

**Pfizer - Science Will Win Podcast - Season 2
Teaser Script**

MUSIC IN

Jamil:

Breast cancer means to me... it is my biggest challenge in this life. It is the one thing that is in the way of me being able to fulfill all my dreams – seeing my kids grow up, you know, living, and growing old with the love of my life, and meeting my grandchildren. And so I feel that it's this constant shadow over my life, where I have to do everything I can to defeat it, in order to be able to set out the life that I set out to live.

Martha:

I have far too many people who I think of who have died because of metastatic breast cancer, and far too many people who are currently dying because of metastatic breast cancer. And for me, just thinking about all those people who are no longer here who really should be here and who were creative, giving mothers, fathers, grandparents, all these things, who aren't here anymore. That keeps me motivated.

Jeff:

Cancer is hundreds, if not thousands of different diseases. Understanding how to attack these distinct diseases by exploiting their specific vulnerabilities is really critical to our ability to find novel treatments that can deliver some robust clinical benefit for patients.

MUSIC TRANSITION

ADAM: Welcome to season two of Science Will Win. In this season we'll explore the advancements of cancer treatments – as well as the challenges, particularly in the breast cancer space.

I'm your host, Adam Rutherford. I'm a geneticist, writer, broadcaster and a lecturer at University College London in the UK.

This season, we're bringing you a special two-part look at how the innovative medications used to treat cancer come to be.

It's a groundbreaking time for cancer research, with as many promising possibilities as there are challenges to overcome. And nowhere is that better illustrated than in breast cancer research.

We're going to be hearing from doctors, researchers, advocates and from patients. And we'll get an inside look at some of the new potential approaches being researched. We'll explore the technical barriers facing medication development, and the latest innovations that seek to overcome them. And finally, we'll be gaining a better understanding of the human impact of this complicated disease.

MUSIC TRANSITION

ADAM: Cancer is such a widespread set of diseases that you'd be hard-pressed to find someone who *hasn't* had it impact their lives in some way. Nearly ten million people die of cancers worldwide each year.

That can be maddening, because humankind has known about cancer for centuries. The ancient Romans documented how cancerous tumors spread, and came back, even after surgery. Those surgical techniques have been refined over the last couple thousand years, but still cancer remains.

In the 20th century, new treatments beyond surgery were developed, including chemotherapy and radiation. And as scientists gained a better understanding of human biology, they were able to explore new avenues for treatment. Today, researchers are developing therapies that are tailored to *specific* types of cancer. They're creating precise approaches to treating specific mutations, like targeted therapies and immunotherapies. These treatments can help people live longer, better lives – but there is still much more to be done.

MUSIC TRANSITION

Jeff:

We know that about one in eight women in the US will develop invasive breast cancer over the course of their lifetime, and evidence points to an increase in the incidence of breast cancer in recent years. So understandably the possibility of developing breast cancer is something that's on the minds of so many women throughout their lives. And that's undoubtedly unsettling. And at the same time, from a scientific standpoint, I also think about how much we've learned about breast cancer over the past few decades and how the scientific community has been able to translate those learnings into some very effective drug treatments that have benefited so many patients and saved countless lives.

ADAM: We're going to take a close look at breast cancer because it's one of the most common forms of cancer worldwide. And yet, it remains a difficult challenge that is not completely understood.

Martha:

I had this horrible, in retrospect, feeling that breast cancer was an easy cancer.

Jamil:

I thought that breast cancer was one type of breast cancer and you got it, you got treated for it, you had surgery and then it was gone. I didn't know about metastatic breast cancer or that you actually died from breast cancer that had spread to other parts

of the body and that there were different types of breast cancer. I didn't learn any of that until I was diagnosed.

ADAM: In part one of this series, we'll get a better sense of what breast cancer *is* – it's actually a group of different diseases, each with their own treatment approaches and prognoses. And we'll dive into some of the early-stage research underway to find new potential therapies, such as improved small molecule approaches.

Jeff:

We look at the shape of the protein, and then we design small molecules that match the shape of that protein, and that allow that small molecule to find its target in a cell where there are thousands of proteins. We just want it to find the one we want to target and nothing else ideally, find that pocket on the protein where it needs to grab onto and block its function. So that's quite a process. But I think we've, we've become pretty good at it over time.

ADAM: In part two, we'll break down a vital piece of how breast cancer treatments come to be... clinical trials. We'll learn how clinical trials work, how researchers determine that potential new medications are safe and effective, how participants enroll in trials, and why all of this work is so important.

Julia:

So working in clinical trials and specifically in breast cancer, clinical trials, I see a very bright future. We've seen so much progress in the last few years for patients with all types of breast cancer and all of this has been done through clinical trials. So I'm excited to see what's going to happen over the next few years as we continue to push the boundaries and improve care for patients, and improve outcomes.

ADAM: Just like the research itself, there are challenges to overcome in clinical trial design and education.

Jamil:

I learned about clinical trials through my own self-advocacy.

Julia:

One key barrier to accessing or participating in clinical trials is really knowing that they exist, knowing that they're an option for you. Going ahead and asking the question whether or not a clinical trial may be right for you in your clinical situation.

ADAM: Some of the latest clinical trial design innovations seek to address potential barriers that may prevent patients from learning about or accessing clinical trials. For example, there may be logistics barriers to overcome.

Jamil:

Some of them have jobs, some of them have children. So just thinking about that, this should not be something that is for only a small few to be able to benefit from, but just thinking about, okay, how can we make this as inclusive and patient-centric as possible?

ADAM: The science behind breast cancer therapy is constantly evolving. And it takes collaboration between patient advocates, researchers, health care providers – and patients themselves – to ensure these important potential treatments can someday become a reality... and potentially change lives.

Jeff:

It's those moments when you get to see the results of some experiment for the first time, and they reveal a new insight into a, a biological or disease process, something that no one has ever previously recognized or understood, and you realize that you may have made an important discovery and those moments don't come often, but when they do come, they're always pretty special.

MUSIC TRANSITION

ADAM: Join us for season two of Science Will Win to explore the journey of potential cancer treatments: the challenges, the human stories, the collaborations, and the breakthroughs.

Tune in October 27th for this two-part story.

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