***Анестезиология и реаниматология***

1. Способ интраоперационной диагностики боковой локализации грыжи поясничного межпозвонкового диска (Колесов С.Н., Воловик М.Г., Рогожкин С.Б., Неделяев А.В.). Патент РФ № 2283022 от 10.09.2006.
2. Способ определения стадии гипоксического повреждения и вероятности оживления по А.Л.Уракову (Ураков А.Л., Руднов В.А., Касаткин А.А. и др.). Патент РФ № 2422090 от 27.06.2011.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Водопьянов К.А., Акулов М.М., Кузнецова И.В., Воловик М.Г. Продленная проводниковая анестезия под контролем ультразвука при операциях на стопе в детской ортопедии // Вестник интенсивной терапии, апрель 2010. С. 34-35.
2. Водопьянов К.А., Воловик М.Г. Сравнительная оценка тепловизионной картины при однократной и продленной проводниковой анестезии у детей // Матер. Всерос. конф. «Поленовские чтения – 2011». Санкт-Петербург, 2011. С. 355-356.
3. Водопьянов К.А., Воловик М.Г. Тепловидение как метод оценки качества проводниковой анестезии у детей // Сб. матер. VI Росс. конгр. «Педиатрическая анестезиология и интенсивная терапия». Тверь: ООО Издательство «Триада», 2011. 308 с., ил. С. 168-169.
4. Водопьянов К.А., Воловик М.Г., Кузнецова И.В., Акулов М.М. Тепловизионный контроль продленной нейроаксиальной анестезии у детей раннего возраста // Материалы Всероссийской научно-практической конференции («Поленовские чтения»). Санкт-Петербург, 2010. С. 306-307.
5. Водопьянов К.А., Кузнецова И.В., Воловик М.Г. Продленная проводниковая анестезия под контролем ультразвука при операциях на стопе в детской ортопедии // XII съезд Федерации анестезиологов и реаниматологов, 19-22 сентября 2010 г. Научные тезисы. М., 2010. С. 93-94.
6. Воловик М.Г., Водопьянов К.А. Первые результаты тепловизионной диагностики при субарахноидальной анестезии у детей разного возраста // Матер. научно-практич. конференции «Актуальные проблемы нейрохирургии». Йошкар-Ола, 2007. С. 118-120.
7. Воловик М.Г., Водопьянов К.А. К методике тепловизионного мониторинга эффекта продленной проводниковой анестезии у детей // Труды IX Междунар. конф. «Прикладная оптика-2010». Санкт-Петербург, 18-22 октября 2010. Т. 3. С. 33-37.
8. Воловик М.Г., Водопьянов К.А. Тепловизионный контроль качества продленной проводниковой анестезии у детей // Российский нейрохирургический журнал им. А.Л.Поленова. 2011. Т. 3, спец. вып. С. 18-21.
9. Воловик М.Г., Водопьянов К.А., Полевая С.А. Зависимость эффективности продленной проводниковой анестезии от возраста ребенка по данным тепловидения // Труды X Междунар. конф. «Прикладная оптика-2012». СПб, 15-20 октября 2012. Т. 3. С. 188-192.
10. Воловик М.Г., Грибков А.В., Руфова Н.Ю. Влияние вводного наркоза на термопаттерн кожных покровов у больных с очаговой патологией головного мозга // Тез.докл. V Всесоюз. конф. «Тепловизионные приборы для медицины и неразрушающего контроля в промышленности – ТеМП-91». Красногорск, 1991. Т. 1. С. 107-108.
11. Воловик М.Г., Колесов С.Н. Тепловидение в объективизации адекватности анестезиологической защиты корешков спинномозговых нервов при операциях удаления грыж поясничных межпозвонковых дисков // Труды VIII Международной конференции «Прикладная оптика-2008». Санкт-Петербург, 20-24 октября 2008. С. 215-219.
12. Воловик М.Г., Колесов С.Н., Грибков А.В. Динамика тепловизионной картины на этапах вводного наркоза // Механизмы адаптационного процесса в остром периоде черепно-мозговой травмы: Матер. Всесоюз. симпоз. Новосибирск, 21-23 ноября 1990 г. Новосибирск, 1990. С. 4.
13. Воловик М.Г., Колесов С.Н., Рогожкин С.Б., Неделяев. Температурные реакции на первое сдвигание корешка с грыжи межпозвонкового диска в автономных зонах иннервации корешков конского хвоста при общей и спинномозговой анестезии // IV Съезд нейрохирургов России / Матер. Съезда. Москва, 18-22 июня 2006 г. М., 2006. С. 21.
14. Грибков А.В., Воловик М.Г., Григорьева В.В. и др. Интраоперационный мониторинг мозгового кровообращения методами тепловидения и транскраниальной допплерографии при анестезии диприваном у больных с объемными поражениями головного мозга // Тез. докл. V Междунар. симпоз «Повреждения мозга (Минимально-инвазивные способы диагностики и лечения)». СПб., 31 мая – 4 июня 1999 г. СПб., 1999. С. 201-203.
15. Грибков А.В., Воловик М.Г., Руфова Н.Ю., Колесов С.Н. Динамика термопаттерна кожи головы у больных с очаговыми поражениями мозга супратенториальной локализации// Тез. докл. I Совещ. по картированию мозга. М., 1991. С. 35-36.
16. Колесов С.Н., Воловик М.Г., Рогожкин С.Б. и др. Динамика сосудистых реакций подошвенных поверхностей стоп после спинномозговой анестезии у больных дискогенной радикулопатией // Матер. Всероссийской науч.-практ. конф. «Поленовские чтения». Санкт-Петербург, 11-13 апреля 2005 г. СПб, 2005. С. 144-145.
17. Колесов С.Н., Воловик М.Г., Рогожкин С.Б., Неделяев. Тепловизионная диагностика боковой локализации грыжи межпозвонкового диска при спинномозговой анестезии // IV Съезд нейрохирургов России / Матер. Съезда. Москва, 18-22 июня 2006 г. М., 2006. С. 57.
18. Ураков А.Л., Касаткин А.А., Уракова Н.А. Инфракрасная термография пальцев и ладоней при шоке как метод оценки устойчивости пациентов к гипоксии и отзывчивости их к оживлению // Вестник Российской военно-медицинской академии. 2013. Т. 44, № 4. С. 169-171.
19. Ураков А.Л., Уракова Н.А., Уракова Т.В. и др. Многоцветность изображения рук на экране тепловизора как показатель эффективности реанимационных мероприятий при клинической смерти // Вестник Уральской медицинской академической науки. 2010. 1 (28): 57-59.
20. Gribkov A.V., Volovik M.G., Rufova N.Yu., Bakunin L.M. Thermographic control of the initial narcosis adequacy for the patients with space-occupying brain lesions // Proc. of SPIE (Bellingham, USA). 1992. V. 2106 (Iconics and Thermovision Systems). Р. 115-123.
21. Urakov A., Gurevich K., Alies M. et al. The tissue temperature during injection of drug solution into it as an integral indicator of rheology // Journal of Physics. 2020: Conf. Ser. (4th International Conference on Rheology and Modeling of Materials (ic-rmm4) 1527, 012003. 4 pp. doi:10.1088/1742-6596/1527/1/012003
22. Urakov A.L., Urakova N.A., Urakova T.V. et al. Use of teplovisor for an estimation postinjection and postinfusion local toxicity of solutions of medical products // Medical examination problems. 2009, N 1, 27-29.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Aberg G., Adler R. Thermographic registrations of some vascular effects of a local anaesthetic compound // Sven Tandlak Tidskr. 1970; 63(10):671-678.
2. Agarwal-Kozlowski K., Lange A.C., Beck H. Contact-free infrared thermography for assessing effects during acupuncture: a randomized, single-blinded, placebo-controlled crossover clinical trial // Anesthesiology. 2009 Sep; 111 (3): 632-9.
3. Aggarwal Y., Karan B.M., Das B.N., Sinha R.K. Computer simulation of heat transfer in different tissue layers of body extremities under heat stress in deep anesthetic condition // J Med Syst. 2008 Aug;32(4):283-90. PMID: 18619092
4. Ahn E.K., Lee Y.C., Zhan H.Y. Correlation between pain scale and infrared thermogram in unilateral pain patients after nerve block // J Korean Med Thermol, 2:59, 2002.
5. Akata T., Kanna T., Izumi K. et al. Changes in body temperature following deflation of limb pneumatic tourniquet // J Clin Anesth. 1998 Feb;10(1):17-22. PMID: 9526932
6. Akata T., Kanna T., Yoshino J. et al. Reliability of fingertip skin-surface temperature and its related thermal measures as indices of peripheral perfusion in the clinical setting of the operating theatre // Anaest. Intensive Care. 2004;32:519-529. [[PubMed](http://www.ncbi.nlm.nih.gov/pubmed/15675212)]
7. Akiyama H., Matsumoto S., Komatsu S., Nagasaki T. Changes in symptom and thermography images after lumbar sympathetic ganglion block // Masui Japanese Journal of Anesthesiology; 1997 Aug;46(8):1048-1052 (65-69?). PMID: 9283159 [in Japanese]
8. Akiyoshi H., Okubo N., Sato S., Tanaka M. Addition of fentanyl to epidural lidocaine raises the toe temperature // Masui. 1996 Oct;45(10):1278-1280. [in Japanese]
9. Al-Alousi L.M., Anderson R.A., Worster D.M., Land D.D. Multiple-probe thermography for estimating the postmortem interval: I. Continuous monitoring and data analysis of brain, liver, rectal and environmental temperatures in 117 forensic cases // J. Forensic. Sci. 2001. 46, 317-322.
10. Ammer K. Ist eine therapeutische Nervenblockade mit elektrischen Strömen möglich? // ÖZPMR: Österr Z Phys Med Rehabil 2006, 16(1): 11-14. [in German]
11. Andreasen A.M., Linnet K.E., Asghar S. et al. "Eyeball test" of thermographic patterns for predicting a successful lateral infraclavicular block // Canadian Journal of Anesthesia 2017, 64(11): 1111-1118. [in French]
12. Arentz S.M., Shandell K.E. Hutchison A. Infrared thermography as a monitor of regional anesthetic approaches to chronic pain // Pain, Volume 18, Supplement 1, 1984, P. S136.
13. Arkilic C.F., Akca O., Taguchi A. et al. Temperature monitoring and management during neuraxial anesthesia: an observational study // Anesth Analg. 2000; 91: 662-666.
14. Asghar S., Bjerregaard L.S., Lundstrøm L.H. et al. Distal infrared thermography and skin temperature after ultrasound-guided interscalene brachial plexus block: A prospective observational study // European Journal of Anaesthesiology 2014; 31 (11): 626-634. DOI:10.1097/EJA.0000000000000152
15. Asghar S., Lange K.H., Lundstrom L.H. Blinded observer evaluation of distal skin temperature for predicting lateral infraclavicular block success // Anesthesia & Analgesia, 2015. 120(1), 246-251. doi:10.1213/ane.0000000000000475
16. Asghar S., Lundstrøm L.H., Bjerregaard L.S., Lange K.H.W. Ultrasound-guided lateral infraclavicular block evaluated by infrared thermography and distal skin temperature // Acta Anaesthesiologica Scandinavica 2014; 58 (7): 867-874. doi: 10.1111/aas.12351
17. Bartosz R., Agnieszka R., Kalicki B. et al. A study of heat loss in patients undergoing general anesthesia warmed with a heated mattress with esophageal temperature monitoring compared to facial infrared thermography // Journal of Medical Imaging and Health Informatics 2016; 6 (1): 141-145.
18. Belani K., Sessler D.I., Sessler A.M. et al. Leg heat content continues to decrease during the core temperature plateau in humans anesthetized with isoflurane // Anesthesiology. 1993 May;78(5):856-863.
19. Bengtsson M. Changes in skin blood flow and temperature during spinal analgesia evaluated by laser Doppler flowmetry and infrared thermography // Acta Anaesthesiol Scand. 1984 Dec;28(6):625-630. PMID: 6240882
20. Biasi G., Fioravanti A., Franci A., Marcolongo R. The role computerized telethermography in the diagnosis of fibromyalgia syndrome // Minerva Med. 85:451-454, 1994.
21. Bindu B., Bindra A., Rath G. Temperature management under general anesthesia: Compulsion or option // Journal of Anaesthesiology Clinical Pharmacology 2017, 33(3): 306-316.
22. Bouvet L, Roukhomovsky M., Desgranges F., Allaouchiche B. Infrared thermography to assess dermatomal levels of labor epidural analgesia with 1 mg/mL ropivacaine plus 0.5 µg/mL sufentanil: A prospective cohort study // Int. J. Obstet. Anesth. 2019, 8-13. <https://doi.org/10.1016/j.ijoa.2019.08.006>
23. Bovaira M., Cañada-Soriano M., García-Vitoria C. et al. Clinical results of lumbar sympathetic blocks in lower limb complex regional pain syndrome using infrared thermography as a support tool // Pain Practice. April 2023. DOI: [10.1111/papr.13236](http://dx.doi.org/10.1111/papr.13236)
24. Bruins A.A., Kistemaker K.R. J., Boom A. et al. Thermographic skin temperature measurement compared with cold sensation in predicting the efficacy and distribution of epidural anesthesia // J Clin Monit Comput (2018) 32:335-341. DOI 10.1007/s10877-017-0026-y
25. Burgess G.E. 3rd, Cooper J.R., Marino R.J., Peuler M.J. Continuous monitoring of skin temperature using a liquid-crystal thermometer during anesthesia // South Med J 1978;71:516-518.
26. Cañada M., Bovaira M., García-Vitoria C. et al. Using infrared thermography to confirm the correct placement of the needle in the performance of lumbar sympathetic blocks for complex regional pain syndrome // Thermology international. 31/3(2021):109-110.
27. Cañada-Soriano M., Bovaira M., García-Vitoria C. et al. Application of machine learning algorithms in thermal images for an automatic classification of lumbar sympathetic blocks // Journal of Thermal Biology. February 2023. DOI: [10.1016/j.jtherbio.2023.103523](http://dx.doi.org/10.1016/j.jtherbio.2023.103523)
28. Cañada-Soriano M., Priego-Quesada J.I., Bovaira M. et al. Quantitative Analysis of Real-Time Infrared Thermography for the Assessment of Lumbar Sympathetic Blocks: A Preliminary Study // Sensors 2021, 21, 3573. 17 pp. https:// doi.org/10.3390/s21113573
29. Cañada-Soriano M., Priego-Quesada J.I., Rubio P. et al. Skin Temperature Assessment During Lumbar Sympathetic Blocks by Infrared Thermography // 2021 43rd Annual International Conference of the IEEE Engineering in Medicine & Biology Society (EMBC). November 2021. DOI: [10.1109/EMBC46164.2021.9629731](http://dx.doi.org/10.1109/EMBC46164.2021.9629731)
30. Chamberlain D.P., Chamberlain B.D.L. Changes in the skin temperature of the trunk and their relationship to sympathetic blockade during spinal anesthesia // Anesthesiology 1986; 65:139-143.
31. Chan P.Y., Tay A., Chen D. et al. Comparison of cutaneous facial temperature using infrared thermography to standard temperature measurement in the critical care setting // J Clin Monit Comput. 2022;36(4):1029-1036.
32. Cheema S.P., Browne T., Entress A.H. Thermography: a noninvasive assessment of pediatric thoracic epidural blocks // J Cardiothorac Vasc Anesth. 1994;8:330-333. doi: 10.1016/1053-0770(94)90246-1.
33. Cheema S.P., Ilsley D., Richardson J., Sabanathan S. A thermographic study of paravertebral analgesia // Anaesthesia. 1995; 50: 118-121. doi: 10.1111/j.1365-2044.1995.tb15092.x
34. D’Angelo Vanni S.M., Castiglia Y.M.M., Ganem E.M. et al. Preoperative warming combined with intraoperative skin-surface warming does not avoid hypothermia caused by spinal anesthesia in patients with midazolam premedication // Sao Paulo Med J. 2007;125(3):144-149.
35. Diaz P.M. Use of liquid-crystal thermography to evaluate sympathetic blocks // Anesthesiology 1976; 44: 443-445.
36. Di Filippo A., Natale V., Del Po F. et al. Skin temperature during sympathetic block: a clinical comparison of bupivacaine 0,5% and ropivacaine 0,5% or 0,75% // Anesth. Intensive Care. 2006. V. 34, N 3. P. 334-337.
37. DiLeo T., Roberge R.J., Kim J.-H. Effect of wearing an N95 Filtering facepiece respirator on superomedial orbital infrared indirect brain temperature measurements // Journal of Clinical Monitoring and Computing 2017,31(1):67-73.
38. El-Gamal N., El-Kassabany., Frank S.M. et al. Age-related thermoregulatory differences in a warm operating room environment (approximately 26 degrees C) // Anesth Analg. 2000 Mar;90(3):694-698.
39. Emerick T.H., Ozaki M., Sessler D.I. et al. Epidural anesthesia increases apparent leg temperature and decreases the shivering threshold // Anesthesiology. 1994 Aug;81(2):289-298.
40. Emery J., Ho D., McKeen L., Heon E., Bissonette B. Pupillary reflex dilation and skin temperature to assess sensory level during combined general and caudal anesthesia in children // Paediatr. Anaesth. 2004. 14 (9): 768-773.
41. Frank S.M., Shir Y., Raja S.N. et al. Core hypothermia and skin-surface temperature gradients. Epidural versus general anesthesia and the effects of age // Anesthesiology. 1994;80(3):502-508.
42. Frank S.M., El-Rahmany H.K., Tran K.M. et al. Comparison of lower extremity cutaneous temperature changes in patients receiving lumbar sympathetic ganglion blocks versus epidural anesthesia // J Clin Anesth. 2000; 12: 525-530.
43. Galvin E.M., Niehof S., Medina H.J. et al. Thermographic temperature measurement compared with pinprick and cold sensation in predicting the effectiveness of regional blocks // Anesth Analg. 2006. V.102. P. 598-604. doi: 10.1213/01.ane.0000189556.49429.16
44. Glosten B., Sessler D.I., Faure E.A. et al. Central temperature changes are poorly perceived during epidural anesthesia // Anesthesiology. 1992 Jul;77(1):10-16.
45. Gonzales de Zarate Apinaniz, Sayalero San Miguel J.M., Alvarez Lopez J.C., Arribas Carrion C. Thermal effects of epidural anesthetic block // Rev Esp Anesthesiol Reanim. 1991 Jul-Aug;38(4):238-241. [Article in Spanish] PMID: 1771285
46. Gozdziuk K., Baranowski P., Mazurekz W. et al. Application of thermography in surgical curing of hand oversweating // 9 International Conference on Quantitative InfraRed Thermography (QIRT-2008), July 2-5, 2008, Krakow – Poland. 6 pp.
47. Haddadin A., Abreu M., Alian A. et al. Noninvasive documentation of delayed brain cooling during deliberate hypothermia // Am. Soc. Anesthesiology Annual Meeting, 2010.
48. Hamaguchi S. The instrument for thermography // Japanese Journal of Anesthesiology 2014; 63 (7): 728-736.
49. Han-Hsiang Su, Ping-Wing Lui, Chi-Lun Yu et al. The effects of continuous axillary brachial plexus block with ropivacain on skin temperature and survival of crushed fingers after microsurgical replantation // Chang Gung Med J 2005;28:567-574.
50. Hardy P.A.J., Wells J.C.D. Extent of sympathetic blockade after stellate ganglion block with bupivacaine // Pain, Volume 36, Issue 2, February 1989, P. 193-196.
51. Hermanns H., Braun S., Werdehausen R. et al. Skin temperature after interscalene brachial plexus blockade // Reg Anesth Pain Med 2007; 32:481-487. doi:10.1016/j.rapm.2007.06.392 PMID: 18035293
52. Hermanns H., Werdehausen R., Hollmann M.W., Stevens M.F. Assessment of skin temperature during regional anaesthesia – What the anaesthesiologist should know // Acta Anaesthesiol Scand. 2018. 62, 1280-1289. doi: 10.1111/aas.13176
53. [Hirose M](http://www.ncbi.nlm.nih.gov/sites/entrez?Db=pubmed&Cmd=Search&Term=%22Hirose%20M%22%5BAuthor%5D&itool=EntrezSystem2.PEntrez.Pubmed.Pubmed_ResultsPanel.Pubmed_RVAbstractPlus)., [Chun T.Y](http://www.ncbi.nlm.nih.gov/sites/entrez?Db=pubmed&Cmd=Search&Term=%22Chun%20TY%22%5BAuthor%5D&itool=EntrezSystem2.PEntrez.Pubmed.Pubmed_ResultsPanel.Pubmed_RVAbstractPlus)., [Tobita M](http://www.ncbi.nlm.nih.gov/sites/entrez?Db=pubmed&Cmd=Search&Term=%22Tobita%20M%22%5BAuthor%5D&itool=EntrezSystem2.PEntrez.Pubmed.Pubmed_ResultsPanel.Pubmed_RVAbstractPlus). The influence of aging on skin temperature and hemodynamic changes during spinal anesthesia // [Acta Anaesthesiol Scand.](javascript:AL_get(this,%20'jour',%20'Acta%20Anaesthesiol%20Scand.');) 1995 Oct;39(7):891-895. PMID: 8848887
54. Hochhausen N., Pereira C.B., Leonhardt S. et al. Estimating Respiratory Rate in Post-Anesthesia Care Unit Patients Using Infrared Thermography: An Observational Study // Sensors 2018, 18, 1618-1629. doi:10.3390/s18051618
55. Hopf H.B., Weissbach B., Petes J. High thoracic segmental epidural anesthesia diminishes sympathetic outflow to the legs, despite restriction of sensory blockade to the upper thorax // [Anesthesiology.](javascript:AL_get(this,%20'jour',%20'Anesthesiology.');) 1990 Nov;73(5):882-889. PMID: 2240678
56. [Hynson J.M](http://www.ncbi.nlm.nih.gov/sites/entrez?Db=pubmed&Cmd=Search&Term=%22Hynson%20JM%22%5BAuthor%5D&itool=EntrezSystem2.PEntrez.Pubmed.Pubmed_ResultsPanel.Pubmed_RVAbstractPlus)., [Sessler D.I](http://www.ncbi.nlm.nih.gov/sites/entrez?Db=pubmed&Cmd=Search&Term=%22Sessler%20DI%22%5BAuthor%5D&itool=EntrezSystem2.PEntrez.Pubmed.Pubmed_ResultsPanel.Pubmed_RVAbstractPlus)., [Glosten B](http://www.ncbi.nlm.nih.gov/sites/entrez?Db=pubmed&Cmd=Search&Term=%22Glosten%20B%22%5BAuthor%5D&itool=EntrezSystem2.PEntrez.Pubmed.Pubmed_ResultsPanel.Pubmed_RVAbstractPlus)., [McGuire J](http://www.ncbi.nlm.nih.gov/sites/entrez?Db=pubmed&Cmd=Search&Term=%22McGuire%20J%22%5BAuthor%5D&itool=EntrezSystem2.PEntrez.Pubmed.Pubmed_ResultsPanel.Pubmed_RVAbstractPlus). Thermal balance and tremor patterns during epidural anesthesia // [Anesthesiology.](javascript:AL_get(this,%20'jour',%20'Anesthesiology.');) 1991 Apr;74(4):680-690. PMID: 2008950
57. Hynson J.M., Sessler D.I. Moayeri A., McGuire J. Absence of nonshivering thermogenesis in anesthetized adult humans // Anesthesiology. 1993 Oct;79(4):695-703.
58. Ignacio D. et.al. Thermographic monitoring of sympathetic nerve block // Thermology 1986; 2:21-24.
59. Jacobs A.M., Esper R., O'Leary R. et al. Thermographic evaluation of the autonomic effects of nerve blocks in the foot // Am Podiatr Med Assoc. 1989; 79(3):107-115.
60. Jay O., Molgat-Seon Y., Chou S., Murto K. Skin temperature over the carotid artery provides an accurate noninvasive estimation of core temperature in infants and young children during general anesthesia // Paediatr Anaesth 2013;23:1109-1116.
61. [Jetzek-Zader M](http://www.ncbi.nlm.nih.gov/sites/entrez?Db=pubmed&Cmd=Search&Term=%22Jetzek-Zader%20M%22%5BAuthor%5D&itool=EntrezSystem2.PEntrez.Pubmed.Pubmed_ResultsPanel.Pubmed_RVAbstractPlus)., [Hermanns H](http://www.ncbi.nlm.nih.gov/sites/entrez?Db=pubmed&Cmd=Search&Term=%22Hermanns%20H%22%5BAuthor%5D&itool=EntrezSystem2.PEntrez.Pubmed.Pubmed_ResultsPanel.Pubmed_RVAbstractPlus)., [Freynhagen R](http://www.ncbi.nlm.nih.gov/sites/entrez?Db=pubmed&Cmd=Search&Term=%22Freynhagen%20R%22%5BAuthor%5D&itool=EntrezSystem2.PEntrez.Pubmed.Pubmed_ResultsPanel.Pubmed_RVAbstractPlus). et al. Increase in skin temperature after spinal anesthesia in infants // [Reg Anesth Pain Med.](javascript:AL_get(this,%20'jour',%20'Reg%20Anesth%20Pain%20Med.');) 2006 Nov-Dec;31(6):519-522. PMID: 17138194
62. Kapural L., Mekhail N. Assessment of sympathetic blocks // Techniques in Regional Anesthesia and Pain Management. July 2001, 5(3):82-87.
63. Kaszuba N., Kasprzyk Kucewicz T., Bałamut K. et al. May thermal imaging be useful in the assessment of dental anaesthesia? Preliminary study // Journal of Thermal Analysis and Calorimetry. August 2021. DOI: [10.1007/s10973-021-10985-y](http://dx.doi.org/10.1007/s10973-021-10985-y)
64. Kim J., Kwon J.H., Kim E. et al. Respiratory measurement using infrared thermography and respiratory volume monitor during sedation in patients undergoing endoscopic urologic procedures under spinal anesthesia // Journal of Clinical Monitoring and Computing 33 (4): 647-656.
65. [Kim Y.C](http://www.ncbi.nlm.nih.gov/sites/entrez?Db=pubmed&Cmd=Search&Term=%22Kim%20YC%22%5BAuthor%5D&itool=EntrezSystem2.PEntrez.Pubmed.Pubmed_ResultsPanel.Pubmed_RVAbstractPlus)., [Bahk J.H](http://www.ncbi.nlm.nih.gov/sites/entrez?Db=pubmed&Cmd=Search&Term=%22Bahk%20JH%22%5BAuthor%5D&itool=EntrezSystem2.PEntrez.Pubmed.Pubmed_ResultsPanel.Pubmed_RVAbstractPlus)., [Lee S.C](http://www.ncbi.nlm.nih.gov/sites/entrez?Db=pubmed&Cmd=Search&Term=%22Lee%20SC%22%5BAuthor%5D&itool=EntrezSystem2.PEntrez.Pubmed.Pubmed_ResultsPanel.Pubmed_RVAbstractPlus)., [Lee Y.W](http://www.ncbi.nlm.nih.gov/sites/entrez?Db=pubmed&Cmd=Search&Term=%22Lee%20YW%22%5BAuthor%5D&itool=EntrezSystem2.PEntrez.Pubmed.Pubmed_ResultsPanel.Pubmed_RVAbstractPlus). Infrared thermographic imaging in the assessment of successful block on lumbar sympathetic ganglion // [Yonsei Med J.](javascript:AL_get(this,%20'jour',%20'Yonsei%20Med%20J.');) 2003 Feb;44(1):119-124. <https://doi.org/10.3349/ymj.2003.44.1.119>
66. Kimura T., Goda Y., Kemmotsu O., Shimada Y. Regional differences in skin blood flow and temperature during total spinal anaesthesia // Can J Anaesth. 1992; 39(2):123-127.
67. [Klaessens](http://profiles.spiedigitallibrary.org/summary.aspx?DOI=10.1117%2F12.875074&Name=John+H.G.M.+Klaessens) J.H.G.M., [Landman](http://profiles.spiedigitallibrary.org/summary.aspx?DOI=10.1117%2F12.875074&Name=Mattijs+Landman) M.[,](http://profiles.spiedigitallibrary.org/summary.aspx?DOI=10.1117%2F12.875074&Name=Rowland+de+Roode) de Roode R. et al. Thermographic and oxygenation imaging system for non-contact skin measurements to determine the effects of regional block anesthesia // Proc. SPIE 7548, Photonic Therapeutics and Diagnostics VI, 75484S (2 March 2010); <https://doi.org/10.1117/12.841645>
68. [Klaessens](http://profiles.spiedigitallibrary.org/summary.aspx?DOI=10.1117%2F12.875074&Name=John+H.G.M.+Klaessens) J.H.G.M., [Landman](http://profiles.spiedigitallibrary.org/summary.aspx?DOI=10.1117%2F12.875074&Name=Mattijs+Landman) M.[,](http://profiles.spiedigitallibrary.org/summary.aspx?DOI=10.1117%2F12.875074&Name=Rowland+de+Roode) de Roode R. Objective methods for achieving an early prediction of the effectiveness of regional block anesthesia using thermography and hyperspectral imaging // Proc. SPIE 7895, Optical Biopsy IX, 78950Q (February 16, 2011). doi:10.1117/12.875074
69. Kruglov D., Stricker R., Howell K. Study of pattern of feet skin temperature distribution during continuous post-operative epidural analgesia // 2020 Quantitative InfraRed Thermography. January 2020. 5 pp. DOI: 10.21611/qirt.2020.060
70. Lange K.H.W., Jansen T., Asghar S. et al. Skin temperature measured by infrared thermography after specific ultrasound-guided blocking of the musculocutaneous, radial, ulnar, and median nerves in the upper extremity // Br J Anaesth. 2011; 106:887-895. doi:10.1093/bja/aer085
71. Larach M., Brandom B., Allen G. et al. Malignant Hyperthermia Deaths Related to Inadequate Temperature Monitoring, 2007-2012 // Survey of Anesthesiology, 2015, vol. 59, no. 2, pp. 102-103.
72. Lewis G.F., Gatto R.G., Porges S.W. A novel method for extracting respiration rate and relative tidal volume from infrared thermography // Psychophysiology. 2011;48 (7):877-887. PMID: 21214587; PMCID: PMC3107393
73. Lin P.H. et al. 2017. Assessment of lower extremity ischemia using smartphone thermographic imaging // Journal of Vascular Surgery Cases and Innovative Techniques 2016. 3(4):205-208. DOI 10.1016/j.jvscit.2016.10.012
74. Lindorf H.H. Investigation of the vascular effect of newer local anesthetics and vasoconstrictors // Oral Surgery, Oral Medicine, Oral Pathology, Volume 48, Issue 4, October 1979, P. 292-297.
75. Li Wan, Pei-Ying Shen, Shu-Xian Zhang et al. Agreement of infrared ear temperature with nasopharyngeal temperature and diagnostic performance on hypothermia in general anesthetized patients // Journal of the Chinese Medical Association. 2022;**85**(11):1093-1097. 10.1097/JCMA.0000000000000770
76. Machura W., Rustecki B., Klimkiewicz J. et al. Infrared evaluation of efficacy of thoracic paravertebral block – preliminary study (extended abstract) // Thermology International 2015, 25(2): 70-72.
77. Mannara G., Salvatori G.C., Pizzuti G.P. Ethyl alcohol induced skin temperature changes evaluated by thermography. Preliminary results // Boll Soc Ital Biol Sper. 1993 Oct;69(10):587-594. PMID: 8198799
78. Marsh M.L., Sessler D.I. Failure of intraoperative liquid-crystal temperature monitoring // Anesthesia and Analgesia 1996; 82(5):1102-1104.
79. Maslach C., Marshall G., Zimbardo P.G. Hypnotic control of peripheral skin temperature: A case report // Psychophysiology, 1972. 9(6), 600-605.
80. Matsui Y., Murayama R., Tanabe H. et al. Evaluation of the Predictive Validity of Thermography in Identifying Extravasation with Intravenous Chemotherapy Infusions // Journal of Infusion Nursing 2017, 40(6) 367-374.
81. Matsumoto S. Thermographic assessments of the sympathetic blockade by stellate ganglion block (1): comparison between C7-SGB and C6-SGB in 40 patients // [Masui.](javascript:AL_get(this,%20'jour',%20'Masui.');) 1991 Apr;40(4):562-569. PMID: 2051581 [in Japanese]
82. Matsumoto S. Thermographic assessments of the sympathetic blockade by stellate ganglion block (2): comparison and analysis of thermographic patterns between C7-SGB and C6-SGB in 20 healthy volunteers // [Masui.](javascript:AL_get(this,%20'jour',%20'Masui.');) 1991 May;40(5):692-701. PMID: 2072510 [in Japanese]
83. Matsumoto S. Thermographic assessments of the sympathetic blockade by stellate ganglion block (3): the block at the base of the 6th cervical transverse process// [Masui.](javascript:AL_get(this,%20'jour',%20'Masui.');) 1992 Jan;41(1):111-118. PMID: 1545490 [in Japanese]
84. McCollum P.T., Spence V.A., Macrae B., Walker W.F. Quantitative assessment of the effectiveness of chemical lumbar sympathectomy // Br J Anaesth 1985; 57: 1146-1149.
85. Medeiros C.R., Brioschi M.L., Souza S.N., Teixeira M.J. Infrared thermography to diagnose and manage venomous animal bites and stings // Rev Soc Bras Med Trop 2017; 50(2):1-5.
86. Minville V., Gendre A., Hirsch J. et al. The efficacy of skin temperature for block assessment after infraclavicular brachial plexus block // Anesth. Analg. 2009. 108 (3): 1034-1036. doi: 10.1213/ane.0b013e318195bf94 [[PubMed](https://www.ncbi.nlm.nih.gov/pubmed/19224821)] [[Cross Ref](https://dx.doi.org/10.1213%2Fane.0b013e318195bf94)]
87. Mozanski M., Rustecki B., Kalicki B., Jung A. Evaluation of paravertebral blocks for mastectomy in an high risk patient by means of infrared imaging – a case report (extended abstract) // Thermology International 2014; 24 (2): 59-60.
88. Murphy B., McCaul C., Oflaherty D. Infrared thermographic assessment of spinal anaesthesia-related cutaneous temperature changes during caesarean section // International Journal of Obstetric Anesthesia. December 2021. DOI: [10.1016/j.ijoa.2021.103245](http://dx.doi.org/10.1016/j.ijoa.2021.103245)
89. [Negishi C](https://www.ncbi.nlm.nih.gov/pubmed/?term=Negishi%20C%5BAuthor%5D&cauthor=true&cauthor_uid=8847780)1, [Ozaki M](https://www.ncbi.nlm.nih.gov/pubmed/?term=Ozaki%20M%5BAuthor%5D&cauthor=true&cauthor_uid=8847780), [Suzuki H](https://www.ncbi.nlm.nih.gov/pubmed/?term=Suzuki%20H%5BAuthor%5D&cauthor=true&cauthor_uid=8847780), [Ohno T](https://www.ncbi.nlm.nih.gov/pubmed/?term=Ohno%20T%5BAuthor%5D&cauthor=true&cauthor_uid=8847780). Temperature changes and thermoregulatory responses during epidural anesthesia in women undergoing cesarean delivery // [Masui.](https://www.ncbi.nlm.nih.gov/pubmed/8847780) 1996 May;45(5):558-564. PMID: 8847780 [in Japanese]
90. Negoro T., Mizumoto K., Ogawa K. et al. Effects of isoflurane and sevoflurane anesthesia on arteriovenous shunt flow in the lower limb of diabetic patients without autonomic neuropathy // Anesthesiology. 2007;107(1):45-52. doi:10.1097/01.anes.0000268388.30053.1e
91. Newman P., Davis N.H. Thermography as a predictor of sacral pressure sores // Age Ageing. 1981;10(1):14-18.
92. Nomura E.Y., Brioschi M.L., Jacobsen Teixeira M. Thermal analysis of patients submitted to spinal anesthesia (extended abstract // Thermology International 2014; 24(1): 15-16.
93. Paqueron X., Musellec H., Virot C., Emmanuel B. Hypnotic Glove Anesthesia Induces Skin Temperature Changes in Adult Volunteers: A Prospective Controlled Pilot Study // International Journal of Clinical and Experimental Hypnosis; October 2019. 67(4): 408-427. DOI: 10.1080/00207144.2019.1649544
94. Park S.Y., Nahm F.S., Kim Y.C. et al. The cut-off rate of skin temperature change to confirm successful lumbar sympathetic block // J. Int. Med. Res. 2010, 38, 266-275. [https://doi.org/10.1177/147323001003800131](https://doi.org/10.1177%2F147323001003800131)
95. Penno A., Arumugam M., Antweiler G. et al. Hauttemperaturerhohungen bei Spinalanasthesie. Pradiktiver Wert als Vorhersagewahrscheinlichkeit einer chirurgischen Toleranz // Anaesthesist 2012. 61:770-776. DOI 10.1007/s00101-012-2076-3 [in German]
96. Pereira C.B., Yu X., Czaplik M. et al. Remote monitoring of breathing dynamics using infrared thermography // Biomed Opt Express. 2015;6(11):4378-4394. PMID: 26601003; PMCID: PMC4646547
97. Piedmont R.L. Effects of hypnosis and biofeedback upon the regulation of peripheral skin temperature // Perceptual and Motor Skills, 1981. 53(3), 855-862.
98. Rajek A., Greif R., Sessler D.I. et al. Core cooling by central venous infusion of ice-cold (4 degrees C and 20 degrees C) fluid: isolation of core and peripheral thermal compartments // Anesthesiology. 2000 Sep;93(3):629-637.
99. Ramajoli F., De Amici D. Is there a bilateral block of the thoracic sympathetic chain after unilateral intrapleural analgesia? // Anesth Analg. 1998 Aug; 87 (2): 360-367.
100. Raynaud J., Michaux D., Bleirad G. et al. Changes in rectal and mean skin temperature in response to suggested heat during hypnosis in man // Physiology & Behavior, 1984. 33(2), 221-226. doi:10.1016/0031-9384(84)90103-3
101. Roberts A.H., Kewman D.G., Macdonald H. Voluntary control of skin temperature: Unilateral changes using hypnosis and feedback // Journal of Abnormal Psychology, 1973. 82(1), 163-168.
102. Rogowski J., Mrozinski P., Jagielak D. et al. Thermographic assessment of stellate ganglion block effectiveness during cardiosurgical procedures // Med Sci Monit. 2000; 6(2):407-410.
103. Rustecki B., Jung A., Ring F. et al. Esophagus measured central temperature compared with infrared camera temperature in patient under general anesthesia // Proceedings of the 17th Congress of the Polish Association of Thermology, Zakopane, March15-17, 2013. Thermology international 2013, 23/2: 68-69. DOI: 10.13140/2.1.2429.3449
104. Rustecki B., Mozañski M., Klimkiewicz J. et al. Evaluation of paravertebral block for mastectomy by infrared imaging (extended abstract) // Thermology International 2015, 25 (3): 103.
105. Rustecki B., Rustecka A., Kalicki B. et al. Comparison of core temperature measured at the esophagus with infrared thermographic temperature monitoring in patients undergoing general anesthesia (extended abstract) // Thermology International 2014; 24 (2): 58-59.
106. Rustecki B., Rustecka A., Kalicki B. et al. A Study of Heat Loss in Patients Undergoing General Anesthesia Warmed with a Heated Mattress with Esophageal Temperature Monitoring Compared to Facial Infrared Thermography // Journal of Medical Imaging and Health Informatics, 2016. 6(1), 141-145. doi:10.1166/jmihi.2016.1587
107. Selvaraj V., Gnanaprakasam P.V. Evaluation of skin temperature over carotid artery for temperature monitoring in comparison to nasopharyngeal temperature in adults under general anesthesia // Anesth Essays Res 2016;10:291-296.
108. Sessler D.I. A proposal for new temperature monitoring and thermal management guidelines // Anesthesiology 89, 1298 (1998).
109. Sillero-Quintana M., Fernández-Jaén T., Fernández-Cuevas I. et al. Infrared Thermography as a Support Tool for Screening and Early Diagnosis in Emergencies // Journal of Medical Imaging and Health Informatics, 2015. Vol. 5, 1223-1228. doi:10.1166/jmihi.2015.1511
110. Silverman D., Bergeron M., Haddadin A. et al. Documentation of potentially harmful cerebral hyperthermia with a noninvasive surface sensor // Am. Soc. Anesthesiology Annual Meeting, 2010.
111. Simpson G., Rodseth R.N. A prospective observational study testing liquid crystal phase change type thermometer placed on skin against oesophageal/pharyngeal placed thermometers in participants undergoing general anesthesia // BMC Anesthesiology 2019; 19 (1), art. no. 206.
112. Stanev E., Dencheva M., Lyapina M., Forghani P. Thermographic examination of prick test reactions with local anesthetic // Journal of Thermal Analysis and Calorimetry. 7 pp. <https://doi.org/10.1007/s10973-019-08814-4>
113. Stevens M.F., Stotz K., Kao T.C. et al. The relative increase in skin temperature after stellate ganglion block is predictive of a complete sympathectomy of the hand // Reg Anesth Pain Med. 1998 May-Jun;23(3):266-720. Comment in: Reg Anesth Pain Med. 1999 May-June, 24(3):275-276. DOI:[10.1016/s1098-7339(98)90053-0](https://doi.org/10.1016/s1098-7339(98)90053-0)
114. Stevens M.F., Werderhausen R., Hermanns H., Lipfert P. Skin temperature during regional anesthesia of the lower extremity // Anesth. Analg. 2006. 102 (4): 1247-1251. doi: 10.1213/01.ane.0000198627.16144.77. [[PubMed](https://www.ncbi.nlm.nih.gov/pubmed/16551932)][[Cross Ref](https://dx.doi.org/10.1213%2F01.ane.0000198627.16144.77)]
115. Stevens M.F., Werdehausen R., Hermanns H., Lipfert P. Further Evidence that Temperature Measurement Is a Useful Indicator of Regional anesthesia Outcomes // Anesth Analg. 2007; 104: 741-742.
116. Strong W.E., Blanchard J., Ramamurthy S., Hoffman J. Does the sympathetic block outlast sensory block: a thermographic evaluation // Pain, Volume 46, Issue 2, August 1991, P. 173-176.
117. Su H.-H., Lui P.-W., Yu C.-L. et al. The effects of continuous axillary brachial plexus block with ropivacaine infusion on skin temperature and survival of crushed fingers after microsurgical replantation // Chang Gung Med. J. 2005. 28 (8): 567-574.
118. Tran K.M.; Frank S.M.; Raja S.N. et al. Lumbar sympathetic block for sympathetically maintained pain: Changes in cutaneous temperatures and pain perception // Anesth. Analg. 2000, 90, 1396-1401. doi: 10.1097/00000539-200006000-00025
119. Tsai J.C., Lim K.B., Lin S.Y., Kao M.C. Thermographic study of palmar and facial skin temperature of hyperhidrosis patients before and after thoracic sympathectomy // J Formos Med Assoc. (2000) Jun;99(6):466-471.
120. Van Haren F.G.A.M., Van Kadic L., Driessen J.J. Skin temperature measured by infrared thermography after ultrasound-guided blockade of the sciatic nerve // Acta Anaesthesiol. Scand. 2013, 57, 1111-1117. <https://doi.org/10.1111/aas.12170>
121. van Haren F.G., Driessen J.J., Kadic L. et al. The relation between skin temperature increase and sensory block height in spinal anaesthesia using infrared thermography // Acta Anaesthesiol Scand. 2010;54(9):1105-1110. <https://doi.org/10.1111/j.1399-6576.2010.02298.x>
122. Vergara-Aguirre S.N., Rodríguez-Medina D.A., Domínguez-Trejo B. et al. Stimulación térmica y analgesia hipnótica para la regulación autonómica e inflamatoria en pacientes con dolor crónico // Revista Digital Internacional de Psicología y Ciencia Social; Julio-Diciembre 2018. Vol. 4, Núm. 2. P. 195-213. DOI: 10.22402/j.rdipycs.unam.4.2.2018.183.195-213 [in Spanish]
123. Verdugo R.J., Ochoa JL. Use and misuse of conventional electrodiagnosis, quantitative sensory testing, thermography, and nerve blocks in the evaluation of painful neuropathic syndromes // Muscle Nerve. 1993;16(10):1056-1062. doi:10.1002/mus.880161009
124. Wagner J., Abreu M., Piepmeier J. et ak. Detection of brain cooling during craniotomy with a surface temperature monitor // Am. Soc. Anesthesiology Annual Meeting, 2010.
125. Werdehausen R., Braun S., Hermanns H. et al. Uniform distribution of skin-temperature increase after different regional-anesthesia techniques of the lower extremity // Regional Anesthesia and Pain Medicine. 2007. 32 (1): 73-78. <http://dx.doi.org/10.1016/j.rapm.2006.07.009>
126. Werdehausen R., Stevens M.F., Hermanns H. et al. Infrared-thermography during regional anaesthesia // Regional Anesthesia and Pain Medicine, Volume 30, Issue 5, Supplement 1, September-October 2005, Page 17.
127. Yamakage M., Kamada Y., Honma Y. Predictive variables of hypothermia in the early phase of general anesthesia // Anesthesia & Analgesia 2000;90(2):456-459.
128. Yoshimura M., Shiramoto H., Koga M. et al. Skin temperature changes after ultrasound-guided supra-inguinal fascia iliaca block: a prospective observational study // JA Clinical Reports (2021) 7:31. 6 pp. <https://doi.org/10.1186/s40981-021-00435-x>
129. Zhang S., Fan L., Mei W. Blood Flow Index and Skin Temperature Measured by Laser Speckle Contrast Imaging and Infrared Thermography After Specific Ultrasound-Guided Blocking of the C6, C7 Nerve Root: A Case Report // Journal of Pain Research. October 2020;13:2577-2583. DOI: [10.2147/JPR.S272829](http://dx.doi.org/10.2147/JPR.S272829)