

## WAKE FOREST SCHOOL OF MEDICINE

### NAME

**Aarti Sarwal, MD, FNCS, FAAN, FCCM, RPNI**  
Professor, Neurology  
Co-Director, Medical School Ultrasound Curriculum  
Director, Neurovascular Laboratory

### ADDRESS:

Department of Neurology  
Wake Forest School of Medicine  
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### EDUCATION:

1996-2001	Government Medical College Patiala, India
2004-2005	Bachelor of Medicine & Surgery (MBBS) Medical Informatics Medvarsity Online Ltd, Indraprastha Apollo Hospital, New Delhi, India Post Graduate Diploma in Medical Informatics

### POSTDOCTORAL TRAINING:

2002 –2003	House Physician –Neurology Government Rajindra Hospital, Patiala, India.
2003 –2004	House Physician –Neurology, Amar Hospital, Patiala, India
2005-2006	Resident-Internal Medicine University of Missouri, Columbia, MO
2006-2009	Resident-Neurology University of Missouri, Columbia, MO
2009-2011	Clinical Fellow, Neurocritical Care Cleveland Clinic, Cleveland, OH

### PROFESSIONAL LICENSURE:

2005-2009	State of Missouri 2005013477 (inactive)
2008-2010	State of California A105889 (inactive)
2009-2012	State of Ohio 35.094614 (inactive)
2011-present	State of North Carolina 2011-00236 (active)
2011-present	DEA (Drug Enforcement Administration)

### SPECIALTY CERTIFICATION:

2009-	Diplomate, American Board of Psychiatry & Neurology
2011-	Diplomate, Neurocritical Care, United Council of Neurological Subspecialties
2013-	Neurosonology(TCD) certification, American Society of Neuroimaging Registered Physician in Neurovascular Interpretation, (RPNI)
2017-	Neurosonology(Carotid ) Certification, American Society of Neuroimaging
2019-	Recertification, American Board of Psychiatry & Neurology

### EMPLOYMENT

#### Academic Appointments

2008-2009	Chief Resident-Neurology
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## University of Missouri, Columbia, MO

2010- 2011	Education Chair, House Staff Association Cleveland Clinic, Cleveland, OH
Wake Forest Baptist Medical Center	
2011-2016	Assistant Professor, Neurocritical Care
2011-2013	Tele-Stroke consultant, Department of Neurology
2011-present	Faculty, Women in Medicine & Science
2016-2020	Associate Professor, Neurocritical Care
2019-present	Fellowship Director, Neurocritical Care
2017-2022	Section Chief, Neurocritical care
High Point Medical Center	
2019-present	Active Staff, Neurology

Professional Experience

2002 –2003	House Physician –Neurology Government Rajindra Hospital, Patiala, India.
2003 –2004	House Physician –Neurology Amar Hospital, Patiala, India

**ADMINISTRATIVE SERVICE**School of Medicine

2016-present	Co-Director, Medical School Ultrasound Curriculum
2017-present	Asst-Course Director, Point of Care Ultrasound Elective
2015-present	Faculty, MS1 Neuroscience learning lab
2022-present	Undergraduate Medical Education Curriculum Committee, voting member. Professional work group.
2023-present	Liaison Committee on Medication Education, MD program Self-Study group for accreditation 2024. Student Supervision & Academic Environment Workgroup
2023-present	Faculty, MS1 Neuroscience Course- Coma & Persistent Vegetative State

Institutional Service

2011-2016	Cardiac Arrest Committee, Member
2011-2012	Office of Women in Medicine Research Committee, Member
2011-2014	Intensive Care Unit Quality Improvement & Adult Critical Care Service Line Steering Committee, Member
2011-present	Medical Director, Brain Death Task Force
2012-2019	Committee on Admissions, School of Medicine, Member
2012-2016	Trauma Peer Review Committee, Member
2013-2015	Advance Care Planning Committee, Member,
2014-present	Critical Illness Injury & Recovery Research center, Member
2014-2016	Neurosciences, Quality/Performance Improvement Committee, Member
2014-2022	Critical care Services Standardization committee, Member
2014-2015	Patient Safety & Quality officer, Neurosciences Service Line
2014-2017	Member, Continuing Medical Education committee: Accreditation Council for Continuing Medical Education (ACCME®) review, Office of Continuing Medical Education

(OCME). Awarded the ACCME's highest level: Accreditation with Commendation  
<http://intranet.wakehealth.edu/leadership/ceo-communications/2017/cme-office-receives-accreditation-with-commendation.htm>

2016-2017	Faculty Review Council- Operations and Quality Subcommittee
2016-2020	Advisory Board, Career Development for Women Leaders Program, Office of Women in Medicine & Science
2016-2020	Member, Point of Care Ultrasound committee
2017-2018	Chair, Career Development Committee, Office of Women in Medicine & Science
2018- 2022	Dean's Inclusion & Diversity Cabinet, Member
2018-present	Member, Steering Committee, Center of Experiential & Applied Learning, WFSOM
2019-2022	Member, Executive Committee, Neuroscience Clinical Trial & Innovation Center,
2020-present	Committee on Admissions, School of Medicine, Member
2020-2022	Dean's Racial Equity Task Force, Member, Culture-Co-Chair
2020-2021	Clinical and Translational Science Institute, Faculty Research Awards Day Committee
2020-2022	Co-Chair, Point of Care Ultrasound Committee
2021-2022	Member, <b>Intramural Research Support Committee, 5% effort</b>
2021-2022	Vice Chair, Neurosciences Quality Council, Atrium Health
2021-2023	Co-Chair, Experience committee. Critical Care Council, Atrium Health
2022-present	Member, Steering committee, Perioperative Outcomes and Informatics Collaborative (POIC)
2022-present	Advisory committee, Wake Forest Center for Biomedical Informatics
2022-present	Director, Neurovascular Laboratory, Atrium Wake Forest Baptist Medical Center

#### Departmental Service

2011-present	Member, Neuromuscular Ultrasound Research Group
2013-2014	Associate Medical Director, Neurocritical Care Unit
2014-2022	Medical Director, Neurocritical Care unit
2014-2016	Critical Care Fellows Education Series Planning Committee
2015-2019	Neurology Department Executive Committee
2015-2022	Stroke Executive Committee
2015-2018	Chair, Neurology Quality & Performance Improvement Committee
2017-2022	Section Head, Neurocritical Care section, Neurology
2019	Member, Wake Forest NeuroNext cohort
2020-2021	Neurology Outreach Committee

### EXTRAMURAL APPOINTMENTS AND SERVICE

#### Editorial Board

2016	Journal of Central Nervous System Disease
2019-present	Editorial Board, Critical Care Medicine (Impact factor 6.97)
2019-2023	Social Media Editor, Critical Care Medicine
2019-2023	Social Media Editor, Neurocritical Care (Impact factor 2.857)
2020	Editorial Board, Journal of Neuroimaging (Impact factor 2.08)
2020	Guest Editor, Practical Neurology, Special issue-Jan 2021
2022	Guest Editor, Frontiers in Neuroscience, Coma and Disorders of

	Consciousness Associate editor- CNS; Oxford Manual of Imaging in Critical care
2023	
<u>Journal Reviewer</u>	
2011-present	<b>Neurocritical Care</b> , Top reviewer 2019, Official journal of the Neurocritical Care Society (Impact factor 2.857)
2011- present	<b>Journal of Neuroimaging</b> , Official journal of American Society of Neuroimaging (Impact factor 2.08)
2014-present	<b>Muscle &amp; Nerve</b> , Official journal of American Association of Neuromuscular & Electrodiagnostic Medicine (Impact factor 2.39)
2018-present	<b>Ultrasound in Medicine and Biology</b> . Official journal of the World Federation for Ultrasound in Medicine and Biology (Impact factor 2.205)
2018-present	<b>Neurology</b> , Official journal of American Academy of Neurology (Impact factor 8.689)
2018-present	<b>European Journal of Neurology</b> , Official journal of the European Academy of Neurology (Impact factor 4.387)
2018-present	<b>Critical Ultrasound Journal</b> , official publication of WINFOCUS (World Interactive Network Focused on Critical UltraSound) (Impact factor 1.89)
2018-present	<b>Journal of Critical Care</b> , Official publication of World Federation of Societies of Intensive and Critical Care Medicine (Impact factor 2.78)
2018-present	<b>Respiratory Physiology &amp; Neurobiology</b> . (Impact factor 1.582)
2019-present	<b>Respiration</b> , Official journal of the Swiss Respiratory Society (Impact factor 2.935)
2019-present	<b>Chest</b> , Official journal of American Society of Chest Physicians (Impact factor 9.657)
2019-present	<b>Stroke</b> , official journal of American Stroke Association. (Impact factor 6).
2020-present	<b>Critical Care Medicine</b> , Official journal of Society of Critical Care Medicine (Impact Factor 6.971)
2020-present	<b>Critical Care Explorations</b> , PubMed Indexed, Open access journal of Society of Critical Care Medicine
2020-present	<b>Journal of Neuro-interventional Surgery</b> , official journal of Society of Neuro-Interventional Surgery. Impact factor 4.46.
2022	<b>European Radiology</b> , Journal of the European Society of Radiology (Impact factor 5.315)
2023	<b>Intensive Care Medicine</b> , official journal of European Society of Intensive Care Medicine. Impact factor 41.78

Syllabus review

2018	"Rehabilitation in the Acute Setting" Masters of Rehabilitation Science Program, University of Melbourne, Australia
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Grant reviewer

2018	Invited to review grants by the Scientific Advisory Board of Prinses Beatrix Spierfonds, largest independent financial supporter for neuromuscular research in the Netherlands
2018	Invited to review grants by Division Biology and Medicine Of Swiss National Science Foundation

Theses review

2022	Master's thesis, Physiotherapy, Graduate School of Health, University of Technology, Sydney
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**PROFESSIONAL MEMBERSHIPS AND SERVICE**

2006-present	<u>Association of Indian Neurologists in America (AINA)</u> Member of the Executive Council (2013-2017) Member, Board of Directors (2017-present) Treasurer (2017-2019) Secretary (2019-2021) President Elect (2021-2023) <b>President 2023-2025</b>
2006-present	<u>American Academy of Neurology (AAN)</u> Graduate, Palatucci Advocacy and Leadership Forum, 2015 Advisor, Palatucci Advocacy and Leadership Forum, 2017 Member, Quality and Safety Subcommittee (2017-2023) Neurology Ambassador, Medical Student Pipeline Initiative 2019 Member, ELA work group 2019 Annual Meeting 2019 Annual Meeting - Medical Student Symposium Facilitator, Neurology Outcomes Measures Workgroup 2019 Section Representative on the Neuro Trauma, Critical Care and Sports Neurology Topic Work Group 2020 Annual Meeting Invited AAN Media Expert 2019 2020 Annual Meeting - Medical Student Symposium: Round Robin and Mixer Member Engagement Committee (2021-2025) Social Media Expert 2021-present Faculty, 2022 Palatucci Advocacy Leadership Forum 2022- Quality Committee Rep on Advanced Drug Monitoring Work Group Mentor, 2021-2022 Emerging Leaders Program Grant reviewer 2022 AAN Research Program <b>Vice Chair, Critical Care &amp; Emergency Neurology Section (2023-2025)</b> Academic Neurology Committee (Member) 4/28/2023 - 4/10/2025
2007-present	<u>Neurocritical Care Society</u> Faculty, Annual Meeting 2012, 2019 Moderator, Twitter Journal Club, Bimonthly (2015-2018) Member, Communications Committee (2015-2018) Chair, Coma, ENLS Protocols Subcommittee (2017-2020) Annual Meeting, Poster Professor, 2017, Hawaii, HI Chair elect, Workshop subcommittee, Annual meeting 2018 Chair, Workshop subcommittee, Annual meeting 2019-2021 Fundraiser Annual Meeting Banquet 2018, 2019, 2020 Editorial Board, NCS Boar review Question bank, 2021 <b>Inaugural Chair, Ultrasound Section, 2020-2022</b> Organizer, Ultrasound trainee webinar series 2022 Co-Chair, Community of Collaborators Module, Curing Coma Campaign (2020-present)
2007-present	<u>Society of Critical Care Medicine</u> Membership Committee (2007- 2008) Accreditation and On-line Learning Committee (2011-2012) Topic leader: Neurosection, LearnICU initiative (2011 - 2015) Fundamental Critical Care Support Program Comm(2014-2016) Education and Simulation Research Subcomm (2016-present) ICU Quality and Patient Safety Research Subcomm(2016-2018) Ultrasound Committee (2018-2024) Social Media Committee (2021-2024) Course Director, Neurocritical Care Board Review Course 2021-2023 2022-2023 Co-Chair of the Neurologic Monitoring in the Adult and Pediatric ICU Task Force and Course Director, Neuromonitoring Course Pre Congress Session, 2022-2023

Member, writing panel for SCCM guidelines to address the use of ultrasound for adult critically ill and injured patients, focused update 2022  
 Member, writing panel, SCCM Guidelines for the Diagnosis and Management of Critical Illness-Related Corticosteroid Insufficiency (CIRCI) in Critically Ill Patients focused update 2022  
**Secretary, Neuroscience Section(2023-2024)**

2013-present	<u>American Society of Neuroimaging</u> Member, Board of Directors (2017-2022) Chair, Communications Committee (2017-present) <b>Treasurer (2023-present)</b>
2014-present	<u>European Society of Intensive Care Medicine</u> Invited member, Intensive Care Fundamentals Course Panel Invited member, GENIUS course, GENeral Intensive care UltraSound
2016-2019	<u>Society of Ultrasound in Medical Education</u> Consultant, International Consensus Conference on Ultrasound in Medical Education Organizing Chair, 6 <sup>th</sup> World Congress of Society of Ultrasound in Medical Education, Winston Salem, NC 2018
2021-2026	<u>World Interactive Network Focused On Critical Ultrasound (WINFOCUS)</u> Member, Research Sub-Committee
2021	<u>Indian Society of Critical Care Medicine</u> Invited member, Scientific Committee for CRITICARE - 2022; 28th Annual Conference
2022	<u>American Society of Echocardiography</u> . Writing group member for ASE guideline: Update to the ASE Statement on the Provision of Echocardiographic Services During the COVID-19 Pandemic. SCCM liaison to American Society of Echocardiography
2023	<u>World Federation of Intensive and Critical Care</u> : Invited member Scientific Program Committee, 16th World Intensive and Critical Care Congress (WICC), Istanbul, Turkey 2023

## OTHER PROFESSIONAL MEMBERSHIPS

2010-present	American Medical Association
2014-present	American Heart Association
2015-present	North Carolina Medical Society
2015-2017	North Carolina Ultrasound Society
2020-present	American Association of Physician Leaders
2020	Fellow, American Neurological Association
2022-present	European Society of Neurosonology and Cerebral Hemodynamics
2022-present	Society of Neurocritical Care, India
2022-present	American Medical Informatics Association
2022-present	American Society of Echocardiography
2023-present	Society of Mechanical Ventilation

## HONORS AND AWARDS

2007	Most Outstanding Abstract presented at the Annual Meeting of American Society of Neuroimaging.
2009	Daniel M Keniston Award for Outstanding House Staff, Department of Neurology, University of Missouri, Columbia, MO..

2010	First place in Neurocritical Care Society Simulation Resuscitation, Competition, San Francisco, CA.
2013-present	Top Neurologist in Winston Salem, NC by International Association of Healthcare Professionals.
2013	Outstanding Young Physician Award, University of Missouri Alumni Association
2013	Abstracts selected by the Science Committee, Annual Meeting of American Academy of Neurology for special notation to highlight as a significant advance based on animal research
2015	Abstract selected for Critical Care Section Highlights of the Year, American Academy of Neurology, Annual meeting
2017	Top Neurologist in Winston Salem, NC by International Association of Healthcare Professionals.
2017	Fellow of the Neurocritical Care Society
2017	Fellow of the American Academy of Neurology
2018	Emerging Leaders Program conducted by American Academy of Neurology for 16 competitively chosen neurologists from US
2013-2020	Best Doctors in America ®
2015-2020	Presidential Citation, Neurocritical Care Society
2019	Top Reviewer, Neurocritical Care Journal
2021	Fellowship of American College of Critical Care Medicine
2021	Translational Science Leadership Academy, Clinical Translational Science Institute Team Science Program, WFSOM, competitive award
2021	Clinical Translational Science Institute SI K&R Writers Series, competitive award
2021	Alpha Omega Alpha Honor Medical Society
2022	Clinical Informatics Board Certification (American Board of Preventive Medicine) Subsidy, Wake Forest Center for Biomedical Informatics, competitive award
2022	Presidential Citation, Society of Critical Care Medicine

## GRANT FUNDING

### Currently Active Grants

Timothy C. Pennell International Fellowship Fund	0%
Cranial Ultrasound for Point of care ICH & ischemic stroke Detection India ( CUPID_India)	\$8,600.00
PI:Ankur Luthra, Mentor: Sarwal	
American Academy of Neurology Education Research Grant 10/202-10/2023	0%
Defining the Role of Tweakertials for Educational Scholarship in Neurology	
PI Albin Casey, Coinvestigator: Sarwal	\$10,000
American Academy of Neurology Medical Student Research Scholarship 10/01/2020-10/1/2021	0%
Application of Machine Learning Approach to assess the impact of social Determinants on outcomes for patients with intracranial hemorrhage	\$3000
PI: Ong, T, Mentor: Sarwal	
Neuroscience Clinical Trials and Innovation Center pilot grant 06/01/2021-05/31/2022	0%
Cranial Ultrasound for Point-of-care Intracranial hemorrhage Diagnosis (CUPID study)	\$20,000
PI: Sarwal A	

Clinical Translational Science Institute Atrium Pilot grant	06/01/2021-05/31/2022	0%
Cranial Ultrasound for Prehospital Intracranial hemorrhage Diagnosis (CUPID study)		\$40,000
PI: Sarwal A		

American Academy of Neurology Medical Student Research Scholarship	10/01/2020-10/1/2021	0%
Title: Elucidating the variability in normal diaphragm topography via neuromuscular ultrasound		\$3000
PI Joshi, Mentor: Sarwal		

UH3HL145269( SIREN network)	5/2022- 5/2025	0.12%
ICECAP - Influence of Cooling Duration on Efficacy in Cardiac Arrest Patients		
Role: Site PI		

NCT02864953 (Biogen)	05/02/2019 - 05/01/2021	0.12%
Biogen/ IQVIA	\$16,021/per patient	
Randomized, Double-Blind, Placebo-Controlled, Parallel-Group, Multicenter, Phase 3 Study to Evaluate the Efficacy & Safety of Intravenous BILB093 (Glibenclamide) Severe Cerebral Edema following Large Hemispheric Infarction		
Primary objective: determine if BILB093 improves functional outcome at Day 90 as measured by the modified Rankin Scale (mRS) when compared with placebo in participants with Large Hemispheric Infarction (LHI).		
Role: Site-PI		

R01 AG066910-01 (Brinkley/Shaltout)	04/01/2020 – 03/31/2025	0.05%
NIH/NIA	\$2,019,124	
The POINTER Neurovascular Ancillary Study (POINTER-NV)		
This study will add comprehensive assessments of cerebral autoregulation, autonomic function, and vascular structure and function in 500 participants enrolled in U.S. POINTER, a multi-center randomized clinical trial designed to investigate whether randomization to one of two lifestyle interventions that differ in format and intensity alters cognitive trajectory over 2 years in older adults who are cognitively normal but at increased risk for dementia.		
Role: Co-I		

### **Mentored student grants**

Medical Student Research Program, 2023	Student: Wesley Lobst	\$3000
Robotic Transcranial Doppler Monitoring to Determine Patient Centric Blood Pressure Targets in Ischemic and Hemorrhagic Stroke		

Medical Student Research Program, 2023	Student: Nicole Santella	\$3000
Feasibility of Automated Robotic TCD in Acute Severe TBI Patients		

Medical Student Research Program, 2016	Student Kristopher Dixon	\$3000
Improving Quality of Communication in Acute Neurological Emergencies		

Medical Student Research Program, 2015	Student, Russell Stewart	\$3000
Improving Quality of Communication in Acute Neurological Emergencies		

### **Past Grant History**

NCT00119717 CoAxia		
Title Safety and Efficacy of NeuroFlo Technology in Ischemic Stroke (SENTIS) The safety of the NeuroFlo device and procedure will be compared to medical management alone.		
Shuaib (PI)		
Sarwal: Site Sub-Investigator		2010

NIH/NINDS 1 UO1 NS080824-01A1



Minimally Invasive Surgery plus rtPA for ICH evacuation Phase III (MISTIE III)

Hanley D (PI)

Sarwal: Site Sub-investigator

2013

NIH 1R01NR011186-01

Title: Standardized Rehabilitation Therapy for ICU Patients with Acute Respiratory Failure. Goal: Early application of ICU physical therapy

Morris PE (PI)

Sarwal, Co-investigator

2014

Oversee muscle ultrasound image protocols and analysis. Initial ultrasound results published PMID: 23041986.

Study Publication PMID: 27367766

NCT01176565

A Phase III Randomized Multicenter Trial of Blood Pressure Reduction for Hypertension in Acute Intracerebral Hemorrhage (ATACH II)

Qureshi AI (PI)

Sarwal, Site Sub-investigator

2015

Pilot grant by the Critical Illness & Injury Recovery Research Center. Administrative Support through Translational Science Institute, Wake Forest School of Medicine supported by NCRR/NIH M01 RR007122 Title: Clinical use of Muscle Ultrasound to predict and reduce extubation failure in patients on mechanical ventilation

Sarwal (PI)

2016

75 patients enrolled, publication in works

McKinney-Avant Pilot Research Award, Wake Forest Neurovascular Lab

\$20,000

Title: Impact of continuous transcranial Doppler in clinical decision making in perioperative and intensive care

Sarwal (PI)

2017

Study sponsor: Ceribell Inc. NCT03534258

Does Use of Rapid Response EEG Impact Clinical Decision Making (DECIDE). A prospective multicenter trial analyzing use of rapid response EEG to change treatment decisions in acute seizure.

Westover MB, PI

Sarwal A, Site Coinvestigator

2018

AegisCN LLC. Collaborator: Duke Clinical Research Institute & PharPoint Research, Inc.

Title: A Proof of Concept Study to Evaluate CN-105 in Intracranial Hemorrhage patients (CATCH).

ClinicalTrials.gov identifier: NCT03168581 (PI: James, ML)

Sarwal, Site Coinvestigator

2019

Facilitated informatics based on enrolling patients in a clinical trial and 2<sup>nd</sup> Top Enrolling site next to Duke

NCT03096639, NCT03107949 LungPacer, Inc

0.12%

Lungpacer Medical Inc

Title: Percutaneous Temporary Placement of a Phrenic Nerve Stimulator for Diaphragm Pacing

A randomized clinical trial to investigate the use of the temporary Diaphragm Pacing Therapy System (DPTS) to rehabilitate the diaphragm in mechanically ventilated patients who have failed at least two weaning attempts. The goal is to strengthen and rehabilitate the diaphragm to liberate the patient more quickly from mechanical ventilation

Sarwal: Consultant /Core Lab reviewer for ultrasound of diaphragm to assess efficacy of pacing device in preventing extubation failure in prolonged mechanical ventilation

2017 - 2020

Neurocritical Care Society INCLINE Grant 2018 NCT03201094

0.01%

Title: Impact of **N**euromuscular Electrical **S**timulation and High **P**roteIn Supplementation on **R**Ecovery after Subarachnoid Hemorrhage (**INSPIRE**)

Badjatia, N, PI

Sarwal A: Co-investigator, Core Ultrasound Lab. Consultant Ultrasound image acquisition, protocols, training and

image analysis. Pilot study for future R01 application

## BIBLIOGRAPHY

- |   |                         |                |
|---|-------------------------|----------------|
| NCT03464851 (Sarwal)  | 02/01/2019 - 02/01/2021 | 0.12           |
| CVR Global, Inc.  | \$512/per patient       |                |
| Evaluation of a New Noninvasive Technique to Diagnose Carotid Artery Stenosis   |                         |                |
| The Purpose of this study is to determine the accuracy of a new non-invasive device, the Carotid Stenotic Scan (CSS), to check for stenosis of the internal carotid artery (ICA) as compared to a carotid ultrasound study. |                         |                |
| Sarwal A: Site-PI - Screen and enroll patients for the study  |                         | 1% effort 2019 |
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- |   |                         |      |
|---|-------------------------|------|
| NCT03004976 (Kurtzberg)   | 09/07/2018 – 06/30/2021 | 0.12 |
| Duke University   | \$17,347/per patient    |      |
| Phase 2 Study of Allogeneic Umbilical Cord Blood Infusion for Adults with Ischemic Stroke - CoBIS 2   |                         |      |
| The primary objective of this study is to determine the efficacy of a single intravenous infusion of unrelated donor umbilical cord blood (UCB) for improving functional outcomes in patients with ischemic stroke. |                         |      |
| Role: Site Sub-I  |                         |      |
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- |  |                       |  |
|--|-----------------------|--|
| NCT02996266 CR Bard, Greer/Sheth( PI)                | 01/01/2019-12/30/2021 |  |
| Impact of Fever Prevention in Brain Injured Patients |                       |  |
| Role: Site Investigator                              |                       |  |
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- |  |                      |  |
|--|----------------------|--|
| NCT03338998 Novartis/ IQVIA Medical Director, Novartis (PI)  | 12/1/2020-01/01/2021 |  |
| A phase II, subject- and investigator blinded, randomized, placebo-controlled study to evaluate efficacy, safety and tolerability of BAF312 (siponimod) in patients with stroke due to intracerebral hemorrhage (ICH). |                      |  |
| Role: Site Investigator  |                      |  |

## Peer-Reviewed Journal Articles indexed in PubMed:

1. Szary N, **Sarwal A**, Hall L. Transfer of Care communication: Improving medical communication during care during inter-facility patient transfer. Missouri Medicine 107, 127-30, 2010. PMID:20446521
2. Sahaya K, Goyal M, **Sarwal A**, et al. Levetiracetam induced thrombocytopenia amongst in-patients. A retrospective study. Epilepsia (Amst) 51(12):2492-5 (2010). PMID:21204814
3. Newey CR, **Sarwal A**, Wisco D, Alam S, Lederman RJ. Variability in Diagnosing Creutzfeldt-Jakob Disease Using Standard and Proposed Diagnostic Criteria. J Neuroimaging 2013 Jan;23(1):58-63. PMID: 23163590
4. Newey CR, **Sarwal A** et al. Patient With Voltage-Gated Potassium-Channel (VGKC) Limbic Encephalitis Found to Have Creutzfeldt-Jakob Disease (CJD) at Autopsy. J Neuropsychiatry Clin Neurosci. 2013 Jul 1;25(3):E05-7. PMID: 24026723
5. Cartwright, MS, Kwayisi G, Griffin LP, **Sarwal A**, et al. Quantitative Neuromuscular Ultrasound in the Intensive Care Unit. Muscle & Nerve. Muscle Nerve. 2013 Feb;47(2):255-9 PMID:23041986
6. **Sarwal A**, Walker F, Cartwright MD . Neuromuscular ultrasound for evaluation of the diaphragm. Muscle Nerve. 47(3):319-29 .PMID: 23382111
7. **Sarwal A**, Childers MK. Ultrasound assessment of the diaphragm: A canine model of X-linked myotubular myopathy. Muscle Nerve. 50 (4), 607-609 PMID:24861988
8. **Sarwal A**, Cartwright MS...Childers MK. Guiding Intramuscular Diaphragm Injections Using Real-time Ultrasound & Electromyography. Muscle & Nerve 51 (2), 287-289 PMID: 25354257
9. **Sarwal A**, Parry S....Cartwright MS. Inter-observer Reliability of Quantitative Muscle Ultrasound Analysis in the Critically Ill Population. J Ultrasound Med. 2015 Jul;34(7):1191-200. PMID:26112621
10. Parry SM, El-Ansary D, Cartwright MS., **Sarwal A**..... Denehy, Linda. Ultrasonography in the intensive care setting can be used to detect changes in the quality and quantity of muscle and is related to muscle strength and function. J Crit Care. 2015 Jun 3. PubMed PMID: 26211979.
11. Newey CR, **Sarwal A**. Ictal Asystole to pace or not to pace. Neurohospitalist 2015 Oct;5(4):NP3-6. PMID:26425256

12. McGinn K, Bishop L, **Sarwal A\***. Use of Ketamine in Barbiturate Coma for Refractory Status Epilepticus. *Clinical Neuropharmacology* 2016 Jan-Feb;39(1):62-5. PMID 26757317
13. Newey CR, Wisco D, Nattanmai P, **Sarwal A\***. Observed medical and surgical complications of prolonged barbiturate coma for refractory status epilepticus. *Ther Adv Drug Saf.* 2016 Oct;7(5):195-203. PMID:27695621
14. Newey, C., **Sarwal, A**, Hantus, S. (2016). [18F]-fluoro-deoxy-glucose positron emission tomography (FDG-PET) scan should be obtained early in cases of autoimmune encephalitis. *Autoimmune Diseases*, 2016. PMID: 27559482
15. Morris, P. E., Berry, M. J., Files, C. D., Thompson, C., Hauser, J., Flores, L., Dhar, S., Chmelo, E., Lovato, J., Case, L. D., Bakhru, R. N., **Sarwal, A.**, Parry, S. M., Campbell, P., Mote, A., Winkelman, C., Hite, R. D., Nicklas, B., Chatterjee, A., Young, M. P. (2016). Standardized Rehabilitation and Hospital Length of Stay Among Patients With Acute Respiratory Failure A Randomized Clinical Trial. *JAMA*, 315 (24), 2694–2702. PMID:27367766
16. Newey CR, **Sarwal A**, Hantus S. Electro-radiological Observations of Grade III/IV Hepatic Encephalopathy patients with seizures. *Neurocritical Care. Neurocrit Care.* 2017 Aug 8. PMID: 28791561
17. Cadena RS, **Sarwal A**. Emergency Neurological Life Support: Approach to the Patient with Coma. *Neurocrit Care.* 2017 Sep 14. PMID:28913601
18. Morris NA, Czeisler BM, **Sarwal A**. Simulation in Neurocritical Care: Past, Present, and Future. *Neurocrit Care.* 2018 Oct 25. PMID:30361865
19. Robba C, Goffi A, Geeraert G, Cardim D, Via G, Czosnyka M, Park S, **Sarwal A**, Padayachy L, Rasulo F, Citerio G. Brain color duplex ultrasonography: methodology, basic and advanced principles and clinical applications. A narrative review." *Intensive Care Med.* 2019 Jul;45(7):913-927. PMID: 31025061.
20. Odom M, Gomez JR, Danelson K, **Sarwal A**. Development of a homemade spinal model for simulation to teach ultrasound-guidance for lumbar puncture. *Neurocrit Care.* 2019 Dec;31(3):550-558. PMID: 31313141
21. Ghoshal S, Gomez JR, Datar S, Tegeler CH, **Sarwal A**, Freedman BI. The impact of chronic kidney disease on cerebral hemodynamics: A transcranial Doppler study. *J Cereb Blood Flow Metab.* 2020 Mar;40(3):482-487. PMID: 31842666
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Research contribution –Footnote /acknowledgement

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#### Invited Publications (Editorially Reviewed)/Book Chapters

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### **In works**

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### **Books**

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20. Dangayach N, Grewal HS, Prada G, Diaz-Gomes JL, **Sarwal A**. Point of Care Ultrasonography: An Indispensable Tool for the Neurocritical Care Team. Currents News Magazine of the Neurocritical Care Society. Volume 12(4). Dec 2017
21. Prada G, Diaz-Gomez JL, **Sarwal A**. Point-of-Care Ultrasound Case Pearl in Neurocritical Care. Currents News Magazine of the Neurocritical Care Society. Volume 13(1) Mar 2018
22. Dangayach N, **Sarwal A**, and Singh, V. 47th Critical Care Congress: Updates from the Neuroscience Section. Currents News Magazine of the Neurocritical Care Society Volume 13(1). Mar 2018
23. **Sarwal A**, Park S. It Took a Village: Highlights of the Workshops at the NCS 15th Annual Meeting and What You Can Expect This Year. Currents News Magazine of the Neurocritical Care Society Volume 13(2). June 2018
24. Garner C, Fernando RJ, **Sarwal A**, Diaz-Gomez JL. Utility of Transesophageal Echocardiography in Cardiac arrest. Currents News Magazine of the Neurocritical Care Society . Volume 13(3). Sep 2018
25. Salisbury K, **Sarwal A**. Transcranial Doppler Ultrasonography Holds Promise in Monitoring Patients with Traumatic Brain Injury. Currents News Magazine of the Neurocritical Care Society . Volume 13(3). Sep 2018
26. Breit H, Thompson G, Wolfe SQ, Wong M, Guzik A, Sarwal A, Cartwright MS. The medical management of intracranial hemorrhage: a review article. *Wake Forest J Sci & Med* 2019 Volume 4, Issue 1.
27. Zavitz J, Masneri D, Cline DM, Riester M, Avery M, **Sarwal A**, Manthey D. Multi-specialty Direct Observation Testing for Extended Focused Assessment with Sonography for Trauma. *Wake Forest J Sci & Med* 2019 Volume 4, Issue 1.
28. Bargouthi T, Vu Q, Tegeler C, **Sarwal A**. Descriptive Case Studies for Clinical Applications of Transcranial Doppler Ultrasound in Neurocritical Care Unit: Cerebral Steal Phenomenon (Reversed Robin Hood Syndrome) Currents News Magazine of the Neurocritical Care Society. Mar 2019
29. Gomez J, **Sarwal A**, Bennett J, Garner C, Lata A, Tegeler C. Role of the Neurocritical Care Consultant in Perioperative Care of Cardiothoracic Surgery Patients – Neuromonitoring and Clinical Cases Currents News Magazine of the Neurocritical Care Society. 2019
30. Sarma AK, Ghoshal S, Craven SJ, **Sarwal A**. Intracerebral Hemorrhage: A Brief Evidence-Based Review of Common Etiologies, Mechanisms of Secondary Injury, and Medical and Surgical Management. J Neuroanaesthesiol Crit Care 2019;00:1–12
31. Chou SHY, **Sarwal A**, Dangayach NS. Rare neurological disorder, Guillain-Barre Syndrome, linked to COVID-19. The Conversation. Link: <https://theconversation.com/rare-neurological-disorder-guillain-barre-syndrome-linked-to-covid-19-141511>

32. Zavitz J, Glass C, **Sarwal A**, Hays B, Shen E, Bryant C, Schoeneck J Gupta K. Innovative Virtual Multi-Specialty Point-of-Care Ultrasound Rotation for 4th Year Medical Students during COVID-19 Improves Ultrasound Knowledge and Image Interpretation. Clinical teaching and learning experiences-A Resource Collection to Support Innovations in Health Professions Education. Association of American Medical Colleges resource Library. Link: <https://www.aamc.org/resource-library/clinical-teaching-and-learning-experiences/innovative-virtual-multi-specialty-point-care-ultrasound-rotation-4th-year-medical-students-during>
33. Rajagopalan S, Beesen AA, **Sarwal A**. Cerebrovascular physiology review. Critical Care Communication March- April issue 2021. Newsletter of the Indian Society of Critical Care Medicine.
34. Ask me anything: Expert opinion for neurocritical care. Critical Care Communication March- April issue 2021. Newsletter of the Indian Society of Critical Care Medicine. March-April issue 2022.
35. **Sarwal A**, Venegas C, Skinner E, LaRovere K, Puckett M, Fields E, Hakimi R. Point of Care Ultrasound ON CALL chapter. Neurocritical Care Society
36. **Sarwal A**, Sapra H, Sahoo TK, Prabhakar H. Curing Coma® Campaign in the Indian Subcontinent. Curing coma newsletter, Neurocritical Care Society 2022

#### Abstracts/Scientific exhibits/Presentations at national meetings:

1. **Sarwal A**, Garewal M, Sivaraman M. Case report –Fifteen and a half syndrome. 2007 Annual Meeting of American Society of Neuroimaging, Miami, FL. **Winner of Resident Travel Award for outstanding abstract.**
2. Patel N, Thomas-Sohl K, **Sarwal A**. Reversible Cortical Atrophy and DWI Changes in Hyponatremia. 2007 Annual Meeting of American Society of Neuroimaging, Miami, FL.
3. Garewal M, Mettu K, **Sarwal A**, et al. Prevalence and features of REM sleep-related breathing disorder. 2007 Annual Meeting of Associated Professional Sleep Societies, Minneapolis, MN.
4. Mettu K, Garewal M, **Sarwal A**, et al. Co-morbidities and cardiac arrhythmias in REM sleep-related breathing disorders. 2007 Annual Meeting of Associated Professional Sleep Societies, Minneapolis, MN.
5. **Sarwal A**, Dabbagh O, Sahota P et al. Does Being On Statins and Antiplatelet Agents Prior To Stroke Affect Elevations of Troponin after Acute Ischemic Stroke? 2007 Annual Meeting of Neurocritical Care Society, Las Vegas, NV.
6. **Sarwal A**, Dabbagh O, Sahota P et al. Serum Troponin and Brain Natriuretic Peptide (BNP) in Acute Ischemic Stroke. 2007 Annual Meeting of Neurocritical Care Society, Las Vegas, NV. Health Sciences Research Day, School of Medicine, University of Missouri, Columbia.
7. Sahota S, **Sarwal A**\*. Acute Disseminated encephalomyelitis without clinical encephalitis. Internal Medicine 2008, American College of Physician Meeting, Washington, DC.
8. **Sarwal A**, Burger R. et al. Use of Antiepileptic drugs- Gabapentin and Levetiracetam in Management of Acute Delirium. 2008 Annual Meeting of American Society of Experimental Neurotherapeutics, Arlington, VA.
9. **Sarwal A**, Dabbagh O, Sahota P et al. Relationship of Post Acute Ischemic Stroke Ionized Magnesium and Calcium to Serum Troponin and Mortality. 2008 Annual Meeting of American Academy of Neurology, Chicago, IL.
10. **Sarwal A**, Dhand U et al. West Nile Encephalitis associated with Reversible Restricted Diffusion of Splenium of Corpus Callosum. 2008 Annual Meeting of American Academy of Neurology, Chicago, IL.
11. **Sarwal A**, Norris S, Sahota P et al. Validation of Osmolar Gap to Monitor Mannitol Use in Ischemic Stroke. 2008 Annual Meeting of Neurocritical Care Society, Miami, FL.
12. **Sarwal A**, Hunter R, Dhand U et al. Tacrolimus Associated Neuropathy. 2009 Annual Meeting of American Association of Neuromuscular and Electrodiagnostic Medicine, San Diego, CA.
13. **Sarwal A**, Singh N, Rai A. Dorsal ulnar cutaneous neuropathy: case report and review of literature. 2009 Annual Meeting of American Association of Neuromuscular and Electrodiagnostic Medicine, San Diego, CA.
14. Goyal M, **Sarwal A**. et al. Reversible congestive venous myelopathy due to spinal dural arterio-venous fistula. 2010 Annual meeting of American Society of Neuroimaging, San Francisco, CA.
15. Lucas H Bradley, **Sarwal A**, et al. Hashimoto encephalopathy with neuroimaging findings mimicking multiple sclerosis. 2010 Annual meeting of American Society of Neuroimaging, San Francisco, CA.

16. **Sarwal A**, Botdorf J, et al. Unusual Transcranial Doppler findings in Rabies encephalitis. 2010 Annual meeting of American Society of Neuroimaging, San Francisco, CA.
17. **Sarwal A**, Botdorf J, Fleming D. Ethical challenges encountered in an experimental research protocol for rabies encephalitis. 2010 Annual meeting of American Academy of Neurology, Toronto, CA.
18. **Sarwal A**, Provencio J. Correlation of External cardiac output monitoring to hemodynamic parameters and central venous pressure readings in critically ill neurological patients. 2010 Annual meeting of American Academy of Neurology, Toronto, CA. **Critical care section Highlights of the year.**
19. Sahaya K, **Sarwal A**, et al. Keppra induced thrombocytopenia. 2010 Annual meeting of American Academy of Neurology, Toronto, CA.
20. **Sarwal A**, Hussain S. Aggressive Blood Pressure Control after Carotid Stenting may not itself prevent Cerebral Hyperperfusion Syndrome. 2010 Annual Meeting of Neurocritical Care Society, San Francisco, CA.
21. Newey CR, **Sarwal A**, Hantus S. Continuous Electroencephalography changes precede clinical changes in a case of Progressive Cerebral Edema. 2010 Annual Meeting of Neurocritical Care Society, San Francisco, CA.
22. Newey CR, **Sarwal A**, Mays H. Limbic Encephalitis: A Case Series of Immune Mediated Encephalitides. 2011 Annual Meeting of American Society of Neuroimaging, Fort Meyers, FL.
23. Alam S, **Sarwal A**, Uchino K. Atypical Clinical and MRI changes in Neurosyphilis. 2011 Annual Meeting of American Society of Neuroimaging, Fort Meyers, FL.
24. **Sarwal A**, Newey CR, Mays M. Syndrome of Inappropriate Antidiuretic Hormone and Voltage Gated Potassium Channel Antibody Associated Limbic Encephalitis. 2011 Annual Meeting of American Academy of Neurology, Honolulu, HI. **Selected in Autoimmune and Paraneoplastic Encephalopathies Integrated Neuroscience Session.**
25. Newey CR, **Sarwal A**, Hantus S. Identification and Management of Ictal Asystole in the Monitored Setting: Two Cases. 2011 Annual meeting of Neurocritical Care Society, Montreal Canada.
26. Newey CR, **Sarwal A**, Hantus S. FDG-PET Scan Should Be Obtained Early in Cases of Autoimmune Limbic Encephalitis. 2011 Annual meeting of Neurocritical Care Society, Montreal Canada.
27. Newey CR, **Sarwal A**, Joao Gomes. Evolution of Cerebral Atrophy in Patients with Prolonged Status Epilepticus: Three Cases. 2012 Society of Critical Care Medicine Congress.
28. Newey CR, **Sarwal A**, Ahrens C, Hantus S. Complications of prolonged barbiturate coma for refractory status epilepticus. American Epilepsy Society 2011.
29. Altay EE, Newey CR, **Sarwal A**, Pioro E. An Usual Case of Central Pontine Myelinolysis: Is There a Causative Role of Vitamin B12 Deficiency? 2012 Annual Meeting of American Society of Neuroimaging.
30. Boggs J, **Sarwal A**, O'Donovan C. Comparison of Weaning methods for Continuously Infused AEDs in Refractory Status Epilepticus. American Epilepsy Society 2012.
31. Hale JS, Dowlen H, Cartwright MS, **Sarwal A**. Neuromuscular Ultrasound for evaluation of the Normal and Abnormal Diaphragm. 2013 Annual Meeting of American Academy of Neurology, San Diego, CA.
32. **Sarwal A**, Serfas JD, Childers MK. Neuromuscular ultrasound for diaphragm assessment following gene replacement therapy in a canine model of X-linked myotubular myopathy (XLMTM). 2013 Annual Meeting of American Academy of Neurology, San Diego, CA. **Selected by the Science Committee for special notation to highlight as a significant advance based on animal research.**
33. **Sarwal A**, Serfas JD, Childers MK. A Novel Method for Targeting Intramuscular Diaphragm Injections Using Ultrasound and Electromyography. 2013 Annual Meeting of American Academy of Neurology, San Diego, CA. **Selected by the Science Committee for special notation to highlight as a significant advance based on animal research.**
34. **Sarwal A**, Morris PE et al. Early serial changes on diaphragm muscle ultrasound may predict duration of mechanical ventilation. 43rd Critical Care Congress, Society of Critical Care Medicine 2014.
35. Dhar S, **Sarwal A**, Morris PE et al. Muscle Ultrasound & Short Physical Performance Battery (SPPB) to predict ICU functional outcomes. 43rd Critical Care Congress, Society of Critical Care Medicine 2014.
36. Parry SM, **Sarwal A**, Cartwright MS et al. Reliability of quantitative muscle ultrasound analysis in the critically ill population 43rd Critical Care Congress, Society of Critical Care Medicine 2014.
37. Bergene J, **Sarwal A**, et al. Cerebral vasospasm post craniopharyngioma surgery with diabetes insipidus: challenges of management. 43rd Critical Care Congress, Society of Critical Care Medicine 2014.

38. Liu Ann, **Sarwal A**, et al. Visualization of a Redundant Diaphragm in Acute Respiratory Distress on bedside ultrasound. 43rd Critical Care Congress, Society of Critical Care Medicine 2014.
39. Justus NW, Lewis MT, **Sarwal A**, Parry S, Berry MJ. Reliability of ultrasound measures of diaphragm muscle thickness: novice versus experienced operators. Annual meeting of Southeast Chapter of the American College of Sports Medicine, Greenville, SC 2014.
40. Parry SM... **Sarwal A**..., Denehy L. The Role of Neuromuscular Ultrasound Imaging In the Critically Ill Population and Relationship to Muscle Strength and Physical Function. American Thoracic Society International Conference 2014, San Diego, CA. Am J Respir Crit Care Med 189, A4505
41. Baghshomali S, Reynolds P, **Sarwal A**\*. Transcranial Doppler to Assess Cerebral Blood Flow in Patients on Extra Corporeal Membrane Oxygenation. 2014 Annual Meeting of American Academy of Neurology, Philadelphia, PA.
42. Caveney M, Cartwright MS, Morris PE, Dhar S, **Sarwal A**\*. Respiratory muscle changes in neurocritical patients: effect of MV, age, obesity and volume status. 44<sup>th</sup> Critical Care Congress, Society of Critical Care Medicine 2015.
43. Quang V, Bishop L, Edwards M, Tegeler C, **Sarwal A**\*. Should TCDs be routinely used for evaluating intracranial circulation for screening high risk patients prior to cardiac surgery. 2015 Annual Meeting of American Academy of Neurology, Washington DC.
44. Torres J, Sam M, **Sarwal A** \*. Algorithmic approach for prognostication in cardiac arrest who undergo hypothermia compared to current clinical approach. 2015 Neurological Society of North Carolina Annual meeting.
45. Torres J, Sam M, **Sarwal A** \*. Ancillary testing is underutilized in neurological prognostication in cardiac arrest patients who undergo hypothermia. 2015 Neurological Society of North Carolina Annual meeting.
46. Bishop L, McDaniel B, Reeves S, Crumpler J, Wolfe SQ, Scott K, **Sarwal A**\*. Early mobility program in the neurocritical care unit- appropriateness of referral for physical therapy. 2015 Annual Meeting of American Academy of Neurology, Washington DC
47. Frenkel M, **Sarwal A**, Couture D. Subdural Injection of a Thrombolytic Agent for Treatment of Recurrent Subdural Hematoma. 83rd American Association of Neurological Surgeons Annual Scientific Meeting, Washington, D.C
48. Crumpler J, McDonough K,...**Sarwal A**\*. Institutionally Standardized Education Module and EMR Documentation for Death by Neurological Criteria Evaluation Can Improve Provider Compliance with Guidelines in a Tertiary Care Academic Medical Center.
  - a. 2016 Annual Meeting of American Academy of Neurology, Vancouver, CA.
  - b. 2016 Annual meeting of Neurocritical Care Society, National Harbor , DC.
49. Dixon K, Canzona M....**Sarwal A**\*.Pilot Study to Assess Quality of Communication in Acute Neurological Emergencies and Define Domains for Improvement.
  - a. 2016 Annual Meeting of American Academy of Neurology, Vancouver, CA.
  - b. 2016 Annual meeting of Neurocritical Care Society, National Harbor , DC.
50. Dixon K, Canzona M....**Sarwal A**\*.Occurrence and Timeliness of Goals of Care Discussions in the Neurocritical Care Unit".
  - a. 2016 Annual Meeting of American Academy of Neurology, Vancouver, CA.
  - b. 2016 Annual meeting of Neurocritical Care Society, National Harbor , DC.
51. Scaturo N, Thompson G...**Sarwal, A**\*.Quality Improvement Initiative to Optimize Therapeutic Anticoagulation with Weight Based Heparin Infusion Nomograms for Patients with High Risk of Bleeding in Neurocritical Care. 2016 Annual Meeting of American Academy of Neurology, Vancouver, CA.
52. Wren M, Glass M,...**Sarwal A**\*. Point of Care Evaluation of Diaphragm Muscle using Ultrasound. 2016 4<sup>th</sup> World Congress of Society of Ultrasound in Medical Education, Lubbock, TX.
53. Wren MP, Baird K, **Sarwal A**\*. Tumor related seizures causing Sudden Unexplained Death in Epilepsy and Takotsubo cardiomyopathy. 2016 North Carolina Medical Society's Fourth Annual Scientific Poster Session, Greensboro, NC. **Award for the best clinical vignette.**
54. Stewart R, Canzona M, Dixon K, Navarette R, Khan J, Wren MP, **Sarwal A**\*. Correlation of Family and Provider perceptions on Quality of Communication in Neurological Emergencies.
  - a. 46<sup>th</sup> Critical Care Congress, Society of Critical Care Medicine 2017.Honolulu, HI. **Selected for Research Snapshot presentation.**
  - b. Critical Care Symposium, Manchester, UK 2017

55. Stewart R, Dixon K, Wren MP, Canzona M, Khan J, Navarette R, **Sarwal A\***. Domains of Communication that Impact Participant Satisfaction in Family Discussions in a Neuro-ICU.
  - a. 2016 North Carolina Medical Society, Fourth Annual Scientific Poster Session, Greensboro, NC
  - b. 46<sup>th</sup> Critical Care Congress, Society of Critical Care Medicine 2017.Honolulu, HI. **Selected for Research Snapshot presentation**
  - c. Critical Care Symposium, Manchester, UK 2017
56. **Sarwal A**, Carter J, Brashear A, Wilson J, Martin S, Johnson JE. Use of medical simulation to test a new patient care environment in a critical care setting. 46<sup>th</sup> Critical Care Congress, Society of Critical Care Medicine 2017.Honolulu, HI. **Selected for Research Snapshot presentation.**
57. Navarette R , Khan J, Cortez-Garcia E, Strowd R, **Sarwal A\***. Intravascular Lymphoma-Induced Multiorgan Dysfunction – Case Report. Annual Meeting of North Carolina Medical Society 2017
58. Zavitz J, Glass C, **Sarwal A\***. Multi-disciplinary Senior Medical Student Point of Care Ultrasound Elective. 5th World Congress of Ultrasound in Medical Education, Montreal, CA. 2017
59. Elder, N, Glass C, Zavitz J, Cartwright M, **Sarwal A\***. Point of Care Cranial Ultrasound in a Neurocritical Care Setting. 2017 Annual meeting of Neurocritical Care Society, Waikoloa, HI
60. **Sarwal A**, Tran H, Kumar AJ, Wijdicks EE. Neurocritical Care Twitter Journal Club: Using Social Media to Enhance Academic Engagement. 2017 Annual meeting of Neurocritical Care Society, Waikoloa, HI
61. Grice T, Cartwright M, Zavitz J, Glass C, Danelson K, **Sarwal A\***. Development of a Homemade Phantom for Simulation to Teach Ultrasound Guidance for Spinal Procedures. 47<sup>th</sup> Critical Care Congress Society of Critical Care Medicine, San Antonio, TX 2018
62. Grice T, Tegeler C, Meads, D, **Sarwal A**. Transcranial Doppler Is a Useful Tool for Assessing Cerebral Perfusion in VA ECMO Patients.
  - a. 47<sup>th</sup> Critical Care Congress Society of Critical Care Medicine, San Antonio, TX 2018.
  - b. Neurocritical Care Society Meeting , Vancouver, CA 2019
63. Zavitz J, Masneri D, Riester M, Avery M, **Sarwal A**, Manthey D. Direct Observation Testing for Extended Focused Assessment with Sonography for Trauma (E-FAST): A Multi-specialty Training Collaboration with Emergency Medicine and Trauma Surgery/ 7<sup>th</sup> World Congress of Ultrasound in Medical Education, Winston Salem, NC 2018
64. Gomez J, Salisbury K, Odom Madison, Sarma AK, Vu Q, Wolfe SQ, Tegeler CH, Bennett John, Foster Dana, **Sarwal A\*** .Feasibility and Utility of Early Continuous Transcranial Doppler in Traumatic Brain Injury admitted to Critical Care Unit.
  - a. 2019 Annual Meeting of the North Carolina Neurological Society, Greensboro, NC.
  - b. 42<sup>nd</sup> Annual Meeting of the American Society of Neuroimaging,Puerto Rico, USA 2018.
65. Gomez J, Vu Q, Sarma AK, Hobbs K, Ghoshal S, Tegeler CH, Bennett John, **Sarwal A\*** .Case Series: Duplex ultrasonography adds incremental value to the evaluation of acute ischemic stroke despite elucidated pathology on CT angiogram.
  - a. 2019 Annual Meeting of the North Carolina Neurological Society, Greensboro,NC.
  - b. 42<sup>nd</sup> Annual Meeting of the American Society of Neuroimaging, Puerto Rico, USA 2018
66. **Sarwal A**, Gomez J, Wolfe SQ, Fargen K, Singh J, Tegeler CR. Sonographic Demonstration of a Perfusion Dependent Stroke with MRI Negative Flow Limiting Stenosis.
  - a. **Awarded the 2<sup>nd</sup> place for Best Poster** at the 2019 Annual Meeting of the North Carolina Neurological Society, Greensboro,NC..
  - b. 42<sup>nd</sup> Annual Meeting of the American Society of Neuroimaging , Rio Grande, Puerto Rico, USA 2018.
  - c. **Selected for Best of Science presentation** at the 2019 Annual meeting of American Academy of Neurology , Philadelphia.
67. Frenkel M, Gomez J, Carmicheal S, **Sarwal A\***. Case Report:B mode ultrasound images of the thoracic spine.
  - a. 2019 Annual Meeting of the North Carolina Neurological Society, Greensboro,NC.
  - b. 42<sup>nd</sup> Annual Meeting of the American Society of Neuroimaging, Puerto Rico, USA 2018.
  - c. 2019 Annual meeting of American Academy of Neurology , Philadelphia.
68. Ghoshal S, Gomez J, Sarma AK, Tegeler CH, Bennett J, **Sarwal A\***. The Impact of Chronic Kidney Disease Stage on Intracranial Vascular Resistance by Transcranial Doppler. 42nd Annual Meeting of the American Society of Neuroimaging, Rio Grande, Puerto Rico, USA 2018.



69. Gomez JG, Herman C, Bharill S, Thomas L, Jarrah R, Strauss L, Tegeler CH, **Sarwal A\***. Cranial Ultrasound and Transcranial Doppler Can be a Useful Tool to Screen Patients for Cerebral Edema Evaluation and Management in Pediatric Intensive Care. Neurocritical Care Society Annual Meeting 2019, Vancouver, CA
70. Marenco-Hillebrand L, Prada G, Gomez JR, Diaz-Gomez JL, Glass C, Tegeler CH, **Sarwal A\***. Point-of-Care Applications of Neuroultrasound in Critical Care: A Systematic Review and Expert Consensus. Neurocritical Care Society Annual Meeting 2019, Vancouver, CA
71. Huang G, Gomez JG, Peacock J, Davis K, Tegeler CH, **Sarwal A\***. Transcranial Doppler Emboli Monitoring Has Potential In Evaluation And Management Of Cerebrovascular Events In Infective Endocarditis. Neurocritical Care Society Annual Meeting 2019, Vancouver, CA
72. Brooten JK, Gabbard JL, Grey CR, **Sarwal A\***. Tertiary Care Transfer, Early Mortality and Goals of Care Discussions in Patients with Acute Neurological Conditions. Neurocritical Care Society Annual Meeting 2019, Vancouver, CA
73. Gomez J, Hobbs K, Vu Q, Bennett J, Meads D, Hendrix S, Wolfe SQ, Tegeler CH, **Sarwal A\***. Neurovascular Ultrasound adds Incremental Value in Re-perfused Acute Ischemic Stroke after Undergoing CT Angiogram. Neurocritical Care Society Annual Meeting 2019, Vancouver, CA
74. Ghoshal, S., Gomez JR, **Sarwal A**, Tegeler CH, Freedman B. The impact of chronic kidney disease on cerebral hemodynamics: A transcranial Doppler study. Neurocritical Care Society Annual Meeting 2019, Vancouver, CA
75. Ghoshal, S. Gomez JR, **Sarwal A**, Tegeler CH, Freedman B. The impact on dialysis modality on cerebral hemodynamics: A transcranial Doppler study. Neurocritical Care Society Annual Meeting 2019, Vancouver, CA
76. Ghoshal, S. Gomez JR, **Sarwal A**, Tegeler CH, Freedman B. Transcranial Doppler monitoring of intra-dialytic cerebral hemodynamics in an ESRD patient with traumatic brain injury. Neurocritical Care Society Annual Meeting 2019, Vancouver, CA
77. Tschoe C, Johnson LL, Giugliano AM, **Sarwal A**. Serotonin Syndrome with Exposure from Tetrahydrocannabinol: a Case Report to Highlight the Side Effects of Increasing Use of CBD Products. American Academy of Neurology, Annual Meeting , Toronto Canada. 2020
78. Huang G, Johnson L, Peacock J, Tegeler CH, Davis K, **Sarwal A**. Transcranial Doppler Emboli Monitoring for Infective Endocarditis. European Society of Intensive Care Medicine LIVES Digital 2020.
79. Levi J, **Sarwal A**. Point of Care Cranial Ultrasound B mode can detect intracranial hemorrhage with high fidelity. 50th Critical Care Congress Society of Critical Care Medicine, 2021
80. Zavitz J, Glass C, **Sarwal A**, Bryant C, Schoeneck J, Shen E, Hays BS, Gupta K. Virtual Multi-Specialty Point-of-Care Ultrasound Rotation for 4th Year Medical Students during COVID-19: Innovative ways to teach, live scanning sessions and daily needs assessment contribute to improved ultrasound knowledge. American Institute of Ultrasound in Medicine 2021 Annual Meeting.
81. Krishnan V, Henry C, Levi J, Tegeler CH, **Sarwal A**. Feasibility of insonation of intracranial cerebral venous system via transcranial Doppler Ultrasound in distinguishing Venous Hypertension in Patients with Chronic Idiopathic Intracranial Hypertension. American Academy of Neurology Virtual Annual Meeting, April 2021
82. Juneja P, Cartwright M, **Sarwal A**. Assessing the Variability of Diaphragm Thickness with Neuromuscular Ultrasound. Neurology Apr 2021, 96 (15 Supplement) 2992. American Academy of Neurology Virtual Annual Meeting, April 2021
83. Allen B, Anzalone A, Wolfe SQ, **Sarwal A**. Scoping Review of Literature on B-Mode Cranial Ultrasonography to Detect Intracranial Hemorrhage.
  - a. 51st Critical Care Congress Society of Critical Care Medicine, 2022
  - b. North Carolina Medical Society Annual meeting 2022
84. Allen B, Oravec C, Silaghi DA, Wolfe SQ, **Sarwal A**. Cardiac Ultrasound Guided Hemodynamic Management to Augment Cerebral Perfusion. 51st Critical Care Congress Society of Critical Care Medicine, 2022
85. Sarma KA, Ranasinghe, Datar S, Lata AL, **Sarwal A**. Dynamic cerebral steal syndrome after subclavian carotid bypass procedure uncovered with transcranial doppler. 51st Critical Care Congress Society of Critical Care Medicine, 2022
86. Rajendran S, Ong TH, Zameza PA, Topaloglu U, Wolfe SQ, Duncan PW, Anwar M, Samuel RE, Budigi

- B, Lack C, **Sarwal A**. Distance Travelled To Tertiary Care As Prognostic Indicator In Intracerebral Hemorrhage Outcomes.  
a. 51st Critical Care Congress Society of Critical Care Medicine, 2022
87. Patel Y, Levi J, Brown PA, Asimos AW, Wolfe SQ, Zavitz JM, Glass C, **Sarwal A**. Pilot Study to Assess Factors that Affect Accuracy of B-Mode Cranial POCUS for ICH Diagnosis. 51st Critical Care Congress Society of Critical Care Medicine, 2022
88. Kapoor S, Offnick A, Wolfe S, Brown P, Sachs J, Duncan P, Bushnell C, Asimos A, **Sarwal A**. Brain topography on adult cranial Ultrasound- Techniques, image interpretation and image library  
a. Neurocritical Care Society 20th Annual meeting 2022, San Antonio, TX  
b. European Society of Neurosonology & Cerebral Hemodynamics, 26th Annual meeting, Lisbon, Portugal
89. Kapoor S, Glass C, Jones B, Saunders I, Winslow JT, Nelson D, Anwar M, Wolfe SQ, Asimos A, Duncan P, **Sarwal A**. Cranial ultrasound image acquisition and remote physician interpretation in a moving ambulance – simulated test to assess feasibility for pre-hospital EMS applications  
a. Neurocritical Care Society 20th Annual meeting 2022, San Antonio, TX  
b. 2022 AMA Research Challenge, Dec 2022
90. Kapoor S, Offnick A, Wolfe SQ, Brown P, Asimos A, Sachs J, Duncan P, Bushnell C, **Sarwal A**. Comparison of hand held ultrasound device with Point of care ultrasound machine for cranial ultrasound.  
a. Neurocritical Care Society 20th Annual meeting 2022, San Antonio, TX  
b. European Society of Neurosonology & Cerebral Hemodynamics, 26<sup>th</sup> Annual meeting, Lisbon, Portugal
91. Allen BC, Kapoor S, Anzalone A, Mayer KP, **Sarwal A**. B-mode cranial ultrasonography to detect intracranial pathology: a systematic review.  
a. Neurocritical Care Society 20th Annual meeting 2022, San Antonio, TX
92. Malinda B, Kapoor S, Glass C, Stutts Z, Emory B, Winslow JT, Stopyra J, Wolfe SQ, Asimos A, Duncan P, **Sarwal A\***. Cranial ultrasound image acquisition in a moving ambulance feasibility for pre-hospital EMS applications: A review of literature. American Academy of Neurology 2023 Annual Meeting, Boston, MA.

#### Submitted [in review]

93. Albin C et al. A Modified Delphi Consensus Approach to Define Entrustable Professional Activities for Neurocritical Care Advanced Practice Provider. 2023 Neurocritical Care Society Annual Meeting
94. Ch'ang, J, Rath K, Larsen T, Axelband J, Kalanuria A, Srinivasan V, Maness C, Sigman E, **Sarwal A\***. Ultrasound Webinar Series for the Neurocritical Care Community: Report from the Ultrasound Section. 2023 Neurocritical Care Society Annual Meeting
95. Zelt E, Topaloglu U, Al-Dhoon A, **Sarwal A**. Feasibility and Effort savings with Natural Language Processing based automatic SDOH extraction from EMR in ICH. 2023 Neurocritical Care Society Annual Meeting
96. Patel Y, Kapoor S, Offnick A, Al-Dhoon A, Duncan P, Wolfe SQ, Asimos A, **Sarwal A**. Pandemic-Induced Challenges in Consenting Patients and Proposed Solutions for Neurocritical Care Trials. 2023 Neurocritical Care Society Annual Meeting
97. Soyland D, Lindley K, Powell N, Asimos A, Pariyadath M, Brooten J, Perkins H, High K, Wolfe SQ, Kapoor S, **Sarwal A**. Triage and Transfer Communication Workflow for Patients with Intracerebral Hemorrhage at a Tertiary Center: Analysis using Quality Improvement Framework. . 2023 Neurocritical Care Society Annual Meeting

#### Abstracts/Scientific exhibits/Presentations at regional meetings:

1. Joyner, J, **Sarwal A**, Bennett J, Francis B, Parnian D, Crawford M, Nixon L, Haynes E, Barker M, Beaton, Tegeler CH. Evaluation of a Change in Teaching Modality to the Virtual Environment on the Neurovascular Ultrasound CME Course due to the COVID-19 Pandemic. Health Professions Education Institute. May 20, 2021

2. Kapoor, S Offnick A, Asimos A, Brown P, Sachs J, Lack C, Winslow J, D'Agostino Jr R, Stopyra J, Duncan P, Wolfe S, Bushnell C, Anwar M, Gurcan M, Tegeler CR Sarwal A. Informatics and ultrasound technology enabling pre-hospital ultrasound use in the ambulance: Experience from the Cranial Ultrasound for Pre-hospital Intracerebral hemorrhage Detection study. (CUPID\_EMS) Wake Forest Center for Biomedical Informatics 2022 Colloquium

#### Oral presentations at national/international meetings:

1. **Sarwal A.** Opioid sparing effect of Gabapentin for Headaches in the Neurointensive care unit 2009 International Headache Congress, Philadelphia, PA. **Awarded the American Headache Society Scholarship.**
2. **Sarwal A** ,Hale JS, Dowlen H, Cartwright MS Neuromuscular Ultrasound for evaluation of the Normal and Abnormal Diaphragm. 2nd International Conference & Course on Neuromuscular Ultrasound, Charleston, South Carolina 2013.
3. **Sarwal A**, Serfas JD , Childers MK. Neuromuscular ultrasound for diaphragm assessment following gene replacement therapy in a canine model of X-linked myotubular myopathy (XLMTM). 2nd International Conference & Course on Neuromuscular Ultrasound, Charleston, South Carolina 2013.
4. **Sarwal A**, Serfas JD, Childers MK. A Novel Method for Targeting Intramuscular Diaphragm Injections Using Ultrasound and Electromyography. 2nd International Conference & Course on Neuromuscular Ultrasound In Charleston, South Carolina 2013
5. **Sarwal A**, Morris PE et al. Early serial changes on diaphragm muscle ultrasound may predict duration of mechanical ventilation. Australian and New Zealand Intensive Care Society Annual Scientific Meeting Melbourne Australia ,2014
6. Kapoor S, Glass C, Jones B, Saunders I, Winslow JT, Nelson D, Anwar M, Wolfe SQ, Asimos A, Duncan P, **Sarwal A\***. Cranial ultrasound image acquisition and remote physician interpretation in a moving ambulance – simulated test to assess feasibility for pre-hospital EMS applications. European Society of Neurosonology & Cerebral Hemodynamics, 26th Annual meeting, Lisbon, Portugal Oct 2022
7. Kapoor S, Offnick A, Asimos A, Brown P, Sachs J, Lack C, Winslow J, D'Agostino R, Stoprya J, Duncan P, Wolfe S, Bushnell C, Tegeler C, **Sarwal A\***. CUPID\_EMS Educational module: teaching cranial ultrasound to EMS for prehospital use. Society of Critical Care Medicine 2023 Critical Care Congress San Francisco, CA
8. Kapoor S, Offnick A, Asimos A, Brown P, Sachs J, Lack C, Winslow J, D'Agostino R, Stoprya J, Duncan P, Wolfe S, Bushnell C, Tegeler C, **Sarwal A\***. Cranial Ultrasound for Pre-hospital Intracerebral hemorrhage Detection: Exploratory feasibility study. Society of Critical Care Medicine 2023 Critical Care Congress San Francisco, CA

#### INVITED EXTRAMURAL PRESENTATIONS AND SEMINARS

##### Regional

Apr 2012	Emergency management of Stroke, Lexington Memorial Hospital, Lexington, NC
Dec 2012	Monitoring in the Neurointensive care Unit, Annual meeting American Association of Neuroscience Nurses Triad Chapter, Winston Salem, NC
Feb 2013	Neurocritical care Society Guidelines for Status Epilepticus Epilepsy Foundation of North Carolina 16th Pediatric Epilepsy Symposium, Asheville, NC
Aug 2013	Subarachnoid hemorrhage, pre and post op ICU management, Carolinas Medical Center-North East, Neuro Critical Care Symposium, Concord, NC
Apr 2016	Point of Care Ultrasound, North Carolina Ultrasound Society, Annual meeting
Oct 2016	Localization in Neurology in relevance to acute stroke care.



Nov 2016	Piedmont Association of Physician Assistants, Annual meeting Clinical Case Studies in Emergency Neurology and Neurocritical Care, 11 <sup>th</sup> Annual Neuroscience Conference-Stroke Care Across the Continuum. Northwest Appalachian Education Center, Winston Salem, NC
Feb 2018	Diaphragm ultrasound and Ventilator Induced Diaphragm Dysfunction , Critical Care Grand Rounds, Duke, Raleigh-Durham, NC
Apr 2018	Speaker, "Dancing stress away". North West AHEC Preventing Burnout Retreat, Winston Salem, NC
June 2019	Speaker, Digital Presence , Early Career Development Program, Women in Medicine and Science , Wake Forest School of Medicine, Winston Salem, NC
July 2019	Ultrasound in Neurocritical Care, Critical Care Grand Rounds, Duke, Raleigh-Durham, NC
Nov 2019	Faculty, Point of Care Ultrasound Course, Winston Salem, NC
June 2020	Establishing and Maintaining a Digital Presence, Early Career Development Program, Women in Medicine and Science , Wake Forest School of Medicine, Winston Salem, NC
Feb 2021	Faculty, Point of Care Ultrasound Course, Winston Salem, NC
Nov 2023	Grand round Neurology, Virginia Tech Carillion School of Medicine

National

Oct 2012	Workshop: Practical Approach to the Neurocritical Care Airway Neurocritical Care Society meeting, Denver, Colorado
Oct 2012	Brain Death and Neuroprognostication Neurocritical Care Society meeting, Denver, Colorado
2013-present	Diaphragm Muscle Ultrasound, Neuromuscular Ultrasound Course Wake Forest School of Medicine, Winston Salem, NC
Feb 2014	Anticoagulant related Intracranial hemorrhage – Case based approach Association of Indian Neurologists in America Stroke Section meeting, San Diego, CA
Aug 2014	Enhanced Responsiveness Reduces Stroke Mortality. University Health Consortium web conference highlighting efforts undertaken by Wake Forest resulting in 80% decrease in stroke mortality Webcast
Aug 2014	Evolution of Neurocritical Care, Grand Rounds Neurology and Neurosurgery, University of New Mexico, Albuquerque , NM
Nov 2014	Faculty for Ultrasonography course organized by American Institute of Ultrasound in Medicine, Winston Salem, NC
Dec 2014	41st National Conference of Association of Clinical Biochemists of India (ACBICON 2014) at All India Institute of Medical Sciences, (AIIMS), Jodhpur, Rajasthan, India
Nov 2015	<b>Course Co-Director</b> , Point of Care and Critical Care Ultrasound Course organized by American Institute of Ultrasound in Medicine Winston Salem, NC
2016-present	Faculty, Neurovascular Ultrasound Course held twice a year, Wake Forest School of Medicine, Winston Salem, NC
Sep 2016	<b>Course Director</b> , Ultrasound and Echo in NeuroICU Neurocritical Care Society Meeting, National Harbor, DC
Oct 2016	Evolution of Neurocritical Care, Grand Rounds Neurology and Neurosurgery, University of Missouri, Columbia, MO
Nov 2016	<b>Course Co-Director</b> , Critical Care Ultrasound Course

	American Institute of Ultrasound in Medicine Winston Salem, NC
May 2017	Faculty, Faculty, Critical Care Ultrasound Course, Neuro & Intensive Care Review organized by Mayo Clinic, Orlando, FL.
Jul 2017	Speaker and Skills Stations Faculty Society of Critical Care Medicine Critical Care Ultrasound: Adult and Pediatric Course, Chicago, IL
Oct 2017	<b>Course Director</b> , Point of care Ultrasonography in NeuroICU Neurocritical Care Society Meeting, Hawaii
Oct 2017	<b>Presenter</b> , Debate Session -Shark Tank Hawaii: Prolonged Propofol infusions are toxic to patients (Con) Neurocritical Care Society Meeting, Hawaii
Feb 2018	Speaker: The Vent is the Enemy: Ventilator Induced Diaphragm Dysfunction, Session : My Patient Won't Wean - Acute Neuromuscular Respiratory Failure: Multi-professional Neurology, Pulmonary and Nursing Perspective, 47 <sup>th</sup> Critical Care Congress , Society of Critical Care Medicine, San Antonio, TX
Feb 2018	Speaker : Neuroimaging for clinicians and Faculty Skill stations, Transcranial Doppler Session: Neurological Monitoring and Its Implementation in the Adult and Pediatric ICU, 47 <sup>th</sup> Critical Care Congress , Society of Critical Care Medicine, San Antonio, TX
Mar 2018	Ventilator Induced Diaphragm Dysfunction, Neurocritical Care John Hopkins School of Medicine, Conference Series, Department of Anesthesia
Mar 2018	Diaphragm Ultrasound, Neuromuscular Conference Series, Department of Neurology, John Hopkins School of Medicine
May 2018	Faculty, Critical Care Ultrasound Course, Neuro & Intensive Care Review organized by Mayo Clinic, Orlando, FL
Jun 2018	Faculty, New Frontiers-Ultrasound Applications in Neurocritical Care. American Society of Echocardiography Annual meeting, Nashville, TN
Jul 2018	Speaker and Skills Stations Faculty Society of Critical Care Medicine Critical Care Ultrasound: Adult Course, Chicago, IL
Sep 2018	Speaker and Faculty for workshop, Transcranial Doppler, Neurocritical Care Society Meeting, Boca Raton, FL
Sep 2018	Faculty for workshop, Critical Care Ultrasound, Neurocritical Care Society Meeting, Boca Raton, FL
Oct 2018	Faculty, Subarachnoid Hemorrhage, Annual Meeting of American College of Chest Physicians, San Antonio, TX
Feb 2019	Speaker : Neuroimaging for clinicians and Faculty for Skill stations, Transcranial Doppler, Session: Neurological Monitoring and Its Implementation in the Adult and Pediatric ICU, 48 <sup>th</sup> Critical Care Congress , Society of Critical Care Medicine, San Diego, CA
May 2019	Faculty, Ultrasound Workshop, American Thoracic Society (ATS) International Conference 2019, Dallas, TX
Aug 2019	Speaker and Skills Stations Faculty Society of Critical Care Medicine Critical Care Ultrasound: Adult Course, Chicago, IL
Sep 2019	Co-Director and Faculty, Neurovascular Ultrasound Course held twice a year
Sep 2019	Delegate, American Academy of Neurology, Legislative Summit, Washington, DC
Oct 2019	Session Chair, Moderator Subarachnoid Hemorrhage, Neurocritical Care Society Meeting, Vancouver, CA
Oct 2019	Ultrasound Focus Specialty Corner facilitator

	Neurocritical Care Society Meeting, Vancouver, CA
Oct 2019	Speaker: Role of ultra-early brain ultrasound in patients with acute brain injury. Neurocritical Care Society Meeting, Vancouver, CA
Oct 2019	Course Director, Neurovascular Ultrasound workshop, Neurocritical Care Society Meeting, Vancouver, CA
Oct 2019	Speaker: Status Epilepticus, Annual Meeting of American College of Chest Physicians, New Orleans, LA
Nov 2019	Speaker: Psychology of Change, Quality Pioneers Program, American Academy of Neurology
Jan 2020	Diaphragm Ultrasound, Grand Rounds, Department of Neurology, University of New Mexico, Albuquerque, NM
Feb 2020	Co-Speaker, Muscle and Diaphragm Ultrasound: Training Course for the Acute and Cardiopulmonary Physical Therapist, 2020 Combined Sections Meeting of American Physical Therapists Association, Denver, Colorado
Mar 2020	Speaker, Role of TCD in ICP management, American Society of Neuroimaging Annual meeting
Mar 2020	Faculty TCD course, American Society of Neuroimaging Annual meeting Atlanta, GA
Mar 2020	Speaker: Butterflies in the Brain - Emerging applications of NeuroUltrasound in ICU. Brain Matters Webinar. Moberg ICU solutions.
Apr 2020	Speaker, Social media Panel- Live Tweeting: Don't just join the conversation, influence it. Annual meeting of the American Academy of Neurology, Toronto, CA – <i>cancelled COVID-19 crisis</i>
Apr 2020	Speaker, Experiential Learning Area: Building a social media presence in your career Annual meeting of the American Academy of Neurology, Toronto, CA – <i>cancelled COVID-19 crisis</i>
May 2020	Visiting Professor, NeuroUltrasound, Ohio State University Wexner Medical Center, Columbus, OH – <i>cancelled due to COVID-19 crisis</i>
Jun 2020	Speaker, NeuroUltrasound Course, Children's Hospital of Philadelphia, Philadelphia, PA – <i>cancelled due to COVID-19 crisis</i>
Aug 2020	Speaker and Skills Stations Faculty Society of Critical Care Medicine Critical Care Ultrasound: Adult Advanced Course, Chicago, IL – <i>virtual due to COVID-19 crisis</i>
Sep 2020	Session Chair, Moderator Ultrasound Session, Neurocritical Care Society Annual meeting, <i>Delivered online due to COVID-19 crisis.</i>
Sep 2020	Speaker, Social Media Wagon: Strategies on Best Use of SoMe to Keep up with Scientific Literature, Neurocritical Care Society Annual meeting, <i>Delivered online due to COVID-19 crisis</i>
Feb 2021	Moderator Session: Emerging Practices and Updates in Neurocritical Care: What an Intensivist Needs to Know. Speaker, Intracranial Hemorrhage: Beat the Bleeds, 50 <sup>th</sup> Annual Congress of Society of Critical Care medicine
Feb 2021	Neurologic Ultrasound in Future Coma, 50 <sup>th</sup> Annual Congress of Society of Critical Care medicine
Feb 2021	Session: Game On! Stump the Intensivist With Critical Care Ultrasound and Current Controversies. Lecture: Should We Use Ultrasound for Every Patient With Suspected Cerebral Edema? 50 <sup>th</sup> Annual Congress of Society of Critical Care Medicine
Mar 2021	Co-Director, Neurocritical Care Board Review: Current Clinical Concepts, 50 <sup>th</sup> Annual Congress of Society of Critical Care Medicine,
Apr 2021	Speaker, Get Social on Social Media #Networking 101 for

	Professional Development, American Academy of Neurology Virtual Annual Meeting
Apr 2021	Panelist, Neurology Networking & Advocacy Through Social Media, American Academy of Neurology Virtual Annual Meeting
May 2021	Speaker, Growing your brand – keys to social media. Society of Critical Care Medicine, Neuroscience Mentorship Program
Aug 2021	Speaker and Skills Stations Faculty Society of Critical Care Medicine Critical Care Ultrasound: Adult Course, Chicago, IL <i>Delivered online due to COVID-19 crisis.</i>
Oct 2021	Faculty/Speaker, Transcranial Doppler Workshop, American Society of Anesthesiologists Annual meeting 2021, San Diego, CA
Jan 2022	Speaker, Utah Thoracic Society Critical Care Symposium, sponsored by the American Thoracic Society, Park City, UT
April 2022	Session: Game On! Stump the Intensivist With Critical Care Ultrasound and Current Controversies. Lecture: Should We Use Ultrasound for Every Patient With Suspected Cerebral Edema? 51 <sup>st</sup> Annual Congress of Society of Critical Care Medicine
Apr 2022	Advances in Acute Ischemic Stroke, From Thrombectomy to Tenecteplase, 51st Annual Congress of Society of Critical Care Medicine
Apr 2022	Crosstalk: Multimodality monitoring outside the neuroICU, 51st Annual Congress of Society of Critical Care Medicine
Apr 2022	Neuroimaging lecture, Medical Student Symposium, Annual meeting, American Academy of Neurology, Seattle, WA
Mar 2022	Co-Director, Neurocritical Care Board Review: Current Clinical Concepts, 50 <sup>th</sup> Annual Congress of Society of Critical Care Medicine
Aug 2022	Speaker and Skills Stations Faculty Society of Critical Care Medicine Critical Care Ultrasound: Adult Course, Chicago, IL
Sep 2022	Speaker, Neurocritical care Society Professional Development and Career Planning Workshop Series-virtual
Sep 2022	Visiting Professor, Grand Rounds lecture, Neurologic Critical Care, Department of Critical Care Medicine, University of Pittsburgh
Oct 2022	Director, Transcranial Doppler Workshop, Annual Meeting Neurocritical care Society, San Antonio TX
Oct 2022	Speaker, Brick by brick: Building a successful Neurocritical Care program, Annual Meeting, Neurocritical care Society, San Antonio TX
Oct 2022	Faculty/Speaker, Transcranial Doppler Workshop, American Society of Anesthesiologists Annual meeting 2021, San Diego, CA
Nov 2022	Point of Care Carotid Ultrasound for Vascular and Interventional Neurologists, Session Title: Foundations in Neurosonology (Session 1) Annual meeting, Society of Vascular and Interventional Neurology
Jan 2023	Co-Director, Neuromonitoring workshop, 52 <sup>nd</sup> Annual Congress of Society of Critical Care Medicine, San Francisco, CA
Jan 2023	Speaker: The Brain and Ultrasound: Simplifying Diagnosis. 52nd Annual Congress of Society of Critical Care Medicine, San Francisco, CA
Jan 2023	Moderator, Windows to the Brain: Neuromonitoring for the General Intensivist' 52nd Annual Congress of Society of Critical Care Medicine, San Francisco, CA
Jan 2023	Moderator, Novel Medical Education and Misinformation: A Double-Edged Sword, 52nd Annual Congress of Society of Critical

Jan 2023	Care Medicine, San Francisco, CA, 52nd Annual Congress of Society of Critical Care Medicine, San Francisco, CA
Feb 2023	Moderator, Time Is Brain: An Update on Management and Pharmacology Strategies for Acute Neurologic Emergencies Ultrasound in the NeuroICU, 12 <sup>th</sup> Annual Jefferson Neurocritical Care Symposium, Sidney Kimmel Medical College (SKMC), Philadelphia
Feb 2023	Pro-Con Debate. Transcranial Doppler in Routine Care of Subarachnoid hemorrhage. Annual neurocritical care symposium, Harborview Medical Center, Seattle, WA
Apr 2023	Speaker, Think Before You Tweet: What Not to Do on Social Media. Innovation Hub; Speaker, Medical Student Symposium. American Academy of Neurology Annual meeting, Boston, MA
May 2023	Faculty, American Thoracic Society's Post Graduate course, Critical Care Ultrasound and Echocardiography
Jul 2023	Faculty, Skills Building Session: Neurosonology: TCDs & Carotid Dopplers, 2023 American Academy of Neurology Summer Conference Emergency & Hospital Neurology, Minneapolis, MN.
Aug 2023	Faculty, American Society of Neuroimaging Annual meeting, Phoenix AZ
Aug 2023	Workshop Director, Ultrasound, Annual meeting Neurocritical Care Society, Phoenix, AZ
Sep 2023	Co-Director, Neurocritical Care Board Review: Current Clinical Concepts, 50 <sup>th</sup> Annual Congress of Society of Critical Care Medicine
Nov 2023	Speaker, Cutting Edge Ultrasound" symposium, American Academy of Neurophysiology & Electrodiagnostic Medicine Annual Meeting
Jan 2024	Course Director, Neuromonitoring, Pre-congress session Society of Critical Care Medicine Annual Congress.

### International

Sep 2016	Faculty, Transcranial Doppler and Carotid Ultrasound workshop World Congress of Society of Ultrasound in Medical Education, Lubbock, TX
Apr 2017	Diaphragm Ultrasound in the ICU. 4th Singapore –Australian New Zealand Intensive Care society Intensive Care Forum 2017, Singapore
Apr 2017	Simulation in the ICU – Untouched Scope of Scenarios. 4th Singapore –Australian New Zealand Intensive Care society Intensive Care Forum 2017, Singapore
Apr 2017	Social media in Critical Care Medicine List-Serv , Critical Care Symposium , Manchester, UK
Apr 2017	Faculty, Critical Care Ultrasound Course, Critical Care Symposium, Manchester, UK
Sep 2017	Diaphragm Ultrasound, International Conference and Course on Neuromuscular Ultrasonography, Seoul, Korea
Sep 2017	Diaphragm and Neuromuscular Ultrasound, Indian Academy of Neurology Annual Meeting, Chennai, India.
Sep 2017	Chairperson Poster judge panel, Indian Academy of Neurology Congress 2017, Chennai, India.
Apr 2018	Faculty, Ultrasound Workshop, Critical Care Symposium, Manchester, UK
Apr 2018	Speaker, Diaphragm Ultrasound and Ventilator Induced Diaphragm

Apr 2018	Dysfunction, Critical Care Symposium, Manchester, UK Speaker, Early Mobility in Neurocritical Care Unit, Critical Care Symposium, Manchester, UK
Aug 2018	Speaker, Emergency Neurological Life Support, St George Hospital, Sydney, Australia
Nov 2018	Speaker, Nepalese Society of Critical Care Medicine Annual Meeting
Apr 2019	Faculty, Ultrasound Workshop, Critical Care Symposium, Manchester, UK
Apr 2019	Speaker, Diaphragm Ultrasound and Ventilator Induced Diaphragm Dysfunction, Critical Care Symposium, Manchester, UK
Sep 2019	Introduction to Neurology with Ultrasound, 7 <sup>th</sup> World Congress of Ultrasound in Medical Education, Irvine, CA
Oct 2019	Speaker, Evolution of Neurocritical Care, Indian Academy of Neurology, Annual Meeting
Apr 2020	Faculty, Critical Care Ultrasound Course, Critical Care Symposium, Manchester, UK— <i>cancelled due to COVID-19 crisis</i>
April 2020	Speaker, Critical Care Symposium, Manchester, UK— <i>cancelled due to COVID-19 crisis</i>
Jun 2020	Organizer, Webinar: Leadership, Innovation and Support. Online virtual webinar in replacement of the scheduled International Summit of Women in Intensive Care, Sicily, Italy
Sep 2020	Speaker, You jumped on the bandwagon? Tackling misinformation, and self-discipline with Social Media. Webinar by Intensive Care Society (United Kingdom ICU critical care society)
Dec 2020	Session: Become the best intensivist you can be: embracing technology for the marginal gain. Speaker: How to encourage and convince people to use social media. European Society of Intensive Care Medicine annual meeting Lives 2020, virtual due to COVID crisis
Jan 2021	Speaker and Member Organizing Committee, Neuro-Critical Care Conference, Neuro Critical Care Subsection of Indian Academy of Neurology- <i>virtual due to COVID-19 crisis</i>
Feb 2021	Speaker, Use of Cranial Ultrasound to assess for Cerebral Edema. Indian Society of Critical Care Medicine Annual meeting CRITICARE2021, virtual due to COVID crisis
May 2021	Speaker, World Interactive Network Focused On Critical UltraSound (WINFOCUS) Annual Meeting
June 2021	Virtual Faculty Speaker” for the Emergency Neurological Life Support”. 17th Emirates Critical Care Conference (Hybrid) in conjunction with The 2nd Regional Neurocritical Care Meeting in the Middle East/Africa in partnership with the Neurocritical Care Society (NCS).
Oct 2021	Future of Social Media in Medicine, Simposio Virtual Internacional de Medicina Crítica
Nov 2021	Speaker, Transcranial Doppler in Subarachnoid hemorrhage, International Critical Care Ultrasound Updates Conference II, Saving Lives Academy
Dec 2021	Speaker, POCUS in 2021: Looking back, looking forward. 4 experts discuss advances that have changed their practice and the road ahead, World Interactive Network Focused On Critical UltraSound Webinar
Feb 2022	NeuroUltrasound, Critical Care Medicine didactic series, University of Toronto, CA

April 2022	Speaker, Concept of Curing Coma Network, Demystifying EEG for the Intensivist, Avoid Fluid overload in Capillary leak Syndrome, PEEP titration in TBI, Cerebrovascular autoregulation, Ultrasound for assessing ICP - TCD/ONC, Annual Meeting of Indian Society of Critical Care Medicine, Ahmedabad, India
Apr 2022	Speaker, Intracranial hemorrhage trials, Importance of looking at the Diaphragm in the ICU and Faculty, Critical Care Ultrasound Course, Critical Care Symposium, Manchester, UK
June 2022	Speaker, Neuroultrasound, Butterflies in the brain - Introduction to NeuroPOCUS and Lecture: Brain-Body interactions - can POCUS help focus on neurological outcomes in critical care. SOA22 Congress, Intensive Care Society, Belfast, UK
June 2022	Faculty, Neuroultrasound, Neurointensive care updates, University of Milano-Bicocca, Milan Italy
Oct 2022	Faculty, Neuroultrasound, European Society of Intensive Care Medicine, Paris, France
Nov 2022	Faculty, Neurocritical Care session, 18th Asian Oceanian Congress of Neurology & 29th Annual Conference of the Indian Academy of Neurology-AOCN – IANCON 2022
Feb 2023	Point of Care TCD in Critically ill patients. Session: Listen Carefully: New and Old Ultrasound Tools for Stroke Diagnosis and Prevention. Annual International Stroke Conference, American Heart Association Dallas, TX
Feb 2023	Ultrasound for assessing ICP - TCD/ONC, Annual Meeting of Indian Society of Critical Care Medicine, Ahmedabad, India
Mar 2023	Faculty, 42nd International Symposium on Intensive Care and Emergency Medicine, Brussels
Mar 2023	Speaker, Society of Neurocritical Care, India: Understanding curing coma campaign
Apr 2023	Faculty, Critical Care Ultrasound Course, Critical Care Symposium, Manchester, UK
Apr 2023	Panelist, for Global Remote Research Scholars Program, 1st Annual Congress on Mentoring in Healthcare
June 2023	Faculty, Neuroscience Summer School, University of Milan-Bocca, Milan, Italy
Aug 2023	Faculty, 16 <sup>th</sup> World Intensive and Critical Care Congress Turkey.
Sep 2023	Speaker, Global POCUS Collaborative: Cases from Different Spaces organized by University of Washington for low income countries Nigeria, Rwanda, Ethiopia, & Nepal
Oct 2023	Faculty/Speaker, European Society of Critical Care Medicine, Milan, Italy
Apr 2024	Faculty, Critical Care Ultrasound Course, Critical Care Symposium, Manchester, UK

## DIDACTIC/SYSTEMATIC INSTRUCTION

2017	Co-Director, <b>Medical School Ultrasound Curriculum.</b> Developed educational modules as a part of the ultrasound curriculum available in electronic form in Canvas. These modules provide the yearly ultrasound education during the 1 <sup>st</sup> year Neuroscience and Respiratory blocks - Module on Neurovascular Ultrasound - Module on Respiratory Ultrasound
2017	Personally collected teaching modules, images from scanning

and online resources for all ultrasound related education. Developed and built the **POCUS Committee iShare site** to host these resources As Asst-Course Director, Point of Care Ultrasound Elective made this resource integral part of education during the 4<sup>th</sup> year POCUS elective as well a repository for abnormal pathology images for ultrasound for any POCUS user in the institute. Below link is accessible to any provider with a wakehealth access at no cost for their educational needs.

<https://wakehealth.sharepoint.com/sites/pocus/SitePages/Home.aspx>

2017

**Education Module for Death by Neurological Criteria**

evaluation. Mandatory module for anybody in the institute who evaluates a patient for death by neurological criteria.

<http://intranet.wakehealth.edu/patient-care/death-by-neurologic-criteria/>. Revised and updated in 2020

2022

Featured in Social media module for WFUSOM learners (MD, PA, academic nursing, and graduate).

[https://rise.articulate.com/share/LXbBtWfQ9iwZ7lgaEeus\\_wCN-FAs\\_sDT#/](https://rise.articulate.com/share/LXbBtWfQ9iwZ7lgaEeus_wCN-FAs_sDT#/)

Nov 2020-2022

Speaker, NeuroUltrasound in Critical Care, Critical Care Ultrasound Workshop, University of San Diego, San Diego, CA

Apr 2022-2023

Ultrasound for assessing ICP - TCD/ONC, Critical Care Curriculum, Indian Society of Critical Care Medicine, Ahmedabad, India

## MENTORING RELATIONSHIPS

### Graduate students

2019

Clinical mentor for Kristen Adams, 1<sup>st</sup> yr. BMS MS Student Molecular Medicine and Translational Science students and the BMSC & MCB Master's degree students

2022

Yash Patel, North Carolina State University, BS student, EMT

### Medical students

2013

Natalie Portman MD,

2013

Ann Liu, MS III

2014

Maxx Caveney, MS II, 2014 Medical Student Summer Research Program Wake Forest School of Medicine

2015

Kristopher Dixon MS I, 2015 Medical Student Summer Research Program Wake Forest School of Medicine

2016

Russell Stewart, MS 1 2016 Medical Student Summer Research Program Wake Forest School of Medicine

2017

Taylor Grice, Neurosonology Research elective

2017

Mary Petrulis Wren, MS3, research project and posters on clinical use of diaphragm ultrasound, currently neurology resident Washington University, St Louis, MO

2020

Claudia Hartman, Stan Green, Judy Ugwuogbu, Richard Hesse, Meaghan Puckett, Tyler Thompson, Pooja Shah- **Volunteer for data entry** in COVID-Delirium international multicenter registry, COVID-Cardiac national multicenter registry, COVID-Neurological complications international multicenter registry

2020

John Levi, Research project venous ultrasound for intracranial pressure measurements, Currently Anesthesia resident, University of Peoria-Illinois.



2020	Pallavi Juneja, MS4, Research project Diaphragm ultrasound, currently Neurology resident, Columbia Presbyterian, New York.
2021	Tiffany Ong, MS2, Research project ICH disparities
2021	Priscila Arellano Zameza, MS3, Research project, ICH disparities
2021	Beddome Allen, now Neurology Resident, Case Western, Cleveland, OH
2022	Robert Alavi, MSIV, Neurosonology research project, now Neurology resident, Wake Forest Baptist Medical Center
2023	Nicole Santella, Medical Student Summer Research Program Wake Forest School of Medicine
2023	Wesley Lobst, Medical Student Summer Research Program Wake Forest School of Medicine

### Residents and fellows

2008-2012	Christopher Newey, Resident Neurology, Cleveland Clinic, OH, Epilepsy fellow, Fellow Neurocritical Care, U Chicago .
2012-2014	Jennifer Walker, Critical care fellow, Wake Forest University School of Medicine.
2018-2019	Jonathan Gomez, PGY2 Clinical Research Fellow, Neurosonology, Wake Forest University School of Medicine.
2019-2020	Naresh Mullaguri MD, Neurocritical care Fellow, Cleveland Clinic Foundation, Cleveland, Ohio. Professional development mentoring through for Mentorship program through Association of Indian Neurologists in America.
2019-2020	Collin Herman, mentored for an article and chapter written under my supervision
2022	Eric Dornoff, Neurology Resident, Vanderbilt University

### Nurse practitioners

2010	Lyndsay Brock, MSN, Critical Care Clinical Nurse Specialist, Cleveland Clinic, OH. Mentored her for research project for Clinical Doctorate in Nursing: St. Louis University
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### Physicians

2016	Dr. Hee Jung Song, Vascular Neurologist. Research fellow Practice and education in Transcranial Doppler and Neurosonology
2017	Dr. Peter Cheng, Anesthesiologist, CA, US.
2017-2020	Mini-fellowship for diaphragm and Point of Care Ultrasound One-on-one CV and teaching Dossier counseling each year for 5 faculty from the class of Early Career Development Program for Women run by Women in Medicine and Science
2018-2019	Ana Beesen, Neurocritical Care Physician, Mentorship Program through Women in Neurology section Neurocritical Care Society
2019	Byungju Ryu, MD, Dept. of Rehabilitation Medicine, Sahmyook Medical Center. Seoul , Korea
2019-present	Suman Ghosh, MD Pediatric Neurologist, University of Florida Gainesville, FL . Research Mentor
2019—present	Kerri LaRovere, MD, Pediatric Neurologist, Boston Children's Hospital. Administrative mentor for program set up.
2021-2022	Lakshmi Shankar, MD, Vascular Neurologist, Penn State University, Women Mentoring Excellence in Neurology (WoMEN) collaborative effort of the American Academy of Neurology- Women In Neurology (AAN-WIN) section in partnership with Women's Neurologist Group (WNG).

2022	Rachel Appelbaum Trauma Critical Care Fellows and now attending at VCU, Richmond. Mentored for TBI related book chapters.
2023	Sahil Kapoor, now psychiatry resident, University of Arkansas.
2023	Swatisakta Chand, now internal medicine resident

#### Other health care professionals

2013	Dana Upton Faculty, Advisor Internship to learn Performance Improvement in Health Care
2013	Ryan Lesley Faculty, Advisor Internship to learn Performance Improvement in Health Care
2014	Selina M Parry, B Physio (Honors), University of Melbourne PhD University of Melbourne, Australia. Diaphragm Ultrasound Mini-fellowship
2018	Leah Bernadette Helou, Speech pathologist, University of Pittsburg. Diaphragm ultrasound mini-fellowship
2017-2019	Annual Clinical/Surgical Rotation course for first-year PhD Biomedical Engineering students Virginia Tech – Wake Forest University School of Biomedical Engineering and Sciences (SBES)-2 week rotation
2020	Leilani Johnson, M.S. Health Disparities in Neuroscience-Related Disorders. Research Assistant

#### PUBLIC OUTREACH

Aug 2012	Presentation: Brain Attack: an overview Best Health Center Winston Salem, NC
Apr 2013	Mentioned in Article “ <a href="#">Scene &amp; Heard: Matters of the heart take center stage</a> ” Winston Salem Journal.
Nov 2014	<a href="#">Baptist medical director selected for forum</a> Courier Tribune
Feb 2016	Mentioned in article “ Wake Forest Baptist opens \$16.5 million neurosciences ICU” published in Triad Business Journal
Feb 2016	Mentioned in article “ <a href="#">Wake Forest Baptist collaborated with families, patients on design and amenities of \$16.5M neurosciences ICU</a> ” in Winston Salem Journal.
Feb 2016	Interviewed on television News segment “ <a href="#">ICU Departments Changing Family and Patient Care</a> ” Time Warner Cable News
Feb 2016	Mentioned in article “ <a href="#">Wake Forest Baptist to open new Neuro ICU</a> ” Winston Salem Journal STUDIO
May 2016	Featured in article in American Academy of Neurology newsletter “ <a href="#">Advocacy Forum Graduate Uses Fresh Skills to Promote New Neuro ICU</a> ”. AANNews Vol 30, Issue 5 May 2016
June 2016	Mentioned in article : NCS Resident and Fellow Task Force Debuts at American Academy of Neurology Annual Meeting for contributions in staffing “ <a href="#">Navigating Your Career</a> ” platform of the AAN, with a focus for those interested in choosing a neurocritical care career.
Nov 2016	Sisters in Science Panel member : mentioned in local media Forsyth County high schools girls look to ' <a href="#">Sisters in Science</a> ' for inspiration," Winston Salem Journal. (November 11, 2016).
Mar 2017	Presentation: Healthy Brain- an overview of good mental health practices. William G White YMCA, Winston Salem, NC
Mar 2017	Mentioned in article about SCCM meeting attendance by

	neurocritical care society member. Currents News Magazine of the Neurocritical Care Society Vol 12(1) 2017
May 2017	Conducted a full day Ultrasound workshop as part of the Wake Forest Baptist Health Summer Immersion Program for high school students exploring careers.
Jun 2017	Mentioned in article: <a href="#">Wake Forest NeuroICU :Impressions of a visiting Professor</a> . Currents News Magazine of the Neurocritical Care Society Vol 12(2) 2017
Aug 2017	Interviewed by Erica Huntzinger for St. Louis radio for <u>pentobarbital pharmacokinetics and pharmacodynamics in relevance to its medical use.</u>
Aug 2017	Facility Tour for Alton Brown, Publisher Winston Salem Journal
May 2018	Facility Tour for the Stroke Advisory Council and Justus-Warren Heart Disease and Stroke Prevention Task Force from N.C. Department of Health and Human Services to showcase the patient and family centered approach to care of stroke patients at Wake Forest Baptist Health Center
Oct 2018	One of 5 faculty chosen for Annual Banquet Fundraiser event - Salsa dance competition. Top fundraiser raised more than \$6000. Neurocritical Care Society Annual Meeting
Mar 2019	Speaker, Brain Injury Awareness Month, Hubbard Learning Center Wake Forest Baptist Health Center
Oct 2019	One of 5 chosen faculty for Annual Banquet Fundraiser Event- Lip Sync Battle, Top fundraiser raised more than \$10,000 for research. Neurocritical Care Society Annual Meeting
Feb 2020	Mentioned in article about Women Pioneers in Medicine with regards to my efforts in POCUS education <a href="https://www.pocus.org/women-pioneers-in-medicine">https://www.pocus.org/women-pioneers-in-medicine</a>
Apr 2020	Featured in a newsletter article Neurology Today By Orly Avitzur, MD, MBA, FAAN COVID-19: These Neurointensivists are Feeding Neuro-ICUs Across the Country. Link: <a href="https://journals.lww.com/neurotodayonline/blog/breakingnews/pages/post.aspx?PostID=946">https://journals.lww.com/neurotodayonline/blog/breakingnews/pages/post.aspx?PostID=946</a>
Apr 2021	Faculty, Neurocritical Care Society trainee event American Academy Neurology
May 2021	Presentation: Intracranial hemorrhage: Lets beat the bleeds, BestHealth Community Programs
Oct 2021	Mentorship Mingle, Neurocritical Care Society Annual Meeting
June 2022	Speaker, "The day in the life of a neurologist working in a hospital setting" Health Policy staff, American Academy of Neurology
June 2022	CUPID research: Finding faster ways to pinpoint the deadliest strokes.Triad Business Journal. <a href="https://www.bizjournals.com/triad/news/2022/06/14/finding-faster-ways-to-pinpoint-strokes.html">https://www.bizjournals.com/triad/news/2022/06/14/finding-faster-ways-to-pinpoint-strokes.html</a>
Aug 2022	Featured & quoted in article Immigrant Critical Care Professionals, Critical Care Connections, Newsletter of Society of Critical Care Medicine. <a href="https://www.flipsnack.com/sccmedicine/critical-connections-summer-2022/download-pdf.html">https://www.flipsnack.com/sccmedicine/critical-connections-summer-2022/download-pdf.html</a>
Oct 2022	Top 10 Things in Neurocritical Care that Most ICU Clinicians Need to Know But May Not. Consultant360's Women Leaders in Medicine Podcast series

2012	Featured in article about neurological assessments <a href="http://intranet.wakehealth.edu/patient-care/icd-10/features/improved-neuro-assessments-enhance-patient-care,-teamwork.htm">http://intranet.wakehealth.edu/patient-care/icd-10/features/improved-neuro-assessments-enhance-patient-care,-teamwork.htm</a>
2017	Featured for health and wellness <a href="http://intranet.wakehealth.edu/about-us/all-in/i-improve-health/stories/aarti-sarwal.htm">http://intranet.wakehealth.edu/about-us/all-in/i-improve-health/stories/aarti-sarwal.htm</a>
2017	Commended by Dean for being part of the CME committee during the Accreditation Council for Continuing Medical Education (ACCME®) review of the Office of Continuing Medical Education (OCME) of Wake Forest University Health Sciences and awarded the ACCME's highest level: Accreditation with Commendation <a href="http://intranet.wakehealth.edu/leadership/ceo-communications/2017/cme-office-receives-accreditation-with-commendation.htm">http://intranet.wakehealth.edu/leadership/ceo-communications/2017/cme-office-receives-accreditation-with-commendation.htm</a>
2018	Mentioned in article about the legacy of ultrasound education at Wake Forest School of Medicine <a href="http://intranet.wakehealth.edu/research-and-education/features/a-sound-foundation-the-legacy-of-ultrasound-at-wake-forest-school-of-medicine.htm">http://intranet.wakehealth.edu/research-and-education/features/a-sound-foundation-the-legacy-of-ultrasound-at-wake-forest-school-of-medicine.htm</a>

#### Community service

2011	Workshop Trainer and mentor, Science Fair Project Workshops for parents for Local Schools. Program in Community Engagement and Implementation conducted by Translational Science Institute, Wake Forest School of Medicine
2012	Represented Wake Forest Baptist Medical Center at the American Heart Association "Heart Ball". Donated time and money to raise awareness regarding cardiovascular disorders Participation and commitment to the cause quoted in the Winston Salem journal coverage of the event.
2015	Represented Wake Forest Baptist Medical Center at the American Heart Association "Heart Ball". Donated time and talent (dance exhibition) to raise awareness regarding cardiovascular disorders
2016	Coordinated Social media coverage for the American Heart Association Walk Oct 2016 organized by Wake Forest Baptist Medical Center
2016	Panel member for "Sisters in Science" community service event for Forsyth county's female students interested in STEM organized by American Medical Women's Association Wake Forest chapter.
2017	Summer Immersion Camp, one day simulation experience offered to local high school students in partnership with Wake Forest University.
2017	"Healthy Brain" presentation at William G White YMCA about wellness, part of Best Health, Wake Forest Baptist Medical Center's Community Wellness Outreach program
2017	"Sisters in Science" community service event for Forsyth county's female students interested in STEM organized by American Medical Women's Association Wake Forest chapter. Demonstrated use of ultrasound in assessing anatomy and pathology to 50 high school students to expose them to careers in medical field.
2018	"Sisters in Science" community service event for Forsyth county's female students interested in STEM organized by American Medical Women's Association Wake Forest chapter. Demonstrated

2018	use of ultrasound in assessing anatomy and pathology to 50 high school students to expose them to careers in medical field. Summer Immersion Camp, one day simulation experience offered to local high school students in partnership with Wake Forest University.
2018	Speaker for the Minorities in Medicine series panel discussion organized by the local chapter of Student National Medical Association, a national organization dedicated to the empowerment of minority medical students
2019	Offer regular shadowing experience (12 hours per student) through the Minority Association of Pre-Health Students (MAPS) at Wake Forest University that provides underrepresented pre-health students with knowledge, skills, and experiences that are associated and necessary for professional participation in the medical field
2022	Speaker, Ultrasound to see through the body, Wake Forest Summer Immersion program
2023	Speaker, Most Common Brain Injuries (Concussion, Stroke, etc.) and Neurological Assessment and Exam, Wake Forest Summer Immersion program

## EXTRACURRICULAR CERTIFICATIONS AND TRAINING

2020	2020 Longitudinal Faculty Development Course by Accreditation Council for Graduate Medical Education - Developing Faculty Competencies in Assessment 10-Week Virtual course.
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## Personal Hobbies

Hiking, ballroom dancing and Crossfit

2013	USA Weightlifting Level 1 Coaching certificate.
2017	3 <sup>rd</sup> place, World Fred Astaire Dance Championship, Las Vegas, NV