

IN THE STATE COURT OF FULTON COUNTY
STATE OF GEORGIA

JONATHAN BUCKELEW and CHRISTIN
BUCKELEW,)

Plaintiffs,)

v.)

CIVIL ACTION FILE
NO. _____

MICHAEL AXT; ADVANCED)
INTEGRATIVE MEDICINE, INC.;)
MATTHEW WOMACK, MD; NORTH)
FULTON EMERGENCY PHYSICIANS,)
LLC; JAMES WALDSCHMIDT, MD;)
JAMES WALDSCHMIDT, MD, P.C.; PETER)
FUTRELL, MD; NORTH FULTON)
NEUROLOGY, P.C.; SACHIN LAVANIA, MD;)
CHRISTOPHER NICKUM; NORTH FULTON)
PULMONARY SPECIALISTS, LLC; NORTH)
FULTON MEDICAL CENTER, INC. d/b/a)
NORTH FULTON REGIONAL HOSPITAL; and)
TENET HEALTHCARE CORPORATION;)

Defendants.)

COMPLAINT

For their Complaint against Defendants, Plaintiffs, Jonathan Buckelew and
Christin Buckelew, allege as follows:

PARTIES AND JURISDICTION

1.

Jonathan Buckelew is a citizen and resident of the State of Georgia. He brings this medical negligence action against Defendants for negligence in the care and treatment he received at North Fulton Hospital in October 2015.

2.

Christin Buckelew is a citizen and resident of Georgia and is Jonathan Buckelew's wife and was his wife at all times relevant to this action. Christin Buckelew brings this action for loss of consortium under Georgia law.

3.

Defendant Michael Axt, is a doctor of Chiropractic Medicine and is licensed to practice chiropractic medicine in the state of Georgia. Dr. Axt may be served with process at his home located at 1912 Tripp Road, Woodstock, Georgia 30188 in Cherokee County, Georgia.

4.

Defendant Advanced Integrative Medicine, Inc. is a Georgia Corporation with its principal place of business located at 5755 North Point Parkway, St 72, Alpharetta, GA 30022. Advanced Integrative Medicine may be served with process by serving its registered agent Robert Schlamp at 15820 Milton Pt,

Alpharetta, GA, 30004 in Fulton County, Georgia.

5.

Defendant Matthew Womack, MD, is a medical doctor licensed to practice medicine in the state of Georgia. He may be served with process at his home located at 16160 Birmingham Hwy, Alpharetta, GA, 30004-2669, in Fulton County, Georgia.

6.

Defendant North Fulton Emergency Physicians, LLC. is a Georgia corporation. North Fulton Emergency Physicians, LLC may be served with process by serving its registered agent CSC of Cobb County, Inc. at 192 Anderson Street SE, Suite 125, Marietta, GA 30060, in Cobb County, Georgia.

7.

Defendant James Waldschmidt, MD, is a medical doctor licensed to practice medicine in the state of Georgia. He may be served with process at his home at 1150 Lake Shore Overlook, Alpharetta, GA 30005-9001 in Fulton County, Georgia.

8.

Defendant James G. Waldschmidt, MD, P.C. is a Georgia professional corporation. James G. Waldschmidt, MD, P.C. may be served with process by

serving its registered agent James Waldschmidt at 1150 Lake Shore Overlook, Alpharetta, GA 30005 in Fulton County, Georgia.

9.

Defendant Sachin Lavania, MD, is a medical doctor licensed to practice medicine in the state of Georgia. He may be served with process at his home address at 14235 Morning Mountain Way, Alpharetta, GA 30004-3289, in Fulton County, Georgia.

10.

Defendant Christopher Nickum is a Physician's Assistant. Defendant Nickum may be served with process at his home address at 10620 Tuxford Drive, Alpharetta, GA 30022-7067, in Fulton County, Georgia.

11.

Defendant North Fulton Pulmonary Specialists, LLC is a Georgia corporation with its principal place of business located at 1445 Ross Avenue, Suite 1400, Dallas, TX 75202. It may be served with process by serving its registered agent CT Corporation at 289 S. Culver St., Lawrenceville, Georgia, 30046-4805, Gwinnett County Georgia.

12.

Defendant Peter Futrell is a medical doctor licensed to practice medicine in

the state of Georgia. He may be served with process at his home address at 4160 Homestead Ridge, F, Cumming Georgia 30041 in Forsyth County Georgia.

13.

Defendant North Fulton Neurology, P.C., is a Georgia Corporation with its principle address at 1325 North Meadow Parkway 120, Roswell, Georgia 30076-3896. It may be served by serving its registered agent is Dr. Bernard R. Drexinger at 1325 North Meadow Parkway 120, Roswell, Georgia 30076-3896, Fulton County.

14.

Defendant North Fulton Medical Center, Inc. d/b/a/ North Fulton Regional Hospital is a Georgia corporation with its principal place of business located at 1445 Ross Avenue, Suite 1400, Dallas, TX 75202. It may be served with process by serving its registered agent CT Corporation at 289 S. Culver St., Lawrenceville, Georgia 30046-4805, Gwinnett County, Georgia.

15.

Defendant Tenet Healthcare Corporation is a Nevada for-profit corporation doing business in the state of Georgia. Its principal office address is at 1445 Ross Avenue, Suite 1400, Dallas, TX 75202. It may be served with process by serving its registered agent CT Corporation at 289 S. Culver St., Lawrenceville, Georgia

30046-4805, Gwinnett County, Georgia.

16.

At all times relevant to this Complaint, Defendant Tenet conducted business through, its subsidiaries and affiliates, Defendants North Fulton Medical Center, Inc. d/b/a/ North Fulton Regional Hospital and North Fulton Pulmonary Specialists, Inc.

17.

Venue is proper in this Court pursuant to Art. VI, § 2, 4 and 6 of the Georgia Constitution and O.C.G.A. § 14-2-510.

FACTUAL ALLEGATIONS

18.

On October 26, 2015, in the afternoon, Jonathan Buckelew went to see Dr. Michael Axt, a chiropractor at Advanced Integrative Medicine, for complaints of neck pain. Dr. Axt recorded in his notes of that visit that Buckelew reported neck pain and headache for four days after working out at the gym. Dr. Axt also recorded in his notes that Buckelew reported bouts of blurred vision and ringing in the ears.

19.

Dr. Axt indicated in his notes that he adjusted Buckelew's neck while

Buckelew was lying down and then asked Buckelew to sit up. Dr. Axt noted that when Buckelew sat up he reported that he felt dizzy, and he seemed disoriented. Dr. Axt then left Buckelew and went to find help. When he returned, Buckelew appeared less responsive and Axt called 911.

20.

It appears that 911 was called at 3:53 pm on October 26, 2015, and Buckelew was then transported by ambulance to North Fulton Hospital where he arrived at approximately 4:20 pm.

21.

When Buckelew arrived at the emergency department, he was alert and oriented to person, place, time and situation and was in no acute distress. His Glasco Coma Scale score was recorded at 11 and his pupils were equal, round and reactive to light.

22.

Buckelew was first seen by emergency department physician, Dr. Matthew Womack, and at 4:39 pm, Dr. Womack ordered a CT of the brain and a CTA of the neck.

23.

The CT and CTA were performed at around 5:15 pm and the CTA was read

by neuroradiologist, Dr. James Waldschmidt. Dr. Waldschmidt dictated his findings at 6:46 pm. The clinical indication listed by Dr. Womack for the CTA study was "pain/disscetion" (sic).

24.

In Dr. Waldschmidt's report on the CTA, he noted, among other things, a potential dissection of the right vertebral artery.

25.

In fact, the imaging study showed that the right vertebral artery was very small in caliber and abnormalities in both vertebral arteries.

26.

The study showed thrombosis of the basilar artery.

27.

After Dr. Womack read Dr. Waldschmidt report, he called Dr. Futrell, the neurologist on call, for a neurology consultation.

28.

Dr. Womack recorded in his notes that at approximately 6:50 pm he discussed with Dr. Futrell the findings on both the CT and the CTA and that Dr. Futrell recommended a lumbar puncture to rule out meningitis and or encephalitis and recommended that the patient be admitted.

29.

Dr. Futrell later records, on October 29, 2015, in his notes, that Dr. Womack did not discuss the CTA with him and that he in fact did not know that a CTA had been performed. He notes that he has checked his phone log and that the phone call with Dr. Womack took place before the results of the CTA were available. He also notes that Dr. Womack never told him that the patient had just been to a chiropractor.

30.

Before the lumbar puncture was performed, Dr. Womack witnessed Buckelew have what he described as a seizure, and intubated Buckelew at 7:27 pm.

31.

Dr. Womack then performed a lumbar puncture. The lumbar puncture showed normal opening pressure and clear cerebral spinal fluid. Dr. Womack ordered the CSF fluid to be examined STAT.

32.

Dr. Womack then contacted the critical care service and spoke to Christopher Nickum, a Physicians Assistant working with Dr. Sachin Lavinia, a critical care specialist working in the ICU.

33.

It appears that either Dr. Lavania and or Mr. Nickum saw and examined Buckelew at around 8:30 pm on October 26, while Buckelew was still in the emergency department, and dictated a History and Physical for his admission into the ICU. It is noted in the history and physical that although Buckelew was somnolent, he was arousable while in the ER and was still following commands. At the time of the History and Physical, Buckelew was sedated and intubated and a neurological exam was not recorded.

34.

At 9:00 pm the results of the analysis of the CSF from the lumbar puncture were reported as normal. However, it appears that the results of the CSF tests were not reported to Dr. Womack or to the emergency department.

35.

Buckelew was discharged from the emergency department and transferred to the ICU at 10:56 pm with a diagnoses of encephalitis and altered mental status, without mention of the normal CSF findings.

36.

In the ICU the nurses note at 12:20 am that Buckelew's pupils are sluggish.

37.

Once in the ICU it appears that Buckelew was not seen or evaluated by a physician until the following morning, sometime after 10:00 am, when he was seen by Dr. Lavania who at that time ordered an MRI of the brain as well as an MRA.

38.

The MRA demonstrated a massive non-hemorrhagic stroke of the posterior circulation of the brain, including thrombosis of the basilar artery which had blocked circulation to the pons and to both hemispheres of the brain.

39.

The MRA was read at around 1:00 pm and the results discussed with Dr. Drexinger of Neurology and Dr. Lavania. At 1:37 pm on October 27, 2015, the first treatment for stroke, a heparin drip, was initiated, over 21 hours after Buckelew arrived at North Fulton Hospital.

40.

The heparin drip was ineffective in resolving any of the damage done by the lack of blood flow to areas of Buckelew's brain.

41.

Because of the delay in diagnoses, no other treatment options were

available.

42.

Mr. Buckelew sustained extensive and permanent brain damage as a result of the delay in diagnoses and treatment of his stroke. He is unable to move any part of his body other than his eyes, but is cognitively intact. This condition, known as Locked-in syndrome (LIS), is permanent and non-reversible.

43.

Mr. Buckelew has expended millions of dollars for medical expenses for his care and he will need 24 hour a day care for the rest of his life.

COUNT ONE

MEDICAL NEGLIGENCE — DR. MICHAEL AXT

44.

The allegations of paragraphs 1 through 43 are hereby incorporated by reference as if fully set forth herein.

45.

Dr. Axt undertook to provide chiropractic treatment to Jonathan Buckelew.

46.

Dr. Axt violated accepted medical and chiropractic practices by adjusting Jonathan Buckelew's neck when Buckelew had demonstrated focal neurological

deficits in conjunction with new onset neck pain and headache.

47.

Dr. Axt owed Buckelew a duty to exercise the degree of skill and care ordinarily employed by chiropractic doctors in the care of treatment of patients under similar conditions and like surrounding circumstances.

48.

Dr. Axt's treatment of Buckelew fell well below the degree of skill and care which is ordinarily employed by the chiropractic profession generally under similar conditions and like surrounding circumstances. The negligence of Dr Axt was a proximate cause of the injuries suffered by Plaintiffs as are set forth herein. Thus, Dr. Axt is liable to Plaintiffs for the damages, as set forth herein, that they have suffered as a result of his negligence.

COUNT TWO

ADVANCED INTEGRATIVE MEDICINE INC.

49.

The allegations of paragraphs 1 through 48 are hereby incorporated by reference as if fully set forth herein.

50.

Upon information and belief, Dr. Michael Axt was at all times relevant to

this action an employee and or agent of Advanced Integrative Medicine, Inc. and was acting in his capacity as an employee and or agent of Advanced Integrative Medicine when he provided care and treatment to Jonathan Buckelew.

51.

Advanced Integrative Medicine is liable to Plaintiffs under a theory of respondeat superior for the negligent acts of its agent Dr. Michael Axt as are set forth herein.

COUNT THREE

MEDICAL NEGLIGENCE — DR. WOMACK

52.

The allegations of paragraphs 1 through 51 are hereby incorporated by reference as if fully set forth herein.

53.

Dr. Matthew Womack undertook to provide medical treatment to Jonathan Buckelew.

54.

Dr. Womack violated acceptable medical practices by not discussing with Dr. Futrell all the imaging that had been ordered on his patient and by not communicating to Dr. Futrell all the relevant medical history including that

Buckelew had a recent chiropractor adjustment.

55.

In addition, Dr. Womack violated accepted medical practices by, among other things, not considering and ruling out a vertebral artery dissection. Further, once the CSF fluid was returned normal, Dr. Womack had an obligation to communicate with the consulting neurologist to report these findings and to discuss a suspicion of a vascular cause of Buckelew's symptoms.

56.

Dr. Womack owed Buckelew a duty to exercise the degree of skill and care ordinarily employed by medical doctors in the care of treatment of patients under similar conditions and like surrounding circumstances.

57.

Dr. Womack's treatment of Buckelew fell well below the degree of skill and care which is ordinarily employed by the medical profession generally under similar conditions and like surrounding circumstances.

58.

Dr. Womack's conduct amounts to gross negligence.

59.

The negligence and or gross negligence of Dr. Womack was a proximate

cause of the injuries suffered by Plaintiffs as are set forth herein. Thus, Dr. Womack is liable to Plaintiffs for the damages, as set forth herein, that they have suffered as a result of his negligence.

COUNT FOUR

LIABILITY OF NORTH FULTON EMERGENCY PHYSICIANS, LLC

60.

The allegations of paragraphs 1 through 59 are hereby incorporated by reference as if fully set forth herein.

61.

Upon information and belief, Dr. Womack was at all times relevant to this action an employee and or agent of North Fulton Emergency Physicians, LLC was acting in his capacity as an employee and agent of North Fulton Emergency Physicians, Inc when he provided care and treatment to Jonathan Buckelew.

62.

North Fulton Emergency Physicians, LLC is liable to Plaintiffs under a theory of respondeat superior for the negligent acts of its agent, Dr. Womack, as are set forth herein.

COUNT FIVE

MEDICAL NEGLIGENCE — DR. WALDSCHMIDT

63.

The allegations of paragraphs 1 through 62 are hereby incorporated by reference as if fully set forth herein.

64.

Dr. Waldschmidt undertook to provide medical treatment to Jonathan Buckelew.

65.

Dr. Waldschmidt violated accepted medical practices by, among other things, by not appreciating an indisputable acute or sub-acute vertebral-basilar artery occlusion due to a vertebral artery-basilar dissection on the October 26, 2015 CTA.

66.

Dr. Waldschmidt owed Jonathan Buckelew a duty to exercise the degree of skill and care ordinarily employed by medical doctors in the care of treatment of patients under similar conditions and like surrounding circumstances.

67.

Dr. Waldschmidt's treatment of Jonathan Buckelew fell well below the

degree of skill and care which is ordinarily employed by the medical profession generally under similar conditions and like surrounding circumstances. The negligence of Dr. Waldschmidt was a proximate cause of the injuries suffered by Plaintiffs as are set forth herein. Thus, Dr. Waldschmidt is liable to Plaintiffs for the damages, as set forth herein, that they have suffered as a result of his negligence.

COUNT SIX

LIABILITY OF JAMES WALDSCHMIDT, MD, P.C

68.

The allegations of paragraphs 1 through 67 are hereby incorporated by reference as if fully set forth herein.

69.

Upon information and belief, Dr. Waldschmidt was at all times relevant to this action an employee and or agent of James Waldschmidt, MD, PC and was acting in his capacity as an employee and agent of James Waldschmidt, MD, PC when he provided care and treatment to Jonathan Buckelew.

70.

James Waldschmidt, MD, PC is liable to Plaintiffs under a theory of respondeat superior for the negligent acts of its agent Dr. Waldschmidt as are set

forth herein.

COUNT SEVEN

MEDICAL NEGLIGENCE — DR. PETER FUTRELL

71.

The allegations of paragraphs 1 through 70 are hereby incorporated by reference as if fully set forth herein.

72.

Dr. Futrell undertook to provide medical treatment to Jonathan Buckelew.

73.

Dr. Futrell violated accepted medical practices by, among other things, not considering and ruling out a basilar thrombosis in the setting of a vertebral artery dissection in this patient. Further, when made aware of the imaging studies ordered by Dr. Womack, he should have reviewed the imaging studies himself.

74.

Dr. Futrell owed Jonathan Buckelew a duty to exercise the degree of skill and care ordinarily employed by medical doctors in the care of treatment of patients under similar conditions and like surrounding circumstances.

75.

Dr. Futrell's treatment of Jonathan Buckelew fell well below the degree of

skill and care which is ordinarily employed by the medical profession generally under similar conditions and like surrounding circumstances. The negligence of Dr. Futrell was a proximate cause of the injuries suffered by Plaintiffs as are set forth herein. Thus, Dr. Futrell is liable to Plaintiffs for the damages, as set forth herein, that they have suffered as a result of his negligence.

COUNT EIGHT

LIABILITY OF NORTH FULTON NEUROLOGY, PC

76.

The allegations of paragraphs 1 through 75 are hereby incorporated by reference as if fully set forth herein.

77.

Upon information and belief, Dr. Futrell was at all times relevant to this action an employee and or agent of North Fulton Neurology, PC and was acting in his capacity as an employee and agent of North Fulton Neurology PC when he provided care and treatment to Jonathan Buckelew.

78.

North Fulton Neurology PC is liable to Plaintiffs under a theory of respondeat superior for the negligent acts of its agent Dr. Futrell as are set forth herein.

COUNT NINE

MEDICAL NEGLIGENCE — DR. SACHIN LAVANIA

79.

The allegations of paragraphs 1 through 78 are hereby incorporated by reference as if fully set forth herein.

80.

Dr. Lavania undertook to provide medical treatment to Jonathan Buckelew.

81.

Dr. Lavania violated accepted medical practices by, among other things, not seeing and examining his patient when he admitted him to the floor of the ICU, not considering and ruling out a vascular cause of his symptoms when he was admitted to the ICU, and not appropriately supervising the physician assistant Christopher Nickum who was practicing under his license.

82.

Dr. Lavania owed Jonathan Buckelew a duty to exercise the degree of skill and care ordinarily employed by medical doctors in the care of treatment of patients under similar conditions and like surrounding circumstances.

83.

Dr. Lavania is also liable for the negligence of the physician assistant,

Christopher Nickum, who was practicing under Dr. Lavania's supervision pursuant to Georgia statute.

84.

Dr. Lavania's treatment of Jonathan Buckelew fell well below the degree of skill and care which is ordinarily employed by the medical profession generally under similar conditions and like surrounding circumstances. The negligence of Dr. Lavania was a proximate cause of the injuries suffered by Plaintiffs as are set forth herein. Thus, Dr. Lavania is liable to Plaintiffs for the damages, as set forth herein, that they have suffered as a result of his negligence.

COUNT TEN

MEDICAL NEGLIGENCE — CHRISTOPHER NICKUM, PA

85.

The allegations of paragraphs 1 through 84 are hereby incorporated by reference as if fully set forth herein.

86.

Physician Assistant Christopher Nickum undertook to provide medical treatment to Jonathan Buckelew.

87.

Nickum violated accepted medical practices by, among other things, not

consulting with Dr. Lavania after seeing the patient, not considering and ruling out a vascular cause of the patient's symptoms, and not reviewing the results of the CSF studies.

88.

Mr. Nickum owed Jonathan Buckelew a duty to exercise the degree of skill and care ordinarily employed by physician assistants in the care of treatment of patients under similar conditions and like surrounding circumstances.

89.

Mr. Nickum's treatment of Jonathan Buckelew fell well below the degree of skill and care which is ordinarily employed by the medical profession generally under similar conditions and like surrounding circumstances. The negligence of Mr. Nickum was a proximate cause of the injuries suffered by Plaintiffs as are set forth herein. Thus, Mr. Nickum is liable to Plaintiffs for the damages, as set forth herein, that they have suffered as a result of his negligence.

COUNT ELEVEN

LIABILITY OF NORTH FULTON PULMONARY SPECIALISTS, LLC;

90.

The allegations of paragraphs 1 through 89 are hereby incorporated by reference as if fully set forth herein.

91.

Upon information and belief, Dr. Lavania and Christopher Nickum were at all times relevant to this action employees and or agents of North Fulton Pulmonary Specialists. LLC and were acting in their capacity as employees and agents of North Fulton Pulmonary Specialists. LLC when they provided care and treatment to Jonathan Buckelew.

92.

North Fulton Pulmonary Specialists. LLC is liable under a theory of respondeat superior for the negligent acts of its agents Christopher Nickum and Dr. Lavania as are set forth herein.

COUNT TWELVE

NORTH FULTON MEDICAL CENTER, INC. d/b/a NORTH FULTON REGIONAL HOSPITAL and TENET HEALTHCARE CORPORATION
PROFESSIONAL AND ORDINARY NEGLIGENCE

93.

The allegations of paragraphs 1 through 92 are hereby incorporated by reference as if fully set forth herein.

94.

The nurses and staff at North Fulton Hospital undertook to provide medical care and treatment to Jonathan Buckelew.

95.

Upon information and belief the nurses and staff providing care and services to Jonathan Buckelew at North Fulton Hospital were employees and or agents of North Fulton Medical Center, Inc. d/b/a North Fulton Regional Hospital and or its parent Tenet Healthcare Corporation when they provided care, treatment and medical services to Jonathan Buckelew.

96.

The staff and nurses at North Fulton Hospital caring for Jonathan Buckelew owed him a duty to exercise the degree of skill and care ordinarily employed by the medical profession generally in the care of treatment of patients under similar conditions and like surrounding circumstances.

97.

The nurses and staff caring for Jonathan Buckelew at North Fulton Hospital also had a duty to exercise ordinary care in carrying out the orders of his physicians, and providing him care and treatment.

98.

The nurses and staff caring for Jonathan Buckelew at North Fulton Hospital violated accepted medical practices by, among other things, not informing Mr. Buckelew's physicians when he had a change in condition in the evening and early

morning hours of October 26 and 27, 2015 and in not informing his physicians when the results of his CNF testing came back normal at or around 9:00 pm on October 26, 2015.

99.

The nurses and staff caring for Jonathan Buckelew at North Fulton Hospital breached their duty of ordinary care in not carrying out the orders of the physicians caring for Jonathon Buckelew, communicating the results of tests performed on Buckelew and providing ordinary care and treatment.

100.

The treatment of Jonathan Buckelew by the staff and nurses at North Fulton Hospital fell well below the degree of skill and care which is ordinarily employed by the nursing profession generally under similar conditions and like surrounding circumstances. The negligence of the North Fulton Hospital staff and nurses was a proximate cause of the injuries suffered by Plaintiffs as are set forth herein. Thus, North Fulton Medical Center, Inc. D/b/a North Fulton Regional Hospital and Tenet Healthcare Corporation are liable to Plaintiffs for the damages, as set forth herein, that they have suffered as a result of their agents' and employees' negligence.

COUNT THIRTEEN

LOSS OF CONSORTIUM

101.

The allegations of paragraphs 1 through 100 are hereby incorporated by reference as if fully set forth herein.

102.

At all times relevant to this action Christin Buckelew was married to Jonathan Buckelew.

103.

As a result of the actions of the defendants, as set forth above, Christin Buckelew has lost the consortium of her husband and suffered harm and damage as a result thereof.

104.

Affidavits from William J. Laretti, Martin Lutz, MD, Anthony Mancuso, MD, Romanus Faigle, MD, Aaron Waxman, MD, Craig Baumgartner, PA-C, Jennifer Adamksi, DNP, APRN, ACNP-BC, CCRN in support of this complaint are attached hereto and incorporated herein.

WHEREFORE, plaintiffs **DEMAND A JURY TRIAL** and pray for judgment as follows:

1. That Jonathan Buckelew recover for his special damages including but not limited to medical expenses and lost wages in an amount to be proven at trial;
2. That Jonathan Buckelew recover for his injuries and general damages in an amount to be proven at trial;
3. That Christin Buckelew recover for her loss of consortium in an amount to be proven at trial;
4. That all costs of this suit be taxed against defendant; and
5. For such other and further relief as the Court deems just and proper.
6. Plaintiffs demand judgment in excess of \$10,000

By: 

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AFFIDAVIT OF WILLIAM J. LAURETTI

I, Dr. William J. Lauretti, being duly sworn upon oath, do hereby depose and state as follows:

1.

I am over 21 years of age, have no physical or mental disabilities, and am otherwise competent to make this affidavit.

2.

The affidavit is made upon the basis of my education, knowledge, training and experience as a doctor of chiropractic licensed to practice chiropractic medicine and upon a review of the following medical records regarding Jonathan Buckelew:

- a. Chiropractic Records from Advanced Integrative Medicine;
- b. Records from October 26 admission to North Fulton Hospital.

3.

I am a doctor of chiropractic medicine licensed to practice chiropractic medicine in the state of New York, and a copy of my curriculum vitae is attached hereto. I was licensed to and was practicing chiropractic medicine in New York in 2015, and I am qualified to express the opinions contained herein, as in my practice I have regularly seen and treated patients with symptoms like Jonathan Buckelew

who present for chiropractic treatment with a history of neck pain. I am familiar with the standard of care for chiropractors in evaluating patients with symptoms and conditions like Jonathan Buckelew presented with at Advanced Integrative Medicine on October 26, 2015. For the five years before 2015, and for many years before that, I regularly saw patients with complaints of neck pain presenting for Chiropractic care and evaluation.

4.

All of the opinions expressed herein are expressed to a reasonable degree of medical probability and are based upon my education, training and experience and the records of Jonathan Buckelew.

5.

For purposes of this affidavit, I have assumed the following facts to be true, based on the medical records I have reviewed:

- a. On October 26, 2015, Jonathan Buckelew went to see Dr. Michael Axt, a chiropractor at Advanced Integrative Medicine, for complaints of left sided neck pain. Dr. Axt noted in his records that Buckelew had had new onset neck pain for four days after working out at the gym. He also recorded that Buckelew reported headaches, bouts of blurred vision and ringing in his ear during this same period of time, and that

his whole body "feels agitated."

- b. Dr. Axt noted that he adjusted Buckelew's neck while Buckelew was lying down and then asked him to sit up. He noted that when _____ Buckelew sat up he reported that he felt dizzy, and he seemed disoriented. Dr. Axt then left Buckelew and went to find help. When Axt returned, Buckelew appeared less responsive, and Axt called 911.
- c. It appears that 911 was called at 3:53 pm on October 26, 2015, and Buckelew was then transported by ambulance to North Fulton hospital where he arrived at approximately 4:20 pm.
- d. When Buckelew arrived at the emergency department he was alert and oriented to person, place, time and situation and was in no acute distress. His Glasgow Coma Scale score was recorded at 11 and his pupils were equal, round and reactive to light.
- e. Buckelew was first seen by emergency department physician, Dr. Matthew Womack, and at 4:39 pm, Dr. Womack ordered a CT of the brain and a CTA of the neck.
- f. The CT and CTA were performed at around 5:15 pm and the CTA was read by a neuroradiologist, Dr. James Waldschmidt, and his findings were dictated at 6:46 pm. The clinical indication listed by Dr.

Womack for the study was "pain/disscetion" (sic).

- g. In Dr. Waldschmidt's report on the CTA, he noted, among other things, a potential dissection of the right vertebral artery.
- h. After Dr. Womack read Dr. Waldschmidt's report, he called Dr. Futrell, the neurologist on call, for a neurology consultation.
- i. Dr. Womack recorded in his notes that at approximately 6:50 pm he discussed with Dr. Futrell the findings on both the CT and the CTA and that Dr. Futrell recommended a lumbar puncture to rule out meningitis and or encephalitis and recommended that the patient be admitted.
- j. Before the lumbar puncture was performed, however, Dr. Womack witnessed Buckelew have what he described as a seizure, and, fearing risk to the airway, intubated Buckelew at 7:27 pm.
- k. Dr. Womack then performed a lumbar puncture. The lumbar puncture showed normal opening pressure and clear cerebral spinal fluid. Dr. Womack ordered the CSF fluid to be examined STAT.
- l. Dr. Womack then contacted the critical care service and spoke to Christopher Nickum, a Physicians Assistant working with Dr. Sachin Lavinia, a critical care specialist working in the ICU.

- m. It appears that either Dr. Lavania and or Mr. Nickum saw and examined Buckelew around 8:30 pm on October 26, while Buckelew was still in the emergency department, and dictated a History and Physical for his admission into the ICU. In the history and physical it is noted that although Buckelew was somnolent, he was arousable while in the ER and was following some commands. At the time of the History and Physical, Buckelew was sedated and intubated and a neurological exam was not recorded.
- n. At 9:00 pm the results of the analysis of the CSF from the lumbar puncture were reported as normal.
- o. Buckelew was discharged from the emergency department and transferred to the ICU at around 10:56 pm with a diagnoses of encephalitis and altered mental status, without mention of the normal CSF findings.
- p. Once in the ICU, it appears that Buckelew was not seen or evaluated by a physician until the following morning sometime after 10:00 am when he was seen by Dr. Lavania who ordered an MRI of the brain as well as an MRA.
- q. The MRA demonstrated a massive non-hemorrhagic stroke of the

posterior circulation of the brain, including thrombosis of the basilar artery which had blocked circulation to the pons and to both hemispheres of the brain.

- r. The MRA was read at around 1:00 pm and the results discussed with Dr. Drexinger of neurology and Dr. Lavania. At 1:37 pm, on October 27, 2015, the first treatment for stroke, a heparin drip, was initiated – over 21 hours after Buckelew arrived at North Fulton Hospital.
- s. The heparin drip was ineffective in resolving any of the damage done by the lack of blood flow to certain areas of Buckelew's brain.
- t. Mr. Buckelew sustained extensive and permanent brain damage. He is unable to move any part of his body other than his eyes, but is cognitively intact. This condition, known as Locked-in syndrome (LIS), is permanent and non-reversible.

6.

Based upon the facts stated above, and my review of the records, it is my opinion that Dr. Axt violated accepted chiropractic practices by manipulating Buckelew's neck when he had demonstrated focal neurological deficits in conjunction with new onset neck pain and headache.

7.

6

It is my opinion that such actions and omissions fell below and are a deviation from the standard of care ordinarily employed by the chiropractic profession generally under similar conditions and like surrounding circumstances.

8.

It is my opinion to a reasonable degree of medical probability that the deviations from the standard of care detailed above caused Jonathan Buckelew harm.

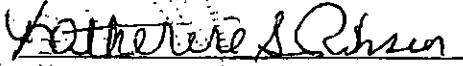
9.

This affidavit is not intended to provide an exhaustive listing of all of the opinions which I may have concerning the matters at issue in this case, and I reserve the right to express additional opinions based upon any additional information which may come to my attention as this case proceeds through the discovery and litigation process. The opinions expressed herein are not intended to and should not be construed to foreclose or exclude opinions that other negligent acts or omissions may have also occurred or contributed to the patient's outcome, but rather this affidavit is given to meet the limited requirements of O.C.G.A. § 9-11-9.1 to set forth at least one act of negligence.

Further affiant saveth not.


WILLIAM J. LAURETTI, DC

Sworn and Subscribed before me
this 26 day of June 2017



Notary Public

My Commission Expires: _____

Katherine S. Robson
Notary Public State of New York
No. 01R05081671
Qualified in Seneca County
Comm. Expires July 7, 2019

Curriculum Vitæ

WILLIAM J. LAURETTI, DC, FICC

ASSOCIATE PROFESSOR

CHIROPRACTIC CLINICAL SCIENCES DEPARTMENT

NEW YORK CHIROPRACTIC COLLEGE

2360 STATE ROUTE 89

SENECA FALLS, NY 13148-0800

E-MAIL: WLAURETTI@NYCC.EDU

PHONE: 585-944-6241

EDUCATION:

1989: Doctor of Chiropractic Degree (D.C.), Western States Chiropractic College, Portland, Oregon.

1982: Bachelor of Arts Degree (B.A.), *cum laude*, with major in Psychology, State University of New York at Albany.

EMPLOYMENT HISTORY:

Sept 2005 — Present: Associate Professor, Dept. of Chiropractic Clinical Sciences, New York Chiropractic College. Responsible for leading and developing a chiropractic technique course for 2nd year students focusing on the Cervical Spine and other spinal regions. Developed other courses including "Coding and Billing for the Contemporary Chiropractic Practice" and "Patient Education". Also assisted in laboratory sessions in other technique and diagnostic courses. Promoted from rank of Assistant Professor to Associate Professor effective September 2009.

1998—Present: Legal Consultant and Expert Witness in a number of ongoing legal cases including chiropractic malpractice cases and allegations of unprofessional conduct.

1992 —2005: Private Practice of Chiropractic, Bethesda and Gaithersburg, Maryland. Owner and sole proprietor of two chiropractic offices from 1997 until 2005, at which time I relocated to join the faculty at NYCC. Responsible for patient management, business administration, marketing and personnel management.

2001— 2003: Case Review Consultant, Healthcare Division, Automated Data Processing, Inc. Reviewed personal injury insurance claims for medical necessity and appropriate coding for a nationwide industry leader in claims processing.

1997 — 2001: Clinical Director, ChiroPlus Network/George Washington University Health Plan. Responsible for day-to-day oversight and utilization management in numerous health plans for a regional chiropractic Individual Practice Association with approximately 70 member doctors. Also responsible for credentialing members, formulating clinical guidelines and prospective reviews of clinical care pathways.

Jan. 1999 — Mar. 2000: Staff Doctor of Chiropractic, American WholeHealth Clinical Center, Chevy Chase, Maryland. Participated in a multi-disciplinary practice along with other DCs, medical physicians, podiatrists, psychologists, nutritionists and other professionals. Special responsibilities included leading the weekly interdisciplinary clinical staff meeting.

1989 — 1991: Associate Doctor of Chiropractic, Bowie, Maryland. Responsible for patient care and case management in a satellite office of a multi-location chiropractic facility.

LICENSURE:

Licensed to practice **chiropractic** in New York since 2006 (Lic. No. X011248). Also licensed to practice chiropractic with with physical therapy privileges in Maryland since 1989 (Inactive Licence No. 1469-PT); in addition, I hold inactive licenses to practice chiropractic in Colorado (2002-2008), in Oregon (1989-2007) and in Virginia (1989-2006).

HONORS:

- 2008: Winner** of New York Chiropractic College's Annual **Excellence in Teaching Award**
- 2004: Awarded** Maryland Chiropractic Association's **Presidential Award** for dedicated service to the profession.
- 2003: Awarded** American Chiropractic Association **Presidential Award** for Outstanding Achievement.
- 2002: Named a Fellow** of the International College of Chiropractic; an honorary society whose membership is limited to no more than 3% of the chiropractors in the US, Canada, Australia and The UK.
- 2000: Named** Maryland Chiropractic Association "**Chiropractor of the Year.**"
- 1997 and 1998: Awarded** Maryland Chiropractic Association Outstanding Achievement Award for two consecutive years.
- 1992: Diplomate**, American Academy of Pain Management
- 1987: Winner** of International Chiropractors Association Scholarship.
- 1982: Honors Graduate**, State University of New York at Albany.

PRESENTATIONS:

- February 2016:** 2hr post-graduate presentation "**Evidence-Based Cervical Spine Care**" at the American Chiropractic Association National Continuing Education Forum, Washington DC
- February 2015:** 2hr post-graduate presentation "**Safety of Chiropractic Cervical Treatments**" at the American Chiropractic Association National Continuing Education Forum, Washington DC
- February 2014:** 2hr post-graduate presentation "**Informed Consent in Chiropractic Practice**" at the American Chiropractic Association National Continuing Education Forum, Washington DC
- October 2013:** 2 hr post-graduate presentation "**Care for Whiplash Related Disorders: and Evidence-Based Approach**" at Maryland Chiropractic Association Fall Convention
- August 2013:** 1hr ACA Teleseminar: "**Informed Consent in Chiropractic Practice**"
- April 2013:** 3 hr. postgraduate presentation "**Cervical Spine Care: An Evidence Based Approach**" at NY State Chiropractic Association sponsored Education Day in Buffalo
- March 2013:** Organized and Facilitated a Workshop at The Association of Chiropractic Colleges 2013 conference, "Teaching Business Courses in Chiropractic School: Lessons Learned, Challenges Identified". This panel discussion involved six instructors from four different institutions sharing their institution's business curricula and engaging in a conversation on how better to prepare new graduates for the business challenges of practice.

- Oct 2012:** 3 hr. postgraduate presentation “**Cervical Spine Care: An Evidence Based Approach**” at the OneConference continuing education seminar at Niagara Falls, Ontario
- Oct 2012:** 2 hr. postgraduate presentation “**Cervical Spine Care: An Evidence Based Approach**” at the annual Association of New Jersey Chiropractors Conference
- Feb 2013, Dec 2011 and Feb 2009:** 3hr postgraduate teleseminar presentation, “Answering Questions About Chiropractic and Stroke” sponsored by New York Chiropractic College.
- January 2010:** Testified before the Connecticut Board of Chiropractic Examiners regarding a proposal to establish new standards of informed consent for doctors of chiropractic performing cervical spinal manipulation.
- March 2009:** 3 hr. postgraduate presentation on management of headaches to Continuing Education Forum sponsored by the Maryland Chiropractic Association.
- October 2007:** Presentation on risks of chiropractic cervical treatments for the Connecticut Chiropractic Association Annual Convention, Continuing Education Program
- October 2007:** Prepared an audio lecture on The Role of Research in Chiropractic for DataTrace publications that was offered to subscribers for Continuing Education Credit.
- June 2007:** American Chiropractic Association Teleseminar: “Answering Questions about Chiropractic and Stroke”
- June 2007:** ACA Teleseminar: “Correct Coding and Billing for the Chiropractic Practice”
- May 2007:** Presentation on Correct Coding, Billing and Documentation to the Idaho Chiropractic Physicians Association in Coeur D’Alene, Idaho in a seminar co-sponsored by ACA
- January 2005, January 2003 and January 2002:** Presentations to students at the School of Public Health, Johns Hopkins University on the basics of contemporary chiropractic practice.
- September 2004:** Presentation to the White House Commission on Aging: “Chiropractic Care for an Aging Population”.
- September 2003 and January 2004:** Presentations to the National Academy of Sciences, Institute of Medicine’s Committee on Complimentary and Alternative Medicine in the United States.
- May 2003:** Continuing Education Program for the Northwest Chiropractic Symposium, Portland Oregon. “The Risks of Chiropractic Cervical Adjustments: Myths vs. Reality”.
- August 2002:** Presentation on risks of chiropractic cervical treatments for the Maryland Chiropractic Association Annual Convention, Continuing Education Program; approved for required Risk Management CE credits.
- April 1999:** Presentation to students of the George Washington University Medical School course on Complementary and Integrative Medicine: “How to Work With a Chiropractor.”
- July 1998:** Presentation to the Second International Workshop to Establish a Chiropractic Research Agenda in Vancouver, Canada.
- November 1996:** Presentation to Uniformed Services University of the Health Sciences (UHUHS), the medical school operated by the U.S. Department of Defense, on chiropractic manipulation.
- October 1996:** Platform presentation to the International Conference on Spinal Manipulation in Bournemouth, England. Also invited to give a presentation as part of the First International Workshop to Establish a Chiropractic Research Agenda.

PROFESSIONAL ACTIVITIES:

- November 2014: Primary Spine Practitioner Certificate** from New York Chiropractic College for completion of a 36 hour postgraduate program on interdisciplinary management of spine related conditions.
- Sept 2014—Feb 2015:** Participant in a Delphi consensus panel to update the Council on Chiropractic Guidelines and Practice Parameters spine-related pain guideline. The charge of this panel will be to generate a multidisciplinary consensus statement on chiropractic care for low back pain.
- January 2010—May 2014: National Chairman of the Faculty American Chiropractic Association.**
- November 2013: Peer reviewer** for the Association of Chiropractic Colleges annual conference
- September 2008: Consultant to the test writing committee of the National Board of Chiropractic Examiners.** Participated in writing the questions for the national licensing board examination for chiropractors in the US.
- May 2008: Appointed to a Task Force** charged with developing and drafting an updated **Informed Consent** policy by the ACA Board of Governors
- April 2008:** Acted as a **participant** in the **Delphi process** regarding appropriate treatments for chronic low back pain for the Council on Chiropractic Guidelines and Practice Parameters (CCGPP)
- March 2006—Present: Faculty Advisor,** NYCC Student American Chiropractic Association.
- July 2003— January 2005: American Chiropractic Association Liaison** to the Institute of Medicine of the National Academy of Sciences for the Institute's project investigating the Use of Complementary and Alternative Medicine (CAM) by the American Public.
- September 2002— Sept 2012: Member,** ACA Coding Committee, the chiropractic profession's major source of input into the national system used to describe health care procedures for the purpose of reimbursement and statistics.
- June 2002— July 2005: Member,** Maryland Workers' Compensation Fee Guide Committee, consisting of stakeholders in the State Workers' Compensation system, selected by the Commissioner, charged with revising the state-mandated fee schedule.
- January 2000 — July 2005: Maryland State Delegate** to American Chiropractic Association.
- July 1997 — Present: Editorial Board Member,** *The Journal of the American Chiropractic Association.*
- September 1995 — January 2000: District Representative,** Maryland Chiropractic Association.
- May 1995 — December 1997: Editorial Director** of the American Chiropractic Association's Internet Project. Responsibilities included developing the ACA's first Web site.

PUBLICATIONS:

Articles in Peer-reviewed Professional Journals:

- Lauretti, WJ. "Talking to Patients About Chiropractic Safety". *ACA News* August 2008.
- Lauretti, WJ. "Risk Factors for Vertebral Artery Dissection and Stroke". *ACA News* July 2008.
- Lauretti, WJ. "Do Chiropractors Cause Strokes? The Latest Developments". *ACA News* June 2008.
- Lauretti WJ. Re: Clarifying chiropractic manipulation risks (letter). *Canadian Med Assoc J.* 2002 (April 2) 166 (7): 886.
- Lauretti WJ. Re: Complications of Spinal Manipulation (letter). *J Family Pract* 1996; 43 (4): 333.
- Lauretti WJ, Brady D. Chiropractic and the Information Superhighway (Commentary). *J Manipulative PhysiolTher* 1996; 19 (4): 273-7.
- Lauretti WJ. Re: Neurologic Complications Following Chiropractic Manipulation: A Survey of California Neurologists (letter). *Neurology* 1996; 46: 884.

Dabbs V, Lauretti WJ. A Risk Assessment of Cervical Manipulation vs. NSAIDs for the Treatment of Neck Pain (Review of the Literature). *J Manipulative Physiol Ther* 1995; 18 (8): 530-6.

Book Chapters and Other Publications:

Chaper Editor: "The Safety and Effectiveness of Common Treatments for Whiplash" in *Whiplash: A Patient Centered Approach*. Elsevier, 2011.

Chapter Editor: "Chiropractic Risks" in *Complementary Medicine in Clinical Practice* Jones and Bartlett Publishers, 2005.

Chapter Editor: "The Comparative Safety of Chiropractic," in *Fundamentals of Chiropractic*, published by Mosby, 2003. A reviewer writing in *Dynamic Chiropractic* noted that "this may be the most important book on chiropractic published in the past decade."

Chapter Editor: "Chiropractic in the Information Age," in *Advances in Chiropractic*, Volume Four, published by Mosby Year Book Company, 1997.

Chapter Editor: "The Comparative Safety of Chiropractic," in *Contemporary Chiropractic*, a general purpose chiropractic text book published by Churchill Livingstone, 1997

Contributor: *Chiropractic: State of the Art*. Published by the American Chiropractic Association, 1998.

Lauretti, WJ. Cerebral Vascular Accidents Associated with Cervical Manipulation: Another View. *J Am Chiropractic Assoc*; 2003; 40 (2).

Lauretti, WJ. A Chiropractic Approach to Neck Pain and Headache. *The Integrative Medicine Consult*; 2000; 2 (1): 176-7.

Lauretti WJ. Your Aching Back. *J Am Chiropractic Assoc* 1998; 35 (6): 50.

Lauretti WJ. Chiropractic at age 102: Why Aren't We Mainstream Yet? *J Am Chiropractic Assoc* 1997; 34 (12): 9.

An Official Spokesman for the American Chiropractic Association who is frequently quoted as a chiropractic expert by national news media such as *The Washington Post*, *Angie's List Magazine*, *MSN*, *Reuters International News Service*, *The Boston Globe*, *The San Francisco Chronicle*, *The Alternative Advisor* published by Time-Life Books, and *The Bottom Line Health* newsletter. Dr. Lauretti also appeared as a guest on *Housecall With Sanjay Gupta* on CNN in June, 2008.

AFFIDAVIT OF MARTIN LUTZ, MD

I, Dr. Martin Lutz, being duly sworn upon oath, do hereby depose and state as follows:

1.

I am over 21 years of age, have no physical or mental disabilities, and am otherwise competent to make this affidavit.

2.

The affidavit is made upon the basis of my education, knowledge, training and experience as a medical doctor licensed to practice medicine and upon a review of the following medical records regarding Jonathan Buckelew:

- a. Chiropractic Records from Advanced Integrative Medicine;
- b. Records from Rural Ambulance;
- c. Records from October 26 admission to North Fulton Hospital.

3.

I am a medical doctor licensed to practice medicine in the state of South Carolina, and a copy of my curriculum vitae is attached hereto. I am board certified in Emergency Medicine, and I was licensed to and was practicing Emergency Medicine in South Carolina in 2015, and for the five years prior to

2015.

4.

I am qualified to express the opinions contained herein as in my practice I have regularly seen and treated patients with symptoms like Jonathan Buckelew who present to the emergency department. For the five years prior to 2015, and for many years before that, I have regularly seen, evaluated and treated patients presenting to the emergency department with an altered level of consciousness. I am familiar with the standard of care for caring for and evaluating patients with sign and symptoms like Jonathan Buckelew presented to the emergency department at North Fulton Hospital with on October 26, 2015.

5.

All of the opinions expressed herein are expressed to a reasonable degree of medical probability and are based upon my education, training and experience and the records of Jonathan Buckelew.

6.

For purposes of this affidavit, I have assumed the following facts to be true, based on the medical records I have reviewed:

- a. On October 26, 2015, Jonathan Buckelew went to see Dr. Michael Axt, a chiropractor at Advanced Integrative Medicine, for complaints

of neck pain. Dr. Axt noted in his records that that Buckelew had had new onset neck pain for four days after working out at the gym. He also recorded that Buckelew reported bouts of blurred vision, headache and a ringing in his ears.

- b. Dr. Axt noted that he adjusted Buckelew's neck while Buckelew was lying down and then asked him to sit up. He noted that when Buckelew sat up he reported that he felt dizzy, and was slow to respond. Dr. Axt then left Buckelew and went to find help. When he returned, Buckelew appeared less responsive, and Axt called 911.
- c. It appears that 911 was called at 3:53 pm on October 26, 2015, and Buckelew was then transported by ambulance to North Fulton Hospital where the records indicate he arrived at 4:17 pm.
- d. When Buckelew arrived at the emergency department, his Glasgow Coma Scale score was recorded as 11.
- e. Buckelew was first evaluated by emergency department physician, Dr. Matthew Womack, and at approximately 4:39 pm, Dr. Womack ordered a CT of the brain and a CTA of the neck.
- f. The CT and CTA were performed at around 5:15 pm and the CTA was read by a neuroradiologist, Dr. James Waldschmidt by 6:46 pm.

The clinical indication listed by Dr. Womack for the study was "pain/disscetion" (sic).

- g. In Dr. Waldschmidt's report on the CTA, he noted, among other things, a potential dissection of the right vertebral artery.
- i. After Dr. Womack was made aware of Dr. Waldschmidt's findings on the imagining study, he notes that he called Dr. Futrell, the on-call neurologist, for a neurology consultation.
- j. Dr. Womack's notes indicate that at approximately 6:50 pm he discussed with Dr. Futrell the findings on both the CT and the CTA, and that Dr. Futrell recommended a lumbar puncture and that the patient be admitted.
- k. Dr. Futrell later records on October 29, 2015, in his notes, that Dr. Womack *did not* discuss the CTA with him and that he in fact did not know that a CTA had been performed. He notes that he has checked his phone log and that the phone call with Dr. Womack took place before the results of the CTA were available. He also notes that Dr. Womack never told him that the patient had just been to a chiropracter.
- l. Dr. Womack records that after his call with Dr. Futrell he was setting

up to perform the lumbar puncture when Buckelew had what he interpreted as a seizure. Buckelew was intubated at 7:27 pm.

- m. Dr. Womack then performed a lumbar puncture at approximately 7:48 pm. The lumbar puncture showed clear cerebral spinal fluid (CSF), and Dr. Womack ordered the CSF to be examined STAT.
- n. Dr. Womack then contacted the critical care service and spoke to Christopher Nickum, a Physician Assistant working with Dr. Sachin Lavania, a critical care specialist working in the ICU.
- o. It appears that either Dr. Lavania and or Mr. Nickum saw and examined Buckelew around 8:37 pm on October 26, while Buckelew was still in the emergency department, and dictated a History and Physical for his admission into the ICU. In the History and Physical it is noted that although Buckelew was somnolent, he was arousable while in the ER and was following some commands. At the time of the History and Physical, Mr. Nickum notes that he was unable to assess Buckelew's neurological status secondary to his sedation and intubation.
- p. At 9:00 pm the results of the analysis of the CSF from the lumbar puncture were reported as normal.

- q. Buckelew was transferred to the ICU at around 10:56 pm.
- r. Once in the ICU, it appears that Buckelew was not seen or evaluated by a physician until the following morning when he was seen by Dr. Lavania who ordered an MRI of the brain as well as an MRA of the head and neck.
- s. The MRI of the brain demonstrated an extensive ischemic stroke of the brainstem, including the medulla, pons and both cerebellar hemispheres. The MRA is consistent with thrombosis of the basilar artery which had resulted in lack of blood flow to the brainstem.
- t. The MRA was read at around 1:00 pm and the results discussed with Dr. Drexinger of neurology and Dr. Lavania. Around 1:37 pm on October 27, 2015, the first specific treatment for stroke, a heparin drip, was initiated, more than 21 hours after Buckelew arrived at North Fulton Hospital.
- u. The heparin drip was ineffective in resolving the damage done by the lack of blood flow to certain areas of Buckelew's brain. Because of the delay in diagnoses, no other treatment options were available.
- v. Mr. Buckelew sustained extensive and permanent brain damage. He is unable to move any part of his body other than his eyes, but is

cognitively intact. This condition, known as Locked-in syndrome (LIS), is permanent and non-reversible.

7.

Based upon the facts stated above, and my review of the records, and assuming as, reported in Dr. Futrell's note, that Dr. Womack did not discuss with Dr. Futrell the results of the CTA or that a CTA had been ordered and did not tell Dr. Futrell about the history of a recent chiropractic adjustment, it is my opinion that Dr. Michael Womack violated accepted medical practices by not discussing with consulting neurologist all of the imaging ordered in the ER, including the CTA and by not discussing with the consulting neurologist all the pertinent medical history including a recent adjust by a chiropractor.

8.

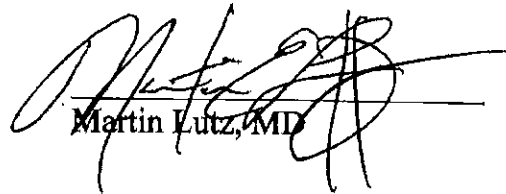
It is my opinion that such actions and omissions fell below and are a deviation from the standard of care ordinarily employed by the medical profession generally under similar conditions and like surrounding circumstances.

9.

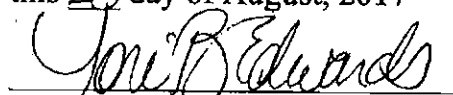
This affidavit is not intended to provide an exhaustive listing of all of the opinions which I may have concerning the matters at issue in this case, and I reserve the right to express additional opinions based upon any additional

information which may come to my attention as this case proceeds through the discovery and litigation process. The opinions expressed herein are not intended to and should not be construed to foreclose or exclude opinions that other negligent acts or omissions may have also occurred or contributed to the patient's outcome, but rather this affidavit is given to meet the limited requirements of O.C.G.A. § 9-11-9.1 to set forth at least one act of negligence.

Further affiant sayeth not.


Martin Lutz, MD

Sworn and Subscribed before me
this 28 day of August, 2017


Notary Public

My Commission Expires: 12/22/2026

CURRICULUM VITAE

Martin E. Lutz, M.D., F.A.C.E.P

Chief, Emergency Medical Transport Services of Greenville Health System, Greenville, SC

Residence: 10 Paris Point Drive, Greenville, SC 29609

Office: GHS Corporate Plaza, 300 East McBee Ave., Greenville, SC 29601 Phone: (864) 797-7759

Email: MLutz@ghs.org

EDUCATION and TRAINING

Undergraduate

John Carroll University 1974 - 1978
Cleveland, OH
Bachelor of Science in Chemistry, Cum Laude Graduate – Honor Curriculum

Medical School

The Ohio State University 1978 - 1981
Columbus, OH
Doctor of Medicine Degree
Awards: Department of Radiology Outstanding Student Award; letters of recommendation from Anesthesia, Internal Medicine, Preventative Medicine, OB/GYN and Pediatrics

Residency

- Emergency Medicine 1981 - 1984
St. Vincent Hospital & Medical Center
Toledo, OH
- The Toledo Hospital 1981 - 1984
Toledo, OH

Emergency Medicine Residency

1982 - 1984
Resident Flight Physician for 19 months with "Life Flight" air ambulance, transporting patients and providing emergency services throughout a 150 mile radius of Toledo, Ohio.

CERTIFICATIONS

Fellow, American College of Emergency Physicians November 1987 - present
ACLS Instructor 1982 - 2000
ATLS 1984 - 2000
Recertified, Emergency Medicine 2012
Recertified, Emergency Medicine 2003
Recertified, Emergency Medicine 1994
Board Certification, Part II, passed October 1985
Board Certification, Part I, passed November 1984

EXPERIENCE

Chief, Emergency Medical Transport Services September 2014 - present

Emergency Medical Services Medical Control Physician

- Greenville Technical College EMT/Paramedic September 2015 - present
- Eagle Med Fixed Wing Ambulance Service November 2011 – present
- State EMS Medical Control Board Member May 2010 - present
 - SC EMS Medical Director of the Year 2015
- Med Trans Helicopter Service March 2010 - present
- Mobile Care Ambulance Service September 2009 - present
- Greenville County EMS September 2009 - present
- Vital Care January 2009 – present

Law Enforcement Center

- Greenville County Detention Center Medical Director May 2009 - present

American Board of Emergency Medicine – National Appointment

- Appointed Senior Oral Examiner ABEM 2003 - present
- Electronic Oral Exam Development Panel 2015
- Team Leader Oral Exam 2005 – 2011, 2014
- Oral Case Development Panel 2009, 2011
- Initial Certification Task Force Advisory Panel 2008 - 2010
- American Board of Emergency Medicine Oral Examiner (Part II) 1988 - 2003

Former Leadership Positions

- **University Medical Group Board of Directors**
 - President Medical Staff, Greenville Health System January 2012 – December 2013
 - Interim Chairman, Department of Emergency Medicine June 2013 - August 2014
- Referral Development Officer, Greenville Health System September 2011 – September 2014
- Vice-President Medical Staff, Greenville Health System January 2010 – December 2011
- Medical Director, Emergency Services, Greenville Health System August 2000 – October 2011
- Deputy Medical Examiner of Greenville County 1984 - 2011
- Vice-Chairman, Department of Emergency Medicine, Greenville Health System 2008 - 2009
- Medical Director/Administrator, Emergency Services, Greenville Health System July 1998 – July 2000
- Medical Director, Department of Emergency Medicine, Greenville Health System July 1993 – June 1998
- Chairman, Department of Emergency Medicine, Greenville Health System 1988 – 1989, 1990 - 1991

University of South Carolina School of Medicine - Greenville, SC

EMT Curriculum/Organization and Medical Control Physician for the Medical Student EMTs Course 2010 – present

Integrated Practice of Medicine Year Two, Core Faculty August 2013 - present

Medicine and Society and Clinical Diagnosis and Reasoning Curriculum Development 2011 - 2013

Clinical Diagnosis and Reasoning Core Faculty August 2011 – June 2013

Clinical Diagnosis and Reasoning Year One, Module Director August 2011 – June 2012

Clinical Diagnosis and Reasoning Year Two, Module Director August 2012 – June 2013

Greenville Health System Committees

GHS/EMS Committee, Chair	2009 - present
Trauma Committee	1990 - present
Credentials Committee	1995 -- 1996; 2001 -- 2005; January 2012 - present
GHS Coordinating Committee	2010 -- 2015
Medical Executive Committee	1988 -- 1991; 2006 -- 2008; 2010; 2011 -- 2015
Commitment to Excellence (C2E) Communication Committee	2011 -- 2013
GHS CQI Committee	1996 -- 1997; 2004 -- 2008
Emergency Services Coordinating Committee (Chairman)	2000 - 2008
Medical Advisory Committee	1998 -- 2008
GHS Strategic Plan Steering Committee	2007
Greenville County Emergency Preparedness (GHS Representative 1993 -- 2011); (GHS Chairman 1998 -- 2003)	
Y2K Planning -- Greenville County/GHS	1998 -- 2000
Emergency Services Committee	1992 -- 2000; Chairman 1992
Spine Committee	1995 -- 1996
Medical Staff Developmental Task Force	1993 -- 1994
Medical Staff Medical Research Committee	1994
Medical Care Committee	1988 -- 1991
Departmental Representative to Operations Committee, Division of Medical Education	1984 -- 1987

Work Experience

Attending Physician -- Greenville Health System	1984 - present
<ul style="list-style-type: none">Greenville Memorial Hospital, Emergency Trauma Center Greenville, SCNorth Greenville Hospital, Emergency Department Travelers Rest, SCGreer Memorial Hospital, Emergency Department Greer, SCHillcrest Memorial Hospital, Emergency Department Simpsonville, SC	1996 - 2014 1984 - 2014 1984 - 2014

Research

CRUSADE GHSUMC Team	2004 - 2006
CRUSADE Co-Medical Director, GHS, UMC	2002 -- 2004
National Registry of Myocardial Infarction III, Investigator for Greenville Health System	1996 -- 2000

Grants

2015 Non-Profit Finance Fund -- Community Paramedic Project

- Focusing on at-risk population - \$348,000 Grant

2012 BlueCross BlueShield of South Carolina Foundation \$300,000 Grant

- To reduce unnecessary ER and EMS utilization through the Community Care Outreach Project
- Awarded GHSUMC & Greenville County EMS

National Poster Presentations/Publications

2016: Prehospital Emergency Care, Volume 20; Number 1: NAEMSP Annual Meeting Abstracts poster presentations: **“Can Paramedics Draw Uncontaminated Blood Cultures Prior to Prehospital Antibiotic Administration?”** and **“How Well Does a Prehospital Sepsis Assessment Tool Correlate with Elevated Serum Lactate Levels: Is a Paramedic’s Assessment Enough?”**

2015: MedSim Magazine Volume 4; Issue 5: **“Utilizing Simulation to Improve Outcomes from Out-of-Hospital Cardiac Arrest”**

2014: University Hospital Consortium selection of poster: **“Greenville Health System and Greenville County EMS work to reduce the ER and EMS utilization through a Nurse Call Line”** for display during the 2014 Annual Conference.

2012: University Hospital Consortium selection of poster: **“Greenville Hospital System University Medical Center (GHSUMC) and the Greenville County Detention Center (GCDC) form a Partnership to Improve Patient Care, Decrease Emergency Department Visits, Decrease Hospital Admissions, and Decrease Costs Incurred by Both Agencies”** for display during the 2012 Annual Conference.

Presentations

2015: EMS – Communication/Handoffs – GHS Evening Lecture Series

2013: EMS Conference/EMS Medical Legal Class

2013: Greenville County School District Nurse In-Service – Medical Legal Issues

2011: Mission Lifeline Upstate Emergency STEMI and Stroke Forum

2011: Physician ED Triage: Improved Patient Satisfaction and Utilization

2010: Emergency Department Triage/Flow Poster Presentation, GHS

2012, 2011, 2010: Lectures to the Upstate EMS Community – Resuscitation Updates, Medical Legal Issues

2007, 2005, 2003, 2002, 2001: Speaker Emergency Patient and Trauma Radiology at State Radiology Technologists Conference

2006: GHSUMC Stroke Symposium

1997: Participant Research Recognition Day – Greenville Hospital System

1996: Speaker 3rd Annual Acute Care Nurse Practitioner Symposium

Professional Memberships and Activities

American College of Emergency Physicians 1984 - present

South Carolina ACEP 1984 - present

American Medical Association 1984 - 2000

Greenville County Medical Society 1984 – 2001

Mini-internship participant: 2000, 1997, 1995, 1994

Member of the Health Care Services Committee: 1995 – 2001

Volunteerism

Greenville County Schools, AED Oversight Physician 2004 - present

Greenville Free Medical Clinic 1993 - present

Greenville County Red Cross, Protocol Review 1998 - present

Licensure

Licensed in South Carolina

Personal

Date of Birth: March 13, 1956

Married with two children

AFFIDAVIT OF ANTHONY MANCUSO, MD

I, Anthony Mancuso, M.D., being duly sworn upon oath, do hereby depose and state as follows:

1.

I am over 21 years of age, have no physical or mental disabilities, and am otherwise competent to make this affidavit.

2.

The affidavit is made upon the basis of my education, knowledge, training and experience as a radiologist and medical doctor licensed to practice medicine and upon a review of the following medical records regarding Jonathan Buckelew:

- a. Imaging studies from October 26, 2015 admission to North Fulton Hospital
- b. Imaging reports from October 26 admission to North Fulton Hospital.
- c. Medical records from October 26 admission to North Fulton Hospital.

3.

I am a medical doctor licensed to practice medicine in the state of Florida, and a copy of my curriculum vitae is attached hereto. I am board certified in radiology, and I was licensed to and was practicing medicine in Florida in 2015

and for the five years prior to 2015.

4.

I am qualified to express the opinions contained herein as in my practice I have regularly seen and evaluated imaging studies of the head and neck in patients being evaluated in the emergency department for an altered level of consciousness and other indications. For the five years prior to 2015, and for many years before that, I have regularly read imaging studies of the head and neck in a hospital setting. I am familiar with the standard of care for reading and reporting on imaging studies of the head and neck including CT scans, CTA exams and MRI studies like those read for Jonathan Buckelew at North Fulton Hospital in October, 2015.

5.

All of the opinions expressed herein are expressed to a reasonable degree of medical probability and are based upon my education, training and experience, and the records of Jonathan Buckelew.

6.

For purposes of this affidavit, I have assumed the following facts to be true, based on the medical records:

- a. On October 26, 2015, Jonathan Buckelew, a 32 year old male, was

seen in the by emergency department at North Fulton Hospital by Dr. Matthew Womack for an altered level of consciousness after having a neck adjustment at a chiropractors office. At 4:39 pm, Dr. Womack ordered a CT of the brain and a CTA of the neck.

- b. The CT and CTA were performed at around 5:15 pm and the CTA was read by neuroradiologist, Dr. James Waldschmidt, and his findings were dictated at 6:46 pm. The clinical indication listed by Dr. Womack for the study was "pain/dissection" (sic).
- c. In Dr. Waldschmidt's report on the CTA, he noted, among other things, a potential dissection of the right vertebral artery.
- d. In fact, the imaging study showed that the right vertebral artery was very small in caliber and the left vertebral artery was dissected from the C1/2 level, to its point of dural penetration, and then on to the vertebral basilar to its junction with the basilar artery. In addition, there was narrowing of nearly the entire basilar artery with a high-grade basilar occlusion related to extension of the left vertebral dissection and /or thromboembolic complications of a vertebral-basilar dissection.
- e. The next day, October 27, 2015, Dr. Sachin Lavania ordered an MRI

of the brain as well as an MRA.

- f. The MRA demonstrated vertebral-basilar occlusion causing extensive, acute/subacute infarction of the brainstem and cerebellum secondary to the impeded perfusion of these portions of the brain.

7.

Based upon the facts stated above, and my review of the records and the imaging studies, it is my opinion that Dr. James Waldenschmidt violated accepted medical practices by not appreciating an indisputable, acute or subacute vertebral – basilar artery occlusion due to a vertebral-basilar dissection on the October 26, 2016 CTA.

8.

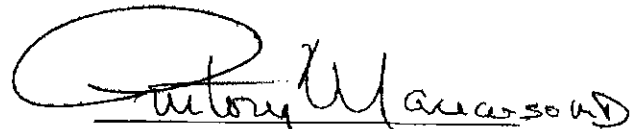
It is my opinion that such actions and omissions fell below and are a deviation from the standard of care ordinarily employed by the medical profession generally under similar conditions and like surrounding circumstances.

9.

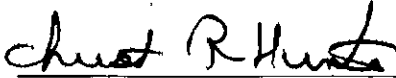
This affidavit is not intended to provide an exhaustive listing of all of the opinions which I may have concerning the matters at issue in this case, and I reserve the right to express additional opinions based upon any additional information which may come to my attention as this case proceeds through the

discovery and litigation process. The opinions expressed herein are not intended to and should not be construed to foreclose or exclude opinions that other negligent acts or omissions may have also occurred or contributed to the patient's outcome, but rather this affidavit is given to meet the limited requirements of O.C.G.A. ' 9-11-9.1 to set forth at least one act of negligence.

Further affiant sayeth not.


Anthony Mancuso, MD

Sworn and Subscribed before me
this 27 day of JUNE 2017



Notary Public

My Commission Expires: 1-5-2019.



CURRICULUM VITAE

PERSONAL DATA

NAME: Anthony A. Mancuso, M.D.
DATE OF BIRTH: August 16, 1947
PLACE OF BIRTH: Brooklyn, New York
CITIZENSHIP: U.S. Citizen

EDUCATION

1965-1967 Miami Dade Junior College
Miami, Florida
A.A.
1967-1969 Florida State University
Tallahassee, Florida
B.S.
1969-1973 University of Miami School of Medicine
Miami, Florida
M.D.
1973-1974 Internship, Mercy Hospital
San Diego, California
1974-1977 Residency, UCLA, CHS, Diagnostic Radiology
Los Angeles, California

PROFESSIONAL EXPERIENCE

Appointments:

1977-1978 Adjunct Instructor, UCLA, Fellowship in Head and Neck Radiology and
Computerized Tomography/Ultrasound, Los Angeles, California
1978-1979 Adjunct Assistant Professor, Department of Radiology, UCLA/
Co-Chief, CT and Ultrasound Section (1979-1980), Los Angeles, California
1979-1981 Assistant Professor in Residence - Department of Radiology, UCLA/Chief, CT
Section (1980-1981), Los Angeles, California
Fellowship in Neuroradiology (February 1 - July 31, 1981)
1981-1983 Associate Professor of Radiology (Neuroradiology Section), Department of
Radiology, University of Utah School of Medicine, Salt Lake City, Utah

1983-1984	Associate Professor of Radiology, University of Florida College of Medicine and Chief of Radiology, Veterans Administration Medical Center, Gainesville, Florida
1984-1989	Clinical Director of MRI, Shands Hospital, University of Florida College of Medicine, Gainesville, Florida
1986-present	Professor of Radiology, University of Florida College of Medicine, Gainesville, Florida
1990-1992	Clinical Director, Radiology Research, University of Florida College of Medicine, Gainesville, Florida
1998-2001	Associate Chairman for Research, Department of Radiology, University of Florida College of Medicine, Gainesville, Florida
5/2000-3/2001	Interim Chairman of Department of Radiology, University of Florida College of Medicine, Gainesville, Florida
4/2001-present	Chairman of Department of Radiology, University of Florida College of Medicine, Gainesville, Florida
2013-present	Medical Director- Katherine Scott & e. Raymond Andrew MRI Resource for Advanced Brain Study

Visiting Professorships:

- University of California at San Francisco, Department of Radiology, San Francisco, California, March 5, 1979
- Loyola University Medical School, Department of Radiology, Chicago, Illinois, March 27-28, 1979
- University of Washington, Department of Radiology, Seattle, Washington, May 5-7, 1983
- University of Miami, Department of Radiology, Miami, Florida, March 21-23, 1984
- University of Kentucky, Department of Radiology, Lexington, Kentucky, October 1984
- Columbia University College of Physicians and Surgeons, Department of Radiology, New York, New York, April 1986
- University of Texas Health Science Center at Dallas, Department of Radiology, Dallas, Texas, October 21-22, 1986
- Columbia University College of Physicians and Surgeons, Department of Radiology, New York, New York, April 1988
- Harvard University, Massachusetts General Hospital, Department of Radiology, Boston, Massachusetts, April 1988
- University of Pittsburgh, Department of Radiology, Pittsburgh, Pennsylvania, March 13-14, 1991
- University of Virginia, Department of Radiology, Charlottesville, Virginia, January 21-22, 1993
- Wayne State University, Department of Radiology, Detroit, Michigan, February 2-4, 1994
- University of Toronto, Department of Radiology, Toronto, Canada October 1-3, 1995
- University of Texas-M.D. Anderson Hospital, Houston, Texas--Doubleday Lecturer, May 20-21, 1996
- Allegheny University Hospitals, Pittsburgh --May 7th and 8th, 1998
- University of Virginia- Keat's Society Endowed Honorary Lectureship- May 13-15, 2011

Committee Service

- Member, Research Advisory Committee - Department of Radiology, UCLA, Los Angeles, California, 1979-1981
- Member, Resident Selection Committee - Department of Radiology, UCLA, Los Angeles, California, 1979-1981
- Member, Medical Care Evaluation Committee, Shands Hospital, Gainesville, Florida, 1984-1985
- Member, Emergency Room Advisory Committee, Shands Hospital, Gainesville, Florida, 1984-1985
- Member, Department of Radiology Finance Committee, Shands Hospital, Gainesville, Florida, 1984-1986
- American College of Radiology (ACR) - Coding Index and Thesaurus Committee, 1985-1990
- Member, Radiological Society of North America (RSNA) Program Committee, Neuroradiology/ Head and Neck Radiology, 1986-1991
- American College of Radiology (ACR) - Malpractice Awareness Task Force/Expert Witness Program, 1986-1990
- Association of University Radiologists (AUR) - Stauffer Award Committee (Research Award), 1986-1987
- Medical Care Evaluation Committee, Shands Hospital, 1987-1990
- American College of Radiology (ACR) - Interdisciplinary Committee on Diagnostic Imaging in Cancer Management, 1986-1987
- American Medical Association - Panel on Magnetic Resonance Imaging, 1984-1988
- Brain Institute Task Force, University of Florida College of Medicine, 1990-1992
- American Society of Head and Neck Radiology, Publications Committee, 1990-1991
- Search Committee for Chairman of Radiation Oncology, 1991-1992
- MRI Research Committee, Department of Radiology, University of Florida College of Medicine, 1991-2001
- Finance Committee, Department of Radiology, University of Florida College of Medicine, 1991-1998
- CT Quality Assurance Committee, Department of Radiology, University of Florida College of Medicine, 1992-1994
- University of Florida Research Advisory Committee, University of Florida College of Medicine, 1992-1994
- American Board of Radiology - Committee on Certificate of Added Qualifications for Neuroradiology, 1992-1995
- Masters Thesis Committee - Jason Rosenberg, 1992-1993

- Second World Congress on Laryngeal Cancer - Advisory Committee, 1993-1994
- American Society of Head and Neck Radiology Publications Committee, 1993-1995
- UFCOM Search Committee for Anatomy and Cell Biology Chair, Spring, 1995
- CQI Committees Read and Return; Communications; MRI (Radiology Department), 1996-1998
- UFCOM Neurology Chairman Search Committee, 1999 and 2000-2001
- Ad Hoc Committee UF AGH—UF Shands Consolidation, 1998-1999
- UF COM College Incentive Fund Review Committee-2000-2001
- Medical Executive Committee, Shands at AGH, May 2001-2006
- Medical Executive Committee, Shands at UF, 2001-present
- Florida Group Practice Executive Committee, 2001-present
- Otolaryngology Chairman Search Committee-- Chairman, 2001-2002 and 2003-2004
- UF COM Promotion and Tenure Committee-Associate Chairman-2002 and Chairman 2003
- UF Group Practice Association—3rd Vice President- 2008 to present
- UF Executive Fiscal Advisory Committee—2008 to present
- Pathology Chairman Search Committee-- Chairman, 2010
- Chairman UF Executive Fiscal Advisory Committee—2010 to present
- UF Group Practice Association—President- 2010 to present

Membership in Scholarly Societies:

- Radiological Society of North America
- American Society of Head and Neck Radiology (Secretary, 1982-1985; Executive Committee, 1985-1986; Vice President, 1988; President Elect, 1989-1990; President, 1990-1991; Past President 1991-1992)
- American Society of Neuroradiology, Senior Member
- American Society for Head and Neck Surgery, Honorary Member
- European Society of Head and Neck Radiology, Honorary Member, 2011

Editorial Experience:

- Editorial Board: American Journal of Neuroradiology (1992-2000); Journal of Computed Axial Tomography (1993-2006); Acta Radiologica Portuguesa (1993-1995); International Journal of Radiation Oncology, Biology and Physics (1998-2006)
- Referee for following journals: Radiology, Journal of Magnetic Resonance in Medicine, Journal of Computer Assisted Tomography, International Journal of Radiation Oncology, Biological Physics, Investigative Radiology, Head and Neck, Cancer, AJNR
- Review of proposed texts for Williams and Wilkins, Lea and Febiger, C. V. Mosby

Grants:

- National Research Service Award Fellowship for training in Academic Radiology from NIH/PHS, 1976-1980 (Principal Investigator).
- Grant-in-aid from Berlex Corporation to study Gadolinium-DTPA in cerebral lesions, 1985 (\$35,000). Renewal 1986 (\$35,000). New study in pediatric patients on same contrast, 1987 (\$35,000) (Principal Investigator).
- Division of Sponsored Research, University of Florida granted the Department of Radiology \$150,000 for support of second whole body imager (Principal Investigator).
- NIH-NCI grant #U01 CA 54026-01, "Comparison of CT and MRI in Staging of Cervical Metastases." \$400,000 over 4 years. Funded October 1991 (Principal Investigator).
- RSNA seed grant, "Detection of Unknown Primary Tumors of the Head and Neck Using 2-[F-18] Fluoro-2-Deoxy-D-Glucose."—Principal Investigator: Suresh K. Mukherji, M.D. \$20,000. Funded Spring 1993 (Co-Principal Investigator).
- Eli Lilly Olanzapine Research Study—Co-Principal Investigator: Katherine N. Scott, Ph.D. Funded February 1998 (Consultant and over-reading of films).
- K-30 Fellowship Funding, "Evidence Based Radiology"—Principal Investigator: Christopher Siström, M.D. \$40,000. Funded 1999 (Mentor).
- Magnetic Resonance Imaging (MRI) of the Upper Trachea During Respiration and Valsalva maneuver. Mallinckrodt—Principal Investigator: Ilona M. Schmalfuss, M.D. Funded 1999 (Co-Principal Investigator).
- AHA Women and Minorities Access to Research Grant, "Pilot Study of Cerebral Vascular Reserve as a Risk Factor for Stroke in Pediatric Sickle Cell Disease"—Principal Investigator: Lorna Sohn Williams, M.D. \$59,900. Funded 2000 (Co-Principal Investigator).
- "Study of the Dynamic Motion of Oropharynx." Kos Pharmaceuticals—Principal Investigator: Ilona M. Schmalfuss, M.D. \$41,888. Funded February 2000 (Co-Principal Investigator).
- "Muscle Composition and Function for Swallowing in Head/Neck Cancer Patients Undergoing Radiotherapy." University of Florida (Opportunity Grant). Phormax—Co-Principal Investigator: Ilona M. Schmalfuss, M.D. \$10,000. Funded October 2000 (Co-Principal Investigator).

- "New Faculty Start-Up." HHMI funding —Principal Investigator: Christopher L. Siström, M.D. \$115,000. Funded March 2001 (Mentor).
- "Free Text Versus Structure Format for Radiology Reports: Measuring Performance and Preference of Selected Medical Personnel in Extracting Case Specific Information." GE funding—Principal Investigator: Christopher L. Siström, M.D. \$50,000. Funded July 2001 (Mentor).
- Longitudinal Study of Traumatic Brain Injury in UF Athletes - Diffusion tensor imaging compared to serum biomarkers and standard clinical measures of concussion in female and male collegiate athletes: a longitudinal survey across the college years. Funded 2013 Toshiba Corporation \$140,000—Principal Investigators: K. Peters, J. Clugston, A. Mancuso

Gift:

- Secured, as a gift to the Department of Radiology, University of Florida, College of Medicine a 0.15 T whole body imager from Technicare Corporation for dedicated research on coil development and proton imaging, 1985. Included were warranty and installation. Total worth \$950,000 - 1,000,000.

Patent:

- Patent received: Angled segment receiver coil for NMR imaging of the head. Filed U. S. Patent Court, 1986. Patent #4,784,146.
- Patent received: Method for improving delivery of pharmaceutical aerosols. Patent #6,567,686.

SCHOLASTIC HONORS

Honorary Societies:

- National Beta Honor Society (High School)
- Phi Theta Kappa (Miami Dade Junior College)
- Alpha Omega Alpha (junior year, University of Miami Medical School, Vice President, senior year)

Awards and Honors:

- | | |
|-----------|---|
| 1967-1968 | Haydon Burns Scholarship (Miami Dade Junior College) |
| 1969-1973 | Complete tuition scholarship to University of Miami School of Medicine |
| 1969 | B.S., Magna Cum Laude |
| 1973 | M.D. with honors - graduating second in class of 115 |
| 1978 | Summa Cum Laude award. Radiological Society of North America for exhibit: Correlated CT Anatomy and Pathology of the Larynx. Annual Scientific Assembly and Meeting of the Radiological Society of North America, Chicago, Illinois, November 26 - December 1, 1978 |
| 1979 | Certificate of Special Merit. American Roentgen Ray Society for exhibit: Correlated CT anatomy and Pathology of the Larynx. Annual American Roentgen Ray Society Meeting, Toronto, Canada, March 1979 |
| 1979 | Certificate of Special Merit. American Roentgen Ray Society for exhibit: CT of the Nasopharynx - Normal Variations of Normal and Pathological Correlations. Annual American Roentgen Ray Society Meeting, Toronto, Canada, March 1979 |
| 1980 | Gold Medal. American Society of Neuroradiology for exhibit: High Resolution CT of the Temporal Bone, Los Angeles. Annual Meeting of the American Society of Neuroradiology, 1980 |
| 1991 | Certificate of Merit. Morphologic Characteristics Useful in Guiding the Diagnostic Work-up of Infiltrative Diseases of the Head and Neck. Exhibit presented at the Annual Meeting of the Radiological Society of North America, Chicago, Illinois, December 1991 |
| 1992 | Certificate of Merit. CT of Normal and Abnormal Facial Nodes. Exhibit presented at the Annual Meeting of the Radiological Society of North America, Chicago, Illinois, December 1992 |

- 1993 Cum Laude Certificate. Radiographic Appearance of the Irradiated Larynx and Hypopharynx by Computed Tomography. Exhibit presented at the Annual Meeting of the Radiological Society of North America, Chicago, Illinois, December 1993
- 1994-present Listed in *Best Doctors in America®: Southeast Region*
- 1995 Examiner for American Board of Radiology Certificate of Added Qualifications in Neuroradiology Oral Examinations
- 1996 Leonard C. Doubleday Lecturer and Honorary Membership in The Houston Radiologic Society
- 1996 Keynote Speaker-International Congress on Head and Neck Cancer Toronto, Canada
- 1997 Presidential Citation—American Society for Head and Neck Surgery
- 2005 Gold Medal Recipient—American Society of Head and Neck Radiology, San Francisco, California, September 2005
- 2100 Lifetime Achievement Award – European Society of Head and Neck Radiology, September 2011

LICENSURE AND CERTIFICATION

LICENSURE:

Florida, #ME0042665
California, #G027974

CERTIFICATION:

1978, Diplomate of the American Board of Radiology
1995, American Board of Radiology Certificate of Added Qualifications in Neuroradiology

BIBLIOGRAPHY

REFEREED PUBLICATIONS:

1. Mancuso AA, Hanafee WN, Julliard GJ, Winter J, Calcaterra TC. The role of computed tomography in the management of cancer of the larynx. *Radiology* 1977; 124 (1):243-244.
2. Mancuso AA, Hanafee WN, Winter J, Ward P. Extensions of paranasal sinus tumors and inflammatory disease as evaluated by CT and pluridirectional tomography. *Neuroradiology* 1978; 16(2):449-453.
3. Mancuso AA, Calcaterra TC, Hanafee WN. Computed tomography of the larynx. *Radiol Clin North Am* 1978; 16(2):195-208.
4. Bein ME, Mancuso AA, Mink JH, Hansen GC. Computed tomography in the evaluation of mediastinal lipomatosis. *J Comput Assist Tomogr* 1978; 2(4):379-383.
5. Mancuso AA. Computed tomographic scanning of the larynx. *West J Med* 1979; 130(5):445-446.
6. Mancuso AA, Rice D, Hanafee WN. Computed tomography with simultaneous sialography in the evaluation of salivary gland tumors. *Radiology* 1979; 132(5 Pt 1):211.
7. Hanafee WN, Mancuso AA, Jenkins HA, Winter J. Computerized tomography scanning of the temporal bone. *Ann Otol Rhinol Laryngol* 1979; 88(5 Pt 1):721-728.
8. Mancuso AA, Hanafee WN. A comparative evaluation of computed tomography and laryngography. *Radiology* 1979; 133(1):131-138.
9. Mancuso AA, Hanafee WN. Computed tomography of the injured larynx. *Radiology* 1979; 133(1):139-144.
10. Pagani JU, Thompson J, Mancuso A, Hanafee W. Lateral wall of the olfactory fossa in determining intracranial extensions of sinus cancer. *AJR* 1979; 133:497-501.
11. Ward P, Hanafee WN, Mancuso A, Shallit J, Berci G. Evaluation of computerized tomography, cinelaryngoscopy and laryngography in determining the extent of laryngeal disease. *Ann Otol* 1979; 88:454-462.
12. Rice DH, Mancuso AA, Hanafee WN. Computerized tomography with simultaneous sialography in evaluating parotid tumors. *Arch Otolaryngol* 1980; 106(8):472-473.
13. Hanafee WN, Mancuso A, Winter J, Jenkins H, Bergstrom JF. Edge enhancement CT scanning in inflammatory lesions of the middle ear. *Radiology* 1980; 136:771-775.
14. Mancuso AA, Tamakwa Y, Hanafee WN. CT of the fixed vocal cord. *AJR* 1980; 135(3):7529-7534.
15. Bentson JR, Mancuso AA, Winter J, Hanafee WN. Combined gas cisternography and edge-enhanced computed tomography of the internal auditory canal. *Radiology* 1980; 136(3):777-779.
16. Mancuso AA, Bohman L, Hanafee W, Maxwell D. Computed tomography of the nasopharynx: normal and variants of normal. *Radiology* 1980; 137(1 Pt 1):113-121.
17. Bohman LG, Mancuso AA, Thompson J, Ward PH, Hanafee WN. A CT approach to benign nasopharyngeal masses. *AJR* 1981; 136(1):173-180.

18. Schwimer SR, Bassett LW, Mancuso AA, Mirra JM, Dawson EG. Giant cell tumor of the cervicothoracic spine. *AJR* 1981; 136(1):63-67.
19. Mancuso AA, Maceri D, Rice D, Hanafee W. CT of cervical lymph node cancer. *AJR* 1981; 136(2):381-385.
20. Stone DN, Mancuso AA, Rice D, Hanafee WN. Parotid CT sialography. *Radiology* 1981; 138(2):393-397.
21. Centeno RS, Bentson JR, Mancuso AA. CT scanning in rhinocerebral mucormycosis and aspergillosis. *Radiology* 1981; 140(2):383-389.
22. Larsson SG, Mancuso AA, Hoover L, Hanafee WN. Differentiation of pyriform sinus cancer from supraglottic laryngeal cancer by computed tomography. *Radiology* 1981; 141:427-432.
23. Fon GT, Bein ME, Mancuso AA, Keesey JC, Lupetin AR, Wong WS. Computed tomography of the anterior mediastinum in myasthenia gravis. A radiologic-pathologic correlative study. *Radiology* 1982; 142(1):135-141.
24. Lufkin R, Barni JJ, Glen W, Mancuso AA, et al. Comparison of computed tomography and pluridirectional tomography of the temporal bone. *Radiology* 1982; 143:715-717.
25. Larsson SG, Mancuso AA, Hanafee WN. Computed tomography of the tongue and floor of the mouth. *Radiology* 1982; 143:493-500.
26. Koehler PR, Mancuso AA. Pitfalls in the diagnosis of retroperitoneal adenopathy. *J Can Assoc Radiol* 1982; 33(3):197-201.
27. Hanson DG, Mancuso AA, Hanafee WN. Pseudomass lesions due to occult trauma of the larynx. *Laryngoscope* 1982; 92(11):1249-1253.
28. Maceri DR, Mancuso AA, Canalis R. Value of computed axial tomography in severe laryngeal injury. *Arch Otolaryngol* 1982; 108(7):449-451.
29. Osborn AG, Hanafee WH, Mancuso AA. Normal and pathologic CT anatomy of the mandible. *AJR* 1982; 139(3):555-559.
30. Mancuso AA, Hanafee WN. Elusive head and neck carcinomas beneath intact mucosa. *Laryngoscope* 1983; 93(2):133-139.
31. Halden WJ, Harnsberger HR, Mancuso AA. Computed tomography of esophageal varices after sclerotherapy. *AJR* 1983; 140(6):1195-1196.
32. Mancuso AA, Harnsberger HR, Muraki AS, Stevens MH. Computed tomography of cervical and retropharyngeal lymph nodes: normal anatomy, variants of normal, and applications in staging head and neck cancer. Part I: normal anatomy. *Radiology* 1983; 148(3):709-714.
33. Mancuso AA, Harnsberger HR, Muraki AS, Stevens MH. Computed tomography of cervical and retropharyngeal lymph nodes: normal anatomy, variants of normal, and applications in staging head and neck cancer. Part II: pathology. *Radiology* 1983; 148(3):715-723.
34. Muraki AS, Mancuso AA, Harnsberger HR, Johnson LP, Meads GB. CT of the oropharynx, tongue base, and floor of the mouth: normal anatomy and range of variations, and applications in staging carcinoma. *Radiology* 1983; 148(3):725-731.
35. Harnsberger HR, Mancuso AA, Muraki AS, Parkin JL. The upper aerodigestive tract and neck: CT evaluation of recurrent tumors. *Radiology* 1983; 149(2):503-509.

36. Kalovidouris A, Mancuso AA, Sarti D. Static gray scale parathyroid ultrasonography. (Is high-resolution real time technique required?) *Clinical Radiology* 1983; 34:385-393.
37. Mancuso AA. Cervical lymph node metastases: oncologic imaging and diagnosis. *Int J Radiat Oncol Biol Phys* 1984; 10(3):411-423.
38. Kalovidouris A, Mancuso AA, Dillion W. A CT-clinical approach to patients with symptoms related to the V, VII, IX-XII cranial nerves and cervical sympathetics. *Radiology* 1984; 151(3):671-676.
39. Dudley JP, Mancuso AA, Fonkalsrud EW. Arytenoid dislocation and computed tomography. *Arch Otolaryngol* 1984; 110(7):483-484.
40. Lawry GV, Finerman ML, Hanafee WN, Mancuso AA, Fan PT, Bluestone R. Laryngeal involvement in rheumatoid arthritis. A clinical, laryngoscopic and computerized tomographic study. *Arthritis Rheum* 1984; 27(8):873-882.
41. Harnsberger HR, Mancuso AA, Muraki AS, Byrd SE, Dillon WP, Johnson LP, Hanafee WN. Branchial cleft anomalies and their mimics: computed tomographic evaluation. *Radiology* 1984; 152(3):739-748.
42. Muraki AS, Mancuso AA, Harnsberger HR. Metastatic cervical adenopathy from tumors of unknown origin: the role of CT. *Radiology* 1984; 152(3):749-753.
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44. Fitzsimmons JR, Thomas RG, Mancuso AA. Proton imaging with surface coils on a 0.15-T resistive system. *Magn Reson Med* 1985; 2(2):180-185.
45. Hall MG, Artega DM, Mancuso AA. Use of computed tomography in localization of head and neck space infections. *J Oral Maxillafac Surg* 1985; 43:978-980.
46. Stevens MH, Harnsberger HR, Mancuso AA, Davis RK, Johnson LP, Parkin JL. Computed tomography of cervical lymph nodes. Staging and management of head and neck cancer. *Arch Otolaryngol* 1985; 111(11):735-739.
47. Virapongse C, Mancuso AA, Fitzsimmons JR. Value of magnetic resonance in assessing bone destruction in head and neck lesions. *Laryngoscope* 1986; 96(3):284-291.
48. Virapongse C, Mancuso AA, Quisling R. Human brain infarcts: Gd-DTPA enhanced MR imaging. *Radiology* 1986; 161:785-794.
49. Akins EW, Fitzsimmons JR, Mancuso AA, Angus LB, Boucher M. Double loop receiver coil for MR imaging at 0.15T. *J Comput Assist Tomogr* 1986; 10(6):1083-1088.
50. Pettersson H, Ackerman N, Kaude J, Googe RE, Mancuso AA, Scott KN, Hackett RH, Hager DA, Cabellero S. Gd-DTPA enhancement of experimental soft tissue carcinoma and hemorrhage in magnetic resonance imaging. *Acta Radiol* 1987; 28(1):75-78.
51. Casselman JW, Mancuso AA. Major salivary gland masses: comparison of MR imaging and CT. *Radiology* 1987; 165(1):183-189.
52. Akins EW, Carmichael MJ, Hill JA, Mancuso AA. Preoperative evaluation of the thoracic aorta using MRI and angiography. *Ann Thoracic Surg* 1987; 44(5):499-507.
53. Yancey JM, Ackerman N, Kaude JV, Googe RE, Fitzsimmons JR, Scott KN, Mancuso AA, Hackett RL, Hager DA, Caballero S. Gadolinium-DTPA enhancement of VX-2 carcinoma of the rabbit kidney on T1 weighted magnetic resonance images. *Acta Radiologica* 1987; 28 (4):479-482.

54. Parsons JT, Mendenhall WM, Mancuso AA, Cassisi NJ, Million RR. Malignant tumors of the nasal cavity and ethmoid and sphenoid sinuses. *Int J Radiat Oncol Biol Phys* 1988; 14(1):11-22.
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15. Mancuso AA. Book Review. *Magnetic Resonance Imaging. Clinical Principles*. Runge V (ed.) *Journal of Magnetic Resonance*, 1992; 99(3):671-672.
16. Mancuso AA. Book Review. *Imaging of Head Trauma*. *Head and Neck* (in press).
17. Invited Editorial Review: The Promise of FDG in Diagnosis and Surveillance of Head and Neck Cancer. *Cancer* 1994; 74:1193-1195.
18. Mancuso AA. Book Review. *Handbook of Head and Neck Imaging*. *Head and Neck* (in press).

19. Stravropoulos SW, Mukherji SK, Mancuso AA. Recurrent parotid adenocarcinoma occurring within the cerebellopontine angle. *AJNR*;1995:1529-1531.
20. Helmberger RC, Stringer SP, Mancuso AA. Rhabdomyoma of the pharyngeal musculature extending into the prestyloid parapharyngeal space. *AJNR* 1996; 17:1115-1118.
21. Helmberger RC, Mancuso AA. Wegener granulomatosis of the eustachian tube and skull base mimicking a malignant tumor. *AJNR* 1996; 17:1785-1790.
22. Helmberger RC, Croker BP, Mancuso AA. Leiomyosarcoma of the larynx presenting as a laryngopyocele. *AJNR* 1996; 17:1112-1114.

BOOKS:

1. Mancuso AA, Hanafee WN. *Computed Tomography of the Head and Neck*. Baltimore: Williams and Wilkins, 1982; 1-297.
2. Mancuso AA, Hanafee WN. *Workbook in Head and Neck CT*. Baltimore: Williams and Wilkins, 1984; 1-243.
3. Mancuso AA, Hanafee WN. *Computed Tomography and Magnetic Resonance Imaging of the Head and Neck, 2nd Edition*. Baltimore: Williams and Wilkins, 1985; 1-503.
4. Mancuso AA, with contributions from Dillon W, Harnsberger HR. *Introductory Workbook for CT and MRI of the Head and Neck, 2nd edition*. Baltimore: Williams and Wilkins, 1989; 1-251.
5. Romrell LJ, Mancuso AA, Rarey KE, Mahan PE, Larkin LH, Ross MH. *Sectional Anatomy of the Head and Neck with Correlative Pathology*. Philadelphia: Lee and Febiger, 1994; 1-214. Also German translation published by Kholhammer Stuggart, 1994.
6. Mancuso AA, Ojiri H, Quisling RG. *Head and Neck Imaging: A Teaching File*. Baltimore: Williams and Wilkins, 2002.
7. Mancuso AA, Hanafee WN (in memoriam). *Head and Neck Radiology*. Volumes I and II (chapters 44-223 in print 2264 pages) another volume (chapters 1-43 on line only) Lippincott & Williams and Wilkins, 2011
8. Mancuso AA, Bidari, S. *Head and Neck Imaging: A Teaching File*. 2nd edition. Philadelphia: Lippincott Williams and Wilkins, 2012. 1-374

CHAPTERS:

1. Mancuso AA. General abdomen: Peritoneal cavity, bowel and mesentery, abdominal wall. In: Sarti DA, Sample WF (eds.) *Diagnostic Ultrasound: Text and Cases (Chapter 8)*. Boston: G. K. Hall Co. 1979; 412-423.
2. Mancuso AA. Computed tomography in the diagnosis and evaluation of primary head and neck cancer. In: Steckel and Kagan (eds.) *Cancer Diagnosis: New Concepts and Techniques*. Grune and Stratton, Inc., 1982.
3. Hanson D, Mancuso AA. Trauma of the respiratory tract-larynx and trachea. In: Greebaum EI (ed.) *Radiology of the Emergency Patient - An Atlas Approach*. New York: John Wiley and Sons, Inc., 1982.

4. Mancuso AA. Computed body tomography. In: Wilson and Hanafee (eds.) Current Radiology, Vol. 4. Wiley Medical, 1983.
5. Mancuso AA. The larynx and hypopharynx. In: Haaga and Alfidi (eds.) Computed Tomography of the Whole Body. St. Louis: C. V. Mosby, 1983.
6. Mancuso AA. The upper aerodigestive tract (nasopharynx, oropharynx and floor of the mouth). In: Bergeron, Som, Osborn (eds.) Head and Neck Imaging Excluding the Brain. St. Louis: C. V. Mosby, 1984.
7. Mancuso AA. The neck in computed tomography of the body. In: Moss, Gamsu, Gerant (eds.) W. B. Saunders, 1984.
8. Mancuso AA. Oncologic Imaging. In: Bragg DG, Rubin P, Youker J (eds.) Pergammon Press, Inc., 1985.

Chapters 4: Cervical metastatic disease
 5: The upper aerodigestive tract (paranasal sinuses), nasopharynx, oropharynx and laryngopharynx)
 6: Major salivary gland
 7: Thyroid gland
9. Mancuso AA. General abdomen (Chapter 10). In: Sarti D (ed.) Diagnostic Ultrasound: Text and Cases, 2nd Edition. Chicago: Year Book Medical Publishers, 1986.
10. Mancuso AA. The larynx and hypopharynx. In: Haaga, Alfidi (eds.) Computed Tomography of the Whole Body. St. Louis: C. V. Mosby, 1987.
11. Dillon W, Mancuso AA. In: Newton, Potts (eds.) Nasopharynx and oropharynx. In: Newton, Potts (eds.) Modern Neuroradiology, Vol. III, 1987.
12. Mancuso AA. Evaluation and staging of laryngeal cancer by computed tomography and MRI. In: Silver CE (ed.) Recent Advances in the Management of Laryngeal Cancer. New York: Thieme Medical Publishing, Inc., 1991.
13. Mendenhall WM, Million RR, Parsons JT, Mancuso AA. Cancer of the larynx. In: Perez CA, Brady LW (eds.) Principles and Practice of Radiation Oncology. Philadelphia: J. B. Lippincott, 1992.
14. Dillon WP, Mancuso AA. The neck. In: Moss, Gamsu, Genant (eds.) Computed Tomography of the Body. Second Edition. W. B. Saunders, 1992.
15. Mendenhall WM, Parson JT, Mancuso AA, et al. Carcinoma of the head and neck: management of the neck. In: Perez CA, Brady SW (eds.) Principles and Practice of Radiation Oncology. Philadelphia: J. B. Lippincott, 1992.
16. Mancuso AA. Diagnostic imaging (temporal bone and CPA and head and neck). In: Meyerhoff WL, Rice DH (eds.) Otolaryngology - Head and Neck Surgery. W. B. Saunders, 1992.

17. In: Million RR, Cassisi NJ (eds.) Management of Head and Neck Cancer. Philadelphia: J. B. Lippincott, 1994:
 - a. Associate Editor and Sole author: Chapter 4; Diagnostic Imaging
 - b. Associate Editor and Co-author:
 - Chapter 6: Neck
 - Chapter 15: Unknown Primary
 - Chapter 16: Oral Cavity
 - Chapter 17: Oropharynx
 - Chapter 18: Larynx
 - Chapter 20: Hypopharynx
 - Chapter 21: Cervical Esophagus
 - Chapter 22: Nose and Paranasal Sinuses
 - Chapter 23: Nasopharynx
 - Chapter 24: Juvenile Angiofibroma
 - Chapter 25: Skin
 - Chapter 29: Temporal Bone
 - Chapter 30: Chemodectomas
 - Chapter 31: Thyroid
 - Chapter 33: Adult Mesenchymal Tumors
18. Horiot JC, Mancuso AA. Tumors of the Oropharynx (Chapter 6.8) Oxford Textbook of Oncology. Oxford University Press, London 1995.
19. Mancuso AA. Diagnostic Imaging (Chapter 7) In: Weber RS, Miller M, Goepfert H. (eds.) Basal and Squamous Cell Skin Cancers of the Head and Neck. Philadelphia: Lee and Febiger, 1995.
20. Larson SG, Mancuso AA. Head and Neck. In: Petterson Holger (ed.) Nicer Centennial Book 1995 - A Global Textbook of Radiology 1995.
21. Janecka IP, Kapadia S, Mancuso A, Prasad S, Moffat DA, Pribaz J. Surgical management temporal bone cancer. In: Harrison L, Sessions R (eds.) Lippincott-Raven, 1997.
22. Schmalfuss IM, Mancuso AA. Diagnostic Imaging. In: Shah, JT (ed.) Essentials of Head and Neck Oncology. New York: Thieme, 1998.
23. Schmalfuss IM, Mancuso AA. Head and Neck in Helical (Spiral) Computed Tomography: A Practical Approach to Clinical Protocols. In: Silverman P (ed.) Philadelphia: Lippincott-Raven Publishers, 1998.
24. MENDENHALL WM, MANCUSO, AA; AMDUR RJ, M.D: MANAGEMENT OF THE NECK INCLUDING UNKNOWN PRIMARY TUMOR JOHN W. WERNING, M.D. IN: PRINCIPLES AND PRACTICE OF RADIATION ONCOLOGY (2005)
25. Mendenhall WM MD, Mancuso AA, Kirwan J, Werning JW, Flowers FP: Skin Carcinoma, IN: PRINCIPLES AND PRACTICE OF RADIATION ONCOLOGY (2005)

ARTICLES SELECTED FOR ABSTRACTING, PROCEEDINGS:

1. Mancuso AA, Hanafee WN, Winter J, Ward P. A comparison of computed tomography and conventional pluridirectional tomography in the evaluation of paranasal sinus pathology. *J Comput Assist Tomogr* 1978; 2.
2. Mancuso AA, Hanfee WN, Calcaterra T. CT scanning of the larynx. *J Comput Assist Tomogr* 1978; 2:522.
3. Bein ME, Mancuso AA, Mink JH, Hansen GC. Computed tomography in the evaluation of mediastinal lipomatosis. *J Comput Assist Tomogr* 1978; 2.
4. Mancuso AA, Bohman L, Hanafee WN, Maxwell, Ward BH. Nasopharynx - Normal variations of normal and pathological correlations. *AJR* 1979; 133(2):345.
5. Mancuso AA, Hanafee WN, Ward PH, Calcaterra T. Correlated CT anatomy and pathology of the larynx. *AJR* 1979; 133(2):345.
6. Mancuso AA. In: Moss A, Goldberg H (eds.) *Pediatric ultrasound: Four common clinical problems. Computed tomography, ultrasound and x-ray: An integrated approach.* UCSF, Department of Radiology Postgraduate Education Division, 1980.
7. Mancuso AA. In: Moss A, Goldberg H (eds.) *Ultrasound of the neck. Computed tomography, ultrasound and x-ray: An integrated approach.* UCSF, Department of Radiology Postgraduate Education Division, 1980.
8. Rice D, Mancuso AA, Hanafee WN. Computed tomography with simultaneous contrast sialography, epitomes of progress - Otolaryngology. *West J Med* 1981; 133(4):321-322.
9. Mancuso AA. Cervical lymph node cancer. *OR Digest* 1981; 13-14.
10. Mancuso AA, Hanafee WN. Elusive head and neck carcinoma beneath intact mucosa. *OR Digest* 1984; 13-14.
11. Mancuso AA, Harnsberger HR, Mauaki AS, et al. Computed tomography of cervical and retropharyngeal lymph nodes: Normal anatomy, variants of normal and applications in staging head and neck cancer. Parts I and II. *Radiology* 1983; 148:709-723. Abstract in *Year Book of Diagnostic Radiology*, Kieffer SA (ed.).
12. Mancuso AA, Virapongse C, Quisling RG. Early clinical experience with Gd-DTPA enhanced MRI in acute cerebral infarction and chronic ischemic changes. In: *Excerpta Medica, Contrast Agents in Magnetic Resonance Imaging.* Elsevier Science, 1986.
13. Mancuso AA. Impact of CT and MRI on the diagnosis of head and neck cancer. *Excerpta Medica, Proceedings of VI European Congress of Radiology.* Elsevier Science, 1987.
14. Tart RP, Mancuso AA, et al. Facial lymph nodes: Normal and abnormal CT appearance. *Radiology* 1993; 188:695-700. *Year Book of Neuroradiology* 1995; (in press)
15. Mukherji SK, Mancuso AA, et al. Irradiated paragangliomas of the head and neck: CT and MR appearance. *AJNR* 1994; 15:357-363. *Year Book of Neuroradiology* 1995 (in press)

PRESENTATIONS AT SCIENTIFIC MEETINGS

1. Mancuso AA, Calcaterra TC, Hanafee WN. The role of CT scanning in the management of cancer of the larynx. Scientific Assembly and Annual Meeting of the Radiological Society of North America, Chicago, Illinois, November 1976.
2. Mancuso AA. CT scanning of the larynx and nasopharynx. The Eleventh Annual Conference on Radiology in Otolaryngology and Ophthalmology. American Otolaryngologic Association, Los Angeles, California, May 21-23, 1977.
3. Mancuso AA. CT screening of the paranasal sinuses. Western Neuroradiologic Society, Palm Springs, California, October 7-9, 1977.
4. Participation in a panel on "Adult Head and Neck Problems" by invitation of Paul Ward, M.D., Chief of the Department of Head and Neck Ophthalmology and Otolaryngology. American Otolaryngologic Association, Los Angeles, California, January 23, 26, 1978.
5. Mancuso AA, Hanafee WN. CT scanning of the larynx. International Symposium on Computed Tomography. Harvard University, Miami, Florida, March 19-24, 1978.
6. Mancuso AA, Hanafee WN. A comparison of CT scanning and pluridirectional tomography in the evaluation of paranasal sinus pathology. International Symposium on Computed Tomography. Harvard University, Miami, Florida, March 19-24, 1978.
7. Mancuso AA, Hanafee WN. A comparison of computed tomography and laryngography in the evaluation of laryngeal pathology. Scientific Assembly and Annual Meeting of the Radiological Society of North America, Chicago, Illinois, November 30, 1978.
8. Mancuso AA, Rice D, Hanafee WN. CT scanning of the parotid gland during contrast sialography. Computed tomography: International Symposium and Course. Harvard University, Las Vegas, Nevada, April 1979.
9. Mancuso AA, Hanafee WN, Ward P. Comparison of CT scanning and laryngography in laryngeal cancer. Computed tomography: International Symposium and Course. Harvard University, Las Vegas, Nevada, April 1979.
10. Featured speaker by invitation: Computed tomography of the larynx; CT of the paranasal sinuses and nasopharynx. Western Society of Neuroradiology, Carmel, California, October 5-7, 1979.
11. Mancuso AA, Bohman LG, Hanafee WN, Maxell DS. CT of the nasopharynx: Normal and variants of normal. Scientific Assembly and Annual Meeting of the Radiological Society of North America, Atlanta, Georgia, November 1979.
12. Mancuso AA. New techniques in otolaryngologic diagnosis. Pacific Coast Otolaryngologic Society, San Diego, California, May, 1980.
13. Mancuso AA, Maceri D, Rice D, Hanafee WN. CT diagnosis of cervical lymph node cancer. Western Neuroradiologic Society, San Diego, California, October 1980.
14. Stone D, Mancuso AA, Rice D, Hanafee WN. CT parotid sialography. Western Neuroradiologic Society, San Diego, California, October 1980.
15. By invitation: One of five panelists of Oncodiagnosis Symposium. Scientific Assembly and Annual Meeting of the Radiological Society of North America, Dallas, Texas, November 1980.

16. By invitation: Workshop on CT of the larynx, nasopharynx, parapharyngeal space, paranasal sinuses, salivary glands. Los Angeles Radiological Society Mid-Winter Conference, Los Angeles, California, January 1981.
17. Radiological Society of North America Refresher Course: Computed tomography of the head and neck. Scientific Assembly and Annual Meeting of the Radiological Society of North America, Chicago, Illinois, November 1981.
18. Radiological Society of North America Categorical Course : Radiation therapy, head and neck cancer imaging. Scientific Assembly and Annual Meeting of the Radiological Society of North America, Chicago, Illinois, November 1981.
19. Radiological Society of North America Refresher Course: Computed tomography of the upper aerodigestive tract and neck. Scientific Assembly and Annual Meeting of the Radiological Society of North America, Chicago, Illinois, December 1982.
20. Mancuso AA. CT of the larynx tumor and trauma. American Society of Head and Neck Radiology Postgraduate Course, Los Angeles, California, May 1981.
21. Mancuso AA. Ultrasound, CT and NMR in head and neck disease and radiology of the sinuses. International Congress and Postgraduate Course on Radiology in Otolaryngology, Paris, France, June 1982.
22. Mancuso AA. CT of cervical and retropharyngeal lymph nodes: Normal, variations of normal and applications in staging head and neck cancer. Scientific Assembly and Annual Meeting of the Radiological Society of North America, Chicago, Illinois, December 1982.
23. Mancuso AA. The CT evaluation of recurrent and residual cancer of the upper aerodigestive tract and neck. Scientific Assembly and Annual Meeting of the Radiological Society of North America, Chicago, Illinois, December 1982.
24. Mancuso AA. The CT-clinical approach to patients with symptoms related to cranial nerves V, VII, IX-XII and cervical sympathetics. American Society of Head and Neck Radiology Meeting and Postgraduate Course, Boston, Massachusetts, May 1983.
25. Radiological Society of North America Refresher Course: Computed tomography of the pharynx, larynx and neck. Scientific Assembly and Annual Meeting of the Radiological Society of North America, Chicago, Illinois, November 1983.
26. A CT-clinical approach to patients with symptoms related to cranial nerves V, VII, IX-XII and cervical sympathetics. Scientific Assembly and Annual Meeting of the Radiological Society of North America, Chicago, Illinois, November 1983.
27. By invitation of the American College of Surgery, Otolaryngology Interdisciplinary Panel Discussion. 69th Clinical Congress of the American College of Surgeons, Atlanta, Georgia, 1983.
28. Mancuso AA. MRI of the upper pharynx and neck: Variations of normal and possible applications in detecting and staging malignant tumors. Society of Magnetic Resonance in Medicine, New York, August 1974.
29. Radiological Society of North America Refresher Course: MRI and CT of the pharynx. Scientific Assembly and Annual Meeting of the Radiological Society of North America, Washington, D. C., November 1984.
30. Mancuso AA. MRI of the upper pharynx and neck: Variations of normal and possible applications in detecting and staging malignant tumors. Part I - Normal variations. Scientific Assembly and Annual Meeting of the Radiological Society of North America, Washington, D. C., November 1984.

31. Mancuso AA. MRI of the upper pharynx and neck: Variations of normal and possible applications in detecting and staging malignant tumors. Part II - Pathology. Scientific Assembly and Annual Meeting of the Radiological Society of North America, Washington, D. C., November 1984.
32. Radiological Society of North America Refresher Course: MRI and CT of the pharynx. Scientific Assembly and Annual Meeting of the Radiological Society of North America, Chicago, Illinois, November 1985.
33. Mancuso AA. High performance receiver coils for imaging the head and neck and 0.15 T: Clinical experience with thin section studies. Scientific Assembly and Annual Meeting of the Radiological Society of North America, Chicago, Illinois, 1985.
34. Mancuso AA. 1. CT and MRI of facial nerve disorders. 2. Imaging of the thyroid and parathyroids. 3. CT and MRI of the pharynx. Annual Meeting of the American Society of Head and Neck Radiology, Seattle, Washington, May 1986.
35. Invited speaker/panelist: Management of parotid tumors. American College of Surgeons Clinical Congress, New Orleans, Louisiana, November 1986.
36. Invited speaker/panelist: Magnetic resonance imaging seminar. Los Angeles Radiologic Society, Los Angeles, California, November 1986.
37. Radiological Society of North America Refresher Course: MRI and CT of the pharynx. Scientific Assembly and Annual Meeting of the Radiological Society of North America, Chicago, Illinois, November 1986.
38. Invited guest: Radiological Society of North America sponsored lecturer for VI European Congress of Radiology, Lisbon, Portugal, June 1987.
 - a. Keynote lecture: Impact of CT and MRI in the diagnosis of head and neck cancer.
 - b. Refresher Course: Cervical lymph node metastases - oncologic imaging and diagnosis.
39. Invited guest: European Society for Therapeutic Radiology and Oncology: Practical planning problems in radiotherapy of head and neck cancer, Lisbon, Portugal, May 1987.
40. Radiological Society of North America Refresher Course: MRI and CT of the pharynx. Scientific Assembly and Annual Meeting of the Radiological Society of North America, Chicago, Illinois, December 1987.
41. Radiological Society of North America Refresher Course: Oncodiagnostic Panel. Scientific Assembly and Annual Meeting of the Radiological Society of North America, Chicago, Illinois, December 1987.
42. Scientific Committee and Faculty: XI International Congress of Head and Neck Radiology. European Society of Head and Neck Radiology, Uppsala, Sweden, June 6-11, 1988.
43. Invited speaker: Second International Conference on Head and Neck Cancer. American Society for Head and Neck Surgery Sponsor, Boston, Massachusetts, August 1988.
44. Invited panelist: Cervical metastasis in aerodigestive cancer. American Academy of Otolaryngology and Head and Neck Surgery, Washington, D. C., September 1988.
45. Radiological Society of North America Refresher Course: MRI and CT of the pharynx and floor of the mouth. Scientific Assembly and Annual Meeting of the RSNA, Chicago, Illinois, 1988.
46. Invited lecturer and panelist: The impact of new imaging technique on cancer staging and curability. International Congress of Radiation Oncology. Paris, France, July 1989.
47. Invited lecturer, panelist, moderator: 17th International Congress of Radiology. Paris, France, July 1989.

48. Invited lecturer, panelist: American College of Surgeons Clinical Congress Postgraduate Course: Otorhinolaryngology: Carcinoma of the tongue. Atlanta, Georgia, October 1989.
49. Radiological Society of North America Refresher Course: CT and MRI of the pharynx and floor of the mouth. Also Moderator of Scientific Session, Chicago, Illinois, 1989.
50. Magnetic Resonance Imaging 1990: National Symposium: MRI of lower cranial nerves; MR and CT of the temporal bone; MR and CT of the paranasal sinuses, Las Vegas, Nevada, April 1990.
51. American Society of Head and Neck Radiology: Special Focus Session - Cases and controversies in head and neck cancer, New Orleans, Louisiana, May 1990.
52. Invited lecturer (four lectures): The Royal Australian College of Radiologists Annual Meeting, Perth, Western Australia, October 1990.
53. Radiological Society of North America, Chicago, Illinois, December 1990:
 - a. Refresher course: CT and MRI of the pharynx and floor of the mouth
 - b. Moderator: Scientific session
 - c. Scientific presentation: Barreda R, Mancuso AA, Stringer S. Suppurative retropharyngeal lymphadenitis: A medical or surgical disease?
54. American Society of Head and Neck Radiology, Boston, Massachusetts, April 3-6, 1991:
 - a. Paper: CT of submucosal laryngeal masses.
 - b. Lectures: Imaging of major salivary glands and normal anatomy of deep spaces of the face and suprahyoid neck.
55. Invited Panelist on New Advances in Head and Neck Imaging. American Society of Neuroradiology, Washington D. C., June 1991.
56. Radiologic Society of North America, Chicago, Illinois, December 1991.
 - a. Moderator: Scientific session
 - b. Refresher course: Imaging of the larynx and hypopharynx
 - c. Scientific presentation: CT of submucosal laryngeal masses
57. American Society of Head and Neck Radiology: Imaging of the thyroid and parathyroids, Chicago, Illinois, April 22-26, 1992.
58. Invited Panelist on Cancer of the Paranasal Sinuses. Third International Conference on Head and Neck Cancer, San Francisco, California, August 1992.
59. Radiologic Society of North America, Chicago, 1992.
 - a. Moderator: Scientific session
 - b. Refresher Course: Imaging of the larynx and hypopharynx
 - c. Scientific presentations: Coauthored three papers presented by Tart RP and Mukherji SK.
60. American Society of Head and Neck Radiology/American Society of Neuroradiology Course and Meeting: Imaging of the oral cavity and oropharynx, Vancouver, May 1993.
61. Radiologic Society of North America, Chicago, 1993
 - a. Refresher Course: Imaging of the larynx and hypopharynx
 - b. Scientific presentations: Coauthored five papers, presented by Mukherji SK
62. Invited Speaker and Panelist: Second World Congress on Laryngeal Cancer, Sydney, Australia, February 21-24, 1994.
 - a. Workshop on imaging advances
 - b. Salvage treatment for early glottic failure (Panelist)
 - c. Favorable supraglottic cancer (Panelist)
 - d. Pyriform sinus cancer (Panelist)

63. American Society of Neuroradiology, Nashville, TN, May 1994. Core Curriculum Course in Neuroradiology: Suprahyoid neck diseases
64. International Congress of Head and Neck Radiology, Washington, DC, June 15-19, 1994.
 - a. Imaging of airway and speech disorders (Invited Speaker)
 - b. Moderator/Panelist: Special focus session on controversies of modern nodal imaging alternatives
 - c. Paper: The value of pretreatment CT as a predictor of outcome and supraglottic carcinoma treated with RT alone
65. Radiologic Society of North America, Chicago, 1994.
Refresher Course: Imaging of the larynx and pharynx.
66. American Society of Head and Neck Radiology, Pittsburgh, May 1995
Speaker and Moderator of a panel on "Diseases of the Larynx and Pharynx."
67. Radiologic Society of North America, Chicago, December 1995.
Refresher Course: Imaging of the larynx and Pharynx.
68. American Society of Head and Neck Radiology, Los Angeles April 1996. Invited Lecture: Imaging of Lymph Nodes.
69. International Conference on Head and Neck Cancer. Toronto, July 28 to August 1, 1996. Invited Keynote Speaker: Imaging Techniques Now and in the 21st Century
70. Radiologic Society of North America, Chicago, December 1996. Update Course in Head and Neck Imaging: Imaging of the Major Salivary Glands.
71. American Society of Head and Neck Radiology, Toronto, May 1996
Unknown Case Panelist; Lecture on Volume Acquisition CT Techniques
72. Radiologic Society of North America, Chicago, December 1997
Update Course in Head and Neck Imaging.
73. American Society of Head and Neck Radiology, Phoenix, April 1997
Imaging of Recurrent Head and Neck Cancer
74. Symposium Neurodiologicum, Philadelphia, May 1998
Program Committee, Focused Panel Coordinator, Presentation-Post treatment evaluation of Head and Neck Cancer: When is it cancer and when is it not?
75. Combined ASNR/American Society of Head and Neck Radiology Meeting, San Diego, April 1999
Imaging of Head and Neck Cancer
76. Radiologic Society of North America, Chicago, 1998
Update Course in head and Neck Imaging.
77. Radiologic Society of North America, Chicago, 1999
Course in Advanced Topics in Head and Neck Cancer
78. Radiologic Society of North America, Chicago, 2000
Course in Advanced Topics in Head and Neck Cancer

79. Combined ASNR/American Society of Head and Neck Radiology Meeting, Boston, MA, April 2001
 - a. CT Findings at the Primary Site of Oropharyngeal Squamous Cell Carcinoma about 6 Weeks Following Definitive Radiotherapy as Predictors of Primary Site Control
 - b. Post-RT CT Results as a Predictive Model for Establishing the Necessity of Planned Post-RT Neck Dissection in Patients with Cervical Metastatic Disease from Squamous Cell Carcinoma
80. American Society of Head and Neck Radiology Meeting, Cleveland OH, September 2002, Cervical Metastatic Disease Imaging.
81. American Society of Clinical Oncology, New Orleans, LA, June 4-8, 2004
Invited speaker and panelist: "Emerging Approaches in Head and Neck Cancer Management."
82. American Academy of Orofacial Pain – Invited Speaker: Responsibility of Clinicians and Diagnostic Radiologists in the Effective Use of Imaging In Patients with Facial Pain- Las Vegas April 2006
83. American Society Of Head and Neck Radiology -Gold Medalist Oration- Invited Speaker-Avoiding False Negative CT and MR Interpretations: Proven Methods to Avoid Missing Critical, Subtle Findings on Imaging Studies of the Head and Neck Phoenix, AZ October 2006

SCIENTIFIC EXHIBITS

- Mancuso AA, Hanafee WN, Ward P. Correlated CT anatomy and pathology of the larynx. Scientific Assembly and Annual Meeting of the Radiological Society of North America, Chicago, Illinois, 1978 (summa cum laude).
- Mancuso AA, Hanafee WN, Ward P. Correlated CT anatomy and pathology of the larynx. Annual Meeting of the American Roentgen Ray Society, Toronto, 1979 (special merit award).
- Mancuso AA, Bohman L, Hanafee WN, Ward P. CT of the nasopharynx: Normal variations of normal and pathological correlations. Annual Meeting of the American Roentgen Ray Society, Toronto, 1979 (special merit award).
- Mancuso AA, Bohman L, Hanafee WN, Ward P. CT of the nasopharynx: Normal variations of normal and pathological correlations. Scientific Assembly and Annual Meeting of the Radiological Society of North America, Atlanta, Georgia, 1979.
- Hanafee WN, Mancuso AA, Winter J, Jenkins H, Bergstrom JF. Edge enhancement CT scanning in inflammatory lesions of the middle ear. Scientific Assembly and Annual Meeting of the Radiological Society of North America, Atlanta, Georgia, 1979.
- Ward P, Mancuso AA, Hanafee WN, Berci G. Evaluation of computerized tomography, cinelaryngoscopy and laryngography in determining the extent of laryngeal disease. American Academy of Otorhinolaryngologists. Dallas, Texas, October 8-12, 1979.
- Hanafee WN, Mancuso AA, Bentson JR, Jenkins H, Winter J. Edge enhancement CT scanning of the temporal bone. American Society of Neuroradiology Meeting, Spring, 1980 (summa cum laude).
- Stone D, Mancuso AA, Rice D, Hanafee WN. CT parotid, sialography. Radiological Society of North America, Dallas, November 1980.
- Akins EW, Hill JA, Mancuso AA, et al. Assessment of left ventricular wall thickness in patients with chronic myocardial infarction by MRI. Scientific Assembly and Annual Meeting of the Radiological Society of North America, Chicago, Illinois, November 1986.
- Yancey JM, Kaude JV, Ackerman N, Googe RE, Mancuso AA, Love IL. Gd-DTPA enhancement of experimental kidney and soft tissue carcinoma. Scientific Assembly and Annual Meeting of the Radiological Society of North America, Chicago, Illinois, 1986.
- Zedvinskis DP, Benson MT, Kerr HH, Cacciarelli AA, Madrazzo B, Mancuso AA. Congenital anomalies: The cervical lymphatic system - Embryologic and pathologic anatomy. Scientific Assembly and Annual Meeting of the Radiological Society of North America, December 1990.
- Dalen K, Benson MT, Kerr HH, Cacciarelli AA, Mancuso AA. Congenital anomalies of the branchial apparatus: Embryologic and pathologic anatomy. Scientific Assembly and Annual Meeting of the Radiological Society of North America, December 1990.
- Sims HM, de Vries EJ, Mancuso AA. Type IV second branchial cleft cysts. Presented at the 95th Annual Meeting of the American Academy of Otolaryngology/Head and Neck Surgery, Kansas City, Missouri, September 22-26, 1991.
- Stiles WA, de Vries EJ, Mancuso AA. Castleman's disease in a retropharyngeal mass. Presented at the 95th Annual Meeting of the American Academy of Otolaryngology/Head and Neck Surgery, Kansas City, Missouri, September 22-26, 1991.

- de Vries EJ, Mancuso AA. Masticator space neurofibroma. Presented at the 95th Annual Meeting of the American Academy of Otolaryngology/Head and Neck Surgery, Kansas City, Missouri, September 22-26, 1991.
- Trimas SJ, de Vries EJ, Mancuso AA, Cassisi NJ. Avascular carotid body tumor. Presented at the 95th Annual Meeting of the American Academy of Otolaryngology/Head and Neck Surgery, Kansas City, Missouri, September 22-26, 1991.
- Slattery WH, de Vries EJ, Mancuso AA. Actinomycosis osteomyelitis of the skull base. Presented at the 95th Annual Meeting of the American Academy of Otolaryngology/Head and Neck Surgery, Kansas City, Missouri, September 22-26, 1991.
- Tart RP, Mukherji S, Mancuso AA. Morphologic characteristics useful in guiding the work-up of infiltrative diseases of the head and neck. Presented at the Scientific Assembly and Annual Meeting of the Radiological Society of North America, Chicago, Illinois, December 1991. (Certificate of merit)
- Tart RP, Mukherji SK, Stringer S, Mancuso AA. CT of normal and abnormal facial lymph nodes. Presented at the Scientific Assembly and Annual Meeting of the Radiological Society of North America, Chicago, Illinois, December 1992. (Certificate of merit)
- Tart RP, Kotzur IM, Mancuso AA, et al. MRI of retropharyngeal lymph nodes: Variations of normal anatomy. Presented at the Scientific Assembly and Annual Meeting of the Radiological Society of North America, Chicago, Illinois, December 1993.
- Tart RP, Kotzur IM, Mancuso AA, et al. CT of the buccal space: Normal anatomy and review of pathology presenting as buccal space masses. Presented at the Scientific Assembly and Annual Meeting of the Radiological Society of North America, Chicago, Illinois, December 1993.
- Mukherji SK, Kotzur IM, Mancuso AA, et al. Radiographic appearance of the irradiated larynx and hypopharynx by CT: Expected changes versus recurrent tumor. Presented at the Scientific Assembly and Annual Meeting of the Radiological Society of North America, Chicago, Illinois, December 1993. (Cum Laude Certificate)
- Mukherji SK, Mancuso AA, et al. Can pretreatment CT predict local control in T2 glottic carcinoma treated with radiation therapy alone? International Congress of Head and Neck Radiology, Washington, DC, June 15-19, 1994. (Winner, Resident's Award)

AFFIDAVIT OF ROMANUS ROLAND FAIGLE, MD

I, Dr Romanus Roland Faigle, being duly sworn upon oath, do hereby
depose and state as follows:

1.

I am over 21 years of age, have no physical or mental disabilities, and am
otherwise competent to make this affidavit.

2.

The affidavit is made upon the basis of my education, knowledge, training
and experience as a medical doctor licensed to practice medicine and upon a
review of the following medical records regarding Jonathan Buckelew:

- a. Chiropractic Records from Advanced Integrative Medicine;
- b. Records and imaging studies from the October 26 admission to North
Fulton Hospital in 2015.

3.

I am a medical doctor licensed to practice medicine in the state of Maryland,
and a copy of my curriculum vitae is attached hereto. I am board certified in
neurology and vascular neurology. I was licensed to practice medicine in Maryland
in 2015, and have been actively engaged in the practice of Neurology for the five

years prior to October 2015.

4.

I am qualified to express the opinions contained herein as in my practice I have regularly seen and treated patients with symptoms like Jonathan Buckelew who present to the emergency department and in who a neurology consult is requested. For the five years prior to October 2015, I have regularly been consulted as a neurologist on patients with symptoms and conditions like Jonathan Buckelew presented with on October 26 and 27, 2015. I am familiar with the standard of care for caring for and evaluating patients with symptoms and conditions like Jonathan Buckelew presented with at North Fulton Hospital on October 26 and 27, 2015.

5.

All of the opinions expressed herein are expressed to a reasonable degree of medical probability and are based upon my education, training and experience, and the records of Jonathan Buckelew.

6.

For purposes of this affidavit, I have assumed the following facts to be true, based on the medical records I have reviewed:

- a. On October 26, 2015, Jonathan Buckelew went to see Dr. Michael

Axt, a chiropractor at Advanced Integrative Medicine, for complaints of neck pain. Dr. Axt noted in his records that that Buckelew had had new onset neck pain for four days after working out at the gym. He also recorded that Buckelew reported bouts of blurred vision, headache and a ringing in his ears for the same period of time.

- b. Dr. Axt noted that he adjusted Buckelew's neck while Buckelew was lying down and then asked him to sit up. He noted that when Buckelew sat up he reported that he felt dizzy, and was slow to respond. Dr. Axt then left Buckelew and went to find help. When he returned, Buckelew appeared less responsive, and Axt called 911.
- c. It appears that 911 was called at 3:53 pm on October 26, 2015, and Buckelew was then transported by ambulance to North Fulton Hospital where he arrived at approximately 4:20 pm.
- d. When Buckelew arrived at the emergency department his Glasgow Coma Scale score was recorded as 11.
- e. Buckelew was first evaluated by emergency department physician, Dr. Matthew Womack, and at approximately 4:39 pm, Dr. Womack ordered a CT of the brain and a CTA of the neck.
- f. The CT and CTA were performed at around 5:15 pm and the CTA

was read by a neuroradiologist, Dr. James Waldschmidt. The clinical indication listed by Dr. Womack for the study was "pain/disscetion" (sic).

- g. In Dr. Waldschmidt's report on the CTA, he noted, among other things, a potential dissection of the right vertebral artery.
- h. In fact, the imaging study showed that the right vertebral artery is very small in caliber and possible abnormalities in both vertebral arteries. The study also showed thrombosis of the basilar artery.
- i. After Dr. Womack was made aware of Dr. Waldschmidt's findings on the imaging study, he called Dr. Futrell, the on-call neurologist, for a neurology consultation.
- j. Dr. Womack recorded in his notes that at approximately 6:50 pm he discussed with Dr. Futrell the findings on both the CT and the CTA, and that Dr. Futrell recommended a lumbar puncture and that the patient be admitted.
- k. Before the lumbar puncture was performed, however, Dr. Womack witnessed Buckelew have what he interpreted as a seizure, and Buckelew was intubated at 7:27 pm.
- l. Dr. Womack then performed a lumbar puncture at approximately 7:48

- pm. The lumbar puncture showed clear cerebral spinal fluid (CSF), and Dr. Womack ordered the CSF to be examined STAT.
- m. Dr. Womack then contacted the critical care service and spoke to Christopher Nickum, a Physician Assistant working with Dr. Sachin Lavania, a critical care specialist working in the ICU.
- n. It appears that either Dr. Lavania and or Mr. Nickum saw and examined Buckelew around 8:37 pm on October 26, while Buckelew was still in the emergency department, and dictated a History and Physical for his admission into the ICU. In the History and Physical it is noted that although Buckelew was somnolent, he was arousable while in the ER and was following some commands. At the time of the History and Physical, Buckelew was sedated and intubated and a neurological exam was not recorded.
- o. At 9:00 pm the results of the analysis of the CSF from the lumbar puncture were reported as normal.
- p. Buckelew was transferred to the ICU at around 10:56 pm.
- q. Once in the ICU, it appears that Buckelew was not seen or evaluated by a physician until the following morning when he was seen by Dr. Lavania who ordered an MRI of the brain as well as an MRA of the

head and neck.

- r. The MRI of the brain demonstrated an extensive ischemic stroke of the brainstem, including the medulla, pons and both cerebellar hemispheres. The MRA is consistent with thrombosis of the basilar artery which had resulted in lack of blood flow to the brainstem.
- s. The MRA was read at around 1:00 pm and the results discussed with Dr. Drexinger of neurology and Dr. Lavania. Around 1:37 pm on October 27, 2015, the first specific treatment for stroke, a heparin drip, was initiated, more than 21 hours after Buckelew arrived at North Fulton Hospital.
- t. The heparin drip was ineffective in resolving the damage done by the lack of blood flow to certain areas of Buckelew's brain. Because of the delay in diagnoses, no other treatment options were available.
- u. Mr. Buckelew sustained extensive and permanent brain damage. He is unable to move any part of his body other than his eyes, but is cognitively intact. This condition, known as Locked-in syndrome (LIS), is permanent and non-reversible.

7.

Based upon the facts stated above, and my review of the records, it is my

opinion that Dr. Futrell violated accepted medical practices by not considering and ruling out a basilar thrombosis in the setting of a vertebral artery dissection in this patient. Further, it is my opinion that, when made aware of the imaging studies ordered by Dr. Womack, he should have reviewed the imaging study himself.

8.

It is my opinion that such actions and omissions fell below and are a deviation from the standard of care ordinarily employed by the medical profession generally under similar conditions and like surrounding circumstances.

9.

It is my opinion to a reasonable degree of medical probability that the deviations from the standard of care detailed above caused Jonathan Buckelew harm.

10.

This affidavit is not intended to provide an exhaustive listing of all of the opinions which I may have concerning the matters at issue in this case, and I reserve the right to express additional opinions based upon any additional information which may come to my attention as this case proceeds through the discovery and litigation process. The opinions expressed herein are not intended to and should not be construed to foreclose or exclude opinions that other negligent

acts or omissions may have also occurred or contributed to the patient's outcome,
but rather this affidavit is given to meet the limited requirements of O.C.G.A. ' 9-
11-9.1 to set forth at least one act of negligence.

Further affiant sayeth not.

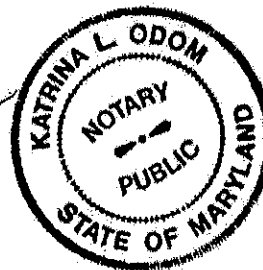


ROMANUS ROLAND FAIGLE, MD

Sworn and Subscribed before me
this 29TH day of 06, 2017

KATRINA L. ODOM - *Katrina L. Odom*
Notary Public

My Commission Expires: 12/06/2018.



Romanus Roland Faigle
1 Noah Ct
21163 Woodstock, MD
rfaigle1@jhmi.edu

Curriculum Vitae

Date of birth: January 22, 1977; Giessen, Germany
Title: MD/PhD/MHS
Current occupation: Assistant Professor of Neurology,
The John Hopkins University School of Medicine

Positions:

07/09-06/10 Intern, Internal Medicine, The Johns Hopkins Hospital, Baltimore
07/10-06/12 Neurology Resident, The Johns Hopkins Hospital, Baltimore
07/12-06/13 Neurology Chief Resident, The Johns Hopkins Hospital, Baltimore
07/13- 06/14 Vascular Neurology Fellow, The Johns Hopkins Hospital, Baltimore
07/14-present Assistant Professor of Neurology, Cerebrovascular Division, Johns
Hopkins University School of Medicine, Baltimore
07/14-present Consulting Vascular Neurologist, Howard County General Hospital,
Columbia, MD

Education and Exams:

10/96-02/00 Medical School, Marburg University, Marburg, Germany

- 03/00-03/05 Ph.D. studies at the Institute of Anatomy and Cell Biology, Gothenburg University, Gothenburg, Sweden
- 03/2005 Ph.D. in Medical Cell Biology (University of Gothenburg)**
- 04/05-05/08 Medical School, Marburg University, Marburg, Germany
- 05/2008 Medical School Diploma**
- 07/09-06/10 Medicine Internship, Osler Program, The Johns Hopkins Hospital**
- 07/10-06/13 Neurology Residency, The Johns Hopkins Hospital**
- 07/13-06/14 Cerebrovascular Fellowship, The Johns Hopkins Hospital**
- 08/14-05/15 M.H.S. studies at the Johns Hopkins University, Johns Hopkins Bloomberg School of Public Health (Graduate Training Program in Clinical Investigation)**
- 8/2015 M.H.S. in Clinical Investigation (Johns Hopkins University)**

Certification:

- 01/2009 ECFMG certification**
- 01/2013 Unrestricted Medical Licensure, State of Maryland #D75374 (active)**
- 09/2013 Board Certification in Neurology, Certificate #58087**
- 08/2014 Board Certification in Vascular Neurology, Certificate #1216**

Teaching/Talks:

- 04/98-07/98 Teaching assistant in “Neuroanatomy for medical students” with Prof. E. Weihe, Institute of Anatomy and Cell Biology, Marburg University, Marburg, Germany
- 10/99-02/00 Teaching assistant in “Biomedical seminars for medical students” with Prof. A. Hasilik, Institute of Physiological Chemistry, Marburg University, Marburg, Germany
- 05/2012 Clinical skills preceptor in Neurology for 2nd year medical students

- 02-03/13 Preceptor for the “Transition to the Wards” course for 2nd year medical students
- 03-04/13 Instructor/Preceptor for the “TRIPLE” (Transition to Internship and Residency and Preparation for Life) course for 4th year medical students
- 02/22/2013 Lecture entitled “Review for the Neurology Residency In-service Training Examination (RITE)” for Neurology residents during noon conference
- 09/10/2013 Teaching session entitled “The Neurological Exam” for medicine residents, noon conference lecture, Janeway Firm
- 11/20/2013 Talk entitled “Navigating Stroke Care” as part of the Clinical Topics in Neuroscience Nursing sessions at Johns Hopkins
- 06/04/2015 “Clinical Skills” teaching for Johns Hopkins medical students: hands-on neurological examination with standardized patients
- 09/28/2015 Interactive noon conference lecture entitled “Stroke Continuum: Review of Critical Outpatient Issues in Clinical Neurology” for Johns Hopkins neurology residents
- 10/28/2015 Research talk entitled “Disparities in Common Inpatient Procedures after Stroke”; presented at the monthly Johns Hopkins Health Equity Jam Session
- 10/02/2015 Teaching session entitled “Cerebral Venous Sinus Thrombosis” for Johns Hopkins neurology residents

Grants and Awards:

- Grant from Hjalmar Svensson Research Fund, Sweden, 2002
- Grant from Adlerbertska Forskningsstiftelsen, Sweden, 2002
- NIH/NINDS R25 Training Grant, 2012-2014
- NIH Clinical Research Scholars Award (KL2), 2014-16

Professional Memberships:

- American Heart Association

Reviewer Activity:

Ad Hoc Reviewer for:

- PLOS ONE
- Clinical Neurology and Neurosurgery
- The International Journal of Neuroscience
- Neurology

Publications:

Abstracts:

A. Brederlau, **R. Faigle**, P. Kaplan, J. McCartney, P. S. Eriksson and K. Funa; *TGF- β superfamily member proteins protect mesencephalic neurons from 6-Hydroxydopamine induced oxidative stress*; 30th Annual Meeting of the American Society for Neuroscience, New Orleans, 2000.

R. Faigle, A. Brederlau, Y. Arvidsson, T. S. Hamzaki, H. Uramoto and K. Funa; *ASK1 inhibits astroglial development via p38 MAP kinase and promotes neuronal differentiation in adult hippocampus-derived progenitor cells*; ELSO Meeting, Dresden, Germany, 2003.

R. Faigle, R. Gottesman, D. Hori, M. Kraut, C. Hogue; *Severity of whiter matter hyperintensities is associated with impaired cerebral autoregulation during cardiac surgery*, International Stroke Conference, Nashville, 2015.

Paper publications:

A. Brederlau, **R. Faigle**, P. Kaplan, P. Odin and K. Funa (2002). *Bone morphogenetic proteins but not growth differentiation factors induce dopaminergic differentiation in mesencephalic precursors*, **Mol Cell Neurosci** 21(3):367-378.

S. H. Hashemi, J.-Y. Li, **R. Faigle** and A. Dahlström (2003).

Adrenergic differentiation and SSR_{2(a)}-receptor expression in CAD-cells cultured in serum-free medium, Neurochem Int 42(1):9-17.

R. Faigle, A. Brederlau, M. Elmi, Y. Arvidsson, T. S. Hamzaki, H. Uramoto and K. Funa (2004).

ASK1 inhibits astroglial development via p38 MAP kinase and promotes neuronal differentiation in adult hippocampus-derived progenitor cells, Mol Cell Biol 24(1):280-93.

T. Egawa-Tsudoku, M. Ohno, N. Tanaka, Y. Takeuchi, H. Uramoto, **R. Faigle**, K. Funa, Ishii Y and M. Sasahara (2004).

PDGF B-chain is involved in the ontogenic susceptibility to NMDA toxicity in developing rat brain, Exp Neurol 186(1):89-98.

A. Brederlau, **R. Faigle**, M. Elmi, A. Zarebski, S. Sjoberg, M. Fujii, K. Miyazono and K. Funa (2004).

The bone morphogenetic protein type Ib receptor is a major mediator of glial differentiation and cell survival in adult hippocampal progenitor cell culture, Mol Biol Cell 15(8):3863-75.

L. Liu, P. Cundiff, G. Abel, Y. Wang, **R. Faigle**, H. Sakagami, M. Xu and Z. Xia (2006).

Extracellular signal-regulated kinase (ERK) 5 is necessary and sufficient to specify cortical neuronal fate, Proc Natl Acad Sci U S A 103(25):9697-702.

H. Klintworth, K. Newhouse, T. Li, W. S. Choi, **R. Faigle** and Z. Xia (2007).

Activation of c-jun N-terminal protein kinase is a common mechanism underlying paraquat- and rotenone-induced dopaminergic cell apoptosis, Toxicol Sci 97(1):149-62.

M. Elmi, **R. Faigle**, W. Yang, Y. Matsumoto, E. Rosenqvist and K. Funa (2007).

Mechanism of MASH1 induction by ASK1 and ATRA in adult neural progenitors, Mol Cell Neurosci 36(2):248-59.

R. Faigle, L. Liu, P. Cundiff, K. Funa and Z. Xia (2008).

Opposing effects of retinoid signaling on astroglialogenesis in embryonic day 13 and 17 cortical progenitor cells, J Neurochem 106(4):1681-98.

R. Faigle, M. Mohme and M. Levy (2012).

Dry Berberi mimicking Guillain-Barre syndrome as the first presenting sign of thiamine deficiency, Eur J Neurol 19(2):e14-15.

R. Faigle and H. Song (2013).

Signaling mechanisms regulating adult neural stem cells and neurogenesis, Biochim Biophys Acta 1830(2):2435-48.

R. Faigle, R. Sutter and P. W. Kaplan (2013).

Electroencephalography of encephalopathy in patients with endocrine and metabolic disorders, J Clin Neurophys 30(5):505-16.

R. J. Felling, **R. Faigle**, C. Y. Ho, R. H. Llinas, and V. C. Urrutia (2014).
Cerebral Amyloid Angiopathy: A hidden risk for IV thrombolysis?, **J Neurol Transl Neurosci** 2(1);pii:1034.

R. Faigle, A. Sharrief, E. B. Marsh, R. H. Llinas, and V. C. Urrutia (2014).
Predictors of critical care needs after IV thrombolysis for acute ischemic stroke, **PLOS ONE** 9(2):e88652.

R. Faigle, A. W. Wozniak, E. B. Marsh, R. H. Llinas, and V. C. Urrutia (2015).
Infarct volume predicts critical care needs in stroke patients treated with intravenous thrombolysis, **Neuroradiology** 57(2):171-8.

R. Faigle, E. B. Marsh, R. H. Llinas, V. C. Urrutia, and R. F. Gottesman (2015).
Novel score predicting gastrostomy tube placement in intracerebral hemorrhage, **Stroke** 46(1):31-6.

R. Faigle, E. B. Marsh, R. H. Llinas, and V. C. Urrutia (2015).
Critical care needs in patients with diffusion-weighted imaging negative MRI after tPA – Does one size fit all?, **PLOS ONE** 10(10):e0141204.

C. H. Brown 4th, **R. Faigle**, L. Klinker, M. Bahouth, L. Max, A. LaFlam, K. J. Neufeld, K. Mandal, R. F. Gottesman, and C. W. Hogue Jr (2015).
The association of brain MRI characteristics and postoperative delirium in cardiac surgery patients, **Clin Ther**;pii:S0149-2918(15)01244-4.

R. Faigle, E. B. Marsh, R. H. Llinas, V. C. Urrutia, and R. F. Gottesman (2015).
Troponin elevation predicts critical care needs and in-hospital mortality after thrombolysis in white but not black stroke patients, **J Crit Care**;pii:S0883-9441(15)00563-8.

R. Faigle, E. B. Marsh, R. H. Llinas, V. C. Urrutia, and R. F. Gottesman (2016).
ICAT: a simple score predicting critical care needs after thrombolysis in stroke patients, **Crit Care** 20(1):26.

AFFIDAVIT OF AARON WAXMAN, MD

I, Dr Aaron Waxman, being duly sworn upon oath, do hereby depose and state as follows:

1.

I am over 21 years of age, have no physical or mental disabilities, and am otherwise competent to make this affidavit.

2.

The affidavit is made upon the basis of my education, knowledge, training and experience as a medical doctor licensed to practice medicine and upon a review of the following medical records regarding Jonathan Buckelew:

- a. Chiropractic Records from Advanced Integrative Medicine;
- b. Records and imaging studies from October 26 admission to North Fulton Hospital.

3.

I am a medical doctor licensed to practice medicine in the state of Massachusetts, and a copy of my curriculum vitae is attached hereto. I am board certified in internal medicine, pulmonology and critical care medicine by the American Board of Internal Medicine, and I was licensed to and was practicing

medicine in Massachusetts in 2015, and for the five years prior to 2015.

4.

I am qualified to express the opinions contained herein as in my practice I have regularly seen and treated patients with symptoms like Jonathan Buckelew who are admitted to the ICU from the emergency department. For the five years prior to 2015, I have regularly seen and evaluated patients being admitted to the ICU with symptoms and conditions like Jonathan Buckelew presented with on October 26 and 27, 2015. I am familiar with the standard of care for caring for and evaluating patients with symptoms and conditions like Jonathan Buckelew presented with at North Fulton Hospital on October 26 and 27, 2015.

5.

All of the opinions expressed herein are expressed to a reasonable degree of medical probability and are based upon my education, training and experience, the records of Jonathan Buckelew.

6.

For purposes of this affidavit, I have assumed the following facts to be true, based on the medical records I have reviewed:

- a. On October 26, 2015, Jonathan Buckelew went to see Dr. Michael Axt, a chiropractor at Advanced Integrative Medicine, for complaints

of neck pain. Dr. Axt noted in his records that that Buckelew had had new onset neck pain for four days after working out at the gym. He also recorded that Buckelew reported bouts of blurred vision, headache and a ringing in his ears for the same period of time.

- b. Dr. Axt noted that he adjusted Buckelew's neck while Buckelew was lying down and then asked him to sit up. He noted that when Buckelew sat up he reported that he felt dizzy, and he seemed disoriented. Dr. Axt then left Buckelew and went to find help. When he returned, Buckelew appeared less responsive, and Axt called 911.
- c. It appears that 911 was called at 3:53 pm on October 26, 2015, and Buckelew was then transported by ambulance to North Fulton hospital where he arrived at approximately 4:20 pm.
- d. When Buckelew arrived at the emergency department he was alert and oriented to person, place, time and situation and was in no acute distress. His Glasco Coma Scale score was recorded at 11 and his pupils were equal, round and reactive to light.
- e. Buckelew was first seen by emergency department physician, Dr. Matthew Womack, and at 4:39 pm, Dr. Womack ordered a CT of the brain and a CTA of the neck.

- f. The CT and CTA were performed at around 5:15 pm and the CTA was read by a neuroradiologist, Dr. James Waldschmidt, and his findings were dictated at 6:46 pm. The clinical indication listed by Dr. Womack for the study was "pain/disscetion" (sic).
- g. In Dr. Waldschmidt's report on the CTA, he noted, among other things, a potential dissection of the right vertebral artery.
- h. In fact, the imaging study showed that the right vertebral artery was very small in caliber and the left vertebral artery dissected just before its junction with the basilar artery although at this point the basilar artery was still patent.
- i. After Dr. Womack read Dr. Waldschmidt's report, he called Dr. Futrell, the neurologist on call, for a neurology consultation.
- j. Dr. Womack recorded in his notes that at approximately 6:50 pm he discussed with Dr. Futrell the findings on both the CT and the CTA and that Dr. Futrell recommended a lumbar puncture to rule out meningitis and or encephalitis and recommended that the patient be admitted.
- k. Before the lumbar puncture was performed, however, Dr. Womack witnessed Buckelew have what he described as a seizure, and fearing

risk to the airway, intubated Buckelew at 7:27 pm.

- l. Dr. Womack then performed a lumbar puncture. The lumbar puncture showed normal opening pressure and clear cerebral spinal fluid. Dr. Womack ordered the CSF fluid to be examined stat.
- m. Dr. Womack then contacted the critical care service and spoke to Christopher Nickum, a Physicians Assistant working with Dr. Sachin Lavinia, a critical care specialist working in the ICU.
- n. It appears that Mr. Nickum saw and examined Buckelew around 8:30 pm on October 26, while Buckelew was still in the emergency department, and dictated a History and Physical for his admission into the ICU. In the history and physical it is noted that although Buckelew was somnolent, he was arousable while in the ER and was following some commands. At the time of the History and Physical, Buckelew was sedated and intubated and a neurological exam was not recorded.
- o. At 9:00 pm the results of the analysis of the CSF from the lumbar puncture were reported as normal. However, it appears that the results of the CSF tests were not reported to Dr. Womack or to the emergency department.

- p. Buckelew was discharged from the emergency department and transferred to the ICU at around 10:56 pm with a diagnoses of encephalitis and altered mental status, without mention of the normal CSF findings.
- q. Once in the ICU, it appears that Buckelew was not seen or evaluated by a physician until the following morning sometime after 10:00 am when he was seen by Dr. Lavania who ordered an MRI of the brain as well as an MRA.
- r. The MRA demonstrated a massive non-hemorrhagic stroke of the posterior circulation of the brain, including thrombosis of the basilar artery which had blocked circulation to the pons and to both hemispheres of the brain.
- s. The MRA was read at around 1:00 pm and the results discussed with Dr. Drexinger of neurology and Dr. Lavania. At 1:37 pm on October 27, 2015, the first treatment for stroke, a heparin drip, was initiated, over 21 hours after Buckelew arrived at North Fulton Hospital.
- t. The heparin drip was ineffective in resolving any of the damage done by the lack of blood flow to certain areas of Buckelew's brain.

Because of the delay in diagnoses, no other treatment options were available.

- u. Mr. Buckelew sustained extensive and permanent brain damage. He is unable to move any part of his body other than his eyes, but is cognitively intact. This condition, known as Locked-in syndrome (LIS), is permanent and non-reversible.

7.

Based upon the facts stated above, and my review of the records, it is my opinion that Dr. Lavania violated accepted medical practices by not considering and ruling out a vascular cause of his symptoms when he was consulted. Further, it is my opinion that Dr. Lavania should have seen and evaluated the patient at the time he was transferred to the ICU.

8.

It is my opinion that such actions and omissions fell below and are a deviation from the standard of care ordinarily employed by the medical profession generally under similar conditions and like surrounding circumstances.

9.


It is my opinion to a reasonable degree of medical probability that the deviations from the standard of care detailed above caused Jonathan Buckelew

harm.

10.

This affidavit is not intended to provide an exhaustive listing of all of the opinions which I may have concerning the matters at issue in this case, and I reserve the right to express additional opinions based upon any additional information which may come to my attention as this case proceeds through the discovery and litigation process. The opinions expressed herein are not intended to and should not be construed to foreclose or exclude opinions that other negligent acts or omissions may have also occurred or contributed to the patient's outcome, but rather this affidavit is given to meet the limited requirements of O.C.G.A. " 9-11-9.1 to set forth at least one act of negligence.

Further affiant sayeth not.

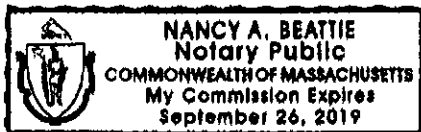

AARON WAXMAN, MD

Sworn and Subscribed before me
this 21st day of June, 2017



Notary Public

My Commission Expires: 9/26/19



Harvard Medical School Curriculum Vitae

Date Prepared: September 18, 2016
Name: Aaron B. Waxman, M.D., Ph.D.
Office Address: Pulmonary and Critical Care Medicine, Brigham and Women's Hospital, Boston, MA
Home Address: 673 Centre Street, Newton, MA 02458
Work Phone: 617-525-9733
Work Email: abwaxman@partners.org
Work FAX: 617-264-6873
Place of Birth: London, Ontario, Canada

Education

1978	BS	Zoology	The George Washington University, Washington, DC
1987	Ph.D.	Anatomy and Neuroscience	Albany Medical College, Albany, NY
1992	M.D.	Medicine	Yale University School of Medicine, New Haven, CT

Postdoctoral Training

1/92 – 9/92	Intern	Internal Medicine	Yale New Haven Hospital
9/92 – 6/94	Resident	Internal Medicine	Yale New Haven Hospital
7/94 – 6/97	Fellow	Pulmonary and Critical Care Medicine	Yale University School of Medicine
7/87 – 6/88	Postdoctoral Associate	Neuroanatomy	Yale University School of Medicine
6/88 – 12/90	Postdoctoral Associate	Molecular Neurobiology	Howard Hughes Medical Institute and Yale University School of Medicine

Faculty Academic Appointments

1997 – 1998	Instructor	Medicine	Yale University School of Medicine
1998 – 2000	Assistant Professor	Medicine	Yale University School of Medicine
2000 – 2001	Assistant Professor	Medicine	Tufts University School of Medicine
2001 – 2011	Assistant Professor	Medicine	Harvard Medical School, Boston, MA
2011 -	Associate Professor	Medicine	Harvard Medical School, Boston, MA

Appointments at Hospitals/Affiliated Institutions

1993-1994	Attending Physician	Emergency Room	West Haven VA Hospital
1994-1995	Attending Physician	Emergency Medicine	Bristol Hospital, Bristol CT
1995-1997	Attending Physician	Emergency Medicine	Yale New Haven Hospital
1995-1999	Attending Physician	Emergency Medicine	Hospital of Saint Raphael
7/96-12/99	Attending Physician	Pulmonary Critical Care	West Haven VA Hospital
7/97-12/99	Attending Physician	Pulmonary Critical Care	Yale New Haven Hospital
1/00-12/01	Attending Physician	Pulmonary Critical Care	Winchester Hospital

1/00-12/01	Attending Physician	Pulmonary Critical Care	New England Medical Center, Boston
1/00-12/09	Attending Physician	Emergency Medicine	Faulkner Hospital, Boston, MA
1/02 – 11/09	Attending Physician	Pulmonary Critical Care	Massachusetts General Hospital
11/09 -	Consulting Staff	Medical Oncology	Dana-Farber Cancer Institute
11/09 -	Associate Physician	Pulmonary Critical Care	Brigham and Women's Hospital
08/13– 07/16	Attending Physician	Cardiology	Boston Children's Hospital

Major Administrative Leadership Positions

Local

1998-1999	Associate Medical Director, Medical Intensive Care Unit	Yale New Haven Hospital
1999-2001	Director of Bronchoscopy Services	Yale New Haven Hospital
2001	Medical Director of Respiratory Therapy	New England Medical Center
2005-2009	Director, Pulmonary Vascular Disease Program	Massachusetts General Hospital
2009 -	Director, Pulmonary Vascular Disease Program	Brigham and Women's Hospital
2011-	Director, Dyspnea and Performance Evaluation Center	Brigham and Women's Hospital
2012-2015	Associate Program Director, PCCM fellowship training program	Brigham and Women's Hospital and Harvard Medical School
2013-	Executive Director, Center for Pulmonary Heart Diseases	Brigham and Women's Hospital Heart and Vascular Center

Committee Service

Local

1983-1984	Curriculum Committee	Albany Medical College.
	1983-1984	Member, Graduate Studies Program
1993-1994	Education Committee	Yale University School of Medicine, Department of Medicine
	1993-1994	Member
1996-1999	Fellowship Curriculum Committee	Yale University School of Medicine, Section of Pulmonary and Critical Care
	1996-1999	Chairperson
1996-1999	Fellowship Admissions Committee	Yale University School of Medicine, Section of Pulmonary and Critical Care
	1996-1999	Member
1996-1999	Bronchoscopy Quality Assurance Committee	Yale New Haven Hospital
	1996-1999	Chairperson
2002-2003	Fellowship Admissions Committee	Yale University School of Medicine
		Member
2004	Task Force on Sepsis Management and Early Goal Directed Therapy, Critical Care Committee	Massachusetts General Hospital
	2004	Chairperson
2004	Task Force on the Use of Albumin in Resuscitation in Shock, Critical Care Committee	Massachusetts General Hospital
	2004	Chairperson

2004-2009	Optimum Care Committee 2004-2009	Massachusetts General Hospital Member
2007-2009	Clinical Research Council, 2007-2009	Massachusetts General Hospital Member
2014	Acute Pulmonary Embolism Program	Director of Steering Committee, Brigham and Women's Hospital

National and International

2003-2011	Partnership for Excellence in Critical Care	One of the founding members with a leadership role in a number of quality improvement initiatives
2008-2010	Biomarkers in Pulmonary Vascular Disease	Chair of Planning Committee for International Meeting
2012, 2013, 2014	International Right Heart Failure Summit Annual Meeting	Co-Chair of organizational committee developing an international expert forum focused on pathophysiologic and clinical issues focused on right heart failure from multiple pathways.
2013-present	International Right Heart Failure Foundation	Founding member and Chair of the Scientific Steering Committee
2013	Pulmonary Vascular Research Institute - joint Symposium of the Excellence Cluster Cardiopulmonary System (ECCPS) and Pulmonary Vascular Research Institute (PVRI) in Bad Nauheim, Germany	Member of the scientific committee responsible for meeting organization and content.
2014	Pulmonary Vascular Research Institute – 8 th World Congress	Director of Scientific Affairs and head of committee responsible for meeting organization and content.

Professional Societies

1983-1992	American Association of Anatomists	
1996-	Society for Critical Care Medicine	
1996-	American College of Physicians	
	2013	Fellow
1996-	American College of Chest Physicians	
	1998-	Fellow
	2006-2007	Member, Chest Journal CME Task Force
1996-	American Thoracic Society ATS Pulmonary Circulation Assembly Program Committee for 2012.	Program committee to plan the Pulmonary Circulation Assembly's sessions for the 2013 International Conference, May 17-24 in Philadelphia, PA. Review abstracts submitted to the

		Assembly and help program acceptable abstracts into the appropriate format
2004-	Pulmonary Hypertension Association	
	2004-	Member, Clinicians and Researchers Scientific Leadership Council, Scientific Sessions Committee. Committee responsible for planning structure and content of sessions at 2010 PHA International Conference
	2008-2010	
	2011-2012	Scientific Leadership Council, Scientific Sessions Committee. Committee responsible for planning structure and content of sessions at 2012 PHA International Conference
2006-	Pulmonary Arterial Hypertension Education Initiative	
	2006-2008	Member, Educational Council
2008	European Respiratory Society	Member
2008-	Wilderness Medical Society	Member
2009-	Pulmonary Vascular Research Institute	Fellow
2013-	Pulmonary Vascular Research Institute	Chair, Right Heart Failure Task Force
2014-2015	Pulmonary Vascular Research Institute	Director, Scientific Affairs – Organize the annual international meeting, oversee all educational activities of the institute

Editorial Activities

Ad Hoc Reviewer

Brain, Pediatric Research, Journal of Intensive Care Medicine, American Journal of Medicine, American Journal of Physiology: Lung Cellular and Molecular Physiology, Chest, American Journal of Respiratory Cell and Molecular Biology, Cytokine, Journal of Experimental Medicine, Respiratory Medicine, American Heart Journal, Circulation, Thrombosis and Hemostasis, Circulation Heart Failure, Journal of Heart and Lung Transplantation, Circulation Research, Pulmonary Circulation

Other Editorial Roles

2010	Editorial Board	Pulmonary Circulation
2012	Editorial Board	The Journal of Heart and Lung Transplantation

Honors and Prizes

1982-1987	Trustee Scholarship	Albany Medical College	Academic
1985, 1986	Dean's Award and Prize for Leadership	Albany Medical College	Leadership
1985, 1986	Dean's Award and Prize for Excellence in Teaching	Albany Medical College	Teaching
1987	Alumni Association Medal and Prize	Albany Medical College	Research and Teaching
1987	Sigma Xi	Sigma Xi Research Society	Excellence in scientific

1997	Young Investigator's Awards	American College of Chest Physicians	investigation Excellence in scientific investigation
1999	Merck Respiratory Young Investigator Fellowship Teaching Award, Pulmonary Critical Care Fellowship	Merck and Company, Inc	Excellence in scientific investigation
1999	Oliver Smith Award	Yale University School of Medicine	Excellence in Teaching and Mentorship
2001	Pulmonary Critical Care Fellows Award for Teaching and Mentorship	Tufts Medical Center	Recognition for outstanding patient care Excellence in Teaching and Mentorship
2002	Susan & Katherine McArthur-Radovsky Award	Tufts Medical Center	Excellence in Teaching and Mentorship
2011	Partners in Excellence Award	Brigham and Women's Hospital	Research and Clinical
2014	Excellence in Mentoring Award	Brigham and Women's Hospital	Development of Right Heart Failure Team
2014		Harvard Medical School	Nominee

Report of Funded and Unfunded Projects

Funding Information

Past

- 1997-1999 IL-11 protection from hyperoxic lung injury
Parker B. Francis Fellowship Award
Role: Principle Investigator
Goals: Characterize the protective effects of IL-11 pretreatment in the setting of hyperoxic injury. Characterize the mechanism(s) of IL-11-induced protection in the setting of hyperoxic injury.
- 1998-2004 Mechanisms of IL-11 protection from hyperoxic lung injury
Mentored Clinical Scientist Research Award (KO8 HL03888-01)
Role: Principle Investigator
Goals: Compare the expression of apoptosis regulators in IL-11 transgene (+) and littermate control mice before and after exposure to 100% oxygen. Establish an *in vitro* system that can be used to define the mechanism of hyperoxia- (oxidant) induced apoptosis and the protective effects of IL-11.
- 1999-2001 Mechanisms of IL-11 protection from hyperoxic lung injury
American Lung Association Research Grant
Role: Principle Investigator
Goals: Define the kinetics and the specific cell populations that undergo apoptosis in hyperoxic lung injury. Define the alterations in apoptosis regulatory processes and, characterize the alterations in regulators of apoptosis induced by IL-11 and determine their role in mediating IL-11-induced protection in lung injury.
- 2004-2009 Interleukin-11 and Interleukin-6 protection from oxidant mediated lung injury
NIH RO1 Research Grant RO1 HL074859
Role: Principle Investigator

- Goals: Characterize the signal transduction pathways that mediate IL-11 and IL-6 induced protection from oxidant stress *in vitro* and examine the relationship to upregulation of mediators of cell death. Evaluate the contribution(s) of Bcl 2 family proteins to protection of pulmonary epithelial and microvascular endothelial cells *in vitro*. Evaluate the contribution(s) of Bcl 2 family proteins to protection *in vivo*.
- 2006-2009 MGH Pulmonary Vascular Development Fund
Internal award for research on pathogenesis of pulmonary hypertension
Role: Principle Investigator
Evaluation of the role of inflammatory mediators in pulmonary vascular remodeling in a mouse model of pulmonary hypertension
- 2007-2009 A study to quantify the number of circulating endothelial cells in patients with severe sepsis.
Sponsor: Eli Lilly and Company - Investigator Initiated Grant
Role: Principle Investigator
Goals: Quantify and characterize abnormal circulating populations of endothelial cells in patients with severe sepsis and septic shock as a mechanism for multi organ failure syndrome
- 2007-2011 Open-label Study to Evaluate the Safety and Efficacy of PRX-08066 in Patients with Pulmonary Hypertension and Chronic Obstructive Pulmonary Disease.
Sponsor: EPIX Pharmaceuticals - Investigator Initiated Study
Role: Principle Investigator
- 2007-2011 A randomized, double blind, placebo-controlled study of oral UT-15C SR in Subjects with Pulmonary Arterial Hypertension
Sponsor: United Therapeutics, Protocol No. TDE-PH-201
Role: Principle Investigator
- 2008-2012 A Phase 2, Randomized, Double-blind, Placebo-controlled, Multicenter, Dose-ranging study of Cicletanine in Subjects with Pulmonary Arterial Hypertension
Sponsor Gilead Sciences (Chair of Steering Committee)
Role: Principle Investigator and Steering Committee Chairman
Goals: Assess the efficacy and safety of a novel eNOS coupler, Cicletanine, in patients with pulmonary arterial hypertension.
- 2011-2013 Brigham and Women's Hospital Clinical Innovations Grant, Development of a Multidisciplinary Dyspnea/Exercise Intolerance Center
Role: Principle Investigator and Director
Goals: Establish of a comprehensive center to evaluate patients with resting or exertional dyspnea, bringing together a core group of clinical experts to collaboratively develop a streamlined efficient and effective approach to assessing and treating the patient with dyspnea.
- 2005-2012 REVEAL Registry
Sponsor: Actelion, Protocol No. RIV PH-408
Role: Site Principle Investigator
Goals: Development of a 5000 patient database of patients with PAH in order to better define the natural history of the disease.
- 2013-2016 Study to assess the fate, safety, and efficacy of allogeneic mesenchymal stromal cells in a large animal model of precapillary pulmonary hypertension and right ventricular dysfunction
United Therapeutics, Investigator Initiated Grant
Role: Principle Investigator

- Goals: preclinical and clinical study to assess the safety and efficacy of allogeneic mesenchymal stromal cells infused into the right coronary artery in a large animal model of pulmonary hypertension and in patients with PAH and right ventricular dysfunction.
- 2012-2016 Heme Oxygenase – 1/Carbon Monoxide in Lung Vascular Injury
Role: Site Principle Investigator
NHLBI: R01HL06023412A1
- Goals: My role is specific to Aim 3 and includes an assessment of the efficacy of carbon monoxide in ameliorating pulmonary vascular remodeling via inhibition of inflammasome
- 2014-2016 PCORI Clinical Data Research Network (CDRN) - Scalable Collaborative Infrastructure for Learning Healthcare System, PCORNet Rare Diseases Task Force, Harvard University Representative
Goals: 29 clinical research data networks that together will form an ambitious new resource known as PCORnet, the National Patient-Centered Clinical Research Network. PCORnet will be a large, highly representative, national network for conducting clinical outcomes research.

Current

- 2014-2019 Integrated Endothelial Phenotyping to Redefine Pulmonary Hypertension.
NHLBI U01 HL125215-01
Role: Co-Principle Investigator (with Dr. Jane Leopold)
Goals: performing patient phenotyping, which will lead to novel sub classifications of patients with pulmonary vascular-right ventricular disease, based on molecular and radiographic as well as clinical characteristics, which can be associated with specific molecular mechanisms of pathogenesis.
- 2008-2016 An open label uncontrolled study of the safety and efficacy of ambrisentan in patients with exercise induced pulmonary arterial hypertension.
Gilead Science, Investigator Initiated Grant
Role: Principle Investigator
Goals: 6-month study to evaluate the effects of Ambrisentan (selective ETRA) administered orally on exercise capacity utilizing invasive cardiopulmonary exercise testing in patients with either exercise induced pulmonary arterial hypertension or diastolic dysfunction.
- 2013-2016 Targeting metabolism to reverse RV dysfunction in PAH
The Cardiovascular Medical Research and Education Fund
Role: Co-Principle Investigator (Co-Principle Investigator with Dr. Yuchi Han at University of Pennsylvania)
Goals: Multicenter study with colleagues at the University of Pennsylvania and the University of Maryland. This proposal will identify: (A) Key molecular and metabolic regulatory pathways that may be targeted for recovery of RV function in patients with PAH; and (B) Specific imaging, plasma, and metabolic markers to better guide prognosis and therapy of the RV dysfunction in PAH.

Current Unfunded Projects

- 2007- Principle Investigator
Patient registry and biological database
Ongoing collection of patient samples obtained during right heart catheterization and invasive CPET from the pulmonary artery and radial artery at rest, peak exercise, and one hour post exercise

Report of Local Teaching and Training

Teaching of Students in Courses

Yale University School of Medicine

1995-1997	Yale Physician Associate Program, Introduction to Clinical Medicine for Pulmonary Section 1 st year students.	Lecturer, Course Coordinator 6 hours
1996-1999	Introduction to Clinical medicine for Pulmonary Medicine Section 2nd year medical students	Lecturer 4 1-hour lectures over a 2 mos period
1997-1999	Introduction to Clinical Medicine Course 2nd year medical students	Preclinical Tutor 4-hrs/wk for 16-wks
1998-1999	Introduction to Clinical Medicine Course, Cellular and Molecular Basis of Acute Lung Injury 2nd year medical students	Lecturer 1-hour lecture

Harvard Medical School

2003-	Introduction to Clinical Medicine Course, Human Systems, Respiratory/Cardiovascular Sections 2 nd year medical students	Preclinical Tutor 2-hrs/day 3-days/wk for 8 wks
2004-2008	Respiratory Infections, Human Systems, Respiratory/Cardiovascular Sections 2nd year medical students	Lecturer 1-hr per year

Formal Teaching of Residents, Clinical Fellows and Research Fellows (post-docs)

1997-1999	Acute Care Lecture Series, Internal Medicine Residency Program, Critical Care Summer Lecture Series	Lecturer - Yale New Haven Hospital 2 1-hour lectures
2000-2008	Critical Care Lecture Series Internal Medicine Residency Program	Lecturer – MGH 2 hours per month
2003-2008	Airway Workshop, airway management course; Pulmonary Critical Care Training Program Presented annually to incoming first year fellows in the Harvard Combined Program	Course Director and Lecturer - HMS 1-full day
2003-2008	Introduction to Bronchoscopy Course, Indication, Contraindication and Consent Presented annually to incoming first year fellows throughout New England	Lecturer - HMS 1-full day
2004-2009	Pulmonary Vascular Physiology Clinical Training Includes training and supervision of fellows	Preceptor - HMS 3-hours every week
2005-2009	Cardiopulmonary Physiology Lecture Series Pulmonary Critical Care fellowship trainees	Lecturer and Organizer – HMS training program 1-hour every week

Clinical Supervisory and Training Responsibilities

Yale University School of Medicine

1996-1997	Service Attending in the Medical Intensive Care Unit and Pulmonary Consultation Service, West Haven Veterans Hospital, Yale University Internal Medicine Training Program (1 Fellow, 1 Resident, 1 Student)	One month
1996-1997	Service Attending in the Medical Intensive Care Unit and Pulmonary Consultation Service, West Haven Veterans Hospital, Yale University Internal Medicine Training Program (1 Fellow, 1 Resident, 1 Student)	One month
1996-1999	Attending Physician, Pulmonary Consultation Service, West Haven Veterans' Administration Hospital	One month
1996-1999	Service Attending in the Medical Intensive Care Unit, Yale New Haven Hospital, Yale University Internal Medicine Training Program (1 Fellow, 3 Residents, 3 Interns, 2 Students)	Three months each year
1997-1999	Pulmonary Consultations Service Attending, Yale New Haven Hospital, Yale University Pulmonary Fellowship Training Program (1-2 Fellows, 1-2 Residents, 1-2 Students)	2 weeks each year
1997-1999	Attending Physician, Medical Intensive Care Unit, YNHH	3 months each year
1997-1999	Attending Physician, Pulmonary Consultation Service, YNHH	2 months each year
<i>New England Medical Center</i>		
2000 – 2001	Pulmonary Service Attending, Tufts University Internal Medicine Training Program (1 Fellow, 1 Resident, 2 Interns, and 1-2 Students)	Four weeks each year for 2 years
2000-2001	Service Attending in the Medical Intensive Care Unit, New England Medical Center, Tufts University Internal Medicine Training Program (1 Fellow, 5 Residents, 3 interns, and 1-2 Students)	Three months each year for two years
2000-2001	Attending Physician, Medical Intensive Care Unit, NEMC	2 months
<i>Winchester Hospital</i>		
2000-2001	Attending Physician Medical Intensive Care Unit, Winchester Hospital	2 months per year
<i>Harvard Medical School</i>		
2002-2009	Pulmonary Consult Attending, Massachusetts General Hospital, Harvard Medical School Pulmonary Critical Care Training Program (2 Fellows, 1-2 Residents, and 1-2 Students)	Two weeks each year
2002-2009	Critical Care Attending, Medical Intensive Care Unit, Massachusetts General Hospital, Harvard	Three months each year

2003-2009	Medical School Internal Medicine and Pulmonary Critical Care Training Program (1 Fellow, 3 Residents, 3 interns, and 1-2 Students) Pulmonary Clinic, Clinical Preceptor, Internal Medicine Residency Program (1 st , 2 nd and 3 rd year medical residents)	2 and a half days per week
2009-	Pulmonary Vascular Disease and Critical Care Attending, Brigham and Women's Hospital, Harvard Medical School Anesthesiology, Ob-Gyn, Surgery, Internal Medicine, and Pulmonary Critical Care Training Programs (1 Fellow, 4 Residents, 1 interns)	Two months each year

Laboratory and Other Research Supervisory and Training Responsibilities

Massachusetts General Hospital

2001- 2010	Principle Investigator Pulmonary Research Laboratory	15% effort
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Formally Supervised Trainees

1997-1998	Jonathan Corne, MBBS, Yale School of Medicine. Current position: Senior Consultant, Queens University Medical Center Nottingham, England, Funded by the Medical Research Council of the United Kingdom Research Advisor, 2 years. <i>IL-13 stimulates vascular endothelial cell growth factor and protects against hyperoxic lung injury.</i>
1996-1999	Nicholas Ward, M.D., Yale School of Medicine. Current position: Associate Professor, Brown University School of Medicine. Research Advisor, 2 years. <i>Evaluation of IL-6 induced protection in hyperoxic acute lung injury using an overexpression transgenic model</i>
2001-2002	Hubert Chen, M.D., MPH, Current position: Medical Director at Genentech. Research Advisor, 1 year. <i>Potential Cost-Effectiveness of Epoprostenol as First-line Therapy for Pulmonary Arterial Hypertension.</i>
2003-2005	Po-Shun Lee, M.D., Current position in industry. Research Advisor, 2 years, <i>Plasma Gelsolin is a Critical Pro-Survival Factor in Sepsis; Evaluation of the role of cytoskeletal components and cellular debris in the initiation of the systemic inflammatory response.</i> Second Prize 2005 New England Respiratory Research Competition Award, Research Advisor, Current position Translational Medicine Expert at Novartis Institutes for BioMedical Research
2003-2007	George Barker, M.D., Ph.D. Current position, Clinical faculty Harvard Medical School, Mount Auburn Hospital, Primary Mentor, Research Advisor, 3 years. <i>DNA Damage in Hyperoxic Lung Injury.</i> Recipient of the GSK Mentored Pulmonary Research Fellowship 2004-2005, First Prize 2005 New England Respiratory Research Competition Award.
2005-2008	James Tolle, M.D., Current position, Assistant Professor, Vanderbilt University School of Medicine, Research Advisor, 3- years. <i>Abnormal Systemic Oxygen Extraction in Pulmonary Hypertension During Incremental Exercise.</i>
2006-2008	M. Kathryn E. Steiner, M.D., Current position, Staff Pulmonologist, New England Baptist Hospital, Primary Mentor, Research Advisor, 2-years. <i>Role of IL-6 in the Pathogenesis of</i>

- Pulmonary Hypertension.*
- 2005- 2010 Narasiah Kolliputi, Ph.D., Current position, Associate Professor, University of South Florida, Primary Mentor, 5-years. *Role of IL-6 in protection from cell death.* Recipient of an AHA research award in lung injury, FASEB Young Investigator Award, and successfully RO1 funded
- 2013 Bart Boerrigter, M.D., Ph.D., Current Position, Clinical fellowship in pulmonary medicine, VU University Medical Center, Amsterdam. Research mentor as part of pre-doctoral research, *Pulmonary hemodynamics and exercise in chronic obstructive pulmonary disease.*
- 2012-2014 Mario Santos, M.D., Ph.D., Current position, Department of Physiology and Cardiothoracic Surgery, Cardiovascular R&D Unit, Faculty of Medicine, University of Porto, Portugal, Research mentor, Study of the physiologic limits to aerobic capacity in heart failure with preserved ejection fraction, and pulmonary hypertension.
- 2014-2015 Manyoo Agarwal, MBBS, Research Fellowship in pulmonary vascular disease and exercise physiology. Research Mentor as part of postdoctoral research fellowship, *Treatment of Group-3 PH with pulmonary vasodilator therapy.*
- 2014-2015 Rudolph Oliveira, M.D., Research Fellowship in pulmonary vascular disease and exercise physiology. Research Mentor as part of postdoctoral research fellowship, *Hemodynamic and physiologic characteristics of patients with connective tissue disease related lung disease*
- 2014-2015 Wei Huang, M.D., Research Fellowship and Clinical Observership funded by the State Hospital In Chongqing China. Research and Clinical mentor, *Outcomes of patients with EiPAH and HFpEF*
- 2014-2016 Roza Badreslam, M.D., Erin-Schrodinger-Fellowship, Austrian Science Fund. Research Mentor, post-doctoral research fellowship, *Right ventricular remodeling and mitochondrial function*

Formal Teaching of Peers (e.g., CME and other continuing education courses)

No presentations below were sponsored by outside entities

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|------------|--|--------------------------------------|
| 2002 | Bioterrorism Preparedness and Response
Harvard Medical School, Continuing Medical Education,
Pulmonary Critical Care Postgraduate Course, MGH | Single presentation
Cambridge, MA |
| 2002 | Bioterrorism Preparedness and Response. Harvard University
Wide Health Policy Program Core Seminar Series, Public Health
Section, Kennedy School of Government, Harvard University | Cambridge MA |
| 2002 | 73 year old woman with Pneumonia and Respiratory Failure.
Clinical Pathologic Conference of the Massachusetts General
Hospital and Harvard Medical School | Boston, MA |
| 2003 | Severe Sepsis and Septic Shock: New Options for Treatment.
Anesthesia Critical Care Grand Rounds, Beth Israel Deaconess
Medical Center and Harvard Medical School | Boston, MA |
| 2003 | Pulmonary Arterial Hypertension, Evaluation and Management.
Medical Grand Rounds, Massachusetts General Hospital | Boston, MA |
| 2003, 2004 | Fluid Resuscitation in Septic Shock
Harvard Medical School, Continuing Medical Education,
Pulmonary Critical Care Postgraduate Course, MGH | Single presentation
Cambridge, MA |

2003, 2004	Severe Sepsis: New Options in the Treatment of Sepsis Harvard Medical School, Continuing Medical Education, Pulmonary Critical Care Postgraduate Course, MGH	Single presentation Cambridge, MA
2003, 2004	Pulmonary Arterial Hypertension Harvard Medical School, Continuing Medical Education, Internal Medicine Postgraduate Review Course, MGH	Single presentation Cambridge, MA
2004	Acute Respiratory Distress Syndrome Harvard Medical School Continuing Medical Education, Intensive Review of Internal Medicine, Postgraduate Review Course, Brigham and Women's Hospital	Single presentation Boston, MA
2004, 2006, 2007,	Fluid Resuscitation in Vasodilatory Shock; Crystalloids versus Colloids Harvard Medical School Continuing Medical Education, Pulmonary Critical Care Postgraduate Course, MGH	Cambridge, MA
2005, 2006, 2007, 2008	Pulmonary Arterial Hypertension: Evaluation and Management Harvard Medical School Continuing Medical Education: • Internal Medicine Postgraduate Review Course (2005) • Pulmonary Critical Care Postgraduate Course (2008), MGH	Cambridge, MA
2006	Update on Therapy in Pulmonary Arterial Hypertension Harvard Medical School Continuing Medical Education, Advanced Heart and Lung Disease, MGH	Single presentation Cambridge, MA
2007	Inflammation and Pulmonary Vascular Remodeling. Harvard Medical School Combined Pulmonary Critical Care Grand Rounds	Boston MA
2007	Evaluation and Management of Pulmonary Arterial Hypertension for the General Internist Harvard Medical School Continuing Medical Education, Internal Medicine Postgraduate Review Course, MGH	Single presentation Cambridge, MA
2007	Simply Speaking - Post Conference Update: American Thoracic Society Pulmonary Arterial Hypertension Educator's CME Lecture Series (Unrestricted Industry Grants)	Boston, MA
2007	Evolving Management of ARDS; Less is Definitely Better. Pediatric Pulmonary Conference, Massachusetts General Hospital	Boston, MA
2008, 2009	Fluid Resuscitation in Shock; Crystalloids and Colloids, is there any difference? Harvard Medical School Continuing Medical Education, Pulmonary Critical Care Postgraduate Course, MGH	Single presentation Cambridge, MA
2009	Pulmonary Arterial Hypertension: Chronic and Acute and Management Harvard Medical School Continuing Medical Education, Pulmonary Critical Care Postgraduate Course, MGH	Single presentation Cambridge, MA
2009	Pulmonary Arterial Hypertension; A Systemic Disease.	Boston, MA

- Rheumatology Grand Rounds, Massachusetts General Hospital
- 2009 Systemic Issues in PHT: The View from the Rest of the Body. Boston, MA
Congenital Heart Disease-Associated Pulmonary Hypertension: A
Two Day "Master Class", Children's Hospital
- 2010 Pulmonary Arterial Hypertension – Management in the Acute Boston, MA
Setting. Anesthesia Critical Care Grand Rounds, Brigham and
Women's Hospital
- 2010 Pulmonary Arterial Hypertension – A Systemic Inflammatory Boston, MA
Disease. Cardiovascular Medicine Grand Rounds, Brigham and
Women's Hospital
- 2010 Making the Diagnosis of Pulmonary Arterial Hypertension, It Still Boston, MA
Takes too Long, Brigham and Women's Hospital
- 2011 New Therapies: Targeting The Right Ventricle in PAH.
Pulmonary Grand Rounds, Brigham and Women's Hospital, Boston, MA
- 2012 Pulmonary Hypertension; Controversy in Diagnosis and management. Medical Grand
Rounds, Faulkner Hospital, Boston, MA
- 2013 CTEPH – Diagnostic Approaches and Therapeutic Options. Combined Cardiac Surgery
and Thoracic Surgery Clinical Conference, Brigham and Women's Hospital
- 2013 Idiopathic Pulmonary Arterial Hypertension; Clinical Presentation, Diagnosis, Therapy,
and Prognosis. Harvard Medical School Continuing Medical Education, Biannual
Cardiovascular Medicine Review Course
- 2015 Chronic Thromboembolic Pulmonary Hypertension, Biannual Thrombosis and
Thromboembolism Course, Harvard Medical School Continuing Medical Education
Brigham and Women's Hospital, Boston, MA
- 2016 Clinical Case of the Month; 61 year old woman with dyspnea on exertion., Medical Grand
Rounds, Brigham and Women's Hospital, Boston, MA
- 2016 Recent advances in Pulmonary Arterial Hypertension; Translating preclinical studies into
clinical practice., Medical Grand Rounds, Brigham and Women's Hospital, Boston, MA

Local Invited Presentations

No presentations below were sponsored by outside entities

- 1997 The Pulmonary Artery Catheter; A Technology Assessment.
Yale University School of Medicine, Connecticut State Chest Conference, New Haven, CT
- 1997 The Pulmonary Artery Catheter Under Fire; Do The Data Support It's Continued Use In
The ICU Medical Grand Rounds, Greenwich Hospital, Greenwich, CT
- 1997 Critical Care Update on Mechanical Ventilation. Yale University School of Medicine,
Connecticut State Chest Conference, New Haven, CT
- 1999 Protection from oxidant induced lung injury: Modulation of cell death pathways
The John B. Pierce Laboratory, Center for Research in Health and the Environment and
Yale University School of Medicine, New Haven, CT
- 1999 Patient with acute onset of dyspnea. Medical Grand Rounds, Yale New Haven Hospital
and Yale School of Medicine, New Haven, CT
- 1999 Management of Shock with an emphasis on septic shock. Yale University School of
Medicine, Connecticut State Chest Conference, New Haven, CT

- 2001 A patient with rapidly progressive dyspnea and hemodynamic collapse –Medical Grand Rounds, New England Medical Center, Boston, MA
- 2001 27-Week Pregnant Patient with Massive Pulmonary Embolism – Critical Care Management. Yale University School of Medicine, Pulmonary Critical Care Fellowship Clinical Conference, New Haven, CT
- 2004 Chronic Obstructive Pulmonary Disease, Update on Evaluation and Management
Harvard Vanguard Medical Associates, Continuing Medical Education Series, Boston, MA
- 2004 Pulmonary Arterial Hypertension, Evaluation and Management in the 21st Century. Massachusetts Society for Respiratory Care (MSRC) Twenty-Seventh Annual Meeting, Springfield, MA
- 2004 Diagnosis and Management of Pulmonary Arterial Hypertension: ACCP Evidence-Based Clinical Practice Guidelines. What are they? Should we use them? 2nd Annual Update in Pulmonary Hypertension, Boston, MA
- 2007 Inflammatory Mediators and the Pathogenesis of Pulmonary Arterial Hypertension, a New Paradigm. 5th Annual Update in Pulmonary Hypertension, Boston, MA
- 2008 Pulmonary Arterial Hypertension. Massachusetts General Hospital, The Norman Knight Nursing Center for Clinical and Professional Development, Pulmonary Hypertension Education Day, Boston, MA
- 2008 Pathway Directed Therapy, A Look Towards The Future – 6th Annual Update in Pulmonary Hypertension, Boston MA
- 2009 Pulmonary Arterial Hypertension, A Systemic – Inflammatory Disease. The Warren Alpert Medical School of Brown University, Division of Pulmonary, Sleep and Critical Care Medicine, Rhode Island Hospital, Providence, RI
- 2010 Cancer Chemotherapies: Role in PAH? 7th Annual Update in Pulmonary Hypertension
Boston, MA
- 2011 Non Group-1 Pulmonary Hypertension, Evaluation and Management. Combined Pulmonary and Cardiology Conference, Mount Auburn Hospital, Cambridge, MA
- 2011 Unexplained shortness of breath; A systematic approach to evaluation in women vs. men. Women’s Health CME Course, Brigham and Women’s / Massachusetts General Hospital and Harvard Medical School, Foxborough, MA
- 2011 PAH, Clinical Presentation, Diagnosis, and Therapy. Combined Cardiology and Pulmonary Grand Rounds, South Shore Hospital, Weymouth MA
- 2011 Pulmonary Hypertension, Definition, Presentation, Diagnosis, and Therapy. Combined Cardiology and Pulmonary Grand Rounds, Leonard Morse – Metro West Medical Center, Natick MA
- 2012 Cellular Respiration: Advances in Therapeutic Targeting in PH. Pulmonary Research Seminar, Tufts University School of Medicine, Tufts Medical Center, Pulmonary Critical Care Division, Boston, MA
- 2013 Unexplained Dyspnea; A Systematic Approach to Evaluation. Medical Grand Rounds, Melrose Wakefield Hospital, Melrose, MA
- 2014 Pulmonary Arterial Hypertension: Diagnostic Approach and Treatment. Spaulding Rehabilitation Hospital, Cambridge MA

- 2014 Improving Outcomes in Pulmonary Heart Disease: Diagnostic Approach and Treatment. Medical Grand Rounds, Beth Israel Deaconess Medical Center - Needham, Needham, MA
- 2014 Practical Management of PAH: A Case-Based Approach. Prima Care Medical, Pulmonary Medicine, Fall River, MA
- 2014 Improving Outcomes in Pulmonary Heart Disease; Diagnostic Approach and Treatment. Medical Grand Rounds, Good Samaritan Hospital, Brockton, MA
- 2014 Non Group-1 Pulmonary Hypertension, Ignored but not Forgotten. Medical Grand Rounds, Saint Elizabeth's Medical Center, Boston, MA
- 2014 Improving Outcomes in Pulmonary Vascular Disease; Sometimes it is a Zebra. Medical Grand Rounds, Lowell General Hospital, Lowell, MA
- 2014 Prostaglandin Pathway – New Drugs and Approaches. 12th Annual Update in Pulmonary Hypertension, Boston, MA
- 2016 Unexplained Dyspnea; Diagnosis based on physiology., Harvard University Health Services, Grand Rounds, Cambridge, MA

Report of Regional, National and International Invited Teaching and Presentations

Invited Presentations and Courses

Regional

No presentations below were sponsored by outside entities

- 1997 Interleukin-11 Protection from Hyperoxic Lung Injury - Connecticut Thoracic Society, 1997 Connecticut Lung Research Conference, Meriden, CT
- 2001 Update On Therapy for Pulmonary Hypertension - Yale University School of Medicine, Connecticut State Chest Conference, New Haven, CT
- 2002 Therapy for Pulmonary Artery Hypertension in the 21st Century –Medical Grand Rounds The North Shore Medical Center, Salem Hospital, Salem, MA
- 2002 National Asthma Education and Prevention Program, Update on Asthma Therapy – Medical Grand Rounds, Caritas Norwood Hospital, Norwood, MA
- 2003 Spirometry and Asthma – Lung Update Series, American Lung Association of Greater Norfolk County Norwood, MA
- 2003 Community Acquired Pneumonia: Epidemiology, Diagnosis, and Management – Medical Grand Rounds, Caritas Saint Anne's Hospital, Fall River, MA
- 2003 Community Acquired Pneumonia: Diagnosis and Management – Medical Grand Rounds New England Sinai Hospital and Rehabilitation Center, Stoughton, MA
- 2004 Chronic Obstructive Pulmonary Disease, Evaluation, Management, and Treatment – Medical Grand Rounds, Veterans Administration Hospital, Togus, ME
- 2006 Management of ARDS: Less May Be Better – Medical Grand Rounds, Newton-Wellesley Hospital, Newton, MA
- 2008 Pulmonary Hypertension, Controversies in Management – Medical Grand Rounds, Newton-Wellesley Hospital, Newton, MA
- 2008 Treatment of Pulmonary Hypertension: Approach to the Patient Who Worsens on Therapy – 3rd Annual Update on Pulmonary Hypertension, Brown University School of Medicine,

Rhode Island Hospital, Providence, RI

- 2009 Pulmonary Arterial Hypertension; A Systemic Disease – 12th Annual Yale Pulmonary Critical Care Alumni Lecture, New Haven CT
- 2009 Pulmonary Arterial Hypertension, Update on Evaluation and Management – Medical Grand Rounds, Hospital of Saint Raphael's, Yale School of Medicine, New Haven, CT
- 2010 Pulmonary Arterial Hypertension: Management Of PAH In The Acute Setting – What Do You Do When The Patient Is Decompensating – Pulmonary Critical Care Fellows Conference, Division of Pulmonary Critical Care Medicine, Yale University School of Medicine
- 2010 Pulmonary Arterial Hypertension, A Systemic - Inflammatory Disease – Connecticut State Chest Conference Yale University School of Medicine
- 2012 Improving Outcomes in Pulmonary Hypertension; Diagnostic Approaches and Therapeutic Options. Medical Grand Rounds, Memorial Hospital, Pawtucket, RI
- 2013 Innovation in Targeting Pulmonary Heart Disease. Connecticut State Chest Conference, Yale University School of Medicine, New Haven, CT – Visiting Professor Spring 2013
- 2013 Inflammation – Playing a Central Role in Pulmonary Heart Disease. Pulmonary Critical Care Research Conference, Yale University School of Medicine, New Haven, CT – Visiting Professor Spring 2013
- 2013 Improving Outcomes in Pulmonary Hypertension; Diagnosis and Treatment. Medical Grand Rounds, Berkshire Medical Center, Pittsfield, MA
- 2014 Improving Outcomes in Pulmonary Heart Disease: Diagnostic Approach and Treatment. St. Vincent's Hospital, Worcester, MA
- 2014 Making Therapy Decisions in Individual PAH Patients: Balancing Efficacy, Safety and Tolerability. Cardiology Seminar, Hartford Cardiology Associates, New Haven, CT
- 2014 Improving Outcomes in Pulmonary Heart Disease: A Pathophysiologic Approach. Medical Grand Rounds, University of Massachusetts, Worcester, MA
- 2014 Long-term Management of Patients with PAH. Adult Medicine Noon Conference, Community Health Services, Hartford, CT
- 2016 Exercise Induced Pulmonary Hypertension; Is it a real disease? Cardiology Grand Rounds, Yale University School of Medicine, New Haven, CT

National

No presentations below were sponsored by outside entities

- 1998 Modulation of acute lung injury in transgenic mice.
New York Academy of Sciences and The Inflammation Research Association, Joint Meeting on Cytokines and Chemokines in Pulmonary Disease, New York, NY
- 1998 Targeted lung expression of interleukin-11 enhances murine tolerance of 100% oxygen and diminishes hyperoxia-induced DNA fragmentation.
Thomas L. Petty Aspen Lung Conference, 41st Annual Meeting, Aspen CO
- 2001 IL-6 type cytokines protect from hyperoxic acute lung injury.
University of Rochester School of Medicine Lung Biology Research Program, Rochester, NY
- 2001 Workup and Management of Pulmonary Hypertension – City Wide Pulmonary Grand

- Rounds, University of Rochester School of Medicine, Rochester, NY - City Wide Pulmonary Grand Rounds
- 2005 Cytokines and Organ Injury; Rethinking Old Concepts – Pulmonary Critical Care Training Program, Critical Care Grand Rounds, Denver Health Medical Center, University of Colorado, Denver, CO
- 2006 Assessing the Evidence: Clinical Applications of Therapeutic Interventions in the Treatment of PAH - American College of Chest Physicians, Chest 2006, October 23, 2006 Satellite Symposium on Pulmonary Arterial Hypertension in 2006: Treating to Goal
- 2007 Pulmonary Arterial Hypertension: Current Controversies in Management – Combined Pulmonary, Cardiology, and Rheumatology Grand Rounds, Dekalb Hospital, Atlanta GA
- 2007 Pulmonary Arterial Hypertension: Current Controversies in Management – Medical Grand Rounds, Northside Hospital, Atlanta GA
- 2007 Inflammation and Pulmonary Vascular Remodeling - Cleveland Clinic Pulmonary Hypertension Summit 2007, Translating Discoveries into Patient Care, Cleveland, OH
- 2008 Treatment Decisions in the Complex Patient with PAH – Cardiology Grand Rounds, Carolinas Medical Center, Carolinas Heart Institute, Charlotte, NC
- 2008 Pulmonary Arterial Hypertension: Management in the Acute Setting – Critical Care Medicine for the Hospitalist, Society of Hospital Medicine One Day University Baltimore, MD
- 2010 Diagnosis to Treatment: Facing the Challenges of Pulmonary Arterial Hypertension. Clinical Case Challenge. <http://cmecorner.articulate-online.com/p/6103578089/DocumentViewRouter.aspx?Cust=61035&DocumentID=8f33d44d-07d5-4e9b-ae3c-6d53133c9688&Popped=True&InitialPage=quiz.html>
- 2011 PAH: Clinical Presentation, Evaluation, and Treatment, an Update for 2011. Internal Medicine Grand Rounds, Northside Hospital, Atlanta GA
- 2011 Exercise Induced Pulmonary Arterial Hypertension; Does it exist and what does it mean? Baltimore Right Heart Failure Summit, University of Maryland School of Medicine, Baltimore, MD
- 2011 The Right Ventricle as Victim of Heart Failure Preserved Ejection Fraction. Heart Failure Society of America, Boston, MA
- 2012 Cellular Respiration: Targeting Metabolism in PH. Pulmonary Critical Care Grand Rounds, University of Pittsburgh Medical Center, Pittsburgh PA.
- 2013 Pulmonary Hypertension; Diagnosis and Treatment. Combined Pulmonary and Cardiology Rounds. Northside Hospital Pulmonary Hypertension Conference, Atlanta GA
- 2013 Improving Outcomes in Pulmonary Hypertension; Diagnostic Approach's & Treatment. Medical Grand Rounds, Lanckenau Medical Center, Jefferson Medical College, Philadelphia PA
- 2013 Form Follows Function: Understanding the Structural Basis on Pulmonary Arterial Hypertension. Heart Failure Society of America Annual Meeting, Orlando FL
- 2013 Regenerative Medicine: Are Opportunities Growing? Pulmonary Hypertension Association Pulmonary Hypertension Professional Network Symposium, Arlington VA
- 2014 Unexplained shortness of breath; A systematic approach to evaluation, Pulmonary Grand

Rounds, Stanford University School of Medicine, Palo Alto, CA

- 2015 Explaining unexplained dyspnea. Pulmonary Critical Care Grand Rounds, Division of Pulmonary Critical Care Medicine, University of North Carolina School of Medicine, Chapel Hill, NC
- 2015 Exercise Induced Pulmonary arterial hypertension; What is it? And what do we do about it? 7th North Carolina Research Triangle Pulmonary Hypertension Symposium, Joint Symposium sponsored by Duke University and University of North Carolina Schools of Medicine, Durham, NC
- 2016 Exercise in the Diagnosis of Patients without/maybe with/with Pulmonary Hypertension. The Alfred P. Fishman Symposium: Exercise in the Diagnosis, Assessment and Treatment of Pulmonary Hypertension. University of Pennsylvania School of Medicine, Philadelphia PA.
- 2016 How should we standardize proteomic approach for phenotyping? Proteomic & Genomic Deep Phenotyping in Pulmonary Arterial Hypertension, Stanford University, Palo Alto, CA
- 2016 Invasive-CPET: Dynamic Assessment of Cardiovascular, Respiratory, and Metabolic Function During Exercise, Cardiopulmonary Exercise Testing Course September 2016, American College of Chest Physicians Global Headquarters, Glenview, IL

International

Those presentations below sponsored by outside entities are so noted and the sponsor is identified.

- 1998 Etiology and Treatment of Acute Lung Injury: From Bench to Bedside – IL-6 type cytokine protection from lung injury. NATO Advanced Study Institute, Corfu, Greece
- 1999 IL-6 type cytokine protection in hyperoxic lung injury – Symposium on Basic and Clinical Aspects of Apoptosis in the Lung, American Thoracic Society, International Conference, San Diego, CA
- 2000 Current Management of Pulmonary Hypertension American Thoracic Society, International Conference, Toronto, Ont
- 2003 Transgenic Investigations of Apoptosis in Acute Lung Injury – Symposium on Mechanisms of Apoptosis During Acute Lung Injury, American Thoracic Society, International Conference, Seattle, WA
- 2008 Diagnosis and Evaluation of Pulmonary Arterial Hypertension: What Do We Really Need to Know? – Chairperson and Organizer, American Thoracic Society Toronto, Ontario Evening Postgraduate Seminar. Seminar focuses on diagnostic tools used to evaluate pulmonary arterial hypertension (PAH) in clinical practice and in clinical trials.
- 2009 Inflammation in Pulmonary Hypertension and Pulmonary Vascular Remodeling – Session Chair, American Thoracic Society International Conference, San Diego, California
- 2009 Practical Solutions to Modern Clinical Dilemmas: PAH Case Studies. The Case of a Patient With Poor Functional Class and Prognosis. Symposium on Prostacyclins in Treatment of PAH. European Respiratory Society, International Conference, Vienna Austria (United Therapeutics)
- 2010 Inflammation And Bone Marrow Derived Cells In Pulmonary Arterial Hypertension Session Chair, American Thoracic Society International Conference, New Orleans, LA
- 2010 IL-6 and Pulmonary Arterial Hypertension. The 11th International Workshop on Scleroderma Research, Boston, Massachusetts

- 2011 IL-6 in PAH; Downstream targets for therapy. Pulmonary Vascular Research Institute Workshop and Debates, Panama City, Panama
- 2011 New Therapies: Advances in Targeting, The Right Ventricle as a Therapeutic Target in PAH. Symposium on Pulmonary Hypertension: new targets, new goals, and new therapies. European Respiratory Society, International Conference, Amsterdam, Netherlands (Bayer Healthcare)
- 2012 Survival data and results of most relevant clinical trials. Teach in Seminar: Basics of Pulmonary Hypertension: Classification, Definitions, and Management, Pulmonary Vascular Research Institute International Conference, Cape Town South Africa
- 2012 Be it resolved. The most important target of therapy in advanced WHO category 1 Pulmonary Hypertension is the right ventricle. Right ventricular pathobiology in pulmonary vascular disease. Pulmonary Vascular Research Institute International Conference, Cape Town South Africa
- 2012 Targeting Mitochondria and Metabolism in Pulmonary Hypertension and Right Heart Failure. Chinese Heart Congress 2012, Beijing, China
- 2012 Any news from the right ventricle? Innovative therapy for the RV. 5th Annual Central European Pulmonary Hypertension Conference, Salzburg, Austria
- 2013 The Role of Inflammation in PAH – Possible Inflammatory Pathways Causing PAH. Pulmonary Vascular Research Institute International Conference, Istanbul, Turkey
- 2013 Exercise training and rehabilitation in patients with PH, safe and effective. Pulmonary Vascular Research Institute International Conference, Istanbul, Turkey
- 2013 Inflammation – Playing a Central Role In Pulmonary Arterial Hypertension. Invited speaker for the Annual Meeting of the International Society of Heart Lung Transplantation, Montreal Quebec, Canada
- 2013 The Roll of Inflammation in Pulmonary Arterial Hypertension. Pulmonary Hypertension from Bench to Bedside, Post Graduate Course, American Thoracic Society International Conference, Philadelphia, PA
- 2013 Right Ventricular Metabolic Shift And Ischemia In Pulmonary Arterial Hypertension. Session Chair, American Thoracic Society International Conference, Philadelphia, PA
- 2013 Initiating the right prostanoid, in the right patient at the right time. Symposium on Changing the parenteral paradigm – Keeping prostanoids front and centre in PAH management thinking. European Respiratory Society, International Conference, Barcelona, Spain (United Therapeutics)
- 2014 Chronic Altitude Sickness. Pulmonary Vascular Research Institute International Conference, Bad Nauheim, Germany
- 2014 Prostacyclin Therapy for PAH; Choosing the right prostanoid at the right time in the right person. Chinese Medical Doctors Association, Cardiovascular Section, Guangzhou, China (Lee's Pharmaceuticals)
- 2014 Prostacyclin Therapy for PAH; Choosing the right prostanoid at the right time in the right person. Chinese Medical Doctors Association and the Fuwai Cardiovascular Hospital, Beijing, China (Lee's Pharmaceuticals)
- 2014 Combination Treatment for PAH: What is the evidence telling us so far? Right Heart Failure Summit and American Heart Association joint meeting, Chicago IL
- 2016 Assessing heart function in patients with early to advanced pulmonary vascular disease. PH Global Science Forum 2016, Berlin Germany (Bayer Pharmaceutical)
- 2016 Abnormal Transpulmonary Metabolite Flux In Exercise Induced Pulmonary Arterial Vasculopathy., American Thoracic Society International Conference, San Francisco, CA

- 2016 Pulmonary Arterial Hypertension; Clinical Presentation, Diagnosis, and Approach to Therapy., Department of Cardiology, Chongqing Medical University, Chongqing China
- 2016 Recent advances in Pulmonary Arterial Hypertension; Translating preclinical studies into clinical practice., Long March Cardiovascular Conference, Fuwai Hospital, Beijing China
- 2016 Clinical Trials for Exercise Pulmonary Hypertension Are Warranted, 3rd International Drug Discovery & Development Symposium, PVRI/FDA/NIH Bethesda MD
- 2016 Unexplained Exertional Intolerance; A systematic approach to diagnosis., Respiratory Medicine Conference, The Royal Brompton Hospital, London England

Report of Clinical Activities and Innovations

Current Licensure and Certification

- 1993 Massachusetts State License
- 1993 National Board of Examiners, Diplomat
- 1994 Connecticut state License (inactive as of 2/2002)
- 1995 American Board of Internal Medicine, Diplomat (Recertified 2015)
- 1997 American Board of Internal Medicine, Diplomat in Pulmonary Disease (Recertified 2007)
- 1998 American Board of Internal Medicine, Diplomat in Critical Care (Recertified 2008)
- 2009 Utah State License

Practice Activities

- 2009 - Ambulatory Care Watkins Clinic, Brigham and Women's Hospital 2 sessions/week
- 2009 - Ambulatory Care Center for Chest Diseases, Brigham and Women's Hospital ½ session/week

Clinical Innovations

1. **Bronchoscopy Credentialing Guidelines for YNHH (1998)**– developed clinical guidelines for credentialing for the practice of Bronchoscopy at Yale New Haven Hospital. Prior to this there were no prepared standards for the hospital. As part of this guideline I instituted maintenance of privileges standards and a record keeping system.
2. **Community Acquired Pneumonia Clinical Practice Guideline, YNHH (1999)** – As part of a hospital-working group, I helped develop guidelines for Yale New Haven Hospital for diagnosis and treatment of community acquired pneumonia.
3. **Pulmonary Vasodilator Clinical Practice Guideline YNHH (1999)** – Developed clinical practice guideline for acute pulmonary vasodilator testing. This was first developed at Yale New Haven Hospital. This was revised and implemented at MGH (2001) and continued now at the BWH (2010).
4. **Ventilator Weaning Protocol, T-NEMC (2001)** – Developed guidelines and instituted a protocol based approach to liberating patients from mechanical ventilation at Tufts-New England Medical Center MICU.
5. **Right heart catheterization and invasive cardiopulmonary exercise testing Clinical Practice Guideline, MGH (2004)** – Developed procedure guideline for all aspects of right heart catheterization and acute pulmonary vasodilator testing. Also developed guidelines regarding placement of right heart catheters and radial arterial lines for invasive cardiopulmonary exercise testing. These guidelines have formed the basis for a new clinical exercise-testing program at the

- BWH (2010).
6. **Intravenous Prostacyclin Clinical Practice Guideline, MGH (2006)** – Developed clinical protocol for continuous delivery of intravenous prostacyclins for patients with pulmonary hypertension. This was initially developed for patients at the MGH. In November 2011 this was updated for use at the BWH and for new pump technologies.
 7. **Exercise Training Clinical Practice Guideline, MGH (2006)** – Developed a guideline for starting exercise rehabilitation programs in patients with PAH. This was initially designed for our clinical practice. Through involvement in national committee's on practice guidelines for patients with PAH, we have contributed components of this guideline to the formulation of a national guideline. These guidelines have been updated recently based on data that we have generated in our exercise laboratory.
 8. **Cicletanine for treatment of PAH (2006)** - Evaluated the use of a novel eNOS coupler for treatment of PAH as part of a compassionate use program. Compound was acquired by Gilead Sciences and has now entered Phase II clinical trial. Steering Cmt. Chairman, Study Sponsor: Gilead Sciences. The initial work on this project has been published, see research publication #20.
 9. **Sepsis Management Clinical Practice Guideline, MGH (2007)** – Led a working group that developed practice guideline for management of severe sepsis and septic shock in the ICU at MGH. As part of this program I oversaw the development of a computer ordering admission template for template for patients admitted to the ICU with severe sepsis and septic shock.
 10. **Mechanical Ventilation Clinical Practice Guideline (2008)** – Developed a best practice approach to liberating patients from mechanical ventilation. This was presented to a national working group and portions of our guidelines were adapted into a national multicenter guideline for determining readiness for liberation from mechanical ventilation. Work related to this effort was published, see research publication #19.
 11. **Implantable Drug Delivery System of Treprostinil in PAH (2009)** - Proposed use of Medtronic SynchroMed pump as part of a fully implantable IV drug delivery system. Steering committee member designing device trial supported by Medtronic's and United Therapeutics
 12. **CTEPH Clinical Program, BWH (2011)**– Developing a systematic approach to the patient with chronic thromboembolic pulmonary hypertension in consideration for surgical or medical therapy. This program is being developed as a multispecialty approach to the evaluation and treatment of patient with both surgical and medical thromboembolic disease.
 13. **Dyspnea and Performance Evaluation Center (2011)** - successful clinical innovation grant to develop a clinical program for the efficient evaluation and diagnosis of patients with unexplained dyspnea. This was a collaborative program with participants from Pulmonary and Cardiovascular Medicine, Radiology, and Neurology. This included the establishment of a structured multilevel cardiopulmonary exercise evaluation program.
 14. **First in human percutaneous Potts Shunt as salvage therapy for PAH and right heart failure (2013)** – Working as a member of the RV Salvage group, a collaborative team of physicians from the Brigham and Women's Hospital and Boston Children's Hospital developed a percutaneous descending aorta-left main pulmonary artery conduit to unload the failing right ventricle. Work related to this effort has been published, see research publication #34
 15. **Acute Pulmonary Embolism Program at BWH (2014)**. Program designed to improve triage and optimize timely management of patients presenting to the ED with Acute Pulmonary Embolism. This is a multidisciplinary program and members of the Cardiovascular Division (Vascular Medicine, CCU, Interventional Cardiology), Pulmonary Vascular Medicine, Cardiac Surgery, and Cardiovascular Imaging are also involved.
 16. **Center for Pulmonary Heart Disease (2014)**. Executive Director and organizer of the first center of its kind in the country, the Center brings together BWH experts in both lung and cardiac disease

to tackle pulmonary heart diseases from all possible angles. The center's clinical programs are closely tied to its translational research platform, bringing findings made in the laboratory to the clinic, and then back to the laboratory for further improvement.

17. **Advanced Fellowship in Pulmonary Heart Disease (2014).** The program focuses on the evaluation and management of patients with diseases of the right heart system including pulmonary vascular disease, congenital heart disease, and end stage lung disease. The program provides trainees with a number of unique clinical opportunities that are not available in most centers across the country and provide more in depth and focused training than what is provided in general Pulmonary and Critical Care Medicine and Cardiovascular training programs.
18. **PHA-Accredited Pulmonary Hypertension Care Center (2015).** BWH pulmonary vascular disease program, under my direction, was formally accredited by the Pulmonary Hypertension Association after undergoing a thorough evaluation based on quality and depth of resources available for the expert care of patients with pulmonary vascular disease.

Report of Education of Patients and Service to the Community

Activities

- | | |
|--------|--|
| 2006 | Pulmonary Hypertension Association 6 th International Conference
Chaired patient education forum on prostacyclins - Prostacyclin treatment options |
| 2006 | Developed educational pamphlet for patients who are undergoing right heart catheterization at the MGH. This is being adapted now for distribution at the BWH |
| 2008 | Pulmonary Hypertension Association 7 th International Conference
Discussant - Patient education forum on clinical lab testing as part of the care of patients with PAH - The ABC's of BNP (and Other PH Test Results) |
| 2009 | PHA 30-City Tour Medical Education Program
Information on PAH diagnosis and management to physicians and other health professionals located in areas without nationally recognized PAH centers |
| 2009 | Pulmonary Hypertension Patient PHorum
Patient education forums held around the United States and sponsored by the Pulmonary Hypertension Association |
| 2009 - | Volunteer Physician for Snowbird Ski Patrol / Wasatch Mountain Rescue
Physician first responder on Ski patrol and backcountry rescue for Snowbird Utah and Wasatch Mountain Rescue – 10 shifts per season |
| 2009 - | Continuing education lecturer, Snowbird Ski Patrol and Wasatch Mountain Rescue
Physician speaker for continuing education program, 4 lectures per year |
| 2010 | Pulmonary Hypertension Association 8 th International Conference
Discussant – Managing emergency situations for care givers and patients with PAH |
| 2012 | Pulmonary Hypertension Patient Support Group – Taking control of your pulmonary hypertension treatment – A question and answer session for patients and caregivers. Seabrook NH |
| 2015 | Established and organized a community outreach program for the Roxbury Tenants of Harvard Community with focus on improving health in heart and lung disease, and diabetes. This is an ongoing program that includes health screening and education. |
| 2016 | Pulmonary Hypertension Association 10 th International Conference
Panel Discussant – Living with a chronic disease |

Educational Material for Patients and the Lay Community

Books, monographs, articles and presentations in other media

2005	Patient Care Manual	Massachusetts General Hospital	Patient care manual detailing guidelines on initiating treatment, side effect management, Hickman catheter care, and management of line infections
2008	Pulmonary Arterial Hypertension, Diagnostic Challenges and Selecting Optimal Therapy	MedScape CME	http://cme.medscape.com/viewprogram/17133
2012	Shortness of breath, lung disease and pulmonary hypertension	Massachusetts Senior Action Council	Invited by the MSAC to present to the council and provide a question and answer period for members because of high prevalence of lung and vascular disease among seniors
2016	Chapter 7-More on PH Drugs	Patients Survival Guide – 5 th Edition	Book developed for patients and care givers by the Pulmonary Hypertension Association, covers all aspects of living with the disease

Recognition

2005-2016	Best Doctors in America	Castle Connelly Medical, Ltd.
2007-2009	Best Doctors in Boston	Boston Magazine

Report of Scholarship

Peer reviewed publications in print or other media

Research Investigations:

1. Klemm WR, Sherry CJ, Sis RF, Schake LM and **Waxman AB**. (1984) Evidence of a role for the vomeronasal organ in social hierarchy in feedlot cattle. *Applied Animal Behavior Science* 1980; 12:53-62
2. Higgins D, **Waxman AB**, and Banker GA. The distribution of microtubule-associated protein 2 changes when dendritic growth is induced in rat sympathetic neurons in vitro. *Neuroscience* 1988; 241:583-92 PMID: 3362354
3. **Waxman AB**, Goldie SJ, Brett-Smith H, Matthay RA. Cytomegalovirus as a Primary Pulmonary Pathogen in AIDS. *Chest* 1997; 111:128-34 PMID: 8996006
4. **Waxman AB**, White K, Trawick DR. Electromechanical dissociation following verapamil and propranolol ingestion: a physiologic profile. *Cardiology* 1997; 8:478-82 PMID: 9286512
5. Goldie SJ, **Waxman AB**. Cytomegalovirus as a Pulmonary Pathogen. *Chest* 1997; 112:1151
6. **Waxman AB**, Einarsson O, Seres T, Knickelbein RG, Homer R, Warshaw JB, Johnston R, Elias, JA. Targeted lung expression of interleukin-11 enhances murine tolerance of 100% oxygen and diminishes hyperoxia-induced DNA fragmentation. *Journal of Clinical Investigation* 1998; 101:1970-82 PMID: 9576762

7. **Waxman AB***, Ward N*, Homer R, Du Y, Mantel L, Elias JA. IL-6 induced protection in hyperoxic acute lung injury, *American Journal of Respiratory Cell and Molecular Biology* 2000; 22:535-542 PMID: 10783124 *Co-First authorship
8. Corne, J, Chupp G, Lee GG, Homer RJ, Zhu Z, Chen Q, Ma B, Du Y, McArdle J, **Waxman AB**, Elias JA. IL-13 stimulates vascular endothelial cell growth factor and protects against hyperoxic acute lung injury. *Journal of Clinical Investigation* 2000; 106:783-91 PMID: 10995789
9. **Waxman AB**, Zhu Z, Lee CG, Elias JA. Transgenic Modeling of Mechanisms of Protection in Acute Lung Injury, Matalon S, Sznajder JI, editors. NATO ASI Series, Etiology and Treatment of Acute Lung Injury: From Bench to Bedside. BV Amsterdam, Netherlands: IOS Press, NATO Science Series, Series 1 January 2000; 336:140-51
10. **Waxman AB**, Mahboubi K, Knickelbein RG, Mantel L, Manzo ND, Pober JS, Elias JA, Interleukin-11 and interleukin-6 protect cultured human endothelial cells from H₂O₂-induced cell death. *American Journal of Respiratory Cell and Molecular Biology* 2003; 29:5513-522 PMID: 12730073
11. He CH, **Waxman AB**, Lee CG, Link H, Rabach ME, Ma B, Chen Q, Zhu Z, Homer R, and Elias JA. Bcl-2-related protein A1 is an endogenous and cytokine-stimulated mediator of cytoprotection in hyperoxic acute lung injury. *Journal of Clinical Investigation* 2005; 115:1039-48 PMID: 15841185
12. Chetty A, Manzo N, **Waxman AB**, Nielsen HC. Modulation of IGF-binding protein-2 and -3 in hyperoxic injury in developing rat lung. *Pediatric Research*, 2005; 58(2): 222-28 PMID: 16055936
13. Lee PS, **Waxman AB**. The importance of differentiating gelsolin isoforms. *American Journal of Respiratory and Critical Care Medicine* 2006; 173:685-86 PMID: 16522767
14. Barker GF, Manzo JG, Cotich K, Shone RK, **Waxman AB**. DNA DNA damage induced by hyperoxia: quantitation and correlation with lung injury, *American Journal of Respiratory Cell and Molecular Biology* 2006; 35(3): 277-89 PMID: 16574945
15. Steiner MK, Preston IR, **Waxman AB**, Klinger JR, Criner GJ, Hill NS. Conversion to bosentan from prostacyclin infusion therapy in pulmonary arterial hypertension: a pilot study. *Chest* 2006; 130:1471-80 PMID: 17099026
16. Lee PS, **Waxman AB**, Cotich KL, Chung SW, Perrella MA, Stossel TP. Plasma Gelsolin is a Marker and Therapeutic Agent in Animal Sepsis. *Critical Care Medicine* 2007; 35(3): 849-55.
17. Tolle JJ, **Waxman AB**, Systrom DS. Impaired systemic oxygen extraction at maximum exercise in pulmonary hypertension. *Medicine & Science in Sports and Exercise* 2008; 40(1): 3-8 PMID: 18091026.
18. Chetty A, Cao GJ, Manzo N, Nielsen HC, **Waxman AB**. The role of IL-6 and IL-11 in hyperoxic injury in developing lung. *Pediatric Pulmonology* 2008; 43(3): 297-304 PMID: 18214944
19. Robertson T, Mann H, Hyzy R, Rogers A, **Waxman AB**, Weinert C, Douglas I, Alapat P, Guntupalli K, Buchman T. Multicenter implementation of a consensus-developed, evidence-based, spontaneous breathing trial protocol. *Critical Care Medicine* 2008; 36(10): 2753-62, PMID: 18828193
20. **Waxman AB**, Lawler L, Cornett G. Cicletanine for the treatment of pulmonary arterial hypertension, *Archives of Internal Medicine* 2008; 168(19): 2164-66 PMID: 18955648
21. Tolle JJ, **Waxman AB**, Pappagianopoulos PP, Systrom DM. Exercise-induced pulmonary arterial hypertension. *Circulation* 2008; 118(21): 2183 – 89 PMID: 18981305
22. Lee PS, Patel S, Christiani DC, Bajwa E, Stossel TP, **Waxman AB**. Plasma gelsolin depletion and

- circulating actin in sepsis – A pilot study. *PLoS One*. 2008; 3(11): e3712. PMID: 19002257
23. Kolliputi N, **Waxman AB**. IL-6 cytoprotection in hyperoxic acute lung injury occurs via suppressor of cytokine signaling-1-induced apoptosis signal-regulating kinase-1 degradation. *Am. J. Respir. Cell Mol. Biol* 2009; 40:314-24 PMID: 18776134
 24. Steiner MK, Syrkina OL, Kolliputi N, Mark EJ, Hales CA, **Waxman AB**. Lung-specific IL-6 overexpression in mice induces pulmonary hypertension. *Circulation Research* 2009; 104:236-44 PMID: 19074475
 25. **Waxman AB**, Kolliputi N. IL-6 protects against hyperoxia induced mitochondrial damage via BCL-2 induced BAK interactions with mitofusions, *Am. J. Respir. Cell Mol. Biol* 2009; 41: 385-396 PMID: 19168699
 26. Kolliputi N, **Waxman AB**. IL-6 cytoprotection in hyperoxic lung injury occurs via PI3K/AKT-mediated Bax phosphorylation., *American Journal of Physiology, Lung Cellular and Molecular Physiology*. 2009; 297: L6 - L16 PMID: 19376889
 27. Thibault, H., Kurtz, B., Raher, M.J., Rahamthulla, S., **Waxman, A.B.**, Halpern, E.F., Bloch, K., Scherrer-Crosbie, M., Noninvasive assessment of murine pulmonary arterial pressure: validation and application to models of pulmonary hypertension. *Circulation Cardiovasc Imaging*, 2010; 3: 157–163 PMID: 20044514
 28. Kolliputi, N., Shaik, R., S., and **Waxman, A.B.** The Inflammasome Mediates Hyperoxia-Induced Alveolar Cell Permeability. *The Journal of Immunology*, 2010, 184: 5819 -5826 PMID: 20375306
 29. Schlichting, D.E., **Waxman, A.B.***, O'Brien, L.A., Wang, T., Naum, C.C., Rubiez, G.J., Um, S.L., Williams, M., Yan, S.B., Circulating Endothelial and Endothelial Progenitor Cells in Patients with Severe Sepsis. *Microvascular Research* 2011; 81:216-211 *corresponding author PMID: 21130783
 30. Malhotra, R, Hess, D, Lewis, GD, Bloch, KD, **Waxman, AB**, and Marc J. Semigran, Vasoreactivity to inhaled nitric oxide and oxygen predicts long term survival in pulmonary arterial hypertension., *Pulmonary Circulation* 2011; 1(2):250-258, PMID: 22020367
 31. Parikh, V.N., Jin, R.C., Rabello, S., Gulbahce, N., White, K., Hale, A., Shaik, R.S., **Waxman, A.B.**, Zhang, Y., Maron, B.A., Hartner, J.C., Fujiwara, Y., Orkin, S.H., Haley, K.J., Barabasi, A., Loscalzo, J., Chan, S.Y., A Network Biology Approach Reveals that MicroRNA-21 Integrates Pathogenic Signaling to Control Pulmonary Hypertension. *Circulation* 2012; 125:1520-1532, PMID: 22371328
 32. Maron, B.A., Opatowsky, A.R., Landzberg, M.J., Loscalzo, J., **Waxman, A.B.**, Leopold, J.A., Plasma aldosterone levels are elevated in patients with pulmonary arterial hypertension in the absence of left ventricular heart failure: a pilot study. *Eur J Heart* 2013 Mar;15(3):277-83, PMID: 23111998
 33. **Waxman A**, Chen SY, Boulanger L, Watson JA, Golden G., Factors associated with adherence to phosphodiesterase type 5 inhibitors for the treatment of pulmonary arterial hypertension. *J Med Econ*. 2013;16(2):298-306, PMID: 23216015
 34. Jesse Esch, J., Shah, P.B., Cockrill, B.A., Farber, H.W., Landzberg, M.J., Mehra, M.R., Mullen, M.P., Opatowsky, A.R., **Waxman, A.B.**, Lock, J.E., Marshall, A.C., Transcatheter Potts Shunt Creation in Patients with Severe Pulmonary Arterial Hypertension: Initial Clinical Experience. *Journal of Heart Lung Transplantation* 2013 April; 32(4):381-7, PMID: 23415728
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23. Rajan Saggar, **Aaron Waxman**, Sonja Bartolome, Micah Fisher, Susanne McDevitt, Lixia Zhang, James Runo, Leslie Spikes, Rajeev Saggar, An open-label study to assess the safety and efficacy of treprostinil to facilitate liver transplantation in patients with portopulmonary hypertension. American Thoracic Society, San Diego, CA 2014
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26. T. Bertero, K.A. Cottrill, Y. Lu, S. Annis, A. Hale, A. Krauszman, B. Bhat, R. Saggar, R. Saggar, W. D. Wallace, D. J. Ross, S. O. Vargas, B. B. Graham, R. Kumar, S. M. Black, S. Fratz, J. R. Fineman, J. D. West, K. J. Haley, **A. B. Waxman**, W. M. Kuebler, B. N. Chau, and S. Y. Chan, The miR-130/301 family exerts systems-level regulation of proliferation, vasoconstriction, and extracellular matrix deposition to control pulmonary hypertension. The American Heart Association, Chicago IL, 2014
27. M. Santos, **A. B. Waxman**, J. Tracy, F. Khalid, A. R. Opotowsky, D. Systrom, Misclassification of

- the Cause of Dyspnea by Resting Right Heart Catheterization: The Impact Of Invasive Cardiopulmonary Exercise Testing. The American Heart Association, Chicago IL, 2014
28. R.K.F. Oliveira, M. Agarwal, J. A. Tracy, A.L. Karin, **A.B. Waxman**, D.M. Systrom, Pulmonary Vascular Disease Burden Detected by Invasive Cardiopulmonary Exercise Test in Parenchymal Lung Disease. The American Thoracic Society, Denver CO, 2015
 29. M. Agarwal, **A.B. Waxman**, Inhaled Treprostinil in Group-3 Pulmonary Hypertension., International Society of Heart Lung Transplantation, Nice France, 2015
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 31. M. Santos, J. Rivero, S.D. McCullough, A.R. Opotowsky, **A.B. Waxman**, D. Systrom, A. M. Shah, Limited Utility of the E/e' Ratio as a Noninvasive Estimator of Left Ventricular Filling Pressure in Patients with Unexplained Dyspnea. European Society of Cardiology, EuroEcho-Imaging 2015, Vienna, Austria
 32. M. Agarwal, M. Santos, R.K. Oliveira, A. Opotowsky, J.A. Tracy, A.L. Karin, **A.B. Waxman**, D.M. Systrom, Role of submaximum exercise pulmonary gas exchange parameters in exercise induced PAH. American Thoracic Society, Denver, CO, 2015
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 35. R.K. Oliverio, M. Agarwal, J.A. Tracy, A.L. Karin, **A.B. Waxman**, D.M. Systrom, Pulmonary vascular disease burden detected by invasive cardiopulmonary exercise testing in parenchymal lung disease. American Thoracic Society, Denver, CO, 2015
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 37. R.K.F. Oliveira, P.J. Hoover, J.A. Tracy, A.L. Karin, **A.B. Waxman**, P.F. Dellaripa, D.M. Systrom, Exercise intolerance evaluated by invasive cardiopulmonary exercise testing in connective tissue disease: beyond pulmonary hypertension. American Rheumatologic Society, San Francisco, CA, 2015
 38. R.K. Oliverio, M. Agarwal, R. Badreslam, A. Opotowsky, **A.B. Waxman**, D.M. Systrom, Central hemodynamic patterns during recovery from peak exercise. European Respiratory Society International Meeting, Amsterdam, NL 2015
 39. R.J. Oudiz, C.J. Meyer, M. Chin, J. Feldman, A. Goldsberry, J. McConnell, P.A. McCullough, M. O'Grady, V.F. Tapon, F. Torres, **A.B. Waxman**, R.J. White, Initial Data Report from 'LARIAT': a Phase 2 Study of Bardoxolone Methyl in PAH Patients on Stable Background Therapy. American College of Chest Physicians Montreal Que, October 2015
 40. T.Biering-Sørensen, M.Santos, J.Rivero, S.D.McCullough, E.West, A.R. Opotowsky, **A.B.**

Waxman, D.M. Systrom, A.M. Shah, Myocardial deformation at rest predicts exercise-induced elevation in LV filling pressure in patients with exertional dyspnea. American Heart Association, Orlando FL, November 2015

41. R.J. Oudiz, C.J. Meyer, M. Chin, J. Feldman, A. Goldsberry, J. McConnell, P.A. McCullough, M. O'Grady, V.F. Tapson, F. Torres, **A.B. Waxman**, R.J. White, Initial Data Report from 'LARIAT': a Phase 2 Study of Bardoxolone Methyl in PAH Patients on Stable Background Therapy. American College of Chest Physicians International Conference, Montreal Que, 2015
42. A.C.M.J. van Riel, D.M. Systrom, R.K.F. Oliveira, M.J. Landzberg, B.J.M. Mulder, B.J. Bouma, A.M. Shah, **A.B. Waxman**, A.R. Opatowsky, Physiologic Dynamic Right Ventricular Outflow Tract Obstruction During Exercise: clinical implications for exercise echocardiography to identify abnormal pulmonary vascular response. American College of Cardiology, Chicago IL, 2016
43. A.C.M.J. van Riel, A.R. Opatowsky, M. Santos, J.M. Rivero, A. Dhimitri, M.J. Landzberg, B.J.M. Mulder, B.J. Bouma, **A.B. Waxman**, D.M. Systrom, A.M. Shah, Accuracy of Echocardiographic Measures of the Exercise-Induced Change in Pulmonary Artery Pressures: Importance of Tricuspid Regurgitation Doppler Quality. American College of Cardiology, Chicago IL 2016
44. H.S. Bhatia, J. Szymonifka, Q. Zhou, Z.R. Lavender, **A.B. Waxman**, M.J. Semigran, R. Malhotra, Q.A. Truong, Four-Tier Classification of Pulmonary Artery Metric Severity for Diagnosis and Prognosis of Pulmonary Hypertension. American College of Cardiology, Chicago IL 2016
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46. S. A. Segrera, A.R. Opatowsky, L. Lawler, D.M. Systrom, **A.B. Waxman**, Open label study of ambrisentan in patients with exercise induced pulmonary arterial hypertension (EiPAH). International Society of Heart and Lung Transplantation, Washington DC 2016
47. W. Huang, R.K.F. Oliveira, D.M. Systrom, H. Lei, **A.B. Waxman**, Early Pulmonary Vascular Dysfunction in Exercise-induced Heart Failure with Preserved Ejection Fraction: Prognostic Implications. American Thoracic Society International Conference, San Francisco, CA 2016
48. R.K.F. Oliveira, J.A. Tracy, A.L. Karin, **A.B. Waxman**, D.M. Systrom, Exercise pulmonary hypertension in fibrotic interstitial lung disease with borderline resting mean pulmonary arterial pressure. American Thoracic Society International Conference, San Francisco, CA 2016
49. **A.B. Waxman**, L. Grove, D.M. Systrom, J. Leopold, R. Dweik, G. Heresi, S. Erzerum, M. Olman, Exercise Induced Pulmonary Arterial Hypertension (EIPAH) Exhibits Thrombophilia and Endothelial Activation. American Thoracic Society International Conference, San Francisco, CA 2016
50. **A.B. Waxman**, C. Bennett, A.J. Janocha, S.A.A. Comhair, S.C. Kalhan, J. Leopold, S. Erzurum, D.M. Systrom, Abnormal Transpulmonary Metabolite Flux In Exercise Induced Pulmonary Arterial Vasculopathy. American Thoracic Society International Conference, San Francisco, CA 2016
51. R.K.F. Oliveira, J.A. Tracy, A.L. Karin, **A.B. Waxman**, D.M. Systrom, Pyridostigmine for Exercise Intolerance Treatment in Preload Failure. American Thoracic Society International Conference, San Francisco, CA 2016
52. R.K.F. Oliveira, J.A. Tracy, A.L. Karin, **A.B. Waxman**, D.M. Systrom, Prevalence of exercise pulmonary hypertension in borderline resting pulmonary hypertension. American Thoracic Society

International Conference, San Francisco, CA 2016

53. R. Badr Eslam, R.K. Oliveira, J.A. Tracy, A.L. Karin, M. Agarwal, **A.B. Waxman**, D. Systrom, Fick principle determinants of the 6minute walk test (6MWT) distance., American Thoracic Society International Conference, San Francisco, CA 2016
54. T. Biering-Sørensen, M. Santos, J. Rivero, E. West, A.R. Opotowsky, **A.B. Waxman**, D.M. Systrom, A.M. Shah, Left atrial deformation at rest predicts peak exercise pulmonary artery wedge pressure and mean pulmonary artery pressure., European Society of Cardiology, Rome, Italy 2016
55. A.C.M.J. van Riel, A. Opotowsky, M. Santos, J. Rivero, A. Dhimitri, M. Landzberg, B. Mulder, B. Bouma, **A. Waxman**, D. Systrom, A. Shah, Accuracy of echocardiographic measures of the exercise-induced change in pulmonary artery pressures: importance of tricuspid regurgitation Doppler quality. *J Am Coll Cardiol.* 2016;67(13_S):2053-2053, Chicago, IL
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AFFIDAVIT OF CRAIG BAUMGARTNER, PA-C

I, Craig Baumgartner, being duly sworn upon oath, do hereby depose and state as follows:

1.

I am over 21 years of age, have no physical or mental disabilities, and am otherwise competent to make this affidavit.

2.

The affidavit is made upon the basis of my education, knowledge, training and experience as a licensed and certified physician assistant and upon a review of the following medical records regarding Jonathan Buckelew:

- a. Chiropractic Records from Advanced Integrative Medicine;
- b. Records and imaging studies from October 26, 2015 admission to North Fulton Hospital.

3.

I am a physician assistant licensed to practice in the state of Illinois, and a copy of my curriculum vitae is attached hereto. I was licensed to and was practicing as physician assistant in Illinois in 2015, and for the five years prior to

2015.

4.

I am qualified to express the opinions contained herein as in my practice I have regularly seen and treated patients with symptoms like Jonathan Buckelew who are admitted to the ICU from the emergency department. For the five years prior to 2015, I have regularly seen and evaluated patients being admitted to the ICU with symptoms and conditions like Jonathan Buckelew presented with on October 26 and 27, 2015. I am familiar with the standard of care for caring for and evaluating patients with symptoms and conditions like Jonathan Buckelew presented with at North Fulton Hospital on October 26 and 27, 2015.

5.

All of the opinions expressed herein are expressed to a reasonable degree of medical probability and are based upon my education, training and experience and the records of Jonathan Buckelew.

6.

For purposes of this affidavit, I have assumed the following facts to be true, based on the medical records I have reviewed:

- a. On October 26, 2015, Jonathan Buckelew went to see Dr. Michael

Axt, a chiropractor at Advanced Integrative Medicine, for complaints of neck pain. Dr. Axt noted in his records that that Buckelew had had new onset neck pain for four days after working out at the gym. He also recorded that Buckelew reported bouts of blurred vision, headache and a ringing in his ears for the same period of time.

- b. Dr. Axt noted that he adjusted Buckelew's neck while Buckelew was lying down and then asked him to sit up. He noted that when Buckelew sat up he reported that he felt dizzy, and was slow to respond. Dr. Axt then left Buckelew and went to find help. When he returned, Buckelew appeared less responsive, and Axt called 911.
- c. It appears that 911 was called at 3:53 pm on October 26, 2015, and Buckelew was then transported by ambulance to North Fulton Hospital where he arrived at approximately 4:20 pm.
- d. When Buckelew arrived at the emergency department his Glasgow Coma Scale score was recorded as 11.
- e. Buckelew was first evaluated by emergency department physician, Dr. Matthew Womack, and at approximately 4:39 pm, Dr. Womack ordered a CT of the brain and a CTA of the neck.

- f. The CT and CTA were performed at around 5:15 pm and the CTA was read by a neuroradiologist, Dr. James Waldschmidt. The clinical indication listed by Dr. Womack for the study was "pain/disscetion" (sic).
- g. In Dr. Waldschmidt's report on the CTA, he noted, among other things, a potential dissection of the right vertebral artery.
- h. After Dr. Womack was made aware of Dr. Waldschmidt's findings on the imagining study, he called Dr. Futrell, the oncall neurologist, for a neurology consultation.
- i. Dr. Womack recorded in his notes that at approximately 6:50 pm he discussed with Dr. Futrell the findings on both the CT and the CTA, and that Dr. Futrell recommended a lumbar puncture and that the patient be admitted.
- j. Before the lumbar puncture was performed, however, Dr. Womack witnessed Buckelew have what he interpreted as a seizure, and Buckelew was intubated at 7:27 pm.
- k. Dr. Womack then performed a lumbar puncture at approximately 7:48 pm. The lumbar puncture showed clear cerebral spinal fluid (CSF),

and Dr. Womack ordered the CSF to be examined STAT.

- l. Dr. Womack then contacted the critical care service and spoke to Christopher Nickum, a Physician Assistant working with Dr. Sachin Lavania, a critical care specialist working in the ICU.
- m. It appears that either Dr. Lavania and or Mr. Nickum saw and examined Buckelew around 8:37 pm on October 26, while Buckelew was still in the emergency department, and dictated a History and Physical for his admission into the ICU. In the History and Physical it is noted that although Buckelew was somnolent, he was arousable while in the ER and was following some commands. At the time of the History and Physical, Buckelew was sedated and intubated and a neurological exam was not recorded.
- n. At 9:00 pm the results of the analysis of the CSF from the lumbar puncture were reported as normal.
- o. Buckelew was transferred to the ICU at around 10:56 pm.
- p. Once in the ICU, it appears that Buckelew was not seen or evaluated by a physician until the following morning when he was seen by Dr. Lavania who ordered an MRI of the brain as well as an MRA of the

Based upon the facts stated above, and my review of the records, it is my opinion that Christopher Nickum violated accepted medical practices by not consulting with Dr. Lavania after seeing the patient, by not considering and ruling out a vascular cause of the patient's symptoms, and by not reviewing the results of the CSF studies and at that time consulting with Dr. Lavania to discuss a potential vascular cause of the patient's symptoms.

8.

It is my opinion that such actions and omissions fell below and are a deviation from the standard of care ordinarily employed by the medical profession generally under similar conditions and like surrounding circumstances.

9.

This affidavit is not intended to provide an exhaustive listing of all of the opinions which I may have concerning the matters at issue in this case, and I reserve the right to express additional opinions based upon any additional information which may come to my attention as this case proceeds through the discovery and litigation process. The opinions expressed herein are not intended to and should not be construed to foreclose or exclude opinions that other negligent acts or omissions may have also occurred or contributed to the patient's outcome,

but rather this affidavit is given to meet the limited requirements of O.C.G.A. § 9-11-9.1 to set forth at least one act of negligence.

Further affiant sayeth not.

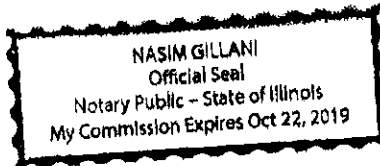

CRAIG BAUMGARTNER, PA

Sworn and Subscribed before me
this 25 day of July, 2017



Notary Public

My Commission Expires: OCT 22 2019



Craig Allen Baumgartner, MBA, MPAS, PA-C, MPLC, DFAAPA
3212 Lindenwood Lane
Glenview, IL 60025-2653
(847) 477-8885
baumgartnerconsulting@gmail.com

AREAS OF EXPERTISE

Consulting

Consulting service in research, education, teaching and quality improvement to various pharmaceutical, biotech, healthcare, educational and legal corporations.

Research/Biotech

Participated in clinical research and development of Bremer halo vest system, Optical Tracking System frameless stereotactic system, Gliadel Wafers phase IV and IL13PEI phase I-III pharmaceutical trials. Wrote grant applications for research projects resulting in funding for new programs. Developed and implemented clinical pathways resulting in improved patient care, decreased hospital costs and increased reimbursement.

Administration

Responsible for supervision and recruitment of clinical and nonclinical personnel. Responsible for capital equipment budget and equipment purchase, public relations, strategic and financial planning and program development (head & spinal cord injury, pain management and neuroscience programs), risk management and quality assurance.

Teaching

Experienced academic faculty member teaching physician assistant and medical students and surgical residents. Educated local, state and national government officials and agencies regarding medical / patient's rights issues.

Surgery (Neuro, General, Trauma, Orthopedic, Urology, Vascular, Plastics, Critical Care)

>83,000 clinical hours in evaluation, management (ER, critical care and floor) and first assist at surgery of neurological, general, trauma, orthopedic, urology and vascular surgery patients

Medicine (Emergency, Critical Care, Occupational, Primary Care, Internal, Hospital, Palliative, Hospice)

> 21,000 clinical hours in evaluation and management of patients in main ER, fast track, urgent care centers, mobile intensive care units, acute and subacute inpatient facilities and outpatient primary care and occupational medicine clinics.

> 10,000 clinical hours experience in all aspects of hospital and critical care medicine

PROFESSIONAL EXPERIENCE

Current positions

Senior Physician Assistant (160-200 hours/month) 04/06-present
NorthShore University HealthSystem (previously Evanston Northwestern Healthcare)
Department of Surgery (primary care/surgicalist coverage of 30-60 patients daily-general, ortho, vascular, urology, trauma, neurosurgery in ER, OR, ICU, floor-pre & post op)
Glenview, IL

Physician Assistant (10-20 hours/month) 04/13-present
Premise Health www.premisehealth.com
(emergency/occupational/primary/urgent care medicine)
Chicago O'Hare International Airport

Physician Assistant (10-20 hours/month) 10/15-present
NorthShore University HealthSystem www.northshore.org
Department of Palliative and Hospice Medicine
(*acute & chronic pain and symptom management, primary care*)
Glenview, IL

Chief Executive Officer (10-30 hours/month) 06/98-present
Baumgartner Consulting
Consulting services regarding physician assistant standard of care,
scope of practice, utilization, education and testing. Consultant to national corporations.

Previous full time positions

Physician Assistant (160-200 hours/month) 07/02-05/06
Emergency Care Group of Northwest / Northwest Community Hospital
Department of Emergency Medicine <http://www.nch.org/>
(152,926 ER visits/year, 14th busiest Emergency Department in U.S)
Arlington Heights, IL

Physician Assistant (160-240 hours/month) 11/00-05/02
Dominique Engel, MD, Inc
(*clinical neurosurgery-ER, OR, ICU, floor, office /administrative director*)
Marysville, CA

Senior Physician Assistant (160-240 hours/month) 07/92-12/00
Evanston Northwestern Healthcare www.northshore.org
Division of Neurosurgery
(*Level I Trauma Center*)
Evanston, IL

Senior Physician Assistant (160-240 hours/month) 10/85-06/92
University of Florida Health Science Center <http://ufhealthjax.org/>
Department of Neurosurgery
(*Level I Trauma Center*)
Jacksonville, FL

Previous part time positions

Senior Physician Assistant (10-20 hours/month) 06/06-12/15
IPC Healthcare www.hospitalist.com
(*coverage of acute and post acute care internal/hospital medicine patients*)
Arlington Heights, IL

Physician Assistant (10-40 hours/month) 03/07-01/09
Northwest Community Hospital <http://www.nch.org/>
Occupational Health
Arlington Heights, IL

Physician Assistant (10-40 hours/month) 06/06-02/08
Best Practices/Northwest Community Hospital
Department of Emergency Medicine-Treatment Centers
Arlington Heights, IL

Physician Assistant (40-80 hours/month) Fremont-Rideout Health Group Department of Emergency Medicine Marysville, CA	08/01-06/02
Physician Assistant (20-40 hours/month) St Francis Hospital Department of Emergency Medicine Evanston, IL	10/94-12/99
Paramedic (20-140 hours/month) St Joseph Volunteer Fire Department, Parkview Memorial Hospital, Baptist Medical Center, Century Ambulance Service	1980-1985

EDUCATION

Medical Provider Legal Consultant (MPLC) A. T. Still University Mesa, AZ	4/15
Master of Physician Assistant Studies (MPAS) Critical Care Medicine http://www.unmc.edu/alliedhealth/education/pa/ University of Nebraska Medical Center Omaha, NE	1999
Master of Business Administration (MBA) Jacksonville University www.ju.edu/ Jacksonville, FL	1989
Bachelor of Health Science (BHS) Physician Assistant Program http://pap.med.ufl.edu/ University of Florida Gainesville, FL	1985
DOT Paramedic Training Program (EMT-P) Northeastern Indiana EMS Regional Coordination Center Fort Wayne, IN	1980

CERTIFICATION

National Commission on Certification of Physician Assistants #1015795 http://www.nccpa.net/	exp 12/31/18
Advanced Cardiac Life Support	exp 5/27/18
American College of Healthcare Executives-FACHE Board Certified in Healthcare Management http://www.ache.org/	

LICENSURE

United States Department of Justice
Drug Enforcement Agency, Schedule 2,2N,3,3N,4,5
Practitioner # ***** exp 07/31/19

State of Illinois
Department of Professional Regulation
Physician Assistant License # 085-000503 exp 03/01/18

Centers for Medicare and Medicaid Services
UPIN # R17264, Provider # 567410, NPI # 1982604054

AWARDS

Who's Who in America
International Who's Who of Professionals
Who's Who Among Young American Professionals
Indiana-Purdue University Outstanding Student Leadership Award
Who's Who Among Students in American Universities and Colleges

ACADEMIC APPOINTMENTS

Rosalind Franklin University of Medicine and Science
Clinical Assistant Professor 2007-present

The Chicago Medical School
Clinical Assistant Professor 1997-2001

Northwestern University Medical School
Instructor of Neurosurgery 1999-2001

PUBLICATIONS

Baumgartner, Craig A. PA-C, MBA, MPAS, DFAAPA, FACHE; Shipman, Scott MD, MPH; Brock, Douglas M. PhD "Commentaries on health services research" Journal of the American Academy of Physician Assistants: September 2015 - Volume 28 - Issue 9 - p 57-58

Ciric I, Rosenblatt S, Kerr W Jr, Lamarca F, Pierce D, Baumgartner C
"Perspective in Pituitary Adenomas: An End of the Century Review of Tumorigenesis, Diagnosis, and Treatment." Clinical Neurosurgery 47:99-100, 2000

Ciric I, Ragin A, Baumgartner C, Pierce D " Complications of Transphenoidal Surgery: Results of a National Survey, Review Of Literature and Personal Experience" Neurosurgery 40:225-237, 1997

Baumgartner C "ATLS and The PA-Where Do We Stand?"
Surgical Physician Assistant 2:34, 1996

PROFESSIONAL ORGANIZATION MEMBERSHIPS

American Bar Association, associate member	2015-present
Member, Nursing and Allied Health Task Force	
Illinois State Bar Association, associate member	2012-present
Chicago Bar Association, associate member	2012-present
American Academy of Physician Assistants in Legal Medicine	2008-present
President	2015-2017
Board of Directors	2010-present
American Academy of Physician Assistants	1985-present
Distinguished Fellow-DFAAPA	
Clinical Preceptor-CPAAPA	
Illinois Academy of Physician Assistants	1992-present
American College of Healthcare Executives	1990-2015
Fellow-FACHE	
Society of Critical Care Medicine	2006-2010
Society of Emergency Medicine Physician Assistants	2003-2008
Association of Neurosurgical Physician Assistants	1992-2003
Board of Directors	
Florida Academy of Physician Assistants	1985-1992
Board of Directors	

PROFESSIONAL ACTIVITIES

American Academy of Physician Assistants (AAPA)	2015-present
Electronic Health Record(EHR) Work Group	
American Academy of Physician Assistants	2015-present
PA Research Team Initiative	
National Commission on Certification of Physician Assistants(NCCPA)	2015-2016
Subject Matter Expert-Surgery	
Subject Matter Expert-Physician Assistant National Certification Exam (PANCE)	
American Academy of Physician Assistants	2014-present
Distinguished Fellow Work Group	
American Academy of Physician Assistants	2014-present
2016 AAPA Conference Grader	
2015 AAPA Conference Grader	
American Academy of Physician Assistants	2013-present
Reviewer –paper on PA Prescribing of Schedule II Medication	
Journal of the American Academy of Physician Assistants	2006-present
Peer Reviewer	
Chicago Healthcare Executives Forum University	2011-2014
Presenter-Healthcare Law and Professional Ethics	
Chicago Medical School Physician Assistant Program	1996-2000
Advisory Board	
State of Florida, Spinal Cord Injury Advisory Council	1988-1990
Northeast Florida	

COMMUNITY ACTIVITIES

Boy Scouts of America, Advancement Chairman	2009-2013
City of Yuba City, Handicapped Board of Appeals	2001-2002
City of Evanston, Leadership Evanston	1995-1996
City of Jacksonville, Mayor's Disability Council Vice-Chairman	1988-1992

AFFIDAVIT OF JENNIFER ADAMSKI, DNP, APRN, ACNP-BC, CCRN

I, Jennifer Adamski, being duly sworn upon oath, do hereby depose and state as follows:

1.

I am over 21 years of age, have no physical or mental disabilities, and am otherwise competent to make this affidavit.

2.

The affidavit is made upon the basis of my education, knowledge, training and experience as a registered nurse licensed to practice nursing and upon a review of the following medical records regarding Jonathan Buckelew:

- a. Chiropractic Records from Advanced Integrative Medicine;
- b. Records from October 26 admission to North Fulton Hospital.

3.

I am a registered nurse and an advanced practice nurse licensed to practice nursing in the state of Georgia, and a copy of my curriculum vitae is attached hereto. I was licensed to and was practicing nursing in Georgia in 2015, and for the five years prior to 2015.

4.

I am qualified to express the opinions contained herein as in my practice I have regularly seen, treated and evaluated patients with symptoms like Jonathan Buckelew who present to the emergency department and are admitted to the ICU. For the five years prior to 2015, I have regularly taken care of patients in the ICU with symptoms and conditions like Jonathan Buckelew presented with on October 26 and 27, 2015. I am familiar with the nursing standard of care for caring for and evaluating patients with symptoms and conditions like Jonathan Buckelew presented with at North Fulton Hospital on October 26 and 27, 2015.

5.

All of the opinions expressed herein are expressed to a reasonable degree of medical probability and are based upon my education, training and experience, the records of Jonathan Buckelew.

6.

For purposes of this affidavit, I have assumed the following facts to be true, based on the medical records I have reviewed:

- a. On October 26, 2015, Jonathan Buckelew went to see Dr. Michael Axt, a chiropractor at Advanced Integrative Medicine, for complaints of neck pain. Dr. Axt noted in his records that that Buckelew had had

new onset neck pain for four days after working out at the gym. He also recorded that Buckelew reported bouts of blurred vision, headache and a ringing in his ears for the same period of time.

- b. Dr. Axt noted that he adjusted Buckelew's neck while Buckelew was lying down and then asked him to sit up. He noted that when Buckelew sat up he reported that he felt dizzy, and he seemed disoriented. Dr. Axt then left Buckelew and went to find help. When he returned, Buckelew appeared less responsive, and Axt called 911.
- c. It appears that 911 was called at 3:53 pm on October 26, 2015, and Buckelew was then transported by ambulance to North Fulton hospital where he arrived at approximately 4:20 pm.
- d. When Buckelew arrived at the emergency department he was alert and oriented to person, place, time and situation and was in no acute distress. His Glasgow Coma Scale score was recorded at 11 and his pupils were equal, round and reactive to light.
- e. Buckelew was first seen by emergency department physician, Dr. Matthew Womack, and at 4:39 pm, Dr. Womack ordered a CT of the brain and a CTA of the neck.
- f. The CT and CTA were performed at around 5:15 pm and the CTA

was read by a neuroradiologist, Dr. James Waldschmidt, and his findings were dictated at 6:46 pm. The clinical indication listed by Dr. Womack for the study was "pain/disscetion" (sic).

- g. In Dr. Waldschmidt's report on the CTA, he noted, among other things, a potential dissection of the right vertebral artery.
- h. After Dr. Womack read Dr. Waldschmidt's report, he called Dr. Futrell, the neurologist on call, for a neurology consultation.
- i. Dr. Womack recorded in his notes that at approximately 6:50 pm he discussed with Dr. Futrell the findings on both the CT and the CTA and that Dr. Futrell recommended a lumbar puncture to rule out meningitis and or encephalitis and recommended that the patient be admitted.
- j. Before the lumbar puncture was performed, however, Dr. Womack witnessed Buckelew have what he described as a seizure, and fearing risk to the airway, intubated Buckelew at 7:27 pm.
- k. Dr. Womack then performed a lumbar puncture. The lumbar puncture showed normal opening pressure and clear cerebral spinal fluid. Dr. Womack ordered the CSF fluid to be examined STAT.
- l. Dr. Womack then contacted the critical care service and spoke to

Christopher Nickum, a Physicians Assistant working with Dr. Sachin Lavinia, a critical care specialist working in the ICU.

- m. It appears that either Dr. Lavania and or Mr. Nickum saw and examined Buckelew around 8:30 pm on October 26, while Buckelew was still in the emergency department, and dictated a History and Physical for his admission into the ICU. In the history and physical it is noted that although Buckelew was somnolent, he was arousable while in the ER and was following some commands. At the time of the History and Physical, Buckelew was sedated and intubated and a neurological exam was not recorded.
- n. At 9:00 pm the results of the analysis of the CSF from the lumbar puncture were reported as normal. However, it appears that the results of the CSF tests were not reported to Dr. Womack or to the emergency department.
- o. Buckelew was discharged from the emergency department and transferred to the ICU at around 10:56 pm with a diagnoses of encephalitis and altered mental status, without mention of the normal CSF findings.
- p. Once in the ICU, nurses note at 12:20 am that Buckelew's pupils were

sluggish but did not inform a physician and it appears that Buckelew was not seen or evaluated by a physician until the following morning, sometime after 10:00 am when he was seen by Dr. Lavanaia who ordered an MRI of the brain as well as an MRA.

- q. The MRA demonstrated a massive non-hemorrhagic stroke of the posterior circulation of the brain, including thrombosis of the basilar artery which had blocked circulation to the pons and to both hemispheres of the brain.
- r. The MRA was read at around 1:00 pm and the results discussed with Dr. Drexinger of neurology and Dr. Lavanaia. At 1:37 pm on October 27, 2015, the first treatment for stroke, a heparin drip, was initiated, over 21 hours after Buckelew arrived at North Fulton Hospital.
- s. Mr. Buckelew sustained extensive and permanent brain damage. He is unable to move any part of his body other than his eyes, but is cognitively intact. This condition, known as Locked-in syndrome (LIS), is permanent and non-reversible.

7.

Based upon the facts stated above, and my review of the records, it is my opinion that the nurses caring for Jonathan Buckelew at North Fulton Hospital

violated accepted nursing practices by not notifying a physician when Mr. Buckelew's condition changed overnight on the evening of October 26 though the morning of October 27, in particular his pupils were sluggish and his blood pressure and heart rate was elevated.

8.

It is my opinion that such actions and omissions fell below and are a deviation from the standard of care ordinarily employed by the nursing profession generally under similar conditions and like surrounding circumstances.

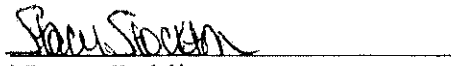
9.

This affidavit is not intended to provide an exhaustive listing of all of the opinions which I may have concerning the matters at issue in this case, and I reserve the right to express additional opinions based upon any additional information which may come to my attention as this case proceeds through the discovery and litigation process. The opinions expressed herein are not intended to and should not be construed to foreclose or exclude opinions that other negligent acts or omissions may have also occurred or contributed to the patient's outcome, but rather this affidavit is given to meet the limited requirements of O.C.G.A. § 9-11-9.1 to set forth at least one act of negligence.

Further affiant sayeth not.


JENNIFER ADAMSKI

Sworn and Subscribed before me
this 20th day of June, 2017



Notary Public

My Commission Expires: Jan 3, 2021.

Stacy Stockton
NOTARY PUBLIC
Clayton County, GEORGIA
My Comm. Expires 01/03/2021

JENNIFER L. ADAMSKI DNP, CCRN, APRN, ACNP-BC

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jennadamski@yahoo.com

CURRICULUM VITAE

EDUCATION

UNIVERSITY OF SOUTH ALABAMA

Mobile, AL

Doctorate of Nursing Practice
Summa Cum Laude, July 2013

UNIVERSITY OF PITTSBURGH

Pittsburgh, PA

- Masters of Science in Nursing
- Acute Care/Critical Care Nurse Practitioner Program
- Summa Cum Laude, December, 2002

LAROCHE COLLEGE/St. Francis School of Anesthesia

Pittsburgh, PA

- Masters of Science Program
- Graduate Studies in Anesthesia

CARLOW UNIVERSITY

Pittsburgh, PA

- Bachelors of Science in Nursing
- Magna Cum Laude, May 2000

EMPLOYMENT

July 2015-present, Assistant Professor, Clinical Track- *Emory University Nell Hodgson Woodruff School of Nursing, Atlanta, GA*

- Graduate faculty for Adult Gerontology Acute Care Nurse Practitioner program

November 2015- *Critical Care & Trauma Nurse Practitioner- Atlanta Medical Center, Atlanta, GA*

- Critical care practice managing adult neurosurgical & trauma patients in the intensive care units.

November 2012- August 2015, Director of Advanced Practice/ Lead Critical Care Nurse Practitioner, Critical Care Medicine- *Northeast Georgia Medical Center, Gainesville, GA*

- Diagnosis and management of adult trauma surgery, neurosurgery, cardiovascular surgery & general surgical critical care patients
- Performs bedside invasive procedures ie. arterial line insertion, central line/hemodialysis line placement, chest tube placement, endotracheal intubations, diagnostic & therapeutic bronchoscopy, PA catheter placement
- Proficient in critical care treatment modalities/therapies of post-op complications & emergencies
- Clinical preceptor for University of Alabama Birmingham ACNP senior students
- Project manager for the implementation of the Advanced Practice Provider-managed rapid response team pilot study
- Provides overall direction and leadership for the critical care advanced practice team
- Ensures the effective administrative management of clinical functions related to personnel and policy, in order to meet the mission of patient care, education and research within a fiscally responsible organization
- Leads the coordination of consistent recruitment, orientation, on-boarding, competency assessment, performance management, staff development, & retention processes for the critical care advanced practice team
- Serves as an expert resource for advanced practice licensure, collaborative practice, credentialing, scope of practice & regulatory compliance for the advanced practice team

November 2010-November 2012 Lead Nurse Practitioner Intensivist -Surgical Critical Care *Sacred Heart Hospital, Pensacola, FL*

- Diagnosis and management of surgical critical care patients ie. Trauma Surgery, General Surgery, Cardiothoracic Surgery, Neurosurgery
- Proficient in treatments/therapies of post-op complications/emergencies ie. pneumothorax, ARF, Life-threatening arrhythmias, ventilatory management, cardiovascular collapse, PEA, sepsis, compartment syndrome
- Perform bedside invasive procedures ie. Arterial line insertions, central line/hemodialysis access insertions, endotracheal intubations, chest tube insertion, fiberoptic bronchoscopy.
- Function as primary provider for the Rapid Response Team and provide ACLS and critical care management to improve patient mortality/morbidity and decrease admissions to the ICU.

Work in collaboration with Anesthesia Intensivists and Surgeons to provide cost-effective and holistic care to Surgical Critical Care patients.

May 2011-November 2012 Nursing Faculty- *Pensacola State College, Pensacola, FL*

- Theory instructor for Adult Nursing I, Bachelors of Nursing program and Associate Program.
- Theory instructor for Adult Nursing II course
- Theory instructor for Adult Nursing III course

- Theory instructor for Critical Care Nursing course

March 2008-October 2010 Cardiovascular & Transplant Intensive Care Lead Nurse Practitioner *Johns Hopkins Hospital, Baltimore, MD*

- *Management of post-op cardiovascular and thoracic surgery patients ie. Heart/Lung transplants, Left ventricular assist device implantations, Aortic Aneurysm Repair, Congenital Anomaly Repair, Minimally invasive valve surgeries, Coronary Artery Bypass Grafts, ECMO*
- *Management/Treatment of post-op complications including tamponade, coagulopathies, arrhythmias, pulmonary embolism, sepsis, organ rejection, ARDS*
- *Clinical instructor & adjunct faculty for the University of Maryland & Johns Hopkins School of Nursing Acute Care Nurse Practitioner Program*
- *Clinical preceptor for new graduate Acute Care Nurse Practitioners in the Cardiac Intensive Care*
- *Work collaboratively with Cardiac Surgeons and Critical Care Intensivist to develop & implement multidisciplinary treatment plans for a high acuity population.*
- *Proficient in invasive procedures including central line, hemodialysis & pulmonary artery catheter placement, chest tube insertions, endotracheal intubations, fiberoptic bronchoscopies & arterial line insertions.*

February 2006- March 2008 Trauma Surgery Acute Care Nurse Practitioner R. *Adams Cowley Shock Trauma Center, Baltimore, MD*

- Integral member of multidisciplinary trauma team with diagnosis & management of neurotrauma patients in the critical care area
- Provide acute trauma resuscitation and life-saving procedures, for example, central venous access, chest tube placements, swan-ganz catheter placement.
- Daily management of patient care and discharge coordination.
- Facilitate progression of patients through a complex trauma network.

April 2003- January 2006 Cardiothoracic & Vascular Surgery Nurse Practitioner *Memorial Regional Hospital, Hollywood, FL*

- Management of pre and post-op cardiac, thoracic and vascular surgery patients (ICU and tele)
- Treatment of post-op complications including tamponade, Afib, ATN, PE, coagulopathies, sepsis.
- Evaluating hemodynamics, ABGs, Labs, CXRs, LVADs, ECMO
- Running codes, managing ventilators, treatment of acid/base disturbances, CVVHD initiation.
- Placement of central venous catheters (approx. 465), arterial lines (190), swan-ganz catheters (90).
- Endotracheal intubations, percutaneous tracheostomies, bronchoscopies
- Chest tube placement and management of pneumothorax, hemothorax.
- Provided health system 24 hour/ 7day NP beeper call
- Clinical Preceptor for University of Miami, Florida International and Barry University ACNP students.
- Consults, history and physicals, and discharge summaries.

LICENSURES & CERTIFICATIONS

- Georgia Advanced Practice Nurse Practitioner License # RN226384
- Maryland Certified Registered Nurse Practitioner License # R175886
- Florida Advanced Registered Nurse Practitioner License # 9199614
- Current ACLS and BCLS Certification
- ANCC Acute Care Nurse Practitioner Certification # 2006010681
- U.S. Drug Enforcement Administration # MD 1570298
- Advanced Trauma Life Support Certification
- Critical Care Registered Nurse Certification (CCRN) #000012448746 exp. 6/30/2018

PROFESSIONAL AFFILIATIONS

- Current appointed Georgia Board of Nursing APRN committee member- 2015-2017
- American Association of Nurse Practitioners (AANP) Leadership Fellow 2015-2016
- GA APRN Roundtable active member 2015-
- Society of Critical Care Medicine Graduate & Resident Education appointed committee member 2014-present
- Society of Critical Care Medicine Advanced Practice & Professional Development committee member 2014-present
- American Nurses Credentialing Center Content Expert for Adult-Gerontology Acute Care Nurse Practitioner Board Exam
- Journal reviewer for the International Journal of Microbiology
- Journal reviewer for the Journal of Trauma Nursing
- National Organization of Nurse Practitioner Faculties
- United Advanced Practice Registered Nurses of Georgia
- American Association of Nurse Practitioners
- Sigma Theta Tau National Honor Society of Nursing
- Society of Trauma Nurses
- Gerontological Advanced Practice Nurses Association

PROFESSIONAL PUBLICATIONS & PRESENTATIONS

2015 Georgia Nurses Association Conference-Presentation- Going Where No Southern State Has Gone Before: The Envisioned Future of GA APRN Practice

Original Articles in Peer-Reviewed Journals

Adamski, J. (2016) Management of intra-abdominal hemorrhagic shock using REBOA (resuscitative endovascular balloon occlusion of the aorta). Journal of Emergency Nursing

Book Chapter

Adamski, J.L., & Sheridan, T. (2016). Prebiotic and probiotic approaches to improving food safety on the farm and their implications to human health. Prebiotics and Probiotics in Human Nutrition and Health. InTech Publishings, Toronto, Canada.

(In progress) Textbook Chapter Primary Author

Adamski, J. (2015, January). Diagnostic Bronchoscopy. *Interventional Critical Care: An Advanced Care Practitioner Handbook for Procedures in the ICU*. Springer Publishing.