Daratumumab may help cancer patients with low physical function to live longer, study finds

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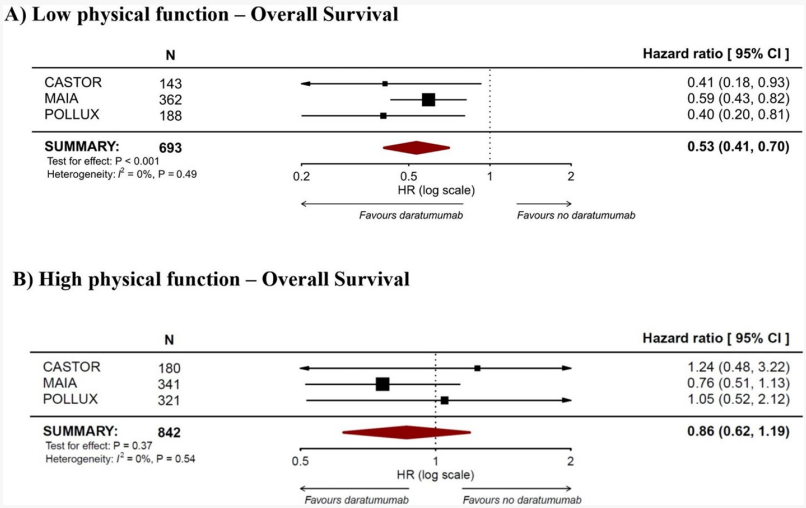

Forest plots of daratumumab OS efficacy (vs. therapies without daratumumab) according to (A) low- and (B) high-physical function. Credit: European Journal of Haematology (2025). DOI: https://doi.org/10.1111/ejh.14410

SHARJAH, EMIRATE OF SHARJAH, UNITED ARAB EMIRATES, May 15, 2025 /EINPresswire.com/ -- by University of Sharjah

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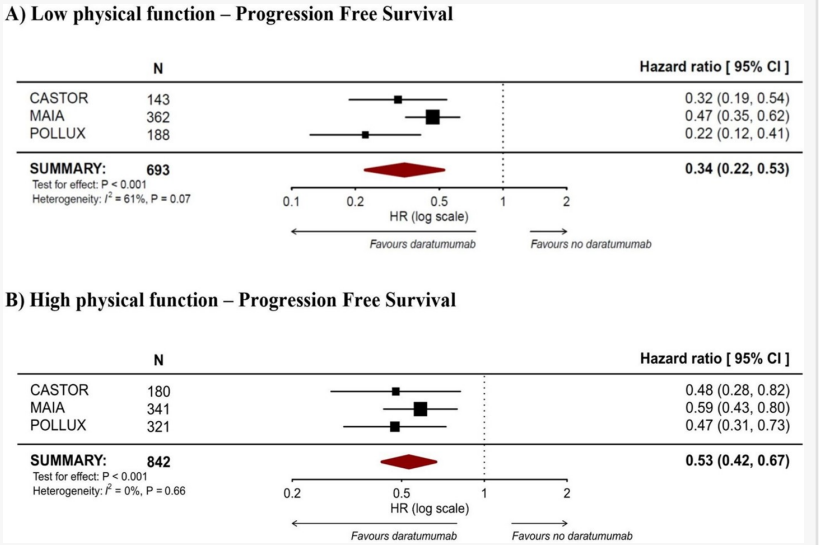
How cancer patients relying on daratumumab feel physically before starting the therapy can predict how long they will live and how well they will respond to the anti- multiple myeloma (MM) drug, according to a new study published in the European Journal of Haematology. (Original Source URL: https://doi.org/10.1111/ejh.14410)

The study analyzed data from 1,804 patients enrolled in three large-scale clinical trials—MAIA, POLLUX, and CASTOR. Across these trials, the median patient age was 66 years, and 44% were female. About half of the patients were randomly assigned to receive daratumumab-containing therapy, while the other half received standard treatments without daratumumab.

Patients were asked, before starting treatment, to complete a standardized questionnaire assessing their ability to carry out everyday tasks. This patient-reported measure of physical function was then used to examine whether it could predict survival and response to daratumumab-based therapy.

“The responses revealed that patients with lower scores benefited more from daratumumab,

lived longer, and had a lower risk of disease progression," noted lead author Dr. Ahmad Abuhelwa from the University of Sharjah. "This is the first study to demonstrate that patient-reported physical function at treatment initiation can predict which patients derive the greatest survival benefit from daratumumab, a monoclonal antibody widely used in the treatment of multiple myeloma."



Kaplan–Meier estimates of daratumumab (A) OS and (B) PFS efficacy by low- and high-physical function. Credit: European Journal of Haematology (2025). DOI: https://doi.org/10.1111/ejh.14410

The study offers a simple, low-cost way to improve treatment decisions, particularly for older or frail patients. "How well cancer patients can perform daily tasks like walking or getting dressed—is a powerful predictor of survival outcomes and treatment benefit in people with multiple myeloma receiving daratumumab-based therapies." Dr. Abuhelwa went on.

The study found that patients who reported having more difficulty with everyday physical activities experienced the greatest benefit from daratumumab treatment. In this low physical function group, daratumumab reduced the risk of death from any cause by 47% (hazard ratio 0.53 [95% CI: 0.40–0.70], P < 0.001) and the risk of cancer progression by 66% (hazard ratio 0.34 [0.22–0.53], P < 0.001) compared to those not receiving daratumumab. A hazard ratio (HR) below 1 means the treatment group had a lower risk; for example, an HR of 0.53 corresponds to a 47% lower risk of death.

In contrast, patients who reported being physically well before treatment—the high physical function group—had less benefit. Their risk of death was reduced by only 14%, which was not statistically significant (HR 0.86 [0.62–1.19], P = 0.364) compared to those not receiving daratumumab. They did, however, experience a 47% reduction in the risk of cancer progression (HR 0.53 [0.42–0.67], P = 0.034), showing that while daratumumab was still effective in this group, the magnitude of benefit was smaller (47%) than that seen in patients with low physical function (66%).

These results held true regardless of the patient's age, sex, weight, cancer stage, doctor-assessed health score (ECOG), or number of other health problems. Interestingly, the commonly used doctor rating of a patient's general health (ECOG) did not help predict who would benefit more — but the patients' own reports of their physical function did.

"Physical function is a predictive and prognostic marker that complements ECOG-PS, supporting

its use in informing therapy decisions for daratumumab-based treatments," the authors write.

Doctors often use the ECOG Performance Status – a scale from 0 (fully active) to 5 (dead) – to determine how well a patient is functioning. But the study, according to Dr. Abuhelwa, found that many patients classified as "fully active" by ECOG reported significant physical challenges themselves.

"Patient-reported scores gave a more accurate and sensitive prediction of survival and treatment effect. This highlights a critical gap—ECOG alone may not capture the full picture. We need to start listening to patients."

The authors draw two major conclusions from their extensive analysis.

In the first, they found that patients who reported lower physical function at treatment initiation received the greatest survival benefit from daratumumab. In the second, the analysis found that patients with higher physical function showed a less pronounced treatment benefit.
"These findings were independent of traditional doctor-assessed tools, such as ECOG performance status. In fact, patient-reported scores outperformed ECOG in predicting survival outcomes. Importantly, daratumumab did not lead to more serious side effects in patients with low physical function," Dr. Abuhelwa points out. "Bottom line: What patients say about their physical limitations—right at the start of therapy—provides critical, actionable insights to guide cancer treatment decisions."

Patients with multiple myeloma are often treated with complex therapies like daratumumab – a life-prolonging monoclonal antibody that can also carry risks. Multiple myeloma is becoming an increasing global burden. In 2022, there were an estimated 188,000 new cases and 121,000 deaths worldwide. By 2045, incidence and mortality are expected to rise by 71% and 79% respectively. In the United States alone, the American Cancer Society projects approximately 36,110 new cases and 12,030 deaths from multiple myeloma in 2025.

On the importance of the study, co-author Dr. Ashley Hopkins, Associate Professor at Flinders University in Australia, said, "This is a timely and significant contribution. It highlights how patient-centered data can meaningfully guide complex treatment decisions in oncology. The study serves as a strong reminder to health professionals to seriously consider what cancer patients say about their physical function before initiating treatment."

Prof. Humaid Al-Shamsi, a co-author from the UAE's Burjeel Cancer Institute, added, "This study highlights the growing importance of patient-centered care in oncology. By listening closely to how patients feel at the start of treatment, we can better personalize therapies and improve outcomes – especially for those who are older or more physically vulnerable. It's a step forward in making cancer care more precise, compassionate, and effective."

The authors suggest their study could have wide-reaching implications. In it, they call on clinicians to incorporate patient-reported physical function into treatment planning; urge policymakers to promote the use of patient-reported outcomes (PROs) in clinical trials and routine care; and encourage drug developers to consider PROs when designing future cancer studies.

However, they maintained that further research and prospective studies were warranted to confirm the identified treatment benefits and explore whether they would extend to other contemporary multiple myeloma treatment regimens.

Said Dr. Abuhelwa, “With further validation, patient-reported outcomes could become an essential part of personalized treatment strategies, ultimately improving both survival and quality of life for people living with multiple myeloma.”

The research is the outcome of collaboration between scientists from H. Lee Moffitt Cancer Center (USA), Flinders University (Australia), the University of North Carolina (USA), and the Burjeel Cancer Institute in the United Arab Emirates (UAE).

LEON BARKHO
University Of Sharjah
+971 50 165 4376
email us here