



Agent Orange Exposure Linked to Aggressive Bone Marrow Cancers in Vietnam Vets

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New study finds Agent Orange exposure is associated with higher-risk genetic changes and faster disease progression in myelodysplastic syndromes.

A new national study published in *Blood Advances* highlights the genetic changes that link exposure to Agent Orange, an herbicide used during the Vietnam War, to myelodysplastic syndromes (MDS), a group of bone marrow cancers that can progress to acute leukemia. The research found that veterans exposed to Agent Orange were diagnosed with MDS at a younger age and were about 80% more likely to see their disease worsen in the first two years after diagnosis compared to unexposed patients. The study also revealed that Black veterans were disproportionately represented among those reporting Agent Orange exposure.

Why it matters

This research provides the strongest data to date linking Agent Orange exposure to distinct genetic changes and more aggressive MDS, which could help these veterans obtain the service-connected care they need. The findings also raise questions about potential long-term leukemia risk and highlight the need for further investigation into exposure patterns and long-term risk in certain groups, such as Black veterans.

The details

The study, led by Dr. Mikkael A. Sekeres from the University of Miami Miller School of Medicine, analyzed data from the National Heart, Lung, and Blood Institute's MDS Natural History Study. Among 2,115 enrolled patients, 130 (6.1%) reported Agent Orange exposure, and 96% of those exposed were men. The researchers found that 54% of exposed patients received a diagnosis of MDS or a related precursor condition, compared to 37% of unexposed patients. Exposed patients were also more likely to have high-risk chromosome abnormalities and specific genetic mutations that suggest the disease will behave aggressively.

- The research was published online ahead of print in *Blood Advances* in March 2026.
- The initial findings were presented at the 2025 American Society of Hematology (ASH) Annual Meeting.

The players

Mikkael A. Sekeres, M.D.

Chief of hematology at Sylvester Comprehensive Cancer Center at the University of Miami Miller School of Medicine and the lead researcher of the study.

National Heart, Lung, and Blood Institute

The institute that oversees the MDS Natural History Study, a prospective national registry that provided the data for this research.

What they're saying

“In the initial work presented at ASH, we had seen an association between Agent Orange exposure and developing MDS. Now we are describing how the disease biology looks different in this exposed group.”

— Mikkael A. Sekeres, M.D., Chief of hematology at Sylvester Comprehensive Cancer Center

“If exposed veterans live long enough, it's possible we could see an association between Agent Orange and leukemia, too.”

— Mikkael A. Sekeres, M.D., Chief of hematology at Sylvester Comprehensive Cancer Center

“We have aging veterans developing MDS who are being told by the Veterans Association that they can't get their health care covered to the extent they need because there hasn't been an official association made.”

— Mikkael A. Sekeres, M.D., Chief of hematology at Sylvester Comprehensive Cancer Center

What's next

The researchers hope that the Institute of Medicine will recognize Agent Orange exposure as a risk factor for MDS, which could help these veterans obtain the service-connected care they need.

The takeaway

This study provides the strongest evidence to date linking Agent Orange exposure to more aggressive forms of myelodysplastic syndromes in Vietnam veterans, highlighting the long-term health impacts of this toxic herbicide and the need for better support and care for those affected.