

Supplementary Table 2: Perfusion assessment in upper GI surgery

Table with columns: Ref No., Author, Country, Journal, Year, Study design, Patient selection, N (cases), Fluorographic agent, Dose, Imaging techniques, Route, Timing, Imaging system, Quantitative measurement, Main endpoints, Imaging accuracy/success rate, Endpoint measures (Clinical impact, change in intraoperative decision-making, Clinical impact, advantages in postoperative outcomes), Adverse effects, Learning curve, Cost analysis, Other comments, Ref. detail.

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Ref. No.	Author	Country	Journal	Year	Study design	Patient selection Subject	N (cases)	Fluorographic agent	Dose	Imaging techniques Route	Timing	Imaging system	Quantitative measurement	Main endpoints	Imaging accuracy/success rate	Endpoint measures Clinical impact, changes in intraoperative decision-making	Clinical impact, advantages to postoperative outcomes Patient compliance, patient satisfaction	Adverse effects	Learning curve	Cost analysis	Other comments	Ref. detail
29	Dahm	US	Am J Surg	2018	Retrospective	Minimally invasive Ivo Lewis esophagectomy	40 (20 received ICG-VA and 20 did not receive ICG-VA)	ICG	7.5 mg	IV	Unclear (the implication is that this was vascularised after anastomosis)	Fu/Paint (Neovision)NA	Ascus blood supply to gastric conduit to reduce anastomotic leakage	NA	ICG-VA prompted resection in six out of 20 cases (30%)	Temperature did not vary between the two groups; anastomotic leakage occurred in two patients (10%) who received ICG-VA, no leakage developed in patients who did not receive ICG-VA	NA	NA	NA	ICG-VA did not reduce leakage rate in Surg. 2018; Sep; 21(6):524-527. doi: 10.1016/j.amjsurg.2017.11.026.	Dahm HA, Ali AA, Cuschak M, Avast ZT. Am J Surg. 2018; Sep; 21(6):524-527. doi: 10.1016/j.amjsurg.2017.11.026.	
30	Noma	Japan	J Am Coll Surg	2018	Retrospective	Esophagectomy with gastric conduit reconstruction	285 (71 received ICG-VA and 214 did not receive ICG-VA)	ICG	12.5 mg	IV	After cervical lymph node dissection	PDFI (Fluorimetry Phosor)NA	Ascus blood supply to gastric conduit to avoid complications	NA	NA	One patient in the ICG group and one patient in the non-ICG group died	One patient in the ICG group and one patient in the non-ICG group died	NA	NA	NA	Noma K, Shirakawa Y, Kasuya N, Okada T, Maeda S, Niimura T, Tanabe S, Sakurama K, Fujiwara T. J Am Coll Surg. 2018; Mar; 226(3):241-251. doi: 10.1016/j.jamcollsurg.2017.11.007.	Noma K, Shirakawa Y, Kasuya N, Okada T, Maeda S, Niimura T, Tanabe S, Sakurama K, Fujiwara T. J Am Coll Surg. 2018; Mar; 226(3):241-251. doi: 10.1016/j.jamcollsurg.2017.11.007.
31	Kitagawa	Japan	Surg Endosc	2018	Retrospective	Esophagectomy with gastric tube reconstruction	72	ICG	5mg + 10 mL saline	IV	Before (n=40) and after (n=26) gastric tube creation	HyperEye Medical System (HEMS)	NA	Ascus blood supply to gastric tube	NA	NA	Seven patients (9.7%) experienced anastomotic leakage	NA	NA	NA	Kitagawa H, Yamamoto I, Yoshida J, Fujiwara K, Uemura S, Tada S, Hamada K. Surg Endosc. 2018; Apr; 32(4):1749-1754. doi: 10.1007/s00464-017-0457-7.	Kitagawa H, Yamamoto I, Yoshida J, Fujiwara K, Uemura S, Tada S, Hamada K. Surg Endosc. 2018; Apr; 32(4):1749-1754. doi: 10.1007/s00464-017-0457-7.
32	Huh	Korea	J Laparoendosc Adv Surg Tech A	2019	Prospective	Laparoscopic gastrectomy for gastric cancer	30	ICG	2.5-5.0 mg	IV	After anastomosis	Image 1 SPiES (Karl Storz)	Trends of fluorescence intensity (perfusion score of 1 to 5)	Ascus blood perfusion	76.7% (23 out of 30 patients)	No changes in the surgical plan	Only one case of anastomotic leakage occurred; one case of stenosis and one case of fluid collection	NA	NA	NA	Huh YJ, Lee HJ, Kim TH, Choi YS, Park JH, Son YG, Suh YS, Kwon SH, Yang HK. J Laparoendosc Adv Surg Tech A. 2019; Apr; 29(4):76-83. doi: 10.1007/s00464-018-0263-3.	Huh YJ, Lee HJ, Kim TH, Choi YS, Park JH, Son YG, Suh YS, Kwon SH, Yang HK. J Laparoendosc Adv Surg Tech A. 2019; Apr; 29(4):76-83. doi: 10.1007/s00464-018-0263-3.
33	Di Fazio	Italy	Obes Surg	2019	Retrospective	Laparoscopic sleeve gastrectomy	43	ICG	5 mL	IV	After construction of the gastric sleeve	QPALA1 (Karl Storz)NA	NA	Ascus blood supply to the gastric tube	NA	NA	One patient experienced gastric leak	NA	NA	NA	Di Fazio M, Romano L, Schiavone S, Brambilla D, Lomanto D, Cuccia G, Schiavone M, Carle F, Galliani A. Obes Surg. 2019; Dec; 29(12):3786-3790. doi: 10.1007/s11695-019-04805-3.	Di Fazio M, Romano L, Schiavone S, Brambilla D, Lomanto D, Cuccia G, Schiavone M, Carle F, Galliani A. Obes Surg. 2019; Dec; 29(12):3786-3790. doi: 10.1007/s11695-019-04805-3.
34	Onai	Italy	Obes Surg	2019	Case report	Modified sleeve gastrectomy with laparoscopic Roux-Y	1	ICG	NA	IV	After removal of the bougie	Image 1 SPiES (Karl Storz)	NA	Ascus vascularization of the staple line	100%	Intraoperative course was uneventful	Postoperative course was uneventful	None	NA	NA	Onai S, Uzzelli M. Obes Surg. 2019; Sep; 29(9):3036-3038. doi: 10.1007/s11695-019-01970-w.	Onai S, Uzzelli M. Obes Surg. 2019; Sep; 29(9):3036-3038. doi: 10.1007/s11695-019-01970-w.
35	Ishige	Japan	J Surg Res	2019	Prospective	Esophagectomy with gastric conduit reconstruction	20	ICG	1.25 mg	IV	Three times before dissecting the prepyloric vessels, after formation of the gastric tube, and before intrathoracic or cervical esophagectomy-gastrectomy	Olympus (no other details given)	ROGA software	Quantitative measurement of perfusion in the gastric conduit	NA	NA	No leakage developed in any of the patients; five cases (25%) had postoperative complications but no anastomotic stenosis or death	NA	NA	NA	Ishige F, Nishiyama Y, Hoshino I, Takayama W, Chiba S, Aomoto H, Iwama Y, Yamaguchi H. J Surg Res. 2019; Feb; 234:105-110. doi: 10.1016/j.jss.2018.08.056.	Ishige F, Nishiyama Y, Hoshino I, Takayama W, Chiba S, Aomoto H, Iwama Y, Yamaguchi H. J Surg Res. 2019; Feb; 234:105-110. doi: 10.1016/j.jss.2018.08.056.

NA, not available or not assessed