



1
00:00:00,000 --> 00:00:02,269
I remember thinking to myself,
“God I hope I never need this

2
00:00:02,269 --> 00:00:03,604
technology.” [slightly tense
music]

3
00:00:03,604 --> 00:00:05,639
A Hubble science writer’s
personal experience

4
00:00:05,639 --> 00:00:09,142
with a life-saving Hubble
technology spinoff

5
00:00:09,142 --> 00:00:12,112
In 1997 the astronauts
will be going back to the Hubble

6
00:00:12,112 --> 00:00:15,682
Space Telescope. One of their
jobs will be to insert a new

7
00:00:15,682 --> 00:00:19,286
generation instrument called the
Space Telescope Imaging

8
00:00:19,286 --> 00:00:22,122
Spectograph. This instrument
contains highly advanced new

9
00:00:22,122 --> 00:00:26,360
digital imaging technology and
this same technology developed

10
00:00:26,360 --> 00:00:31,198
especially for Hubble is as we
speak being used in clinics and

11
00:00:31,198 --> 00:00:35,869
hospitals across this country in
a new breast biopsy system in a

12
00:00:35,869 --> 00:00:40,040
high-tech war on breast cancer.
My name is Ann Jenkins, I'm a

13
00:00:40,040 --> 00:00:43,877
science writer on Hubble Space
Telescope. This was one of the

14
00:00:43,877 --> 00:00:46,613
first stories I worked on as a
full-time science writer. The

15
00:00:46,613 --> 00:00:49,816
way it came about was I was
asked to document Hubble

16
00:00:49,816 --> 00:00:54,454
spinoffs, technology that was
originally developed for Hubble

17
00:00:54,454 --> 00:00:59,526
that was being used on Earth.
The new technology involved

18
00:00:59,526 --> 00:01:02,796
seeing into the breast tissue
from two different angles and

19
00:01:02,796 --> 00:01:06,300
pinpointing the suspicious
tissue and then bringing a small

20
00:01:06,300 --> 00:01:10,971
needle into the tissue to take
out a portion of the suspicious

21

00:01:10,971 --> 00:01:15,175

tissue to be biopsied. So this saved the patient an open

22

00:01:15,175 --> 00:01:18,979

surgical incision, which was the way biopsies had been done

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00:01:18,979 --> 00:01:21,214

previously. When I was first researching and writing about

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00:01:21,214 --> 00:01:24,017

the technology, I thought, "Well this is amazing. You know, the

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00:01:24,017 --> 00:01:28,522

patient is going to have so much less pain and so much less

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00:01:28,522 --> 00:01:31,925

recovery time." And then we did a video a couple of months after

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00:01:31,925 --> 00:01:35,595

the press release came out. When we went to the hospital, it was

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00:01:35,595 --> 00:01:38,632

to interview the doctor who had been doing stereotactic breast

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00:01:38,632 --> 00:01:41,034

biopsies, it was a very new technology back then, there

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00:01:41,034 --> 00:01:44,738

weren't very many machines in the area. And we saw the machine

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00:01:44,738 --> 00:01:48,208
and I think the producer of the
video or maybe it was me who

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00:01:48,208 --> 00:01:51,345
said, "Boy it would be nice if
we had a patient." And then

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00:01:51,345 --> 00:01:54,047
somebody looked at me and I
said, "Okay, I'll be the

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00:01:54,047 --> 00:01:58,885
patient." While I was on the
table actually pretending to get

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00:01:58,885 --> 00:02:01,989
a stereotactic breast biopsy, I
remember thinking to myself,

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00:02:01,989 --> 00:02:04,691
"God I hope I never need this
technology." >>Doctor's

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00:02:04,691 --> 00:02:06,626
offscreen voice: And when I fire
the gun you're going to feel a

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00:02:06,626 --> 00:02:11,064
little pinch. [sound of the
needle shooting out] Okay. How

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00:02:11,064 --> 00:02:15,702
was that? >>Ann: I thought about
the technology a lot since

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00:02:15,702 --> 00:02:18,338
working on the video and doing
the press release. It was one of

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00:02:18,338 --> 00:02:23,176

our most successful spinoff stories. And last year I had a

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00:02:23,176 --> 00:02:26,546

routine mammogram. I've had routine mammograms for a number

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00:02:26,546 --> 00:02:30,917

of years now, and I was called back. I didn't think much of it

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00:02:30,917 --> 00:02:33,053

because I'd been called back twice before and it never

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00:02:33,053 --> 00:02:36,023

amounted to anything. But this time when I was called back the

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00:02:36,023 --> 00:02:40,594

radiologist read the second mammogram in real time and said,

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00:02:40,594 --> 00:02:44,264

"You've got four little dots all in a line and they're very

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00:02:44,264 --> 00:02:47,901

suspicious. You need to get a biopsy." When I found out I

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00:02:47,901 --> 00:02:51,605

needed to get a stereotactic breast biopsy, the doctor, the

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00:02:51,605 --> 00:02:54,307

radiologist who first told me was amazed that I knew what it

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00:02:54,307 --> 00:02:57,177

was, and then I told him the story of why I knew what it was,

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00:02:57,177 --> 00:02:59,980

and that was because I had done the research and written the

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00:02:59,980 --> 00:03:03,683

press release and done the video on it so many years earlier.

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00:03:03,683 --> 00:03:07,087

Having researched the technology, I think that made me

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00:03:07,087 --> 00:03:09,689

a lot less nervous going into the procedure. I knew what it

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00:03:09,689 --> 00:03:12,893

was, and it actually performed as advertised. It was extremely

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00:03:12,893 --> 00:03:17,397

easy for me, I didn't have much pain, I had a fast recovery

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00:03:17,397 --> 00:03:21,902

time, and I was very grateful that I didn't have to be put

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00:03:21,902 --> 00:03:25,605

under and intubated and have an open surgical incision. If you

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00:03:25,605 --> 00:03:28,575

have to have cancer, this was the best kind. It was caught

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00:03:28,575 --> 00:03:31,812

extremely early, the procedure that I had was very

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00:03:31,812 --> 00:03:35,315

conservative, I didn't even have to have chemo. I had the

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00:03:35,315 --> 00:03:38,618

surgery, I had radiation, and now I'm on a drug for the next

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00:03:38,618 --> 00:03:42,789

five or ten years. I will always be an advocate for getting your

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00:03:42,789 --> 00:03:46,359

mammograms early and often. I've been a big fan of space

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00:03:46,359 --> 00:03:49,496

technology ever since I was a toddler. I actually have a scar

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00:03:49,496 --> 00:03:53,934

on my chin from Apollo 13 from when the capsule splashed down

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00:03:53,934 --> 00:03:56,837

and I jumped up and the throw rug slipped out from under me

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00:03:56,837 --> 00:03:59,739

and I gashed my chin and had to get stitches. So I've been a big

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00:03:59,739 --> 00:04:03,076

fan all my life. I've worked on Hubble pretty much my whole

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00:04:03,076 --> 00:04:06,213

adult life. I'm of course very
fond of Hubble, it's an amazing

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00:04:06,213 --> 00:04:11,351

machine, and I am in awe of what
it's done for humanity and also

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00:04:11,351 --> 00:04:15,021

the technology spinoffs that
have been brought down to Earth

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00:04:15,021 --> 00:04:19,426

that help people here on Earth
in ways that we never even

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00:04:19,426 --> 00:04:22,996

expected when the technology was
originally developed for Hubble.