Behind the Breakthroughs That Save Lives

"You could argue that … every individual cancer is different because our genomes are complex."

December 6, 2018 By Damon Runyon Cancer Research Foundation

Damon Runyon scientists recently shared some of the cutting-edge cancer therapies that are saving lives at an event sponsored by the Young Presidents' Organization in New York City.

Nobel Laureate Harold E. Varmus, MD, of Weill Cornell Medicine, set the tone for the evening with a reminder that today's breakthroughs are the result of many years of research. "Everything that you hear tonight is based on decades of work directed toward understanding how cells work, how the immune system functions and how malfunctions in cells lead to cancer. It has depended heavily on the development of new technologies, which are rooted in fundamental research that may not appear at first glance to be about cancer."

Guests heard from former Clinical Investigator Jedd D. Wolchok, MD, PhD, of Memorial Sloan Kettering Cancer Center, and Current Clinical Investigator Christopher E. Barbieri, MD, PhD, of Weill Cornell Medicine. Wolchok discussed immunotherapy—drugs that harness a patient's immune system to find and kill cancer cells. Barbieri presented his research using therapy to specifically target the damage in prostrate cells that causes cancer. Today, these two approaches play a critical role in treating cancer and providing hope for many patients.

While new cancer therapies have generated optimism and the cancer mortality rate has dropped 26% since 1991, there is still a long way to go before all forms of cancer become treatable. Further research is necessary to overcome resistance, cases in which a patient's cancer recurs when treatment stops working. Doctors also need to better understand why some patients respond to a particular drug, but others with the same cancer do not.

"In general, cancer is an incredibly complex set of diseases," said Varmus. "You could argue that every cancer is different, not just every kind of cancer, but every individual cancer because our genomes are complex," he added. "We need to understand this threat to human health, both in the US and around the world. But this long-term effort can only succeed with talent and money. I believe that public funding of research is important, but private funding is equally important."

Damon Runyon funds the brightest young scientists to tackle these formidable issues in cancer research. We are confident that the bold, new paths they are pioneering will lead to cancer cures. Watch the video to learn more about the progress being made by Wolchok and Barbieri.

This post was originally published by Damon Runyon Cancer Research Foundation. It is republished with permission.

© 2026 Smart + Strong All Rights Reserved.
http://beta.docker.cancerhealth.com/blog/behind-breakthroughs-save-lives