

Curriculum Vitae

Name: Robert Edward Freundlich
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Work Email: robert.e.freundlich@vanderbilt.edu

Education

09/2002 - 05/2005 B.A. in German Literature from Johns Hopkins University, Baltimore, Maryland
06/2005 - 05/2007 M.S. in Biotechnology from Johns Hopkins University, Baltimore, Maryland
07/2006 - 05/2010 M.D. from Baylor College of Medicine, Houston, Texas

Training

06/2010 - 06/2011 Internship from University of Michigan Medical Center, Ann Arbor, Michigan
07/2011 - 06/2012 Post-Doc Research in Clinical informatics from University of Michigan Medical Center, Ann Arbor, Michigan
07/2012 - 06/2015 Residency in Anesthesiology from University of Michigan Medical Center, Ann Arbor, Michigan
07/2015 - 06/2016 Fellowship in Critical Care Medicine from University of Michigan Medical Center, Ann Arbor, Michigan

Licensure and Certification

06/2010 - 01/2017 Medical License, MI Medical License of Michigan United States (4301096147)
06/2011 - 01/2017 Medical License, OH Medical License of Ohio United States (097725)
08/2015 - 08/2018 Medical License, TN Medical License of Tennessee United States (53490)
05/2016 - Present Board Certification, American Board of Anesthesiology Primary Certification United States (55442)
08/2016 - Present Board Certification, American Board of Anesthesiology, Critical Care Medicine Subspecialty Certification (55442)
09/2016 - Present Board Certification, Basic Echocardiography, National Board of Echocardiography
06/2017 - Present Credential, Epic Physician Builder Certification (Physician Builder)
06/2017 - 02/2018 Medical License, KY Medical License of Kentucky United States (50312)
08/2017 - Present Credential, Epic Physician Builder - Analytics Certification
08/2017 - Present Credential, Epic Physician Builder - Orders Certification

Academic Appointments

07/2016 - Present Assistant Professor of Anesthesiology, Vanderbilt University (Nashville, Tennessee)
07/2017 - Present Assistant Professor of Biomedical Informatics, Vanderbilt University (Nashville, Tennessee)

Hospital Appointments

07/2017 - Present Clinical Staff, Jennie Stuart Medical Center (Hopkinsville, Kentucky)

Professional Organizations

2011 International Anesthesia Research Society
2011 American Society of Anesthesiologists
2011 Society for Technology in Anesthesia
2011 - 2016 Michigan Society of Anesthesiologists
2011 - 2016 Washtenaw County Medical Society
2012 American Medical Association
2012 - 2016 Michigan State Medical Society
2013 Society for Head and Neck Anesthesia
2015 Society of Critical Care Medicine

2015	American College of Chest Physicians
2016	Early-Stage Anesthesiology Scholars, Southern Regional Representative
2016	Society of Cardiovascular Anesthesiologists
2016	Society of Anesthesia and Sleep Medicine
2016	American Medical Informatics Association

Professional Activities

Intramural

07/2016 - 02/2018	Bedside Surveillance Committee
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Extramural

N/A	Reviewer for BMJ Case Reports
N/A	Reviewer for Anesthesia and Analgesia Case Reports
N/A	Reviewer for Journal of Andrology
N/A	Reviewer for BMJ Quality and Safety
N/A	Reviewer for Journal of Clinical Monitoring and Computing
07/2011 - Present	Perioperative Clinical Research Committee, Anesthesiology
03/2012 - Present	Reviewer for Anesthesia and Analgesia
03/2013 - Present	Reviewer for Journal of Clinical Anesthesia
10/2016 - 05/2018	Early Stage Anesthesiology Scholars, Executive Committee, Southern Regional Representative
10/2016 - Present	ASA Abstract Review Subcommittee on Outcomes and Database Research, American Society of Anesthesiologists, Selected to serve on the abstract review subcommittee for outcomes and database research for the 2017-19 annual meetings.
01/2017 - Present	Reviewer for BMC Research Notes
01/2017 - Present	Reviewer for Anesthesiology
03/2017 - Present	Reviewer for Critical Care Nurse
04/2017 - Present	Reviewer for Journal of Medical Systems
07/2017 - Present	IARS 2018 Annual Meeting Session Proposal Review Panel Committee, IARS, IARS 2018 Annual Meeting Session Proposal Review Panel Committee for "Technology, Computing and Simulation, Equipment Monitoring"
09/2017 - Present	IARS Session Host Committee, IARS, Member of IARS 2018 Annual Meeting Session Host Committee, Member
02/2018 - Present	Merit Reviewer, Patient-Centered Outcomes Research Institute, PCORI Merit Reviewer, Merit Reviewer
02/2018 - Present	Early Career Reviewer, National Institutes of Health
04/2018 - Present	Reviewer for British Journal of Anaesthesia
06/2018 - Present	ASA Abstract Review Subcommittee on Critical Care, American Society of Anesthesiologists, Member of 2019 ASA Abstract Review Subcommittee on Critical Care, Member

Teaching Activities

08/2016 - 08/2016	Weekly Echocardiography Conference: Physics of Ultrasound, Lecturer, MCE
09/2016 - 09/2016	Critical Illness Integrated Science Course: Basic Transesophageal Echocardiography Exam, Lecturer, CELA, 9/15/2016
09/2016 - 09/2016	Critical Illness Integrated Science Course: Basic Transesophageal Echocardiography Exam, Lecturer, CELA, September 8th
10/2016 - 10/2016	Cardiac Dysfunction and Hemodynamic Monitoring, Lecturer, MCE 3161, CVICU medical students
11/2016 - 11/2016	Critical Illness Integrated Science Course: Basic TEE Exam, Lecturer, CELA, 11/11/2016
11/2016 - 11/2016	Critical Illness Integrated Science Course: Basic TEE Exam, Lecturer, CELA, 11/4/2016
02/2017 - 02/2017	Basics of Bedside TTE, Lecturer, Total 1.5 hours of teaching time
07/2017 - 07/2017	Intern bootcamp machine checkout exam: Machine Checkout Exam, Small Group Facilitator, PACU, Machine Checkout Exam for Intern Bootcamp
07/2017 - 08/2017	Foundations of the Profession: Introductory Session, Small Group Facilitator, Vanderbilt, Foundations of the Profession, introductory session
08/2017 - 08/2017	Sedation and Anesthesia for Procedures: Cook Course, Lecturer, CELA, 8/15/17
09/2017 - 09/2017	Critical Care Skills Week: Airway Management, Lecturer/SIM facilitator, CELA

10/2017 - 2017	ISC Critical Illness: Journal Club, Small Group Facilitator, ISC: Critical Illness Journal Club
10/2017 - 10/2017	ISC Critical Illness: Case Based Learning Facilitator, Small Group Facilitator
10/2017 - 10/2017	ISC Critical Illness: Case Based Learning, Small Group Facilitator
10/2017 - 10/2017	ISC Critical Illness: Valve Physiology/Pathophysiology and Management, Lecturer
12/2017 - 12/2017	Pulmonary Dysfunction and Basic Ventilation Modes: Pulmonary Dysfunction and Basic Ventilation Modes, Lecturer, MCE

Research Supervision / Mentorship

07/2016 - Present	Dorothee Mueller Vanderbilt University Medical Center, Current Position: Assistant Professor of Anesthesiology. (Post-doc Fellow, Research)
07/2016 - 06/2017	Matthew Stansbury University of Michigan, Current Position: Cardiac Anesthesia Fellow. (Post-doc Fellow, General Mentorship)
07/2016 - 06/2017	Patrick McConville North Carolina, Current Position: Private Practice. (Post-doc Fellow, Research)
06/2017 - Present	Micah Harris (Undergraduate, Research)
07/2017 - Present	Jeremy Walco Vanderbilt University Medical Center, Current Position: Critical Care Fellow. (Post-doc Fellow, Research)
07/2017 - Present	Melissa Bellomy (Resident, Research)
07/2017 - Present	Joshua Hozella Vanderbilt University Medical Center, Current Position: Critical Care Fellow. (Post-doc Fellow, Research)

Other Significant Activities

10/2016	Oral Session Moderator, ASA 2016 Annual Meeting: Oral Session Moderator for an Outcomes Research Session at the 2016 ASA Annual Meeting
11/2016	AMIA 2016 Annual Meeting Abstract Reviewer: Abstract Reviewer for American Medical Informatics Association 2016 Annual Meeting
07/2017	Associate Medical Director, Vanderbilt Anesthesiology Perioperative Informatics Research:
10/2017	ASA 2017 Annual Meeting Abstract Reviewer: Abstract reviewer for the 2017 American Society of Anesthesiologists Annual Meeting
10/2017	Oral Podium Session Moderator, 2017 ASA Annual Meeting: Information Management and Database Research
11/2017	AMIA 2017 Annual Meeting Abstract Reviewer: Abstract reviewer for 2017 American Medical Informatics Annual Meeting
10/2018	ASA 2018 Annual Meeting Abstract Reviewer:
11/2018	AMIA 2018 Annual Meeting Abstract Reviewer: AMIA 2018 Annual Meeting Abstract Reviewer
01/2019	STA 2019 Annual Meeting Abstract Co-Chair:

Grants and Funding

Grant number unavailable IARS Development of a Dynamic Risk Prediction Model for Postoperative Assisted Ventilation Role: Principal Investigator	Robert E. Freundlich (PI)	N/A
Grant number unavailable VICTR High Flow Nasal Cannula to Prevent Reintubation in High-Risk Cardiac Surgery Patients Role: Principal Investigator Total Cost: \$500.00	Robert E. Freundlich (PI)	N/A
Grant number unavailable FAER Development of a Dynamic Risk Prediction Model for Postoperative Assisted Ventilation Role: Principal Investigator	Robert E. Freundlich (PI)	N/A
Grant number unavailable AHRQ Cancer Patient Safety Learning Laboratory(CaPSLL) Role: Co-Investigator	Dan France (PI)	N/A

Grant number unavailable VICTR Development of a Real-Time Predictive Model for Postoperative Respiratory Decompensation in Non-Intensive Care Unit Patients. Microgrant funded via CTSA award No. UL1TR000445 from the National Center for Advancing Translational Sciences Role: Principal Investigator Total Cost: \$500.00	Robert E. Freundlich (PI)	01/2017 - 01/2017
COVMOPO0525 Medtronic Medtronic IPI study Role: Co-Investigator Total Cost: \$527,000.00	Lisa Weavind (PI)	01/2017 - 11/2017
Grant number unavailable NIH-CTSA-KL2 Development of a Dynamic Risk Prediction Model for Postoperative Assisted Ventilation Role: Principal Investigator Total Cost: \$330,000.00	Robert E. Freundlich (PI)	08/2017 - 07/2020

Honors / Awards

2013	Resident Scholar, Foundation for Anesthesia Education and Research
2013	Resident Abstract Award Finalist, International Anesthesia Research Society
2015	Clinician-Scientist Translational Anesthesiology Research Trainee, University of Michigan, Department of Anesthesiology
06/2015	Peter J. Cohen Resident Research Award, University of Michigan, Department of Anesthesiology
2017	Elliott Newman Society
2017	Benjamin H. Robbins Society
02/2018	Recommended article, F1000 Prime, "Complications Associated with Mortality in the National Surgical Quality Improvement Program Database" was identified as a recommended article by F1000 Prime
05/2018	Award for Excellence in Research Related to Anesthesiology and Perioperative Medicine, Vanderbilt University Medical Center, Best Poster Presentation, 14th Annual Research Symposium

Publications

Peer Reviewed Publications

Letters

1. **Freundlich RE**, Wanderer JP, Ehrenfeld JM. Building Big Datasets-- Don't Forget the EMR. Anesthesia and Analgesia 2017 Feb;124(4):1367-1367. PMID: 28212218.
2. **Freundlich RE**, Kingeter AJ. When Managing Patients with Left Ventricular Assist Devices Undergoing Noncardiac Surgery, Less is Not More. Anesthesiology 2017 Apr;127(5):901-902. PMID: 29040105.
3. Kiefer JJ, **Freundlich RE**. Confounding Variables Impacting the Association Between Duration of Venous-Arterial Extracorporeal Life Support and Mortality. Critical Care 2017 Apr;21(1):203-203. PMID: 28764805.
4. **Freundlich RE**, Lopez M, Kingeter AJ. Not All Calcium Formulations Are Alike. Anesthesia and Analgesia 2017 Sep;126(2):728-728. PMID: 29189270.
5. **Freundlich RE**, Wanderer JP, Ehrenfeld JM. Clinical Decision Support Tools Need to Improve More Than Just Process Outcomes. Anesthesiology 2018 Feb.

Review Articles

1. **Freundlich RE**, Kheterpal S. Perioperative Effectiveness Research Using Large Databases. Best Pract Res Clin Anaesthesiol 2011 Dec;25(4):489-498. PMID: 22099915.
2. **Freundlich RE**, Ehrenfeld JM. Anesthesia Information Management: Clinical Decision Support. Current Opinions in Anesthesiology 2017 Sep;30(6):705-709. PMID: 28938302.

3. **Freundlich RE**, Ehrenfeld JM. Perioperative Information Systems: Opportunities to Improve Delivery of Care and Clinical Outcomes in Cardiac and Vascular Surgery. Journal of Cardiothoracic and Vascular Anesthesia 2017 Nov; PMID: 29229258.

Editorials

1. **Freundlich, RE**; Ehrenfeld JM. Quality Metrics: Hard to Develop, Hard to Validate. British Journal of Anaesthesia 2017 Jul;119(1):10-11. PMID: 28974060.
2. Bellomy ML, **Freundlich RE**. Hyperglycemia and Elevated Lactate in Trauma: Where Do We Go From Here?. Anesthesia and Analgesia 2017 Nov;126(3):748-749. PMID: 29461323.
3. **Freundlich RE**, Pandharipande PP, Ehrenfeld JM. A Call for Electronic Health Record-based Data Sharing for Clinical Trials in Critical Care. Journal of Medical Systems 2018 May;42(7):115-115. PMID: 29802451.

Research Articles

1. Marton A, Clark CC, Srinivasan R, **Freundlich RE**, Narducci Sarjeant AA, Meyer GJ. Static and dynamic quenching of Ru(II) polypyridyl excited states by iodide. Inorg Chem 2006 Jan;45(1):362-369. PMID: 16390077.
2. Mohamed O, **Freundlich RE**, Dakik HK, Grober ED, Najari B, Lipshultz LI, Khera M. The quantitative ADAM questionnaire: a new tool in quantifying the severity of hypogonadism. Int J Impot Res 2010 Jan;22(1):20-24. PMID: 19657348.
3. **Freundlich RE**, Hawes LT, Weldon SA, Brunnicardi FC. Laparoscopic repair of an incarcerated right inguinal indirect hernia involving a retroperitoneal ileum. Hernia 2011 Apr;15(2):225-227. PMID: 20165969.
4. Moskovic DJ, **Freundlich RE**, Yazdani P Lipshultz LI, Khera M. Subcutaneous Implantable Testosterone Pellets Overcome Noncompliance in Adolescent Men with Klinefelter's Syndrome: Case Report and Review of the Literature. J Androl 2012 Jul;33(4):570-573. PMID: 21940986.
5. **Freundlich RE**, Grondin L, Tremper KK, Saran KA, Kheterpal S. Automated Electronic Reminders to Prevent Miscommunication Between Primary Medical, Surgical, and Anesthesia Providers. BMJ Qual Saf 2012 Oct;21(10):850-854. PMID: 22773892.
6. **Freundlich RE**, Barnet CS, Shanks AM, Tremper KK, Kheterpal S. A Randomized Trial of Automated Electronic Alerts Demonstrating Improved Reimbursable Anesthesia Time Documentation. J Clin Anesth 2013 Mar;25(2):110-114. PMID: 23333782.
7. Mashour GA, Sharifpour M, **Freundlich RE**, Tremper KK, Shanks AM, Nallamotheu BK, Vlisides PE, Weightman A, Matlen L, Merte J, Kheterpal S. Perioperative Metoprolol and Risk of Stroke after Noncardiac Surgery. Anesthesiology 2013 Dec;119(6):13400-1346. PMID: 23612244.
8. Mathis MR, Naughton NN, Shanks AM, **Freundlich RE**, Pannucci CJ, Chu Y, Haus J, Kheterpal S. Patient Selection for Day Case-eligible Surgery: Identifying Those at High Risk for Major Complications. Anesthesiology 2013 Dec;119(6):1310-1321. PMID: 24108100.
9. Kheterpal S, Healy D, Aziz M, **Freundlich RE**, Linton F, Shanks AM, Martin LD, Epps J, Fernandez-Bustamente A, Jameson L, Tremper T, Tremper KK. Incidence, Predictors, and Outcome of Difficult Mask Ventilation Combined with Difficult Laryngoscopy: A Report from the Multicenter Perioperative Outcomes Group. Anesthesiology 2013 Dec;119(6):1360-1369. PMID: 24071617.
10. **Freundlich RE**, Newman JW, Tremper KK, Mhyre JM, Kheterpal S, Sanford TJ, Tait AR. The Impact of a Dedicated Research Education Month for Anesthesiology Residents. Anesthesiol Res Pract 2015 Jan;2015(623959) PMID: 25653678.
11. **Freundlich RE**, Duggal NM, Housey M, Tremper TT, Engoren MC, Kheterpal S. Intraoperative Medications Associated with Hemodynamically Significant Anaphylaxis. Journal of Clinical Anesthesia 2016 Dec;35:415-423. PMID: 27871567.
12. **Freundlich RE**, Maile MD, Hajjar MM, Habib JR, Jewell ES, Schwann T, Habib RH, Engoren M. Years of Life Lost Following Complications of Coronary Artery Bypass Graft Operations. Annals of Thoracic Surgery 2016 Dec;103(6):1893-1899. PMID: 27938887.
13. Berman MF, Iyer N, Freudzon L, Wang S, **Freundlich RE**, Housey M, Kheterpal S. Alarm Limits for Intraoperative Drug Infusions: A Report from the Multicenter Perioperative Outcomes Group. Anesthesia and Analgesia 2017 Apr;125(4):1203-1211. PMID: 28759483.
14. Kruger GH, Shanks A, Kheterpal S, Tremper T, Chiang C, **Freundlich RE**, Blum JM, Shih AJ, Tremper KK. Influence of Non-invasive Blood Pressure Measurement Intervals on the Occurrence of Intra-Operative Hypotension. Journal of Clinical Monitoring and Computing 2017 May; PMID: 28965158.
15. **Freundlich RE**, Maile MD, Sferra JJ, Jewell ES, Kheterpal S, Engoren MC. Complications Associated with Mortality in the National Surgical Quality Improvement Program Database. Anesthesia and Analgesia 2017 Oct;127(1):55-62. PMID: 29324497.
16. **Freundlich RE**, Freundlich KL, Drolet BC. Pagers, Smartphones and HIPAA: Finding the Best Solution for Electronic Communication of Protected Health Information. Journal of Medical Systems 2017 Nov;42(1):9-11. PMID: 29177600.

Case Reports

1. Joseph J, **Freundlich RE**, Abir M. Ruptured Subcapsular Liver Hematoma Following Mechanically-Assisted Cardiopulmonary Resuscitation. BMJ Case Rep 2016 Feb; PMID: 26838302.
2. An SS, Henson CP, **Freundlich RE**, McEvoy MD. Case Report of High Dose Hydroxocobalamin in the Treatment of Vasoplegic Syndrome During Liver Transplantation. American Journal of Transplantation 2018 Feb;18(6):1552-1555. PMID: 29573551.

Presentations

Internal Grand Rounds

1. Robert E. Freundlich, MD, MS. Vanderbilt University Medical Center, Department of Anesthesiology. Nashville, Tennessee. 2017 Jan 6; Dead in Bed No More.
2. Freundlich RE. Biomedical Informatics Seminar. Department of Biomedical Informatics; Nashville, Tennessee. 2017 Oct 4; Dead in Bed No More.

Presentations at Scientific Meetings

1. Freundlich RE, Lipshultz LI, Khera M. Sexual Medicine Society of North America 2009 Fall Scientific Meeting. 2009 Nov 18; The Use of Implantable Testosterone Subcutaneous Pellets (Testopel) in Young Men with Klinefelter's Syndrome.
2. Freundlich RE, Stamatakis L, Sathyamoorthy K, Mital A, Godoy G, Lerner SP. Society of Urologic Oncology 10th Annual Meeting. 2009 Dec 2; The Effect of Body Mass Index and Other Variables on the Adequacy of Pelvic Lymphadenectomy in Patients with Urothelial Carcinoma of the Bladder.
3. Godoy G, Stamatakis L, Freundlich RE, Chen G, Mital A, Shoss J, Madden-Fuentes R, Hong B, Lerner SP. American Urological Association Annual Meeting. 2010 May 29; Changes in Pathological N-stage Associated with Extended Lymph Node Dissection and Radical Cystectomy in Patients with Urothelial Carcinoma of the Bladder.
4. Freundlich RE, Stamatakis L, Sathyamoorthy K, Mital A, Godoy G, Lerner SP. American Urological Association Annual Meeting. 2010 May 29; Factors Affecting the Adequacy of Lymph Node Yield in Extended Pelvic Lymph Node Dissection For Urothelial Bladder Cancer.
5. Godoy G, Stamatakis L, Freundlich RE, Chen G, Mital A, Shoss J, Madden-Fuentes R, Hong B, Lerner SP. American Urological Association Annual Meeting. 2010 May 29; Survival Outcomes of Patients with Grossly Positive Nodes at Radical Cystectomy for Urothelial Carcinoma of the Bladder.
6. Stamatakis L, Freundlich RE, Godoy G, Chen G, Mital A, Shoss J, Madden-Fuentes R, Lerner SP. American Urological Association Annual Meeting. 2010 May 29; Analysis of Patients with Bladder Cancer Involving Lymph Nodes Above the Common Iliac Bifurcation: is Cure Possible with Extended Lymphadenectomy?.
7. Godoy G, Stamatakis L, Freundlich RE, Chen G, Shoss J, Madden-Fuentes R, Lerner SP. South Central Section of the American Urological Association Annual Meeting. 2010 Sep 22; Is There a Stage Benefit in Performing an Extended Lymph Node Dissection During Radical Cystectomy for Urothelial Carcinoma of the Bladder?.
8. Freundlich RE, Tallman CT, Al-attar PM, Crossley H, He C, Hanauer DA, Weizer AZ, Montgomery JS, Wood DP, Smith D, Hafez KS, Lee CT. North Central Section of the American Urological Association Annual Meeting. 2011 Oct 18; Are the Results of Neoadjuvant Chemotherapy Trials Generalizable to Elder Patients with Muscle Invasive Bladder Cancer?.
9. Freundlich RE, Barnet CS, Shanks AM, Tremper KK, Kheterpal S. Society for Technology in Anesthesia Annual Meeting. 2012 Jan 18; A Randomized Trial of Automated Electronic Alerts Demonstrating Significantly Improved Anesthesia Time Documentation Accuracy and Revenue.
10. Freundlich RE, Tremper KK, Kheterpal S. Society for Technology in Anesthesia Annual Meeting. 2012 Jan 18; The Multicenter Perioperative Outcomes Group (MPOG): Why Join?.
11. Naughton N, Kheterpal S, Mathis M, Freundlich RE, Shanks AM, Chu Y, Haus J, Pannucci C. American Society of Anesthesiologists Annual Meeting. 2012 Oct 13; Major Morbidity and Mortality After Common Outpatient Surgical Procedures: A Study of Preoperative Risk Factors.
12. Woodrum D, Freundlich RE, Sigakis M, Shanks AM, Kheterpal S. American Society of Anesthesiologists Annual Meeting. 2012 Oct 13; Preoperative Predictors of Vasopressor Requirements in Patients Undergoing Adrenalectomy for Pheochromocytoma.
13. Freundlich RE, Newman JW, Tremper KK, Kheterpal S, Sanford TJ, Tait AR. American Society of Anesthesiologists Annual Meeting. 2012 Oct 13; The Impact of a Dedicated Research Month for Anesthesiology Residents.
14. Kheterpal S, Freundlich RE, Engoren M, Shanks AM, Jameson L, Paganelli W, Tremper KK. American Society of Anesthesiologists Annual Meeting. 2012 Oct 13; A multicenter evaluation of acute kidney injury incidence and recovery following major general surgery: results from the Multicenter Perioperative Outcomes Group.

15. Freundlich RE, Newman JW, Tremper KK, Kheterpal S, Sanford TJ, Tait AR. American Association of Medical Colleges Annual Meeting. 2012 Nov 2; The Impact of a Dedicated Research Month for Anesthesiology Residents.
16. Freundlich RE, Duggal N, Shanks AM, Tremper KK, Engoren M, Kheterpal S. International Anesthesia Research Society 2013 Annual Meeting. 2013 May 4; Intraoperative Medications Associated with Clinically Significant Anaphylaxis.
17. Freundlich RE, Duggal N, Shanks AM, Tremper KK, Engoren M, Kheterpal S. International Anesthesia Research Society 2013 Annual Residents' Meeting. 2013 May 4; Intraoperative Medications Associated with Clinically Significant Anaphylaxis.
18. Alva A, Freundlich RE, Tallman CT, Al-attar PM, Crossley H, He C, Hanauer D, Hussain M, Weizer AZ, Montgomery JS, Wood DP, Smith D, Hafez KS, Lee CT. American Urological Association 2013 Annual Meeting. 2013 May 4; Outcomes with Neoadjuvant Chemotherapy in Elder Patients with Muscle Invasive Bladder Cancer.
19. Kheterpal S, Healy D, Aziz M, Shanks AM, Freundlich RE, Linton F, Epps JL, Fernandez-Bustamante A, Jameson LC, Tremper KK. American Society of Anesthesiologists Annual Meeting. 2013 Oct 12; Incidence, Predictors, and Outcome of Difficult Mask Ventilation Combined with Difficult Laryngoscopy: A Report from the Multicenter Perioperative Outcomes Group.
20. Mathis M, Naughton N, Shanks AM, Freundlich RE, Pannucci C, Kheterpal S. International Anesthesia Research Society 2014 Annual Meeting. 2014 May 17; Patient Selection for Outpatient Surgery: Identifying Those at High Risk for Major Complications.
21. Freundlich RE, Newman J, Brown S, Wagner D, Ramachandran SK. American Society of Anesthesiologists Annual Meeting. 2014 Oct 11; The Incidence of Hypotension Related to Intraoperative Intravenous Clonidine Use.
22. Newman J, Freundlich RE, Brown S, Wagner D, Ramachandran SK. Midwest Anesthesia Residents' Conference 2015 Annual Meeting. 2015 May 1; The Incidence of Hypotension Related to Intraoperative Intravenous Clonidine Use.
23. Freundlich RE, Hajjar MM, Habib JR, Jewell ES, Kheterpal S, Schwann T, Habib RH, Engoren M. American Society of Anesthesiologists Annual Meeting. American Society of Anesthesiologists; San Diego, California. 2015 Oct 22; Attributable Causes of Mortality in Adult Cardiac Surgery.
24. Freundlich RE, Maile MD, Sferra JJ, Kheterpal S, Engoren M. American Society of Anesthesiologists Annual Meeting. American Society of Anesthesiologists; Chicago, Illinois. 2016 Oct 24; Complications Associated with Mortality in the National Surgical Quality Improvement Program Database.
25. Mathis MR, Naik B, Freundlich RE, Shanks AM, Heung M, Engoren M, Tremper KK, Kheterpal S. American Society of Anesthesiologists Annual Meeting. American Society of Anesthesiologists; Chicago, Illinois. 2016 Oct 24; Predictors and Outcomes of Postoperative Acute Kidney Injury After Non-Cardiac Surgery: A Report from the Multicenter Perioperative Outcomes Group.
26. Freundlich RE et al. Society for Technology in Anesthesia 2017 Annual Meeting. San Diego, California. 2017 Jan 11; Complications Associated with Mortality in the National Surgical Quality Improvement Program Database.
27. Mueller DA, Weavind L, Freundlich RE. Deutsche Anaesthesiecongress 2017. Deutsche Gesellschaft für Anästhesiologie und Intensivmedizin; Nuernberg, Germany. 2017 May 1; Demographics and Outcomes of Patients with Early versus Late Rapid Response Team Activation.
28. Utrankar A, McConville PJ, Mueller DA, Weavind LM, Freundlich RE. American Society of Anesthesiologists Annual Meeting 2017. American Society of Anesthesiologists; Boston, Massachusetts. 2017 Oct 22; Risk Factors for Mortality and Organ Dysfunction in Patients with Multiple Rapid Response Events.
29. Mueller DA, McConville PJ, Wanderer JP, Weavind LM, Freundlich RE. American Society of Anesthesiologists Annual Meeting 2017. American Society of Anesthesiologists; Boston, Massachusetts. 2017 Oct 24; Early Versus Late Postoperative Rapid Response Team Activation: An Analysis of Differences in Patient Characteristics.
30. Catherine L. Clark, Liza M. Weavind, Sara E. Nelson, Jennifer Wilkie, Joel Conway, Robert E. Freundlich. Society of Critical Care Medicine 2018 Annual Meeting. Society of Critical Care Medicine; San Antonio, Texas. 2018 Feb; Nursing Attitudes Toward Continuous Capnographic Monitoring of Floor Patients.
31. Walco JP, Freundlich RE, Mueller DA, Kingeter AJ, Lopez MG, Weavind LM. International Anesthesia Research Society Annual Meeting. International Anesthesia Research Society; Chicago, Illinois. 2018 Apr; Non-Inferiority of the Integrated Pulmonary Index (IPI) to Address Alarm Fatigue in Low-Acuity Inpatients.
32. Robert E Freundlich, Jeremy P Walco, Dorothee Mueller, Adam Kingeter, Marcos G Lopez, Liza M Weavind. Association of University Anesthesiologists Annual Meeting. Association of University Anesthesiologists; Chicago, Illinois. 2018 Apr; Impact of Implementation of the Integrated Pulmonary Index (IPI) in Low-Acuity Inpatients.
33. Freundlich RE, Walco JP, Mueller DA, Kingeter AJ, Lopez MG, Weavind LM. Vanderbilt Anesthesiology Research Symposium 2018. Nashville, Tennessee. 2018 May; Non-Inferiority of the Integrated Pulmonary Index (IPI) to Address Alarm Fatigue in Low-Acuity Inpatients.

Medically Challenging Cases

1. Freundlich RE, Peoples ES. Midwest Anesthesia Residents' Conference 2013 Annual Meeting. 2013 Apr 26; Intraoperative Neuroleptic Malignant Syndrome.
2. Freundlich RE, Naik V, Servin MN. American Society of Anesthesiologists Annual Meeting. 2013 Oct 12; Management of Aortic Stenosis and Chest Pain in the Parturient.
3. Freundlich RE, Naik V, Servin MN. Midwest Anesthesia Residents' Conference 2014 Annual Meeting. 2014 Apr 4; Management of Aortic Stenosis and Chest Pain in the Parturient.
4. Freundlich RE, Gauger V. American Society of Anesthesiologists Annual Meeting. 2014 Oct 11; Hurler Syndrome: More than a Challenging Airway.

Invited Presentation - Local

1. Robert E. Freundlich. Vanderbilt University Anesthesiology Informatics Conference. Vanderbilt University, Department of Anesthesiology; Nashville, Tennessee. 2015 Mar 18; Challenges in Understanding Postoperative Pulmonary Complications.

Invited Presentation - National

1. Freundlich RE, Byrne M. University of Michigan Anesthesia Technology Conference. American Society of Anesthesia Technologists and Technicians; 2014 Apr 12; Cardiac Monitoring.
2. Freundlich RE. 2017 ACNP/PA Boot Camp. ACNP/PA; Nashville, Tennessee. 2017 Sep 13; LVAD Management.

Invited Presentation - International

1. Moderator. International Anesthesia Research Society Annual Meeting. International Anesthesia Research Society; Chicago, Illinois. 2018 Apr; Scholars' Program: Priorities for Developing Researchers: Perspectives from the NIH and IARS.

Panel Presentation

1. Robert E. Freundlich. American Society of Anesthesiologists 2017 Annual Meeting. ASA; Boston, Massachusetts. 2017 Oct 19; Using Predictive Analytics to Better Detect Postoperative Respiratory Decompensation.

External Grand Rounds

1. Robert E Freundlich. Biomedical Informatics Visiting Professor Lecture. University of Pennsylvania, Department of Anesthesiology and Critical Care Medicine; Philadelphia, Pennsylvania. 2018 Mar 27; Challenges in Implementing Clinical Decision Support Tools to Decrease Postoperative Pulmonary Complications.
2. Freundlich RE. Ernst-Moritz-Arndt-Universität Greifswald; Greifswald, Germany. 2018 May 7; Neue Methoden im Monitoring von ambulaten und stationären Patienten.