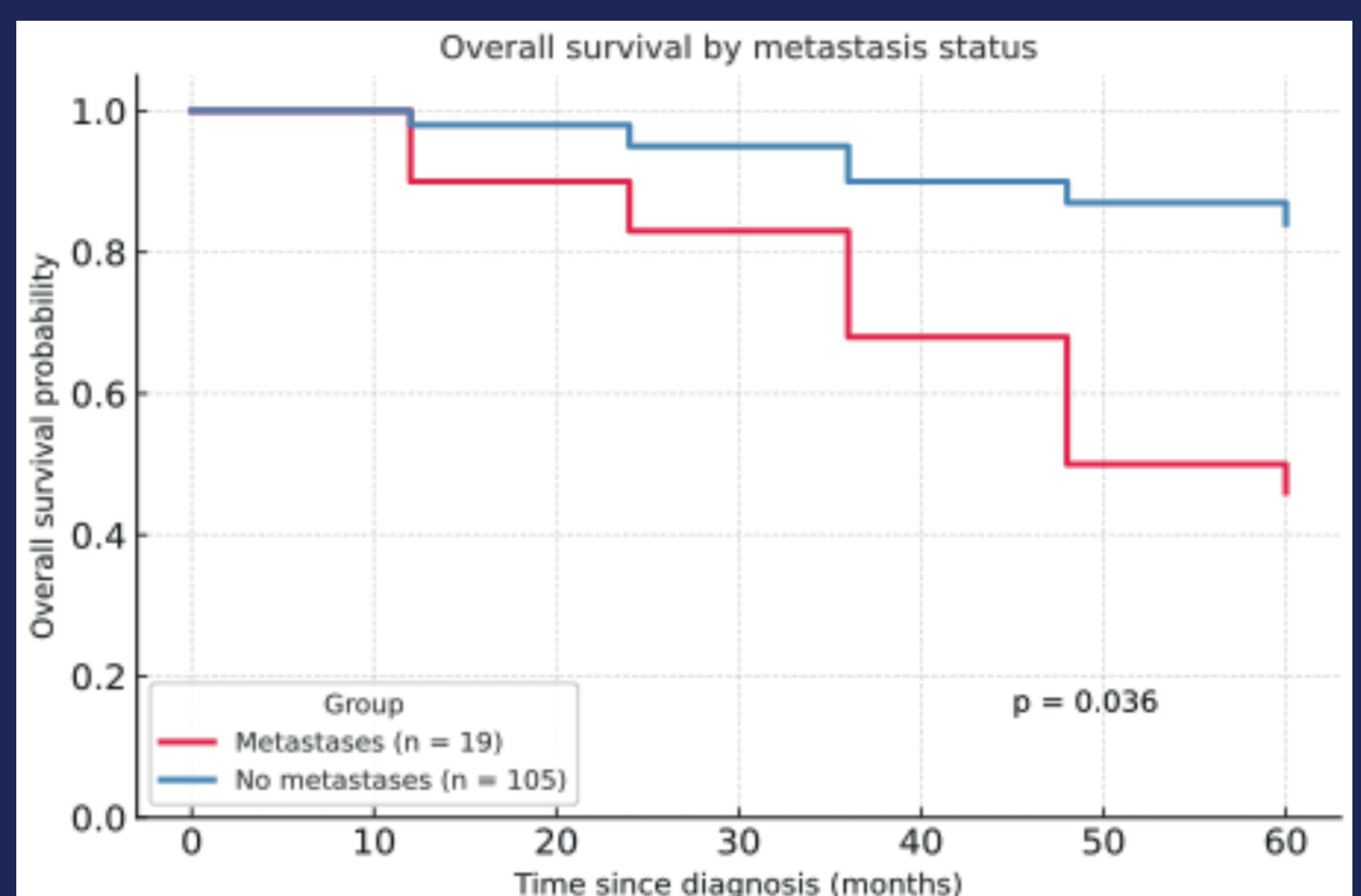


Figure 2 – Overall survival in metastatic patients

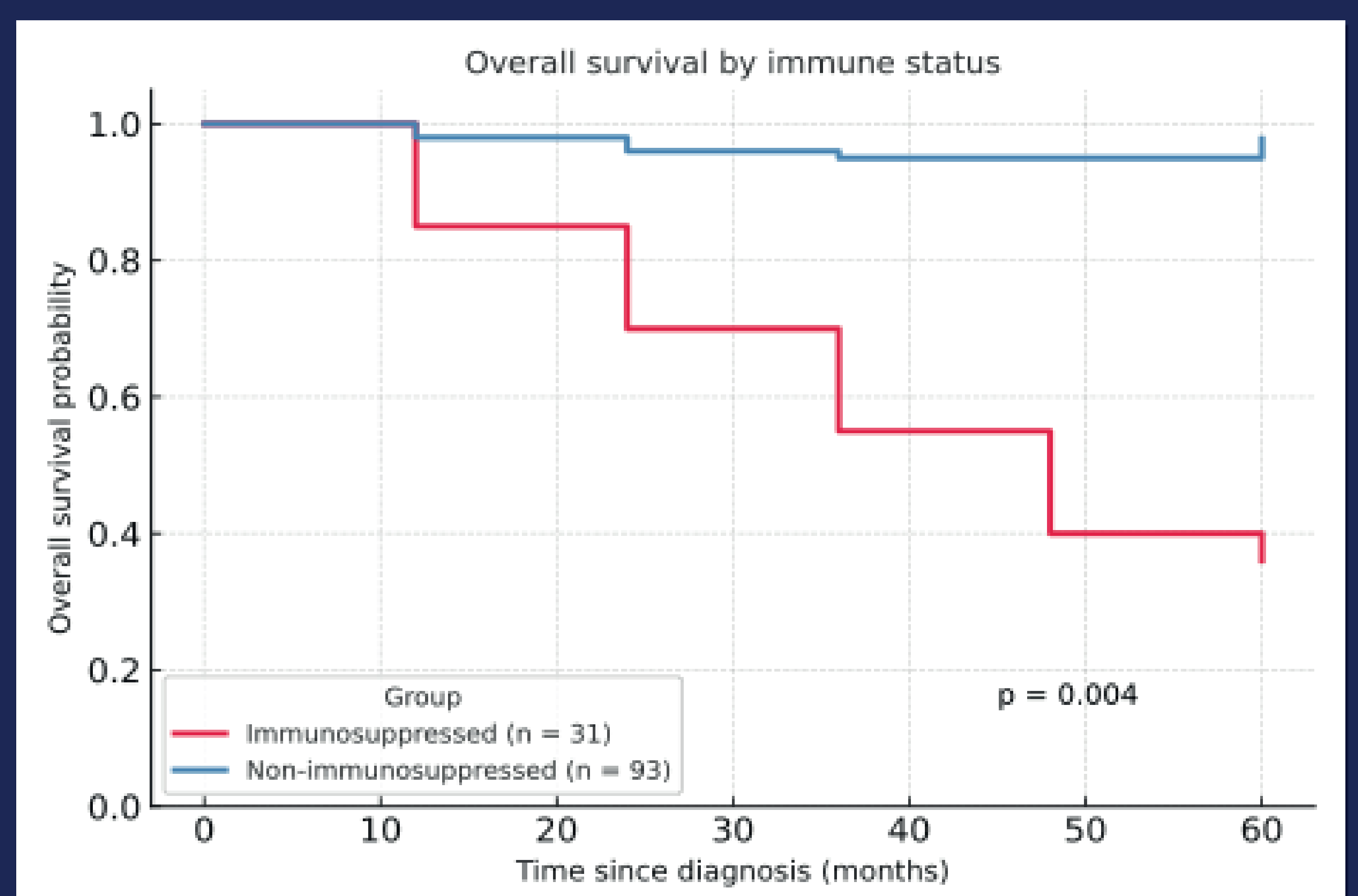


Figure 3- Overall survival in immunosuppressed patients