

Second Window Indocyanine Green

Second Window [Indocyanine Green](#) (SWIG) is a novel technique for real-time, intraoperative tumor visualization using a high dose infusion of Indocyanine Green (ICG) 24 hours before surgery. Due to pathologic diversity found in the [pineal region](#), tissue diagnosis in patients with pineal region mass is essential to optimize further clinical management.

Case reports

Cho et al. presented a case of a 75-year-old woman with known pineal region [mass](#) for 18 years, who presented with progressive classic signs and symptoms of [obstructive hydrocephalus](#) over the past six months. The preoperative imaging confirmed a contrast-enhancing [pineal region tumor](#), which appeared to be obstructing the [aqueduct of Sylvius](#), causing proximal obstructive hydrocephalus. 5mg/kg of [ICG](#) was delivered intravenously 24 hours before the surgery. The patient underwent an [endoscopic third ventriculostomy](#) and a [biopsy](#) of the [pineal](#) lesion. The [tumor](#) demonstrated clear near-infrared fluorescence which was distinct from surrounding [third ventricle floor](#) and [ependyma](#). The signal to background ratio was 2.9. The final pathology report revealed a WHO Grade I [pineocytoma](#).

They reported on a novel application of near-infrared [fluorescence](#) for tumor identification of [pineal region tumors](#), using the Second Window ICG technique ¹⁾.

¹⁾

Cho A, Cho SS, Buch VP, Buch LY, Lee JYK. Second Window ICG Near Infrared Fluorescent TransVentricular Biopsy of a Pineal Tumor: A Case Report with a 2-Dimensional Operative Video. World Neurosurg. 2019 Oct 26. pii: S1878-8750(19)32741-X. doi: 10.1016/j.wneu.2019.10.113. [Epub ahead of print] PubMed PMID: 31669685.

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