Behind the Breakthroughs

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COVID-19 has given everyone a crash course in drug and vaccine development. While the new coronavirus vaccines may appear to have come out of nowhere in record time, their success is built on years of research in many fields, including oncology. In fact, the mRNA technology used in the first two vaccines authorized in the United States was originally developed for cancer treatment (click here).

For an inside look at early-stage research that could lead to the next treatment breakthroughs, we turned to the Damon Runyon Cancer Research Foundation, which funds scientists with “bold and brave” ideas (click here). For example, researchers are developing off-the-shelf CAR-T therapies that could be faster and cheaper to produce than customized T cells for each patient. Others are working on vaccines that teach the immune system to recognize cancer and harnessing artificial intelligence to better understand how cancer spreads and develops resistance.

After four decades of effort, researchers have finally cracked the code for drugs that target KRAS; the first KRAS drug could be approved this year (click here). And there’s evidence that fecal transplants can improve response to immunotherapy (click here).

Earlier breakthroughs are helping people today. Heidi Yates is benefiting from new targeted therapies for chronic lymphocytic leukemia—and remains hopeful that research will lead to a cure (click here). Michael Kovarik, a man living with metastatic breast cancer, advocates for more research (click here). And Siri Lindley relied on her horse as she recovered from a stem cell transplant (click here).

Of course, turning basic science into treatments depends on clinical trials. COVID-19 has disrupted cancer research, but it has also spurred innovations to speed up and streamline the process, making it easier for more patients to participate. Ask your care team whether a trial might be a good option for you.

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