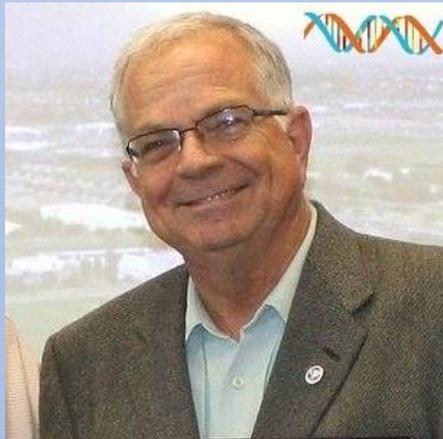


Next Steps with your DNA



Viewpoint Resort



Ken waters
@familytreeaz

<http://familytreeaz.com/presentations>



February 2026

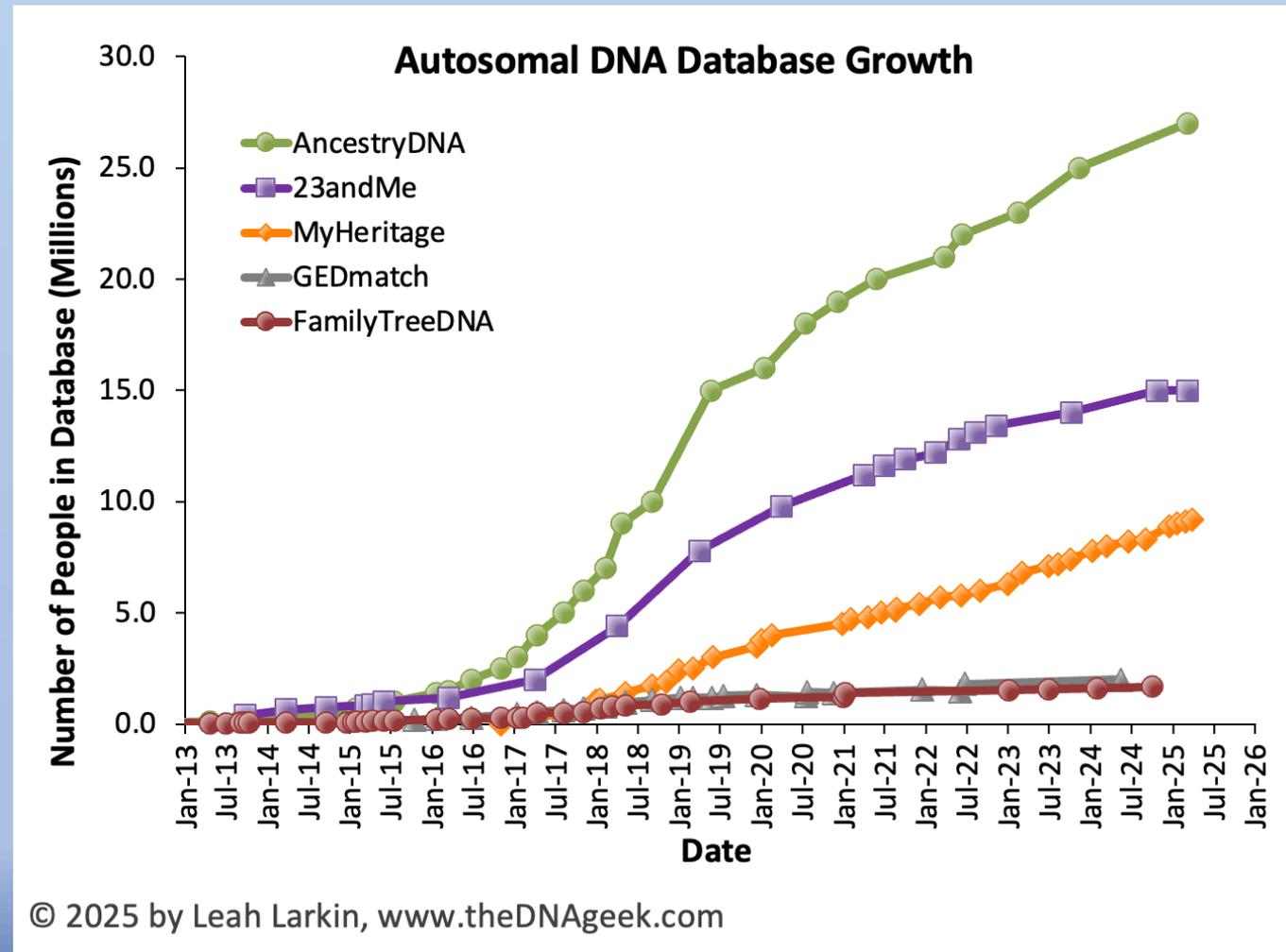
All slides and handouts can be found at:
<http://www.familytreeaz.com/Presentations/>



QR Code: take photo to
open to presentations

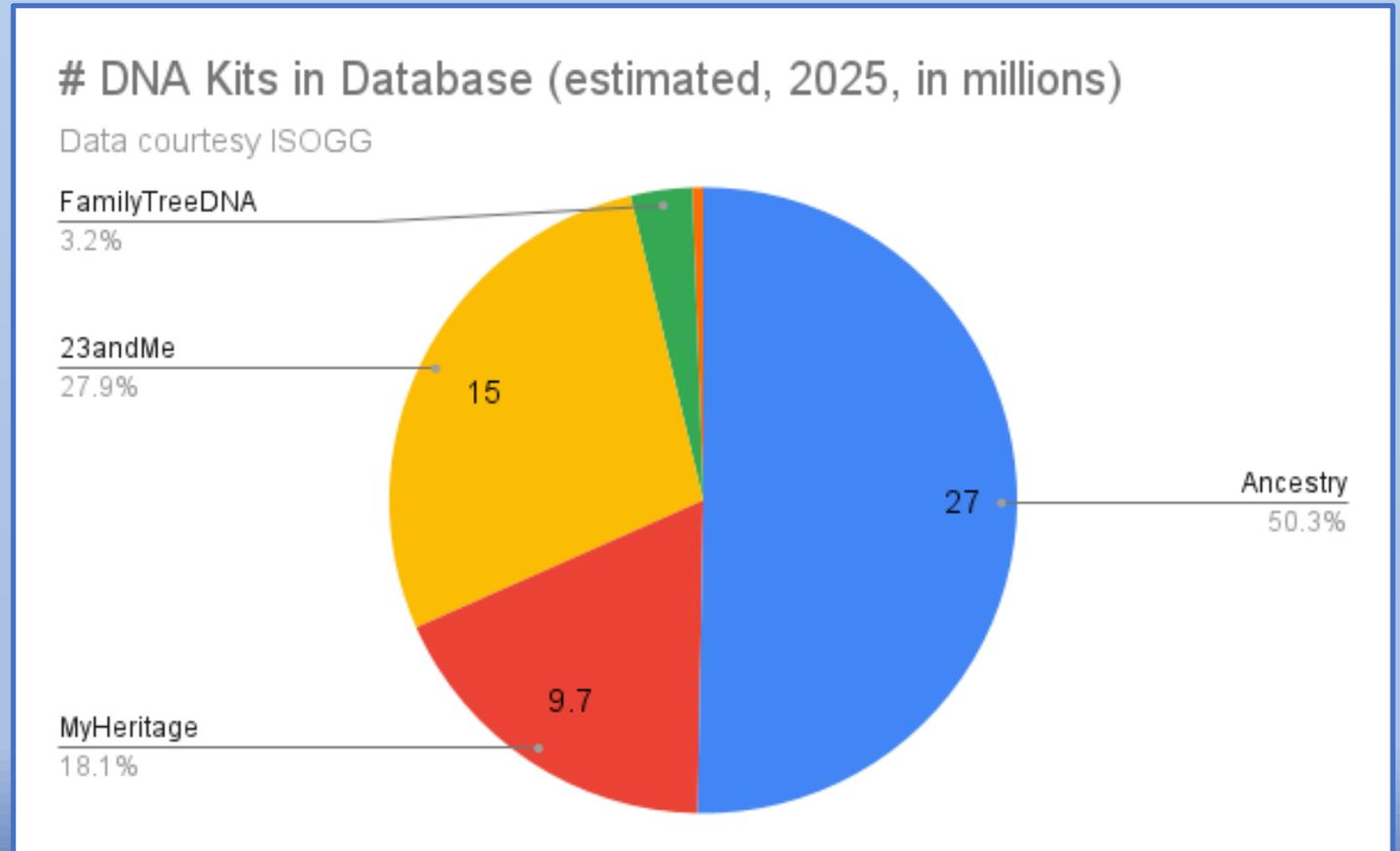
Testing Companies Over Time

- Plus LivingDNA which does not report # of kits, likely < 0.3 million



Current Numbers of tests

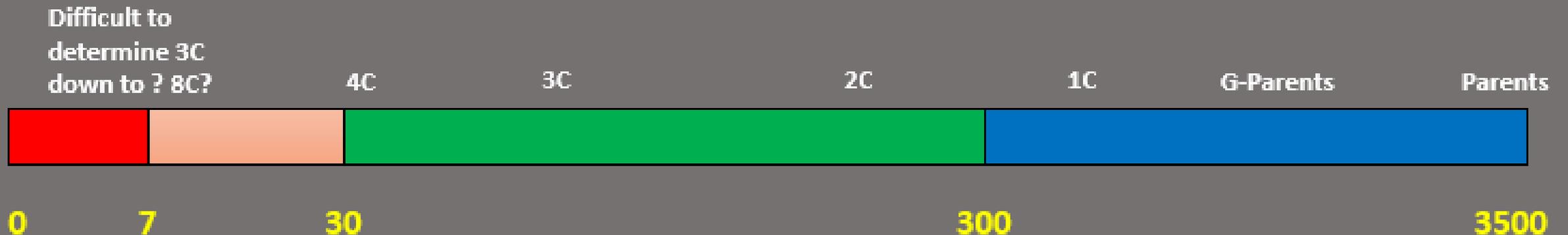
- Ancestry has by far the most DNA tests in their database
- Followed by 23andMe and MyHeritage
- The tiny sliver (too small to label) is LivingDNA



Data from https://isogg.org/wiki/Autosomal_DNA_testing_comparison_chart

First --- An Important Definition: Centimorgan

- A measure of “relatedness”
- Ranges from 0 to ~ 3,500
 - Higher number implies closer relationship
 - 3,500 implies a parent-child relationship



Linking a Tree to your DNA Kit

Linking a tree to your DNA kit

- On Ancestry and MyHeritage you have the capability to store your family tree
- Be sure to LINK your tree to your DNA kit (go to Your Profile)
- And keep the tree PUBLIC

Linking, unlinking, or changing which tree is linked

From a browser

1. In the top-right corner of [Ancestry®](#), click your **Profile** and select **Account Settings**.
2. On the left side of the page, under *Settings*, click **DNA**.
3. Select a DNA test.
4. Under *DNA and family tree linking*, click **DNA link**.
5. Choose to link, unlink, or change your family tree link.
 - **To link your DNA results to a family tree:** click the **dropdown menu** and **choose an existing tree** or select **+ Start tree** to create a new one.
 - If starting a new tree, add at least one parent and repeat these steps from the beginning.
 - After selecting your tree, enter your name, then select **Link DNA results**.
 - **To unlink a family tree:** click **Remove**.
 - **To change your family tree link:** click the **dropdown menu** and **choose a different tree** or select **+ Start tree** to create a new one.
 - If starting a new tree, add at least one parent and repeat these steps from the beginning.
 - After selecting your tree, enter your name, then select **Link DNA results**.

Ken Waters

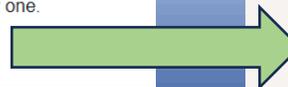
Test details

Test name	Ken Waters	>
Date of birth	1956	>
Sex assigned at birth	Male	>
Gender representation	Male labels (like son)	>

DNA and family tree linking

Connect this DNA test to a tree to use them together.

Linked tree	Linked to Kenneth Richard Waters in [DNA] Waters Tree Email:satwatcher.gen@gmail.com	>
-------------	-----------------------------------------------------------------------------------------	---



ProTools on Ancestry

ProTools - Ancestry

- Contains a variety of useful tools

Ancestry® Pro Tools Membership

Take your research to the next level with Ancestry® Pro Tools. This add-on membership gives you access to advanced DNA and family history tools designed to improve your tree's accuracy and showcase the people in your tree like never before.

What's included

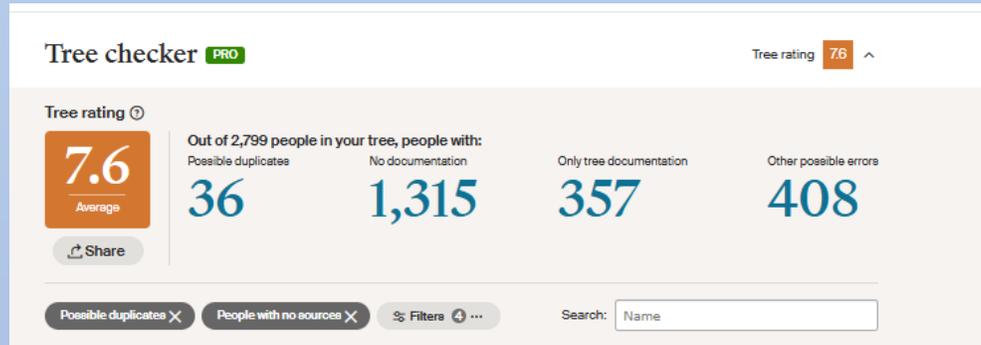
Ancestry Pro Tools requires an active [Ancestry family history membership](#). Family history memberships give you access to paid records, other member trees, and some DNA features.

Pro Tools provides access to advanced DNA and family history tools, including:

- **Tree checker:** Find potential duplicates and possible errors in your tree.
- **Smart filters:** Search, group, and sort people in your tree using key details beyond names.
- **Charts & reports:** Create and share detailed family histories.
- **Tree mapper:** See where people in your tree lived in relation to one another.
- **Tree insights:** Discover familial trends and see patterns in your tree.
- **Enhanced shared matches:** See how much DNA your matches share and their predicted relationships to each other. (Separate DNA kit purchase required to access this feature.)

ProTools -- TreeChecker

- While not a DNA tool it can help a lot to clean up your tree



- It takes a lot of time to go through all these but can help improve your linked tree

Quackenbosch, Pieter	1702 Albany, New York, USA	1772 Niskayuna, Albany, New York, United States
Quackenbush, Pieter Johannese	from 1678 to 1680 Albany, Albany, New York	20 July 1748 Albany, Albany, New York

Likely not a duplicate

Goode, Mary	1720 Whitby Plantation, Richmond, Virginia, USA	1758 Albermarle, , Virginia, USA
Goode, Mary	1720 Richmond County, Virginia, British Colonial America	1758 Albermarle County, Virginia, British Colonial America

A likely duplicate

ProTools – Charts & Reports

- Descendancy chart
 - One of my Mayflower lines
 - Up to 7 generations so I had to break into two reports

Generated on February 19th, 2025

[DNA] Waters Tree Email:satwatcher.gen@gmail.com

Peregrine White



Descendancy

1. **Peregrine White** b: Nov 1620. d: 20 Jul 1704 in Marshfield, Plymouth, Massachusetts, USA; age: 83.
+ **Sarah Bassett** b: 1630 in Plymouth, Plymouth, Massachusetts, USA. d: 22 Jan 1711 in Marshfield, Plymouth, Massachusetts, USA; age: 81.
2. **Silvanus White** d: Deceased.
+ **Deborah Church** d: Deceased.
3. **William White** b: 1683. d: Bef. 3 Oct 1780 in Dartmouth, Bristol, Massachusetts, USA; age: 97.
+ **Elizabeth Cadman** b: Abt. 1684 in Dartmouth, Bristol, Massachusetts, USA. d: Aft. 6 Jan 1768; age: 84.
4. **Roger White** b: 1708. d: 17 Jun 1802; age: 94.
+ **Rebecca Grinnell** b: 16 Dec 1710 in Little Compton, Newport, Rhode Island, United States. d: 17 Jun 1802 in Little Compton, Newport, Rhode Island, United States; age: 91.
5. **Hannah White** b: 17 Sep 1734 in Little Compton, Newport, Rhode Island, USA. d: 1766 in New York, USA; age: 31.
+ **Abraham Utter** b: 18 Nov 1732. d: 5 Jan 1819; age: 86.
6. **Sarah Utter** b: 12 Jul 1761 in Stonington, New London, Connecticut, United States. d: 29 Jun 1801; age: 39.
+ **Capt. David Larkin** b: November 1751 in Hope Valley, Hopkinton, Kings, British Colonial America, Rhode Island, USA. d: 11 November 1839 in Hope Valley, Hopkinton, Washington, Rhode Island, USA; age: 88.
7. **Sarah "Sally" Larkin** b: 29 Dec 1797 in Hopkinton, Washington, Rhode Island, United States. d: 18 Apr 1828 in Clarence, Erie, New York, United States; age: 30.
+ **Aaron Davis** b: 22 August 1794 in Rhode Island, United States of America. d: 25 January 1859 in Clinton County, Michigan, United States of America; age: 64.

Generated on February 19th, 2025

[DNA] Waters Tree Email:satwatcher.gen@gmail.com

Aaron Davis



Descendancy

1. **Aaron Davis** b: 22 August 1794 in Rhode Island, United States of America. d: 25 January 1859 in Clinton County, Michigan, United States of America; age: 64.
+ **Sarah "Sally" Larkin** b: 29 Dec 1797 in Hopkinton, Washington, Rhode Island, United States. d: 18 Apr 1828 in Clarence, Erie, New York, United States; age: 30.
2. **Mary Davis** b: 5 April 1812 in Rhode Island. d: 8 April 1881 in Wexford, Wexford, Michigan; age: 69.
+ **Ira Gilman Butler** b: 1797 in New York, USA. m: Abt 1834 in New York, USA. d: 15 Sep 1878 in Marcellus, Cass Co., MI.; age: 81.
3. **Elizabeth Ann Butler** b: Jul 1835 in Rochester NY. d: 30 Sep 1914 in Springville, Wexford, Michigan, USA; age: 79.
+ **Jefferson N Campbell** b: Jan 1833 in Michigan. m: 6 Nov 1890 in Charlotte, Eaton, Michigan, USA. d: Deceased.
+ **Nathan G Spencer** b: 12 Dec 1829 in Hartland, Windsor, Vermont, USA. d: 20 Apr 1877 in Battle Creek, Calhoun, Michigan, USA; age: 47.
4. **Adeline Spencer** b: abt 1854 in Michigan. d: Deceased.
4. **Culver R. Spencer** b: Nov 1856 in Walton, Mich. d: 13 Jan 1928 in Los Angeles, Los Angeles, California, USA; age: 71.
+ **Arzelia Cummings** b: 22 Apr 1859 in Onondaga County, New York, USA. m: 31 Dec 1877 in Kalamazoo, Kalamazoo, Michigan, USA. d: 4 Jul 1932 in Los Angeles, Los Angeles, California, USA; age: 73.
5. **Nellie Julia Spencer** b: 24 Oct 1878 in Jackson, Jackson, Michigan, USA. d: 30 Sep 1932 in Los Angeles, Los Angeles, California, USA; age: 53.
+ **Eugene Huntley** b: May 1846 in Burlington, Chittenden, Vermont, USA. m: 29 Sep 1900 in Cedar Rapids, Linn, Iowa. d: 25 Oct 1900 in Cedar Rapids, Linn County, Iowa, United States of America; age: 54.
+ **Frank Gustav Pohlmann** b: 26 Jan 1880 in Waszminker, Germany. m: 23 Mar 1926 in Colorado Springs, Colorado, USA. d: 4 Jan 1976 in Stanton, Orange, California, USA; age: 95.
+ Unknown
6. **Mardell Lillian Huntley** b: 2 Feb 1908 in Clinton, Clinton, Iowa, USA. d: 28 Aug 2005 in Las Vegas, Clark, Nevada; age: 97.
+ **Charles Noble Craddock** b: 16 Apr 1905 in Mount Vernon, Jefferson, Illinois, USA. m: 10 Dec 1931 in Los Angeles, California, USA. d: 15 Jan 1983 in Las Vegas, Clark, Nevada, USA; age: 77.
7. **Joan Anita Craddock** b: 12 May 1929 in Los Angeles, Los Angeles, California, USA. d: 11 Oct 2015 in Mesa, Maricopa, Arizona, USA; age: 86.
+ **Richard J Waters** b: 22 Dec 1919 in San Francisco, California. m: 7 Sep 1951 in Norfolk, Independent Cities, Virginia, USA. d: 8 Nov 1979 in Petaluma, Sonoma, California, USA; age: 59.

ProTools – Family Group Sheet

Generated on February 19th, 2025

[DNA] Waters Tree Email:satwatcher.gen@gmail.com

Richard J Waters

Family Group Sheet



Name: [Richard J Waters](#)
Birth: 22 Dec 1919 in San Francisco, California.
Spouses: [Joan Anita Craddock](#)
[Thelma M Greenwood](#)
[Helen L Bockoven](#)
[Jeanne Claire Mills](#)
Death: 8 Nov 1979 in Petaluma, Sonoma, California, USA; age: 59.
Burial: San Rafael, Marin County, California, USA.
Father: [Joseph John Waters](#)
Mother: [Caroline Margaret Sylvia](#)



Spouse: [Joan Anita Craddock](#)
Birth: 12 May 1929 in Los Angeles, Los Angeles, California, USA.
Marriage: 7 Sep 1951 in Norfolk, Independent Cities, Virginia, USA.
Death: 11 Oct 2015 in Mesa, Maricopa, Arizona, USA; age: 86.
Father: [Charles Noble Craddock](#)
Mother: [Mardell Lillian Huntley](#)



Spouse: [Thelma M Greenwood](#)
Birth: 14 Apr 1914 in San Francisco, California.
Marriage: 4 May 1969 in Monterey, California, USA.
Death: 12 March 2005 in Petaluma, Sonoma County, California, United States of America; age: 90.
Burial: San Rafael, Marin County, California, United States of America.
Father: [Lester Errol Greenwood](#)
Mother: [Emily G Battail](#)



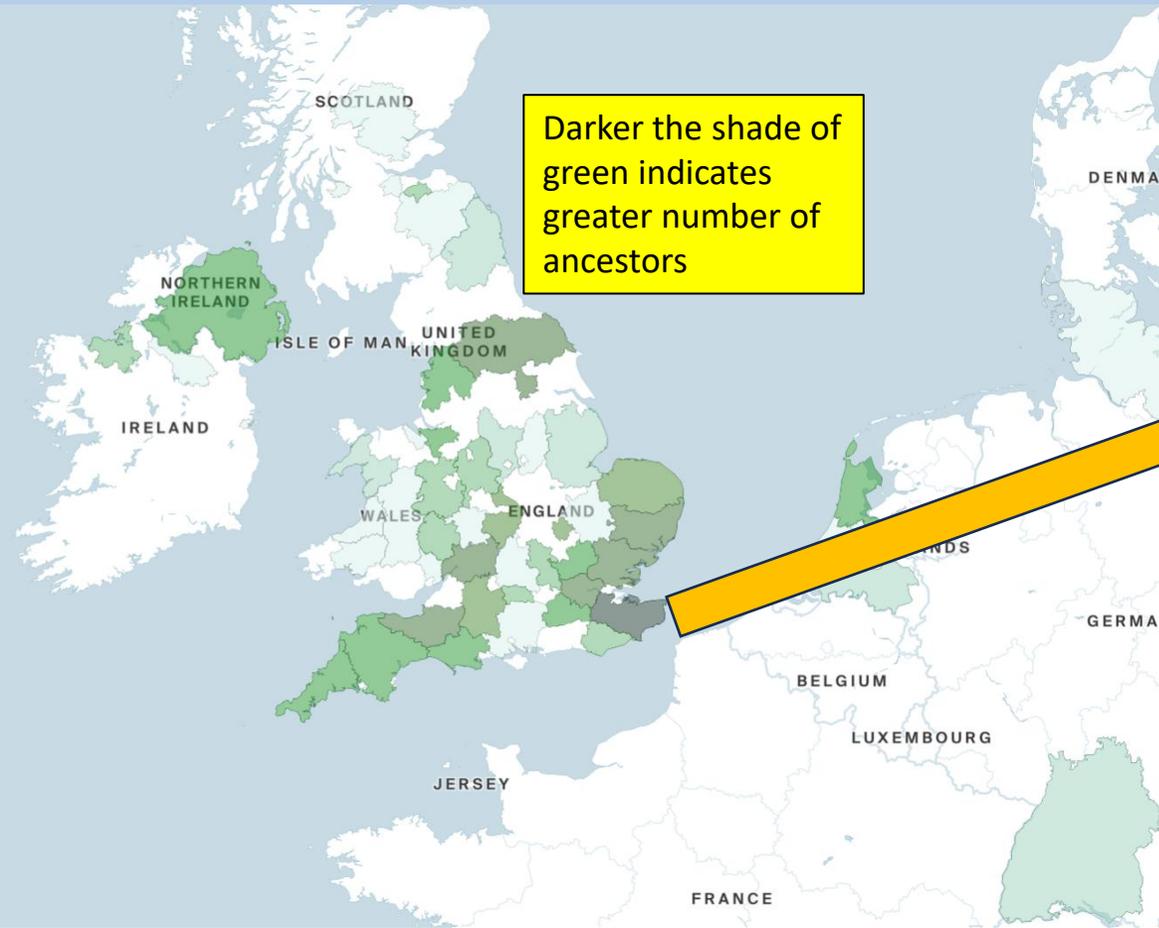
Spouse: [Helen L Bockoven](#)
Birth: 23 Mar 1914 in Oklahoma.
Marriage: Divorce: Apr 1968 in Alameda City, California, USA.
Death: Jan 1979; age: 64.
Father: [George Bockoven](#)
Mother: [Maude L Bockoven](#)



Spouse: [Jeanne Claire Mills](#)
Birth: 1 Feb 1922 in Portland, Multnomah, Oregon, USA.
Death: 12 Dec 1995 in Laguna Hills, Orange, California, USA; age: 73.
Father: [David Mills](#)
Mother: [Doris Lucile Desilets](#)

Children of Richard J Waters and Joan Anita Craddock: 2

ProTools – TreeMapper



Darker the shade of green indicates greater number of ancestors



Direct line ancestors, over 20 from Kent, England
Lists each one and how I'm related.

Kent, England, United Kingdom

Family Share

Family 21

- William Bassett**
1590–1667
12th great-grandfather
Birth 1590 • Sandwich, Kent, England
- Joanna Bates**
1602–1683
9th great-grandmother
Birth 1602 • Lydd, Kent, , England
- Mary Cruttenden**
1616–1669
11th great-grandmother
Birth 1616 • Hawkhurst, Tunbridge Wells Borough, Kent, England
- Capt. Dolor Davis**
1593–1673
9th great-grandfather
Marriage 29 Mar 1624 • Kent, England
- Peter Arthur Davis**
1680–1776

ProTools – Enhanced Shared Matches

- In my opinion, this feature alone makes it worth it to have this subscription
- Provides how much each of your matches shares with other matches in the genetic network

You and Michelle
2nd cousin 1x removed | Maternal side
2% shared DNA: 152 cM across 8 segments

Connect to tree Message Edit Relationship

+ Add/edit group
2CIR, great-granddaughter of Stella C...

Trees Origins **Shared Matches PRO**

Filter shared matches + Group Search Sort

Shared match:	Your:	Michelle Kaulukukui-Palisbo's:
Joan Anita Craddock	Your: Mother 3,474 cM Maternal side	Michelle 1st cousin 1x removed or half grandaunt 360 cM
	Your: Daughter 3,470 cM Both sides	Michelle 3rd cousin or half 2nd cousin 1x removed 106 cM
	Your: Brother 2,491 cM Both sides	Michelle 2nd cousin or half 1st cousin 1x removed 209 cM
	Your: 1st cousin 1x removed 369 cM Maternal side	Michelle 2nd cousin 1x removed or 1st cousin 2x removed 184 cM
Jim Auld	my grand aunt Laverne Craddock, 369/20.	
	Your: 2nd cousin 309 cM Maternal side	Michelle Uncle 1,624 cM

ProTools – Enhanced Shared Matches

You and Michelle
2nd cousin 1x removed | Maternal side
2% shared DNA: 152 cM across 8 segments

Connect to tree Message Edit Relationship

5 6 + Add/edit group
2C1R, great-granddaughter of Stella C...

Trees Origins Shared Matches PRO

Filter shared matches + Group Search Sort

Shared match:	Your:	Michelle Kaulukukui-Palisbo's:
 Joan Anita Craddock	Your: Mother 3,474 cM Maternal side	Michelle 1st cousin 1x removed or half grandaunt 360 cM
Mother, 3474/46.		
	Your: Daughter 3,470 cM Both sides	Michelle 3rd cousin or half 2nd cousin 1x removed 106 cM
Daughte		
	Your: Brother 2,491 cM Both sides	Michelle 2nd cousin or half 1st cousin 1x removed 209 cM
Brother.		
	Your: 1st cousin 1x removed 369 cM Maternal side	Michelle 2nd cousin 1x removed or 1st cousin 2x removed 184 cM
Jim Auld my grand aunt Laverne Craddock, 369/20.		
	Your: 2nd cousin 309 cM Maternal side	Michelle Uncle 1,624 cM
2C, grandson of Stella Mae Craddock my great aunt. 309/15. Sent message 8/26/2018 and ...		

Before I only knew that Michelle and Leland were shared matches to me. I didn't know they were related to each other. With Enhanced Shared Matches I was able to see how they were related to each other and so I could put both in my family tree properly.



ThruLines on Ancestry

ThruLines

Home > AncestryDNA®

AncestryDNA® ThruLines®

ThruLines® shows you how you may be related to your DNA matches. ThruLines are based on information from family trees they don't change the information in trees. If there's inaccurate information in your tree, you may receive inaccurate ThruLines. Only you and anyone you've invited to view your DNA results can see your ThruLines.

We use the family tree linked to your test to find people who are in your tree and are also in your matches's linked trees. If your tree is private and not searchable, you won't be able to see ThruLines, and information from your matches' trees that are private and not searchable won't be available to you. DNA matches may appear in more than one of your ThruLines.

ThruLines are available for ancestors through 5th great-grandparents. ThruLines won't appear for 6th great-grandparents and beyond.

You must have a public tree (or private but searchable) and have it linked to your DNA kit in order to see any ThruLines.

ThruLines

- Attempts to build your direct ancestors
- NOTE: this is primarily based on trees --- both yours and your matches
- It can provide hints of how you might be related to your DNA matches

Ken Waters

Summary Origin Matches Trails

All By parent By ancestor By location

ThruLines shows you how you may be related to your DNA matches through ancestors you share. You get ThruLines when ancestors from your tree are also in a match's tree. Pick an ancestor to see which matches descend from them. [Learn more about ThruLines](#)

Parents

- Richard J Waters, Father, 1916-1973
- Joan Anita Craddock, Mother, 1928-2015

Grandparents

- Joseph John Waters, Paternal grandfather, 1888-1950
- Caroline Margaret Sylvia, Paternal grandmother, 1901-1980
- Charles Noble Craddock, Maternal grandfather, 1902-1993
- Mardell Lillian Huntley, Maternal grandmother, 1918-2000

Great Grandparents

- John Waters, Great-grandfather, 1888
- Irene Agnes Berkley, Great-grandmother, 1908-1970
- Joao John da Silva (Sylvia), Great-grandfather, 1845-1912
- Caroline C. Lemos, Great-grandmother, 1916-1912
- Charles Noble Craddock, Great-grandfather, 1865-1930
- Mary Ellen Wood, Great-grandmother, 1873-1930
- Nellie Julia Spencer, Great-grandmother, 1879-1912

2nd Great Grandparents

- Terence Waters, 2nd great-grandfather, 1822-1902
- Sabina Gallagher, 2nd great-grandmother, 1822-1901
- Joseph Mortimer Berkeley, 2nd great-grandfather, 1846-1910
- Mary Ann Wheeler, 2nd great-grandmother
- Manuel Correia da Silva, 2nd great-grandfather
- Luisa Candida, 2nd great-grandmother
- Felicianno Machado Lemos, 2nd great-grandfather, 1811-1904

ThruLines® for Malinda Spivey

ThruLines® uses Ancestry® trees to suggest that you may be related to 11 DNA matches through Malinda Spivey.

Relationships List

Malinda Spivey, 2nd great-grandmother

Charles N Craddock, Great-grandfather, 1868-1950

- Stella M M Craddock, Grandaunt, 1890-1981, 2 DNA Matches
- Laverne Craddock, Grandaunt, 1903-1991, 4 DNA Matches
- Charles N Craddock, Maternal grandfather, 1905-1983, 4 DNA Matches
- Walter J Craddock, Granduncle, 1910-2002

Judith Ann Craddock, 1st cousin 1x removed, 1934-2014

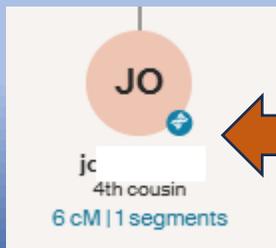
ME, 2nd cousin, 167 cM | 9 segments

Joan Anita Craddock, Mother, 3,474 cM | 25 segments

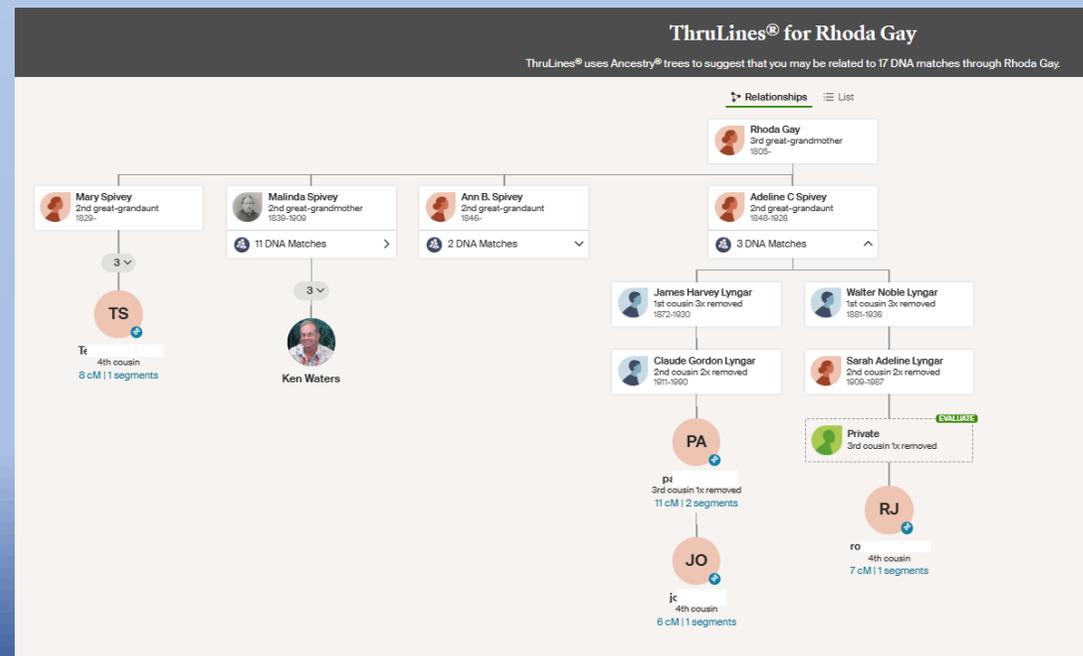
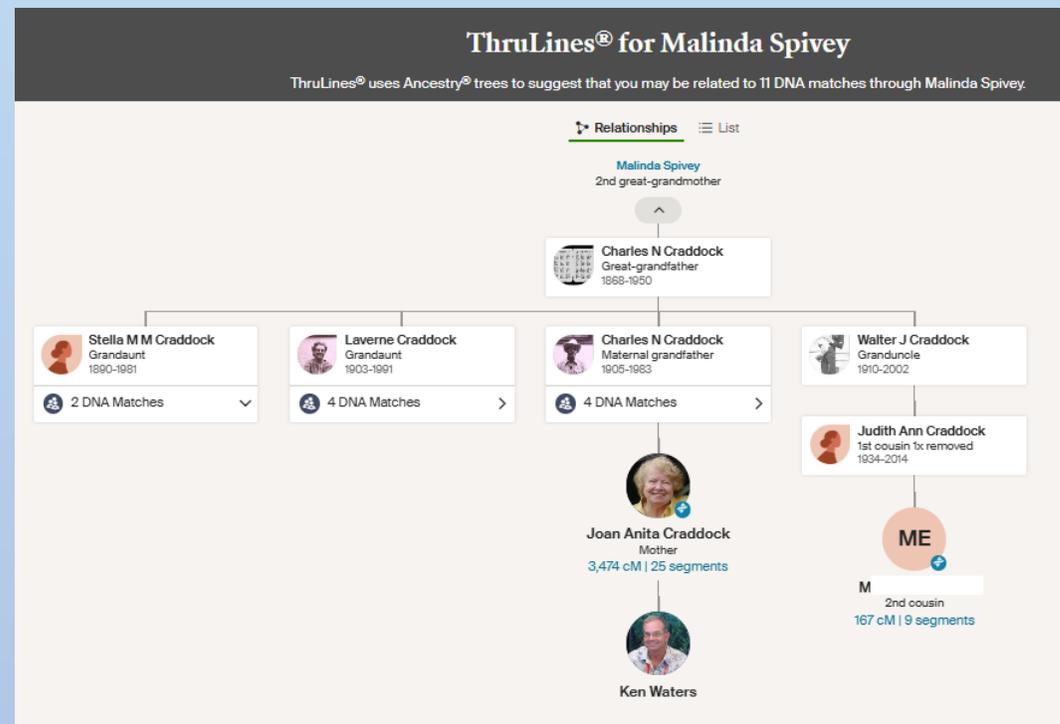
Ken Waters

ThruLines

- Important notes:
 - If there are common errors in other people's trees then that will result in bad errors in ThruLines --- carefully verify these tips!
 - Many mystery matches will not show up in ThruLines because of weaknesses in links between your tree and others trees (e.g., NPEs, donor conceived, etc.)
 - Some suggested relationships are using very low DNA values (e.g., 8 cMs) – so be careful – they could be valid but use some other verification (traditional genealogy to verify)

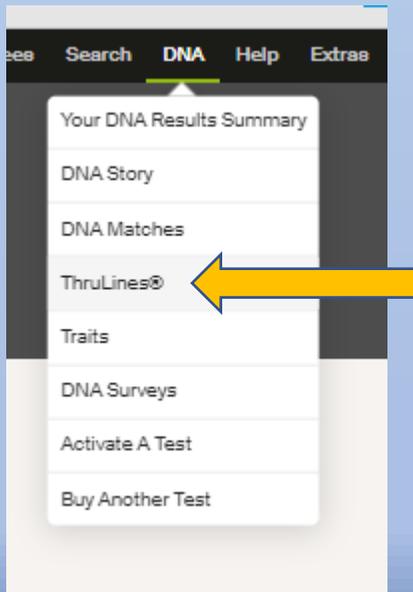


This tiny segment actually seemed to be valid – but that's not always the case!



ThruLines

- Starting with parents
- Goes down to 5th great-grandparents



Elizabeth R. Randolph
5th great-grandmother
1778-1837

In your tree

Manuel Silveira da Rosa
5th great-grandfather
-1798

POTENTIAL ANCESTOR

Not in your tree

Ken Waters's DNA Matches
View [DNA] Waters Tree Email:satwatchergen@gmail.com

All matches By parent **BETA** By ancestor By location

Filters ▾

ThruLines®
ThruLines shows you how you may be related to your DNA matches through ancestors you share. You get ThruLines when ancestors from your tree are also in a match's tree. Pick an ancestor to see which matches descend from them. [Learn more about ThruLines.](#)

Parents

- Richard Joseph Waters (Father 1910-1979)
- Joan Anita Craddock (Mother 1929-2015)

Grandparents

- Joseph John Waters (Paternal grandfather 1898-1965)
- Caroline Margaret Sylvia (Paternal grandmother 1893-1963)
- Charles Noble Craddock (Maternal grandfather 1905-1983)
- Mardell Lillian Huntley (Maternal grandmother 1908-2005)

Great Grandparents

- John Waters (Great-grandfather 1860-)
- Irene Agnes Berkley (Great-grandmother 1869-1907)
- Joaõ John da Silva (Sylvia) (Great-grandfather 1845-1932)
- Caroline C. Lemos (Great-grandmother 1874-1913)

Great Grandparents (continued)

- Charles Noble Craddock (Great-grandfather 1868-1950)
- Mary Ellen Wood (Great-grandmother 1870-1930)
- Nellie Julia Spencer (Great-grandmother 1878-1932)

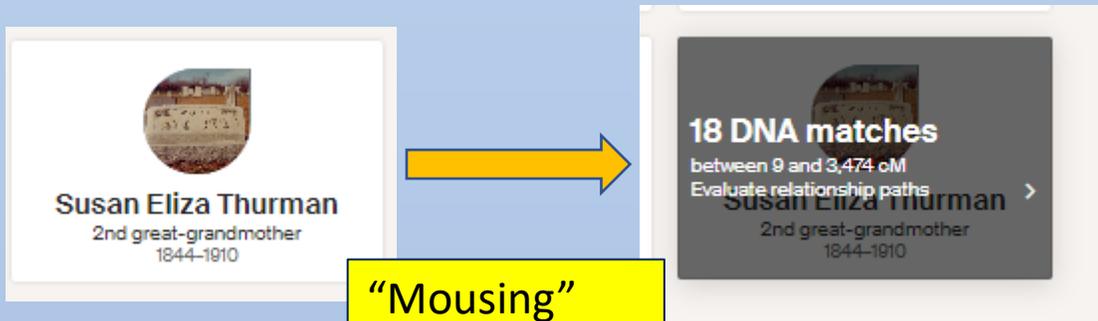
2nd Great Grandparents

- Terence Waters (2nd great-grandfather 1825-1902)
- Sabina Gallagher (2nd great-grandmother 1830-1901)
- Joseph Mortimer Berkeley (2nd great-grandfather 1848-1880)
- Mary Ann Wheeler (2nd great-grandmother 1848-1913)

2nd Great Grandparents (continued)

- Manuel Correia da Silva (2nd great-grandfather)
- Luisa Candida (2nd great-grandmother)
- Feliciano Machado De Lemos (2nd great-grandfather)
- Delfina Candida San Jose (2nd great-grandmother)

Look at quantity (and *quality* of those DNA matches)



“Mousing”
over a name
can reveal the
number of
DNA matches
Ancestry finds

Be careful: having a lot of DNA matches may simply be because of your close tested matches

You need “breadth” of matches from other matches outside your close family

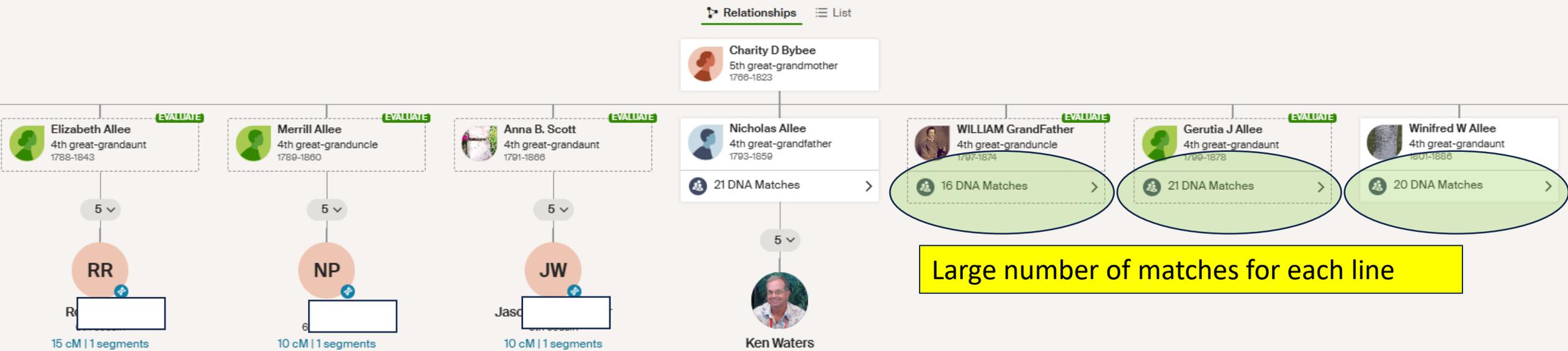
TIP: Try moving the mouse over each person. When you see lots of matches that is an indication that the person in the tree may be properly placed.

Good ThruLines Indicator

- DNA tested matches from 10 descendants from the same person
- Some vertical lines have 20+ matches

ThruLines® for Charity Delilah Bybee

ThruLines® uses Ancestry® trees to suggest that you may be related to 96 DNA matches through Charity Delilah Bybee.



Large number of matches for each line



Wide breadth of lines

Whole Genome Sequencing on MyHeritage

Whole Genome Sequencing (WGS – MyHeritage)

- Announced Oct 2025, available Jan 2026
- What is it?
 - It measures virtually all the genes on every chromosome
 - That works out to about 3,000,000,000 [billion] bases (or markers or SNPs)
 - Standard autosomal microarray kits typically only measure 700,000 bases
 - Up until October 2025 this was very expensive (\$500+++)
 - MyHeritage is offering it with a standard autosomal kit (currently \$25!)



The image shows a screenshot of a blog post from MyHeritage. At the top, it says "MyHeritage Blog". Below that, it says "DNA • MYHERITAGE NEWS". The main title of the article is "MyHeritage Upgrades Its DNA Tests to Whole Genome Sequencing". The author is listed as "By Erica" and the date is "October 17, 2025". There are social media sharing icons for Facebook, X, and Email. The article content includes the MyHeritage logo, the "GENE" logo, and the "ULTIMA GENOMICS" logo. The main text of the article is "MyHeritage Upgrades Its DNA Tests to Whole Genome Sequencing". At the bottom of the article, there is a URL: "myheritage.com/DNA". The background of the article features a decorative graphic of concentric circles made of small colored squares.

Whole Genome Sequencing (WGS – MyHeritage)

- Announced Oct 2025, supposedly

 MyHeritage Blog

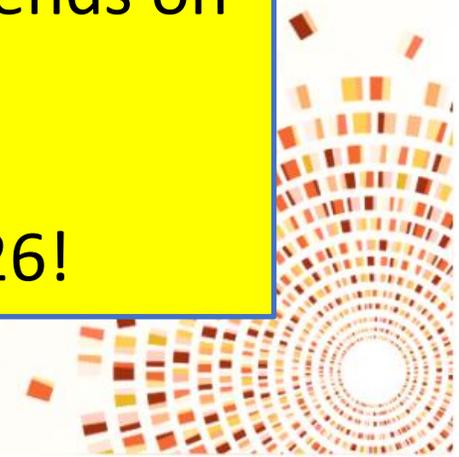
- This is largely new, uncharted territory for the consumer market.

Will it enhance our ability to use DNA for genealogy purposes?

Nobody really knows for sure right now---it probably depends on developers to start experimenting with it.

I will be trying it and hope to report on my findings in 2026!

myheritage.com/DNA



Timber

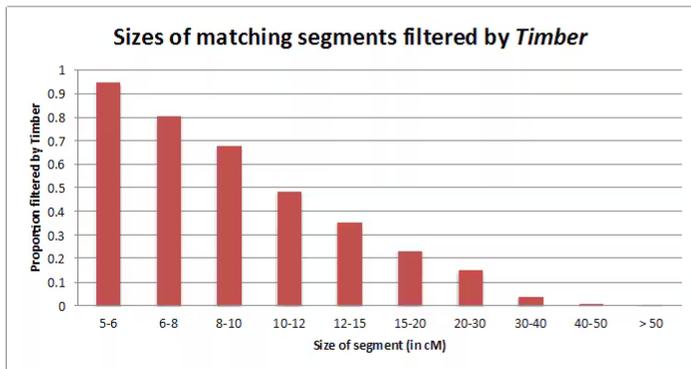
Timber

- What is Timber?
 - An algorithm to try to remove segments that are common to many other matches

Timber mostly filters out shorter segments of shared DNA

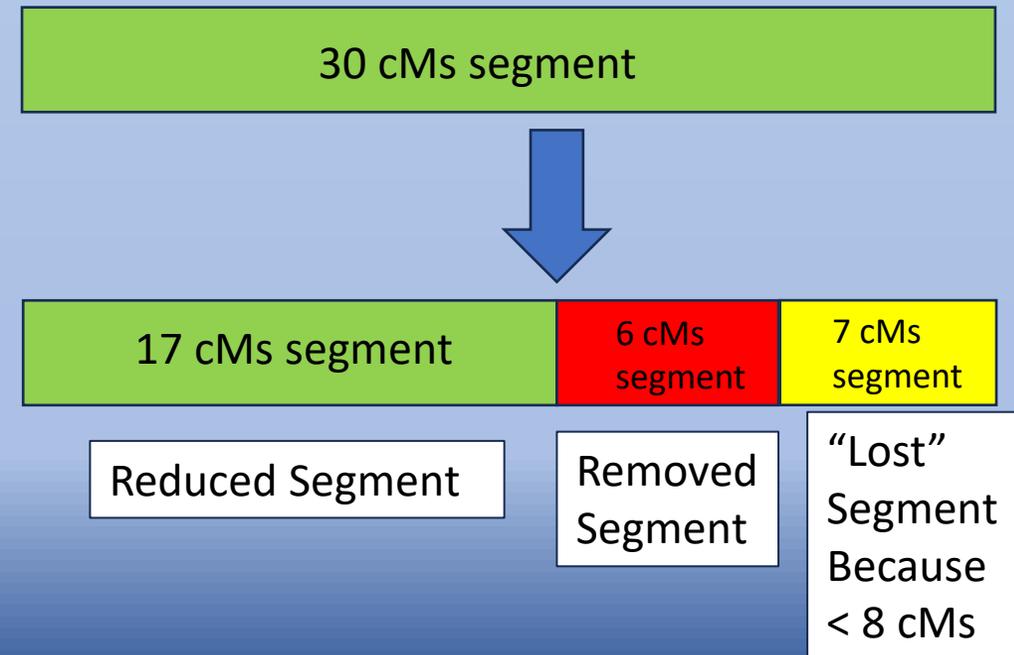
The DNA you share with your matches is distributed across segments of DNA. If you think of you and your match's DNA like two books, shared DNA segments are like identical sentences or paragraphs in both books. The length of the longest segment you and a DNA match have in common can help [determine your relationship](#). Sharing fewer, longer segments usually indicates a closer relationship. Shorter segments of shared DNA can indicate a distant relationship or identical DNA due to a shared region.

When we looked at the shared DNA segments removed by *Timber* for a study of 300,000 Ancestry customers, we saw that most of the removed segments are shorter (<10 cM). See the chart below.



However, we also found that in some cases, longer identical segments (>15 cM) were also removed by *Timber*. What this shows is that there is much more than just the sizes of the identical DNA segments to consider when trying to identify shared DNA from a recent common ancestor.

No impact on matches with 80+ cMs. Even removing a small segment from a big one can have a major impact because it breaks a large single segment into 2 much smaller segments, one of which might be below the 8 cMs limit for segments.



Timber Example

Click Here



N.S.
Managed by deblacy56

[4th cousin or half 3rd cousin 1x removed](#)
Paternal side
30 cM | < 1% shared DNA

Public linked tree
735 people
Common ancestor

+ Add ...

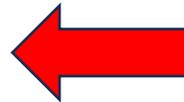
Thurman/Hill, 5C. 30/3. 2



Joan Anita Craddock and N.S.

Predicted: 4th cousin or half 3rd cousin 1x removed

- Shared DNA: 30 cM across 3 segments
- Unweighted shared DNA: 45 cM
- Longest segment 24 cM



Big difference, 30 cMs versus 45 cMs
This can affect estimated relationship

SideView

SideView

- What is SideView?

How SideView™ Technology Splits Your DNA Results by Parent

When we first read your DNA, we don't know which parts of your DNA came from each parent.

Ancestry® developed a technology called SideView™ to figure this out using DNA matches. Because a match is usually related to you through only one parent, your matches can help us “organize” the DNA you share with them.

SideView™ technology powers the DNA inheritance features that show which regions, journeys, matches, and traits you inherited from each parent, even without testing your parents (though we don't know which parent is which).

The ability to divide your DNA into parental sides, one paternal, one maternal

Your regions by parent

Your parents each contributed half of your DNA. Now, you can see which regions you inherited from each parent—even if they haven't taken tests. [Learn more](#)

Overview [Share](#)



Select one or more regions to highlight.

- All England & Northwestern Europe Ireland Scotland Portugal Wales Sweden

Detailed comparison [Share](#)

[Edit parent labels](#)

Same data, more detail. This chart shows the percentages of each region you inherited from your parents. Added together, the percents from each parent for a region equals your percent for that region.

Region	Maternal	Paternal	You
Total: 6	50%	50%	100%
England & Northwestern Europe	24%	4%	28%
Ireland	4%	23%	27%
Scotland	20%	2%	22%
Portugal	0%	18%	18%
Wales	0%	3%	3%
Sweden	2%	0%	2%

Give Ancestry

Give your research by testing family members. [Why test?](#)

Give a DNA k

Inheritance is

Regions may not be at all.

[Tell me more](#)

Their halves, y

This informat—not from tes

You inherited [AncestryDNA](#) results.

How do we kno

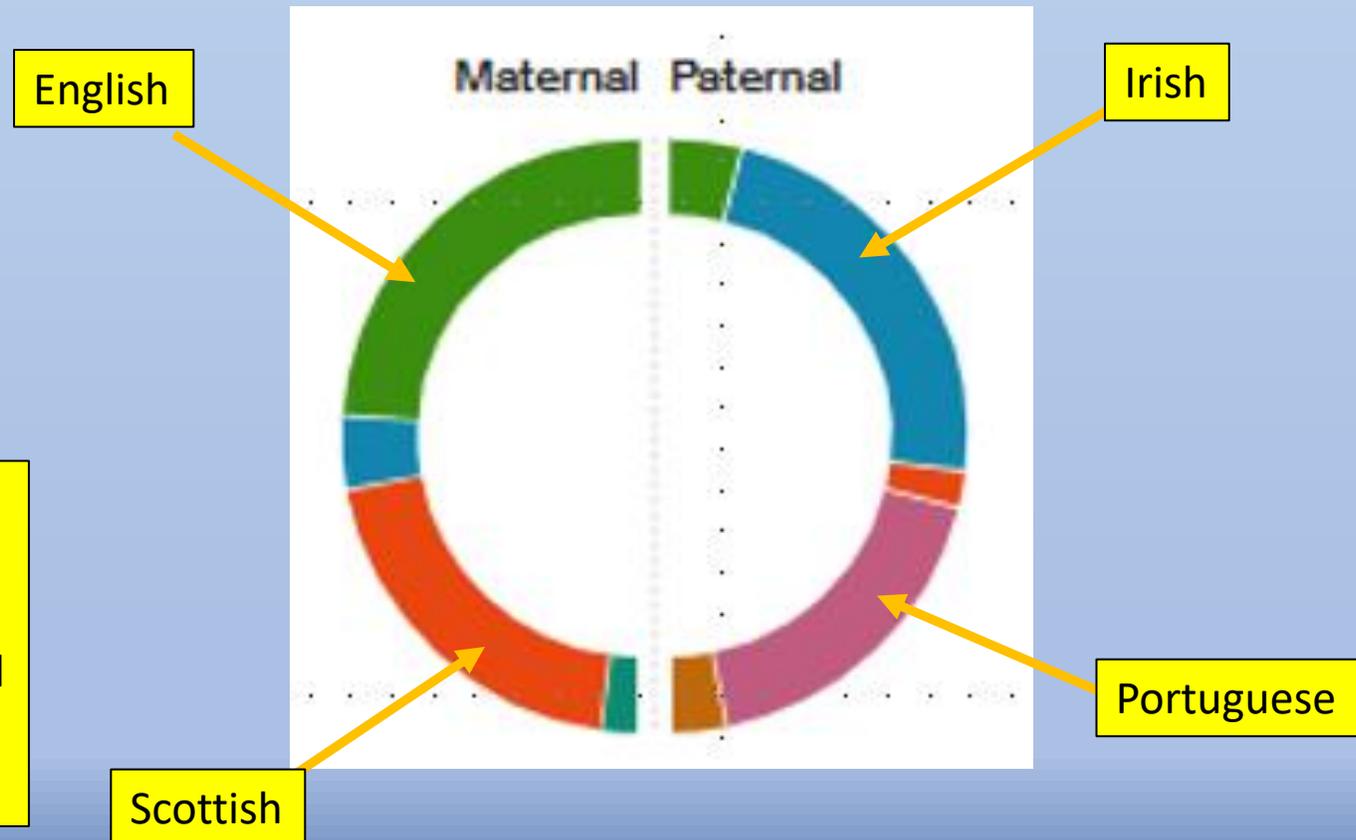
SideView

- Initially, Ancestry won't know which side is which and so will just label as 'Parent1' and 'Parent2'
- You'll have the ability to declare which is which

The ability to divide your DNA into parental sides, one paternal, one maternal.

NOTE: this feature requires an updated account like AncestryDNA Plus or paid membership.

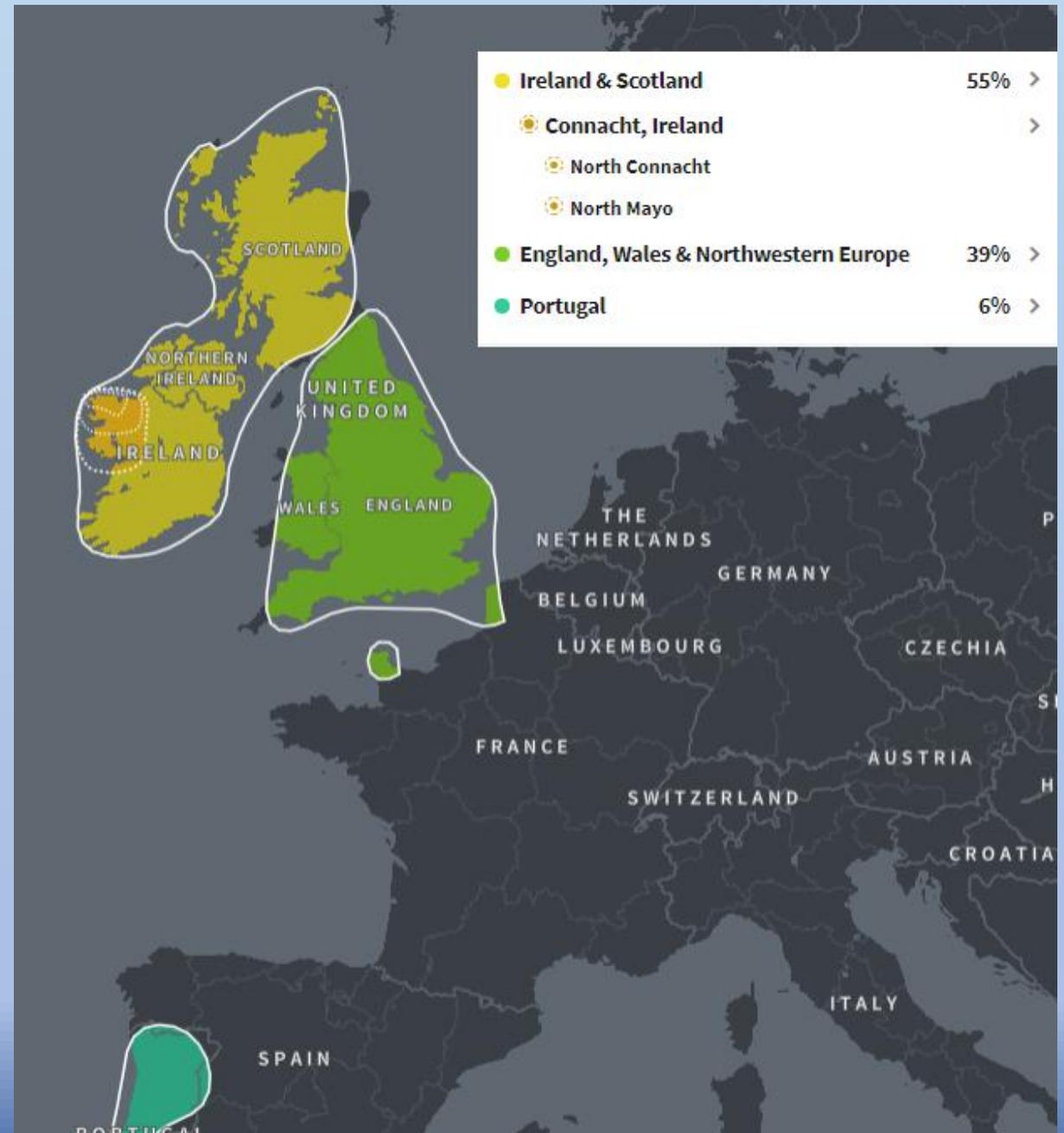
This is my SideView showing which side I get different "ethnicity" contributions from



Ethnicity

Ethnicity Estimates

- Limited use for genealogy
- Occasionally can be useful to look for very specific and unique ancestral heritage (e.g., American Indian, East Asian, African, etc.)
- Frequently changing and updating on the different testing companies



- Regions
- Journeys
- By parent



Ken's 8 ancestral regions

Celtic & Gaelic

- Central Scotland & Northern Ireland 41% >
- Connacht, Ireland 12% >
- Munster, Ireland 4% >
- Southern Wales 4% >

Iberian Peninsula

- Azores 14% >
- Portugal 4% >

England

- Southeastern England & Northwestern Europe 17% >

Western Europe

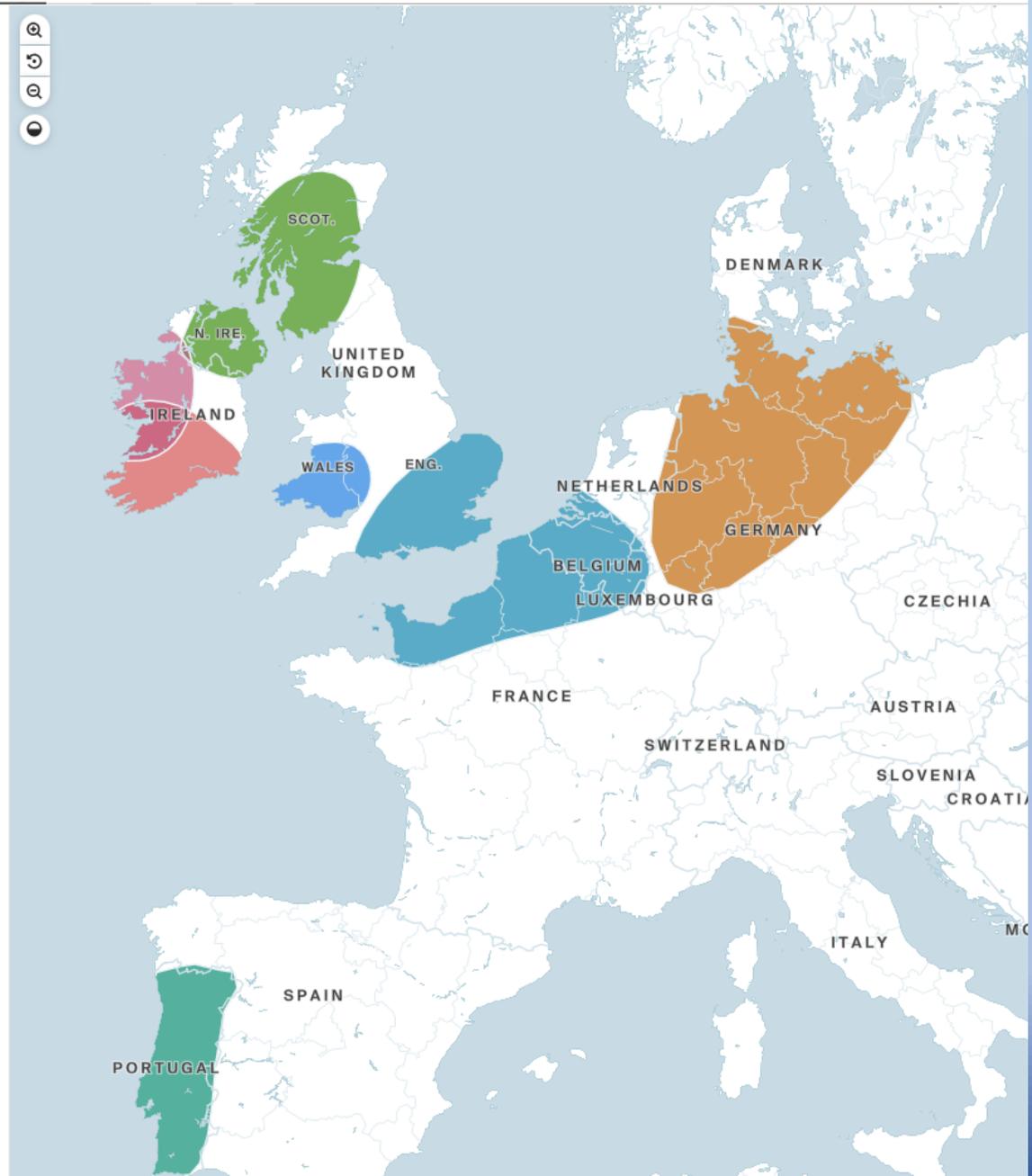
- Northwestern Germany 4% >

Updated October 2025. [View previous results and FAQs](#)

We compare your DNA against a worldwide reference panel to see which populations your DNA looks most like. [How do we calculate this?](#)

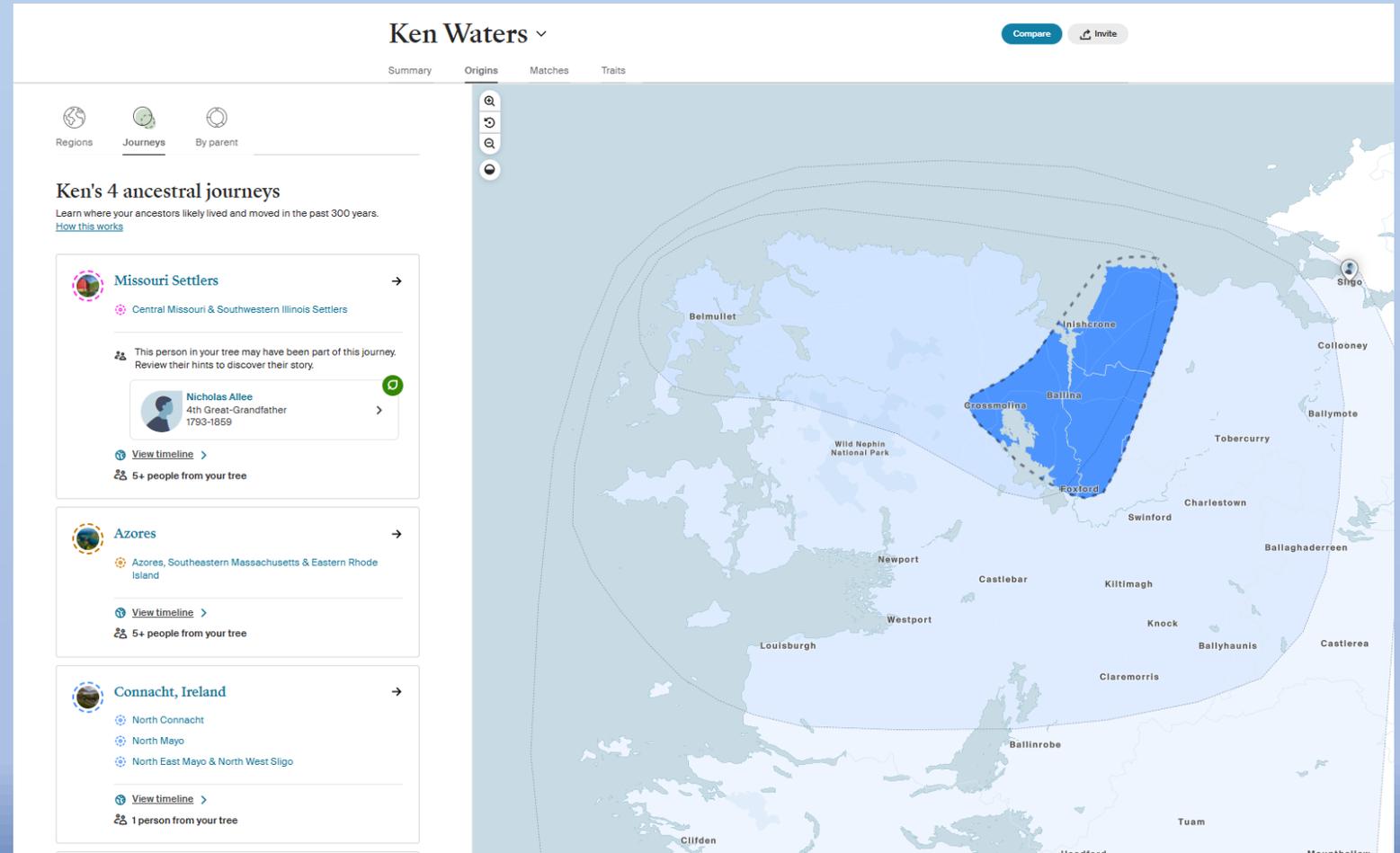
Share

We found a potential ancestor for you
We found a potential ancestor in your tree. Review them to see if they're connected to your regions. →



Ethnicity – Ancestral Journeys

- Identified a small area of Ireland where my ancestors appear to have lived
- County Mayo and County Sligo in northwest Ireland



Match Lists

Match Lists --- Family Tree DNA

- Match strength in cMs

3,384

- Estimated Relationship

Half Brother, Grandfather/
Grandson, Uncle/ Nephew

- Surnames, if provided

de Lemos / Lemos /
Machado / Sylvia /
San Jose / Adores /
Alvira / Constanca / de
Lemos / de Lemos /

Name	Match Date	Relationship Range	Shared cM	Longest Block	X-Match	Linked Relationship	Ancestral Surnames
[Profile]	10/28/2017	Father/ Son	3,384	267		[Icon]	
[Profile]	10/28/2017	Mother/ Daughter	3,384	267	X-Match	[Icon]	
[Profile]	07/07/2015	Mother/ Daughter	3,384	267	X-Match	Mother	
[Profile]	10/28/2017	Full Brother, Half Brother, Grandfather/ Grandson	2,421	184	X-Match	[Icon]	
[Profile]	07/07/2015	Half Brother, Grandfather/ Grandson, Uncle/ Nephew	1,551	129		Uncle	
[Profile]	10/28/2017	1st Cousin, Uncle/ Nephew	746	122		[Icon]	
[Profile]	10/28/2017	1st Cousin - 2nd Cousin	572	80		[Icon]	
[Profile]	10/28/2017	1st Cousin - 2nd Cousin	474	65	X-Match	[Icon]	
[Profile]	11/28/2018	1st Cousin - 2nd Cousin	69			[Icon]	
[Profile]	04/30/2017	1st Cousin - 2nd Cousin	417	52		[Icon]	de Lemos / Lemos / Machado / Sylvia / San Jose / Adores / Alvira / Constanca / de Lemos / de Lemos /
[Profile]	10/28/2017	1st Cousin - 3rd Cousin	390	40	X-Match	[Icon]	

Match Lists --- My Heritage

- Match strength in cMs
- Estimated Relationship
- Age/Sex – if provided

The screenshot displays a DNA match list for Ken Waters. The header shows 'Ken Waters' with a profile picture and the text 'This is you | Showing 1-10 of 10,029 DNA Matches'. Below the header are three match entries, each with a profile picture, name, relationship, DNA match quality, shared DNA, shared segments, and largest segment. Each entry also has 'Review DNA Match' and 'View tree' buttons.

Name	Relationship	DNA Match quality	Shared DNA	Shared segments	Largest segment
Waters	Son	50.0% (3,541.1 cM)	22	284.3 cM	
Waters	Daughter	49.9% (3,540.7 cM)	22	284.3 cM	
Joan Waters (born Craddock)	Mother	49.8% (3,533.9 cM)	22	284.3 cM	

Additional details from the screenshot:

- For the first match (Waters, Son): 'Waters appears in your family tree. He is your son.'
- For the second match (Waters, Daughter): 'Waters appears in your family tree. She is your daughter.'
- For the third match (Joan Waters, Mother): 'Waters appears in your family tree. She is your daughter.'

Match Lists --- Living DNA

- Match strength in cMs
- Estimated Relationship

You share DNA with the following users

 Joan Craddock	Predicted Relationship: Parent/Child/Sibling ⓘ	DNA shared: 46.93% (3403.59 cM) ⓘ
 Ernest Waters	Predicted Relationship: Grandparent/Half-sibling/Avuncular ⓘ	DNA shared: 20.99% (1521.99 cM) ⓘ
 Cathy	Predicted Relationship: 2nd cousin once removed ⓘ	DNA shared: 1.73% (125.21 cM) ⓘ

Match Lists --- Ancestry

- Match strength in cMs
- Tree information
- Shared common ancestor
- Notes/Tag groups

The screenshot displays the 'Kenneth Richard Waters's DNA Matches' page. At the top, there are navigation options for 'List' and 'Map'. Below this is a 'Filter by:' section with buttons for 'Unviewed', 'Common ancestors', 'Messaged', 'Notes', 'Trees', 'Shared DNA', and 'Groups'. A search and sort bar is also present. The matches are categorized into sections: 'Parent/Child', 'Full Sibling', and 'Close Family'. Each match entry includes a profile picture, name, relationship type, shared DNA amount and segments, a '2,185 People' link, and a 'Common ancestor' icon. Some entries also have 'Add/edit groups' and 'Mother's Side' options with specific group names and member counts.

Match Name	Relationship	Shared DNA	Common Ancestor	Groups
Joan Anita Craddock	Parent/Child	3,474 cM across 46 segments	Common ancestor	Mother, 3474/46
Waters	Parent/Child	3,470 cM across 60 segments	Common ancestor	Mother's Side Daughter, 3470/60
Waters	Parent/Child	3,466 cM across 62 segments	Common ancestor	Mother's Side Son, 3466/62
Waters	Brother	2,491 cM across 63 segments	Common ancestor	Mother's Side Brother, 2491/63
Ernest Howard Waters	Close Family-1st Cousin	1,583 cM across 41 segments	Common ancestor	Paternal Uncle, 1583/41

Match Lists --- 23andMe

- Match strength in % -- NOT cMs
- Estimated Relationship

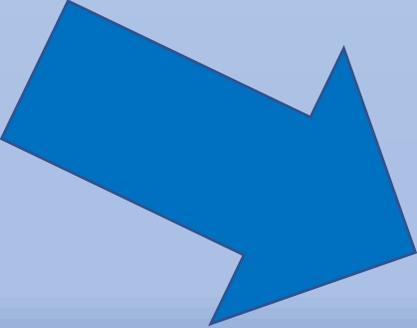
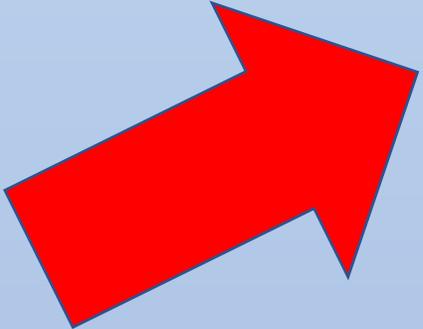
The screenshot shows the 23andMe DNA Relatives interface. At the top, there are navigation links for HOME, ANCESTRY, HEALTH & TRAITS, RESEARCH, and FAMILY & FRIENDS, along with an UPGRADE button and a user profile for Ken. Below the navigation, there are tabs for List, Map, and Frequently Asked Questions. The main heading is "DNA Relatives" with a sub-heading "Get started with your predicted relationships, then connect and message to learn more." A filter section shows "Showing 1328 of 1323 Relatives" and a "Sort by" dropdown set to "Strength of Relationship". A search bar is available with the placeholder "Name, relation, or location". On the left, there are several filter categories: Notifications, Profile features and activity, Ancestor birthplaces, Mom's side / Dad's side, and Connections. The main list of matches is as follows:

Match	Relationship	DNA Shared	Segments
MC (Connected)	First Cousin	12.9%	28
MH (Not Connected)	Second Cousin	5.04%	15
CR (Invitation sent)	Second Cousin	3.37%	13
TW (Invitation sent)	Second Cousin	3.23%	12
ME (Connected)	Second Cousin	2.84%	12
FB (Not Connected)	Second to Third Cousin	2.59%	8

Grouping Matches – “Divide and Conquer”

- On Ancestry, Using Tag Groups in combination with Notes and Shared Matches:
 - Group your matches by dividing them
 - First, Paternal vs. Maternal side
 - Then, work on Grandparents
 - Continue to divide matches

The goal: sort your matches into common groups



First steps

- Review your matches, strongest (highest centimorgans) first
- Try to identify the closest matches
 - Do you know them?
 - How are you related to them?
- If using Ancestry:
 - Enter notes about what you know about them
 - Use Tag Groups to identify them

Kenneth Richard Waters's DNA Matche

List Map

Filter by: Unviewed Common ancestors Messaged Notes Trees Shared DNA Group

Parent/Child

	Joan Anita Craddock Parent/Child Shared DNA: 3,474 cM across 48 segments	+1,797 People Common ancestor
	Parent/Child Shared DNA: 3,470 cM across 60 segments	+2,185 People Common ancestor
	Parent/Child Shared DNA: 3,466 cM across 62 segments	+2,185 People Common ancestor

Full Sibling

	Brother Shared DNA: 2,481 cM across 63 segments	+2,185 People Common ancestor
--	----------------------------------------------------	----------------------------------

Close Family

	Ernest Howard Waters Close Family-1st Cousin Shared DNA: 1,583 cM across 41 segments	+2,185 People Common ancestor
	1st-2nd Cousin Shared DNA: 941 cM across 36 segments	+5 People Common ancestor
	1st-2nd Cousin Shared DNA: 716 cM across 23 segments	+2,185 People Common ancestor

2nd Cousin

Tag Groups:

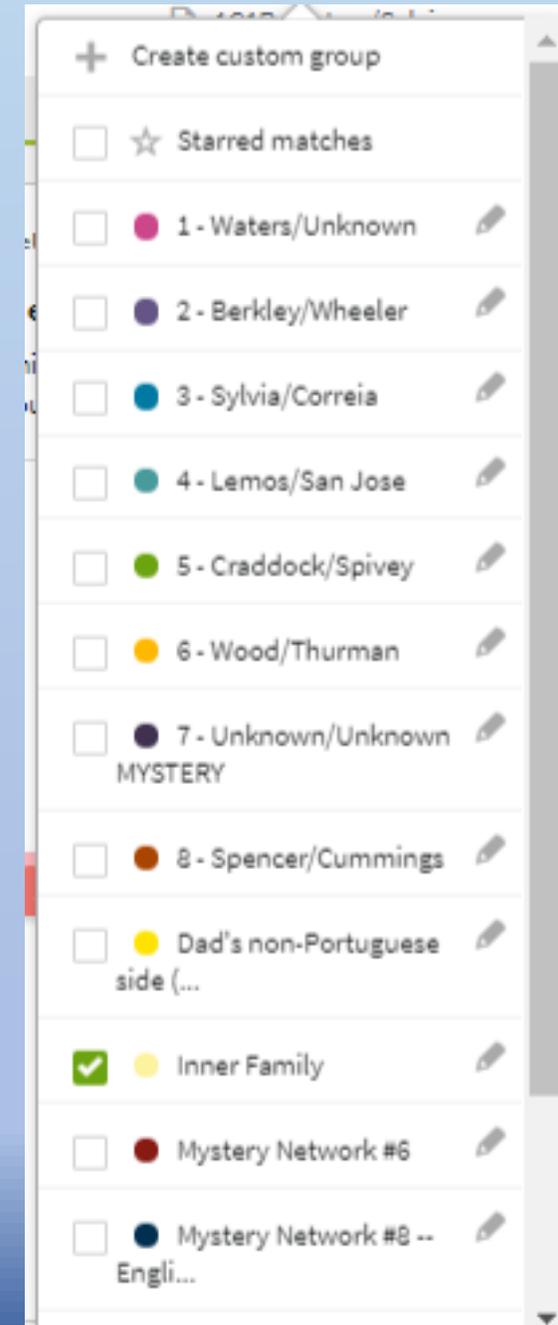
- Create custom group
- Starred matches
- 1 - Waters/Unknown
- 2 - Berkeley/Wheeler
- 3 - Sylvia/Correia
- 4 - Lemos/San Jose
- 5 - Craddock/Spivey
- 6 - Wood/Thurman
- 7 - Unknown/Unknown
MYSTERY
- 8 - Spencer/Cummings
- Dad's non-Portuguese side (...)
- Inner Family
- Mystery Network #8
- Mystery Network #8 -- Engli...

Use Available Tools to Sort Matches

- Best Recommendation:
 - Tag Groups in Ancestry!
 - 24 different colored dots to sort your matches into (now 64 groups for upgraded accounts)
- Other Options:
 - Spreadsheets (manually entered match data)
 - Leeds method using spreadsheets

www.danaleeds.com › dna-color-clustering-the-leeds-method-for-easil...
[DNA Color Clustering: The Leeds Method for Easily ...](#)
Aug 23, 2018 - Unsure of how other people were sorting their Shared Matches from AncestryDNA, I developed my own method: the **Leeds Method** of DNA ...
You've visited this page 2 times. Last visit: 4/30/19

- Use 3rd party tools such as DNAGedcom which can download all your matches and allow easy exporting into spreadsheets
- Gedmatch does have tagging



My kit's tag groups

- IF=Inner Family, anyone who will otherwise have 4 or 8 tag groups



<input type="checkbox"/>	1 - Waters/Unknown	
<input type="checkbox"/>	2 - Berkley/Wheeler	
<input type="checkbox"/>	3 - Sylvia/Correia	
<input type="checkbox"/>	4 - Lemos/San Jose	
<input type="checkbox"/>	5 - Craddock/Spivey	
<input type="checkbox"/>	6 - Wood/Thurman	
<input type="checkbox"/>	7 - Unknown/Unknown MYSTERY	
<input type="checkbox"/>	8 - Spencer/Cummings	
<input type="checkbox"/>	Dad's non-Portuguese side (...)	
<input checked="" type="checkbox"/>	Inner Family	
<input type="checkbox"/>	Mystery Network #6	
<input type="checkbox"/>	Mystery Shipp Network	
<input type="checkbox"/>	Unknown Mom's Side	

Uploading

Uploading

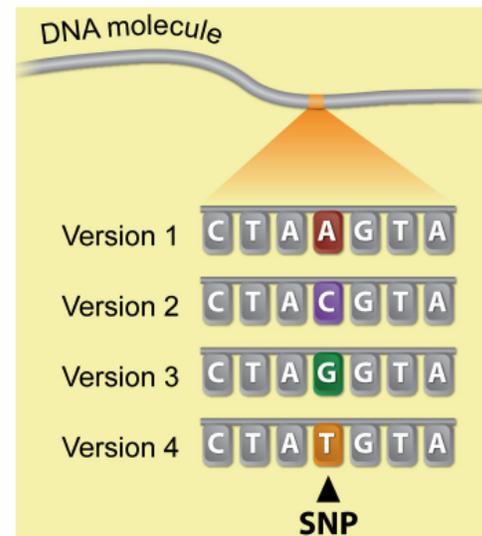
- **WHY?**

- Allows comparisons into other testing company databases
- Sometimes the only way to find a certain match
- It's free!

First step, download your dna “data”

- Each of the 5 testing companies allows you to download your DNA record
 - All but one of them produce a single “.zip” file
 - One, Living DNA, produces a text file that may need to be “zipped”
- **IMPORTANT TO KNOW:** This file only has a very small portion of your DNA mapped, typically about 700,000 markers, or SNPs of your total biome which consists of 3 billion SNPs

SNP Quick Reference



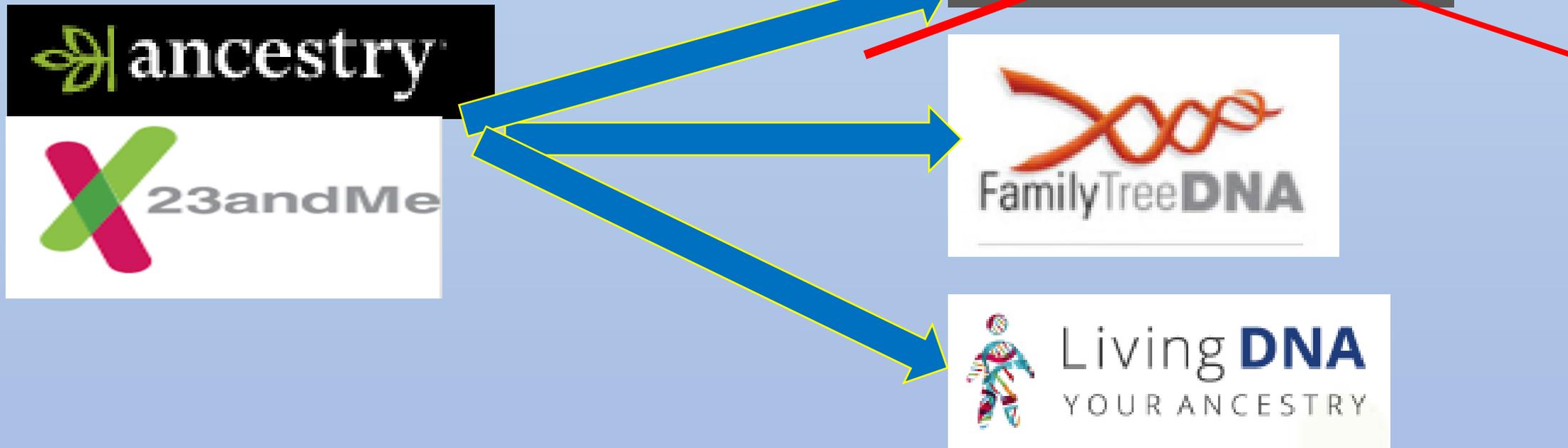
SNP (pronounced "snip") stands for Single Nucleotide Polymorphism. SNPs are single-nucleotide substitutions of one base for another. Each SNP location in the genome can have up to four versions: one for each nucleotide, A, C, G, and T. A SNP and its distribution in a population might look like the images below and to the left.

Not all single-nucleotide changes are SNPs, though. To be classified as a SNP, two or more versions of a sequence must each be present in at least one percent of the general population.

SNPs occur throughout the human genome—about one in every 300 nucleotide base pairs. This translates to about 10 million SNPs within the 3-billion-nucleotide human genome.

Courtesy: <https://learn.genetics.utah.edu/content/precision/snips/>

UPLOADING: 2 of the 5 testing companies allow uploading



Allows you to use test results from one company to compare to other databases --- more matches!

MyHeritage shut down uploading in 2025

ALSO! Upload to GedMatch

- <https://www.gedmatch.com/login1.php>
- Free service that allows uploads from all 5 testing companies



Tools for DNA & Genealogy Research

Home

Log
out

To our valued users:

Thanks to your support, GEDmatch has flourished beyond what I ever could've envisioned when we started 9 years ago. Today, we are 1.3 million users strong, and we're growing every day. That growth has led us to consider a partner who can ensure we continue to thrive while staying true to our mission. I'm extremely pleased to announce that we have found that partner in Verogen, Inc.

Click [HERE](#) to see the rest of Curt's message

Hint: Want to see up to 100,000 matches? Tier 1 "One-to-many DNA comparison" will show you that many matches (if you have them) and allow you to filter them by name, sex, haplogroup and other factors. Tier 1 membership is only \$10 for a month.

New Click here to see video on GEDmatch and Law Enforcement Matching

Click this link for information on 'How To Use GEDmatch' - particularly for new users.

Existing GEDmatch users: click this link for a videos related to the current version of GEDmatch

Click this link for information on Q matching

Messaging



- Primary Goal: to get more information on the match's family tree
- Some important considerations
 - Do as much background research on the person as possible before messaging
 - Keep first message simple and brief—try to get the interest of the other person
 - Do NOT go into technical details in first message --- don't want to scare them off
 - Do include relevant family lines/locations
 - Of course, avoid any potentially sensitive information

A screenshot of a messaging interface. At the top left is a circular profile picture of a man and the name "William Hansen" next to it. Below this is a "Subject" field containing the text "DNA Connection on Smith Line". Underneath is a "Message" field containing the text: "Hello, my name is Ken Waters from Mesa, AZ. It appears you and I may be related on the Smith line. Joseph Smith (born 1823 in Oklahoma) was my 2nd great grandfather and appears to be your 3rd great grandfather. I would like to confirm if this is true and possibly compare our family trees if you don't mind. You can also reach me at my email: satwatcher.gen@gmail.com." Below the message field is the text "Thanks so much!". At the bottom left is a green "Send" button, and at the bottom right is a blue "Cancel" button. A close button (X) is in the top right corner.

Ways to Save

Tips to save



- Wait for the 50% off membership deals that come up once in awhile
 - When they do come up, buy a “gift” membership for yourself setting it to be “gifted” one day after your subscription expires
 - Don’t forget to make sure your current subscription does not “auto-renew” by either cancelling it, removing the credit card, or calling Ancestry
 - I’ve done this the last 3 years and so have only paid \$99 to \$109 for a one-year U.S. subscription --- half price

A screenshot of the Ancestry website during a Black Friday sale. The page features the Ancestry logo in the top left, a 'Log In' link in the top right, and a black banner with the text 'BLACK FRIDAY SALE CYBER MONDAY'. Below the banner, the main headline reads 'Save 50%* on Ancestry® Gift Memberships.' followed by the subtext 'Our biggest discount of the year.' and a prominent green button labeled 'Gift now'.

U.S. Discovery	World Explorer	Family Pro
Access all U.S. records on Ancestry®	Access all U.S. & international records on Ancestry®	Everything on Ancestry®, Fold3®, & Newspapers.com™ Publisher Extra®, Pro Tools, & up to 4 additional accounts
Free for 14 days Auto Renewing, Cancel Anytime.	Free for 14 days Auto Renewing, Cancel Anytime.	Free for 14 days Auto Renewing, Cancel Anytime.
+\$24.99 \$19.99/month	+\$39.99 \$34.99/month	+\$59.99 \$54.99/month
+\$119 \$99/6 mos. Pay per month	+\$169 \$149*/6 mos. Pay per month	+\$259 \$239/6 mos. Pay per month

Tips to save



- Use one account to manage multiple kits
 - Then, when you upgrade to a membership, ProTools, or AncestryDNA Plus you will only have to pay once for them and they will apply to all your managed kits!
- Look out for specials on ProTools such as reduced subscription for 6 months

NOTE: All of this is always subject to change!

	Cost	Description	I have
DNA Kit	\$0 (beyond cost of kit)	See matches, ethnicity, basic tools	<input checked="" type="radio"/>
Membership	\$99-\$300/yr	Ability to search trees, records, etc.	<input checked="" type="radio"/>
ProTools	\$5 - \$10/mo	Many useful tools, in particular the shared matches (note: requires a full paid membership to add on)	<input checked="" type="radio"/>
AncestryDNA Plus	\$30/6 mo	Basic shared matches (included with membership)	<input type="radio"/>



AncestryDNA Plus™ membership.

AncestryDNA Plus™ is a premium DNA membership that gives you access to helpful tools and new features to make it easier than ever to make continuous discoveries about your family.

\$29.99 FOR 6 MONTHS*
(Effectively \$5 a month)

10 Helpful Hints

- #1: Test only with the 5 trusted companies (Ancestry, 23andMe, FTDNA, MyHeritage, Living DNA)
- #2: Download the DNA data and upload it to as many sites as you can
- #3: Build a single family tree that is accurate and supportable with good-quality records and keep that family tree PUBLIC (!) and make sure it's attached to your DNA record
- #4: Build private trees for all your hypothesis tests ("what if") to see what hints can be found to help solve mysteries and build your public tree up
- #5: Learn to use useful tools such as DNAPainter and its relationship estimator

10 Helpful Hints

- #6: Be prepared to deal with unexpected surprises!
- #7: Use well-crafted, well-thought out messaging to DNA matches to share information and test your hypotheses
- #8: Regularly check for new matches
- #9: Sort your matches (starting at the top) into family groups
 - I like to use Ancestry's Tag feature to sort into my 8 great-grandparent lines
- #10: Learn more (go to conferences, attend local meetings (e.g., East Valley DNA SIG), watch videos, take classes [like mine!])

BONUS RULE: HAVE FUN, ENJOY, WELCOME YOUR NEW-FOUND FAMILY MEMBERS!

Questions?



Remember---all presentations online

- Presentations: <http://familytreeaz.com/Presentations>



Genealogy Presentations

2023

[Identifying Your DNA Matches \(Jan 2023\)](#)

2022

[A Unified Process for DNA Matches \(Dec 2022\)](#)

[Intro to DNA \(Dec 2022\)](#)

[DNA Painter Dec 2022](#)

[GEDMatch \(Trilogy\)](#)

[DNA Relational Diagrams](#)

[First Look at Ancestry SideView Matching](#)

[Deep Dive into MyHeritage DNA Oct 2022](#)

[What Can DNA Do For You Sep 2022](#)

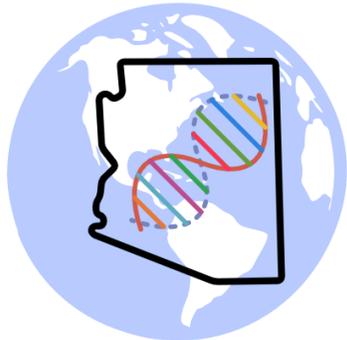
[New Match Methodology 2022](#)

[GEDMatch Apr 2022 Handout](#)

[DNA Tips & Tricks](#)

[Intro to DNA \(Mar 2022\)](#)

FamilyTreeAZ.com



Presentations:

<http://familytreeaz.com/Presentations>



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