

Reversing Cancer Newsletter

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“You cannot separate the scientist from the soul.”

Azra Raza’s Fireside Chat Part 2

When Kevin Ham and I organized a fund-raising bike ride in Vancouver last September, we thought “Let’s have Azra share her unfiltered thoughts in a way she can’t on a podcast or social media.”

I alerted everyone it would be like meeting Nelson Mandela or Mother Teresa 40 years ago.

A fortunate group of people joined us. I am sharing highlights from Azra’s “Fireside Chat” from that fundraising event.

Part 1 is online at <https://evo2.org/fireside/>.
This is Part 2:

Azra: I came to this country as an outsider. I was constantly anxious about when a patient is telling me their history, what are they NOT saying?

What am I missing? And what if the story changes from son to daughter to wife who are all telling different stories than the patient? It changes from mouth to mouth, from week to month. These are the evolving narratives we hear.

Our job as doctors is to take this fragmented information being thrown at us and somehow try to hear more clearly – the kind of hearing blind people develop. To read between the lines, to read between the silences.

And then construct a story, put it in the medical records in such a concise way that the next person coming on and reading that chart has an accurate idea about what's going on.

So, in other words, a very big part of my training—the young people's job—is to tell them that **narrative medicine** is one of the most important things in life. Reading, writing, and communicating are all extremely important. Empathy and emotions will come from that.



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Perry: My favorite professor in college taught English Authors Before 1800, and every class was mind-blowing. He said, “I get lots of pre-med students. And I tell them all my number one advice to you is read novels. Because 70% of what's wrong with somebody starts in their head. And if you don't understand how a person thinks, you won't understand why they're unhealthy. And the medical schools are turning out technicians instead of people who understand people.”

He said, “We used to have stories of a grandfather or a mother or a father dying in their bed at home and the stories they told. And now we have medical histories of a patient in the hospital and no human story.”

Azra: In my book, Chapter Six is called “Andrew.” After Andrew died, five years later, I went to his mother and his sister and everybody in the family. I said, “Now, cast a backward glance.”

“Things are so chaotic when somebody is dying and going through cancer treatment. You don't have a moment to think, because no sooner do you adapt to one reality, suddenly something changes.

“But now you’ve had time to think and reflect. What decisions would you have changed? What would you do differently?”

This is how my book is different from other books, because I go back to families and ask them 10 years later, five years, eight years later, “Think back and tell us what we did wrong or what would you do differently?”

No one else has done this.

Andrew's mother and sister both wrote the following down... please read it in the book. Both said Andrew was admitted for his terminal illness for four months at a major hospital in New York City. His oncologist was just one floor above him.

In four months, that doctor never came down once to see him.

Now, I know that oncologist, I know that he's very good and empathetic. Why didn't he go? Where was his empathy?

He was protecting himself. He felt like such a failure. He couldn't face it that he had failed completely to help a 22-year-old. Whereas his presence would've meant so much to the young man and his family.

Again, I know that guy. I know he's such a kind oncologist, such a nice father, but he couldn't handle it.

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Are we going to blame him? No, of course not. I can't. But I can't blame Andrew's mother and sister for feeling angry with him also. These are the complexities of being human!

Dov: We avoid grief like the plague. And Azra, I feel like you walk around in grief. I've never met anybody in my life who could walk in grief and turn it into a power source.

Susan: You two are using grief as a power source to serve. There's this brink of tears and genius that is going on all the time. It's magnificent. Thank you so much for inviting me, Perry.

Azra: Well, thank you for saying that though. Because normally in my field I'm treated like I've written the Satanic Verses of medicine!

Susan: Dr. Raza you said that there was no conscious decision. You just are who you are. I just wanted to anchor that thought process.

Mahmood: There's something about Dr. Raza that is different. The moment you get into her presence, within a few minutes you see it. All of us are seeing right now. Dr. Raza, the scientist, the doctor, the cancer curer. I didn't get to see her or meet her in that way first. I was blown away by her by something completely, entirely different. She is a master connoisseur of Urdu poetry. She can rattle off her poetry just like she's reading a book.

I saw this during Covid on Zoom because we were all shut down. The very first time I heard her, I thought, "Who is this woman?! I would love to get to know her!" And then I met her in person. And she's even more impressive in English. Two weeks ago she was in Silicon Valley and met a whole bunch of people, a lot of Pakistani people, a lot of other fellow Urdu poetry aficionados. And I saw her in person in a setting like this. I had tears in my eyes.

What I'm trying to say is you cannot separate the scientist from the soul, the poetry that she is, the narrative that she talks about. There is no one like her. She's unique!

Azra: As an oncologist, I'm seeing patients all the time. It is such a privilege to spend time with them. Every time I'm going to the clinic, that's the day I feel the best because I know it's going to be a fantastic time.

It's not like patients are crying, grief-stricken, and woebegone all the time. No, we have the best time, and they look forward to coming and seeing me. For me, it's a love fest in the clinic. It's the best thing possible. They come, they hug me, they kiss me.

There's a Hispanic contingent of my patients that have a tradition of never coming empty-handed. They'll bring a lollipop, a little band, and lipstick. Sometimes they just bring me coffee, but they never walk into my clinic empty-handed. Not one of them.

How do you think I feel? I'm not grief-stricken. I'm hugging and kissing them. We're high-fiving and saying, "Okay, you gotta get two units of blood today. Are you going there?"

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And then we exchange jokes. "What, did your daughter get another tattoo? Oh, no. Okay. Fine." We are always living in the moment, and it is a beautiful thing.

It is a true honor and privilege to observe the kind of dignity with which these individuals are facing extremely painful crises in their lives, but with so much grace. You are constantly learning, and your spirit... they provide helium for my spirit.

Instead of dragging it down, they lift my spirit. I love seeing patients. Please remove this idea that dealing with this kind of patient population is crushing, spirit-destroying, and soul-crushing.

Not at all. It's just the opposite.

Susan: Will you share your latest thinking on the tissue repository? The potential that you see with this and how does that compare to the industry standard? What are others not doing that you are doing? What are you most excited about?

Azra: Cancer researchers say, "Oh, I have to understand cancer." I say, "Go study a *patient* who has cancer." But no! They never see a patient with cancer!

They'll produce damage on the skin of a mouse or a rat, and see a cancer develop there and study it. Then they develop some treatment to cure it. But that doesn't apply to humans. Or they will take human cancer cells, put them in mice, grow them. But if you're taking cells completely out of their environment, it's a very different story than seeing how they behave *inside a patient's body*.

When you create a tumor by damaging the skin, *it's not the same as a spontaneous cell*, the first cell that developed in an otherwise perfectly healthy person.

So the question I keep asking myself is a fundamental: **What is it that we are doing wrong in cancer research?** And the answer is, we are not studying human cancers.

My antidote to that is the tissue repository. What is its purpose? My idea is very simple. Cancer is a well-orchestrated, response to stress. It's not a random phenomenon. It's purposefully evolving. So what is the stress in the environment, in the soil, that selects an abnormal seed or selects a seed to behave abnormally?

Because *no life form can exist without responding to its environment*. It's impossible. It's always seed and soil. We keep concentrating on the one seed without looking at the soil.

What is in the soil that could have caused a cell to misbehave? And then, how did the First Cell begin to misbehave? Those are the two fundamental questions I'm asking. Both are addressed by the tissue repository.

First, when you are asking what caused the appearance of cancer, there must have been a stress. I'm not talking about mental stress. I'm talking about stress in an organ. Like a liver that has a

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hepatitis B virus infection, and all the cells are dying. They're getting the signal: fight or flight, develop a response, or you're gonna die.

And so one cell develops a response. But what were the stress markers? Everything that happens is shed into the blood. Blood is a window into all kinds of diseases.

So with this tissue repository, I have samples of blood serum, plasma, saliva, bone marrow, everything in a longitudinal fashion on the same patient as they crossed this phase transition from pre-leukemia to acute leukemia.

How did the stress markers change that caused this to happen? We can go and look at it. It's so simple. All I have to do is pull a hundred patients and look at pre and post leukemia. Two time points. Study their two drops of blood by multiple omics techniques: genomics, transcriptomics, metabolomics, proteomics.

To do this we need a couple of million dollars. And from doing this, we will be able to develop a signature that tells us, *from two drops of blood*, what were the stress markers that caused this change to appear? How did these stress markers differ from this one?

With this targeted signature, for a few thousand dollars, we can go and examine thousands of patients, come up with the signature, and now go to people at high risk of getting cancer.

Who are they? I'm sorry to say that people who have one cancer are always at risk of getting another, not just a recurrence of the old one, but a new cancer. *Do you know that 20% of all new cancers appear in a cancer survivor?*

One in five cancers appear in a cancer survivor. Why? **Because we never took out the stress that caused the first cancer to appear!**

My own husband at 34 got testicular cancer, survived it, then at 57 got a completely unrelated leukemia and died of it in the prime of his life. Why? Because the stress, whatever was in the body, was still there.

So my point is, we have the tissue repository that no one else in the world has. And I just need a little investment. Then people can make billions of dollars off of it. I don't care. But that signature will be so important to take to individuals at high risk of cancer, like cancer survivors, *and see whether we can predict the appearance of a second cancer and prevent it by normalizing the stress signature.*

You guys are interested in wellness. You want to know what are the inflammatory markers that are making people have chronic diseases like dementia, Alzheimer's, stroke, all these things? Well, cancer is one of those chronic diseases appearing from the same kind of inflammation.

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But what is the signature and how can we reverse it? The answers are all there in the repository. The *way* is there. But the *will* is not! Because the whole paradigm has developed around studying *mouse* models!

So this is why I'm here searching for \$2 million with bowl in hand.

Audience member: I don't understand. Often an entrepreneur has an idea they can't get over the finish line. So they find investors who essentially license their ideas. They put in some initial money, then they can blow it up.

How can there not be people out there that look at this and see the massive impact that this can have on the whole world?

\$2 million to help so many people is a drop. It's tiny. For a billionaire, two million's nothing. What's holding this back from getting that?

Azra: I don't know. You answer.

Perry: I'll take a crack at it. You're saying \$2 million would get us a firm causal relationship between stressors and cancer.

Azra: I'm 100% confident. We have to take this signature, validate it with thousands of samples, which I also have. But once we have the signature, phase two would be another \$2 million to do that. Once we have that, we are ready for prime time.

Perry: So I'm going to give you a bit of a pessimistic view: We spend \$2 to \$5 million and we develop a firm causal relationship between pre-cancer and cancer, which of course, *scientifically*, I'm absolutely over the moon about.

But warning somebody at high risk is equivalent to telling a smoker to stop smoking. It sounds easy, but it's hard. "Give up your cheeseburgers... or forgive your ex-wife... or do meditation every morning," or something like that.

They're gonna want a pill, 'cause that's what the world loves: pills.

So the pill is gonna take five years to develop and another five years to get through clinical trials. And that's gonna cost \$150 million, not \$3 million. It's gonna have legal hurdles.

So from start to finish, we're looking at 8 to 12 years. And most investors are only willing to deal with time windows of maybe 5 years.

There are investment groups that are working on eight to 12-year timelines. But I had a conversation with one guy who is doing some incredible investment work, and he said, "I hate biotech. Hate it." He goes, "We don't even want to touch a biotech investor. They will poison everything we're doing."

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Biotech is “Silicon Valley expectations meets Richard Dawkins-style science.” A toxic combination. Silicon Valley culture says, "We are gonna pump hundreds of millions of dollars into 10 companies. Two of 'em are gonna go supernova. We're gonna shoot the other eight in the head before they get to maturity, because they're losers."

Even though on a different time scale, those would be viable companies. The venture capitalists don't want to deal with all of that. It's got to be cash positive in five years or it's a dud. That's the Silicon Valley way.

Then we add the Richard Dawkins mentality, which is "Everything is a gene. We're looking for a gene. Everything is a mechanism. Everything is a cog. Everything is a gear. We're gonna find the cog or the gear."

When in fact, the truth is what Denis Noble says: "There is no privileged level of causation. It is systems within systems within systems within systems."

But please remember: Anybody who's studied complex systems understands:

There is always something simple that can be done to change the trajectory of the system.

And the way you get there is through some form of **music, narrative or poetry.**

(To be continued)

Perry

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Who We Are

Reversing Cancer is a foundation helping to identify cancer in its earliest stage, when treatment is vastly more likely to succeed—an approach that hasn't received nearly as much support as it deserves. Perry Marshall discusses in detail how we can revolutionize the cancer profession for surprisingly small investment at <https://evo2.org/repository/>.

While 90% of the profession is focused on Stage 3-4, our Open Source Tissue Repository is detecting cancer at Stage Negative One. This will change the way cancer is treated worldwide. Your donation helps bring this project to critical mass.

What to Do Next

- Contribute to Science Research — Donate at www.evo2.org/cancer
- Our Manifesto is posted online at <https://reversingcancer.org/donation-fundraising-letter/> (the password is: now)
- Our podcast is at <https://evo2.org/the-podcast/> and blog <https://reversingcancer.org/blog/>
- Contact us at support@reversingcancer.org
- WE ARE HIRING! Please introduce us to a fundraising professional who is looking for an opportunity. Contact our CEO Jon Correll at support@reversingcancer.org.

We Need Your Helping Hands

Evolution 2.0 is me, CEO Jon Correll, Mary McEvoy and a few other precious volunteers to contribute hours here and there. **We can really use your hands-on assistance.**

Another thing you can do to help is fund our virus research. I know of no one who is bringing a full-fledged “Evolution 2.0” viewpoint on virus evolution. It’s 501c3 not for profit, so you can go to evo2.org and make a tax-deductible donation.

We could also use some volunteers...

- **Administration and project management**
- Finances
- Scientific papers, research, and projects
- Film (documentary screenwriters, editors)
- **All** forms of marketing ad copywriting, buying Google, YouTube and Facebook traffic, writing blog posts, shooting videos, podcasts, publicity angles, news media
- Project management

Email evolution@evo2.org and let us know what your skills are and how you might like to help.

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