

Y-DNA test

- What does this test do?
 - Tests Y-chromosome only
 - Y-chromosome is male sex chromosome, only males have it
 - Passed down from father to son virtually unchanged for generations
 - Testing company = Family Tree DNA
- Y-DNA Results:
 - Haplogroup –number/letter combination indicating:
 - Genetic family group/ancient origins of surname, thousands of years ago
 - SNPs – changes to the DNA that sort out branches of the human family tree, perhaps thousands of years ago
 - Y-STR values (haplotype)
 - Sequence of numbers equal the results on each marker of the DNA that was tested
 - i.e. tested 37 markers, your Y-STR results will be a sequence of 37 numbers
 - List of matches
 - Matches are those with the same or almost the same exact sequence of Y-STR results that you have
 - 12 markers and sometimes 25 markers are not definitive enough
 - 37 markers is minimum to test & be confident of relationship
 - Having a match means that you share a common male ancestor approximately 1-15 generations ago (up to 500 years or so)
 - Correspond with matches of same surname as yours:
 - Make sure your email is correct in database; respond to all queries
 - Some matches will not answer your query
 - Write all matches of same surname. Usually the matches will have corresponded previously and know something about the other persons they match.
 - Provide your match with information about your earliest known paternal ancestor; his wife; children/spouses; places they've lived; and possible relatives
 - Enter your family tree (esp. paternal line) in the test database
 - Learning from Y-DNA results
 - Work with matches of same surname to determine how you all connect up
 - Your match's immigrant ancestor may be your immigrant ancestor also
 - Trace forward from the immigrant ancestor to try to connect your family line with his
 - Work with matches to determine all likely descendants of the immigrant ancestor

- Your match's hometown back in the old country, may be your ancestor's hometown or the area from which he emigrated
 - Conduct research in old country to trace family back further
- Any foreign matches may provide clues to where family originated before they came to the US
- Unusual Y-DNA results:
 - No matches of your surname
 - If you have significant number of close or exact matches of a different surname at 37 markers or higher,
 - You might be related to those folks due to:
 - Name change/Adoption/Non-paternity event (affair, unwed mother, etc.)
 - Contact the matches
 - Contact your surname administrator and/or FamilyTreeDNA (the company)
 - If you have close or exact matches of many different surnames at 37 markers or better,
 - Your surname may have been adopted later (1700 or 1800s), especially in Scandinavia, parts of Russia, and for many Jewish cultures
 - Contact your surname administrator for more guidance on this situation

No Matches at All

- Unusual surname/Few male descendants of that particular male line/Few immigrants from that family to US
- Be patient; wait and see
- Recruit others to test
- Contact your surname administrator

Advanced SNP information (Big Y test):

- SNPs can be relevant to more recent genealogy, but often involve more ancient genealogy
- Define new branches within the genealogical surname clusters.
- Since they are inherited from father, SNPs help track where/when a branch in the tree started and possibly with whom.
- Y-SNPs also provide information on how the branches are connected and the relative time frame of each branch
- This is a changing field. New SNPs could be discovered tomorrow that relate to your family or mine

- See ISOGG website for fuller explanations. Also FTDNA's Forums (<http://forums.familytreedna.com/>)

Bibliography:

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- Estes, Roberta. *DNA for Native American Genealogy*. Baltimore, Maryland : Genealogical Publishing Co., Inc., 2021.
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- Vance, J. David. *The Genealogist's Guide to Y-DNA Testing for Genetic Genealogy*. [Place of publication not identified] : [J. David Vance], [2020]
- Wayne, Debbie Parker. *Advanced Genetic Genealogy : Techniques and Case Studies*. Cushing, Texas : Wayne Research ; 2019.

Websites:

DNAeXplained-Genetic Genealogy Blog by Roberta Estes: <http://dna-explained.com/>

International Society of Genetic Genealogy: <http://www.isogg.org/> Check out newbie section

Journal of Genetic Genealogy: <http://www.jogg.info>

The Genetic Genealogist by Blaine Bettinger: <http://thegeneticgenealogist.com/>

Facebook groups: “Big Y Facebook Group” and “Big Y * Seq * YFull * FGC – NGS Discussion Forum”

Definitions:

Allele: Genetic variant at a specific point or locus in our genetic code

Deep ancestry: Ancestry in an anthropological time frame of over 1000 to tens of thousands of years ago that predates recorded history and surnames for most people. (per ISOGG)

Haplogroup: Group of people that descend from the same branch of the human family tree, perhaps thousands of years ago.

Marker: An identifiable physical location on a chromosome that is variable between individuals and whose inheritance can be monitored. A term commonly used along with allele values in

describing an individual's haplotype. Marker labels, such as M173 or DYS388, have no intrinsic meaning. (per ISOGG)

Non-paternity event: When the individual's Y-STR results do not link up to other persons of his same surname, but instead matches those of another surname closely or exactly. Could be caused by adoption, name change, illegitimacy, or marital infidelity in the paternal line, perhaps as long as 100s of years ago, or more recently. (per Kennett)

SNP (snip): To make new cells, an existing cell divides in two. But first it copies its DNA so the new cells will each have a complete set of genetic instructions. Cells sometimes make mistakes during the copying process - kind of like typos. These typos lead to variations in the DNA sequence at particular locations, called single nucleotide polymorphisms, or SNPs (pronounced "snips"). DNA is passed from parent to child, so you inherit your SNPs versions from your parents. Not same as a mutation. (per 23andme.com)

STR: Short tandem repeat - Patterns in the DNA sequence which repeat over and over again in tandem, i.e., right after each other. Typically the repeat motif is less than six [base pairs](#) long. By counting the repeats, one gets an [allele](#) value which is given in an individual's [haplotype](#). (per ISOGG)

Contact information:

Sara Allen
Allen County Public Library
sallen@acpl.info