

This research created a diagnostic test for two types of blood cancers, Myelodysplastic Syndrome (MS) and Acute Myeloid Leukemia (AML). The test, called **ChromoSeq**, takes a snapshot of a patient's genome sequence to identify genetic cancer clues. ChromoSeq could replace current tests that are more likely to make errors.

The Impact

This project creating a diagnostic test for blood cancers resulted in **clinical**, **community**, and **economic** benefits.

Unlike current diagnostic tests, ChromoSeq looks at all of a patient's cancer genetic information. With this scope, the test is less likely to make errors. ChromoSeq is very reliable, accurate, and inexpensive, so the Centers for Medicare and Medicaid (CMS) have agreed to cover its cost. This coverage provides access for all Medicare and Medicaid participants to use this test. With increased access to a diagnostic test, health care quality for Medicare and Medicaid participants should increase. AML and MS treatments should be more appropriate with this test, with the potential to reduce costs associated with longer hospital stays and unnecessary procedures.

The Challenge

Most people are diagnosed with AML or MS, sometimes both, around age 70. For both blood cancers, less than one in three patients lives another five years after diagnosis. Starting appropriate treatment early should improve quality of life and promote longevity. Current diagnostic tests, however, may make mistakes and delay appropriate treatment.

The Approach

The research team created ChromoSeq, a diagnostic test for blood cancers. This test provides:

- Accurate analysis of the patient's cancer
- Shorter time to make treatment decisions
- Expanded access to treatment through increased coverage of ChromoSeq testing

RESEARCH HIGHLIGHTS

The ChromoSeq work resulted in:

- A new diagnostic test for blood cancers.
- Coverage of the test by Centers for Medicare and Medicaid.
- Potential higher quality treatments for blood cancers.
- Potential reduced costs associated with appropriate treatments.

Key TSBM Impacts



CLINICAL

This work created an accurate and inexpensive diagnostic test for blood cancers.



CLINICAL

ChromoSeq is new biomedical technology using whole-genome sequencing.



COMMUNITY

More accurate cancer diagnoses could lead to more appropriate treatment.



COMMUNITY

The Centers for Medicare and Medicaid have agreed to cover ChromoSeq, meaning millions of Americans now have access to the test.



ECONOMIC

Better cancer treatments could reduce costs associated with lengthy hospital stays.

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Find out more:

[Read the full case study](#)

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