Squamous cell carcinoma is a common cutaneous lesion of the scalp. Standard treatment protocols are effective in managing most lesions. We report 8 unique cases of squamous cell carcinoma of the scalp that behaved in an unusually aggressive manner for its histologic grade. We describe the intensive treatment of this aggressive phenomenon, which may be encountered in one’s head and neck practice.

**Discussion**

Cutaneous lesions of the scalp are a common presentation in head and neck surgery. Skin cancers of the scalp can have a propensity to spread, due to the subgaleal plane that provides limited resistance. At the peristomal level, tumor spread can go for unexpected distances. Furthermore, its vigorous blood supply and dense lymphatics create further potential for spread of disease, making the scalp a high-risk site.

High histologic grade in addition to size and depth of invasion had previously been associated with worse biologic behavior in squamous cell carcinoma. In the setting of Mohs micrographic excision, Broedlan and Zitelli cite that lower grade squamous cell carcinoma tumors require a 4mm margin, whereas high histologic grade tumors require a 6mm margin for improved clearance rates.

In this patient series we review 6 cases of well to moderately well-differentiated squamous cell carcinomas of the scalp. These cases fell in the low histologic grade category. However, within this series we identify biologic behavior that goes against this grading system. Patients 1, 2, 4, and 5 had gross bony invasion by the tumor. The cases in this series were biologically aggressive that far exceeded the low histologic grade lesions. If locally aggressive features are suspected, then the lesion must be treated aggressively with wide excision, clear margins, including involved calvarium, defect repair, and adjuvant radiation therapy.

Histologic analysis of the primary specimen, widely excised and deep margins that included bone in 4 out of 6 of our patients was performed with hematoxylin and eosin, demonstrating bony invasion (Figure 1). In the setting of Keratin pearls and minimal pleomorphism consistent with well-differentiated squamous cell carcinoma (Figure 3).

**Conclusion**

Unusually aggressive squamous cell carcinoma of the scalp may behave aggressively; including bony invasion and recurrence at the primary site, despite low histologic grade. The clinician should be aware that these locally aggressive features, are not necessarily associated with worse biologic behavior. If locally aggressive features are suspected, then the lesion must be treated aggressively with wide excision, clear margins, including involved calvarium, defect repair, and adjuvant radiation therapy.