

## Module 7 - Genetic Genealogy Concepts, Standards, and Ethics

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### Module 7: Genetic Genealogy Concepts, Standards, and Ethics

December 15–21

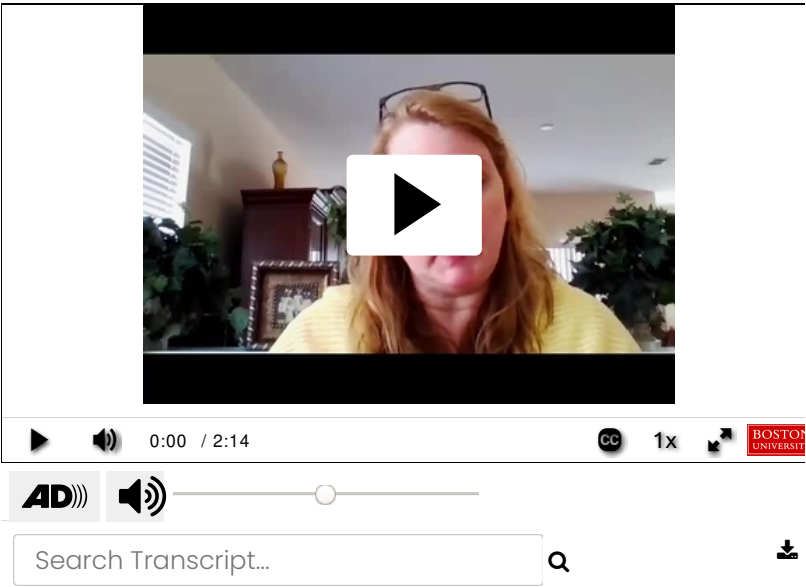
- Readings:** Bettinger, Blaine T. *The Family Tree Guide to DNA Testing and Genetic Genealogy*. 2nd ed.
- Chapter 1, “Genetic Genealogy Basics”
  - Chapter 2, “Common Misconceptions”
  - Chapter 3, “Ethics and Genetic Genealogy”
  - Chapter 4, “Autosomal-DNA (atDNA) Testing”
  - Chapter 5, “Y-Chromosomal (Y-DNA) Testing”—Read through the end of the section entitled “Daughtering Out”
  - Chapter 6, “Mitochondrial (mtDNA) Testing”—Read through the end of the section entitled “Finding an mtDNA Descendant: Working Backward to Go Forward”
  - Chapter 7, “X-Chromosomal (X-DNA) Testing”—Read through the end of the section entitled “The Unique Inheritance of X-DNA”
  - Chapter 9, “Ethnicity Estimates”

**Discussions:** **Discussions 11, 12, & 13** postings end Monday, December 21 at 11:59 PM ET

**Assessments:** **Module 7: Genetic Genealogy Concepts** due Monday, December 21 at 11:59 PM ET

### Lesson 1: Understanding Genetic Genealogy DNA Testing and Ethics Overview and Objectives

#### Overview



Hi, and welcome to your final week of the Genealogical Principals course. My name is Alison [? File ?] and I will be your instructor for this final week. And we will be discussing and learning all about genetic genealogy.

I have been a genealogist since probably my late teens in the 1980s. And currently, I am working as the genealogy specialist for the Orange County, Florida, library system. My job is very special and allows me the opportunity to work with people of diverse cultures and backgrounds, as well as exposes me to all types of situations that can happen or

^ Hide Transcript

Throughout this module you will be introduced to key concepts, ideas, and language used in the emerging field of genetic genealogy. DNA has created whole new ways of solving genealogical problems. As with most specialized fields genetic genealogy requires an understanding of terms and vocabulary. Once you gain a strong understanding of the terminology, you will quickly discover that genetic genealogy is a logical science built on simple biological concepts. Many elements of genetic genealogy and cousin matching are based on probabilities and statistics.

In this first unit you will gain a basic understanding of genetics and will learn about the different types of tests currently available on the market. You will have the opportunity to explore the genetic genealogy standards and apply them to several theoretical situations. DNA results can be life-changing, so it is important to think about the ethical implications of testing before you find yourself in a tricky situation. When making ethical choices regarding DNA testing it is much easier to be proactive than reactive.

## Learning Objectives

Upon completion of Unit 1 **Genetic Genealogy Concepts, Standards, and Ethics** you should be able to:

- Identify the different types of genetic genealogy DNA tests available
- Understand who is able to take each type of genetic genealogy DNA test
- Explain ways that genetic genealogy DNA test results can confirm, extend, and supplement traditional genealogical research
- Demonstrate an understanding of the genetic genealogy standards
- Evaluate ethics and behavior within the guidelines as described by the genetic genealogy

standards.

## The Power of DNA

Genetic genealogy is a fairly new, exciting, and quickly developing field. The first time the term “genetic genealogy” was used in the mainstream media was in February 1989. It wasn't until June of 1996 that genetic genealogy was the topic of a genealogy conference lecture. In 2000 Family Tree DNA, based out of Houston, Texas, began offering the first consumer-based genetic genealogy tests, a 12 marker Y-DNA test and an HVR 1 region mitochondrial DNA test. While somewhat limited in scope by today's standards, these early tests altered the field of genealogy forever.

Before we can begin to understand where the field of genetic genealogy is going in the future, it is important to understand its past. Consumer based genetic genealogy testing is less than twenty years old yet it has undergone tremendous changes and developments in its relatively short life span. Take a moment and explore the [History of Genetic Genealogy Timeline](#) available online at the International Society of Genetic Genealogy Wiki.

There is no doubt that DNA testing and the power it has to provide evidence that helps us answer genealogical questions has quickly changed how we research family history. Think of it this way. Genealogists work with sources to find answers to their research questions. They work with a wide range of paper documents. All these sources help tell ancestral stories. DNA testing is now another powerful source available to researchers. It has opened up a world of possibilities for those seeking answers about their families and ancestors.

As genealogists DNA can help us do many things. It can help us:

- Verify or disprove existing research conclusions
- Identify parents or biological family
- Locate living cousins and other family members
- Confirm or deny possible connections between families
- Prove or disprove oral family history regarding ethnicity
- Identify and pinpoint locations, people, or family units for future genealogical research
- Show how surnames with different spelling variations are (or perhaps are not) related
- Discover non-paternity events or misattributed parentage events.

Now mainstream DNA testing is a tool genealogists are expected to use. If DNA test results are available, a paper trail should be augmented by its results in a genealogical conclusion. Genealogists who wish to reach a sound conclusion cannot fail to use DNA test results any more than they can ignore a pertinent census or vital record.

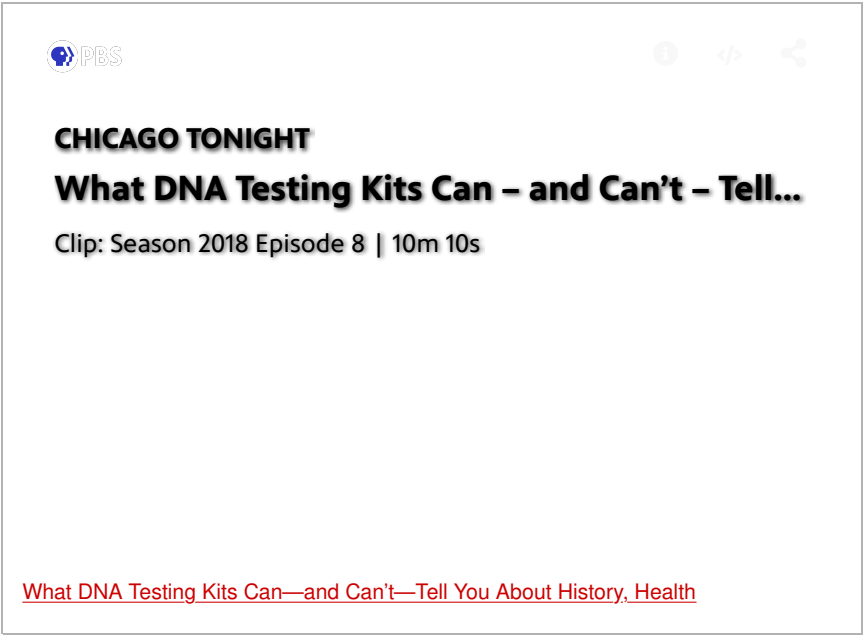
It is important that we learn exactly what DNA can and cannot do. Except in parent-child relationships, DNA testing does not provide test takers with direct answers simply by looking at their DNA test results. DNA testing provides researchers with evidence, but it is up to each genealogist to learn how to analyze, interpret, and correlate that evidence. To be helpful in answering research questions DNA test results must be compared to the results of others. A DNA test by itself is not very helpful. Remember DNA is a source and like any other type of genealogical source it must be compared to other sources. Often patterns become clear and conclusions can be drawn only after testing multiple family members and comparing their results to a wide variety of DNA matches. DNA does have limitations on what conclusions can be drawn.

Important things to know are:

- Genetic genealogy DNA testing cannot tell you the *exact* relationship that you have with a relative. You will have to work with the DNA evidence and compare it to other sources in order to determine the type of relationship you share with a match.
- Having a genetic genealogy DNA test done may reveal medical information about the test taker to a third party. In some cases, DNA matches may be able to tell if a familial trait or genetic mutation has been inherited by the tester.
- Doing a genetic genealogy DNA test does not violate your health record privacy.
- Genetic genealogy DNA testing is not a substitute for a medical exam or a replacement for advanced medical testing.

Video: “What DNA Testing Kits Can—and Can’t—Tell You About History, Health”

Take a moment now and watch a segment that aired on *Chicago Tonight* entitled “What DNA Testing Kits Can—and Can’t—Tell You About History, Health”



After you finish watching the Chicago Tonight video, please read Chapters 1 and 2 in your course textbook, *The Family Tree Guide to DNA Testing and Genetic Genealogy (2nd Edition)* by Blaine T. Bettinger.

- Chapter 1: Genetic Genealogy Basics
- Chapter 2: Common Misconceptions

Discussion 11: Genealogical DNA Testing Experience

After you develop your questions and answers, go to the discussion board and share them with your fellow students.

Discussion 12: DNA Tests, Standards, and Ethics

Each question below requires a two-part answer.

- If your birth month is January through April, discuss number 1.
- If your birth month is May through August, discuss number 2.
- If your birth month is September through December, discuss number 3.

For part a) discuss what type of DNA test(s) would best provide evidence toward the research problem and explain your reasoning for choosing each type of test. For part b) discuss how each situation should be handled from an ethical perspective.

Please read and comment with a thorough and well-thought-out reply to at least two of your fellow students. Remember to be courteous and respectful with your replies. There are no right or wrong answers and your fellow students may have a very different view of the situation than you do. The purpose of this exercise is not to debate issues but rather to encourage you to think about all possibilities and situations prior to DNA testing.

1a) Your mother-in-law Sarah always said she was adopted as a young child and the parents who raised her were not her biological parents. She is now deceased and you would like to try to identify her biological parents.

1b) At your request your mother did DNA testing and you are the manager of her account. Six months after her test results came in an unexpected match appears. The unexpected match contacts you saying she is an adoptee and thinks that your mother is her half sister. To the best of your knowledge your mother's parents married young and remained together throughout their life. Your grandmother is still alive, but your grandfather is not. You did not discuss how DNA testing can reveal unexpected results with your mother before she tested. How do you proceed? What do you tell the person who contacted you? What do you tell your mother and/or grandmother?

2a) Your great-great-grandfather William Jones was born in central New York about 1861. All genealogical records found so far identify his father as Joseph Jones but none provide any evidence of his mother's identity. You are exploring the possibility of DNA testing to help reveal his mother's identity. Which DNA test(s) would you choose to help to determine who his mother was?

2b) You receive a message from one of your DNA matches, Jane, a woman in her sixties who lives in another state. Jane says she was looking for information on her father, whom she had never met. She said her mother had a very brief relationship with a US soldier during the Vietnam War. Jane believes the soldier used a fake name and her mother, who later moved to the US, tried to locate the father but was unsuccessful. Jane believes that your deceased grandfather was her father. Your grandfather would've been married to your grandmother when Jane was conceived. Jane would like to meet your aunts and uncles, her supposed half-siblings, and is asking you for their contact information. What do you do? How do you proceed?

3a) Your Jewish grandfather immigrated to the US from the Ukraine in the early 1900s. You know he Americanized his first and last name but have no idea what his original Jewish name was in the old country. Without learning his original name, you can't continue your traditional (paper-based) genealogical research. You are hopeful that DNA testing could help to reveal his birth name.

3b) Ten years ago your Uncle Steve took a Y-DNA test at your request. Uncle Steve has since passed away. You are now working on a family project and realize that Uncle Steve's autosomal DNA could possibly help to further your research and perhaps even help to solve a family mystery. You know that the testing company stores samples for many years. Can you or should you order an autosomal DNA test on Uncle Steve's stored test sample?

## Delving into Four Types of Genetic Genealogy DNA Testing

## Four Types of Genetic Genealogy

Before reading the section below read Chapters 4 through 7 in your course textbook *The Family Tree Guide to DNA Testing and Genetic Genealogy (2nd Edition)* by Blaine T. Bettinger.

- Chapter 4, “Autosomal-DNA (atDNA) Testing”
- Chapter 5, “Y-Chromosomal (Y-DNA) Testing”—Read through the end of the section entitled “Daughtering Out”
- Chapter 6, “Mitochondrial (mtDNA) Testing”—Read through the end of the section entitled “Finding an mtDNA Descendant: Working Backward to Go Forward”
- Chapter 7, “X-Chromosomal (X-DNA) Testing”—Read through the end of the section entitled “The Unique Inheritance of X-DNA”

## Y-DNA Summary

### Who Can Test:

- Only men can take this test. Women do not have a Y chromosome and therefore cannot take a Y-DNA test.

### Inheritance:

- Passes from father-to-son virtually intact. No recombination takes place.
- Y is a sex chromosome.
- Men inherit the Y chromosome exclusively from their father.
- Men who share a common ancestor usually have the same or very similar Y-DNA.

### About the Test:

- This test compares markers on a man's Y chromosome to markers on other men's Y chromosomes.
- This test is relevant to the paternal line only. In many cases this is the surname line.
- This test is useful in surname projects or in answering questions regarding the male surname.
- The test can help estimate (although broadly) how long ago the most recent common ancestor (MRCA) lived.
- This test can provide evidence about a relationship between two men of the same surname who lack a known genealogical relationship.
- This test can tell you that you share a common ancestor but can't tell you exactly who that common ancestor was.

## Mitochondrial DNA (mtDNA)

### Who Can Test:

- Both men and women can take a mtDNA test.
- A son can take this test, but it provides information only on his umbilical line.

### Inheritance:

- Everyone has mtDNA inherited from their mother.
- mtDNA is passed from a mother to her children, both male and female.
- Except in tragic mutations, men do not contribute any mtDNA to their children.
- Women who share a common ancestor usually have the same or very similar mtDNA.

### About the Test:

- This test compares a test taker's mtDNA to the mtDNA of other test takers.
- A mtDNA test can help determine if you descend from the same female ancestor as others who have tested but it can't tell you who that ancestor was or when she lived.
- Because mtDNA mutates very slowly, two test takers with an identical match could possibly have a common ancestor well over twenty generations ago.
- This test is relevant only to the umbilical line.
- This test can help confirm or dismiss a hypothesis regarding an umbilical line ancestor.
- mtDNA is plentiful in cells and survives well enough to be extracted from ancient remains.

## Autosomal DNA (atDNA)

### Who Can Test:

- Everyone – men and women.

### Inheritance:

- Each parent contributes 50% of his or her atDNA to a child.
- Each person inherits 50% of his or her atDNA from mother and 50% from father.

### About the Test:

- An atDNA test compares the test taker's atDNA with the atDNA of others who have tested at the same testing company.
- atDNA testing matches you with relatives on **all** your ancestral lines. Most people carry at least some amount of each ancestor's atDNA for approximately 5-6 generations.
- Shared atDNA is measured in centimorgans (cMs). In most cases the more centimorgans the closer the relationship is between two people. For example, a parent and child will have a larger number of shared cMs than an uncle and nephew.
- Can be helpful in confirming or excluding recent relationships and can provide clues to more distant ancestors.
- Can help test takers connect with living cousins so genealogical research can become more collaborative.

## X-DNA

### Who Can Test:

- Everyone—men and women. X-DNA is usually included in atDNA testing although some testing companies' match-reporting tools don't show the X-DNA information even though they test it.

### Inheritance:

- X is a sex chromosome.
- Women have two X chromosomes. Women inherit one from their mother and one from their father.
- Men have one X chromosome which they inherit intact from their mother.
- Fathers pass their one X chromosome to their daughters. (Their sons receive a Y chromosome. A child's sex is determined by whether it inherits an X chromosome from its father or a Y.)
- This is very different than mtDNA. Do not confuse the two.

### About the Test:

- atDNA test results usually include X chromosome matches.
- Because of its unique inheritance patterns X-DNA can be very useful to including or eliminating certain branches of the family tree. This can help isolate your shared common matches to a particular branch of your family tree.

- Colorized fan chart showing the [female inheritance](#) of the X-DNA
- Colorized fan chart showing the [male inheritance](#) of the X-DNA

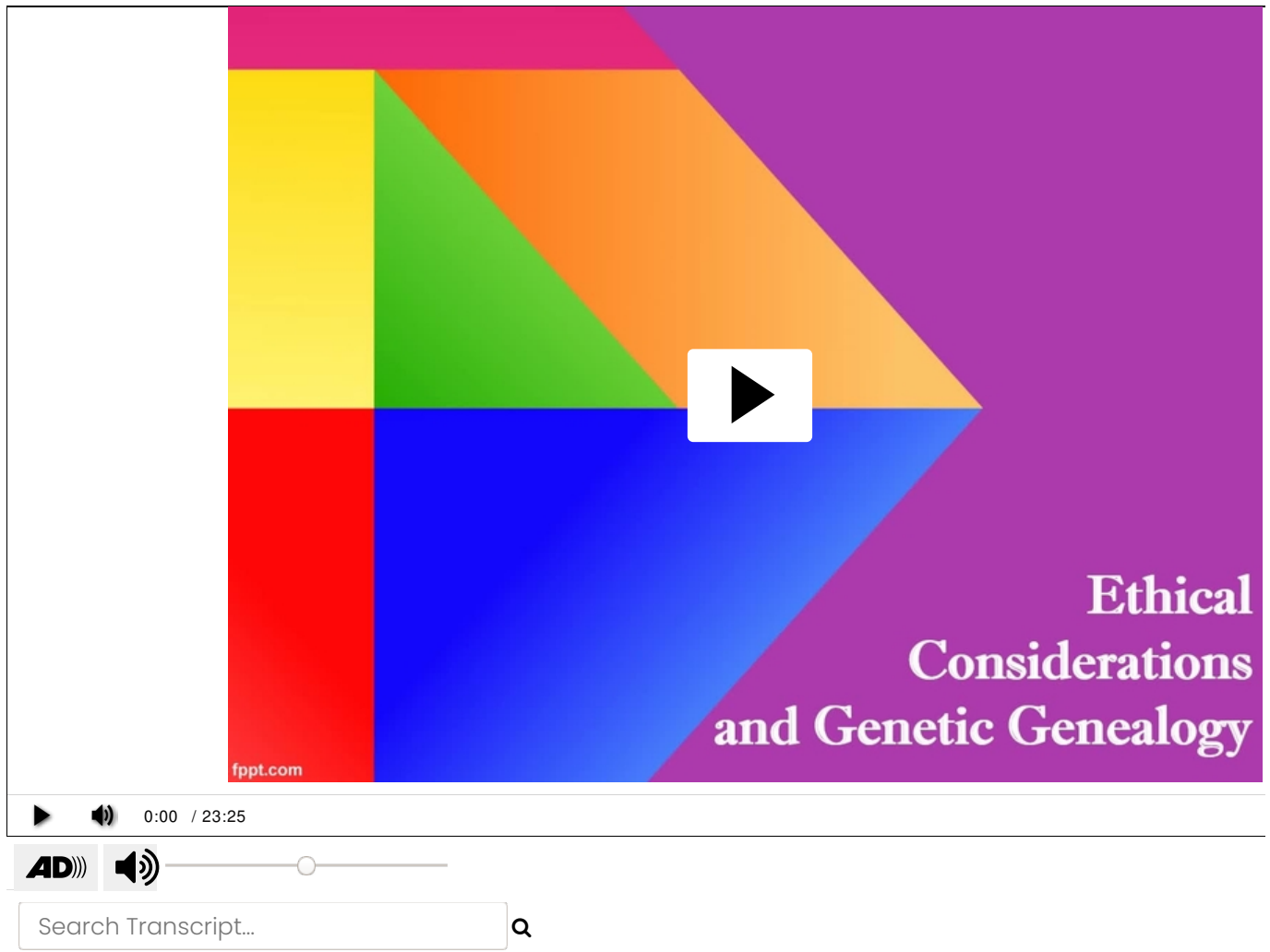
## Genetic Genealogy Standards and Ethics

In 2015 a genetic genealogy committee published a partial draft of [Genetic Genealogy Standards](#). These guidelines were developed to help provide ethical and usage standards for all people involved in the field of genetic genealogy whether they be casual DNA test takers, extended family members, or professional genealogists working with paying clients. The genetic genealogy standards is a three page document.

Before continuing to the video below please read the *Genetic Genealogy Standards* posted above and Chapter 3 "Ethics and Genetic Genealogy" in your course textbook.

Video: Allison Ryall, "Ethics and Experience"





**Ethical Considerations and Genetic Genealogy**

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Today, we will be discussing ethical considerations and genetic genealogy. As with most complex issues, it is important educate ourselves about potential scenarios and outcomes surrounding genetic genealogy before we encounter su research activities. Ethics is at the core of our everyday life.

We ask ethical questions whenever we think about how we should act. Being ethical is a part of what defines us as hur rational, thinking, choosing creatures. We all have the capacity to make conscious choices. Complex ethical problem: genealogy can be individual and private or widespread and systematic, involving groups, organizations, or even whole cor

In 2015, a group of individuals, including genealogists, genetic genealogists, and scientists, worked together to develop the standards. This document is available to everyone as a PDF download on the website [geneticgenealogystandards.com](http://geneticgenealogystandards.com) you take a moment and read through the genetic genealogy standards in full, but there are several points that I think are I would like to draw your attention to.

First one is item number 2, testing with consent. The genetic genealogy standards state, "genealogists only obtain D receiving consent, written or oral, from the tester. In the case of a deceased individual, consent can be obtained from a I In the case of a minor, consent can be given by a parent or legal guardian of the minor. However, genealogists do n someone who refuses to undergo testing."

This is a very important issue to remember. We must have permission in order to do DNA testing. And as part of that, w those who choose to not partake in the testing, even if their DNA test might answer questions for us.

If someone says that they do not want to do it, we need to respect that as genealogists and walk away from the interesting point with genetic genealogy standards, number 3, raw data, "genealogists believe the testers having an inali own DNA test results and raw data, even if someone other than the tester purchased the DNA test."

Basically, this means if you are asking family members to test for you, you pay for the test, and you may perhaps not

## Discussion 12: DNA Tests, Standards, and Ethics

After you develop your questions and answers, go to the discussion board and share them with your fellow students.

### Discussion 13: "DNA and the Media"

Find a recent story or article on the Internet from a mainstream media source. Share the link with the group. Make sure the article is accessible by all and isn't on a pay or subscription site.

Based on what you have learned about DNA write a brief critique of the article. Answer the following questions in your critique.

- Is the article clear?
- Does the writer have a good grasp of how DNA testing works?
- Does the writer understand what DNA testing can and can't do?
- Are concepts presented clearly to readers who may not be knowledgeable about DNA?
- Does the writer present DNA testing in a neutral way or is he or she trying to influence readers in a specific way, either for or against DNA testing?
- Is one DNA testing company mentioned or favored over the others?

Reply thoughtfully and thoroughly to at least two of your fellow student's posts on Discussion Board 3: "DNA and the Media"

## More About Ethics

Ethics are usually learned through personal experiences and behaviors. It is always easier to think about ethical situations and choices before you find yourself facing them. Before we can make decisions and choose actions it is important that we take a moment and consider situations from all perspectives. Every situation has more than one side. There is always more than just one point of view. Ethics are not always black and white. In many cases there are multiple gray areas.

In order to illustrate the complexity of ethics please read the following articles and watch the following videos. Each tells a story about a situation that individuals encountered after doing DNA testing.

## Further Resources

### Readings:

- [DNA Tests May Reveal the Skeletons in the Family Closet](#)
- [Facts Matter](#)
- [What Unexpected Things Might I Learn From 23andMe?](#)
- [Skillbuilding: The Ethics of DNA Testing](#)

### Video:

- Judy Russell and Amy Johnson Crow on [the Ethics of Genetic Genealogy](#) or in YouTube: [The Ethics of Genetic Genealogy: Tips from Judy Russell, the Legal Genealogist](#)
- (Video with article) [Three Siblings Abandoned As Newborns By Same Mom At Separate Times Meet For First Time](#)

## Lesson 2: Ethnicity Results, and Major Testing Companies

## Overview and Objectives

### Overview

The most frequently asked questions by those new to genetic genealogy are “Which testing company is the best?” or “Which testing company should I use?” This unit will provide you with an introduction and overview to the four major testing companies in the genetic genealogy marketplace. Each company is a solid player that provides unique tools to their test takers. In addition, each company has their own proprietary matching algorithms which determine who is or isn't a match to the test taker.

A key component of this unit is learning how to understand, read, and interpret ethnicity estimates. Ethnicity estimates are the most talked about and recognized aspect of genetic genealogy. Several of the major testing companies focus the majority of their marketing, advertising, and television commercials on ethnicity in order to attract new test takers. Yet ethnicity estimates are the least reliable component to DNA testing. It is important to realize that the ethnicity breakouts provided by the testing companies are just **estimates**. Creating these estimated percentages is a very complex process based on probability, statistics, and research.

### Learning Objectives

Upon completion of this unit the student should be able to:

- Identify and name the four major DNA test companies
- Explain which type of test each company offers
- Distinguish the basic differences between testing companies
- Compare and contrast strengths and weaknesses between testing companies
- Summarize how each testing company presents DNA information to the test taker
- Recognize the strengths and weaknesses of ethnicity testing
- Identify the caveats with ethnicity testing
- Explain how siblings can have different ethnicity testing results
- Summarize how different testing companies calculate ethnicity estimates

## The Four Major Genetic Genealogy Testing Companies

Each of the four major testing companies deliver quality products. What differs among them is their proprietary matching algorithms, the size of their databases, and the tools they offer the end user.

Recently a price war is going on between the testing companies. Prices change frequently and often. For the past several years sales have been offered around holiday periods such as Mother's Day, Father's Day and Valentine's Day. During the Christmas season sales have started around Black Friday and have continued through the end of the year. Several of the companies have been known to do a summer sale during the months of June and/or July. To determine current pricing it is always best to visit each company's website.

## Overview of How Results are Presented and Used

### Exploring FamilyTreeDNA

#### Y-DNA Testing

FamilyTreeDNA is the only one of the four major testing companies to offer Y-DNA testing. Currently they offer the following tests:

- Y-37 which examines 37 short tandem repeats (STRs) on the Y chromosome
- Y-111 which examines 111 short tandem repeats (STRs) on the Y chromosome
- Big Y-700 which examines 700 short tandem repeats and over 200K single nucleotide polymorphisms (SNPs) on the Y chromosome

A GOOD START

Y-37

ONLY \$119 USD

Examines 37 short tandem repeats (STRs) on the Y chromosome

ORDER NOW

Y-111

ONLY \$249 USD

Examines 111 short tandem repeats (STRs) on the Y chromosome

ORDER NOW

EXPERT LEVEL

Big Y-700\*

ONLY \$449 USD

Examines 700 short tandem repeats and over 200K SNPs on the Y chromosome

ORDER NOW

\*Big Y-700 does not include the raw data file. The option to purchase is available once you get your results.

FamilyTreeDNA, Y-DNA Tests, [www.familytreedna.com](http://www.familytreedna.com)

MtDNA Testing

FamilyTreeDNA is the only one of the four major testing companies to offer mtDNA testing. Currently they offer two versions of the test: mtDNA Plus which tests on the HVR1 and HVR2 regions of the mitochondrial DNA and the mtFull Sequence test which includes HVR1, HVR2 and the coding region of the mitochondrial DNA. For genealogical purposes it really is best to do the mtFull sequence test.

Mother's Line

mtDNA Plus

History

HVR1+HVR2

mtFull Sequence

Genealogy  
History

Full Sequence

- Connect to matches
- Free access to group projects & experts on your lineage
- Automated updates to your results
- Free webinars with a professional genetic genealogist
- Personalized customer support
- Discover up to 180,000 years

FamilyTreeDNA, mtDNA Tests, [www.familytreedna.com](http://www.familytreedna.com)

Autosomal DNA Testing

FamilyTreeDNA's autosomal test is called the Family Finder test.

	Best for	Specifications	What you get
Family Finder	Genealogy History Ancestry	Autosomal	<ul style="list-style-type: none"><li>• Family Finder Matches</li><li>• Ethnic Percentages</li></ul>

FamilyTreeDNA, Family Finder Test, [www.familytreedna.com](http://www.familytreedna.com)

Sample Collection


Currently FamilyTreeDNA uses a cheek swab for collecting their samples. This is an advantage for testing elderly family members or those who have difficulty producing spit. FamilyTreeDNA also stores received samples for approximately twenty years so in most cases additional tests can

be ordered without have to provide an additional sample. However, it is important to realize that DNA samples do degrade over time and certain types of tests use more of the sample than others.

Relative Matching

Relative matching is provided for all tests at FamilyTreeDNA. The information is presented differently for each type of test.

Y-DNA Matching




 Y-DNA - Matches

FILTER MATCHES

Show Matches For: The Entire Database Markers: 67 Distance: All Matches Per Page: 25

Last Name Starts With: (Optional) New Since: Run Report


67 MARKERS - 3 - MATCHES

Genetic Distance	Name	Earliest Known Ancestor	Y-DNA Haplogroup	Terminal SNP	Match Date
4	 Y-DNA67	Valentine Rochelle/Rachels b1770 SC? d1855 TN	R-M269		1/3/2017
7	 Y-DNA111 FF	Valentine Rochelle/Rachels b1770 SC? d1855 TN	R-M269		1/3/2017
7	 Y-DNA111 BigY	Zadoc Rachels 1804-1875 s/o Wm. Rachels d1837 GA	R-BY3251	BY3251	1/3/2017

Download CSV

FamilyTreeDNA, Y-DNA Matches, www.familytreedna.com

mtDNA Matching

 mtDNA - Matches













FILTER MATCHES

Show Matches For: The Entire Database Regions: HVR1, HVR2, Coding Regions Matches Per Page: 25

Last Name Starts With: (Optional) New Since: Run Report














HVR1, HVR2, CODING REGIONS - 142 MATCHES

Page: 1 2 3 4 5 6 of 6

Genetic Distance	Name	Earliest Known Ancestor	mtDNA Haplogroup	Match Date
0	 FMS FF		U5b2a2b	2/22/2018
0	 FMS FF		U5b2a2b	12/13/2017
0	 FMS FF		U5b2a2b	10/5/2017
0	 FMS FF	Betty Healy, b1806	U5b2a2b	5/22/2017
0	 FMS FF		U5b2a2b	4/19/2017
0	 FMS FF	Clement Crapo, Bay City, MI	U5b2a2b	1/26/2017
0	 FMS FF		U5b2a2b	1/26/2017
0	 FMS	Catharine Parr, b.1728, Eccles.Lncstr. England	U5b2a2b	1/26/2017
0	 FMS	Mary Weeks d 1851	U5b2a2b	1/26/2017
0	 FMS FF		U5b2a2b	1/26/2017
0	 FMS FF	Lucy Mallery, b. abt 1811 NY State	U5b2a2b	1/26/2017
0	 FMS		U5b2a2b	1/26/2017

FamilyTreeDNA, mtDNA - Matches, www.familytreedna.com

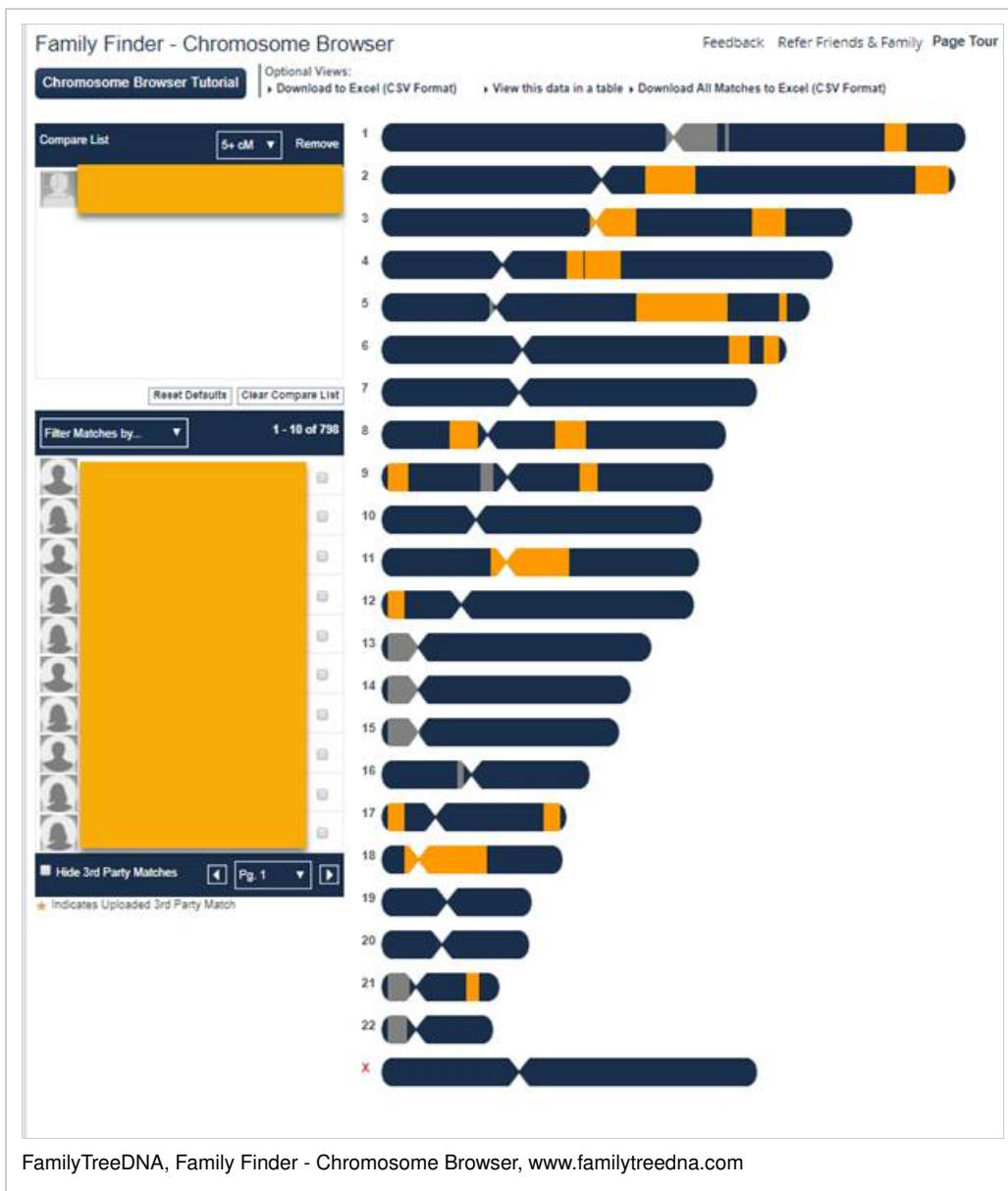
Autosomal Matching

	Name	Match Date	Relationship Range	Shared Centimorgans	Longest Block	X-Match	Linked Relationship	Ancestral Surnames	
<input type="checkbox"/>	 [Redacted]	12/22/2016	Parent/Child	3,384	267	X-Match	Daughter	[Redacted]	
<input type="checkbox"/>	 [Redacted]	12/22/2016	Parent/Child	3,384	267	X-Match	Son	[Redacted]	
<input type="checkbox"/>	 [Redacted]	12/22/2016	Parent/Child	3,384	267	X-Match	Son	[Redacted]	
<input type="checkbox"/>	 [Redacted]	01/09/2017	Parent/Child	3,384	267	X-Match	Daughter	[Redacted]	
<input type="checkbox"/>	 [Redacted]	01/11/2017	Parent/Child	3,384	267	X-Match	Mother	[Redacted]	
<input type="checkbox"/>	 [Redacted]	12/22/2016	Half Siblings, Grandparent/Grandchild, Uncle/Nephew	1,646	200		Grandson	[Redacted]	
<input type="checkbox"/>	 [Redacted]	02/29/2016	1st Cousin - 3rd Cousin	378	39		1st Cousin 1R	[Redacted]	
<input type="checkbox"/>	 [Redacted]	03/24/2017	2nd Cousin - 4th Cousin	116	29		2nd Cousin 1R	[Redacted]	
<input type="checkbox"/>	 [Redacted]	02/04/2018	3rd Cousin - 5th Cousin	84	16			[Redacted]	

FamilyTreeDNA, Family Finder Matches, [www.familytreedna.com](http://www.familytreedna.com)

### Chromosome Browser

FamilyTreeDNA provides a chromosome browser for its autosomal Family Finder test. This allows you to see a visual representation of which chromosome(s) and which segments you share with a match. The following image shows all of the segments that are shared between the test taker and her half first cousin once removed. The test taker's great-grandmother is the grandmother of the half first cousin once removed. As long as the two individuals being compared have no other ancestors in common other than the identified great-grandmother/grandmother then all of the segments shown in this chromosome browser were inherited by the test taker from her great-grandmother.



### Database Size

As of May 2020 there are approximately 1.15 million autosomal DNA testers in FamilyTreeDNA's databases (Source: [The DNA Geek](#)). Numbers are not available on mtDNA or Y-DNA testers.

### Raw Data Download

FamilyTreeDNA allows you to download your raw data file for storage on your personal hard drive or for you to upload to other sites that accept third party uploads.

### Raw Data Upload

FamilyTreeDNA does accept raw autosomal data uploads from other testing sites.

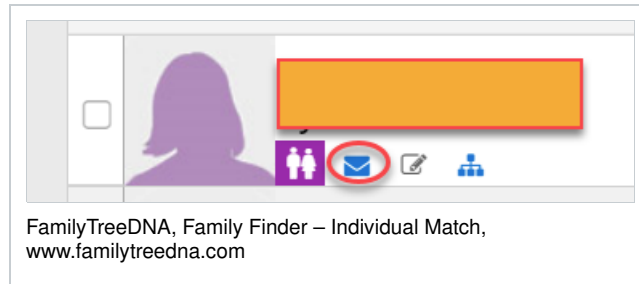
### Results Period Waiting Time

The processing time varies greatly depending on the types of test and the current volume of tests being processed in the lab. Generally

submitted chart of processing times on her website: [The DNA Geek: DNA Tests](#).

### Method of Contact with Matches

Users provide their email address. All contact with fellow matches is done through the individual user's private email. The match's email can be located by clicking on the blue envelope that appears under each match's name.



### Some Other Tools Available

For the Family Finder (atDNA) test:

- Gedcom can be uploaded or Family Tree can be built from scratch.
- Mother/Father sorting of DNA matches is available. As you add your matches onto your family tree in the FamilyTreeDNA website, the website will begin to sort your remaining matches by your maternal and paternal side.
- In-common-with and not-in-common-with sorting options are available to help you sort matches that you have in common with a specific match or to help you find matches that you don't have in common with a specific match.
- Matches can be searched by surname or ancestral name but not by location or place of origin.

## Exploring Ancestry DNA

### Y-DNA Testing

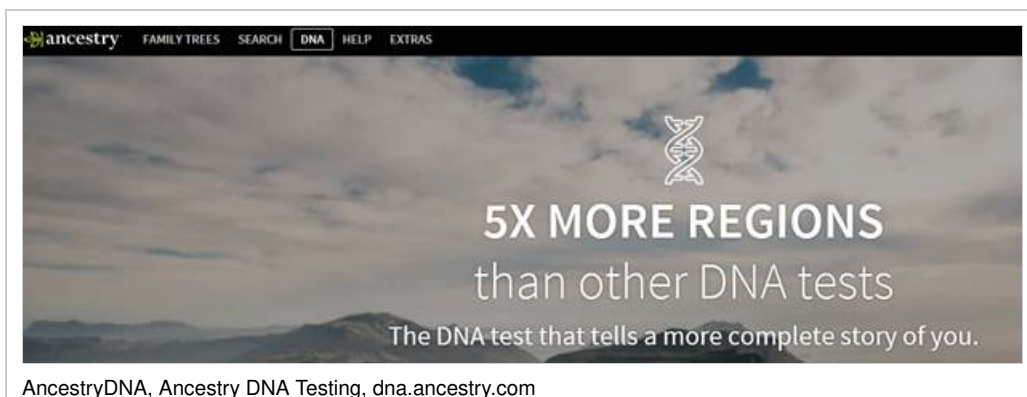
Not available at Ancestry DNA. Ancestry.com did Y-DNA previously but discontinued it in mid-2014.

### MtDNA Testing

Not available at Ancestry DNA. Ancestry.com did mtDNA previously but discontinued it in mid-2014.

### Autosomal DNA Testing

Autosomal DNA testing is the only DNA testing that Ancestry.com currently does.





## Sample Collection

To test with Ancestry DNA the test taker has to spit into a small vial and the spit must reach the level marked on the vial.

## Relative Matching

Relative matching is provided by Ancestry DNA. Matches are shown in descending order based on the number of shared centimorgans with the test taker.

The screenshot displays a list of DNA matches from AncestryDNA. It is organized into sections for different relationship types: 2ND COUSIN and 3RD COUSIN. Each match entry includes a star icon, a profile picture placeholder, a name (redacted with an orange bar), a 'Possible range' of relationships, a 'Confidence: Extremely High' status with a green progress bar, the number of shared matches (e.g., 1,028 people), and a 'VIEW MATCH' button. Some entries also show the last login date.

2ND COUSIN

- ★ [Profile] [Name] Possible range: 1st - 2nd cousins Confidence: Extremely High 1,028 people VIEW MATCH
- ★ [Profile] [Name] Possible range: 1st - 2nd cousins Confidence: Extremely High 1,028 people VIEW MATCH
- ★ [Profile] [Name] Possible range: 2nd - 3rd cousins Confidence: Extremely High 7 people VIEW MATCH  
Last logged in Sep 12, 2017

3RD COUSIN

- ★ [Profile] [Name] Possible range: 3rd - 4th cousins Confidence: Extremely High 1,028 people VIEW MATCH
- ★ [Profile] [Name] Possible range: 3rd - 4th cousins Confidence: Extremely High No family tree VIEW MATCH  
Last logged in Jan 17, 2018

AncestryDNA, Match List, dna.ancestry.com

## Chromosome Browser

Ancestry DNA does not provide a chromosome browser to its test takers.

## Database Size

As of May 2020 there are approximately sixteen million autosomal DNA testers in Ancestry DNA's database (Source: [The DNA Geek](#)).

## Raw Data Download

Ancestry DNA allows you to download your raw data file for storage on your personal hard drive or for you to upload to other sites that accept third party uploads.

## Raw Data Upload

Ancestry DNA does not accept raw autosomal data uploads from other testing sites. All testers must test with Ancestry DNA to have their test results in the Ancestry DNA database.

## Results Period Waiting Time

Generally speaking Ancestry DNA returns results in 4-6 weeks depending on the volume in the lab. There have been reports of some people

getting their results in as little as three weeks. Leah LaPerle Larkin, a genetic genealogist, keeps a user submitted chart of processing times on her website: [The DNA Geek: DNA Tests](#).

### Method of Contact with Matches

All initial communication with matches must be done through Ancestry's internal messaging system. This requires the message recipient to log back into Ancestry and to manually check his or her account for messages. If the recipient has the account set up to receive external messages Ancestry may send notice that a message is waiting.

### Some Other Tools Available

- In-common-with sorting option is available to help identify matches that you have in common with a specific match.
- If a parent has tested and is in the Ancestry DNA databases, then matches can be sorted by those that are in-common-with the parent who has tested.
- Matches can be searched by surname and/or birth location.
- Gedcom can be uploaded or family tree can be built from scratch.
- If a match has the same ancestor in his or her family tree as the test taker, Ancestry will display a green leaf that indicates a shared ancestor between the two people.

## Exploring 23andMe

### Y-DNA Testing

Not available at 23andMe.

### MtDNA Testing

Not available at 23andMe.

### Autosomal DNA Testing

Autosomal DNA testing is the only type of DNA testing that 23andMe currently does.

The image is a promotional graphic comparing two 23andMe service packages. On the left is the 'Ancestry Service' box, and on the right is the 'Health + Ancestry Service' box, which is marked as 'RECOMMENDED'. A central pink circle highlights the upgrade: 'NOW WITH 150+ ANCESTRY REGIONS¹'. Below each box is a brief description of the service and a 'learn more' link. At the bottom, the text reads '23andMe, atDNA Test Types, www.23andme.com'.

Service	Key Features
Ancestry Service	Experience your ancestry in a new way! Get a breakdown of your global ancestry by percentages, connect with DNA relatives and more. <a href="#">learn more</a>
Health + Ancestry Service (Recommended)	Get an even more comprehensive understanding of your genetics. Receive 75+ online reports on your ancestry, traits and health - and more. <a href="#">learn more</a>

23andMe, atDNA Test Types, [www.23andme.com](http://www.23andme.com)

### Sample Collection

To test with 23andMe the test taker has to spit into a small vial and the spit must reach the level marked on the vial.

Relative Matching

Relative matching is provided by 23andMe. Matches are shown in descending order based on the percent of DNA shared with the test taker. 23andMe has different levels of sharing. In some cases you may need to ask the match to share his or her information with you.

### DNA Relatives

Find and connect with genetic relatives to learn about relationships and family history. Use overlapping DNA segments to find common ancestors in the [DNA Comparison View](#).

Sort by

Strength of Relationship

Showing 1053 out of 1053 relatives

	Name	Relationship	Side	Sharing
☆	EL	Mother 50.0% shared, 25 segments	M	
☆	JH	Second to Third Cousin 1.25% shared, 6 segments		
☆	MB	Third to Fourth Cousin 0.60% shared, 4 segments		
☆	HH	Third to Fifth Cousin 0.86% shared, 2 segments		
☆	AN	Third to Fifth Cousin 0.47% shared, 3 segments		
☆	JC	Third to Fifth Cousin 0.46% shared, 3 segments	M	
☆	VS	Third to Fifth Cousin 0.43% shared, 3 segments	M	
☆	CC	Third to Fifth Cousin 0.42% shared, 3 segments	M	

Filters

Update DNA Relatives profile

Search keywords

Name, relation, or location

Reset

Notifications

Relationship

Closest 3 4 5 6 7+

Ancestor birthplaces

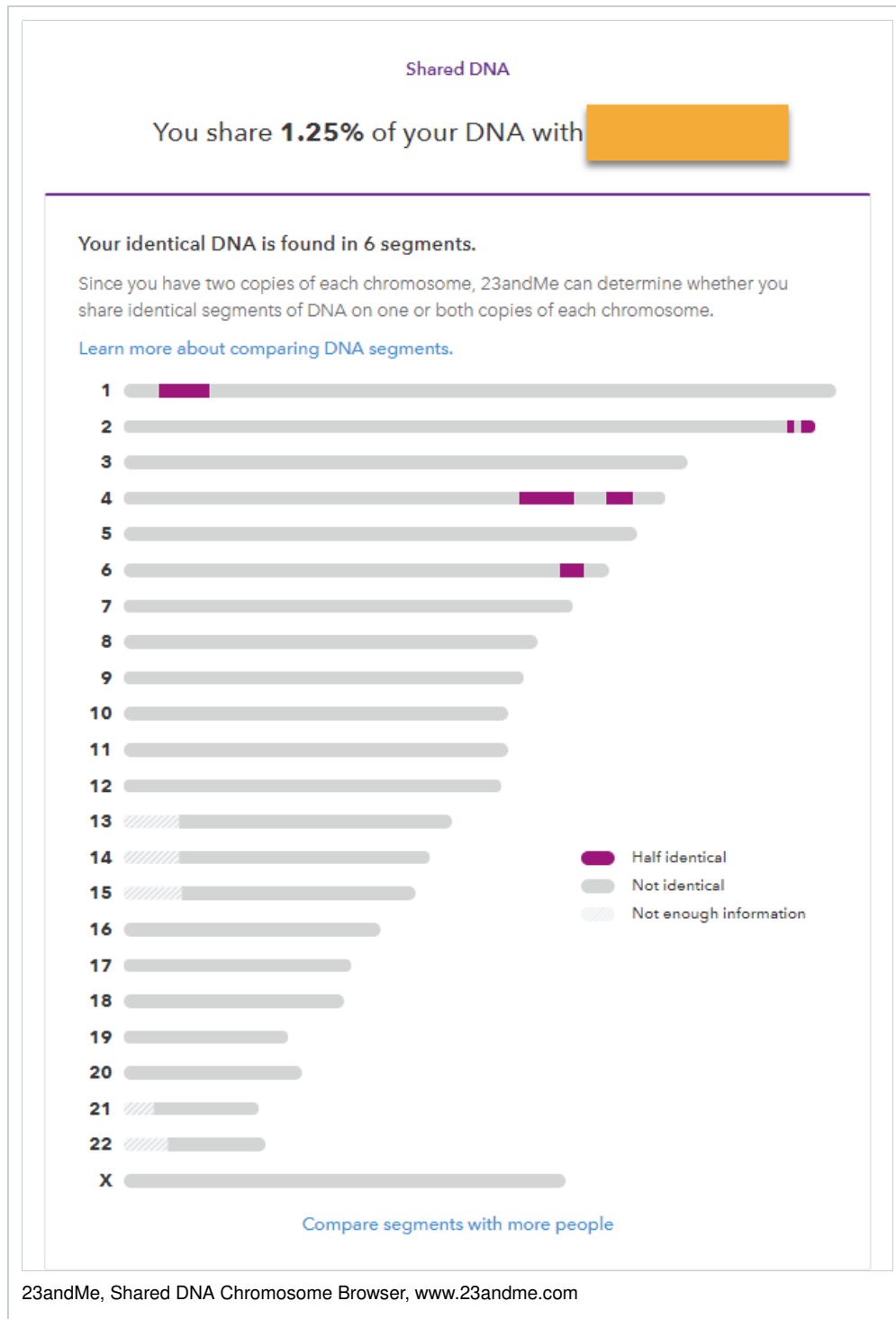
Surname

Mom's side / Dad's side

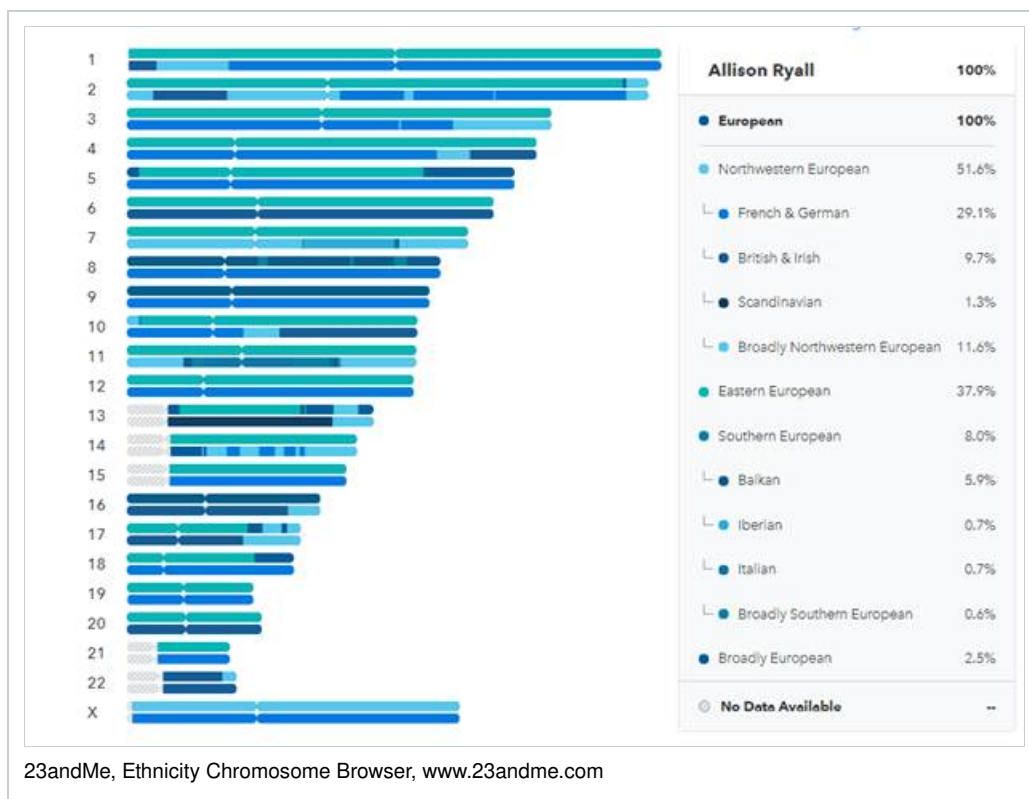
23andMe, DNA Relatives, [www.23andme.com](http://www.23andme.com)

Chromosome Browser

23andMe provides a chromosome browser for use with matches who agree to share that level of information with you.



23andMe also provides a chromosome browser for use with ethnicity tests. The image below shows ethnicity by chromosome and segment for each of the 23 chromosomes. Since the test taker's mother has also tested and is in the 23andMe database the ethnicity inherited from the mother is placed on the top of each chromosome and the ethnicity inherited from the father appears on the bottom of each chromosome.



### Database Size

As of May 2020 there are approximately ten million autosomal DNA testers in 23andMe's database (Source: [The DNA Geek](#)).

### Raw Data Download

23andMe allows you to download your raw data file for storage on your personal hard drive or for you to upload to other sites that accept third party uploads.

### Raw Data Upload

23andMe does not accept raw autosomal data uploads from other testing sites. All testers must test with 23andMe to have their test results in the 23andMe database.

### Results Period Waiting Time

Generally speaking 23andMe returns results in 4-6 weeks depending on the volume in the lab. Leah LaPerle Larkin, a genetic genealogist, keeps a user submitted chart of processing times on her website: [The DNA Geek: DNA Tests](#).

### Method of Contact with Matches

All initial communication with matches must be done through 23andMe's internal messaging system. This requires the message recipient to log back into 23andMe to reply to the message.

### Some Other Tools Available

- Searches of matches can be made by keyword, relationship level, ancestor birthplace or surname.
- Matches can be sorted by mother or father's side if at least one parent has tested with 23andMe.

## Exploring MyHeritage

### Y-DNA Testing

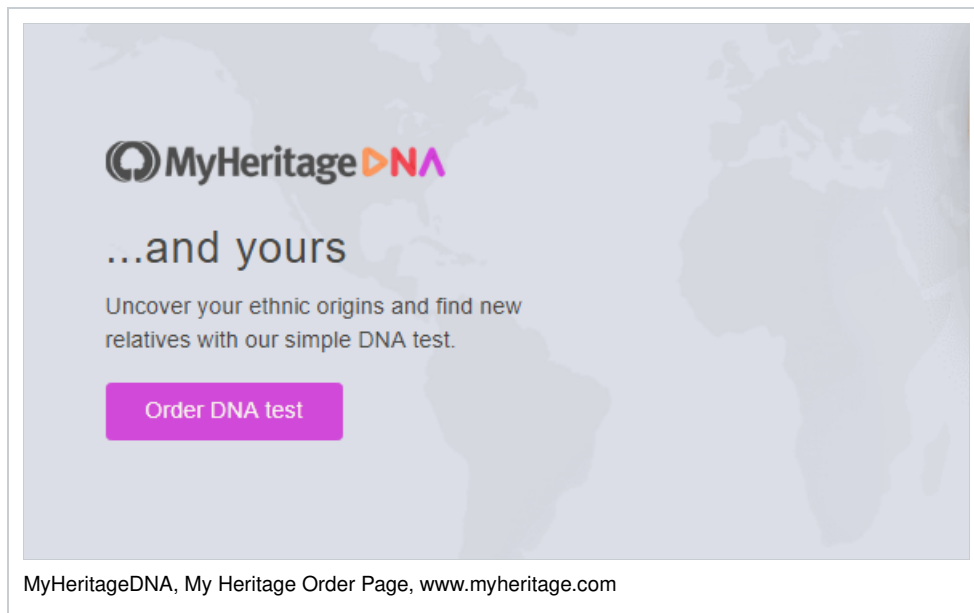
Not available at MyHeritage.

### MtDNA Testing

Not available at MyHeritage.

### Autosomal DNA Testing

Autosomal DNA testing is the only type of DNA testing that MyHeritage currently does.



### Sample Collection

Currently MyHeritage uses a cheek swab for collecting their samples. Like FamilyTreeDNA this is an advantage for testing elderly family members or those who have difficulty producing spit.

### Relative Matching

Relative matching is provided by MyHeritage. Matches are shown in descending order based on the percent of DNA and centimorgans shared with the tester.

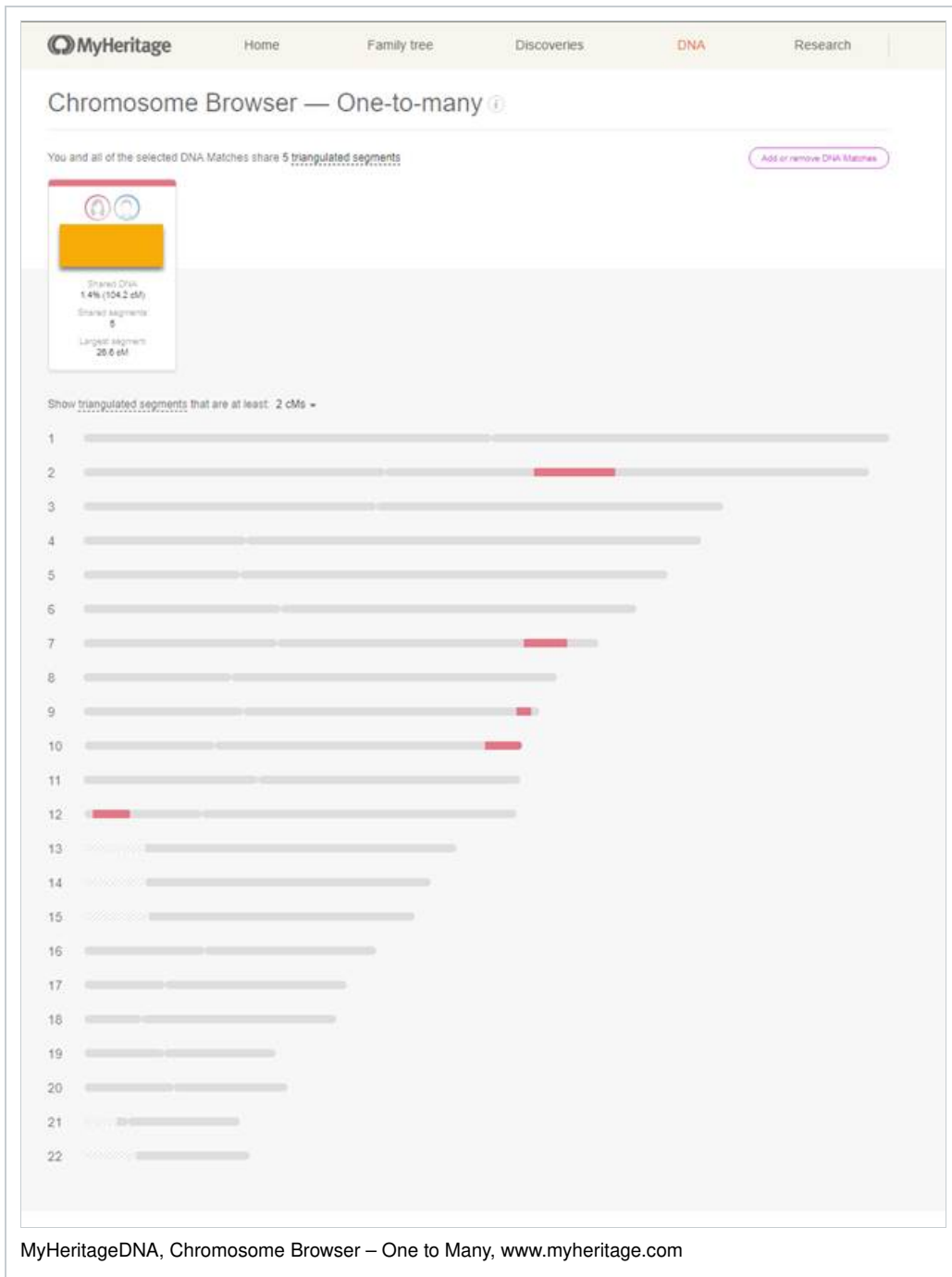
MyHeritage DNA Matches, www.myheritage.com

The screenshot displays the 'DNA Matches' section of the MyHeritage website. At the top, navigation tabs include Home, Family tree, Discoveries, DNA (selected), and Research. Below the navigation bar, a header indicates 'Showing 1-10 of 1,167 DNA Matches' and a 'Sort by: Shared DNA' dropdown. The main content area features five match cards, each with a profile picture, a family tree icon, and the following information:

- Match 1:** Estimated relationship: Mother. DNA Match quality: 48.2% (3,497.6 cM). Shared DNA: 22. Shared segments: 262.7 cM. Buttons: View tree, Review DNA Match.
- Match 2:** Estimated relationship: 1st cousin twice removed - 3rd cousin once removed. DNA Match quality: 1.4% (104.2 cM). Shared DNA: 5. Shared segments: 26.8 cM. Buttons: Contact, View tree, Review DNA Match.
- Match 3:** Estimated relationship: 3rd - 5th cousin. DNA Match quality: 0.8% (57.7 cM). Shared DNA: 5. Shared segments: 15.2 cM. Buttons: Contact, View tree, Review DNA Match.
- Match 4:** Estimated relationship: 3rd - 5th cousin. DNA Match quality: 0.6% (42.4 cM). Shared DNA: 2. Shared segments: 31.9 cM. Buttons: Contact, View tree, Review DNA Match.
- Match 5:** Estimated relationship: 3rd - 5th cousin. DNA Match quality: 0.6% (41.5 cM). Shared DNA: 4. Shared segments: 14.4 cM. Buttons: Contact, View tree, Review DNA Match.

## Chromosome Browser

MyHeritage provides a chromosome browser for its autosomal test. This allows you to see a visual representation which chromosome(s) and which segments you share with a match.



### Database Size

As of May 2020 there are approximately 3.77 million autosomal DNA testers in MyHeritage's database (Source: [The DNA Geek](#)).

### Raw Data Download

MyHeritage allows you to download your raw data file for storage on your personal hard drive or for you to upload to other sites that accept third party uploads.

### Raw Data Upload

MyHeritage does accept raw autosomal data uploads from other testing sites.



## Results Period Waiting Time

MyHeritage returns results in 4-6 weeks depending on the volume in the lab. Leah LaPerle Larkin, a genetic genealogist, keeps a user submitted chart of processing times on her website: [The DNA Geek: DNA Tests](#).

## Method of Contact with Matches

All initial communication with matches must be done through MyHeritage's internal messaging system.

MyHeritageDNA, Email Correspondence Page, [www.myheritage.com](http://www.myheritage.com)  
MyHeritageDNA, Email Correspondence Page, [www.myheritage.com](http://www.myheritage.com)

## Some Other Tools Available

- If a match has uploaded a pedigree chart it is displayed on the match page.
- In-common-with matches are shown on the match page.
- An ethnicity comparison with each match is visible on the match page.

## Required Reading

Please take a moment and read the following article: "[With a Simple DNA Test, Family Histories Are Rewritten](#)"

## Discussion 13: "DNA and the Media"

After you develop your questions and answers, go to the discussion board and share them with your fellow students.

### Discussions

#### Ask your Instructors

#### Ask your Instructors

Please ask your Teaching Team any questions that are not covered in other areas. To enter the discussion forums click on the blue link and create a thread. The first available teaching team member will answer.

#### Water Cooler

#### Water Cooler

Please feel free to socialize here with other members of the class. This discussion is not graded.

#### Introductions

#### Introductions

Use this discussion board to write a brief introduction about yourself and your genealogical interests and experience.

## Discussion 1

### Discussion 1: Leaving Your Tracks

- Which sites did you visit?
- Did you find any surprises in your search for information about yourself?
- How will this exercise change your approach to searching for or evaluating information when you're doing future genealogical searches?

## Discussion 2

### Discussion 2: Explore *FamilySearch*

Take some time to explore the resources in FamilySearch and tell your classmates about something that you found particularly interesting or helpful. Examples might be a collection of charts, a wiki article on military research, or a video presentation on a particular topic.

## Discussion 3

### Discussion 3: Census: Focus on a Family

Review the family of Pincus and Jennie Lukashovsky and their neighborhood in the 1920 and 1930 US census records. Our research confirms that the two entries pertain to the same family in spite of inconsistencies that you will see.

**Important:** Use only *FamilySearch* to locate and access the two census records. Do *not* create an online tree or any other online notes as part of your process. If you need to make a visual outline of the family structure, please sketch it out on paper.

In 1920 the family lived in Brooklyn, Kings County, New York, and were counted in Enumeration District 1507. You may challenge yourself by searching for them (their name was spelled oddly and then misindexed) or go straight to [the page on which they appear in FamilySearch](#).

By 1930 the family surname had been changed to Lux and they lived in Brooklyn, Kings County, New York, and were counted in Enumeration District 24-1773. You may search for them or go straight to [the page on which they appear in FamilySearch](#).

**Review** the course content on the page "Analysis and Correlation: Census Records." Compare, contrast, and analyze the information about the family and its neighborhoods in the two census records. What changed in the ten years between the census enumerations? What did not? What was stated and what was implied? What questions are raised by the information? What might the neighborhood context suggest about the family?

**Consult** the instructions to enumerators for at least one of the information categories, such as how the words "family" or "dwelling house" were defined, or the order of entering names.

*Do NOT research members of this family beyond these two census records.* You may, however, search for general background information helpful in understanding the family entries or the neighborhood, such as a map, a local history, occupation information in the enumerator's instructions, etc. We encourage you to review census pages before and after this family's for a better understanding of the neighborhood.

**Post one or two of your observations** in the discussion board; indicate in your subject line what your topic is, for example: "family size and occupation." Also comment on, expand upon, or raise a

question about the analysis in one or more of your fellow students' posts. Do share any insights that you gained from consulting the instructions to enumerators.

## Discussion 4

### Discussion 4: Looking at Probate Records

Review the probate files for David Lincoln Sr.'s estate.

1. If you were researching the David Lincoln family, what questions would these documents pose? Make a list as you read through the files.
2. On the discussion board post one question from your list. Given your question, what pertinent information in the probate file would lead to your next research step? What would that step be? The document you are referring to should be in the Subject Line of the posting.
3. Read and comment on one or more of your classmates' posts. *Doing* further research is not the purpose here! Rather, focus on using information items to direct your (or your classmate's) hypothetical future research, and on understanding the information you are looking at in the probate record(s).

## Discussion 5

### Discussion 5: Keeping Current

Some of the current "hot topics" discussed among genealogists include records access and using DNA results in our research. Where do you go for information about what is happening in the world of genealogy—periodicals? webinars? blogs? online discussion groups? conferences? (Be specific—which blog, etc.). If you don't have an answer for this question, you can still participate in the discussion by asking about or commenting on someone else's post.

## Discussion 6

### Discussion 6: Meeting the GPS

Use this discussion board to continue the examination of and conversation about Johnson's "Sophie Howe" article, begun in the video lesson "Looking at the Structure." Topics we'd like you to address:

1. Focus on one of the five components of the GPS: how does Johnson convey to her readers that her proof meets that component? or do you think her proof does *not* meet it? Be specific.
2. Choose one of the standards in our textbook *Genealogy Standards* and explain how Johnson does or does not meet that standard in her article.
3. The video lesson focused, in part, on the structure of Johnson's article. Expand upon, disagree with, or supply additional thoughts about the structure.

Comment on a posting by a classmate (please be more specific than simply "I agree"): expand upon a point made, ask a question about it, or offer an alternative perspective.

Watch for further engaging questions posted by your facilitator.

## Discussion 7

### Discussion 7: Transcripts & Standards

Review this [original document](#) and [associated transcription](#). Does the transcription meet Standards

#23, #25, #26, and #29?

Please identify **only one** thing that does not comply with the standards. Why doesn't it comply with standards? What would you do differently with respect to this **one thing** if you were to transcribe the document?

## Discussion 8

### Discussion 8: Questions You Develop After Reading the John Eppinger Family Census Timeline

When you organize your data into a timeline, you might make observations or see new possible research avenues. Read over the Eppinger census timeline.

Pick **one** of the following questions and post your response:

1. Does it appear that the named subjects are the same throughout the census years? How can you tell?
2. Is the birth information consistent? If not, why do you think that is the case?
3. Does anyone appear or disappear from the family group? What reasons can you think would account for this? Where would you go to do further research to see if your theory is correct?
4. Does the census provide information on home ownership? What does that mean for your research?
5. Is there other data that might suggest research in other records? If so, what records would you search?
6. What might you do next if this was your research project?

**These are thought questions only, please do not do any research.**

## Discussion 9

### Discussion 9: Research Plan Practice: Share Your Plan and Brainstorm

Using the index card for William M. Effinger:

1. Create a research question. Evaluate the question against *Genealogy Standards* #10.
2. Identify what you know. How do you know it? Do you need to verify any of the facts? Are there any discrepancies?
3. Brainstorm the sources you could use to answer the question. Evaluate those against Standard 12 (Broad context), Standard 13 (Source-based content), and Standard 14 (Topical breadth).  
**Hint:** websites like *Fold3*, *Ancestry*, *FamilySearch* are not sources – they are repositories.
4. Prioritize your sources. Review Standard 15 (Efficient sequence).

**This is a thought exercise only—do not execute your research plan.**

## Discussion 10

### Discussion 10: Research Reports and the Standards

You have just read two simple research reports. Evaluate these reports against Standards #62–71 and #74. Please identify **one thing** that does not comply with standards. Why doesn't it comply with standards? What would you do differently with respect to this **one thing** if you were to write this report?

- If your birth month is January through June, discuss the Effinger Report.
- If your birth month is July through December, discuss the Hendee Report.

**Note:** You cannot hurt our feelings. Although these reports were initially actual reports-to-ourselves, they have been tweaked to make sure they give you things to critique!

## Discussion 11

### Discussion 11: Genealogical DNA Testing Experience

Share your experiences about DNA testing by answering the following questions. Try to engage your fellow students by reading at least two of their posts and responding to them with a thoughtful and thorough reply.

1. Have you tested your DNA? If so, what type of test or tests have you done? Which company or companies have you tested with?
2. If you have not taken a DNA test do you have a genealogical question or problem in your research that you think DNA may help solve or provide evidence towards? If so, briefly describe the question or problem.
3. Have you asked a known family member to take a DNA test for you so that you could discover more about your genetic genealogy? If so, how did you approach him or her? Was it necessary to educate that person on the DNA testing process before he or she took the test? Without using names or identifying information, share your experience.
4. Have you ever asked a stranger to take a DNA test because you believed its results would add evidence in a DNA project or case you were working? If so, how did you approach that person? Was it necessary to educate the stranger about the DNA testing process? Without using names or identifying information, share your experience.
5. If you have never asked someone to take a DNA test (family or stranger), how would you handle the situation?

## Discussion 12

### Discussion 12: DNA Tests, Standards, and Ethics

Each question below requires a two-part answer.

- If your birth month is January through April, discuss number 1.
- If your birth month is May through August, discuss number 2.
- If your birth month is September through December, discuss number 3.

For part a) discuss what type of DNA test(s) would best provide evidence toward the research problem and explain your reasoning for choosing each type of test. For part b) discuss how each situation should be handled from an ethical perspective.

Please read and comment with a thorough and well-thought-out reply to at least two of your fellow students. Remember to be courteous and respectful with your replies. There are no right or wrong answers and your fellow students may have a very different view of the situation than you do. The purpose of this exercise is not to debate issues but rather to encourage you to think about all possibilities and situations prior to DNA testing.

1a) Your mother-in-law Sarah always said she was adopted as a young child and the parents who raised her were not her biological parents. She is now deceased and you would like to try to identify her biological parents.

1b) At your request your mother did DNA testing and you are the manager of her account. Six months after her test results came in an unexpected match appears. The unexpected match contacts you saying she is an adoptee and thinks that your mother is her half sister. To the best of your knowledge your mother's parents married young and remained together throughout their life. Your grandmother is still alive, but your grandfather is not. You did not discuss how DNA testing can reveal unexpected results with your mother before she tested. How do you proceed? What do you tell the person who contacted you? What do you tell your mother and/or grandmother?

2a) Your great-great-grandfather William Jones was born in central New York about 1861. All genealogical records found so far identify his father as Joseph Jones but none provide any evidence of his mother's identity. You are exploring the possibility of DNA testing to help reveal his mother's identity. Which DNA test(s) would you choose to help to determine who his mother was?

2b) You receive a message from one of your DNA matches, Jane, a woman in her sixties who lives in another state. Jane says she was looking for information on her father, whom she had never met. She said her mother had a very brief relationship with a US soldier during the Vietnam War. Jane believes the soldier used a fake name and her mother, who later moved to the US, tried to locate the father but was unsuccessful. Jane believes that your deceased grandfather was her father. Your grandfather would've been married to your grandmother when Jane was conceived. Jane would like to meet your aunts and uncles, her supposed half-siblings, and is asking you for their contact information. What do you do? How do you proceed?

3a) Your Jewish grandfather immigrated to the US from the Ukraine in the early 1900s. You know he Americanized his first and last name but have no idea what his original Jewish name was in the old country. Without learning his original name, you can't continue your traditional (paper-based) genealogical research. You are hopeful that DNA testing could help to reveal his birth name.

3b) Ten years ago your Uncle Steve took a Y-DNA test at your request. Uncle Steve has since passed away. You are now working on a family project and realize that Uncle Steve's autosomal DNA could possibly help to further your research and perhaps even help to solve a family mystery. You know that the testing company stores samples for many years. Can you or should you order an autosomal DNA test on Uncle Steve's stored test sample?

## Discussion 13

### Discussion 13: "DNA and the Media"

Find a recent story or article on the Internet from a mainstream media source. Share the link with the group. Make sure the article is accessible by all and isn't on a pay or subscription site.

Based on what you have learned about DNA write a brief critique of the article. Answer the following questions in your critique.

- Is the article clear?
- Does the writer have a good grasp of how DNA testing works?
- Does the writer understand what DNA testing can and can't do?
- Are concepts presented clearly to readers who may not be knowledgeable about DNA?
- Does the writer present DNA testing in a neutral way or is he or she trying to influence readers in a specific way, either for or against DNA testing?
- Is one DNA testing company mentioned or favored over the others?

Reply thoughtfully and thoroughly to at least two of your fellow student's posts on Discussion Board 3: "DNA and the Media"

## Ethnicity Results Explained

Before watching the video on the next page, please read Chapter 9 "Ethnicity Estimates" in your course textbook and the following articles:

- [Stanford at the Tech Museum Understanding Genetics Same Parents Different Ancestry](#)
- [Stanford at the Tech Museum Understanding Genetics Same DNA Different Ancestry Results](#)
- [Unexpected Ethnicity Results](#)
- Roberts Estes' post: [Which Ethnicity Test is Best?](#)
- [Native American Ancestors Came From Asia In Three Migrations](#)

Video: "Understanding Ethnicity Estimates"

**Ethnicity Estimate** Up to date

- Europe East 51%
- Europe West 28%
- Great Britain 16%
- Low Confidence Regions
- Ireland/Scotland/Wales 2%
- Finland/Northwest Russia 1%
- Scandinavia <1%
- Europe South <1%

**Migrations**

- Connacht, Ireland  
From your regions: Great Britain; Ireland/Scotland/Wales

See other regions tested 350+

View your DNA story over time

**Ethnicity** 1800 1825 1850 1875 1925

0:00 / 17:11





Today we're going to be exploring ethnicity estimates across each of the four testing sites. I'm going to share my test results with you so you can see how ethnicity is displayed at each individual testing company's website.

The first one that is showing on the screen is at Ancestry. Ancestry has recently updated their ethnicity results to include more than they had previously. And looking at the screen, you can see that Ancestry is predicting that I'm approximately 51% Eastern European, and 16% Great Britain, with a little bit of Ireland, Scotland, Wales, Finland, Northwest Russia, Scandinavia, Southern European thrown in there as well.

As we look at all of this, as we click on each one, they are color-coded. So if I click on Europe East, you can see it highlights the regions that are included. This is important because each testing company has a different grouping of countries in each one of their groups. So for Ancestry, you can see which countries are included in Europe East by hovering over or highlighting on it.

Same thing with Europe West, you can see which countries are included in that definition. And there is a little bit of overlap between how the circles cross over each other.

If we click on Europe East, for an example, you will see that it tells me that I have a range of anywhere from 38% to 61% of my ethnicity. The important thing to remember with all of these is what it says on the screen-- "ethnicity estimate." It's an estimate. It's not an exact measurement. And there can be some variations in it.

If I retest multiple times, my percentage could even come back and be slightly different-- anything within the 38% to 61% range. It is saying I'm 51%, if I send in another test, I could come back and have anything in this range of 38% to 61%. And then the next time it is predicting that would be included in Eastern European. Anywhere from Romania to Ukraine, Estonia, Austria, include a rather large grouping.

Same thing if we click on Ireland, Scotland, and Wales, we'll see that it covers quite a bit. Ireland, Northern Ireland, Scotland, and Wales. In here it also predicts that I have matches with people who share links to this area in Ireland, even though my



## What Ethnicity Testing Cannot Tell Us

Your ethnicity estimates cannot tell you exactly which country your ancestors came from. It can link your DNA to generalized areas—Eastern Europe, Asia, or Africa, but currently it can't tell you if your ancestors were born in Germany, France, or Wisconsin. Nor can ethnicity estimates tell you *which one* of your ancestors was born in a particular geographic area. To discover exactly where each ancestor was born we need to do traditional genealogical research. Ethnicity estimates can provide clues to lead us, but for solid genealogical answers we still need to turn to paper records and traditional research.

Ethnicity estimate tests cannot negate the possibility of a specific ethnic heritage. If Ashkenazi (Jewish) markers show up on in your ethnicity estimate, you have an ancestor at some point in time who was Ashkenazi. However, the absence of Ashkenazi markers doesn't mean that you don't have an Ashkenazi ancestor. If your four times great-grandmother was Ashkenazi, it is possible that you just didn't inherit any of her Ashkenazi DNA ethnicity markers.

### Ethnicity Readings

The following are a series of documents and informational hand-outs put out by the major testing companies regarding their ethnicity testing. Please read each of these articles or documents:

- [Ancestry Composition: 23andMe's State-of-the-Art Geographic Ancestry Analysis](#)
- [FamilyTreeDNA's myOrigins Methodology Whitepaper](#)
- [Ancestry.com's Ethnicity Whitepaper.](#)

Due to the length and scientific nature of this paper please skim it in full paying closer attention to the following sections: 1. Introduction, 3. Reference Panel, and 4. AncestryDNA's Ethnicity Estimation.