

Genetic Networks

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Illustrations of.com #60477

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



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Genetic Networks

- According to Diahan Southard:

BLOGWEBINARSTHE

What is a Genetic Network?

Diahan Southard


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What is a genetic network? Here's how genetic networks apply to your DNA matches and how they can topple your genealogy brick walls by finding your missing ancestors and solving family history mysteries!

Why do people (especially science people) use big words to describe simple concepts?

I do not have an answer to this bigger question, but I can tell you that **a genetic network is just a group of people who share DNA**. And it's essential to your genetic genealogy research.

I want you to **start thinking about your DNA match list in terms of these genetic groups**. An essential characteristic of these groups is that in order to be included, you have to have a membership. Your membership is the shared DNA you have with at least one other person in that group.



<https://www.yourdnaguide.com/ydgblog/what-is-genetic-network-dna>

What is a Genetic Network?

- A collection of DNA matches to a DNA test taker that are related to each other and to YOU



You

- Let's start by looking at Ancestry's **Shared Matches** feature

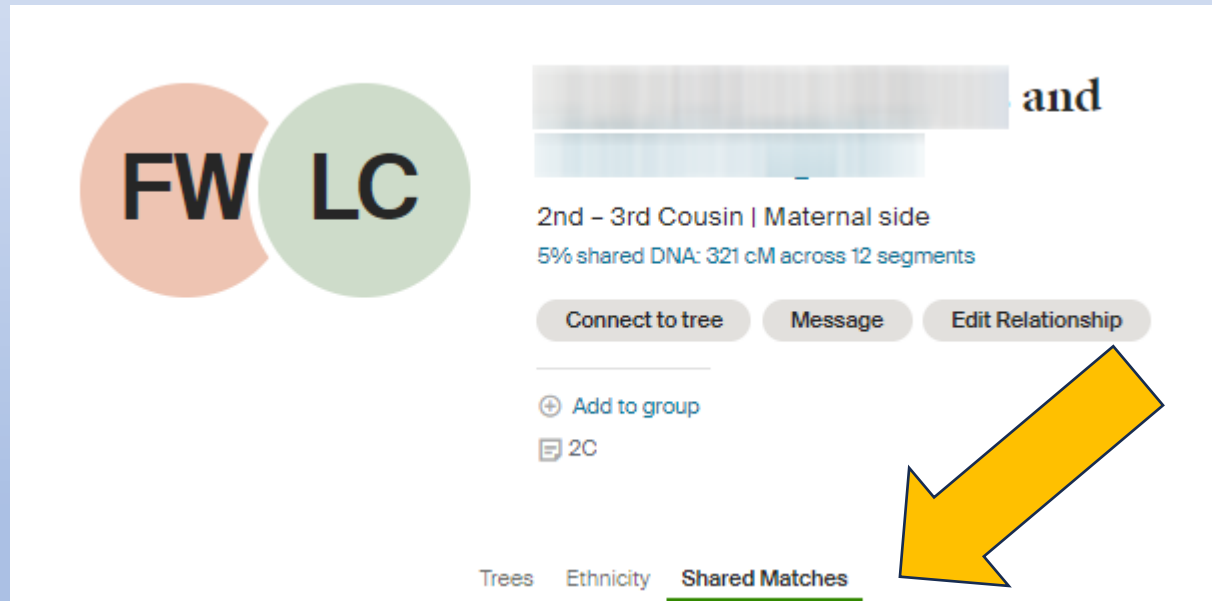
Your DNA Match List

- Start with your DNA match list
- Closest matches will be at the top
- Click on the closest matches whom you do know, such as a 1st cousin (shares grandparents), etc.

The screenshot shows a 'DNA Matches' interface. At the top, there's a header with 'View [DNA] Waters Tree Email:satwatchesgen@gmail.com' and a navigation bar with 'All matches', 'By parent', 'By ancestor', and 'By location'. Below this is a filter bar with options: 'Unviewed', 'Common ancestors', 'Notes', 'Trees', 'Shared DNA', and 'Groups'. A search bar is also present. The main content area is titled 'Parent/Child' and displays a list of matches. Each match entry includes a profile picture, a name, a tree icon with 'Public linked tree' and a count of people (e.g., 2,711 People), and a 'Common ancestor' icon. To the right of each entry is a 'Do you recognize them?' section with 'Yes' and 'Learn more' buttons. The matches are sorted by closeness, with the most recent or closest matches at the top.

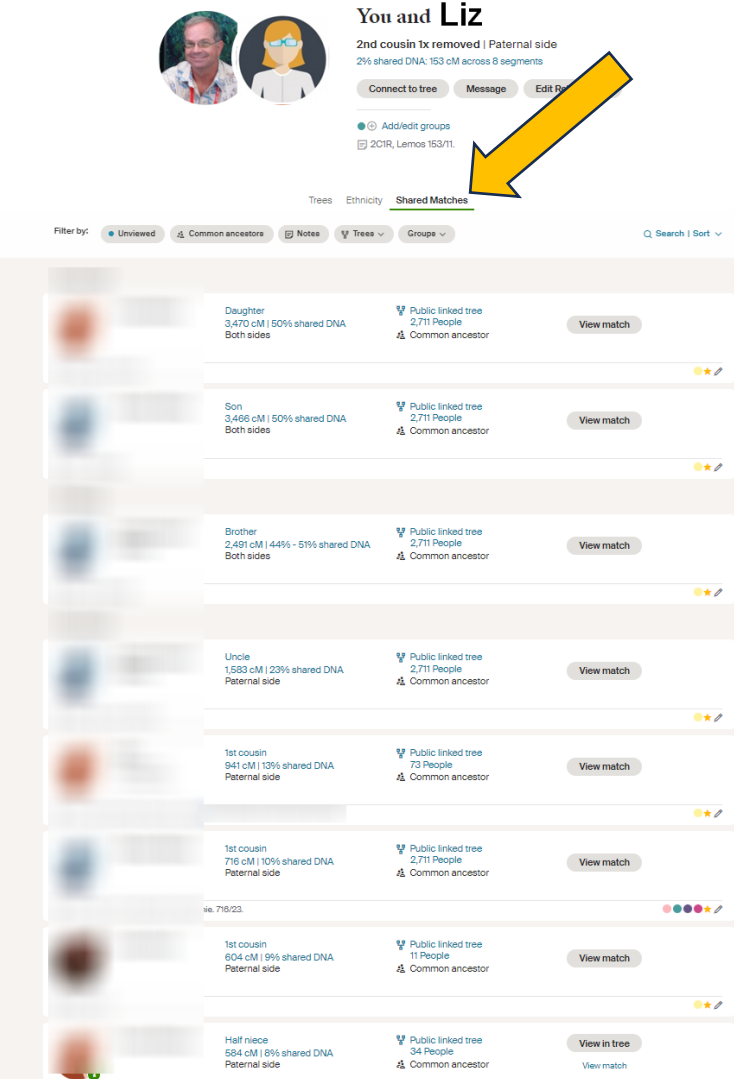
Shared Matches in Ancestry

- From that match, look at the Shared Matches
- Shared Matches can be accessed by clicking on the Shared Matches



Shared Matches in Ancestry

- Each DNA match above 20 centiMorgans you have will have a set of “Shared Matches”
- These matches --- and YOU --- can be defined as a “Genetic Network”
- Generally, they all should share the same ancestral line and possibly the same common ancestors as YOU

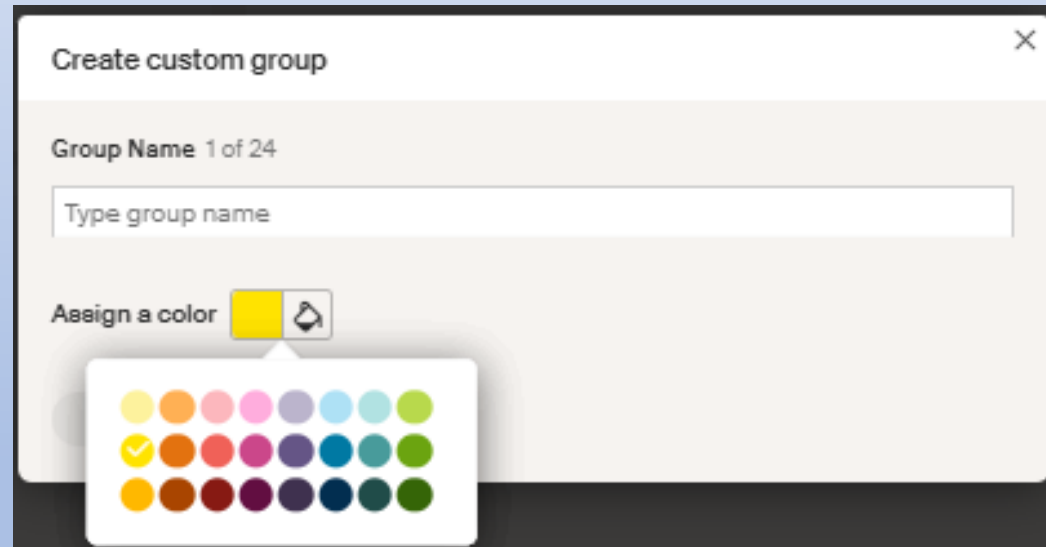


The screenshot shows the 'You and Liz' profile page on AncestryDNA. At the top, it displays the relationship '2nd cousin 1x removed | Paternal side' and '2% shared DNA: 153 cM across 8 segments'. Below this are buttons for 'Connect to tree', 'Message', and 'Edit profile'. A yellow arrow points to the 'Shared Matches' tab in the navigation bar. The main content area shows a list of shared matches with columns for relationship, shared DNA, and a 'View match' button.

Relationship	Shared DNA	Common Ancestor	Action
Daughter	3,470 cM 50% shared DNA Both sides	Public linked tree 2,711 People Common ancestor	View match
Son	3,466 cM 50% shared DNA Both sides	Public linked tree 2,711 People Common ancestor	View match
Brother	2,481 cM 44% - 51% shared DNA Both sides	Public linked tree 2,711 People Common ancestor	View match
Uncle	1,583 cM 23% shared DNA Paternal side	Public linked tree 2,711 People Common ancestor	View match
1st cousin	941 cM 13% shared DNA Paternal side	Public linked tree 73 People Common ancestor	View match
1st cousin	716 cM 10% shared DNA Paternal side	Public linked tree 2,711 People Common ancestor	View match
1st cousin	604 cM 9% shared DNA Paternal side	Public linked tree 11 People Common ancestor	View match
Half niece	584 cM 8% shared DNA Paternal side	Public linked tree 34 People Common ancestor	View in tree View match

An Easy Way to Group them in Ancestry

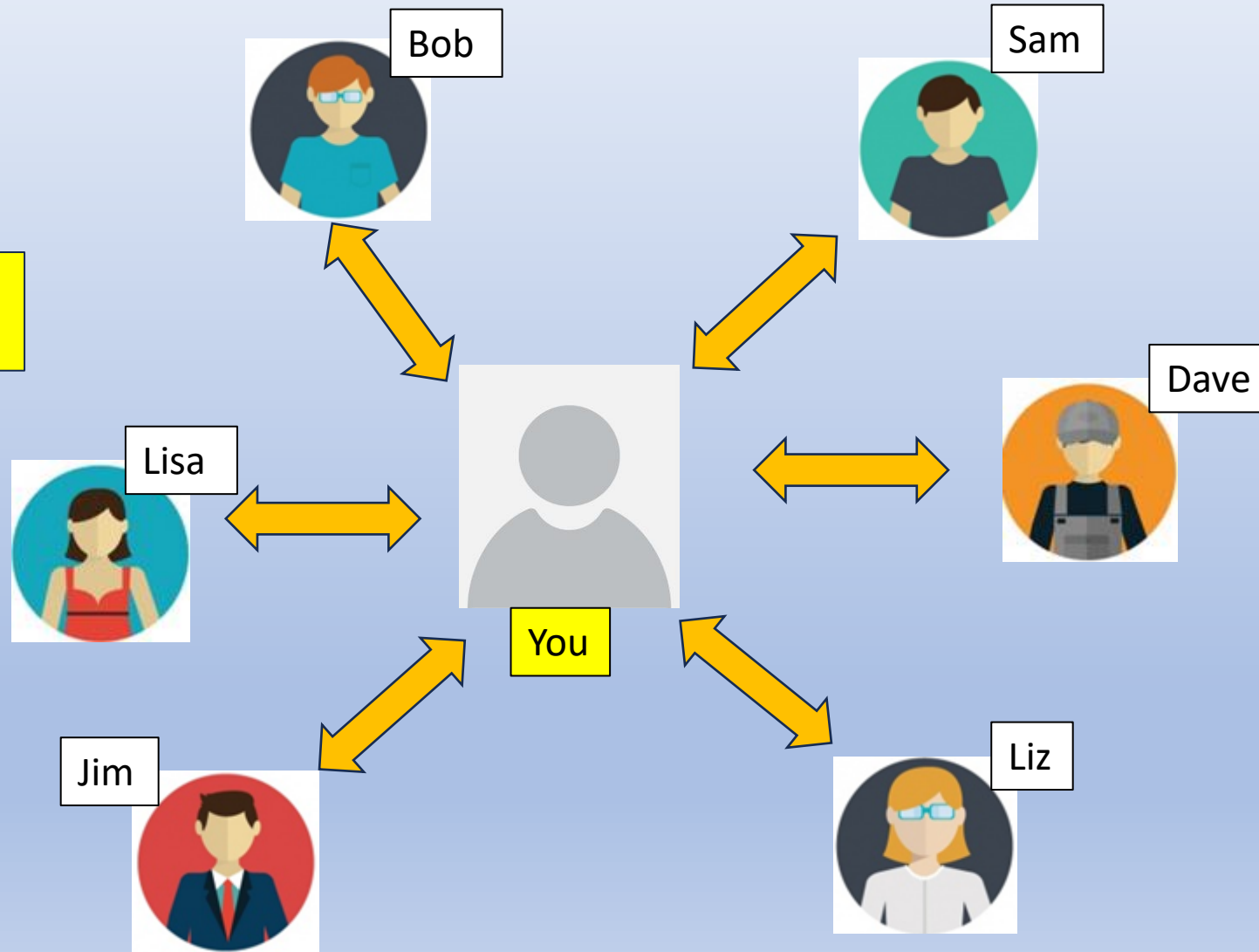
- Use Ancestry's Tag Groups (in My Heritage they are called "Labels")
- 24 possible groups, each denoted with a different color



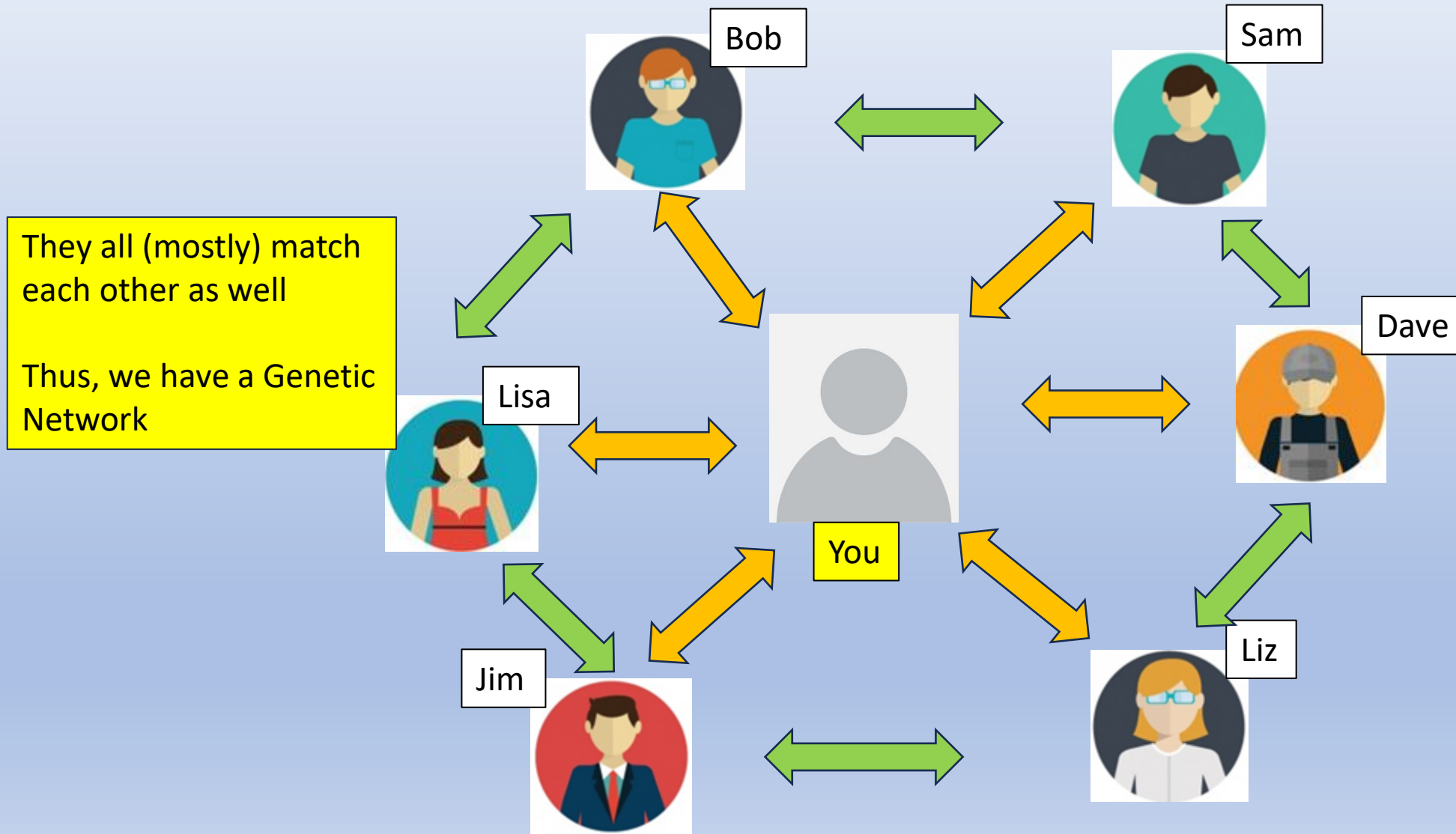
- Note: later in 2024 the number of tag groups will be increased to 64 for ProTools subscribers

Genetic Networks

These DNA test takers all match you on DNA



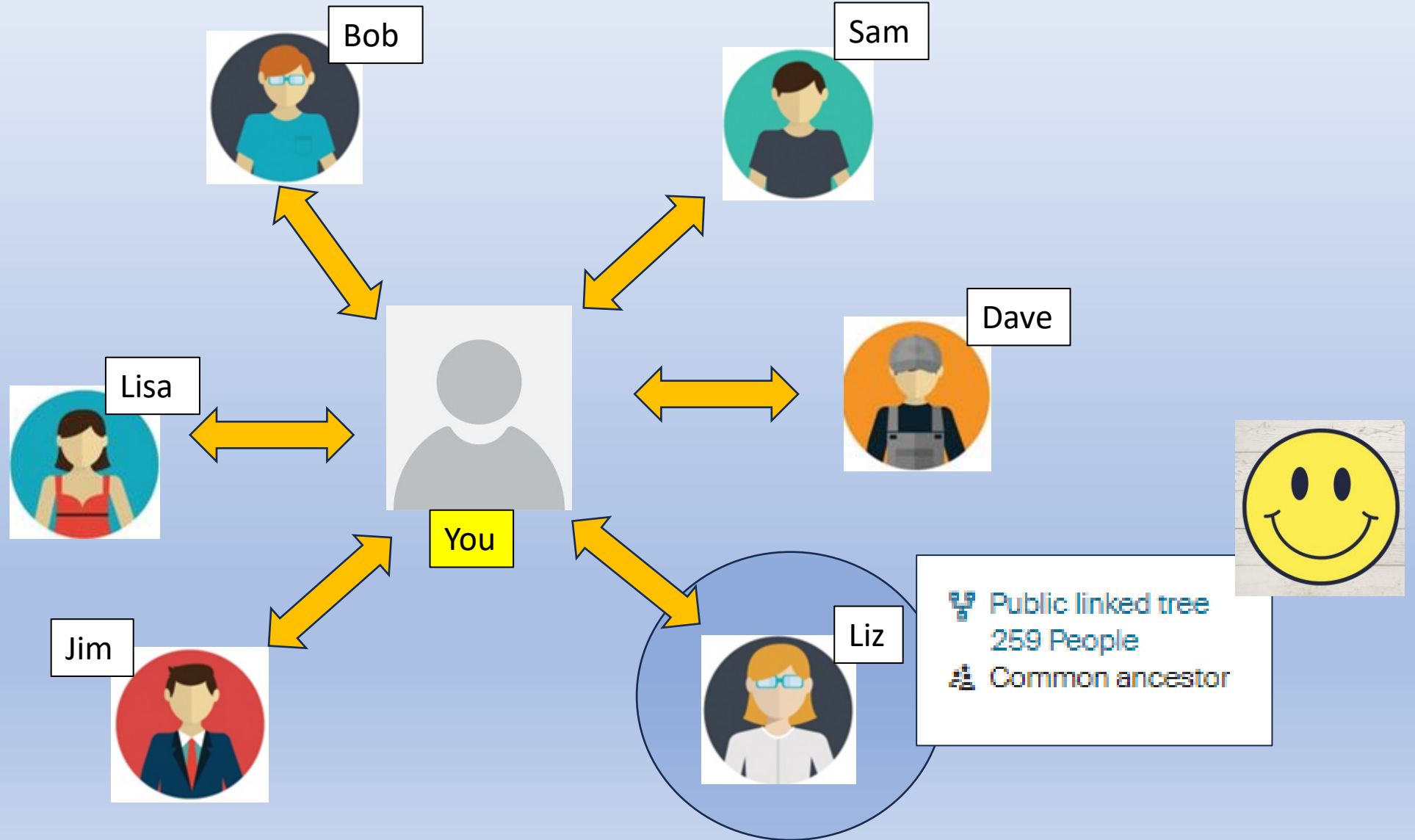
Genetic Networks -- Concept



Genetic Networks -- Concept

Some of these matches may not have a usable or public family tree.

BUT, sometimes all you need is for one of them to have a good tree!

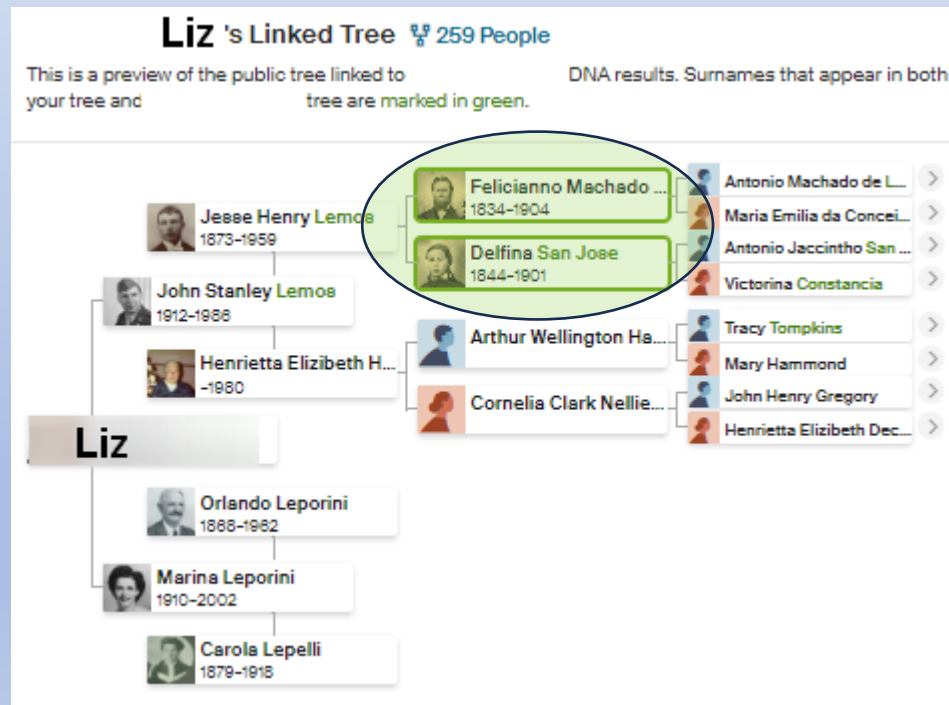


Liz has a tree!



Liz

 Public linked tree
259 People
 Common ancestor

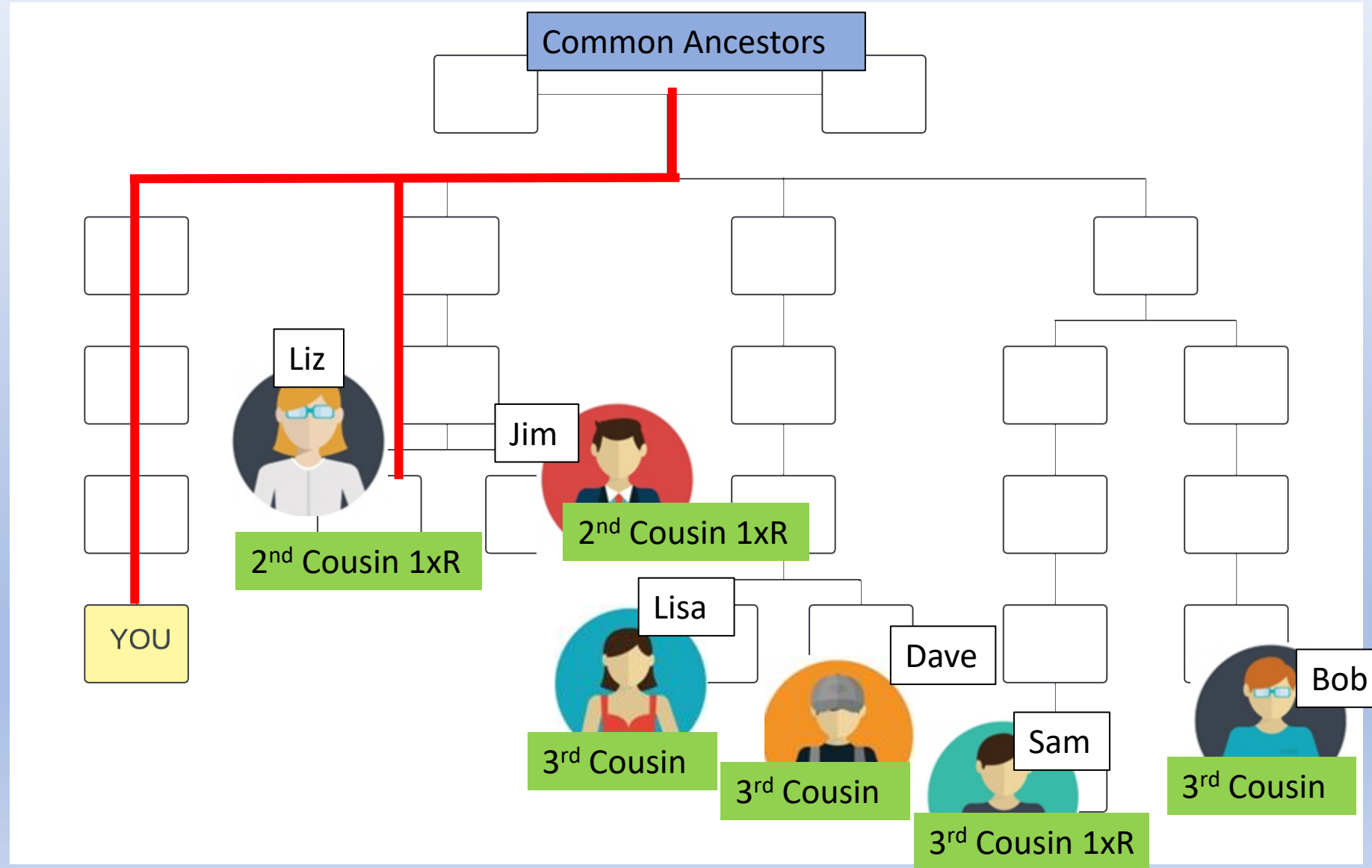


Liz's great-grandparents turn out to be your 2nd great-grandparents and are in your tree.

She is your confirmed 2nd cousin once removed.

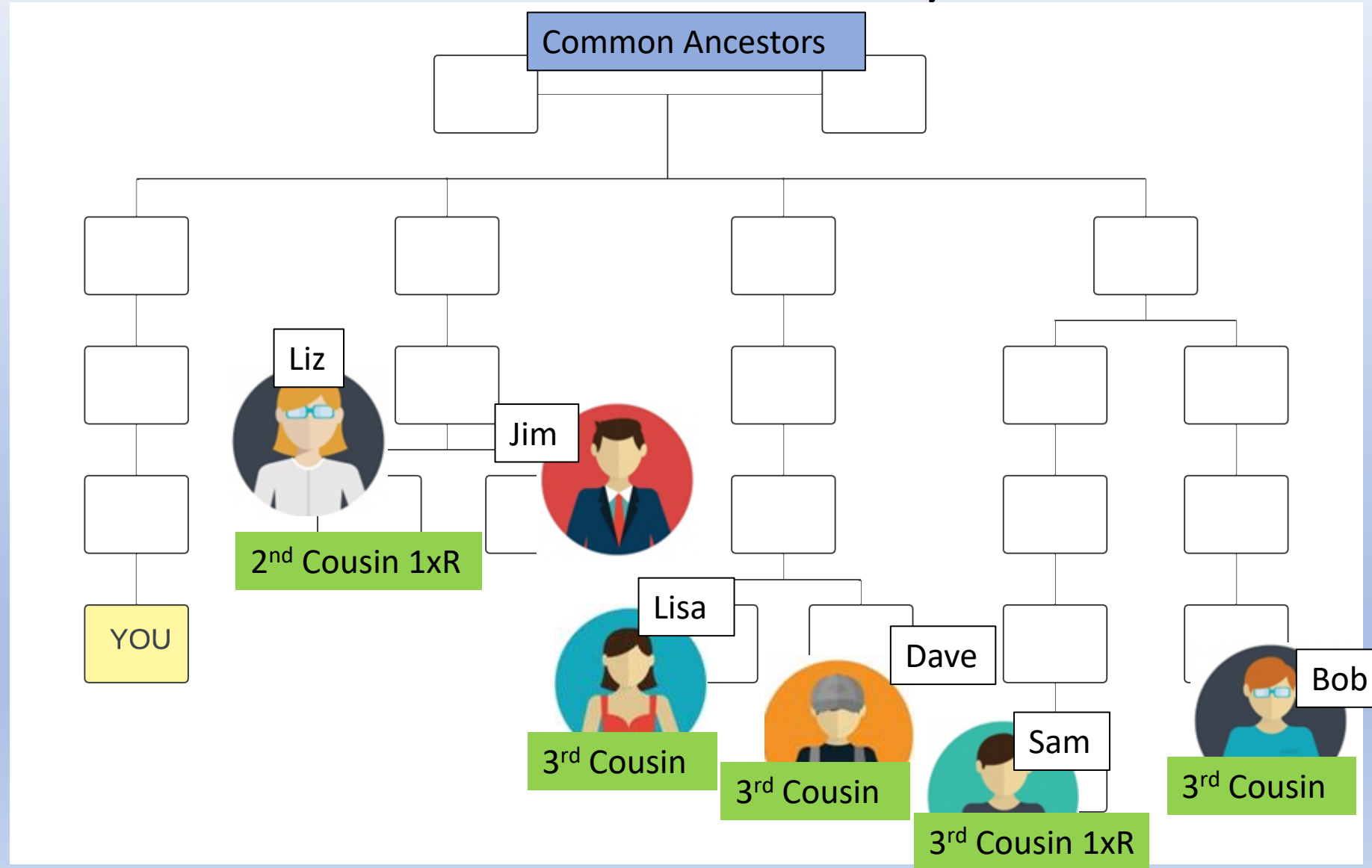
Genetic Network

- You've confirmed Liz as a "2C1R"
- Now, work on building a tree to place the others and determine the relationship to you



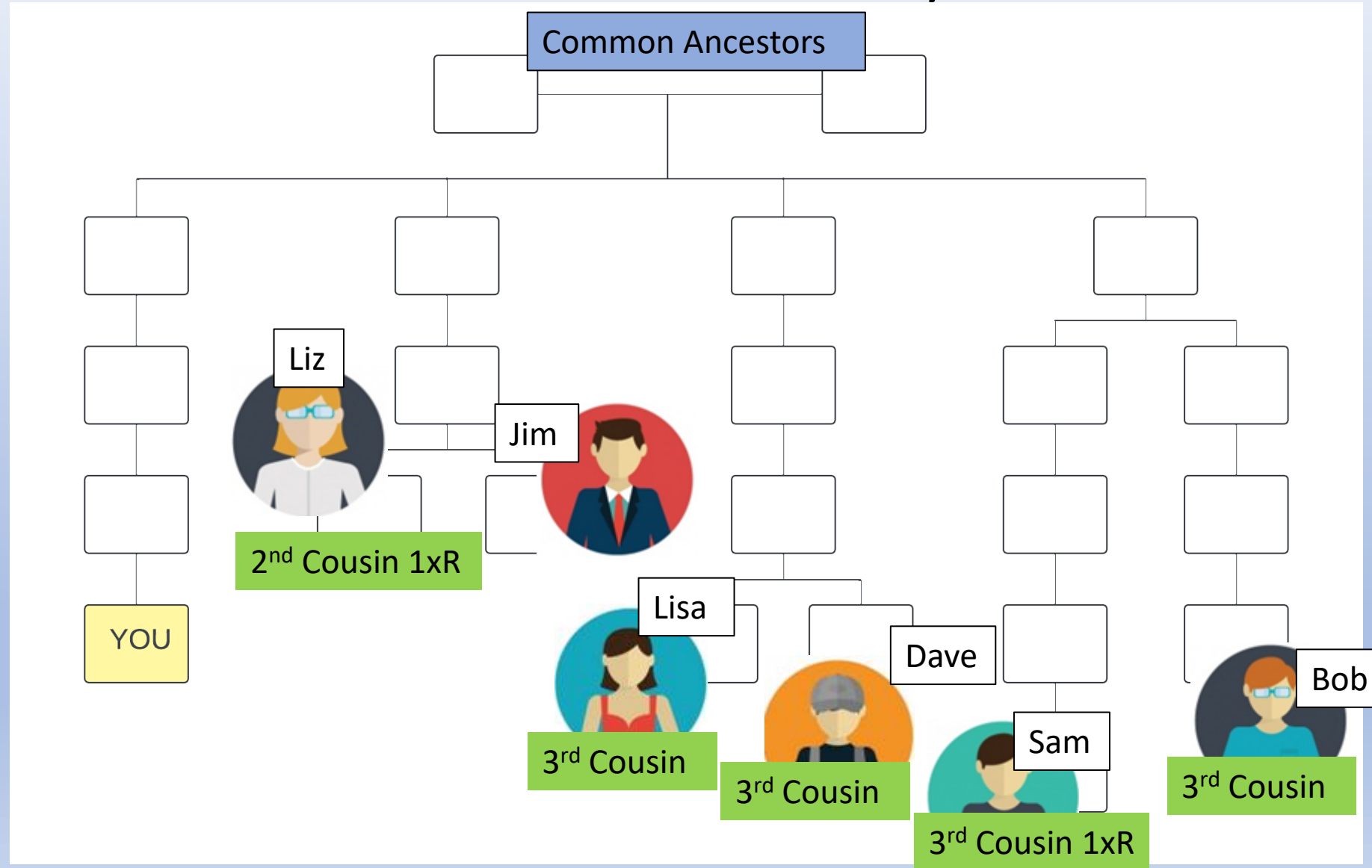
Genetic Network---in terms of a family tree

- So, a group of DNA matches who tend to match each other and have a common ancestral line



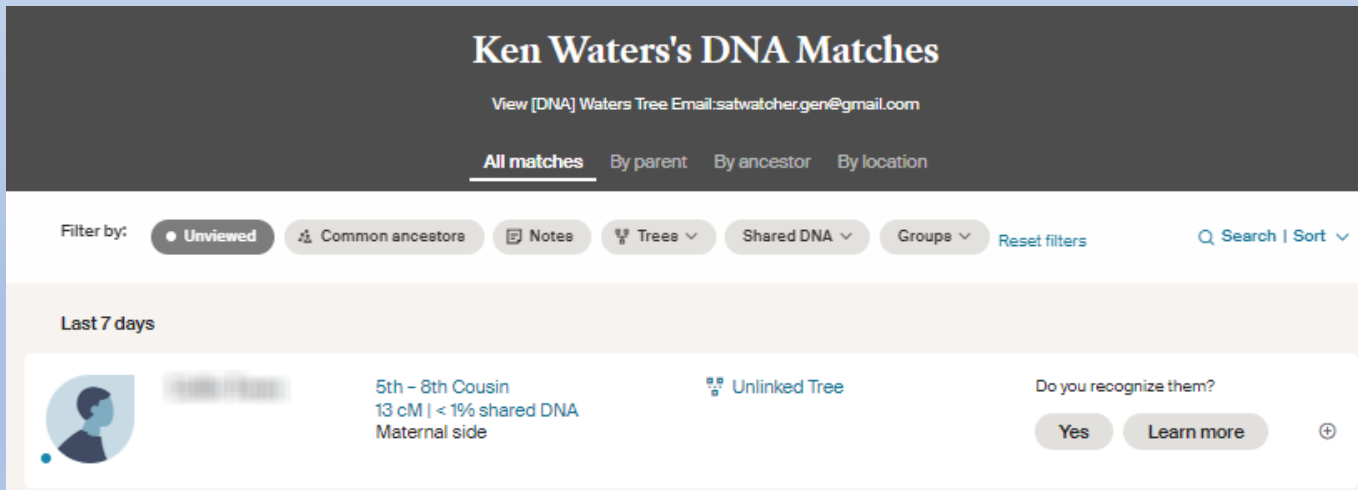
Genetic Network---in terms of a family tree

- Use matches with good (verifiable and replicative) trees to determine the common ancestral line
- Build a research tree (aka “quick-and-dirty” tree) to place each of the matches and determine where each fits in to this Genetic Network



New Matches?

- Check for Shared Matches to the New Match
- Hopefully you'll see a pattern where this new match seems to fit in a Genetic Network that you've already identified



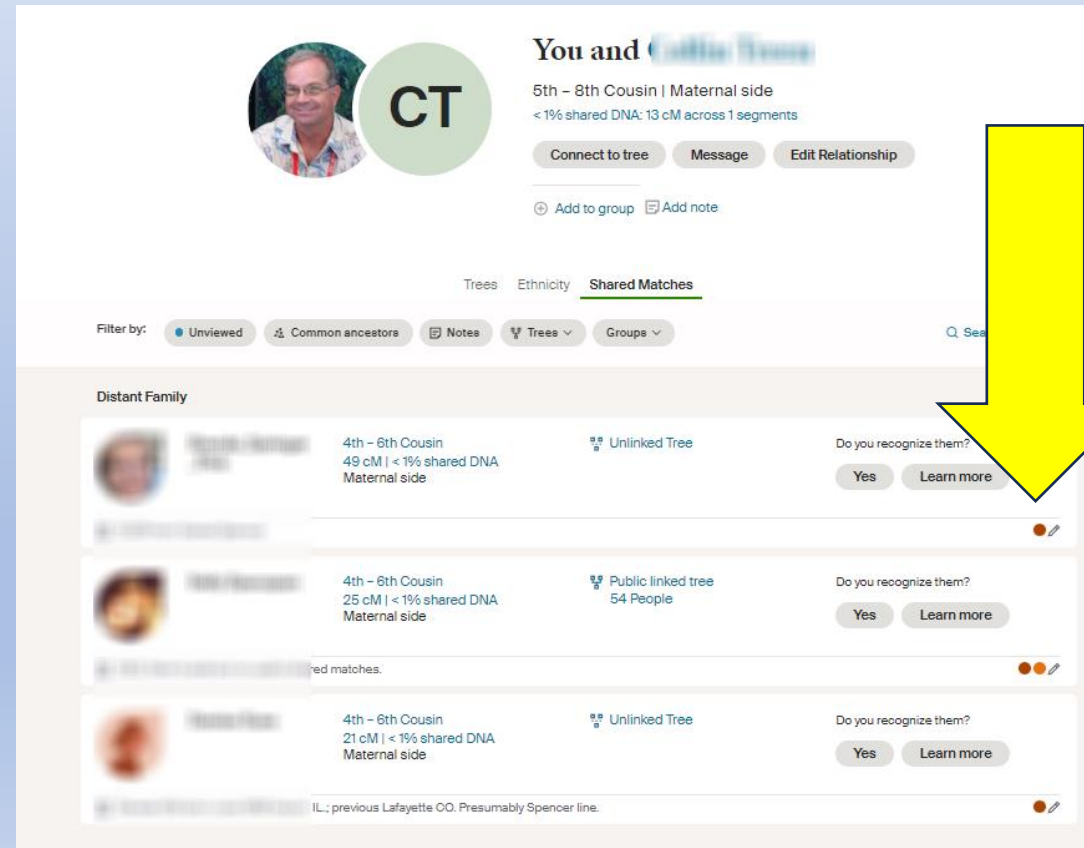
Ken Waters's DNA Matches
View [DNA] Waters Tree Email:satwatcher.gen@gmail.com

All matches By parent By ancestor By location

Filter by: **Unviewed** Common ancestors Notes Trees Shared DNA Groups Reset filters Search | Sort

Last 7 days

	5th - 8th Cousin 13 cM < 1% shared DNA Maternal side	Unlinked Tree	Do you recognize them? Yes Learn more
--	--	---------------	--



You and Cattie Truss
5th - 8th Cousin | Maternal side
< 1% shared DNA: 13 cM across 1 segments

Connect to tree Message Edit Relationship

Add to group Add note

Filter by: Unviewed Common ancestors Notes Trees Groups Search

Shared Matches

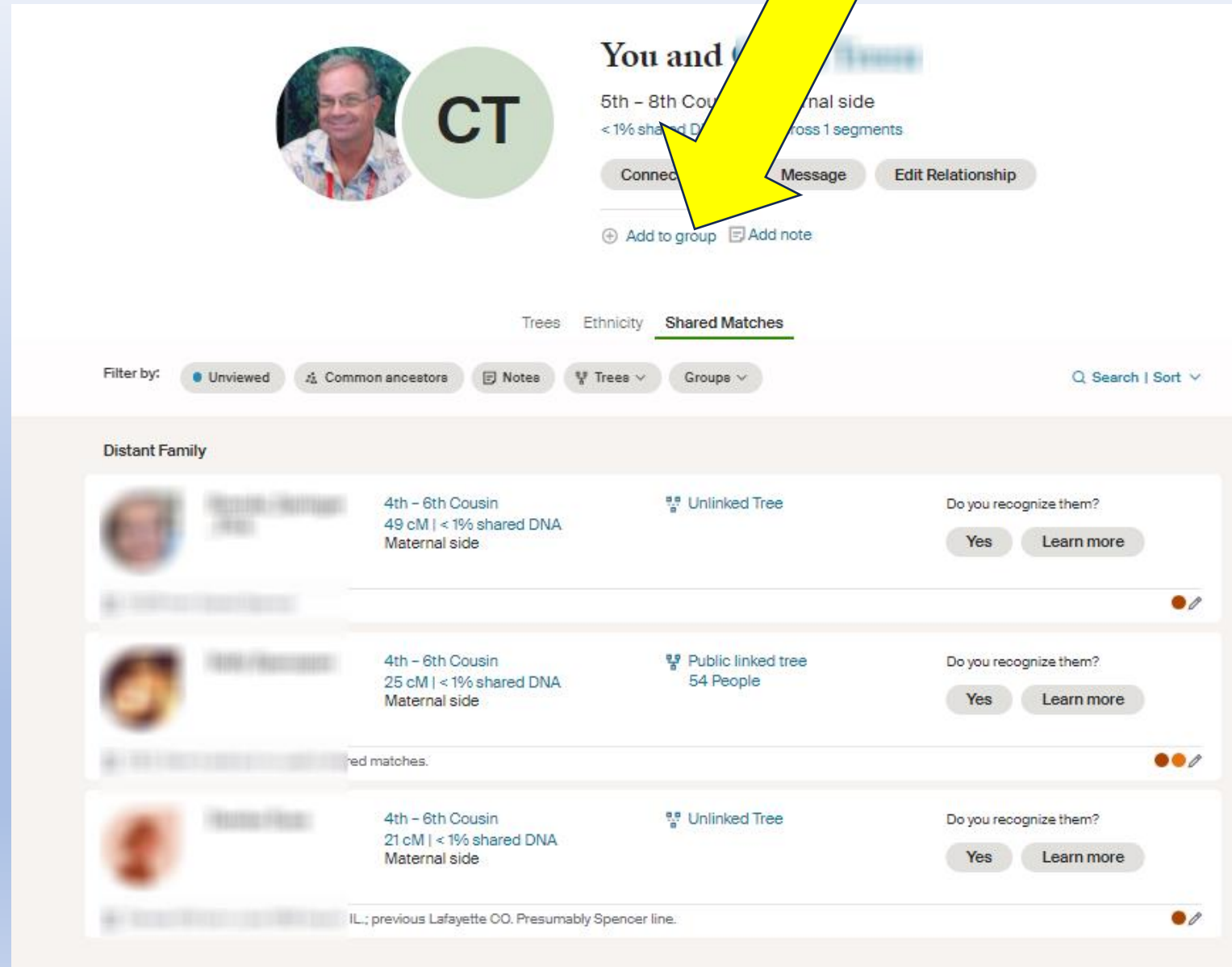
Distant Family

	4th - 6th Cousin 49 cM < 1% shared DNA Maternal side	Unlinked Tree	Do you recognize them? Yes Learn more
	4th - 6th Cousin 25 cM < 1% shared DNA Maternal side	Public linked tree 54 People	Do you recognize them? Yes Learn more
	4th - 6th Cousin 21 cM < 1% shared DNA Maternal side	Unlinked Tree	Do you recognize them? Yes Learn more

IL; previous Lafayette CO. Presumably Spencer line.

New Matches?

- Add this new match to the existing already-defined Genetic Network, using the Tag Groups



The screenshot displays a genetic matching interface. At the top, a match profile is shown with a circular profile picture of a man, a green circle with the letters 'CT', and the text 'You and [Name]'. Below this, it indicates a relationship of '5th - 8th Cousin, Maternal side' with '< 1% shared DNA' and 'across 1 segments'. Action buttons include 'Connect', 'Message', and 'Edit Relationship'. A large yellow arrow points to the 'Message' button. Below the profile, there are options to 'Add to group' and 'Add note'. The main section is titled 'Shared Matches' and includes filter options: 'Unviewed', 'Common ancestors', 'Notes', 'Trees', and 'Groups'. A search and sort function is also present. The 'Distant Family' section lists three matches, each with a profile picture, name, relationship ('4th - 6th Cousin'), shared DNA ('49 cM | < 1% shared DNA' or '25 cM | < 1% shared DNA' or '21 cM | < 1% shared DNA'), maternal side, tree status ('Unlinked Tree' or 'Public linked tree'), and a 'Do you recognize them?' prompt with 'Yes' and 'Learn more' buttons.

Match Name	Relationship	Shared DNA	Side	Tree Status	Recognize?
[Name]	4th - 6th Cousin	49 cM < 1% shared DNA	Maternal side	Unlinked Tree	Yes / Learn more
[Name]	4th - 6th Cousin	25 cM < 1% shared DNA	Maternal side	Public linked tree 54 People	Yes / Learn more
[Name]	4th - 6th Cousin	21 cM < 1% shared DNA	Maternal side	Unlinked Tree	Yes / Learn more

New Matches?

- Add this new match to the existing already-defined Genetic Network, using the Tag Groups

The screenshot displays a genetic matching interface. On the left, a list of tag groups is shown, each with a checkbox and a pencil icon for editing. A yellow arrow points to the 'Distant Family' section. The tag groups include:

- Starred matches
- 0 - Distant Saved Matches
- 1 - Waters/Unknown
- 2 - Berkley/Wheeler
- 3 - Sylvia/Correia
- 4 - Lemos/San Jose
- 5 - Craddock/Spivey
- 6 - Wood/Thurman
- 7 - Unknown/Unknown MYSTERY
- 8 - Spencer/Cummings
- Berkley/Berkeley line from DC
- Dad's non-Portuguese side (...)
- DI -- Mom's side
- Ferry/Elder on Spencer/Cumm...
- Inner Family
- Low matches (6-8)
- Mystery Network #6
- Mystery Network #7 -- Mom's...
- Mystery Shipp Network
- No idea---no useful shares
- UNKNOWN #9 Mom's Side
- Unknown Mom's Side
- Unknown Orphan Cluster
- Unknown WBW Stanfield/Ziegl...
- Waters - Trish Brown Irish

On the right, a match profile is shown for a person named 'and Cullin Stone'. The match is identified as a '1st Cousin | Maternal side' with 'Shared DNA: 13 cM across 1 segments'. Below the profile, there are buttons for 'Add to tree', 'Message', and 'Edit Relationship'. A 'Shared Matches' section is visible, showing a list of groups with search and sort options. At the bottom, there are three 'Unlinked Tree' entries, each with a 'Do you recognize them?' question and 'Yes' and 'Learn more' buttons.

The Ideal

- You've sorted your matches into your 8 great-grandparent lines and assigned a different color for each
- These can each be considered a Genetic Network because they all came from the same ancestors and so (generally speaking) share DNA with each other

<input type="checkbox"/>	1 - Waters/Unknown (40)
<input type="checkbox"/>	2 - Berkley/Wheeler (38)
<input type="checkbox"/>	3 - Sylvia/Correia (90)
<input type="checkbox"/>	4 - Lemos/San Jose (154)
<input type="checkbox"/>	5 - Craddock/Spivey (186)
<input type="checkbox"/>	6 - Wood/Thurman (263)
<input type="checkbox"/>	7 - Unknown/Unknown MYSTERY (9)
<input type="checkbox"/>	8 - Spencer/Cummings (209)

Special Note

- Sometimes not all members of a Genetic Network will necessarily share DNA with **every** other member of the Genetic Network
- This is more likely when dealing with smaller, more distant matches
- This is quite normal, and expected, and is simply an artifact of what we call random recombination

Review

- Genetic Network is a set of DNA matches related to each other
- Can be used to infer a Common Ancestral Line
- The set of members in the Genetic Network can be identified using Ancestry's Tag Groups or My Heritage's Labels

Upcoming Classes/Presentations

Date: Sat, May 4, 1 pm

Location: Red Mountain Library

Topic: WATO (What Are The Odds)

Description: What is WATO and how can I use it?



All library classes are free to attend and require no registration and held at the Red Mountain Mesa Public Library at 635 N Power Rd in Mesa (unless otherwise noted above).



Presentations:

<http://familytreeaz.com/Presentations>



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