

Finding Irish Origins: A County is Not Enough!

Class 4: Using DNA to Determine Irish Origins

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Choosing a Testing company

- FamilyTreeDNA: <https://www.familytreedna.com/> – Only company currently offering Y-DNA and mtDNA testing; their autosomal test is called Family Finder
- AncestryDNA: <http://dna.ancestry.com/> - only offers Autosomal; DNA Matches
- MyHeritage: <https://www.myheritage.com/> - only offers Autosomal; DNA Matches
- 23andMe: <https://www.23andme.com/> - only offers Autosomal; DNA Relatives
- LivingDNA: <https://livingdna.com/> - offers Autosomal, Y-DNA and mtDNA; Family Networks

Best Practices

- Test close relatives and different branches of your family tree – the older the better.
- Provide a well-researched and documented tree at the testing company.
- Test at multiple companies to find the most matches.

Y-DNA

Only found in males since the Y chromosome is not present in females. It is used to trace your paternal ancestry and in one name studies.

Mitochondrial or mtDNA

This is not part of the chromosomes and is passed down relatively unchanged from a mother to all her children. Only her daughters (not her sons) can continue to pass the mitochondrial down to future generations. It is used to trace your maternal ancestry and confirm if two people share a maternal ancestor.

Haplogroups

If you take a Y or mitochondrial DNA test you will be assigned a haplogroup. It is an ancient ancestral grouping which shows the particular migration path your ancient ancestors travelled when they left Africa.

Autosomal or atDNA

The autosomal test is the most popular DNA test taken. It examines the 22 non-sex chromosome pairs and the X chromosome on chromosome 23. It is the random recombination of DNA inherited from all of your ancestors.

- The more DNA you share, the closer the relationship. Each company estimates the closeness of the relationship between yourself and a match.
- It is used in genealogy to identify relationships in the past five or six generations or to at least the 2nd great grandparent or the third cousin level.
- If a parent has tested, you can determine which chromosomes are from your mother or father.



- Test your older relatives whenever possible. This will allow you to identify matches further back in your family tree. For example, if you can test a parent or aunt or uncle you are going back five generations in their family tree which is six generations in your family tree.

Ethnicity Estimates

- Reference Panels used to determine your ethnicity
 - DNA samples from populations in a specific area
 - Each company has different sets of samples
- Algorithms used for assigning regions
 - May be put in a broader region
 - Labels may be confusing and not always accurate
- Timeframes
 - Usually about 500-1000 years ago
 - Ancestry and 23andMe may be within 500 years
- Overall, can be misleading or inaccurate
- May change over time.

Your Family Tree

- Evaluate your tree and identify your gaps or brick walls
- Yours should include through your earliest known ancestors
- Do you have all births, marriage and deaths?
- Locations where they occurred?
- All Locations where family lived and moved to?
- All children and siblings?

Irish Naming Conventions

- First born son after father's father
- Second born son after mother's father
- Third born son after father
- Fourth born son after father's oldest brother
- Fifth born son after father's 2nd oldest brother or mother's oldest brother
- First born daughter after mother's mother
- Second born daughter after father's mother
- Third born daughter after mother
- Fourth born daughter after mother's oldest sister
- Fifth born daughter after mother's 2nd oldest sister or father's oldest sister

Working with your Autosomal DNA matches

- DNA companies predict relationship based on centimorgans (cM) in common
- Look for people or surnames in common
- Look for locations in common
- Review shared matches of your matches
- Ask questions and be patient for answers
- Work together with your match and share information
- Always confirm with genealogical records
- May need to build out your match's tree and find more information

Working with your Y-DNA and mtDNA Matches

- Look for matches who have genetic distance of 0 (exact match or 1 (single mutation)). The further out the genetic distance, the more distant the common ancestor shared between you and the DNA match.
- Verify earliest known ancestors reported by DNA testers using the paper trail – this information is not verified through DNA.
- TIP: If a Y-DNA match has distance of 0 or 1 but # markers is low (ex. Under 67), encourage your DNA match to upgrade to a higher # of markers.

DNA Consultations

- DNA consultations can be arranged with a genealogist via telephone, online (Zoom), or in-person.
- Work with you on a research plan for your brick wall
- Learn how to use one of the many third-party tools to manage and analyze DNA
- Request a 1-hour DNA consultation at <https://www.americanancestors.org/expert-help/consultations>

Genetic Genealogy Resources:

Websites

International Society of Genetic Genealogists or ISOGG wiki: <http://www.isogg.org/wiki/>

Genealogical vs Genetic Family Tree: <https://thegeneticgenealogist.com/2009/11/10/qa-everyone-has-two-family-trees-a-genealogical-tree-and-a-genetic-tree/>

Cousin Statistics: https://isogg.org/wiki/Cousin_statistics

Shared cM Relationship Chart: <https://thegeneticgenealogist.com/2020/03/27/version-4-0-march-2020-update-to-the-shared-cm-project/>

Shared cM Tool: <https://dnainter.com/tools/sharedcmv4>

Blogs

Blaine Bettinger: The Genetic Genealogist <http://thegeneticgenealogist.com/>

Debbie Parker Wayne: Deb's Delvings <http://debsdelvings.blogspot.com/>

Roberta Estes: DNAeXplained - Genetic Genealogy <http://dna-explained.com/>

Judy Russell: The Legal Genealogist <http://www.legalgenealogist.com/category/dna/>

Kitty cooper: Musings on genealogy and genetics <http://blog.kittycooper.com/>

Books and Articles

Angie Bush, *Genetic Genealogy Basics*. (Baltimore, Maryland: Genealogical Publishing Company, 2016).

Blaine Bettinger, *The Family Tree Guide to DNA Testing and Genetic Genealogy (2nd Edition)*. (Cincinnati, Family Tree Books, 2019).

Christopher Challender Child, *Using DNA in Genealogy*. (Boston, New England Historic Genealogical Society, 2014). Available for purchase at <https://shop.americanancestors.org/products/portable-genealogist-using-dna-in-genealogy>

Diana Elder, Nichole Dyer, and Robin Wirthlin, *Research Like a Pro with DNA: A Genealogist's Guide to Finding and Confirming Ancestors with DNA Evidence* (2021)

Colleen Fitzpatrick, *DNA and Genealogy*. (Fountain Valley, CA, Rice Book Press, 2005).

David Vance, *The Genealogist's Guide to Y-DNA Testing for Genetic Genealogy* (2024)

Debbie Parker Wayne, *Advanced Genetic Genealogy: Techniques and Case Studies*. (Cushing, Texas, Wayne Research, 2019)

Diahan Southard, *Your DNA Guide the Book: Step-by-Step Plans to Connect You with Your Family Using Your DNA* (United States, Your DNA Guide, 2020).

Melanie McComb, *Webinar Syllabus: Choosing a DNA Test for Your Research Goals* (January 2025). Available for purchase at <https://shop.americanancestors.org/products/webinar-syllabus-choosing-a-dna-test-for-your-research-goals-copy>

Roberta Estes, *The Complete Guide to FamilyTree DNA: Y-DNA, Mitochondrial, Autosomal and X-DNA* (Genealogical Publishing Co, 2024)

Tamar Weinberg, *The Adoptee's Guide to DNA Testing: How to Use Genetic Genealogy to Discover Your Long-Lost Family*. (Cincinnati, Family Tree Books, 2018).

Additional Resources

EasyGenie Genetic Genealogy Triangulation Kit for DNA Tests. Available for purchase at <https://shop.americanancestors.org/products/genetic-genealogy-triangulation-kit-for-dna-tests>

On Demand: Making Connections: Interpreting DNA Test Results – classes taught by Melanie McComb and Christopher C. Child – available for purchase until March 31, 2026 - <https://my.americanancestors.org/2454/2695>