

ALUMNI STORIES



Alem A. Belachew, PhD

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THE UNIVERSITY OF TEXAS
MD Anderson
Cancer Center

Making Cancer History®

Seeking to understand the “why?”

Losing her father at the age of 12 to kidney cancer was the spark that ignited a curiosity that fueled Alem Belachew’s career.

A native of Ethiopia, Alem Belachew came to the United States at the age of 18 to attend college and pursue a career in research. Leaving her family in Ethiopia was difficult, yet having her sister with her helped her transition into the American culture. She describes her parents as “highly educated farmers.” Both earned Ph.D.’s – one in horticulture and the other in agriculture.

Upon her father’s passing, Alem began reading anything she could find about his cancer. She wasn’t searching for a cure, she simply wanted to understand it. She learned that with early detection, her father’s cancer would have had a 90% survival rate. This awakened within her a social responsibility that had a significant impact on her career choices. Her interest in biochemistry and molecular biology led her to seek post-college employment in a research lab. As she had always wanted to do cancer research, it surprised her when research lab work became stale. At this point, she chose to pivot her career towards analytics and data-rich population-based outcome studies with genetic and ancestry components. In other words, she married population health, genetics, and ancestry, and her career headed in a new direction.

Alem’s Ph.D. thesis involved understanding the genetic and clinical contributors of multiple myeloma susceptibility and outcomes in patients with varying racial and ethnic backgrounds. She sought to understand if there are clinical or genetic differences in the manifestation of disease for multiple myeloma patients by race or ethnicity, focusing on the understudied Hispanic population. With self-reporting of race/ethnicity bias removed, Alem used a person’s genetic ancestry to describe their ancestral background more accurately.

Her study was one of the first to characterize the disease in Hispanics. It also highlighted the need to consider the heterogeneity of the Hispanic population when assessing risk in multiple myeloma incidence and outcomes. It is often common practice for persons of Hispanic origin to be treated as a monolithic group. However, using her population health/ancestry approach, the study showed varying degrees of clinical manifestation of disease by varying levels of ancestral background. This research drove home the point that we should be looking into genetic ancestry when using racial/ethnic disparities in research.

Alem emphasizes the need for more outcomes-based research using genetics and ancestry which she believes is bringing new knowledge and is leading researchers toward uncharted territory. Alem currently works for a healthcare data intelligence company specializing in oncology. She engages with pharmaceuticals, CROs, and non-profit organizations to support their research, commercial, or business strategies through the application of clinical data.

Her childhood curiosity continues to fuel her desire to understand “why?” things happen in cancer and how it affects people. And Alem’s career pivot has opened many career options. It’s too early to say where Alem will end up with her career, but one thing is for sure – *she will have a good time figuring it out.*

MD Anderson School(s) from which I graduated

- The University of Texas MD Anderson Cancer Center UTHealth Graduate School of Biomedical Sciences, 2020

Academic area of specialization

Human and Molecular Genetics Cancer, Epidemiology

Current Employer

salesSEER, Inc.

Current City

Houston, TX

Current Position

Director for Client Engagement

Website

<https://www.saleseer.com/>

Who are your mentors?

While studying at MD Anderson, Alem paired with *Michelle A.T. Hildebrandt* as a mentee. Alem describes Dr. Hildebrandt as a great coach who was supportive of her high standards. Likewise, Dr. Hildebrandt’s standards are high and she encouraged Alem to explore different avenues and internships as long as she continued to produce quality work in her research output.

Michelle A.T. Hildebrandt, Ph.D., is an associate professor in the Department of Lymphoma - Myeloma, Division of Cancer Medicine, MD Anderson Cancer Center.

Works of interest

- [Expression quantitative trait loci of genes predicting outcome are associated with survival of multiple myeloma patients](#)
- [Genetic determinants of multiple myeloma risk within the Wnt/beta-catenin signaling pathway](#)
- [Abstract PR04: Understanding outcome disparities in multiple myeloma: A multiethnic comparison of clinical characteristics in Hispanics](#)
- [Patterns of racial/ethnic disparities in baseline health-related quality of life and relationship with overall survival in patients with colorectal cancer](#)

[Click here for additional links to Dr. Belachew's published works.](#)

Family

Engaged

Undergraduate school(s) from which I received a degree(s)

California State University Northridge
Bachelor of Science, Biochemistry – 2011

High school from which I graduated

Nativity Girls' School, Addis Ababa, Ethiopia – 2006

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