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Cancer Patients Face Elevated Risk of Carrying Antimicrobial Resistant 'Superbugs'

FRANKLIN LAKES, N.J., May 21, 2025 /PRNewswire/ -- First-of-their-kind studies published in [The Lancet Oncology](#)¹ and [Cancer Medicine](#)² provide new data showing that cancer patients in both hospital and outpatient settings are at a substantially higher risk of developing antimicrobial resistant (AMR) infections compared to all other non-cancer patients.



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Key Takeaways:

- The studies, led by the [Cancer and AMR Consortium](#), which includes BD (Becton, Dickinson and Company) (NYSE: BDX), the Union for International Cancer Control (UICC), and the AMR Action Fund, found AMR rates among key pathogens were 1 to 3 times higher, and up to 5 times greater with some specific pathogen-source combinations in outpatient cancer patients;³ and 1.5 to 2 times more likely in hospitalized cancer patients as compared to non-cancer patients².
- Studies examined data on more than 1.6 million bacterial isolates collected from 198 outpatient facilities in the U.S. and more than 4.6 million admissions across 168 U.S. hospitals.

Together, the two studies, which are understood to be the first large, multi-center studies to quantify AMR among cancer patients in the U.S., offer some of the strongest evidence to date that superbugs pose a substantial risk to cancer patients across a variety of settings.

"As an oncologist, my ability to effectively treat a patient's cancer is predicated on the idea that antibiotics will both cure and prevent potentially fatal infections throughout their course of care," said study co-author Yehoda Martei, MD, University of Pennsylvania. "The rapid emergence of AMR among oncology patients will affect cancer care, including the possibility of undermining new innovations such as CAR T-cell therapy and other immunotherapies, given the risk of immunosuppression and opportunistic infections associated with these therapies."

The rise of AMR is rapidly diminishing the effectiveness of available antimicrobial medicines, contributing to approximately 4.7 million deaths per year.⁴ Antibiotics and other antimicrobials like antifungals play a critical role in cancer care, both as a treatment for infections and as a preventative treatment to reduce the risk of infections associated with certain medical procedures, such as surgery or chemotherapy.

"These studies highlight a critical need for enhanced infection prevention programs, focused antibiotic and diagnostic stewardship, and an increased use of rapid diagnostic tools," said corresponding author Diane Flayhart, director Global Public Health at BD. "While we expected cancer patients to be at an increased risk of superbugs, we were surprised at the high proportion of AMR pathogens compared to non-cancer patients, especially in outpatient settings. It shows just how vulnerable cancer patients are to these dangerous pathogens."

Read more in [The Lancet Oncology](#): *"Incidence and prevalence of antimicrobial resistance in outpatients with cancer: a multicentre retrospective cohort study."*

About BD

BD is one of the largest global medical technology companies in the world and is advancing the world of health by improving medical discovery, diagnostics and the delivery of care. The company supports the heroes on the frontlines of health care by developing innovative technology, services and solutions that help advance both clinical therapy for patients and clinical process for health care providers. BD and its more than 70,000 employees have a passion and commitment to help enhance the safety and efficiency of clinicians' care delivery process, enable laboratory scientists to accurately detect disease and advance researchers' capabilities to develop the next generation of diagnostics and therapeutics. BD has a presence in virtually every country and partners with organizations around the world to address some of the most challenging global health issues. By working in close collaboration with customers, BD can help enhance outcomes, lower costs, increase efficiencies, improve safety and expand access to health care. For more information on BD, please visit bd.com or connect with us on LinkedIn at www.linkedin.com/company/bd1/, X (formerly Twitter) [@BDandCo](#) or Instagram [@becton_dickinson](#).

1 "Incidence and prevalence of antimicrobial resistance in outpatients with cancer: a multicentre retrospective cohort study," Vikas Gupta, Michael J. Satlin, Calvin Yu, Yehoda M. Martei, Lillian Sung, Lars F. Westblade, Scott C. Howard, ChinEn Ai, Diane C. Flayhart, *The Lancet Oncology*, online April 30, 2025, doi: added after embargo.

2 "Burden of Antimicrobial Resistance in Adult Hospitalized Patients With Cancer: A Multicenter Analysis," Vikas Gupta, Michael J. Satlin, Calvin Yu, Yehoda M. Martei, Lillian Sung, Lars F. Westblade, Scott C. Howard, ChinEn Ai, Diane C. Flayhart, *Cancer Medicine*, online December 13, 2024, doi: 10.1002/cam4.70495

- 3 AMR rates among key pathogens were 1 to 3 times higher overall in cancer patients, with some specific pathogen-source combinations such as vancomycin-resistant enterococci (VRE) and multidrug-resistant *Pseudomonas aeruginosa* (MDR-PA) more than 5 times greater for cancer patients in outpatient settings compared to patients without cancer.
- 4 <https://www.who.int/news-room/fact-sheets/detail/antimicrobial-resistance>

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