What the sugar coating on your cells is trying to tell you

People thought the sugar coating on our cells was like a protective coating that somehow made our cells stronger or tougher, now we tend to think about the sugars that are populating the surface of our cells as a language.

Sugars tell us our blood type. Those who share the blood type O, means that we have three simple sugars linked together. Blood type A and B means that you have an enzyme that adds one more building block. This is the principle for blood transfusion and those sugars might be telling us that you have cancer.

When an immune cell snuggles against a cancer cell, it's looking for signs of disease, and if it finds those signs, the cell gets activated. A protein on the immune cells grabs sialic acid (sugar), and if that protein gets held at the synapse between the immune cell and the cancer cell, it puts that immune cell to sleep.

The sugars are telling cells around that the cell is good or bad, and cancers get the ability to express these new sugars. Now that we understand how those sugars mesmerize the immune system, we can come up with new medicines to wake up those immune cells.

I think that the pathology of cancer is very complex and confusing, but works like this one are telling us that a big picture has a reason to be, so this would be a new pathway for new develops