

Sudhakar Subramani, MD,MMed,MME, FASE

Curriculum Vitae

May 2024

Educational and Professional History

Degrees Earned

1999	MBBS, Chengalpattu Medical College, Chengalpattu, India
2005	MD, Jawaharlal Institute of Postgraduate Medical Education and Research (JIPMER), Pondicherry, India
2009	MMed in Anaesthesiology, National University of Singapore, Singapore, Singapore
2024	"Master in Medical Education" (MME), University of Iowa, Iowa City, IA, USA.

Postgraduate

Jan 2000 - Jan 2001	Internship, Chengalpattu Medical College, Chengalpattu, India
Aug 2002 - Dec 2005	Resident in Anesthesiology and Critical Care, Jawaharlal Institute of Postgraduate Medical Education and Research (JIPMER), Pondicherry, India
Jan - Dec 2006	Fellow in Cardiothoracic Neurosurgical Anesthesiology, Sree Chitra Tirunal Institute for Medical Sciences and Technology (SCTIMST), Trivandrum, India
Jul 2011 - Jun 2012	Fellow in Cardiothoracic Anesthesia, University of Iowa, Iowa City, Iowa

Licenses

Jul 2011 - Jun 2012	State of Iowa Fellow License to Practice Medicine, State of Iowa Board of Medical Examiners, Iowa
Jun 2012 - May 2015	State of Iowa Special License to Practice Medicine, State of Iowa Board of Medical Examiners, Iowa
May 2015 - Jan 2025	State of Iowa License to Practice Medicine, State of Iowa Board of Medical Examiners, Iowa

Certifications

Jan 2014 - Jan 2025	Iowa Controlled Substances Certification (ICSC), Iowa Board of Pharmacy, Iowa
Jun 2011 - Apr 2025	Advanced Cardiovascular Life Support (ACLS) Provider, American Heart Association, Iowa
Feb 2015 - Feb 2027	Federal Drug Enforcement Administration (DEA) Controlled Substance Registration, United States Department of Justice, District of Columbia
2006 - Present	Post-Doctoral Certificate Course in Cardiothoracic Vascular and Neurosurgical Anesthesiology, Sree Chitra Tirunal Institute for Medical Sciences and Technology, India
Nov 2009 - Present	Education Commission for Foreign Medical Graduates, Education Commission for Foreign Medical Graduates, Pennsylvania

Jan 2010 - Present	United States Medical Licensing Examination, Federation of State Medical Boards and National Board of Medical Examiners, Pennsylvania USMLE Step 1: 223/93 - passed 08/2008 USMLE Step 2: 227/94 - passed 11/2009 USMLE Step 3: passed 01/2010
2011 - Present	Collaborative Institutional Training Initiative Program, Iowa
Jul 2012 - Present	Diplomate, Advanced Perioperative Transesophageal Echocardiography, National Board of Echocardiography, North Carolina
Jul 2018 - Present	Fellow of the American Society of Echocardiography (FASE), American Society of Echocardiography, North Carolina

Professional Development

Jul 1, 2022 - Jun 30, 2023	Anesthesia Team Training, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa "Difficult Airway" (11/22/2022)
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Employment History

Feb 2001 - Apr 2002	Intensivist (Medical Officer), Raj Nursing Home, Chennai, India
Jan - Mar 2007	Assistant Professor, SRM Medical College Hospital and Research Centre, Tamil Nadu, India
Mar 2007 - Apr 2009	MMed Anaesthesiology, Singapore General Hospital National University of Singapore, Singapore, Singapore
Mar 2007 - Jun 2009	Clinical Associate, Anesthesiology, Singapore General Hospital, Singapore
May 2009 - May 2011	Specialist Registrar, Anesthesiology, Singapore General Hospital, Singapore, Singapore
Jun 2011 - Feb 2014	Associate Consultant, Anesthesiology, Singapore General Hospital, Singapore, Singapore
Jul 2012 - Dec 2014	Associate, Department of Anesthesia, University of Iowa Health Care, Carver College of Medicine, Iowa City, Iowa, United States
Jan 2015 - Jun 2018	Clinical Assistant Professor, Department of Anesthesia, University of Iowa Health Care, Carver College of Medicine, Iowa City, Iowa, United States
Jul 2018 - Jun 2023	Clinical Associate Professor, Department of Anesthesia, University of Iowa Health Care, Carver College of Medicine, Iowa City, Iowa, United States
Jul 2023 - Present	Clinical Professor, Department of Anesthesia, University of Iowa Health Care, Carver College of Medicine, Iowa City, Iowa, United States

Honors and Awards

1996	Second Place in Comparative Study of Goat and Human Heart in Relation to the Tricuspid Leaflets and Papillary Muscles, Tanjore, India
1996	Top Rank and Distinction in Anatomy, Chengalpattu Medical College, Chengalpattu, India
1997	Merit Certification in Pharmacology, Chengalpattu Medical College, Chengalpattu, India
1998	Second Place in the Ophthalmology Medal, Chengalpattu Medical College, Chengalpattu, India

1999	Obtained Top Rank in Medicine in Final MBBS, Chengalpattu Medical College, Chengalpattu, India
2003	Best Paper in Clinical Pharmacology in the Indian Society of Anesthesiologists National Conference, Indian Society of Anesthesiologists, India
2004	First Place in South India Anesthesiology Quiz Program, Chennai, India
2005	Gold Medal MD, Anesthesiology Class of 2005, Pondicherry University, Pondicherry, India
2018	Resident Excellence in Teaching Award, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa
2020	Resident Excellence in Teaching Award, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa
2021	Resident Teacher of the Year Award, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa
2022	Resident Teacher of the Year Award, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa
2023	Resident Teacher of the Year Award, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa
2024	President and Provost Award for Teaching Excellence, University of Iowa, Iowa City, Iowa

Teaching

Course Teaching

Jul 2012 - Jun 2013	<p>Clinical Anesthesia, ANES:8301, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa</p> <p>Role: Lecturer</p> <p>"Intraoperative Monitoring" (09/20/2012; 11/02/2012)</p> <p>"Preoperative Evaluation and Premedication" (01/28/2013; 03/22/2013; 5/20/2013)</p>
Jul 2013 - Jun 2014	<p>Clinical Anesthesia, ANES:8301, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa</p> <p>Role: Lecturer</p> <p>"What is Anesthesia?" (07/30/2013)</p> <p>"Pain Medicine" (02/25/2014; 04/22/2014)</p> <p>"Obstetric Anesthesia" (03/25/2014)</p>
Jul 2014 - Jun 2015	<p>Clinical Anesthesia, ANES:8301, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa</p> <p>Role: Lecturer</p> <p>"Intraoperative Monitoring" (07/30/2014)</p> <p>"What is Anesthesia?" (08/26/2014; 09/10/2014; 10/21/2014; 02/03/2015; 03/17/2015; 06/09/2015)</p> <p>"Preoperative Evaluation and Premedication" (02/03/2015; 04/02/2015)</p> <p>"Obstetric Anesthesia" (02/26/2015)</p> <p>"Pharmacology" (04/30/2015; 05/28/2015)</p>

Jul 2015 - Jun 2016 Clinical Anesthesia, ANES:8301, University of Iowa, Carver College of Medicine,
Department of Anesthesia, Iowa City, Iowa
Role: Lecturer
"Preoperative Evaluation and Premedication" (07/29/2015; 09/10/2015; 10/13/2015)
"What is Anesthesia?" (11/04/2015; 02/23/2016; 03/22/2016; 05/04/2016)
"Pharmacology" (01/29/2016; 04/22/2016; 06/15/2016)

Jul 2016 - Jun 2017 Clinical Anesthesia, ANES:8301, University of Iowa, Carver College of Medicine,
Department of Anesthesia, Iowa City, Iowa
Role: Lecturer
"Pain Medicine" (09/07/2016)
"Focused Assessment with TTE" (10/04/2016)
"Pharmacology" (10/14/2016; 10/28/2016; 05/18/2017)
"What is Anesthesia?" (11/08/2016; 01/10/2017; 03/07/2017; 04/04/2017)
"Preoperative Evaluation and Premedication" (01/10/2017)
"Intraoperative Monitoring" (06/16/2017)

Jul 2017 - Jun 2018 Clinical Anesthesia, ANES:8301, University of Iowa, Carver College of Medicine,
Department of Anesthesia, Iowa City, Iowa
Role: Lecturer
"Pharmacology" (08/18/2017)
"Intraoperative Monitoring" (09/13/2017)
"Preoperative Evaluation and Premedication" (10/26/2017)
"What is Anesthesia?" (12/06/2017)

Jul 2017 - Jun 2018 Clinical Anesthesia Senior, ANES:8401, University of Iowa, Carver College of Medicine,
Department of Anesthesia, Iowa City, Iowa
Role: Facilitator
"Cardiothoracic Anesthesia" (06/11/2018)

Jul 2017 - Jun 2018 EKG & Vascular Ultrasound, IM:8413, University of Iowa, Carver College of Medicine,
Department of Internal Medicine, Iowa City, Iowa
Role: Lab Instructor
Lab presented 3 times (05/15/2018; 05/23/2018; 05/29/2018)

Jul 2018 - Jun 2019 Clinical Anesthesia, ANES:8301, University of Iowa, Carver College of Medicine,
Department of Anesthesia, Iowa City, Iowa
Role: Facilitator
"Intraoperative Monitoring" (09/27/2018)

Jul 2018 - Jun 2019 Clinical Anesthesia Senior, ANES:8401, University of Iowa, Carver College of Medicine,
Department of Anesthesia, Iowa City, Iowa
Role: Facilitator
"Cardiothoracic Anesthesia" (08/16/2018; 06/17/2019)

Jul 2018 - Jun 2019 EKG & Vascular Ultrasound, IM:8413, University of Iowa, Carver College of Medicine,
Department of Internal Medicine, Iowa City, Iowa
Role: Lab Instructor
Lab x24 (07/03/2018; 07/25/2018; 07/31/2018; 08/28/2018; 09/04/2018;
09/11/2018; 09/18/2018; 09/25/2018; 10/02/2018; 10/09/2018; 01/15/2019;
01/22/2019; 01/29/2019; 02/05/2019; 02/12/2019; 02/19/2019; 02/26/2019;
03/05/2019; 04/23/2019; 05/21/2019; 05/28/2019; 06/05/2019; 06/11/2019;
06/25/2019)

Jul 2019 - Jun 2020 Clinical Anesthesia, ANES:8301, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa
Role: Facilitator
"Pharmacology I" (08/08/2019)
"Intraoperative Monitoring" (02/27/2020)

Jul 2019 - Jun 2020 Clinical Anesthesia Senior, ANES:8401, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa
Role: Facilitator
"Cardiothoracic Anesthesia" (02/27/2020)

Jul 2019 - Jun 2020 EKG & Vascular Ultrasound, IM:8413, University of Iowa, Carver College of Medicine, Department of Internal Medicine, Iowa City, Iowa
Role: Lab Instructor
Lab x15 (07/09/2019; 07/23/2019; 07/30/2019; 08/06/2019; 08/20/2019; 08/27/2019; 09/03/2019; 09/10/2019; 10/01/2019; 10/08/2019; 01/14/2020; 01/21/2020; 02/25/2020; 02/27/2020; 03/03/2020)

Jul 2020 - Jun 2021 Clinical Anesthesia, ANES:8301, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa
Role: Facilitator
"Intraoperative Monitoring" (07/09/2020)
"Preoperative Evaluation" (08/19/2020; 12/09/2020; 03/24/2021; 05/20/2021)
"What is Anesthesia?" (06/16/2021)

Jul 2020 - Jun 2021 Clinical Anesthesia Senior, ANES:8401, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa
Role: Facilitator
"Cardiothoracic Anesthesia" (07/23/2020; 09/17/2020; 10/12/2020; 04/23/2021)

Jul 2021 - Jun 2022 Clinical Anesthesia, ANES:8301, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa
Role: Facilitator
"Preoperative Evaluation" (08/18/2021)
"Fluid, Blood, & Electrolyte Management" (02/02/2022)

Jul 2021 - Jun 2022 Clinical Anesthesia Senior, ANES:8401, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa
Role: Facilitator
"Pharmacology II" (03/02/2022)
"Cardiothoracic Anesthesia" (03/15/2022)

Jul 2022 - Jun 2023 Clinical Anesthesia Senior, ANES:8401, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa
Role: Facilitator
"Cardiothoracic Anesthesia" (01/12/2023; 05/10/2023)

Jul 2022 - Jun 2023 Clinical Anesthesia, ANES:8301, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa
Role: Facilitator
"Intraoperative Monitoring" (04/06/2023)

Jul 2023 - Jun 2024 SRNA Didactic Lecture Series, ANES:6010, University of Iowa, College of Nursing, Iowa City, Iowa
"Anesthesia for Interventional Cardiology" (12/07/2023)

Jul 2023 - Jun 2024 Clinical Anesthesia, ANES:8301, University of Iowa, Carver College of Medicine,
Department of Anesthesia, Iowa City, Iowa
Role: Facilitator
"Preoperative Evaluation" (11/21/2023)

Other Teaching

Non-Course Teaching

Jul 2011 - Jun 2012 Adult Cardiothoracic Anesthesia Echo Series Lecture Series, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa
"Identification of Intracardiac Masses in Non-Cardiac Surgery" (05/16/2012)

Jul 2012 - Jun 2013 Adult Cardiothoracic Anesthesia Echo Series Lecture Series, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa
"Heparin and Protamine" (10/18/2012; 11/08/2012)
"Thrombelastography-cardiac surgery" (11/29/2012)
"Lung Transplantation" (03/21/2013)

Jul 2012 - Jun 2013 Anesthesia Resident Lecture Series, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa
"Hemodynamic Monitoring" (09/11/2012; 10/02/2012)

Jul 2012 - Jun 2013 Anesthesia Resident Simulation Series, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa
"Advanced Cardiovascular Training" (09/2012)

Jul 2013 - Jun 2014 Simulation Center Open Lab, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa
"Focused Assessed Transthoracic Echocardiography" (05/29/2014)

Jul 2013 - Jun 2014 Adult Cardiothoracic Anesthesia Fellowship Lecture Series, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa
"Heparin and Protamine" (08/15/2013)
"Anesthesia for Lung Transplantation" (03/13/2014)

Jul 2014 - Jun 2015 Adult Cardiothoracic Anesthesia Fellowship Lecture Series, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa
"Heparin and Protamine" (12/18/2014)

Jul 2014 - Jun 2015 Anesthesia Resident Lecture Series, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa
"Preoperative Evaluation of the Cardiac Patient Undergoing Non-Cardiac Surgery" (07/15/2014)
"Hemodynamic Monitoring" (09/02/2014; 09/16/2014)

Jul 2014 - Jun 2015 Anesthesia Simulation Center Open Lab, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa
"Advanced Perioperative Hemodynamic Monitoring: Demonstration of LiDCOrapid and Continuous Non-Invasive Blood Pressure (CNAP)" (02/11/2015)

Jul 2015 - Jun 2016 Adult Cardiothoracic Anesthesia Fellowship Lecture Series, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa
"Three-Dimensional Transesophageal Echocardiography Evaluation of the Left Ventricle" (07/16/2015)

Jul 2015 - Jun 2016	Anesthesia Fellow and Resident Simulation Series, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa "Transesophageal Echocardiography" (10/21/2015, 10/22/2015)
Jul 2015 - Jun 2016	Anesthesia Resident Lecture Series, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa "Cardiopulmonary Collapse during Elective Laparoscopy Nissen's Fundoplication" (09/08/2015) "Current Trends in Advanced Perioperative Hemodynamic Monitoring" (09/14/2015) "Management Options for the Failing Right Ventricle in an Elective Cardiac Surgery" (09/21/2015) "Preoperative Evaluation of the Cardiac Patient Undergoing Non-Cardiac Surgery" (09/22/2015)
Jul 2015 - Jun 2016	Anesthesia Resident Simulation Series, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa "Echocardiography" (Module 1: 9 times; Module 2: 8 times; Module 3: 8 times; Module 4: 9 times; Module 5: 6 times; Module 6: 6 times; Module 7: 6 times; Module 8: 2 times) Untitled simulations (10/01/2015; 11/12/2015) "Transesophageal Echocardiography" (10/14/2015; 10/15/2015; 04/26/2016)
Jul 2015 - Jun 2016	Sponsor Simulation, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa "TEE/TTE Simulator New Software Demonstration" (08/20/2015)
Jul 2016 - Jun 2017	Adult Cardiothoracic Anesthesia Fellowship Lecture Series, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa "Interesting Echos" (9/15/2016) "Anesthetic Considerations for Lung Transplantation" (11/17/2016) "Heparin, Protamine, and Special Coagulation" (12/15/2016)
Jul 2016 - Jun 2017	Anesthesia Resident Lecture Series, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa "Hemodynamic Monitoring" (08/09/2016; 08/16/2016) "Preoperative Evaluation of the Cardiac Patient Undergoing Non-Cardiac Surgery" (10/03/2016)
Jul 2016 - Jun 2017	Anesthesia Resident Simulation Series, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa "Echocardiography" (Module 1: 3 times; Module 2: 3 times; Module 3: 2 times; Module 4: 2 times; Module 5: 3 times; Module 6: 3 times; Module 7: 0 times; Module 8: 0 times) "Transesophageal Echocardiography" (08/19/2016; 10/17/2016; 01/03/2017; 01/04/2017; 01/26/2017; 03/27/2017; 04/11/2017; 04/26/2017; 05/05/2017; 06/16/2017; 06/22/2017) "Trial of Sim" (08/31/2016) Untitled simulations (10/04/2016; 11/14/2016; 01/31/2017)
Jul 2017 - Jun 2018	Adult Cardiothoracic Anesthesia Fellowship Lecture Series, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa "Minimally Invasive Cardiac Procedures MitraClip and TAVR" (07/27/2017) "Heparin and Protamine" (08/17/2017) "Interesting ECHOs" (04/25/2018)
Jul 2017 - Jun 2018	Anesthesia Resident Case-Based Echo Reviews, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa Presented x8 (02/21/2018; 02/27/2018; 02/28/2018; 03/29/2018; 04/04/2018; 04/06/2018; 04/17/2018; 06/22/2018)

Jul 2017 - Jun 2018	Anesthesia Resident Lecture Series, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa "Management Options for the Failing Right Ventricle in an Elective Cardiac Surgery" (08/15/2017 x2) "Preoperative Evaluation of the Cardiac Patient Undergoing Non-Cardiac Surgery" (12/11/2017; 12/18/2017)
Jul 2017 - Jun 2018	Anesthesia Resident Simulation Series, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa "Echocardiography" (Module 1: 9 times; Module 2: 8 times; Module 3: 4 times; Module 4: 4 times; Module 5: 4 times; Module 6: 3 times; Module 7: 0 times; Module 8: 2 times) "Transesophageal Echocardiography" (08/1/2017; 09/29/2017; 10/12/2017; 10/19/2017; 10/20/2017; 12/06/2017)
Jul 2017 - Jun 2018	Anesthesia Simulation Center Open Lab, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa "ECHO Sessions" (05/21/2018; 05/22/2018; 05/23/2018; 05/24/2018) "Expert Q&A with hands on Skills-Airway Issues" (6/05/2018; 06/06/2018; 06/08/2018)
Jul 2017 - Jun 2018	Anesthesia Simulation Sessions, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa Untitled Sessions (01/29/2018; 03/27/2018) "Transthoracic Echo Limited Views" (01/30/2018)
Jul 2018 - Jun 2019	Adult Cardiothoracic Anesthesia Fellowship Lecture Series, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa "Heparin, Protamine, and Special Coagulation" (07/11/2018) "TAVR and Mitraclip" (08/08/2018) "Interesting ECHOs" (08/15/2018) "Basic Cardiac Cath and Coronary Interventions - Saket Girotra" (12/05/2018) "Echocardiographic Evaluation for LVAD and Heart Transplantation" (12/19/2018)
Jul 2018 - Jun 2019	Anesthesia Resident Case-Based Echo Reviews, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa Presented x8 (09/13/2018; 09/14/2018; 11/1/2018; 11/6/2018; 11/8/2018; 11/20/2018; 01/15/2019; 01/16/2019)
Jul 2018 - Jun 2019	Anesthesia Resident Lecture Series, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa "Every Pressor I Can Think of and Still No Satisfactory Blood Pressure - Managing Vasoplegia" (08/06/2018) "Preoperative Evaluation of the Cardiac Patient Undergoing Non-Cardiac Surgery" (12/10/2018)
Jul 2018 - Jun 2019	Anesthesia Resident Simulation Series, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa "Echocardiography" (Module 1: 14 times; Module 2: 14 times; Module 3: 14 times; Module 4: 11 times; Module 5: 4 times; Module 6: 1 time; Module 7: 1 time; Module 8: 0 times) "Case Review" (04/17/2019)
Jul 2018 - Jun 2019	Anesthesia Simulation Center Open Lab, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa "FloTrac" (2/12/2019)

Jul 2019 - Jun 2020 Anesthesia Resident Simulation Series, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa
"Echocardiography" (Module 1: 7 times; Module 2: 7 times; Module 3: 6 times; Module 4: 6 times; Module 5: 5 times; Module 6: 0 times; Module 7: 1 time; Module 8: 0 times)
"Perioperative Echo Training" (08/22/2019; 09/04/2019; 01/09/2020)

Jul 2019 - Jun 2020 Anesthesia Fellow Simulation Series, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa
"Comprehensive TEE views" (09/26/2019)

Jul 2019 - Jun 2020 Anesthesia Resident Case-Based Echo Reviews, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa
Presented x2 (06/17/2020; 06/30/2020)

Jul 2019 - Jun 2020 Anesthesia Resident Lecture Series, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa
"Management Options for the Failing Right Ventricle in an Elective Cardiac Surgery" (09/30/2019)
"Echocardiographic Evaluation of Aortic Valve Disorders" (04/02/2020)
"Echocardiography for Diastolic Function and Aortic Valve Insufficiency" (04/03/2020)
"Left Ventricular Systolic Function Assessment" (04/09/2020)
"Pre-op Evaluation of the Cardiac Patient Undergoing Non-cardiac Surgery" (04/20/2020)

Jul 2019 - Jun 2020 Adult Cardiothoracic Anesthesia Fellowship Lecture Series, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa
"Transesophageal Echocardiogram Workshop" (07/12/2019)
"Heparin, Protamine, and Coagulation" (09/18/2019)
"Update on TAVR and Mitraclip" (04/16/2020)

Jul 2020 - Jun 2021 Adult Cardiothoracic Anesthesia Fellowship Lecture Series, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa
"TEE - Safety Considerations and Knobology" (07/06/2020)
"Heparin, Protamine, and Coagulation" (08/18/2020)
"TEE evaluation for LVAD and OHTx" (12/02/2020)
"Update on TAVR and Mitraclip" (03/10/2021)
"Pain Management in Cardiac Surgery" (06/25/2021)

Jul 2020 - Jun 2021 Anesthesia Resident Case-Based Echo Reviews, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa
Presented x1 (08/28/2020)

Jul 2020 - Jun 2021 Anesthesia Resident Lecture Series, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa
"Mitral Stenosis and Mitral Regurgitation" (08/17/2020)
"Anesthetic Management of Patients with CAD/Weaning from Cardiopulmonary Bypass" (08/31/2020)
"Induction of a Patient with Coronary Artery Disease and Weaning from Cardiopulmonary Bypass" (11/23/2020; 02/15/2021)
"Pre-Op Evaluation of the Cardiac Patient Undergoing Non-cardiac Surgery" (03/31/2021; 04/21/2021)
"Aortic Stenosis and Aortic Regurgitation" (05/17/2021)

Jul 2020 - Jun 2021	Anesthesia Resident Simulation Series, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa "Echocardiography" (Module 1: 11 times; Module 2: 13 times; Module 3: 13 times; Module 4: 10 times; Module 5: 9 times; Module 6: 11 times; Module 7: 2 times; Module 8: 3 times) "Echocardiography-Trans thoracic echo FATE" (05/13/2021) "FATE review" (06/10/2021; 06/14/2021)
Jul 2021 - Jun 2022	Adult Cardiothoracic Anesthesia Fellowship Lecture Series, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa "TEE evaluation for LVAD and OHTx" (01/03/2022; 01/06/2022) "Mitral Clip and TAVR" (03/14/2022) "Pain Management in Cardiac Surgery" (06/09/2022)
Jul 2021 - Jun 2022	Anesthesia Simulation Series, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa "Heartwork TEE Simulator" (06/16/2022; 06/17/2022)
Jul 2021 - Jun 2022	Anesthesia Resident Lecture Series, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa Cardiac POCUS Group A: Presented x1 (05/06/2022) Cardiac POCUS Group B: Presented x1 (05/06/2022) Cardiac POCUS Group C: Presented x1 (05/06/2022)
Jul 2021 - Jun 2022	Anesthesia Resident Simulation Series, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa "Echocardiography" (Module 1: 6 times; Module 2: 10 times; Module 3: 11 times; Module 4: 7 times; Module 5: 5 times; Module 6: 2 times; Module 7: 1 time; Module 8: 0 times) "FATE review" (07/28/2021; 10/15/2021; 12/01/2021; 12/20/2022; 01/11/2022) "Transthoracic Echocardiogram (TTE): POCUS Cardiac" (03/17/2022)
Jul 2021 - Jun 2022	CA-2 Resident Education Day, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa "Vasoplegia" (03/16/2022)
Jul 2021 - Jun 2022	CA-3 Resident Education Day, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa "Management RV Failure" (01/19/2022) "POCUS Workshop" (01/19/2022)
Jul 2022 - Jun 2023	Anesthesia Resident Simulation Series, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa "Echocardiography" (Module 1: 3 times; Module 2: 8 times; Module 3: 9 times; Module 4: 9 times; Module 5: 9 times; Module 6: 1 time; Module 7: 1 time; Module 8: 1 time) "POCUS" (09/07/2022; 09/20/2022)
Jul 2022 - Jun 2023	Basic Anesthesia Training Resident Lecture Series, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa "POCUS-Cardiac" (05/18/2023) "POCUS-Gastric/Fast" (05/18/2023) "POCUS-Lung" (05/18/2023)
Jul 2022 - Jun 2023	CA-2 Resident Education Day, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa "Vasoplegia" (04/19/2023)

Jul 2022 - Jun 2023	Intern Operating Room Simulation Series, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa "POCUS" (05/18/2023)
Jul 2022 - Jun 2023	POCUS Testing, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa Facilitated x1 (04/26/2023)
Jul 2022 - Jun 2023	Simbionix TEE/TTE Echo Simulator Demonstration, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa Facilitated x2 (08/19/2022; 09/09/2022)
Jul 2022 - Jun 2023	Adult Cardiothoracic Anesthesia Fellowship Lecture Series, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa "TEE: Artifacts, Pitfalls and Intracardiac Masses" (08/29/2022) "Echo for LVAD and Heart Transplant" (09/15/2022) "Heparin, Protamine, and Coagulation" (11/01/2022) "TAVR and Mitraclip" (02/17/2023) "Pain Management" (05/11/2023)
Jul 2023 - Jun 2024	Adult Cardiothoracic Anesthesia Fellowship Lecture Series, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa "TEE: Safety Considerations and Knobology" (07/11/2023) "TEE: Artifacts, Pitfalls and Intracardiac Masses" (08/16/2023) "TEE for Evaluation of LVAD and OHTx" (09/08/2023) "Heparin, Protamine, and Coagulation" (11/07/2023) "TAVR/Mitra Clip" (03/22/2024) "Pain Management in Cardiac Surgery" (04/09/2024)
Jul 2023 - Jun 2024	Anesthesia Fellow Simulation Series, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa "ECHO Boot Camp" (07/12/2023)
Jul 2023 - Jun 2024	Anesthesia Resident Simulation Series, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa "Echocardiography" (Module 1: 8 times; Module 2: 18 times; Module 3: 18 times; Module 4: 12 times; Module 5: 8 times; Module 6: 3 times; Module 7: 0 times; Module 8: 0 times) "POCUS" (03/20/2024; 03/21/2024; 04/04/2024) "Unresponsive PACU Patient" (02/06/2024)
Jul 2023 - Jun 2024	Intern Didactic Lecture Series, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa "Basics of Ultrasound Physics" (07/17/2023) "POCUS Basics FATE Views" (07/17/2023) "Journal Club" (07/17/2023)
Jul 2023 - Jun 2024	CA-3 Resident Academic Day, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa "Management of RV Failure" (10/04/2023) "POCUS/TEE Hands-On Workshop" (10/04/2023)
Jul 2023 - Jun 2024	Mock Oral Board Preparation, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa Reviewed x1 (03/05/2024)

Jul 2023 - Jun 2024 CA-2 Resident Academic Day, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa
"Management of the Failing RV" (03/20/2024)

Grand Rounds

Jul 2012 - Jun 2013 Anesthesia Grand Rounds: Faculty Seminar, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa
"How and When to Use the LiDCO" (06/11/2013)

Jul 2014 - Jun 2015 Anesthesia Grand Rounds: Faculty Seminar, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa
"Utilization of Preoperative Echocardiography in Non-Cardiac Surgery: Evidence or Experience-Based?" (11/25/2014)

Jul 2019 - Jun 2020 Anesthesia Grand Rounds: Faculty Seminar, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa
"Low-flow Anesthesia" (09/17/2019)

Jul 2021 - Jun 2022 Anesthesia Grand Rounds, University of Pittsburgh, Department of Anesthesia, Pittsburgh, Pennsylvania
"Regional Anesthesia in Cardiac Surgery" (03/24/2022)

Jul 2021 - Jun 2022 Anesthesia Grand Rounds: Faculty Seminar, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa
"Peri-Operative Management of Right Heart Failure" (02/08/2022)

Mentoring and Student Supervision

Medical Students

2013 - 2015 Patrick Hussey, Medicine, MD, University of Iowa
Medical student, participated in retrospective review of regional anesthesia techniques in pediatric cardiac surgery - involved in data analysis.

2016 - 2017 Julian Robles, Medicine, MD, University of Iowa
Medical student, participated in retrospective review of regional anesthesia techniques in pediatric cardiac surgery - involved in data analysis and preparing manuscript.

Nov 2020 - Apr 2022 Munazza Fatima, Medicine, MD, University of Iowa
Medical student participated in compiling echo archive for resident education project.

May - Aug 2022 Olivia Snyder, M3, Medicine, MD, University of Iowa
Participated in analysis and manuscript preparation of "Comparison of cardiac output between LiDCo, PA catheter and TEE".

Mentored "Trending Ability of Cardiac Output Measurement by LiDCO Rapid™ and Transesophageal Echocardiography in Elective Cardiac Surgery: A Comparison with Thermodilution" poster presentation on September 15, 2022, during Medical Student Research Conference, which won the "Margaret V. Lunsford Award for Research in Anesthesia".

May - Aug 2022	Savantha Thenuwara, M1, Medicine, MD, University of Iowa Participated in data gathering, analysis and manuscript preparation for - "Role of autologous transfusion in an elective cardiac surgery" as summer research funded project. Mentored "Impact of Intraoperative Autologous Blood Transfusion in an Elective Cardiac Surgery: A Retrospective Cohort Study" poster presentation on September 15, 2022, during Medical Student Research Conference.
Jan - Apr 2023	Grant Hurt, M3, Medicine, MD, University of Iowa "Improving Perioperative Management of Patients with Pulmonary Hypertension - A Quality Improvement Project", presented at the Midwest Anesthesia Residents Conference 2023.
Jan - Apr 2023	Richard Gardner, M3, Medicine, MD, University of Iowa "Improving Perioperative Management of Patients with Pulmonary Hypertension - A Quality Improvement Project", presented at the Midwest Anesthesia Residents Conference 2023 and Anesthesiology (ASA) 2023 conference.
Feb - Apr 2023	Aravinthasamy Sivamurugan, M3, Medicine, MD, University of Iowa "What are the Hemodynamic Effects of High Spinal Anesthesia During Pediatric Cardiac Surgery?", presented at the Midwest Anesthesia Residents Conference on April 15, 2023. "Total Spinal Anesthesia in Pediatric Cardiac Surgery: Effects on Postoperative Pain and Opioid Utilization - A Propensity Matched Investigation" presented during the Medical Student Research Conference on September 13, 2023.

Residents

Apr 2014	Jay Diaz-Parlet, University of Iowa Presented "AVR Complicated by Bronchial Artery Bleeding" at the 2014 Midwest Anesthesia Residents Conference, St. Louis, Missouri
Apr 2015	Mike Baker, University of Iowa Presented "Pediatric Heart Transplant in Becker Muscular Dystrophy Complicated by Abnormal Pulmonary Venous Return" at the 2015 Midwest Anesthesia Residents Conference, Cleveland, Ohio
Apr 2016	Gautam Reddy, University of Iowa Presented "Laparoscopic Cholecystectomy in LVAD Patient" at the 2016 Midwest Anesthesia Residents Conference, Minneapolis, Minnesota
Apr 2017	Tim Mundell, University of Iowa Presented "Pulmonary Sarcoma Extended into Intra-Cardiac Chamber - An Unusual Presentation" at the 2017 Midwest Anesthesia Residents Conference, Chicago, Illinois
Apr 2019	Jarrood Bang, University of Iowa Presented "Cardiac Tamponade During Pacemaker Lead Extraction" at Midwest Anesthesia Residents Conference, Detroit, Michigan
Apr 2019	Jordan Hill, University of Iowa Presented "Minimally Invasive But Not Without Risk, A Case of Hemodynamic Instability" at Midwest Anesthesia Residents Conference, Detroit, Michigan
Oct 2020	Andrew Hayden, CA-2, University of Iowa Presented "Spontaneous Hemothorax Evacuation" at the Anesthesiology Annual Meeting, Virtual

Oct 2020	Deepak Agarwal, CA-3, University of Iowa Presented "Refractory Ventricular Fibrillation Secondary To Severe Hypothermia - V-a Ecmo" at the Anesthesiology Annual Meeting, Virtual
Apr 2021	Gavin Meredith, University of Iowa Presented "Post-Myocardial Infarction Left Ventricular Aneurysm: Diagnostic Challenges with Echocardiography" at the 2021 Virtual Midwest Anesthesia Residents Conference. Received 2nd place for Oral Presentation in the Cardiovascular/Thoracic Category.
Apr 2021	James Myers, University of Iowa Presented "Anesthetic Considerations for Complex Aortic Arch Surgery" at the 2021 Virtual Midwest Anesthesia Residents Conference.
Jan - Apr 2022	Matthew Schettle, CA-2, Cardiovascular/Thoracic, University of Iowa "Left Upper Lobectomy Complicated by Massive Hemorrhage and Refractory Neurological Deficit", presented at the Midwest Anesthesia Residents Conference 2022.
Jan - Apr 2022	Nicholas Cavanaugh, CA-1, Cardiovascular/Thoracic, University of Iowa "Perioperative Anesthetic Considerations During Transcatheter Aortic Valve Replacement Using Transcaval Approach", presented at the Midwest Anesthesia Residents Conference 2022.
Jan - Apr 2022	Wahida Khan, CA-1, General Anesthesia, University of Iowa "Delayed Respiratory Failure in Post Operative Care Unit", presented at the Midwest Anesthesia Residents Conference 2022.
Aug 2019 - Jun 2022	Breethaa Janani Selvamani, CA-3, University of Iowa Presented "Association of Primary Graft Dysfunction with Transfusion in Lung Transplantation-a Retrospective Analysis" at the October 2020 virtual ASA annual meeting.
Jun 2021 - Jun 2022	Ryan Densmore, CA-3, University of Iowa Assisted with data gathering, analysis for "Perioperative Red Blood Cell Transfusion and One Year Mortality After Lung Transplantation: A Multicenter Study". Mentored on education project updating echocardiography curriculum materials.
Feb - Apr 2023	Aamil Patel, CA-2, Cardiovascular/Thoracic, University of Iowa "PEA Arrest in Bilateral Lung Transplant for COPD/Emphysema", presented at the Midwest Anesthesia Residents Conference on April 15, 2023.
Feb - Apr 2024	Helena Aaberg, CA-1, University of Iowa "Unusual Complication of Leadless Pacemaker Implantation", presented at the Midwest Anesthesia Residents Conference on April 6, 2024.
Oct 2021 - Jun 2024	Cody Petersen, CA-3, University of Iowa Mentoring on education project related to POCUS update focusing on gastric ultrasound and FAST exam.
Oct 2021 - Jun 2024	Rollin Cook, CA-3, University of Iowa Mentoring on education project related to POCUS update focusing on cardiac and lung ultrasound.

Summer Research Scholars

May - Aug 2022 Savantha Thenuwara, M1, Iowa Medical Student Research Program (IMSRP), MD, University of Iowa
Summer research fellowship project: "Autologous Transfusion in an Elective Cardiac Surgery"

Undergraduate Students

2015 - 2016 John Sagar, University of Iowa
Undergraduate student, participated in LiDCO prospective study - involved in enrolling patients, data collection, analysis and preparing manuscript.

2015 - 2016 Matt Suiter, University of Iowa
Undergraduate student, participated in LiDCO/PA survey study - involved in enrolling patients, data collection, analysis and preparing manuscript.

Scholarship/Professional Productivity

Publications or creative works

Peer-reviewed papers and journal articles

1. **Subramani, S.**, Kundra, P., Madhurima, S. & Ravishankar, M. (2005). Unilateral bronchospasm following interpleural analgesia with bupivacaine. *Acta Anaesthesiol Scand* 49 (1) 104-5. [DOI: 10.1111/j.1399-6576.2004.00537.x](https://doi.org/10.1111/j.1399-6576.2004.00537.x). [PMID: 15675993](https://pubmed.ncbi.nlm.nih.gov/15675993/).
100% of the work was done in India while I was doing my Anesthesia Residency in 2004. I wrote the majority of the case report and I was directly involved in all of the patient's perioperative care.
2. Kundra, P., **Subramani, S.** & Ravishankar, M. (2006). [Loss of resistance technique](https://doi.org/10.1111/j.1399-6576.2006.01000.x). *Acta Anaesthesiol Scand* 50 633-634. [DOI: 10.1111/j.1399-6576.2006.01000.x](https://doi.org/10.1111/j.1399-6576.2006.01000.x).
100% of the work was done in India while I was doing my Anesthesia Residency in 2005. I contributed 25% in reply to the editor comments.
3. Badhe, A. & **Subramani, S.** (2006). An intravenous organophosphate poisoning with intermediate syndrome: an unusual way of intoxication. *Indian J Crit Care Med* 10 (3) 191-192. [DOI: 10.4103/0972-5229.27862](https://doi.org/10.4103/0972-5229.27862).
100% of the work was done in India while I was doing my Anesthesia Residency in 2005. I contributed significantly in writing this report and I was directly involved in patient care while in the intensive care rotation.
4. Shivashanmugam, T., Kundra, P. & **Subramani, S.** (2006). [Iliac compartment block following ilioinguinal iliohypogastric nerve block](https://doi.org/10.1111/j.1460-9592.2006.01925.x). *Paediatr Anaesth* 16 (10) 1084-1086. [DOI: 10.1111/j.1460-9592.2006.01925.x](https://doi.org/10.1111/j.1460-9592.2006.01925.x). [PMID: 16972842](https://pubmed.ncbi.nlm.nih.gov/16972842/).
100% of the work was done in India while I was doing my Anesthesia Residency in 2005. I contributed 50% of the manuscript work and was involved in intra-operative patient care.
5. **Subramani, S.**, Hemavathi, B. & Ravishankar, M. (2007). [Effect of sevoflurane on vecuronium induced neuromuscular blockade](https://doi.org/10.1111/j.1365-2040.2007.01692.x). *J Anaesthesiol Clin Pharmacol* 23 (1) 59-64.
100% of the work was done in India while I was doing my Anesthesia Residency from 2002 to 2005. This was my thesis project for successful completion of the residency in India. I did 100% of work in enrolling subjects, data gathering and analyzing the data. My mentor and co-authors helped me in editing the manuscript.
6. **Subramani, S.** & Ong, S. (2010). Hypokalemia after cessation of the therapeutic barbiturate coma-an unusual complication. *Crit Care Shock* 13 113-116.
100% of the work was done in Singapore while I was doing my advanced Anesthesia Residency (Specialist Registrar) in 2009. I wrote the majority of the case report as I was directly involved in taking care of this patient in the neuro-intensive care unit.

7. **Subramani, S.** & Poopalalingam, R. (2014). [Bonfils assisted double lumen endobronchial tube placement in an anticipated difficult airway](#). *J Anaesthesiol Clin Pharmacol* 30 (4) 568-570. DOI: [10.4103/0970-9185.142867](#). PMID: 25425788. PMCID: PMC4234799.
75% of the work was done in Iowa and 25% was done in Singapore. I wrote the majority of the case report with input from my mentor.
8. **Subramani, S.** & Diaz-Parlet, J. (2015). [Aortic valve replacement complicated by bronchial artery hemorrhage](#). *J Cardiothorac Vasc Anesth* 29 (3) 735-737. DOI: [10.1053/j.jvca.2013.10.027](#). PMID: 24525163.
100% of the work was done in Iowa. I wrote more than 80% of the case report with input from the resident who participated in the patient care.
9. **Subramani, S.**, Freeman, B. & Rajagopal, S. (2015). [Anesthetic considerations for bilateral lung transplantation in Mounier-Kuhn syndrome](#). *J Cardiothorac Vasc Anesth* 29 (3) 727-730. DOI: [10.1053/j.jvca.2013.10.030](#). PMID: 24529664.
100% of the work was done in Iowa. I did the major part of the case report with input from two co-authors.
10. Diaz-Parlet, J. & **Subramani, S.** (2015). [Dystonic reaction associated with ondansetron administration in a patient with normal pressure hydrocephalus](#). *J Clin Anesth* 27 (5) 423-425. DOI: [10.1016/j.jclinane.2015.03.037](#). PMID: 25935832.
100% of the work was done in Iowa. The majority of the work was done by the resident and I helped the resident in editing the manuscript.
11. Hanada, S., Van Winkle, M. T., **Subramani, S.** & Ueda, K. (2017). [Dynamic ultrasound-guided short-axis needle tip navigation technique vs. landmark technique for difficult saphenous vein access in children: a randomised study](#). *Anaesthesia* 72 (12) 1508-15. DOI: [10.1111/anae.14082](#). PMID: 28983903.
12. Suhitharan, T., **Subramani, S.**, Win, M. M., Sulaiman, W. B., Johar, N. B. & Chi, O. B. (2018). [Effect of remifentanyl on the recovery profile after head and neck surgeries: a prospective study](#). *J Anaesthesiol Clin Pharmacol* 34 (3) 307-313. DOI: [10.4103/joacp.JOACP_337_16](#). PMID: 30386011. PMCID: PMC6194847.
13. Hitchcock, R., Obr, C. J. & **Subramani, S.** (2018). [Cardiac tamponade and complete heart block during transcatheter aortic valve implantation: a simulation scenario for anesthesia providers](#). *MedEdPORTAL* 14 10779. DOI: [10.15766/mep.2374-8265.10779](#). PMID: 30800979. PMCID: PMC6342360.
14. Raphael, J., Mazer, C. D., **Subramani, S.**, Schroeder, A., Abdalla, M., Ferreira, R., Roman, P. E., Patel, N., Welsby, I., Greulich, P. E., Harvey, R., Ranucci, M., Heller, L. B., Boer, C., Wilkey, A., Hill, S. E., Nuttall, G. A., Palvadi, R. R., Patel, P. A., Wilkey, B., Gaitan, B., Hill, S. S., Kwak, J., Klick, J., Bollen, B. A., Shore-Lesserson, L., Abernathy, J., Schwann, N. & Lau, W. T. (2019). [Society of Cardiovascular Anesthesiologists Clinical Practice Improvement advisory for management of perioperative bleeding and hemostasis in cardiac surgery patients](#). *J Cardiothorac Vasc Anesth* 33 (11) 2887-2899. DOI: [10.1053/j.jvca.2019.04.003](#). PMID: 31604540.
15. Raphael, J., Mazer, C. D., **Subramani, S.**, Schroeder, A., Abdalla, M., Ferreira, R., Roman, P. E., Patel, N., Welsby, I., Greulich, P. E., Harvey, R., Ranucci, M., Heller, L. B., Boer, C., Wilkey, A., Hill, S. E., Nuttall, G. A., Palvadi, R. R., Patel, P. A., Wilkey, B., Gaitan, B., Hill, S. S., Kwak, J., Klick, J., Bollen, B. A., Shore-Lesserson, L., Abernathy, J., Schwann, N. & Lau, W. T. (2019). [Society of Cardiovascular Anesthesiologists Clinical Practice Improvement advisory for management of perioperative bleeding and hemostasis in cardiac surgery patients](#). *Anesth Analg* 129 (5) 1209-1221. DOI: [10.1213/ANE.0000000000004355](#). PMID: 31613811.
16. Krishnan, S., Sharma, A., **Subramani, S.**, Arora, L., Mohananey, D., Villablanca, P. & Ramakrishna, H. (2019). [Analysis of neurological complications after surgical versus transcatheter aortic valve replacement](#). *J Cardiothorac Vasc Anesth* 33 (11) 3182-3195. DOI: [10.1053/j.jvca.2018.11.011](#). PMID: 30595485.
17. Evans, A. S., Weiner, M. M., Shaefi, S., Patel, P. A., Townsley, M. M., Kumaresan, A., Feinman, J. W., Fritz, A. V., Martin, A. K., Steinberg, T. B., Renew, J. R., Gui, J. L., Radvansky, B., Bhatt, H., **Subramani, S.**, Sharma, A., Gutsche, J. T., Augoustides, J. G. & Ramakrishna, H. (2020). [The year in cardiothoracic and](#)

- [vascular anesthesia: selected highlights from 2019](#). *J Cardiothorac Vasc Anesth* 34 (1) 1-11. DOI: [10.1053/j.jvca.2019.10.057](#). PMID: [31759862](#).
18. Sharma, A., Arora, L., **Subramani, S.**, Simmons, J., Mohananey, D. & Ramakrishna, H. (2020). [Analysis of the 2018 American Heart Association focused update on advanced cardiovascular life support use of antiarrhythmic drugs during and immediately after cardiac arrest](#). *J Cardiothorac Vasc Anesth* 34 (2) 537-544. DOI: [10.1053/j.jvca.2019.03.069](#). PMID: [31097339](#).
 19. **Subramani, S.**, Aldrich, A. W., Dwarakanath, S., Sugawara, A. & Hanada, S. (2020). [Early graft dysfunction following heart transplant: prevention and management](#). *Semin Cardiothorac Vasc Anesth* 24 (1) 24-33. DOI: [10.1177/1089253219867694](#). PMID: [31378136](#).
 20. **Subramani, S.**, Arora, L., Krishnan, S., Hanada, S., Sharma, A. & Ramakrishna, H. (2020). [Analysis of conduction abnormalities and permanent pacemaker implantation following transcatheter aortic valve replacement](#). *J Cardiothorac Vasc Anesth* 34 (4) 1082-1093. DOI: [10.1053/j.jvca.2019.07.132](#). PMID: [31558391](#).
 21. Sharma, A., Kuppachi, S., **Subramani, S.**, Walia, A. K., Thomas, J. A. & Ramakrishna, H. (2020). [Loop diuretics-analysis of efficacy data for the perioperative clinician](#). *J Cardiothorac Vasc Anesth* 34 (8) 2253-2259. DOI: [10.1053/j.jvca.2019.10.035](#). PMID: [31879151](#).
 22. Subramaniam, K., Del Rio, J. M., Wilkey, B. J., Kumar, A., Tawil, J. N., **Subramani, S.**, Tani, M., Sanchez, P. G. & Mandell, S. M. (2020). [Anesthetic management of lung transplantation: results from a multi-center, cross-sectional survey by the Society for Advancement of Transplant Anesthesia](#). *Clin Transplant* 34 (8) e13996. DOI: [10.1111/ctr.13996](#). PMID: [32484978](#).
 23. Ungerman, E., Khoche, S., **Subramani, S.**, Bartels, S., Fritz, A. V., Martin, A. K., Subramanian, H., Devarajan, J., Knight, J., Boisen, M. L. & Gelzinis, T. A. (2020). [The year in cardiothoracic transplantation anesthesia: selected highlights from 2019](#). *J Cardiothorac Vasc Anesth* 34 (11) 2889-2905. DOI: [10.1053/j.jvca.2020.06.026](#). PMID: [32782193](#).
 24. Rhoades, D. & **Subramani, S.** (2021). [Diagnostic challenges with transesophageal echocardiography for intraoperative iatrogenic aortic dissection: role of epiaortic ultrasound](#). *Ann Card Anaesth* 24 (1) 83-86. DOI: [10.4103/aca.ACA_4_19](#). PMID: [33938839](#).
 25. Arora, L., Krishnan, S., **Subramani, S.**, Sharma, A., Hanada, S., Villablanca, P. A., Núñez-Gil, I. J. & Ramakrishna, H. (2021). [Functional tricuspid regurgitation: analysis of percutaneous transcatheter techniques and current outcomes](#). *J Cardiothorac Vasc Anesth* 35 (3) 921-931. DOI: [10.1053/j.jvca.2020.02.036](#). PMID: [32247538](#).
 26. Martin, A. K., Weiner, M. M., Feinman, J. W., Bhatt, H. V., Fritz, A. V., Townsley, M. M., Sharma, A., Stawarski, K., Patel, S. J., Zhou, E. Y., Addis, D. R., Al Ghofaily, L., Malhotra, A. K., Teixeira, M. T., **Subramani, S.**, Arora, L., Cowart, C. R., Jayaraman, A. L. & Ramakrishna, H. (2021). [The year in cardiothoracic and vascular anesthesia: selected highlights from 2020](#). *J Cardiothorac Vasc Anesth* 35 (4) 993-1005. DOI: [10.1053/j.jvca.2020.10.031](#). PMID: [33229168](#). PMCID: [PMC7575453](#).
 27. Hussey, P., Onodera, Y., Reddy, S., Samuelson, B., **Subramani, S.**, Ranganath, Y. S., Jaradat, T. & Hanada, S. (2021). [Need for preoperative anemia management clinics in Japan: initiatives at a university hospital in the USA](#). *J Anesth* 35 710-722. DOI: [10.1007/s00540-021-02979-9](#). PMID: [34338863](#).
 28. **Subramani, S.**, Sharma, A., Arora, L., Hanada, S., Krishnan, S. & Ramakrishna, H. (2022). [Perioperative right ventricular dysfunction: analysis of outcomes](#). *J Cardiothorac Vasc Anesth* 36 (1) 309-320. DOI: [10.1053/j.jvca.2021.01.032](#). PMID: [33593648](#).
 29. Courtwright, A. M., Wilkey, B., Devarajan, J., **Subramani, S.**, Martin, A. K., Fritz, A. V., Cassara, C. M., Boisen, M. L., Bottiger, B. A., Pollak, A., Maisonave, Y. & Gelzinis, T. A. (2022). [The year in cardiothoracic transplant anesthesia: selected highlights from 2020 part I - lung transplantation](#). *J Cardiothorac Vasc Anesth* 36 (1) 33-44. DOI: [10.1053/j.jvca.2021.09.013](#). PMID: [34670721](#).
 30. Rier, A. S., **Subramani, S.**, Ravindranath, S., Singhal, A. & Hanada, S. (2022). [Acute pulmonary embolism caused by abdominal pannus retraction in an awake patient in the operating room: a case report](#). *A A Pract* 16 (1) e01559. DOI: [10.1213/XAA.0000000000001559](#). PMID: [35849725](#).
 31. Martin, A. K., Feinman, J. W., Bhatt, H. V., **Subramani, S.**, Malhotra, A. K., Townsley, M. M., Fritz, A. V., Sharma, A., Patel, S. J., Zhou, E. Y., Owen, R. M., Ghofaily, L. A., Read, S. N., Teixeira, M. T., Arora, L., Jayaraman, A. L., Weiner, M. M. & Ramakrishna, H. (2022). [The year in cardiothoracic and vascular](#)

- [anesthesia: selected highlights from 2021](#). *J Cardiothorac Vasc Anesth* 36 (4) 940-951. DOI: [10.1053/j.jvca.2021.10.011](#). PMID: [34801393](#).
32. Lin, C. Y., Stiles, C. L., **Subramani, S.**, Maxwell, M. J., Peacher, D. F., Larson, S. B. & Hanada, S. (2022). [Challenges for emergent combined cesarean delivery and type A aortic dissection repair including bleeding management in the setting of full heparinization: a case report](#). *Cureus* 14 (10) e30647. DOI: [10.7759/cureus.30647](#). PMID: [36439601](#). PMCID: [PMC9684002](#).
 33. Martin, A. K., Feinman, J. W., Bhatt, H. V., Fritz, A. V., **Subramani, S.**, Malhotra, A. K., Townsley, M. M., Sharma, A., Patel, S. J., Ha, B., Gui, J. L., Zaky, A., Labe, S., Teixeira, M. T., Morozowich, S. T., Weiner, M. M. & Ramakrishna, H. (2023). [The year in cardiothoracic and vascular anesthesia: selected highlights from 2022](#). *J Cardiothorac Vasc Anesth* 37 (2) 201-213. DOI: [10.1053/j.jvca.2022.11.002](#). PMID: [36437141](#).
 34. Cavanaugh, N. B., **Subramani, S.**, Foster, T. J. & Hanada, S. (2023). [Prophylactic use of continuous positive airway pressure to operative lung during one-lung ventilation can minimize bleomycin pulmonary toxicity: a report of two cases](#). *Cureus* 15 (3) e36150. DOI: [10.7759/cureus.36150](#). PMID: [37065344](#). PMCID: [PMC10101724](#).
 35. Jain, A., **Subramani, S.**, Gebhardt, B., Hauser, J., Bailey, C. & Ramakrishna, H. (2023). [Infective endocarditis-update for the perioperative clinician](#). *J Cardiothorac Vasc Anesth* 37 (4) 637-649. DOI: [10.1053/j.jvca.2022.12.030](#). PMID: [36725476](#).
 36. Shen, J., Singh, M., Tran, T. T., Bughrara, N. F., Vo, C., Sigakis, M., Nikravan, S., Tone, R., Sandhu, C. K., Kakazu, C., Kumar, V., Sharma, A., Safa, R., Byrne, M., **Subramani, S.**, Pham, N. & Ramsingh, D. (2023). [Assessment of cardiopulmonary point-of-care ultrasound objective structured clinical examinations in graduating anesthesiology residents across multiple residency programs](#). *J Clin Anesth* 91 111260. DOI: [10.1016/j.jclinane.2023.111260](#). PMID: [37734197](#).
 37. Alfaras-Melainis, K., Fernando, R. J., Boisen, M. L., Hoffman, P. J., Rosenkrans, D. J., Teeter, E., Cardi, A. I., Laney, J., Reagan, A., Rao, V. K., Anderson, M., Luke, C. B., **Subramani, S.**, Schisler, T., Ritchie, P. J., Gelzinis, T. A. (2024). [The year in thoracic anesthesia: selected highlights from 2022](#). *J Cardiothorac Vasc Anesth* 38 (1) 29-56. DOI: [10.1053/j.jvca.2023.09.006](#). PMID: [37802689](#).

Chapters

1. **Subramani, S.** & Punia, S. (2021). [Chapter 3: Lower extremity nerve blocks](#). In Chakraborty, A. (Eds.) *Blockmate: A Practical Guide to Ultrasound Guided Regional Anesthesia*. (1st Edition), pp. 49-85. New York, NY: Springer International Publishing. DOI: [10.1007/978-981-15-9202-7_3](#).
2. Sharma, A. & **Subramani, S.** (2022). [Chapter 4: Point-of-Care Ultrasound of the Lungs](#). In Ashokka, B. & Chakraborty, A. (Eds.) *A Practical Guide to Point of Care Ultrasound (POCUS)*. (1st Edition), pp. 81-101. New York, NY: Springer International Publishing. DOI: [10.1007/978-981-16-7687-1_4](#).
3. **Subramani, S.**, Hanada, S. & Chakraborty, A. (2022). [Chapter 6: Vascular Ultrasound](#). In Ashokka, B. & Chakraborty, A. (Eds.) *A Practical Guide to Point of Care Ultrasound (POCUS)*. (1st Edition), pp. 121-147. New York, NY: Springer International Publishing. DOI: [10.1007/978-981-16-7687-1_6](#).
4. Chakraborty, A., Khemka, R., **Subramani, S.** & Fan, L. J. (2022). [Chapter 2: Ultrasound-Guided Vascular Cannulation](#). In Ashokka, B. & Chakraborty, A. (Eds.) *A Practical Guide to Point of Care Ultrasound (POCUS)*. (1st Edition), pp. 19-54. New York, NY: Springer International Publishing. DOI: [10.1007/978-981-16-7687-1_2](#).
5. Gelzinis, T., Miliam, A., **Subramani, S.** & Ramakrishna, H. (2026). Chapter 33: Anesthesia for MCS. In Arabia, F. A. (Eds.) *Mechanical Circulatory Support*. (1st Edition). New York, NY: Springer International Publishing.

Reviews

1. Onodera, Y., Sugawara, A., **Subramani, S.**, Kurosawa, A., Sasakawa, T. & Hanada, S. (2021). [Current status of watchman and its anesthetic implications: experience from the University of Iowa Hospital](#). *J Clin Anesth (Japan)* 45 (2) 147-157.
Review article in Japanese
2. Bhatt, H. V., Fritz, A. V., Feinman, J. W., **Subramani, S.**, Malhotra, A. K., Townsley, M. M., Weiner, M. M., Sharma, A., Teixeira, M. T., Lee, J., Linganna, R. E., Waldron, N. H., Shapiro, A. B., McKeon, J., Hanada, S.,

- Ramakrishna, H. & Martin, A. K. (2024). [The year in cardiothoracic and vascular anesthesia: selected highlights from 2023](#). *J Cardiothorac Vasc Anesth* 38 (1) 16-28. DOI: 10.1053/j.jvca.2023.10.030. PMID: 38040533.
3. Jain, A., Gebhardt, B., **Subramani, S.**, Mehrotra, M., Gaber, M. & Ramakrishna, H. (2024). [Tricuspid regurgitation: analysis of outcomes and risk assessment](#). *J Cardiothorac Vasc Anesth*. DOI: 10.1053/j.jvca.2024.02.040. PMID: 38523023.

Abstracts

1. Sivamurugan, A., Rier, A., Samuelson, B., James, A., **Subramani, S.**, Sondekoppam, R. V. & Hanada, S. (2022). [Impact of Induced Total Spinal Anesthesia on Fast-track Strategy in Pediatric Cardiac Surgery: Retrospective Study](#). *Anesth Analg* 134 (5S) 119-120. DOI: 10.1213/01.ane.0000841692.90419.0e.

Non-peer-reviewed journal articles

1. Courtwright, A. M., Devarajan, J., Fritz, A. V., Martin, A. K., Wilkey, B., **Subramani, S.**, Cassara, C. M., Tawil, J. N., Miltiades, A. N., Boisen, M. L., Bottiger, B. A., Pollak, A. & Gelzinis, T. A. (2023). [Cardiothoracic transplant anesthesia: selected highlights: part I-lung transplantation](#). *J Cardiothorac Vasc Anesth* 37 (6) 884-903. DOI: 10.1053/j.jvca.2023.01.023. PMID: 36868904.

Other Publications

1. **Subramani, S.** & Tewari, A. (2014). [Pre-operative echocardiography: evidence or experience based utilization in non-cardiac surgery?](#) *J Anaesthesiol Clin Pharmacol* 30 (3) 313-315. New Delhi: J Anaesthesiol Clin Pharmacol. DOI: 10.4103/0970-9185.137258. PMID: 25190935. PMCID: PMC4152667.
Based on my extensive work in perioperative Echocardiography, and upon invitation from the editor of J Anaesthesiol Clin Pharmacol, I wrote more than 90% of the editorial along with my colleague in Iowa. 100% of work was done in Iowa.
2. Garg, S., **Subramani, S.** & Sachdeva, H. (2017). [Postoperative nausea and vomiting: the Achilles heel of anesthesiologists](#). *J Anaesthesiol Clin Pharmacol* 33 (4) 427-428. DOI: 10.4103/joacp.JOACP_321_17. PMID: 29416229. PMCID: PMC5791250.
3. **Subramani, S.**, Garg, S., Singh, A. P. & Sinha, A. C. (2018). [Perioperative communication: challenges and opportunities for anesthesiologists](#). *J Anaesthesiol Clin Pharmacol* 34 (1) 5-6. DOI: 10.4103/joacp.JOACP_37_18. PMID: 29643614. PMCID: PMC5885448.
4. **Subramani, S.** & Garg, S. (2019). [Challenges to implement minimum effective volume in regional anesthesia](#). *J Anaesthesiol Clin Pharmacol* 35 (1) 47-48. DOI: 10.4103/joacp.JOACP_279_18. PMID: 31057239. PMCID: PMC6495624.
Editorial comment on: J Anaesthesiol Clin Pharmacol. 35(1):41.
5. **Subramani, S.** (2020). [The current status of EuroSCORE II in predicting operative mortality following cardiac surgery](#). *Ann Card Anaesth* 23 (3) 256-257. DOI: 10.4103/aca.ACA_32_19. PMID: 32687077. Editorial
6. **Subramani, S.** (2022). [Comparison between 2D and 3D echocardiography for quantitative assessment of mitral regurgitation: current status](#). *Ann Card Anaesth* 25 (2) 198-199. DOI: 10.4103/aca.aca_238_20. PMID: 35417968. PMCID: PMC9244269.
7. Hanada, S., Hayashi, Y., **Subramani, S.** & Thenuwara, K. N. (2024). [Pioneering the integration of artificial intelligence in medical oral board examinations](#). *Cureus* 16 (1) e52318. DOI: 10.7759/cureus.52318. PMID: 38357084. PMCID: PMC10866608. Editorial

Media Contributions

Jan 5, 2024 Internet, Consultant 360, Malvern, Pennsylvania
Research summary about a research project presented at the 22nd Annual Pain Medicine Meeting in New Orleans, Louisiana, November 10-11, 2023.
<https://www.consultant360.com/exclusive/use-high-spinal-anesthesia-general-anesthesia-affects-postoperative-recovery-pediatric>

Other Funding

Completed

1. Impact of High Spinal Anesthesia Technique on Fast-Track Strategy in Pediatric Cardiac Surgery: A Retrospective Study; University of Iowa Hospitals and Clinics; University of Iowa, Carver College of Medicine; Sondekoppam Vijayashankar, Rakesh (Supporting), Subramani, Sudhakar (Co-Investigator), Whiting, Jacob H (Co-Investigator), Sugawara, Ami (Co-Investigator), Onodera, Yoshiko (Co-Investigator), Hanada, Satoshi (Principal Investigator)
 - Jul 1, 2020 - Dec 31, 2021
 - Amount: \$19,454.00
 - Small Grant Program/Clinical and Educational Pilot Grant

Other Research Activities

Non-Human Subject

Jun 12, 2012 - Oct 11, 2016 The Use of Percutaneous Coronary Sinus Catheter in Minimally Invasive Cardiac Patients; University of Iowa, Carver College of Medicine, Department of Anesthesia; Swerczek, Michael (Co-Investigator), Shune, Alexander (Co-Investigator), Ellis, Benjamin (Co-Investigator), Davenport, Tina (Co-Investigator), Subramani, Sudhakar (Co-Investigator), Krishnan, Sundar (Co-Investigator), Sakamoto, Hajime (Co-Investigator), Hanada, Satoshi (Principal Investigator)

This study was funded with resources from the Department of Anesthesia at the University of Iowa Carver College of Medicine, because 1) we utilized our NCA days and/or ICEA fund which were provided from our department, 2) Hajime Sakamoto helped this project, who was granted a position as visiting faculty position at our department, and 3) our department paid for the publication fee.

Feb 5, 2019 - Feb 7, 2021 Comprehensive Review of Patients who Underwent MitraClip at the University of Iowa; University of Iowa, Carver College of Medicine, Department of Anesthesia; Subramani, Sudhakar (Co-Investigator), Onodera, Yoshiko (Co-Investigator), Hanada, Satoshi (Principal Investigator)

This study was funded with resources from the Department of Anesthesia at the University of Iowa Carver College of Medicine, because 1) we utilized our NCA days and/or ICEA fund which were provided from our department, and 2) Yoshiko Onodera helped this project, who was granted a position as visiting faculty position at our department.

Jan 11, 2020 - May 20, 2021 Retrospective review of WATCHMAN procedure; University of Iowa, Carver College of Medicine, Department of Anesthesia; Subramani, Sudhakar (Co-Investigator), Hanada, Satoshi (Supporting), Onodera, Yoshiko (Investigator)

Predictors of Anesthesia Department Patient Outcomes; Anesthesia Department Umbrella Project. This study was funded with resources from the Department of Anesthesia at the University of Iowa Carver College of Medicine, because 1) we utilized our NCA days and/or ICEA fund which were provided from our department,

and 2) Yoshiko Onodera helped this project, who was granted a position as visiting faculty position at our department.

Jan 11, 2020 - Oct
15, 2022

Predictors of Anesthesia Department Patient Outcomes: Anesthesia Department Umbrella Project Retrospective review of lung transplant surgery; University of Iowa, Carver College of Medicine, Department of Anesthesia; Subramani, Sudhakar (Co-Investigator), Hanada, Satoshi (Supporting), Onodera, Yoshiko (Investigator)
This study was funded with resources from the Department of Anesthesia at the University of Iowa Carver College of Medicine, because 1) we utilized our NCA days and/or ICEA fund which were provided from our department, and 2) Yoshiko Onodera helped this project, who was granted a position as visiting faculty position at our department.

Sep 21, 2020 - Oct
15, 2022

Impact of High Spinal Anesthesia Technique on Fast-Track Strategy in Pediatric Cardiac Surgery: A Retrospective Study; University of Iowa, Carver College of Medicine, Department of Anesthesia; Singhal, Arun (Clinical Investigator), Sivamurugan, Aravinthasamy (Co-Investigator), Sondekoppam, Rakesh V (Supporting), Rier, Alex (Co-Investigator), Samuelson, Blain (Co-Investigator), Subramani, Sudhakar (Co-Investigator), Whiting, Jacob H (Co-Investigator), Sugawara, Ami (Co-Investigator), Onodera, Yoshiko (Co-Investigator), Hanada, Satoshi (Principal Investigator)
Predictors of Anesthesia Department Patient Outcomes: Anesthesia Department Umbrella Project Retrospective review of Retrospective review of high spinal anesthesia in pediatric cardiac surgery. This study was funded with resources from the Department of Anesthesia at the University of Iowa Carver College of Medicine, because 1) we utilized our NCA days and/or ICEA fund which were provided from our department, and 2) Yoshiko Onodera helped this project, who was granted a position as visiting faculty position at our department. In addition, Satoshi Hanada received the fund for this project from University of Iowa Hospitals and Clinics/Carver College of Medicine (Small Grant Program/Clinical and Educational Pilot Grant).

Jul 1, 2021 - Oct 15,
2022

Hemodynamic Changes Associated with High Spinal Anesthesia in Adult Cardiac Surgery Population; University of Iowa, Carver College of Medicine, Department of Anesthesia; Sondekoppam, Rakesh V (Supporting), Sivamurugan, Aravinthasamy (Co-Investigator), Rier, Alex (Co-Investigator), Samuelson, Blain (Co-Investigator), Subramani, Sudhakar (Co-Investigator), Hanada, Satoshi (Principal Investigator)

Dec 30, 2020 - Nov
26, 2024

Perioperative and Anesthetic Registry of Orthotopic Heart Transplantation; University of Iowa, Carver College of Medicine, Department of Anesthesia; Panos, Anthony (Co-Investigator), Whiting, Jacob (Co-Investigator), Bang, Jarrod (Co-Investigator), Hanada, Satoshi (Co-Investigator), Subramani, Sudhakar (Principal Investigator)
This study was funded with resources from the Department of Anesthesia at the University of Iowa Carver College of Medicine because we utilized our NCA days and/or ICEA fund which were provided from our department.

Jan 27, 2020 - Nov
16, 2025

Perioperative Red Blood Cell Transfusion and One Year Mortality After Lung Transplantation-A Multicenter Study; University of Iowa, Carver College of Medicine, Department of Anesthesia; Parekh, Kalpaj (Co-Investigator), Klesney-Tait, Julia (Co-Investigator), Onodera, Yoshiko (Co-Investigator), Hanada, Satoshi (Co-Investigator), Subramani, Sudhakar (Principal Investigator)
This study was funded with resources from the Department of Anesthesia at the University of Iowa Carver College of Medicine, because 1) we utilized our NCA days and/or ICEA fund which were provided from our department, and 2) Yoshiko Onodera helped this project, who was granted a position as visiting faculty position at our department.

Presentations

Conference Presentations

May 30, 2015 Subramani, S. Afternoon Session. Presented at Iowa Anesthesia Symposium XV, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa.

Demonstrations

May 5, 2012 Subramani, S. LiDCO and FloTrac (Live). Presented at Iowa Anesthesia Symposium XII, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa.

May 3, 2014 Subramani, S. Lung Isolation Techniques Using Double Lumen Tube. Presented at Iowa Anesthesia Symposium XIV, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa.

Invited Lectures

Oct 2012 Subramani, S. Complete Fiberoptic Bronchoscopy Exam and Tracheobronchial Anatomy. Presented at Anesthesia Advanced Airway Symposium, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa.

May 5, 2013 Subramani, S. Lung Isolation Techniques Using Double Lumen Tube. Presented at Iowa Anesthesia Symposium XIII, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa.
May 4-5, 2013

Aug 2013 Subramani, S. Problem Based Learning and Discussion and Cardiovascular Collapse in Elective Laparoscopy Surgery. Presented at South Zone Annual Anesthesia Conference, Puducherry, India.

Aug 2013 Subramani, S. Utilization of Preoperative Echocardiography in Non-cardiac Surgery - Evidence of Experience-based. Presented at South Zone Annual Anesthesia Conference, Puducherry, India.

Jan 2014 Subramani, S. Basic TEE Examination. Presented at Annual Anaesthesia Meeting, Sri Lanka.

Jun 21, 2014 Subramani, S. Basic Perioperative Hemodynamic Assessment. Presented at Basic Perioperative TEE Review Course, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa.

Jun 21, 2014 Subramani, S. Identification of Intracardiac Masses in Non-Cardiac Surgery. Presented at Basic Perioperative TEE Review Course, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa.

Jan 2015	Subramani, S. Advanced Hemodynamic Monitoring - Current Trends. Presented at Indian Society of Anaesthesiologists, Indian Society of Anaesthesiologists, Puducherry, India.
May 30-31, 2015	Subramani, S. Transesophageal Echocardiography for All Anesthesia Providers. Presented at Iowa Anesthesia Symposium XV, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa.
Feb 2016	Subramani, S. Role of Echocardiography in LVAD and Heart Transplant. Presented at Indian Association of Cardiovascular Thoracic Anaesthesiologists Annual Meeting, Indian Association of Cardiovascular Thoracic Anaesthesiologists, Chennai, India.
Jun 18, 2016	Subramani, S. Basic Perioperative Hemodynamic Assessment. Presented at Basic Perioperative TEE Review Course, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa.
Jun 18, 2016	Subramani, S. Identification of Intracardiac Masses in Non-Cardiac Surgery. Presented at Basic Perioperative TEE Review Course, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa.
Feb 2017	Subramani, S. How to Access Tricuspid Regurgitation. Presented at Indian Association of Cardiovascular Thoracic Anaesthesiologists Annual Meeting, Indian Association of Cardiovascular Thoracic Anaesthesiologists, Pune, India.
Sep 9, 2017	Subramani, S. Obstetric Specific Echocardiography. Presented at Obstetric Anesthesia Symposium, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa.
May 2018	Subramani, S. Anesthetic Considerations for MitraClip. Presented at Asahikawa Medical University, Asahikawa Medical University, Asahikawa, Japan.
Jun 16, 2018	Subramani, S. Basic Perioperative Hemodynamic Assessment. Presented at Basic Perioperative TEE Review Course, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa.
Jun 8, 2019	Subramani, S. Global and Regional Ventricular Function. Presented at Basic Perioperative TEE Review Course, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa.
Sep 29, 2020	Subramani, S. Patient Safety Considerations and Knobology. Presented at Basic Perioperative TEE Review Course, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa.
Apr 23, 2021	Gardiner, G., Agarwal, D., Subramani, S., Onodera, Y., Ueda, K. & Hanada, S. Does the Aerosol Box Accommodate the Double Lumen Tube Intubation? Presented at Thoracic Anesthesia Symposium, Society of Cardiovascular Anesthesiologists, Virtual Conference.
May 16, 2021	Subramani, S. TEE in LVAD. Presented at Forum of Cardiac Anaesthesiologists, Bangalore Chapter of Indian Association of Cardiovascular and Thoracic Anaesthesiologists (IACTA).
May 21, 2021	Subramani, S. Evaluation of Prosthetic Heart Valves. Presented at American College of Cardiology, American College of Cardiology, Washington, District of Columbia.
Nov 6, 2021	Subramani, S. Is Cardiopulmonary Bypass in Lung Transplantation - More Harmful Than Benefits? Presented at KoreAnesthesia 2021 - 98th Annual Scientific Meeting of the Korean Society of Anesthesiologists, Korean Society of Anesthesiologists, Bexco, Busan, Korea.
Jan 22, 2022	Subramani, S. Current Role of Extracorporeal Cardiopulmonary Support in Lung Transplantation. Presented at Midwest Regional Meeting, Society of Advancement of Transplant Anesthesia (SATA), Pittsburgh, Pennsylvania.

- Feb 23, 2022 Subramani, S. Current Scenario of Anaesthesia for Lung Surgeries and Its Future. Presented at Virtual Conference, Indian College of Anaesthesiologists, New Delhi, India.
- Mar 11, 2022 Subramani, S. Role of Echo During Mitraclip Placement. Presented at 16th Annual Perioperative and Critical Care Transesophageal Echocardiography Workshop, Society of Transesophageal Echocardiography (STE); Department of Anaesthesiology and Critical Care, PGIMER, Chandigarh.
- Jun 18, 2022 Subramani, S. Artifacts, Pitfalls and Intracardiac Masses. Presented at Basic Perioperative TEE Review Course, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa.
- Jun 18, 2022 Subramani, S. Patient Safety Considerations and Knobology. Presented at Basic Perioperative TEE Review Course, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa.

Posters

- 2004 Subramani, S. Intravenous Organophosphate Poisoning: An Unusual Way of Intoxication - A Case Report. Presented at South Zone Conference, South Zone Conference, Chidambaram, India.
- 2004 Subramani, S. Unilateral Bronchospasm following Interpleural Analgesia with Bupivacaine - A Case Report. Presented at South Zone Conference, South Zone Conference, Chidambaram, India.
- 2006 Subramani, S. Refractory Hypotension during Weaning from CPB - Lithium, A Potential Source. Presented at South Zone Conference, South Zone Conference, Pondicherry, India.
- Mar 2010 Subramani, S. Metabolic and Endocrine Effects of Epidural Glucocorticoid Injections - A Pilot Study. Presented at New York Society of Regional Anaesthesia World Congress Meeting, New York Society of Regional Anaesthesia, Dubai, United Arab Emirates.
- Mar 2010 Subramani, S. Use of Strong Opioids for Chronic Non Cancer Pain - A Retrospective Analysis of Practice at a Pain Clinic. Presented at New York Society of Regional Anaesthesia World Congress Meeting, New York Society of Regional Anaesthesia, Dubai, United Arab Emirates.
- Apr 2010 Subramani, S. Anesthetic Considerations for Percutaneous Aortic Valve Replacement - Initial Experience from Southeast Asia. Presented at Society of Cardiothoracic Anesthesiologists 32nd Annual Meeting, Society of Cardiothoracic Anesthesiologists, New Orleans, Louisiana.
- Sep 2010 Subramani, S. Preoperative use of ACE-Inhibitors is NOT associated with Acute Kidney Injury in Cardiac Surgery. Presented at Duke Anesthesiology, Duke University, Department of Anesthesiology, Singapore.
- Apr 2011 Subramani, S. Association of the Ethnicity and Acute Kidney Injury after Cardiac Surgery. Presented at American Society for Microbiology, Singapore General Hospital, Singapore, Singapore.
- Apr 2011 Subramani, S. Hemodilution has Independent Association with Acute Kidney Injury after Cardiac Surgery. Presented at World Congress of Anaesthesiologists, World Congress of Anaesthesiologists, Rome, Italy.
- Apr 2012 Subramani, S. Anesthetic Considerations for Lung Transplantation in Mounier Kuhn Syndrome - Complex Case. Presented at 34th Annual Society of Cardiovascular Anesthesiologists Meeting and Workshops, Society of Cardiovascular Anesthesiologists, Boston, Massachusetts.

- Apr 2013 Subramani, S. Successful Implantation of Low Fio2 CPAP for One Lung Anesthesia in Bleomycin Patient - Complex Case. Presented at 35th Annual Society of Cardiovascular Anesthesiologists Meeting and Workshops, Society of Cardiovascular Anesthesiologists, Miami, Florida.
- Oct 2014 Subramani, S. Validations of STOP BANG Questionnaire in Detecting Difficult Airway, Laryngoscopy and Intubation. Presented at American Society of Anesthesiologists Annual Meeting, American Society of Anesthesiologists, New Orleans, Louisiana.
- Apr 2015 Subramani, S. Atrial Myxoma involving Right Upper Pulmonary Vein in an Elderly Patient - An Unusual Presentation. Presented at Society of Cardiothoracic Anesthesiologists Annual Meeting, Society of Cardiothoracic Anesthesiologists, Washington, District of Columbia.
- Apr 2015 Subramani, S. Perioperative Considerations of Post Myocardial Infarction Ventricular Septal Defect - Case Series. Presented at Society of Cardiothoracic Anesthesiologists Annual Meeting, Society of Cardiothoracic Anesthesiologists, Washington, District of Columbia.
- Oct 2015 Subramani, S. Cardiac Tamponade in TAVR case. Presented at American Society of Anesthesiologists Annual Meeting, American Society of Anesthesiologists, San Diego, California.
- Apr 2016 Subramani, S. Transfemoral Aortic Valve Replacement Complicated by Sub Aortic Valve Mass - An Unusual Presentation. Presented at Society of Cardiothoracic Anesthesiologists Annual Meeting, Society of Cardiothoracic Anesthesiologists, San Diego, California.
- Jun 2016 Subramani, S. Trending Ability of Cardiac Output Measurement by LiDCOrapid and Transesophageal Echocardiography in an Elective Cardiac Surgery: A Comparison with Thermodilution. Presented at International Anesthesia Research Society Annual Meeting, International Anesthesia Research Society, San Francisco, California.
- Oct 25, 2016 Sagar, J. E. & Subramani, S. Two Statistical Methods of Analyzing Cardiac Output Data from Three Devices During Elective Cardiac Surgery. Presented at American Society of Anesthesiologists Annual Meeting, American Society of Anesthesiologists, San Francisco, California.
- Apr 2017 Post Myocardial Infarction Ventricular Septal Defect Complicated by Pseudoaneurysm - An Unusual Presentation. Presented at Society of Cardiothoracic Anesthesiologists Annual Meeting, Society of Cardiothoracic Anesthesiologists, Orlando, Florida.
- Apr 2018 Subramani, S. Excision of Intracardiac Mass with Bipolar Disorder on Lithium Complicated by Refractory Hypotension. Presented at Midwest Anesthesia Residents Conference, Midwest Anesthesia Residents Conference, Cincinnati, Ohio.
Conference Dates: April 13-15, 2018
- Apr 2018 Subramani, S. Hypoxemia in an Emergent Stanford Type B Aortic Dissection Repair. Presented at Midwest Anesthesia Residents Conference, Midwest Anesthesia Residents Conference, Cincinnati, Ohio.
Conference Dates: April 13-15, 2018

- Apr 2018 Subramani, S. Intraoperative Iatrogenic Aortic Dissection Not Visible by Transesophageal Echocardiography. Presented at Society of Cardiovascular Anesthesiologists 40th Annual Meeting and Workshops, Society of Cardiovascular Anesthesiologists, Phoenix, Arizona.
- May 18, 2019 Sand, R. I. & Subramani, S. Valve-in-Valve-in-Valve Rescue Following Embolized Trans Catheter Aortic Valve Replacement. Presented at Society of Cardiovascular Anesthesiologists annual meeting, Society of Cardiovascular Anesthesiologists, Chicago, Illinois.
Conference Dates: May 18-21, 2019
- Oct 19, 2019 Sugawara, A., Hanada, S., Subramani, S., Ranganath, Y. S. & Kunisawa, T. [Semi Emergent Thyroidectomy Secondary To Amiodarone Induced Thyrotoxicosis In A Severe Mitral Valve Stenosis](#). Presented at American Society of Anesthesiologists Annual Meeting, American Society of Anesthesiologists, Orlando, Florida.
- Oct 19, 2019 Alfi, M., Hanada, S. & Subramani, S. [Tracheal Resection Using a Two-circuit Technique](#). Presented at American Society of Anesthesiologists Annual Meeting, American Society of Anesthesiologists, Orlando, Florida.
MC1001
- Oct 3, 2020 Selvamani, B. J., Onodera, Y., Hanada, S. & Subramani, S. [Association of primary graft dysfunction with transfusion in lung transplantation - a retrospective analysis](#). Presented at American Society of Anesthesiologists Annual Meeting, American Society of Anesthesiologists, Washington, District of Columbia.
eAbstract presentation number was A4289. Conference was rescheduled as a virtual conference due to COVID-19.
- Oct 3, 2020 Agarwal, D. & Subramani, S. [Refractory ventricular fibrillation secondary to severe hypothermia - V-A ECMO](#). Presented at American Society of Anesthesiologists Annual Meeting, American Society of Anesthesiologists, Washington, District of Columbia.
eAbstract presentation number was MC1083. Conference was rescheduled as a virtual conference due to COVID-19.
- Oct 3, 2020 Hayden, A. M. & Subramani, S. [Spontaneous hemothorax evacuation](#). Presented at American Society of Anesthesiologists Annual Meeting, American Society of Anesthesiologists, Washington, District of Columbia.
eAbstract presentation number was MC1113. Conference was rescheduled as a virtual conference due to COVID-19.
- Mar 17, 2022 Sivamurugan, A., Rier, A., Samuelson, B., James, A., Subramani, S., Sondekoppam, R. V. & Hanada, S. Impact of Induced Total Spinal Anesthesia on Fast-track Strategy in Pediatric Cardiac Surgery: Retrospective Study. Presented at International Anesthesia Research Society Annual Meeting, International Anesthesia Research Society.
Virtual conference, March 17-20, 2022
- May 9, 2022 Sivamurugan, A., Hanada, S., James, A., Rier, A., Samuelson, B., Sondekoppam, R. V. & Subramani, S. What is the Impact of Induced Total Spinal Anesthesia on the Fast-Track Strategy in Pediatric Cardiac Surgery? Presented at Pediatric Research Day, University of Iowa, Carver College of Medicine, Iowa City, Iowa.
- May 20, 2022 Subramani, S., Pedersen, M. R., Sharma, A., Sondekoppam, R. V., Hanada, S., Arora, L., Aldrich, A. W. & Dillman, D. D. Point of Care Ultrasound (POCUS) curriculum for anesthesia interns and residents. Presented at GME Leadership Symposium, University of Iowa, Iowa City, Iowa.
- Sep 15, 2022 Snyder, S. H., Subramani, S. & Hanada, S. Impact of Intraoperative Autologous Blood Transfusion in an Elective Cardiac Surgery: A Retrospective Cohort Study. Presented at Medical Student Research Conference, University of Iowa, Carver College of Medicine, Iowa City, Iowa.

- Sep 15, 2022 Snyder, O. J., Sagar, J. E., Hanada, S. & Subramani, S. Trending Ability of Cardiac Output Measurement by LiDCO Rapid™ and Transesophageal Echocardiography in Elective Cardiac Surgery: A Comparison with Thermodilution. Presented at Medical Student Research Conference, University of Iowa, Carver College of Medicine, Iowa City, Iowa.
- May 5, 2023 Lin, C. Y., Cavanaugh, N., Subramani, S. & Hanada, S. Grayscale Inversion in Fluoroscopy: Pneumothorax Versus Atelectasis: A Case Report. Presented at Thoracic Anesthesia Symposium & Workshops, Society of Cardiovascular Anesthesiologists (SCA), Portland, Oregon.
- May 5, 2023 Cavanaugh, N., Subramani, S., Foster, T. & Hanada, S. Prophylactic Use of Continuous Positive Airway Pressure to Operative Lung Can Limit FiO2 During One-Lung Ventilation to Prevent Pulmonary Toxicity with Prior Bleomycin Treatment: Report of Two Cases. Presented at Thoracic Anesthesia Symposium & Workshops, Society of Cardiovascular Anesthesiologists (SCA), Portland, Oregon.
- May 6, 2023 Cavanaugh, N. & Subramani, S. Superior Vena Cava Syndrome Following Commando Procedure: A Case Report. Presented at Society of Cardiovascular Anesthesiologists Annual Meeting, Society of Cardiovascular Anesthesiologists (SCA), Portland, Oregon.
- Oct 15, 2023 Gardner, R., Hanada, S. & Subramani, S. Improving Perioperative Management of Patients with Pulmonary Hypertension – A Quality Improvement Project. Presented at Anesthesiology Annual Meeting, American Society of Anesthesiologists, San Francisco, California.
- Nov 10, 2023 Sivamurugan, A., Sadek, N., Sondekoppam, R. V., Rier, A. S., Subramani, S., Rajagopal, S., Ranganath, Y. S., Singhal, A. & Hanada, S. Impact of High Spinal Anesthesia in Pediatric Congenital Heart Surgery on Fast-Track Recovery: A Propensity Score-Matched Retrospective Comparative Study. Presented at 22nd Annual Pain Medicine Meeting, American Society of Regional Anesthesia and Pain Medicine (ASRA), New Orleans, Louisiana.
Abstract received the conference's "Best of Meeting" award.

Workshops

- Nov 2011 Subramani, S. Transesophageal Echocardiography for Non-Cardiac Anesthesia. University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa.
Live Demonstration and Hands-on in Pigs
- Sep 2013 Subramani, S. Anatomy of the Aortic Valve-Echocardiographic Assessment. Presented at Annual TEE Workshop, Bangalore, India.
- Sep 2013 Subramani, S. Hands on Session with Live Demonstrations on the Standard TEE Views along with 3D Image Acquisition. Presented at Annual TEE Workshop, Bangalore, India.
- Sep 2013 Subramani, S. Wet Lab Sessions on the Anatomy of the Heart. Presented at Annual TEE Workshop, Bangalore, India.
- Dec 2014 Subramani, S. Transesophageal Echo Cardiogram Workshop: "Hemodynamic Calculations with Echocardiography". Presented at Annual National Conference, Indian Society of Anaesthesiologists, Madurai, Sri Lanka.
- Apr 10, 2015 Subramani, S. Anesthesia for Airway Surgeries. Presented at 4th Annual Thoracic Anesthesia Symposium: Workshop, Society of Cardiovascular Anesthesiologists, Washington, District of Columbia.
- May 30-31, 2015 Subramani, S. Transesophageal Exam. Presented at Iowa Anesthesia Symposium XV, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa.

- Apr 1-2, 2016 Subramani, S. Anesthesia for Airway Surgeries. Presented at 5th Annual Thoracic Anesthesia Symposium, Society of Cardiovascular Anesthesiologists, San Diego, California.
- Apr 1-2, 2016 Subramani, S. PBLD: Lung Transplantation. Presented at 5th Annual Thoracic Anesthesia Symposium, Society of Cardiovascular Anesthesiologists, San Diego, California.
- Jun 4, 2016 Subramani, S. Ultrasound for Vascular Access. Presented at RASCI Advanced Ultrasound Workshop, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa.
- Jun 4, 2016 Subramani, S. Ultrasound Scanning on Vascular Access Phantoms. Presented at RASCI Advanced Ultrasound Workshop, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa.
Hands-on Workshop
- Aug 2016 Subramani, S. Hemodynamic Calculations with Echocardiography. Presented at 10th Annual TEE Workshop, Bangalore, India.
- Apr 21, 2017 Subramani, S. Anesthesia for Airway Surgeries. Presented at 6th Annual Thoracic Anesthesia Symposium, Society of Cardiovascular Anesthesiologists, Orlando, District of Columbia.
- Aug 2017 Subramani, S. Echocardiographic Assessment of Prosthetic Valves. Presented at 11th Annual TEE Workshop, Bangalore, India.
- Jun 16, 2018 Subramani, S. Workshop #1: TEE Simulator. Presented at Basic Perioperative TEE Review Course, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa.
- Oct 2018 Subramani, S. Hands-on Session Echo Simulator. Presented at Iowa Society of Anesthesiologists Fall Meeting, Iowa Society of Anesthesiologists, Iowa City, Iowa.
- Jun 8, 2019 Subramani, S. Workshop #1. Presented at Basic Perioperative TEE Review Course, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa.
- Aug 23, 2020 Subramani, S. Echocardiographic Assessment of Aortic Valve. Presented at 14th National and 5th International Transoesophageal Echocardiography (TEE) Workshop, Indian Association of Cardiovascular Thoracic Anaesthesiologists (IACTA), Bangalore, India.
Virtual Meeting
- Aug 21, 2021 Subramani, S. Echocardiography for Aortic Stenosis and Aortic Regurgitation. Presented at 15th National and 6th International Transoesophageal Echocardiography (TEE) Workshop, European Association of Cardiothoracic Anaesthesiology and Intensive Care, Bangalor, India.
- Jun 18, 2022 Subramani, S., Aldrich, A. W. & Bang, J. K. Hands-on Session: Hemodynamic Assessment. Presented at Basic Perioperative TEE Review Course, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa.
- Sep 24, 2022 Bang, J. K. & Subramani, S. Transesophageal Echocardiogram (TEE). Presented at Iowa Society of Anesthesiologists 2022 Fall CME Conference, University of Iowa, Iowa City, Iowa.

Other Presentations

- Feb 2017 Subramani, S. Complex Cardiac Surgical Cases - Role of Echocardiography. Presented at Indian Association of Cardiovascular Thoracic Anaesthesiologists Annual Meeting, Indian Association of Cardiovascular Thoracic Anaesthesiologists, Pune, India.

Feb 28, 2022	Subramani, S. Updates on Low Flow Anesthesia. Presented at Anesthesiology Grand Rounds, University of Minnesota, Department of Anesthesiology, Minneapolis, Minnesota.
Mar 1, 2022	Subramani, S. Right Heart Failure and Perioperative Management in Non-Cardiac Surgery. Presented at Anesthesiology Grand Rounds, University of Minnesota, Department of Anesthesiology, Minneapolis, Minnesota.
May 18, 2022	Subramani, S. Right Heart Failure and Perioperative Management in Non-Cardiac Surgery. Presented at Anesthesia Grand Rounds, Singapore General Hospital, National University of Singapore, Singapore, Singapore.
May 31, 2022	Subramani, S. Updates on POCUS. Presented at Anesthesiology Grand Rounds, University of Minnesota, Department of Anesthesiology, Minneapolis, Minnesota.
Aug 24, 2022	Subramani, S. Current Role of Regional Anesthesia in Cardiac Surgery. Presented at Anesthesia Grand Rounds, Temple University, Philadelphia, Pennsylvania.
Sep 14, 2022	Sivamurugan, A., Hanada, S., Sondekoppam, R. V. & Subramani, S. The Hemodynamic Changes Associated with High Spinal Anesthesia in Infants Undergoing Cardiac Surgery. Presented at Medical Student Research Conference, University of Iowa, Carver College of Medicine, Iowa City, Iowa.

Areas of Research Interest

- 01. Validation of measurement of cardiac output with LiDCOrapid and TEE by comparing with intermittent thermodilution technique in cardiac surgical patients – A prospective study.
- 02. Comparative hemodynamic assessment between LiDCOrapid and pulmonary artery catheter in different cardiac surgical patient scenarios – A web-based survey.
- 03. Retrospective analysis of impact of regional anesthesia in pediatric cardiac surgeries on extubation and ventilation.
- 04. Implications of preoperative transthoracic echocardiography in the anesthetic management for non-cardiac surgery in simulated patients – A web-based survey.
- 05. Prevalence of postoperative nausea and vomiting in the Asian population – A prospective study.
- 06. Use of Pregabalin in the perioperative period – A meta-analysis.
- 07. Opioids and its usage in the chronic non-cancer pain.
- 08. Validation of STOP BANG questionnaire in identifying difficult airway, laryngoscopy and Intubation – A prospective study.
- 09. Anesthetic considerations in the management of transapical and transfemoral aortic valve replacement.
- 10. Effect of Sevoflurane on vecuronium induced neuromuscular blockade.
- 11. Effect of Remifentanyl with volatile anaesthetic agents on the recovery profile after prolonged head and neck surgery – A prospective study.

Service

Memberships in Professional Organizations

Feb 2001 - Present	Tamilnadu Medical Council
Jul 2004 - Present	Indian Society of Anaesthesiologists (ISA)
Mar 2009 - Present	Singapore Medical Council
Mar 2009 - Present	Singapore Society of Anaesthesiologists (SSA)
Mar 2010 - Present	Society of Cardiothoracic Anesthesiologists (SCA)

Jul 2012 - Present	International Anesthesia Research Society (IARS)
Jul 2014 - Present	Indian Association of Cardiothoracic Anaesthesiologists (IACTA)
Jan 2015 - Present	American Society of Anesthesiologists (ASA)
Jan 2015 - Present	Iowa Society of Anesthesiologists (ISA)
Apr 2018 - Present	Society for the Advancement of Transplant Anesthesia (SATA)
Dec 2021 - Present	Society for Education in Anesthesia (SEA)

Professional Service

Committees and Boards

2013	Scientific Committee, Asian Society of Cardiothoracic Anaesthesiologists, Singapore, Member
2013 - 2015	Research Review Committee, Society of Cardiothoracic Anesthesiologists (SCA), East Dundee, Illinois, United States, Committee Assignment
2018 - 2020	Bylaws Committee, Society for the Advancement of Transplant Anesthesia (SATA), Louisville, Kentucky, United States, Committee Assignment
2015 - 2023	Blood Conservation Working Group, Society of Cardiothoracic Anesthesiologists (SCA), East Dundee, Illinois, United States, Committee Assignment
2018 - Present	Cardiothoracic Subcommittee, Society for the Advancement of Transplant Anesthesia (SATA), Louisville, Kentucky, United States, Committee Assignment
2022 - Present	Education Committee, Society for Education in Anesthesia (SEA), Milwaukee, Wisconsin, United States, Committee Assignment
2022 - Present	Simulation Committee, Society for Education in Anesthesia (SEA), Milwaukee, Wisconsin, United States, Committee Assignment
2022 - Present	Membership Steering Committee, American Society of Echocardiography (ASE), Durham, North Carolina, United States, Committee Assignment

Leadership Roles

2021 - Present	Midwest Regional SATA, Society for the Advancement of Transplant Anesthesia (SATA), Louisville, Kentucky, United States, Chair
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Editor/Reviewer

2018	Journal of Clinical Anesthesia and Management, Milpitas, California, United States, Reviewer, Publications
2021	Anaesthesia, Pain & Intensive Care, Karachi, Pakistan, Reviewer, Publications
2013 - Present	Journal of Anaesthesiology and Clinical Pharmacology, New Delhi, India, Reviewer, Publications
2015 - Present	Journal of Cardiothoracic and Vascular Anesthesia, Philadelphia, Pennsylvania, United States, Reviewer, Publications
2016 - Present	Annals of Cardiac Anesthesia, New Delhi, India, Reviewer, Publications

Other

2016	Poster Presentations, Society of Cardiothoracic Anesthesiologists (SCA), San Diego, California, United States, Moderator Conference Dates: April 1-2, 2016
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- 2017 Poster Presentations, Society of Cardiothoracic Anesthesiologists (SCA), San Diego, California, United States, Moderator
Conference Dates: April 1-2, 2016
- 2023 Midwest Anesthesia Residents' Conference, Association of Midwest Academic Anesthesia Chairs (AMAAC), Milwaukee, Wisconsin, United States, Poster Judge
Judged x1 (04/15/2023)

University, College, Department Service

University

- Dec 13, 2018 - Present Anticoagulation Subcommittee, University of Iowa, Iowa City, Iowa, Member
- Sep 1, 2021 - Present MedSurg Credentials Subcommittee, University of Iowa Hospitals and Clinics, Iowa City, Iowa, Member

College

- Sep 1, 2016 - Nov 30, 2022 Carver College of Medicine Admissions Committee, University of Iowa, Carver College of Medicine, Iowa City, Iowa, Interviewer
Interviewed x4 (2016-2017: unknown; 2017-2018: unknown; 2018-2019: 1 time; 2019-2020: 1 time; 2021-2022: 12/13/2021; 2022-2023: 11/30/2022)

Department

- Feb 1, 2012 - Aug 9, 2017 Clinical Case Conference, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa, Discussant
"Communication Failure" (02/01/2012)
"Intraoperative Death in an Emergent Cardiac Case" (02/01/2012)
"Postoperative Upper Airway Obstruction" (09/19/2012)
"Intraoperative Coronary Vasospasm" (12/12/2012)
"Clotted Cell Saver in Jehovah's Witness Patient" (02/27/2013)
"Ascending Aortic Dissection" (06/26/2013)
"Cardiac Arrest While Closing Sternum: Unable to Reinstitute Cardiopulmonary Bypass in Time" (06/26/2013)
"Case Cancellation: Little Surgical Benefit over Anticipated Major Perioperative Complications" (07/31/2013)
"Esophageal Perforation Following Aortic Valve Replacement" (07/31/2013)
"Unplanned Intensive Care Unit Admission in Chronic Large Pleural Effusion after Bilateral Lung Transplant" (07/31/2013)
"Unplanned SNICU Admission Due to Hemodynamically Significant Ventricular Bigeminy" (08/07/2013)
"Failed Trial Extubation in Patient with Mediastinal Tumor and Superior Vena Cava Syndrome" (08/14/2013)
"Obtunded Elderly Patient in PACU" (08/13/2014)
"Massive Transfusion Following Pediatric Heart Transplant" (08/27/2014)
"Cardiogenic Shock and Arrest after Craniotomy for Subdural Hematoma Evacuation" (09/17/2014)
"Intraoperative Death Following Superior Vena Cava Tear" (09/17/2014)
"Will you Transfuse Greenish Blue Fresh Frozen Plasma?" (03/04/2015)
"Transcatheter Aortic Valve Replacement Complicated By Left Ventricular Lacerations - Emergent Aortic Valve Replacement" (03/18/2015)
"Failure to Isolate Lung, Procedure Unsuccessful" (07/22/2015)
"Failed Tube Exchange Requiring Emergent Airway" (01/20/2016)

"Isolated Elevated Partial Thromboplastin Time in Patient with Normal Prothrombin Time" (02/03/2016)
 "Coughing Your Way to a One Liter Blood Loss" (03/16/2016)
 "Pulseless Electrical Activity in an Elective Video Assisted Thoracoscopic Surgery (VATS) Lobectomy" (08/31/2016)
 "Accidental Clamping of the Chest Tube Drainage During Transport Leads to Worsening Pneumothorax" (05/10/2017)
 "Refractory Bronchospasm Following Intubation in Elective Ears Nose Throat Procedure" (05/24/2017)
 "Morbid Obese Individual with Severe ARDS- Class A VV ECMO" (06/07/2017)
 "Robotic Assisted Pelvic Mass Excision Complicated by Pneumothorax" (08/09/2017)

Jul 20, 2021 - Jan 3, 2023 Anesthesia Grand Rounds: M&M, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa, Moderator
 Moderated x5 (07/20/2021; 02/22/2022; 06/21/2022; 09/20/2022; 01/03/2023)

Mar 21, 2023 - May 31, 2023 Citation Task Force: Citation 1, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa, Chair

Mar 6, 2017 - Jul 11, 2023 Anesthesia Grand Rounds: M&M, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa, Discussant
 "Intraoperative Ventricular Tachyarrhythmias Leading to Case Cancellation in a Class A Sacral Debridement" x2 (03/06/2017; 03/06/2018)
 "Acute Pulmonary Embolism in an Emergent Type B Aortic Dissection" (10/17/2017)
 "Cardiac Arrest following Transfer to OR Bed in an Elective TAVR" (07/03/2018)
 "Severe Bradycardia in an Elective Peroral Endoscopic Myotomy (POEM) Procedure - Unknown Etiology" (12/11/2018)
 "Cardiac Tamponade during Pacemaker Lead Extraction" (03/19/2019)
 "Refractory V-fib Secondary to Severe Hypothermia - VA ECMO" (05/05/2020)
 "Cardiac Arrest while Mapping for Ventricular Tachycardia Ablation" (06/09/2020)
 "Post Tonsillectomy Bleeding" (09/29/2020)
 "Impella Exchange Complicated by Refractory Ventricular Tachyarrhythmias" (02/02/2021)
 "Near Cardiac Arrest in Heart Transplant Secondary to Massive Bleeding" (02/02/2021)
 "Elective CABG Complicated by Refractory Hypotension Secondary to Graft Dysfunction" (04/06/2021)
 "TAVR Warranting Surgical AVR" (04/06/2021)
 "Left Upper Lobectomy Complicated by Massive Secondary to PA Injury" (02/22/2022)
 "Refractory Hypoxia in Post Covid Patient Complicated by Failed ECMO" (02/22/2022)
 "PEA Arrest on Induction in Setting of Severe Pulmonary Hypertension Secondary to Respiratory Failure" (06/21/2022)
 "PEA Arrest in Bilateral Lung Transplant for COPD/Emphysema" (01/03/2023)
 "Emergency C-Section Complicated by Massive Bleeding" (03/21/2023)
 "Tracheal Stenosis and Known Difficult Airway" (07/11/2023)

"Emergent C-Section Complicated by Possible Pseudocholinesterase Deficiency"
(11/07/2023)

Jul 1, 2012 - Present	Adult Cardiothoracic Fellowship Interview Committee, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa, Member Interviewed x4 (04/30/2013; 05/03/2013; 04/14/2016; 05/16/2016)
Jul 1, 2013 - Present	Adult Cardiothoracic Anesthesia Fellowship Clinical Competency Committee, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa, Chair
Jul 1, 2013 - Present	Anesthesia Residency Echocardiography Rotation, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Co-Director Co-Director with Dr. Satoshi Hanada
Jul 1, 2014 - Present	Anesthesia Residency Case-Based Learning, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa, Facilitator
Sep 1, 2020 - Present	Basic Perioperative TEE Review Course, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa, Program Director
Sep 1, 2021 - Present	Adult Cardiothoracic Anesthesia Fellowship Program Evaluation Committee, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa, Member
Nov 1, 2021 - Present	Anesthesia Resident Perioperative Rotation, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa, Director
Feb 1, 2022 - Present	Point of Care Ultrasound (POCUS) Rotation, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa, Director
Jul 1, 2022 - Present	Anesthesia Resident Education Evaluation Committee, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa, Member
Jul 1, 2022 - Present	Resident Program Evaluation Committee, University of Iowa, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa, Chair

Clinical Assignments

Jul 1, 2012 - Present	Faculty Anesthesiologist, Iowa City, IA Faculty anesthesiologist in the Department of Anesthesia, specializing in Cardiothoracic Anesthesia; working mainly in the Main Operating Rooms.
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