

[Reliability of DNA Tests Featuring Diahn Southard](#)

In this day of technology advances, DNA testing is a “hot” topic. Below is a synopsis of Diahn’s recent contribution to *FamilyTree Magazine* in their May/June, 2020 issue. Diahn is one of those DNA experts that I previously highlighted in the [April 16, 2020 Facebook group posting](#). Now she has a challenging assignment to compile together my DNA testing with my sister’s DNA for a definitive composite DNA analysis about our ancestors based on both of our individual DNA testings. The trick is to compare multiple DNA from the oldest generations available and since my sister passed away on April 6, 2019, so now’s that time for this report. Do not procrastinate having the oldest generations tested and compared, particularly between males and females. Here is a synopsis of my DNA test report that Diahn did for me in 2017 at: <http://www.kuzmich.com/DNA%20Blog%20Entry2.pdf>. I’m anxious to have Diahn finalize a report on both my sister and me for the benefit of our families. It has taken me this long to obtain family permission for my deceased sister’s DNA results and fortunately, I’m still alive and able to follow through on this important family history goal in making both YDNA and mtDNA parts of my DNA Family History profile for our children and grandchildren and beyond. The sad thing is DNA testing wasn’t available for my deceased parents so it is critical (one generation later) that my sister and I now have DNA test results available with the same company, 23andme.com, for better compatibility of the results.



How reliable is the information from DNA tests?

Remember: There are two parts to your DNA results.

You receive information connecting you to locations (ethnicity results), as well as to other people (DNA matches). We have to talk about these two kinds of data differently.

Ethnicity estimates

Due to the way our DNA has traveled the world throughout time, it's difficult for testing companies to be accurate when it comes to our ethnicity results. (That's why we call them "estimates.") Their reliability depends heavily on their current reference populations (i.e., the groups they're comparing you to) and the testing company's latest algorithm.

If the testing company doesn't have a sufficient reference population for your region, your results may not be as accurate as you would like. For example, let's say (from your research) you know you have Albanian ancestry.

If your testing company has not sampled a large enough group of people from Albania, they may not have a category (or reference population) specific to that group. So, your results place you in a geographically close group that's closest to your data: the Italy group.

Review all the reference populations that your testing company currently has to see if they have categories for your known ancestries. You should also be patient, since companies are always improving their algorithms.

DNA matches

In general: Your top DNA matches are extremely accurate. Close DNA matches are certainly your relatives somehow, even if you can't quite figure out your relationship.

It's tempting to evaluate DNA matches' accuracy solely by how well they identify a genetic relationship. So if my second cousin tests and shows up for me as a second-cousin match, we may feel the test is accurate. And when my great-aunt tests and is listed as a first-cousin match, we might feel the test is inaccurate.

However, judging accuracy only by those labels ignores something important. Relationships aren't just labels—they're also degrees of separation up and down a family tree. And when you think about matches in those terms, you may find they're more accurate than you initially gave them credit for.

For example, there are four "steps" between my first cousin and me: (1) me to my parent, (2) parent to my grandparent, (3) grandparent to aunt and (4) aunt to first cousin. And it's *also* four steps from me to my great-aunt: (1) me to my parent, (2) parent to my grandparent, (3) grandparent to great-grandparent, (4) great-grandparent to great-aunt.

This is reflected in the amount of shared DNA I'm expected to have with each of those relatives: roughly 850 cM between first cousins, and the same between great-aunts/great-nieces.

This is a somewhat trickier way of thinking about relationships, but it does help you re-evaluate DNA matches that (at a first glance) may seem inaccurate.

Closing Comments

For those that desire more explanations about DNA testing, perhaps this posting is a good wakeup call about what you need to both consider and do. Diahana offers a lot free on-line materials that are both informative and practical. Go to <https://familytreewebinars.com/diahansouthard> for more opportunities, including free webinars that you can register for right now coming up on September 18, 2020 and December 4, 2020 on **Legacy Family Tree Webinars** that offers many, many outstanding free webinars that you should consider subscribing to with no financial obligations. Now you know why Diahana is a leading voice for consumer DNA testing. For example at the 2020 RootsTech Conference, Diahana presented four DNA presentations. And having her as a consultant is incredibly for my family at this particular time with the precision of archery!



