

New findings provide hope for treatment of multiple myeloma

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Hareth Nahi and Muhammad Kashif at the Department of medicine, Huddinge. Credit: Ulf Sirborn

Researchers at Karolinska Institutet have investigated the use of low dose venetoclax, an experimental drug, for the treatment of the heterogeneous cancer disease multiple myeloma in patients who had relapsed on standard therapies. The findings are published in the *American Journal of Hematology* and provide new hope for the treatment of multiple myeloma.

Multiple Myeloma (MM) is a heterogeneous cancer [disease](#) comprised of various distinct subtypes and accounts for nearly 20 percent of deaths caused by all blood related diseases. Treatment of this disease has improved over the last decades, however some patients continue to experience multiple relapses, which contribute to premature deaths.

In this study on 25 patients, the researchers at Karolinska Institutet found that a dose of 400 mg daily of [venetoclax](#), a medication currently used to treat different types of leukemia, was effective in the treatment of heavily pre-treated MM and AL-amyloidosis patients, a disease associated with

plasma cell dyscrasia, with mild manageable adverse events and no associated deaths.

Successful treatment for nearly half of the patients

"The study shows that selection of low dose venetoclax was critical to reduce the adverse events of the drug without adventuring the benefit of venetoclax in regard to response rates and survival," says the article's first author Hareth Nahi, senior physician and associate professor at the Center for Hematology and Regenerative Medicine at the Department of Medicine, Huddinge, Karolinska Institutet.

The study included a total of 25 patients (17 MM and eight AL-amyloidosis) who had become resistant to standard treatment over time, resulting in more aggressive disease. The patients with [chromosomal abnormality](#) called t(11;14) were then treated with low dose venetoclax. The study demonstrates that venetoclax treatment was effective in 44 percent of all patients, 71 percent in AL-amyloidosis and 33 percent in MM subgroups. While 20 patients (80 percent) observed some adverse events, these were in all cases manageable and no deaths associated with venetoclax treatment were observed. The dominant adverse event was nausea, observed in 32 percent of patients.

Hareth Nahi, the corresponding author Muhammad Kashif from the Department of Medicine, Huddinge, and the other researchers from Karolinska Institutet and Karolinska University Hospital, also established a simple method to predict of the response of venetoclax up to level of 91 percent specificity. This method can be used for personalized medicine and it would be easy to implement it at the pathology department at the Karolinska university hospital in Huddinge.

More information: Hareth Nahi et al, Low dose

venetoclax as a single agent treatment of plasma cell malignancies harboring t(11;14), *American Journal of Hematology* (2021). DOI: [10.1002/ajh.26207](https://doi.org/10.1002/ajh.26207)

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