

# MDS, a blood cancer, strikes nearly five times more Americans than previously thought

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Myelodysplastic syndromes (MDS) - a group of serious blood cancers - are nearly five times more common in seniors than previously thought, according to a new study by researchers from the John Theurer Cancer Center at Hackensack University Medical Center. The study also showed for the first time that MDS patients are at much higher risk for heart attack, diabetes and other serious complications than other seniors, and that their health care costs are far higher. The study is published online in the *Journal of Clinical Oncology*.

"This study demonstrates that MDS is a very common [blood cancer](#) of the elderly, and that those who have it are at high risk of dying prematurely from other causes," says lead author Stuart L. Goldberg, M.D., a hematologist/oncologist who is Chief of the Division of Leukemia, John Theurer Cancer Center. "This has implications for how the disease is treated and will hopefully spur additional research."

Myelodysplastic syndromes, which occur primarily in people age 60 and above, are a group of diseases in which the bone marrow does not make enough healthy [blood cells](#). Patients with MDS are more prone to infection, anemia and bleeding and often report extreme fatigue and other debilitating symptoms. The most common treatment for MDS is [blood transfusion](#), but four new medications to treat the disease and its complications have come to the market in the last four years. MDS is diagnosed through blood and bone marrow tests.

"Dr. Goldberg's study highlights the breadth of work we are completing at the John Theurer Cancer Center where we are committed to improving patient care through advancing research," said Andrew L. Pecora, M.D., F.A.C.P., C.P.E., Chairman and Executive Administrative Director, John Theurer Cancer Center. "We are pleased to take a leading role in this milestone study for the MDS community."

MDS was not reportable as a cancer until 2001, when the National Cancer Institute (NCI) began requiring that all tumor registries report cases to the Institute's Surveillance, Epidemiology & End Results (SEER) program. The SEER database reported 10,300 newly diagnosed MDS patients in 2003, with a three-year survival rate of just 35 percent.

To conduct a "head-to-head" study, Dr. Goldberg and colleagues analyzed claims data for Medicare beneficiaries age 65+ for 2003. What they found was alarming: an estimated 45,000 new cases of MDS.

The gap in estimates can be explained by differing data sources: Medicare data are submitted by both physicians in private practice as well as hospital-based physicians, while SEER data come strictly from tumor registries, which are primarily found in hospitals.

"MDS is generally treated by hematologists and primary care physicians in private practice, and elderly patients with MDS are frequently not seen at a hospital-based cancer center until their disease progresses," says Dr. Goldberg. "So most cases are not being reported to NCI. As we found in our study, many apparently die of other causes as their disease progresses."

The researchers found a much higher incidence of other serious illnesses among MDS patients than among American seniors as a whole. More than 73% of MDS patients experienced a heart attack within three years of diagnosis, while 54.5% of the general Medicare population did. The

prevalence of other conditions was also higher, including: diabetes (40% for MDS patients, vs. 33.1% non-MDS); dyspnea, a type of shortness of breath (49.4% vs. 28.5%); liver disease (.8% vs. .2%); and sepsis, a serious blood infection (22.5% vs. 6.1%). MDS patients requiring blood transfusions had a higher incidence of these conditions than those who were not transfused.

Acute myeloid leukemia (AML) developed within three years in 9.6% of newly diagnosed MDS patients, and those who received transfusions progressed to AML at a rate of 24.6% (previous estimates were that 20-30% of MDS patients progressed to AML).

A much higher percentage of MDS patients died during the study period than those without MDS. The three-year survival rate for those with MDS was 60%, while it was 84.7% for the general Medicare population. The mortality rate for transfused MDS patients was higher than for those not transfused. The higher survival rates in this study compared to SEER were attributed to the higher percentage of early stage patients treated in communities compared to hospital-based tumor registries.

While the health consequences and scope of the disease found in the study were alarming, the cost of treating MDS also proved to be significant. In 2003, the median amount billed to Medicare for MDS was \$16,181, compared to \$1,575 for Medicare beneficiaries as a whole.

"As the U.S. population continues to age, MDS will become a more prominent medical problem with a significant impact on the health care system," says Dr. Goldberg.

Dr. Goldberg believes that this study will provide a baseline for additional research. "Since we now know the scope of the problem as it was before MDS medications became available, it will be interesting to see in future studies how new cancer treatments have impacted the

disease. We also need to learn why MDS patients develop other conditions, such as heart failure, so that we can treat the whole person."

Provided by John Theurer Cancer Center

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