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Applications of Surgical Navigation in Head and Neck Cancer Management

Spatial precision is of paramount importance in head and neck cancer management, since a number of functional structures and tissues are densely located in every anatomical site lying from the clavicles to the skull base. The challenge of being precise from a topographic, spatial standpoint characterizes several steps of care in patients affected by head and neck malignancies, including pre-treatment staging, surgery, and post-operative therapy. Surgical navigation systems represent a relatively accessible technology and can be exploited to increase spatial precision in cancers arising in bone-rich areas of the head and neck. Two main applications of surgical navigation will be discussed with these regards: 1) surgical navigation-aided delineation of margins and 2) surgical navigation-based mapping of tissue samples to support inter-disciplinary communication and guide post-operative therapy.

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手术导航在头颈部肿瘤治疗中的应用

由于从锁骨到颅底的每个解剖部位都密集分布着许多功能结构和组织，因此空间精度在头颈癌的治疗中至关重要。从位置和空间的角度来看，头颈部恶性肿瘤患者的几个治疗步骤包括治疗前分期、手术和术后治疗都面临着精确性挑战。手术导航系统是一种相对容易获得的技术，可以用于提高头颈部骨骼密集区域肿瘤手术的空间精度。我们将对手术导航的两个主要应用进行如下讨论:1)手术导航辅助切缘划定; 2)用以支持跨学科交流和指导术后治疗的、基于手术导航的组织样本映射。

