

MORE INFORMATION. MORE SECURITY.
GUIDING NEUROSURGEONS WITH CONFIDENCE.

NEW 4 MM
ENDOSCOPES



NIR/ICG Fluorescence Imaging, Helping Neurosurgeons to Create a New Standard of Care

NIR/ICG, an IMAGE1 S™ technology, enables live visualization of structural landmarks beneath the tissue surface with no latency using near-infrared (NIR) imaging to detect indocyanine green (ICG) distribution within the tissue.

NIR/ICG provides:

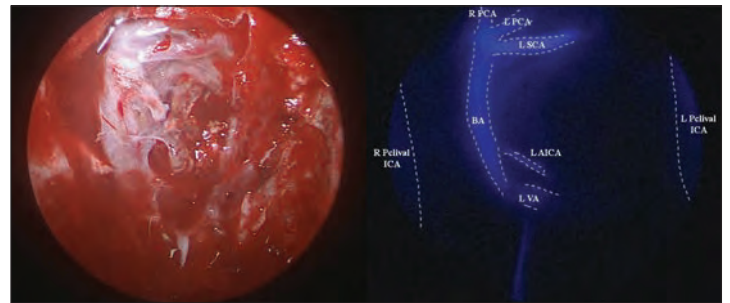
- Better intraoperative understanding¹
- Real-time assessment of blood flow of vasculatures²
- A tool to assist in identifying the critical vascularity when anatomical landmarks are gone¹

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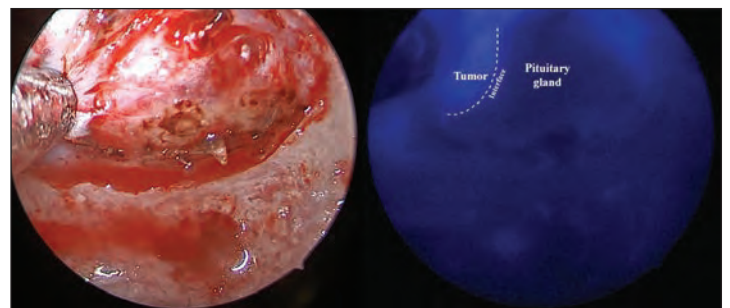
With NIR/ICG it's possible to:

- Significantly reduce errors^{2,3}
- Differentiate tissue planes between lesions & adjacent structures^{4,5}
- Evaluate tissue perfusion intraoperatively⁶
- Accurately predict flap viability⁶
- Reduce incomplete aneurysm clipping^{2,3,7}

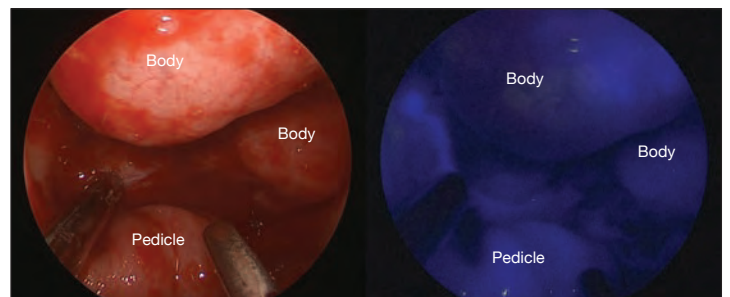
Ordering Information: NIR/ICG Neuroscopes	
28164 AC	Telescope 0°, ICG, 4 mm, 18 cm, autoclavable
28164 BC	Telescope 30°, ICG, 4 mm, 18 cm, autoclavable
28164 FC	Telescope 45°, ICG, 4 mm, 18 cm, autoclavable
Ordering Information: NIR/ICG System Components	
IMAGE1S-H3-KT	Kit, IMAGE1 S™ HD CCU with H3-Link, keyboard + adapter
TH102	IMAGE1 S™ H3-Z FI Camera Head
20133701-1	D-light P 300 Watt Xenon Light Source
495NAC-NSM	Light Cable, 3.5 x 250 cm, heat resistant
Under Development	Cart
VTG-0001	ICG IV Drug (Pkg of 6 vials)



Critical Neurovascular Structures



Tissue Planes



Flap Perfusion

1. Hide T, Yano S, et al. Usefulness of the indocyanine green fluorescence endoscope in endonasal transsphenoidal surgery. *J Neurosurg*. 2015 May;122(5):1185-92. Published online February 27, 2015. doi: 10.3171/2014.9.JNS14599
2. Yoshioka H, Kinouchi H. The roles of endoscope in aneurysmal surgery. *Neurol Med Chir (Tokyo)* 2015;55(6):469-478. doi:10.2176/nmc.ra.2014-0428
3. Catapano G, Sgulò FG, Laleva LN, et al. (2017). Multimodal use of indocyanine green endoscopy in neurosurgery: a single-center experience and review of the literature. *Neurosurg Rev*, 1-14
4. Nakassa ACI, P. Gardner P, et al. Usefulness of indocyanine green fluorescence endoscopy for intraoperative differentiation of intracranial tumors and adjacent structures. *J Neurol Surg B* 2017; 78(S 01): S1-S156. doi: 10.1055/s-0037-1600677
5. Inoue A, Ohnishi T, et al. Usefulness of an image fusion model using three-dimensional CT and MRI with indocyanine green fluorescence endoscopy as a multimodal assistant system in endoscopic transsphenoidal surgery. *Int J Endocrinol*, vol. 2015, Article ID 694273, 10 pages, 2015. <https://doi.org/10.1155/2015/694273>
6. Geltzeiler M, Igami Nakassa AC, et al. Evaluation of intranasal flap perfusion by intraoperative indocyanine green fluorescence angiography. *Oper Neurosurg*, Mar 13, 2018 (advance publication). <https://doi.org/10.1093/ons/opy002>
7. Mielke D, Malinova V, Rohde V. Comparison of intraoperative microscopic and endoscopic ICG angiography in aneurysm surgery. *Neurosurgery*. 2014 Sep;10 Suppl 3:418-25; discussion 425. doi: 10.1227/NEU.00000000000000345

It is recommended to check the suitability of the product for the intended procedure prior to use.



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Caution: Federal (USA) law restricts this device to sale by or on the order of physician.

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