Computer assisted surgery

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Computer-assisted surgery is an evolving technology that allows real-time anatomic navigation during endoscopic surgery by linking preoperative triplanar radiologic images and intraoperative endoscopic views, thus helping the surgeon avoid damage to vital structures. Preoperative computed tomography is the preferred modality to show bone landmarks and vascular structures. Radiologists play an important role in surgical planning by reporting extension of sphenoid pneumatization, recesses and septations of the sinus, and other relevant anatomic variants. Radiologists should understand the relationships of the sphenoid bone and skull base structures, anatomic variants, and image-guided neuronavigation techniques to prevent surgical complications and allow effective treatment of skull base lesions with the endoscopic endonasal transsphenoidal approach [1].

1)
García-Garrigós E, Arenas-Jiménez JJ, Monjas-Cánovas I, Abarca-Olivas J, Cortés-Vela JJ, De La Hoz-Rosa J, Guirau-Rubio MD. Transsphenoidal Approach in Endoscopic Endonasal Surgery for Skull Base Lesions: What Radiologists and Surgeons Need to Know. Radiographics. 2015 Jun 5:140105. [Epub ahead of print] PubMed PMID: 26046941.