

## **Cell Phones and Brain Tumors: Should You Worry?**

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Reid C. Thompson, M.D.

Ezra Fitz

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### **Introduction**

#### **Andrew Schorr:**

Hello and thanks for being with us once again on HealthRadio.net. I'm Andrew Schorr with Patient Power, and I am always delighted when we can tackle a very topical issue that's on people's minds and then do it with people who are in the know or at least as much as medical science can know at any one point, and that's what we're going to do today. We're going to talk about brain tumors. We're going to talk about is there a connection and should you worry related to cell phones, which a couple of hundred million cell phones are out there just in the U.S. and imagine around the world, and you can't watch the Olympics or anything without seeing commercials for cell phones, and I know they've changed our lives. My children have them, and my wife has them, and my wife says, you know, 'Why didn't you answer the cell phone?' if I have turned it off like during this broadcast. So we're very well connected, and now I know where I am, I'm based in Seattle in Washington State, now there's a requirement that you can't be holding it to your ear in your car; you have to have a headset; and that's true in an increasing number of states around the country. Those headsets are connected with Bluetooth.

So we wonder about all these electrical devices around, and then just a few weeks ago at the University of Pittsburgh Cancer Center, which is a top cancer center in the country, there was a directive that maybe people should be careful about the use of their cell phones and could there be a connection with an increase risk of brain cancer, and then it was all over the news.

If you think back, I think it was a couple of years ago, there were some reports about whether for policemen who were with those speed traps, we love them don't we, and they had those handheld radar devices, and were those policemen at higher risk of later having brain cancer because they were holding this high-powered electrical device near their head? So we worry about those things, and I have to say when I was diagnosed with leukemia back in 1996, a whole different kind of cancer, my wife looked out the window and saw a major; not one of those huge you know monolithic power lines, but still more than the residential area; power supply going up our street for the area where we live, and she said could there be an electromagnetic field that sparked your leukemia? So we worry about these things.

Should we worry? I'll add to that. With children, like my teenagers and even my 11-year-old, and you can shake your finger at me that I let him have a cell phone, but he runs all around, and I know where he is with it. You know, are their brains more sensitive, and will years from now we have to worry about what we're doing now? Is this a tempest in a teapot? Is it real? We're going to find out with an expert from the Vanderbilt University Brain Tumor Center, part of the Vanderbilt-Ingram Cancer Center in Nashville, but first I want to connect you, as I always do, with someone who has been living with such a diagnosis, now not at all necessarily connected with his cell phone use, but still he has wondered this just as much as anybody, and that's Ezra Fitz. Ezra is 31-years-old, and he lives in Brentwood, Tennessee, right near Nashville, and back in January of 2006 I believe it was Ezra you were home from New York City where you were working in the publishing world, and I know you translate books that have been in Spanish and in Portuguese into English, so you're a really smart guy. You were home visiting the folks, and you had a seizure, right?

### **Ezra's Story**

**Ezra:**

That's right.

**Andrew Schorr:**

What happened exactly?

**Ezra:**

I was fortunate, you know, I was at my folk's house and not my apartment up in Manhattan where I could have been by myself when it happened, but I was sitting working on the computer on one of the projects I was working on, and my eyes started to roll around, I couldn't focus, and my initial thought was that I just had eye strain from staring at the computer screen all day. So I saved the document and shut it down and tried to walk across the house into the living room, and I just never made it. I couldn't see. My eyes just kind of rolled back into my head, and I seized up, and the next thing that I knew I woke up and I was in an ambulance heading to Vanderbilt Hospital.

**Andrew Schorr:**

We should say what happens next is you eventually had brain surgery because the seizure ended up being caused by a tumor. How big was this tumor, and where was it in your brain?

**Ezra:**

The tumor was in my left temporal lobe, which is a point of language usage in the brain, and I guess it was about the size of a golf ball, maybe a little bit larger, but that's where it was. They went in. They did a craniotomy. It was an awake craniotomy, which is very interesting to me and to some other people, so I was able to answer questions, and the

doctors can kind of judge by my ability and my responses to these questions what part of the brain they're working in and what parts to stay away from.

**Andrew Schorr:**

Right. I know the surgeon was a noted neurosurgeon at Vanderbilt, Dr. Kyle Weaver, and it sounds like they did a good job because you're speaking really well now two-and-a-half years later, but you also had other treatment, radiation and chemotherapy. That went on for quite a while, didn't it?

**Ezra:**

Right. A few weeks after I recovered from the surgery I did 30 days of radiation and followed that with 12 monthly rounds of chemotherapy. So it was a little over a year that the whole process of treatment took place.

**Andrew Schorr:**

Right, and so now we're about two-and-a-half years out. How have you been doing, and what checkups do you have?

**Ezra:**

I'm basically cancer free, knock on wood. I'm able to work and play. I ran a half-marathon this spring, so physically I feel great, and I'm back working doing the publishing business work that I do, and I've translated some books since then, so I'd have to say I'm just about as good as new.

**Andrew Schorr:**

That's great, and you have MRIs occasionally just looking to see is there anything lurking there?

**Ezra:**

Yes, exactly. I go in for scans about every four months just to check and make sure that there's no re-growth and that other thing looks the way it's supposed to look.

**Andrew Schorr:**

Well, it sounds like you've gotten great care. Now let's connect with this whole cell phone discussion. So when I visit New York City, which is where you lived and where I grew up, you go there nowadays and people; you're 31 now but as you were a 20-something; everybody has a cell phone glued to their head as they walk to their office or the gym or wherever they're going. Now you're right-handed, right?

**Ezra:**

Correct.

**Andrew Schorr:**

You developed the brain tumor on the left side of your brain.

**Ezra:**

Correct.

**Andrew Schorr:**

Okay, so we have to wonder was there any connection there, but as this news came out, did you or your parents say, 'We have no idea what caused Ezra's brain tumor. Could this have played a role?' Were you all asking that?

**Ezra:**

Certainly, yes, we did ask that question specifically among other possibilities, and when something as surprising and devastating as a cancer diagnosis comes I think it's just a natural reaction for people to want to just look at every possible question of how could this have happened, did I do something wrong, is there something I should have done another way, and it was just one of many questions that we had.

**Brain Cancer Research**

**Andrew Schorr:**

Right, well let's find out. Now another noted doctor, a neurosurgeon at the Vanderbilt Brain Tumor Center, and actually the director of it, is Dr. Reid Thompson, and Dr. Thompson is with us today, and he's thought about this too, and Dr. Thompson I bet since this publicity has come out, have you been asked a hundred times, five hundred times? So let's go through it and spend some time. We've gotten some e-mail questions from people. So Dr. Thompson, how many times do you think you've been asked, and let's sort of delve into it. Tell us where you're coming from on this.

**Dr. Thompson:**

Yes, sure. First of all Andrew I want to thank you for raising the awareness of this topic, and I also want to tell you what a wonderful spokesperson Ezra is for this cancer. Here's a young man who's had a tumor in his speech area. It's really what we're trying to do and accomplish in neurosurgery these days, getting people back to a normal life, so Ezra's just a terrific example of that.

One of the first questions that people ask me; I mean, I treat patients with brain cancer; and the first question people ask me is what causes it? Why did it affect me? I think that the answer really is that we don't know. We don't know that yet, and yet we're studying it, and I think that's an important message to get out there.

There are a lot of thoughts about what might cause cancer in general, but specifically brain cancer and we get into the idea that there's been this question about cell phones use, and it's very compelling. I mean we hold cell phones right next to our brains, and it seems like there might be an obvious link there. So I've been asked that question innumerable times.

I think one of the key things to note is that there really are a lack of good quality studies, okay, that address the issue, and I that's part of the reason we're in a little bit of a quandary here is that this type of research is really important to do, but it's also really difficult to do it and to do it well.

**Andrew Schorr:**

The questions is, you know, take with lung cancer is that we now clearly know over many years that if you smoke you're at higher risk of lung cancer and maybe as there are some studies now if the person who you live with or are next to if you're exposed to second-hand smoke that can make a difference too, but it took a long time to figure that out. Do you worry, and maybe you have kids like I do, that oh my god what we're doing now, 20 years from now we'll say well now we've got the long-term data, and what if we knew?

**Dr. Thompson:**

Yes, I think that's really what caused the folks at Pittsburgh to sort of sound the alarm, and I think that the question is very legitimate, and it's an important question to ask. I think that one of the ways to respond to it is to say that, having said that there are sort of a lack of studies, there aren't any studies, and in fact there have been a number of research studies that have been done that asked the question is there a link between cell phone use and brain cancer, and actually some of the studies were done in the United States and even published in preeminent medical journals like the "New England Journal of Medicine" and that was an important study.

There was also a very large, well designed study done in Scandinavia, and what was important about that study was that in Scandinavia they keep really good records of cell phone use, and they have a really good database of a cancer registry. So they were able to kind of link the two. Those two studies in particular were very, very clear that there was no link between the use of cell phones and the development of brain cancer.

So the best-designed studies, the largest ones, really do not support that link, and I think that one of the points I wanted to make today Andrew was that we live now in an era that we call evidence-based medicine. What does that mean? Well, evidence-based medicine means that we make treatment recommendations, we treat people, we use medication, we use different therapies based on the best evidence, and I think the point I want to make is the that the best evidence that we have now is that there is no link.

Now I think your question is a really good one. What about children? We don't know what the exposure might be for young children, and I think that the answer to that is I think you need to be very smart about it. I mean, I don't want my children talking on a cell phone for ten hours a day, but you also recognize that it's important for them to have a cell phone as you point out Andrew so you know where they are. So I think we have to be very smart about it. I think we need to study it, but the best available evidence that we have now does not support a link between cell phone use and brain cancer.

One of the other things I think is important to point out is that we made the observation at Vanderbilt that if you look at a map of the United States and you look at it in terms of where are people being diagnosed with brain cancer, it turns out that there's a significant regional disparity. What do I mean by that? People it turns out in the Southeast have a higher incidence of brain cancer. Why is that? I mean people in the Southeast don't necessarily use cell phones. I'd imagine that they probably use them less than maybe in New York or L.A., but it begins to sort of make you wonder why that is, and we've actually taken advantage of that and set up a study that five centers study throughout the Southeast here where we're asking the question, you know, what causes brain cancer? What are the risk factors? It may be something in the diet; that's one of the things we're studying.

One of the things that's really clear is that, and I think it's a theme that's developing now in medicine that very important, and I want people to understand that; in order to have a disease like brain cancer, it's probably going to turn out that you need to have two things happen. One is an exposure to something. It could be in the environment. It could be something in your diet, something related to the type of work you do. We're not sure but some exposure. Then you also have to have some type of sensitivity or maybe a genetic predisposition or vulnerability to respond to the exposure, and if you have one but not the other, you might not get the disease, but it's having both; a sensitivity to something and also the exposure that then triggers the disease.

So the studies that we're doing; and I think that it's a very careful epidemiologic study, that means we're studying what are the risk factors for brain cancer; are going to address both of those issues looking specifically at what might the exposure be and also looking in the DNA for clues as to why someone might have a sensitivity to that exposure. Does that make sense?

**Andrew Schorr:**

Yes, it sure does. I should mention, I think I've got the link online for that information about that study. It's [www.southeasternbraintumorstudy.org](http://www.southeasternbraintumorstudy.org).

**Dr. Thompson:**

Yes, that sounds right.

**Listener's Questions**

**Andrew Schorr:**

Well of course we want to know the cause and we want to dedicate ourselves to prevention. Now we did get an e-mail question in from Sandy who said, 'Is there any research being done concerning those ear pieces' I mentioned that everybody's buying; the Bluetooth earpieces and things; and help us as you answer that question doctor, you know, we know that there's a link between a lot of exposure to x-rays and increased risk of cancer, so we think about this sort of zapping going on. I don't know that too many of

us maybe don't understand the technology behind Bluetooth or even cell phones to differentiate. Maybe you can help do that for us.

**Dr. Thompson:**

Those are good questions, and I think I can help you. One of the key things to understand is that there is a known risk factor for cancer and specifically for brain cancer, and that's exposure to what's called ionizing radiation. What's that? X-rays, like a chest x-ray or any CAT scan, has actually radiation that's called ionizing radiation. What we've learned is that for patients who have had 20 to 25 CAT scans that 20 years later they're at higher risk for developing cancers. So we know that that is a known risk factor.

The confusion I think with cell phones is that cell phones emit non-ionizing radiation, so people may not understand the differences there. That is a very different sort of a process. It's essentially low-power microwave frequency signals. One of the things that people have been talking about nationally and really some prominent people around the country is that they won't use their cell phones; they're going to use the Bluetooth headset because they want the cell phone away from their brain. I mean, I think that if you're worried, that seems pretty reasonable to me, but I'm not sure that there's any evidence that would suggest that using your cell phone next to you or using a Bluetooth would change the equation.

The question is, is there any research being done in it, and I think that one thing's for sure that the national conversation that's happening now is definitely going to engender more research interest in it. So I think you'll see some studies designed specifically to answer that question, and in fact they might even be funded by the cell phone manufacturers. Who knows?

**Andrew Schorr:**

That would be good. Now we have just a couple of minutes before our break, and later on in our program we'll take a lot more questions. You mentioned about research. So we wish we had these definitive studies, but the budget for the National Cancer Institute has been going down, and so when I do interviews across all cancer and really across all illnesses, everybody's saying we need more research, but the funds are not there.

**Dr. Thompson:**

Yes. You know it's so important to get that point across. Again, the first question people ask is why do I have this cancer, and we don't know. We simply don't know, and the reason we don't know is because it's very difficult to study. It takes a lot of effort and energy to get a study together to recruit patients, and that takes a lot of money, and that's research money, and that largely comes some from foundation support but from the government, and you're right Andrew; the budget is going down so it's making it, you know, at a time when we really are even more aware we don't know the answer and we have to figure it out and do the research to figure it out, we're up against a difficult funding situation for sure.

**Andrew Schorr:**

Well, we're in a presidential election year, and all of congress is up for election, so folks as we have these health concerns we can all be more advocates and say whether it's Senator McCain, Senator Obama, or your local congressman, hey you know, this is important to me, and when you start dividing up what dollars we have let's think about research to answer these important health questions.

**Dr. Thompson:**

Absolutely.

**Andrew Schorr:**

Now cancer, like in Ezra's case, he was a younger patient, and certainly there is cancer that affects younger people, and we'll talk more about who develops brain cancer, but many cancers are in people getting older, like me middle-age or older, although I was a young leukemia patient, and so as our population ages and it is, unfortunately more families will be touched by cancer.

Let's get answers on how we can prevent it and how we can treat it best. That comes from research.

We're going to be discussing this a lot more, and we invite your questions as I said, and I want to hear from Ezra. Now Ezra went to Princeton. He's a really smart guy, and so Ezra's going to help me ask questions that all of us wonder about, and then we're going to learn more about how well he's doing now after getting great care at Vanderbilt.

Just a word about Vanderbilt. I'm delighted to have Dr. Thompson with us because Vanderbilt, if you follow the rankings of the medical centers, is one of the really top tier medical centers in the country as is their cancer center is just wonderfully ranked with really great care, and I think as you heard with Dr. Thompson today, they're very committed to education. We're going to be back with more of our live Patient Power webcast discussing cell phones and brain tumors and also understanding with the news about Teddy Kennedy and other celebrities who have been diagnosed with brain tumors where we are with treatment now and as with Ezra hopefully the very positive result that can happen to more patients if they receive good care. We'll be right back with more, and thank you for being with us. Stay with us.

Welcome back to our live Patient Power webcast where we've been discussing really what causes brain cancer and is there a connection with cell phones or the earpieces or other electrical things that we may be exposed to, and should you worry about it now because god forbid 20 years from now then some big study comes out and it confirms this, that would be scary, although as Dr. Reid Thompson, Director of the Vanderbilt Brain Tumor Center, points out it could be the other way too. We just don't know, so we shouldn't jump to conclusions, but they are fair questions to ask, and as we were saying just before

the break how important it is for our decision makers to support medical research where we can get these answers and so millions of us can make better decisions with our doctors but hopefully preventative ones.

We also have with us besides Dr. Thompson, Ezra Fitz who was diagnosed in January 2006 after having a seizure with brain cancer, and of course he wondered about the connection with cell phones too. He's been treated very successfully both with surgery to remove the tumor and then radiation and chemotherapy to get any lingering cancer cells and even though the tumor was near kind of the language center of this brain, this man definitely uses language. You can hear how articulate he is, and we're going to speak with Ezra from Brentwood, Tennessee more in a second but also what he does for a living is he translates books into English that were originally in Spanish or Portuguese, so I would say in that he's doing that again, and he's two-and-a-half years out from his diagnosis, that this man's language ability was preserved with great medical care.

### **Risk Factors for Brain Cancer**

#### **Andrew Schorr:**

Ezra, so we've been talking about this whole thing of what causes it. You have probably thought and thought and thought with your family was there any family connection to brain cancer. Did anybody have anything like this in your family before you?

#### **Ezra:**

Actually, my grandfather on my mother's side had a glioblastoma maybe 15 years ago, so we wondered about that, you know, if there was a genetic predisposition. We wondered about, you know, there are so many variables out there, and we wondered about all of them.

#### **Andrew Schorr:**

Dr. Thompson, what about that? So for instance in my leukemia, chronic lymphocytic leukemia, that's one of the cancers where there's maybe a little bit of a family connection or we've been reading about Christina Applegate the actress who was in that crazy movie "Anchorman" with Will Ferrell, and she had a double mastectomy after having cancer found in one because she was seen to have this BRCA1 and BRCA2 gene where she, a small minority of women with breast cancer, but where she'd have sort of the breast cancer/ovarian cancer gene. What about brain cancer and genetics?

#### **Dr. Thompson:**

Brain cancer tends not to run in families, although there are really rare exceptions. In general we can confidently tell most patients that they're children, for example, are not going to be at higher risk, and one of the things that we don't recommend therefore based on that is that people in families get a screening MRI for example; so we don't recommend that.

**Andrew Schorr:**

Now, so we don't think there's very much at all of a genetic connection. We talked about x-rays where there could be a later risk. We don't know about cell phones or Bluetooth. What about in some cancers people who work in certain industries like I did a program recently on bladder cancer and so there's some, you know, if you were exposed a lot to dry cleaning chemicals or if you smoked, and this was a new one on me, that the chemicals from the smoke actually can get into your urine and increase your risk of bladder cancer. Anything chemically-wise related to brain cancer?

**Dr. Thompson:**

Not known but a source of active study Andrew, and I think it really, again, points out that we just have a situation where we don't have a lot of information about it, but those kinds of things are going to be really important to tease out, and research that we're doing at Vanderbilt and now with our study, those are the kinds of things that we zeroing in on. We're asking people what type of work they do, were there chemical exposures at their work and if so what were they? That's the kind of the nature of the research right now.

**Treatment Options**

**Andrew Schorr:**

All right. I want to talk about treatment now. So Ezra, you had surgery. How long did that surgery go on? I mean you were awake for it.

**Ezra:**

I think it was about four-and-a-half hours.

**Andrew Schorr:**

Wow, so you're, now you're kind of immobilized, but you're talking.

**Ezra:**

Right.

**Andrew Schorr:**

And they're saying Ezra, and what else did they do to test whether your cognitive abilities were still sharp?

**Ezra:**

I was shown flashcards every so often with pictures to see if I could identify the pictures on the cards, and then there was just casual conversation pretty much throughout the entire four-plus hour procedure.

**Andrew Schorr:**

Dr. Thompson, now I imagine you have had many years of training; medical school, surgical residency, neurosurgical residency, and now you're the director. So you're like the

big cheese there. So if you were my doctor, I would want you not to have a cold because my fear would be if you sneeze you're going to cut on the wrong thing. Where are we now with technology to help with precision so that you can cut out the cancer cells and then there may be radiation and all that? How you can you have precise treatment now so hopefully more people can have a result like Ezra?

**Dr. Thompson:**

Right, great questions. You know, I think we've really made a lot of progress Andrew in terms of our ability to find tumors in the brain, but one of the things that is important to talk about with the type of tumor that Ezra had and what we're talking about today; these tumors that are primarily in the brain, they grow in the brain primarily; that they really infiltrate into the brain. You know they send cells that kind of send little finger-like projections in, so surgery plays an important role in terms of trying to remove as much of the tumor as you can safely remove it, but I always tell patients that tumors in the brain are a lot like real estate. You know what's important in real estate. It's location, location, location.

So in Ezra's case the tumor was really located in that critical language area, but we've got newer technologies that we can bring into the operating room that help us to pinpoint, localize, find exactly where the tumors are and then also to map out functions. One of the things that we do before surgery is functional MRI imaging. So in other words, we put people in an MRI magnet and we ask them to do various things like speak or move, and we can see areas in the brain that are doing those kinds of functions, and it helps us to know where those functional areas are and where the tumor is so that we can just take out the tumor.

We're making a lot of progress there, and there's some pretty interesting research that's going on that is going to even give us new ways of looking at tumors in the operating room; getting the tumor cells, for example, to fluoresce or light up so that could see just what is the tumor and the normal brain around it might not glow like that. So those are the kinds of things that are happening now in terms of research.

**Andrew Schorr:**

I understand in surgery, even in the operating room now, since as you cut something out the brain tissue kind of moves around that you sort of, you as a neurosurgeon now have newer technologies to help you navigate as the road map is changing during surgery, right?

**Dr. Thompson:**

That's exactly right, and we can actually navigate around the brain in real time. So we can actually take a little probe and touch certain areas, and we can see on a computer image right exactly where we are in the brain. So we know I'm in front of the tumor, I'm deep to it, I'm just behind it, and that type of thing. So those technologies are really changing the

way we do these surgeries, and I think Ezra's a perfect example of how the technology has benefited him.

**Andrew Schorr:**

Ezra, so you had three modalities of treatment and maybe other support with social workers and rehab people. So in going to Vanderbilt did you find there was a whole team of people with different specialties who work together to help you recover?

**Ezra:**

Definitely, and this is something that I wanted to bring up so I'm glad you mentioned it. The flip side to the coin to the great physical treatment that I got from Vanderbilt and all the doctors; the surgeon, oncologist, and radiologist there; we have a Gilda's Club here in Nashville, and I know you've got one there in Seattle, and I know there are a number of them all over the rest of the country and...

**Andrew Schorr:**

It's a great organization.

**Ezra:**

It is. It's tremendous, and like I was saying it's the perfect compliment to the information and the treatment that you get from the hospital. It's a different sort of information you get from a group like Gilda's, which is comprised of current patients and survivors who can care their experiences with you. If you say I'm going to be taking this type of chemotherapy. What sorts of side effects did you have? And people can just relay it on a very personal scale patient-to-patient like that.

**Andrew Schorr:**

Well, I know you're devoted to that. Also I should mention that, if I've got this right Dr. Thompson, Vanderbilt is getting involved in helping build community. Certainly around Tennessee there's this program "CanConnect" to help people really build community knowing that we're all kind of all in it together.

**Dr. Thompson:**

Yes, and I think that's so important not to feel sort of isolated and I love the fact that Ezra brought up Gilda's. I'm a huge fan as well, and I send all my patients. Not only that, but I send my patients' families as well. It's so important.

**Andrew Schorr:**

Right, right, and I wanted to ask you though about another, the clinical side of the team too. So you said that this, the brain tumors that you see when you look inside somebody's head have made these fingers depending upon the tumor, and so then radiation and chemotherapy come into play. How important is it when somebody's diagnosed with brain cancer that there's a team that works together?

So there's you the neurosurgeon, and certainly you have radiologists who help you look at what you've got. You've got radiation oncologists. You've got pathologists who are helping you know exactly what those cells are, and you've got medical oncologists too, and I'm sure there's a whole big supporting cast. It sounds like you need a whole team.

### **Importance of a Team Approach**

#### **Dr. Thompson:**

Yes. Yes, I am so glad you brought it up Andrew because you know in order to get really the best care I think you really need to be treated in a center that has a team, and as a surgeon I'm sort of the tip of the iceberg. I'm often the first oncologist that patients encounter but absolutely it's so important. We actually meet, and most centers have it too, where we meet as a tumor board. What that means is a group of about 20 of us, you know, all the people you just mentioned getting together and specifically discussing patients individual cases and trying to come up with the best treatment plan for them. I think that's a strategy that's just right.

#### **Andrew Schorr:**

Now, that brought up something. I have the benefit of doing educational programs all the time, and I've been learning. So when you talk about tumor boards there at Vanderbilt. So sometimes you want to have surgery, not you want to, but sometimes that's what's recommended. Sometimes I know in some cancers sometimes radiation or chemo is even done first, or what's the, you have a lot of notes on the piano to be played. So that's where you all are discussing what is a plan we will recommend, and then Ezra as a patient or as an example of a patient and family then they're very involved in the decision, right?

#### **Dr. Thompson:**

Right, and usually patients don't come to the tumor board, but it is really a group of medical people getting around a table, and you're right, very different perspectives on a problem. I've had patients where I've brought their films and discussed their cases at tumor board where I thought for sure we ought to be doing one thing, and it's an opportunity to really hear very different areas of expertise, and it sometimes changes your plan, and all that information can get communicated back to patients, and it's that kind of flow of information that I think works best.

#### **Andrew Schorr:**

Ezra, did you feel very well informed and involved in the decisions in your case?

#### **Ezra:**

I'm sorry?

#### **Andrew Schorr:**

Did you feel very well informed and involved and that you were a partner in what was going to happen in your case?

**Ezra:**

Oh yes, definitely. Everything was made, the recommendations were made very clear to us so we knew exactly what was coming and what we hoped to achieve by everything. So that's a very important part for patients to be aware of what's going to be done to you and what it's supposed to achieve, and I recommend that patients be active participants and ask questions of the doctors, and if you don't understand something then just ask for a little clarification to get the answer and just feel like a part of that overall team that includes all the people treating you and the tumor board and just everybody involved.

**Why Get a Second Opinion?**

**Andrew Schorr:**

That's why we call this program Patient Power, and I'm really delighted that there is that consumerism that's developed among patients.

Dr. Thompson let me ask you this, and I know you're in a major academic medical center. So when somebody is diagnosed with a brain tumor and hopefully there won't be another shoe that drops years from now where we say well cell phones were part of it. At any rate, for whatever the cause, you get this scary, scary diagnosis for you and your family. How important is a second opinion and how do you feel about it at Vanderbilt because somebody might go somewhere and they say yes, you have brain cancer I'm sorry to tell you, and it's inoperable. Does that mean it's inoperable at any center, or might somebody be told that but at least a life-extending surgery and other treatments might be available somewhere else?

**Dr. Thompson:**

I'm glad you brought it up. I think it's really critical to get a second opinion especially for something that's as critical as a brain tumor, and there are unbelievable differences in terms of how people approach a problem like that. I think that we're kind of coming out of an area of nihilism in terms of treatment where in the past it was, well you have a brain tumor and get your affairs in order. It's not like that any more. I think Ezra is a good example of that, and it is absolutely critical to get a second opinion. Ego should not play a role here. I encourage my patients to go get another opinion. I want them to be well informed and to make the best decision and feel very comfortable about it. So that's a really important point.

**Andrew Schorr:**

Ezra, do you talk about that with other patients too as far as how, I like to say there's sort of an art of medicine, and so obviously Dr. Thompson has many years of experience but then someone else brings their wisdom and that it's important for patients to sort of navigate this and then make decisions that they feel comfortable with. What do you talk about let's say when you're with others at Gilda's Club?

**Ezra:**

That's a great question. There are a couple of other people there that had similar types of brain tumors, and Temodar is a very common chemotherapy that's administered to people for treatment of brain tumors, and it's very interesting to see how it affects some people slightly differently than other people, and we compare our anti-nausea medicines when we're on the chemo, and some things worked for other people and some things don't work as well for other people, and it's always helpful to have someone say hey, this particular anti-nausea medication worked great for me. You should ask your oncologist about it to see if it might work for you, and there's just another sounding board, another way of learning about every possible aspect of your treatment.

**Personalized Medicine and Clinical Trials**

**Andrew Schorr:**

Dr. Thompson so we're finding out now in cancer that although our biology is mostly the same that we respond to different treatments somewhat differently. So there used to be in cancer like "one size fits all." A woman is diagnosed with breast cancer, whoop lop off the breast, whatever, that all cancer cells were the same. That's not where we are now are we?

**Dr. Thompson:**

That's right. A really insightful question Andrew, and I think it's so important to talk about it. One of the things that we are entering into as an era, it's called "personalized medicine." What does that mean? We know that patients with brain tumors, patients like Ezra and a different patient. If you look at their tumors, if the pathologist looks at them under the microscope, they may look identical, and as a result we sort of think that they should be treated with the same drug, but the reality is you treat Ezra with a drug and he's going to respond, and you treat another patient whose tumor looks identical with the same drug, and they may not respond. Why is that? What we're discovering is that at a deep level, okay, at a molecular level there are pathways that drive tumor growth that differ from patient to patient, and if you could figure out what is driving Ezra's tumor to grow as opposed to another patient's tumor; again they look identical; then you could direct your therapy at that particular problem for that particular patient, and I think that is an important theme that is developing now in cancer.

In the world of brain cancer, that's becoming very clear. We have even new evidence just in the last couple of years that that is the case.

**Andrew Schorr:**

So that leads me to further discussion on clinical trials. So you have a major academic medical center at Vanderbilt, and you have researchers, and you have labs, and then you're very much in touch with others around the country doing the same thing. If someone gets a diagnosis of brain cancer, might they have access to clinical trials to be considered in their case that you would tell them about if they come to Vanderbilt?

**Dr. Thompson:**

Yes. I think what's important to know is that the therapy that we recommend for patients has like Ezra had, which is a chemotherapy Temodar, which is a drug, and radiation therapy. That's already gone through a lot of study in patients in clinical trials, so we know that that is the best therapy we have now, but in addition to that there are opportunities for patients to be involved in clinical trials as you've pointed out, and that's the way that we're going to really make progress.

There are 18,000 patients a year let's say diagnosed with brain cancer that we're talking about in the United States each year. If you could group those patients together, even from institution to institution, and involve them in a clinical trial to really ask questions; does this drug work, Is it effective; we will have more rapid answers, and I tell patients like Ezra that time is on their side because we're really starting to pick up speed in terms of our knowledge base from clinical trials.

One just quick example. If you give the same drug to 100 patients with a brain tumor, 15% respond. That doesn't seem like a lot unless you're one of the 15 that responded, and if you could figure out what it was about those 15 that responded and then treat them specifically you'd be much farther along the curve, and that's what clinical trials are hoping to do.

**Andrew Schorr:**

All right, well let's bring this full circle back to where we started with Ezra. Ezra, it sounds like we don't have the answers about cell phones. We will wonder about that and Bluetooth, but I think Dr. Thompson has shown how there's got to be a lot of scientific rigor and more research to really tell us whether we should worry or not. We just don't know.

**Ezra:**

Right. That's kind of a big thing. You have to decide how much energy you're going to expend worrying about questions that you can't actually answer at this moment and how much energy you're going to spend being strong doing treatments and living the best life possible despite your diagnosis.

**Andrew Schorr:**

Right, and just briefly I'd like to hear from you. We just have a couple of minutes left. Your outlook for every day and for hopefully a long future?

**Ezra:**

I've got pretty much the same outlook that someone who never had this diagnosis would have. I'm back to working with books and translating and writing books, and I'm actually

working on a novel of my own. I've actually decided I've had enough working with other people's books and I might as well take a shot at one of my own. So in a way it's opened up...

**Andrew Schorr:**

What's the title for that?

**Ezra:**

The title of the book is going to be "The Morning Side of the Hill" which is in reference to my old neighborhood in New York.

**Andrew Schorr:**

Neat. Well we wish you all the best, and I know it's thrilling for the folks at Vanderbilt to hear you on this program and know you're doing so well. And Ezra Fitz, I want to wish you all the best. I'll come see you in Brentwood some time, and you'll give me a Spanish and Portuguese lesson.

**Ezra:**

All right, and thanks to you and thanks to all the great doctors at Vanderbilt who helped me through this.

**Andrew Schorr:**

Absolutely. And Dr. Reid Thompson, Director of the Vanderbilt Brain Tumor Center at the Vanderbilt-Ingram Cancer Center at Vanderbilt Medical Center now certainly again getting wonderful recognition as a top center. Thank you for all you do sir, and really you know we may do another program sometime, and we'll have more research either on how to prevent brain tumors, how to keep them at bay, and I hope in Ezra's case that can go on forever, but thank you for what you do and the work at Vanderbilt. We really appreciate your time today.

**Dr. Thompson:**

Thank you for having us on your program Andrew.

**Andrew Schorr:**

Yes, thank you. I want to talk just a little bit more about Patient Power. So these programs that we do, connecting you with eminent experts such as Dr. Thompson at Vanderbilt and also Ezra a very inspiring guy. Our goal is to really help you get connected with the best medicine for you and your family, and as you know on the Internet there's good information and there's bad information or if you talk to someone. For example, if you talk to someone who had a family relative treated for brain cancer, maybe that person didn't live very long, and you say well that's always the way it is. Well, it isn't as you heard with Ezra. He's gotten great care, and he's doing well, and we hope that continues for many years. So we want to inspire hope and connect you with the latest that medicine has to offer and let you ask questions. Thank you so much for being with us.

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9220 SE 68th Street | Mercer Island, WA 98040-5135 | [andrew@patientpower.info](mailto:andrew@patientpower.info) | Cell: 206.295.2196 | [www.patientpower.info](http://www.patientpower.info)

Thanks to the folks at Vanderbilt who helped us with today's program connect us with Dr. Thompson and Ezra. They were terrific.

Remember there will be a replay for you on [www.patientpower.info](http://www.patientpower.info) and we always welcome your suggestions at [questions@patientpower.info](mailto:questions@patientpower.info). Knowledge can be the best medicine of all. Have a great weekend. I'm Andrew Schorr. We'll see you next time.

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