

Please stand by for real time captions.

Good afternoon everybody Thank you for coming to want to welcome our virtual participants have over 30 people who registered to participate virtually . I want to welcome our virtual participants as well . My name is Veronica and I'm joined by Dr. Sally Weaver would be facilitating this session with me today . We are program directors in healthcare delivery research program and we co-lead research agenda on health care and cancer delivery . If you're participating in the session for the very first time we have a few points to cover with you . This lecture is a part of a cyber discussion series on understanding the healthcare team's role and occluding the [Indiscernible] coordination . We hold these lecture series at least three or four times a year to solicit and engage opinions from researchers, clinicians, healthcare managers as well as healthcare providers who spend a lot of something about healthcare quality and how to deliver care in a better way . Were interested in teamwork processes and cancer care and what researchers need to do to understand how to deliver better care . These sessions help identify topics and factors that address [Indiscernible] process of care that leads to better care coordination and better patient outcomes . For those of you for joining us virtually and are new to the go to webinar feature I just have a few housekeeping issues for you . The control panel should appear in the upper right-hand corner of your screen . To expand the control panel click the orange panel . To make the webinar full-screen please the blue icon and this appears to buns below the orange arrow . All lines will be and listen mode only in the session will be recorded and posted on the program website within the next week . We want this to be a interactive session for those in the room as well as that are participating virtually . For those who are participating virtually you can submit your questions at any time . Just type your questions in the Q&A box on the right side of your screen and also for our virtual participants if you need live close captioning please click on the link in the chat box located on the bottom right of your screen . I'm very pleased to introduce everybody to our guest speaker Dr. Raymond [Indiscernible] . Is a practicing hematologist a medical oncologist at the Baptist can't this -- cancer center in Tennessee . He the research professionals University of Memphis school of Public health and is also a member of the Vanderbilt Ingram Cancer Center as well as direct oncology research group and the multidisciplinary oncology program . Dr. [Indiscernible] research focuses on improving healthcare systems including the examination of oncology care delivery model . As well as improving the quality of surgical resection and pathologic staging of lung cancer . Dr. [Indiscernible] research support include funding from [Indiscernible] as well as the center outcome research Institute and is also the PI [Indiscernible] minority underserved national Cancer institute community oncology research program that we know is [Indiscernible] . Dr. Osarogiagbon received his medical degree from the University of [Indiscernible] Nigeria and he's a member of the medical society and American Society of oncology advisory group . He serves from the NIH research services organization and delivery section . He is on the board of directors of the [Indiscernible] lung cancer foundation center program . Is also on electoral boards for two journals . Finally he is a chairman elective international Association for the study of lung cancer, membership committee . The title of Dr. Osarogiagbon [Indiscernible] . Dr. Osarogiagbon welcome , Thank you for coming and were happy to have you here with us this afternoon .

Thank you very much Veronica . [Applause] . I think you were talking about somebody else but I'll take all the credit . [Low Volume] Thank you for the invitation I really feel honored to be

able to participate with you today . I got six main objective I wanted to cover . I want to paint the picture of the reality of lung cancer care and then talk about how we might go about tackling the challenge represented by what I show you . Then talk about how multiple necessary concepts can be a major means of overcoming these challenges and then I'm going to exemplify from our ongoing research ways in which we have used [Indiscernible] interactive interdisciplinary approaches both in decision-making and in care execution to improve [Indiscernible] and outcomes of care . Then we will talk about the gap in implementing [Indiscernible] care and means of overcoming them . Finally maybe look to the future of the challenges and opportunities that we have . First the challenge . Lung cancer is the [Indiscernible] of our age . Worldwide there is about over 6 million new patients diagnosed annually worldwide call 1.4 million deaths. In the United States is about 224,000 224,020 16 and about 150,000 deaths . Lung cancer percent about 14% of all [Indiscernible] in the United States . Represents 25% of all the deaths . The aggregate five year survival guide diagnosed in 2017 with lung cancer will be approximately we think about 18% . Compared to about 95% of prostate cancer, almost 90% for breast and [Indiscernible] . We have not moved that [Indiscernible] very far because in the 1970s it was about 12% . All the work and efforts and discoveries over the last several decades we have [Indiscernible] to 18% . [Low Volume] The map I just showed, it just shows you this Memphis Tennessee were IM is in the epicenter of our population dense region of lung cancer incidence . With a 17% aggregate survival no surprise that [Indiscernible] map is pretty much identical . We know why of course most people get this . It has to do with tobacco use, it still more culturally accepted in parts of the country . Along with that comes the fact that lung cancer [Indiscernible] is also the heart disease belt, and the other belts of America .

I'm going to talk a little bit about the quality gaps . The challenge of lung cancer, the reason why we have not made [Indiscernible] program is the fact that patients yes it diagnosed in advanced stages Obama get lucky and identify patients at points where they can be properly taking care of a good outcomes we failed to deliver those outcomes . The quality gaps can be divided into early decision-making problems . Diagnosis, staging, treatment selection and also problems with execution of care . What the diagnosis is made, patients were fortunate to have early stages theoretically have curable disease we often fail to cure and trying to dig into why that is . Of course even patients with the [Indiscernible] disease to have options that can be beneficial to them . I'll give you a snapshot for example . Early-stage disease this is from [Indiscernible] . We looked at patients with [Indiscernible] stage I and two to whom the optimal treatment is surgery . We just ask what percent of -- percentage of patients receive [Indiscernible] . About 50% in Wyoming of just shy to 80% in New Jersey messages . [Indiscernible] is somewhere in the middle . My healthcare system has major [Indiscernible] in Arkansas and you look at the list of states [Indiscernible] . Somewhat indicative of the problem . I said Tennessee rate 65%, sounds good . In my healthcare system we [Indiscernible] three states and have five major institutions were lung cancer surgery is done . Woman look at the use of surgical section for stage I we see this very striking, even [Indiscernible] variability . The use of surgery, the use of no treatment patients with curable [Indiscernible] disease . The same stories goes with [Indiscernible] . I showed you that map . The reason why I think that the work we do outside of the environment is meaningful even the were focused on my group on [Indiscernible] is that the things that we find our meaningful for many other diseases . This map is almost the [Indiscernible] cancer map of America . As I said, heart disease and stroke relevant to that . We feel that our approach to this challenge and the lessons we learned and the generalizable years

that we come up with are likely going to be meaningful to us . Here how we have approach this . I'm very much [Indiscernible] by this impact. If you look at things from the population level, if you want to make a difference from the [Indiscernible] the bigger bang you will get for your buck is to keep this from happening in the first place . By that is early detection through screening . Optimal treatment of early-stage disease and then [Indiscernible] better more advanced .

If you look at where we spent our clinical dollars, it's actually in the opposite direction which in some ways makes no sense . Impacting the in large healthcare system we felt we needed a strategic approach . We needed to remember that impact . Med -- impact pyramid . About 12 years ago when I got to this region we started out with the place where the data was which was the hospitals . The part of it was [Indiscernible] Web surgery . Even though I know the surgeon I started out looking at surgical [Indiscernible] and very we realize that we have a number of things that we can do better . Ultimately our programs now include multidisciplinary conference and clinic. We now developed a strategic trial program . We have a research program including what I'm going to set -- start talking about . [Indiscernible] . Downstream we have developed how we started a [Indiscernible] detection program and making sure the right thing gets done for those patients . That we have a number of [Indiscernible] with the American cancer society health research branch . Then we started a [Indiscernible] project, the project improves [Indiscernible] . Then downstream we want to get out to communities I want to consolidate our tobacco program and also patients who [Indiscernible] . Trying to taken [Indiscernible] comprehensive organize approach is being part of our solution . I will talk next the interplay dysentery care I've been given a lot of time to speak with [Indiscernible] and I want to make sure I don't drive everybody to distraction. If you have any questions I would love to take them at any time . With the picture painted about the lung cancer challenge and maybe some strategies to approach and if anybody has any questions I would be glad to take it . Otherwise move on to the next .

So interdisciplinary care . Lung cancer is complicated but as we all [Indiscernible] we can oversimplify and start with that . The thing about lung cancer is it always starts out at the same place . It starts out with an abnormal [Indiscernible] . That is where it comes into our role as healthcare systems and providers . You can always TrackBack when the first shot was fired . Then it flows into any fried diagnostic biopsy . Is a cancer or not . Then the need to know how much cancer have you got . How widespread is it . Than on the basis of this, the selection of treatment ideally can optimal one for the unique patient and then you get your outcomes . As you see, deferring to the [Indiscernible] you get, the wider the range of options you have . What is important to note is that each one of these options are controlled by a different type of specialist who traditionally has a different culture and communication system, a different point of emphasis and actually quite frankly a different [Indiscernible] . Lung cancer is complicated . We look at four years of lung cancer resections in my healthcare system . Asked the question how do patients flow from point to point . From one point From 1.2 the last point . What you see here are these crazy loops costs, Skip, forward, backwards and high percentages . Along with this is a patient who has been told that have a disease [Indiscernible] . Lung cancer is complicated but we have to simplify . As part of that simplification we have to look at the actors in this play . Who are they and what is their role . You actually break these people down into the first responders . These are the people who typically order that first x-ray that leads to the

understanding there is a problem . Most commonly ever care doctors, emergency room doctors and hospitals . These doctors are unique in the sense that they know the danger, the medical legal danger and every other danger . They do not have the skill sets to deliver care . They have to turn around and find somebody to him the situation off to . Then you have diagnosed patients . The radiologist and pathologists . These are being relatively behind-the-scenes . Patients don't really interact with these members of the team . That you have interventionist . People who [Indiscernible] material . Then you have the therapist, people who do the treatments . [Indiscernible] . Then you have coordinators, the connective tissue that keeps the [Indiscernible] . Then of course never forget the patients should be at the center of all of this and the caregivers who should be right next to them . When we say we want to set up a program, what would we have to have goals ? what are we trying to achieve ? hopefully we can agree that a good care delivery environment should be able to quickly and efficiently, accurately identify the need of the patient on where they need to go to get that need met . Leading to the best possible outcomes . Obviously within the limits that the patient says . The problem is what I showed you . Not only is this a highly [Indiscernible] disease with patients and older patients with lots of [Indiscernible] who have a disease [Indiscernible] but you have so many different actors you need somebody directing the play . In the usual care model, the play directs itself . We think that the actors are so skilled they can conduct this play without [Indiscernible] direction . The patient meets the doctor and we hope for a good outcome . With this interdisciplinary approach you are more actively trying to get the right patient to the right doctor who has direct school sets for that particular patient . Than get that done in a timely fashion hereby enhancing the likelihood of the best possible outcome . It makes sense, every time you [Indiscernible] everybody goes [Indiscernible] . If you look across the land you find precious little evidence of this actually happening . The gap between expert recommendation, why are you even doing this already too no evidence of this going on means that they have to be [Indiscernible] . What are they ? patients obviously when you talk to them, they tell you [Indiscernible] .

It makes sense to where is the evidence . That's part of the problem . It's easy for people to [Indiscernible] peer [Indiscernible] . Can you establish it geographically diverse widespread environment in such a resource challenge part of the country . If you do so what is the value . What are the measurable meaningful improvements in outcomes that [Indiscernible] will provide . And at what expense . You can look and glanced directly and look at the value in terms of [Indiscernible] and stuff like that . These were the questions that reframed in our proposal . We were fortunate they occur -- they were kind and they were worthy questions . I'm going to talk about how he went about that project and some of the early results . Here we are trying to improve decision-making . The program that we set up was a [Indiscernible] program . The was no clinic to intervene on . Basically when we started this project, the first aim was to understand from the key stakeholders perspectives certain key questions about physical enterprise . Stakeholders with patients, their caregivers, the two groups that I mentioned the first responders and the involved specialists who needs and challenges could be different, nurses, hospital administrators, the people left provide the environment of care, executive level representatives of third-party . We want to find out what should an optimal lung cancer model look like . What should be able to do and what should it look like I taste like and smell like . Here are two models . The current care and then [Indiscernible] . What can you see from your respective as strength and weaknesses, pros and cons . Were interested in looking at multi-care and what are from your perspective the barriers to being able to deliver this in a meaningful way and what would you

like, whatever we do to be able to demonstrate to you to make you convinced that multi-care is as good, no better or worse than serial care . The whole point of this is to measure . We do a total of 22 focus groups, a total of 106 participants . Different types of positions .

This is basically what we found, everybody agrees the concept of [Indiscernible] by itself if done right, division collaboration, better coordination, [Indiscernible] recommendations for care and probably [Indiscernible] will improve the time limit of care . Patients compositions, administrative . Terms of challenges, patients and caregivers couldn't think of anything . When you dig in deep enough it will tell you at the end of the day that there are problems . I'm worried that this thing is going to rob me of my [Indiscernible] physician and therefore rob me from streams of [Indiscernible] and of my source of income . Patients get shocked when they learn that doctors were about preserving their social income . Than others are interested in finding evidence . The administrators and the insurance executives moaned about the lack of validated [Indiscernible] . What stops anyone smart business guy from hanging up the [Indiscernible] . How will we know [Indiscernible] when we see it and how will we know it's not there when we don't C then of course needing to know what value do you get out of this . Those are's -- that was our first . The idea was to take this use those benchmarks and embed them as the execute . Now we needed to go do it within our healthcare system and show that we were doing at . It's [Indiscernible] because I said so and because it does XYZ . Once with the XYZ we know we are ready to go and were able to compare . The benchmarks that we chose [Indiscernible] . Concordance rate is once the multigroup has agreed this is the next step we need to agree and take . In a previous world we have shown that almost 40% of multi-D recommendations were not carried out . [Indiscernible] . We felt that for this to be successful we needed to have a minimum of 85% concordance rate . The timeliness of care was a benchmark although timeliness does not translate into a survival difference . What we heard loud and clear from our patient is that you can't tell me I have a life-threatening illness and make me wait . Stage confirmation from work we have done and recognized that a lot of our patients get [Indiscernible] so we wanted to measure how quickly we make the efforts and how much [Indiscernible] has . We have a lot of surveys that we get from patients . We were also interested in [Indiscernible] satisfaction including the first responders participating . We are interested in helping create an implementation knowledge infrastructure . We use the framework to look at the evolution of the program within the healthcare system . [Indiscernible] . The things we learned from the stakeholder that we are careful to [Indiscernible], we learned the timeliness of patients and the quality of communication . That was something we were easily able to prove tougher communication how do you measure that . We decided we would measure the frequency which of the final recommendations were communicated directly to the next person who was supposed to have care handed off to them . That communication was a specific span of time, 72 hours . The clinician told us that timeliness that is their time was important so don't waste my time with your multi-D .

Communication, also they were insistent that you have to respect pre-existing relationships . If I sent a patient to you and that patient ends up in somebody else's hands, one of the challenges the real challenges and multi-D is you have to find some way to not have those [Indiscernible] happen because it can be lethal . Administrators want to expand access to care and they were interested in ensuring whatever you did and what patients have [Indiscernible] . We embedded all these things in various ways into what we did . This Elijah shows you a concordance rate . [

Indiscernible] . Here this shows one of the things that we needed to do was administer service to patients . This is not the results of the survey, these are just showing that most of the time over 95% of the time we were able to get the caregiver and patient survey as needed . Our service and insert a baseline at three months and six months . The verifiable communication to have this closed loop communication . We have templates including patient stage and a very precise [Indiscernible] I was recommended .

They have to acknowledge the [Indiscernible] and it has to be have sent to them within the time that we specify . Having done all these things, now it's time to look . How does this matchup with [Indiscernible] . For every multi-D patient this is a [Indiscernible] study . We thought about randomization but it's going to take us too much time to configure the healthcare system to [Indiscernible] . The reason why we did the set up was because we thought there might be some crossover from serial to multi-D . We wanted to have some flexibility for [Indiscernible] . What we really wanted to ask is what is the value of multi-day . Also what is multi-D . The way we define multi-D is somewhat [Indiscernible] . Anybody who physically comes into the [Indiscernible] clinic and whose care is correlated by a navigator will [Indiscernible] that clinic . We also have remember the weekly conference . It's possible for patients to be presented in the conference but never physically see [Indiscernible] . We defined those patients as serial care . What we are saying is, multi-D you have to be physically seeing and we have to eyeball you and know what you look like . You have to be able to give us feedback about what you are doing and the coordinator has to . But that has done for us was given us [Indiscernible] groups . [Indiscernible] . We will be able to see, do you really have to be [Indiscernible] in the group clinic or will the conference surf ice . Living through a virtual tape of activity . And then the endpoints are interested in outcomes, the stage confirmation do you actually do the correct staging appropriate rate . The timeliness of care and survival and how to match it up . [Indiscernible] . The multi-D patients are older and tend to be [Indiscernible] and they tend to be less frequently [Indiscernible] . Is somewhat stacked up to be [Indiscernible] . Part of this is using multi-D as a means to [Indiscernible] .

One and point, we see that the correct [Indiscernible] is significantly done in the multi-D arm than in the serial care arm . The other thing that we have seen is that the use of treatment [Indiscernible] link the stage at this proven to be different . [Indiscernible] . Are early baseline patient reported outcomes in and show much difference between serial care and multi-D patients except the multi-D patients at baseline rated their care more positive . We are now looking for the three-month and waiting for the six-month survey . Bottom line, we received the structure and its [Indiscernible] . We are already seeing imbalances in stage appropriate [Indiscernible] and mortalities . Were also doing, trying to understand how these patients under study compared to everybody else out there . We got the patients were physically seen in the multi-D clinic . Were going to look at all the patients and their characteristics and compare them to everybody presented in the conference call patients diagnosed with lung cancer in the greater regional healthcare system . With Dr. [Indiscernible] health compare them to the [Indiscernible] . I'm going to move in a slightly different direction . If nobody has a question . Next I'm going to talk about actual care delivery . We talked about decision-making and the early steps that you take . This is work that was supported by the NCI . Looking at surgical resection of early stage lung cancer . There are 60,000 and lung cancer resection in the United States roughly . The five year survival rate of all [Indiscernible] lung cancer is about 17% . About 90% of those five-year

survivors are people who had surgery . Surgery is the most [Indiscernible] for lung cancer . For patients who have that available to them, the most important factor is the pathologic [Indiscernible] . [Indiscernible] . You can see here that looking at the [Indiscernible] patients with [Indiscernible] negative disease across the world [Indiscernible] . In Asia you can see that these are their survival [Indiscernible] . Those statistics are lower and America even low in Australia and even lower in Europe . [Low Volume] I'm going to give you three snapshots of why quality difference is . When we look at patients with no negative lung cancer operated on and United States 18% of them have no lymph nodes exam .that . Here we are saying we can [Indiscernible] about them . Here again those who had one or more [Indiscernible] we just said [Indiscernible] and we are good . There is a 14% survival . What is the 14% survival difference ? the benefits of chemotherapy is somewhere between four and 14% . Just getting the correct operation and knowing your ability to [Indiscernible] better gives you [Indiscernible] benefit . Than we said yes give us one [Indiscernible] but here we said okay these are all [Indiscernible] patients . The more lymph nodes examined before you call somebody negative the lower their mortality is . The sweet spot seems to be 18 to 20 . Just big said just -- just because you said they're not negative doesn't mean that . The most important factor, how do you expect what proportion of patients would you expect would have no lymph nodes exam . The most popular number zero . 18 to 20 is a small [Indiscernible] out there . These notes a surgeon has to get . If he doesn't you have no way of getting to them . Once the surgeon submits this, the pathologist must be able to get . Once you know that you can figure out whose responsibility and were to be focus our intervention . We said let's start with the [Indiscernible] notes and we designed the surgical specimen collection . Nevermind the surgeon of the correct [Indiscernible] and allows them to put them into specific containers . This marker reminds the surgical team of [Indiscernible] for quality . When you do that and start looking at large data this is from our region now and look at certain quality benchmarks . The NCC and a benchmarks for example . Where we usual fail is the lymph nodes exam .

Why should we care about this ? we care because [Indiscernible] . Look at the lymph node issue . If you have all criteria your chances of dying is going to be lower . It doesn't matter how many of the three [Indiscernible] . The kit has significantly improve the odds of overcoming these troubles . Use the kit and there is the survival, no use of the kit there is no survival . It's not just the fact that we now reminded him that we need to be doing this but as they been doing it if you let them do surgery without the kit they go back to the way they were . There is the other aspect of it, what do pathologist to . Yes so these people should [Indiscernible] . This is the resection specimen after a routine examination . We said we think you're losing their votes give to us and let's re-examine . These are individual patients, [Indiscernible] is what made it to the pathology report and read is what was going to the incinerator on what we found . These are lymph nodes with cancer, these are the ones that made into pathology . 90% of patients have missed lymph nodes . 30% have [Indiscernible] , 12% with [Indiscernible] have [Indiscernible] . We designed a new method of dissecting the specimen that was tested by pathologist . Wee bit implementing that . [Indiscernible] . When you combined these you can see quick differences . The no lymph nodes emanation goes away either when you they pathology [Indiscernible] or the kit . The resections we are missing critical aspects go way down . If you look at the criteria they lymph node issue condo intervention cop pathology only, kit only vote . You see the same pattern as you take more [Indiscernible] quality criteria . [Indiscernible] . The point here being, the combination of intervention is what you have to have . You have to improve what the

surgeon does and also have to improve what the pathologist does . You do them both and there is a survival curve . You do neither there is a survival curve . This all sounds very good but this is what you get when you try to make change happen . It probably saves lives but who has time for that . We are not in the business of saving lives at [Indiscernible] . We have said of the work we do has to make the difference at a population level . Of the inside that we get [Indiscernible] . Early on we can see between the time before and the time after we started the series of interventions we can already see population level survival in the tri-state region . [Indiscernible]

Back to the impact pyramid . We have to do something about this, sometimes it takes more than death to make people change their habits . Here is the big challenge . [Indiscernible] . I think all of this illustrates the opportunity that we have and maybe defines a pathway for the future including future research . What is multi-day ? what is the anatomy of it and who do we have to have . What is the [Indiscernible] was human interactivity do you have time going on you to be able to say a we have a functioning [Indiscernible] . Was science principles will advance our teaming ability, the ability to come together and interact properly to be able to get the positive outcomes that we need to have for our patients . How to engage patients and caregivers in all of this . [Indiscernible] . Directions that we have been going, we feel that [Indiscernible] can be expanded . We want to expand the team members involvement in the work that we do we want to get to a point where we can start accurately studying -- study [Indiscernible] . We need a portfolio that will encourage us to understand what goes on in the places where patients choose to seek care . All healthcare like [Indiscernible] is local . That's all I have to say I Thank you for your attention today and I have to mention there are members of my team who have done all this work . I want to make sure I mention the various members of my team . These four individuals are now in the [Indiscernible] . [Indiscernible] . I want to make sure I think all of the [Indiscernible] who have invested in the work that I just presented . [Indiscernible] . Thank you very much . [Applause] .

Thank you Ray that was a fabulous presentation . We will go and open up things for questions . If you're in the room with us I would just ask if we can use the microphone so folks that are online can hear those questions . If you're joining us online you can type your question into the chat box in the lower right-hand corner of the computer screen . Any questions in the room ?

Thank you very much for a great talk . I had a quick question I was intrigued as you laid out as you were thinking about reach in terms of the representation of the patient population . As you were talking and moving on to this idea and trying to grasp where patients choose to seek care, have you thought about mapping the multidisciplinary team approach to the way in which healthcare and cancer care as a whole is structured to get a sense of what is the reach of the particular models you been testing in the particular health system and how it might map on tumor patients choose to seek care .

The answer is yes . That's a very interesting challenge that we had . One of the [Indiscernible] is just a few syllables . When we started our project we went to several healthcare systems around the country to see what was going on so we can figure out how we want to implement this . The striking thing that we came up with was [Indiscernible] of definition . You places that have [Indiscernible] and we have a row of surgeons were medical oncologists are an [Indiscernible] . Anybody can reach over and talk to the other [Indiscernible] . We have a few places where you

have your clinic and then we have somebody who's on a schedule to float around from different [Indiscernible] . These are all different approaches . These all seem to be put together . We decided because of the work that we have done before and the [Indiscernible] we wanted to [Indiscernible] on a in person claim . Natalie done this work, I currently actively [Indiscernible] again . I got the case study where I'm interviewing the key managers of several different institutions and programs . [Indiscernible] . How do you work out financial aspects of this . What do you do with [Indiscernible] and what do you measure . How do you know you're making a difference . That's been fascinating, an early step of what you're saying . I think that's where we need to go . [Indiscernible] .

Thank you for a terrific presentation . It's kind of a follow on to what you're talking about here which is -- I found myself wondering you have two conditions in part of your study . From what I can tell I might have missed it but can you describe the differences between those two conditions of what you think the active ingredient as . I think that's the other piece of this . You have shown the improved outcome and it's what you're saying . [Low Volume]

The multiD environment which is the experiment is rigidly defined . That a patient with a possible lung cancer [Indiscernible] comes into a specific [Indiscernible] . Were surgeons and medical [Indiscernible] radiologist and care specialists are present . [Indiscernible] and there is navigator, part of the team now goes on and helps schedule what [Indiscernible] is that is recommended . Nothing else gets done . We don't do biopsies or procedures or any treatment . The serial care is anything else .

[Low Volume] Is that enhancing patient adherence, I guess that's the part .

We think navigation has a key component . We think that the open dialogue not only between doctors but also involved in the patient's . We sit around looking at CAT scans only have this individual [Indiscernible] of who it is that we are talking about and then the patient shows that . Then you realize not going to happen or you think yes and the patient says no I'm not going to do that . [Indiscernible] . Remember, I [Indiscernible] about this . [Indiscernible] . This can be that multiD does a lot of test and spend a lot of money but I don't know . [Indiscernible] .

One question I have for you somewhat related to that . In terms of outcomes you deftly make the case for [Indiscernible] being one . How about dealing with positives in the overuse is going something over the [Indiscernible] .

That is the battle to come . Because of screening . When we start -- I was talking to my colleagues as one of our hospitals -- at one of our hospitals . [Low Volume] They do about 250 -- 2500 CAT scans every month in the emergency room only . [Indiscernible] . What you have is a large volume of things -- is a large number of actual patients with lung cancer but a much larger number of patients with nothing going on but danger . You don't have a program put together that will identify those patients [Indiscernible] . And allow you to continue to focus on [Indiscernible] . The idea of overdiagnosis is definitely a real danger . It's overuse of procedures and testing and potentially overdiagnosis of the proper definition of it . [Indiscernible] . This infrastructure is actually going to be even more important because potential harm is so much

greater and the good you can do is so much smaller . Unlike the struggle with this is [Indiscernible] . I was telling David today that in the be the challenge of [Indiscernible] .

I had a couple of questions . The first test to do with the [Indiscernible] that you mentioned . You may be aware there is an act of Congress which has been sitting still for a few years now called the [Indiscernible] and is looking to see how they can reimburse for the team based consultations . I'm curious as to what you found in your focus group with regards to that and whether there is any hope of resolving those issues down the road . The second question has to do with what you said when the implemented the kit, the moment they don't use the kit they go right back to where they are . From a implantation standpoint, how do you think you can take this a step further to sustain proper clinical practice after all the investment .

Those are great questions . First the issue of [Indiscernible] . We do what we are [Indiscernible] . We look up our self interest . Doctors can no exception . You put incentives that people will gravitate to what they ought to be doing . [Low Volume] . If are interested in bringing teams together we need to make sure that we bring them together so the patient's benefit . Not just bring them together and then they can talk about last night's golf game or something . I'm very confident that there are incentives there and people will gravitate towards that . That's a very frequent complaint . The other part of that question is without the [Indiscernible] that will happen . Would you be willing to structure your reimbursement teams to fit the superior model if there was such one . The answer was absolutely yes . We will not only put a financial premium, we would even be evil and willing to [Indiscernible] patients to such site if we know what they are, where they are and know for a fact . Here's were benchmarking comes in . Know for a fact that we're actually doing multiD that gives you results that you desire . It comes back to benchmarking and linking those benchmarks to meaningful outcomes . When you are benchmarking your say something is appearing or -- superior . These are questions we will be able to address because we are careful to structure [Indiscernible] . Then you have the question about the kids . Obviously that going back, the surgeons for [Indiscernible] thing okay . It's the fact that it's a team, it is [Indiscernible] it's not the surgeons by themselves . [Indiscernible] . Is only as strong as its weakest link . If something goes wrong in that chain your back to the same [Indiscernible] . So how do we make it [Indiscernible] . I think the first thing we have to do is demonstrate clearly its value in broad settings . [Indiscernible] . We have proposed a randomized trial using the kit that would randomize institutions [Indiscernible] . We think that would help us establish the treatment effects if you will . Does this kit actually value and benefit the [Indiscernible] . And to what degree . I think if we can do a study like that and then the other aspect of it is the thing has to be user-friendly . The thing we see with the kit is that the surgeons, the moment they see it they get it . [Indiscernible] . The question becomes what you now remove the report -- support of a research grant, how are you going to supply . The problem is a problem of supply . I don't think it's a problem of adoption . Adoption wraps up very quickly . Surgeons were still in the kids from places that were activated [Indiscernible] . How do you create that supply . [Indiscernible] .

In Canada I believe they regionalized lung cancer surgery . I'm not sure if most of those [Indiscernible] of this model but I would imagine the use of the [Indiscernible] . I'm wondering if those results holdup on [Indiscernible] . [Low Volume]

The ideal of regionalization has been encountered and every time for a while, where we started doing this work, academic surgeons are [Indiscernible] . First of all there is a capacity problem . 85% of lung cancer in America are done at [Indiscernible] hospitals . To is, patients don't like to go . Within reason even when you show some value, especially older patients . [Indiscernible] . The idea was if you have a simple elegant solution, those are good technically . They can make a patient walk out of the ICU [Indiscernible] . It's not surviving the operation . [Indiscernible] . Once they have that realization and you give them the means to do it as I showed, the process measures of quality quickly go up . What we are now showing is the outcome measures of survival actually goes up as well .

We are just about at the end of our time for today . I would like to extent a sincere thank you Dr. Osarogiagbon for the presentation and I wanted Thank you to everybody who joined up today in the room and all mine and for asking great questions . We do hope you can join us for the next webinar that will be on June 22 . Also just a quick note that today slides will be posted in two days on healthcare delivery research program website . For those of you joining us online you will receive a short online evaluation and we ask that you do take a couple of minutes to complete that . With that a big thank you to Dr. Osarogiagbon and thank you for joining us today .

[Applause] .

[Event concluded]