IN THE STATE COURT OF CLAYTON COUNTY
STATE OF GEORGIA

TINA MASHBURN, Individually, and TINA MASHBURN, as Administrator of the Estate of BILLY R. MASHBURN, deceased,	)	
Plaintiff,	)	CIVIL ACTION FILE NO. 2020CV02176
v.	)	
ATLANTA HEART ASSOCIATES, LLC; CHITURU ADELE, M.D.; PRIME HEALTHCARE FOUNDATION – SOUTHERN REGIONAL, LLC; PRIME HEALTHCARE FOUNDATION, INC.; PRIME HEALTHCARE SERVICES, INC.; JOHN DOE; AND ABC, CORP.,	)	***JURY TRIAL DEMANDED***
Defendants.	)	

FIRST AMENDED COMPLAINT

COMES NOW, Tina Mashburn, Individually and as Administrator of the Estate of Billy R. Mashburn, deceased, and hereby files this First Amended Complaint, showing the Court and Jury as follows:

Paragraphs ¶¶ 1-87 of the original Complaint (attached hereto as Exhibit "A"), plus all Introductory and Concluding Paragraphs, filed October 14, 2020, are hereby incorporated herein (as are all Exhibits to the original Complaint). The remainder of the Complaint is hereby amended as follows to add the following:

PARTIES, JURISDICTION AND VENUE

13a.

Defendant Prime Healthcare Foundation – Southern Regional, LLC is a Delaware for-profit corporation with its principal office address located at 11 Upper Riverdale Road SW, Riverdale, GA 30274 within Clayton County. It is a foreign limited liability company authorized to transact business in the State of Georgia.

13b.

Defendant Prime Healthcare Foundation – Southern Regional, LLC may be served through its registered agent for service of process, Cogency Global, Inc., at the registered office address, 900 Old Roswell Lakes Parkway, Suite 310, Roswell, GA, 30076 in Fulton County.

13c.

Defendant Prime Healthcare Foundation – Southern Regional, LLC is subject to the jurisdiction of this court.

13d.

Venue is proper as to Prime Healthcare Foundation – Southern Regional, LLC.

13e.

Defendant Prime Healthcare Foundation, Inc. is a Delaware for-profit corporation with its principal office address located at 3480 E. Guasti Road, 3rd Floor, Ontario, California, 91761. It is a foreign limited liability company authorized to transact business in the State of Georgia.

13f.

Defendant Prime Healthcare Foundation, Inc. may be served through its registered agent for service of process, Cogency Global, Inc., at the registered office address, 900 Old Roswell Lakes Parkway, Suite 310, Roswell, GA, 30076 in Fulton County.

13g.

Defendant Prime Healthcare Foundation, Inc. is subject to the jurisdiction of this court.

13h.

Venue is proper as to Prime Healthcare Foundation, Inc.

13i.

Defendant Prime Healthcare Services, Inc. is a Delaware for-profit corporation with its principal office address located at 3480 E. Guasti Road, 3rd Floor, Ontario, California, 91761. It is a foreign limited liability company authorized to transact business in the State of Georgia.

13j.

Defendant Prime Healthcare Services, Inc. may be served through its registered agent for service of process, Cogency Global, Inc., at the registered office address, 900 Old Roswell Lakes Parkway, Suite 310, Roswell, GA, 30076 in Fulton County.

13k.

Defendant Prime Healthcare Services, Inc. is subject to the jurisdiction of this court.

13l.

Venue is proper as to Prime Healthcare Services, Inc.

13m.

At all times relevant and material hereto, the aforementioned defendants Prime Health Services, Inc., Prime Healthcare Foundation, Inc., and Prime Healthcare Foundation – Southern Regional, LLC (hereinafter sometimes referred to as "SRMC" or the "SRMC Defendants") collectively owned, operated, and/or managed Southern Regional Medical Center ("SRMC"), a community hospital located at 11 Upper Riverdale Road SW, Riverdale, GA. 30274 in Clayton County and where the negligent care and treatment of Billy Mashburn on July 30, 2019 occurred.

13n.

Plaintiff hereby puts the SRMC Defendants (Prime Health Services, Inc., Prime Healthcare Foundation, Inc., and Prime Healthcare Foundation – Southern Regional, LLC) on notice that other of their employees and agents are potentially liable for the injuries to and death of Billy Mashburn. Plaintiff hereby reserves the right to amend the Complaint, and may amend this Complaint, to assert violations of the standard of care on the part of said individuals. Plaintiff further shows that said individuals were employees or agents of these Defendants, and were acting in the course and scope of said agency and employment at the time they rendered negligent medical care to Billy Mashburn. Therefore, the SRMC Defendants (Prime Health Services, Inc., Prime Healthcare Foundation, Inc., and Prime Healthcare Foundation – Southern Regional, LLC), individually or collectively, are liable for the negligent acts and omissions of any of their staff who provided care to Billy Mashburn in July 2019 under theories of vicarious liability or *respondeat superior*.

13o.

Defendant John Doe(s) is an individual who provided care to Billy Mashburn on July 30, 2019. His or her correct name(s) and address(es) at this time are unknown.

13p.

Upon information and belief, Defendant ABC Corporation ("Defendant ABC Corp.") is an entity that employed Defendant John Doe(s), and others, who provided medical care to Billy Mashburn on July 30, 2019.

13q.

Defendant John Doe(s) was acting within the course and scope of his or her agency and employment with Defendant ABC Corp. The true identity of ABC Corp. is currently unknown to

Plaintiff. The negligence of Defendant John Doe(s) and others may be imputed to Defendant ABC Corp. pursuant to the doctrine of *respondeat superior*.

13r.

Once the true identity of John Doe(s) and his or her employer ABC Corp. is made known to Plaintiff, Plaintiff will file an amended complaint containing the correct identification for substitution of these proper parties.

13s.

Alternatively, Defendant John Doe(s) was acting within the course and scope of his or her agency and/or employment with the SRMC Defendants (Prime Health Services, Inc., Prime Healthcare Foundation, Inc., and Prime Healthcare Foundation – Southern Regional, LLC), and as such, these Defendants, individually or collectively, are liable for the negligent acts and omissions of John Doe(s) under theories of vicarious liability or *respondeat superior*.

13t.

All Defendants are joint tortfeasors.

13u.

This Court has personal jurisdiction over the foreign corporations named herein as Defendants pursuant to the Georgia Long-Arm Statute, O.C.G.A. § 9-10-91, because they each, through one or more agent(s): (1) transacted any business within this state; (2) committed a tortious act or omission within this state, …; and/or (3) committed a tortious injury in this state caused by an act or omission outside this state and the Defendants regularly transact or solicit business, or engages in any other persistent course of conduct, or derive substantial revenue from goods used or consumed or services rendered in Georgia.

13v.

All Defendants have been properly served with the Summons and Complaint in this action.

FACTS

50a.

A technician who was able to run the echocardiography machine was not immediately available in the Cath Lab on July 30, 2019 when Dr. Adele suspected pericardial effusion.

50b.

The needed echocardiography tech had reportedly gone home for the day. No other echocardiography tech was otherwise available on a STAT basis.

50c.

The SRMC Cardiac Catheterization Laboratory ("Cath Lab") was not properly staffed and equipped as is required by a Cardiac Catheterization Laboratory under the applicable professional standards of care.

50d.

Cardiac Catheterizations Laboratories treat patients, many on an urgent or emergent basis, suffering from life-threatening conditions.

50e.

Often, patients come in, as did Mr. Billy Mashburn, via Emergency Medical Services specifically to receive a higher level of emergency care as is (or is supposed to be) offered in hospitals which maintain accredited Cardiac Catheterization Laboratories, like the SRMC Cath Lab when Mr. Mashburn presented there by way of EMS on July 30, 2019.

50f.

Cardiac Catheterization Laboratories covering acute myocardial infarction must be available twenty-four hours a day, seven days a week, and three hundred and sixty-five days a year.

50g.

Proper availability of the Cardiac Catheterization Laboratory includes proper staffing and equipping such that cardiac patients in a variety of emergent and even life-threatening situations (as was Mr. Mashburn following the complication he suffered causing effusion and then tamponade) can be appropriately assessed and timely treated.

50h.

Specifically, as it applies to the context here, there must be properly trained and qualified Cath Lab personnel available at all times to perform urgent and emergent echocardiography.

62a.

Rural Metro is an Emergency Medicine Services ("EMS") company called by Tiffany Peterson White, CVT, RCIS, to transport Billy Mashburn to Emory Crawford Long Hospital on July 30, 2019.

62b.

When she placed the call to Rural Metro on July 30, 2019, Ms. Peterson White learned that Rural Metro was no longer in contract with Southern Regional Medical Center ("SRMC").

62c.

No one from SRMC had informed Ms. Peterson White or anyone in the Cath Lab at SRMC that there was no longer a contract with Rural Metro in place before she made this call.

62d.

After learning that Rural Metro was no longer in contract with SRMC, Ms. Peterson White then called another EMS provider, AmeriPro.

62e.

Once Ms. Peterson White gave AmeriPro information about the condition of Mr. Mashburn, she learned that AmeriPro did not have the necessary equipment for transport.

62f.

After calling AmeriPro and still not having secured transport to Emory Crawford Long Hospital, Ms. Peterson White called the house supervisor for suggestion on whom to call.

62g.

Ms. Peterson White was told by the house supervisor that the house supervisor would look it up and come down to help. The house supervisor then came to the Cath Lab to assist.

62h.

When the house supervisor arrived in the Cath Lab, she had the phone number of Veterans Ambulance Service, and she then called them.

62i.

The house supervisor was told by Veterans Ambulance Service that there were contractual issues with SRMC, and a unit would not be dispatched.

62j.

No one from SRMC had informed the house supervisor, Ms. Peterson White, or anyone in the Cath Lab at SRMC that there was no longer a contract in place with Veterans Ambulance Service before the house supervisor placed this call.

62k.

Ms. Peterson White then called Air Flight and learned from Air Flight that they could not come out due to the weather.

62l.

At this point, having called multiple providers and not having been able to secure transport for Mr. Mashburn, Ms. Peterson White and the house supervisor decided to call Clayton County EMS.

62m.

Multiple phone calls were made before Clayton County accepted transfer.

62n.

On July 30, 2019, SRMC was not in contract with Clayton County for ambulance services, and the house supervisor had to call someone in the C-suite of SRMC for permission to use Clayton County and to insure financial compensation.

62o.

Two ambulance services were posted in the Cath Lab on July 30, 2019: Rural Metro and Air Flight.

62p.

On July 30, 2019, Ms. Peterson White ascertained AmeriPro's number by looking on a shelving unit ofpaperwork in the Cath Lab and finding an envelope from AmeriPro with the phone number listed.

62q.

On July 30, 2019, the house supervisor obtained Veterans Ambulance Service's number from a clipboard the house supervisor carries, and this list had more numbers than to which Ms. Peterson White had access.

62r.

The time period on July 30, 2019 from the decision to transfer until Clayton County's unit was notified was approximately an hour and a half (from 18:10 to 19:37).

62s.

On or before July 30, 2019, the SRMC Defendants had not implemented an appropriate system of interfacility ambulance transfer.

62t.

On or before July 30, 2019, the SRMC Defendants should have put appropriate means and methods of interfacility transfer (hospital to hospital transfer) into place and updated these means and methods accordingly such that timely and safe ambulance transport for a patient in critical condition could occur.

62u.

On or before July 30, 2019, the SRMC Defendants failed to provide sufficient education of the hospital staff on the plan that the hospital had put into place for interfacility EMS transfer, and they failed to timely update staff on changes in that plan accordingly (such as an ambulance

provider no longer being in contract with the hospital, and in what order EMS services should be called for attempted transfer).

62v.

On or before July 30, 2019, the SRMC Defendants failed to have a working plan in place to secure timely ambulance services.

62w.

The SRMC Defendants failed to adequately train and staff the Cardiac Cath Lab to handle urgent and emergent interfacility transfers of critical care patients prior to Mr. Mashburn's care on July 30, 2019.

62x.

On or before July 30, 2019, the SRMC Defendants failed to institute and maintain appropriate means and methods of interfacility EMS transfer (hospital to hospital transfer).

62y.

On July 30, 2019, the SRMC Defendants failed to appropriately manage the methods of staff obtaining appropriate ambulance transport for a patient in critical condition.

COUNT II
ORDINARY AND INSTITUTIONAL NEGLIGENCE OF SRMC DEFENDANTS PERTAINING TO THE STAFFING OF THE SRMC CATH LAB

80a.

The SRMC Defendants owed a duty of reasonable care when they provided care to Billy Mashburn on July 30, 2019.

80b.

The SRMC Defendants owed a duty to meet the applicable institutional standard of care when they provided care to Billy Mashburn on July 30, 2019.

80c.

The Southern Regional Medical Center Cardiac Catheterization Laboratory was not properly staffed and equipped as is required by a Cardiac Catheterization Laboratory under the applicable professional standards. Cardiac Catheterizations Laboratories treat patients, many on an urgent or emergent basis, suffering from life-threatening conditions. Often, patients come in, as did Mr. Billy Mashburn, via Emergency Medical Services specifically to receive a higher level of emergency care as is (or is supposed to be) offered in hospitals which maintain accredited Cardiac Catheterization Laboratories, like the SRMC Cath Lab when Mr. Mashburn presented there by way of EMS on July 30, 2019.

80d.

As such, to meet the applicable professional standards, Cardiac Catheterization Laboratories covering acute myocardial infarction must be available twenty-four hours a day, seven days a week, and three hundred and sixty-five days a year. Proper availability of the Cardiac Catheterization Laboratory includes proper staffing and equipping such that cardiac patients in a variety of emergent and even life-threatening situations (as was Mr. Mashburn following the complication he suffered causing effusion and then tamponade) can be appropriately assessed and timely treated. Specifically as it applies to the context here, there must be properly trained and qualified personnel available at all times to perform urgent and emergent echocardiography.

80e.

The SRMC Defendants, by and through SRMC and the Southern Regional Medical Center Cardiac Catheterization Laboratory (including any and all physicians and administrative personnel overseeing the same), breached the standard(s) of care as applies to Cardiac Catheterization

Laboratories generally under like surrounding circumstances and similar conditions in the following ways:

a. Failing to have echocardiography personnel readily available, in breach of the requirement that such personnel be available for urgent and emergent echocardiography;

b. Failing to maintain a Cardiac Catheterization Laboratory that was adequately equipped and staffed to handle urgent and emergent complications, such as the complication here requiring emergent pericardiocentesis to alleviate Mr. Mashburn's pericardial effusion and resulting cardiac tamponade; and

c. Failing to maintain a Cardiac Catheterization Laboratory that was adequately equipped and staffed to allow for its physicians, such as Dr. Chituru Adele, to perform an emergent pericardiocentesis in the physician's preferred method.

80f.

Within a reasonable degree of medical probability, the acts and omissions/deviations from the standard of care as committed by the SRMC Defendants (along with Dr. Adele) are the direct and proximate cause of the pain, suffering, and death of Billy R. Mashburn.

80g.

While not legally required to properly bring a claim of institutional negligence, Plaintiffs attach the Affidavit of Robert Attaran, M.D. as Exhibit "B" to this Amended Complaint. This affidavit contains the opinions of an affiant competent to render opinions against the SRMC Defendants regarding these allegations.

COUNT III
ORDINARY AND INSTITUTIONAL NEGLIGENCE OF SRMC DEFENDANTS PERTAINING TO INTERFACILITY TRANSFER AND EMS TRANSPORT

80h.

The SRMC Defendants owed a duty of reasonable care when they provided care to Billy Mashburn on July 30, 2019.

80i.

The SRMC Defendants owed a duty to meet the applicable institutional standard of care when they provided care to Billy Mashburn on July 30, 2019.

80j.

On or before July 30, 2019, the SRMC Defendants had not implemented an appropriate system of interfacility ambulance transfer under the applicable professional and institutional standards. These standards dictate that appropriate means and methods of interfacility transfer (hospital to hospital transfer) be put into place and updated accordingly such that timely and safe ambulance transport for a patient in critical condition can occur. These standards also include sufficient education of the hospital staff on theplan that the hospital has put into place for interfacility EMS transfer, and timely updating of staff on changes in that plan accordingly (such as an ambulance provider no longer being in contract with the hospital, and in what order EMS services should be called for attempted transfer).

80k.

The SRMC Defendants, by and through SRMC, its Cardiac Catheterization Laboratory, and any and all physicians and administrative personnel overseeing the same, breached the standard of care as applies to hospitals generally under like surrounding circumstances and similar conditions in the following ways:

a. Failing to have a working plan in place to secure timely ambulance services;
b. Failing to adequately train and staff the Cardiac Cath Lab to handle urgent and emergent interfacility transfers of critical care patients;
c. Failing to institute and maintain appropriate means and methods of interfacility EMS transfer (hospital to hospital transfer); and
d. Failing to appropriately manage the methods of staff obtaining appropriate ambulance transport for a patient in critical condition.

80l.

Within a reasonable degree of medical probability, the acts and omissions/deviations from the standard of care as committed by the SRMC Defendants (along with Dr. Adele) are the direct and proximate cause of the pain, suffering, and death of Billy R. Mashburn.

80m.

While not legally required to properly bring a claim of institutional negligence, Plaintiffs attach the Affidavit of Fred Hyde, M.D., J.D., MBA as Exhibit "C" to this Amended Complaint. This affidavit contains the opinions of an affiant competent to render opinions against the SRMC Defendants regarding these allegations.

WHEREFORE, Plaintiff prays for the following:

(a) That process be issued as to all of the Defendants;

(b) That Tina Mashburn, individually, recover a judgment against the Defendants for the full value of the life of her late husband, Billy R. Mashburn, in excess of Ten Thousand and no/100 ($10,000.00);

(c) That Plaintiff Tina Mashburn, as Administrator of the Estate of Billy R. Mashburn, deceased, recover a judgment against Defendants in excess of Ten Thousand and no/100 ($10,000.00) as shown by the evidence at the trial of this case, for pain and suffering, medical bills and funeral and burial expenses;

(d) That the Court and Jury grant such other and further relief as it may deem just and proper; and

(e) That Plaintiff be granted a trial by jury.

This 23rd day of November, 2021.

WATKINS, LOURIE, ROLL & CHANCE, PC

BY */s/ Stephen R. Chance*
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CERTIFICATE OF TIMELINESS

Pursuant to Georgia Supreme Court Rule 11.1, Plaintiff certifies that this Amended Complaint is timely submitted, taking into account the suspension of filing deadlines as prescribed by the *Order Declaring Statewide Judicial Emergency* entered on March 14, 2020 and extended for the fourth time on July 10, 2020. Specifically:

(a) The statute of limitation for the wrongful death portion of this action would have originally run on July 31, 2021, the second anniversary of the passing of Billy Mashburn.

(b) Per Section II (A)(10) of the July 10, 2020 *Fourth Order Extending Declaration of Statewide Judicial Emergency*, "[t]he 122 days between March 14 and July 14, 2020, or any portion of that period in which a statute of limitation would have run, shall be excluded from the calculation of that statute of limitation."

(c) This filing is timely because it is being filed within the number of days specified in section (b). Excluding the 122 days between March 14 and July 14, 2020 results in a new deadline for the purposes of the statute of limitation in this action of November 29, 2021.

Respectfully submitted, this 23rd day of November, 2021.

WATKINS, LOURIE, ROLL & CHANCE, PC

BY */s/ Stephen R. Chance*
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CERTIFICATE OF SERVICE

I hereby certify that I have served the foregoing pleading on all counsel of record via Odyssey eFile GA service as follows:

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Seleta M. Griffin
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This 23rd day of November, 2021.

WATKINS, LOURIE, ROLL & CHANCE, PC

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Tiki Brown
Tiki Brown
Clerk of State Court
Clayton County, Georgia
Rachel Jeffers

IN THE STATE COURT OF CLAYTON COUNTY
STATE OF GEORGIA

TINA MASHBURN, Individually, and TINA MASHBURN, as Administrator of the Estate of BILLY R. MASHBURN, deceased, Plaintiff, v. ATLANTA HEART ASSOCIATES, LLC, AND CHITURU ADELE, M.D. Defendants.	CIVIL ACTION FILE NO. 2020CV02176 ***JURY TRIAL DEMANDED***

COMPLAINT

COMES NOW, Tina Mashburn, Individually and as Administrator of the Estate of Billy R. Mashburn, deceased, and hereby files this Complaint, showing the Court and Jury as follows:

INTRODUCTION

On July 30, 2019, 61-year old Billy R. Mashburn experienced chest pains at home and was brought by ambulance via the Clayton County Emergency Medical Services ("EMS") to the Emergency Department at Southern Regional Medical Center ("SRMC). During transport to Southern Regional, the results of an electrocardiogram ("EKG"), which monitors the mechanical activity of the heart, were transmitted to cardiologist Chituru Adele, M.D. and a code ST-Elevation Myocardial Infarction ("STEMI") was called. In laymen's terms, Mr. Mashburn was having a heart attack which needed appropriate emergency treatment.

Dr. Adele, in attempting to treat the STEMI (and a blocked artery that was consequently discovered), performed a cardiac catheterization of Billy Mashburn's right coronary artery that was complicated by a perforation of the artery. Dr. Adele recognized the perforation and attempted

EXHIBIT A

to mend the perforation, but the patient suffered profound hypotension (severely low blood pressure) during the procedure. This hypotension was caused by the perforation and led to a pericardial effusion (excess fluid between the heart and the pericardium, the sac around the heart). This untreated effusion ultimately resulted in cardiac tamponade, a serious medical condition in which blood or fluid fills the pericardium. Mr. Mashburn's pericardial effusion constituted an emergency necessitating relief of the effusion via performance of pericardiocentesis. Pericardiocentesis is a procedure done to remove fluid that has built up in the pericardium. It is done using a needle and small catheter to drain this excess fluid. Despite this life-threatening condition, Dr. Adele failed to perform a pericardiocentesis and instead, attempted to transfer Mr. Mashburn elsewhere, despite the likelihood that a transfer could not safely take place in a timely manner and would be life-threatening for Mr. Mashburn. Dr. Adele's decision to transfer Mr. Mashburn, rather than perform the needed emergency pericardiocentesis, caused the development of cardiac tamponade and Mr. Mashburn's consequent death.

The acts and omissions/deviations of the standard of care of Dr. Adele are detailed herein and in the contemporaneously filed affidavit of Dr. James Goldstein. These acts and omissions caused Mr. Mashburn's wrongful death. Plaintiff Tina Mashburn, individually and on behalf of her late husband's estate, is entitled to damages, including those for pain and suffering, medical and funeral expenses, and all damages allowed under Georgia law for the wrongful death of Billy R. Mashburn.

PARTIES, JURISDICTION AND VENUE

1.

Tina Mashburn is in the process of being appointed the Administrator of the Estate of Billy R. Mashburn, deceased, and is therefore entitled to bring this action to recover for the physical and

emotional pain and suffering of Billy R. Mashburn, for funeral and burial expenses, for all medical and hospital expenses, and for all other damages recoverable by the Estate pursuant to Georgia law.

2.

Tina Mashburn is Billy R. Mashburn's surviving wife and is entitled to bring this claim for the wrongful death of her deceased husband.

3.

Defendant Atlanta Heart Associates, P.C. is a Georgia for-profit corporation with its principal place of business located at 350 Country Club Drive, Suite A, Stockbridge, Georgia, 30281 within Henry County.

4.

Defendant Atlanta Heart Associates, P.C. maintains an office from which it conducts business at 483 Upper Riverdale Road, 30274 within Clayton, County.

5.

Defendant Atlanta Heart Associates, P.C. may be served through its registered agent for service of process, Gopal Rao, at the registered office address, 350 Country Club Drive, Suite A, Stockbridge, Georgia, 30281 within Henry County.

6.

Defendant Atlanta Heart Associates, P.C. is subject to the jurisdiction of this court.

7.

At all times material hereto, Dr. Chituru Adele was an agent and/or employee of Atlanta Heart Associates, P.C.

8.

At all times material hereto, Dr. Chituru Adele was acting within the course and scope of his employment and/or agency relationship with Atlanta Heart Associates, P.C.

9.

Atlanta Heart Associates, P.C. is liable for the negligent acts and omissions of Dr. Adele.

10.

Dr. Chituru Adele is a physician licensed in the State of Georgia, and he is subject to the jurisdiction of this court.

11.

Dr. Chituru Adele may be served at his residence, 540 Trimble Lake Court, Atlanta, Georgia, 30342-2484, within Fulton County.

12.

Defendants are joint tortfeasors. All defendants are subject to the jurisdiction of this Court.

13.

Venue is proper in this Court because the cause of action originated in Clayton County and Defendant Atlanta Heart Associates, P.C. has an office and transacts business in Clayton County. O.C.G.A. § 14-2-510(b)(3).

FACTS

14.

On July 30, 2019, 61-year old Billy R. Mashburn experienced chest pains at home and was brought by ambulance via the Clayton County EMS to the Emergency Department at Southern Regional Medical Center.

15.

During transport to Southern Regional, the results of an EKG were transmitted to cardiologist Chituru Adele, M.D and a code STEMI (ST-Elevation Myocardial Infarction) was called.

16.

A STEMI code was called during transport via EMS and the EKG was transmitted to Dr. Adele prior to Mr. Mashburn's arrival at the emergency department.

17.

Billy Mashburn arrived at the Emergency Department at Southern Regional around 16:40 (4:40 p.m.). He was immediately triaged and seen by emergency department physician Jumoke Alim, M.D.

18.

Mr. Mashburn presented with a chief complaint of chest pain described as burning in nature with shortness of breath, nausea/vomiting, and diaphoresis.

19.

Mr. Mashburn reported chest pain with a score of 8/10.

20.

Upon arrival at the emergency department on July 30, 2019, Mr. Mashburn was noted to be a well-developed and well-nourished male who was lying on the stretcher.

21.

Mr. Mashburn was noted to be awake, alert, oriented, and cooperative with normal speech. He was not tachycardic and there was no gallop, rub, or murmur.

22.

Mr. Mashburn was admitted to Southern Regional Medical Center, in Clayton County, Georgia.

23.

Mr. Mashburn was taken to the Cardiac Catherization Laboratory ("Cath Lab") at approximately 16:56 on July 30, 2019 for a cardiac catherization to treat his STEMI, to be performed by Dr. Chituru Adele.

24.

Once in the Cath Lab on July 30, 2019, Mr. Mashburn was placed on defibrillator pads, cardiac monitor, blood pressure cuff, oxygen at 2 liters per minute via nasal cannula. He was alert and appropriate.

25.

Dr. Adele arrived for the procedure on July 30, 2019 at approximately 17:19.

26.

Dr. Adele undertook to perform a cardiac catherization and immediate coronary angioplasty because he diagnosed an acute inferior wall ST elevation myocardial infarction.

27.

Dr. Adele performed the catherization procedure by entering the right femoral artery using the Seldinger technique followed by placement of a 6-French sheath, occurring at approximately 17:30. Selective left and right angiography were performed by approximately 17:33 and the angiograms were reviewed.

28.

Dr. Adele determined that the left main artery and the circumflex artery were free of significant disease.

29.

Dr. Adele determined that the right coronary artery was a dominant vessel and was to be occluded in its mid-segment. This was the infarct-related lesion.

30.

Dr. Adele determined that there was complete occlusion of a large-caliber right coronary artery in its mid-segment.

31.

Dr. Adele performed a primary angioplasty and a pre-dilatation angioplasty, followed by the deployment of 3.5 mm drug-eluting stents.

32.

Dr. Adele performed an immediate angioplasty, which re-established distal flow. Dr. Adele deployed 3.5 mm stents covering the entire lesional segment.

33.

Following the stenting, Dr. Adele determined there was residual deficit due to intravascular calcium. Dr. Adele's team then proceeded with post-dilatation angioplasty.

34.

Post-stenting, Dr. Adele determined that there was a residual stenosis due to calcification within the vessel wall.

35.

Following the post-dilatation, Dr. Adele identified evidence of contrast extravasation outside the coronary vasculature, suggesting perforation.

36.

Dr. Adele then deployed covered stents, specifically, a Graftmaster covered stent, and found no further evidence of contrast extravasation, according to Dr. Adele's July 30, 2019 note. He also noted the implantation of the stent "successfully treated the perforation."

37.

Dr. Adele then placed Mr. Mashburn on intravenous dopamine and fluids due to "persistent blood pressure, hypotension" and a balloon pump was recommended.

38.

Dr. Adele noted that "[p]ost-procedure, due to persistent hypotension," Mr. Mashburn was placed on an intra-aortic balloon pump "for supportive management . . . "

39.

Dr. Adele treated Mr. Mashburn with a balloon pump by approximately 18:04 and 1:1 counterpulsation was established.

40.

At the conclusion of the procedure, (noted by Tiffany Peterson, CVT, RCIS to be complete at 18:10), Dr. Adele determined there was re-established flow down the right coronary artery, the patient was awake and alert, chest pain free, but continued to be hypotensive.

41.

At 18:12, a Code Blue was called, and Mr. Mashburn was noted to have vomited. He was otherwise awake, alert, and oriented.

42.

At 18:12, Dr. Adele requested that Mr. Mashburn be intubated.

43.

At 18:14, Mr. Mashburn was noted to have heart rate of 53, blood pressure of 71/49, O2 saturation of 97%, respirations of 10, and sinus bradycardia.

44.

At 18:52, Mr. Mashburn was noted to have heart rate of 60, blood pressure of 62/22, O2 saturation of 90%, respirations of 13, and sinus bradycardia.

45.

Following the catheterization procedure, it was Dr. Adele's opinion that Mr. Mashburn needed a STAT echocardiogram to assess for pericardial effusion.

46.

By no later than 18:52 had Dr. Adele decided that Mr. Mashburn needed a STAT echocardiogram to assess for pericardial effusion.

47.

Acute pericardial effusion caused by perforation in the coronary vasculature can lead to cardiac tamponade if it is not promptly diagnosed and treated.

48.

Southern Regional Medical Center ("SRMC") operates an accredited cardiac catherization lab.

49.

SRMC's accredited cardiac catherization lab is required to have the equipment to perform an echocardiogram.

50.

Nevertheless, an echocardiogram was not performed on Mr. Mashburn at SRMC, despite the fact that Dr. Adele determined he needed one by 18:52 to assess for pericardial effusion STAT.

51.

Rather than performing an echocardiogram himself, Dr. Adele began making arrangements to transfer Mr. Mashburn to Emory University Hospital Midtown ("EUHM") for urgent echocardiography, assess for pericardial effusion, and placement on an Impella hemodynamic support.

52.

In the note dictated October 17, 2019, Dr. Adele noted that following the procedure, he then "spoke to [his] colleague Dr. Liberman at EUHM, who accepted the patient immediately, and following some extended difficulty in securing an ambulance, patient was eventually transferred to Emory for further management."

53.

In Dr. Adele's note dictated July 30, 2019, there is no mention of any difficulty in securing an ambulance or any other notation indicating delay in transfer to EUHM.

54.

When Dr. Adele suspected pericardial effusion, the standard of care required him to perform a STAT echocardiogram, fluoroscopy, or some type of imaging to confirm the suspicion of pericardial effusion.

55.

When Dr. Adele suspected pericardial effusion, following the cardiac catheterization of the right coronary artery complicated by perforation of the artery, the standard of care required him to attempt to treat the effusion, once presence was confirmed, by pericardiocentesis.

56.

When Dr. Adele suspected pericardial effusion, following the cardiac catheterization of the right coronary artery complicated by perforation of the artery, the standard of care required him to perform pericardiocentesis.

57.

When Dr. Adele provided cardiac catheterization services to Mr. Mashburn in the Southern Regional Medical Center on June 30, 2019, the standard of care required him to be proficient in pericardiocentesis so that he could address the complication of effusion appropriately.

58.

Once Dr. Adele's suspicions of pericardial effusion were confirmed by echo following the cardiac catheterization of the right coronary artery complicated by perforation of the artery, the standard of care required him to perform pericardiocentesis rather than to initiate an inappropriate transfer of an unstable patient.

59.

At 19:04, Mr. Mashburn's O2 saturation was noted to be 80%.

60.

At 19:09, a temporary pacemaker catheter was inserted and sutured in place by 19:12.

61.

At 19:31, Mr. Mashburn's blood pressure continued to be dangerously low, and was noted to be 63/22.

62.

At 19:46, Mr. Mashburn's blood pressure was noted to be 55/32.

63.

The Clayton County EMS records indicate that a unit was dispatched at 19:37 and was present at the patient's bedside at 19:42 on July 30, 2019.

64.

The narrative of the Clayton County EMS record states that the EMS crew was presented a report "by the Cath lab doctor" who "advised the patient presented in the ED (emergency department) with an acute myocardial infarction."

65.

The Clayton County EMS records then noted the doctor advised the patient had a[n] inferior infarct and was being transferred with a balloon pump, on a portable vent, with a cardiac monitor and medication pumps. He was noted to be "extremely hypotensive" (54/27) and was being administered significant dosages of vasopressors.

66.

The Clayton County EMS records show that EMS departed with the patient for EUHM at 20:37 and arrived at the destination at 20:54.

67.

Mr. Mashburn arrived at EUHM unconscious, cyanotic, on intra-aortic balloon pump, with a transvenous pacer present at rate of 70, unresponsive, and in critical condition.

68.

Upon arrival at EUHM, Mr. Mashburn's admitting diagnoses included cardiac tamponade, pericardial effusion, STEMI, acute respiratory failure, coronary artery dissection, acute ischemic heart disease, accidental puncture and laceration of a circulatory system organ or structure during a circulatory system procedure, "other intraoperative complications of the circulatory system, not elsewhere classified," and "other surgical procedures as the cause of the abnormal reaction of the patient, or of later complication, without mention of misadventure at the time of the procedure."

69.

The medical records from EUHM also reflect that "[p]atient was unstable on multiple high dose pressors with large effusion post PCI (percutaneous coronary intervention) at OSH (outside hospital) and severe shock, hypotension. [Blood pressure] was in 40-50s despite being on high dose 3 pressors and IABP. He was not stable to go to cath lab."

70.

At EUHM, Mr. Mashburn's Glasgow Coma Score was assessed as a 3, the lowest possible score, indicating deep coma or death.

71.

At EUHM, Mr. Mashburn's motor responses were flaccid, he was verbally unresponsive, he was unarousable, and he had no eye-opening response.

72.

Upon arrival to the bedside, Dr. Adam Greenbaum noted, "upon my arrival to the patient's bedside there was no discernable blood pressure despite the [intra-aortic balloon pump] triggering off of a v-paced rhythm. Quick limited bedside echocardiographic imaging revealed a large pericardial effusion with a thickened RV free wall (suggesting thrombus with some additional

fibrin standing in the pericardial space as well) . . . While CPR and ACLS protocol was initiated, emergent bedside pericardiocentesis was performed . . . with removal of approximately 300 mL of bloody, nonclotting fluid with resolution of the effusion of echo. Despite the above and multiple rounds of CPR/ACLS protocol . . . no rhythm or blood pressure could be restored . . ."

73.

Despite the Emory providers relieving Mr. Mashburn's effusion on July 30, 2019 via drainage of the pericardial cavity, Mr. Mashburn's condition continued to deteriorate, and he went into pulseless electrical activity arrest.

74.

Mr. Mashburn died on July 30, 2019.

75.

Dr. Gabriela M. Bedolla, pathologist, performed an autopsy of the chest on Mr. Mashburn on August 1, 2019.

76.

Upon autopsy, anatomical diagnoses included "right coronary artery perforation; per medical record, complication of balloon angioplasty at OSH," "hemopericardium . . . status post pericardiocentesis," and "cardiac tamponade (clinical)."

77.

Upon autopsy, clinical diagnoses included "myocardial infarction (STEMI) ruled in at OSH (balloon angioplasty to RCA (right coronary artery) with perforation and subsequent stenting); arrived on ventilator[;] [c]ardiac tamponade with large circumferential pericardial effusion (urgent pericardiocentesis)[;] [c]ardiogenic shock – hypotension (epinephrine and balloon pump assist)[;] PEA arrest (CPR/ACLS protocol, multiple rounds)."

78.

Upon autopsy, the microscopic description authored by Dr. Bedolla notes that '[t]he pericardium in the area of pericardiocentesis defect shows acute hemorrhage consistent with post-procedural changes . . ."

79.

Dr. Bedolla also commented: "[t]he decedent was a 61 year old male . . . who presented to an outside hospital on 7/30/2019 with chest pain, where myocardial infarction (STEMI) was ruled in . . . subsequent balloon angioplasty of the right coronary artery was complicated by perforation. On the same day, he was transferred to EUHM (Emory University Hospital Midtown) with intra-aortic balloon pump in place (7/30/2019 at 21:17). He remained hypotensive despite vasopressors and was found to have large circumferential pericardial effusion with tamponade. He underwent emergency bedside pericardiocentesis with removal of 200 mL of bloody fluid. During the procedure, he developed asystole and pulseless electrical activity. Cardiopulmonary resuscitation was instituted; he expired about 30 minutes later . . ."

80.

Dr. Bedolla also comments, ". . . immediate cause of death is attributed to cardiac tamponade secondary to right coronary artery rupture . . ."

COUNT I

MEDICAL MALPRACTICE OF CHITURU ADELE, M.D.

81.

Under Georgia law, Dr. Chituru Adele, in his care and treatment of Billy R. Mashburn, had a duty to comply with the applicable standard of care.

82.

The standard of care, as applies here, is simply what a reasonable physician would do. In other words, the applicable standard of care is the standard of care and skill exercised by physicians generally under similar conditions and like surrounding circumstances.

83.

Dr. Chituru Adele deviated from the standard of care and skill exercised by physicians generally under similar conditions and like surrounding circumstances when he provided medical care and treatment to Billy R. Mashburn on July 30, 2019.

84.

The deviations from the standard of care committed by Dr. Adele include, but are not limited to:

1. Failing to perform an echocardiogram to confirm the diagnosis of pericardial effusion;
2. Failing to perform pericardiocentesis to alleviate Mr. Mashburn's pericardial effusion and resulting cardiac tamponade;
3. Attempting to transfer Mr. Mashburn to a tertiary care center despite his hemodynamic instability;
4. Attempting to transfer Mr. Mashburn despite his need for an emergent pericardiocentesis.

85.

Within a reasonable degree of medical probability, the acts and omissions/deviations from the standard of care as committed by Dr. Adele are the direct and proximate cause of the pain, suffering, and death of Billy R. Mashburn.

86.

Plaintiffs have complied with O.C.G.A. § 9-11-9.1 by attaching the Affidavit of James Goldstein, M.D. as Exhibit "A" to this Complaint. This affidavit contains the opinions of a duly qualified physician competent to render medical opinions under Georgia law against Dr. Adele.

87.

Defendants are jointly and severally liable to Plaintiff for general and special damages.

WHEREFORE, Plaintiff prays for the following:

(a) That process be issued as to all of the Defendants;

(b) That Tina Mashburn, individually, recover a judgment against the Defendants for the full value of the life of her late husband, Billy R. Mashburn, in excess of Ten Thousand and no/100 ($10,000.00);

(c) That Plaintiff Tina Mashburn, as Administrator of the Estate of Billy R. Mashburn, deceased, recover a judgment against Defendants in excess of Ten Thousand and no/100 ($10,000.00) as shown by the evidence at the trial of this case, for pain and suffering, medical bills and funeral and burial expenses;

(d) That the Court and Jury grant such other and further relief as it may deem just and proper; and

(e) That Plaintiff be granted a trial by jury.

This 14th day of October, 2020.

WATKINS, LOURIE, ROLL & CHANCE, PC

BY _____
STEPHEN R. CHANCE
Georgia Bar No. 120395
ROBERT D. ROLL
Georgia Bar No. 613560
XAVIER O. CARTER
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BY _____
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STATE OF Michigan)

COUNTY OF Oakland

AFFIDAVIT OF JAMES A. GOLDSTEIN, M.D.

NOW COMES James A. Goldstein, M.D. and, after being duly sworn, deposes and states under oath the following:

1.

My name is James A. Goldstein, M.D. I am over the age of 18. I am of sound mind and suffer no legal impediment from giving this affidavit. I am fully competent and qualified to testify to the matters discussed in this affidavit. I give this affidavit based upon my own personal knowledge.

2.

I am a physician licensed to practice medicine in the state of Michigan. Presently, and for the past 40 years, I have practiced medicine within the specialty of cardiology. I practiced cardiology for all of the five years preceding July 30, 2019. I am a Fellow of the American College of Cardiology. I serve on the Editorial Board of The Journal Catherization and Cardiovascuar Interventions, the Publication of ME Society of Cardiac Angiography, of which I am a Fellow. I am presently Director of Research and Education with the Division of Cardiology, William Beaumont Hospital in Royal Oak, Michigan, where I have an active clinical practice in cardiology. A true and correct copy of my curriculum vitae is attached hereto as Exhibit "A."

EXHIBIT A

3.

Based on my education, training and experience, I am familiar with the degree of care and skill that is exercised by cardiologists in those conditions and circumstances surrounding Mr. Billy Mashburn's presentation to the Southern Regional Medical Center on July 30, 2019, and the care provided to him there, including by Chituru Adele, M.D. I have approximately 40 years of experience in diagnosing and treating patients with a history of myocardial infarction, pericardial effusion, cardiac tamponade, and other cardiac diseases and have experience in performing all manner of interventional cardiology procedures, including cardiac catherization, and addressing complications of said procedures. For more than three of the five years preceding July 30, 2019 (when the negligent acts and omissions giving rise to this case occurred), I have been actively engaged in the practice of interventional cardiology, including regularly encountering patients, such as Mr. Mashburn, who have undergone a cardiac catheterization and stint procedure and who have developed the complications of perforation and bleeding with pericardial effusion and cardiac tamponade. I have regular and active experience in the diagnosing and treatment of these complications and conditions in my practice, including but not limited to all five years of the five year period preceding July 30, 2019. The experience I have with regard to cardiac patients and interventional cardiology includes all of the five-year time period previous to Mr. Mashburn's presentation to Dr. Adele in July of 2019.

4.

This affidavit is based upon my personal knowledge gained through my education, training and experience. This affidavit is also based upon the facts shown within the following medical records pertaining to Billy R. Mashburn:

(a) Medical records from the Southern Regional Medical Center relating to the care of Billy R. Mashburn on July 30, 2019;

(b) Medical records from Emory Healthcare/Emory Crawford Long Hospital relating to the care of Billy R. Mashburn on July 30, 2019;

(c) Records from the Clayton County EMS relating to the care of Billy R. Mashburn on July 30, 2019; and

(d) The death certificate for Billy R. Mashburn.

5.

In reviewing the records described above, I have ascertained the following facts and assume them to be true in stating my opinions below:

a. On July 30, 2019, 61-year old Billy R. Mashburn experienced chest pains at home and was brought by ambulance via the Clayton County EMS to the emergency department at Southern Regional Medical Center. During transport to Southern Regional, an EKG was transmitted to cardiologist Chituru Adele, M.D and a code STEMI (ST Elevation Myocardial Infarction) was called.

b. Billy Mashburn arrived the emergency department at Southern Regional around 16:40 (4:40 p.m.). He was almost immediately triaged and seen by emergency department physician Jumoke Alim, M.D. Dr. Alim noted that he presented with a chief complaint of chest pain and that just prior to arrival [at the emergency department] he had been engaged in sexual intercourse when he developed substernal chest pain described as burning in nature with shortness of breath, nausea/vomiting, and diaphoresis. Dr. Alim noted that the STEMI code was called during transport via EMS and that the EKG had been transmitted to the interventionalist prior to Mr.

Mashburn's arrival at the emergency department. Mr. Mashburn reported chest pain with a score of 8/10.

c. Upon arrival at the emergency department, Mr. Mashburn was noted to be a well-developed and well-nourished male who was lying on the stretcher appearing to be in moderate discomfort. He was noted to be awake, alert, oriented, and cooperative with normal speech. He was not tachycardic and there was no gallop rub or murmur.

d. Mr. Mashburn was admitted to Southern Regional Medical Center. At approximately 16:51, the Cath Lab was noted to be ready for the patient. Mr. Mashburn was taken to the Cath Lab at approximately 16:56 for an emergency cardiac catherization.

e. Once in the Cath Lab, he was placed on defibrillator pads, cardiac monitor, B/P cuff, oxygen at 2 liters per minute via nasal cannula. He was alert and appropriated. The physician, Dr. Adele, arrived for the procedure at approximately 17:19. A pre-procedure evaluation was performed, and no changes were noted.

f. At approximately 17:29 a French size 6 diagnostic catheter was inserted via Mr. Mashburn's femoral artery and a left coronary artery angiogram was performed. The diagnostic catheter was removed at approximately 17:30.

g. At approximately 17:30, a French size 6 interventional coronary guide catheter was inserted. An angiogram was performed at approximately 17:31.

h. At 17:37, a 3.0 mm diameter, 15 mm length coronary balloon catheter with 145 cm shaft length was inserted into the right coronary artery and inflated. It was then re-positioned and re-inflated.

i. At 17:39, a coronary drug eluding stent delivery system was inserted into the right coronary artery. It was deployed at 17:40 and removed at 17:41.

j. At 17:43, a second drug eluding stent delivery system was inserted into the right coronary artery. It was deployed at 17:44 before being removed.

k. At 17:47, a second coronary balloon catheter was inserted into the right coronary artery and inflated. It was removed at 17:48.

l. At 17:48, Najeeb I. Siddique, M.D., an anesthesiologist, was called to the catheterization (or cath) lab due to Mr. Mashburn becoming hemodynamically unstable prior to the insertion of an intra-aortic balloon pump (IABP). He changed Mr. Mashburn from nasal cannula to a 100% non-rebreather mask and reported ventilation and oxygenation were stable.

m. Between approximately17:50-17:53, a coronary bare metal stent delivery system was inserted into the right coronary artery and removed.

n. At 17:52, Mr. Mashburn's vital signs included a heart rate of 54, blood pressure of 64 over 39, oxygen saturation of 96%, respirations at 17, and sinus bradycardia.

o. At 17:55, a third drug eluding stent delivery system was inserted into the right coronary artery and deployed before being removed at 17:56.

p. At 18:02, an IABP sheath was inserted.

q. At 18:05, Mr. Mashburn's vital signs included a heart rate of 55, blood pressure of 66/42, oxygen saturation of 97%, respirations at 9, and sinus bradycardia. At 18:09, his vital signs included a heart rate of 44, blood pressure of 82 over 42, oxygen saturation of 99%, respirations at 10, with sinus bradycardia.

r. At 18:10, nurse Tiffany Peterson noted that the IABP catheter insertion procedure was deemed complete. At 18:12, the family was notified. The patient was awake, alert, and oriented.

s. The preliminary cardiac catherization report notes sedation began at 17:26 and ended at 18:11. Estimated ejection fraction was noted to be 25-30%. The left coronary artery anatomy was noted to be diffuse, with moderate atherosclerosis. The right coronary artery was noted to go from 100% to 0%. However, Dr. Adele noted that the right coronary artery procedure was "complicated by contrast extravasation."

t. At 18:12, Dr. Najeeb I. Siddique was again called to the catheter lab where a CODE BLUE was called. Mr. Mashburn was noted to have vomited with possible aspiration on the IABP. Dr. Siddique notes that the cardiologist requested that the patient be intubated. The patient was placed on a ventilator.

u. Between approximately 19:09 and 19:12, a temporary pacemaker catheter was inserted, and a temporary pacemaker catheter was sutured in place.

v. At 18:52, Dr. Adele dictated a note documenting the following:

    i. Mr. Mashburn presented as a 61-year-old male with chest pain and inferior ST elevation myocardial infarction on the ECG. Emergency cardiac catherization was activated;

    ii. Dr. Adele undertook to perform a cardiac catherization and coronary angioplasty because he diagnosed an acute inferior wall ST elevation myocardial infarction;

    iii. The procedure was performed by entering the right femoral artery using the Seldinger technique followed by placement of a 6-French sheath. Selective left and right angiography were performed and the angiograms were reviewed.

    iv. It was determined that the left main artery and the circumflex artery were free of significant disease. The right coronary artery was determined to be a dominant vessel that was occluded in its mid-segment and was the infarct-related lesion.

    v. A primary angioplasty and a pre-dilatation angioplasty were performed, followed by the deployment of 3.5 mm drug-eluting stents.

vi. Following the stenting, there was residual deficit due to intravascular calcium. Dr. Adele's team proceeded with post-dilatation angioplasty.

vii. Following the post-dilatation, they identified evidence of extravasation of contrast outside the coronary vasculature, suggesting perforation. They then deployed covered stents and following deployment, there was no further evidence of contrast extravasation.

viii. The patient was then placed on intravenous dopamine and fluids due to "persistent blood pressure, hypotension" and a balloon pump was recommended.

ix. Mr. Mashburn was treated with a balloon pump and 1:1 counterpulsation was established. At the conclusion of the procedure, there was re-established flow down the right coronary artery, the patient was awake and alert, chest pain free, but continued to be hypotensive.

x. Mr. Mashburn was "planned for emergency transfer to a tertiary care center" with a recommendation for "a stat echocardiogram to assess for pericardial effusion."

w. The Clayton County EMS records indicate that a unit was dispatched at 19:37 and was present at the patient's bedside at 19:42. [CC EMS 005]. The narrative of the Clayton County EMS record states that the EMS crew was presented a report "by the Cath lab doctor" who "advised the patient presented in the ED with an acute myocardial infarction. The doctor advised the patient had a[n] inferior infarct and was being transferred with a balloon pump, on a portable vent, with a cardiac monitor and medication pumps. He was noted to be "extremely hypotensive" and was being administered significant dosages of vasopressors.

x. The Clayton County EMS records show that EMS departed with the patient for Emory Crawford Long Hospital at 20:37 and arrived at the destination at 20:54.

y. The medical records from Emory Crawford Long Hospital record that "[p]atient was unstable on multiple high dose pressors with large effusion post PCI at OSH and severe shock, hypotension. BP was in 40-50s despite being on high dose 3 pressors

and IABP. He was not stable to go to cath lab." The medical providers at ECLH performed a bedside echocardiogram and performed a pericardial puncture, removing about 200 cc of bloody fluid from Mr. Mashburn's pericardium. The echo showed no more effusion following that drainage, but fibrinous material remained, "probably represented a clotted blood." Despite relieving Mr. Mashburn's effusion, his condition continued to deteriorate and he went into PEA arrest and died.

6.

My review of the records from the care of Mr. Mashburn at Southern Regional Medical Center leads me to conclude that Chituru Adele, M.D., performed a cardiac catherization of Billy Mashburn's right coronary artery that was complicated by a perforation of the artery. Dr. Adele recognized the perforation and attempted to mend the perforation, but the patient suffered profound hypotension during the procedure, more likely than not caused by the perforation leading to a pericardial effusion resulting in cardiac tamponade. This constitutes an emergency necessitating immediate relief of the effusion via performance of immediate emergency pericardiocentesis in the catheterization laboratory, preferably with echocardiographic guidance but at minimum under fluoroscopic guidance. Dr. Adele failed to perform those procedures and attempted to transfer Mr. Mashburn despite the likelihood that said transfer could not safely take place in a timely manner to prevent the development of cardiac tamponade and consequent death.

In my opinion, Chituru Adele, M.D. and Atlanta Heart Associates, P.C. breached the standard of care by cardiologists generally under like surrounding circumstances and similar conditions in the following ways:

1. Failing to perform an echocardiogram to confirm the diagnosis of pericardial effusion;
2. Failing to perform pericardiocentesis to alleviate Mr. Mashburn's pericardial effusion and resulting cardiac tamponade;
3. Attempting to transfer Mr. Mashburn to a tertiary care center despite his hemodynamic instability;
4. Attempting to transfer Mr. Mashburn despite his need for an emergent pericardiocentesis.

7.

It is further my opinion, to a reasonable degree of medical probability, that the above-described breaches of the standard of care on the part of Dr. Adele and Atlanta Heart Associates, P.C. caused or contributed to Mr. Billy Mashburn's developing pericardial effusion leading to cardiac tamponade, and ultimately resulting in his death on July 30, 2019.

8.

This affidavit is being given to comply with the requirements of O.C.G.A. § 9-11-9.1. This affidavit is not intended to include all of my opinions that I have formed following my review of the records enumerated herein. In fact, I have additional opinions that are not expressed herein. All of my opinions stated herein are expressed based upon my education, training and experience as well as upon my review of the records enumerated above. I reserve the right to alter and supplement my opinions upon being provided further information.

FURTHER AFFIANT SAYETH NOT.

This 11th day of September, 2020.

JAMES A. GOLDSTEIN, M.D.

Sworn to and subscribed before me

this 11th day of September, 2020.

Notary Public

My Commission expires: 02/28/2026

TONI M. HAGGERTY
NOTARY PUBLIC, STATE OF MI
COUNTY OF OAKLAND
MY COMMISSION EXPIRES Feb 28, 2026
ACTING IN COUNTY OF Oakland

CURRICULUM VITAE

James A. Goldstein, M.D., F.A.C.C.
Director of Research and Education
Mike and Shirley Kojaian Endowed Chair in Cardiovascular Research & Education
Department of Cardiovascular Medicine
Beaumont Health System
Royal Oak, Michigan
July 1, 2020

Date of Birth: January 17, 1950

Marital Status: Married
Children: Jacob, age 36
Rachel, age 34
Sidney, age 32

Telephone: Office: 248.898.1872
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Work Address: William Beaumont Hospital
Department of Cardiovascular Medicine
3601 W. Thirteen Mile Road
Royal Oak, Michigan 48073

Place of Birth: Highland Park, Illinois

Citizenship: United States

Areas of Interest: Congestive Heart Failure
Acute Myocardial Infarction
RV Infarction and RV Shock
Hemodynamics
Atherosclerotic Plaque characterization
Diseases of the Pericardium
Non-invasive and Invasive Imaging
Bedside Cardiovascular Physical Examination

EDUCATION:

1972 B.S. University of Illinois, Urbana, Illinois

1976 M.D. University of Chicago School of Medicine
Chicago, Illinois

TRAINING:

1976-77 Intern
University of Oregon Hospitals
Portland, Oregon

1977-78 Resident in Medicine
University of Oregon Hospitals
Portland, Oregon

1978-80 Research Fellow in Cardiology
Cardiovascular Research Institute
University of California
San Francisco, California

1980-82 Clinical Cardiology Fellow
Cardiovascular Research Institute
University of California
San Francisco, California

CHRONOLOGY OF PROFESSIONAL EXPERIENCE:

1982-86 Associate Chief, Cardiology
Director, Coronary Care Unit
Santa Clara Valley Medical Center
Assistant Clinical Professor of Medicine
Stanford University Medical Center, California

1986-94 Interventional Cardiologist
Cardiac Transplantation Service
Assistant Professor of Medicine
Washington University School of Medicine
St. Louis, Missouri

1994-Present Director of Research and Education
Director of Cardiomyopathy and Heart Failure Center
Department of Cardiovascular Medicine, Beaumont Health System
Professor of Medicine
Oakland University-William Beaumont School of Medicine

HONORS:

Curriculum Vitae
James A. Goldstein, M.D., F.A.C.C.

1968-72 Edmund J. James Scholar and Willard Scholar
University of Illinois, Urbana, Illinois
Graduated With Highest Honors and Highest Distinction

1971-72 First Undergraduate Appointed as Graduate Teaching
Fellow, Department of Physiology and Biophysics, University of Illinois

1988-89 Teacher of the Year, Department of Medicine
Washington University School of Medicine
St. Louis, Missouri

1995 The Best Doctors in America: Midwest Region (1996-1997)

1996 - 2002 Top Doctors: Detroit Monthly

1998-2007 Best Doctors in Michigan, Detroit News & Free Press

2005 *Essential Science Indicators* reported that the article on: "Multiple complex Coronary Plaques in Patients with Acute Myocardial Infarction" (New England Journal of Medicine 2000;343:915-922) in the top 1% of citations within the field.

2001 – 2005 Guide to American's Top Physicians"
Consumers' Research Council of America

1999-2013 Best Doctors in America

2011 Best Doctors Metro Detroit

2012 US News and World Report's 'Top Doctors'

2014 Simon Dack Award for Outstanding Scholarship
American College of Cardiology

2014 Teacher Award for 2013
Oakland University-William Beaumont School of Medicine

2015 Attending Physician of the Year
Department of Cardiovascular Medicine

2016 Hildner Elite Reviewer Award
Catheterization and Cardiovascular Interventions

Curriculum Vitae
James A. Goldstein, M.D., F.A.C.C.

SCAI Annual Meeting

2016 European Atherosclerosis Society Best Poster Award

2016 Attending Physician of the Year
Department of Cardiovascular Medicine

2017 Attending Physician of the Year
Department of Cardiovascular Medicine

2020 Attending Physician of the Year
Department of Cardiovascular Medicine

Special Award: Attending Physician of the Year 2014-2020
Department of Cardiovascular Medicine

2018-Present
Mike and Shirley Kojaian Endowed Chair in Cardiovascular Research & Education

MEMBERSHIPS

Fellow, American College of Cardiology
American Heart Association
Fellow, Society of Cardiac Angiography and Interventions

ADVISORY BOARDS:

Chair, Alumni Annual Funds, Medical & Biological Sciences, Alumni Association, University of Chicago 2006
Member of Alumni Council, Medical & Biological Sciences Alumni Association, University of Chicago 2006 – 2009

Board of Trustees: Society of Cardiac Angiography and Interventions: 2010-13

Scientific Advisory Board of the 22nd World Congress on Heart Disease

EDITORIAL RESPONSIBILITIES:

Editorial Board: Catheterization and Cardiovascular Interventions 2006-present

Curriculum Vitae
James A. Goldstein, M.D., F.A.C.C.

Editorial Board: Journal of American College of Cardiology 2002-2006, 2010-1013

Editorial Board: Coronary Artery Disease 2013-present

Manuscript Reviewer: American Heart Journal, American Journal of Cardiology, Catheterization and Cardiovascular Diagnosis, Circulation, Coronary Artery Disease, Journal of the American College of Cardiology, New England Journal of Medicine, Journal of Interventional Cardiology, JAMA, European Heart Journal

Other: Abstract Grader: American College of Cardiology
American Heart Association
Society for Cardiac Angiography: 1998-present
Transcatheter Cardiovascular Therapeutics, 2002-present
CRT 2012-present

HOSPITAL COMMITTEES

Human Investigation Committee: 2001-2006
Cardiovascular Medicine Executive Committee 2006-2011
Cardiovascular Medicine Advisory Committee 2007-2011
Founding Director of Cardiovascular Curriculum OUWBH Medical School Curriculum
OUWBH Medical School Curriculum Committee 2013-2014

Curriculum Vitae
James A. Goldstein, M.D., F.A.C.C.

PROFESSIONAL SOCIETY COMMITTEE MEMBERSHIPS:

Society of Cardiac Angiography: Interventional Committee: 2002-present

Society of Cardiac Angiography: Board of Trustees: 2009-present

Chair: Multi-specialty Occupational Health Group: Representing SCAI: 2004-present

Chair: SCAI Task Force on Interventional CHF

Chairman: American College of Cardiology: Michigan Chapter Annual Meeting 2006

GRANTS:

"An Open-label Pilot Study to Examine the Effects of Nifedipine GITS on Total Ischemic Activity, Metabolic and Mechanical Function of the Left Ventricle in Patients With Stunned and Hibernating Myocardium" (07/89 - 07/92): Pfizer Pharmaceuticals, Inc.: $150,000

"Mechanisms Underlying Right Ventricular Dysfunction" (07/01/88 - 06/31/89): Missouri Heart Association Grant-in-Aid: $50,000

"Responses of the Right Heart to Ischemia and Reperfusion" (07/01/91 - 06/31/93): Missouri Heart Association Grant-in-Aid: $50,000

"Deleterious Effects of the Lytic State on Reperfused Myocardium: A Pilot Study Comparing the Effects on Reperfused Myocardium of a Fibrin-Selective Versus a Nonfibrin-Selective Thrombolytic Agent" (12/15/92 - 02/28/93): Genentech: $50,000

"The Effects of a Superoxide Dismutase Mimic on Recovery of Myocardium Subjected to Thrombotic Occlusion and Prolonged Thrombolytic Reperfusion" (10/01/93 - 10/01/94): Monsanto/Searle Grant: $200,000

Randomized, Double-Blind, Placebo-Controlled Study of the Acute Hemodynamic Effects and Safety of the Endothelin Receptor Antagonist in Subjects with Heart Failure. Bristol-Myers Squibb Pharmaceutical Research Institute. (12/96 - 12/97): $40,000

A Clinical Phase 1 / 2 Study of Transarrest as adjunct therapy for cardiac rate and rhythm

management during coronary artery bypass graft (CABG) Surgery. Corvascular Surgical Systems: $200,000 1998-9

Coronary Angiography using the angiographic contrast injection system study –ACIST Medical Systems: $30,000 1998-9

An acute, double-blind, placebo-controlled, parallel group study of coronary vascular responsiveness during administration of the 5HT IB/ID-receptor agonists, eletriptan (IV) or sumatriptan (SC), as determined using quantitative coronary angiography (protocol A1601072) – Pfizer Pharmaceuticals: $750,000 2001-2002

Inot-43: The effects of nitric oxide for inhalation on survival or the need for dialysis or a right ventricular assistance device (RVAD) in right ventricular infarction patients (protocol #Inot43) $25,000 2002

Coronary artery plaque characterization by near-infrared spectroscopy in patients undergoing elective percutaneous coronary intervention. InfraReDx, Inc. $50,000 2009-2010

Chemical Composition of Plaques by CT Angiography: Correlation by Coronary artery plaque characterization by near-infrared spectroscopy. Siemens, Inc. $20,000 2009-2010

Co-Investigator: PITCH Heart Failure Study: PDE5 Inhibition with Tadalafil Changes Outcomes in Heart Failure. Massachusetts General Hospital (MGH) and New England Research Institutes, Inc (NERI) $26.1 million cooperative grant award from the National Heart, Lung and Blood Institute (NHLBI) of the National Institutes of Health (NIH) to conduct a trial testing the safety and efficacy of tadalafil, a pulmonary vasodilator and phosphodiesterase Type 5 (PDE5) inhibitor, in patients with heart failure.

BIOMEDICAL PATENTS:

Angiographic Fluid Control System: Patent issued: # 5,515,851

Catheterization Procedure Platform System: Patent issued: # 5,586,163

Endomyocardial Biopsy Sheath: Patent issued: # 5,810,746

Radiation Protection System: Patent issued: # 6,448,571

Angiographic Fluid Control System: Patent issued: # 5,515,851

Catheterization Procedure Platform System: Patent issued: # 5,586,163

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Endomyocardial Biopsy Sheath: Patent issued: # 5,810,746

Radiation Protection System: Patent issued: # 6,448,571

Radiation Protection System: Patent issued #6,653,648

Radiation Barrier: Patent issued #7,057,194

Radiation Protection System: Patent issued #7,091,508

Radiation Protection System: Patent issued #60018300-0029

Method and Apparatus for Shielding Medical Personnel from Radiation #60018300-0035

Radiation Protection System: Patent issued #7,638,784

Lower Shield For Radiation Protection System: Patent issued #7,829,873

Method and Apparatus for Shielding Medical Personnel from Radiation: Issued #8,716,687

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fatigue syndrome as documented with holter and biopsy data in Birmingham, Michigan, 1991-1993. Infectious Diseases in Clinical Practice 1997;6:327-333.

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101. **Goldstein JA** Coronary Intervention with Miniaturized Guiding Systems: Is Smaller Necessarily Better? Catheterization and Cardiovascular Interventions 2010; 75: 989-90

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59. Sakwa M, McCue MG, Shannon F, Timmis SB, Duhaylongsod FG, Ayers GM, **Goldstein JA**. Pharmacologic electrical arrest with intermittent pacing facilitates off-pump bypass surgery. International Society for Minimally Invasive Cardiac Surgery – 5/99.

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James A. Goldstein, M.D., F.A.C.C.

60. Timmis SBH, Sakwa MP, Shannon FG, McCue M, Pica M, Ayers G, **Goldstein JA.** Interventional cardiology techniques utilized to facilitate performance of off-pump coronary artery bypass surgery. The Society for Cardiac Angiography & Interventions – 5/99.

61. Sztejfman C, Bettinetti M, DeLuca C, **Goldstein JA.** Portable digital fluoroscopic imaging system as stand-alone catheterization laboratory for coronary and peripheral angiography and interventions. The Society for Cardiac Angiography & Interventions – 5/99.

62. Patel MB, Bowers T, Pica M, Safian RD, Grines CL, O'Neill WW, **Goldstein JA.** Atrioventricular block in inferior MI is not due to AV nodal ischemia alone. The Society for Cardiac Angiography & Interventions – 5/99.

63. Wolyn R, Chowdhury P, Timmis GC, **Goldstein JA**, O'Neill JA. Outcome of urgent coronary interventions in patients presenting with acute non-Q-wave myocardial infarction in a community hospital setting. 1st International Congress on Heart Disease - 5/99.

64. **Goldstein JA**, Demetriou D, Shoukfeh M, Pica M. Multiple unstable coronary plaques in patients with acute MI increase recurrent ischemia and revascularization rates. Circulation 1999: Supplement I:100:18:1-378.

65. Patel MB, Qureshi MA, **Goldstein JA**. Reperfusion with leukocyte depleted blood during primary PTCA in patients with acute myocardial infarction: Initial clinical experience. Circulation 1999;Supplement I;100(18):1-360.

66. Qureshi MA, Safian RD, **Goldstein JA**, Westveer DC, Glazier S, Balasubramanian M, O'Neill WW. Beaumont risk stratification score for mortality after percutaneous intervention. Circulation 1999;Supplement I;100(18): 1-780.

67. DeGeare VS, **Goldstein JA**. Predictive value of the Killip Classification in patients undergoing primary percutaneous intervention for acute MI: A pooled analysis of the PAMI trials. Circulation 1999;Supplement I;100(18): 1-809.

68. Lee DT, Patel M, Bowers T, **Goldstein JA**. Atrioventricular block in inferior myocardial infarction is not due to AV nodal ischemia alone. Circulation 2000;Supplement;102;18:II-608.

69. Skelding KA, **Goldstein JA**, Lee DT, Mehta LS, Pica MC, O'Neill WW. Resolution of refractory no reflow after intracoronary epinephrine. Circulation 2000;Supplement;102;18: II-645.

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preserved during stress in patients with chronic proximal right coronary occlusion. Journal of the American College of Cardiology 2001;37(2):347A.

71. Lee DT, Nguyen VD, O'Neill WW, **Goldstein JA**. Reperfusion induced bradycardia and hypotension is common with proximal but not distal acute RCA occlusions: Role of the ischemic right ventricle. Journal of the American College of Cardiology 2001;37(2):358A.

72. Skelding KA, Demetriou D, Crisan D, Mehta L, Boura JA, Pica MA, Guido-Allen DA, Finta B, Safian RD, **Goldstein JA**, Grines CL, O'Neill WW. Platelet glycoprotein IIIa polymorphism is not a risk factor for target vessel revascularization after percutaneous revascularization. Journal of the American College of Cardiology 2001;37(2):69A.

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75. **Goldstein JA**. Multiple unstable coronary plaque in patients with acute MI increase recurrent ischemia and revascularization rates. Journal of Heart Disease 2001;2:61.

76. Harjai KJ, Grines Cl, Sadeghi M, Ledford C, Marsalese D, Safian RD, **Goldstein, JA**, Kahn J, O'Neill WWW, PAMI group. Does prior angina predict outcomes following acute myocardial infarction? Testing the relevance of ischemic pre-conditioning in the era of primary angioplasty. Journal of the American College of Cardiology 2002;39(5):302A.

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Curriculum Vitae
James A. Goldstein, M.D., F.A.C.C.

80. **Goldstein JA**, Lee DT, Bowers T, Grines CL, Pica M, O'Neill WW. Bradycardia, hypotension and chronotropic incompetence are common with acute proximal versus distal RCA occlusion. Journal of the American College of Cardiology 2002;39(5):318A.

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83. Skelding KA, O'Neill KE, O'Neill WW, **Goldstein JA**. Myonecrosis commonly complicates no-reflow developing after interventions in both native coronary vessels and vein grafts. Catheterization and Cardiovascular Interventions 2002;56(1):118.

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James A. Goldstein, M.D., F.A.C.C.

90. **Goldstein JA**. Effect of supratherapeutic doses of eletriptan on human coronary arteries. American Headache Society 2003;Chicago, Illinois. *Best poster award.

91. **Goldstein JA**. Effect of supratherapeutic doses of eletriptan vs a therapeutic dose of sumatriptan and vs placebo on human coronary arteries. EFNS Congress 2003;Helsinki, Netherlands.

92. **Goldstein JA.** Supratherapeutic doses of eletriptan vs a therapeutic dose of sumatriptan and vs placebo: Effect on human coronary arteries. International Headache Society 2003; Rome, Italy.

93. Raff G, **Goldstein JA.** Cardiovascular Imaging 2003:31st Annual Meeting and Scientific Session, Fourth International Workshop on Coronary MR and CT Angiography, Dallas, Texas.

94. Chowdhury PS, Harjai KJ, Boura JA, **Goldstein JA**, O'Neill WW. Predictors and Prognostic Implications of Coronary Artery Dissection in the Setting of Primary Percutaneous Intervention for Acute Myocardial Infarction. Poster presentation – American Heart Association – Orlando, Florida

95. **Goldstein JA**, Balter Stephen, Klein Lloyd W. Prevalence of orthopedic problems in interventionalists: Society of Coronary Angiography and Interventions – San Diego, California 2004.

96. Goldstein J, Bartholomew B, **Goldstein JA.** Influence of preprocedural hydration and n-acetylcysteine on contrast nephropathy in the modern interventional era. Society of Coronary Angiography and Interventions – San Diego, California 2004.

97. Abbas AE, Brewington SD, **Goldstein JA**, Gallagher MJ, Boura JA, Raff GL. A novel method for hemodynamic assessment of hypertrophic obstructive cardiomyopathy using cine MRI frame counting. American Journal of Cardiology September, 2004;TCT:32E.

98. Brewington SD, Abbas AE, **Goldstein JA**, Raff FL. Morphologic changes in the ventricular septum after alcohol septal ablation: A study using contrast-enhanced magnetic resonance imaging. The American Journal of Cardiology 2004;TCT256:119E.

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100. Gallagher MJ, Ross MA, Raff GL, Romey A, **Goldstein JA**, Dickinson CZ, O'Neill WW, Medado P, O'Neil B. The accuracy of 64-slice spiral computed tomography compared with

stress myocardial perfusion imaging in low risk emergency department chest pain center patients. Circulation 2005;112(17):3180.

101. Mehta LS, Raff G, Dixon S, Brewington SD, Abbas AE, O'Neill WW, **Goldstein JA.** Microvascular perfusion is intact in patients with Takotsubo "Broken Heart" syndrome: A study using early contrast-enhanced magnetic resonance imaging. Circulation 2005;112(17):2828.

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105. Glanz A, Pica MC, Dixon SR, **Goldstein JA**, Chetty R, O'Neill WW. Safety and Feasibility of rapid patient transfer across international borders for primary angioplasty in ST elevation myocardial infarction. CCS Vancouver, BC 2006.

106. Cheruvu PK, Finn AV, Gardner C, Caplan J, **Goldstein JA**, Stone GW, Virmani R, Muller JE. Density and distribution of thin-cap fibroatheroma and rupture plaque in human coronary arteries – A pathologic study. Circulation 2006;114(18):11-22:251.

107. Chinnaiyan KM, Mehta LS, Gallagher MJ, **Goldstein JA,** Raff GL. Coronary CT angiography decreases the need for invasive cardiac catheterization in patients with indeterminate stress test. Journal of the American College of Cardiology 2007;49(9):117A:901-231

108. **Goldstein JA**, Muller JEM. Detection of Lipid-Rich coronary plaque in patients with a catheter-based near-infrared spectroscopy system: Final results of the SPECTroscopic assessment of coronary lipid (SPECTACL) multicenter study. ACC 2008

109. Madder RD, Pica MC, **Goldstein JA,** Dixon SR. Frequency of lipid-core plaque in culprit and non-culprit lesions by intra-coronary near-infrared spectroscopy. TCT 2010.

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James A. Goldstein, M.D., F.A.C.C.

BOOK CHAPTERS

1. Cresci SC, **Goldstein JA.** Hemodynamic manifestations of ischemic right heart dysfunction. In Kern MJ (ed): "Hemodynamic rounds: Interpretation of cardiac pathophysiology from pressure waveform analysis", New York, NY: Wiley-Liss, Inc., 1993:151-156.

2. **Goldstein JA.** Cardiac valve disease: Pathophysiology, evaluation and management. In: Freed M (ed.): "Guide to cardiovascular drug therapy". Physicians Press, Birmingham, Michigan (In Press).

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4. **Goldstein JA.** Management of patients with congestive heart failure. In: Medical management of heart disease: The Clinician's Consultant. Marcel Dekker, Inc. New York, 1996: 221-234.

5. Sobel BE, Watkins M, **Goldstein JA.** Management of patients with valvular heart disease. In: Medical Management of Heart Disease: The Clinician's Consultant Marcel Dekker, Inc., New York, 1996: 239-266.

6. **Goldstein JA.** Management of patients with pericardial diseases. In: Medical Management of Heart Disease: The Clinician's Consultant Marcel Dekker, Inc., New York, 1996: 267-284.

7. McCullough P, **Goldstein JA.** Heart pressures and catheterization. Diagnostic Cardiac Catheterization Blackwell Scientific Publications, Inc. 1997.

8. **Goldstein JA,** Donohue B. Minimally invasive cardiac surgery. "Perioperative assessment of graft patency." Quality Medical Publishing, Inc. St. Louis, MO 1998.

9. Rosenfield K, **Goldstein JA,** Safian RD. Medical and peripheral vascular complications. The Manual of Interventional Cardiology. Physicians' Press 2001.

10. **Goldstein JA.** Panvascular Plaque Instability: Relationship to Systemic Inflammation. Handbook of Vulnerable Plaque, 2nd edition, 2007

11. **Goldstein JA.** Hemodynamic manifestations of ischemic right heart dysfunction. In Kern MJ, **Goldstein JA** (eds): Hemodynamic Rounds: Interpretation of cardiac pathophysiology from pressure waveform analysis", New York, NY: Wiley-Liss,

Inc.2009.

12. **Goldstein JA.** An anatomic-pathophysiologic approach to hemodynamic assessment. In Kern MJ, **Goldstein JA** (eds): Hemodynamic Rounds: Interpretation of cardiac pathophysiology from pressure waveform analysis", New York, NY: Wiley-Liss, Inc.2009.

13. **Goldstein JA.** Hemodynamic Evaluation of Dyspnea In Kern MJ, **Goldstein JA** (eds): Hemodynamic Rounds: Interpretation of cardiac pathophysiology from pressure waveform analysis", New York, NY: Wiley-Liss, Inc 2009.

14. **Goldstein JA.** Bedside evaluation of low output hypotension In Kern MJ, **Goldstein JA** (eds): Hemodynamic Rounds: Interpretation of cardiac pathophysiology from pressure waveform analysis", New York, NY: Wiley-Liss, Inc 2009.

15. **Goldstein JA.** Hemodynamic evaluation of right heart failure. In Kern MJ, **Goldstein JA** (eds): Hemodynamic Rounds: Interpretation of cardiac pathophysiology from pressure waveform analysis", New York, NY: Wiley-Liss, Inc 2009.

16. **Goldstein JA.** Pathophysiology and Management of Acute Right Ventricular Infarction Circulation Monograph on Cardiogenic Shock Eds: Hochman JS and Ohman EM, Editors Wiley-Blackwell 2009

17. **Goldstein JA.** Special Problems in Acute Myocardial Infarction: Suspected Myocardial Ischemia in the Emergency Department In: Cardiology Eds: Crawford, et al. Mosby Elsevier 2009

18. Chinnaiyan K, Raff G and **Goldstein JA.** Cardiac CT in the Emergency Department. Cardiology Clinics. Ed: Crawford M. Saunders Nov 2009.

19. **Goldstein JA.** Angiography for Detection of Complex and Vulnerable Plaque. In: Naghavi M (ed). Asymptomatic Atherosclerosis: Pathophysiology, Detection and Treatment. Humana Press 2010

20. **Goldstein JA,** Muller JE Intravascular Characterization of Vulnerable Coronary Plaque. In: Naghavi M (ed). Asymptomatic Atherosclerosis: Pathophysiology, Detection and Treatment. Humana Press 2010

21. **Goldstein JA and Abbas A** Anatomic-Pathophysiologic Approach To Hemodynamics: Complementary Roles of Non-Invasive and Invasive Diagnostic Modalities Cardiol Clin

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M Lim (Editor) 2011 29: 173-190

22. **Goldstein JA**, Madden SP, Sum S, Dixon SR, Madder RD, Muller JE Intravascular Spectroscopy Current Cardiovascular Imaging Reports Kern MJ (Editor) Curr Cardiovasc Imaging Reports 2011

23. **Goldstein JA** Acute Right Ventricular Infarction in Cardiology: An Illustrated Text K Chatterjee (Editor) Jaype Brothers publishers 2012

24. **Goldstein JA**, Madden SP, Sum S, Dixon SR, Madder RD, Muller JE Intravascular Spectroscopy In: Percutaneous Interventional Cardiovascular Medicine: The PCR-EACPI Textbook Eeckhout et al (Editors) Europa Organization Volume I: pages 665-680, 2012

25. **Goldstein JA**. Faces of Right Ventricular Failure. Cardiology Clinics. May 2012 Ed: Goldstein J and Rich J Saunders/Elsevier 2012

26. **Goldstein JA**. Acute Right Ventricular Infarction. Cardiology Clinics. May 2012 pages 219-232 Editors: Goldstein J and Rich J Saunders/Elsevier 2012.

27. **Goldstein JA and Kern MJ**. Percutaneous RV Support Devices. Cardiology Clinics. May 2012 pages 303-310 Editors: Goldstein J and Rich J Elsevier/Saunders 2012

28. Goldstein JA, Intravascular Characterization of Vulnerable Plaque SCAI Interventional Cardiology Board Review Kern M (Editor) Wolters Kluwer/Lippincott Williams 2013

29. Goldstein JA, Restrictive Cardiomyopathy
    In Current Diagnosis and Treatment: Cardiology 4th Edition Crawford M (Editor) Lange/McGraw Hill Press 2013

30. Zacharias SK, Goldstein JA Clinical Assessment of the Severity of Aortic Stenosis In Aortic Stenosis: Case-Based Diagnosis and Therapy Abbas A Ed Springer 2015

31. Bilolikar, AN, Abbas AE, Goldstein JA Non-Invasive Correlation of Invasive Imaging: An Essential Guide Editor: Abbas Springer 2015

32. In Interventional Cardiology Imaging: An Essential Guide Abbas A Ed Springer Goldstein JA Acute Right Ventricular Infarction in Cardiology: An Illustrated Text K Chatterjee (Editor) Jaype Brothers Publishers 2016

33. Goldstein JA, Restrictive Cardiomyopathy In Current Diagnosis and Treatment: Cardiology 5th Edition Crawford M (Editor) Lange/McGraw Hill pages 315-323 2017

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34. Goldstein JA. Acute Right Ventricular Infarction
In Kern MJ, Lim M, Goldstein JA (eds): Hemodynamic Rounds Wiley-Liss, Inc. New York, NY 2018

35. Goldstein JA. Hemodynamic Evaluation of Dyspnea
In Kern MJ, Lim M, Goldstein JA (eds): Hemodynamic Rounds Wiley-Liss, Inc. New York, NY 2018

36. Goldstein JA. Bedside evaluation of low output hypotension
In Kern MJ, Lim M, Goldstein JA (eds): Hemodynamic Rounds Wiley-Liss, Inc. New York, NY 2018

37. Hanson ID, **Goldstein JA** Invasive Hemodynamic Assessment of Shock and Use of Mechanical Support for Acute Left and Right Ventricular Failure In Kern MJ, Lim M, **Goldstein JA** (eds): Hemodynamic Rounds Wiley-Liss, Inc. New York, NY 2018

38. **Goldstein JA**. Hemodynamic evaluation of right heart failure.
In Kern MJ, Lim M, **Goldstein JA** (eds): Hemodynamic Rounds Wiley-Blackwell, Inc. New York, NY 2018

39. **Goldstein JA**. Cardiac Tamponade
In Kern MJ, Lim M, **Goldstein JA** (eds): Hemodynamic Rounds Wiley-Blackwell. New York, NY 2018

40. **Goldstein JA**. Constrictive Pericarditis
In Kern MJ, Lim M, **Goldstein JA** (eds): Hemodynamic Rounds Wiley-Blackwell, Inc. New York, NY *2018*

41. **Goldstein JA**. Restrictive Cardiomyopathy
In Kern MJ, Lim M, **Goldstein JA** (eds): Hemodynamic Rounds Wiley-Blackwell, Inc. New York, NY 2018

42. Madder RD, **Goldstein JA**, Madden SP, Stone G, Muller JE Intravascular Spectroscopy In: Percutaneous Interventional Cardiovascular Medicine: The PCR-EACPI Textbook Eeckhout et al (Editors) Europa Organization 2018

43. Madder RD, **Goldstein JA**, Madden SP, Stone G, Muller JE Intravascular Spectroscopy In: Percutaneous Interventional Cardiovascular Medicine: The PCR-EACPI Textbook Eeckhout et al (Editors) Europa Organization 2020

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James A. Goldstein, M.D., F.A.C.C.

BOOK REVIEWS

Goldstein JA. Handbook of the Vulnerable Plaque. New England Journal of Medicine June 2, 2005;352;22:2360-2361

Curriculum Vitae
James A. Goldstein, M.D., F.A.C.C.

MAJOR INVITED LECTURESHIPS (SELECTED LIST)

Invited Lecture: RV Failure in Chronic Pulmonary Hypertension. American College of Chest Physicians Annual Meeting - October, 1990.

Invited Lecture: RV Infarction and Cardiogenic Shock. American College of Cardiology Annual Meeting - March, 1992.

Invited Lecture: Right Ventricular Infarction. American Heart Association Annual Meeting - November, 1992.

Invited Lecture: Right Ventricular Infarction. American College of Cardiology Meeting - March, 1993.

Invited Lecture: Right Ventricular Infarction. American College of Cardiology, University of California, San Francisco Critical Care Symposium - August, 1993.

Invited Lecture: Pathophysiology of Right Ventricular Dysfunction. American Heart Association - November, 1993.

Moderator of Scientific Session: Neurohormonal Controls in Congestive Heart Failure. American Heart Association - November, 1993.

Invited Lecture: Management of Cardiogenic Shock. American College of Cardiology - March, 1994.

Moderator of Scientific Session: Vasoactive Substances. American College of Cardiology March, 1994.

Invited Lecture: Pathophysiology and Management of RV Infarction. American Heart Association, Symposium on Cardiogenic Shock - November, 1994.

Invited Lecture: Primary Coronary Angioplasty in Acute Myocardial Infarction: The Results of the PAMI Trial. Como, Italy - December 1994.

Moderator of Symposium: Diseases of the Pericardium. American College of Cardiology - March 1995.

Moderator of Scientific Session: Calcium and Cardiac Muscle Regulation. American College of Cardiology - March 1995.

Chairman of Symposium: Pathophysiology and Therapy of Pericardial Disease. American College of Cardiology - March 1996

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Invited lecture: Right Ventricular Failure. Michigan Thoracic Society- 1996 Annual Scientific Sessions-April 1996

Invited Lecture: Role of Early Coronary Angiography in Evaluation of Chest Pain. Michigan Chapter American College of Cardiology - October 1996

Invited Lecture: Right Ventricular Infarction. American College of Cardiology - Alburquerque, New Mexico. October 1996
Moderator of Scientific Session on Coronary Blood Flow: American Heart Association - November 1996

Invited lecture: The Spectrum of Pericardial Disease: Clinical Presentation, Evaluation and Treatment. American College of Cardiology - March 1997

Keynote address: Biomedical Developments in Cardiovascular Disease. Dillon-Reed Health Care and Technology Conference. New York. June 1997.

Invited presentation: Intraoperative Angiography: Transcatheter Cardiovascular Therapeutics, Washington DC. September 1997.

Moderator of Scientific Session on Mitral Regurgitation: American Heart Association-November 1997

Moderator: Cardiac Seminar: Stenting in the Real World – American Heart Association-November 1997

Invited Lecture: Unstable Coronary Plaques and Triggers of Acute Myocardial Infarction. The Eino Nelson Conference, Aventura, Florida. January 1998.

Grand Rounds speaker: RV Infarction. Henry Ford Hospital, Detroit, Michigan. June, 1998

Transcatheter Cardiovascular Therapeutics (TCT), October 1998
- Moderator: Coronary Interventions: Patient Outcomes.
- Event Moderator: Cath Lab of the Future I: Design Innovations and "Cine-less" Alternatives.
- Event Moderator: Cath Lab of the Future II: Strategies for Information Systems Management.
- Lecturer: Cath Lab Innovations and Enhancements: The Practical Utility of a "Portable" Cardiac Catheterization Laboratory-Intraoperative, Emergency Room, and other applications.
- Lecturer: Interventional Complications: General Medical Complications: Renal

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Insufficiency (etiology, prevention and management).

Buenos Aires, Argentina, October, 1998
Panel Discussion: "Minimally Invasive Surgery". Speaker: "State of Art: Hemodynamic Consequences and Management of Acute Myocardial Infarction."
Panel Discussion: "Hemodynamic Consequences and Management of Acute Myocardial Infarction."

Moderator: Heart Failure and Shock in Myocardial Infarction. American Heart Association - November, 1998.

Invited lecture at American College of Cardiology – Cardiovascular Board Review: Certification and Recertification: Diseases of the Pericardium and Restrictive Cardiomyopathy, September, 1999.

Transcatheter Cardiovascular Therapeutics, September, 1999
Pharmacologically Induced Electrical Arrest with Intermittent Pacing to Simplify "Beating Heart" Surgery.
Assisted Injected Systems (ACIST): Reducing Contrast use and making Angiography Easier
Use of Mobile (Portable) Cath Lab: In the OR, ER, and Elsewhere – Technical issues and Clinical Applications

Invited lecture at American College of Cardiology - Spain – National Congress of the Spanish Society of Cardiology: RV infarction. October, 1999.

Invited lecture- American College of Cardiology- Symposia: Management of the Patient with Chest Pain. "Immediate Coronary Angiography in the Emergency Department" March 2000.

Grand Rounds speaker at: Indiana University, Kannert Institute of Cardiology. June, 2000.

Invited lecture – American College of Cardiology -Cardiovascular Board Review: Certification and Recertification. Cardiac tamponade, constrictive pericarditis and restrictive cardiomyopathy. September, 2000.

Transcatheter Cardiovascular Therapeutics, October, 2000.
Invited lecture: Multiple simultaneous unstable coronary plaques: Frequency, mechanisms and clinical ramifications.
Event Moderator: Acute Ischemic Coronary syndromes I; New approaches to unstable angina and non Q-wave MI.

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American Heart Association, November, 2000.
Invited lecture: Hemodynamics in Right Ventricular Infarction.
Co-moderator: Hypertrophy and Hypertrophic Myopathy.

American College of Cardiology, March, 2001.
Invited lecture: Difficult Hemodynamic Situations: Assessment and Management.

2nd International Congress in Heart Disease, July, 2001 – Invited Lecture

American College of Cardiology Board Review, September, 2001.
Invited Lecture: Cardiac Tamponade, Constrictive Pericarditis and Restrictive Cardiomyopathy.

Transcatheter Cardiovascular Therapeutics 2001, September, 2001.
Invited lecture: Cardiac Cooling and supersaturated oxygen delivery: Novel mechanical approaches to reduce infarct size.

American College of Cardiology: Board Review Course. September 2002
Invited lecture: Cardiac Tamponade, Constrictive Pericarditis and Restrictive Cardiomyopathy and Hemodynamics
Invited lecture: Hemodynamic evaluations

Transcatheter Cardiovascular Therapeutics: September 2002.
Invited lecture: (1) Multifocal plaque instability – incidence, mechanism and clinical implications. (2) Hybrid revascularization in the OR – current status (3) A critical appraisal of reperfusion injury: Of course reperfusion injury exits, and its prevention will save lives (4) Multifocal plaque instability – incidence, mechanisms and clinical ramifications

American Heart Association: November 2002
Invited lecture: Right Ventricular Myocardial Infarction
Symposium moderator: Ventricular function

American College of Cardiology: March 2003
Invited lecture: Right Ventricular Myocardial Infarction

Society for Cardiac Angiography and Interventions: Boston, MA, May 2003
Invited lecture: Hemodynamic Dilemmas for the Interventionalist

Massachusetts General Hospital, Boston, MA. September 2003
Cardiac Journal Club and Cardiac Research Seminar
Invited lecture: Multifocal Plaque Instability

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James A. Goldstein, M.D., F.A.C.C.

American College of Cardiology, Cardiovascular Board Review, September 2003
Invited lecture: Pericardial Disease

Transcatheter Cardiovascular Therapeutics, September 2003
Invited lecture: Multifocal plaque instability in ACS and AMI: detection and management

American Heart Association, November, 2003
Case presentation – Interventional Cardiology 2003 – Bench to Bedside and Beyond-Catheter-based Therapy of Hypertrophic Myopathy: Percutaneous septal ablation

American College of Cardiology, March 2004.
Invited participant: Mechanical Complications of Myocardial Infarction
Intervention in Patients with Diabetes

Transcatheter Cardiovascular Therapeutics, September 2004
Invited lecture: The Multisite Nature of Vulnerable Plaque (Session: Vulnerable Plaque: Pathophysiology, Detection and Therapeutic
Discussant: Moderate Roundtable Discussion and Audience Q&A. (Session:
Vulnerable plaque: Pathophysiology, Detection and Therapeutic Intervention
Live case discussant: Plenary Sessions
Moderator: Oral abstract session. Session title: Novel approaches to limit
reperfusion injury and LV remodeling.

American College of Cardiology, March 2005
Invited lecture: Intracardiac Echocardiography Road Maps for best patent foramen ovale and atrial septal defect closures
Co-Chair: Interventional Approach for Structural Heart Disease

3rd International Vulnerable Plaque Meeting, June 2005
Invited lecture: Angiography: Still the gold standard?
Chairman: Assessment programs

American Heart Association, November 2005
Invited lecture: Right Ventricular Myocardial Infarction
Moderator: The Right Ventricle 2005: Structure, Function and Pathophysiology

American College of Cardiology – i2 Summit 2006, March 2006
Panelist: Will Computed Tomography Replace Diagnostic Heart Catheterization

Curriculum Vitae
James A. Goldstein, M.D., F.A.C.C.

Michigan Chapter of American College of Cardiology, October 2006
Conference Chair

Transcatheter Cardiovascular Therapeutics, October 2006
Moderator: Transcatheter Closure of Congenital Defects: Focus on PFO and ASD
Lecturer: Transcatheter Closure of Congenital Defects: Focus on PFO and ASD. Embryology and Development of the Atrial Septum, Anatomic Variations with Therapeutic Implications
Panel Moderator: Transcatheter Closure of Congenital Defects: Focus on PFO and ASD
Lecturer: Tough Calls in the Cath Lab: Advanced Hemodynamics and Angiography: Valvular Heart Disease and Hypertrophic Cardiomyopathy
Case Presenter: Tough Calls in the Cath Lab: Advanced Hemodynamics and Angiography: Valvular Heart Disease and Hypertrophic Cardiomyopathy
Case Presenter: Structural Heart Disease I: PFO, ASD and VSD closure tips, tricks and complications
Live Case Discussant: Structural Heart Disease

American College of Cardiology – March 2007
Chair: Multivessel Revascularization in Acute Myocardial Infarction

Transcatheter Cardiovascular Therapeutics, October 2007
Lecturer: Coronary CTA in the Assessment of Acute Chest Pain
Lecturer: Pericardial Effusions and Cardiac Tamponade: How to Recognize and When to Act
Discussant:Three Hemodynamic Conundrums: Stump the Experts (and The Audience)
Lecturer: Septal Anatomy and Anatomic Relationships
Discussant: Moderated Roundtable Discussion. Interventional Therapies For Adult Congenital Heart Disease and Structural Defects
Moderator: Interventional Strategies and Adjunct Pharmacology in ACS And AMI
Lecturer:Anatomy, Embryology and Pathophysiology of Congenital Heart Disease: A Primer for Adult Cardiologist
Lecturer and Discussant:Clinical Imperatives for Plaque Characterization: Scenarios
In which Lesion Interrogation may be Important

Curriculum Vitae
James A. Goldstein, M.D., F.A.C.C.

American College of Cardiology, March 2008
Co-Chair: Assessment of Pericardial Disease
Lecturer: PFO Structure: Simple to Complex: Imaging and Treatment
Lecturer: Effusion and Tamponade – Thinking like a Hemodynamicist
Lecturer: Pericardial Disease

Society for Cardiac Angiography and Interventions, May 2008
Lecturer: Effusion and Tamponade – Thinking like a Hemodynamicist
Lecturer: Pericardial Disease

Grand Rounds Department of Cardiology University of California Irvine September 2008
"Plaque Characterization by CT angiography and Novel Invasive Tools"

Grand Rounds Department of Cardiology Northwestern University September 2008
"Plaque Characterization by CT angiography and Novel Invasive Tools"

Grand Rounds Department of Cardiology Emory University September 2008
"Plaque Characterization by CT angiography and Novel Invasive Tools"

Transcatheter Cardiovascular Therapeutics, October 2008
Lecturer: Coronary CTA in the Assessment of Acute Chest Pain
Lecturer: Pericardial Effusions and Cardiac Tamponade: How to Recognize and When to Act
Discussant: Three Hemodynamic Conundrums: Stump the Experts (and The Audience)

Discussant: Moderated Roundtable Discussion. Interventional Therapies For Adult Congenital Heart Disease and Structural Defects

Lecturer: Clinical Imperatives for Plaque Characterization

Scottsdale Interventional Forum, February 2009
Lecturer: Looking Beyond the Lumen: Plaque Characterization

American College of Cardiology Annual Meeting, March 2009
Lecturer: Pericardial Effusions and Cardiac Tamponade: How to Recognize and When to Act

Lecturer: Clinical Imperatives for Plaque Characterization

Society for Cardiac Angiography and Interventions, May 2009
Lecturer: Pericardial Effusions and Cardiac Tamponade

Curriculum Vitae
James A. Goldstein, M.D., F.A.C.C.

Lecturer: Clinical Imperatives for Plaque Characterization

EuroPCR, Barcelona May 2009
Lecturer: NIR Infrared spectroscopy for Plaque characterization

Transcatheter Cardiovascular Therapeutics, September 2009
Lecturer: Clinical Imperatives for Plaque Characterization
Lecturer: Pericardial Effusions and Cardiac Tamponade: How to Recognize and When to Act
Discussant:Three Hemodynamic Conundrums: Stump the Experts (andThe Audience)

Grand Rounds Department of Cardiology Long Beach Memorial University of California Irvine
October 2009 "Plaque Characterization by CT angiography and Novel Invasive Tools"

American Heart Association, November 2009 Featured Abstract at Late-Breaking Session:
"Computed Tomographic Angiography for Systematic Triage of Acute Chest Pain Patients to Treatment - The CT-STAT Trial"

American Heart Association of Michigan: Celebration of Science U of Michigan March 2010
Keynote Speaker: Vulnerable Plaque

American College of Cardiology Annual Meeting, March 2010

Lecturer: Cardiac Tamponade, Constrictive Pericarditis and Restrictive Cardiomypaothy

Lecturer: Near Infrared Spectroscopy for Plaque Characterization

Society for Cardiac Angiography and Interventions, May 2010
Lecturer: Radiation Induced Pericardial Disease

EuroPCR, Paris May 2010

Lecturer: NIR Infrared spectroscopy for Plaque characterization

Vulnerable Plaque Meeting June 2010 Lisbon, Portugal
Lecturer: NIR Infrared spectroscopy for Plaque characterization

Curriculum Vitae
James A. Goldstein, M.D., F.A.C.C.

Transcatheter Cardiovascular Therapeutics Sept 2010 Wash DC
Lecturer: NIR Infrared spectroscopy with and without CT Correlation

Lecturer: Plaque Composition: Does it Matter and How to Measure

Lecturer: Pericardial Disease: Tamponade, Constriction and Restriction

Lecturer: Detection of Vulnerable Plaque: Are OCT and Spectroscopy the Future?

Lecturer: NIR Spectroscopy and Coronary Distal Embolization

Cardiac Cath Handbook Live: Cooper University Hospital Philadelphia, Pa Oct 2010
Lecturer: Complications of Acute MI: Beyond "Door to Balloon"?

Lecturer: Pericardial Disease: Tamponade, Constriction and Restriction

Lecturer: Embryology of Congenital Heart Disease

Lecturer: The Thinking Catheterizers Approach to SOB and Right Heart Failure

Chronic Total Occlusion-Left Main Summit New York City February 2011
Lecturer: NIR Infrared spectroscopy for Plaque characterization

Scottsdale Interventional Forum, February 2011
Marquis Lecturer: Plaque Characterization BY CT Angiography and Direct Coronary Imaging

CRT Washington DC March 2011
Lecturer: NIR Infrared spectroscopy for Plaque characterization

American College of Cardiology April 2011
Lecture: Molecular imaging with near infrared spectroscopy and virtual histology techniques to identify vulnerable plaque

Lecturer: Identification of high risk plaques and predictors of distal embolization: IVUS, OCT, spectroscopy and beyond

Lecturer: Coronary artery CTA: comparison to intravascular ultrasound

Lecturer: Pericardial Disease: Tamponade, Constriction and Restriction

Society of Cardiac Angiography Annual Meeting Baltimore, Md May 2011

Curriculum Vitae
James A. Goldstein, M.D., F.A.C.C.

Lecturer: Anatomy and Embryology of Congenital Heart Disease: A Primer for Adult Cardiologists

Lecturer: NIR Infrared spectroscopy for Plaque characterization

Lecturer: Pericardial Disease: Tamponade, Constriction and Restriction

EuroPCR Paris May 2011
Lecturer: Stent Treatment Length Should Rely on NIRS Assessment

Beaumont Structural Heart Symposium June 2011
Lecturer: Anatomy and Embryology of Congenital Heart Disease

Vulnerable Plaque Meeting June 2011 Lisbon, Portugal
Lecturer: NIR Infrared spectroscopy for Plaque characterization

Cardiac Cath Handbook Live: Cooper University Hospital Philadelphia, Pa Oct 2011
Lecturer: Complications of Acute MI: Beyond "Door to Balloon"?

Lecturer: Pericardial Disease: Tamponade, Constriction and Restriction

Lecturer: Plaque Characterization: FFR, IVU, OCT and Spectroscopy

Lecturer: Embryology of Congenital Heart Disease

Lecturer: The Thinking Catheterizers Approach to SOB and Right Heart Failure

Washington Hospital Center, Washington DC October 2011
Lecturer: CT Angiography for Evaluation of Chest Pain in the ER

Beaumont Hospital Symposium October 2011
Lecturer: Update in Congestive Heart Failure

Transcatheter Cardiovascular Therapeutics November 2011 San Francisco
Lecturer: Detection of Vulnerable Plaque: Are OCT and Spectroscopy the Future?

Lecturer: Detection of Coronary Lesions at Risk for Distal Embolization

Optics In Cardiology Conference Thorax Center Rotterdam, Netherlands December 2011

Curriculum Vitae
James A. Goldstein, M.D., F.A.C.C.

Lecturer: NIRS-IVUS Imaging for Plaque Characterization

Scottsdale Interventional Forum, February 2012
Lecture: Detection of Vulnerable Plaque

Lecture: Occupational Health and Radiation Protection in the Cath Lab

American College of Cardiology Annual Meeting, Chicago March 2012
Chair and Lecturer: Multi-Disciplinary Management of the Failing Heart: Team Based Evaluation and Advanced Heart Disease

18th Annual Interventional Fellows Course, Miami April 2012

Lecture: NIRS for Plaque Characterization

Lecture: Mechanical Support for High Risk PCI and Cardiogenic Shock

Society of Cardiac Angiography Annual Meeting Las Vegas May 2012
Chair and Lecture: Multi-Disciplinary Management of the Failing Heart: Team Based Evaluation and Therapy of Advanced Heart Disease

Transcatheter Cardiovascular Therapeutics October 2012 Miami, Fla
Lecturer: TVC-guided PCI and its role in your interventional practice

Lecturer: Mechanisms and Predictors of Stent Thrombosis and Restenosis: Insights from NIRS.

Society of Cardiac Angiography Fellows Course, Las Vegas December, 2012
Chair and Lecturer: Multi-Disciplinary Management of the Failing Heart: Team Based Evaluation and Therapy of Advanced Heart Disease

Scottsdale Interventional Forum, February 2013
Lecture: NIRS-IVUS for Total Vessel Characterization

American College of Trial Lawyers Annual Meeting
Keynote Speaker: The Golden Era of Medicine: 1970-2013
Miracles From to Bench to Bedside/ The Future: Robust Pipeline or Devolution?

Optics In Cardiology Thorax Center Rotterdam, Netherlands March 2013
Lecturer: NIRS-IVUS Imaging for Plaque Characterization

Curriculum Vitae
James A. Goldstein, M.D., F.A.C.C.

American College of Cardiology March 2013
Lecture: Is There a Role for Tissue Characterization- VH-IVUS, IB-IVUS, or NIRS-In Guiding and Optimizing Stent Implantation?

Symposium Co-Chair: What do I do Now? Stumping the Panel with Real World Intravascular Imaging and Physiology

Symposium Co-Chair: CT Angiography in Clinical Use

Rush University, Chicago Illinois May 2013
Lecturer: Plaque Characterization

Loyola University, Chicago Illinois May 2013
Lecturer: Plaque Characterization

Society of Cardiac Angiography Annual Meeting Las Vegas May 2013
Hemodynamics Symposium Cases: Hemodynamics of Structural Heart Intervention
Lecturer: Tamponade or other: How do I know if my patient is in trouble?

Exceptional Challenges in PCI: Case Reviews Demonstrating Newest Techniques & Technologies
Lecturer: Intra-coronary Infrared spectroscopy to predict embolization risk during PCI
Round Table: LV-Support – Recent Advances in Technique and Outcomes
Moderator: Round Table Clot, Shock, and Awe in ACS/STEMI: managing the critically ill.
Lecturer: How to manage acute MI with RV shock

Beaumont Advanced Imaging Conference: October **2013**
Coronary Plaque Characterization
Cardiomyopathy: Evaluation and Management

TCT: San Francisco, California October 2013
Lecturer: Coronary Plaque Characterization by NIRS
Lecturer: Occupational Health Hazards in the Catheterization Laboratory

University of Pittsburgh Medical Center: November 2013 Visiting professor
Grand Rounds: RV Infarction: A Tale of 2 Ventricles
Fellows Lecture: Pericardial Disease

American Heart Association Annual Meeting: Dallas November 2013

Curriculum Vitae
James A. Goldstein, M.D., F.A.C.C.

Invited Lecture: Constrictive Pericarditis vs Restrictive Cardiomyopathy

CRT: Washington DC February 2014
Lecturer: **NIRS-IVUS for** Coronary Plaque Characterization

Scottsdale Interventional Forum March 2014
Lecturer: Coronary Plaque Characterization

American College of Cardiology Washington DC March **2014**
Lecturer: Occupational Health Hazards in the Catheterization Laboratory

Lecturer: Angiography Alone is Insufficient to Guide PCI:
The Important Role of Direct Coronary Imaging in the Interventional Lab
Joint Symposium of the Cardiological Society of India and Inter-American Society of
Cardiology and the American College of Cardiology

EuroPCR, Paris May 2014
Lecturer: Will hybrid imaging improve our ability to predict culprit lesions?

Lecturer: How to use near-infrared spectroscopy to guide PCI

SCAI Annual meeting Las Vegas May 2014
Lecturer: Coronary Plaque Characterization by NIRS-IVUS

Vulnerable Plaque Meeting, Oxford, England, June 2014
Lecturer: "NIRS Trials"

TCT: Washington, DC September 2014
Lecturer: Avoiding Long-Term Complications with PCI: Imaging Guidance with NIRS
Lecturer: Radiation Reduction Exposure: A Real Unmet Clinical Need: Clinician Perspective

CVI's 3rd Annual Interventional CV Medicine: The State of the Art Philadelphia October 2014
Lecturer: Can MI be Prevented in the Cath Lab?

CRT: Washington DC February 2015
Lecturer: NIRS-IVUS for Coronary Plaque Characterization

Scottsdale Interventional Forum March 2015
Lecturer: Has PCI Become More Complex in 2015?

Curriculum Vitae
James A. Goldstein, M.D., F.A.C.C.

Lecturer: RV Failure and Percutaneous Support

Lecturer: Coronary Plaque Characterization

SCAI Annual meeting San Diego May 2015
Lecturer: Timing Is Everything! Defining Pre-Shock and Shock

Lecturer: Hemodynamic Evaluation of Right Ventricular Failure and Shock

TCT: San Francisco, Calif September 2015
Lecturer: Acute RV Infarction Requiring Mechanical Support

CRT: Washington DC February 2016
Lecturer: NIRS-IVUS for Coronary Plaque Characterization

Scottsdale Interventional Forum March 2016
Lecturer: New Insights in CHF

Lecturer: RV Failure and Percutaneous Support

Lecturer: Coronary Plaque Characterization

TCT-AP: Seoul, South Korea April 2016
Lecturer: Detection of Vulnerable Plaque by CT Angiography

Lecturer: NIRS-IVUS: Imaging to guide Optimal PCI

SCAI Annual meeting Orlando, Fla 2016
Lecturer: Occupational Health Hazards in the Catheterization Laboratory

European Atherosclerosis Society Innsbruck, Austria, May 2016
Lecturer: Plaque Characterization by CTA: NIRS-IVUS Correlates

TCT Washington DC October 2016
Lecturer: Oh My Aching Back: Occupational Health Hazards

Primary Care Conference Las Vegas Nevada December 2016
Lecturer: Update on Hypertension

Lecturer: Update on Hyperlipemia

Lecturer: Update on Heart Failure

Curriculum Vitae
James A. Goldstein, M.D., F.A.C.C.

CRT Washington 2017
Lecturer: Detection of Vulnerable and Disrupted Plaques by CTA

Lecturer: Impella RP for RV Shock

Lecturer: Novel Radiation Protection Systems

Scottsdale Interventional Forum March 2017
Lecturer: RV Failure and Percutaneous Support

Lecturer: Update on PFO

ARCH Percutaneous Cardiac and Peripheral Vascular Therapeutics 2017
St. Louis, Missouri
Lecturer: Vulnerable Plaque: Holy Grail or Fool's Errand?

SCAI Annual meeting New Orleans May 2017
Lecturer: Managing Stress, Fatigue and Burnout in the Cath Lab

University of Florence Symposium May 2017
Lecturer: Vulnerable Plaque BY CT Angiography

Henry Ford Hospital "Live in the D" Symposium on Mechanical Support June 2017

Lecturer: RV Failure and Percutaneous Support

Innovations in Cardiovascular Disease Venice, Italy October 2017
Lecturer: Angiography Alone is Insufficient to Guide PCI:
The Important Role of Direct Coronary Imaging in the Interventional Lab

TCT Denver, Colorado October 2017
Lecturer: Diagnosis and Treatment Options for RV Shock

Lecturer: Managing Occupational Hazards and Burnout in the Cath Lab

Lecturer: Current State-of-the-Art: Identification of Vulnerable Patients and Plaques with Non-invasive Testing

Primary Care Conference Orlando, Florida 2017
Lecturer: Update on Hypertension

Curriculum Vitae
James A. Goldstein, M.D., F.A.C.C.

Lecturer: Update on Hyperlipidemia

Lecturer: Update on Heart Failure

CRT Washington 2018
Lecturer: Impella RP for RV Shock

Lecturer: Diagnosis and Treatment Options for RV Shock

Lecturer: Novel Radiation Protection Systems

Scottsdale Interventional Forum March 2018
Lecturer: Mechanical Support in RV Failure

Lecturer: The Search for Vulnerable Plaque: The Emerging Role of CTA

Lecturer: Understanding the Anatomy (and Embryology) of the Foramen Ovale

ARCH Percutaneous Cardiac and Peripheral Vascular Therapeutics April 2018
Lecturer: Radiation Safety: Do's and Don'ts

Primary Care Conference Hawaii, 2018
Lecturer: Update on Hypertension

Lecturer: Update on Hyperlipidemia

Lecturer: Update on Heart Failure

SCAI Annual meeting San Diego May 2018
Lecturer: Patient Radiation Skin Injury: Frequency, Prevention and Treatment

C3: Complex Cardiovascular Therapeutics Orlando Florida June 2018
Lecturer: Diagnosis and Treatment of Vulnerable Plaque

TCT Denver, San Diego September 2018
Discussant: Strategies to Control Radiation Exposure III

Lecturer: NIRS-IVUS to Guide Stenting

Cardiovascular Institute of Philadelphia: 3rd Annual Interventional Cardiology Fellows Course Feb 2019
Lecturer: Developing a Successful Career in CV Medicine: Preventing Burnout and

Curriculum Vitae
James A. Goldstein, M.D., F.A.C.C.

Staying in the Zone

Lecturer: Door-to-Unloading-Acute MI with Shock

CRT Washington 2019
Lecturer: Impella RP for RV Shock

Lecturer: Novel Radiation Protection Systems

Scottsdale Interventional Forum March 2019
Lecturer: RV Shock

ARCH Percutaneous Cardiac and Peripheral Vascular Therapeutics April 2019
Lecturer: Radiation Safety in the Cath Lab

Emory Practical Intervention Course - Southeast Consortium EPIC-SEC: 2019
Lecturer: Plaque Characterization by CTA

SCAI Annual meeting Las Vegas May 2019
Discussant: Managing Stress, Fatigue and Burnout in the Cath Lab

C3 Interventional Cardiology Meeting Orlando June 2019
Lecturer: RV Shock

TCT San Francisco September 2019
Lecturer: A Novel Complete Radiation Protection System Eliminates Operator Exposure and Leaded Aprons

Lecturer: Physician Safety and Emerging Technology Solutions

Cardiovascular Institute of Philadelphia: 3rd Annual Interventional Cardiology Fellows Course Feb 2020
Lecturer:

CRT Washington 2020
Lecturer: Plaque Instability: ACS is the End, not the Beginning

Lecturer: RV Shock: Pathophysiology and Management

Lecturer: RV Shock: Diagnosis and Management

Lecturer: A Novel Complete Radiation Protection System

Curriculum Vitae
James A. Goldstein, M.D., F.A.C.C.

Scottsdale Interventional Forum March 2020
Lecturer: RV Shock

ARCH Percutaneous Cardiac and Peripheral Vascular Therapeutics April 2020
Lecturer: Radiation Safety in the Cath Lab

Curriculum Vitae
James A. Goldstein, M.D., F.A.C.C.

Curriculum Vitae
James A. Goldstein, M.D., F.A.C.C.

STATE OF CONNECTICUT

COUNTY OF __New Haven_____

AFFIDAVIT OF ROBERT R. ATTARAN, M.D., FACC, FASE, FSCAI, RPVI

Personally appeared before the undersigned attesting officer, duly authorized to administer oaths, comes Robert R. Attaran, M.D., FACC, FASE, FSCAI, RPVI, who after being duly sworn, deposes and states under oath as follows:

1.

My name is Robert R. Attaran, M.D., FACC, FASE, FSCAI, RPVI; I am of legal age; and I am competent to testify.

2.

The facts stated herein are based upon my own personal knowledge.

3.

I am a physician licensed to practice medicine in the State of Connecticut. I have been continuously licensed in the State of Connecticut from 2014 to the present. I have been previously licensed in FLORIDA 2011-2014, ARIZONA 2007-2010.

4.

I attended University of Toronto, Canada, graduating with my Bachelor of Science with honors in Human Physiology in 1994. I then obtained my Bachelor's in Medicine and Bachelor's in Surgery with honors from the University of Sheffield in the United Kingdom in 2000. I then completed a general internship at Royal Hallamshire Hospital in Sheffield, United Kingdom from 2000 to 2001. From 2001 to 2002, I was in Emergency Medicine at Guy's and Saint Thomas's Hospitals in London, England. From 2002 to 2003, I worked in Critical Care, Surgery, and Trauma at the University College London Hospitals, London, England. From 2004 to 2007, I

EXHIBIT B

and addressing complications of said procedures. For more than three of the five years preceding July 30, 2019 (when the negligent acts and omissions giving rise to this case occurred), I have been actively engaged in the practice and teaching of Interventional Cardiology, including regularly encountering patients, such as Mr. Mashburn, who have undergone a cardiac catheterization and stint procedure and who have developed the complications of perforation and bleeding with pericardial effusion and cardiac tamponade. I have regular and active experience in the diagnosing and treatment of these complications and conditions in my practice and in my teaching of Fellows, including but not limited to all five years of the five-year period preceding July 30, 2019. The experience I have with regard to cardiac patients and interventional cardiology includes all of the five-year time period previous to Mr. Mashburn's presentation to Dr. Adele in July of 2019.

6.

Based on my education, training, and experience, I am also familiar with the professional standards as they apply to Cardiac Catheterization Laboratories, including standards dictating the proper staffing, equipping, running, monitoring, and supervision that should occur in Cardiac Catheterization Laboratories. These professional standards would apply to the Southern Regional Medical Center Cardiac Catheterization Laboratory ("SRMC Cath Lab") in July 2019 when Mr. Billy Mashburn presented there. Since approximately 2013, I have held positions that involve Interventional Cardiology Fellowship training, teaching, and directing, and as such, inherently require knowledge of and experience with the professional standards that apply to a Cardiac Catheterization Laboratory. Thus, for more than three of the five years preceding July 30, 2019 (when the negligent acts and omissions giving rise to this case occurred), I have been actively engaged in the practice and teaching of Interventional Cardiology and have held

positions that require knowledge of and experience with the professional standards that apply to a Cardiac Catheterization Laboratory.

7.

This affidavit is based upon my personal knowledge gained through my education, training, and experience. This affidavit is also based upon the facts shown within the following medical records pertaining to Billy R. Mashburn:

(a) Medical records from the Southern Regional Medical Center relating to the care of Billy R. Mashburn on July 30, 2019;

(b) Medical records from Emory Healthcare/Emory Crawford Long Hospital relating to the care of Billy R. Mashburn on July 30, 2019;

(c) Records from the Clayton County EMS relating to the care of Billy R. Mashburn on July 30, 2019;

(d) The death certificate for Billy R. Mashburn; and

(e) The Deposition of Chituru Adele, M.D., taken February 22, 2021.

8.

In reviewing the medical records described above, I have ascertained the following facts and assume them to be true in stating my opinions below:

a. On July 30, 2019, 61-year old Billy R. Mashburn experienced chest pains at home and was brought by ambulance via the Clayton County EMS to the emergency department at Southern Regional Medical Center. During transport to Southern Regional, an EKG was transmitted to cardiologist Chituru Adele, M.D and a code STEMI (ST Elevation Myocardial Infarction) was called.

b. Billy Mashburn arrived the emergency department at Southern Regional around 16:40 (4:40 p.m.). He was almost immediately triaged and seen by emergency department physician Jumoke Alim, M.D. Dr. Alim noted that he presented with a chief complaint of chest pain and that just prior to arrival [at the emergency department] he had been engaged in sexual intercourse when he developed substernal chest pain described as burning in nature with shortness of breath, nausea/vomiting, and diaphoresis. Dr. Alim noted that the STEMI code was called during transport via EMS and that the EKG had been transmitted to the interventionalist prior to Mr. Mashburn's arrival at the emergency department. Mr. Mashburn reported chest pain with a score of 8/10.

c. Upon arrival at the emergency department, Mr. Mashburn was noted to be a well-developed and well-nourished male who was lying on the stretcher appearing to be in moderate discomfort. He was noted to be awake, alert, oriented, and cooperative with normal speech. He was not tachycardic and there was no gallop rub or murmur.

d. Mr. Mashburn was admitted to Southern Regional Medical Center. At approximately 16:51, the Cath Lab was noted to be ready for the patient. Mr. Mashburn was taken to the Cath Lab at approximately 16:56 for an emergency cardiac catherization.

e. Once in the Cath Lab, he was placed on defibrillator pads, cardiac monitor, B/P cuff, oxygen at 2 liters per minute via nasal cannula. He was alert and appropriated. The physician, Dr. Adele, arrived for the procedure at approximately 17:19. A pre-procedure evaluation was performed, and no changes were noted.

f. At approximately 17:29 a French size 6 diagnostic catheter was inserted via Mr. Mashburn's femoral artery and a left coronary artery angiogram was performed. The diagnostic catheter was removed at approximately 17:30.

g. At approximately 17:30, a French size 6 interventional coronary guide catheter was inserted. An angiogram was performed at approximately 17:31.

h. At 17:37, a 3.0 mm diameter, 15 mm length coronary balloon catheter with 145 cm shaft length was inserted into the right coronary artery and inflated. It was then re-positioned and re-inflated.

i. At 17:39, a coronary drug eluding stent delivery system was inserted into the right coronary artery. It was deployed at 17:40 and removed at 17:41.

j. At 17:43, a second drug eluding stent delivery system was inserted into the right coronary artery. It was deployed at 17:44 before being removed.

k. At 17:47, a second coronary balloon catheter was inserted into the right coronary artery and inflated. It was removed at 17:48.

l. At 17:48, Najeeb I. Siddique, M.D., an anesthesiologist, was called to the catheterization (or cath) lab due to Mr. Mashburn becoming hemodynamically unstable prior to the insertion of an intra-aortic balloon pump (IABP). He changed Mr. Mashburn from nasal cannula to a 100% non-rebreather mask and reported ventilation and oxygenation were stable.

m. Between approximately17:50-17:53, a coronary bare metal stent delivery system was inserted into the right coronary artery and removed.

n. At 17:52, Mr. Mashburn's vital signs included a heart rate of 54, blood pressure of 64 over 39, oxygen saturation of 96%, respirations at 17, and sinus bradycardia.

o. At 17:55, a third drug eluding stent delivery system was inserted into the right coronary artery and deployed before being removed at 17:56.

p. At 18:02, an IABP sheath was inserted.

q. At 18:05, Mr. Mashburn's vital signs included a heart rate of 55, blood pressure of 66/42, oxygen saturation of 97%, respirations at 9, and sinus bradycardia. At 18:09, his vital signs included a heart rate of 44, blood pressure of 82 over 42, oxygen saturation of 99%, respirations at 10, with sinus bradycardia.

r. At 18:10, nurse Tiffany Peterson noted that the IABP catheter insertion procedure was deemed complete. At 18:12, the family was notified. The patient was awake, alert, and oriented.

s. The preliminary cardiac catherization report notes sedation began at 17:26 and ended at 18:11. Estimated ejection fraction was noted to be 25-30%. The left coronary artery anatomy was noted to be diffuse, with moderate atherosclerosis. The right coronary artery was noted to go from 100% to 0%. However, Dr. Adele noted that the right coronary artery procedure was "complicated by contrast extravasation."

t. At 18:12, Dr. Najeeb I. Siddique was again called to the catheter lab where a CODE BLUE was called. Mr. Mashburn was noted to have vomited with possible aspiration on the IABP. Dr. Siddique notes that the cardiologist requested that the patient be intubated. The patient was placed on a ventilator.

u. Between approximately 19:09 and 19:12, a temporary pacemaker catheter was inserted, and a temporary pacemaker catheter was sutured in place.

v. At 16:52, Dr. Adele dictated a note documenting the following:

i. Mr. Mashburn presented as a 61-year-old male with chest pain and inferior ST elevation myocardial infarction on the ECG. Emergency cardiac catherization was activated;

ii. Dr. Adele undertook to perform a cardiac catherization and coronary angioplasty because he diagnosed an acute inferior wall ST elevation myocardial infarction;

iii. The procedure was performed by entering the right femoral artery using the Seldinger technique followed by placement of a 6-French sheath. Selective left and right angiography were performed and the angiograms were reviewed.

iv. It was determined that the left main artery and the circumflex artery were free of significant disease. The right coronary artery was determined to be a dominant vessel that was occluded in its mid-segment and was the infarct-related lesion.

v. A primary angioplasty and a pre-dilatation angioplasty were performed, followed by the deployment of 3.5 mm drug-eluting stents.

vi. Following the stenting, there was residual deficit due to intravascular calcium. Dr. Adele's team proceeded with post-dilatation angioplasty.

vii. Following the post-dilatation, they identified evidence of extravasation of contrast outside the coronary vasculature, suggesting perforation. They then deployed covered stents and following deployment, there was no further evidence of contrast extravasation.

viii. The patient was then placed on intravenous dopamine and fluids due to "persistent blood pressure, hypotension" and a balloon pump was recommended.

ix. Mr. Mashburn was treated with a balloon pump and 1:1 counterpulsation was established. At the conclusion of the procedure, there was re-established flow down the right coronary artery, the patient was awake and alert, chest pain free, but continued to be hypotensive.

x. Mr. Mashburn was "planned for emergency transfer to a tertiary care center" with a recommendation for "a stat echocardiogram to assess for pericardial effusion."

w. The Clayton County EMS records indicate that a unit was dispatched at 19:37 and was present at the patient's bedside at 19:42. [CC EMS 005]. The narrative of the

Clayton County EMS record states that the EMS crew was presented a report "by the Cath lab doctor" who "advised the patient presented in the ED with an acute myocardial infarction. The doctor advised the patient had a[n] inferior infarct and was being transferred with a balloon pump, on a portable vent, with a cardiac monitor and medication pumps. He was noted to be "extremely hypotensive" and was being administered significant dosages of vasopressors.

x. The Clayton County EMS records show that EMS departed with the patient for Emory Crawford Long Hospital at 20:37 and arrived at the destination at 20:54.

y. The medical records from Emory Crawford Long Hospital record that "[p]atient was unstable on multiple high dose pressors with large effusion post PCI at OSH and severe shock, hypotension. BP was in 40-50s despite being on high dose 3 pressors and IABP. He was not stable to go to cath lab." The medical providers at ECLH performed a bedside echocardiogram and performed a pericardial puncture, removing about 200 cc of bloody fluid from Mr. Mashburn's pericardium. The echo showed no more effusion following that drainage, but fibrinous material remained, "probably represented a clotted blood." Despite relieving Mr. Mashburn's effusion, his condition continued to deteriorate and he went into PEA arrest and died.

9.

In reviewing the deposition transcript of Dr. Adele described above, I have additionally ascertained the following facts and assume them to be true in stating my opinions below:

a. A technician who was able to run the echocardiography machine was not immediately available, as they had reportedly gone home for the day, nor was one available on a stat basis.

10.

My review of the records from the care of Mr. Mashburn at Southern Regional Medical Center and Deposition of Dr. Chituru Adele leads me to conclude that Chituru Adele, M.D., performed a cardiac catherization of Billy Mashburn's right coronary artery that was complicated by a perforation of the artery. Dr. Adele recognized the perforation and attempted to mend the perforation, but the patient suffered profound hypotension during the procedure, more likely than not caused by the perforation leading to a pericardial effusion resulting in cardiac tamponade. This constitutes an emergency necessitating immediate relief of the effusion via performance of immediate emergency pericardiocentesis in the catheterization laboratory, preferably with echocardiographic guidance but at minimum under fluoroscopic guidance or even without guidance (referred to as a "blind pericardiocentesis"). Dr. Adele failed to perform those procedures and attempted to transfer Mr. Mashburn despite the likelihood that said transfer could not safely take place in a timely manner to prevent the development of cardiac tamponade and consequent death.

In my opinion, Chituru Adele, M.D. and Atlanta Heart Associates, P.C. breached the standard of care by cardiologists generally under like surrounding circumstances and similar conditions in the following ways:

1. Failing to perform pericardiocentesis to alleviate Mr. Mashburn's pericardial effusion and resulting cardiac tamponade;
2. Attempting to transfer Mr. Mashburn to a tertiary care center despite his hemodynamic instability; and
3. Attempting to transfer Mr. Mashburn despite his need for an emergent pericardiocentesis.

11.

My review of the records from the care of Mr. Mashburn at Southern Regional Medical Center and Deposition of Chituru Adele, M.D., leads me to conclude that the Southern Regional Medical Center Cardiac Catheterization Laboratory was not properly staffed and equipped as is required by a Cardiac Catheterization Laboratory under the applicable professional standards. Cardiac Catheterizations Laboratories treat patients, many on an urgent or emergent basis, suffering from life-threatening conditions. Often, patients come in, as did Mr. Billy Mashburn, via Emergency Medical Services specifically to receive a higher level of emergency care as is (or is supposed to be) offered in hospitals which maintain accredited Cardiac Catheterization Laboratories, like the SRMC Cath Lab when Mr. Mashburn presented there by way of EMS on July 30, 2019. As such, to meet the applicable professional standards, Cardiac Catheterization Laboratories covering acute myocardial infarction must be available twenty-four hours a day, seven days a week, and three hundred and sixty-five days a year. Proper availability of the Cardiac Catheterization Laboratory includes proper staffing and equipping such that cardiac patients in a variety of emergent and even life-threatening situations (as was Mr. Mashburn following the complication he suffered causing effusion and then tamponade) can be appropriately assessed and timely treated. Specifically as it applies to the context here, there must be properly trained and qualified personnel available at all times to perform urgent and emergent echocardiography.

In my opinion, the Southern Regional Medical Center Cardiac Catheterization Laboratory (including any and all physicians and administrative personnel overseeing the same) breached the standard of care as applies to Cardiac Catheterization Laboratories generally under like surrounding circumstances and similar conditions in the following ways:

1. Failing to have echocardiography personnel readily available, in breach of the requirement that such personnel be available for urgent and emergent echocardiography;
2. Failing to maintain a Cardiac Catheterization Laboratory that was adequately equipped and staffed to handle urgent and emergent complications, such as the complication here requiring emergent pericardiocentesis to alleviate Mr. Mashburn's pericardial effusion and resulting cardiac tamponade; and
3. Failing to maintain a Cardiac Catheterization Laboratory that was adequately equipped and staffed to allow for its physicians, such as Dr. Chituru Adele, to perform an emergent pericardiocentesis in the physician's preferred method.

12.

It is further my opinion, to a reasonable degree of medical probability, that the above-described breaches of the standard of care on the part of Dr. Adele, Atlanta Heart Associates, P.C., and the Southern Regional Medical Center Cardiac Catheterization Laboratory caused or contributed to Mr. Billy Mashburn's developing pericardial effusion leading to cardiac tamponade, and ultimately resulting in his death on July 30, 2019.

13.

This affidavit is being given to comply with the requirements of O.C.G.A. § 9-11-9.1. This affidavit is not intended to include all of my opinions that I have formed following my review of the records enumerated herein. In fact, I have additional opinions that are not expressed herein. All of my opinions stated herein are expressed based upon my education, training and experience as well as upon my review of the records enumerated above. I reserve the right to alter and supplement my opinions upon being provided further information.

FURTHER AFFIANT SAYETH NOT.

This 19 day of May, 2021.

ROBERT R. ATTARAN, M.D.

Sworn to and subscribed before me

this 19th day of May, 2021.

Notary Public
My Commission expires: May 31, 2023

KAREN M. McCAUSLAND NOTARY PUBLIC CONNECTICUT

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1994 University of Toronto, Canada
Bachelor of Science *with Honors,* Human Physiology
2000 University of Sheffield, UK
Bachelor of Medicine, Bachelor of Surgery *with Honors*

July 2014 – Present Associate Clinical Professor of Medicine, Section of Cardiology, Yale School of Medicine, New Haven, Connecticut.

Jan 2020 – Present Director, Interventional Cardiology Fellowship Training Program, Yale School of Medicine, New Haven, Connecticut.

March 2020 – Present Director, Endovascular Fellowship Training Program, Yale School of Medicine, New Haven, Connecticut.

2013 – June 2014 Director of Cardiology Training and Curriculum Development, Internal Medicine Residency Program, Aventura Hospital, Miami, Florida.

2011- June 2014 Interventional Cardiology Attending.
Miami International Cardiology Consultants, Miami, Florida.

2010-2011 Interventional Cardiology Fellowship Program, Yale University New Haven, Connecticut.

2007-2010 Cardiovascular Medicine Fellowship Program, University of Arizona, Tucson, Arizona.

2004-2007 Internal Medicine Residency Program, University of Arizona Affiliated Hospitals Tucson, Arizona.

2002-2003 Critical Care, Surgery, Trauma, University College London Hospitals London, United Kingdom.

2001-2002 Emergency Medicine Guy's and St. Thomas's Hospitals London, United Kingdom.

2000-2001 General Internship, Royal Hallamshire Hospital Sheffield, United Kingdom.

AWARDS AND MEMBERSHIPS:

- Top Doctor, Connecticut, 2017-
- Patient's Choice Award (2011-2014) Vitals.com
- Chief Cardiology Fellow, University of Arizona Affiliated Hospitals, 2009-2010
- Special Competence in Adult Echocardiography, National Board of Echocardiography, 2010
- Nuclear Board Certification, 2010
- Winner case presentation, Save a Leg Save a Life Foundation, Annual Scientific Sessions, September, 2010
- Winner of Best Case Presentation, Cardiovascular Research Foundation Fellows Course, Abiomed Impella device utilization, May 2010
- Annenberg Center Scholarship to attend Mentoring in Preventive Cardiology, Sept 2008
- Winner of Outstanding Patient Care Award, University Med Center AZ, 2008
- Winner Gold Star Award for Superior Service, Southern Arizona VA Hospital, AZ, 2007
- Winner, Charles Hall Jr. Memorial Award for Outstanding Resident on the Coronary Care Unit, University of Arizona, 2006
- Winner, Clinical Vignette Competition, University of Arizona Affiliated Hospitals, 2006
- Winner, Clinical Vignette Competition, American College of Physicians Arizona Chapter Finals, 2006
- Alpha Omega Alpha equiv. (MBChB with Honors) University of Sheffield School of Medicine, 2000
- Herbert Price Prize in Research, University of Sheffield, UK, 1998
  British Medical Association Trust Scholarships, UK, 1997-2000

American College of Physicians, Affiliate Member
American College of Cardiology, Fellow

American Society of Echocardiography, Fellow
Society for Cardiovascular Angiography and Intervention, Fellow
Registered Physician in Vascular Imaging (ARDMS)
Human Investigation Committee (HIC III) Institutional Review Board Member. Yale University, 2014.
Vascular Quality Initiative (VQI). Member 2014-
American Venous Forum. Member 2015-
American College of Phlebology. Member 2015-16
NCDR PVI Research and Publications Committee. Member 2015-
American Venous Forum, Membership Committee, 2019-
American Venous Forum, Fellowship Course Committee, 2019-

BOOKS:

Attaran R, Ochoa-Chaar CI. Compression therapy in venous disease. In: Ochoa-Chaar (ed) Current management of venous disease. Springer. 2018.
Attaran R. Deep vein thrombosis. In: Peripheral Vascular Disease: A Clinical Approach. Mena C and Jayasuriya S (Eds). Wolter Klewer. In press.
Attaran R. Superficial venous disease of the legs and treatment. In: Peripheral Vascular Disease: A Clinical Approach. Mena C and Jayasuriya S (Eds). Wolter Klewer. In press.
Cua B, **Attaran R**. Atherectomy. In: Peripheral Vascular Disease: A Clinical Approach. Mena C and Jayasuriya S (Eds). Wolter Klewer. In press.
Attaran R, Cleman MW. Invasive Hemodynamics (Chapter). In: Textbook of Cardiovascular Intervention. Ed: Thompson, C. Springer, NY, 2013.
Jayasuriya S, **Attaran R**. Common TEE anatomy for the boards (Chapter). In: Questions, Tricks and tips for the Echocardiography Boards. Eds: Sorrell, Jayasuriya. Wolters Kluwer, NY, 2014
Contributing Author and Editor to Five Study Aid Books:
Chan C (ed): Intercollegiate MRCS: Applied Basic Science MCQs. Pastest Publishing Ltd, 2004, Cheshire, UK.
Chan C (ed): Intercollegiate MRCS: Clinical Problem Solving EMQs. Vol 1. Pastest Publishing Ltd, 2004, Cheshire, UK.
Chan C (ed): Intercollegiate MRCS: Clinical Problem Solving. Vol 2. Pastest Publishing Ltd, 2004, Cheshire, UK.

Chan C (ed): MRCS System Modules. The Complete Test. Pastest Publishing Company Ltd, 2003, Cheshire, UK.
Chan C (ed): MRCS Core Modules. The Complete Test. Pastest Publishing Company Ltd, 2003, Cheshire, UK.

RESEARCH:

TOBA BTK Trial, Tack optimized balloon angioplasty for below the knee arterial disease. 2017 (Site Principal Investigator)
EVOLVE Short DAPT Study, 2016 (Site Principal Investigator) A prospective, multicenter, single-arm study designed to assess the safety of 3-month DAPT in subjects at high risk for bleeding undergoing PCI with a SYNERGY Stent System (BSCi). July 2016 -
The BARD® VENOVO™ Stent Study, 2016-2017 (Site Principal Investigator) A Prospective, Non-Randomized, Multi-Center, Single-Arm Study of the Treatment of Iliofemoral Occlusive Disease – an Assessment for Effectiveness and Safety (VERNACULAR).
Vivo Vena Study, 2015-2016 (Site Principal Investigator) Safety and effectiveness of the Zilver® Vena™ Venous Stent in the treatment of symptomatic iliofemoral venous outflow obstruction.
The Absorb III Study, 2014-2015 (Site Principal Investigator) A Clinical Evaluation of Absorb BVS, the Everolimus Eluting Bioresorbable Vascular Scaffold in the Treatment of Subjects With de Novo Native Coronary Artery Lesions.
The Absorb IV Study, 2014-2017 (Site Principal Investigator) A Clinical Evaluation of Absorb BVS, the Everolimus Eluting Bioresorbable Vascular Scaffold in the Treatment of Subjects With de Novo Native Coronary Artery Lesions.
The TOBA 2 Trial, 2015-2017 (Site Principal Investigator) Tack optimized balloon angioplasty II for femoropopliteal arteries.
Veryan Mimics-2 Trial, 2015-16 (Site Principal Investigator) Clinical evaluation of the BioMimics 3D stent.
Lutonix SFA ISR Study, 2014-2017 (Sub-investigator) A Prospective, Multicenter, Single-Blind, Randomized, Controlled Trial Comparing the Lutonix® Drug Coated Balloon vs. Standard Balloon Angioplasty for Treatment of Femoropopliteal In-Stent Restenosis.

Portrait Registry, 2014-2016 (Sub-investigator) “Patient-centered Outcomes Related to Treatment practices in peripheral Arterial disease: and Investigating Trajectories”
Lutonix BTK Study, 2014-2017 (Sub-investgator) A Prospective, Multicenter, Single Blind, Randomized, Controlled Trial Comparing the Lutonix Drug Coated Balloon vs. Standard Balloon Angioplasty for Treatment of Below-the-Knee Arteries.
TRA 2°P TIMI-50 Study, 2008 (Sub-investigator) Enrollment, evaluation and follow-up of patients for the TRA 2°P TIMI-50 Study, a Phase III study of SCH 530348, a direct thrombin inhibitor, in known atherosclerotic disease.
SACAR Study, 2009 (Co-investigator) The multi-center SACAR (Strategies for Aggressive Central Afterload Reduction) Study, uses a novel hand-held tonometer (SphygmoCor) to monitor central aortic pressure and afterload, and aims to correlate clinical outcome with central afterload reduction in patients with congestive heart failure. OM8 Lovaza Atrial Fibrillation Study, 2008- (Sub-investigator) Evaluation, recruitment and follow-up of patients as part of a multi-center controlled trial to assess the efficacy and safety of the omega-3 fish oil Lovaza for the prevention of recurrent atrial fibrillation.
Plato Study, 2008. (Sub-investigator) Patient evaluation, recruitment and follow-up in a study comparing the investigational anti-platelet drug ticagrelor to clopidogrel for inhibition of platelet aggregation in acute coronary syndromes. OSIRIS Trial, 2008 (Merck). (Sub-investigator) Stem cell therapy in acute myocardial infarction, multi-center.

PUBLICATIONS:

Bhardwaj B, Spertus JA, Kennedy KF, Jones WS, Safley D, Tsai TT, Aronow HD, Vora AN, Pokharel Y, Kumar A, **Attaran RR**, Feldman DN, Armstrong E, Prasad A, Gray B, Salisbury AC. Bleeding complications in lower-extremity peripheral vascular interventions: Insights from the NCDR PVI Registry. JACC Cardiovasc Interv. 2019;12(12):1140-1149.

Jelani Q, Shah S, Yuanyuan T, Spertus J, Smolderen K, Aronow H, Paredes M, Attaran R, Regan R and Mena-Hurtado C. Patterns and predictors of referral for invasive management of peripheral arterial disease in the United States: insights from the Portrait Registry. Journal of the American College of Cardiology. 73(9): March 2019

Attaran R, Denizhan O, Lin I, Mena C, Lansky A. April 2019. Evaluation of anticoagulant and antiplatelet therapy after iliocaval stenting: Factors

associated with stent patency. J Vasc Surg: Ven Lymph Disorders. June 2019.
Gul B, Stair B, Hermany P, Willis S, Mena-Hurtado C, Attaran RR. Comparison of procedural success between two radial sheaths: Comparison of the 6-Fr Glidesheath Slender to 6-Fr Standard Sheath. Herz. 2018 May 16. doi: 10.1007/s00059-018-4707-1
Minges KE, Bikdeli B, Wang Y, Attaran RR, Krumholz HM. National and Regional Trends in Deep Vein Thrombosis Hospitalization Rates, Discharge Disposition, and Outcomes for Medicare Beneficiaries. Am J Med. 2018 May 10. pii: S0002-9343(18)30410-8. doi: 10.1016/ j.amjmed. 2018.04.033.
Haghighat L, Altin SE, **Attaran RR**, Mena-Hurtado C, Regan CJ. Review of the latest percutaneous devices in critical limb ischemia. J Clin Med. 2018 Apr 14;7(4). pii: E82.
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Mustapha JA, Lansky A, Shishehbor M, Miles McClure J, Johnson S, Davis T, Makam P, Crowder W, Konstantino E, **Attaran RR**; Chocolate Bar Investigators. A prospective, multi-center study of the Chocolate balloon in femoropopliteal peripheral arterial disease: The Chocolate Bar Registry. Catheter Cardiovasc Interv. 2018 Mar 7. doi: 10.1002/ccd.27565.
Bennett WL, Singla A, **Attaran R**, Abi-Rafeh N, Mena-Hurtado C (2017) Carotid Stenting of a Near Total Occlusion in a High Risk Patient Using Proximal and Distal Cerebral Embolic Protection. J Vasc Endovasc Surg. 2:28 doi: 10.21767/2573-4482.100061
Singla A, **Attaran R**. Bilateral Iliac Vein Stenting without Contrast in a Patient with Venous Ulcer. Clin Surg. 2016; 1: 1033.
Nanna MG, et al. Carotid artery stenting versus carotid endarterectomy. Postgrad Med J. 2016 Jun 17. pii: postgradmedj-2015-133689. doi: 10.1136/postgradmedj-2015-133689. [Epub ahead of print]
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Panaich S et al. Comparison of In hospital Outcomes and Hospitalization Costs of Peripheral Angioplasty and Endovascular Stenting. Am J Cardiol. 2015 May 29. pii: S0002-9149(15)01355-7. doi: 10.1016
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Attaran R, Ewy GA. Epinephrine in resuscitation: curse or cure? Future Cardiology. 2010; 6(4):473-482.
Attaran R. Cardiac Remote Ischemic Preconditioning in Coronary Stenting. [letter]. Circulation. 2009 Oct; 120(14):e132.
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fibrillation. Int J Cardiovasc Imaging. 2008; 24(8):819- 824.
Attaran R, Habibzadeh MR, Baweja G, Slepian MJ. Quadricuspid aortic valve with ascending aortic aneurysm: report of a case and discussion of embryological mechanisms. Cardiovasc Pathol. 2009; 18(1): 49-52.
Attaran R, Ata I, Kudithipudi V, Foster L, Sorrell VL. Protocol for optimal detection and exclusion of a patent foramen ovale using transthoracic echocardiography with agitated saline microbubbles. Echocardiography. 2006; 23(7): 616-622.
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CASE REPORTS:

Attaran R, Abdelghany M, Mena-Hurtado C. Lower extremity venoplasty with the shockwave lithotripsy balloon. Cath Lab Digest. March 2019. 27(3).

Attaran R, Jhamnani S, Mena-Hurtado C. Exertional dyspnea due to iliac vein occlusion, treated by recanalization. Vascular Disease Management. 2017; 14(9): e199-e201.
Singla A, Foster M, Bennett W, Young E, **Attaran R,** Mena-Hurtado, C. Management of a patient with superior vena cava syndrome and a central venous catheter. Vascular Disease Management. 2017. 14(7): E157
Wu, R, **Attaran R**. Entrapment and Retention of a Ruptured Coronary Angioplasty Balloon: A Case Report. Cath Lab Digest. 2015; 23(10)
Attaran R, Szerlip M, Luft U. High risk 2-vessel intervention in NSTEMI and severe LV dysfunction assisted by the Impella 2.5 device. Best Impella

Case. Winner of Abiomed Travel Award. CRF Annual Interventional fellows course. Presented May 9th 2010, Miami.
Attaran R, Lee K. Coronary steal resulting from LIMA-to-SVG-to-LAD-to-ventricular fistula physiology associated with mal-positioned prosthetic aortic valve. Journal of Inv Cardiol. Nov 2010.
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Thai H, Juneman E, Shah S, **Attaran R**, Driggs C, Willhite T. Acute Ostial LAD Thrombosis with Extension Into the Left Main and Circumflex Bifurcation. TCT MD Online, June 29 2009.
Thai H, Rahman S, **Attaran R**, Willhite T. IVUS Guided Stenting of Ostial Left Circumflex Lesion. TCT MD Online, June 8 2009
Sorrell V, Altbach M, Panczyk E, **Attaran R**, Ata A, Bilgin A, Habibzadeh M. Lipomatous hypertrophy of the interatrial septum (LHIAS). Society for Cardiac Magnetic Resonance Case of the Week. (online) 08-09.
Attaran R, Habibzadeh M, Baweja G, Slepian M: Quadricuspid aortic valve with ascending aortic aneurysm: report of a case and discussion of embryological mechanisms. Cardiovasc Pathol. 2009; 18(1): 49-52.
Attaran R, Guarraia D: Ascending aortic aneurysm in a man with scleroderma. Clin Rheum. 2007; 26(6):1027-1028.
Attaran R, Probst F: Histamine fish poisoning: a common but frequently misdiagnosed condition. Emerg Med J. 2002; 19(5):474-5.

ORAL PRESENTATIONS:
Feb 12 2021. Coronary artery disease. Yale School of Medicine.
Feb 12 2021. Acute coronary syndrome. Yale School of Medicine.
Feb 13 2021. Peripheral arterial disease. Yale School of Medicine.
May 31 2019. Superficial venous insufficiency. Glue is best. Debate at NCVH National Annual Meeting, New Orleans, LA.
May 31 2019. Update on the year's best clinical trials. NCVH National Annual Meeting, New Orleans, LA.
April 17 2019. Evaluation of antiplatelet and anticoagulant therapy for iliocaval stenting. Oral presentation. Global Rising Star Session. Charing Cross Symposium. London.

Feb 25 2019. Peripheral vascular disease. Yale School of Medicine.
Sept 7 2018. Emphasis on the Appropriate Vascular Approach to the Non-Healing Wound. American Professional Wound Care Society, Annual Scientific Sessions, Baltimore, MD.
June 1 2018. Best venous trials of 2018. NCVH Annual Meeting, New Orleans, LA.
June 1 2018. Cyanoacrylate ablation. Vein Forum. NCVH Annual Meeting, New Orleans, LA.
June 1 2018. Mechanochemical ablation. Vein Forum. NCVH Annual Meeting, New Orleans, LA.
May 30 2018. Latest advances in venous care. Healthcare Professionals Forum. NCVH Annual Meeting, New Orleans, LA.
May 29 2018. Interventions for acute and chronic DVT and chronic venous insufficiency. Fellows Symposium. NCVH Annual Meeting, New Orleans, LA.

April 20 2018: Venous Disease in the Elderly: A Simple Disease or Limb Threatening Disability?. 7th Annual Update in Interventional Cardiology. Yale School of Medicine. New Haven, CT.
April 14 2018: The hypercoagulable syndromes: when to suspect and when to treat. NCVH Napa, Ca.

Dec 8 2016: Dual antiplatelet therapy and post-conference updates. Evening lecture to staff of Lawrence and Memorial Hospital.
Oct 31 2017: Prevalence, predictors, and outcomes of bleeding complications in peripheral vascular interventions for lower extremities: Insights from the NCDR PVI Registry. TCT 2017, Denver, Co. (Co-author)
May 30 2017. Moderator. NCVH Fellows Course.
May 30 2017: Interventions for venous insufficiency, acute and chronic DVT. NCVH, Annual Scientific Meeting, New Orleans, LA.

May 11 2017: How to Build a Successful Multispecialty Interventional Program. Panelist. Special Session. SCAI Annual Scientific Meeting, New Orleans, LA.

Nov 14 2016: Deep venous thrombosis, pulmonary embolism and venous disease. The forgotten epidemic. Grand Rounds at Lawrence and Memorial Hospital. New London.
Oct 22 2016: Deep Venous Thrombosis and Pulmonary Embolism: An Overview of Guidelines and Real-Life Practical Approach to Diagnosis and Management. New Cardiovascular Horizons. California.
July 12 2016: Post percutaneous coronary intervention care. Lecture to Medical Interns and Residents. Yale New Haven Hospital.
June 4 2016: Compression therapy: Does it Work. New Cardiovascular Horizons Vein Forum. New Orleans.
June 3 2016: Management of mixed arteriovenous disease. New Cardiovascular Horizons Vein Forum. New Orleans.
May 3 2016: Peripheral Vascular Disease. Selected Topics. Grand Round. Middlesex Hospital. CT.
Apr 2 2016: Are the Guidelines Behind the Times: Catheter-Directed therapy versus Anticoagulation for PE and DVT. American College of Cardiology Annual Scientific Sessions. Chicago.
Dec 5 2015: Distinguishing venous insufficiency from CHF from lymphedema. New Cardiovascular Horizons Vein Symposium, Miami Florida.
Dec 5 2015: A beginners guide to safe sclerotherapy. New Cardiovascular Horizons Vein Symposium, Miami Florida.
Oct 30 2015: Acute pulmonary embolism. When is intervention warranted. Current Management of Venous Disorders Symposium, Yale University.
Oct 24 2015: The coagulation cascade and hypercoagulable disorders. New Cardiovascular Horizons Symposium, Redding, California.
May 30 2015: Overview of Anatomy and Physiology of Venous Insufficiency, Post operative protocols, New technology on the immediate horizon. New Cardiovascular Horizons Vein Symposium, New Orleans.
May 15 2015: Combined superficial and deep venous system disease. 4th Annual Yale Interventional Cardiology Update.
Dec 2014: Grand Round. Peripheral vascular disease. St Mary's Hospital, CT

Nov 2014: Grand Round. The New Lipid Guidelines. Aventura Hospital, FL
Sept 2014: Grand Round. Treatment of MI. Danbury Hospital, CT
Aug 2014: Grand Round. Cardiogenic Shock. Greenwich Hospital, CT
Attaran R, Indik J. Paroxysmal atrial fibrillation. Treatment modalities. American College of Cardiology (ACC) Annual Scientific Sessions, March 2009.
Attaran R, Sorrell VL, Movahed R: Poor correlation of pulmonary systolic pressure using echocardiography versus right heart catheterization in patients awaiting heart transplantation. World Congress on Heart Disease. Toronto, July 2008.
Attaran R, Sorrell VL: Ventricular dysfunction among Nonelite Runners after a Marathon is associated with Troponin elevation without focal myocardial necrosis. A Cardiac Magnetic Resonance Imaging Study. World Congress on Heart Disease. Toronto, July 2008.
Lim E, Ali ZA, Attaran R, Cooper G: Routine diuretics are not necessary after coronary bypass surgery. Presented at the Meeting of the Society of Cardiothoracic Surgeons of Great Britain and Ireland, 2000.
Attaran R. Quadricuspid aortic valve with ascending aortic aneurysm. American College of Physicians Arizona Chapter Annual Scientific Sessions. Clinical Vignette Competition, First Place Winner and National Finalist, 2006.

POSTERS:

Feb 2019. Abdelghany M, Attaran R, Henry G, Mojibian H, Mena-Hurtado C. Uterine Cervical Cancer Involving the Myocardium and Pericardium. Fellow-in-training session. American College Cardiology, Annual Scientific Sessions.
Feb 2019. Mahmoud M, Elsheshtawy M, Attaran R, Kadura S, Mena-Hurtado C. Traumatic Coronary artery dissection. Fellow-in-training session. American College Cardiology, Annual Scientific Sessions.
Feb 2019. Jelani, AQ, Attaran R, Mena-Hurtado. Patterns and Predictors of Referral for Invasive Management of Peripheral Arterial Disease in the United States; Insights from the PORTRAIT registry. Moderated Poster session. American College Cardiology, Annual Scientific Sessions.
Nov 2018. Development and validation of a model to predict post-procedure bleeding after peripheral vascular intervention. A report from the NCDR

Registry. Adam C. Salisbury, MD, MSc; David M. Safley, MD; Herbert D. Aronow, MD, MPH; Kevin F. Kennedy, MS; Schuyler Jones, MD; Dmitriy N. Feldman, MD;
Eric Secemsky, MD, MSc; Thomas Tsai, MD, MSc; Robert R. Attaran, MD; John A. Spertus. AHA Annual Scientific Sessions, Nov 2018.

Attaran R: Outcomes of The Vascade Closure device used in conjunction with the SafeGuard Pressure Assisted device. A single center experience. [Presented at ISET Feb 2017, Ft Lauderdale, FL].
Gul B & Attaran R: Comparison of the Terumo Slender and Terumo long sheath in transradial catheterization. A prospective observational study. [Presented at NCVH May 2017, New Orleans, LA].
Attaran R: Ascending aortic aneurysm in a man with scleroderma. American College of Physicians, Arizona Chapter, Annual Scientific Sessions, 2005.
Badheka A, Attaran R: Iliac vein stenting for compression from iliac artery stent. 6th New York Vein Symposium. April 2015.

OTHER INTERESTS:

Co-Chair and Moderator. NCVH Vein Forum. New Orleans, June 4 2016.
Moderator. Great Minds Think Differently. American College of Cardiology Annual Scientific Sessions, Chicago, April 2, 2016
Guest Editor: Global Vascular Digest, 2016
Editorial Board: Vascular Surgery, Clinics in Surgery
Member of Institutional Review board (HIC III), Yale University, Aug-Dec 2014.
Reviewer for Phlebology, Echocardiography, Clinical Cardiology, Oxford University Press USA and Lippincott Williams & Wilkins publishers.
Spanish language. Basic working knowledge.
VFR Pilot. Member of Aircraft Owners and Pilots Association.
Donor to ASPCA & Doctors Without Borders
Member, Connecticut Medical Society.
Mentorship to visiting Faculty, Dr. Xiaojian Sun, Assoc Prof, Yuhuangding Hospital of Yantai, China. Nov 2016.

QUALITY IMPROVEMENT:

NCDR PVI Research and Publications Committee. (2015-). Member
Cardiosmart ACC. Varicose Vein Segment. Editor. 2016-
Vascular Quality Initiative (2014-). Member

Data Safety Monitoring Board (2014). TOBA BTK Study: Tack Optimized Balloon Angioplasty Below the Knee Study for Infrapopliteal Arteries Using the Tack-it Endovascular System. Protocol Number: TD 0109 Rev B.
Data Safety Monitoring Board (2015). Neuro – TAVR Study.
Initiated a large quality improvement exercise to flag high risk ER patients. Guy's and St. Thomas' Hospital Emergency Dept, London. 2001.
STEMI activation appropriateness audit by the Emergency Department at University Medical Center, Tucson, Arizona, 2009.

PROFESSIONAL QUALIFICATIONS:
American Board of Internal Medicine, Certification on Aug 2007
Basic and Advanced Life Support, current
CT Board of Medicine, License 52939
NY Board of Medicine, License 278676

INTERESTS

- Coronary, peripheral arterial and venous intervention.
- Resident and Fellow Education and Training.
- Medical simulation development.
- Quality and safety improvement initiatives.

OTHER
Oct 2017. Interview. Documentary "Composed". Interview on physiology and treatment of performance anxiety amongst performers.
http://composeddocumentary.com

STATE OF CONNECTICUT

COUNTY OF FAIRFIELD

AFFIDAVIT OF FRED HYDE, MD, JD, MBA

Personally appeared before the undersigned attesting officer, duly authorized to administer oaths, comes Fred Hyde, MD, JD, MBA, who after being duly sworn, deposes and states under oath as follows:

1.

My name is Fred Hyde, MD, JD, MBA; I am of legal age; and I am competent to testify.

2.

The facts stated herein are based upon my review of records as noted below

3.

I graduated from the Yale School of Medicine in 1972. I received my law degree from Yale School of Law in 1975 and was admitted to the Bar in the State of Connecticut that same year. I received my MBA from Columbia University School of Business in 1992. From 2003 to the present, I have been a Clinical Professor of Health Policy and Management in the Mailman School of Public Health, Columbia University. From 2013 to the present, I have been a Fellow in the Global Healthcare Innovation Management Center, Fordham University School of Business. From 2016-2017, I was a Clinical Professor of Health Policy and Management, and an Adjunct Professor of Business at the Columbia Business School, Columbia University. From 2018 to the present, I have been an Adjunct Associate Professor, School of Nursing and Health Studies, Department ofHealth Systems Administration, Georgetown University. From 1981 through the present, in addition to the above, I have also served as an independent consultant for hospitals and other healthcare organizations, and these professional roles have included serving in Chief Executive (CEO) positions at the following: Delaware Outpatient Center for Surgery,

EXHIBIT C

Newark, DE (2006-2010); Reproductive Associates of Delaware, Newark, DE (2008); Aliquippa Community Hospital, Aliquippa, PA (2001-2002); Winsted Health Center Foundation, Winsted, CT (1997-2001); Windham Hospital, Willimantic, CT (1987-1994); my professional roles have also included serving in Vice President positions at Yale New Haven Medical Center (1977-1981) and at the Connecticut Hospital Association (1973-1977). A true and accurate copy of my resume is attached hereto as Exhibit "A."

4.

Based on my education, training, and experience, I am familiar with the professional and institutional standards as they apply to hospital and other healthcare organizations, including standards dictating the appropriate means and methods of interfacility transfer (hospital to hospital transfer). This includes the standards relating to interfacility transfer planning and implementation considerations; operational procedures; interfacility coordination; and the execution and management of obtaining appropriate ambulance transport for a patient in critical condition. These professional standards would apply to Southern Regional Medical Center and the Southern Regional Medical Center Cardiac Catheterization Laboratory ("SRMC Cath Lab") in July 2019 when Mr. Billy Mashburn presented there. Throughout my career, I have held numerous positions that involve the implementation, assessment, and/or teaching of healthcare policy and administration, including appropriate hospital policies and procedures. I have been actively engaged in this field consistently since 1973 and have held positions that require knowledge of and experience with the professional and institutional standards that apply to hospitals and healthcare organizations.

5.

This affidavit is based upon my personal knowledge gained through my education, training, teaching, and experience. This affidavit is also based upon the facts shown within the following medical records pertaining to Billy R. Mashburn:

(a) Medical records from the Southern Regional Medical Center relating to the care of Billy R. Mashburn on July 30, 2019;

(b) Medical records from Emory Healthcare/Emory Crawford Long Hospital relating to the care of Billy R. Mashburn on July 30, 2019;

(c) Records from the Clayton County EMS relating to the care of Billy R. Mashburn on July 30, 2019;

(d) The death certificate for Billy R. Mashburn;

(e) The Deposition of Chituru Adele, M.D., taken February 22, 2021;

(f) The Deposition of Ms. Peterson White, CVT, RCIS, taken October 21, 2021; and

(g) The deposition of Haley Mucci, RN, taken June 16, 2021.

6.

In reviewing the medical records described above, I have ascertained the following facts and assume them to be true in stating my opinions below:

a. On July 30, 2019, 61-year-old Billy R. Mashburn experienced chest pains at home and was brought by the Clayton County EMS via ambulance to the emergency department at Southern Regional Medical Center. During transport to Southern Regional, an EKG was transmitted to cardiologist Chituru Adele, M.D and a code STEMI (ST-Segment Elevation Myocardial Infarction) was called.

b. Billy Mashburn arrived the emergency department at Southern Regional around 16:40 (4:40 p.m.). He was almost immediately triaged and seen by emergency department physician Jumoke Alim, M.D. Dr. Alim noted that Mr. Mashburn presented with a chief complaint of chest pain and that just prior to arrival [at the emergency department] he had been engaged in sexual intercourse when he developed substernal chest pain described as burning in nature with shortness of breath, nausea/vomiting, and diaphoresis. Dr. Alim noted that the STEMI code was called during transport via EMS and that the EKG had been transmitted to the interventionalist prior to Mr. Mashburn's arrival at the emergency department. Mr. Mashburn reported chest pain with a score of 8/10.

c. Mr. Mashburn was admitted to Southern Regional Medical Center. At approximately 16:51, the Cath Lab was noted to be ready for the patient. Mr. Mashburn was taken to the Cath Lab at approximately 16:56 for an emergency cardiac catherization.

d. . The physician, Dr. Adele, arrived for the procedure at approximately 17:19. A pre-procedure evaluation was performed, and no changes were noted.

e. Dr. Adele dictated a note documenting the following:

   i. Mr. Mashburn presented as a 61-year-old male with chest pain and inferior ST elevation myocardial infarction on the ECG. Emergency cardiac catherization was activated.

   ii. Dr. Adele undertook to perform a cardiac catherization and coronary angioplasty because he diagnosed an acute inferior wall ST elevation myocardial infarction.

   iii. The procedure was performed by entering the right femoral artery using the Seldinger technique followed by placement of a 6-French sheath. Selective left and right angiography were performed and the angiograms were reviewed.

   iv. It was determined that the left main artery and the circumflex artery were free of significant disease. The right coronary artery was determined to be a dominant vessel that was occluded in its mid-segment and was the infarct-

related lesion.

v. A primary angioplasty and a pre-dilatation angioplasty were performed, followed by the deployment of 3.5 mm drug-eluting stents.

vi. Following the stenting, there was residual deficit due to intravascular calcium. Dr. Adele's team proceeded with post-dilatation angioplasty.

vii. Following the post-dilatation, they identified evidence of extravasation of contrast outside the coronary vasculature, suggesting perforation. They then deployed covered stents and following deployment, there was no further evidence of contrast extravasation.

viii. The patient was then placed on intravenous dopamine and fluids due to "persistent blood pressure, hypotension" and a balloon pump was recommended.

ix. Mr. Mashburn was treated with a balloon pump and 1:1 counterpulsation was established. At the conclusion of the procedure, there was re-established flow down the right coronary artery, the patient was awake and alert, chest pain free, but continued to be hypotensive.

x. Mr. Mashburn was "planned for emergency transfer to a tertiary care center" with a recommendation for "a stat echocardiogram to assess for pericardial effusion."

f. The Clayton County EMS records indicate that a unit was dispatched at 19:37 and was present at the patient's bedside at 19:42. [CC EMS 005]. The narrative of the Clayton County EMS record states that the EMS crew was presented a report "by the Cath lab doctor" who advised the patient presented in the ED with an acute myocardial infarction. The doctor advised the patient had a[n] inferior infarct and was being transferred with a balloon pump, on a portable vent, with a cardiac monitor and medication pumps. He was noted to be "extremely hypotensive" and was being administered significant dosages of vasopressors.

g. The Clayton County EMS records show that EMS departed with the patient for Emory Crawford Long Hospital at 20:37 and arrived at the destination at 20:54.

h. The medical records from Emory Crawford Long Hospital record that "[p]atient was

unstable on multiple high dose pressors with large effusion post PCI at OSH and severe shock, hypotension. BP was in 40-50s despite being on high dose 3 pressors and IABP. He was not stable to go to cath lab." The medical providers at ECLH performed a bedside echocardiogram and performed a pericardial puncture, removing about 200 cc of bloody fluid from Mr. Mashburn's pericardium. The echo showed no more effusion following that drainage, but fibrinous material remained, "probably represented a clotted blood." Despite relieving Mr. Mashburn's effusion, his condition continued to deteriorate and he went into PEA (pulseless electrical activity) arrest and died.

7.

As noted above, I reviewed the deposition of Ms. Peterson White, CVT, RCIS. In general, Ms. Peterson White testified that there was trouble in obtaining ambulance service. From her testimony, I have additionally ascertained the following facts and assume them to be true in stating my opinions below:

a. The initial EMS company called (whom Ms. Peterson White believes to be Rural Metro) was no longer in contract with Southern Regional Medical Center, and no one from SRMC had informed Ms. Peterson White that there was no longer a contract in place before she placed this call.

b. Ms. Peterson White then "looked for another EMS provider" and called AmeriPro. Once she gave them information about the patient and the condition of Mr. Mashburn, she learned that they did not have the necessary equipment for transport.

c. After calling AmeriPro and still not having secured transport to Emory Crawford Long Hospital, Ms. Peterson White called the house supervisor for

"suggestion on who I should call, what I should do next."

d. Ms. Peterson White was told by the house supervisor that "[the house supervisor] would look it up and come down to help us." The house supervisor then came to the Cath Lab to assist.

e. When the house supervisor arrived in the Cath Lab, she had the phone number of Veterans Ambulance Service, and she called them. The house supervisor was told that "there were some contractual issues there too."

f. Ms. Peterson White then called Air Flight, which she initially did not call because "the patient didn't warrant Air Flight and it's more equipment." She learned from Air Flight that they could not come out due to the weather.

g. At this point, "[Tiffany and the Cath Lab staff] with the house supervisor, (were) just trying to think of anyone we've used in the past or any, you know, any other ambulance services." They then decided to call Clayton County.

h. The house supervisor called Clayton County's ambulance services and "ultimately" they agreed to come and transport Mr. Mashburn.

i. Multiple phone calls were made before Clayton County accepted transfer. SRMC was not in contract with Clayton County for ambulance services, so Ms. Peterson White stated that there was an "ordeal of how does this work, you know, with actually using them, payment, and so forth." Ultimately, the house supervisor had to call someone in the C-suite of SRMC for permission to use Clayton County and to "financially compensate."

j. As to how she decided upon the order of ambulance companies / EMS transport options that she was going to call, Ms. Peterson White testified that two ambulance services were posted in the Cath Lab: Rural Metro and the

number to Air Flight.

k. Ms. Peterson White ascertained Ameripro's number by looking on a shelving unit of paperwork in the Cath Lab and finding an envelope from Ameripro with the phone number listed.

l. Ms. Peterson White testified that the house supervisor obtained Veterans Ambulance Service's number from a clipboard the house supervisor carries, and "on [the house supervisor's] list was more providers than Tiffany had."

m. Ms. Peterson White testified that the time from the decision to transfer until Clayton Curtis unit was notified was approximately an hour and a half (from 18:10 to 19:37).

8.

My review of the records from the care of Mr. Mashburn at Southern Regional Medical Center and the depositions noted above leads me to conclude that Southern Regional Medical Center had not implemented an appropriate system of interfacility ambulance transfer under the applicable professional and institutional standards. These standards dictate that appropriate means and methods of interfacility transfer (hospital to hospital transfer) be put into place and updated accordingly such that timely and safe ambulance transport for a patient in critical condition can occur. These standards also include sufficient education of the hospital staff on the plan that the hospital has put into place for interfacility EMS transfer, and timely updating of staff on changes in that plan accordingly (such as an ambulance provider no longer being in contract with the hospital, and in what order EMS services should be called for attempted transfer).

In my opinion, Southern Regional Medical Center, its Cardiac Catheterization Laboratory, and any and all physicians and administrative personnel overseeing the same,

breached the standard of care as applies to hospitals generally under like surrounding circumstances and similar conditions in the following ways:

1. Failing to have a working plan in place to secure timely ambulance services;
2. Failing to adequately train and staff the Cardiac Cath Lab to handle urgent and emergent interfacility transfers of critical care patients;
3. Failing to institute and maintain appropriate means and methods of interfacility EMS transfer (hospital to hospital transfer); and
4. Failing to appropriately manage the methods of staff obtaining appropriate ambulance transport for a patient in critical condition.

9.

This affidavit is being given to comply with any applicable filing requirements, such as may be argued to apply or such as may be found to apply here. This affidavit is not intended to include all of my opinions that I have formed following my review of the records enumerated herein. All of my opinions stated herein are expressed based upon my education, training and experience, as well as upon my review of the records enumerated above. I reserve the right to alter and supplement my opinions upon being provided further information.

FURTHER AFFIANT SAYETH NOT.

This 23rd day of November, 2021.

FRED HYDE, M.D.

Sworn to and subscribed before me

this 23 day of November, 2021.

Notary Public
My Commission expires:

CHIP KEATING
NOTARY PUBLIC - CONNECTICUT
MY COMM. EXPIRES 12/31/2026

Exhibit A

Resume for Fred Hyde, MD

Fred Hyde & Associates, Inc.
Colt's Pond, P.O. Box 362
Ashford, CT 06278

(475) 231-5061
fredhyde@aol.com

Dr. Hyde is an independent consultant specializing in health services and finances. His clients have included academic medical centers, physicians, community hospitals, surgery centers, managed care organizations, health care unions, community organizations and foundations. Dr. Hyde works with his wife, Jane Guillette, formerly Vice President at White Plains Hospital Center, New York, as Fred Hyde & Associates, Inc.

Experience and Employment

1981-present	Independent consultant with assignments that have included chief executive positions (below).
2006-2010	Chief Executive Officer, Delaware Outpatient Center for Surgery, Newark, DE.
2008	Chief Executive Officer, Reproductive Associates of Delaware, Newark, DE.
2001-2002	President/Chief Executive Officer, Aliquippa Community Hospital, Aliquippa, PA.
1997-2001	Chief Executive Officer, Winsted Health Center Foundation, Winsted, CT.
1987-1994	President/Chief Executive Officer, Windham Hospital, Willimantic, CT. Led rebuilding of an insolvent hospital and development of new clinical programs.
1987-1994	President, Northeast Hospital Network (1987-93) and Health Alliance of Connecticut (1993-4), community hospital coalitions developing programs in health insurance, health care legislation, human resources, finance and purchasing.
1979-1981	Financing of hospital building projects as an investment banker. Vice President and National Health Care Manager for Smith Barney, Harris Upham & Co., Inc.
1977-1981	Yale New Haven Medical Center. Vice President for Planning, Yale-New Haven Hospital, (1977-79) managing a comprehensive construction, renovation and re-equipment program. Subsequently (1979-1981) served as the first Director of the Faculty Practice Plan, Yale Medical School.
1973-1977	Vice President (1973-75), General Counsel (1975-77) of the Connecticut Hospital Association.

Academic Background and Teaching Activity

2018-present	Adjunct Associate Professor, School of Nursing & Health Studies, Department of Health Systems Administration, Georgetown University
2016-2017	Clinical Professor of Health Policy and Management (in Business), Adjunct Professor of Business, Columbia Business School, Columbia University.
2013-present	Fordham University School of Business, Fellow, Global Healthcare Innovation Management Center.
2003-present	Clinical Professor of Health Policy & Management in the Mailman School of Public Health, Columbia University.
1992	MBA, Columbia University, School of Business.
1975	JD, Yale School of Law. Admitted to the Bar, State of Connecticut, 1975.
1972	MD, Yale School of Medicine.
1967	BA, Yale College, magna cum laude, honors in major (biology), Phi Beta Kappa.