Press release

New Research from One Biosciences Shows Single-Cell Profiling Can Identify Which Ovarian Cancer Tumors are Predisposed to Chemotherapy Resistance

Researchers from French National Centre for Scientific Research (CNRS), Institut Curie, Sorbonne Université and One Biosciences show ovarian cancer tumor cells may be epigenetically primed to resist chemotherapy

Clinical single-cell profiling at diagnosis may enable more personalized treatment strategies in difficult-to-treat cancer

Paris, October 20, 2026 – One Biosciences today announced data showing some ovarian cancer tumor cells are predisposed to resist chemotherapy and single-cell profiling at diagnosis can identify tumor profiles that indicate which patients are likely to experience treatment failure, ultimately enabling more personalized treatment strategies.

Researchers from One Biosciences, French National Centre for Scientific Research (CNRS), Institut Curie, and Sorbonne Université found that the cellular changes linked to the development of resistance to cytotoxic chemotherapy cannot be explained by DNA mutations alone: the functional and epigenetic state of tumor cells play a key role and initial tumor composition predicts overall survival.

The study focused on patients with high grade serous ovarian cancer (HGSOC), the most common and aggressive type of ovarian cancer. The disease has few symptoms, is often identified late and remains difficult to treat, with a five-year survival rate below 40 percent.

“Ovarian cancer tumors are very diverse, with many different cell types. These cells can do many different things, some of which help the tumor resist chemotherapy. In this study we identified all the functional states present in a tumor both before and after treatment and found that a patient’s initial tumor profile predicted their

outcome," said Céline Vallot, Ph.D., co-founder and chief scientific officer at One Biosciences. "By using single-cell profiling to identify functional states associated with chemotherapy resistance, we may be better able to predict who will respond to therapy and who won't, giving physicians an opportunity for more personalized treatment strategies."

The study analyzed single-cell RNA profiles of tumor samples both before and after chemotherapy, allowing researchers to track cellular changes. Tumors with a higher initial concentration of chemotherapy-resistance functional states were associated with poorer overall survival. Additionally, researchers identified epigenetic markers for resistance to the chemotherapy agents utilized. Critically, the single-cell profiling technology used in this study can be applied to standard FFPE biopsy samples widely used in clinical care.

"Clinical grade single-cell profiling allows us to identify and track the cellular mechanisms of resistance not just in a research study, but in real world clinical care across a number of cancer types," said Vincent Miller, M.D., executive chairman of One Biosciences. "This study highlights the impact that knowledge could have for personalizing treatment strategies in one of the most difficult-to-treat cancers patients face."

The full study was published online in *Cancer Discovery*.

About One Biosciences
One Biosciences is a single-cell transcriptomics company pioneering clinical-grade tumor profiling solutions. Founded in 2020 as a spin-off from Institut Curie, the company has developed OneMap™, an end-to-end single-cell molecular profiling platform, designed to help clinicians select optimal treatments for cancer patients and support pharmaceutical companies in the development of precision therapies and companion diagnostics. One Biosciences is supported by leading investors and partners including Redmile Group, Blast, Sofinnova Partners, Institut Curie, Gustave Roussy, and by the Paris-Saclay Cancer Cluster as part of its BOOST program. For more information, visit: www.onebiosciences.fr.

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