# THE FUTURE OF CANCER TREATMENT WILL BE COLLABORATIVE, CROWDSOURCED AND CREATIVE



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From Nobel laureates to visionary leaders to fearless patient advocates, the global oncology community has no shortage of trailblazers focused on fighting cancer. But we all know that creating truly transformative treatments and realizing the promise of precision medicine takes more than the brilliance of individuals; it requires the combined creativity and ingenuity of many. Indeed, the next stage of oncology research will, more than ever, be defined by collaborations that advance current science and pioneer new ways of working together.

Grassroots and academic initiatives around the world are showing what happens when people build communities around life-changing missions. Researchers at the Southern Methodist University in Dallas, Texas, for example, are working to recruit a global network of "Minecraft" gamers to help identify the chemical compounds that improve the effectiveness of chemotherapy. Through a plugin that incorporates the SMU researchers' challenge, thousands of players worldwide can compete while analyzing critical data.

Cancer Research UK's (CRUK) Citizen Science projects harness the power of gamers in a similar fashion. Through partnerships with game developers, the organization has created apps and games that challenge gaming fans to analyze cell samples and other data that enables CRUK-funded researchers to advance their work. By opening up their datasets to people around the world, scientists are finding that they can shorten the window of time needed to answer their central research questions.

In our own experience, we've seen some of the swiftest progress come when people with diverse skillsets from different disciplines apply their knowledge in novel situations. For example, Project Data Sphere, of which Pfizer is a founding member, is a unique collaboration between industry, academia, government and patients intended to speed the pace of cancer research. Combining the clinical trial data of more than 120,000 patients across dozens of datasets, the project enables researchers around the world to share, integrate and analyze historical cancer research for future benefit.

In 2015, the platform issued a novel crowd-sourced challenge to the scientific community, asking if they could use the Sphere's data, together with machine learning techniques, to find a better prognostic model for advanced prostate cancer. A total of 549 participants from 21 countries with a diverse range of expertise answered the call. The winning team, who beat an existing model, was a group of researchers from Finland who were completely new to prostate cancer research. Such a collaborative model combining diverse talent with cutting edge technology makes it possible for fresh ideas to rise and prove their value; indeed, such an example is the

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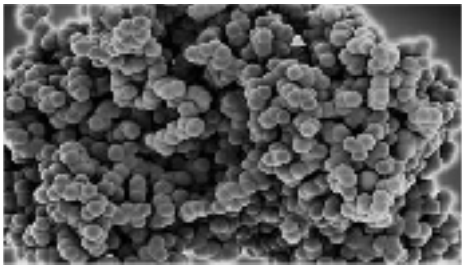

THERE'S NO 'I' IN DRUG DEVELOPMENT

very foundation of new data science models that we are exploring across oncology, and beyond, to help patients faster.

As those of us who have devoted our careers to the field of oncology know, drug discovery is not for the faint of heart. False starts and setbacks are par for the course. But as we look ahead, we are more optimistic than ever – because of the inspiring collaboration and creativity we have the privilege of experiencing every day.

[1] National Cancer Institute. *Precision Medicine in Cancer Treatment.* https://www.cancer.gov/about-cancer/treatment/types/precision-medicine . Accessed May 15, 2018.

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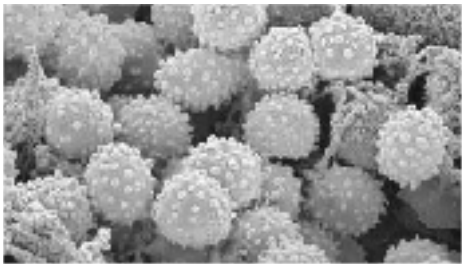

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