There are three different types of technology used for ancestry testing: Y-DNA, mitochondrial (mt) DNA, and autosomal DNA. Males carry an X and a Y chromosome, whereas females carry two X chromosomes. Males will give their sons the Y chromosome and their daughters the X chromosome which means a Y chromosome DNA test will trace ancestry through the male side of the family. Mitochondrial DNA is present in both males and females, but only mother's pass on the mtDNA. This means mtDNA testing will trace ancestry through the female side of the family. Both of these tests try to identify a single line of descent (called a haplotype) dating back thousands of years. Autosomal DNA comes from both male and female sides of the family. In this case the lab analyzes a number of specific locations throughout the individual genome.

Ancestry genetic testing is not quite the same as medical genetic testing. The lab will compare the consumer's DNA to a reference database of DNA samples from modern individuals living in various regions. Keep in mind that there are disagreements between the definitions of certain genetic ethnicities, many ethnic groups migrated from their country of origin, and the accuracy of the test is directly related to the variety of ancestries represented in the databases. In other words the labs use statistics and prediction models to give you a probability of ethnicity, but there are many explanations for why it may not match up with what you expect.

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