

Ancestry DNA

The Science: Ancestry tests autosomal DNA (atDNA)

- Each cell has 23 pairs of chromosomes. Chromosome pairs 1-22 are called autosomes.
 - Half of each pair comes from dad and half from mom.
- Chromosome pair 23 are the sex chromosomes:
 - Males get a Y chromosome from dad and an X chromosome from mom. Females get an X chromosome for both dad and mom.

Many DNA tools are available without an Ancestry subscription:

- Ethnicity estimates
- Cousin matching and the ability to contact DNA matches
- Matches map
- Ability to add your family tree
- Access to linked public family trees (pedigree charts only) through (16) second great-grandparents
- ThruLines™

Ethnicity Estimate:

- Ethnicity results can be the most fun part of DNA testing, but they are the least accurate!
- Ethnicity is compared with test populations living today; not with our ancestors' DNA. Some test populations are small so results can be very general.
- Compare ethnicity estimates with your DNA matches.
- Our ancestors traveled more than we may think, crossing borders and mixing up the DNA.
- Testing companies are refining algorithms as the science develops.

Cousin Matching

- Cousin matching is the most valuable feature of genetic genealogy.
- Most DNA matches will be distant cousins. To identify fourth cousins, you must know your (32) third great-grandparents.
- Build your family tree directly on Ancestry, or upload a GEDcom using Roots Magic, Legacy, Family Tree Maker, etc. Link your family tree to your DNA. From the DNA home page, click Settings in the upper right corner.
- Review the family trees of your matches.
- Remember user-submitted family trees should be used only for clues. Many contain errors.

Ancestry DNA, continued

Compare Centimorgans (cMs):

cMs measure the amount of atDNA you share with your match. The more cMs you share, the closer your relationship.

<u>Approximate Shared CMs</u>	<u>Relationship</u>
3,400	Parent/child, identical twin
2,550	Full sibling
1,700	Grandparent, uncle/aunt, half-sibling
1,600	Double first cousin
850	Great grandparents, 1C, great uncle/aunt, half uncle/aunt
425	1C1R, half 1C, double 2C, 2 nd great uncle/aunt, half great uncle/aunt
212	2C, 1C2R, half 1C1R, half 2 nd great uncle/aunt
106	2C1R, half 2C, 1C3R, half 1C2R
53	3C, 2C2R

ISOGG, “Ranges of Sharing Percentage,” (isogg.org/wiki/autosomal_%20DNA_statistics: accessed 6 January 2019).

Study Blaine Bettinger’s Shared cM Project on the blog *The Genetic Genealogist*, thegeneticgenealogist.com

Compare “Shared Matches” (most valuable tool):

- Select a match and click “Shared Matches” to view a list of people who share DNA with you (the tester) and the DNA match you selected.
- Using information you gathered through family trees, shared centiMorgans, and shared matches, begin grouping your matches according to shared ancestry.
- Separate matches into 24 color-coded groups; identify an additional group with a gold star.
- As you identify matches, add notes:



You and tecky [redacted]

Predicted relationship: 2nd–3rd Cousin

Shared DNA: 223 cM across 10 segments

Longest Segment: 43 cM

★ Add/edit groups

📄 2C1R. 2Ggd of John & Annie



Trees Ethnicity Shared Matches

Favorite DNA Website

- ✓ International Society of Genetic Genealogy (isogg.org)

Study on FaceBook

- ✓ DNA Newbies
- ✓ Genetic Genealogy Tips & Techniques