AUTOSOMAL DNA - ADSA

Autosomal DNA matches can come from your entire ancestry - all your lines. Males or females may be tested. Test oldest generations first! Autosomal DNA tests are available from three different companies. Watch for sales around holidays:

- Ancestry.com ($99, over 2,000,000 in database)
- FamilyTreeDNA.com - FamilyFinder test ($79, over 200,000 in database)
- 23andMe.com ($99 without health reports, over 1,000,000 in database)

> ***Q:*** *Which company should I pick for my Autosomal DNA test?*
> ***A:*** *I suggest all three! Start with Ancestry.com ($99) and then transfer (copy raw data) to FamilyTreeDNA.com ($39) & GEDmatch.com (free) then test again at 23andMe.com ($99).*

Things to Keep In Mind with Autosomal DNA

1. Beware of distant matches or very small matching DNA segments - they may be false matches.
2. Your relationship may be closer or more distant than the testing company predicted.
3. Your match may not be matching you in the way you think it is:
   - Watch out for endogamy (intermarriage) which can mean you are related in more than one way.
   - Use triangulation to find multiple matches who all share the same DNA segment.
   - Look for more than one triangulated match that suggests a particular surname or location.
4. Your or your match's tree may be incorrect - always validate the underlying genealogical research.
5. Follow up with traditional genealogical research to confirm your DNA interpretation.

Free Third Party Tools on the Web

GEDMATCH - www.gedmatch.com
A volunteer-run clearinghouse database where you can compare DNA test results between all three of the companies. GEDMATCH is particularly valuable to those who tested at Ancestry because Ancestry does not provide segment data.

DNAgedcom - www.dnagedcom.com
A volunteer-run set of tools for downloading, viewing and analyzing match results at all three companies and GEDMATCH. DNAgedcom includes the Autosomal DNA Segment Analyzer (ADSA) which is a chromosome browser that allows you to look at all your segments at once on each chromosome along with In Common With information.

My Suggestions For How to Learn More...

www.venturacogensoc.org/cpage.php?pt=343
- An up-to-date collection of information on getting started.

www.dnagedcom.com/adsa/adsamanual.html.php
- Read the ADSA manual, especially "Interpreting Your Results".

www.facebook.com/groups/dnanewbie/
- Participate in an online DNA group and ask questions.

Attend your local society's DNA Special Interest Group!

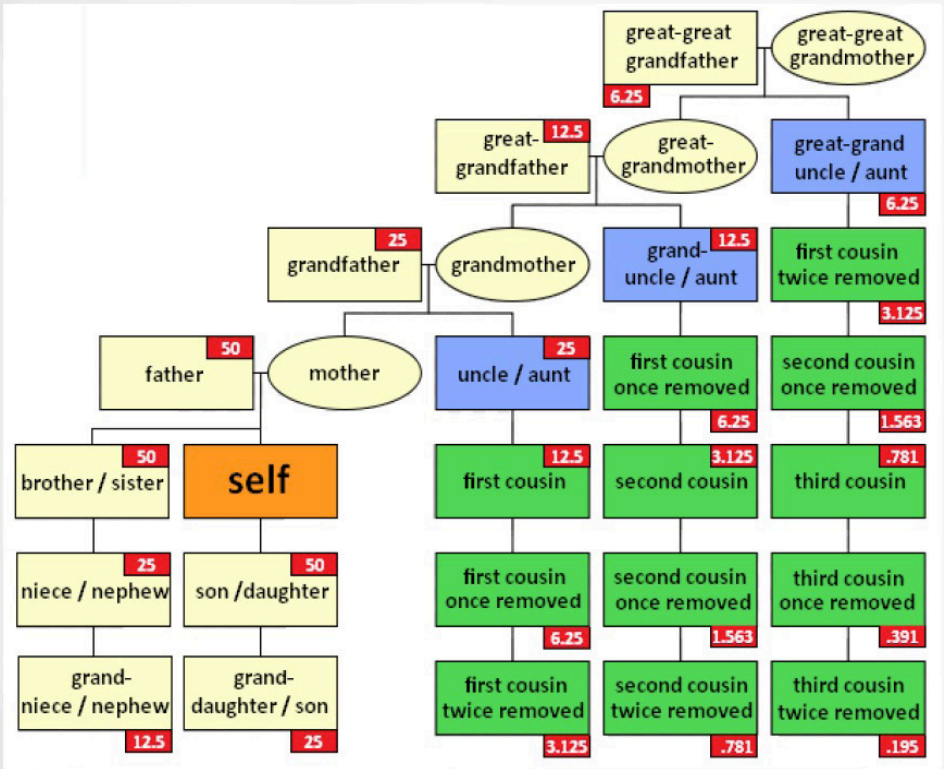
Probability a DNA Segment is IBD for Unphased Data
ISOGG Wiki

Matching Segment	% IBD	% IBS
15 cM	>99%	<1%
13 cM	99%	1%
12 cM	97%	3%
11 cM	90%	10%
10 cM	86%	14%
9 cM	80%	20%
8 cM	62%	38%
7 cM	42%	58%
6 cM	26%	74%
5 cM	14%	86%
4 cM	5%	95%
3 cM	1%	99%

RELATIONSHIP STATISTICS (from ISOGG WIKI)

RELATIONSHIP	MATCH PROBABILITY*	TOTAL cM SHARED			SEGMENTS
		PERCENT	EXPECTED	RANGE	
Parent/Child	100%	50%		3539-3748 cM	23-29
First Cousins	100%	12.5%	888 cM	548-1139 cM	17-32
First Cousins 1R		6.25%	444 cM	220-638 cM	12-23
Second Cousins	>99%	3.125%	222 cM	86-426 cM	10-18
Second Cousins 1R		1.563%	111 cM	19-197 cM	4-12
Third Cousins	>90%	.781%	55.4 cM	16-111 cM	2-6 ?
Third Cousins 1R		.391%	27.8 cM	0-99 cM	1-4
Fourth Cousins	>50%	.195%	13.8 cM	0-54 cM	0-2
Fifth Cousins	>10%	.049%			
Sixth Cousins	<2%	.012%			

* FTDNA statistics, Ancestry claims slightly higher probabilities due to their pseudo-phasing



ISOGG wiki statistics:

Parent/child: 3539-3748 cMs
1st cousins: 548-1034 cMs
1st cousins 1R: 248-638 cMs
2nd cousins: 101-378 cMs
2nd cousins 2R: 43-191 cMs
3rd cousins: 43-ca 150 cMs
3rd cousins 1R: 11.5-99 cMs
More distant cousins: 5-ca 50 cMs

image by Dimario, Wikimedia Commons http://commons.wikimedia.org/wiki/File:Cousin_tree_(with_genetic_kinship).png

Email me anytime with questions. I'm always happy to help!
Don Worth - worth@ucla.edu