

New Study Advances Cancer Precision Therapies by Identifying Patients Who Benefit from Bexmarilimab treatment

Researchers have identified the conditions under which the antibody-drug bexmarilimab can activate the body's own defense system against cancer.

TURKU, FINLAND, May 20, 2025 /EINPresswire.com/ -- Researchers at the [University of Turku](#),



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Associate Professor Maija Hollmén

Finland, have taken a step towards more personalized and effective cancer treatments. A new study has identified the conditions under which the antibody-drug bexmarilimab can activate the body's own defense system against cancer, and how to identify patients who will benefit from the drug.

Bexmarilimab has the ability to “wake up” macrophages, a type of immune cell, to act against cancer. The study found that this activation occurs especially when the tumor microenvironment is immunologically silent. Moreover, in the healthy tissue adjacent to the tumor, bexmarilimab

was shown to trigger B cell-mediated immune responses, regardless of how sensitive the neighboring tumor was to the treatment. This suggests that the drug may have immunological effects beyond the tumor itself.

New Tool for Patient Selection

By utilizing previous knowledge about the changes bexmarilimab causes in tumors, researchers were able to demonstrate the benefit of bexmarilimab by measuring the upregulation of five different genes (gene signature). In the future, this could enable more accurate patient selection and improved treatment outcomes.

“This gene signature gives us a tool to identify patients whose tumors are likely to respond to bexmarilimab. Supporting treatment decisions with gene signatures measured from the tumor may help target therapies to those who are most likely to benefit. The next step is clinical validation of the signature, which could enable its use in more precise patient profiling”, explains

Jenna Rannikko, Doctoral Researcher and lead author of the study.

The study utilized patient-derived tissue samples that closely mimic the interaction between tumors and the immune system. By measuring treatment response in these tissues, the researchers observed similar patterns to those seen in clinical trials of bexmarilimab.

Promising Future for Finnish Immunotherapy

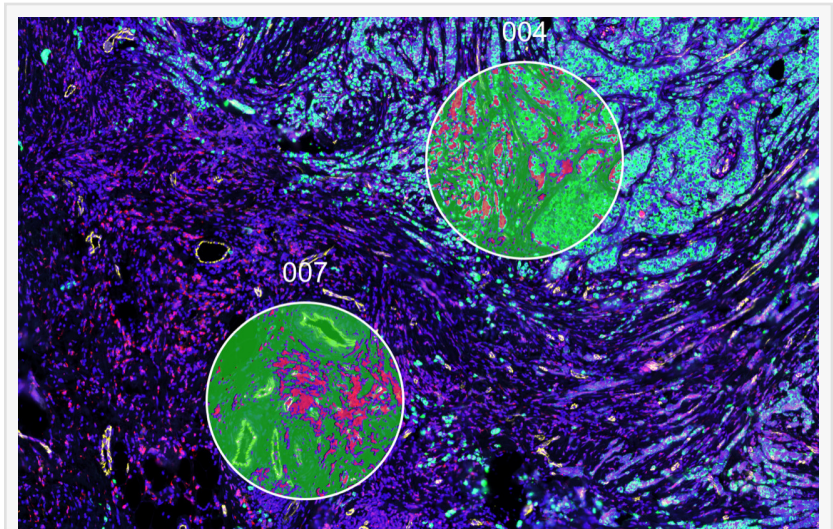
Bexmarilimab, developed in Finland, has shown promising results in several types of solid tumors. This new study adds important insights into how bexmarilimab can be used most effectively in the future.

“Our findings suggest that by better understanding the tumor microenvironment, we can tailor immunotherapies to the patients who are most likely to benefit”, says Associate Professor Maija Hollmén, the study’s principal investigator. “In addition, understanding the factors that influence treatment efficacy may help expand its use to new patient groups in the future.”

The study was published in the [Journal for ImmunoTherapy of Cancer](#) on 15 May 2025.

Maija Hollmén is a group leader in the InFLAMES Flagship which is a joint initiative of the University of Turku and Åbo Akademi University, located in Turku, Finland. The goal of the Flagship is to integrate the immunological and immunology-related research activities to develop and exploit new diagnostic and therapeutic tools for personalized medicine. InFLAMES is part of the Research Council of Finland’s Flagship Programme.

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The image shows breast cancer tissue, where the nuclei are stained dark blue, cancer cells turquoise, blood vessels yellow, and macrophages magenta. The green-highlighted areas indicate regions where genes expressed by macrophages were measured using scRNA-seq.

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