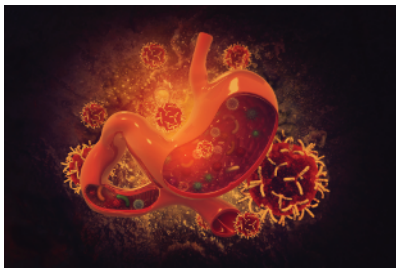

gastric-derived cells. The researchers identified genes that were differentially expressed in the two cellular subtypes of PCs and used this information to develop a 12-gene prognostic signature validated in almost 1,400 patients.

"This study is not a complete unraveling of the complexity of gastric cancer, but it's a first step—it opens the door for understanding intratumor heterogeneity," Ajani says. Next, the team aims to prospectively validate the prognostic signature, which might eventually stratify patients for treatment.

"The findings suggest that in PC, gastric tumor cells may exhibit very high degrees of transcriptional plasticity, contributing to intratumor heterogeneity," says Patrick Tan, MD, PhD, of the Cancer Science Institute of Singapore, who was not connected to the study. "17q amplifications also appear to be associated with gastric-dominant PC cells exhibiting poor survival," he adds, and genes on the 17q region may represent new drug targets.

"Major strengths of the study are the use of single-cell analyses, which give greater resolution, and the use of well-annotated peritoneal samples from distinct clinical cohorts," says Samuel Klempner, MD, of Massachusetts General Hospital Cancer Center in Boston, who was also not involved. "No one has really studied peritoneal carcinomatosis—it's an important knowledge gap, and an unmet clinical need."

The study suggests several areas for further research, including how genes in the prognostic signature contribute to disease biology, and how peritoneal cells compare with cells from the primary tumor and other metastatic sites at the single-cell level, Klempner says. A more detailed analysis of immune cells in the peritoneal cavity may provide additional insight into tumor-immune interactions in this space and identify additional therapeutic targets.

"This study emphasizes the importance of not just assuming that the peritoneal cavity is all one thing," Klempner says. "It suggests that this is an active compartment where there is biology that needs to be understood."
–Catherine Caruso ■

NOTED

Sanofi announced it will acquire Kymab for $1.1 billion and up to $350 million in milestone payments. Kymab's pipeline includes KY1044, an anti-ICOS antibody being tested alone and in combination with a PD-L1 inhibitor in advanced solid cancers. KY1044 preferentially depletes intratumoral regulatory T cells and stimulates ICOS-positive effector T cells.

Novartis will pay BeiGene $650 million up front and as much as $1.55 billion in milestone payments for the PD-1 inhibitor tislelizumab. Novartis will acquire rights to develop, manufacture, and commercialize the drug in North America, Japan, the European Union, and six other European countries. Tislelizumab is approved in China for certain forms of classic Hodgkin lymphoma, urothelial carcinoma, and non–small cell lung cancer.

The American Cancer Society (ACS) reported that **the cancer mortality rate decreased by 2.4% from 2017 to 2018 in the United States,** the biggest single-year drop on record (CA Cancer J Clin 2021;71:7–33). The ACS estimated that there will be 1.9 million cancer diagnoses and 600,000 cancer-related deaths in 2021, but the projections don't account for the COVID-19 pandemic, which has disrupted cancer screenings and care.

THE NATIONAL CANCER ACT AT 50

Year-long commemoration of sweeping legislation that spurred improvements in cancer care begins.

One could call it the original Cancer Moonshot: In 1971, just 2 years after men walked on the moon, Congress passed the National Cancer Act, sweeping legislation that set the course for steady scientific progress in prevention, screening, diagnosis, and treatment.

The act gave the NCI special status, with its own budget procedures and presidentially appointed director and oversight panels. It birthed the Frederick National Laboratory for Cancer Research, dedicated to basic research and technology development. And it brought about the Cancer Centers Program, a cornerstone of the NCI's translational science efforts.

The legislation also established an international cancer research data bank—known today as the Surveillance, Epidemiology, and End Results program—and helped to destigmatize cancer among the American public.

With the National Cancer Act turning 50 this year, "we really hope and expect that the entire cancer research community will embrace this anniversary and want to talk about it," says Norman Sharpless, MD, the NCI's director.

Working with partners in academia, industry, and philanthropy, the institute is planning social media campaigns throughout the year to tell the stories of pioneers who made seminal contributions in the cancer world. On Instagram and elsewhere, the campaigns will feature notable figures, such as the inventors of the human papillomavirus vaccine and the patient advocates who fought for passage of the National Cancer Act. The NCI is even rolling out a slogan for the outreach effort: *Nothing will stop us.*

Due to the COVID-19 pandemic and presidential transition, the institute has no major activities planned to celebrate the semicentennial this winter. However, virtual events may be held in conjunction with the spring conferences of the American Association for Cancer Research and the American Society of Clinical Oncology. When the coronavirus is under control, additional activities may lead up to December 23, the day President Richard Nixon signed the act in 1971.

"It is an important event to commemorate," says Sharpless. "It's an opportunity to talk about cancer progress today and where we can make more progress going forward." *–Elie Dolgin*