

# Doppler Blood Flow Monitoring System clinical data summary

Below are clinical studies that highlight the various benefits of the Doppler Blood Flow Monitoring System.  
**Click on each source below to view the abstract or article.**

Sources	Topics addressed								
	Flap location	Buried flaps	Early detection	Improved salvage rate	Venous monitoring	Arterial monitoring	Cost	Meta analysis	Importance of healthcare education
1. Frost MW, Niumsawatt V, Rozen WM, et al. Direct comparison of postoperative monitoring of free flaps with microdialysis, implantable Cook-Swartz Doppler probe, and clinical monitoring in 20 consecutive patients. <i>Microsurgery</i> . 2015;35(4):262-271. <a href="https://doi.org/10.1002/micr.22331">https://doi.org/10.1002/micr.22331</a>	HN, LE, BR	X	X	X	X				
2. Schmulder A, Gur E, Zaretski A. Eight-year experience of the Cook-Swartz Doppler in free-flap operations: microsurgical and reexploration results with regard to a wide spectrum of surgeries. <i>Microsurgery</i> . 2011;31(1):1-6. doi: 10.1002/micr.20816. <a href="https://doi.org/10.1002/micr.20816">https://doi.org/10.1002/micr.20816</a>	HN, BR, UE		X	X			X		
3. Chang TY, Lee YC, Lin YC, et al. Implantable Doppler probes for postoperatively monitoring free flaps: efficacy. A systematic review and meta-analysis. <i>Plast Reconstr Surg Glob Open</i> . 2016;4(11):e1099. <a href="https://doi.org/10.1097/GOX.0000000000001099">https://doi.org/10.1097/GOX.0000000000001099</a>	HN, UE, LE, BR	X	X	X	X	X	X	X	
4. Lenz Y, Gross R, Penna V, et al. Evaluation of the implantable Doppler probe for free flap monitoring in lower limb reconstruction. <i>J Reconstr Microsurg</i> . 2018;34(3):218-226. <a href="https://doi.org/10.1055/s-0037-1608628">https://doi.org/10.1055/s-0037-1608628</a>	LE	X	X	X	X		X		X
5. Wax MK. The role of the implantable Doppler probe in free flap surgery. <i>Laryngoscope</i> . 2014;124 (suppl 1):S1-S12. <a href="https://doi.org/10.1002/lary.24569">https://doi.org/10.1002/lary.24569</a>	HN	X	X	X		X	X		X
6. Um GT, Chang J, Louie O, et al. Implantable Cook-Swartz Doppler probe versus Synovis flow coupler for the post-operative monitoring of free flap breast reconstruction. <i>J Plast Reconstr Aesthet Surg</i> . 2014;67(7):960-966. <a href="http://dx.doi.org/10.1016/j.bjps.2014.03.034">http://dx.doi.org/10.1016/j.bjps.2014.03.034</a>	BR		X		X	X	X		
7. Teven CM, Ooi ASH, Inbal A, et al. Implantable Doppler monitoring of buried free flaps during vascularized lymph node transfer. <i>J Surg Oncol</i> . 2017;116(3):371-377. <a href="https://doi.org/10.1002/jso.24655">https://doi.org/10.1002/jso.24655</a>	LN	X	X	X	X				
8. Ho MW, Cassidy C, Brown JS, et al. Rationale for the use of the implantable Doppler probe based on 7 years' experience. <i>Br J Oral Maxillofac Surg</i> . 2014;52(6):530-534. <a href="http://dx.doi.org/10.1016/j.bjoms.2014.03.014">http://dx.doi.org/10.1016/j.bjoms.2014.03.014</a>	HN	X	X		X	X			X

HN: head and neck UE: upper extremity LE: lower extremity BR: breast LN: lymph node

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	Flap location	Buried flaps	Early detection	Improved salvage rate	Venous monitoring	Arterial monitoring	Cost	Meta analysis	Importance of healthcare education
9. Poder TG, Fortier PH. Implantable Doppler in monitoring free flaps: a cost-effectiveness analysis based on a systematic review of the literature. <i>Eur Ann Otorhinolaryngol Head Neck Dis.</i> 2013;130(2):79-85. <a href="https://doi.org/10.1016/j.anorl.2012.07.003">https://doi.org/10.1016/j.anorl.2012.07.003</a>	HN	X		X	X	X	X		X
10. Kim JT, Ho SYM, Kim YH. A chimaeric-pattern flap design for implantable Doppler surrogate monitoring: a novel placement technique. <i>J Plast Reconstr Aesthet Surg.</i> 2014;67(2):190-197. <a href="https://doi.org/10.1016/j.bjps.2013.10.045">https://doi.org/10.1016/j.bjps.2013.10.045</a>	HN, LE	X	X	X					
11. Abdou SA, Sharif-Askary B, Zolper EG, et al. Intraoperative utility of the implantable Doppler in lower limb reconstruction: a matched case-control study. <i>Plast Reconstr Surg Glob Open.</i> 2020;8(11):e3229. <a href="https://doi.org/10.1097/gox.0000000000003229">https://doi.org/10.1097/gox.0000000000003229</a>	LE		X		X	X	X		
12. Park RCW, Bresler AY, Bansal AP, et al. Outcomes in microvascular head and neck reconstruction in the setting of restricted residency hours. <i>Am J Otolaryngol.</i> 2018;39(5):522-526. <a href="https://doi.org/10.1016/j.amjoto.2018.06.001">https://doi.org/10.1016/j.amjoto.2018.06.001</a>	HN		X	X	X	X			X
13. Leibig N, Ha-Phuoc A, Stark GB, et al. Retrospective evaluation of diagnostic accuracy of free flap monitoring with the Cook-Swartz-Doppler probe in head and neck reconstruction. <i>J Craniomaxillofac Surg.</i> 2019;47(12):1973-1979. <a href="https://doi.org/10.1016/j.jcms.2019.11.001">https://doi.org/10.1016/j.jcms.2019.11.001</a>	HN			X	X	X			
14. Dunklebarger MF, McCrary H, King B, et al. Success of implantable Doppler probes for monitoring buried free flaps. <i>Otolaryngol Head Neck Surg.</i> 2022;1945998221082533. <a href="https://doi.org/10.1177/01945998221082533">https://doi.org/10.1177/01945998221082533</a>	HN	X		X	X	X	X		X
15. Berthelot M, Ashcroft J, Boshier P, et al. Use of near-infrared spectroscopy and implantable Doppler for postoperative monitoring of free tissue transfer for breast reconstruction: a systematic review and meta-analysis. <i>Plast Reconstr Surg Glob Open.</i> 2019;7(10):e2437. <a href="https://doi.org/10.1097/gox.0000000000002437">https://doi.org/10.1097/gox.0000000000002437</a>	BR		X	X	X	X		X	

HN: head and neck UE: upper extremity LE: lower extremity BR: breast LN: lymph node

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