A Simplified Way to Identify Harmful Medications in Older Adults With Cancer

Findings published in JNCCN can help clinicians make informed decisions about prescription meds that contribute to frailty.

September 23, 2025 By National Comprehensive Cancer Network

New research published in the September 2025 issue of JNCCN—Journal of the National Comprehensive Cancer Network validates the use of a specifically-curated tool for determining which medications may be causing harm for older patients with cancer. Researchers affiliated with the Veterans Affairs (VA) Healthcare System in Boston evaluated a tool based on information from the NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines) for Older Adult Oncology, called the "Geriatric Oncology Potentially Inappropriate Medications" scale, or "GO-PIMS" for short. They used data from the VA Cancer Registry to determine how well the GO-PIMs scale can identify high-risk medications and their association with outcomes in more than 380,000 older adults diagnosed with cancer, both solid tumors and hematologic malignancies, between January 1, 2000, and December 31, 2022.

According to their results, 38% of patients were prescribed at least one GO-PIMs, most-commonly selective serotonin reuptake inhibitors (SSRIs). Each additional GO-PIM was associated with a 66% increase in odds of being mildly or moderately-to-severely frail at diagnosis. These findings confirm the GO-PIMS tool can identify high-risk medications that impact patients and outcomes negatively.

"This research is about making treatment safer and more tolerable—especially for older adults who are already vulnerable to adverse events," explained lead author Jennifer La, PhD, of Harvard Medical School and the VA Boston Cooperative Studies Program Center. "We found that many patients are prescribed chronic and supportive care medications that may do more harm than good—especially when they're already dealing with complex health issues. These medications, rapidly identified by the GO-PIMs scale, were linked to higher rates of frailty, hospitalizations, and even death. By identifying and reviewing these prescriptions early, we can potentially improve safety and outcomes for people undergoing cancer treatment."

"We hope this research encourages oncology teams to routinely review medication lists—not just count the number of drugs but look closely at which ones might be risky," added senior author

Clark DuMontier, MD, MPH, also of Harvard Medical School and VA Boston/Brigham and Women's Hospital/Dana-Farber Cancer Institute. "Tools like the GO-PIMs scale can be built into electronic health records to flag concerning prescriptions. We need to weigh the risks and benefits carefully, and when possible, consider safer alternatives or deprescribing. Finding the right balance requires individual considerations for each patient, and we hope tools like GO-PIMs and frailty assessment will help make that possible. We are currently piloting such an approach using GO-PIMs in our local clinic."

"A cancer diagnosis is an ideal time to revisit medication safety, as older adults often begin systemic therapy with complex regimens, shifting goals of care, and frequent clinical contact," commented Mostafa Mohamed, MBBCh, PhD, University of Rochester Medical Center, who was not involved in this research. "La et al. highlighted the increased prevalence and clinical relevance of potentially inappropriate prescribing in older adults with cancer using the GO-PIMs scale in a national dataset. This analysis is unique in its use of a cancer-specific PIMs framework (GO-PIMs) derived from NCCN Guidelines in a real-world, national setting.

Dr. Mohamed continued: "This research underscores the opportunity to improve care by addressing medication-related risks. The next step is integrating tools like GO-PIMs into everyday practice, not only to flag high-risk medications, but also to support actionable changes in treatment planning and patient care."

Dr. Mohamed is the author of a longer response to the study that has also published in the September issue of JNCCN. To read the entire study "Potentially Inappropriate Medications, Frailty, and Outcomes in Patients With Cancer Managed in a National Health Care System" and the corresponding "The Last Word" commentary, visit JNCCN.org.

The GO-PIMs scale was previously validated for demonstrating frailty in older patients with hematologic malignancies treated at a single institution. Learn more about those findings, from August 2022, here: https://www.nccn.org/home/news/NewsDetails?NewsId=3404.

This announcement was originally published September 10, 2025, on the National Comprehensive Cancer Network website.
