
IN THE CIRCUIT COURT FOR BALTIMORE COUNTY, MARYLAND

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EVELYN M. DELOVICH-WOOD, et al.,

Plaintiffs,

v.

Case No.
03-C-14-012573

HASSAN E. KASSAMALI, M.D., 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 Friday, September 18, 2015, commencing at 2:00 o'clock p.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, No. 2100

(6) Baltimore, Maryland 21201

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

(8)

(9) KASLICK & PRETE, LLC

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(13) BY: MARY ELIZABETH KASLICK, Esq.

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(1) Charash, M.D.

(2) endeavor.

(3) Could you state your full name for

(4) the record, please?

(5) A Bruce Charash.

(6) Q And where is your professional

(7) address, Dr. Charash?

(8) A 205 East 63rd Street and Lenox Hill

(9) Hospital. I see patients there as well in the

(10) out-patient department.

(11) Q So that 205 East 63rd, is that your

(12) actual office address?

(13) A Yes.

(14) Q Is that physically located in area

(15) of Lenox Hill?

(16) A Yes.

(17) Q Describe your practice for me,

(18) please.

(19) A I currently have an out-patient

(20) practice since 2006. Up until then I was hired by

(21) medical schools and hospitals running intensive

(22) care units, but in the last decade I have seen

(23) patients. The majority of my practice is

(24) cardiology. Seventy-five percent of my patients

(25) were referred to me for cardiac problems.

(1) Charash, M.D.

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

(3) witness, having been first duly sworn by

(4) Tina DeRosa, a Notary Public within and for

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

(6) testified as follows:

(7) DIRECT EXAMINATION

(8) BY MS. KASLICK:

(9) Q Dr. Charash, it's pronounced

(10) Charash, right. Thank you.

(11) My name is Mary Beth Kaslick. I

(12) represent Dr. Kassamali in an action that has been

(13) brought in the Circuit Court of Baltimore County

(14) with respect to the care and treatment of decedent

(15) Michael Mills.

(16) I'm going to ask you a series of

(17) questions. If you don't understand me, if I'm not

(18) making myself clear, please let me know; okay?

(19) A Yes.

(20) Q Also, please don't be offended if I

(21) ask you to slow down. I can tell from our

(22) conversation as you came in the room that you're a

(23) very quick talker and I'm not a quick hearer. So

(24) there may be times that I ask you to do that, but

(25) I promise you this will not be a particularly long

(1) Charash, M.D.

(2) Twenty-five percent of my practice over time have

(3) become patients who came to me for primary care in

(4) addition to the cardiology patients.

(5) Q So the 25 percent that you see for

(6) primary care, are they also cardiology patients or

(7) some are or some aren't?

(8) A They may or may not develop heart

(9) disease, but their original reason for seeing me

(10) was not for cardiac reasons.

(11) Q Okay. And you said over the last

(12) decade or so that has been the makeup of your

(13) practice. Before that were you serving as an

(14) intensivist?

(15) A Most of the time, yes. But I also

(16) had an out-patient practice, but that was ten to

(17) 25 percent of my time. Now, my practice is 90

(18) percent of my clinical time, ten percent are at

(19) the hospital.

(20) Q And where did you serve as an

(21) intensivist?

(22) A Well, at Cornell, New York Hospital

(23) from '87 to '91. Then from '91 to 2005 I was

(24) chief of the cardiac care unit at Lenox Hill, and

(25) then from January 2005 -- February 1, 2005 until

(1) Charash, M.D.
 (2) July 1, 2006 I was on the full-time medical
 (3) faculty of Columbia University and spent a third
 (4) of my time running the intensive care unit.
 (5) Q When you were running the CCU at
 (6) Lenox Hill were you actually employed by the
 (7) hospital or the corporation that owns the
 (8) hospital?
 (9) A By the hospital.
 (10) Q Okay.
 (11) A I didn't think there's a distinction
 (12) then. Now the hospital is part of a chain. It
 (13) was bought.
 (14) Q And why did you move into primarily
 (15) a private practice in 2006?
 (16) A A number of reasons, but mainly it
 (17) was time. It's really more complicated. I was at
 (18) Lenox Hill with friends I knew from Cornell where
 (19) a giant program had been established there.
 (20) Although I never did interventional work, my close
 (21) friends were the leaders of interventional
 (22) medicine in New York really and they moved to
 (23) Columbia.
 (24) When they left Lenox Hill, after 15
 (25) years of running the cardiac intensive care unit I

(1) Charash, M.D.
 (2) and have this marked as No. 1, please.
 (3) (Curriculum vitae was marked
 (4) as Deposition Exhibit No. 1 for
 (5) identification, as of this date.)
 (6) BY MS. KASLICK:
 (7) Q Doctor, the CV that you handed me,
 (8) Exhibit No. 1, is that accurate and up to date?
 (9) A Yes.
 (10) Q Do you have any publications that
 (11) are in the pipeline that aren't listed on this CV?
 (12) A No.
 (13) Q Did you happen to bring with you a
 (14) list of your medical/legal testimony or work over
 (15) the last few years?
 (16) A I did not. And part of the reason
 (17) is I'm updating it because it's a year old, but
 (18) while I am updating I'm happy to forward to you
 (19) the previous list.
 (20) Q That would be great. And if you can
 (21) do that it would be up to date until
 (22) approximately?
 (23) A A year ago.
 (24) Q A year ago.
 (25) A Every year at the end of the summer

(1) Charash, M.D.
 (2) thought it was time for a change. It's really a
 (3) younger person's job. It's very long hours. You
 (4) are called all the time, so I figured it was time
 (5) to make a change.
 (6) When I went to Columbia I started to
 (7) develop a larger practice and my patients who I
 (8) know were all from the East Side where I lived and
 (9) worked and it made so sense, so I decided I would
 (10) go back to Lenox Hill and have an out-patient
 (11) practice there.
 (12) Q In the Upper East Side?
 (13) A Yes. I have patients that come from
 (14) different areas, but most of my people wanted to
 (15) go to Lenox Hill Hospital, so that's why I moved
 (16) back.
 (17) Q Do you have any privileges at any
 (18) other hospital currently besides Lenox Hill?
 (19) A No.
 (20) Q Do you have a current CV with you?
 (21) A Yes.
 (22) Q May I have it?
 (23) A Yes.
 (24) Q Thank you.
 (25) MS. KASLICK: Go ahead, Tina,

(1) Charash, M.D.
 (2) I put in the year before.
 (3) Q Can you give me an estimate of how
 (4) many times over the last year you have given
 (5) testimony in deposition or at trial?
 (6) A Probably 20 times in deposition in
 (7) 12 months and probably 12, 13 times in trial.
 (8) Q Over the last year?
 (9) A Calendar year, yes. Over the last
 (10) 12 months, let's just make it clear.
 (11) Q Have you worked with Mr. Peek or
 (12) Mr. Cardaro's partner before?
 (13) A I have.
 (14) Q How many times?
 (15) A I don't know the exact number, but I
 (16) would be surprised if it wasn't closer to four or
 (17) five or six. It may be less. I just didn't
 (18) recall.
 (19) Q Over the last year have any, all,
 (20) some of those testimonies involved the evaluation
 (21) of patients with complaints of chest pain?
 (22) A Yes.
 (23) Q Can you tell me how many?
 (24) A No.
 (25) Q Many?

(1) Charash, M.D.
 (2) A Many is a comparative term, but
 (3) frequently medical/legal cases where I'm asked to
 (4) give opinions involve chest pain. But certainly
 (5) there are many other issues I have been involved
 (6) with, but I would say that chest pain is certainly
 (7) as common as any other issue that has come up.
 (8) Q What about on behalf of physicians.
 (9) Have you ever testified in a case in which the
 (10) criticism of the doctor is that he didn't
 (11) appropriately evaluate a patient with complaints
 (12) of chest pain?
 (13) A Yes.
 (14) Q When was the last time you testified
 (15) for a physician in that circumstance?
 (16) A Good Lord, I'm not sure the last
 (17) time that I testified, but I can tell you I do
 (18) recall one case out of Palm Beach County which was
 (19) probably four, five years ago.
 (20) Q Florida?
 (21) A In Florida.
 (22) Q Who were you working with in that
 (23) case?
 (24) A The firm's name was Bobo, B-O-B-O,
 (25) Spicer, S-P-I-C-E-R, and Bochino, B-O-C-H-I-N-O.

(1) Charash, M.D.
 (2) Q And what do you recall about that
 (3) case?
 (4) A Not a great deal except that a
 (5) patient I think had seen an internist with pain
 (6) that was burning in his esophageal area that got
 (7) worse when he lied down that was relieved by
 (8) antacids and then I believe six months to a year
 (9) later he died of a heart attack.
 (10) And the plaintiff was alleging that
 (11) he should have been worked up for heart disease
 (12) then, but at the time the pain had been evaluated,
 (13) treated with antacids, and my main argument for
 (14) that case particularly that just because he had
 (15) reflux disease doesn't protect him against heart
 (16) attacks for the rest of his life and it was a
 (17) defense verdict.
 (18) There was not one element of his
 (19) pain that even raised a suspicion of heart
 (20) disease. He wasn't referred to a cardiologist, he
 (21) never had an EKG. Pain was as clear GI as you can
 (22) have and it did resolve with antacids. So I felt
 (23) it was an appropriate case to defend.
 (24) Q Did you give a deposition in that
 (25) case?

(1) Charash, M.D.
 (2) A I must have because I remember
 (3) testifying in trial and in Florida you are
 (4) deposed, but I didn't remember the deposition.
 (5) Q Do you remember the name of the
 (6) doctor?
 (7) A I don't remember any details other
 (8) than the law firm and the county.
 (9) Q Just Bobo, Spicer & Bocchino in Palm
 (10) Beach County, Florida?
 (11) A Correct.
 (12) Q All right. Have there been any
 (13) other instances on which you have testified on
 (14) behalf of a defendant doctor in a case involving
 (15) allegation that a patient with chest pain was not
 (16) appropriately worked up for cardiac disease.
 (17) A Offhand I cannot.
 (18) Q How about the contrary. Can you
 (19) tell me how many times approximately you've
 (20) testified that a physician violated the standards
 (21) of care under those circumstances?
 (22) A I could not possibly give you an
 (23) accurate estimate. What I want to make clear
 (24) which might or might not give you a perspective of
 (25) this. I have a good memory, but it's more of a

(1) Charash, M.D.
 (2) passive memory. If I'm given information I'll
 (3) remember details once I'm provided some
 (4) information. I have reviewed in my life time
 (5) somewhere between 800 and 900 medical/legal cases
 (6) over the last 28 years. In that same time span I
 (7) have probably been involved in over 30,000 patient
 (8) visits.
 (9) There is just no way in the world I
 (10) can actively recall or separate medical histories
 (11) from medical/legal cases or from medical cases
 (12) without something to remind me and to sit here to
 (13) try to come up with collective numbers is
 (14) virtually impossible.
 (15) Even cases that I may have testified
 (16) in the last year I may not remember any of the
 (17) details other than the name. Then if presented
 (18) with some information I would remember a lot more,
 (19) but cold when you ask me numbers like how many
 (20) times have I been involved in cases where chest
 (21) pain is the central issue, I can't answer your
 (22) question. I don't know.
 (23) Q How much did you make last year as a
 (24) medical/legal expert?
 (25) A How much money grossly?

(1) Charash, M.D.
(2) Q Yes.
(3) A I don't know yet. I deferred my
(4) taxes from 2014 -- 2015, until October, but I can
(5) estimate.
(6) Q Give me your estimate.
(7) A About \$75,000.
(8) Q What's the most you ever made in
(9) calendar year, a tax year of doing medical/legal
(10) work gross?
(11) A Possibly between 80 and \$90,000.
(12) Q Tell me how much or how you charge,
(13) if you just go through that for me.
(14) A Well, my charges are on an hourly
(15) basis and they have changed over the years.
(16) Q Currently.
(17) A My current charges are \$450 an hour
(18) for review time and \$500 an hour for testimony
(19) time, deposition and trial. Trials I charge for
(20) every hour of work the activities of a trial make
(21) me miss on a 9:00 to 5:00 hourly basis.
(22) So I would assume if I went to
(23) Baltimore I would miss an eight-hour day of work,
(24) so I would charge \$4,000 for the trial.
(25) Q How much time have you put in as an

(1) Charash, M.D.
(2) you?
(3) A None.
(4) Q No allegation against you, you were
(5) just sued?
(6) A Correct.
(7) Q Okay.
(8) A Everyone whose name on the chart of
(9) a patient at New York Hospital who had a bad
(10) outcome was included in the suit. When my
(11) discovery deposition was taken it demonstrated I
(12) had absolutely zero involvement with the patient
(13) during any time of the alleged complaints, I was
(14) immediately dropped by the plaintiff.
(15) Q When you were -- do you remember
(16) what happened to that. What was the bad outcome
(17) in that case?
(18) A I have no idea. I only know that I
(19) gave the patient thrombolytic therapy for an
(20) evolving heart attack. After my involvement which
(21) was in the emergency room as the on-call
(22) cardiologist he left the cardiac care unit, he
(23) went to the medical floors and something happened
(24) on the medical floor that became the basis of the
(25) allegation. I don't even know what happened to

(1) Charash, M.D.
(2) expert in this particular case to date?
(3) A I don't know the exact amount, but I
(4) would estimate about four to five hours.
(5) Q When did you first get materials to
(6) review in this case?
(7) A I believe at some point during the
(8) spring. I don't have the original cover letter
(9) which I'm not sure why I don't, but I have the
(10) chart. But I'm pretty certain I recently received
(11) the case.
(12) Q In the spring of 2015?
(13) A I think so.
(14) Q What makes you think that?
(15) A My best recollection.
(16) Q That it was fairly recently?
(17) A Yes.
(18) Q Have you ever been sued for
(19) malpractice yourself?
(20) A Once.
(21) Q And when was that, approximately?
(22) A 1989.
(23) Q And where was it?
(24) A New York County.
(25) Q And what was the allegation against

(1) Charash, M.D.
(2) the patient. All I know is that I had no clinical
(3) management of him at any point that was in the
(4) allegation. So once it was clear that I had
(5) nothing to do with this case I was dropped.
(6) Q When you were an employee of any
(7) hospital system as opposed to an independent
(8) physician was your care ever brought into question
(9) in a lawsuit in which the hospital was sued, but
(10) you weren't named individually?
(11) A No. I was never deposed in any
(12) other case as a fact witness -- actually once as a
(13) fact witness with care before the hospital, but I
(14) have never been involved in a lawsuit other than
(15) the one time where my name was dropped. Nothing
(16) has ever been settled or even alleged about my
(17) involvement in the patient's care in a case.
(18) Q So there haven't been any claims at
(19) all?
(20) A None.
(21) Q As part of your current teaching can
(22) you tell me what that involves?
(23) A Currently it involves two aspects.
(24) One is whenever a patient of mine is admitted to
(25) the hospital I am expected to and do provide

- (1) Charash, M.D.
 (2) education to the house staff and the medical
 (3) students engaged in helping manage my patients.
 (4) Q On the floor?
 (5) A On the floor.
 (6) Q Okay.
 (7) A And then once a year I am asked to
 (8) be the attending of the month for the cardiac
 (9) consults service where I round daily with the
 (10) consult team which involves cardiology fellows,
 (11) medical house staff and medical students, and
 (12) teach them cardiology.
 (13) About once a year I've been asked,
 (14) although I haven't in the last year, to give a
 (15) talk about chest pain and its evaluation in the
 (16) emergency room as I helped design the protocols
 (17) for Lenox Hill's chest pain center in the
 (18) emergency room.
 (19) When I was a full-time faculty
 (20) member at Lenox Hill, when I was on their faculty
 (21) I would give regular lectures at NYU and regular
 (22) lectures at the hospital. I have probably
 (23) delivered 600 formal lectures on the road over the
 (24) 25 years of my medical career.
 (25) Q When is the last time you give a

- (1) Charash, M.D.
 (2) Q Did you provide any kind of written
 (3) materials to the people that you were lecturing
 (4) to?
 (5) A No.
 (6) Q Did you use an outline or any kind
 (7) of notes for yourself?
 (8) A No. I have been giving this talk
 (9) for 25 years with small changes because the
 (10) approach to chest pain is pretty universal.
 (11) Q Has it ever been videotaped that you
 (12) know of?
 (13) A I don't know of anyone videotaping
 (14) me ever.
 (15) Q Have you ever published on the
 (16) evaluation of chest pain?
 (17) A I don't think so.
 (18) Q Do any of the publications that are
 (19) listed on Exhibit No. 1 which is your CV deal with
 (20) the issues as you see them in this particular
 (21) case?
 (22) A No.
 (23) Q You said you developed chest pain
 (24) protocols for the emergency room while you were at
 (25) Lenox Hill as the -- was that when you were

- (1) Charash, M.D.
 (2) formal lecture on the evaluation of chest pain?
 (3) A Probably two years ago to the house
 (4) staff.
 (5) Q And did you do it with a power point
 (6) presentation?
 (7) A No.
 (8) Q Did you do it with any kind of
 (9) audiovisual aids?
 (10) A Only one.
 (11) Q What was it?
 (12) A I took a textbook of cardiology and
 (13) threw it into a trash can.
 (14) Q Why?
 (15) A Because I told them that textbooks
 (16) cannot help you be a better doctor because they
 (17) can only give you principles. It's about
 (18) eliciting the facts of a case. Hearing the
 (19) patient, what they say and how they act and
 (20) understanding human nature what people say and you
 (21) can't practice from a textbook. Textbooks are
 (22) invaluable in so many things, but when it comes to
 (23) interface with patients, the history and careful
 (24) detail provides 80 percent of cardiac management
 (25) and a book can't teach you how to do that.

- (1) Charash, M.D.
 (2) director of the CCU?
 (3) A Yes.
 (4) Q Are they protocols that are still
 (5) used at Lenox Hill Hospital?
 (6) A I would think in the last ten years
 (7) they have been updated, but I don't know for sure.
 (8) But generally there's an expectation of updating
 (9) protocols with some frequency by the Joint
 (10) Commission. My guess is they have updated them.
 (11) Q When was it that you developed or
 (12) helped develop them, what year was the last time?
 (13) A Probably between 2000 and 2005. I
 (14) don't remember what year. That's way too obscure
 (15) for me to know.
 (16) Q Do you have a copy of the protocols
 (17) as they existed at that point?
 (18) A No.
 (19) Q Since then have you been involved in
 (20) developing any other kinds of protocols,
 (21) guidelines, procedures for the evaluation of chest
 (22) pain?
 (23) A No.
 (24) Q Besides helping with the generation
 (25) of those at Lenox Hill while you were there as

- (1) Charash, M.D.
 (2) chief of CCU, have you had anything to do with the
 (3) development of protocols for the evaluation of
 (4) chest pain in any other setting?
 (5) A No.
 (6) Q Have you ever served on the
 (7) editorial board of any journal?
 (8) A No.
 (9) Q Have you ever been asked to review
 (10) journal articles by any publication?
 (11) A Yes.
 (12) Q Okay. Which ones?
 (13) A I was asked to edit and review
 (14) articles from a journal that was run by a former
 (15) professor of mine at Cornell named Steve Schidt,
 (16) S-C-H-I-D-T. He died recently. And I just don't
 (17) remember the name of the journal. It was called
 (18) Cardiology something. I can't remember the name
 (19) offhand, but this was back in the late '80's.
 (20) Q Okay. Since then have you been
 (21) asked to review any journal articles?
 (22) A No.
 (23) Q On your curriculum vitae there is a
 (24) book listed called the Heart and Circulatory
 (25) System, Health and Medical Horizons and it looks

- (1) Charash, M.D.
 (2) disease.
 (3) Q Is that out of print?
 (4) A Well, you need to order it. It's
 (5) not actively in print, but there are copies you
 (6) can buy on the internet.
 (7) Q Second-hand?
 (8) A Probably.
 (9) Q Okay. You haven't updated it since
 (10) 1992; have you?
 (11) A No.
 (12) Q What were you asked to do in this
 (13) particular case, Doctor?
 (14) A Review all available records and
 (15) information, the discovery products on the case of
 (16) Michael Mills. Provide a standard of care opinion
 (17) as well as causation and survival, I guess.
 (18) Q Did you make any notes?
 (19) A No. But just to help speed one part
 (20) up, I used Post-its to mark pages. The colors
 (21) have no meaning. It's just purely to have
 (22) different colors to find things and I highlight
 (23) things. Very rarely do I write on a page. If I
 (24) do, in this case I didn't, it's usually just to
 (25) identify what's on the page. But the highlighting

- (1) Charash, M.D.
 (2) like the last publication dates or the last
 (3) edition that's listed on your CV appears to be
 (4) 1989.
 (5) Since that time have there been any
 (6) updates of that particular book?
 (7) A No. That was -- that's an
 (8) encyclopedia and like many other encyclopedias
 (9) they had annual summaries including medical
 (10) summaries of the year, and I was asked for those
 (11) four or five years to write the medical annual
 (12) summary for heart disease and that's what I wrote.
 (13) Q Okay.
 (14) A But when I left Cornell I did not
 (15) get engaged in doing that anymore.
 (16) Q So that was a chapter within the
 (17) encyclopedia?
 (18) A It was.
 (19) Q Okay. And the books you have
 (20) listed, there's two editions, one is a hard cover,
 (21) one is paperback of a book called Heart Myths; is
 (22) that right?
 (23) A Correct. That was my own book to
 (24) the public to explain very common
 (25) misunderstandings and misconceptions about heart

- (1) Charash, M.D.
 (2) colors and/or the Post-it colors have no organized
 (3) system to them. They are just random.
 (4) Q I think you said and correct me if
 (5) I'm wrong, that you no longer have whatever
 (6) transmittal letter you had that indicated your
 (7) first mailings in this case; right?
 (8) A Correct.
 (9) Q Okay. Do you have a bill or
 (10) anything that would reflect when you first got
 (11) involved?
 (12) A No, but I'm sure Mr. Peek's firm
 (13) does.
 (14) Q Do you keep a time record of your
 (15) work in medical malpractice cases?
 (16) A Not the way you're probably
 (17) thinking. Like I said, Mr. Peek's firm would have
 (18) the invoices. What I do is I write an invoice. I
 (19) Keep a copy of it. When I get paid I don't keep
 (20) the hourly rate, but I keep the annual income for
 (21) tax purposes.
 (22) So I don't keep longitudinally the
 (23) hours of a case because once I do activity, I bill
 (24) for it and when I'm paid I keep track of the total
 (25) income, but not case based income.

(1) Charash, M.D.
 (2) Q Okay. Let me see if I understand
 (3) it. Do you send out interim invoices to attorneys
 (4) or do you just send out one invoice at the end?
 (5) A No. I send out interim invoices.
 (6) If they send me a record I review it, I keep track
 (7) of the hours, send an invoice. When I am paid I
 (8) keep track what money I received for income
 (9) purposes, but I don't keep track of case by case
 (10) income.
 (11) Q Would the invoice that you send to
 (12) an individual law firm reference one particular
 (13) case on each invoice?
 (14) A It would reference the exact
 (15) activity I did and the time spent.
 (16) Q I was going to get to that part of
 (17) the question. For example, if you're doing
 (18) multiple cases for one law firm would you send out
 (19) one invoice a month or would you just send out
 (20) invoice that pertain to that particular case at
 (21) the time?
 (22) A The second, case by case.
 (23) Q Okay. And that invoice would
 (24) reflect what the activity was and the time spent
 (25) to that activity?

(1) Charash, M.D.
 (2) A Right. So Mr. Peek's firm would
 (3) have that.
 (4) Q Okay. I'm just trying to understand
 (5) what you've got, what's out there.
 (6) So then when you get a check you
 (7) destroy your copy of the invoice?
 (8) A And then mark down my income.
 (9) Q Okay. Then when you mark down your
 (10) income do you mark it down per case or do you just
 (11) have a running tab of how much you are making that
 (12) year?
 (13) A I have running tab of the law firm.
 (14) So if a law firm has a case I guess I can figure
 (15) out it was just that one case, but I don't need to
 (16) keep track -- many cases extend over several years
 (17) and there is no financial reason why I need to
 (18) know what I made on a case over three years if
 (19) they are different activities.
 (20) So as a result I keep track of
 (21) annual income for my tax purposes and accounting
 (22) purposes, but I don't keep an internal billing
 (23) record for each case.
 (24) Q Got it. In this particular case did
 (25) you receive materials to review in one batch or

(1) Charash, M.D.
 (2) multiple batches?
 (3) A One batch clearly because here is a
 (4) table of contents with the materials I have here
 (5) today.
 (6) Q And that's -- those materials that
 (7) are referenced in the table of contents are the
 (8) only things that you have reviewed in this case?
 (9) A Correct.
 (10) Q Okay. May I see it, please, your
 (11) pile. Thank you.
 (12) A I did take some things a little bit
 (13) out of order and I moved all of the relevant EKG's
 (14) to the very front of the chart.
 (15) Q I'll tell you what. Let's just have
 (16) the table of contents marked as Exhibit No. 2 and
 (17) then, Doctor, as we go along I may have individual
 (18) pages marked as we go along. Here, you can have
 (19) that back.
 (20) A Thank you. Let me leave this with
 (21) Tina so I don't take it.
 (22) (Table of contents was marked
 (23) as Deposition Exhibit No. 2 for
 (24) identification, as of this date.)
 (25) Q I was going to say I will want

(1) Charash, M.D.
 (2) photocopies of some of the things you've marked so
 (3) we'll do that later.
 (4) A Or they can send it to me.
 (5) Q Can you tell me, Doctor, give me an
 (6) outline of what your opinion is with respect to
 (7) the standard of care with respect to Dr.
 (8) Kassamali.
 (9) A Well, it's a really rather simple
 (10) singular standard of care criticism. Dr.
 (11) Kassamali deviated from the standard of care by
 (12) failing to refer Mr. Mills for a cardiac
 (13) evaluation, that would have been including a
 (14) stress test and ultimately cardiac
 (15) catheterization, and by doing so Mr. Mills died
 (16) from an otherwise preventable death from a heart
 (17) attack. Had Dr. Kassamali complied with the
 (18) standard of care Mr. Mills would be alive and well
 (19) today.
 (20) Q So how is it that the standard of
 (21) care required Dr. Kassamali to refer Mr. Mills for
 (22) a cardiac evaluation that would have included a
 (23) stress test and ultimately a catheterization?
 (24) A I do apologize, but when you say how
 (25) it is, are you asking me for the basis of my

(1) Charash, M.D.
 (2) opinion in terms of explaining it?
 (3) Q I am, yes.
 (4) A Okay. The basis of my opinion is as
 (5) follows. When Mr. Mills was referred to Dr.
 (6) Kassamali he was sent to him and the first visit
 (7) in which he saw him to my knowledge is March 23,
 (8) 2012 and he was sent because he was having chest
 (9) pain.
 (10) Now, basically you can say that when
 (11) a patient is referred to a cardiologist for
 (12) evaluation of chest pain by a primary health care
 (13) practitioner you would think that that would
 (14) include actually evaluating the patient's heart.
 (15) Chest pain is certainly the most
 (16) frequent single complaint patients present in
 (17) doctors' office. It's the plurality, not the
 (18) majority. But chest pain is the most common. It
 (19) would be the most common single complaint of
 (20) patients in emergency rooms and doctor's office.
 (21) And concern about premature coronary disease must
 (22) be viewed in virtually any adult male in the
 (23) United States.
 (24) Now, this man is 28 year old which
 (25) is young generally for heart disease, but he also

(1) Charash, M.D.
 (2) think of 28 year olds as having heart disease, he
 (3) was referred by a primary care doctor out of that
 (4) concern and he also had a risk factor of
 (5) hypertension which is equally uncommon in 28 year
 (6) olds.
 (7) Q Okay.
 (8) A So given the fact that he had
 (9) something that is not common among 28 year olds
 (10) and his primary care provider was worried that
 (11) heart disease could be a basis of his chest pain,
 (12) the standard of care required in general that the
 (13) cardiologist work up the chest pain as possible
 (14) heart disease.
 (15) Q Okay.
 (16) A But that's one element.
 (17) Q Okay. But let me ask you something.
 (18) Even in the absence of anything else would that
 (19) have been enough in your mind for the standard of
 (20) care to have required the next step and would the
 (21) next step have been a stress test?
 (22) A I can't answer the question the way
 (23) you phrase it as a simple yes, no.
 (24) Q Why?
 (25) A Because the other elements are here,

(1) Charash, M.D.
 (2) had the more extraordinary background of having
 (3) actually diagnosed hypertension.
 (4) If you have high blood pressure at
 (5) the age of 28 that is not common either. Nor, by
 (6) the way, is it common for a 28 year old to be sent
 (7) to a cardiologist for chest pain evaluation.
 (8) So you take just the extraordinary
 (9) nature that a primary care doctor was worried
 (10) enough about a patient to send him to a heart
 (11) doctor. If that patient has a premature risk
 (12) factor which is not common for this age group,
 (13) generally you would think the cardiologist would
 (14) be inclined to get a stress test, but that's not
 (15) the entire basis of my opinion. The second --
 (16) Q Hold on. Before you get to the
 (17) second part because I know that you are going to
 (18) get to the second part. So the first part is, and
 (19) I know there is a second part, so I'm not trying
 (20) to isolate it, but I'm trying to understand it
 (21) because Mr. Mills at 28 had a premature, did you
 (22) say risk factor of high blood pressure or
 (23) hypertension?
 (24) A Again, the really better way to
 (25) phrase it is that even though you don't typically

(1) Charash, M.D.
 (2) too, and you would have to tell me what the
 (3) outcomes would be of those other elements. There
 (4) is no vacuum.
 (5) Q Okay. Go ahead.
 (6) A The patient further was having pain
 (7) that was occurring at rest. That means if it is
 (8) heart disease it would be unstable heart disease.
 (9) Stable heart disease would be heart
 (10) disease that is totally within the patient's
 (11) control driven by a predictable amount of moderate
 (12) to severe activity.
 (13) If a patient has reproducible chest
 (14) pain with moderate to severe activity, then in the
 (15) short run they could control their ischemic
 (16) threshold by basically staying at a sedentary
 (17) activity level which means they are in control of
 (18) not getting ischemia. They still need a workup,
 (19) but they are not in short-term danger.
 (20) But if a patient is having pain at
 (21) rest and not predictable by activity, then you
 (22) have to suspect that if the pain is coming from
 (23) the heart it is being driven by an unstable
 (24) artery, one where the artery is episodically
 (25) closing and opening on its own. That would be due

- (1) Charash, M.D.
 (2) to either plaque rupture or clot formation with or
 (3) without spasm, but there would be some acute
 (4) process that's beyond the patient's control.
 (5) So if a patient is having pain at
 (6) rest, if it is cardiac they could experience
 (7) sudden death at any moment unrelated to the
 (8) activity level. If a person is only getting chest
 (9) pain running full speed up a hill their likelihood
 (10) of having sudden death at rest is extremely low.
 (11) It's like the difference between a ticking package
 (12) and a cannon ball. Both may be explosives, but
 (13) the cannon ball is stable unless you bang it with
 (14) a bat. The ticking package, you don't know when
 (15) it's going to go off.
 (16) Q Let me ask you two questions. One
 (17) is does it make any difference in your opinion
 (18) with respect to the pain at rest how long it
 (19) lasts?
 (20) A I can't answer that question as you
 (21) phrase it as a simple yes, no.
 (22) Q Does it matter to you how long it's
 (23) been going on?
 (24) A Again, those questions really depend
 (25) on more of the details. Those facts would be very

- (1) Charash, M.D.
 (2) patient is in immediate risk of sudden death as an
 (3) ongoing threat to his life every day. Now, I am
 (4) not saying it's cardiac because of it. I'm just
 (5) saying that the need to know the answer with
 (6) greater certainty rises with the greater degree of
 (7) instability of a presenting syndrome.
 (8) Q Wouldn't that suggest that the
 (9) referral should have been made immediately for
 (10) catheterization?
 (11) A Well, based on my next point.
 (12) Q Isn't that what you would have done?
 (13) A The answer to the question is that
 (14) the standard of care would ultimately require that
 (15) this patient have a catheterization.
 (16) That said, it would be reasonable
 (17) under very monitored circumstances to perform a
 (18) stress test to help identify the more likely part
 (19) of the heart that's ischemic. The stress test
 (20) would have probably been abnormal. But you're
 (21) right, even with a normal stress test he would
 (22) have to be ultimately catheterized. A stress test
 (23) would be helpful though to help guide where you're
 (24) looking.
 (25) If he were having pain the day of

- (1) Charash, M.D.
 (2) important.
 (3) If a patient is having prolonged
 (4) pain that would be another identifier of an
 (5) ominous prognosis, although pain at rest is an
 (6) ominous prognosis if it's from the heart.
 (7) If the pain is short-lived, but at
 (8) rest, it doesn't mean it's stable, but the more
 (9) prolonged pain the more you would make a case of
 (10) even more ominous prognosis. Even worse would be
 (11) if the pain episodes were getting more intense or
 (12) longer. But again, certain things that elevate
 (13) risk, their absence doesn't decrease the risk
 (14) where you start. In terms of how long they have
 (15) been having it, to some degree it matters.
 (16) Q Why?
 (17) A Well, if someone said they've had
 (18) pain every day of their entire life since they
 (19) were three, then I would wonder why they were
 (20) being referred to a cardiologist at this point in
 (21) their life. Why not earlier. In this case it
 (22) said that it went on for months without pain and
 (23) then it came back. He was having up to ten or 15
 (24) episodes a day.
 (25) Again, if that is cardiac the

- (1) Charash, M.D.
 (2) the stress test you would have to cancel the test
 (3) and send him to the cath lab right away.
 (4) Q Knowing what you know about how he
 (5) presented in, what's our date?
 (6) A Feel free to take any page you like.
 (7) Q March of 2012.
 (8) A March 23, 2012.
 (9) Q Knowing what you know simply
 (10) prospectively from what you are seeing on that
 (11) page, would you not have sent him immediately for
 (12) a catheterization?
 (13) A I would have with the EKG. But the
 (14) standard of care would have permitted sending him
 (15) to the hospital for a stress test if he wasn't
 (16) having pain then under very carefully monitored,
 (17) you know, environment and then going on to cath if
 (18) needed. Well, cath would be needed, but going on
 (19) to cath with the direction of the stress test.
 (20) Q You wouldn't have waited for that
 (21) with that EKG?
 (22) A I wouldn't. The standard of care it
 (23) would be perfectly permissible to go either
 (24) approach as long as the patient wasn't having pain
 (25) at time of the test or shortly before and you have

(1) Charash, M.D.
 (2) to include the patient in the options. I tell
 (3) patients the risks and benefits. I have given
 (4) patients the option of going directly to cath or a
 (5) stress test first.
 (6) But in a patient like this I would
 (7) tell him that he is 28 years old. He has
 (8) developed a change in his EKG over a short period
 (9) of time and given the fact that he is having pain
 (10) at rest you can't rely on a stress test alone
 (11) because his life is in danger and we need to know
 (12) with certainty.
 (13) The best example I've always given
 (14) is like I said two packages in your living room.
 (15) One of them is a box open with a cannon ball. You
 (16) know with total certainty that cannon ball is live
 (17) exposure. Let's say you know with certainty, but
 (18) it's stable. The next box is a box that's ticking
 (19) and there is a five percent chance it's a bomb.
 (20) You get a call, 20 houses had boxes put in them
 (21) and one of those 20 boxes is a bomb.
 (22) The bomb squad come to your house.
 (23) Which one do you want removed first. The cannon
 (24) ball with a certainty of being an explosive, but
 (25) stable or the ticking package with only a five

(1) Charash, M.D.
 (2) A But the standard of care doesn't
 (3) require that as the only approach.
 (4) Q Why not. Why not?
 (5) A The doctor might argue that even if
 (6) he has coronary disease you might want a guiding
 (7) test of ischemia.
 (8) Q But honestly in your practice that's
 (9) not what you would have done?
 (10) A No. I would have brought it to the
 (11) patient and asked what they wanted and tell them
 (12) there are two approaches, but both have to be done
 (13) carefully because the patient might want to be
 (14) stressed first.
 (15) Q And the patient says, Doctor, I want
 (16) to know what you have recommended.
 (17) A I would say that the best thing for
 (18) you in my opinion is to know because your life is
 (19) on the line. If you're having pain at rest 10
 (20) times a day you are facing an unreasonable risk of
 (21) sudden death if it's your heart and you can't go
 (22) home with even a one in 20 doubt.
 (23) Now, I think the stress test would
 (24) have been positive. I would have made the case to
 (25) go to cath. But I've had patients disagree even

(1) Charash, M.D.
 (2) percent chance of being a bomb. You would have to
 (3) have the common ball -- the ticking package
 (4) removed first.
 (5) If the patient has a credible threat
 (6) their chest pain which is occurring at rest is
 (7) cardiac, they can't rely on a one in 20 chance
 (8) they're going to die even with a stress test and
 (9) the best the stress test can do is one in 20
 (10) people who have it will be sent home to their
 (11) deaths if they are unstable in the pattern, which
 (12) he is.
 (13) So you're right, he really can't go
 (14) home ultimately without a catheterization, but
 (15) it's reasonable to stress him first under the
 (16) right conditions and it probably would have been
 (17) positive. But based on his young age, the highly
 (18) worrisome pain he has, the fact that he had ten to
 (19) 15 a day at rest, if that is cardiac he is in life
 (20) or death situation. And then the EKG raises the
 (21) risk level to an absolute threat.
 (22) Q And in light of that you would have
 (23) sent him directly for catheterization?
 (24) A I personally would have.
 (25) Q Yes.

(1) Charash, M.D.
 (2) with that information, get stressed and then go on
 (3) to cath.
 (4) So I am not saying the standard of
 (5) care can be only the way I would personally do it.
 (6) The patient has to decide based on all the risk
 (7) and benefits. But the patient has to understand
 (8) the danger their facing on their ongoing symptoms,
 (9) that if it's cardiac you cannot be sent home with
 (10) ten episodes of pain a day. And if there is a
 (11) five percent in the office that it's cardiac you
 (12) can't be sent home like that. You wouldn't leave
 (13) a package in your house with a one in 20 chance
 (14) that it was a ticking package.
 (15) Q Before we get to the EKG, anything
 (16) else with respect to the character of his pain or
 (17) symptoms that you believe would have directed Dr.
 (18) Kassamali in compliance with the standards of care
 (19) to do a workup through a stress test and/or direct
 (20) catheterization?
 (21) A Well, you also have the fact that
 (22) this patient reports some shortness of breath with
 (23) activity. But, unfortunately, that's not defined
 (24) on any level, meaning how much activity is
 (25) required.

(1) Charash, M.D.
 (2) By definition every person alive
 (3) will get short of breath if they push themselves
 (4) to the max. But if a patient is reporting
 (5) shortness of breath with activity by definition
 (6) that means it at a level of activity that you
 (7) don't expect to get short of breath, but we don't
 (8) know how low threshold is it.
 (9) If I told every patient to run up a
 (10) staircase as fast as they could 20 floors they'll
 (11) get short of breath at some point. You don't tell
 (12) the doctor about that. You only report shortness
 (13) of breath if it's at an unusually lower point of
 (14) activity. But it's not quantified here so we
 (15) don't know. That certainly adds some concern, if
 (16) he has a relatively new onset of shortness of
 (17) breath with activity. It's not explored enough to
 (18) be able to take too much away from that.
 (19) But other than that based on the
 (20) fact that he has unusual risk factors, the fact
 (21) that he was sent to the doctor, the fact that his
 (22) pain was showing a life-threatening pattern and
 (23) then of course that his EKG showed a seminal
 (24) change from just what was two weeks earlier, yes,
 (25) he needed to be sent to the hospital and worked

(1) Charash, M.D.
 (2) up.
 (3) Q Before the EKG is taken into
 (4) consideration, based upon the history that's given
 (5) is he at high risk for having cardiovascular
 (6) disease, ischemic heart disease?
 (7) A I wouldn't say he's high risk. I
 (8) mean that's a relative term. I would say that he
 (9) is at high risk for his age group. I think he's
 (10) unusual for 28 year olds. His blood pressure in
 (11) the office had a diastolic of 102. That's not
 (12) something most people have at age 28 under any
 (13) circumstances. It did drop as he relaxed, but
 (14) blood pressure during stress is equally important
 (15) as during relaxation.
 (16) So based on that part alone, again I
 (17) don't believe Dr. Kassamali had his cholesterol
 (18) profile worked out when he saw him on that visit.
 (19) Q Did the standard of care require
 (20) that based on the other information that was
 (21) there?
 (22) A No. But you can't dismiss
 (23) cholesterol level until you know it. I'm just
 (24) saying his risk factor was a minimum of
 (25) hypertension.

(1) Charash, M.D.
 (2) Q Do you stratify patient's risk
 (3) levels in your practice?
 (4) A To a degree.
 (5) Q All right. When I asked you was he
 (6) high risk, I think you said well, I wouldn't say
 (7) high risk, but for his age.
 (8) Would he be a patient in your
 (9) practice that you would consider to be a high or
 (10) moderate knowing what you know from the history or
 (11) low risk for ischemic heart disease?
 (12) A I would put him at high, moderate.
 (13) Q Okay.
 (14) A Not high.
 (15) Q Now, do you in reaching your
 (16) opinions in this case and in stratifying patients
 (17) within your own practice, do you utilize any of
 (18) the guidelines that are out there that are put out
 (19) by the societies with respect to the evaluation of
 (20) chest pain?
 (21) A I cannot answer the question the way
 (22) you phrase it.
 (23) Q And tell me why.
 (24) A Okay. Guidelines are by definition
 (25) not standards of practice. They are not called

(1) Charash, M.D.
 (2) rules. They are called guidelines which means
 (3) they're to guide.
 (4) No. 2, multiple guidelines can exist
 (5) to give a sense of the overview of how to approach
 (6) patients in general with prospective heart
 (7) disease. But you cannot make a determination of
 (8) what is the standard of care without knowing the
 (9) facts of a specific case.
 (10) The heterogeneity of patient
 (11) individuality is so large that you cannot express
 (12) it all in a written form. You need to take case
 (13) specific points and apply them to the general
 (14) approach and come up for that patient of what the
 (15) standard of care would reflect.
 (16) Q Let me be very direct with you. Are
 (17) you intending to come into court and testify in
 (18) this case and make reference to any particular
 (19) guidelines in support of your opinions?
 (20) A No. They are not intended to
 (21) support my opinion.
 (22) Q Okay. Are you intending to make
 (23) reference within your testimony on Dr. Kassamali's
 (24) violation of the standards of care to any
 (25) particular guidelines?

- (1) Charash, M.D.
 (2) A No.
 (3) Q Okay.
 (4) A I think it's self-evident based on
 (5) the facts of this case.
 (6) Q What's self-evident?
 (7) A That he failed to diagnose a patient
 (8) who had come to him for a cardiac evaluation with
 (9) a life-threatening pattern of chest pain who then
 (10) demonstrated objective evidence of heart disease.
 (11) Q And the objective evidence of heart
 (12) disease is the EKG?
 (13) A Yes.
 (14) Q Okay. Now, anything else with
 (15) respect to the history that is important to you
 (16) with respect to your opinion before we get to the
 (17) EKG?
 (18) A Well, the patient was also an
 (19) ex-smoker which again although he wasn't very old
 (20) that adds to the risk of heart disease.
 (21) So you have from Dr. Kassamali's
 (22) point of view two clear risk factors. Cigarette
 (23) smoking, although he quit, but it's still a risk
 (24) factor and high blood pressure.
 (25) Again, Dr. Kassamali does not have

- (1) Charash, M.D.
 (2) Within five years you have a 50
 (3) percent reduction of increased risk that cigarette
 (4) smoking begins. Between five and ten years there
 (5) is a progressive reduction of risk of former
 (6) smoking. But if you were more than ten years away
 (7) you could say the former smoking would probably
 (8) not be an influential risk factor.
 (9) Q How long was he from smoking at that
 (10) point?
 (11) A Actually, I have to find it. I
 (12) don't remember.
 (13) Q Take your time.
 (14) A He quit smoking four years ago
 (15) according to the intake sheet of Dr. Kassamali.
 (16) So, yes, it would still be a risk
 (17) factor, but of course he's younger, life long
 (18) burden is less, but it's still a risk factor. We
 (19) can't make it vanish.
 (20) Q Is it a major risk factor or do you
 (21) not stratify risk factors like that?
 (22) A No. You don't use simplistic terms
 (23) like major or minor. What you would say is it's a
 (24) major risk factor, but of course quantitatively
 (25) it's less than if you were older. Everything is

- (1) Charash, M.D.
 (2) in his office chart a cholesterol profile which
 (3) only means he can't make an assumption one way or
 (4) the other. He can't exclude that as a risk
 (5) factor. He can only demonstrate that it is
 (6) unknown to him.
 (7) So you have two risk factors that
 (8) are established. One risk factor which is
 (9) undetermined from Dr. Kassamali's perspective.
 (10) And again you have the patient who presented from
 (11) an internist who made the decision this patient
 (12) needed a cardiac evaluation and you have a patient
 (13) showing a life-threatening pattern of pain and
 (14) then it gets to the EKG.
 (15) Q So the cigarette smoking that you
 (16) said was a risk factor, does it depend how long
 (17) ago he quit, how much he smoked, anything like
 (18) that or is it still the same whether he was
 (19) smoking or not smoking since he had in the past?
 (20) A Cigarette smoking as a risk factor
 (21) does reduce over time. By ten years of quitting
 (22) cigarette smoking it's as if you never smoked,
 (23) from a heart disease perspective. Cancer is a
 (24) life long cumulative risk. It never goes away,
 (25) but it can get worse.

- (1) Charash, M.D.
 (2) less because he's younger.
 (3) Q Are there any risk factors that are
 (4) considered major risk factors as distinguished
 (5) from between those that are considered major and
 (6) minor?
 (7) A And that is also a relative term.
 (8) Some things are called major risk factors, but
 (9) it's about the perspective of the conversation.
 (10) Every risk factor is major if it happens to you.
 (11) The point is that risk factors are
 (12) not monoliths. Risk factors are relative. That
 (13) means that family history, we say if a first
 (14) degree relative had heart disease at a relatively
 (15) young age, but if a person's father had a heart
 (16) attack at 30 compared to 50 or somebody had five
 (17) first degree relatives at young ages that's
 (18) quantitative different, but not absolute.
 (19) Cigarette smoking is cumulative, but
 (20) still a risk factor in the early years.
 (21) Cholesterol is quantitative based on HDL and LDL.
 (22) Hypertension is quantitative. But each of those
 (23) are also influenced by how young they occur in
 (24) life. So that's why there is no monolith. In
 (25) some people one risk factor may be the single most

(1) Charash, M.D.
(2) determining factor for them and yet in another
(3) person it may be a different risk factor.
(4) So when you ask about major risk
(5) factors, all of the major risk factors, smoking,
(6) cholesterol, family history, diabetes,
(7) hypertension all are major risk factors, but that
(8) doesn't mean they have the same weight in all
(9) people all the time.
(10) Some people having diabetes at age
(11) 18 may put them at risk at age 27. Having
(12) diabetes at age 53 may not raise your risk for a
(13) longer time. Things have to be put in a holistic
(14) approach. You can't give a simple answer.
(15) Q I think you said that with respect
(16) to the EKG it was of significance that there had
(17) been, did you say a seminal change from an earlier
(18) EKG to the one that was done in Dr. Kassamali's
(19) office?
(20) A Yes, I did.
(21) Q And what do you mean by a seminal
(22) change?
(23) A What I mean by a seminal change is
(24) that there are two aspects of an EKG or actually
(25) more than two. You can have an abnormal EKG.

(1) Charash, M.D.
(2) Take an EKG that's abnormal. In a vacuum the
(3) abnormality may or may not be a change.
(4) So there are really three kinds of
(5) abnormalities. One is an abnormal EKG in a
(6) vacuum. So one has an abnormal EKG, you don't
(7) know whether that's their contemporary baseline.
(8) Maybe that's the way the EKG looks every year for
(9) them. But you can't say it's a change. You
(10) didn't know the baseline, so you don't know when
(11) it was not like that.
(12) So an abnormal EKG can't be read in
(13) isolation. You look at an abnormal EKG. You see
(14) there are abnormalities. They may or may not be
(15) specific. They may or may not be high risk. And
(16) they in isolation have less information.
(17) Then you can look at an EKG and
(18) compare it to historic EKG's from a year ago, from
(19) two years ago, from five years ago. Over years an
(20) EKG can evolve. Someone has high blood pressure,
(21) left ventricle can have stress and over time you
(22) can develop changes. So a change could be over a
(23) long longitudinal period of time. Someone might
(24) have an EKG and the last one is five years ago,
(25) the one now may be abnormal, may be different, but

(1) Charash, M.D.
(2) that difference may not be acute because it is an
(3) evolution potentially over five years. You can't
(4) prove it or not.
(5) Then you have an EKG that's done
(6) that has an abnormality as in this case and you
(7) notice that it's different from a year ago and it
(8) is different from 13 days ago. Now -- sorry, 11
(9) days ago. That is a much more problematic EKG.
(10) Mr. Mills' EKG demonstrated new ST
(11) segment depressions on his EKG in Dr. Kassamali's
(12) office on March 23rd that was not present on his
(13) EKG performed on March 12th at his primary care
(14) doctor's office. That is a seminal change.
(15) The EKG showing ST depressions would
(16) be a concerning EKG in a patient in isolation, but
(17) the fact that the abnormalities were not present
(18) 11 days earlier or 12 days earlier is of enormous
(19) consequence and in a patient who is not apparently
(20) having chest pain presumably at the moment of the
(21) EKG has even greater consequence. Because if you
(22) get an EKG during chest pain you are more likely
(23) to see the full magnitude of changes.
(24) If you see an after shock EKG which
(25) shows residual depression and the patient wasn't

(1) Charash, M.D.
(2) having pain at the time, that shows that the EKG
(3) changes were probably much more severe in their
(4) nature when they occurred. But the fact that he
(5) developed new ST segment depressions on his EKG in
(6) Kassamali's office is the reason why he needed to
(7) be urgently evaluated for his heart disease.
(8) Q So do ST segment depressions
(9) correlate with ischemic heart disease?
(10) A I can't answer the question the way
(11) you're phrasing it as a simple yes, no.
(12) Q And why can't you answer the
(13) question as I have phrased it?
(14) A I would need more information. Some
(15) ST depressions do, some don't.
(16) Q Okay. Let me focus it a little bit.
(17) I'm going to have you mark a copy of the EKG that
(18) was done in Dr. Kassamali's office, but the
(19) character of the ST segment depressions that you
(20) see on that EKG from March 23, 2012.
(21) A Yes.
(22) Q Were they indicative to you of
(23) ischemic heart disease?
(24) A I have already answered the question
(25) that a singular EKG before comparison to any

- (1) Charash, M.D.
 (2) previous EKG that has ST depressions may reflect
 (3) ischemia, may reflect some other form of chronic
 (4) left ventricular disease.
 (5) If you see ST depressions you have
 (6) to consider ischemia in your differential
 (7) diagnosis, but that differential diagnosis is
 (8) broader when you start comparing that EKG to
 (9) previous EKG's. If you compare it to EKG's and
 (10) the last one is five years ago and it's different
 (11) that much time, multiple years can include
 (12) stresses to the heart that are not ischemic that
 (13) might result in evolution of EKG abnormalities.
 (14) So if you see an ST depression on an
 (15) EKG with no context to it and the patient is not
 (16) having acute chest pain, you don't know. It could
 (17) be, it may not be, but it's certainly abnormal.
 (18) If you compare it to a more ancient
 (19) EKG and it changed it raises the risk it's
 (20) ischemic, but there are other explanations in the
 (21) mix.
 (22) When you see ST depression that was
 (23) not there 11 or 12 days ago, that dramatically
 (24) increases the danger that that ST depression is
 (25) reflective of ischemia.

- (1) Charash, M.D.
 (2) Nothing is one hundred percent
 (3) certain, but once you see new ST segment
 (4) depressions that were not there on the last EKG
 (5) performed less than two weeks ago and there is a
 (6) change in the EKG from to now, then being less
 (7) than two weeks ago, that ST depression must be
 (8) considered first and foremost to be ischemic until
 (9) proven otherwise in a patient who has
 (10) extraordinary risk factors with a diastolic over
 (11) 100 in the doctor's office, smoking, you have to
 (12) consider coronary disease and the pattern is
 (13) unstable and you can't say go home and die without
 (14) a workup.
 (15) Q So in this particular case is it
 (16) fair to say that not only was it incumbent upon
 (17) Dr. Kassamali to consider that the ST segment
 (18) depressions were being caused by ischemic heart
 (19) disease, but you believe, in fact, that they were?
 (20) A If you are asking in retrospect.
 (21) Q I am.
 (22) A It's near medical certainty that
 (23) they were and that's proven by the EKG on July 29,
 (24) 2012, the day he died, where he demonstrates
 (25) massive ST segment depressions mostly seen in the

- (1) Charash, M.D.
 (2) same leads that were showing some ST depression.
 (3) Q Okay.
 (4) A So in retrospective yes, it's a near
 (5) medical certainty.
 (6) Q So if ischemic heart disease is
 (7) causing the ST segment depressions, do you expect
 (8) them to be progressive over time?
 (9) A No. They'll come and go. You can
 (10) have ST depressions that come and go back to
 (11) baseline.
 (12) What I'm saying is since there is no
 (13) evidence that he was having evidence at the time
 (14) of his EKG that he was showing post-ischemic ST
 (15) depression. The reason why that's important is
 (16) because if you have an acute ischemic attack from
 (17) baseline you will have ST depression. When the
 (18) ischemia resolves in most cases the EKG goes back
 (19) to baseline.
 (20) Eighty-five percent of people with
 (21) acute coronary syndromes when they have an EKG
 (22) done at a time they are not having chest pain, 85
 (23) percent of them will have a normal EKG in between.
 (24) So most people having an EKG without chest pain,
 (25) the EKG is totally normal at the time the EKG is

- (1) Charash, M.D.
 (2) done. You can be in the worst danger of sudden
 (3) death with episodic pain, but if the EKG pain is
 (4) not done with pain 85 percent of the people are
 (5) normal, but 15 percent of people with acute
 (6) coronary disease show some telltale residual
 (7) evidence of ST depression even after they have
 (8) recovered. Usually it's people having more
 (9) life-threatening ischemia and because it's
 (10) generally worse ischemia that leaves a residual ST
 (11) depression in this patient being this is a
 (12) presumed pain-free EKG, those ST depressions that
 (13) have changed in 11 days are highly concerning.
 (14) Q You said that ST depressions on EKG
 (15) can be in a vacuum a sign of ischemic heart
 (16) disease. They can also be a sign of left
 (17) ventricular disease; correct?
 (18) A Yes.
 (19) Q Okay. Do they look any different.
 (20) Is the shape of the ST depression expected to look
 (21) any different between the two?
 (22) A Sometimes, yes. Sometimes, no.
 (23) Q In what way?
 (24) A Well, left ventricular depression
 (25) there is usually -- left ventricular hypertrophy

- (1) Charash, M.D.
 (2) usually there are other indicators, an increase in
 (3) the voltage of the EKG. It's usually in the
 (4) company it keeps. So your answer has to include
 (5) other factors in the EKG, but that said at the end
 (6) of the day, no, there is no way to tell.
 (7) What you need is to see whether an
 (8) EKG is consistently abnormal or not. You cannot
 (9) prove or disprove on one EKG in a vacuum whether
 (10) certain forms of ST depression reflect ischemic
 (11) pathology or not.
 (12) MS. KASLICK: Let's go ahead
 (13) and have this marked as Exhibit No. 3.
 (14) (EKG was marked as Deposition
 (15) Exhibit No. 3 for identification, as
 (16) of this date.)
 (17) (EKG was marked as Deposition
 (18) Exhibit No. 4 for identification, as
 (19) of this date.)
 (20) (EKG was marked as Deposition
 (21) Exhibit No. 5 for identification, as
 (22) of this date.)
 (23) (EKG was marked as Deposition
 (24) Exhibit No. 6 for identification, as
 (25) of this date.)

- (1) Charash, M.D.
 (2) Q Doctor, I'm going to hand you what's
 (3) been marked as Exhibit No. 3. I'm going to ask
 (4) you to mark the abnormalities you see on that with
 (5) the green, please, so I can go back and see it.
 (6) A Okay. I'd like to demonstrate
 (7) something before I mark it which I think will make
 (8) you see it better and then I will mark it because
 (9) once I draw on it it's going to be harder to see
 (10) it.
 (11) When you take an EKG there are three
 (12) identifiable bumps. A P wave which is the first
 (13) small bump, the QRS which is the main complex and
 (14) then afterward the T wave. So we look at the
 (15) segment between the QRS and the T wave, called the
 (16) ST segment and compare that to the baseline, the
 (17) line of equilibrium which is generally by the
 (18) preceding Q to P wave segment.
 (19) Now, to see if there is ST
 (20) depression in a different lead it's simplest if
 (21) you take a credit card, and I'll draw on this, but
 (22) before I do just to make it simple, if you take a
 (23) lead with no ST depression, Lead V2, you put a
 (24) credit card on the isoelectric line and you look
 (25) at QRS and see if there is light underneath it and

- (1) Charash, M.D.
 (2) there isn't. The ST segment is exactly on the
 (3) same electrical line as on the baseline, because
 (4) this line is the baseline.
 (5) If you go to V, like Victory 6 and
 (6) put this line on the baseline you can see beyond
 (7) any shadow of a doubt that there is a space
 (8) between the ST segment and the isoelectric line.
 (9) That is the ST segment depression. There is one
 (10) millimeter of ST depression in Lead V, like
 (11) victory, 5 which was not present on any previous
 (12) EKG.
 (13) Now, if you would like I could draw
 (14) the isoelectric line on here if you want. If not,
 (15) I'll highlight the area. Please let me know what
 (16) you prefer.
 (17) Q Highlight the area with yellow.
 (18) A But don't draw the isoelectric line?
 (19) Q Nope.
 (20) A I appreciate the fact you said nope
 (21) instead of no.
 (22) Q No, sir.
 (23) A Yes, ma'am.
 (24) Q Thank you. Take a look at --
 (25) A That's just one lead by the way. I

- (1) Charash, M.D.
 (2) wasn't showing you all the abnormalities.
 (3) Q Mark all the abnormalities for me.
 (4) Tell me where you are marking them and what they
 (5) are.
 (6) A Okay. I just misplaced my baseline.
 (7) Q You are talking about your credit
 (8) card.
 (9) A Yes, but I'm using it as a straight
 (10) edge.
 (11) Q I understand that, but Tina is
 (12) taking down what you are saying and it may come
 (13) off as you have replaced your baseline or you have
 (14) misplaced your baseline.
 (15) A So there is just under one
 (16) millimeter of ST depression in Lead V, like
 (17) victory, 5. There is approximately one millimeter
 (18) of ST segment depression in V, like victory, 4.
 (19) There is just approximately one millimeter of ST
 (20) depression in v like -- sorry, lead AVF. There is
 (21) a millimeter of ST segment depression in Lead II.
 (22) And those are the only leads with identifiable ST
 (23) segment depression.
 (24) Q Okay. So let me hand you what has
 (25) been marked as No. 4. No, actually --

- (1) Charash, M.D.
 (2) A I'm not allowed to look at the other
 (3) one, okay. I'll look at my copy then.
 (4) Q That's fine. I'm asking you simply
 (5) to mark -- look at it prospectively as somebody
 (6) would be looking at it in the office.
 (7) A I intend to.
 (8) Q Can you do that?
 (9) A I am.
 (10) Q But you're comparing it now to
 (11) something else?
 (12) A I'm not comparing it. I'm just
 (13) looking at something else.
 (14) Q Let's see what it is.
 (15) A The EKG from the 23rd.
 (16) Q So you are looking at the EKG from
 (17) the 23rd and now you are looking at the one which
 (18) was done before which is Exhibit No. 4; correct?
 (19) A Correct.
 (20) Q Okay.
 (21) A On this EKG although there is a
 (22) minor dipping of the ST segment there is no
 (23) identifiable ST segment depression in Lead V4, V5
 (24) and V6.
 (25) Q Where is the minor dipping that

- (1) Charash, M.D.
 (2) Q Okay. Let's take a look at No. 5.
 (3) Are there any abnormalities that you
 (4) see on that EKG?
 (5) A No. No ST depression, no
 (6) abnormalities.
 (7) Q What about six, any abnormalities on
 (8) No. 6?
 (9) A There is minor amount of ST
 (10) depression, less than a half millimeter in V6.
 (11) Q Why don't you mark that for me,
 (12) please?
 (13) A There is less than a half
 (14) millimeter -- well, less than a half millimeter of
 (15) ST depression in Lead V5. Less than a half
 (16) millimeter in ST depression in Lead V4. Less than
 (17) a half millimeter ST depression in Lead II.
 (18) That's it.
 (19) Q Okay. So why were there ST
 (20) depressions, segment depressions in Exhibit No. 6
 (21) which predates Exhibit No. 5 and there were none
 (22) in Exhibit No. 5?
 (23) A One possible explanation is the
 (24) patient was having episodic ischemia at this time
 (25) in his life.

- (1) Charash, M.D.
 (2) you've described?
 (3) A Only in Lead V6.
 (4) Q Mark that with yellow for me.
 (5) A The ST segment dips down, but it is
 (6) not depressed because it comes back up again. But
 (7) it's not abnormal in V4 or V5.
 (8) Q Is it abnormal in that Lead?
 (9) A No. Technically it isn't. It's
 (10) just a configuration you would pay attention to
 (11) and there is no ST depression anywhere on this
 (12) EKG.
 (13) Q Why is it a configuration that one
 (14) would pay attention to?
 (15) A Cardiologists, when they do an EKG
 (16) if you see an abnormal ST segment you'd want to
 (17) look back and see if it was there before. If you
 (18) see ST depression it's significant. If you see a
 (19) contra change, just something with experience, you
 (20) would just follow and see if that is a baseline or
 (21) if there is something happening. But it's not
 (22) nearly enough information as ST depression.
 (23) Q Is it an abnormality?
 (24) A No, technically not, but to a
 (25) cardiologist you would still follow it.

- (1) Charash, M.D.
 (2) Q What other possible explanations?
 (3) A There was some type of electrolyte
 (4) abnormality.
 (5) That one you showed me from 2011, I
 (6) need the date of it, how close in time it is to
 (7) the other 2011.
 (8) Q It's 2010.
 (9) A 2010.
 (10) Q 5/28/2010.
 (11) A Well, you would need to know about
 (12) other EKG's in that time period. If that EKG
 (13) changed over a period of ten or 12 days it would
 (14) be a concerning EKG. It would depend if he was
 (15) having symptoms then. If it hasn't you would need
 (16) to know a lot of things about what his blood
 (17) pressure was at the time. You would want to see
 (18) more interval EKG's.
 (19) Whatever he had, he had clinically
 (20) less ST depression in less leads which did seem to
 (21) appear to get better and they were significantly
 (22) worse in 2012.
 (23) What I'm saying is that a short
 (24) temporal change is something you can't explain by
 (25) time.

(1) Charash, M.D.
 (2) Q Besides being a possibility or an
 (3) explanation being that he had episodic ischemic
 (4) changes at that time or an electrolyte imbalance,
 (5) are there any other explanations?
 (6) A Electrolytes wouldn't really do
 (7) that. It would have to be extreme.
 (8) Q Isn't that what you said?
 (9) A Yeah, I know, but it would have to
 (10) be a big electrolyte difference. More the
 (11) question would be whether the heart had structural
 (12) changes. Whether he was developing left
 (13) ventricular hypertrophy. It is really difficult
 (14) on one EKG like that. You do see a change over a
 (15) year, but it's less than a half millimeter of ST
 (16) depression that went away.
 (17) So the differential is too wide
 (18) open. I would need to take a more thorough
 (19) history from the patient. But if you see that
 (20) kind of change over a period of two weeks, then it
 (21) ischemia becomes a much greater part of the
 (22) differential diagnosis.
 (23) I didn't have any information
 (24) clinically about what were the conditions of that
 (25) EKG back in 2010. But for it to change from 2010

(1) Charash, M.D.
 (2) hemodynamics were, what his vital signs were then.
 (3) If there was an echo, I would want to see that to
 (4) see if the heart's condition changed.
 (5) All I'm saying is that when an EKG
 (6) shows less than a half millimeter of ST depression
 (7) that is gone in a year it does raise the potential
 (8) risk of ischemia. When a patient develops new ST
 (9) depression that are bigger in a period of 11 days
 (10) that is a much more aggressive evidence of
 (11) concern. It doesn't mean the old one wasn't
 (12) ischemia. But all we have is a less significant
 (13) ST depression changing in a year.
 (14) Without more information I can't
 (15) know what the meaning is. There are a lot of
 (16) possibilities including ischemia. The 2012 EKG's
 (17) are nearly conclusive of it.
 (18) Q What did you mean when you said to
 (19) have a small shift in a year could be indicative
 (20) of conditions and changes in the left ventricle?
 (21) A I don't know which word you don't
 (22) understand.
 (23) Q I'm not asking for a word to be
 (24) explained. I'm asking you what did you mean that
 (25) there can be a shift in a year that would indicate

(1) Charash, M.D.
 (2) to 2011 would add some concern about possible
 (3) heart disease in this patient, but I don't know
 (4) enough information.
 (5) Q If it changes from showing the ST
 (6) segment depression in 2010 to showing none in
 (7) 2011, you would have more concern about there
 (8) being heart disease?
 (9) A That's not what I said.
 (10) Q My question to you is why were there
 (11) ST segment depressions in 2010 and none in that
 (12) 2011?
 (13) A My answer is I don't know because I
 (14) don't have enough information about him. To have
 (15) an EKG have a relatively small shift in a year can
 (16) be explained by conditions and changes of the left
 (17) ventricle, but that change cannot occur in 11
 (18) days.
 (19) Now, what I would want to know is,
 (20) A, why was at that time 26 year old having an EKG
 (21) done. Why was he having one every year. Was he
 (22) having chest pain at the time or near that time.
 (23) Was he having any cardiac condition. Why did he
 (24) have the EKG.
 (25) I would want to know what his

(1) Charash, M.D.
 (2) the conditions and changes in the left ventricle?
 (3) A Left ventricular size, wall
 (4) thickness, wall tension can result in structural
 (5) changes of the left ventricle that could be
 (6) reflected on an EKG because the EKG is showing the
 (7) electrical activity of the heart.
 (8) If the heart gets thicker, if the
 (9) heart rotates, if the heart has a geometric shift
 (10) it can affect repolarization.
 (11) Those changes are usually measured
 (12) over months to a year or years. So if an EKG
 (13) changes from year to year, it's possible it's due
 (14) to chronic structural changes of the size,
 (15) demersion, thickness and rotation of the left
 (16) ventricle. It's possible.
 (17) Q But wouldn't you expect those
 (18) changes to be worsening of the EKG as opposed to a
 (19) normalization?
 (20) A No, you wouldn't have expectation.
 (21) Some types of changes can progress. Some can
 (22) reverse. If you have left ventricular hypertrophy
 (23) and you get treated for hypertension it can get
 (24) better. But the point is it can also be ischemia.
 (25) I'm just saying that the shift from 2010 to '11

(1) Charash, M.D.
 (2) has less significance than the shift from
 (3) March 12th to March 23rd.
 (4) MS. KASLICK: Let's go ahead
 (5) and have this one marked as Exhibit
 (6) No. 7, please.
 (7) (EKG was marked as Deposition
 (8) Exhibit No. 7 for identification, as
 (9) of this date.)
 (10) BY MS. KASLICK:
 (11) Q Okay. Doctor, take a look at No. 7.
 (12) MR. PEEK: What's the date of
 (13) that one?
 (14) MS. KASLICK: That's the last
 (15) one, March 30, 2011.
 (16) MR. PEEK: Did we not do that
 (17) one?
 (18) MS. KASLICK: Hold on.
 (19) Yes, we did do this one.
 (20) MR. PEEK: Okay.
 (21) MS. KASLICK: Is this the
 (22) same.
 (23) Q I think it's the second page. Look
 (24) at this for me, would you, Doctor. Are five and
 (25) seven the same study?

(1) Charash, M.D.
 (2) could stress him or cath him. Inevitably he has
 (3) to be cathed.
 (4) Q Assuming for purposes of my question
 (5) that he did not have chest pain when he went in to
 (6) see the doctor on that day.
 (7) What did the standard of care --
 (8) what options were there to comply with the
 (9) standards of care?
 (10) A Well, you'd really have to determine
 (11) not just whether he was having pain at that moment
 (12) in time, but the doctor did say he was having
 (13) eight to ten episodes of pain a day.
 (14) I would want to know if he was
 (15) having eight to ten over the last two or three
 (16) days. If he was, it's the same standard. You
 (17) don't punish somebody because they are not having
 (18) pain at the moment you're seeing them. If he is
 (19) having that many episodes of pain a day he would
 (20) have to go to the hospital because if it's heart
 (21) disease you have no idea when the bomb is going to
 (22) go off.
 (23) Q Now, when you say he has to go to
 (24) the hospital, do you mean on that day the standard
 (25) of care required Dr. Kassamali to admit him to the

(1) Charash, M.D.
 (2) A Yes. They are time stamped the
 (3) exact same time.
 (4) Q So they are just different copies?
 (5) A Yes.
 (6) Q Okay. Then we will disregard No. 7.
 (7) I'll leave in the stack, but just for the purpose
 (8) of the record just looks different because of the
 (9) copying because of how it was printed out.
 (10) So, Doctor, with respect to that
 (11) visit to Dr. Kassamali on March 23, 2012. Taking
 (12) the EKG into consideration and the factors that
 (13) you stated before, what did the standard of care
 (14) require Dr. Kassamali on that date to do?
 (15) A Well, if the patient was complaining
 (16) of active chest pain that day send him to the
 (17) hospital where he would have to be monitored.
 (18) Also, the patient is discussing
 (19) having pain up to ten times a day at rest. That
 (20) would afford an opportunity to have him on a
 (21) continuous monitor. Even on a telemetry there can
 (22) be relative shift of the ST segment if they are
 (23) having active pain. So it can provide a wealth of
 (24) information since he seemed to have many episodes
 (25) at rest. Now, if he remains pain free at rest you

(1) Charash, M.D.
 (2) hospital?
 (3) A If he was having eight to ten
 (4) episodes of chest pain a day, the answer would be
 (5) yes.
 (6) Q Okay. Based on the record that you
 (7) have, did the standard of care require Dr.
 (8) Kassamali to admit Mr. Mills to the hospital on
 (9) March 23rd?
 (10) A Well, the incomplete information,
 (11) that makes it hard to know with more certainty is
 (12) that if you read his note he says sometimes he can
 (13) have them up to ten to 15 episodes a day. That
 (14) doesn't give me enough of understanding what the
 (15) last four or five days were like. That would be a
 (16) major determination.
 (17) If he said I had no pain the last
 (18) four or five days or one, then you could bring him
 (19) the next day and do a stress test, but the more
 (20) active his pain is, the more frequent it is
 (21) contemporaneous, but that's not in his note. We
 (22) don't what his clusters are like in the last
 (23) several days and you're talking about a young
 (24) man's life.
 (25) Those details make a difference

(1) Charash, M.D.
 (2) between going to an emergency room versus going
 (3) home and getting stressed the next day.
 (4) Q So if he said but I haven't had them
 (5) in a few days?
 (6) A I would bring him in the next day
 (7) for a stress test.
 (8) Q I'm not asking you what you would do
 (9) at this time. I'm asking you what the standard of
 (10) care require.
 (11) A It would require either sending him
 (12) to the hospital or stressing him within 24 hours
 (13) and telling him to come to the ER if he has more
 (14) pain. It would just depend on the pattern he was
 (15) having the last week, five days.
 (16) Q Stressing him in the office
 (17) facility?
 (18) A That would be fine as long as your
 (19) facility can handle a patient safely.
 (20) Q What do you mean?
 (21) A Well, you have to have resuscitation
 (22) equipment in any office and monitoring. If you
 (23) are going to do stress test there is a risk of
 (24) arrhythmic death in every patient. It's low, but
 (25) you would have to be equally prepared.

(1) Charash, M.D.
 (2) If he had pain at rest the day of
 (3) the stress test you would have to wonder whether
 (4) that was prudent, too. So the options you would
 (5) give him is if he was having active pain that day
 (6) even before he came in and having frequent chest
 (7) pain over the last several days you would tell him
 (8) that it's much safer to be in the hospital. And
 (9) you would monitor him and saying in the hospital
 (10) we can also monitor your chest pain on continuous
 (11) monitoring and get more insight as to what's going
 (12) on.
 (13) If the pain pattern was not as
 (14) aggressive as the ten to 15 a day then you say get
 (15) a stress test within 24 hours, although I think
 (16) you have to be catheterized. Here's why. Look at
 (17) your EKG. And I would offer the option. There is
 (18) certainly no downside to bringing him in. The
 (19) need to bring him in medically would be based on
 (20) how aggressive his symptoms were, but if it wasn't
 (21) you would still have to do a present and urgent
 (22) evaluation.
 (23) Q Did you review the results of the
 (24) echocardiogram?
 (25) A Yes.

(1) Charash, M.D.
 (2) Q And did they reveal anything that
 (3) was of any significance to you with respect to
 (4) Mr. Mills' heart health?
 (5) A Well, all it revealed was that he
 (6) had not suffered any damage to his heart which is
 (7) good. His heart was normal. That's what you like
 (8) when someone has heart disease. A strong left
 (9) ventricle gives you best prognosis if you get your
 (10) arteries fixed.
 (11) Q Does it give you any indication with
 (12) respect to the presence or the absence of ischemic
 (13) disease?
 (14) A It gives you information that he
 (15) wasn't having acute ischemia during the moment of
 (16) the echo, but if somebody has an acute coronary
 (17) syndrome in between episodes virtually of them
 (18) will have normal echos.
 (19) Q Doctor, I take it that based on your
 (20) opinion that Dr. Kassamali violated the standards
 (21) of care in his first visit, you also believe he
 (22) violated the standards of care with Mr. Mills;
 (23) correct?
 (24) A Well, it's an ongoing deviation.
 (25) Q Is there anything different about

(1) Charash, M.D.
 (2) that second visit that either made the
 (3) recommendations that you believe should have been
 (4) made different or in any way?
 (5) A No. It's still an ongoing
 (6) evaluation. I don't believe he did an EKG on that
 (7) date which he should have, especially with the
 (8) change on EKG. But that's irrelevant. What he
 (9) needed was the exact same evaluation that he
 (10) needed earlier. So it's been an ongoing deviation
 (11) since his visit.
 (12) Q So as of the second visit the
 (13) standard of care required referral to the hospital
 (14) or being brought back in to have a stress test?
 (15) A Based on the pattern of his
 (16) contemporaneous pain, yes.
 (17) Q And based on the pattern of his
 (18) contemporaneous pain?
 (19) A Yes. What the last few days and
 (20) week has been like.
 (21) Q Because if the last few days and
 (22) week were what, how would that change?
 (23) A More aggressive the pattern the more
 (24) going to the hospital is urgent. The less
 (25) aggressive the more you have flexibility for an

- (1) Charash, M.D.
 (2) out-patient evaluation. It really depends on the
 (3) details. There's black, white, and gray. If it's
 (4) gray, send him to the hospital, but if it's
 (5) clearly a quiet pattern then you advise him if his
 (6) pain gets any worse go to the hospital, but get
 (7) him stressed within 24 hours.
 (8) Q Okay.
 (9) A Although I still think he needs to
 (10) be catheterized based on that EKG.
 (11) Q What kind of pain did he have?
 (12) A Chest.
 (13) Q How was it described or does it
 (14) matter?
 (15) A Well, details matter and pain can be
 (16) characterized as high risk, middle risk, low risk.
 (17) You can come up with any term you want, but the
 (18) point is that there are no descriptors that can
 (19) absolutely exclude heart disease or not. So it's
 (20) all in the context of where the pain is.
 (21) Q What is high risk pain?
 (22) A Location, generally substernal or
 (23) left chest. That is the highest risk location.
 (24) Epigastric is slightly lower. Right chest is
 (25) possible, but less. The quality, more commonly

- (1) Charash, M.D.
 (2) are not discussing that it feels like a knife as
 (3) opposed to just being intense when it comes. So
 (4) you'd want to make sure. That's why you have to
 (5) be very careful in your history because if you
 (6) look here there's only one choice.
 (7) Q What are you looking at?
 (8) A Well, the patient circled chest
 (9) discomfort. So there is separate chest pain. So
 (10) it doesn't change anything.
 (11) Q And you're looking at Dr.
 (12) Kassamali's records?
 (13) A Well, yes, but the intake sheet
 (14) circled by the patient. So the only descriptor
 (15) present is sharp. So sharp would be less risk
 (16) than dull or burning.
 (17) Q Okay.
 (18) A But it's substernal or left chest
 (19) which is highest location. No coronary pain
 (20) usually lasts for few seconds, but it can. Not
 (21) commonly is it that short, but it does happen. So
 (22) you have the two more atypical features of short
 (23) lived and sharp pain, but then you have the more
 (24) typical feature of it being in the left chest.
 (25) Q I think we were talking about the

- (1) Charash, M.D.
 (2) chest pain. Coronary disease is more commonly
 (3) described as dull, meaning squeezing, tightness,
 (4) heaviness, pressure. Then burning is another
 (5) characteristic which is less than dull, and then
 (6) sharper pain is still a potential characteristic,
 (7) but it's less common than burning or dull.
 (8) So you have dull, burning, and
 (9) sharp. So you would want to look at those
 (10) characteristics. Then you would want to look at
 (11) associated symptoms.
 (12) In his case he describes the chest
 (13) pain as being sharp. Now, sharp generally sounds
 (14) like it's the lower quality, the location is
 (15) higher.
 (16) Q I'm sorry, the what?
 (17) A It's not dull or burning, but sharp.
 (18) I said that the system of highest risk is dull,
 (19) followed by burning, followed but sharp.
 (20) Q So it would be the lowest risk using
 (21) that?
 (22) A On the qualitative scale sharp pain
 (23) is the less common presentation. But some people
 (24) describe intense pain as sharp. So you have to be
 (25) sure. If someone says the pain is sharp that they

- (1) Charash, M.D.
 (2) second visit.
 (3) A Yes.
 (4) Q Is there anything about the second
 (5) visit that was less concerning, more concerning,
 (6) just as concerning?
 (7) A It's an ongoing concern that has not
 (8) been remedied. The EKG, especially the fact that
 (9) it changed from the last known EKG in the
 (10) possession of Dr. Kassamali, he doesn't address it
 (11) on either visit.
 (12) With all of the facts in evidence
 (13) the fact that this patient had risk factors that
 (14) you can't ignore, that he was referred by primary
 (15) care for cardiac evaluation, the fact that he was
 (16) having recurrent episodic pain at rest which would
 (17) mean life-threatening if it's cardiac, and the
 (18) fact that he had developed over an 11-day period
 (19) of time unquestionable new ST segment depression,
 (20) that required an urgent cardiac evaluation or an
 (21) emergent one based on his symptoms and this was an
 (22) ongoing deviation.
 (23) Q If he had cardiac catheterization in
 (24) the spring of 2012 do you have an opinion as to
 (25) what it would have shown?

(1) Charash, M.D.
 (2) A Relatively, yes.
 (3) Q Tell me.
 (4) A He would have been shown to have at
 (5) least a 50 to 60 percent atherosclerotic plaque in
 (6) his LAD which would have shown irregularity,
 (7) evidence of rupture, plus or minus evidence of
 (8) clot.
 (9) Q And if he had had a stress test
 (10) prior to that catheterization what would it have
 (11) shown?
 (12) A It probably would have shown
 (13) ischemia in the anterior wall at least. It
 (14) doesn't mean it has to, but it more likely than
 (15) not have shown it.
 (16) Q If it had been considered a normal
 (17) stress test would that -- would there have to have
 (18) been to comply with the standard of care further
 (19) evaluation?
 (20) A Yes. He would have to be
 (21) catheterized anyway.
 (22) Q So it doesn't matter whether he was
 (23) stressed or not, and by stressed I mean an
 (24) exercise stress test?
 (25) A I discussed this earlier. A stress

(1) Charash, M.D.
 (2) test would be a reasonable option especially to
 (3) guide the ultimate invasive workup, but that EKG
 (4) abnormality is near certain evidence in
 (5) retrospective and in prospect high enough concern
 (6) that you can't play dice with his life.
 (7) Q You said that a catheterization done
 (8) in the spring of 2012 would have shown a 50 to 60
 (9) percent occlusion from atherosclerosis?
 (10) A No. I said at least a 50 to
 (11) 60 percent occlusion.
 (12) Q At least a 50 to 60 percent
 (13) occlusion in the LAD. What do you base that on?
 (14) A Well, in part the autopsy.
 (15) Q Okay.
 (16) A And in part the EKG's.
 (17) Q Okay. The autopsy, based on what
 (18) the findings were at autopsy?
 (19) A Well, this patient was found to have
 (20) significant premature coronary disease on autopsy.
 (21) The autopsy has two aspects, gross
 (22) and then microscopic. The gross evaluation of his
 (23) coronary arteries revealed some level of
 (24) obstructive disease in all three of his arteries.
 (25) This is by cross section and eyeballing on gross

(1) Charash, M.D.
 (2) the Medical Examiner's conclusion was there was 30
 (3) to 40 percent blockage in the circumflex artery, a
 (4) 50 percent narrowing of the mid right coronary
 (5) artery, and 50 to 60 percent blockage of the
 (6) proximal LAD.
 (7) Now, of these three arteries the
 (8) most severely blocked on gross is the LAD. It's
 (9) also at the origin of the LAD and in most patients
 (10) most of the time the LAD is the dominant artery.
 (11) Given his massive EKG changes at the
 (12) day of his death when he was able to get a full
 (13) 12-lead EKG shows massive ischemia to the heart.
 (14) With reasonable medical certainty the infarct
 (15) artery was the LAD. That is far and away the most
 (16) likely to cause such massive ischemic changes and
 (17) it's also far and away clearly the most obstructed
 (18) artery and the blockage at the origin of the
 (19) biggest artery. Those match clinically.
 (20) The microscopic portion of the
 (21) autopsy did not evaluate the LAD or circumflex,
 (22) but only the right coronary artery is discussed.
 (23) Whereas on gross it said there was 50 percent
 (24) blockage on the right. On autopsy on the
 (25) microscopic, actually hold on, the circumflex may

(1) Charash, M.D.
 (2) also be discussed.
 (3) It says here cross section of the
 (4) right coronary artery had at least 50 percent
 (5) narrowing by atherosclerotic plaque. That's
 (6) interesting because they said 50 percent on gross
 (7) and at least 50 percent on micro, suggesting that
 (8) the gross might be lowballing it. The LAD is not
 (9) described.
 (10) The circumflex artery is described
 (11) and it says 30 to 40 percent narrowing by plaque,
 (12) but what we do not have is a description of the
 (13) LAD artery which is the artery that was most
 (14) likely to be the acute artery with either a
 (15) ruptured plaque and/or clot.
 (16) Q Why not?
 (17) A Why not what?
 (18) Q Why don't we have it?
 (19) A It's just not there. I can't tell
 (20) you why it's not there. In terms of the need for
 (21) a Medical Examiner to determine whether Mr. Mills
 (22) died a natural death and whether his death was due
 (23) to heart disease, that was accomplished.
 (24) The Medical Examiner wasn't
 (25) necessarily trying to answer every question you

(1) Charash, M.D.
 (2) and I might have today. I don't know if the
 (3) Medical Examiner had the EKG done on the day of
 (4) his death or the EKG's done before his death to
 (5) show a pattern, but as far as I'm concerned the
 (6) Medical Examiner was thorough.
 (7) All I'm empirically saying there is
 (8) no microscopic descriptor of the LAD which I
 (9) believe is likely to be the infarct artery. There
 (10) is something called clinical pathologic
 (11) correlation. You take the findings of the Medical
 (12) Examiner and apply them to the sequence of
 (13) clinical events leading up to this patient's
 (14) death.
 (15) In doing so it is near medical
 (16) certainty that he suffered from a massive MI in
 (17) his death and within reasonable medical certainty
 (18) that was the LAD.
 (19) Now, as to why that artery is not
 (20) microscopically discussed I can't answer your
 (21) question. But nor do I believe the Medical
 (22) Examiner was required to answer our question.
 (23) Q Do you have a copy of the EKG from
 (24) the day of his death?
 (25) A I do.

(1) Charash, M.D.
 (2) Q May I have it, please. I'm going to
 (3) mark it. I'm going to let you mark that one, too.
 (4) (EKG was marked as Deposition
 (5) Exhibit No. 8 for identification, as
 (6) of this date.)
 (7) Q Doctor, could you do me a favor.
 (8) Would you look at Exhibit No. 8, please. Take the
 (9) yellow marker and mark for me the abnormalities.
 (10) A That will take quite a fair amount
 (11) of work.
 (12) Q Because it's so massively --
 (13) A Yes.
 (14) Q -- abnormal.
 (15) That was done at Upper Chesapeake
 (16) Hospital; correct?
 (17) A Yes. Now, there are two types of
 (18) abnormalities. I'm going to underline in the
 (19) official reading right bundle branch block because
 (20) there is that. That's a change of the conduction
 (21) of electricity in the heart, but a right bundle
 (22) branch block does not distort ST segment
 (23) depressions.
 (24) If you look at this EKG in lead,
 (25) let's just go through each one, in Lead I there is

(1) Charash, M.D.
 (2) approximately three millimeters of ST segment
 (3) depression. I'll mark that. In Lead II there is
 (4) three millimeters of ST depression. In Lead III
 (5) there is two millimeters of -- well, two
 (6) millimeters of ST depression.
 (7) In Lead AVR there are three
 (8) millimeters of ST segment elevation. In Lead AVF
 (9) there are three millimeters of ST depression. In
 (10) Lead V, like victory, 1 there is three millimeters
 (11) of ST depression. In Lead V, like victory, 2
 (12) there is four millimeters of ST depression. In
 (13) Lead V, like victory, 3, there are four
 (14) millimeters of ST depression. In Lead V, like
 (15) victory, 4, five millimeters of ST depression. In
 (16) V, like victory, 5, five millimeters of ST
 (17) depression. In V, like victory, 6, four
 (18) millimeters of ST depression.
 (19) So this patient has massive ST
 (20) segment depressions. The ST elevation in Lead AVR
 (21) is often a mirror image of the ST depression, but
 (22) it is showing massive depressions on the EKG which
 (23) shows global ischemia and matches certainly the
 (24) leads that were abnormal in Dr. Kassamali's office
 (25) although it goes beyond that. But certainly those

(1) Charash, M.D.
 (2) abnormalities in the office are included in these
 (3) leads.
 (4) Q What was his condition when that EKG
 (5) was taken?
 (6) A He was in the midst of a cardiac
 (7) arrest resuscitation effort where he was being
 (8) actively resuscitated.
 (9) Q You've I take it reviewed the events
 (10) of that morning?
 (11) A Yes.
 (12) Q All right. Can you explain to me
 (13) what caused him to go into seizures that morning
 (14) at his home?
 (15) A Sure. A large number of people who
 (16) experience arrhythmic -- when people have a heart
 (17) attack which is what I believe happened to him the
 (18) morning of his death, he within reasonable medical
 (19) certainty went into an arrhythmia.
 (20) It was probably ventricular
 (21) tachycardia or could be ventricular fibrillation
 (22) and in a large percentage of patients who have
 (23) cardiac arrests they develop an anoxic seizure
 (24) early during the code.
 (25) So it is common in a witnessed

(1) Charash, M.D.
 (2) arrest for a person to seize early during the
 (3) cardiac arrest as a result of the loss of blood
 (4) flow to the brain.
 (5) Now, if he went into ventricular
 (6) tachycardia first it's even more common because he
 (7) could have a massive reduction in his cardiac
 (8) output due to V-tach which would result in the
 (9) absence of a pulse to a casual observer, but would
 (10) also result in low blood flow to the brain or
 (11) V-fib. It happens.
 (12) But witnessed arrests commonly have
 (13) grand mal seizure or some form of seizure activity
 (14) because of the loss of blood flow to the brain
 (15) early on. It's usually not sustained forever in a
 (16) patient. It doesn't restore cardiac rhythm, but
 (17) it's often visualized in the beginning.
 (18) Q I'm sorry, what did you mean it's
 (19) not often sustained?
 (20) A It's usually not a permanent seizure
 (21) condition if they recover. It's usually a
 (22) physiological seizure due to the moment.
 (23) Q Of anoxia?
 (24) A Yes.
 (25) Q Any other signs and symptoms that

(1) Charash, M.D.
 (2) time. But the pattern of what you see is largely
 (3) dependent on what the heart is doing.
 (4) Q Do you believe he went into V-tach
 (5) or ventricular fibrillation?
 (6) A I don't know enough information to
 (7) know the answer. I have not had the opportunity
 (8) to read any discovery depositions in this case
 (9) which would certainly give me more insight as to
 (10) what happened that day, but with the information
 (11) provided I don't know what he first went into.
 (12) Q What would cause V-tach in this
 (13) situation?
 (14) A A heart attack or acute ischemia.
 (15) In this case his EKG is more consistent with him
 (16) having a massive heart attack.
 (17) Q Than what?
 (18) A I don't understand your question.
 (19) Q You said it's more consistent, more
 (20) consistent than what than having a massive heart
 (21) attack?
 (22) A Than having an ischemic seizure
 (23) without a heart attack.
 (24) Q So it's more consistent with it
 (25) having been caused by -- and I'm sorry if I'm

(1) Charash, M.D.
 (2) you would expect to accompany that anoxic event?
 (3) A No. There is no expectation of any
 (4) of them. Lots of people don't have seizures, but
 (5) a large percent do.
 (6) Q Repeated?
 (7) A There is no expectation of a new
 (8) seizure, but a large number of patients will.
 (9) Q I mean repeated seizures?
 (10) A It doesn't have to be. It depends
 (11) on how their cardiac rhythm goes. Most people
 (12) would not have repeated seizures, but if they get
 (13) recovered and have more hypoxia it's possible. It
 (14) would parallel their cardiac response to the code.
 (15) Q You say to the code, what do you
 (16) mean, to the resuscitation efforts?
 (17) A Or spontaneously. If a person goes
 (18) into ventricular fibrillation and has an early
 (19) anoxic seizure that won't recur because they are
 (20) basically dead. If a person goes into V-tach
 (21) during the early phase of a heart attack that
 (22) could spontaneously recover.
 (23) So they could have recurrent
 (24) seizures with recurrent anoxia. It would really
 (25) depend on what their heart rhythm was doing at the

(1) Charash, M.D.
 (2) dense about this, but is it more consistent with
 (3) him having gone into V-tach or into ventricular
 (4) fibrillation?
 (5) A Neither. His overall course, the
 (6) EKG looked like he was having a massive heart
 (7) attack and that's certainly more likely what
 (8) happened that day.
 (9) Q He was having a massive heart attack
 (10) that morning at home?
 (11) A At some point, yes.
 (12) Now, massive heart attacks literally
 (13) mean massive large territory muscle, but usually
 (14) even a massive heart attack doesn't cause you to
 (15) die immediately, but an arrhythmia does.
 (16) It doesn't matter about the size of
 (17) a heart attack. This appears to be a man who had
 (18) an acute ischemic that day of his heart. Probably
 (19) a large heart attack. It probably caused him to
 (20) have an electrical arrest. Clearly paramedics had
 (21) to get there which means there was a down time on
 (22) top of his heart attack and arrest. He could not
 (23) recover fully from it because between the arrest
 (24) and the heart attack his heart went into an
 (25) irreparable spiral to death. But neither would

(1) Charash, M.D.
 (2) have occurred if his heart had been identified and
 (3) treated prior to that.
 (4) Q And the anoxic event --
 (5) A Yes.
 (6) Q -- that led to his seizures are
 (7) consistent then with the massive heart attack that
 (8) he had?
 (9) A No. That's not what I said.
 (10) Q Then why don't you tell me.
 (11) A Cerebral anoxic -- when I said
 (12) anoxic seizures I meant reduced brain flow,
 (13) reduced blood flow to the brain.
 (14) Anyone with V-tach and/or V-fib can
 (15) have it. A massive heart attack usually takes
 (16) hours to kill you or days. So people don't like
 (17) just collapse and die most of the time from a very
 (18) large heart attack. They develop shock. Any
 (19) heart attack when it begins can throw you sudden
 (20) death arrhythmias which can lead to a brain
 (21) seizure from loss of brain blood flow, but if you
 (22) are having a very large heart attack or a massive
 (23) heart attack and you have a cardiac arrest from an
 (24) arrhythmia with a downtime, that combination tends
 (25) to throw you into a heart that can't be saved

(1) Charash, M.D.
 (2) To that degree I'm embracing the
 (3) pathologic findings as described with the
 (4) patient's entirety of his clinical course, EKG's,
 (5) and events of the day of his death.
 (6) When you put them all together it
 (7) presents a clinical pattern that I have described
 (8) within a reasonable medical certainty.
 (9) Q Are you going to be offering an
 (10) opinion as to what Mr. Mills' course would have
 (11) been more likely so than not if he had been -- if
 (12) Dr. Kassamali had complied with the standards of
 (13) care as you have described them?
 (14) A I do.
 (15) Q Tell me what.
 (16) A Within a reasonable certainty he
 (17) would have been catheterized. His LAD would have
 (18) been identified as the principal pathologic
 (19) artery. By the medical standards practiced in
 (20) 2012 across the United States, even though I'm not
 (21) an interventional cardiologist, I can say with
 (22) reasonable certainty the overwhelmingly most
 (23) likely way it would have been fixed would have
 (24) been with stenting since that was 90 percent of
 (25) people who had coronary repair in that year,

(1) Charash, M.D.
 (2) under any circumstance.
 (3) So it appeared he suffered from two
 (4) illnesses that day, a heart attack and a cardiac
 (5) arrest as a result of the heart attack which added
 (6) great insult to his injury.
 (7) Q Have you ever practiced as a
 (8) pathologist?
 (9) A No.
 (10) Q Have you looked at any of the
 (11) pathology slides in this case?
 (12) A No.
 (13) Q All right. I take it then you're
 (14) basing your opinions with respect to what the
 (15) pathology is showing on the actual written report?
 (16) A I in no way have the skills,
 (17) training or intent to do anything except the
 (18) description of the pathologic abnormalities in
 (19) this case.
 (20) I am not a pathologist. I would not
 (21) look at slides if they were available because I
 (22) would not reference myself as an expert. But
 (23) where I am an expert is correlating pathologic
 (24) findings to clinical events in what we call
 (25) clinical pathologic correlation.

(1) Charash, M.D.
 (2) especially with one dominant artery, and he would
 (3) have then undergone two different changes in his
 (4) life.
 (5) One would have been much more
 (6) aggressive risk factor reduction. Central to that
 (7) is the complete uncertainty about his cholesterol
 (8) level and based on what that is he may need statin
 (9) therapy or other cholesterol reduction remedies.
 (10) He would have then required more
 (11) aggressive blood pressure control and careful
 (12) follow-up and he would have required constant
 (13) supervision under the care of a cardiologist with
 (14) screening stress test, awareness of symptoms, and
 (15) ongoing risk factors reduction.
 (16) With those remedies he would have
 (17) had presumably good outcome because in the United
 (18) States the single most dangerous form of heart
 (19) disease is that which is not known. Once you are
 (20) identified and under care your outcome is so much
 (21) greater than if you have no idea if you have
 (22) coronary disease.
 (23) Q What would have been stented more
 (24) likely so than not?
 (25) A The LAD most likely was the artery

- (1) Charash, M.D.
 (2) that was the infarct artery.
 (3) Q And I know, Doctor, you tried to
 (4) explain this to me before, but just one more time.
 (5) Why is it that you concluded that
 (6) the LAD was most likely the infarct artery?
 (7) A I thought I was very complete.
 (8) Q I'm just asking you one more time,
 (9) please.
 (10) A A, on gross examination the LAD was
 (11) the only of the three arteries to be described to
 (12) be greater than 50 percent blocked.
 (13) B, the LAD obstruction was at the
 (14) origin of the LAD.
 (15) C, the LAD is typically the biggest
 (16) coronary artery of the three.
 (17) D, at the time of his death the EKG
 (18) showed massive global ischemia which of the three
 (19) arteries would best be accounted for by the LAD.
 (20) E, the LAD was not looked -- was not
 (21) described under a microscope and was likely to be
 (22) the acute artery and, finally, it's also
 (23) consistent with the EKG changes seen between
 (24) March 12th and March 23, 2012 where the findings
 (25) are consistent with apical ischemia which involves

- (1) Charash, M.D.
 (2) the anterior wall.
 (3) Q Why is it significant that the LAD
 (4) plaque was at the origin?
 (5) A The higher up an artery the greater
 (6) the amount of territory at risk. So if there was
 (7) a distal LAD blockage it would not be involving
 (8) the entire territory of the LAD, but when you talk
 (9) about the origin of the biggest of the three
 (10) arteries that is much more likely to account for
 (11) the type of EKG changes than if it was in a side
 (12) branch or distal.
 (13) Q You said one of the factors was that
 (14) it had not been described under microscopic
 (15) examination.
 (16) A Yes.
 (17) Q And why does that factor weigh in
 (18) favor of that having been the one that produced
 (19) the final ischemia?
 (20) A Well --
 (21) Q Or occlusion?
 (22) A The description of the right
 (23) coronary artery and circumflex are not detailed in
 (24) the microscopic report, but there is no
 (25) affirmative description of plaque rupture,

- (1) Charash, M.D.
 (2) disruption or even adjacent clot formation
 (3) microscopically.
 (4) The infarct artery would have had a
 (5) greater than 50 percent chance of demonstrating
 (6) those abnormalities.
 (7) Now, even if the LAD were described
 (8) the same it would still be likely to be the LAD
 (9) for every clinical reason. But there is a greater
 (10) than 50 percent chance if the LAD were looked at
 (11) we would have seen the affirmative evidence.
 (12) So seeing the changes can increase
 (13) the likelihood of the diagnosis, but the absence
 (14) cannot remove it.
 (15) Q Right. But the affirmative evidence
 (16) or the affirmative changes are not evident in the
 (17) two microscopic, two that had been studied
 (18) microscopically; correct?
 (19) A Correct. But the LAD appears not to
 (20) have been looked at under the microscope.
 (21) Q Do you know why that is?
 (22) A You would have to ask the
 (23) pathologist. This is the second time you asked me
 (24) a question which I have no possibility of knowing
 (25) the answer.

- (1) Charash, M.D.
 (2) I would like to take a break, but if
 (3) you think you are five minutes away or so.
 (4) Q I think I'm five minutes away unless
 (5) you told me you have reviewed something that we
 (6) haven't gone through already.
 (7) A No.
 (8) Q Let me just see your pile real
 (9) quickly. You can take a break. Go ahead.
 (10) (A short recess was taken at
 (11) this time.)
 (12) (The deposition resumed with
 (13) all parties present.)
 (14) BRUCE CHARASH, M.D., resumed,
 (15) and testified further as follows:
 (16) BY MS. KASLICK:
 (17) Q Dr. Charash, have you been asked to
 (18) address any other issues that we haven't talked
 (19) about here in this deposition?
 (20) A No.
 (21) MS. KASLICK: Okay. I don't
 (22) have anything else.
 (23) CROSS-EXAMINATION
 (24) BY MR. PEEK:
 (25) Q Let me just ask you for the record,

(1) Charash, M.D.
 (2) would it have been appropriate or within the
 (3) standard of care for Dr. Kassamali to interpret
 (4) the EKG from March 23, '12 as normal?
 (5) A No.
 (6) MR. PEEK: Okay. That's it.
 (7) We'll read.
 (8) MS. KASLICK: Okay. Read and
 (9) sign, Doctor?
 (10) THE WITNESS: Yes.
 (11) I have not read discovery
 (12) depositions.
 (13) MS. KASLICK: You said that.
 (14) THE WITNESS: As a result I
 (15) might have opinion about things that
 (16) Dr. Kassamali said that have not come
 (17) up in the depo.
 (18) MR. PEEK: If there is an
 (19) issue I will deal with that.
 (20) (Whereupon, at 4:00 o'clock
 (21) p.m., the deposition was concluded.)
 (22)
 (23)
 (24)
 (25)

(1) CERTIFICATE
 (2)
 (3) STATE OF _____:
 (4) COUNTY/CITY OF _____:
 (5)
 (6) Before me, this day, personally appeared
 (7) BRUCE CHARASH, M.D., who, being duly sworn, states
 (8) that the foregoing transcript of his/her
 (9) Deposition, taken in the matter, on the date, and
 (10) at the time and place set out on the title page
 (11) hereof, constitutes a true and accurate transcript
 (12) of said deposition.
 (13)
 (14) _____
 (15) BRUCE CHARASH, M.D.
 (16)
 (17) SUBSCRIBED and SWORN to before me this _____
 (18)
 (19) day of _____, 2015, in the
 (20) jurisdiction aforesaid.
 (21)
 (22) _____
 (23) My Commission Expires _____ Notary Public
 (24)
 (25)

(1) CAPTION
 (2)
 (3) The Deposition of BRUCE CHARASH, M.D., taken in the
 (4) matter, on the date, and at the time and place set
 (5) out on the title page hereof.
 (6)
 (7) It was requested that the deposition be taken by
 (8) the reporter and that same be reduced to
 (9) typewritten form.
 (10)
 (11) The Deponent will read and sign the transcript
 (12) of said deposition.
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(1) DEPOSITION ERRATA SHEET
 (2) RE:
 (3) FILE NO.
 (4) CASE CAPTION: EVELYN M. DELOVICH-WOOD, et al. vs.
 (5) HASSAN E. KASSAMALI, M.D., et al.
 (6) DEPONENT: BRUCE CHARASH, M.D.
 (7) DEPOSITION DATE: SEPTEMBER 18, 2015
 (8) To the Reporter:
 (9) I have read the entire transcript of my Deposition
 (10) taken in the captioned matter or the same has been
 (11) read to me. I request for the following changes
 (12) be entered upon the record for the reasons
 (13) indicated.
 (14) I have signed my name to the Errata Sheet and the
 (15) appropriate Certificate and authorize you to
 (16) attach both to the original transcript.
 (17) _____
 (18) _____
 (19) _____
 (20) _____
 (21) _____
 (22) _____
 (23) _____
 (24) SIGNATURE: _____ DATE: _____
 (25) BRUCE CHARASH, M.D.

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I N D E X

Witness: Direct Cross
 Bruce Charash, M.D. 3 101

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C E R T I F I C A T E

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
 September, 2015.

 TINA DeROSA

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