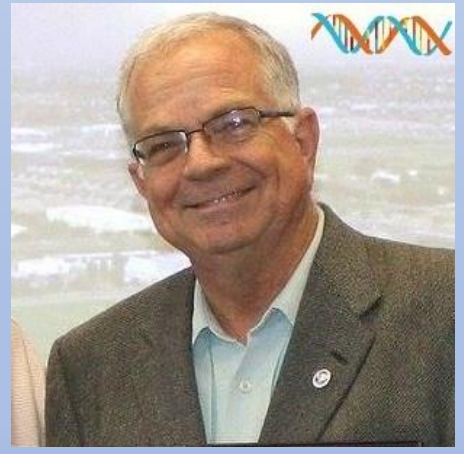
Next Steps with your DNA

Red Mountain Mesa Public Library



Ken waters

Satwatcher.gen@gmail.com

http://familytreeaz.com/presentations

November 2026

All slides and handouts can be found at:

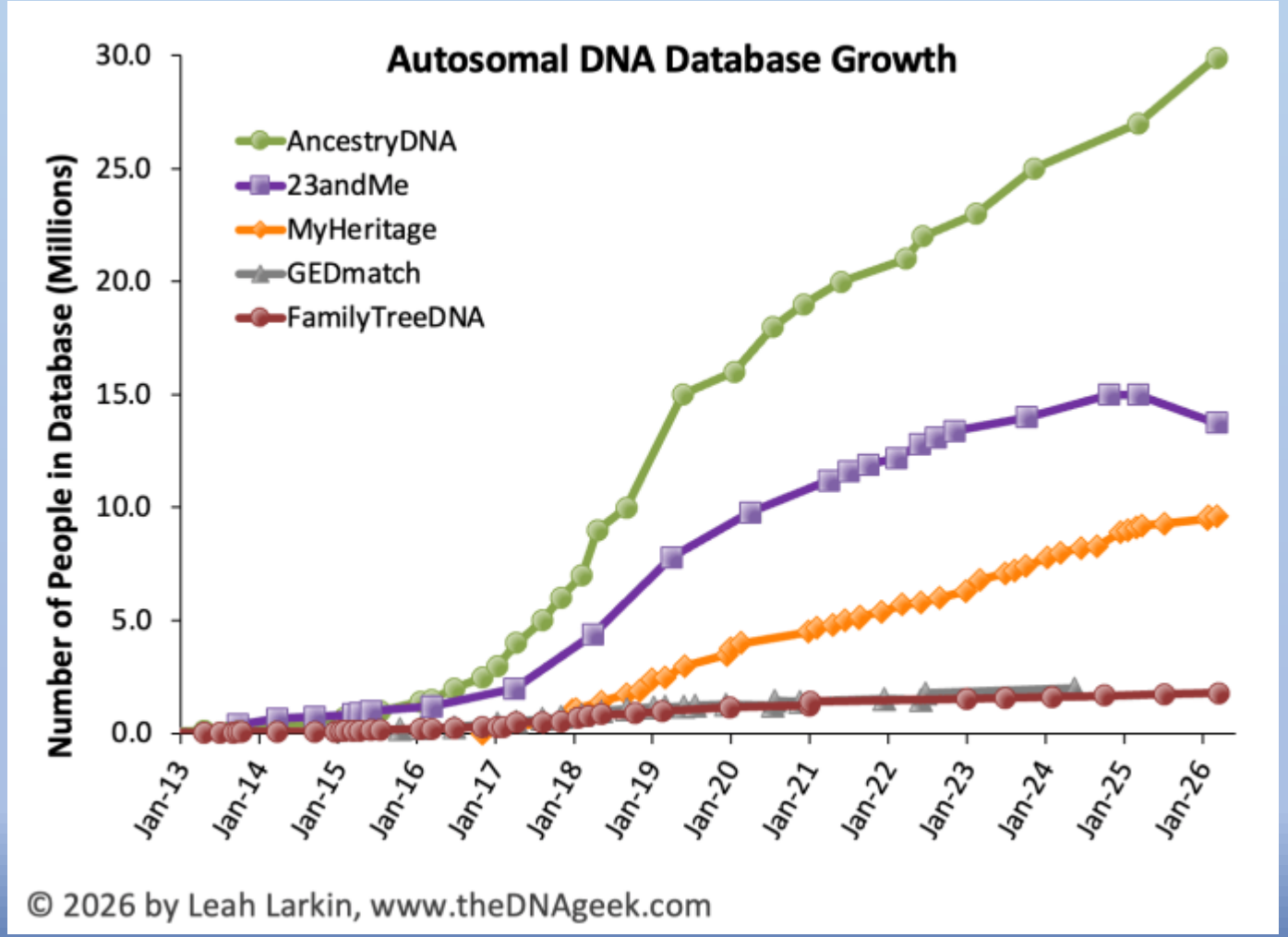
http://www.familytreeaz.com/Presentations/



QR Code: take photo to open to presentations

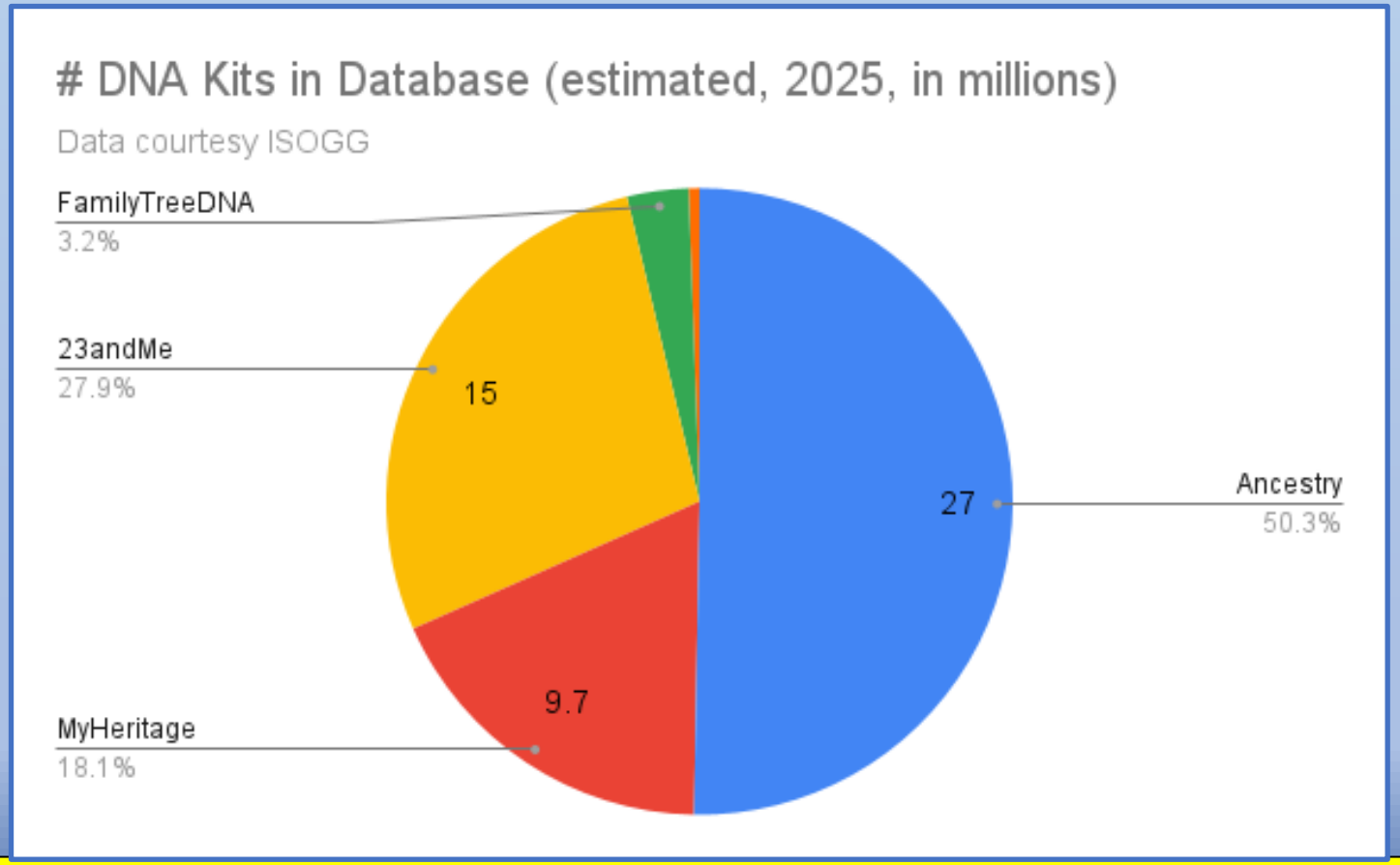
Testing Companies Over Time

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



Current Numbers of tests

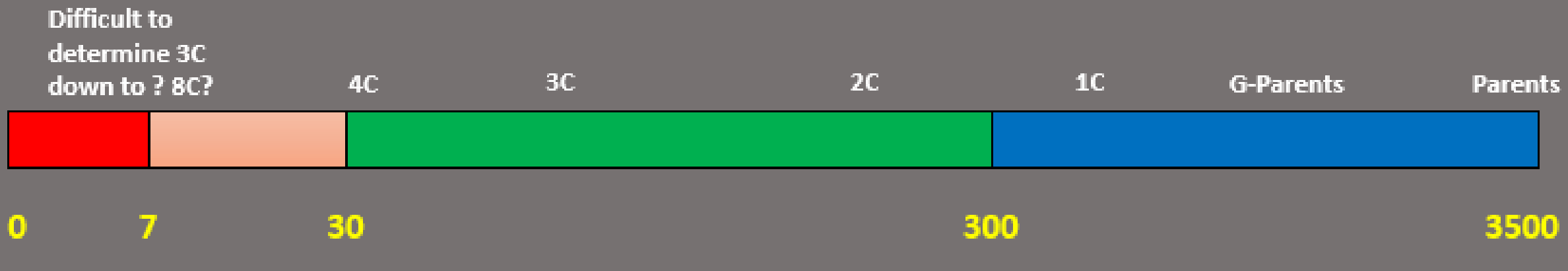
- Ancestry has by far the most DNA tests in their database
- Followed by 23andMe and MyHeritage
- The tiny sliver (too small to label) is LivingDNA



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

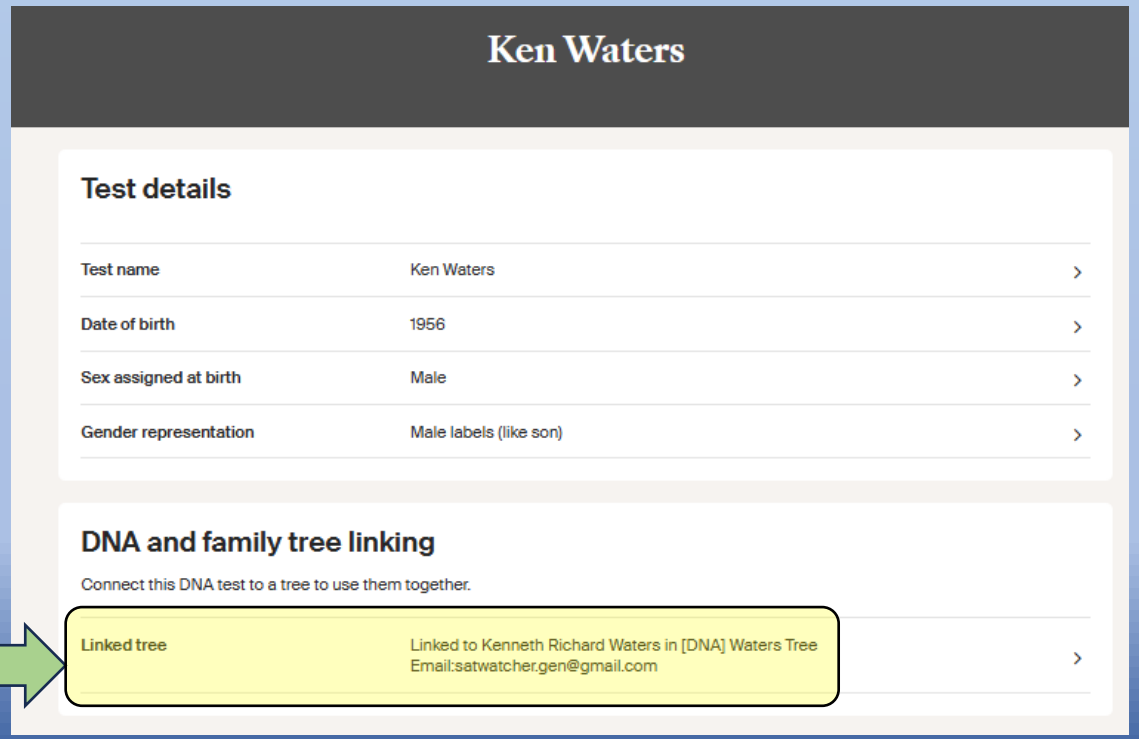
Linking a tree to your DNA kit

- 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

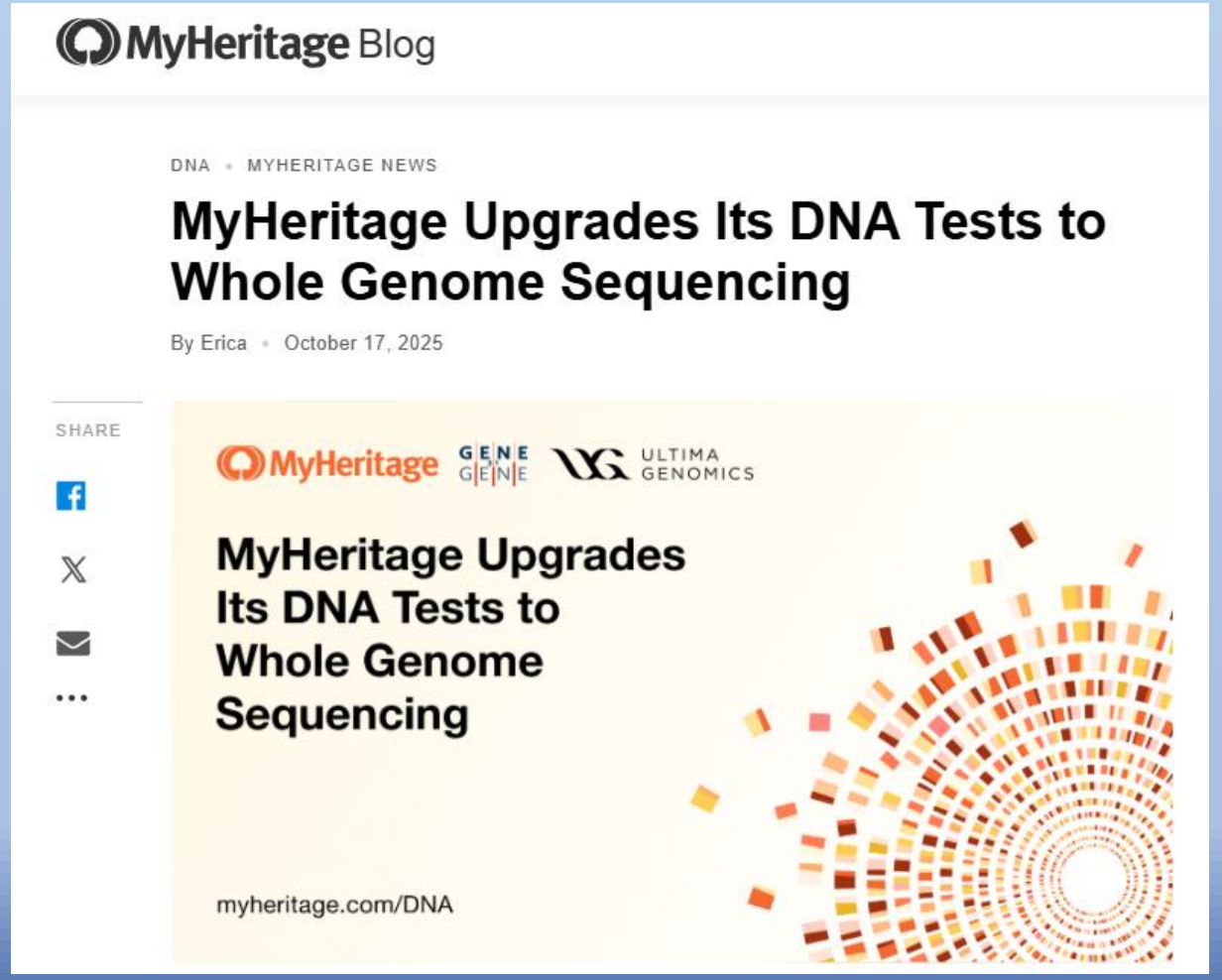
1. In the top-right corner of Ancestry®, click your **Profile** and select **Account Settings**.
2. On the left side of the page, under *Settings*, click **DNA**.
3. Select a DNA test.
4. Under *DNA and family tree linking*, click **DNA link**.
5. Choose to link, unlink, or change your family tree link.
   - **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.**



Whole Genome Sequencing

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!)



Whole Genome Sequencing (WGS – MyHeritage)

- Announced Oct 2025, supposedly
-

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.

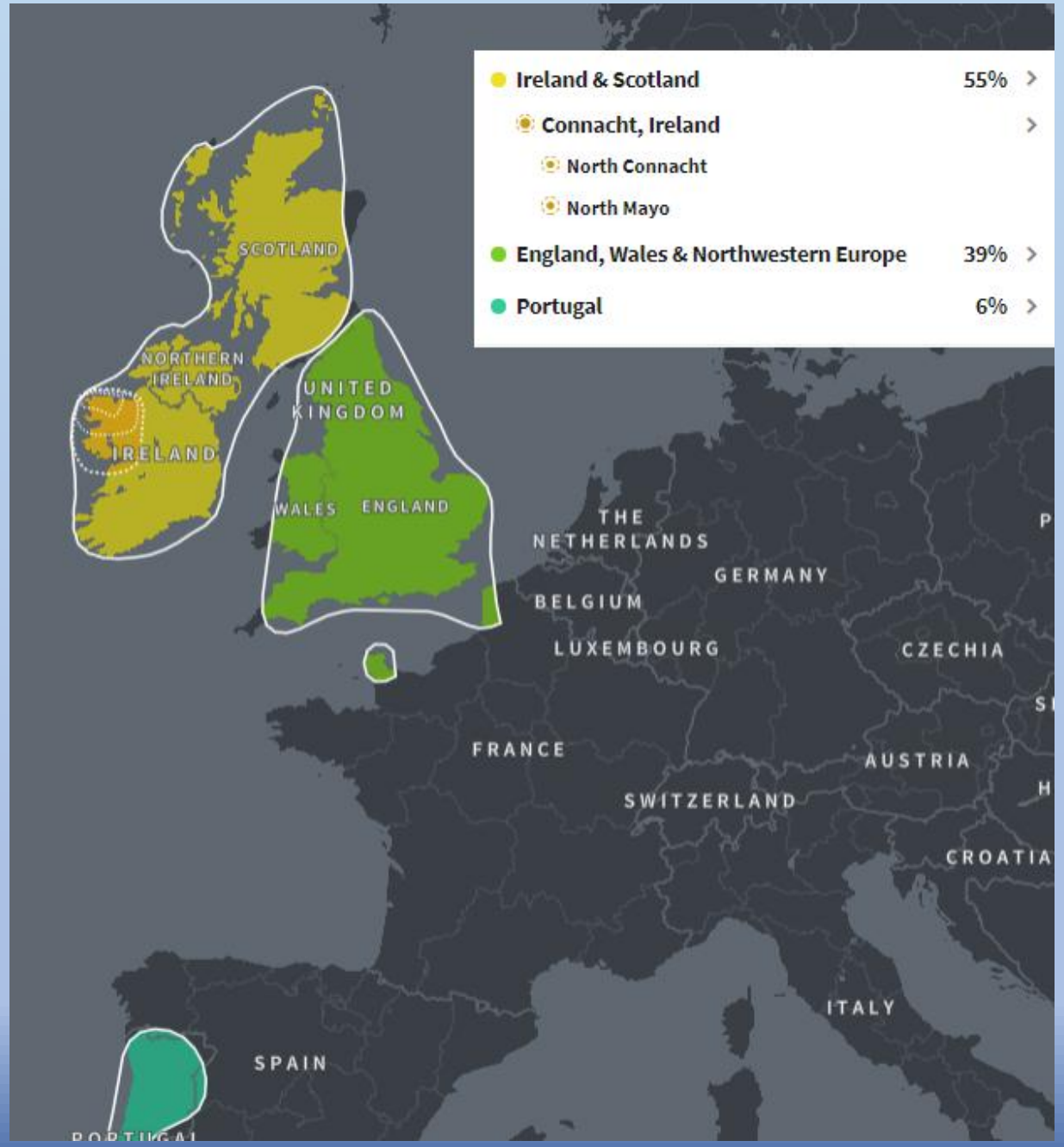
I will be trying it and hope to report on my findings in 2026!



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



Ken Waters

Compare | Invite

Summary | Origins | Matches | Traits

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%

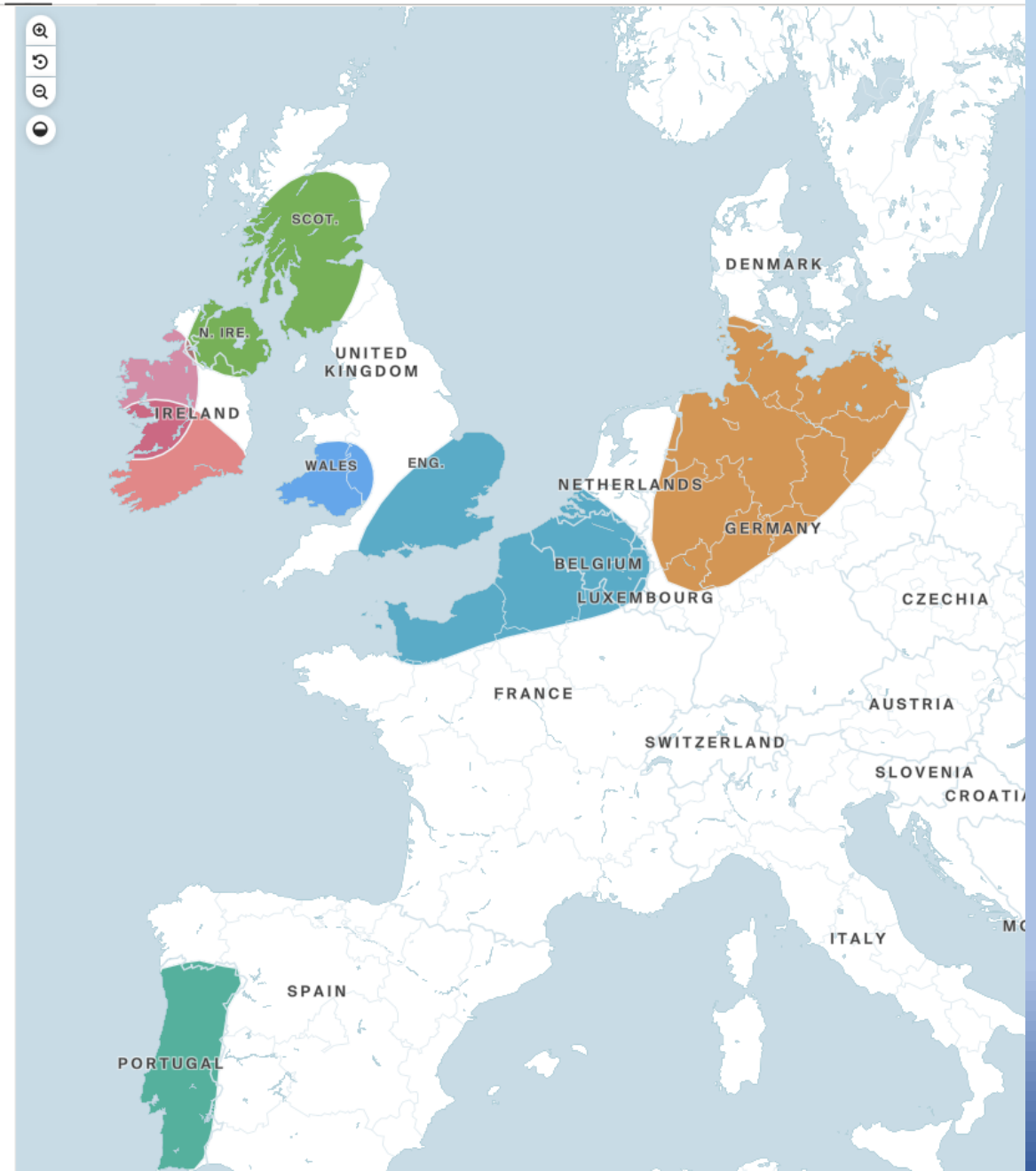
Updated October 2025. View previous results and FAQs

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

Share

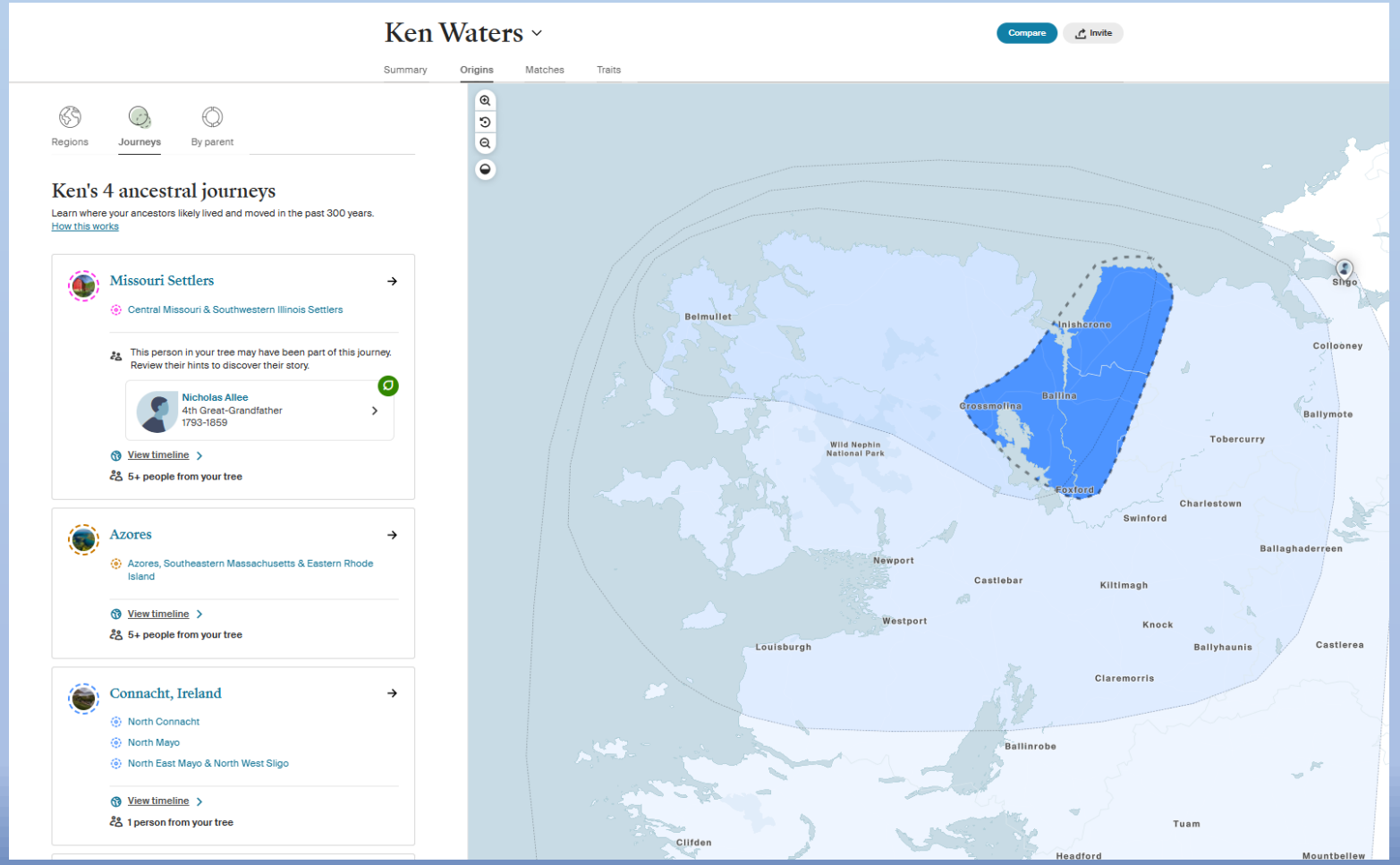
We found a potential ancestor for you

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

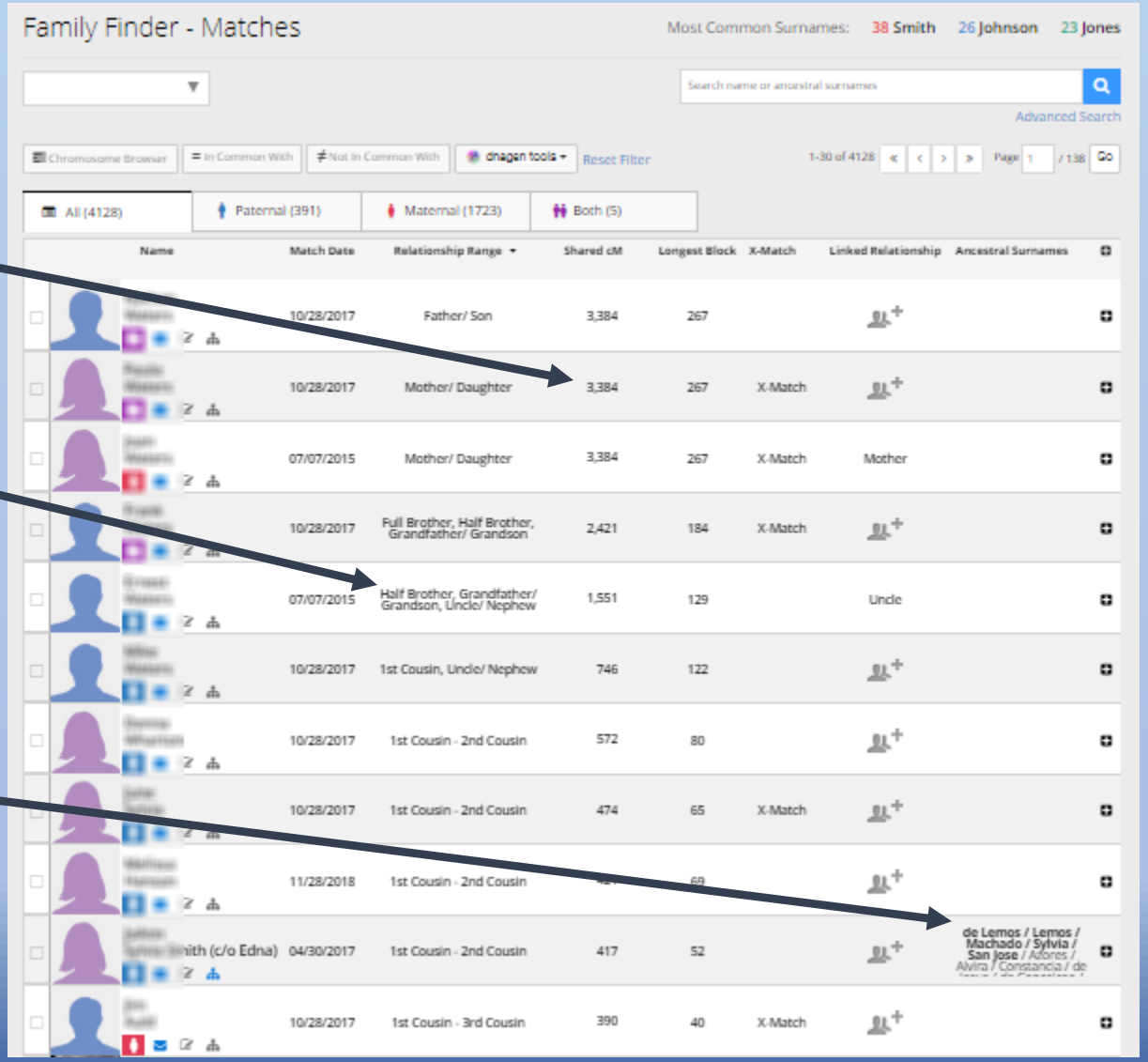
3,384

- Estimated Relationship

Half Brother, Grandfather/ Grandson, Uncle/ Nephew

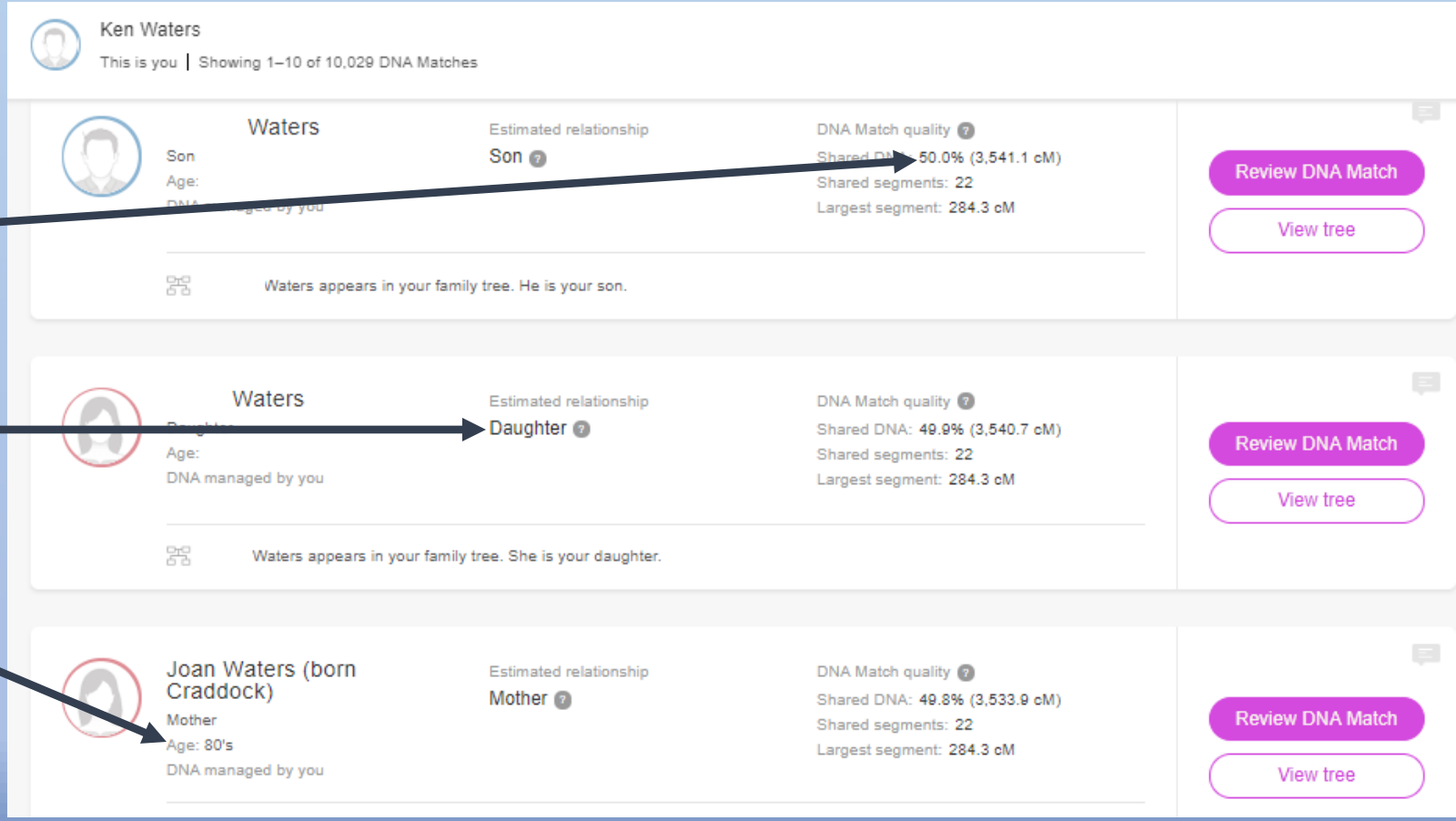
- Surnames, if provided

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



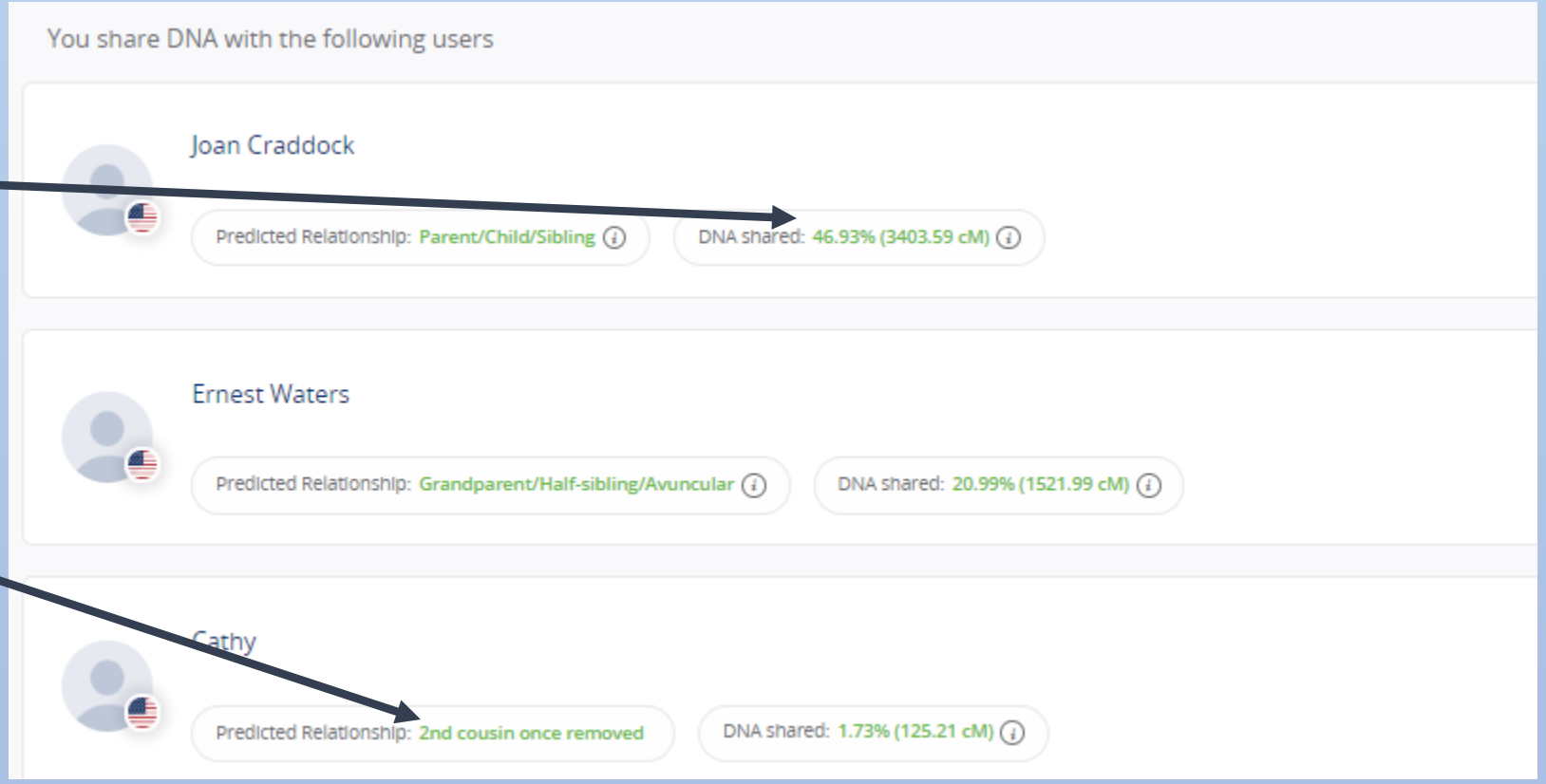
Match Lists --- My Heritage

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



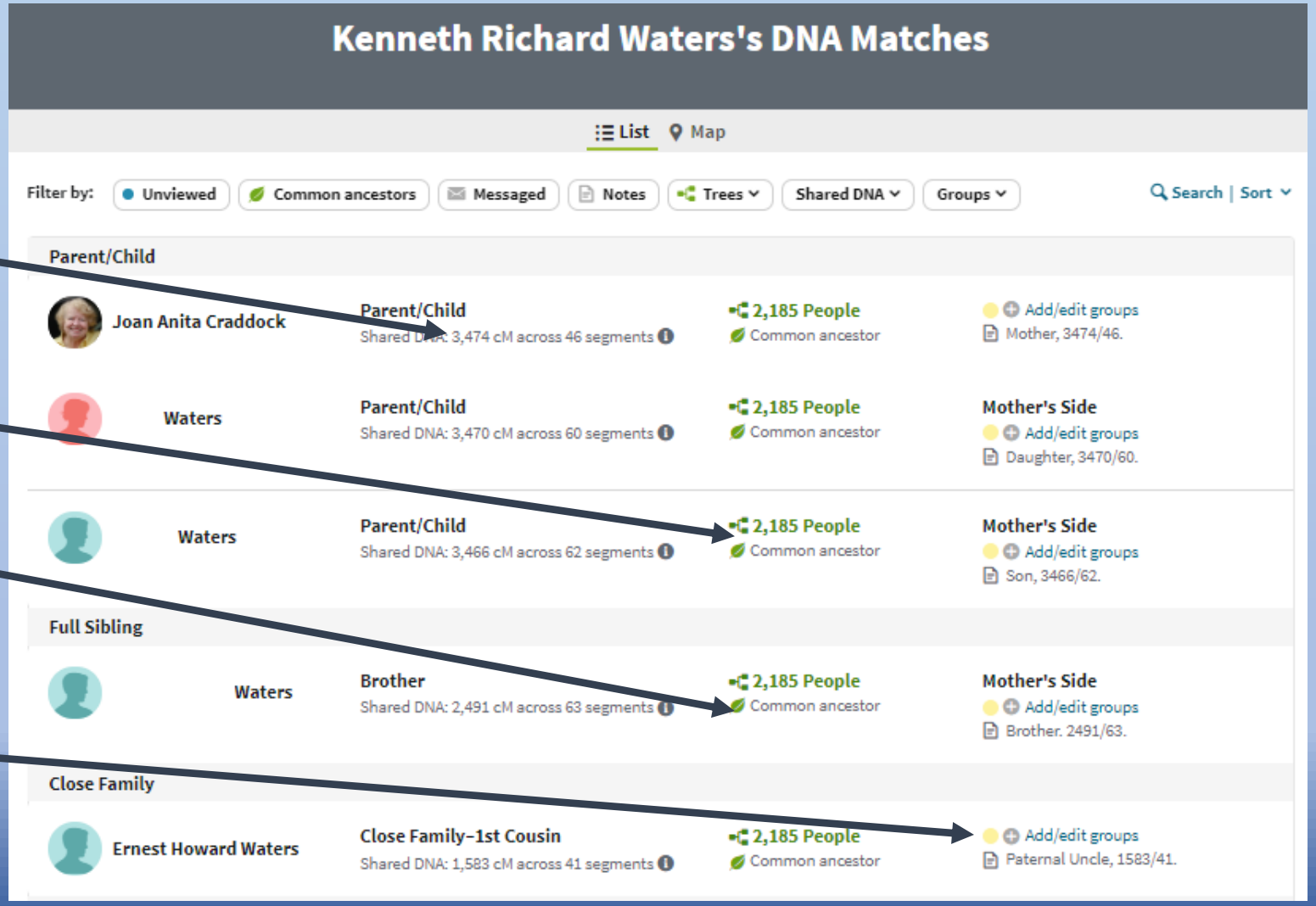
Match Lists --- Living DNA

- Match strength in cMs
- Estimated Relationship



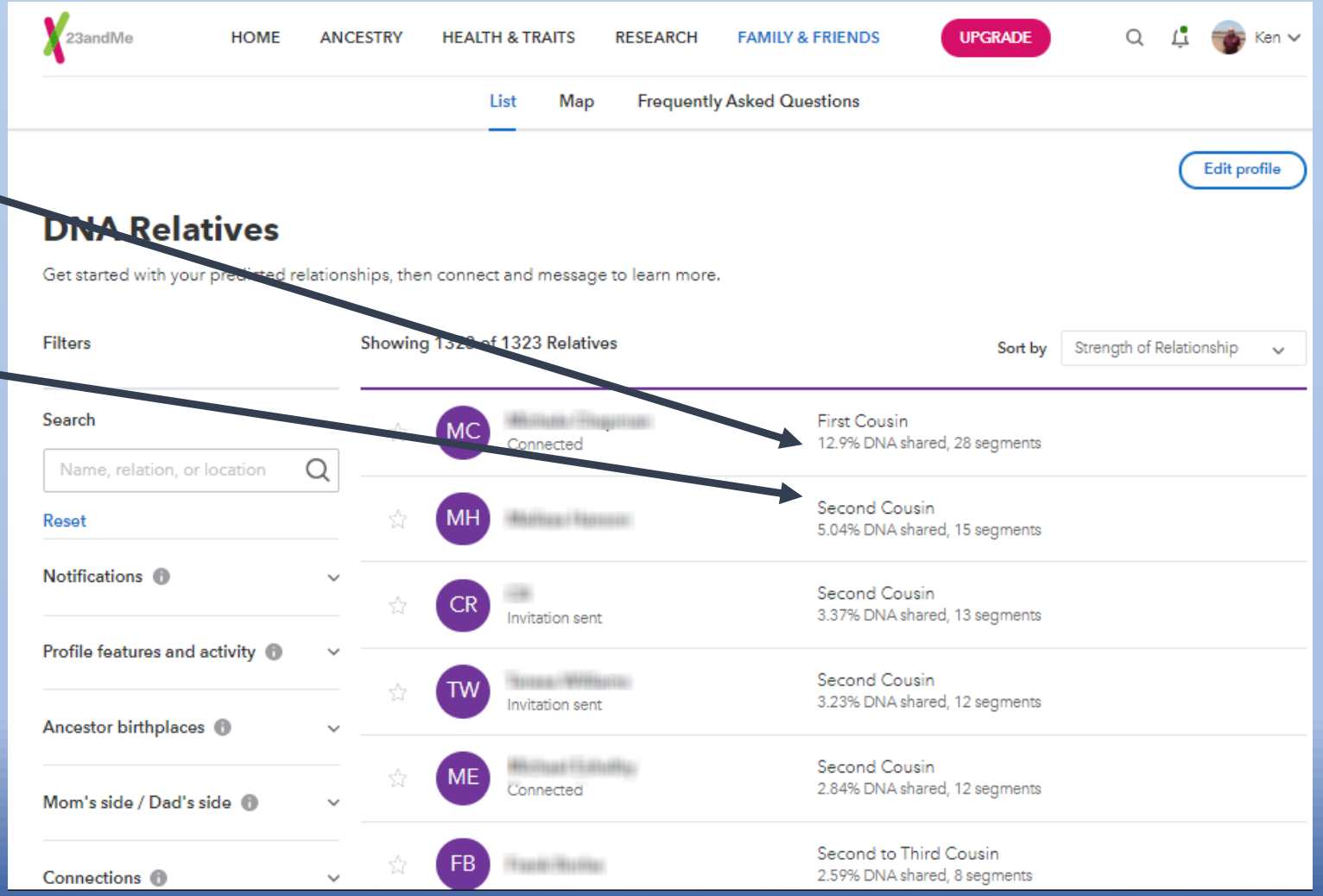
Match Lists --- Ancestry

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



Match Lists --- 23andMe

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



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

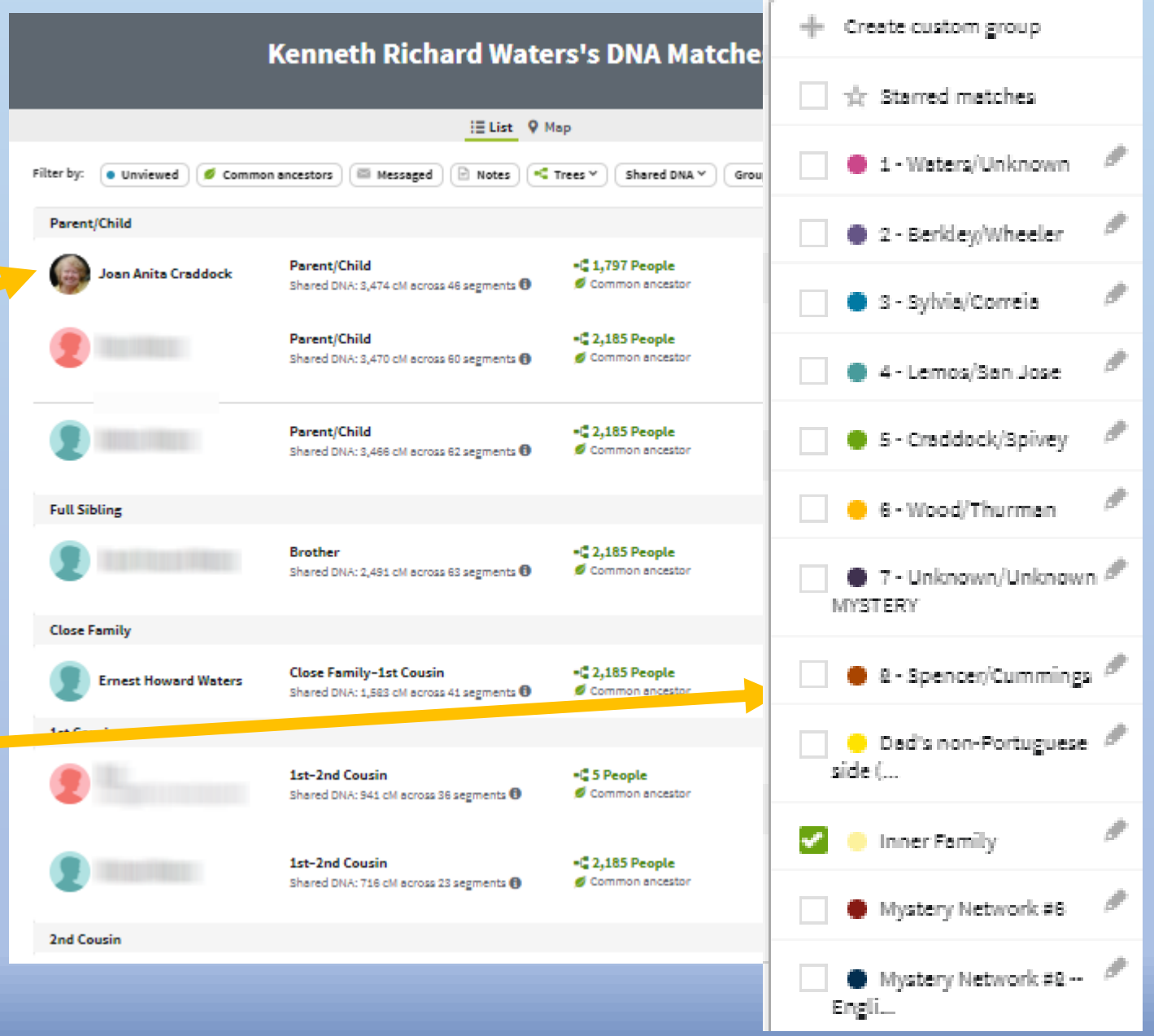






First steps

- 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



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

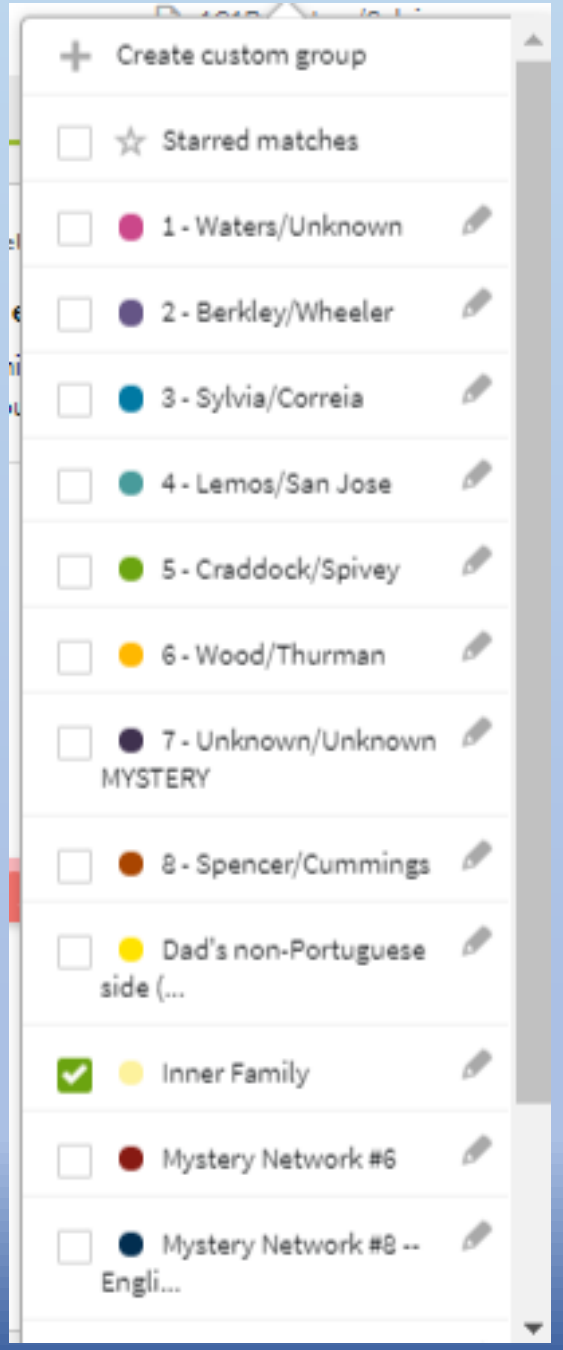
www.danaleeds.com › dna-color-clustering-the-leeds-method-for-easil...

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 ...

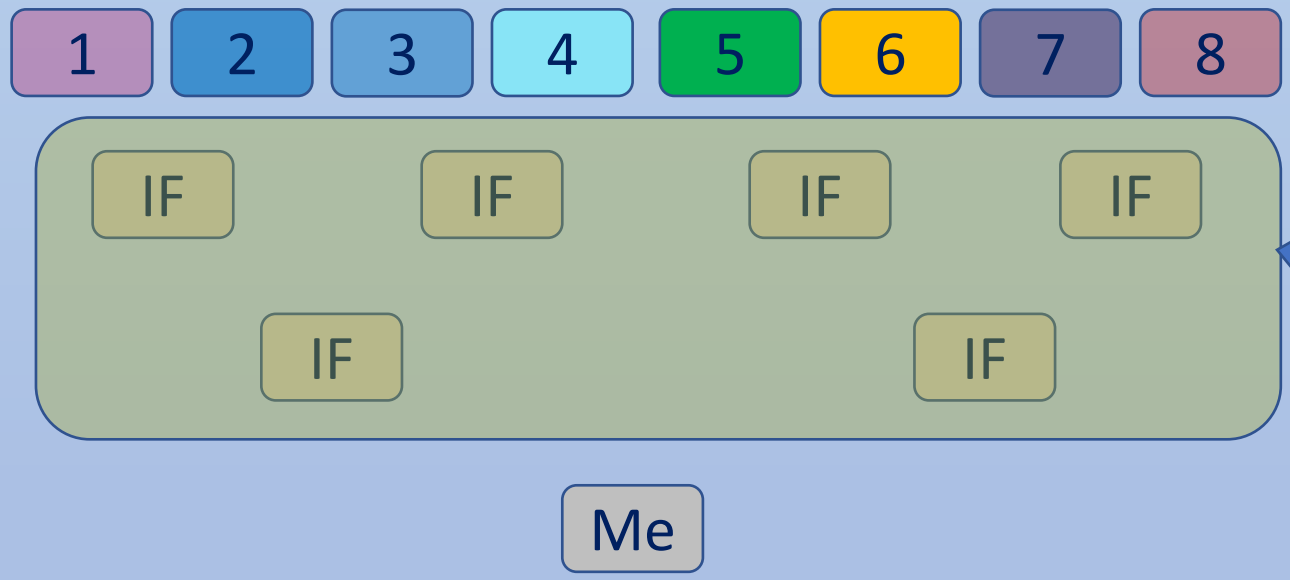
You've visited this page 2 times. Last visit: 4/30/19

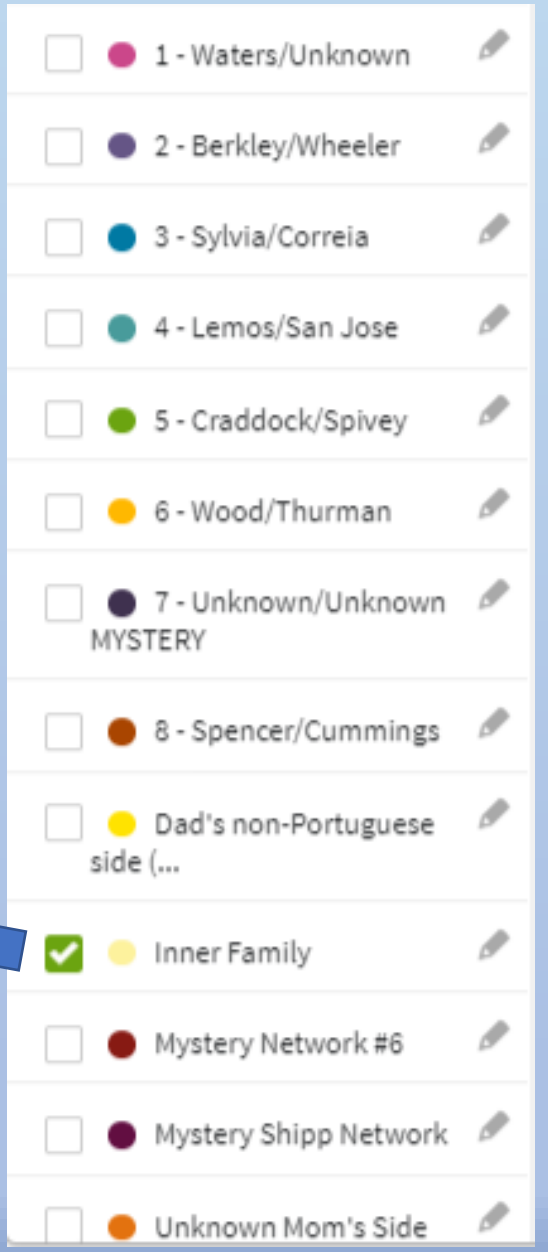
  - Use 3rd party tools such as DNAGedcom which can download all your matches and allow easy exporting into spreadsheets
  - Gedmatch does have tagging



My kit’s tag groups

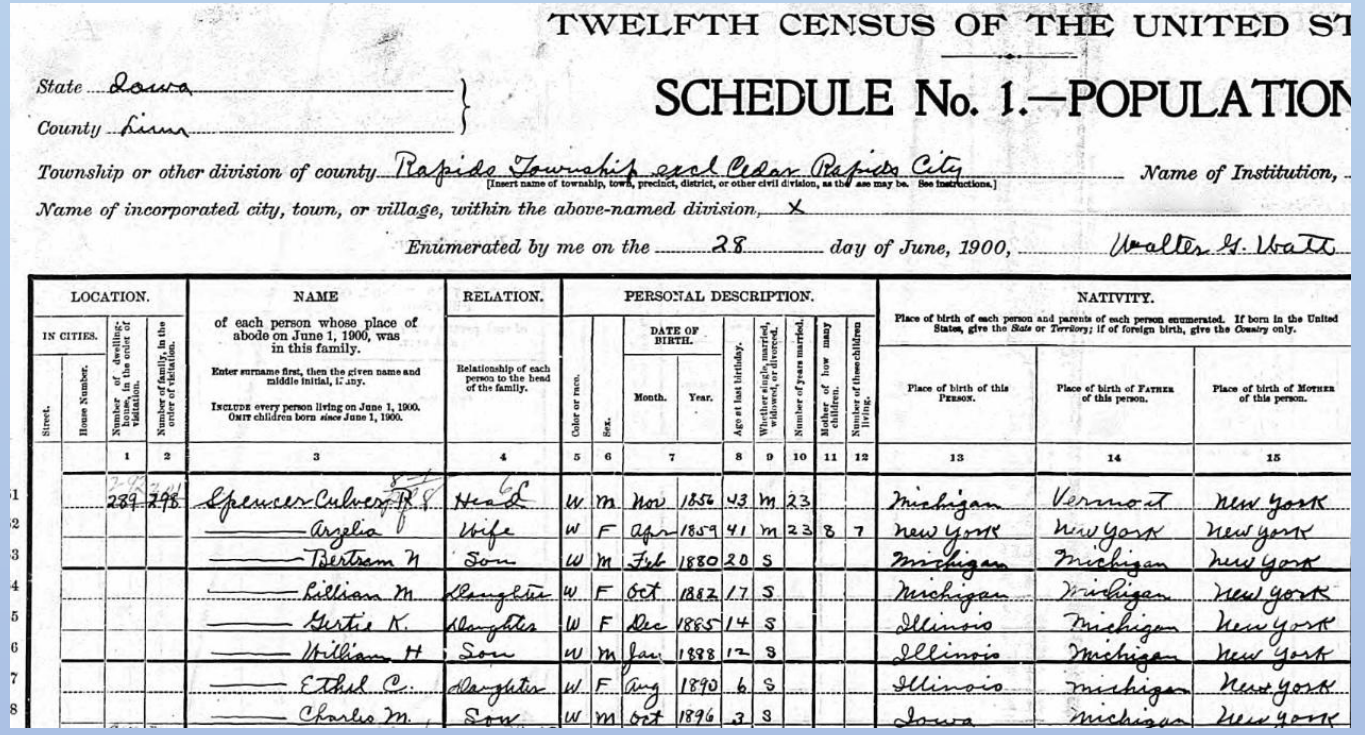
- IF=Inner Family, anyone who will otherwise have 4 or 8 tag groups





Important Step – Identify a Match

- Ways to Identify
  - Search on Facebook
  - Search on LinkedIn
  - Search on Google
  - Analyze the tree (if it exists) for clues to parents or siblings and search for each of them for clues
  - Check records in databases such as FamilySearch.com, Ancestry, MyHeritage
    - Useful examples include City Directories, Birth Index, Public Records (e.g., utility accounts), voting records, state and national census



TWELFTH CENSUS OF THE UNITED ST

State Iowa
County Linn

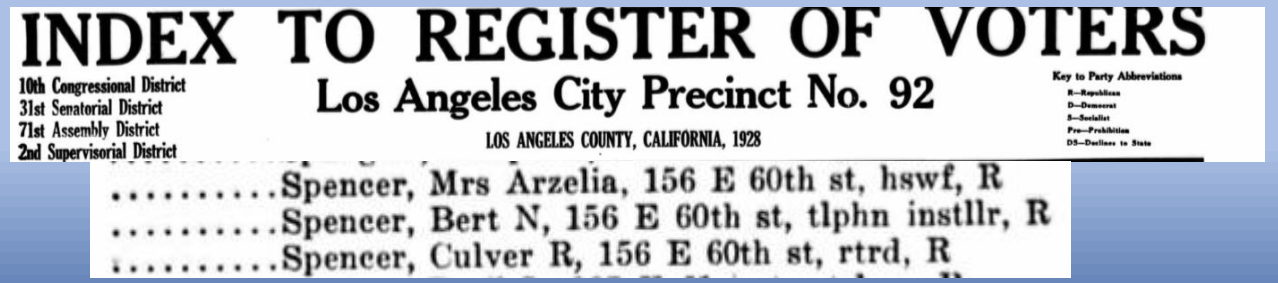
SCHEDULE No. 1.—POPULATION

Township or other division of county Rapids Township and Cedar Rapids City [Insert name of township, town, precinct, district, or other civil division, as the case may be. See instructions.] Name of Institution,

Name of incorporated city, town, or village, within the above-named division, X

Enumerated by me on the 28 day of June, 1900, Walter H. Watts

	LOCATION.				NAME of each person whose place of abode on June 1, 1900, was in this family. Enter surname first, then the given name and middle initial, if any. INCLUDE every person living on June 1, 1900. OMIT children born since June 1, 1900.	RELATION. Relationship of each person to the head of the family.	PERSONAL DESCRIPTION.								NATIVITY. Place of birth of each person and parents of each person enumerated. If born in the United States, give the State or Territory; if of foreign birth, give the Country only.		
	IN CITIES. Street.	IN CITIES. House Number.	Number of dwelling, in the order of visitation.	Number of family, in the order of visitation.			Color or race.	Sex.	DATE OF BIRTH. Month.	DATE OF BIRTH. Year.	Age at last birthday.	Whether single, married, widowed, or divorced.	Number of years married.	Mother of how many children.	Number of these children living.	Place of birth of this Person.	Place of birth of Father of this person.	Place of birth of Mother of this person.
			1	2	3	4	5	6	7		8	9	10	11	12	13	14	15
1			239	298	Spencer Culver R	Head	W	M	Nov	1856	43	M	23			Michigan	Vermont	New York
2					Arzelia	Wife	W	F	Apr	1859	41	M	23	8	7	New York	New York	New York
3					Bertram N	Son	W	M	Feb	1880	20	S				Michigan	Michigan	New York
4					Lillian M	Daughter	W	F	Oct	1882	17	S				Michigan	Michigan	New York
5					Gertie K.	Daughter	W	F	Dec	1885	14	S				Illinois	Michigan	New York
6					William H	Son	W	M	Jan	1888	12	S				Illinois	Michigan	New York
7					Ethel C.	Daughter	W	F	Aug	1890	6	S				Illinois	Michigan	New York
8					Charles M.	Son	W	M	Oct	1896	3	S				Iowa	Michigan	New York



INDEX TO REGISTER OF VOTERS

10th Congressional District
31st Senatorial District
71st Assembly District
2nd Supervisorial District

Los Angeles City Precinct No. 92

LOS ANGELES COUNTY, CALIFORNIA, 1928

Key to Party Abbreviations
R—Republican
D—Democrat
S—Socialist
Pro—Prohibition
DS—Declines to State

.....Spencer, Mrs Arzelia, 156 E 60th st, hswf, R
.....Spencer, Bert N, 156 E 60th st, tlphn instllr, R
.....Spencer, Culver R, 156 E 60th st, rtrd, R

Uploading

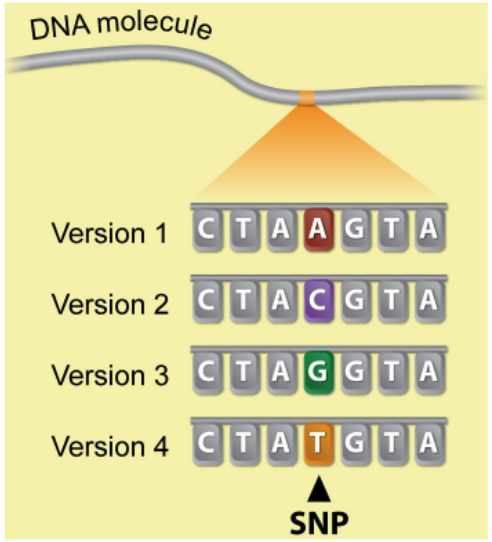
Uploading

- 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



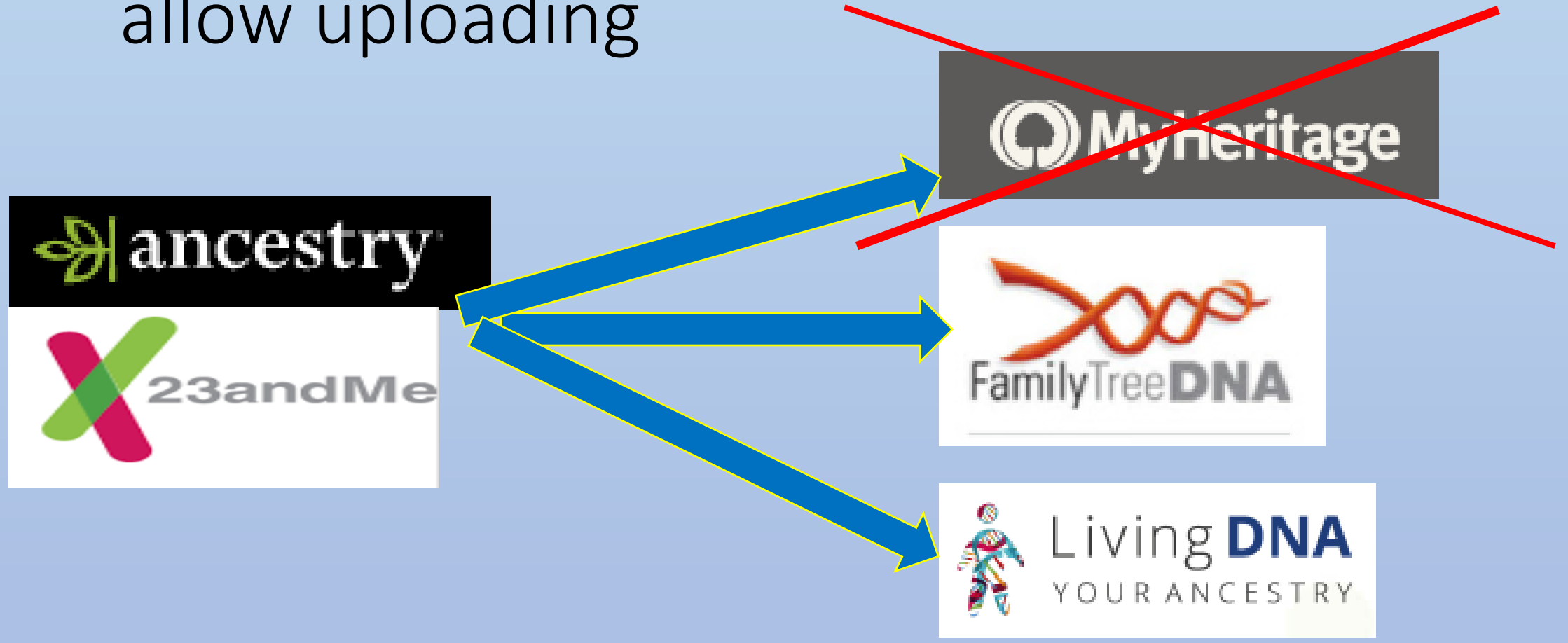
SNP (pronounced "snip") stands for Single Nucleotide Polymorphism. SNPs are single-nucleotide substitutions of one base for another. Each SNP location in the genome can have up to four versions: one for each nucleotide, A, C, G, and T. A SNP and its distribution in a population might look like the images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

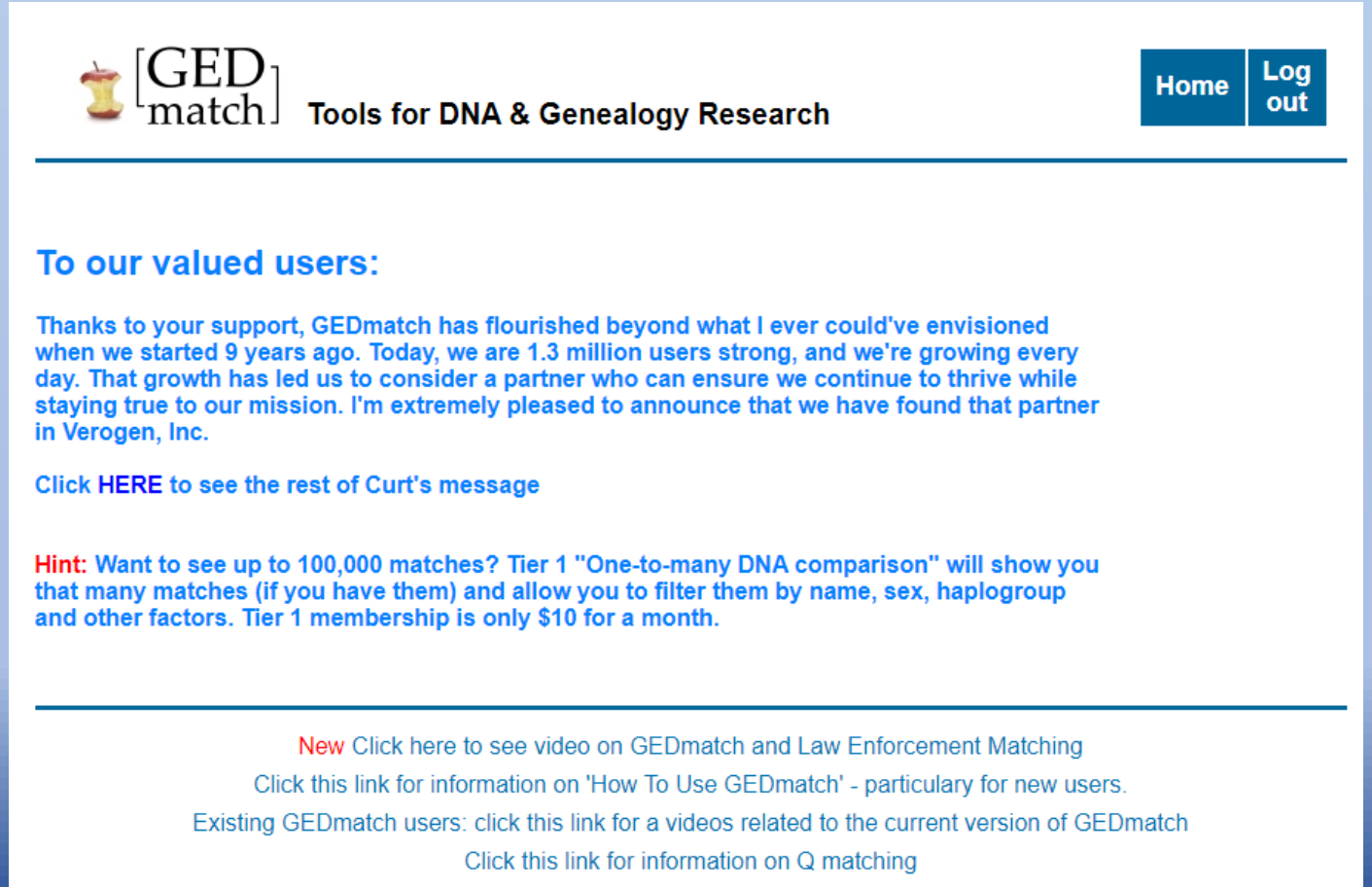


Allows you to use test results from one company to compare to other databases --- more matches!

MyHeritage shut down uploading in 2025

ALSO! Upload to GedMatch

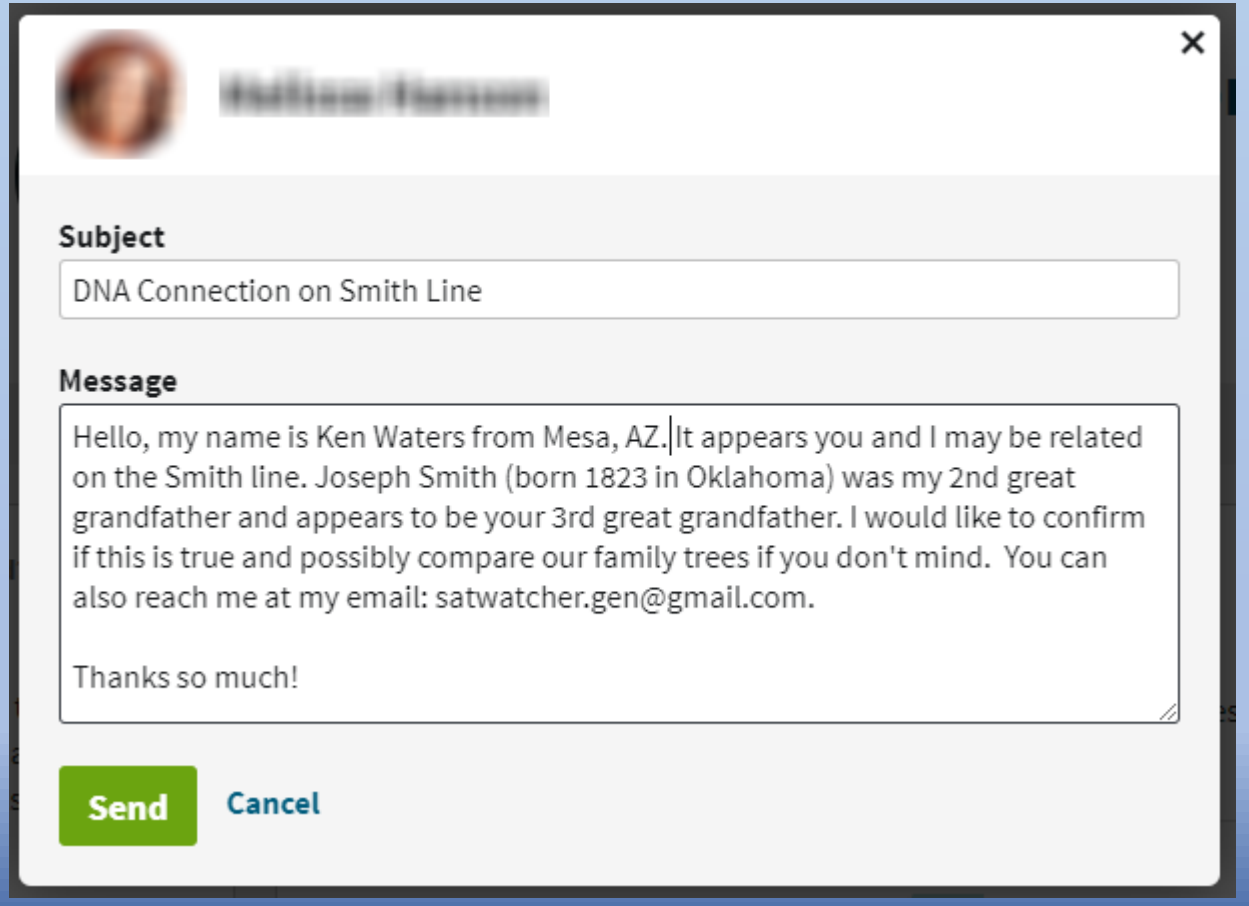
- https://www.gedmatch.com/login1.php
- Free service that allows uploads from all 5 testing companies



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



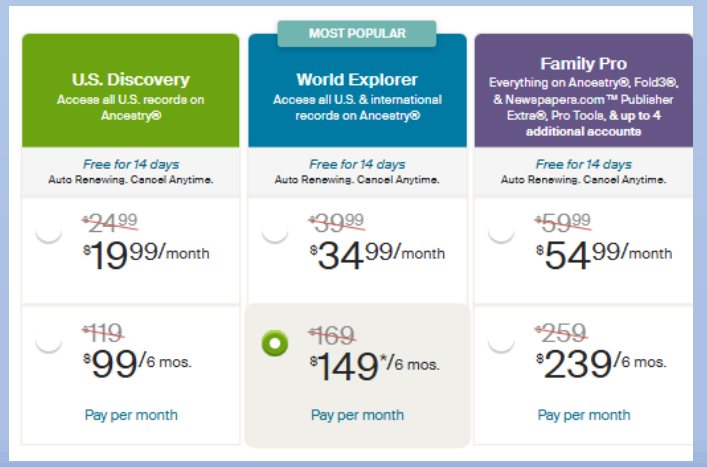
Ways to Save

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





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	●
Membership	$99-$300/yr	Ability to search trees, records, etc.	●
ProTools	$5 - $10/mo	Many useful tools, in particular the shared matches (note: requires a full paid membership to add on)	●
AncestryDNA Plus	$30/6 mo	Basic shared matches (included with membership)	



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)

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



Contact:

Ken Waters
E-Mail: **satwatcher.gen@gmail.com**
Google Voice Phone: (480) 331-5889