

Carlecast 11 Foundation Day 2006

Dr. David Graham: Carlecast number 11, Foundation Day, 2006, 50 years and we're still going strong.

[music - instrumental]

Hello, and welcome again to the Carlecast, the podcast where we give you doctors talking with doctors about issues important to your health. I am Dr. David Graham, your host, and this, our 11th show, is going to be a little bit different in format. I'm not going to have the one interview with a doc where we go into some degree of depth about a single topic, and there's a good reason for that.

You see, not that long ago we had our 50th Foundation Day. Now, any time you can get to 50 times or 50 years of doing something, that's a nice little milestone to reach. The Carle Foundation Day has reached a very nice milestone.

Just to give you a little history of things, Carle Clinic this year is celebrating its 75th anniversary of being in existence. Now, in 1946 the doctors at Carle Clinic established the Carle Foundation to oversee charitable works of the organization. Ten years into that, for the tenth anniversary, the folks at Carle, both the clinic and the foundation, decided to put on a regular fall education meeting to initially celebrate the tenth birthday, the tenth anniversary of the Foundation.

Initially, this was pretty informal. It was basically similar to what we kind of do here in this podcast: doctors getting together talking with doctors about new information, pearls of how best to use the information to treat particular patients. There was no credit for continuing education like we see so much these days. What we wanted to do is we wanted to maximize the knowledge of each other for the benefit of all of our patients.

Well, this has kind of expanded over the years. It has certainly changed into now becoming more of a formal continuing education session where we have a number of speakers, a number of different educational tracks where we bring doctors from around the region to learn more - as we can always do - to help improve the care to all of our patients.

Now, each year we've had a Chair of Foundation Day. This year for this extra special anniversary Foundation Day our Chair happened to be the CEO of Carle Foundation, Dr. James Leonard. I had a chance to speak with Dr. Leonard, and he did an excellent job at filling me in a little bit on kind of the history of Foundation Day, some of the context, and how it continues to change over time.

Dr. James Leonard: It's interesting; first off, that Foundation Day has been here for 50 years. For anyone who's involved with continuing medical education projects, whether it's in medicine or elsewhere, that's a phenomenal run. It's usually hard to keep people interested, to have them be involved in a way that the

product keeps getting better and better and the program keeps growing.

Interestingly, we've seen all of that with Foundation Day. Someone has stepped forth every year to lead. We've only had two people do it twice, and so when you look at that, 46 different leadership people - and I'm not including Napoleon Knight and myself from this year - that's pretty amazing.

Dr. David Graham: Another really interesting thing about Foundation Day is really the change in the audience of Foundation Day. As I said, in the beginning it was very much an informal gathering of Carle docs exchanging pearls, exchanging cases, learning from each other, actually, on how to treat patients. That is very different now, and in fact, it's very impressive the number of docs we get to this little small town in central Illinois, and the various exposures, specialties and practices that these different physicians have. Once again, Dr. Leonard:

Dr. James Leonard: Yes, the current numbers are 289 were pre-registered, and we always expect another ten to 15 percent of walk-ins and people who forgot to send their cards or thought they were going to be out of town or whatever. Of that, 46 percent are people from outside of the Carle Clinic or the Foundation Physician Practices Group. And so, that's an impressive number and pretty consistent year on year.

The other thing that's happened, if I may, is that as we've progressed we have also pulled in a number of specialists from other areas outside of just Carle Hospital. What you see there and what has become increasingly a draw are presentations, such as by Dr. Kaplan today where he comes in and talks about advancements in lean health care, which is really about quality improvement. You have a presentation on the cutting edge by Dr. Tang from Palo Alto to talk about information technology, which we're using in this pod broadcast here. Very exciting stuff, and helps keep all of us contemporary.

And then we'll have the Jean Turkle Lecture Series this afternoon, which will actually be two scientists from the University of Illinois. We'll hear a lot more about very cutting edge genomics and some of the research occurring there.

Dr. David Graham: It's always nice when the people you interview can help you with the segues along with the show, and Dr. Leonard did a good job at that with this interview. Through Foundation Day, there's always been a series of lectures beyond just the educational aspect. There has been a series of keynote lectures which can oftentimes focus on not necessarily just the care and education aspects of medicine, but some of the social aspects, some of the political aspects.

We've had people along the lines of the editor-in-chief of the New England Journal of Medicine. We have had the head of the American Medical Association. We've even had Ralph Nader in speaking a number of years ago, along with various other people talking about almost political socio-economic aspects of

things involved with medicine, not to mention technology involved with medicine.

On top of this, to focus more on technology there's a series of lectures called the Jean Turkle Lectures, which I'll talk a little bit more about later. Those tend to focus more on purely technology aspects of medicine, new procedures, new techniques, those sorts of things.

Well, Dr. Leonard and Dr. Napoleon Knight, who was also a co-chairman of Foundation Day this year, along with the organizers of Foundation Day, also added something extra to the usual educational aspect of Foundation Day. And that is, they added some pre-Foundation Day items, one of which was focusing very specifically on quality in health care. It was subtitled "Seeking Perfection in Medicine."

One of the speakers they brought into this was Dr. Gary Kaplan. Dr. Kaplan is actually the chairman and CEO of the Virginia Mason Medical Center in Seattle. Virginia Mason has actually done some very interesting things as it applies to quality. What they've done has had some very tangible effects in terms of health care as it's done at Virginia Mason. I had a chance to speak with Dr. Kaplan, and I asked him initially how they started focusing the changes they're making in terms of quality health care at Virginia Mason and what sort of approach they took as they thought about this.

Dr. Gary Kaplan: We've achieved a great clarity around our customer truly being the patient. And so for us, all of the efforts of our entire 5,000 employees are on creating the optimal patient experience. We've looked around the country at health care and have experienced... have taken the opportunity to also look at other industries. What we discovered about five years ago is that other industries actually have processes and management methods in place that are really all about safety and all about quality and all about efficiency.

As we've learned more, we've embraced the principles of the Toyota Production System and have actually brought them into our organization, and we call it the Virginia Mason Production System. For us it's really all about striving to achieve a zero-defect product or service for our patients. And so we are using a variety of innovative methods to do that.

Dr. David Graham: As Dr. Kaplan and I spoke, one very interesting thing became clear: most people see the delivery of medicine as truly and simply under the total control of the physician. That is to say no one else really has a say what can happen, where things can happen, and whether or not something, in fact, should happen. At Virginia Mason that paradigm has actually been turned on its head to the point that almost anybody can make sure that nothing goes wrong.

Dr. Gary Kaplan: Yes, just like the line worker at the Toyota plant, we have said to every one of our 5,000 employees, including our physicians, "You are a safety inspector, and we need you to stop the line, so to speak." What we call that

is our patient safety alert system. So if any staff member identifies an error or a near miss or something that might go wrong, we ask them to report that immediately.

As senior leaders, our commitment is to respond to their concerns and begin the process of root cause analysis immediately so that we can prevent a mistake from harming a patient. Since we've put this in place in July of 2002, we have had over 4, 700 patient safety alerts called by members of our staff, and we've very proud of that.

Dr. David Graham: Now I do think we need to be clear about one thing. A patient safety alert doesn't mean that something bad actually happened. In fact, the vast majority of these are what are called near misses or someone recognizing that if this were allowed to happen the potential of something bad to happen was there. So what he's proud of is, in fact, their recognition of things that could happen and the changes being made to keep them from happening to harm the patient at some point down the road.

Needless to say, this is not something that's going to happen without some very strong leadership at the helm. There had to be changes in how leadership looks at things. Certainly they had to buy into this whole idea, but that change had to happen not only at the leadership level, but happen all the way down at every level of the organization. Once again, Dr. Kaplan.

Dr. Gary Kaplan: Well, absolutely. These methods that we're putting in place are both top-down and bottom-up, so the leadership has to be clear. This is the direction we're going to go. This is how we're going to approach it. What we really want to be about is empowering every single staff member to do their best and to have the methods and tools to do their best.

Actually, what we're finding is it's the people closest to the work, doing the work, which know how to improve the work. What leadership needs to do is unleash the power and potential of the frontline staff member.

Dr. David Graham: Certainly that's an idea that could be put into play in any leadership position, recognizing that the people you have doing the job are good at what they do and letting them be good at what they do. Now, the outcome of all of this is that you end up with the true aspect of team medicine, not just involving the person giving the care, but the patient as well, as Dr. Kaplan explains.

Dr. Gary Kaplan: I think the patient needs to be very willing to serve as our partner. Really, what we talked about at Virginia Mason is team medicine. That team includes the care provider, care delivery team, but also has to include the patient. We cannot do what we strive to do in producing a zero defect product without really having the patient as our partner in this effort.

Dr. David Graham: Once again, an idea that's recognized more and more throughout medicine that Virginia Mason is truly taking to heart and integrating

into the advances in care that they give. It's interesting, a lot of people think about quality in health care, and think, in fact, that that must lead to, certainly, higher costs, and aren't we going to bankrupt the healthcare system by doing this?

But as Dr. Kaplan explains, when, in fact, we avoid the mistakes and avoid the problems and get rid of some of the wastes - for lack of a better phrase - in the care that's given, we can, in fact, reduce the cost of health care. As we adapt this nationwide, we may, in fact, go a long way towards lowering the health care cost burden in this country.

Dr. Gary Kaplan: How we end up getting paid for our services in the future, we have to be as efficient as we can be. What we've found is that our processes in health care, whether it's in the hospital or in the clinic, are full of waste. By using very clear methods and tools to take out that waste, we're improving quality and safety, and we're also reducing the cost of care.

It used to be said, as you remember, you get what you pay for. It was sort of like, you have to pay more to get better quality health care. We're actually finding just the opposite. If we take out the waste, reduce the defects, improve quality and safety, it actually costs us less.

Dr. David Graham: I can assure you that a lot of physicians left Dr. Kaplan's talk with many, many new ideas and ways of thinking about things roaming around in their head. I have no doubt that a lot of the ideas that he put forth are going to sprout and bear great fruit here in central Illinois.

Later on in the day, after we had a series of education sessions, we got into our keynote and our Gianturco lectures. Our keynote speaker was Dr. Paul Tang. Dr. Tang, even as a physician, is the Chief Information Officer for Epic. Epic is a company that develops a number of software programs and solutions in medicine. One of the things they're very active in working in is the electronic medical record.

Dr. Tang, as you might guess, is a huge proponent of the electronic medical record. Certainly as we adapt it both at Carle Clinic and Carle Foundation we're finding many advantages there to be had. As I spoke with Dr. Tang, he very eloquently described some of these advantages that are here to be had, and in fact, some of the things that patients ought to be asking for and looking for as it pertain to the medical records.

Dr. Paul Tang: It turned out in a survey about 50 percent of patients think that physicians already use an electronic health record system, when in fact, it's closer to nine percent of physicians actually have a comprehensive electronic health record system. So, the advice I'd give to patients is ask your docs to invest in one.

The reason is because I think it's the number one say that, as a team, health care providers can improve their quality and increase their patient's safety. You might

think of the "Got Milk?" ad. Well, I think the important question for patients, then, to ask a physician is, "Got EHR?" for electronic health record system.

Dr. David Graham: I've got to admit, I haven't had any patients come in and ask me, "Got EHR yet?" Who knows? After some folks give some listen to this, I may be hearing this in the near future. Certainly, I think it's an important question because the advantages of having an electronic medical record or an electronic health record are huge. Everything from being able to easily access records, films, pictures; being able to sit in an examine room with a patient and not have to search through this huge stack of X-rays to find the one picture or CAT scan slide that you want to show a patient, but to bring it right up on the screen.

To making it easier for pharmacists as we electronically fax prescriptions to pharmacies which make it, in fact, easier for them to read so we don't have medication records, because of the stereotypical doctor's sometimes questionable handwriting. Anyway, Dr. Tang also went into a bit of explanation on how the electronic health record or electronic medical record in other ways can help improve the quality of care.

Dr. Paul Tang: One of the most obvious things is it makes information available at the physician's fingertips. Right now, instead of foraging for things that may or may not be in the paper record, it makes them accessible at the touch of a button.

The second piece is, it can help with something we call decision support. It can help remind physicians about certain things that a patient might be eligible for, whether it's a pap smear, a flu vac, a mammogram, or checking on potential complications of a medication. All these things should come to mind at every interaction between the patient and the physician, but we can't... Physicians don't always remember everything, so a computer is good at that reminder function.

Dr. David Graham: Now certainly, both Carle Clinic and Carle Foundation have wholeheartedly embraced electronic medical records and have either implemented or are in the midst of implementing very robust electronic medical records throughout all of the Carle institutions. We're already seeing the benefits of that in terms of improved quality of care, including some of the issues I talked about further.

Where this really becomes a benefit at presenting this at Foundation Day is for those physicians not from Carle who are kind enough to attend. We can help use our Foundation Day lectures as - if you might say - a bully pulpit to try and advance the notion of electronic medical records throughout central Illinois, advancing the health care of all people living in this area of the country.

Now, the other lectures I talked about were the Gianturco Lectures. Let me give you a little history. Dr. Cesare Gianturco was a Carle Clinic physician who developed some technology in terms of different catheter delivery systems. They

became fairly widely used and fairly well known. In honor of his accomplishments, Foundation Day developed these series of lectures called the Gianturco Lectures.

These lectures have mainly focused on technology in medicine, and we've had some very interesting ones through the years. We've had lectures on robotic surgery many, many years before it became known and used for prostate cancer and for other cancers. Interestingly enough, the main aspects we were hearing about it were in military uses. That is to say, having a surgeon operate on a wounded patient who might still be at the front lines while the surgeon was, in fact, a number of miles away at a little more safe institution. We heard about virtual colonoscopies years before they are now more widely accepted through the marketplace and used on a regular basis now.

The focus of this year's Gianturco Lectures - in fact, there were two of them - were on translational research. Carle Foundation, together with Carle Clinic and the University of Illinois, are establishing a large new thrust in the area of translational research. Now, let me be honest with you. We've had translational research in the area through the University and through other institutions for a number of years, but we've really had an untapped potential here at Carle that we're looking to tap more fully now. This will be something you hear about in the years to come.

We decided to highlight some of the excellent researchers that we have at the University now in our two Gianturco lectures. Interestingly enough, the topics that they both focused on, because these are topics they both work in, are regarding stem cells. Now I know - let's kind of step back for a minute and get away from some of the political, ethical aspects that we're talking about here. None of this is regarding embryologic stem cells. In fact our two Gianturco lecturers are looking at stem cells from a very, very different approach.

Our first speaker was Dr. Marie Claude Hoffman. Dr. Hoffman is at the Institute of Genomic Research at the University of Illinois. Her focus is looking on stem cells in a very different way. She's not looking for stem cells to treat disease. But wait; let me have her explain it better than I ever could.

Dr. Marie Claude Hoffman: My work basically is focusing on adult stem cells. Those are cells which we can find in virtually all organs in our body. Those cells are there. They are sometimes dormant or sometimes they proliferate very slowly. They are meant to rejuvenate the tissue when the tissue is injured or when a tissue like the skin or the blood - which is a tissue - is meant to regenerate throughout the life of the individual. So, those stem cells are really quite important.

Now, the problem comes when the cells which are proliferating quite regularly, because they are proliferating, the probability that something goes wrong in the DNA replication is quite high and mutations can arrive pretty quickly. Sometimes

are not repairable by the cell and we think that's because of this, stem cells are probably the target of malignant transformation.

Dr. David Graham: In other words, if we can understand stem cells a little better, we might, in fact, have a better understanding about how different diseases arise through the body. Once again, let me ask Dr. Hoffman to put it better than I can.

Dr. Marie Claude Hoffman: People need to understand that even the problem of regeneration or tissue regeneration or replacement is very similar to the problem of cancer in some ways because we are dealing with cells which are proliferating, maturing. In one case, we try to use stem cells to make them proliferate and mature into distinct cells that belong to distinct tissue. In the case of cancer, we have cells here which are not able anymore to differentiate, to mature into normal tissue, so trying to understand stem cells in the broad sense will allow us to understand cancer way better and why cancer cells proliferate instead of mature.

Dr. David Graham: In other words, if we understand stem cells better, we are going to understand a lot of different diseases and we can use that as we fight these diseases down the road. Now Dr Hoffman felt it very important to emphasize the different aspects of her research as she carries it along.

Dr. Marie Claude Hoffman: Absolutely, because this is a completely different aspect of stem cell research which understands why tissues grow and to try to understand why cancer cells grows.

Dr. David Graham: So I think certainly we can all agree that Dr Hoffman's research has a lot of real benefit to it as we understand things and apply that knowledge in the future and it's not the kind of research that we really need to get all into concerns or uproars about in terms of ethical questions because, in fact, the stem cells she is looking at are stem cells that are present in normal tissues already. She is not looking to collect stem cells and do anything different with it.

Now our other Gianturco speaker was Dr. Lawrence Schook also from the Genomics Institute at the University of Illinois and yes his research was focusing on the use of collected stem cells but he is also looking at a couple of different aspects of collected stem cells. He is not dealing at all with embryologic stem cells so we can once again avoid that whole ethical question and argument but the questions he raises hold a lot of potential impact in the future of stem cell research. Now the first question he raises is what about stem cells we can collect from people already. Dr. Lawrence Schook.

Dr. Lawrence Schook: What we have seen, particularly with the myocardial infarction story, and there are other growing stories both experimentally and in the clinics, but the next step has seemed to be that the variation reflects impurities in the NGA population in the population in the bone marrow.

Dr. David Graham: In other words, the stem cells we are able to collect now aren't the purest population of cells that we can find. So what if there was some ability to make that population of stem cells pure, to find exactly the type of stem cells from the adult that you are looking for to begin with and that's something that Dr. Schook explains here is the main focus of his research now.

Dr. Lawrence Schook: What we are trying to do at the Institute for General Ecology at Carle is we have some new technology that has been developed right here at the research park right here in Champaign that allows us to really look at high throughput purification of bone marrow cells. In the bone marrow there are really two compartments of stem cells. There are the hematopoietic stem cells that have been used successfully in terms of treating, in terms of radiation therapy and there is also a group of cells, these mesenchymal stem cells, the adult's cells that can become muscle bone, cartilage, ligaments. Historically, we have used an impure population for reconstituting the hematopoietic system and that's worked really well. We want to begin to look at using the sub populations of the mesenchymal stem cells for treatment in myocardial infarction. The responses are very varied and we think they are due to two things. One, the number of mesenchymal stem cells that might be in a patient at a given time and also the idea that other cells in there might have either a positive or negative effect of the effectiveness of the mesenchymal stem cells.

Dr. David Graham: Now Dr Schook on a couple of occasions in his last couple of quotes mentioned myocardial infarction. What he has been referring to is the fact that there have been some studies of patients who have had damaged hearts from heart attacks who had the damaged heart muscle injected with their own adult stem cells and, in fact, there has been good clear evidence that those stem cells turned into new heart muscle. In other words, the patient's body was able to regenerate an organ that was damaged that in the past, we've never been able to regenerate to this level before and that's one of the things that are being looked at with adult stem cell therapy and Dr. Schook did a good job at giving us some idea of what the future might be for cell based therapies.

Dr. Lawrence Schook: I think the future for cell based therapies and I think everyone has been looking for a success story for stem cell research. I think, unfortunately, a lot of the debates have been focused on embryonic stem cells and we can take it off the table because that is really a long-term effect. The idea with using adult stem cells is still one that we've used traditionally. So we've done blood transfusions. We've done bone marrow transplants. So we are not really doing anything differently in terms of the approach to harvesting the cells and introducing them back into the individual. What we are talking about now is having a better understanding of the purity how we can isolate out the small percentage of cells. We are talking about 0.1%, 0.01%. They are in a very small amount. There are some new ways and we are partnering with the adult bone marrow stem cell group at Northwestern with Jayesh Mehta who is world renowned in adult bone marrow transplant, who is also a partner in a relationship with the purification where there is some new ideas of being able to provide growth factors to the patient to mobilize the these cells into the

peripheral blood. So our excitement is that we can hopefully begin to be not having to go in and take bone marrow which has negative consequences but actually being able mobilize the mesenchymal stem cells from the bone marrow so we can actually use peripheral blood as the source of these mesenchymal stem cells. That's the excitement that we're trying to pursue.

Dr. David Graham: Once again, the speaker helps me with my segue. What I wanted to talk about for a second here was the fact that physicians go into medicine many, many times with a real sense of excitement, of new things, of learning all these amazing new facts, new technologies, totally new experiences that we go through. Things like Foundation Day, listening to speakers like Dr. Kaplan, Dr. Tang, Dr. Hoffman, Dr. Shook work so well to rekindle that level of excitement that we've had and recharge our whole enthusiasm for medicine and the future of medicine that it just provides a huge service to the physicians who attend these things.

The other thing it really goes to show is the different aspect of Carle - Carle Foundation and Carle Clinic. Certainly, we have a large thrust on giving good quality health care. But with the assistance of the Foundation, and really as one of the main focuses of the Foundation's mission we also put a lot of importance on education. Dr. Leonard, the CEO of the Foundation and, again, the Chair of this year's Foundation Day really put it well.

Dr. James Leonard: I think in the context of how Foundation Day fits into medicine in east central Illinois, for me at least this really shows how important we take the obligation around education. Carle has said we're a multi-specialty group practice. A lot of what we do is very contemporary medicine that allows this spot in east central Illinois, which is semi-rural in many ways, to practice medicine that you typically only find in the big cities.

How do you bring that level of expertise to primary care physicians, physicians in smaller towns? You do it with an event like this, and you make it real good quality. You give folks lots of choices about what they can hear as well as meet the physicians that they might be talking to on the phone, that they might be getting consultations from. So from that perspective, it meets an obligation that I think is incredibly important around the health care of the entire region.

Dr. David Graham: Or to put it another way, when you put together the delivery of health care, the education to make sure that the people giving you your health care are completely up to speed with the different aspects of care that are going on, all under one roof at Carle Clinic and Carle Foundation, it goes to show this one very important thing. Dr. Leonard:

Dr. James Leonard: I think it really points out hopefully to patients and anyone that might hear this how serious we are about health care for this region; that for people to spend the time to not just come and hear the presentations, but to put these presentations together. The physicians spend hours, and it's to make sure that that 20 or 30-minute interaction is at the highest level possible. That's

the kind of thing that's going on every day from all of the physicians and other healthcare practitioners here in east central Illinois.

Hopefully, people feel good about that. That it is very serious, and it is moving ahead in a way that really protects all of us, our friends, our neighbors and our own families.

Dr. David Graham: To that end, and also to address something that Dr. Leonard mentioned in that quote, the Carle Foundation is going to be doing something different with the Foundation Day talks from this year. We recognize that for many doctors in the area it's difficult to take a half day or a whole day out of your practice, particularly if there are a number of docs from your town or your area that want to come to Foundation Day. Someone has to be there to give the ongoing care that patients need or to be available if something happens that a patient needs care right at that time.

In the past there have been books with summaries of slides or maybe some written presentations, but many times those are just never as good as hearing the actual talk. This year to show how much importance we place on physicians being able to get access to this information, Carle Foundation - and I'm happy to help them do this - is making these talks available in a new way. We are, in fact, bringing podcasting to Foundation Day, not just with this, but we have selected out a number of talks from Foundation Day that lend themselves to this audio format very well and we've recorded them.

We will be translating them into mp3 format and we'll have them available for area physicians to download and listen to at their leisure, just with all the advantages that podcasting has. In fact - and we're still in the midst of working this out - we're going to, very potentially, have this available for physicians to get their continuing education credit that they need to keep their licenses up to date as well.

These talks aren't posted quite yet, but they will be available through the Carle Foundation Continuing Education website. Their main web page is www.carleconnect.com. We'll be sending information when these are available through the website to all the physicians in the area that these will be available for them to listen to, to learn from, and to hopefully rekindle some of that sense of enthusiasm and excitement that we all had when we came into medicine to begin with.

I've got to admit, anybody is going to be able to download these. If you, as just a listener of the Carlecast, might want to listen to some of these talks as well, understanding that these aren't geared towards patients as much as they're geared towards physicians. The information may be a little more intense and in depth than you might be used to getting on this format. But certainly it would be available for you to do that.

Now, I do want to say, I know this has been a longer show than we've had in the past. I thought there was so much good information to the conversations I had with the physicians at Carle Foundation Day that I thought it was OK to expand our time a little bit. I hope you'll be OK with that, and I apologize if this is just dragging on way too long for some of you.

This is a bit of a special show. Like I said, we're not going to have our usual format. I'm not going to have my "what else is going on in medicine" story this week. God, hasn't this gone on long enough already? Anyway, we'll get back to the format with the next show. We have some real good topics and real good interviews lined up in the weeks to come.

I hope you join us. Once again, you can go to our website, www.carlecast.com, and download the shows and transcripts from that site. Or you can sign up and subscribe through any of the usual podcast registries: iTunes Music Store, Odeo, Podcast Alley, Podcast Pickle, Yahoo Podcast, AOL Podcast. The number of registries just keeps getting longer and longer.

We hope to keep providing you with good information at patient-based levels that will have an impact in your life and your health care for years to come. So until next time, I am once again, Dr. David Graham, your host for the Carlecast, asking you to stay healthy.

[music - instrumental to fade out]