

Research Objective

Do you want to verify genetic connections to family members and ancestors or confirm a hypothesized relationship?

1

DNA Test

Determine which living individuals would be most beneficial to test to get the most information.

YES

NO

Go to DNA Process Tree 2

Tools:

1. Test with AncestryDNA.
2. Test at 23andMe (results include Y-DNA & mtDNA haplogroup estimates).
3. Transfer DNA raw data to MyHeritage, FTDNA, Living DNA, GEDmatch (a 3rd party website).
4. Additional Y-DNA test at FTDNA for males: recommend at least 67 markers.

Why?

DNA testing is an additional source of information that helps identify and confirm family connections.

2

Networks and Groups

Separate DNA matches into Genetic Networks or family groups.

Do you want to create Genetic Networks manually?

YES

NO

Why?

Separating your DNA matches will help you to focus in on a specific line of your family.



Correspond with DNA matches

You could write something like...
"Hello, [the DNA company] says that we share ____cM or ____ percent DNA. That puts us in the range of ____ [relationship/ cousins]. I would love to connect with you and figure out our common ancestor(s)."

Digital Manual Tools:

Use the Leeds method (www.danaleeds.com), Shared matches on AncestryDNA, 23andMe "Relatives in Common," MyHeritage "Shared DNA matches."
Family Tree DNA: "In Common With" [ICW]
GEDmatch: "People who match both kits, or 1 of 2 kits."

Digital Automatic Tools:

Use AutoCluster reports on Genetic Affairs & MyHeritage, GEDmatch Tier 1 "Clusters, Single Kit input, Basic Version." Collins-Leeds method at dnagedcom.com, ConnectedDNA.com, DNADNA.com, or rootsfinder.com to separate your matches into family groups.

3

Do you know how much DNA you share with your matches in centiMorgans (cM) or percent (%)?

Why?

The amount of DNA you share helps verify the familial relationship you have with your DNA match.

4

Do you know the possible relationship you share with the DNA match?

YES

NO

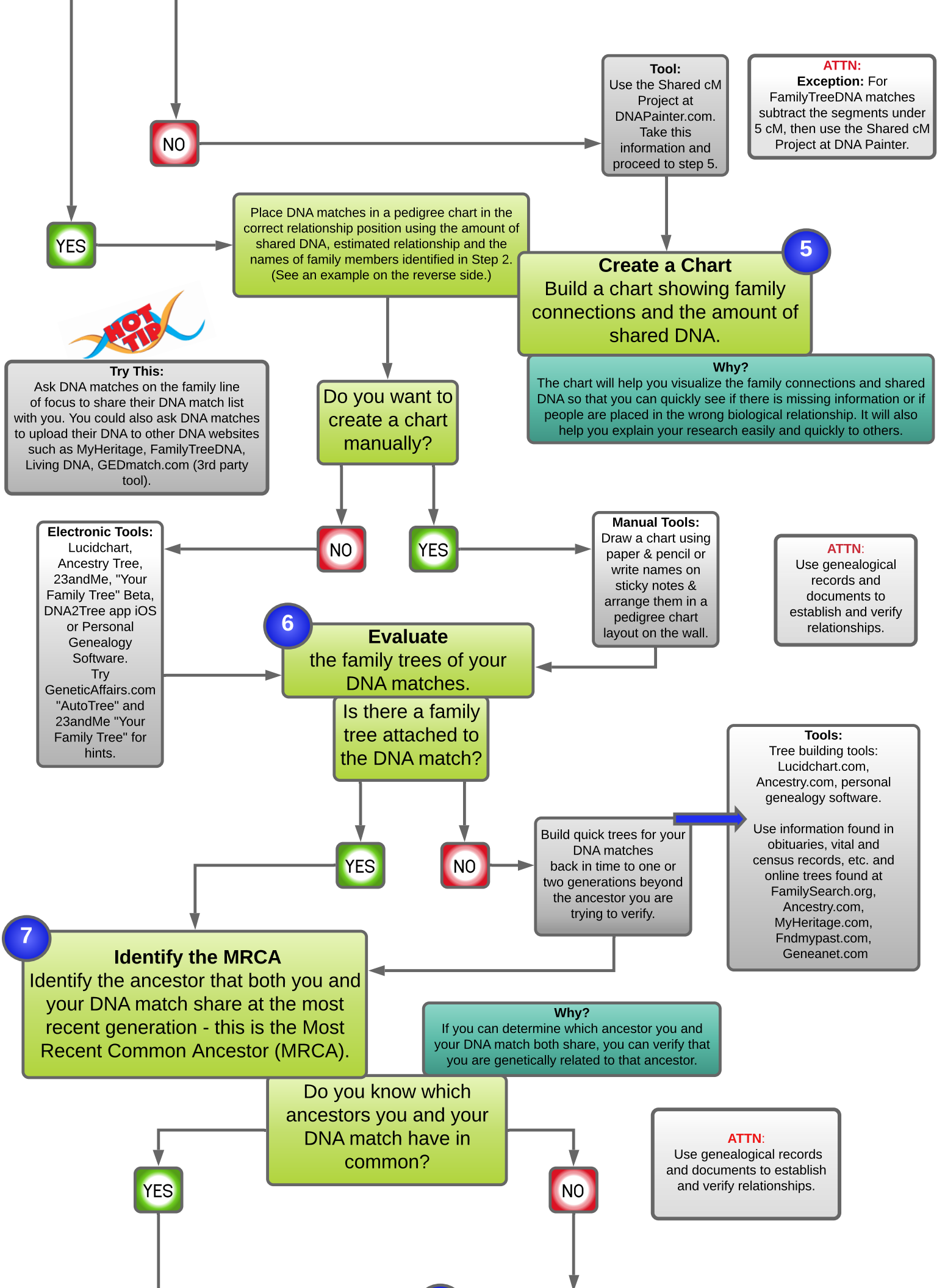
Go to next step.

Tools:

Look on DNA company website for the amount of DNA you share with your DNA matches listed in centiMorgans (cM) or percentages (%).

Why?

Knowing the relationship helps you place the DNA match in the correct location in the family tree.



You've reached your goal!
Mark your chart to indicate a verified Genetic relationship.



To zero-in on biological parent candidates in a large family, search for DNA matches that descend from an adult child **and** their spouse. If there are no DNA matches that connect with the spouse, then you are looking at the wrong child. Move on to the next adult child **and** spouse. Look for DNA matches that share that spouse's parents or grandparents.

8 Pedigree Triangulation
Look for common surnames as you compare family trees that are attached to DNA matches. Explore the pedigrees and localities to find the most recent common ancestor (MRCA) shared by you and your DNA match. To focus on one family line, use the people in the family groups identified in Step 2.

Tools:
Family trees attached to DNA matches at AncestryDNA, MyHeritage & FTDNA, the Leeds Method (www.danaleeds.com). Use groups identified in Step 2.

Is additional information needed to confirm relationships and verify genetic connections to family members and ancestors?

Why?
If you can identify the common ancestors you share with DNA matches, you verify that those ancestors are genetically related to you. This will confirm the relationships you share with people in your family tree.

YES

NO

You've reached your goal!
Mark your chart to indicate a verified Genetic relationship.

The ancestor shared by all 3 is the MRCA.

9 Segment Triangulation
Identify DNA segments shared by you and two of your matches on the same chromosome. Look in your family trees to identify the ancestor or ancestral couple that the three of you share. The people in the family groups identified in Step 2 share common ancestors.

Why?
Looking at and analyzing actual DNA results gives information about DNA segments that can be used to verify known family members. You can use this information to identify the DNA segments that you inherited from specific ancestors. This information will help you trace your family tree back even more generations - perhaps even beyond the ancestors you know about now.

Tools:
Chromosome Browsers found at MyHeritage, 23andMe, FTDNA, & GEDmatch. Triangulation tools at Gedmatch Tier 1, Autosomal DNA Segment Analyzer at DNAGedcom. Try www.geneticaffairs.com AutoSegment tool.

ATTN:
Use genealogical records and documents to establish and verify relationships.

You've reached your goal!
Mark your chart to indicate a verified Genetic relationship.

10 Repeat the process
Continue to build family trees for yourself and additional DNA matches. Look for connections in time and place where ancestors could meet and connect.

Locate records that prove the connections between generations in DNA matches' family trees.

Why:
You will be able to verify ancestors, and connect with other living relatives that may have more family history records and information than you do. You can use DNA evidence to break through "brick walls" and identify previously unknown ancestors.

You have confirmed your research objective. Keep going! You're doing great!