

## Breast Cancer Screening Saves Lives

Webcast

**March 20, 2012**

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### **Beth's Story of Early Detection**

#### **Andrew Schorr:**

Deaths from breast cancer have decreased about 25 percent over the past 15 years, which many people credit in part to earlier detection. Coming up, a leading expert from Chicago's Northwestern Memorial Hospital will explain the latest breast cancer screening approaches. We'll also hear from a patient who benefitted. It's all next on Patient Power.

Hello and welcome to Patient Power sponsored by Northwestern Memorial Hospital. I'm Andrew Schorr.

Well, we keep saying it, but I don't think we can say it enough, and that is early detection of cancer typically makes a big difference, and screening when you think about cancer is one where it can make a huge difference is breast cancer. So we say to women at certain ages depending upon their family history, "mammography, mammography, mammography." It sounds like a broken record, but it is so important, and then there are other diagnostic tools, screening tools that can play a role as well.

We're going to hear about all that from a leading expert from Northwestern Memorial Hospital in Chicago, but first I'd like to introduce you to someone who has benefitted, and that is Beth Long. Beth is 52. She's from the suburbs in the southwest of Chicago, Orland Park. She has a whole bunch of kids who are young adults now. One is an adult, 35, actually is a writer on Family Guy, but that's a whole other story, right, Beth?

#### **Beth:**

It is.

#### **Andrew Schorr:**

Okay. But, Beth, you've gone through a good bit of screening for breast cancer. You've had mammography, like many women, for a number of years now in your case. And then let's go back just a few years, about five years ago they started spotting something, didn't they?

#### **Beth:**

They did.

**Andrew Schorr:**

And it was just a small spot?

**Beth:**

Saw a small spot and kept track of it.

**Andrew Schorr:**

Okay. So that meant mammography, where typically maybe it would be every year you'd go maybe every six months or so?

**Beth:**

I did. I started out with six months, and then recently went to three months.

**Andrew Schorr:**

And something was changing, so they wanted to keep an eye on it.

**Beth:**

They did.

**Andrew Schorr:**

Now, you knew that maybe they'd have to investigate further, and so I understand that in June of 2011 there was a change where they felt they needed to do a biopsy?

**Beth:**

They did, another set of eyes, another screening, another ultrasound. The doctor on call there said, let's take a look.

**Andrew Schorr:**

Okay. And what did they find?

**Beth:**

They found a BCIS, stage 1, small spot.

**Andrew Schorr:**

That connected you with a surgeon who is our guest today, Dr. Kevin Bethke. What did Dr. Bethke recommend?

**Beth:**

Well, after doing an MRI he decided to recommend a lumpectomy.

**Andrew Schorr:**

All right. And you had that in September of 2011, typically followed by radiation. So I think it was 33 days of radiation?

**Beth:**

Yes.

**Andrew Schorr:**

Okay. You've come through that. Now it's a few months later. How are you doing?

**Beth:**

Good. Great.

**Andrew Schorr:**

All right. So you had a lot of screening.

**Beth:**

I did.

**Andrew Schorr:**

First where nothing showed up and then something suspicious and then it was followed. How do you feel about how early detection has probably greatly benefitted you?

**Beth:**

It has. It's important. It's important to stay with the program, it's important to be kind to yourself and keep at it.

**Andrew Schorr:**

When you said you got the scary call, cancer has been found, and that can be tumultuous in a family and everybody is worried about mom, but you were able to tell [your family] that it was seen almost at the smallest point, right? It was very early.

**Beth:**

It was found very early. I knew it was small, so the rates are good, so we just needed to keep at it and find a good doctor to keep ourselves in good hands.

**Andrew Schorr:**

Okay. Well, let's meet those good hands. That's Dr. Kevin Bethke. He's assistant professor clinical surgery at the Lynn Sage Breast Center at Northwestern University and Northwestern Memorial Hospital, and he's at Northwestern University's Feinberg School of Medicine. Dr. Bethke, welcome back to Patient Power.

**Dr. Bethke:**

Hi, Andrew. Glad to be here.

**Andrew Schorr:**

Yeah, thank you so much for being with us. So you are a big proponent of screening, and is this an example like in Beth's case where it just makes a big difference?

**Dr. Bethke:**

Yeah, certainly I'm a huge proponent of screening, and in her case it really made a big difference. Hers was found at a very early stage. I believe earlier in 2011 during her routine screening mammography both sides they noted some subtle changes on the left side, and they said, "You know, we don't really know what this is. It's a little bit of a change. Why don't you come back in six months and we'll take another look." They did. They now saw some small calcifications in the area, and the radiologist then did a needle core biopsy, and that showed a ductal carcinoma in situ with a very small focus of micro invasion.

So she was ultimately a stage 1, but just barely stage 1, really just as close to a stage zero as a stage 1. And Beth underwent the lumpectomy, and we checked her lymph nodes, which were negative, and then she went on to get radiation therapy.

**Andrew Schorr:**

So this is the story--when intervention is needed this is the story you want. You identify it, it is something that needs to be dealt with, but you can deal with it when it's very manageable.

**Dr. Bethke:**

Exactly. Form pure stage zero, the survival is pretty much 100 percent. For what Beth had, it's right next to 100 percent. It's almost the same because it was found so early, way before it became palpable on exam. And with modern mammography techniques we can find tumors when they're perhaps about three, three to five millimeters in size, which is about a quarter of an inch. That's extremely small.

**Recommendations for Breast Cancer Screening**

**Andrew Schorr:**

Doctor, let's go over the recommendations and what you all follow at Northwestern as far as who should have a mammogram at what age.

**Dr. Bethke:**

Certainly. We follow the American Cancer Society guidelines, which are pretty much the standard around the country. The guidelines indicate that a patient should start annual screening mammography at age 40 and then every year thereafter. They should have a physician breast exam every three years between ages 20 and 39, and then every year after age 40. And then a breast self-exam is optional beginning about age 20.

**Andrew Schorr:**

Now, what about if mom had breast cancer or grandma or your Aunt Susie? What about that, or your sister?

**Dr. Bethke:**

Yeah, if you have a first-degree relative like a mother a daughter or a sister who had an early-age breast cancer, say in their mid, early to mid 40s, we would recommend starting mammography five to 10 years before that family member developed their cancer. So if a patient's relative developed breast cancer at age 42

we would recommend that our patient start about age 35.

We generally don't do mammography before the age of 30. The breasts are quite dense in a young woman, and the mammography has a very difficult time seeing through dense breast tissue, so it's not very helpful.

**Andrew Schorr:**

All right. Let's talk about some of the things that have come up. So you talked about the guidelines, but, you know, you read the paper and it seems like every few years there's some challenge to mammography, and there was, you know, a couple years ago. And I know you in the medical community said, oh, no, and you were not particular happy about a government panel's recommendations that said maybe it should be different. So take us through that because women can be confused.

**Dr. Bethke:**

Certainly. And that unfortunately confused a lot of patients. I believe that was about two and-a-half years ago a US preventive task force met, reviewed the literature, and they came up with recommendations that indicated that patients should start screening mammography at age 50 and then every other year thereafter. And, you know, it was politicized, and everybody started pointing fingers, and this tends to happen about every three to four years where there is basically an assault on breast imaging and mammographic screening.

I think the medical community defended themselves quite well. They took another look at the literature. I don't think there's any doubt on anybody's part that screening does save lives. There is controversy as to when to start screening, how often you should do it. I think after that episode, after looking at all of the data the medical community went back to the standard recommendations that we just talked about, the American Cancer Society, where you start at age 40 and every year thereafter.

So that task force did not change the routine in the United States, and I think our current screening recommendations will be standing for a long time.

**Approaches to Screening**

**Andrew Schorr:**

Now, you know, some women don't look forward to mammograms, and it's something else they have to have on the calendar, but they don't want to go through it and they [ask], "Well, gee, is there a simpler test?" You know, is there something else that could be done that would be as reliable because sometimes you think, "Well, is there something new that's better?"

**Dr. Bethke:**

Well, there's been a huge amount of research in breast screening, and you're right, it can be uncomfortable. They have to squeeze the breast, and they don't do that just for the sake of squeezing the breast. They do that in order to get a very high

resolution picture so that they have a more sensitive test and it can find even smaller lesions. So that's usually the main complaint, that it's uncomfortable.

And so is there anything that doesn't require squeezing the breast that's going to give us as good of information as a mammogram, and so far nothing is able to. We have breast ultrasounds, but they show different changes in the breast. They do not take the place of a mammogram. Ultrasounds are used as an adjunct to mammography. If you see a density on mammography we'll follow it up with an ultrasound. If you feel a lump on exam, we'll follow it up with an ultrasound. But ultrasound itself cannot replace mammography.

There are other options. There's MRI. MRI is not a perfect test. It's a very expensive test and there's a lot a false positives with an MRI, which means about 40 percent of patients who have a breast MRI something shows up on the MRI, and that requires additional testing, additional imaging, and perhaps additional needle biopsy to determine what the MRI actually shows. This creates a huge amount of excess expense and huge amounts of anxiety. So we only use MRIs in very special circumstances for screening. It is not generally used for the entire population.

**Andrew Schorr:**

Beth, if I'm not mistaken you had told me that you did have a MRI after the mammography spotted the one place. It did spot others, but those were nonmalignant, right?

**Beth:**

Exactly. It did bring a lot of anxiety, it did bring some extra tests, they were very painful, and I guess I'm glad we all found out what it is, but, like Dr. Bethke says, it's a few false positives.

**Andrew Schorr:**

Right.

**Dr. Bethke:**

Her situation wasn't really for screening.

**Andrew Schorr:**

Right.

**Dr. Bethke:**

Our routine is if you have a diagnosis of breast cancer we will obtain an MRI at that time to better map out the extent of disease. There are a couple instances however, where we do use MRI for true screening, and that's for high-risk patients. And high risk is determined as anybody who has a 20 to 25 percent lifetime risk of breast cancer. The American Cancer Society has published guidelines that indicate that particular population of patients should get a yearly MRI and also a yearly mammogram, and you stagger the two by six months.

**Andrew Schorr:**

Okay. So it's really, for a woman then, that's a conversation with her doctor to [ask], "What are the tests that are needed in my situation with my level of risk, my age, etc.?"

**Dr. Bethke:**

Right. And so the patient's physician will look at the patient's family history. If they have a very strong family history, they may feel that the woman is considered high risk and would benefit from MRI. They may carry the breast cancer gene mutation which carries a 60 to 70 percent lifetime risk of breast cancer. Or they may have had chest radiation as a young adult for perhaps Hodgkin's lymphoma. That also increases the risk of breast cancer.

So all these patients fall into a high-risk category, and for them MRI screening makes sense. For the general population it doesn't.

**The Biopsy Process**

**Andrew Schorr:**

Dr. Bethke, we talked about the importance of regular mammograms, and then sometimes, as in Beth's case, something is spotted, and it's followed, and then maybe something has changed and they want to take it further. So one of the things, when something is spotted, is it obvious? I mean, it's not like it's necessarily cancer, right? There's some change that maybe radiologist and others feel should be investigated further? Help us--because it's not always clear, right?

**Dr. Bethke:**

Certainly. When the radiologists see something they have to make a judgment call, and they have to determine, "Is this totally benign, can we just ignore it, is it a little bit worrisome, and should we then bring the patient back in six months for another mammogram, or is it worrisome enough to warrant a biopsy right now?" Usually, their threshold for doing a biopsy soon is about a two percent risk of breast cancer, so it doesn't really take much suspicion to trigger a needle biopsy. And then generally, at least in most larger institutions, it's the radiologist who will go ahead and do the needle biopsy, either with ultrasound guidance or with mammographic guidance, and that's called a stereotactic core biopsy.

**Andrew Schorr:**

Let's understand what that is. So they've spotted something, they're going to--with local anesthetic have a needle go down to where it is, and they're trying to get a few cells that then would be analyzed. Is that right?

**Dr. Bethke:**

That's correct. They'll use, like for stereotactic they have you lying flat on your stomach, and it's a fairly complex device, but basically they use mammogram to guide the needle exactly to the point of the mammographic abnormality. And then they'll take tiny little pieces of tissue out called cores, and those are sent to the pathologist. About 20 to 25 percent of all core biopsies are cancer, 75 percent are benign. So a woman should not assume that if they're called for a biopsy that it's

automatically malignant because most are actually benign.

**Andrew Schorr:**

And then sometimes it can be a fluid-filled cyst, right?

**Dr. Bethke:**

Yes. A cyst doesn't require a biopsy, so if they see a density on a mammogram or you feel a lump you'll then do an ultrasound, and the ultrasound is very good at distinguishing a solid mass from a cystic mass, and a cystic mass is just basically a little sac of fluid, and ultrasound can determine that something is a simple cyst. That doesn't need to be aspirated unless it's causing symptoms like pain or anxiety. They can easily aspirate that through a small needle and it will go away.

If it's a complex cyst, which means that it has septations inside of it or the wall has thickened, then the radiologist will go ahead and do a core needle biopsy of that cyst. But generally most cysts we can ignore. If we know it's a cyst we don't have to biopsy it. We don't even need to aspirate it if it's not causing problems.

**Factors That Could Interfere with Mammography**

**Andrew Schorr:**

A couple of questions. You know, maybe it's not the typical woman, but some women have had breast implants. Does that make mammography more difficult?

**Dr. Bethke:**

Not by experienced mammographers. We have a lot of patients with breast augmentation at Northwestern, and it really isn't a problem. There are a couple of different views that the radiologist will do to kind of move the implant out of the way, but any radiologist or radiation or radiology tech who does it a lot really doesn't have an issue.

Remember, the implants are behind the breast tissue, so they actually are pushing the breast tissue forward, and it doesn't hide anything. Either the implant is behind the muscle or the implant is behind the breast tissue on top of the muscle. Either way, the breast tissue is in front of the implants, not covered up by the implant.

**Andrew Schorr:**

All right. Another question is some people are having children in their later years now or are still having cycles. Depending on where they are in their menstrual cycle or even if they were breastfeeding, breastfeeding baby at 40, how does that affect mammography?

**Dr. Bethke:**

We generally don't do mammography during breastfeeding. It's not that it's dangerous, it just doesn't work very well because the breast tissue in a lactating patient is very dense, and one of the weaknesses of mammography is it doesn't see through dense breast tissue very well. So, you know, we prefer ideally the patient would have had a mammogram not too long before she became pregnant and then

would get one about three months after she stops breastfeeding. By that time of three months the breast will have returned to its more natural self. It will have shrunk a little bit, it will be much softer, not as dense, and the mammogram will work much better.

**Andrew Schorr:**

And where are you in your cycle, does that matter?

**Dr. Bethke:**

For mammography, not really. It may be a little bit more tender during certain points of the cycle, but in terms of accuracy with modern digital technique I don't think that makes any significant difference.

**Types of Mammography**

**Andrew Schorr:**

You said a word I want to follow up on. You said modern "digital" techniques. So over the last few years hospitals have switched from, you know, kind of x-ray film to all this digital technology. Has that enabled tumors and abnormalities to be spotted in a better way, earlier?

**Dr. Bethke:**

It probably does for women who have dense breasts. It's been shown that digital mammography is better and more sensitive in women who have a denser breast than the old-styled screen film mammography. So the recommendation is a woman under 50 or premenopausal woman should probably have digital mammography if it's available rather than screen film mammography.

The problem is you don't have digital mammography available everywhere. It's very expensive equipment. So if you have screen film equipment that works well and your radiologist is good at using it, I'm not sure there's a huge amount of difference between digital and good screen film. But the studies would show that if you have a choice and you have dense breasts you're better off having a digital mammogram.

**Andrew Schorr:**

All right. Now, we talked about that example you were giving a minute ago about somebody having ultrasound and being guided by mammography. So is there a difference between screening mammography and diagnostic mammography? Or is that an example? People hear these terms; they don't know what it means. I don't know what it means.

**Dr. Bethke:**

Sure. I get that question quite a bit, "What's the difference between a screening mammogram and a diagnostic mammogram?" And a lot of patients think a diagnostic mammogram is better. It's not better, it's just different. They both are done on exactly the same machine, same technique, same radiologist reads it.

A screening mammogram is done with two views of each breast. So there's two views of the right breast, two views of the left breast, and then the patient goes home and the radiologist will read that mammogram at a later date. If they see an abnormality on those images then the patient will be called back to the radiology center for additional films.

And when they're called back those--that additional imaging would be called a diagnostic mammogram, and that means that a radiologist will be looking at each view as it's done, and they'll be telling the radiology technician, "Get this view, get that view," [or] why don't we repeat this view?" So the radiologist takes an active role at that time, whereas with the screening mammography the films are batch read maybe a week after they're taken, and if an abnormality is seen the patient needs to come back.

**Andrew Schorr:**

Okay. But in that diagnostic one, again, still, a woman shouldn't be having heart palpitations that it necessarily means it's cancer at all.

**Dr. Bethke:**

Definitely not. I believe it's about eight to 10 percent of all patients are brought back for additional imaging after a screening mammogram, and the vast majority, 75 percent of those, are actually benign.

**Following Up with MRI**

**Andrew Schorr:**

All right. Let's take it further. So we mentioned MRI, and Beth experienced this. So there was something spotted on the mammogram, and then you were taking it further with MRI, and she wasn't necessarily high risk, so now where did that MRI fit in as a follow-up to the discovery on mammography?

**Dr. Bethke:**

MRI is a very sensitive test. It shows things that a mammogram may not show. So when a patient is diagnosed with breast cancer and we want to do a lumpectomy we get the MRI to map out the extent of disease. It gives us a little better idea as to how extensive the tumor is within the breast, and once we have that information we can make a better determination as to whether or not the patient is a candidate for a lumpectomy.

The problem with MRI is it's overly sensitive, which leads to low specificity, which means a lot of false positives, and that leads to a number of extra biopsies. So if you get an MRI you have to be prepared to come back for some additional imaging and perhaps additional needle biopsies.

**Approaches to Screening in Development**

**Andrew Schorr:**

And then some women have heard of other techniques being used, you know,

ductal lavage, and I'm sure in the radiology community they try to see, you know, are there other techniques they could use. Where do we stand with all of this beyond mammography?

**Dr. Bethke:**

Well, mammography is still the only screening tool, that's been proven, you know, hundreds of times and hundreds of studies around the world. There's nothing that is as sensitive as mammography and as specific as mammography and cost-effective. I mean, MRI is more sensitive, but, you know, an MRI, book price is \$5,000. We can't afford that as a country or as individuals to do an annual MRI unless there's a really strong indication for it, so it doesn't make sense for screening.

There are other tests. There's something called a sestamibi scan that uses a radioactive dye. That was initially used maybe 15, 20 years ago. It didn't work out very well. There's a newer version of it recently, but that really hasn't caught on.

There's something called a PEM scan which is kind of like a PET scan but it's breast specific. Again, newer technology, but there's been no randomized, international or even national trials that show it's any better than mammography.

Ultrasound we currently use. The companies are developing something called the whole-breast automated ultrasound where it kind of takes a picture of the entire breast using ultrasound imaging. That's in its very early stages.

Ductal lavage, at Northwestern it's used as a research tool to help a woman determine her risk of breast cancer in the future, but I don't think it's really been proven to be an effective means of diagnosing breast cancer. So it's not a good screening technique.

Any test that's developed is going to have to be compared head-to-head with mammography, and I don't foresee any other tests in the near future beating out mammography.

**The Lifesaving Benefits of Screening**

**Andrew Schorr:**

Let's bring this full circle, though. So you have been a breast surgeon for a number of years now. You have had hundreds if not thousands of patients, so you are very passionate about this and the importance of a woman keeping those appointments and being on a schedule for mammograms, aren't you?

**Dr. Bethke:**

Definitely.

**Andrew Schorr:**

You believe it saves lives.

**Dr. Bethke:**

I do believe it saves lives, and that's been proven on many, many studies. Every time an assault is launched on mammography, you go back, look at the literature, look at all of the studies; mammography reduces breast cancer mortality by 20 to 30 percent.

The other thing is that over the last 15 years the mortality from breast cancer has decreased by 25 percent. A lot of that is due to screening, using mammography. Some of it is also due to better chemotherapy regimens, better surgery, and so forth, but nobody argues the fact that mammography decreases breast cancer mortality.

**Andrew Schorr:**

So, Beth, you've lived it. There are women listening who say, "I forgot last year" or "Maybe I'll get around to it," or "I don't know, it's uncomfortable." What do you say to them? What do you say to your friends? What do you say to your 35-year-old stepdaughter? What do you say?

**Beth:**

It's a gift to yourself. It's a gift to yourself to be proactive, to take care of your health, and with that you put yourself at good doctors and good hospitals. That's the best you can do for yourself.

**Andrew Schorr:**

And in that this has been caught so early you're looking for a long future, I'm sure.

**Beth:**

I hope so.

**Andrew Schorr:**

Yeah, well, you've got a lot of weddings to be at, right? Lot of weddings, lot of grandchildren.

**Beth:**

There you go.

**Andrew Schorr:**

Lot of stuff. So I wish you, Beth Long, all the best. Thank you for sharing your story of breast cancer detection and the benefits of screening. Thank you for that.

**Beth:**

Thank you.

**Andrew Schorr:**

And Dr. Kevin Bethke, now a regular on Patient Power and assistant professor of clinical surgery, a breast cancer surgical specialist at the Lynn Sage breast center at Northwestern Memorial Hospital, thank you, Kevin, for what you do, your devotion to patients and helping underscore the importance of regular screening.

**Dr. Bethke:**

Thanks, Andrew. Thanks so much for having us. It's always a joy to be on your program.

**Andrew Schorr:**

Thank you. This is our mission here at Patient Power, and it's a mission I know at Northwestern Memorial Hospital, is to empower and educate you because, here, the ball is in your court. Make those appointments, keep those appointments so that if something turns up it can be dealt with at its earliest stage, and as we've heard that can be lifesaving.

Thank you for joining us. I'm Andrew Schorr. Remember, knowledge can be the best medicine of all.

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