
IN THE CIRCUIT COURT OF MARYLAND FOR BALTIMORE CITY

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ELEFTERIOS J. KALFAS, ETC., ET AL.,

Plaintiffs,

v.

CASE NO.
24-C-16-003427MM

JOHNS HOPKINS BAYVIEW MEDICAL
CENTER, INC., ET AL.,

Defendants.

- - - - -x

DEPOSITION of BRUCE CHARASH, M.D., taken by Defendants at the offices of Fink & Carney Reporting and Video Services, 39 West 37th Street, Sixth Floor, New York, New York 10018, on Tuesday, April 18, 2017, commencing at 11:00 o'clock a.m., before Tina DeRosa, a Shorthand (Stenotype) Reporter and Notary Public within and for the State of New York.

(1) APPEARANCES:

(2)

(3) CARDARO & PEEK, LLC

(4) Attorneys for Plaintiffs

(5) 201 North Charles Street, Suite 2100

(6) Baltimore, Maryland 21201

(7) BY: JEFFREY L. PEEK, Esq.

(8)

(9) CHASON, ROSNER, LEARY & MARSHALL, LLC

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(11) 401 Washington Avenue, Suite 1100

(12) Towson, Maryland 21204

(13) BY: ERIKA ALSID SHORT, Esq.

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(25)

(1) Charash, M.D.

(2) A Yes.

(3) Q Okay. You brought with you it

(4) looks like your file today and a number of

(5) documents for me that we will have marked.

(6) I would like to start with an

(7) updated CV you provided this morning.

(8) MS. SHORT: We'll mark this

(9) as Exhibit 1.

(10) (Curriculum vitae was marked

(11) as Deposition Exhibit No. 1 for

(12) identification, as of this date.)

(13) BY MS. SHORT:

(14) Q All right. And in looking at the

(15) CV that you provided to me this morning it looks

(16) like you are currently an attending physician at

(17) Lenox Hill.

(18) A Correct.

(19) Q Okay. And tell me what your role

(20) as an attending physician at Lenox Hill

(21) encompasses.

(22) A It means that I have admitting

(23) privileges to Lenox Hill Hospital and with that

(24) comes teaching responsibilities of the doctors

(25) in training at that institution including NYU

(1) Charash, M.D.

(2) BRUCE CHARASH, M.D., called as

(3) a witness, having been first duly sworn

(4) by Tina DeRosa, a Notary Public within

(5) and for the State of New York, was

(6) examined and testified as follows:

(7) EXAMINATION

(8) BY MS. SHORT:

(9) Q Good morning, Dr. Charash. We

(10) just met briefly off the record, but my name is

(11) Erika Short. I represent the Defendant in a

(12) case brought by Ms. Kalfas' Estate and her

(13) family against Baltimore-Washington -- pardon

(14) me, Johns Hopkins Bayview Medical Center. I'm

(15) looking at a record from Baltimore-Washington.

(16) We are here today to take your

(17) deposition. I know that you have been deposed

(18) numerous times before. Are you okay with me

(19) skipping the general deposition rules?

(20) A Yes.

(21) Q Other than if you do not

(22) understand a question that I have asked and you

(23) answer it I'm going to assume that you

(24) understood unless you tell me otherwise; is that

(25) fair?

(1) Charash, M.D.

(2) medical students who rotate there.

(3) Q Are you employed by Lenox Hill?

(4) A No.

(5) Q Are you in private practice?

(6) A Yes.

(7) Q Does your private practice have a

(8) name?

(9) A Just my name. I'm an

(10) unincorporated business.

(11) Q Can you describe for me what your

(12) private practice entails?

(13) A Yes. I have office hours Monday

(14) to Friday. Fifty percent of my patients are

(15) cardiac patients who still have their own

(16) primary care doctor. Twenty-five percent of my

(17) patients were patients referred to me as a

(18) cardiologist, but over the course of time asked

(19) me to additionally become their primary care

(20) doctor, and 25 percent of my patients came to me

(21) for primary care without a preexisting cardiac

(22) diagnosis or concern and over time about half of

(23) them have developed some form of heart issue.

(24) I do stress tests and

(25) echocardiograms in my office and I admit them to

- (1) Charash, M.D.
 (2) Lenox Hill Hospital when required and do
 (3) consultations at Lenox Hill Hospital.
 (4) Q When did you begin your private
 (5) practice?
 (6) A In 2006. For the first 20 years
 (7) of my practice, from '87 to 2006 I was employed
 (8) by medical schools and hospitals by which I
 (9) spent 90 plus percent of my time in the hospital
 (10) and ten percent of my time in an out-patient
 (11) practice owned by those institutions, but my own
 (12) practice, and in the last ten years that's
 (13) reversed to now 90 percent office to five, ten
 (14) percent of my time in the hospital.
 (15) Q Okay. So if I'm looking at your
 (16) CV where you have listed on Page 2 senior
 (17) attending physician Lenox Hill Hospital '91 to
 (18) 2005, you were actually employed by Lenox Hill
 (19) Hospital at that time?
 (20) A Correct.
 (21) Q And then in 2006 you started your
 (22) own private practice?
 (23) A Correct.
 (24) Q Through today?
 (25) A Yes.

- (1) Charash, M.D.
 (2) Q Okay. Do you have any partners in
 (3) that practice?
 (4) A No.
 (5) Q All right. So you have admitting
 (6) privileges at Lenox Hill at which you are
 (7) admitting your own private practice patients?
 (8) A And/or seeing patients in
 (9) consultation.
 (10) Q Okay. How does that break out
 (11) that you are seeing patients in consultation
 (12) versus admitting your own?
 (13) A I would say about one-quarter of
 (14) my own and 75 percent are consults.
 (15) Q And these are obviously cardiac
 (16) consults that you're doing?
 (17) A The consults are cardiac. My own
 (18) patients could be admitted with a variety of
 (19) problems, although more than half of those are
 (20) cardiac.
 (21) Q And when you are called in to do a
 (22) consult on a patient that is not from your
 (23) private practice, is this occurring as a result
 (24) of a patient that's been admitted and they would
 (25) like for you to come in and do a cardiac consult

- (1) Charash, M.D.
 (2) or is this occurring in order for a patient to
 (3) be admitted?
 (4) A Both. The ones that are
 (5) pre-admission are typically surgical clearance
 (6) patients, but otherwise the remainder are
 (7) patients in the hospital that develop some issue
 (8) that needs a cardiologist.
 (9) Q And when you say that the quarter
 (10) of the patients that are your own that you are
 (11) admitting have a variety of problems, more than
 (12) half of those problems being cardiac, what other
 (13) types of problem would you be admitting your own
 (14) patients for and continuing to follow them at
 (15) Lenox Hill?
 (16) A If a patient falls and breaks
 (17) their hip or if a patient needs a joint
 (18) replacement, a patient might develop pneumonia,
 (19) gall bladder disease.
 (20) Anyone who develops a medical or
 (21) even surgical illness in my practice whether I
 (22) am a cardiologist or not, if they get admitted I
 (23) will be the admitting doctor or the one
 (24) following them from the medical side.
 (25) Q And then you also told me that you

- (1) Charash, M.D.
 (2) have a teaching component.
 (3) A Yes.
 (4) Q So tell me about that.
 (5) A Teaching occurs on multiple
 (6) levels. The day-to-day level is if I have a
 (7) patient in the hospital there are teams of
 (8) interns, residents, and medical students
 (9) following them and there's an expectation to, of
 (10) course, engage in the education of the doctors
 (11) in training involved in my specific patients and
 (12) that could be in small huddles outside the room
 (13) for five minutes or longer.
 (14) One month a year we rotate to be
 (15) the attending of the month on the cardiology
 (16) consult service where there are a team of
 (17) doctors in training and that's more of a three
 (18) to four hour a day commitment five days a week
 (19) to go over the consult service with weekend
 (20) coverage.
 (21) I deliver several lectures a year
 (22) about the assessment of emergency cardiac
 (23) conditions, chest pain evaluation in the
 (24) emergency room, shortness of breath evaluation.
 (25) Several times a year I'm invited

- (1) Charash, M.D.
 (2) to give the morning report where residents
 (3) gather with the more complicated medical cases
 (4) and discuss them with the attending. So they
 (5) select two or three of the more challenging
 (6) admissions for an academic and clinical
 (7) discussion.
 (8) Q The teaching component that you
 (9) just described for me it looks like four
 (10) different components actually, subparts of that.
 (11) Other than lecturing a few times a
 (12) year at Lenox Hill regarding the recognition of
 (13) chest pain, shortness of breath in patients who
 (14) present to the hospital, are you teaching in the
 (15) emergency room or in the field of emergency
 (16) medicine?
 (17) A Not general emergency medicine,
 (18) but cardiac related issues with regards to the
 (19) emergency room I would.
 (20) Q Are you teaching anywhere else
 (21) besides Lenox Hill Hospital?
 (22) A No.
 (23) Q And these teaching positions, are
 (24) they paid?
 (25) A No.

- (1) Charash, M.D.
 (2) Q Do you have any materials, Power
 (3) Point slides, presentation materials from any of
 (4) the lectures that you have given regarding
 (5) cardiac emergency room medicine issue?
 (6) A No.
 (7) Q How often per year do you give
 (8) that specific lecture?
 (9) A Averaging two.
 (10) Q And who are you giving that
 (11) lecture to?
 (12) A To the medical house staff and
 (13) medical students on the internal medicine
 (14) rotation. So generally a group of 70 people.
 (15) Q Have you ever worked as an
 (16) emergency room physician?
 (17) A Not since my fellowship where I
 (18) from '84 to '87 most of the cardiology fellows
 (19) including myself did moonlighting at St.
 (20) Barnabas Hospital in New York for general ER
 (21) rotations, but not since then. But for the 14
 (22) years I was at Lenox Hill I was engaged in the
 (23) cardiac center in the ER. I served on the
 (24) emergency room committee. I saw patients with
 (25) potential heart disease as an ER physician. I

- (1) Charash, M.D.
 (2) was authorized to see them to speed people
 (3) through. So I would write the ER note, but only
 (4) with regard to cardiac or potential cardiac
 (5) presentations, not general ER.
 (6) I set up the protocols for the
 (7) cardiac center in the ER. I did peer review,
 (8) quality improvement. I served on multiple
 (9) committees. I assessed performance of nurses
 (10) and doctors in the ER.
 (11) So I was deeply integrated into
 (12) the emergency room and was there virtually every
 (13) day, but only from the point of view of cardiac
 (14) or suspected cardiac presentations.
 (15) Q And that was up through 2005?
 (16) A Correct.
 (17) Q Okay. And did you do that the
 (18) entire time from '91 through 2005?
 (19) A Yes.
 (20) Q Okay. What are you currently
 (21) Board-certified in?
 (22) A Internal medicine since '84 and
 (23) cardiology since '87, and those certifications
 (24) were permanent because they occurred before they
 (25) changed the system for recertification.

- (1) Charash, M.D.
 (2) Q Okay. I take it from that that
 (3) you have never been Board-certified in emergency
 (4) room medicine; right?
 (5) A Correct.
 (6) Q Okay. Have you ever been licensed
 (7) to practice in Maryland?
 (8) A No.
 (9) Q Okay. Have you authored any
 (10) articles or books on emergency medicine?
 (11) A No.
 (12) Q Have you authored any articles or
 (13) books on myocardial infarction?
 (14) A Yes.
 (15) Q Okay. And I'm happy to give you a
 (16) copy of your CV, but when I look here you have a
 (17) book entitled Heart Myths and there are a few
 (18) peer reviewed journals and abstracts.
 (19) Can you help me figure out which
 (20) ones relate to emergency medicine?
 (21) A Certainly.
 (22) Q Okay.
 (23) A You said heart attack, not
 (24) emergency medicine.
 (25) Q Pardon me. You are exactly right.

- (1) Charash, M.D.
 (2) On heart attack.
 (3) A Well, we did animal studies. The
 (4) first two peer reviewed publication journals
 (5) from '81 and '82 were on heart attacks in dogs.
 (6) The article in Seminars and
 (7) Nuclear Medicine from '87 was on nuclear studies
 (8) in acute myocardial infarction.
 (9) I should take that back. I did
 (10) write one article for emergency medicine from
 (11) 1990 which was in the Journal of Emergency
 (12) Medicine where I took care of a patient with a
 (13) very complex and bizarre poisoning reaction to
 (14) an unauthorized medication and I published it
 (15) with the head of poison control of New York City
 (16) at the time, Diane Sauter, S-A-U-T-E-R, and I
 (17) was co-author of the article.
 (18) The book Heart Myths talks about
 (19) heart attacks generally.
 (20) Q I'm sorry, is that publication
 (21) listed on your CV with Diane Sauter?
 (22) A Yes.
 (23) Q Which number is that?
 (24) A Well, it's the last of the peer
 (25) reviewed journals.

- (1) Charash, M.D.
 (2) Q Thank you.
 (3) A My book does discuss general
 (4) principles of heart attacks.
 (5) Q It looks like your book Heart
 (6) Myths was first published in '91 and then again
 (7) in '92 would be the most recent thing that you
 (8) have published related to heart attacks?
 (9) A Correct.
 (10) Q I know that you have been asked
 (11) this question a number of times, but can you
 (12) tell me what the current percentage of your time
 (13) spent on medical/legal matters is in
 (14) relationship to your professional work?
 (15) A Yes. A great deal of my
 (16) medical/legal work is actually done on my own
 (17) hours at night and weekends, but the best
 (18) estimate is it's ten to 15 percent of my time.
 (19) Q Have you ever spent more than 20
 (20) percent of your time on medical/legal matters?
 (21) A No, I have never approached 20
 (22) percent. It's always been under 15 percent of
 (23) my time.
 (24) Q Regarding your review and opinions
 (25) in this case, is there any specific literature

- (1) Charash, M.D.
 (2) upon which you will rely?
 (3) A No.
 (4) Q You brought with you and I will
 (5) mark as Exhibit 2 a trial list. It begins in
 (6) May of 2012,
 (7) A Yes. It's the last five years.
 (8) Q Okay.
 (9) A I haven't updated the last month,
 (10) but that's the most updated version I have.
 (11) Q Okay.
 (12) (Trial list was marked as
 (13) Deposition Exhibit No. 2 for
 (14) identification, as of this date.)
 (15) Q In this trial list the last one
 (16) you have is March 7, 2017. The case is
 (17) Garfunkel.
 (18) Have you testified in trial since
 (19) March 7th this year?
 (20) A I don't believe so.
 (21) Q Okay. Have you previously worked
 (22) with Mr. Peek's office?
 (23) A Yes.
 (24) Q Do you know on how many occasions?
 (25) A No, but I would estimate a half a

- (1) Charash, M.D.
 (2) dozen. But that's just a guess. I don't really
 (3) remember.
 (4) Q Do you know for what period of
 (5) time that encompasses?
 (6) A A number of years. I think if you
 (7) look at my testimony list there may have been
 (8) some depositions and/or trials in the last five
 (9) years, but I don't recall when we first worked
 (10) together.
 (11) Q Other than this case do you have
 (12) any other current cases that you are reviewing
 (13) or working on for Mr. Peek or anyone in his
 (14) office?
 (15) A I honestly don't remember. I may
 (16) or may not have an open case. I don't think
 (17) there are. If there are any it wouldn't be more
 (18) than one or two, but I don't even know if I have
 (19) any.
 (20) Q Okay. The case in which you most
 (21) recently provided trial testimony in Maryland
 (22) March 1, 2017, Baylor, what did that case
 (23) involve?
 (24) A I don't remember. I really need
 (25) you to understand that my memory is very

(1) Charash, M.D.
 (2) peculiar from the point of view that I store a
 (3) great deal of it in passive form which means if
 (4) I was given one thing that would trigger my
 (5) memory. I would remember everything about it.
 (6) If I was given something to
 (7) remember a previous case with Mr. Peek's firm I
 (8) would be able to do it, but I don't.
 (9) I did a deposition in this office
 (10) last week. I don't even remember the name of
 (11) the case right now. It's just how my memory
 (12) works. If I was given one thing to trigger to
 (13) unlock that memory I would remember everything.
 (14) I just put it behind me. So I honestly don't
 (15) remember what that case was about.
 (16) Q Do you recall of the five
 (17) trials -- no, six that you have testified in
 (18) this year, do you recall if any of them involve
 (19) similar issues to this case?
 (20) A I don't recall directly, but this
 (21) is an unusual case. So I would say it's
 (22) unlikely that I have testified in a case too
 (23) similar to this ever.
 (24) I mean I may have had a case,
 (25) there have probably been some cases of people,

(1) Charash, M.D.
 (2) plaintiff versus defense currently?
 (3) A Averaging for my entire career and
 (4) in the last five years about 15 percent of what
 (5) I review are for defense firms, but for a number
 (6) of reasons based on really the different
 (7) requirements of an expert witness in defense
 (8) versus plaintiff less than five percent of my
 (9) testimony is for defense.
 (10) Q Do you know if you have ever
 (11) offered testimony as a defense witness in
 (12) Maryland?
 (13) A I have not. I have never been
 (14) approached by a defense firm in Maryland,
 (15) although I have defended doctors in Maryland by
 (16) advising defense lawyers not to pursue a case,
 (17) but not hired by a defense firm.
 (18) (Invoice was marked as
 (19) Deposition Exhibit No. 4 for
 (20) identification, as of this date.)
 (21) Q Marking as Exhibit 4 an invoice
 (22) that you brought today dated January 15, 2016 in
 (23) the amount of \$675, and I believe what you told
 (24) me is that there is an additional invoice?
 (25) A Just sent last night which I

(1) Charash, M.D.
 (2) it depends how general you want to go, who are
 (3) admitted with a medical illness where I have
 (4) argued they required some form of monitoring
 (5) that wasn't done out of concern for primary or
 (6) cardiac -- primary or secondary cardiac
 (7) complications.
 (8) So I would not be surprised if I
 (9) had cases like that. But the more detailed you
 (10) get about this case the more isolated it
 (11) becomes. So in general I'm sure I have
 (12) testified about people who required some form of
 (13) cardiac monitoring before, but I don't think
 (14) ever due to a foreign body in an appendage.
 (15) (Discussion off the record.)
 (16) MS. SHORT: I'm going to
 (17) mark as Exhibit 3, you brought this
 (18) morning your deposition list. It
 (19) also goes back five years. It
 (20) begins April of 2012,
 (21) (Deposition list was marked
 (22) as Deposition Exhibit No. 3 for
 (23) identification, as of this date.)
 (24) BY MS. SHORT:
 (25) Q How does your caseload break down

(1) Charash, M.D.
 (2) didn't bring a copy, I should have, for I think
 (3) five and a half hours for review of all the
 (4) records, rereview of them, the depositions that
 (5) I received, our hour telephone discussion
 (6) yesterday and preparation for today's deposition
 (7) which means I have spent about seven hours on
 (8) this case.
 (9) Q What is your -- oh, I see \$450 an
 (10) hour. Is that for all work you do in the case
 (11) outside of testimony?
 (12) A Correct. Anything that I can do
 (13) on my time is \$450 an hour. Deposition time
 (14) during work hours for trial or deposition is
 (15) \$500 an hour.
 (16) Q This is Exhibit 5. I'm marking a
 (17) cover letter you brought today dated April 14th
 (18) of this year which is from Mr. Peek's legal
 (19) assistant enclosing additional materials.
 (20) (Letter dated April 14, 2017
 (21) was marked as Deposition Exhibit No.
 (22) 5 for identification, as of this
 (23) date.)
 (24) Q Do you know what those additional
 (25) materials are?

- (1) Charash, M.D.
 (2) A Yes. I had received the
 (3) depositions, the three discovery depositions I
 (4) read in this case electronically, but I asked
 (5) prior to my deposition to have hard copies in
 (6) case I needed to mark them, which I didn't, but
 (7) these are the three.
 (8) Q There are more than three
 (9) depositions that have occurred in the case, so
 (10) could you tell me then which depositions you
 (11) have?
 (12) A Well, I asked for all of the
 (13) depositions, but I have Dr. Hoffmann,
 (14) H-O-F-F-M-A-N-N. Dr. Hill and Nurse
 (15) practitioner Rowe, R-O-W-E.
 (16) (Cover page to medical
 (17) records was marked as Deposition
 (18) Exhibit No. 6 for identification, as
 (19) of this date.)
 (20) Q What I am marking as Exhibit 6 is
 (21) the cover page to the medical records that you
 (22) received with a table of contents.
 (23) Is this something that you
 (24) prepared or it came with the records?
 (25) A That came with the records.

- (1) Charash, M.D.
 (2) Q All right. Outside of the medical
 (3) records listed here, have you received any other
 (4) medical records in the case?
 (5) A No.
 (6) Q Okay. Have you requested any
 (7) other medical records?
 (8) A I have an open request for
 (9) anything that comes up. I asked for any medical
 (10) records available in the case and I was told
 (11) that I received everything.
 (12) Q Okay. If I could take a look at
 (13) your stack of records there, too, please.
 (14) A These are my report and
 (15) certificate of qualified expert.
 (16) Q Okay.
 (17) A Even though I received the full
 (18) set of records I think some of the pages are
 (19) missing and I don't know why. No relevant page
 (20) is missing, but I don't think it adds up to the
 (21) total number of pages I initially received.
 (22) Q Okay. So I'm going to mark as
 (23) Exhibit 7 your report because the one that you
 (24) handed me has very colorful highlighting along
 (25) with a number of notes.

- (1) Charash, M.D.
 (2) A Well, they are not notes. It's
 (3) literally writing what's on the page, but, yes,
 (4) notes.
 (5) (Report of Dr. Charash was
 (6) marked as Deposition Exhibit No. 7
 (7) for identification, as of this
 (8) date.)
 (9) Q Okay.
 (10) A And allow me to just simplify the
 (11) deposition by saying that I use different color
 (12) highlights and different color Post-its to help
 (13) separate things so I can more quickly identify
 (14) anything, but there is no significance to the
 (15) color chosen. It's purely random.
 (16) So there is no color coding of
 (17) Post-its or notes. I just find when I am going
 (18) through records I can identify things more
 (19) rapidly than if everything was one color.
 (20) Q Okay. The report does not have a
 (21) date on it. Do you know when it was prepared?
 (22) A Well, it would have been shortly
 (23) after I reviewed the record. So it probably
 (24) would have been late January or early February,
 (25) 2016, but actually I didn't realize there was no

- (1) Charash, M.D.
 (2) date.
 (3) Q Okay. And did you prepare Exhibit
 (4) 7 yourself?
 (5) A No.
 (6) Q Who prepared Exhibit 7?
 (7) A I don't know. It was provided to
 (8) me. It was based on our extensive conversation
 (9) of the case, but I do not know who prepared it.
 (10) Q It was provided to you by
 (11) Plaintiffs' counsel?
 (12) A Yes.
 (13) Q When it was provided to you did
 (14) you make any changes to it?
 (15) A I don't know. I don't recall.
 (16) Q Do you know if it was provided to
 (17) you in electronic format or in hard copy as it
 (18) was here?
 (19) A It was most likely not by memory,
 (20) but by custom, sent to me electronically.
 (21) Q Did you bring any e-mails that you
 (22) have exchanges with Plaintiffs' counsel with you
 (23) today?
 (24) A I don't know. I don't save the
 (25) e-mails.

- (1) Charash, M.D.
 (2) Q What did you do with them?
 (3) A Delete them. Other than an e-mail
 (4) that has content or something I need, but there
 (5) are none in this case.
 (6) Q Did Plaintiffs' counsel ever tell
 (7) you that you should not delete any
 (8) correspondence or documentation that you create
 (9) in the case?
 (10) A No. But on the other hand I
 (11) assumed that if they were necessary they have my
 (12) e-mails in return. I just don't need to keep
 (13) 50,000 e-mails.
 (14) Q If I wanted to know if you made
 (15) any changes to the draft that was provided to
 (16) you by Plaintiffs' counsel how would I go about
 (17) doing that?
 (18) A I have no idea.
 (19) Q Because you can't remember?
 (20) A Correct.
 (21) Q The notes that you have here you
 (22) said that it is just a restatement of what is
 (23) already typewritten?
 (24) A Everything is just a restatement
 (25) so that way it kind of serves as an index.

- (1) Charash, M.D.
 (2) Q Did you request that Plaintiffs'
 (3) counsel prepare this report for you?
 (4) A No. It's just been the tradition
 (5) of cases from Maryland, that in some states like
 (6) New Jersey and Pennsylvania I have always been
 (7) asked to generate a report. In cases in the
 (8) states of Massachusetts and Maryland the
 (9) tradition has been that they send me a draft
 (10) report.
 (11) Q I'm marking as Exhibit 8 your
 (12) certificate of qualified expert in the case.
 (13) I'm guessing Plaintiffs' counsel
 (14) drafted that?
 (15) A Yes.
 (16) (Certificate of qualified
 (17) expert was marked as Deposition
 (18) Exhibit No. 8 for identification, as
 (19) of this date.)
 (20) Q Okay. Did you make any changes to
 (21) it?
 (22) A I have no memory of that.
 (23) Q Are you aware of any way that we
 (24) could figure out whether or not you made any
 (25) changes?

- (1) Charash, M.D.
 (2) A No.
 (3) Q Do you recall signing Exhibit 8?
 (4) A Only by the fact that it's signed.
 (5) Q Do the sticky notes that are on
 (6) the medical records correlate to the color of
 (7) the highlights on the report?
 (8) A No. Again, it's totally random
 (9) the colors that are chosen.
 (10) (Discussion off the record.)
 (11) Q I'm going to mark your highlighted
 (12) and tabbed medical chart of Ms. Kalfas' records
 (13) that you reviewed as Exhibit 9.
 (14) (Highlighted and tabbed
 (15) medical chart was marked as
 (16) Deposition Exhibit No. 9 for
 (17) identification, as of this date.)
 (18) Q And we'll get a rubberband.
 (19) A Not now because I'm going to want
 (20) to refer to it.
 (21) Q No. No. Just so we keep it all
 (22) together and don't pull things out. Here you
 (23) are.
 (24) A Thank you. I don't need these
 (25) earlier exhibits. I'll just hold on to seven

- (1) Charash, M.D.
 (2) and eight and nine. I don't even need eight.
 (3) Just seven and nine.
 (4) Q Outside of the documents that we
 (5) have gone over, Exhibits 1 through 9 we will go
 (6) over in greater detail, have you made any other
 (7) notes in the case?
 (8) A No.
 (9) Q I didn't look at the transcripts
 (10) themselves that you told me that you reviewed.
 (11) Did you make any notes on those?
 (12) A No. And I don't believe I did any
 (13) highlighting either.
 (14) Q Okay.
 (15) A No.
 (16) Q Okay. Have you spoken with anyone
 (17) in Ms. Kalfas' family?
 (18) A No.
 (19) Q Have you spoken with any of the
 (20) treating physicians involved in Ms. Kalfas' care
 (21) at any point in time?
 (22) A No.
 (23) Q How about any of the other experts
 (24) in the case?
 (25) A No.

- (1) Charash, M.D.
 (2) Q Do you know any of the other
 (3) experts in the case?
 (4) A I don't even know the names of the
 (5) other experts.
 (6) Q It's an easy answer then.
 (7) Do you know any of the treating
 (8) providers that you saw as you reviewed
 (9) Ms. Kalfas' medical record?
 (10) A No.
 (11) Q You said that you spoke with
 (12) Mr. Peek yesterday for about an hour?
 (13) A Correct.
 (14) Q And I'm assuming it was Mr. Peek.
 (15) It could have been Mr. Cardaro or someone else.
 (16) Was it Mr. Peek?
 (17) A It was Mr. Peek.
 (18) Q Okay. And what did you discuss in
 (19) that conversation?
 (20) A My opinions in this case.
 (21) Q Did you discuss anything that is
 (22) not outlined in your report which is Exhibit 7?
 (23) A Well, I think that my report
 (24) established the foundation for a case, but many
 (25) of the details are specific in the records. So

- (1) Charash, M.D.
 (2) I provided the foundation of my opinion, but I
 (3) think my report is just the beginning of my
 (4) opinions. I have no new overall opinions, but
 (5) there is a lot of evidence in the chart to
 (6) support my opinions.
 (7) Q Okay. We're going to go through
 (8) that.
 (9) A Of course.
 (10) Q Okay. But outside of walking me
 (11) through the support for your opinions in the
 (12) case, did you discuss anything else with
 (13) Mr. Peek other than what you'll walk me through
 (14) in the chart and what is in Exhibit 7?
 (15) A No.
 (16) Q You met with him briefly today
 (17) before this deposition?
 (18) A Correct.
 (19) Q Did you discuss anything with him
 (20) outside of what is in Exhibit 7 and what we will
 (21) go through in the medical chart?
 (22) A No.
 (23) Q And then I believe that you said
 (24) there was one prior conversation with Mr. Peek
 (25) or his office?

- (1) Charash, M.D.
 (2) A Yes, when I first reviewed the
 (3) records to establish my support of the case.
 (4) Q And do you recall when that
 (5) conversation occurred?
 (6) A It would have been very close to
 (7) the time of the invoice, but I do not recall
 (8) when.
 (9) Q The other invoice, not the one we
 (10) have here today?
 (11) A No. The one invoice would have
 (12) been when I first reviewed the file and I would
 (13) have spoken somewhere close to the time of that
 (14) invoice in, you know, late January of 2016.
 (15) Q At the time of that call did you
 (16) discuss anything with Mr. Peek or anyone in his
 (17) office other than what is contained now in
 (18) Exhibit 7 and what we'll go through in the
 (19) medical chart?
 (20) A I would think not. I don't have
 (21) an independent memory, but there would have been
 (22) nothing else to discuss.
 (23) Q All right. Why don't we walk
 (24) through your report. If you give me kind of a
 (25) bulletproof form maybe. I'm trying to think of

- (1) Charash, M.D.
 (2) the easiest way for us to do this since you have
 (3) things tabbed in the records that are supportive
 (4) of your opinions that might not necessarily be
 (5) in the report itself. I want to make sure that
 (6) I'm getting the complete foundation for each of
 (7) your opinions.
 (8) A Well, why don't I give you my
 (9) opinions and then we can establish a foundation?
 (10) Q It's fine. Your opinions are in
 (11) report so I didn't want to spend an hour going
 (12) through your opinions since I have them.
 (13) A I think if I give you a summary it
 (14) might be a foundation for you to ask me
 (15) questions.
 (16) Q That's fine.
 (17) A I'm not going to go through the
 (18) report.
 (19) My central opinion and there are
 (20) others is that Mr. Kalfas required to be on a
 (21) cardiac monitor -- Ms. Kalfas, sorry. And had
 (22) she been on a cardiac monitor she would have
 (23) survived the cardiac arrest.
 (24) So that's a central opinion is
 (25) that she required monitoring because of her

(1) Charash, M.D.
 (2) complex cardiac history, her abnormal EKG, and
 (3) the fact that she came in with a significant
 (4) medical illness that could carry with it primary
 (5) and secondary cardiac complications the standard
 (6) of care required she been on monitored unit and
 (7) her failure to survive the cardiac arrest was
 (8) directly related to the failure of her being on
 (9) a monitored unit and a large part of that
 (10) opinion will be based on the code sheet itself.

(11) The other opinions are that she
 (12) presented with an infectious disease with high
 (13) risk indicators including, but not limited to
 (14) her dropping glucose levels which is usually the
 (15) sign of a significant infection. And as a
 (16) result with her cardiac history even without the
 (17) abnormal EKG would have required cardiac
 (18) monitoring.

(19) The other opinion is that keeping
 (20) a foreign body in her foot, in her toe I think,
 (21) made her condition worse because an infection
 (22) with a foreign body becomes somewhat like a
 (23) reactor and it appears the timeframe from her
 (24) presentation to her cardiac arrest was 12 to 13
 (25) hours and I believe that every hour it the

(1) Charash, M.D.
 (2) abnormal EKG, the complex history, and the fact
 (3) that from your viewpoint the illness that she
 (4) presented with it carried primary and secondary
 (5) cardiac complications.

(6) A Because she was presenting with a
 (7) very significant bacterial infection. As a
 (8) diabetic with a foot infection who is having
 (9) dropping sugars meant that she had a serious
 (10) infection and somebody with a complicated
 (11) cardiac history that's a bad complication and
 (12) they just require cardiac monitoring for that
 (13) reason alone given the abnormal EKG and given
 (14) the fact that when they went backwards and
 (15) looked at her cardiac enzymes in the emergency
 (16) room she was already ruling in for some level of
 (17) heart attack which means that the medical
 (18) illness, the infection was stressing her heart
 (19) to an unreasonable level.

(20) Although that retrospectively
 (21) confirmed why she needed to be monitored
 (22) protectively this serious medical illness
 (23) showing the ability to drop her sugars and all
 (24) of the high risk septic, pre-septic indicators
 (25) required monitoring and then the abnormal EKG,

(1) Charash, M.D.
 (2) foreign body would have been removed would have
 (3) carried a more significant reduction of her risk
 (4) of having a cardiac arrest.

(5) And I think that we can say
 (6) reasonably safely that because this is
 (7) expediential growth and expediential damage that
 (8) if it was removed less than six hours prior to
 (9) her cardiac arrest the likelihood of the arrest
 (10) would have been reduced by greater than 50
 (11) percent and every hour more than six hours would
 (12) have given her a progressively increased
 (13) likelihood of preventing cardiac arrest.

(14) So the arrest would have been more
 (15) likely than not been prevented with aggressive
 (16) therapy and removing the foreign body up until
 (17) about six hours prior to the arrest.

(18) Regardless, had she been on a
 (19) monitored unit within reasonable medical
 (20) certainty she would have survived the arrest.

(21) Q Okay. Thank you. So let's talk
 (22) about that first main opinion relating to the
 (23) need for Ms. Kalfas to be on a cardiac monitor
 (24) and it sounds to me like the basis for that
 (25) opinion if I listed this correctly is the

(1) Charash, M.D.
 (2) of course.

(3) Q So let's kind of go through each
 (4) of those subparts so that I can make sure I
 (5) fully understand your basis and let's start with
 (6) the EKG.

(7) Have you had a chance to review
 (8) the EKG that was first done. There are two of
 (9) them. Do you have that one in front of you
 (10) timed 2111?

(11) A Yes.

(12) Q And can you tell me what your read
 (13) of this EKG is?

(14) A Well, there is a wavy baseline so
 (15) the reading is impacted by that. But there is
 (16) ST segment elevation in Leads V1, V2, and V3
 (17) which are suggestive, but not diagnostic of an
 (18) acute anterior wall heart attack.

(19) There is also evidence of an old
 (20) anterior wall heart attack based on the poor R
 (21) wave progression in the anterior leads.

(22) There are nonspecific ST
 (23) abnormalities in what we call the limb leads.
 (24) Leads I, 2, 3, AVL and AVF. The magnitude of ST
 (25) segment elevation in Lead V2 is the one that is

(1) Charash, M.D.
 (2) most difficult to assess because of the wavy
 (3) baseline. The EKG computer reads it as acute
 (4) myocardial infarction in capital letters largely
 (5) because of the wavy baseline in V2.
 (6) So looking at this EKG you would
 (7) have to conclude that she may be having an acute
 (8) anterior wall heart attack. So that is the
 (9) reading of this EKG consistent with, but not
 (10) diagnostic of an acute anterior wall heart
 (11) attack.
 (12) Q Will you be giving an opinion in
 (13) this case that she was having a heart attack?
 (14) A Well, she definitely was having a
 (15) heart attack from the point of view of enzyme
 (16) release. I don't believe she was having a
 (17) primary heart attack. But I believe that with
 (18) her long history of coronary disease and bypass
 (19) surgery and even though the autopsy confirmed
 (20) that the bypass grafts were open it was not
 (21) meant to, nor did it answer an extensive mapping
 (22) of coronary disease. But I believe that within
 (23) reasonable medical certainty her heart was being
 (24) negatively impacted by her septic presentation
 (25) or pre-septic presentation.

(1) Charash, M.D.
 (2) Just having a heart rate of 120
 (3) which she had frequently is like having an
 (4) ongoing stress test you cannot control. So I
 (5) believe with reasonable medical certainty her
 (6) heart was being negatively impacted by her
 (7) medical illness which was the primary reason she
 (8) needed to be on a monitor.
 (9) Q Okay. So you disagree with the
 (10) computer reading that this is acute MI?
 (11) A No, I don't disagree with it. I'm
 (12) just saying that because of the wavy baseline
 (13) you can't resolve it with any more clarity.
 (14) This EKG is appropriately
 (15) consistent with an acute MI. Clinically I think
 (16) that when you look at all the data points she
 (17) was not evolving a ST segment elevation heart
 (18) attack. But this EKG is consistent with that.
 (19) You must diagnose a patient, not just the EKG.
 (20) Q Sure. And Ms. Kalfas had a
 (21) cardiac history before coming into the Emergency
 (22) Department; right?
 (23) A Yes.
 (24) Q Okay. Have you reviewed any of
 (25) the EKG's that were performed on Ms. Kalfas

(1) Charash, M.D.
 (2) prior to March 21st of 2013?
 (3) A I don't recall.
 (4) Q Other than the records of her
 (5) primary care physician which appear to be in
 (6) what you were sent, did you review any records
 (7) from her cardiologist?
 (8) A Was that on the list. I know that
 (9) she had an extensive cardiac history and I did
 (10) not have access to her bypass record. I am
 (11) aware of her past history through the records
 (12) included.
 (13) Q This has her primary care, Dr.
 (14) John Sebastian, Tab 4?
 (15) A Yes.
 (16) Q Anything else that you can tell me
 (17) about the EKG done on March 21st at 2111?
 (18) A Well, there is a slightly
 (19) prolonged -- well, there is a prolonged QT
 (20) interval which in and of itself supports the
 (21) reason to monitor her.
 (22) The corrected QT known as QTC in a
 (23) woman should be under 450. If it's over 500
 (24) that carries an imminent risk of sudden death
 (25) and hers was 491. That alone is not an

(1) Charash, M.D.
 (2) overwhelming risk, although it is high risk for
 (3) cardiac arrest, but in the context of the
 (4) repolarization changes, in the context of her
 (5) runaway heart rate, in the context of her
 (6) medical illness and her underlying cardiac
 (7) disease those all support the reason why she
 (8) needed to be monitored.
 (9) Q All right. Anything else about
 (10) that EKG that supports the basis for your
 (11) opinion that she needed to be on a cardiac
 (12) monitor?
 (13) A That's all the contribution of the
 (14) EKG provides.
 (15) Q Did you review the read by Dr.
 (16) Meyer on that EKG?
 (17) A I did.
 (18) Q Okay. Do you agree with her read?
 (19) A I don't agree or disagree. I
 (20) think it's incomplete, but I think that she is
 (21) making assumptions about ST elevations in V2
 (22) which you can't make. The really only way to
 (23) read this EKG would be to repeat it without a
 (24) wavy baseline.
 (25) Q Is that an opinion that you will

- (1) Charash, M.D.
 (2) be offering in the case that the medical
 (3) provider should have repeated the EKG based on
 (4) the wavy baseline?
 (5) A No. I'm just saying that's one
 (6) way to remedy the uncertainty in Lead V2. I'm
 (7) saying this EKG is consistent with a cardiac
 (8) impact of her medical illness which was
 (9) confirmed by her enzymes.
 (10) Since I will not be offering an
 (11) opinion she needed an emergency catheterization
 (12) or any emergency cardiac intervention I don't
 (13) have a criticism for not repeating the EKG. I
 (14) only criticize the failure to monitor this
 (15) patient.
 (16) Q Okay. All right. The next basis
 (17) that you provided for the opinion regarding
 (18) cardiac monitoring was her complex history.
 (19) Tell me what about her complex
 (20) history supports that opinion.
 (21) A Okay. Well, the history is both
 (22) her past medical history and her current
 (23) illness. Her past medical history is that of a
 (24) woman that has a history of coronary disease,
 (25) previous bypass surgery, and a reduced ejection

- (1) Charash, M.D.
 (2) fraction.
 (3) Patients with reduced left
 (4) ventricular ejection fractions from coronary
 (5) disease are much higher risk for inducing a
 (6) cardiac arrest under stress than those with
 (7) normal ejection fractions.
 (8) Her ejection fraction in the past
 (9) I believe was 35 to 40 percent. I don't want to
 (10) get that wrong. And when you've had an ischemic
 (11) cardiomyopathy with a reduced ejection fraction
 (12) from coronary disease you are far more
 (13) vulnerable to cardiac arrest under any level of
 (14) stress. It was 30 to 40 percent. So she has a
 (15) reduced EF putting her at risk for cardiac
 (16) arrest. She has known coronary disease and
 (17) bypass and multiple stents.
 (18) As of the time that she presented
 (19) to Johns Hopkins Bayview no one had any ability
 (20) to know what the current status was of her
 (21) coronaries. We knew her pump was badly damaged.
 (22) They had no idea as to whether her grafts were
 (23) open, as to any previous angioplasty site had
 (24) closed.
 (25) So she is unknown in terms of the

- (1) Charash, M.D.
 (2) magnitude of her coronary disease progression.
 (3) She has a reduced ejection fraction. That puts
 (4) her at high risk with a low EF and uncertain
 (5) coronaries for having cardiac arrest
 (6) established.
 (7) She came in with a complicated
 (8) illness because it was characterized by a number
 (9) of symptoms including dizziness, shortness of
 (10) breath, lethargy as well as dropping glucose
 (11) levels and clearly an infectious source in her
 (12) foot with the clear recognition of a foreign
 (13) body.
 (14) When your sugar drops from 47 down
 (15) to 31 down to 26, sure, that could be due to
 (16) excessive insulin intake, that could be due to
 (17) not eating and taking regular insulin, but in a
 (18) person consistent with a presentation consistent
 (19) with infection that is independently high risk
 (20) marker that the infection is more serious than
 (21) it looks.
 (22) Quite frankly, that's the most
 (23) likely mechanism. But even if you dispute what
 (24) the likelihood is mechanism is, that is
 (25) necessary part of the differential diagnosis,

- (1) Charash, M.D.
 (2) that the infection is more serious than it first
 (3) appears.
 (4) She was a diabetic and she was
 (5) elderly, I think 70 -- I'm sorry, what was her
 (6) age, 71. Seventy-one year old diabetics can
 (7) easily mask the magnitude of their infectious
 (8) spread. They don't look as toxic at the
 (9) beginning.
 (10) But having a drop in sugar, having
 (11) lethargy and having a heart rate that was often
 (12) as high as 120 or higher, even though the heart
 (13) rate went up and down all both indicate a
 (14) potentially very serious underlying infection
 (15) and with a foreign body an infection that has no
 (16) chance of reaching stability with the foreign
 (17) body in place, but also a clearly dangerous
 (18) provocation on the heart.
 (19) So her illness presented with that
 (20) of a significant infection with mental status
 (21) changes and shortness of breath, with an
 (22) abnormal EKG. And we know in retrospect that
 (23) when they did check the cardiac enzyme from the
 (24) ER blood her heart was being affected with
 (25) enzymes and that's not a surprise given her fast

(1) Charash, M.D.
 (2) heart rate, her underlying cardiac disease, and
 (3) the stress of this illness.
 (4) Q Can you direct me in the record to
 (5) where Ms. Kalfas was short of breath?
 (6) (Discussion off the record.)
 (7) A I thought she complained of
 (8) shortness of breath in the ER, but I'm trying to
 (9) find where that is referenced. Let me look
 (10) here.
 (11) Here it says at 1848 in the
 (12) emergency room on Page 24 that she complained of
 (13) shortness of breath, nausea, and right foot
 (14) pain.
 (15) Q Okay. Does it say what the
 (16) shortness of breath appears to be arising from?
 (17) A No. She had gone to the bathroom
 (18) and we know she had chronic obstructive lung
 (19) disease and was on home oxygen, and then on Page
 (20) 25 --
 (21) Q And I'm sorry, of course this is
 (22) what counsel, we always do this. We don't have
 (23) the same page number, so if you could direct me
 (24) to a time or --
 (25) MR. PEEK: Tell her what

(1) Charash, M.D.
 (2) time.
 (3) A What I call Page 24 is an ER
 (4) nursing note.
 (5) MR. PEEK: This is the EDM
 (6) patient record. Page 12 was the
 (7) prior discussion. What he's talking
 (8) about now is EDM patient record Page
 (9) 13 and the numbers for those things
 (10) are in the upper right corner of the
 (11) printout. So it's independent from
 (12) the Bates stamping.
 (13) Q Other than the notation that
 (14) Ms. Kalfas was reassessed after going to the
 (15) bathroom and complained of shortness of breath
 (16) which as you said we know that she had lung
 (17) disease, we know she was on home oxygen, do you
 (18) see anywhere else in the record that she
 (19) complained of shortness of breath?
 (20) A I'd have to look, but right now
 (21) offhand, no. But this case and my reasons why
 (22) she needed monitoring isn't limited to shortness
 (23) of breath, of course. It's limited to the
 (24) toxicity of her presentation. The fact that she
 (25) has chronic obstructive lung disease and a

(1) Charash, M.D.
 (2) history of heart failure and a reduced ejection
 (3) fraction and coronary disease just make her much
 (4) higher risk for the addition of another illness.
 (5) Q And I certainly understand that
 (6) that's your position. I'm just trying to make
 (7) sure that I am getting all the basis for your
 (8) opinions in the case. So if you are saying she
 (9) was short of breath in the Emergency Department
 (10) that I'm understanding what it is that you are
 (11) saying, where in the record that is.
 (12) A I can't find my copy of the EMS
 (13) report. Do you have yours. I just need to look
 (14) at it for one moment, please.
 (15) (Discussion off the record.)
 (16) (A short recess was taken at
 (17) this time.)
 (18) (The deposition resumed with
 (19) all parties present.)
 (20) BRUCE CHARASH, M.D., resumed,
 (21) and testified further as follows:
 (22) BY MS. SHORT:
 (23) Q All right. I think that we just
 (24) established that there is not shortness of
 (25) breath mentioned anywhere else in the medical

(1) Charash, M.D.
 (2) record, at least that any of us could find.
 (3) The issue of dizziness, are you
 (4) aware of that being mentioned anywhere else in
 (5) the medical record other than Page 13 of the EDM
 (6) which actually has a code for 7780.4, dizziness.
 (7) A Not by memory. I mean I would
 (8) have to go extensively through the record.
 (9) Q Is that something you think you
 (10) would have noted in your review?
 (11) A No. I didn't reference the source
 (12) of that information, but it was in the record.
 (13) Q Anything else about Ms. Kalfas'
 (14) past medical history that forms the basis for
 (15) your opinion that she needed to be on a cardiac
 (16) monitor?
 (17) A Well, again, based on her complex
 (18) comorbid conditions of COPD, heart failure,
 (19) coronary disease and a reduced ejection fraction
 (20) and an uncertainty of the status of her coronary
 (21) arteries and based on the significance of an
 (22) infectious presentation with a dropping sugars
 (23) which were very prominent as well as runaway
 (24) heart rates, meaning 120's which is a fast rate
 (25) for somebody with uncertain coronary disease,

(1) Charash, M.D.
 (2) those establish the primary foundation of why
 (3) she needs to be monitored.
 (4) Peripherally dizziness, shortness
 (5) of breath, weakness, lethargy are kind of more
 (6) consequences of what is objectified by her fast
 (7) heart rate and her dropping sugar which are the
 (8) objective markers of a potentially serious
 (9) infection.
 (10) Then you have the abnormal EKG and
 (11) of course the fact that she had positive enzymes
 (12) upon presentation which kind of demonstrates the
 (13) whole point of why she needed to be monitored.
 (14) When they checked that level it was not a
 (15) surprise because she was under a stress state
 (16) with underlying disease.
 (17) Q I know that as part of the basis
 (18) for your opinion you are including in the
 (19) infectious process that she presents with. But
 (20) are you of the opinion that no matter what
 (21) Ms. Kalfas presented with, whether she had
 (22) sprained her left ankle, whether she had a
 (23) nosebleed, whatever it was that she should have
 (24) been placed on a cardiac monitor?
 (25) A I can't answer the question

(1) Charash, M.D.
 (2) limited to a simple yes, no. The reason why I
 (3) can't is that any reason why her heart rate is
 (4) that high would put her at high risk for her
 (5) underlying condition and there is no threat to
 (6) the patient of being monitored.
 (7) Now, people with a sprained ankle
 (8) or a nosebleed would not typically need
 (9) admission. If their condition was more profound
 (10) that led to the need for admission there
 (11) certainly would be a case to be made that they
 (12) should be monitored, but that would be based on
 (13) the specifics of that presentation. But because
 (14) she came in with an infection and dropping
 (15) sugars that is a condition that has a
 (16) progressive nature to it or a threat of
 (17) progression.
 (18) So I would say that it's possible
 (19) she would need monitoring. If she had a
 (20) nosebleed so severe that she needed surgical
 (21) correction, yes, bleeding makes you
 (22) hypercoagulable. If she had a high heart rate I
 (23) would make a case she should be monitored if she
 (24) needed admission for cauterization.
 (25) But this is a far more dangerous

(1) Charash, M.D.
 (2) presentation because infections do progress and
 (3) infections based on foreign bodies when you
 (4) start seeing a dropping sugar level that is very
 (5) concerning. Now, again you may not be able to
 (6) prove upon admission with certainty that the
 (7) sugar is related to infection, but you must work
 (8) for her safety with that as your operating
 (9) principle until proven otherwise. And,
 (10) therefore, monitoring her was unquestionably
 (11) indicated.
 (12) If you create a very specific
 (13) alternative presentation I could give you an
 (14) opinion based on those facts.
 (15) Q What I was trying to understand is
 (16) when you are giving me her history of coronary
 (17) artery disease, bypass surgery, et cetera, if
 (18) that alone was sufficient for you to say that
 (19) she needed to be on a cardiac monitor or if it
 (20) was the addition of the sugars and the heart
 (21) rate. That's what I was trying to figure out if
 (22) that's what you are saying.
 (23) A Well, other underlying condition,
 (24) she is not on a monitor at home, so the point is
 (25) that having underlying heart disease alone

(1) Charash, M.D.
 (2) doesn't require being on a monitor, but it would
 (3) depend on the nature of the illness because
 (4) there is a combustibility of the two together.
 (5) Based on the specifics of what was
 (6) wrong with her you could make a decision whether
 (7) she needs to be monitored. What I was saying is
 (8) that it doesn't take much to demonstrate a clear
 (9) benefit of being monitored because there is no
 (10) danger to her.
 (11) In this case with an infectious
 (12) presentation and the factors I have given she
 (13) did need monitoring. You raised nosebleed. She
 (14) had a minor nosebleed and was being sent home
 (15) from the emergency room I would say no. If she
 (16) had an extensive nosebleed that required
 (17) cauterization and recurrent bleeding I would say
 (18) yes. So you really need to give me the facts.
 (19) I think I have established the
 (20) fact with her underlying preexisting and
 (21) comorbid conditions the threshold of requiring a
 (22) monitor is low. But based on the specifics of
 (23) what threat she faces would impact that decision
 (24) to monitor her, but it wouldn't take much to
 (25) require monitoring.

- (1) Charash, M.D.
 (2) It's never wrong to monitor her
 (3) because there is no downside to watching her
 (4) heart respond to an illness. Just the need and
 (5) the requirement grows based on the severity of
 (6) the threat she faces.
 (7) Q All right. Anything else about
 (8) her history and presentation to the hospital
 (9) that form the basis for your opinion that she
 (10) needed to be on a cardiac monitor?
 (11) A No.
 (12) Q All right. The third subpart of
 (13) that opinion was that her presentation carried
 (14) with it primary and secondary cardiac
 (15) complications. This went to the bacterial
 (16) infection, the dropping sugars.
 (17) Is there anything in addition to
 (18) what we have already discussed that forms the
 (19) basis for your opinion that she required a
 (20) cardiac monitor for that reason?
 (21) A No, but included in that is of
 (22) course the abnormal EKG and everything else.
 (23) Q I'm just trying to walk through
 (24) the subparts and make sure I fully understand
 (25) what you are relying on.

- (1) Charash, M.D.
 (2) Okay. I think as another subpart
 (3) that you added was the troponin level. That
 (4) this forms the basis for why she needed to be on
 (5) a cardiac monitor.
 (6) A Well, no, that's not legitimate.
 (7) I'm saying that a troponin level was drawn after
 (8) she decompensated, but it demonstrated in
 (9) retrospect that indeed even at the time of her
 (10) admission her heart was not responding well to
 (11) her illness. That impacts the causation as to
 (12) why she had a cardiac arrest.
 (13) Clearly any patient with uncertain
 (14) coronary disease and the magnitude of her
 (15) history would benefit from having a troponin
 (16) when they come in. So had they drawn a troponin
 (17) they would have seen that her heart was
 (18) reacting. Now, I'm not going to argue that they
 (19) needed to do one when she came in. I'm saying
 (20) she needed to be monitored.
 (21) All I'm saying is the troponin
 (22) shows us that her heart was already being
 (23) impacted before she had her cardiac arrest from
 (24) those very factors that I was mentioning.
 (25) Q Okay. And thanks for the

- (1) Charash, M.D.
 (2) clarification because that's what I was getting
 (3) at, whether you were going to say it was a
 (4) breach to not order the troponin in the ED or
 (5) whether you were saying that retrospectively the
 (6) fact that it was ordered after her arrest is
 (7) demonstrating further support for your opinion.
 (8) So I think you have answered that question, so
 (9) thank you.
 (10) Okay. Any other basis for your
 (11) opinion that Ms. Kalfas required cardiac
 (12) monitoring that we have not already discussed?
 (13) A No.
 (14) Q And just so I'm clear, when
 (15) exactly do you believe she should have been
 (16) placed on cardiac monitor?
 (17) A From the moment she came into the
 (18) ER through her entire hospital course until she
 (19) was stable.
 (20) So certainly when she left the
 (21) emergency room the standard of care required her
 (22) to be put on a telemetry unit or an appropriate
 (23) step-down unit with continuous cardiac
 (24) monitoring.
 (25) Q Did the standard of care require

- (1) Charash, M.D.
 (2) her to be on cardiac monitoring in the Emergency
 (3) Department?
 (4) A Yes.
 (5) Q All right. The second opinion
 (6) that I wrote down was that you were going to be
 (7) discussing causation as it relates to the code
 (8) sheet.
 (9) A Yes.
 (10) Q Okay. Let's talk about that.
 (11) Go ahead and tell me your opinion
 (12) and basis.
 (13) A I'm sorry.
 (14) Q That's okay. You're a very
 (15) talkative person. So I figured you would start
 (16) telling me.
 (17) A I'm not sure if that is a
 (18) compliment or not.
 (19) Q It is. Go ahead.
 (20) A Thank you. Okay.
 (21) Q Go ahead.
 (22) A Okay. In order to discuss the
 (23) code sheet I need to first discuss the three
 (24) ways a person can have a cardiac arrest. Fair
 (25) enough?

- (1) Charash, M.D.
 (2) Q Sure.
 (3) A One is a person can have a cardiac
 (4) arrest as a consequence of a mechanically
 (5) catastrophic event. And in that category it
 (6) would mean something that mechanically occurred
 (7) in the body that's not survivable like a
 (8) ruptured aortic aneurysm, a ruptured left
 (9) ventricle, a massive pulmonary embolism. A
 (10) massive bleed in the brain to even trauma,
 (11) gunshot wound and stabbings.
 (12) So if a person has a cardiac
 (13) arrest from a mechanically catastrophic event
 (14) then there is no causation about monitoring
 (15) because if something blows up in their body
 (16) nothing is going to save them unless they were
 (17) on a trauma table.
 (18) So some people die spontaneously
 (19) from a mechanically catastrophic event by which
 (20) when they code there is no coming back and there
 (21) would no causation to monitoring.
 (22) And I said three categories. The
 (23) second two both fall within the category of a
 (24) non-mechanically catastrophic event and if it's
 (25) a non-mechanically catastrophic event then it's

- (1) Charash, M.D.
 (2) an arrhythmia, an electrical event. In an
 (3) arrhythmia there are two categories. One, a
 (4) person who is on a monitor that is dealt with
 (5) very rapidly and the second category is somebody
 (6) who is not on a monitor and not dealt with
 (7) rapidly.
 (8) We know from cardiac studies and
 (9) from the electrophysiology lab where people with
 (10) very sick hearts, every day thousands in the
 (11) United States are put on tables in
 (12) electrophysiology labs and thrown into sudden
 (13) cardiac death and they are shocked within ten to
 (14) 15 seconds. The study's goal is to throws them
 (15) into sudden cardiac death and the resuscitation
 (16) rate is as close to 100 percent as anything in
 (17) medicine. The death rate is as close to zero as
 (18) anything we could report.
 (19) We know that if you have a primary
 (20) electrical death, if you are shocked within 15
 (21) seconds that the resuscitation rate is virtually
 (22) 100 percent.
 (23) Now, of the electrical, I broke
 (24) into two categories, the rapidly responding one
 (25) versus the person who has a delay in responding,

- (1) Charash, M.D.
 (2) We know that every minute that
 (3) goes by before you respond to the electrical
 (4) event their chances of survival plummet. If you
 (5) have an electrical arrest and you get shocked
 (6) within 15 seconds it's 100 percent survival.
 (7) Within 30 seconds it's closer to 95 percent
 (8) survival or five percent death rate. If you
 (9) take a minute there is a ten percent death rate
 (10) of people who should have lived. If you take
 (11) two minutes it's 20 percent death rate. If you
 (12) take three minutes it's 30 percent death rate.
 (13) So the point is every minute it
 (14) takes even with effective CPR and this is on the
 (15) condition of effective CPR, every minute that
 (16) goes by you see a progressively increased number
 (17) of people who die that should have lived from
 (18) their electrical event.
 (19) Which means if a person is on a
 (20) monitored floor and get shocked within 30
 (21) seconds as she should, the death rate would be
 (22) five percent. If it takes a minute which is the
 (23) outside it would be ten percent. If it takes
 (24) three minutes to determine the rhythm the death
 (25) rate goes up to 30 percent which means that it's

- (1) Charash, M.D.
 (2) three to six times worse because of the three
 (3) minute delay in recognizing the cardiac rhythm.
 (4) Now, also people who have sudden
 (5) electric death often have precursors to their
 (6) sudden death showing that it's on the way.
 (7) People who have V-fib often have V-tach
 (8) beforehand providing an opportunity to intervene
 (9) even before the arrest.
 (10) So if Ms. Kalfas suffered a
 (11) mechanically catastrophic event then there would
 (12) be no causation to her need for monitoring.
 (13) Even though the standard of care would have
 (14) required a monitor it wouldn't have mattered if
 (15) she was on a monitor.
 (16) Now, we know two things. Her
 (17) autopsy did not demonstrate a mechanical
 (18) catastrophic event. There was no mechanical
 (19) change that was unsurvivable and we know that
 (20) during the course of her resuscitation even with
 (21) the delay in seeing what the mechanism of the
 (22) arrest was and a delay in providing her even
 (23) with epinephrine which is a first line drug and
 (24) I'm going to go into the specifics, she was able
 (25) to regain a spontaneous heart rate and blood

(1) Charash, M.D.
 (2) pressure both 11 minutes into the cardiac arrest
 (3) and then an even stronger one 19 minutes into
 (4) the cardiac arrest from 5:45 to 6:04 a.m.
 (5) So the fact -- now, let's go into
 (6) her arrest. I believe she had an electrical
 (7) cardiac arrest. At 5:45 a.m. she had a cardiac
 (8) arrest. Prior to her cardiac arrest she noticed
 (9) something was wrong with her. She was screaming
 (10) that she was on fire. That's an unusual symptom
 (11) for whatever she had, but she clearly was in a
 (12) distressed state before she had a cardiac
 (13) arrest.
 (14) Now, the arrest was witnessed by
 (15) people in the room, but they had no long idea
 (16) what was going on electrically. With reasonable
 (17) medical certainty given the fact that there is
 (18) no other explanation as to why she was suddenly
 (19) screaming that things were on fire, more likely
 (20) than not prior to her V-fib arrest she had
 (21) ventricular tachycardia, and although the
 (22) response of feeling you are on fire and things
 (23) are going wrong is not typical of any disease I
 (24) have known, given that this acute awareness of
 (25) something was wrong was occurred in this,

(1) Charash, M.D.
 (2) have occurred if this patient were on a
 (3) monitored unit.
 (4) Now, the point I'm making is in
 (5) spite of receiving three minutes of CPR before
 (6) they even get the first electrical rhythm where
 (7) things change over those three minutes and five
 (8) minutes before the first therapy is introduced
 (9) which was epinephrine, it is astonishing that 11
 (10) minutes into the code she had some restoration
 (11) of blood pressure, a heart rate of 91 and a
 (12) blood pressure of 78 systolic and that at 6:04,
 (13) again 19 minutes into the code she was able to
 (14) have a blood pressure of 117 over 75. Actually,
 (15) at 6:00 o'clock a.m. she even had a heart rate
 (16) of a hundred in sinus rhythm. So in 15 minutes
 (17) she had a return of sinus rhythm.
 (18) Given that she had a return of
 (19) spontaneous heart rate and blood pressure after
 (20) what was an unquestionably delayed response to
 (21) her arrest, that would not have occurred if she
 (22) was on monitor, after 15 minutes of a
 (23) resuscitation to get back to sinus rhythm
 (24) indicates that had they gotten to her earlier
 (25) with reasonable medical certainty she would have

(1) Charash, M.D.
 (2) whatever it was, 30 seconds or so before she had
 (3) a cardiac arrest more likely than not, and
 (4) that's the best I can give you, she was in
 (5) V-tach and went to V-fib.
 (6) Had she been on a monitor she
 (7) would have been shocked right away and she would
 (8) have survived. Now, she cardiac arrested at
 (9) 5:45 and began CPR immediately, but they don't
 (10) have any sense of the electrical system for
 (11) three minutes. They said she was in pulseless
 (12) electrical activity, but they don't describe
 (13) what the rhythm was. You could have sinus
 (14) rhythm, have a heart rate of 70 and have no
 (15) blood pressure. That is called pulseless
 (16) electrical activity from a tamponade.
 (17) But we don't know what the rhythm
 (18) was. I don't know if it was V-tach with no
 (19) pulse or whether it was sinus rhythm with no
 (20) pulse. There is no sense of what it was. But
 (21) the point is there was no even measurement of
 (22) the electricity for the first three minutes.
 (23) Then you don't even give a dose of
 (24) epinephrine until five minutes into the code.
 (25) And these are unacceptable delays that would not

(1) Charash, M.D.
 (2) had an abrupt return of her rhythm and survived
 (3) because the delay in implementing treatment and
 (4) the delay in restoring rhythm carries with it
 (5) progressive damage to the left ventricle from
 (6) oxygen deprivation during the code.
 (7) CPR does not keep you alive. It
 (8) slows the rate in which you are dying. In this
 (9) case the fact that after pulseless electrical
 (10) activity at the three-minute mark, very few
 (11) people would ever have any form of recovery and
 (12) she was able to get back to spontaneous pulse.
 (13) That means that if she was on a monitor with
 (14) reasonable medical certainty -- A, it means it
 (15) was electric because if it was mechanical there
 (16) would be no chance. If something mechanically
 (17) led to her losing her blood pressure and heart
 (18) rate and coding. And you add to that condition
 (19) her underlying weak heart and damaged lungs 15
 (20) minutes of CPR and oxygen deprivation, there
 (21) would be zero possibility within medical reason
 (22) that she could have returned her electrical
 (23) activity and get a pulse.
 (24) So the fact they were able to
 (25) return even for a short period of time means

- (1) Charash, M.D.
 (2) this was an electrical event and given that
 (3) there was no cardiac monitor in spite of being
 (4) witnessed by health care providers in the room
 (5) at the time of her collapse the delay in
 (6) recognizing the heart rate, the delay in giving
 (7) epinephrine she still was able to almost come
 (8) close to surviving. So with reasonable
 (9) certainty if she were monitored when she had her
 (10) code she would be alive today.
 (11) Q Outside of the code sheet any
 (12) other basis for your opinion on causation, other
 (13) than the code sheet and of course what you
 (14) already told me today?
 (15) A And the autopsy. No, no other
 (16) basis.
 (17) Q Will you be giving an opinion that
 (18) goes beyond the fact that she would have
 (19) survived?
 (20) MR. PEEK: Like life
 (21) expectancy.
 (22) MS. SHORT: Yes.
 (23) MR. PEEK: No opinions on
 (24) life expectancy.
 (25) MS. SHORT: Thank you.

- (1) Charash, M.D.
 (2) (Discussion off the record.)
 (3) Q Okay. The next opinion that I
 (4) think we have already gone over a bit, but was
 (5) the fact that she presented with an infectious
 (6) disease process with high risk indicators. Is
 (7) there anything additional in the record or that
 (8) you would offer at trial regarding that as a
 (9) basis for your opinion in this matter that we
 (10) have not already talked about?
 (11) A No.
 (12) Q Okay.
 (13) A Actually, one subopinion and maybe
 (14) we should bring it up that if you look at her
 (15) vital signs and this sheet says the internal is
 (16) patient discharge report and it has Page 5 on
 (17) the bottom. That's the hospital number. And it
 (18) gives you the vital signs for March 20th to
 (19) March 21st up through her admission and death
 (20) and her blood pressure at 1655 was 116 over 56
 (21) and her heart rate was 120. At 1845 her blood
 (22) pressure was 141 over 64 and her heart rate was
 (23) 123. If you jump to 1:19 a.m. her blood
 (24) pressure had dropped to 94 over 65, and then if
 (25) you look at 5:16 prior to her code her blood

- (1) Charash, M.D.
 (2) pressure was 97 over 44.
 (3) Her systolic and diastolic were
 (4) dropping after midnight from a reasonable blood
 (5) pressure to a menacingly low blood pressure for
 (6) a woman her age. That supports the progressive
 (7) septic nature of her illness and a dropping
 (8) blood pressure is an independent marker of high
 (9) risk in addition to the glucose drop we
 (10) mentioned earlier, and certainly in retrospect
 (11) confirms this as a progressive septic stress on
 (12) a heart at risk and prospectively highlighted
 (13) the danger she was facing due to her infectious
 (14) illness.
 (15) Q Anything else on that opinion?
 (16) A No.
 (17) Q All right. And then the next
 (18) thing you had summarized for me was your opinion
 (19) that if the foreign body itself had been removed
 (20) sooner.
 (21) A Yes.
 (22) Q That would have changed the
 (23) outcome.
 (24) A Yes.
 (25) Q So let's talk about that and by

- (1) Charash, M.D.
 (2) that I mean you tell me what the basis is for
 (3) your opinion.
 (4) A Okay. This is a general medical
 (5) opinion, but it applies to this case in specific
 (6) and that is if you have an infectious source it
 (7) is accelerated by the presence of a foreign
 (8) body. The inflammatory response is worsened by
 (9) a foreign body and the impact on the systemic
 (10) presentation of the illness is worsened by the
 (11) foreign body.
 (12) Infections grow expedientially.
 (13) So if a bacterial divide time is 20 minutes, in
 (14) the 20 minutes before her code more bacteria
 (15) grew in those 20 minutes than in the entire
 (16) period of time she was infected because it
 (17) doubles every cycle.
 (18) So you have an expediential impact
 (19) of a bacterial infection that is accelerated
 (20) like gasoline on a fire by a foreign body. Had
 (21) the foreign body been removed it would have
 (22) dramatically reduced the impact on the infection
 (23) on her body and the stress of the infection on
 (24) her body.
 (25) So it's a loose opinion because

- (1) Charash, M.D.
 (2) it's not as specific as the cardiac arrest
 (3) evidence, but basically if the foreign body had
 (4) been removed it would have improved the
 (5) trajectory of her infectious presentation. The
 (6) reason why I said six hours is that that's a
 (7) comfortable mark to say 50/50. It's probably
 (8) less than six hours it would have helped, but by
 (9) six hours because it's expedient. The last
 (10) six hours as opposed to the first six hour in
 (11) the ER I think you would have had enough of an
 (12) impact on the inflammatory and septic response
 (13) that it would have been less likely that the
 (14) sepsis would have provoked a cardiac arrest when
 (15) it did.
 (16) Q And are you saying six hours prior
 (17) to her arrest?
 (18) A Yes.
 (19) Q Okay. And are you saying that if
 (20) the surgery had been performed at that point in
 (21) time she would not have suffered cardiac arrest?
 (22) A More likely than not, correct.
 (23) Q Any other basis, foundation for
 (24) that opinion other than what you have already
 (25) given me?

- (1) Charash, M.D.
 (2) A No.
 (3) Q Okay. The opinions that you have
 (4) given me today are very much in addition to what
 (5) is contained in your report, so I want to make
 (6) sure that the opinions in your report we go over
 (7) those as well.
 (8) I know some of them may be
 (9) encompassed generally, but Page 2 of the report
 (10) you indicate that you are critical of the health
 (11) care providers in the emergency room including
 (12) Dr. Pham and Dr. Record for failing to timely
 (13) perform an EKG.
 (14) A Yes.
 (15) Q And failing to investigate the
 (16) cause of her extremely low glucose levels.
 (17) Is that still an opinion that you
 (18) are going to be offering?
 (19) A Well, I guess it's not a simple
 (20) opinion. The first is that an EKG should have
 (21) been done promptly given her heart rate and her
 (22) past history as promptly as possible and it was
 (23) basically a pre-admission afterthought. But
 (24) based on the fact that her EKG was not acted
 (25) upon it's hard to say there would have been

- (1) Charash, M.D.
 (2) causation if it was done two hours earlier.
 (3) In terms of the hypoglycemia it's
 (4) less about investigating the source of it rather
 (5) than recognizing the significance of it. The
 (6) low sugar should have been viewed from the prism
 (7) of her having an infection and recognizing that
 (8) that was a threatening medical illness on top of
 (9) a woman with her risk factors.
 (10) Q Okay. Then the next sentence, I'm
 (11) critical of Dr. Hill for not taking any action
 (12) upon review of the EKG.
 (13) Okay. We discussed that of course
 (14) you feel that she should have been placed on a
 (15) cardiac monitor. Is there anything else that
 (16) you think that Dr. Hill should have done?
 (17) A Yes. Check the cardiac enzymes
 (18) from presentation and follow them which would
 (19) have then proven she was having a cardiac
 (20) response to her illness.
 (21) Q Anything else?
 (22) A No.
 (23) Q Then you indicate that you are
 (24) critical of the health care providers including
 (25) Amanda Gaines, RN and Christian Rowe, CRNP

- (1) Charash, M.D.
 (2) responsible for transferring and receiving
 (3) Ms. Kalfas as an in-patient Ms. Kalfas' full
 (4) chart including EKG should have been sent and if
 (5) it was not present on arrival it should have
 (6) been retrieved and reviewed.
 (7) Will you be testifying at trial
 (8) CRNP Rowe and Nurse Gaines breached the standard
 (9) of care?
 (10) A Well, I think the standard of care
 (11) breach was not putting her on a monitored unit
 (12) and anything that they failed to have that would
 (13) have provided them further information to make
 (14) that decision would be a part of it, but with
 (15) what they had she should have been monitored.
 (16) So not getting the old records, if
 (17) their defense is that they were unaware of
 (18) certain conditions that could be significant,
 (19) but that's not their defense.
 (20) Q Will you be giving the opinion in
 (21) the case that Nurse Gaines was responsible for
 (22) determining whether or not Ms. Kalfas should be
 (23) on a monitored unit?
 (24) A No.
 (25) Q And how about for Christian Rowe?

- (1) Charash, M.D.
 (2) A Nurse Rowe was an admitting health
 (3) care provider. She was responsible to determine
 (4) that the patient needed to be on a monitored
 (5) unit. She was the admitting primary care
 (6) provider. So she carries that responsibility to
 (7) either consult with more senior people or make
 (8) the right decision.
 (9) If her answer is she didn't know
 (10) the medicine well enough, then the hospital is
 (11) responsible for that or she is responsible to
 (12) get help. Yes, she carries the responsibility
 (13) as anyone who is the admitting health care
 (14) authority.
 (15) (A short recess was taken at
 (16) this time.)
 (17) (The deposition resumed with
 (18) all parties present.)
 (19) BRUCE CHARASH, M.D., resumed,
 (20) and testified further as follows:
 (21) BY MS. SHORT:
 (22) Q On the EKG performed in the ED do
 (23) you agree that the computer reading as to acute
 (24) MI is inaccurate?
 (25) A I think that it can't be

- (1) Charash, M.D.
 (2) determined by the EKG itself because there is
 (3) enough artifact that Lead V2 is not determinat.
 (4) So I think we know in retrospect
 (5) she was not having an acute ST segment elevation
 (6) MI, but the EKG raised a concern and your remedy
 (7) is either to repeat it or not.
 (8) Q For the troponin that we know was
 (9) added on after her arrest, the level that came
 (10) back I think it was .3, something like that 38?
 (11) A I think so.
 (12) Q We can pull it. Let's do that.
 (13) A .32.
 (14) Q Is there anything about that
 (15) particular level that informs you in this case?
 (16) A Nothing more than saying that by
 (17) the time she was in the hospital she was already
 (18) suffering ischemic damage to her heart due to
 (19) the medical illness she presented with.
 (20) Q Could that troponin level have
 (21) been related to sepsis?
 (22) A No.
 (23) Q And why is that?
 (24) A Well, sepsis affecting the heart
 (25) or pre-sepsis, yes. Her fast heart rate was

- (1) Charash, M.D.
 (2) more likely the reason plus the dropping sugar
 (3) levels, but there are no septic related
 (4) artifacts.
 (5) Now, if you have deep sepsis and
 (6) massive renal failure your troponin can creep
 (7) up, but people that get septic when they release
 (8) troponins are usually due to the stress on the
 (9) heart. Now, even a healthy heart can start to
 (10) release enzymes with enough psychological
 (11) stress. This isn't a person presenting in
 (12) septic crisis requiring drugs to elevate blood
 (13) pressure and acid building up in the blood. So
 (14) it was cardiac stress due to her illness.
 (15) Q I think you just started to give
 (16) me a few of them, but what outside of a true
 (17) cardiac condition causing the increase in
 (18) troponin, what else, what other conditions could
 (19) cause an increase?
 (20) A I don't understand your question.
 (21) You could have troponins increase by total renal
 (22) failure or massive renal failure and then over
 (23) time your troponin might creep up a little bit.
 (24) We don't have more than one
 (25) measurement. We will never know if it was a

- (1) Charash, M.D.
 (2) curve or how it presented. When you have a
 (3) troponin that significantly elevated upon
 (4) presentation it means that the heart has had
 (5) permanent damage to cells. Now, either it's
 (6) from a primary coronary artery occlusion or it's
 (7) due to physiologic stress on the heart without a
 (8) complete occlusion.
 (9) Q And in your opinion it's due to
 (10) stress on the heart?
 (11) A Absolutely.
 (12) Q In her case?
 (13) A Yes.
 (14) Q Okay. You reviewed the autopsy
 (15) report as well; correct?
 (16) A Of course.
 (17) Q Okay. And you agree that the
 (18) autopsy was benign for a cardiac issue other
 (19) than preexisting condition?
 (20) A Well, there is nothing else it
 (21) could possibly have shown. It didn't show a
 (22) thrombotic artery which confirms that this was
 (23) not a primary ST segment elevation MI.
 (24) Whatever damage occurred coming
 (25) in, A, it would have been small enough that it

- (1) Charash, M.D.
 (2) would have been difficult to find on an autopsy,
 (3) but you don't see cellular changes unless you
 (4) have a heart attack and live until 24 hours. In
 (5) the first 24 hours there is zero manifestation
 (6) of a heart attack at a cellular level. So the
 (7) damage cannot have been seen because she died as
 (8) quickly as she did.
 (9) Q Do you agree that anyone that has
 (10) cardiomyopathy will have an elevated troponin I
 (11) level?
 (12) A No. Most people with
 (13) cardiomyopathy won't.
 (14) Q And Why is that?
 (15) A Anyone that has heart muscle
 (16) damage at the time of the damage will release
 (17) cardiac enzymes, but if they have a chronic
 (18) cardiomyopathy there won't be any enzyme
 (19) release. It's released during the process of
 (20) death of heart muscle cells, but it's not a
 (21) chronic release.
 (22) Q And I guess what I'm saying is
 (23) that once that happens, that damage, will
 (24) subsequent troponin I tests be elevated as a
 (25) result of that?

- (1) Charash, M.D.
 (2) A No. Only if there is more damage
 (3) to the heart.
 (4) Q Okay. Have you seen any of
 (5) Ms. Kalfas' prior troponin levels --
 (6) A No.
 (7) Q -- before this admission?
 (8) A No.
 (9) Q Do you do serial troponin levels
 (10) on your cardiac patients?
 (11) A And on some patients without known
 (12) heart disease. Based on the situation, yes.
 (13) Q What type of situation would cause
 (14) you to do serial troponin levels?
 (15) A Anybody presenting with either
 (16) suspicion of a primary coronary event or a
 (17) person with a known coronary disease coming in
 (18) with a significant medical event.
 (19) Surgery often requires serial
 (20) cardiac enzymes after surgery or somebody with a
 (21) significant medical illness like sepsis would
 (22) require the heart to be monitored the same way.
 (23) Q Did Ms. Kalfas report chest pain
 (24) at any time to the providers?
 (25) A No.

- (1) Charash, M.D.
 (2) Q Or chest tightness?
 (3) A No.
 (4) Q Okay. Does that have any impact
 (5) on your viewpoint of what was happening with her
 (6) when she presented?
 (7) A None whatsoever.
 (8) Q Why is that?
 (9) A Well, she was an elderly woman,
 (10) diabetic. They don't often have pain and with
 (11) another medical illness going on it makes it
 (12) even less likely that they will feel pain. And
 (13) if you are having a secondary cardiac damage
 (14) from a medical illness usually you don't feel
 (15) pain.
 (16) If she were having a primary
 (17) thrombotic anterior wall MI she may or may not
 (18) have pain. So there is no expectation of pain
 (19) especially as a diabetic woman, but a secondary
 (20) heart attack which is what she was having almost
 (21) never has chest pain associated which is why we
 (22) draw surveillance enzymes.
 (23) Q When we reviewed the EKG earlier
 (24) and we talked about prolonged QT interval that
 (25) you mentioned, is that something that occurs in

- (1) Charash, M.D.
 (2) a patient that has a preexisting cardiac
 (3) condition or is that something that indicates to
 (4) you there is some form of an active process
 (5) going on?
 (6) A Well, people who have damage to
 (7) the ventricle are more predisposed to a long QT
 (8) which is part of the reflection of their
 (9) increased risk of arrhythmias, but an acute
 (10) medical illness and acute ischemia tend to
 (11) prolong it further.
 (12) So there would be no way based on
 (13) her initial EKG to determine what her baseline
 (14) QT interval was, but it was another reflection
 (15) of the stress she was undergoing and the reason
 (16) for cardiac monitoring.
 (17) Q Will you be offering any opinions
 (18) in this case regarding any health care providers
 (19) other than those we have discussed here today
 (20) and contained in your certificate and report?
 (21) A No.
 (22) Q Any other opinions that you will
 (23) offer in this case that we have not discussed
 (24) here today?
 (25) A No.

(1) Charash, M.D.
 (2) Q If you are provided with any
 (3) additional records and they add to or change
 (4) your opinions in any way, if you would let
 (5) Mr. Peek know so I would have an opportunity to
 (6) come back and ask you questions about that. Is
 (7) that fair?
 (8) A Yes. And of course being unable
 (9) to anticipate what defense experts might say, if
 (10) they say something that requires a specific
 (11) rebuttal I will let Mr. Peek know as well.
 (12) Q Okay. That's fair. At this
 (13) moment do you plan to do any other work in the
 (14) case other than appear for trial and provide
 (15) testimony?
 (16) A No.
 (17) Q Let me just ask you in the
 (18) designation that we were provided in the case by
 (19) Mr. Peek it indicates that the standard of care
 (20) required that Ms. Kalfas be admitted to a
 (21) monitored bed which we have talked about at
 (22) length. But then it also says that she receive
 (23) medical therapy.
 (24) Will you be giving any opinion
 (25) that she should have received some type of

(1) Charash, M.D.
 (2) medical therapy?
 (3) A Well, extraction of the foreign
 (4) body.
 (5) Q Okay. Outside of extraction of
 (6) the foreign body anything else?
 (7) A No.
 (8) Q It also says that she should have
 (9) received more aggressive fluid resuscitation.
 (10) Will you be giving that opinion?
 (11) A No.
 (12) Q And we have talked about her
 (13) glucose levels, but this says that her glucose
 (14) levels should have been more tightly controlled.
 (15) Will you be giving an opinion that
 (16) it was a breach in the standard of care for the
 (17) health care providers to not tightly control her
 (18) glucose levels?
 (19) A No.
 (20) Q Approximately how many patients do
 (21) you admit and if it's easier on a monthly or
 (22) annual basis to Lenox Hill?
 (23) A I'd say between ten and 15 a
 (24) month.
 (25) Q And of that ten to 15 is it

(1) Charash, M.D.
 (2) accurate that 75 percent of those are not your
 (3) primary patient?
 (4) A Yes.
 (5) Q And are all of those patients
 (6) being admitted for some type of cardiac issue?
 (7) A No.
 (8) Q Okay. And is that the same
 (9) breakdown that you told me earlier?
 (10) A Yes.
 (11) Q All right. Do you have anything
 (12) else with you today that you have brought that
 (13) leads to your opinions in the case that you have
 (14) made notations on that you have created a report
 (15) of?
 (16) A No.
 (17) Q Do you have anything at home that
 (18) fits that category?
 (19) A No.
 (20) MS. SHORT: At this time I
 (21) have no further questions.
 (22) EXAMINATION
 (23) BY MR. PEEK:
 (24) Q Let me just, we found out in
 (25) discovery in this case, Doctor, that Dr. Pham

(1) and Dr. Record were not the ER doctors really
 (2) involved with Ms. Kalfas, but that Dr. Hoffmann
 (3) was and your report doesn't speak to Dr.
 (4) Hoffmann.
 (5) Are you critical of Dr. Hoffmann
 (6) for the reasons you have discussed here today
 (7) and for the reasons that are in the report?
 (8) A Correct. My report -- my opinions
 (9) haven't changed, but the role of different
 (10) health care providers have been clarified.
 (11) MR. PEEK: That's all I want
 (12) to put on the record and then we
 (13) will read and sign.
 (14) (Discussion off the record.)
 (15) MR. PEEK: Jlp@cardarolaw,
 (16) C-A-R-D-A-R-O, L-A-W, .com. Just an
 (17) electronic Mini with any exhibits
 (18) attached.
 (19) MS. SHORT: E-Tran and PDF
 (20) colored exhibits.
 (21) (Whereupon, at 1:10 o'clock
 (22) p.m., the deposition was concluded.)
 (23)
 (24)
 (25)

(1)
 (2) CAPTION
 (3)
 (4) The Deposition of BRUCE CHARASH, M.D., taken in the
 (5) matter, on the date, and at the time and place set
 (6) out on the title page hereof.
 (7)
 (8)
 (9) It was requested that the deposition be taken by
 (10) the reporter and that same be reduced to
 (11) typewritten form.
 (12)
 (13)
 (14) The Deponent will read and sign the transcript
 (15) of said deposition.
 (16)
 (17)
 (18)
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 (24)
 (25)

(1)
 (2) DEPOSITION ERRATA SHEET
 (3) RE:
 (4) FILE NO.
 (5) CASE CAPTION: ELEFTERIOS J. KALFAS, ETC., ET AL.
 (6) vs. JOHNS HOPKINS BAYVIEW
 DEPONENT: BRUCE CHARASH, M.D.
 DEPOSITION DATE: APRIL 18, 2017
 (7)
 (8) To the Reporter:
 I have read the entire transcript of my Deposition
 taken in the captioned matter or the same has been
 read to me. I request for the following changes
 (9) be entered upon the record for the reasons
 (10) indicated.
 I have signed my name to the Errata Sheet and the
 (11) appropriate Certificate and authorize you to
 attach both to the original transcript.
 (12) _____
 (13) _____
 (14) _____
 (15) _____
 (16) _____
 (17) _____
 (18) _____
 (19) _____
 (20) _____
 (21) _____
 (22) _____
 (23) SIGNATURE: _____ DATE: _____
 (24) BRUCE CHARASH, M.D.
 (25)

(1)
 (2) CERTIFICATE
 (3)
 (4) STATE OF _____:
 (5) COUNTY/CITY OF _____
 (6)
 (7) Before me, this day, personally appeared
 (8) BRUCE CHARASH, M.D., who, being duly sworn, states
 (9) that the foregoing transcript of his/her
 (10) Deposition, taken in the matter, on the date, and
 (11) at the time and place set out on the title page
 (12) hereof, constitutes a true and accurate transcript
 (13) of said deposition.
 (14)
 (15) _____
 (16) BRUCE CHARASH, M.D.
 (17)
 (18)
 (19) SUBSCRIBED and SWORN to before me this _____
 (20) day of _____, 2017, in the
 (21) jurisdiction aforesaid.
 (22)
 (23) _____
 (24) My Commission Expires _____ Notary Public
 (25)

(1)
 (2) INDEX
 (3) Examination By: Page
 (4) Ms. Short 3
 (5) Mr. Peek 84
 (6) EXHIBITS
 (7)
 (8) Defendants' Description Page
 for Ident.
 (9)
 (10) 1 Curriculum vitae 4
 (11) 2 Trial list 16
 (12) 3 Deposition list 19
 (13) 4 Invoice 20
 (14) 5 Letter dated April 14, 2017 21
 (15) 6 Cover page to medical records 22
 (16) 7 Report of Dr. Charash 24
 (17) 8 Certificate of qualified expert 27
 (18) 9 Highlighted and tabbed medical chart 28
 (19)
 (20)
 (21)
 (22)
 (23)
 (24)
 (25)

- (1)
- (2)
- (3)
- (4)
- (5)
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CERTIFICATE

STATE OF NEW YORK)

) ss.

COUNTY OF NEW YORK)

I, TINA DeROSA, a Shorthand
(Stenotype) Reporter and Notary
Public of the State of New York, do
hereby certify that the foregoing
Deposition, of the witness, BRUCE
CHARASH, M.D., taken at the time and
place aforesaid, is a true and
correct transcription of my
shorthand notes.

I further certify that I am
neither counsel for nor related to
any party to said action, nor in any
wise interested in the result or
outcome thereof.

IN WITNESS WHEREOF, I have
hereunto set my hand this 21st day
of April, 2017.

TINA DeROSA

A				
a.m 1:15 62:4,7 64:15 67:23	admission 51:9 51:10,24 52:6 55:10 67:19 79:7	anterior 37:18 37:20,21 38:8 38:10 80:17	arteries 49:21 artery 52:17 77:6,22	20:3 AVF 37:24 AVL 37:24
ability 36:23 43:19	admissions 10:6	anticipate 82:9	article 14:6,10 14:17	aware 27:23 40:11 49:4
able 18:8 52:5 61:24 64:13 65:12,24 66:7	admit 5:25 83:21	Anybody 79:15	articles 13:10,12	awareness 62:24
abnormal 34:2 34:17 36:2,13 36:25 45:22 50:10 54:22	admitted 7:18 7:24 8:3,22 19:3 82:20 84:6	aortic 58:8	artifact 75:3	
abnormalities 37:23	admitting 4:22 7:5,7,12 8:11 8:13,23 74:2,5 74:13	appear 40:5 82:14	artifacts 76:4	B
abrupt 65:2	advising 20:16	appeared 87:7	asked 3:22 5:18 15:10 22:4,12 23:9 27:7	B 3:2 48:20 74:19 89:6
Absolutely 77:11	aforesaid 87:21 90:12	appears 34:23 45:3 46:16	assess 38:2	back 14:9 19:19 58:20 64:23 65:12 75:10 82:6
abstracts 13:18	afterthought 71:23	appropriately 39:14	assessment 9:22	backwards 36:14
academic 10:6	age 45:6 68:6	Approximately 83:20	assistant 21:19	bacteria 69:14
accelerated 69:7 69:19	aggressive 35:15 83:9	April 1:14 19:20 21:17,20 88:6 89:14 90:22	associated 80:21	bacterial 36:7 54:15 69:13,19
access 40:10	agree 41:18,19 74:23 77:17 78:9	argue 55:18	assume 3:23	bad 36:11
accurate 84:2 87:12	ahead 57:11,19 57:21	argued 19:4	assumed 26:11	badly 43:21
acid 76:13	AL 1:3,7 88:4	arising 46:16	assuming 30:14	Baltimore 1:2 2:5
acted 71:24	alive 65:7 66:10	arrest 33:23 34:7,24 35:4,9 35:9,13,14,17 35:20 41:3 43:6,13,16 44:5 55:12,23 56:6 57:24 58:4,13 60:5 61:9,22 62:2,4 62:6,7,8,8,13 62:14,20 63:3 64:21 70:2,14 70:17,21 75:9	assumptions 41:21	Baltimore-Wa... 3:13,15
action 72:11 90:17	allow 24:10	argued 19:4	astonishing 64:9	Barnabas 11:20
active 81:4	ALSID 2:11	arrest 33:23	attach 88:11	based 20:6 25:8 34:10 37:20 42:3 49:17,21 51:12 52:3,14 53:5,22 54:5 71:24 79:12 81:12
activity 63:12,16 65:10,23	alternative 52:13	arrest 33:23	attached 85:19	baseline 37:14 38:3,5 39:12 41:24 42:4 81:13
acute 14:8 37:18 38:3,7,10 39:10,15 62:24 74:23 75:5 81:9,10	Amanda 72:25	arrested 63:8	attack 13:23 14:2 36:17 37:18,20 38:8 38:11,13,15,17 39:18 78:4,6 80:20	basically 70:3 71:23
add 65:18 82:3	amount 20:23	arrhythmia 59:2 59:3	attacks 14:5,19 15:4,8	basis 35:24 37:5 41:10 42:16 48:7 49:14 50:17 54:9,19 55:4 56:10 57:12 66:12,16 67:9 69:2 70:23 83:22
added 55:3 75:9	and/or 7:8 17:8	arrhythmias 81:9	attending 4:16 4:20 6:17 9:15 10:4	Bates 47:12
addition 48:4 52:20 54:17 68:9 71:4	aneurysm 58:8	arrival 73:5	Attorneys 2:4,9	
additional 20:24 21:19,24 67:7 82:3	angioplasty 43:23		authored 13:9 13:12	
additionally 5:19	animal 14:3		authority 74:14	
adds 23:20	ankle 50:22 51:7		authorize 88:11	
	annual 83:22		authorized 12:2	
	answer 3:23 30:6 38:21 50:25 74:9		autopsy 38:19 61:17 66:15 77:14,18 78:2	
	answered 56:8		available 23:10	
			Avenue 2:9	
			Averaging 11:9	

6:1 7:1 8:1 9:1 10:1 11:1 12:1 13:1 14:1 15:1 16:1 17:1 18:1 19:1 20:1 21:1 22:1 23:1 24:1 24:5 25:1 26:1 27:1 28:1 29:1 30:1 31:1 32:1 33:1 34:1 35:1 36:1 37:1 38:1 39:1 40:1 41:1 42:1 43:1 44:1 45:1 46:1 47:1 48:1 49:1 50:1 51:1 52:1 53:1 54:1 55:1 56:1 57:1 58:1 59:1 60:1 61:1 62:1 63:1 64:1 65:1 66:1 67:1 68:1 69:1 70:1 71:1 72:1 73:1 74:1 75:1 76:1 77:1 78:1 79:1 80:1 81:1 82:1 83:1 84:1 86:4 87:8 87:16 88:6,24 89:16 90:11	City 1:2 14:15 clarification 56:2 clarified 85:11 clarity 39:13 clear 44:12 53:8 56:14 clearance 8:5 clearly 44:11 45:17 55:13 62:11 clinical 10:6 Clinically 39:15 close 32:6,13 59:16,17 66:8 closed 43:24 closer 60:7 co-author 14:17 code 34:10 49:6 57:7,23 58:20 63:24 64:10,13 65:6 66:10,11 66:13 67:25 69:14 coding 24:16 65:18 collapse 66:5 color 24:11,12 24:15,16,19 28:6 colored 85:21 colorful 23:24 colors 28:9 com 85:17 combustibility 53:4 come 7:25 55:16 66:7 82:6 comes 4:24 23:9 comfortable 70:7 coming 39:21 58:20 77:24 79:17 commencing 1:15 Commission	87:24 commitment 9:18 committee 11:24 committees 12:9 comorbid 49:18 53:21 complained 46:7 46:12 47:15,19 complete 33:6 77:8 complex 14:13 34:2 36:2 42:18,19 49:17 complicated 10:3 36:10 44:7 complication 36:11 complications 19:7 34:5 36:5 54:15 compliment 57:18 component 9:2 10:8 components 10:10 computer 38:3 39:10 74:23 concern 5:22 19:5 75:6 concerning 52:5 conclude 38:7 concluded 85:23 condition 34:21 51:5,9,15 52:23 60:15 65:18 76:17 77:19 81:3 conditions 9:23 49:18 53:21 73:18 76:18 confirmed 36:21 38:19 42:9 confirms 68:11 77:22	consequence 58:4 consequences 50:6 consistent 38:9 39:15,18 42:7 44:18,18 constitutes 87:12 consult 7:22,25 9:16,19 74:7 consultation 7:9 7:11 consultations 6:3 consults 7:14,16 7:17 contained 32:17 71:5 81:20 content 26:4 contents 22:22 context 41:3,4,5 continuing 8:14 continuous 56:23 contribution 41:13 control 14:15 39:4 83:17 controlled 83:14 conversation 25:8 30:19 31:24 32:5 COPD 49:18 copies 22:5 copy 13:16 21:2 25:17 48:12 corner 47:10 coronaries 43:21 44:5 coronary 38:18 38:22 42:24 43:4,12,16 44:2 48:3 49:19,20,25 52:16 55:14 77:6 79:16,17	correct 4:18 6:20,23 12:16 13:5 15:9 21:12 26:20 30:13 31:18 70:22 77:15 85:9 90:13 corrected 40:22 correction 51:21 correctly 35:25 correlate 28:6 correspondence 26:8 counsel 25:11,22 26:6,16 27:3 27:13 46:22 90:16 COUNTY 90:5 COUNTY/CL... 87:5 course 5:18 9:10 31:9 37:2 46:21 47:23 50:11 54:22 56:18 61:20 66:13 72:13 77:16 82:8 COURT 1:2 cover 21:17 22:16,21 89:15 coverage 9:20 CPR 60:14,15 63:9 64:5 65:7 65:20 create 26:8 52:12 created 84:14 creep 76:6,23 crisis 76:12 critical 71:10 72:11,24 85:6 criticism 42:13 criticize 42:14 CRNP 72:25 73:8 current 15:12 17:12 42:22
---	--	--	---	---

43:20	decision 53:6,23	27:17 28:16	different 10:10	9:10,17 12:10
currently 4:16	73:14 74:8	31:17 48:18	20:6 24:11,12	20:15 85:2
12:20 20:2	decompensated	74:17 85:23	85:10	documentation
Curriculum	55:8	86:4,9,15	differential	26:8
4:10 89:10	deep 76:5	87:10,13 88:2	44:25	documents 4:5
curve 77:2	deeply 12:11	88:6,8 89:12	difficult 38:2	29:4
custom 25:20	Defendant 3:11	90:10	78:2	dogs 14:5
CV 4:7,15 6:16	Defendants 1:8	depositions 17:8	direct 46:4,23	doing 26:17
13:16 14:21	1:12 2:9	21:4 22:3,3,9	directly 18:20	dose 63:23
cycle 69:17	Defendants'	22:10,13	34:8	doubles 69:17
	89:8	depravation	disagree 39:9,11	downside 54:3
	defended 20:15	65:6	41:19	dozen 17:2
D	defense 20:2,5,7	deprivation	discharge 67:16	Dr 3:9 22:13,14
D 89:2	20:9,11,14,16	65:20	discovery 22:3	24:5 40:13
damage 35:7	20:17 73:17,19	DeRosa 1:15 3:4	84:25	41:15 71:12,12
65:5 75:18	82:9	90:6,24	discuss 10:4	72:11,16 84:25
77:5,24 78:7	definitely 38:14	describe 5:11	15:3 30:18,21	85:2,3,4,6
78:16,16,23	delay 59:25 61:3	63:12	31:12,19 32:16	89:16
79:2 80:13	61:21,22 65:3	described 10:9	32:22 57:22,23	draft 26:15 27:9
81:6	65:4 66:5,6	Description 89:8	discussed 54:18	drafted 27:14
damaged 43:21	delayed 64:20	designation	56:12 72:13	dramatically
65:19	delays 63:25	82:18	81:19,23 85:7	69:22
danger 53:10	delete 26:3,7	detail 29:6	discussing 57:7	draw 80:22
68:13	deliver 9:21	detailed 19:9	discussion 10:7	drawn 55:7,16
dangerous 45:17	demonstrate	details 30:25	19:15 21:5	drop 36:23
51:25	53:8 61:17	determinant	28:10 46:6	45:10 68:9
data 39:16	demonstrated	75:3	47:7 48:15	dropped 67:24
date 4:12 16:14	55:8	determine 60:24	67:2 85:15	dropping 34:14
19:23 20:20	demonstrates	74:3 81:13	disease 8:19	36:9 44:10
21:23 22:19	50:12	determined 75:2	11:25 34:12	49:22 50:7
24:8,21 25:2	demonstrating	determining	38:18,22 41:7	51:14 52:4
27:19 28:17	56:7	73:22	42:24 43:5,12	54:16 68:4,7
86:5 87:10	Department	develop 8:7,18	43:16 44:2	76:2
88:6,23	39:22 48:9	developed 5:23	46:2,19 47:17	drops 44:14
dated 20:22	57:3	develops 8:20	47:25 48:3	drug 61:23
21:17,20 89:14	depend 53:3	diabetic 36:8	49:19,25 50:16	drugs 76:12
day 9:18 12:13	depends 19:2	45:4 80:10,19	52:17,25 55:14	due 19:14 44:15
59:10 87:7,20	Deponent 86:14	diabetics 45:6	62:23 67:6	44:16 68:13
90:21	88:6	diagnose 39:19	79:12,17	75:18 76:8,14
day-to-day 9:6	deposed 3:17	diagnosis 5:22	dispute 44:23	77:7,9
days 9:18	3:17,19 4:11	44:25	distressed 62:12	duly 3:3 87:8
deal 15:15 18:3	deposition 1:11	diagnostic 37:17	divide 69:13	dying 65:8
dealt 59:4,6	3:17,19 4:11	38:10	dizziness 44:9	
death 40:24	16:13 18:9	Diane 14:16,21	49:3,6 50:4	E
59:13,15,17,20	19:18,21,22	diastolic 68:3	doctor 5:16,20	E 2:2,2 3:2
60:8,9,11,12	20:19 21:6,13	die 58:18 60:17	8:23 84:25	48:20 74:19
60:21,24 61:5	21:14,21 22:5	died 78:7	doctors 4:24	87:2,2 89:2,6
61:6 67:19	22:17 24:6,11			90:2,2
78:20				

e-mail 26:3	electric 61:5	entails 5:12	Examination	56:6 62:5,17
e-mails 25:21,25	65:15	entered 88:9	3:7 84:22 89:3	65:9,24 66:18
26:12,13	electrical 59:2	entire 12:18	examined 3:6	67:5 71:24
E-Tran 85:20	59:20,23 60:3	20:3 56:18	excessive 44:16	factors 53:12
earlier 28:25	60:5,18 62:6	69:15 88:8	exchanges 25:22	55:24 72:9
64:24 68:10	63:10,12,16	entitled 13:17	Exhibit 4:9,11	facts 52:14
72:2 80:23	64:6 65:9,22	enzyme 38:15	16:5,13 19:17	53:18
84:9	66:2	45:23 78:18	19:22 20:19,21	failed 73:12
early 24:24	electrically	enzymes 36:15	21:16,21 22:18	failing 71:12,15
casier 83:21	62:16	42:9 45:25	22:20 23:23	failure 34:7,8
easiest 33:2	electricity 63:22	50:11 72:17	24:6 25:3,6	42:14 48:2
easily 45:7	electronic 25:17	76:10 78:17	27:11,18 28:3	49:18 76:6,22
easy 30:6	85:18	79:20 80:22	28:13,16 30:22	76:22
eating 44:17	electronically	epinephrine	31:14,20 32:18	fair 3:25 57:24
echocardiogra...	22:4 25:20	61:23 63:24	exhibits 28:25	82:7,12
5:25	electrophysiol...	64:9 66:7	29:5 85:18,21	fall 58:23
ED 56:4 74:22	59:9,12	ER 11:20,23,25	expectancy	falls 8:16
EDM 47:5,8	ELEFTERIOS	12:3,5,7,10	66:21,24	family 3:13
49:5	1:3 88:4	45:24 46:8	expectation 9:9	29:17
education 9:10	elevate 76:12	47:3 56:18	80:18	far 43:12 51:25
EF 43:15 44:4	elevated 77:3	70:11 85:2	expediential	fast 45:25 49:24
effective 60:14	78:10,24	Erika 2:11 3:11	35:7,7 69:18	50:6 75:25
60:15	elevation 37:16	Errata 88:2,10	70:9	February 24:24
eight 29:2,2	37:25 39:17	especially 80:19	expedientially	feel 72:14 80:12
either 29:13	75:5 77:23	Esq 2:6,11	69:12	80:14
74:7 75:7 77:5	elevations 41:21	establish 32:3	expert 20:7	feeling 62:22
79:15	embolism 58:9	33:9 50:2	23:15 27:12,17	fellows 11:18
ejection 42:25	emergency 9:22	established	89:17	fellowship 11:17
43:4,7,8,11	9:24 10:15,15	30:24 44:6	experts 29:23	field 10:15
44:3 48:2	10:17,19 11:5	48:24 53:19	30:3,5 82:9	Fifty 5:14
49:19	11:16,24 12:12	Estate 3:12	Expires 87:24	figure 13:19
EKG 34:2,17	13:3,10,20,24	estimate 15:18	explanation	27:24 52:21
36:2,13,25	14:10,11 36:15	16:25	62:18	figured 57:15
37:6,8,13 38:3	39:21 42:11,12	et 1:3,7 52:17	extensive 25:8	file 4:4 32:12
38:6,9 39:14	46:12 48:9	88:4	38:21 40:9	88:3
39:18,19 40:17	53:15 56:21	evaluation 9:23	53:16	find 24:17 46:9
41:10,14,16,23	57:2 71:11	9:24	extensively 49:8	48:12 49:2
42:3,7,13	employed 5:3	event 58:5,13,19	extraction 83:3	78:2
45:22 50:10	6:7,18	58:24,25 59:2	83:5	fine 33:10,16
54:22 71:13,20	EMS 48:12	60:4,18 61:11	extremely 71:16	Fink 1:12
71:24 72:12	enclosing 21:19	61:18 66:2		fire 62:10,19,22
73:4 74:22	encompassed	79:16,18	F	69:20
75:2,6 80:23	71:9	evidence 31:5	F 87:2 90:2	firm 18:7 20:14
81:13	encompasses	37:19 70:3	faces 53:23 54:6	20:17
EKG's 39:25	4:21 17:5	evolving 39:17	facing 68:13	firms 20:5
elderly 45:5	engage 9:10	exactly 13:25	fact 28:4 34:3	first 3:3 6:6 14:4
80:9	engaged 11:22	56:15	36:2,14 47:24	15:6 17:9 32:2
			50:11 53:20	

32:12 35:22	48:3 49:19	71:16 83:13,13	handed 23:24	68:8
37:8 45:2	fractions 43:4,7	83:18	happening 80:5	higher 43:5
57:23 61:23	frankly 44:22	go 9:19 19:2	happens 78:23	45:12 48:4
63:22 64:6,8	frequently 39:3	26:16 29:5	happy 13:15	highlighted
70:10 71:20	Friday 5:14	31:7,21 32:18	hard 22:5 25:17	28:11,14 68:12
78:5	front 37:9	33:17 37:3	71:25	89:18
fits 84:18	full 23:17 73:3	49:8 57:11,19	head 14:15	highlighting
five 6:13 9:13,18	fully 37:5 54:24	57:21 61:24	health 66:4	23:24 29:13
16:7 17:8	further 48:21	62:5 71:6	71:10 72:24	highlights 24:12
18:16 19:19	56:7 73:13	goal 59:14	74:2,13 81:18	28:7
20:4,8 21:3	74:20 81:11	goes 19:19 60:3	83:17 85:11	Hill 4:17,20,23
60:8,22 63:24	84:21 90:15	60:16,25 66:18	healthy 76:9	5:3 6:2,3,17,18
64:7		going 3:23 19:16	heart 5:23 11:25	7:6 8:15 10:12
floor 1:13 60:20	G	23:22 24:17	13:17,23 14:2	10:21 11:22
fluid 83:9	Gaines 72:25	28:11,19 31:7	14:5,18,19	22:14 72:11,16
follow 8:14	73:8,21	33:11,17 47:14	15:4,5,8 36:17	83:22
72:18	gall 8:19	55:18 56:3	36:18 37:18,20	hip 8:17
following 8:24	Garfunkel 16:17	57:6 58:16	38:8,10,13,15	hired 20:17
9:9 88:9	gasoline 69:20	61:24 62:16,23	38:17,23 39:2	his/her 87:9
follows 3:6	gather 10:3	71:18 80:11	39:6,17 41:5	history 34:2,16
48:21 74:20	general 3:19	81:5	45:11,12,18,24	36:2,11 38:18
foot 34:20 36:8	10:17 11:20	Good 3:9	46:2 48:2	39:21 40:9,11
44:12 46:13	12:5 15:3 19:2	gotten 64:24	49:18,24 50:7	42:18,20,21,22
foregoing 87:9	19:11 69:4	grafts 38:20	51:3,22 52:20	42:23,24 48:2
90:9	generally 11:14	43:22	52:25 54:4	49:14 52:16
foreign 19:14	14:19 71:9	great 15:15 18:3	55:10,17,22	54:8 55:15
34:20,22 35:2	generate 27:7	greater 29:6	61:25 63:14	71:22
35:16 44:12	getting 33:6	35:10	64:11,15,19	Hoffmann 22:13
45:15,16 52:3	48:7 56:2	grew 69:15	65:17,19 66:6	85:3,5,6
68:19 69:7,9	73:16	group 11:14	67:21,22 68:12	hold 28:25
69:11,20,21	give 10:2 11:7	grow 69:12	71:21 75:18,24	home 46:19
70:3 83:3,6	13:15 32:24	grows 54:5	75:25 76:9,9	47:17 52:24
form 5:23 18:3	33:8,13 52:13	growth 35:7	77:4,7,10 78:4	53:14 84:17
19:4,12 32:25	53:18 63:4,23	guess 17:2 71:19	78:6,15,20	honestly 17:15
54:9 65:11	76:15	78:22	79:3,12,22	18:14
81:4 86:11	given 11:4 18:4	guessing 27:13	80:20	Hopkins 1:6
format 25:17	18:6,12 35:12	gunshot 58:11	hearts 59:10	3:14 43:19
forms 49:14	36:13,13 45:25		help 13:19 24:12	88:5
54:18 55:4	53:12 62:17,24	H	74:12	hospital 4:23 6:2
found 84:24	64:18 66:2	H 3:2,2 48:20,20	helped 70:8	6:3,9,14,17,19
foundation	70:25 71:4,21	74:19,19 89:6	hereof 86:6	8:7 9:7 10:14
30:24 31:2	gives 67:18	H-O-F-F-M-A...	87:12	10:21 11:20
33:6,9,14 50:2	giving 11:10	22:14	hereunto 90:21	54:8 56:18
70:23	38:12 52:16	half 5:22 7:19	high 34:12 36:24	67:17 74:10
four 9:18 10:9	66:6,17 73:20	8:12 16:25	41:2 44:4,19	75:17
fraction 43:2,8	82:24 83:10,15	21:3	45:12 51:4,4	hospitals 6:8
43:11 44:3	glucose 34:14	hand 26:10	51:22 67:6	hour 9:18 21:5
	44:10 68:9	90:21		

21:10,13,15 30:12 33:11 34:25 35:11 70:10 hours 5:13 15:17 21:3,7 21:14 34:25 35:8,11,17 70:6,8,9,10,16 72:2 78:4,5 house 11:12 huddles 9:12 hundred 64:16 hypercoaguable 51:22 hypoglycemia 72:3	impacted 37:15 38:24 39:6 55:23 impacts 55:11 implementing 65:3 improved 70:4 improvement 12:8 in-patient 73:3 inaccurate 74:24 included 40:12 54:21 including 4:25 11:19 34:13 44:9 50:18 71:11 72:24 73:4 incomplete 41:20 increase 76:17 76:19,21 increased 35:12 60:16 81:9 independent 32:21 47:11 68:8 independently 44:19 index 26:25 indicate 45:13 71:10 72:23 indicated 52:11 88:10 indicates 64:24 81:3 82:19 indicators 34:13 36:24 67:6 inducing 43:5 infarction 13:13 14:8 38:4 infected 69:16 infection 34:15 34:21 36:7,8 36:10,18 44:19 44:20 45:2,14	45:15,20 50:9 51:14 52:7 54:16 69:19,22 69:23 72:7 infections 52:2,3 69:12 infectious 34:12 44:11 45:7 49:22 50:19 53:11 67:5 68:13 69:6 70:5 inflammatory 69:8 70:12 information 49:12 73:13 informs 75:15 initial 81:13 initially 23:21 institution 4:25 institutions 6:11 insulin 44:16,17 intake 44:16 integrated 12:11 interested 90:18 internal 11:13 12:22 67:15 interns 9:8 interval 40:20 80:24 81:14 intervene 61:8 intervention 42:12 introduced 64:8 investigate 71:15 investigating 72:4 invited 9:25 invoice 20:18,21 20:24 32:7,9 32:11,14 89:13 involve 17:23 18:18 involved 9:11 29:20 85:3 ischemia 81:10	ischemic 43:10 75:18 isolated 19:10 issue 5:23 8:7 11:5 49:3 77:18 84:6 issues 10:18 18:19	know 3:17 15:10 16:24 17:4,18 20:10 21:24 23:19 24:21 25:7,9,15,16 25:24 26:14 30:2,4,7 32:14 40:8 43:20 45:22 46:18 47:16,17 50:17 59:8,19 60:2 61:16,19 63:17 63:18 71:8 74:9 75:4,8 76:25 82:5,11 known 40:22 43:16 62:24 79:11,17
I			J	
idea 26:18 43:22 62:15 Ident 89:8 identification 4:12 16:14 19:23 20:20 21:22 22:18 24:7 27:18 28:17 identify 24:13 24:18 illness 8:21 19:3 34:4 36:3,18 36:22 39:7 41:6 42:8,23 44:8 45:19 46:3 48:4 53:3 54:4 55:11 68:7,14 69:10 72:8,20 75:19 76:14 79:21 80:11,14 81:10 immediately 63:9 imminent 40:24 impact 42:8 53:23 69:9,18 69:22 70:12 80:4	incomplete 41:20 increase 76:17 76:19,21 increased 35:12 60:16 81:9 independent 32:21 47:11 68:8 independently 44:19 index 26:25 indicate 45:13 71:10 72:23 indicated 52:11 88:10 indicates 64:24 81:3 82:19 indicators 34:13 36:24 67:6 inducing 43:5 infarction 13:13 14:8 38:4 infected 69:16 infection 34:15 34:21 36:7,8 36:10,18 44:19 44:20 45:2,14	45:15,20 50:9 51:14 52:7 54:16 69:19,22 69:23 72:7 infections 52:2,3 69:12 infectious 34:12 44:11 45:7 49:22 50:19 53:11 67:5 68:13 69:6 70:5 inflammatory 69:8 70:12 information 49:12 73:13 informs 75:15 initial 81:13 initially 23:21 institution 4:25 institutions 6:11 insulin 44:16,17 intake 44:16 integrated 12:11 interested 90:18 internal 11:13 12:22 67:15 interns 9:8 interval 40:20 80:24 81:14 intervene 61:8 intervention 42:12 introduced 64:8 investigate 71:15 investigating 72:4 invited 9:25 invoice 20:18,21 20:24 32:7,9 32:11,14 89:13 involve 17:23 18:18 involved 9:11 29:20 85:3 ischemia 81:10	ischemic 43:10 75:18 isolated 19:10 issue 5:23 8:7 11:5 49:3 77:18 84:6 issues 10:18 18:19	January 20:22 24:24 32:14 JEFFREY 2:6 Jersey 27:6 Jlp@cardarol... 85:16 John 40:14 Johns 1:6 3:14 43:19 88:5 joint 8:17 Journal 14:11 journals 13:18 14:4,25 jump 67:23 jurisdiction 87:21
			K	L
			Kalfas 1:3 33:20 33:21 35:23 39:20,25 46:5 47:14 50:21 56:11 61:10 73:3,22 79:23 82:20 85:3 88:4 Kalfas' 3:12 28:12 29:17,20 30:9 49:13 73:3 79:5 keep 26:12 28:21 65:7 keeping 34:19 kind 26:25 32:24 37:3 50:5,12 knew 43:21	L 2:6 L-A-W 85:17 lab 59:9 labs 59:12 large 34:9 largely 38:4 late 24:24 32:14 lawyers 20:16 Lead 37:25 42:6 75:3 leads 37:16,21 37:23,24 84:13 LEARY 2:8 lecture 11:8,11 lectures 9:21 11:4 lecturing 10:11 led 51:10 65:17 left 43:3 50:22 56:20 58:8 65:5 legal 21:18 legitimate 55:6 length 82:22 Lenox 4:17,20 4:23 5:3 6:2,3 6:17,18 7:6 8:15 10:12,21

11:22 83:22	looking 3:15	37:24 44:2	meaning 49:24	18:5,11,13
let's 35:21 37:3	4:14 6:15 38:6	45:7 55:14	means 4:22 18:3	25:19 27:22
37:5 57:10	looks 4:4,15	main 35:22	21:7 36:17	32:21 49:7
62:5 68:25	10:9 15:5	making 41:21	60:19,25 65:13	menacingly 68:5
75:12	44:21	64:4	65:14,25 77:4	mental 45:20
lethargy 44:10	loose 69:25	manifestation	meant 36:9	mentioned
45:11 50:5	losing 65:17	78:5	38:21	48:25 49:4
letter 21:17,20	lot 31:5	mapping 38:21	measurement	68:10 80:25
89:14	low 44:4 53:22	March 16:16,19	63:21 76:25	mentioning
letters 38:4	68:5 71:16	17:22 40:2,17	mechanical	55:24
level 9:6 36:16	72:6	67:18,19	61:17,18 65:15	met 3:10 31:16
36:19 43:13	lung 46:18 47:16	mark 4:8 16:5	mechanically	Meyer 41:16
50:14 52:4	47:25	19:17 22:6	58:4,6,13,19	MI 39:10,15
55:3,7 75:9,15	lungs 65:19	23:22 28:11	61:11 65:16	74:24 75:6
75:20 78:6,11		65:10 70:7	mechanism	77:23 80:17
levels 9:6 34:14	M	marked 4:5,10	44:23,24 61:21	midnight 68:4
44:11 71:16	M.D 1:11 3:1,2	16:12 19:21	medical 1:6 3:14	Mini 85:18
76:3 79:5,9,14	4:1 5:1 6:1 7:1	20:18 21:21	5:2 6:8 8:20,24	minor 53:14
83:13,14,18	8:1 9:1 10:1	22:17 24:6	9:8 10:3 11:12	minute 60:2,9
licensed 13:6	11:1 12:1 13:1	27:17 28:15	11:13 19:3	60:13,15,22
life 66:20,24	14:1 15:1 16:1	marker 44:20	22:16,21 23:2	61:3
likelihood 35:9	17:1 18:1 19:1	68:8	23:4,7,9 28:6	minutes 9:13
35:13 44:24	20:1 21:1 22:1	markers 50:8	28:12,15 30:9	60:11,12,24
limb 37:23	23:1 24:1 25:1	marking 20:21	31:21 32:19	62:2,3 63:11
limited 34:13	26:1 27:1 28:1	21:16 22:20	34:4 35:19	63:22,24 64:5
47:22,23 51:2	29:1 30:1 31:1	27:11	36:17,22 38:23	64:7,8,10,13
line 61:23	32:1 33:1 34:1	MARSHALL	39:5,7 41:6	64:16,22 65:20
list 16:5,12,15	35:1 36:1 37:1	2:8	42:2,8,22,23	69:13,14,15
17:7 19:18,21	38:1 39:1 40:1	Maryland 1:2	48:25 49:5,14	missing 23:19
40:8 89:11,12	41:1 42:1 43:1	2:5,10 13:7	62:17 64:25	23:20
listed 6:16 14:21	44:1 45:1 46:1	17:21 20:12,14	65:14,21 69:4	moment 48:14
23:3 35:25	47:1 48:1,20	20:15 27:5,8	72:8 75:19	56:17 82:13
literally 24:3	49:1 50:1 51:1	mask 45:7	79:18,21 80:11	Monday 5:13
literature 15:25	52:1 53:1 54:1	Massachusetts	80:14 81:10	monitor 33:21
little 76:23	55:1 56:1 57:1	27:8	82:23 83:2	33:22 35:23
live 78:4	58:1 59:1 60:1	massive 58:9,10	89:15,18	39:8 40:21
lived 60:10,17	61:1 62:1 63:1	76:6,22	medical/legal	41:12 42:14
LLC 2:3,8	64:1 65:1 66:1	materials 11:2,3	15:13,16,20	49:16 50:24
long 38:18 62:15	67:1 68:1 69:1	21:19,25	medication	52:19,24 53:2
81:7	70:1 71:1 72:1	matter 50:20	14:14	53:22,24 54:2
longer 9:13	73:1 74:1,19	67:9 86:5	medicine 10:16	54:10,20 55:5
look 13:16 17:7	75:1 76:1 77:1	87:10 88:8	10:17 11:5,13	56:16 59:4,6
23:12 29:9	78:1 79:1 80:1	mattered 61:14	12:22 13:4,10	61:14,15 63:6
39:16 45:8	81:1 82:1 83:1	matters 15:13	13:20,24 14:7	64:22 65:13
46:9 47:20	84:1 86:4 87:8	15:20	14:10,12 59:17	66:3 72:15
48:13 67:14,25	87:16 88:6,24	mean 18:24 49:7	74:10	monitored 34:6
looked 36:15	90:11	58:6 69:2	memory 17:25	34:9 35:19
	magnitude			

36:21 41:8	48:13 51:8,10	nuclear 14:7,7	16:8,11,21	71:3,6 81:17
50:3,13 51:6	51:19 53:13,18	number 4:4	17:20 23:6,12	81:22 82:4
51:12,23 53:7	54:4 57:23	14:23 15:11	23:16,22 24:9	84:13 85:9
53:9 55:20	61:12	17:6 20:5	24:20 25:3	opportunity
60:20 64:3	needed 22:6	23:21,25 44:8	27:20 29:14,16	61:8 82:5
66:9 73:11,15	36:21 39:8	46:23 60:16	30:18 31:7,10	opposed 70:10
73:23 74:4	41:8,11 42:11	67:17	35:21 39:9,24	order 8:2 56:4
79:22 82:21	47:22 49:15	numbers 47:9	41:18 42:16,21	57:22
monitoring 19:4	50:13 51:20,24	numerous 3:18	46:15 55:2,25	ordered 56:6
19:13 33:25	52:19 54:10	Nurse 22:14	56:10 57:10,14	original 88:11
34:18 36:12,25	55:4,19,20	73:8,21 74:2	57:20,22 67:3	out-patient 6:10
42:18 47:22	74:4	nurses 12:9	67:12 69:4	outcome 68:23
51:19 52:10	needs 8:8,17	nursing 47:4	70:19 71:3	90:19
53:13,25 56:12	50:3 53:7	NYU 4:25	72:10,13 77:14	outlined 30:22
56:24 57:2	negatively 38:24		77:17 79:4	outside 9:12
58:14,21 61:12	39:6	O	80:4 82:12	21:11 23:2
81:16	neither 90:16	O 86:2	83:5 84:8	29:4 31:10,20
month 9:14,15	never 13:3 15:21	o'clock 1:15	old 37:19 45:6	60:23 66:11
16:9 83:24	20:13 54:2	64:15 85:22	73:16	76:16 83:5
monthly 83:21	76:25 80:21	objectified 50:6	once 78:23	overall 31:4
moonlighting	new 1:14,14,17	objective 50:8	one-quarter	overwhelming
11:19	3:5 11:20	obstructive	7:13	41:2
morning 3:9 4:7	14:15 27:6	46:18 47:25	ones 8:4 13:20	owned 6:11
4:15 10:2	31:4 90:3,5,8	obviously 7:15	ongoing 39:4	oxygen 46:19
19:18	night 15:17	occasions 16:24	open 17:16 23:8	47:17 65:6,20
multiple 9:5	20:25	occlusion 77:6,8	38:20 43:23	
12:8 43:17	nine 29:2,3	occurred 12:24	operating 52:8	P
muscle 78:15,20	non-mechanic...	22:9 32:5 58:6	opinion 31:2	P 2:2,2 86:2
myocardial	58:24,25	62:25 64:2,21	33:19,24 34:10	p.m 85:23
13:13 14:8	nonspecific	77:24	34:19 35:22,25	page 6:16 22:16
38:4	37:22	occurring 7:23	38:12 41:11,25	22:21 23:19
Myths 13:17	normal 43:7	8:2	42:11,17,20	24:3 46:12,19
14:18 15:6	North 2:4	occurs 9:5 80:25	49:15 50:18,20	46:23 47:3,6,8
	nosebleed 50:23	offer 67:8 81:23	52:14 54:9,13	49:5 67:16
N	51:8,20 53:13	offered 20:11	54:19 56:7,11	71:9 86:6
N 2:2 86:2 89:2	53:14,16	offering 42:2,10	57:5,11 66:12	87:11 89:3,8
name 3:10 5:8,9	Notary 1:16 3:4	71:18 81:17	66:17 67:3,9	89:15
18:10 88:10	87:24 90:7	offhand 47:21	68:15,18 69:3	pages 23:18,21
names 30:4	notation 47:13	office 5:13,25	69:5,25 70:24	paid 10:24
nature 51:16	notations 84:14	6:13 16:22	71:17,20 73:20	pain 9:23 10:13
53:3 68:7	note 12:3 47:4	17:14 18:9	77:9 82:24	46:14 79:23
nausea 46:13	noted 49:10	31:25 32:17	83:10,15	80:10,12,15,18
necessarily 33:4	notes 23:25 24:2	offices 1:12	opinions 15:24	80:18,21
necessary 26:11	24:4,17 26:21	oh 21:9	30:20 31:4,4,6	pardon 3:13
44:25	28:5 29:7,11	okay 3:18 4:3,19	31:11 33:4,7,9	13:25
need 17:24 26:4	90:14	6:15 7:2,10	33:10,12 34:11	part 34:9 44:25
26:12 28:24	noticed 62:8	12:17,20 13:2	48:8 66:23	50:17 73:14
29:2 35:23		13:6,9,15,22		81:8

particular 75:15	6:14 7:14	plummet 60:4	prepared 22:24	principles 15:4
parties 48:19	15:18,20,22,22	plus 6:9 76:2	24:21 25:6,9	printout 47:11
74:18	20:4,8 35:11	pneumonia 8:18	presence 69:7	prior 22:5 31:24
partners 7:2	43:9,14 59:16	point 11:3 12:13	present 10:14	35:8,17 40:2
party 90:17	59:22 60:6,7,8	18:2 29:21	48:19 73:5	47:7 62:8,20
passive 18:3	60:9,11,12,22	38:15 50:13	74:18	67:25 70:16
patient 7:22,24	60:23,25 84:2	52:24 60:13	presentation	79:5
8:2,16,17,18	percentage	63:21 64:4	11:3 34:24	prism 72:6
9:7 14:12	15:12	70:20	38:24,25 44:18	private 5:5,7,12
39:19 42:15	perform 71:13	points 39:16	47:24 49:22	6:4,22 7:7,23
47:6,8 51:6	performance	poison 14:15	50:12 51:13	privileges 4:23
55:13 64:2	12:9	poisoning 14:13	52:2,13 53:12	7:6
67:16 74:4	performed	poor 37:20	54:8,13 69:10	probably 18:25
81:2 84:3	39:25 70:20	position 48:6	70:5 72:18	24:23 70:7
patients 5:14,15	74:22	positions 10:23	77:4	problem 8:13
5:17,17,20 7:7	period 17:4	positive 50:11	presentations	problems 7:19
7:8,11,18 8:6,7	65:25 69:16	possibility 65:21	12:5,14	8:11,12
8:10,14 9:11	Peripherally	possible 51:18	presented 34:12	process 50:19
10:13 11:24	50:4	71:22	36:4 43:18	67:6 78:19
43:3 79:10,11	permanent	possibly 77:21	45:19 50:21	81:4
83:20 84:5	12:24 77:5	Post-its 24:12,17	67:5 75:19	professional
PDF 85:20	person 44:18	potential 11:25	77:2 80:6	15:14
peculiar 18:2	57:15,24 58:3	12:4	presenting 36:6	profound 51:9
Peek 2:3,6 17:13	58:12 59:4,25	potentially	76:11 79:15	progress 52:2
30:12,14,16,17	60:19 76:11	45:14 50:8	presents 50:19	progression
31:13,24 32:16	79:17	Power 11:2	pressure 62:2	37:21 44:2
46:25 47:5	personally 87:7	practice 5:5,7,12	63:15 64:11,12	51:17
66:20,23 82:5	Pham 71:12	6:5,7,11,12,22	64:14,19 65:17	progressive
82:11,19 84:23	84:25	7:3,7,23 8:21	67:20,22,24	51:16 65:5
85:12,16 89:5	physician 4:16	13:7	68:2,5,5,8	68:6,11
Peek's 16:22	4:20 6:17	practitioner	76:13	progressively
18:7 21:18	11:16,25 40:5	22:15	prevented 35:15	35:12 60:16
peer 12:7 13:18	physicians	pre-admission	preventing	prolong 81:11
14:4,24	29:20	8:5 71:23	35:13	prolonged 40:19
Pennsylvania	physiologic 77:7	pre-sepsis 75:25	previous 18:7	40:19 80:24
27:6	place 45:17 86:5	pre-septic 36:24	42:25 43:23	prominent
people 11:14	87:11 90:12	38:25	previously 16:21	49:23
12:2 18:25	placed 50:24	precursors 61:5	primary 5:16,19	promptly 71:21
19:12 51:7	56:16 72:14	predisposed	5:21 19:5,6	71:22
58:18 59:9	plaintiff 20:2,8	81:7	34:4 36:4	prospectively
60:10,17 61:4	Plaintiffs 1:4 2:4	preexisting 5:21	38:17 39:7	68:12
61:7 62:15	Plaintiffs' 25:11	53:20 77:19	40:5,13 50:2	protectively
65:11 74:7	25:22 26:6,16	81:2	54:14 59:19	36:22
76:7 78:12	27:2,13	preparation	74:5 77:6,23	protocols 12:6
81:6	plan 82:13	21:6	79:16 80:16	prove 52:6
percent 5:14,16	please 23:13	prepare 25:3	84:3	proven 52:9
5:20 6:9,10,13	48:14	27:3	principle 52:9	72:19

provide 82:14	27:12,16 89:17	realize 24:25	67:7 71:12	released 78:19
provided 4:7,15	quality 12:8	really 17:2,24	85:2,13,15	relevant 23:19
17:21 25:7,10	quarter 8:9	20:6 41:22	88:9	rely 16:2
25:13,16 26:15	question 3:22	53:18 85:2	records 21:4	relying 54:25
31:2 42:17	15:11 50:25	reason 36:13	22:17,21,24,25	remainder 8:6
73:13 82:2,18	56:8 76:20	39:7 40:21	23:3,4,7,10,13	remedy 42:6
provider 42:3	questions 33:15	41:7 51:2,3	23:18 24:18	75:6
74:3,6	82:6 84:21	54:20 65:21	28:6,12 30:25	remember 17:3
providers 30:8	quickly 24:13	70:6 76:2	32:3 33:3 40:4	17:15,24 18:5
66:4 71:11	78:8	81:15	40:6,11 73:16	18:7,10,13,15
72:24 79:24	Quite 44:22	reasonable	82:3 89:15	26:19
81:18 83:17		35:19 38:23	recovery 65:11	removed 35:2,8
85:11	R	39:5 62:16	recurrent 53:17	68:19 69:21
provides 41:14	R 2:2 3:2,2	64:25 65:14	reduced 35:10	70:4
providing 61:8	37:20 48:20,20	66:8 68:4	42:25 43:3,11	removing 35:16
61:22	74:19,19 87:2	reasonably 35:6	43:15 44:3	renal 76:6,21,22
provocation	90:2	reasons 20:6	48:2 49:19	repeat 41:23
45:18	R-O-W-E 22:15	47:21 85:7,8	69:22 86:10	75:7
provoked 70:14	raised 53:13	88:9	reduction 35:3	repeated 42:3
psychological	75:6	reassessed 47:14	refer 28:20	repeating 42:13
76:10	random 24:15	rebuttal 82:11	reference 49:11	replacement
Public 1:16 3:4	28:8	recall 17:9 18:16	referenced 46:9	8:18
87:24 90:8	rapidly 24:19	18:18,20 25:15	referred 5:17	repolarization
publication 14:4	59:5,7,24	28:3 32:4,7	reflection 81:8	41:4
14:20	rate 39:2 41:5	40:3	81:14	report 10:2
published 14:14	45:11,13 46:2	receive 82:22	regain 61:25	23:14,23 24:5
15:6,8	49:24 50:7	received 21:5	regard 12:4	24:20 27:3,7
pull 28:22 75:12	51:3,22 52:21	22:2,22 23:3	regarding 10:12	27:10 28:7
pulmonary 58:9	59:16,17,21	23:11,17,21	11:4 15:24	30:22,23 31:3
pulse 63:19,20	60:8,9,11,12	82:25 83:9	42:17 67:8	32:24 33:5,11
65:12,23	60:21,25 61:25	receiving 64:5	81:18	33:18 48:13
pulseless 63:11	63:14 64:11,15	73:2	Regardless	59:18 67:16
63:15 65:9	64:19 65:8,18	recertification	35:18	71:5,6,9 77:15
pump 43:21	66:6 67:21,22	12:25	regards 10:18	79:23 81:20
purely 24:15	71:21 75:25	recess 48:16	regular 44:17	84:14 85:4,8,9
pursue 20:16	rates 49:24	74:15	relate 13:20	89:16
put 18:14 51:4	reaching 45:16	recognition	related 10:18	reporter 1:16
56:22 59:11	reacting 55:18	10:12 44:12	15:8 34:8 52:7	86:10 88:7
85:13	reaction 14:13	recognizing 61:3	75:21 76:3	90:7
puts 44:3	reactor 34:23	66:6 72:5,7	90:16	Reporting 1:12
putting 43:15	read 22:4 37:12	record 3:10,15	relates 57:7	represent 3:11
73:11	41:15,18,23	19:15 24:23	relating 35:22	request 23:8
	85:14 86:14	28:10 30:9	relationship	27:2 88:9
Q	88:8,9	40:10 46:4,6	15:14	requested 23:6
QT 40:19,22	reading 37:15	47:6,8,18	release 38:16	86:9
80:24 81:7,14	38:9 39:10	48:11,15 49:2	76:7,10 78:16	require 36:12
QTC 40:22	74:23	49:5,8,12 67:2	78:19,21	53:2,25 56:25
qualified 23:15	reads 38:3			

79:22	retrospect 45:22	11:16,24 12:12	seconds 59:14	severity 54:5
required 6:2	55:9 68:10	13:4 36:16	59:21 60:6,7	sheet 34:10 57:8
19:4,12 33:20	75:4	46:12 53:15	60:21 63:2	57:23 66:11,13
33:25 34:6,17	retrospectively	56:21 62:15	see 12:2 21:9	67:15 88:2,10
36:25 53:16	36:20 56:5	66:4 71:11	47:18 60:16	shocked 59:13
54:19 56:11,21	return 26:12	ROSNER 2:8	78:3	59:20 60:5,20
61:14 82:20	64:17,18 65:2	rotate 5:2 9:14	seeing 7:8,11	63:7
requirement	65:25	rotation 11:14	52:4 61:21	short 2:11 3:8
54:5	returned 65:22	rotations 11:21	seen 55:17 78:7	3:11 4:8,13
requirements	reversed 6:13	Rowe 22:15	79:4	19:16,24 46:5
20:7	review 12:7	72:25 73:8,25	segment 37:16	48:9,16,22
requires 79:19	15:24 20:5	74:2	37:25 39:17	65:25 66:22,25
82:10	21:3 37:7 40:6	rubberband	75:5 77:23	74:15,21 84:20
requiring 53:21	41:15 49:10	28:18	select 10:5	85:20 89:4
76:12	72:12	rules 3:19	Seminars 14:6	shorthand 1:16
rereview 21:4	reviewed 13:18	ruling 36:16	send 27:9	90:6,14
residents 9:8	14:4,25 24:23	runaway 41:5	senior 6:16 74:7	shortly 24:22
10:2	28:13 29:10	49:23	sense 63:10,20	shortness 9:24
resolve 39:13	30:8 32:2,12	ruptured 58:8,8	sent 20:25 25:20	10:13 44:9
respond 54:4	39:24 73:6		40:6 53:14	45:21 46:8,13
60:3	77:14 80:23	S	73:4	46:16 47:15,19
responding	reviewing 17:12	S 2:2 3:2 48:20	sentence 72:10	47:22 48:24
55:10 59:24,25	rhythm 60:24	74:19 89:6	separate 24:13	50:4
response 62:22	61:3 63:13,14	S-A-U-T-E-R	sepsis 70:14	show 77:21
64:20 69:8	63:17,19 64:6	14:16	75:21,24 76:5	showing 36:23
70:12 72:20	64:16,17,23	safely 35:6	79:21	61:6
responsibilities	65:2,4	safety 52:8	septic 36:24	shown 77:21
4:24	right 4:14 7:5	Sauter 14:16,21	38:24 68:7,11	shows 55:22
responsibility	13:4,25 18:11	save 25:24 58:16	70:12 76:3,7	sick 59:10
74:6,12	23:2 32:23	saw 11:24 30:8	76:12	side 8:24
responsible 73:2	39:22 41:9	saying 24:11	serial 79:9,14,19	sign 34:15 85:14
73:21 74:3,11	42:16 46:13	39:12 42:5,7	serious 36:9,22	86:14
74:11	47:10,20 48:23	48:8,11 52:22	44:20 45:2,14	SIGNATURE
restatement	54:7,12 57:5	53:7 55:7,19	50:8	88:23
26:22,24	63:7 68:17	55:21 56:5	served 11:23	signed 28:4
restoration	74:8 84:11	70:16,19 75:16	12:8	88:10
64:10	risk 34:13 35:3	78:22	serves 26:25	significance
restoring 65:4	36:24 40:24	says 46:11 67:15	service 9:16,19	24:14 49:21
result 7:23	41:2,2 43:5,15	82:22 83:8,13	Services 1:13	72:5
34:16 78:25	44:4,19 48:4	schools 6:8	set 12:6 23:18	significant 34:3
90:18	51:4 67:6 68:9	screaming 62:9	86:5 87:11	34:15 35:3
resumed 48:18	68:12 72:9	62:19	90:21	36:7 45:20
48:20 74:17,19	81:9	Sebastian 40:14	seven 21:7 28:25	73:18 79:18,21
resuscitation	RN 72:25	second 57:5	29:3	significantly
59:15,21 61:20	role 4:19 85:10	58:23 59:5	Seventy-one	77:3
64:23 83:9	room 9:12,24	secondary 19:6	45:6	signing 28:3
retrieved 73:6	10:15,19 11:5	34:5 36:4	severe 51:20	signs 67:15,18
		54:14 80:13,19		

similar 18:19,23	spontaneous	81:15	54:24 57:17	87:10 88:8
simple 51:2	61:25 64:19	stressing 36:18	58:2 71:6	90:11
71:19	65:12	stronger 62:3	surgery 38:19	takes 60:14,22
simplify 24:10	spontaneously	students 5:2 9:8	42:25 52:17	60:23
sinus 63:13,19	58:18	11:13	70:20 79:19,20	talk 35:21 57:10
64:16,17,23	sprained 50:22	studies 14:3,7	surgical 8:5,21	68:25
site 43:23	51:7	59:8	51:20	talkative 57:15
situation 79:12	spread 45:8	study's 59:14	surprise 45:25	talked 67:10
79:13	ss 90:4	subopinion	50:15	80:24 82:21
six 18:17 35:8,11	St 11:19 37:16	67:13	surprised 19:8	83:12
35:17 61:2	37:22,24 39:17	subpart 54:12	surveillance	talking 47:7
70:6,8,9,10,10	41:21 75:5	55:2	80:22	talks 14:18
70:16	77:23	subparts 10:10	survivable 58:7	tamponade
Sixth 1:13	stabblings 58:11	37:4 54:24	survival 60:4,6,8	63:16
skipping 3:19	stability 45:16	SUBSCRIBED	survive 34:7	teaching 4:24
slides 11:3	stable 56:19	87:18	survived 33:23	9:2,5 10:8,14
slightly 40:18	stack 23:13	subsequent	35:20 63:8	10:20,23
slows 65:8	staff 11:12	78:24	65:2 66:19	team 9:16
small 9:12 77:25	stamping 47:12	sudden 40:24	surviving 66:8	teams 9:7
somebody 36:10	standard 34:5	59:12,15 61:4	suspected 12:14	telemetry 56:22
49:25 59:5	56:21,25 61:13	61:6	suspicion 79:16	telephone 21:5
79:20	73:8,10 82:19	suddenly 62:18	sworn 3:3 87:8	tell 3:24 4:19 9:4
somewhat 34:22	83:16	suffered 61:10	87:18	15:12 22:10
sooner 68:20	start 4:6 37:5	70:21	symptom 62:10	26:6 37:12
sorry 14:20	52:4 57:15	suffering 75:18	symptoms 44:9	40:16 42:19
33:21 45:5	76:9	sufficient 52:18	system 12:25	46:25 57:11
46:21 57:13	started 6:21	sugar 44:14	63:10	69:2
sounds 35:24	76:15	45:10 50:7	systemic 69:9	telling 57:16
source 44:11	state 1:17 3:5	52:4,7 72:6	systolic 64:12	ten 6:10,12,13
49:11 69:6	50:15 62:12	76:2	68:3	15:18 59:13
72:4	87:4 90:3,8	sugars 36:9,23		60:9,23 83:23
speak 85:4	states 27:5,8	49:22 51:15	T	83:25
specific 9:11	59:11 87:8	52:20 54:16	T 86:2 87:2,2	tend 81:10
11:8 15:25	status 43:20	suggestive 37:17	89:6 90:2,2	terms 43:25 72:3
30:25 52:12	45:20 49:20	Suite 2:4,9	Tab 40:14	test 39:4
69:5 70:2	Stenotype 1:16	summarized	tabbed 28:12,14	testified 3:6
82:10	90:7	68:18	33:3 89:18	16:18 18:17,22
specifics 51:13	stents 43:17	summary 33:13	table 22:22	19:12 48:21
53:5,22 61:24	step-down 56:23	support 31:6,11	58:17	74:20
speed 12:2	stickey 28:5	32:3 41:7 56:7	tables 59:11	testifying 73:7
spend 33:11	store 18:2	supportive 33:3	tachycardia	testimony 17:7
spent 6:9 15:13	Street 1:13 2:4	supports 40:20	62:21	17:21 20:9,11
15:19 21:7	stress 5:24 39:4	41:10 42:20	take 3:16 13:2	21:11 82:15
spite 64:5 66:3	43:6,14 46:3	68:6	14:9 23:12	tests 5:24 78:24
spoke 30:11	50:15 68:11	sure 19:11 33:5	53:8,24 60:9	thank 15:2
spoken 29:16,19	69:23 76:8,11	37:4 39:20	60:10,12	28:24 35:21
32:13	76:14 77:7,10	44:15 48:7	taken 1:11 48:16	56:9 57:20
			74:15 86:4,9	

66:25	6:10,14,19	transcript 86:14	typically 8:5	16:9,10
thanks 55:25	12:18 14:16	87:9,12 88:8	51:8	upper 47:10
therapy 35:16	15:12,18,20,23	88:11		use 24:11
64:8 82:23	17:5 21:13,13	transcription	<hr/> U	usually 34:14
83:2	29:21 32:7,13	90:13	U 3:2 48:20	76:8 80:14
thereof 90:19	32:15 43:18	transcripts 29:9	74:19	
thing 15:7 18:4	46:24 47:2	transferring	unable 82:8	<hr/> V
18:12 68:18	48:17 55:9	73:2	unacceptable	v 1:5
things 24:13,18	65:25 66:5	trauma 58:10,17	63:25	V-fib 61:7 62:20
28:22 33:3	69:13,16 70:21	treating 29:20	unauthorized	63:5
47:9 61:16	74:16 75:17	30:7	14:14	V-tach 61:7 63:5
62:19,22 64:7	76:23 78:16	treatment 65:3	unaware 73:17	63:18
think 17:6,16	79:24 84:20	trial 16:5,12,15	uncertain 44:4	V1 37:16
19:13 21:2	86:5 87:11	16:18 17:21	49:25 55:13	V2 37:16,25
23:18,20 30:23	90:11	21:14 67:8	uncertainty 42:6	38:5 41:21
31:3 32:20,25	timed 37:10	73:7 82:14	49:20	42:6 75:3
33:13 34:20	timeframe 34:23	89:11	undergoing	V3 37:16
35:5 39:15	timely 71:12	trials 17:8 18:17	81:15	variety 7:18
41:20,20 45:5	times 3:18 9:25	trigger 18:4,12	underlying 41:6	8:11
48:23 49:9	10:11 15:11	troponin 55:3,7	45:14 46:2	ventricle 58:9
53:19 55:2	61:2	55:15,16,21	50:16 51:5	65:5 81:7
56:8 67:4	Tina 1:15 3:4	56:4 75:8,20	52:23,25 53:20	ventricular 43:4
70:11 72:16	90:6,24	76:6,18,23	65:19	62:21
73:10 74:25	title 86:6 87:11	77:3 78:10,24	understand 3:22	version 16:10
75:4,10,11	today 3:16 4:4	79:5,9,14	17:25 37:5	versus 7:12 20:2
76:15	6:24 20:22	troponins 76:8	48:5 52:15	20:8 59:25
third 54:12	21:17 25:23	76:21	54:24 76:20	Video 1:13
thought 46:7	31:16 32:10	true 76:16 87:12	understanding	view 12:13 18:2
thousands 59:10	66:10,14 71:4	90:12	48:10	38:15
threat 51:5,16	81:19,24 84:12	trying 32:25	understood 3:24	viewed 72:6
53:23 54:6	85:7	46:8 48:6	unincorporated	viewpoint 36:3
threatening 72:8	today's 21:6	52:15,21 54:23	5:10	80:5
three 9:17 10:5	toe 34:20	Tuesday 1:14	unit 34:6,9	virtually 12:12
22:3,7,8 57:23	told 8:25 20:23	Twenty-five	35:19 56:22,23	59:21
58:22 60:12,24	23:10 29:10	5:16	64:3 73:11,23	vitae 4:10 89:10
61:2,2 63:11	66:14 84:9	two 10:5 11:9	74:5	vital 67:15,18
63:22 64:5,7	top 72:8	14:4 17:18	United 59:11	vs 88:5
three-minute	total 23:21	37:8 53:4	unknown 43:25	vulnerable
65:10	76:21	58:23 59:3,24	unlock 18:13	43:13
threshold 53:21	totally 28:8	60:11 61:16	unquestionably	
thrombotic	Towson 2:10	72:2	52:10 64:20	<hr/> W
77:22 80:17	toxic 45:8	type 79:13 82:25	unreasonable	walk 31:13
thrown 59:12	toxicity 47:24	84:6	36:19	32:23 54:23
throws 59:14	tradition 27:4,9	types 8:13	unsurvivable	walking 31:10
tightly 83:14,17	training 4:25	typewritten	61:19	wall 37:18,20
tightness 80:2	9:11,17	26:23 86:11	unusual 18:21	38:8,10 80:17
time 5:18,22 6:9	trajectory 70:5	typical 62:23	62:10	want 19:2 28:19
			updated 4:7	33:5,11 43:9

71:5 85:12	worsened 69:8	1100 2:9	2100 2:4	500 21:15 40:23
wanted 26:14	69:10	116 67:20	2111 37:10	56 67:20
Washington 2:9	wouldn't 17:17	117 64:14	40:17	<hr/>
wasn't 19:5	53:24 61:14	12 34:24 47:6	21201 2:5	6
watching 54:3	wound 58:11	120 39:2 45:12	21204 2:10	6 22:18,20 89:15
wave 37:21	write 12:3 14:10	67:21	21st 40:2,17	6:00 64:15
wavy 37:14 38:2	writing 24:3	120's 49:24	67:19 90:21	6:04 62:4 64:12
38:5 39:12	wrong 43:10	123 67:23	22 89:15	64 67:22
41:24 42:4	53:6 54:2 62:9	13 34:24 47:9	24 46:12 47:3	65 67:24
way 26:25 27:23	62:23,25	49:5	78:4,5 89:16	675 20:23
33:2 41:22	wrote 57:6	14 11:21 21:20	24-C-16-0034...	6her 52:23
42:6 61:6	<hr/>	89:14	1:6	<hr/>
79:22 81:12	X	141 67:22	25 5:20 46:20	7
82:4	<hr/>	14th 21:17	26 44:15	7 16:16 23:23
ways 57:24	x 1:3,9 89:2,6	15 15:18,22 20:4	27 89:17	24:6 25:4,6
we'll 4:8 28:18	<hr/>	20:22 59:14,20	28 89:18	30:22 31:14,20
32:18	Y	60:6 64:16,22	<hr/>	32:18 89:16
We're 31:7	year 9:14,21,25	65:19 83:23,25	3	70 11:14 45:5
weak 65:19	10:12 11:7	16 89:11	3 19:17,22 37:24	63:14
weakness 50:5	16:19 18:18	1655 67:20	75:10 89:4,12	71 45:6
week 9:18 18:10	21:18 45:6	18 1:14 88:6	30 43:14 60:7,12	75 7:14 64:14
weekend 9:19	years 6:6,12	1845 67:21	60:20,25 63:2	84:2
weekends 15:17	11:22 16:7	1848 46:11	31 44:15	7780.4 49:6
went 36:14	17:6,9 19:19	19 62:3 64:13	32 75:13	78 64:12
45:13 54:15	20:4	89:12	35 43:9	7th 16:19
63:5	yesterday 21:6	1990 14:11	37th 1:13	<hr/>
West 1:13	30:12	<hr/>	38 75:10	8
whatsoever 80:7	York 1:14,14,17	2	39 1:13	8 27:11,18 28:3
WHEREOF	3:5 11:20	2 6:16 16:5,13	<hr/>	89:17
90:20	14:15 90:3,5,8	37:24 71:9	4	81 14:5
wise 90:18	<hr/>	89:11	4 20:19,21 40:14	82 14:5
witness 3:3 20:7	Z	20 6:6 15:19,21	89:10,13	84 11:18 12:22
20:11 90:10,20	zero 59:17 65:21	60:11 69:13,14	40 43:9,14	89:5
witnessed 62:14	78:5	69:15 89:13	401 2:9	87 6:7 11:18
66:4	<hr/>	2005 6:18 12:15	44 68:2	12:23 14:7
woman 40:23	0	12:18	450 21:9,13	<hr/>
42:24 68:6	Odoing 7:16	2006 6:6,7,21	40:23	9
72:9 80:9,19	<hr/>	201 2:4	47 44:14	9 28:13,16 29:5
work 15:14,16	1	2012 16:6 19:20	491 40:25	89:18
21:10,14 52:7	1 4:9,11 17:22	2013 40:2	<hr/>	90 6:9,13
82:13	29:5 37:24	2016 20:22	5	91 6:17 12:18
worked 11:15	89:10	24:25 32:14	5 21:16,22 67:16	15:6 64:11
16:21 17:9	1:10 85:22	2017 1:14 16:16	89:14	92 15:7
working 17:13	1:19 67:23	17:22 21:20	5:16 67:25	94 67:24
works 18:12	100 59:16,22	87:20 88:6	5:45 62:4,7 63:9	95 60:7
worse 34:21	60:6	89:14 90:22	50 35:10	97 68:2
61:2	10018 1:14	20th 67:18	50,000 26:13	
	11 62:2 64:9	21 89:14	50/50 70:7	
	11:00 1:15			