

# Towards Fluorescence-Guided Head and Neck Cancer Surgery



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Fluorescence imaging is currently the single most promising new technique in surgical oncology. Fluorescence-guided cancer surgery provides real-time intraoperative optical feedback on tumor margins and could therefore revolutionize surgical outcomes and patient survival. This thesis focuses on current modalities and cancer targeting strategies of fluorescence-guided head and neck cancer surgery. It was demonstrated in preclinical studies that head and neck tumors could be detected by targeting various hallmarks of cancer. The fundamental limitations of the technique are explained and future perspectives on its use are provided. When practical and technical surgical issues are considered with care, fluorescence imaging can be a very powerful intraoperative tool in guiding the future head and neck surgeon towards radical resection and optimal clinical results.

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