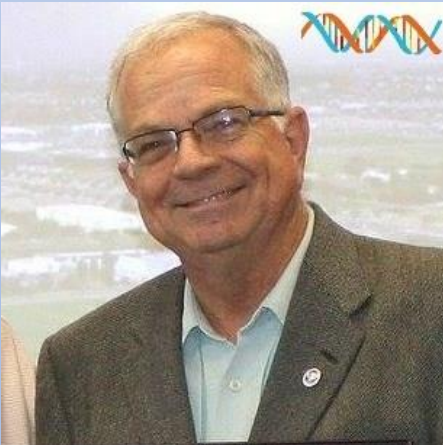


# Downloading and Uploading DNA Data



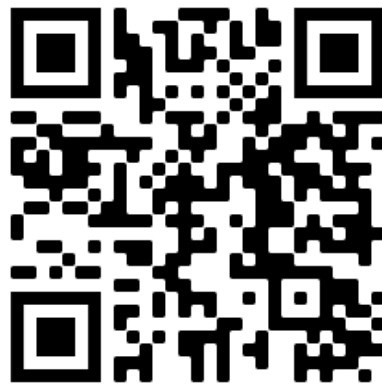
Ken waters  
@familytreeaz

<http://familytreeaz.com/presentations>



February 2024

All slides and handouts can be found at:  
<http://www.familytreeaz.com/Presentations/>



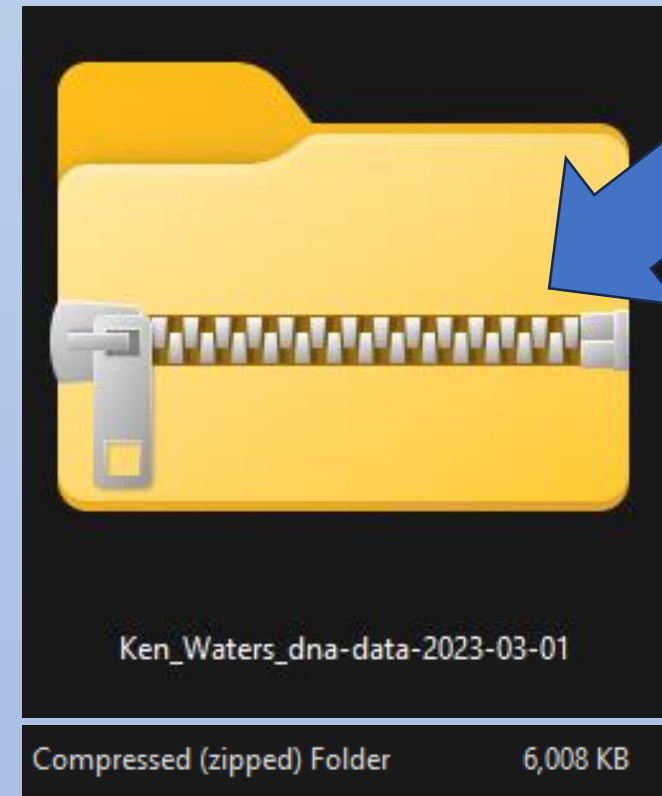
QR Code: take photo to  
open to presentations

# Why Should I Bother?

- By having your DNA test kit data in more than one company you will see many more DNA matches than if you just stick with the one company
- Perhaps you tested at 23andMe and have strong European heritage --  
- by downloading and then uploading to MyHeritage you will find many more matches, many living in Europe

# What do we mean by “DNA data”

- Each testing company stores a DNA record for each test-taker
- This is basically just a text file for all the tested markers for the different chromosome
- These files can be downloaded from the testing company website



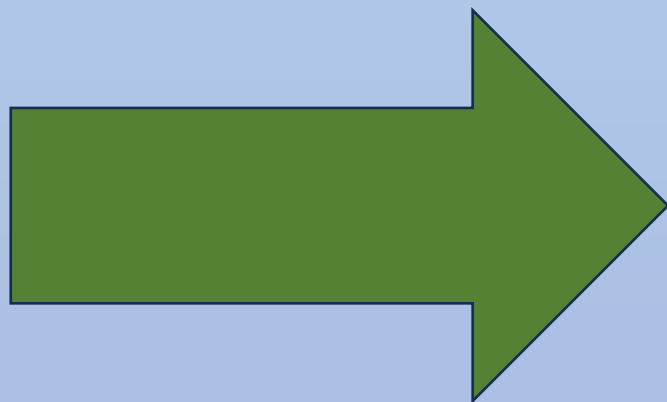
6 MB “zipped”  
(compressed) file  
as downloaded  
from Ancestry.com

# What do we mean by “DNA data”

- The “zipped” file can be uncompressed into a very large text file (~18 MB)



AncestryDNA



```
#AncestryDNA raw d
#This file was g
#Data was coll
#Data is for
#Below is
#INFORMA
#ONLY.
#SUBJECT
#DOWNLOADE
#WHEN YOU
#SECURING
#
#Genetic d
#correspon
#(possible)
#of the SN
#contain t
#on the fo
rsid chromosome position allele1 allele2
rs4477212 1 82154 T T
rs3131972 1 752721 G G
rs12562034 1 768448 A G
rs11240777 1 798959 A G
rs6681049 1 800007 C C
rs4970383 1 838555 C C
rs4475691 1 846808 C C
rs7537756 1 854250 A A
rs13302982 1 861808 G G
rs1110052 1 873558 T T
rs17160698 1 887162 T T
rs3748597 1 888659 C C
rs13303106 1 891945 G G
rs28415373 1 893981 C C
rs13303010 1 894573 A A
rs6696281 1 903104 C C
rs28391282 1 904165 G G
rs2340592 1 910935 A G
```

Chromosome #

SNP ID

First Value (A,T,C,G)

Second Value (A,T,C,G)

AncestryDNA file opened in Wordpad

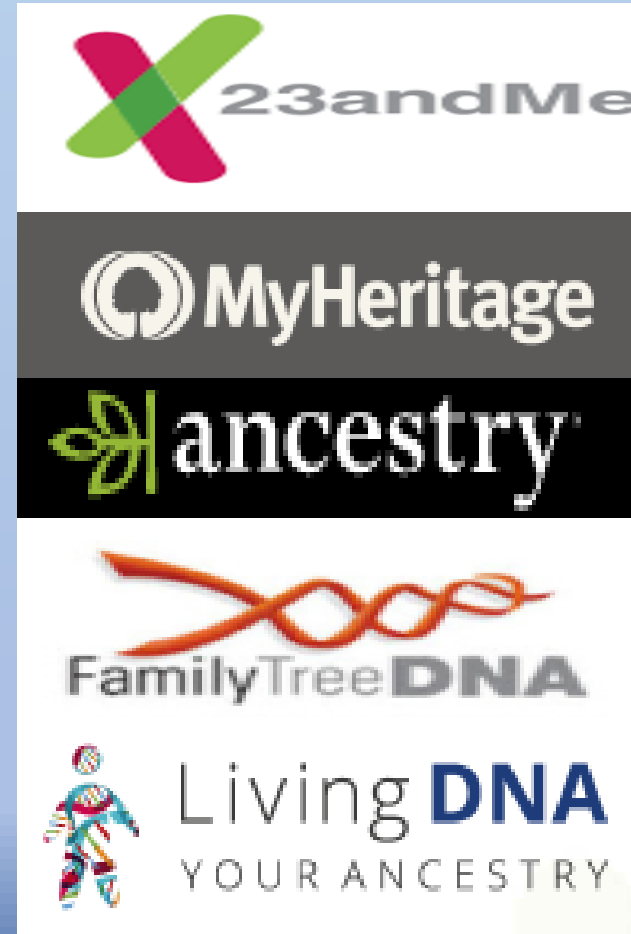
# Special Note

- You would not normally want to unzip and view the file --- I did it here simply to show what's in it for illustrative purposes!
- For most purposes you'll just keep it as a single "zip" file

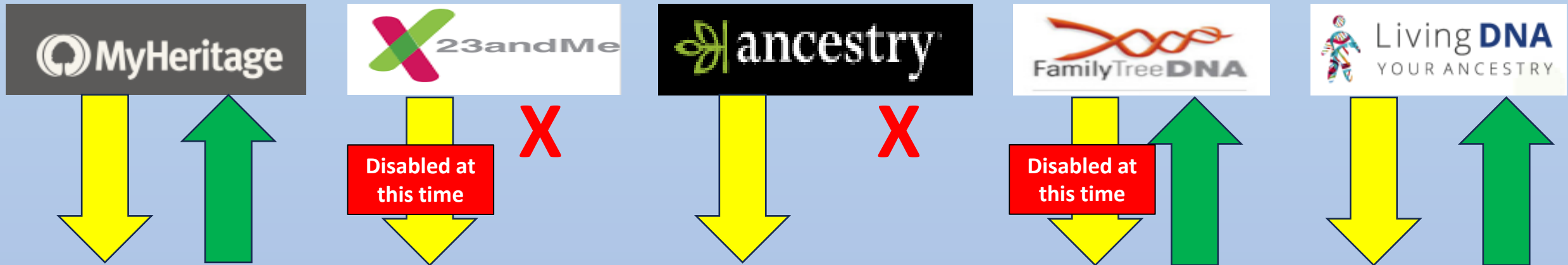
```
#AncestryDNA raw data download
#This file was generated by AncestryDNA at: 03/01/2023 22:08:01 UTC
#Data was collected using AncestryDNA array version: V1.0
#Data is formatted using AncestryDNA converter version: V1.0
#Below is a text version of your DNA file from Ancestry.com DNA, LLC. THIS
#INFORMATION IS FOR YOUR PERSONAL USE AND IS INTENDED FOR GENEALOGICAL RESEARCH
#ONLY. IT IS NOT INTENDED FOR MEDICAL OR HEALTH PURPOSES. THE EXPORTED DATA IS
#SUBJECT TO THE ANCESTRY TERMS AND CONDITIONS, BUT PLEASE BE AWARE THAT THE
#DOWNLOADED DATA WILL NO LONGER BE PROTECTED BY OUR SECURITY MEASURES.
#WHEN YOU DOWNLOAD YOUR RAW DNA DATA, YOU ASSUME ALL RISK OF STORING,
#SECURING AND PROTECTING YOUR DATA. FOR MORE INFORMATION, SEE ANCESTRYDNA FAQs.
#
#Genetic data is provided below as five TAB delimited columns. Each line
#corresponds to a SNP. Column one provides the SNP identifier (rsID where
#possible). Columns two and three contain the chromosome and basepair position
#of the SNP using human reference build 37.1 coordinates. Columns four and five
#contain the two alleles observed at this SNP (genotype). The genotype is reported
#on the forward (+) strand with respect to the human reference.
rsid chromosome position allele1 allele2
rs4477212 1 82154 T
rs3131972 1 752721 G G
rs12562034 1 768448 A G
rs11240777 1 798959 A G
rs6681049 1 800007 C C
rs4970383 1 838555 C C
rs4475691 1 846808 C C
rs7537756 1 854250 A A
rs13302982 1 861808 G G
rs1110052 1 873558 T T
rs17160698 1 887162 T T
rs3748597 1 888659 C C
rs13303106 1 891945 G G
rs28415373 1 893981 C C
rs13303010 1 894573 A A
rs6696281 1 903104 C C
rs28391282 1 904165 G G
rs2340592 1 910935 A G
```

# 5 Mainstream DNA Testing Companies

- There are 5 known and recommended companies at this time:
  - Ancestry
  - Family Tree DNA
  - MyHeritage
  - 23andMe
  - Living DNA



# 5 Testing Companies



All 5 testing companies allow downloading the raw DNA file

3 of the testing companies allow uploading a raw DNA file --- Ancestry and 23andMe do not allow uploads

Currently 23andMe and FamilyTreeDNA downloads are disabled due to security concerns

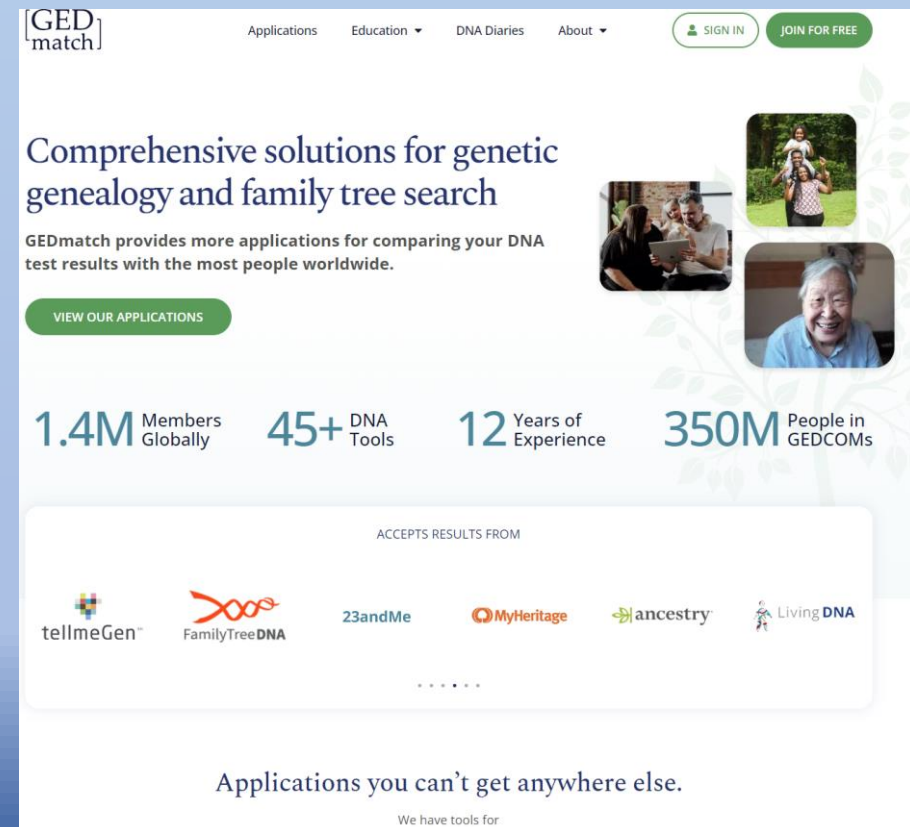


# Also---GEDMatch accepts uploaded DNA files

- Free site to upload DNA to --- accepts DNA from all 5 testing companies as well as a few others that are not mainstream

The logo for GEDmatch, featuring the word "GED" in a large, bold, serif font inside square brackets, with the word "match" in a smaller, lowercase serif font below it.

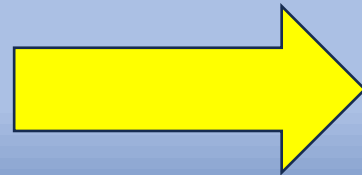
- Free to register and to upload up to 5 kits
- Basic tools are available for free
- Some more advanced tools can be accessed with a nominal upgrade fee

A screenshot of the GEDmatch website homepage. The page features a navigation bar with links for Applications, Education, DNA Diaries, and About, along with "SIGN IN" and "JOIN FOR FREE" buttons. The main heading reads "Comprehensive solutions for genetic genealogy and family tree search". Below this, a sub-heading states "GEDmatch provides more applications for comparing your DNA test results with the most people worldwide." A "VIEW OUR APPLICATIONS" button is visible. The page highlights key statistics: "1.4M Members Globally", "45+ DNA Tools", "12 Years of Experience", and "350M People in GEDCOMs". A section titled "ACCEPTS RESULTS FROM" displays logos for tellMeGen, FamilyTreeDNA, 23andMe, MyHeritage, ancestry, and LivingDNA. At the bottom, the text reads "Applications you can't get anywhere else." and "We have tools for".

Note:

- Because there are so many complexities with each different company in terms of downloading and uploading I'll just show one example:

## Downloading from Ancestry and uploading to MyHeritage



# Downloading Process

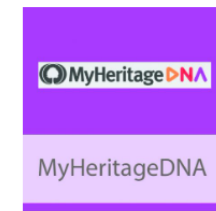
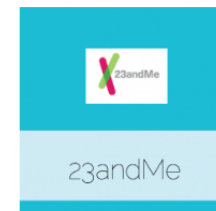
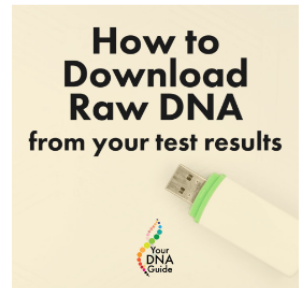
- Different with each company and the instructions can change with time
- Recommended resources:
- <https://www.yourdnaguide.com/rawdata>
- <https://dna-explained.com/2019/11/04/dna-file-upload-download-and-transfer-instructions-to-and-from-dna-testing-companies/>

## How to Download Your Raw DNA Data

Your raw DNA data is the file that is generated by the testing company and provides your values at each location that was tested in your DNA. That raw data is a valuable record, and you should keep it for your own records. Choose a testing company below to see how to access that data and save it to your computer.

### Download

Before you can take your autosomal data anywhere, you have to download it from the company who has it. Choose your testing company to get started.



# In addition, the testing company might have useful instructions

The screenshot shows the AncestryDNA help page for downloading DNA data. The page title is "Downloading DNA Data". It explains that DNA data is information generated from an AncestryDNA test, used for ethnicity estimates, matching relatives, and predicting traits. It notes that this data is also called "raw data" and can be downloaded in a .txt format. A blue button labeled "Go to DNA Settings" is present. Below it, a list of 8 steps provides instructions on how to download the data, including selecting the test, confirming the download, verifying the account, and finding the downloaded file. A section titled "Reading your DNA Data" shows a sample of the data format as a table with columns for rsID, chromosome, position, allele1, and allele2.

ancestry Home Trees Search DNA Support Topics

Home > AncestryDNA®

## Downloading DNA Data

DNA Data is the information generated from an AncestryDNA® test. This data is used to estimate your ethnicity estimate, match you with genetic relatives, and predict your traits. This uninterpreted data is also called "raw data."

DNA Data can be downloaded in a .txt (text file) format. DNA Data from other websites cannot be uploaded to Ancestry®.

[Go to DNA Settings](#)

1. From your DNA Settings, select the test you'd like to download.
2. Scroll down to the *Download or Delete* section and select **Download DNA data**.
3. Select the **box** to confirm that you understand, and click **Continue**.
4. Verify your account by choosing 1 of 2 methods:
  - Click **Enter current password**. Enter your **password** into the field and click **Continue**.
  - Click **Send code via email** > **Send code**. Retrieve the code from your email inbox and enter it into the *Enter Code* field. Click **Continue**.
5. Check your email inbox for an email to download your DNA data. The email can take up to 24 hours to arrive.
6. In the email, select **Download DNA Data**. The downloaded file will not be in or attached to the email.  
If you made multiple download requests, only the most recent email from Ancestry (associated with your most recent download request) will have a valid link. A download link can only be used once. It will expire after a week. If your link has expired, start over at step 1.
7. Click **Download DNA Data**.
8. The file will be downloaded to your computer. The file name will be **dna-data-(date).zip**. If you can't find it, check your Downloads folder or search for the file name (if you have a PC) by clicking the Windows key **⊞** on your keyboard and entering the file name in the search field that appears. If you have an Apple computer, select the Spotlight icon **🔍** in the top-right corner of your screen and enter the file name in the search field. To open the file, double-click it.

## Reading your DNA Data

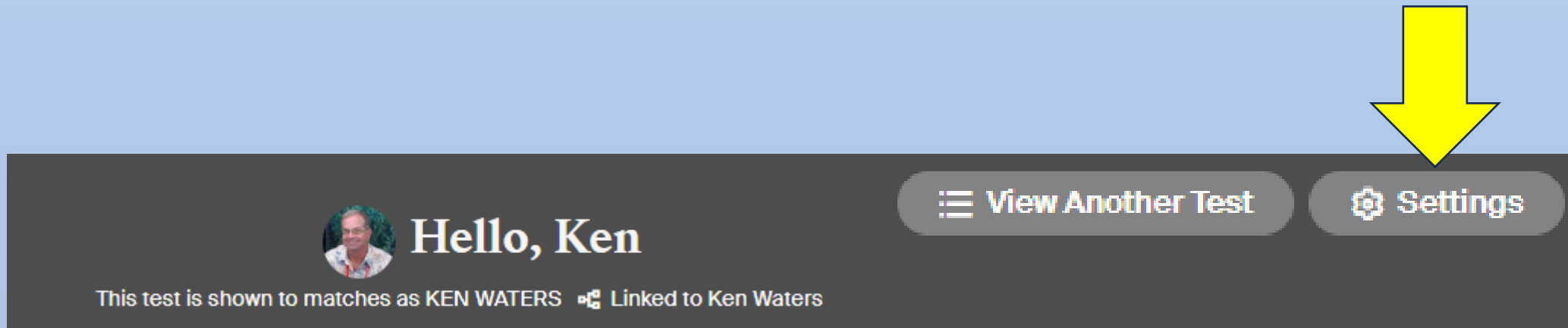
Here's what the data may look like:

rsID	chromosome	position	allele1	allele2
rs4477212	1	72017	A	A
rs3094315	1	742429	G	A
rs3131972	1	742584	G	G
rs12124819	1	766409	G	G

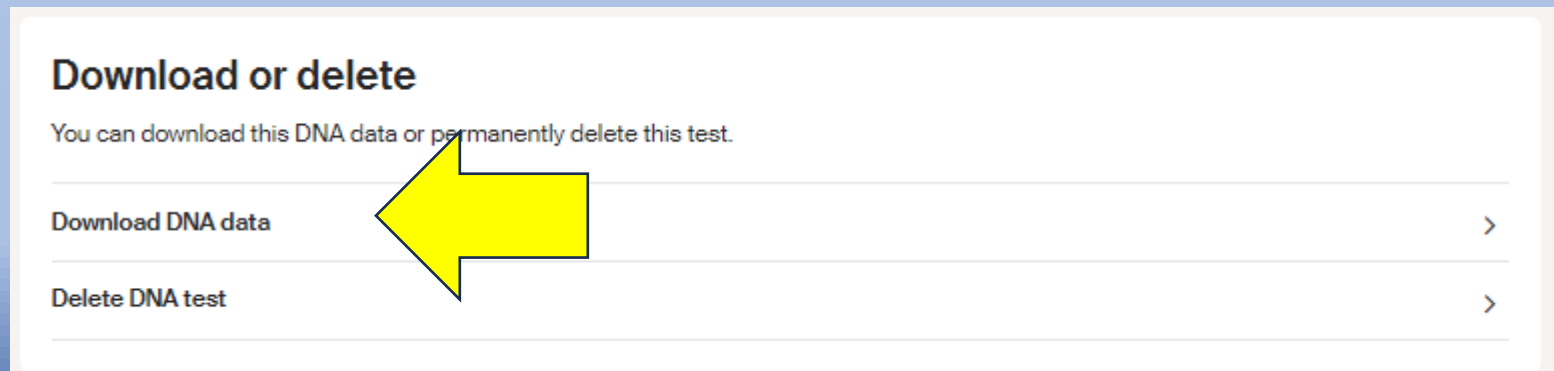
[https://support.ancestry.com/s/article/Downloading-DNA-Data?language=en\\_US](https://support.ancestry.com/s/article/Downloading-DNA-Data?language=en_US)

# We'll show one example, Ancestry to MyHeritage

- Step 1: Download from Ancestry



A screenshot of the Ancestry user interface. On the left, there is a profile picture of a man and the text "Hello, Ken". Below this, it says "This test is shown to matches as KEN WATERS" followed by a small icon and "Linked to Ken Waters". On the right, there are two buttons: "View Another Test" and "Settings". A large yellow arrow points down to the "Settings" button.



A screenshot of a menu titled "Download or delete". Below the title, it says "You can download this DNA data or permanently delete this test." There are two options listed: "Download DNA data" and "Delete DNA test". A large yellow arrow points left towards the "Download DNA data" option.

# Downloading from Ancestry

## Download DNA test for Ken Wat

### Download DNA test

You can download a .zip file of your DNA Data. Downloaded data is subject to [AncestryDNA Privacy Statement](#). [What is DNA Data?](#)

I understand that after I download my DNA Data, it will no longer be protected and I will assume all risk of storing, securing, and protecting this information.

Continue

Cancel

 ancestry



KEN WATERS  
satwatcher.gen@gmail.com

### Verify account

Choose a method to verify your account.

 Send code via email

 Enter current password

Cancel

# Downloading from Ancestry

## Download DNA test

### Check your inbox

We've emailed you instructions on how to download your data. This email may take up to 24 hours to show up in your inbox.  
[Return to your DNA settings.](#)

After several  
(many?) minutes...

Just click to download





### Your requested data is available

The data file is ready for  
Ken Waters:

[Download DNA Data](#)

For your security, this link will only work once and will automatically expire after 7 days. If the link no longer works, go to your [AncestryDNA® settings](#) page to start the process again.

Final Step: download the file  
(be sure to save it in a place  
you'll know how to find later!)

## Download DNA Data

 [Download DNA Data](#)

### More about your DNA Data

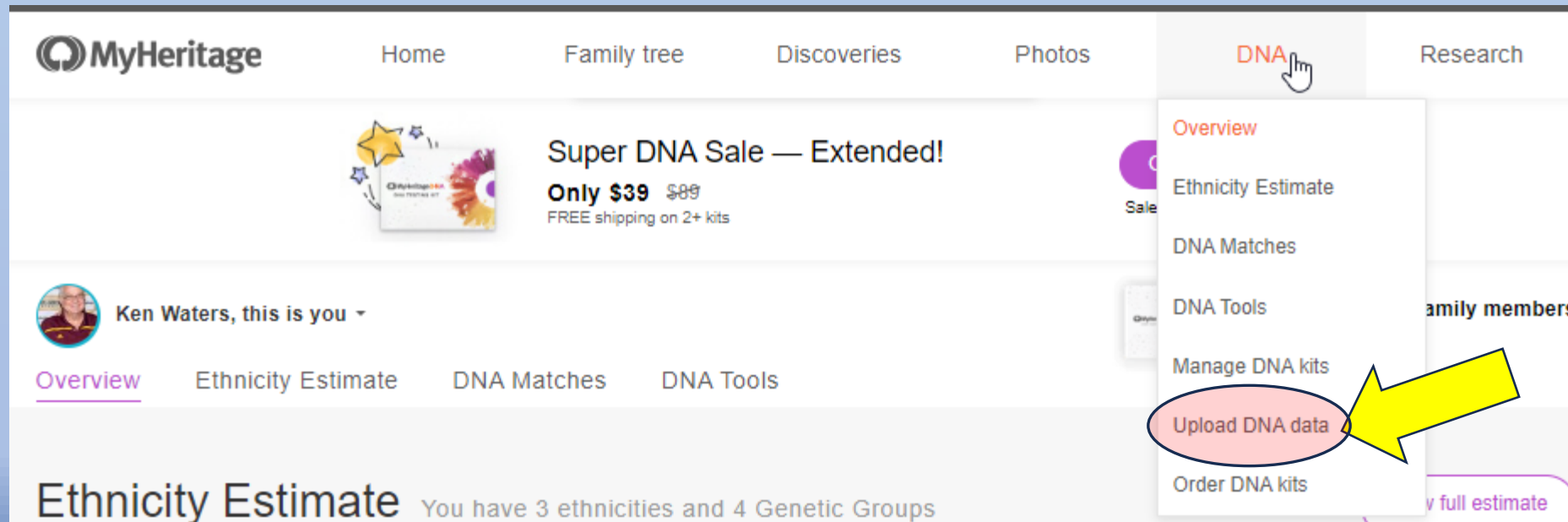
Your DNA Data is subject to the [Terms and Conditions](#) and [Privacy Statement](#). You must not use the DNA Data in whole, in part, and/or in combination with any other database for discriminatory, breach of privacy, or otherwise illegal activity (for example, to identify an anonymous donor or to make insurance or employment decisions). Once you receive the downloaded DNA Data, that copy will not be protected by our security measures.

The DNA Data is for your personal use and is intended for genealogical research only. Individual DNA sequences included in the DNA Data are not validated for accuracy. As such, this information is not intended for medical/health purposes or for legal proceedings.

[What is DNA Data?](#)

# Uploading to MyHeritage

- Log into MyHeritage and “mouse over” the DNA tab and select upload



The screenshot shows the MyHeritage website interface. At the top, there is a navigation bar with the MyHeritage logo and several tabs: Home, Family tree, Discoveries, Photos, DNA, and Research. The DNA tab is highlighted in red, and a mouse cursor is hovering over it. A dropdown menu is visible, listing several options: Overview, Ethnicity Estimate, DNA Matches, DNA Tools, Manage DNA kits, Upload DNA data, and Order DNA kits. The 'Upload DNA data' option is circled in red, and a yellow arrow points to it from the right. Below the navigation bar, there is a promotional banner for a 'Super DNA Sale — Extended!' with a price of 'Only \$39' (down from '\$89') and 'FREE shipping on 2+ kits'. Below the banner, there is a user profile for 'Ken Waters, this is you' with a dropdown arrow. Under the profile, there are several tabs: Overview, Ethnicity Estimate, DNA Matches, and DNA Tools. The 'Overview' tab is selected. Below the tabs, there is a section titled 'Ethnicity Estimate' with the text 'You have 3 ethnicities and 4 Genetic Groups'. To the right of this section, there is a button labeled 'View full estimate'.



# Uploading to MyHeritage

- Click Start to answer a few basic questions

MyHeritage Home Family tree Discoveries Photos **DNA** Research

## Upload DNA data

If you or your family members have already taken a DNA test with another provider, you can upload the DNA data to MyHeritage and receive DNA matches **FREE**.\*


[Start](#)

Haven't tested your DNA yet? [Order your DNA kit](#)

\* Receiving DNA Matches and contacting them is free and unlimited. Unlocking additional DNA features (Chromosome Browser, Ethnicity Estimate, Shared ancestral places, and more) costs an extra fee.

DNA data uploaded to MyHeritage is completely private and secure. Only you can see the DNA data you upload.

# Uploading to MyHeritage

Home Family tree Discoveries Photos DNA Research

## Upload DNA data

Whose DNA data are you uploading?

Mine  Someone Else's

---




Enter the details of the person who was tested

 ×

I have obtained permission from the person listed above to manage his/her DNA data (mandatory)

[Continue >](#)

Discoveries are a few simple steps away

-  Download your raw DNA data from your provider (Ancestry, FamilyTreeDNA, 23andMe)\*. [How to download?](#)
-  Upload the raw DNA file to MyHeritage.
-  Receive your DNA Matches.

\*MyHeritage is not endorsed by or affiliated with these companies.

# Uploading to MyHeritage

- Continue answering the questions

MyHeritage Home Family tree Dis

## Upload DNA data

Whose DNA data are you uploading?

Mine  Someone Else's

Enter the details of the person who was tested

Male  Female

First name:  Last name:

Year of birth:  Relationship to you:

Can be approximate

[Back](#)

I have obtained permission from the person listed above to manage his/her DNA data (mandatory)

Progress: ● ○ ○ ○ ○ ○ ○ ○ [Continue >](#)

## Upload DNA data

### Processing of genetic data

MyHeritage will process Jane Doe's DNA data file, conduct genetic analysis and provide you with the DNA results. To do so, we need your explicit consent to the following:

- MyHeritage will collect and process Jane Doe's DNA data and other sensitive personal information (such as Jane Doe's ethnic or geographic origins);
- MyHeritage will process Jane Doe's DNA data to provide me with reports about her heritage in the form of an Ethnicity Estimate, Genetic Groups, and other personalized insights related to her ancestral origins;

Read our [Privacy Policy](#) to know more about how we process the DNA data. You can withdraw your consent at any time by deleting your DNA data as described in [this Help Center article](#).

I explicitly consent to MyHeritage processing the DNA data file, conducting genetic analysis and providing me with the DNA results, as described above.

Progress: ○ ○ ● ○ ○ ○ ○ ○ [Continue >](#)

## Upload DNA data

### Upload for personal use

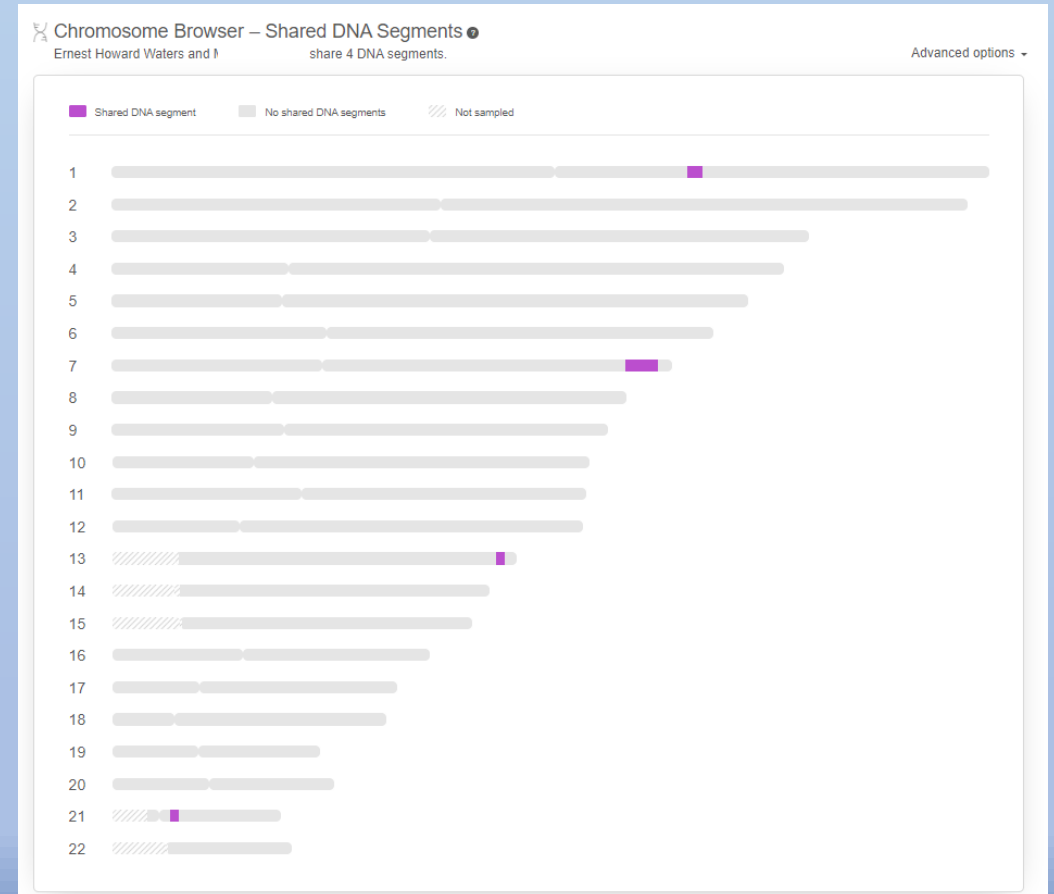
I confirm that the DNA data I'm uploading is not related to any law enforcement or forensic investigation

Progress: ○ ○ ○ ● ○ ○ ○ ○ [Continue >](#)

**NOTE: MyHeritage Terms & Conditions do not allow uploading of Investigative Genetic Genealogy (IGG) DNA kits**

# Once uploaded, you'll be able to view matches for the newly uploaded kit

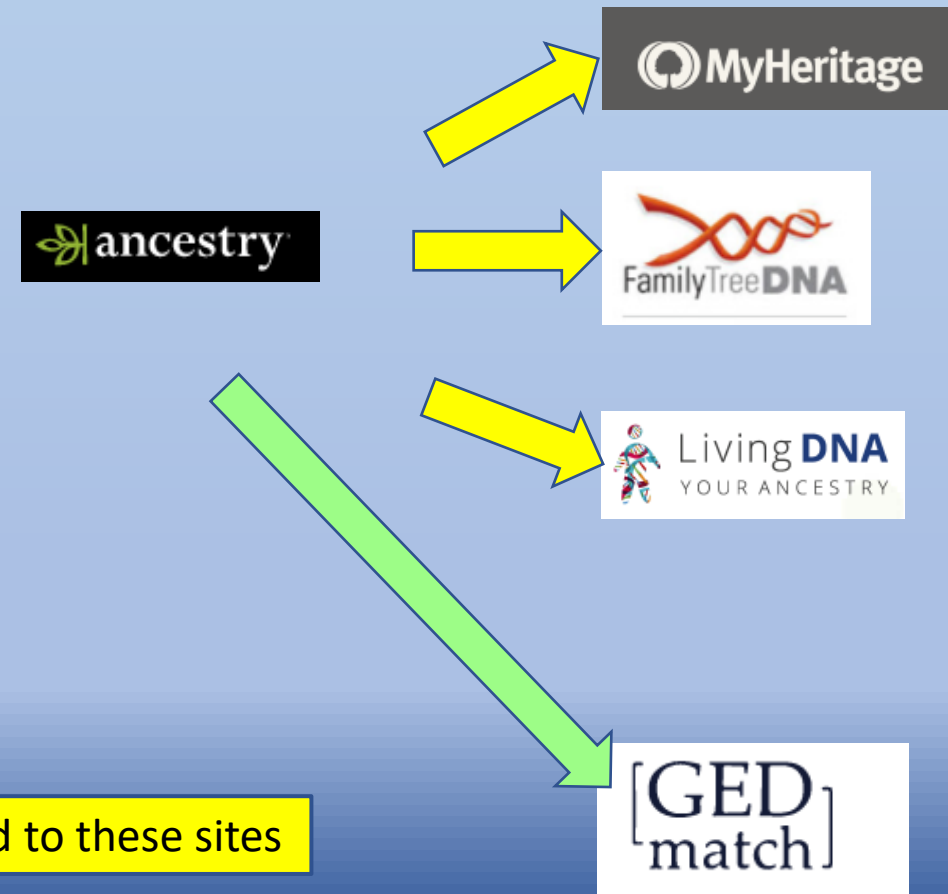
- I've uploaded about 15 kits to MyHeritage
- One note: MyHeritage has outstanding comparison tools that can be opened up by paying a one-time upgrade fee
- Once that fee is paid once then all kits that have been uploaded on that account have access to those tools!



**Example of the Chromosome Browser**

# Recommended Strategy

- Test with Ancestry first (largest database, excellent family tree tools)
- Download your DNA from Ancestry
- Upload to:
  - My Heritage
  - Family Tree DNA
  - Living DNA
  - GEDMatch (not a testing company)
- The key here is to have your DNA in all 5 testing companies plus GEDMatch



Demo? Questions?

**FamilyTreeAZ.com**



Presentations:

<http://familytreeaz.com/Presentations>



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Blog: [familytreeaz.com](http://familytreeaz.com)

Twitter: [@familytreeaz](https://twitter.com/familytreeaz)

Google Voice Phone: (480) 331-5889

