This session has been organized by EC using University Environment Committee staff Senate and the Deans office of the Harriot College of Arts and Sciences, and I would like to thank Dean Donnell, who is the Dean of Harriot College, for initiating this idea and inviting us to organize it.

So I'd like to introduce the people who will be on the panel today.

Uh, my first Doctor Emanuel servos, who is professor of the division of Surgical Oncology at ECU Brody School of Medicine. I see him there welcome.

And Suzanne Lea, PhD and MPH associate professor, ECU Department of Public Health and she's with us.

And then Alan Christensen, who is PhD professor and chair of the Department of Psychology here at ECU.

So if you're ready, I would say the first question, and this is for anyone who would like to start. How common is pancreatic cancer if you know?

OK, UM, let's see, I'll, I'll say a doctor. Soros, did you wanna comment on that? Or I can I can actually address that?
Well, let me, uh, I'll start and I'll give sort of a national perspective and Suzanne is very good at.

It's a sort of calling these data down to a more regional and.

Uhm Eastern North Carolina.

And just introduce myself and so I am a surgical oncologist. I'm the director of the Biden Cancer Center. I've been here in eastern North Carolina for 14 1/2 years now and.

And have devoted my entire academic.

Uh, my career to research and both benchtop research clinical research into pancreatic cancer and so that was one of the things that attracted me to Asia. North Carolina was a.

Relatively high incidence of pancreas cancer. In these 29 counties in a paucity of.

Providers or practitioners that were.

An expert and.

Uh, and wanting to specialize in what was then a pretty rare cancer type?

And so when I came here was, uh, across the country is about 28,000 new cases of pancreas cancer diagnosed a year? That was in 2007 and then in the incidence is rising. So today that number is about 48,000 new cases a year, so it's still a relatively rare cancer as far as.

Of celebrities and well known people are diagnosed with the disease.
Zervos, Emmanuel
Suzanne, do you wanna talk about eastern North Carolina statistics a little bit?

Lea, Suzanne
Yeah I can. And in North Carolina in particular. So I did pull together a few slides that might help. And if it were possible, I could share my screen and then talk from some of the slides. If if that would be OK may I share my my screen.

Pearce, Susan
You may, if you have trouble, you could email it to me and I can share it.

Lea, Suzanne
OK, let's see.

Lea, Suzanne
OK, can you see that slide deck?

Pearce, Susan
Yes.

Lea, Suzanne
OK, great so uh this slide. I wanted to to show you come OK well I mean.

Lea, Suzanne
Ah.

Lea, Suzanne
Well, we'll just start here. So in North Carolina, heart disease is the.

Lea, Suzanne
Leading cause of death, but cancer is the 2nd leading cause of death and cancer has been the leading cause of death in North Carolina since 2009.

Lea, Suzanne
Pancreatic cancer is the fifth most common cause of cancer death in North Carolina and the 12th most frequently occurring cancer as of 2018.

Lea, Suzanne
53% of pancreatic cancers are between the ages when they're diagnosed of age 65 and 84, and then roughly 1/3 of between 45 and 64 years of age, and African American blacks have the highest incidence and mortality, and men have a higher mortality than women.
And this just summarizes incidents just simply means the diagnosis of new new cases and then mortality are the death. So you can see here what the leading causes of incidents MC cancer cases are the actual wrong number, and then the rate of themselves. And of course pancreatic cancer is up there in the top and and then also the 5th leading cause of death.

Lea, Suzanne
Overall.

Lea, Suzanne
And this is for a 2018.

Lea, Suzanne
And then four.

Lea, Suzanne
For incidence and mortality at they're very similar, so I'm gonna move to mortality.

Lea, Suzanne
For the.

Lea, Suzanne
A map, but this just shows the new cancer cases, the rate of cancer pancreatic cancer in the state as just continue to go up as Doctor Servo. Stated from 2002 to 2018. So we just see a very linear fit of this new.

Lea, Suzanne
Uh incidents of.

Lea, Suzanne
Pancreatic cancer.

Lea, Suzanne
And this also shows the change. Pancreatic cancer is actually here. It is on the slide on the left and and it is increasing, and this 1.4 simply means that it's increasing on average at about 1.4% a year. Over the five years between 2014 and 2018, of course, is is all ages, both 6 and all races.

Lea, Suzanne
So pancreatic cancer is increasing in the state.

Lea, Suzanne
Uh, this shows the mortality trends by.

Lea, Suzanne
Sex and race and you can see that.
Lea, Suzanne
Uhm, their rate per 100,000 is a fairly flat across.

Across the years, from 2007 to 2.

What the 2016?

2018 interval

OK, but here's a map of North Carolina and this blue county. Here is Pitt County, where we are and.

Uh, uh, this? These are categories of low to high rates of mortality for pancreatic cancer, and Pitt County is.

But one of the lower Counties 9.7 to 10.9 deaths per 100,000.

And you can see, for example, Robeson County has very high mortality at 13.1 to 18 points, except for example per 100,000.

Pick County compared to North Carolina actually has a higher mortality rate than the than the state. Overall, you can see that here in this column, and the US rate is just about in the middle between Pitt County and North Carolina at 11. About 11 deaths per 100,000 population.

That that's about and this is also the mortality change for pancreatic cancer. It's been about stable over the five year interval, 2014 to 2018, which means just on average it's. It's been about the same number of of deaths on average each year.

And then these are the historical transfer death, luckily.
Lea, Suzanne
Uh, it's not as fatal as it used to be. The actual mortality rates have seen a huge decline for a lot of reasons, but the this is definitely the incidents. Is also what we're very concerned about. And overall the United States pancreatic cancer is not in the top ten in terms of new cases diagnosed, but it is in terms of lethality is the fifth most common cause of death in the US for cancer deaths?

Lea, Suzanne
I just like in our state.

Lea, Suzanne
OK, so I'll just quit sharing.

Lea, Suzanne
Uh.

Lea, Suzanne
Let's see.

Lea, Suzanne
OK.

Pearce, Susan
OK, thank you very much.

Lea, Suzanne
No, that was, uh, that's just some. Some data about the incidents, immortality.

Lea, Suzanne
OK, good thank you. So the next question is what are the known risk factors for pancreatic cancer?

Zervos, Emmanuel
So there are really no known risk factors for pancreas cancer.

Zervos, Emmanuel
Uh, aside from anatomic or physiologic.
Derangements that. That results in a chronic, chronically inflamed state of the pancreas, and those are hereditary pancreatitis. If you have that, you know that you have it.

Uhm, epidemiologically. I think that the only real risk factor that surfaces.

Uhm, consistently is cigarette smoking. As with most other cancers, but aside from that, when you look at large populations of patients with pancreas cancer and do.

You are a logistical regression looking for common risk factors, and again, in the absence of a genetic predisposition or an anatomic variant that favors of chronic inflammatory state.

OK, thank you and Becky kind of answered the next question, which is what is unknown, right?

So next I'd like to ask, can you speak to any risks associated with these issues in Brewster and whether they are linked to cancer?

Sure, so we know about asbestos. One person is saying that the air intake system allows cigarette smoke and exhaust fumes to circulate as well as exposure to exhaust fumes from the bus is outside the building.

Well, I think that that this question really gets at the core of what it is.

That I'd like to.

In in my answer I'll I'll try to emphasize my.
My biases in this regard.

There's a perception of a.

For a belief that there may be a cancer cluster of pancreas cancer that's occurring in the Brewster building and.

If that is in fact the case.

It is likely arising from.

In unknown factor or yet to be identified factor.

Uh, that has not yet been described, so diesel fumes and as best dose.

And you know other carcinogens.

Have not been specifically implicated in the development of pancreas cancer. That's not to say that there's not something out there that causes pancreas cancer. As a matter of fact.

I spent a good part of my career giving pancreas cancers to rodents and and mice and studying different treatment methodologies, so I know we can cause it.

But it's exceptionally difficult even when you're trying and and it has to be. In those cases, it was with a, you know, a direct insult to the pancreas, meaning trying to.

Expose the pancreas directed at those carcinogens in order to get a pancreas cancer to develop their which is not a real life.
Scenario and the pancreas isn't really ever exposed directly to a toxin it's exposed through. What we breathe in what we eat. As with most cancers.

And I, I think that I, I think you're there's a from what I've seen and and the emails that I've seen, there's justifiably high level of anxiety around.

What appears to be a possible cluster in pancreas cancer?

And I think first and foremost.

You know, that's really what has to be established is are we dealing with a cluster or are we dealing with?

You know, just an unfortunate circumstance of coincidences.

That are occurring.

In a.

You know, in a specific location.

And by that, what I mean by that is that.

Uh, in in in. In doing this for the past 20 years as an attending physician, I see all aspects of this disease and this diagnosis, and I see patients who are in an automobile accident that have a CT scan of their abdomen and have and incidentally identified cysts of the pancreas.

Who are told by an ER doctor that they need to come and see a surgeon, and by the time they get from between somewhere between the emergency room and my office, they come in with the belief that they have pancreas cancer, when in fact they just have an abnormality of their pancreas that.
Zervos, Emmanuel

Uhm, uh, was discovered. Incidentally, during as an X ray that was obtained for other reasons.

Zervos, Emmanuel

And then there's true pancreas cancer. Like Alex Trebek had and.

Zervos, Emmanuel

Uh, and.

Zervos, Emmanuel

And other celebrities that you know whom we've lived.

Zervos, Emmanuel

Through their battle with that cancer.

Zervos, Emmanuel

And then there's Steve Jobs also. And Steve Jobs had well what some of us consider pancreas cancer. And some of us consider a different type of cancer altogether, which is a neuroendocrine type tumor. It can occur in any organ.

Zervos, Emmanuel

And and I hesitate to tell my patients that have neuroendocrine type tumors which are different than pancreas cancers.

Zervos, Emmanuel

I hesitate to tell them that this is the type of cancer that Steve Steve Jobs had.

Zervos, Emmanuel

Because we all know what the outcome of that.

Zervos, Emmanuel

Of of his disease, was it ultimately ended up taking his life?

Zervos, Emmanuel

But the type of pancreas cancer that he had?

Zervos, Emmanuel

Is in most cases very treatable. Very curable.

Zervos, Emmanuel

He chose a different path in terms of his treatment that was non traditional and to some extent or to what extent it led to the progression of that disease. I don't know.
But when I tell patients that they have a neuroendocrine tumor, that pancreas.

It's usually good news for them. I mean, they come in feeling as though this is the type of pancreas cancer that's going to kill them.

And I tell them that this is the type of pancreas cancer that they will live with, and in most cases that is the case.

And so, first and foremost, I think in seven four I feel like it's unfortunate that.

Well, there's good and bad sides to getting this out into the public space through the media.

Yeah, UM in the good thing is it is brought the attention to this problem to the highest levels administration such that.

I believe that everything is being done to establish whether or not this is in fact a cluster.

But on the other hand.

I think it's creating a level of anxiety that may be premature that we don't know exactly what the true rate and incidence of.

Pancreas cancer is in the Brewster building.

And so far I think attempts have been made to answer that question.

In very indirect ways and and this is the hardest way to do this type of thing, which is through the Death Registry you know, and public records of death certificates.
Which in and of themselves are flawed.

And UM, or going through the Central Cancer Registry, and that's a slow and tedious process, and in many cases is really dependent on the accuracy of the independent registries that feed into the Central cancer registry.

And as you can imagine here at vident, the tumor registry is robust and we have abstracters that go into the patient chart and ensure that when we call something, a pancreas cancer, it is in fact a pancreas cancer, but that may not be the case at some of the smaller hospitals that serve our area in our region, and so even.

Uh, even those.

Very basic and rudimentary descriptive statistics may not be enough to answer the question as to whether or not this is a true cost or or not.

In only by going into individual patient records and charts, I think will we be able to do that with the level of confidence that's going to attract the resources necessary then to uncover.

Potential yet to be identified causes.

That, and I've said a lot there and I think that's going to generate a lot of questions amongst the group, so I think it may be worthwhile.

To pause at this time in and entertain questions about what I've just said.

That's a great idea, so if you would like to ask a question now.
Pearce, Susan
Feel free to put one in the chat or to raise your hand or just to chime in.

Jones, Katherine
Hi I have a question can you hear me?

Pearce, Susan
Yes.

Jones, Katherine
Uhm?

Jones, Katherine
I would like to ask Doctor Lee UM?

Jones, Katherine
Given the.

Jones, Katherine
Add A to address the challenges of trying to evaluate.

Jones, Katherine
The this situation as a cluster.

Jones, Katherine
Given that different people may have spent different amounts of time in the building, so if, for instance, how would a cancer epidemiologist address that question of exposure? And are there methods for, you know, saying this individual spent two years in the building?

Jones, Katherine
Uh, Tuesday and Thursday. And this, you know it. How would wanna just for something like that?

Jones, Katherine
Uhm?

Jones, Katherine
Given that while there may be a number of individuals who all spent time in the building, they may not have all spent the same number of years or the same number of days, or that sort of thing.

Lea, Suzanne
OK well uhm.
Lea, Suzanne
I can.

Lea, Suzanne
I've tried to answer that the first thing is that.

Lea, Suzanne
NIOSH is currently working on.

Lea, Suzanne
Investigating this suspected cancer cluster.

Lea, Suzanne
And there is a process that CDC goes through a NIOSH is a an agency or branch of the Centers for Disease Control and Prevention, and there is a protocol that is followed to investigate a suspected cancer cluster.

Lea, Suzanne
With the overall goal of being whether or not the excess number of cases.

Lea, Suzanne
Has a curd and whether or not the cases are likely to be associated with some agent in the building, so that's the overarching goal. Is is to correlate the excessed cases with.

Lea, Suzanne
Something that could be a cancer causing agent and.

Lea, Suzanne
The first thing that has to happen is.

Lea, Suzanne
Gathering information to to learn about the cases.

Lea, Suzanne
And this is a what?

Lea, Suzanne
Hi Doctor, Service had I just mentioned we need to learn more about.

Lea, Suzanne
What constitutes the situation with the the patients that are there?
Lea, Suzanne
Add the faculty and.
Lea, Suzanne
I think it's only faculty. It might be staff involved and come and see what that data supports.
Lea, Suzanne
Because one of the things that has to be determined in step one is whether or not there's enough evidence to.
Lea, Suzanne
To determine that.
Lea, Suzanne
These cases might fit the definition of a cluster, and particularly with respect to some common etiology. So remember, we're trying to look at the association.
Lea, Suzanne
Uh, these RV a common exposure. Some etiologic agent.
Lea, Suzanne
And.
Lea, Suzanne
Then if it looks like.
Lea, Suzanne
There's some evidence, uh, we can move to Step 2, but the exposure piece, if it needs to also be.
Lea, Suzanne
There and.
Lea, Suzanne
So the.
Lea, Suzanne
The next step after that is really looking more carefully at whether or not the cases that are present exceed what would be expected.
Lea, Suzanne
In this situation here we have cases we as doctors service mentioned some of these cases could actually be something else. We don't have the death certificates. We don't know exactly what the death certificate says.
Lea, Suzanne
Uhm, and we also don't know what underline conditions or what other.
Lea, Suzanne
Other secondary causes of death might be on the death certificate, so.
Lea, Suzanne
Scuse me, uh, the issue of identifying what the population of risk is. So cases arise out of a population.
Lea, Suzanne
And so the population at risk is has to be defined as well.
Lea, Suzanne
And then at that point, once you have the population at risk and a comparison.
Lea, Suzanne
A group with some cancer rates, which would probably come for me there. Pitt County or similar county, or perhaps and the state. Overall, you could assess whether or not the observed exceeded the expected.
Lea, Suzanne
And and and then Step 2 would.
Lea, Suzanne
Help move to Step 3, which is the feasibility of actually doing at epidemiologic study. As it I, I think that's what you're suggesting in terms of exposure measure. So all and Step 3 is really looking at the feasibility of conducting an optimal logic study.
Lea, Suzanne
And and so there are lots of pieces that go into feasibility studies. Whether or not you can define the population of risk and few they are given the given the number of people that would be involved, perhaps with working or even moving in and out of the Brewster building on a regular basis.
Lea, Suzanne
Or perhaps it's several buildings altogether in that area.
Lea, Suzanne
Uhm it, but that's where feasibility would come in assessing. What is the true case definition? How are we going to measure exposure? What are the exposures that would have already been biologically identified? And then the.

Lea, Suzanne
And then in step four, that's where a hypothesis driven analytic epidemiology study would be conducted. So it wouldn't be until probably late in Step 3.

Lea, Suzanne
E uh, that something like a a time exposure.

Lea, Suzanne
Matrix for individuals that may come in and out of contact with the Brewster Building would actually be developed and and then during the implementation that we study, that's when those measurements were to occur. So there'd be a lot of background looking at the feasibility of how these exposure measures would happen should they, should they happen that way.

Jones, Katherine
Thank you, that's really helpful.

Lea, Suzanne
Thank you.

Pearce, Susan
Yes, thank you Doctor Lee. So Karin Zipf has a question.

Zipf, Karin
Hi everyone, I want to thank you all for holding this panel I'm. I'm very very grateful I may, uh, inhabitant of Brewster for the past 20 years. And I'm not even going to count the number of Thursdays have been in the building or whatever. It's just my.

Zipf, Karin
My concern is a matter of understanding that I am.

Zipf, Karin
Now, in a situation where I want to make sure I get the right diagnostics going forward and monitoring my health because I have spent so much time in a building in which even if it's coincidence, it has association with a number of people dying of pancreatic cancer, so there isn't association there no matter what, and whether that is caused by the building or not, there is an association of people passing away from pancreatic cancer in that building, so I wanna know the.
Zipf, Karin
Uhm, best diagnostic you know what're the my my own physician is very concerned about the incidents there and has been very very receptive. But I am concerned about diagnostics and what insurance will cover. And if there's a way that ECU might be able to help convince the insurance company if necessary to get certain diagnostics, what do you all recommend?

Zipf, Karin
There's some ways to.

Zipf, Karin
You come for us to sort of monitor our health in a proactive way. That will also help us with anxiety.

Zervos, Emmanuel
I think that's a great question, and I think we're all seeking.

Zervos, Emmanuel
In the absence of information were seeking something that we can do proactively.

Zervos, Emmanuel
In the event that are, you know our. Our worst fears are realized in that this is in fact putting people at risk.

Zervos, Emmanuel
Uhm?

Zervos, Emmanuel
Maybe to answer your question.

Zervos, Emmanuel
Best would be to go back and look at patients who have.

Zervos, Emmanuel
A very strong family histories of pancreas cancer.

Zervos, Emmanuel
When we think that about 10% of pancreas cancers are genetically or are somehow related to genetics.
Zervos, Emmanuel

And.

Studies looking at just.

Patients who have got.

One or more first degree relatives with pancreas cancer and using.

Kind of the most up to date.

Screening methodology have have failed to identify a specific screening test for pancreas cancer.

That is.

Uhm, sensitive and specific enough to justify the cost of those tests.

And that's in a really large population of people in a cancer with a relatively small incidents. So you can imagine.

Other.

The bar is pretty high to get to a screening test in this particular.

Uhm?

Circumstance.
We do know of some genetic mutations that really put patients at risk for pancreas cancer specifically.

Uh, maybe some BRCA mutations, some variants, BRCA mutations?

In that, combined with a very strong family history, have led to.

Do screening protocols which involved MRI.

Uhm and ultrasound?

Intermittently, every six months.

Again.

You have to meet really, really specific criteria for an insurance company.

Uh, to pay for those really expensive tests.

And now I'm afraid that in the absence of.

Proving that this is a true cluster.

That most of those

if one wanted to be proactive and get those types of screen tests, and those are the the most sensitive tests available.

That those costs would be born by the individual.
And then I think the corollary or follow up question is, well, what about less expensive?

Uhm, tests like CT scan or even blood tests that look screened for that you probably seen or heard of that screen 4.

Uh, circulating tumor cells.

In in, those are available and we're considering that platform here at the Cancer Center. But again, not, and they those tests run about $900 each. And they're really good at common cancers, but not so great at less common cancers. And so much so that the FDA has not yet approved a single cancer screening platform for coverage for approval. In anticipation that there would eventually be covered by the federal government to pay for these tests, so we're not quite there yet in terms of.

My what is my recommendation to you?
You know?
Really.
To have that relationship with your primary care physician.
In a me too.
Understand the symptoms and warning signs.
And once those manifests and move forward quickly and aggressively with imaging another testing when justified by your presenting.
Symptoms and.
But I do think that just the fact that you've been in the Brewster building for 20 years.
Well it is not going to change the minds of your well. You're obviously on the state health plan. We're all on the state. Same health plan. So it is not going to get Blue Cross and Blue Shield.
Excited about paying for screening tests.
May I ask a follow up?
Yes.
So you know, even if I were willing to pay for the MRI myself.
Zipf, Karin
I can't even get.
Zipf, Karin
Uh, I can't even in other l. I mean that's.
Zipf, Karin
That doesn't even seem to be an option. My doctor won't even order it unless.
Zipf, Karin
The insurance company will cover it. How do you about getting an MRI?
Zipf, Karin
Hang the 1500 to $2000 if you wanted to do it out of pocket.
Zipf, Karin
To begin with.
Zervos, Emmanuel
Yeah, well, you'd have to convince someone to order it.
Zervos, Emmanuel
Uh, they would order it and it would go through an approval process, meaning what? So there would have to be some indication for ordering it.
Zervos, Emmanuel
And it would have to go through approval process denied. You would then sign a waiver that says I would cover any costs associated with this test.
Zervos, Emmanuel
Uh?
Zervos, Emmanuel
Uhm, that aren't covered by insurance and then you'd go forward and have the tests and the billing would be sorted out on the back end. Of course you'd be you. You would have signed something that said you would be liable for that expense.
Zervos, Emmanuel
Uhm?
Zervos, Emmanuel
I think.
Zervos, Emmanuel
I think that is possibly something that can be done is to find a way to work with our medical community so that people that wish to get screened, even if it involves out of pocket expense. It can be done without jumping through those hoops.

Zervos, Emmanuel
I'm currently I don't know how to. I don't know how that would be done, but I can look into that.

Zipf, Karin
That would be a really helpful to know because one of the things that I'm really interested in getting. I don't think I have any symptoms of pancreatic cancer, but I sure would like to have a baseline considering I've had three friends in the building who died of pancreatic cancer in the last three years.

Zipf, Karin
But thank you very much.

Pearce, Susan
Yes, thank you all right. Doctor Christensen.

Christensen, Alan Jay
So I thought.

Christensen, Alan Jay
Thanks, maybe the psychologists say something about why I'm here and then just a couple of thoughts.

Christensen, Alan Jay
Uh, so I study risk perception. How people perceive health risks and how they respond to them. And some of that work is bidding cancer. Population is not in pancreatic cancer specifically.

Christensen, Alan Jay
That this is a really stressful situation and I when I first heard about this from being done now and and from some of the department chairs that are in that part of the building.

Christensen, Alan Jay
You know my heart went out to all of you. I mean to to have to even give this a second thought as you go about your routine is is very stressful.

Christensen, Alan Jay
Uhm, yeah. And and and not even to mention if you've lost a colleague or a or a friend to the disease right? And then it's exponentially.
Christensen, Alan Jay
Even more so.

Christensen, Alan Jay
In the in the work that I've done went one of the things that becomes very clear.

Christensen, Alan Jay
Is as human beings we want an understanding of why things happen when, especially when bad things happen?

Christensen, Alan Jay
Cancers are really stellar, unfortunately. Example of that there's nobody that's been touched by cancer either personally or someone they knew that wasn't driven to find an explanation. That's human nature that's been well documented. Psychologists have psycho Babble terms that they used to talk about that that striving to understand cause.

Christensen, Alan Jay
Sometimes that understanding is just not there and that that makes it a lot more stressful.

Christensen, Alan Jay
Right, sometimes you know, sometimes the causes are apparent. Pancreatic cancer is doctor Servoss, as detailed very well, even relative to other cancers. I mean, all cancers are insidious. All cancers are horrible, right? They all suck all of those things. Petretti cancer is particularly insidious.

Christensen, Alan Jay
Uh, you know, not much is known about risk factors, screening procedures, or are very difficult and expensive and and hard to come by. All of those things make it.

Christensen, Alan Jay
It's more frightening. They they make it more unsettling.

Christensen, Alan Jay
When we have reason to think that maybe we're at risk, certainly somebody that we knew must have been because they they had the the disease that that's it's human nature to really strive to understand the cause.

Christensen, Alan Jay
It's also important, I think, that we remind ourselves that, well, that not knowing the cause makes it more unsettling and more anxiety provoking. It doesn't necessarily mean warm up more risk.
Christensen, Alan Jay
That's a separate question.

Christensen, Alan Jay
Some things we don't understand are relatively low risk to us. Something we understand really, really well, or you know or are in the end what what we end up being it very much at risk of.

Christensen, Alan Jay
So those are those are different things, and I mean I'm not an expert on you, you've heard from experts on, you know just how relatively rare pancreatic cancer is.

Christensen, Alan Jay
What is known or in most cases not known about risk factors? I I just mostly want to say that I, you know, I understand the anxiety, I I, I understand the wanting to to to to find an explanation, that that's how we're wired.

Christensen, Alan Jay
And to sort of be told that there is not an explanation it, it's it's very difficult.

Christensen, Alan Jay
And you know it's a situation where that you know as Doctor Zervos talked about him. It's gonna be like the the the best. Probably that people can do is, you know is is is to take care of themselves in other ways. Well, we don't know a lot about risk factors for pancreatic cancer. We we know a little bit, you know. Certainly stay away from those, you know, control what you can control.

Christensen, Alan Jay
Uhm, smoking being the obvious one.

Christensen, Alan Jay
But but it's you know, just partly I wanna I wanna normalizing anxiety and and and so you know people go through this and when when they're touched by something like this they wanna understand the reason the reasons are not always there to understand it doesn't mean information is not being shared it it just means that oftentimes that no, we just we don't know.

Christensen, Alan Jay
Uhm, and that's unsettling and important to remember that that not knowing makes us feel bad, but it doesn't necessarily put us at greater risk.

Christensen, Alan Jay
I don't know if that's helpful, but.
Pearce, Susan
Thank you other questions.

Christensen, Alan Jay
Thank you other questions.

Pearce, Susan
So while we’re waiting, I I wonder if either Doctor Lee or Doctor Christianson could say anything about? Has there been any research into why North Carolina has?

Higher rates than some other states.

Christensen, Alan Jay
Doctor Lee would be the one to ask that.

Lea, Suzanne
Maybe yeah, me, uh, uh, uh, pancreatic cancer overall.

Lea, Suzanne
Uhm?

Lea, Suzanne
So.

Lea, Suzanne
The uh.

Lea, Suzanne
So in terms of where North Carolina stacks up.

Lea, Suzanne
It it’s about in the middle of the pack in terms of the States and terms of its incidence and mortality.

Lea, Suzanne
And while a smoking seems to be the most definitive.

Lea, Suzanne
Hi Bruce, factor that that we know about Epidemiologically. We also know that.

Lea, Suzanne
Obesity.
Lea, Suzanne
And type 2 diabetes are strong predictors of pancreatic cancer.

Lea, Suzanne
And.

Lea, Suzanne
We also know that in eastern North Carolina and in central North Carolina and in western North Carolina.

Lea, Suzanne
Yeah, um, across our state obesity is a problem and and so is type 2 diabetes, and particularly in the east. Where we're.

Lea, Suzanne
Or, uh, we're at a deficit in terms of.

Lea, Suzanne
Well, I'll just say that we have very high prevalence of diabetes and obesity in eastern part of the state and the and the 29 catchment area of our service hospital network, but also in the overall 41 counties as well. The counties South of our 29 catchment area on the east of I-95, so.

Lea, Suzanne
North Carolina.

Lea, Suzanne
Is a really eastern North Carolina is really probably the driver of our high obesity.

Lea, Suzanne
Uhm, prevalence and likely are high incidence.

Lea, Suzanne
Pancreatic cancer if you look at eastern North Carolina versus the rest of the state and dumb.

Lea, Suzanne
I and that is just.

Lea, Suzanne
From looking at.

Lea, Suzanne
Data in terms of.
Lea, Suzanne
The correlations in it with the distribution of the prevalence of these factors across the state when you just stack up a map of obesity prevalence and map of diabetes prevalence in a map of incidents and more talented pancreatic cancer. Many of the counties in the eastern part of our state.

Lea, Suzanne
You know, kind of all a great.

Pearce, Susan
Thank you other questions.

Pearce, Susan
Alright, I'll feed you a couple that I was centered in France.

Pearce, Susan
Uhm?

Pearce, Susan
So I have the.

Pearce, Susan
Have there been any other cases where several colleagues sharing workplace space got fatally ill with pancreatic cancer? And I guess.

Pearce, Susan
I guess that's a question about not just ECU about nationally, and what factors were identified. Anyone happen to know?

Zervos, Emmanuel
I've done a A Medline search looking for this and have not been able to identify.

Zervos, Emmanuel
Any?

Zervos, Emmanuel
Pancreas cancer?

Zervos, Emmanuel
Clusters in the United States that have been published.

Pearce, Susan
OK.
Wow, you might have an opportunity here.

This Karin Zipf again. I'm sorry I wanted to come.

Follow up just a little bit more with this. Again, the diagnostic testing Dr service would you mind?

Running through very briefly the testing diagnostics that are you usually conduct when you have a person who comes in with.

Suspicious symptoms, would you sort of walk us through how you?

What test do you order and and what you're looking for, just very briefly, so that we have an idea of how to visualize what we need, what we might want to do, or what we.

What we might be needing to do in order to.

You know, just sort of be proactive.

Yeah, I think you're asking me what I would do if I worked in Brewster for 20 years.

Uh, let me just start by saying that I'm usually at the I'm pretty far downstream. When this happens, people usually get to meet that are already carrying the diagnosis of pancreas cancer.

Yeah, because the region has gotten pretty good at recognizing the signs and symptoms associated with it, and we've gotten pretty good at specializing ourselves such that were not
involved in the very early diagnostics. That wasn't always the case, and when I got here 15 years ago and there was.

00:48:53.810 --> 00:48:55.610
Zervos, Emmanuel
What So what what?
00:48:56.230 --> 00:49:06.210
Zervos, Emmanuel
What patients you know raise my level of interest in made me suspicious. Well, patients in that sweet spot 60 to 70 years of age.
00:49:06.940 --> 00:49:11.410
Zervos, Emmanuel
A new onset diabetes in that age group.
00:49:12.820 --> 00:49:14.680
Zervos, Emmanuel
Unexplained weight loss.
00:49:15.580 --> 00:49:16.250
Zervos, Emmanuel
And.
00:49:18.340 --> 00:49:18.870
Zervos, Emmanuel
Uh.
00:49:21.430 --> 00:49:22.040
Zervos, Emmanuel
Uhm?
00:49:22.690 --> 00:49:27.330
Zervos, Emmanuel
Evidence of acute pancreatitis without a cause meaning.
00:49:28.000 --> 00:49:42.820
Zervos, Emmanuel
No gallstones, no alcohol, no anatomic issue to cause pancreatitis. Those would all be things that I would raise my interest enough to fight to order tests and fight to get it paid for because.
00:49:43.850 --> 00:49:56.720
Zervos, Emmanuel
The the likelihood of having a positive finding on those tests would be high and the tests that I traditionally used would be CT scan and so CT scan now.
00:49:57.950 --> 00:50:13.490
Zervos, Emmanuel
Unless it in so there are pancreas protocol CT scans which rises raised the cost but a script but CT scan in and of itself not great screening unless you take it to the next level.
00:50:15.020 --> 00:50:19.510
Zervos, Emmanuel
If it were me and I had limited resources to, then I was paying out of pocket.
00:50:20.390 --> 00:50:33.780
Zervos, Emmanuel
I would probably do a tumor blood marker every six months or every year, and that's about and you can and you won't get any pushback on that. You can just tell your primary care doctor to order it.

Zervos, Emmanuel
And and even if they disagree with you.

Zervos, Emmanuel
It's probably about a.

Zervos, Emmanuel
50 to $75 test.

Zervos, Emmanuel
And that's something you can do by just other than just being vigilant about the way you feel and about those other things that I mentioned.

Zervos, Emmanuel
Uhm, if my suspicion grew higher.

Zervos, Emmanuel
Then I would come.

Zervos, Emmanuel
And I had other and I. I think we're considering just long term exposure in the Brewster building as something that's gonna.

Zervos, Emmanuel
That's going to raise your anxiety level to a point where you'd be willing to pay for this.

Zervos, Emmanuel
Uhm?

Zervos, Emmanuel
I guess, and if I had worked in the building for a long time and I had some other symptom. One other symptom that made me concerned that was unexplained.

Zervos, Emmanuel
I would probably pay for an MRI test.

Zervos, Emmanuel
And just get a baseline.
And and that symptom would be the ones that I told you about. You know unexplained weight loss, Malays, new onset diabetes, pancreatitis, unexplained.

00:51:47.010 --> 00:51:47.740
Zervos, Emmanuel
Uhm?

00:51:49.350 --> 00:51:52.200
Zervos, Emmanuel
And in those.

00:51:53.370 --> 00:51:55.330
Zervos, Emmanuel
And typically those presentations.

00:51:57.300 --> 00:52:00.860
Zervos, Emmanuel
But again, if you wanted to do something sort of that.

00:52:01.620 --> 00:52:10.520
Zervos, Emmanuel
Is more affordable. I think it's a blood tumor marker test. They're they're sensitive, and while they're about about.

00:52:11.620 --> 00:52:25.620
Zervos, Emmanuel
20% but so blood Group A doesn't mount the antigen responds or doesn't have the energy and but everyone else does. So that's excludes about 20% of the population.

00:52:26.440 --> 00:52:27.050
Zervos, Emmanuel
Uhm?

00:52:27.660 --> 00:52:31.100
Zervos, Emmanuel
And there's other reasons why the CA 19 nine would go up.

00:52:32.490 --> 00:52:37.480
Zervos, Emmanuel
But that's something that's something that you could do that may give you some Peace of Mind.

00:52:38.870 --> 00:52:39.440
Zervos, Emmanuel
But

00:52:40.140 --> 00:52:55.370
Zervos, Emmanuel
uh, again, blood tests in and of themselves have never been shown to prolong life in people with known diagnosis of the cancers that are being screened. They only result in earlier diagnosis of those cancers.

00:53:00.460 --> 00:53:02.260
Zipf, Karin
Thank you so much. Doctor, servos.
Thank you other questions.
Karen, I will look into the other.
A question that you had about trying to figure out a way to get screened in the absence of a physicians order as well. And I'll get back to.

Uh, Suzanne or Susan.
In with my findings.
Well, I would greatly appreciate that, thank you.
Hey.
Thank you.
I don't see any more questions.
You know, I, I just make a closing comment that sounds like we're getting to the end here.

I'm taking care of patients with pancreas cancer. My entire professional career.
I feel that these types of questions and patients family members all the time, especially when.
Zervos, Emmanuel
And and I appreciate.

Zervos, Emmanuel
How much anxiety is how much anxiety this creates?

Zervos, Emmanuel
Uhm?

Zervos, Emmanuel
And, UM.

Zervos, Emmanuel
And I think is Doctor Christianson said that.

Zervos, Emmanuel
Uhm?

Zervos, Emmanuel
What we don't know is creating more anxiety than what we do know in this case, and.

Zervos, Emmanuel
And that is.

Zervos, Emmanuel
Not true for just the Brewster building, but it's true for pancreas cancer in general. There's just so much we don't know about it. Terms of the causes.

Zervos, Emmanuel
And the fact that in most cases were unable to diagnose it early enough to make a meaningful difference with the various treatment modalities that we have available to us is exceedingly frustrating. For those of us that care for these people, people whose loved ones are afflicted with the disease, and people who made who feel like they may be at risk for getting it.

Zervos, Emmanuel
Uhm?

Zervos, Emmanuel
So.

Zervos, Emmanuel
I just wanna is from my perspective when I closed by acknowledging.
Zervos, Emmanuel
Your anxiety and and.

Zervos, Emmanuel
And doing what I can from the position that I sit in to help mitigate it in whatever way possible.

Pearce, Susan
Dear to our two other panelists, have some closing comments for us.

Lea, Suzanne
Well, I'll just say that I appreciate the opportunity to.

Lea, Suzanne
Provide the information that I can and hope it was helpful. And and I also very sensitive to.

Lea, Suzanne
Uh, this this situation. I mean, a lot of you are my friends. I know you and UM.

Lea, Suzanne
I, uh.

Lea, Suzanne
You know, reach out to me later if you want, and I'll.

Lea, Suzanne
Charlie is helpful as I can.

Lea, Suzanne
I appreciate your time.

Pearce, Susan
Doctor christianson?

Christensen, Alan Jay
Fingers crossed it's a long time before there's another case of pancreatic cancer.

Christensen, Alan Jay
Uh, in the building, or you know, among any of our colleagues. But no, it's just, you know, I'm always listening here. Or if anybody ever wants to chat about this or anything related why I'm easy to find?

Lea, Suzanne
Yeah.
Pearce, Susan
OK I wanna thank you to our panelists and thank you to everyone who joined us today. I'm around of applause. I think we've got some good information and.

Pearce, Susan
I hope everyone stays well.

Lea, Suzanne
Thank you.

Zervos, Emmanuel
Thank you.

Pearce, Susan
Thank you.

Lea, Suzanne
Likewise.

Pearce, Susan
Take care.

Lea, Suzanne
Take care thanks a lot. Take care. Goodnight bye.

Christensen, Alan Jay
Goodnight