

## Closer examination of risk factors for Latinos underscores cultural diversity

September 16, [Dia de la Raza](#), is celebrated as the 'Day of the Race' throughout the Latin American world. It's Columbus Day in the U.S. and European world, but to Central Americans it marks the beginning of their heritage, the mixing of the Native American and European peoples that results in the development of modern Latinos.

The recent boon of genetic investigation into origin and personalized medicine has illustrated this mix on a molecular level, and yielded some surprising findings about how those origins impact an individual's risk of developing, or being protected from disease.

Latina women with greater Native American origin appear to carry a mutation that is protective against developing breast cancers. A woman with two copies of this mutation has an 80 percent reduced rate of ever developing the cancer compared to her Latina peers who have predominantly European origin according to the study. For Latinas with a single mutation, the risk is reduced by 40 percent. The mutation protects these women by decreasing the density of breast tissue. Dense breasts are a known risk factor for cancers.

But the mutation's protective effects are not blanketed across the Latina community, [it's highly dependent on where a person's ancestors originated, as the Wall Street Journal reports](#):

As many as 20 percent of Latinas in California are likely to have at least one copy of the variant, significantly lowering their risk of breast cancer, while less than 1 percent of Puerto Rican women are likely to have inherited it, the researchers said... "It has a lot to do with how much indigenous American ancestry they have," cancer specialist Dr. Elad Ziv said.

[In another study, researchers found similar protective effects for Native American origin on asthma incidence among Latinos](#). The higher the study subject's ancestry could be attributed to indigenous Americans, the lower their risk factors for developing the condition. Again, Mexican Latinos were more protected from the conditions, because their greater indigenous genes, than were Puerto Ricans who had the highest asthma risk recorded in the study.

This study didn't identify which particular genes affected asthma risk and lung function, but did suggest that Puerto Rican children shouldn't be screened for lung disease using the same clinical cut off points used for Mexican and Caucasian children, as is currently the practice.

The GLP has reported before on the [complexities of understanding racial components within Mexican communities](#). And within the Latino community in the United States, people seem to be [changing which groups they use to self-identify for census and other data](#).

Although it's unlikely that genetics will solve the cultural complexities of the Latino community in the near term, it will help us understand how vast the diversity within this 'group' actually is. And, will likely help develop more specialized disease screening protocols to improve healthcare for Latinos.

**Meredith Knight is editor of the human genetics section for Genetic Literacy Project and a freelance science and health writer in Austin, Texas. Follow her @meremereknight.**

**Additional Resources:**

- [Mexican genes, Mexican diseases, and the idea of race](#), Genetic Literacy Project
- [Taking ancestry into account with personalized medicine](#), Genetic Literacy Project
- [Hispanics have higher risk for metabolic syndrome, but risk factors differ by ethnic origin](#), Medscape