Topical Gel Relieves Painful Skin Rash Caused by Targeted Therapy for Colorectal Cancer

Better control of the acne-like side effect can lead to significantly better treatment outcomes.

April 29, 2025 By MD Anderson Cancer Center

- Novel treatment allowed patients with colorectal cancer to successfully continue taking their cancer treatment with improved quality of life.
- Acne-like skin rash is a common side effect from colorectal cancer treatment, often causing patients to postpone their treatments.
- LUT014, a topical BRAF inhibitor made by Lutris Pharma, is the first agent to treat the cause of the rash without interfering with the treatment itself.
- Over two-thirds of patients had successful treatment with the higher dose of LUT014 compared to one-third with placebo.

A new topical gel called LUT014 successfully reduced the severity of a painful acne-like rash that commonly occurs as a side effect of targeted therapy with epidermal growth factor receptor (EGFR) inhibitors for colorectal cancer, according to a clinical trial led by researchers at The University of Texas MD Anderson Cancer Center.

Most patients who used the topical gel had improved quality of life and were able to continue receiving EGFR inhibitor treatment for their cancer compared to patients receiving a placebo gel, which can benefit long-term outcomes. Results from the Phase II trial were presented today at the American Association for Cancer Research (AACR) Annual Meeting 2025 by principal investigator Anisha Patel, MD, associate professor of Dermatology.

“We’re really excited about this novel topical gel. Having a therapy with low side effects and high efficacy is critical for improving quality of life and cancer treatment continuation for these patients,” Patel said. “This rash can have a high impact on patients’ quality of life. Better control of the rash can lead to better control of the cancer and a better chance at significantly improving

outcomes."

Patients with colorectal cancer commonly are treated with anti-EGFR therapies, such as cetuximab and panitumumab. However, EGFR inhibition blocks the MAPK pathway, disrupting normal skin cell function and triggering an inflammatory response that results in a painful acne-like skin condition found mainly on the head, neck and upper trunk.

Roughly 75% of patients on EGFR inhibitors will experience a skin toxicity or severe rash that negatively affects their quality of life, and most will end up either reducing their treatment dosage or completely discontinuing treatment altogether.

Most currently available topical and oral therapies for the rash focus on its symptoms, providing minimal and often temporary relief. LUT014, a novel topical BRAF inhibitor, is the only current therapy that targets the underlying mechanism of the rash. Specifically, it reactivates the MAPK pathway, which is shut down by EGFR inhibitors. Because it is a topical, alcohol-based gel, it is not absorbed into the bloodstream and therefore does not interfere with the effectiveness of cancer treatments.

The trial enrolled 118 patients with colorectal cancer across 23 medical centers who had developed moderate to severe acneiform rashes while taking an EGFR inhibitor. Patients were randomly assigned to receive a 0.1% formulation of LUT014, a 0.03% formulation of LUT014, or a placebo gel for 28 days.

Treatment success was defined as a one-grade or greater reduction in rash severity, or an improvement in at least five skin-specific quality-of-life criteria. Treatment success was significantly higher in patients who received either of the LUT014 formulations – 27 of 39 (69%) with the 0.1% formulation and 19 of 40 (47.5%) with the 0.03% formulation – compared to 13 of 39 (33%) in patients that received the placebo gel.

Notably, while patients receiving LUT014 still had some grade 3 or lower adverse events, these were considered an improvement on expected outcomes from the application of an alcohol-based gel on inflamed skin, with patients reporting better quality of life overall.

"These rashes typically are treated with antibiotics or topical steroids, but we're seeing people develop resistance to those with long-term use," Patel said. "LUT014 is the first treatment to target the mechanism of the rash without being absorbed in the bloodstream, allowing us to effectively treat this unfortunate side effect without compromising tumor treatment. We saw results within a week for many of the patients."

A Phase III clinical trial currently is in the works to further evaluate the effectiveness of this treatment, Patel explained. Additionally, while this study examined its use for colorectal cancer treatment, other cancer therapies currently in development also affect kinase pathways, highlighting the potential broader application of LUT014 to manage other types of cancer treatments.

The study was funded by Lutris Pharma. Patel reports receipt of consulting fees from Asymmetric Therapeutics, Deciphera Pharmaceuticals, Erasca, Janssen Scientific Affairs, Lutris Pharma, OnQuality Pharmaceuticals, Repare Therapeutics and SynOx Therapeutics, as well as research funding to MD Anderson from AnaptysBio, Hoth Therapeutics, Lutris Pharma, OnQuality Pharmaceuticals and Pfizer. A full list of collaborating authors and their disclosures can be found within the abstract here.

This news release was published by MD Anderson Cancer Center on April 27, 2025.

Click here for more news from AACR 2025.
