

Quick Look at MyHeritage's New Whole Gene Sequencing(WGS) Capability



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open to presentations

Acronyms Used

- MH = MyHeritage
- WGS = Whole Genome Sequencing
- cM = centimorgan (s), a measure of common strength of a segment
- Segs = # of segments shared to another DNA kit
- CRAM = Compressed Reference-oriented Alignment Map
- SNPs = Single Nucleotide Polymorphisms (think of this as a marker on your DNA)

What is WGS?

- Whole Genome Sequencing looks at all (or nearly all) genes in a DNA kit
 - This is in contrast to the kits we are used to that only sample about 700,000 SNPs (that's a 1-to-4,285 ratio)
- **Data Output:** Covers roughly 3 billion nucleotides and allows advanced users to download their raw genomic data in a compressed CRAM file format.  MyHeritage Blog +2

Whole Genome Sequencing (WGS – MyHeritage)

- Announced Oct 2025, available Jan 2026
- What is it?
 - It measures virtually all the genes on every chromosome
 - That works out to about 3,000,000,000 [billion] bases (or markers or SNPs)
 - Standard autosomal microarray kits typically only measure 700,000 bases
 - Up until October 2025 this was very expensive (\$500+++)
 - MyHeritage is offering it with a standard autosomal kit (currently \$25!)

This is a slide I originally included in one of my presentations from late 2025



Why??

- Possibly a way to unlock more distant (i.e., lower centimorgan) matches
- Get better distance estimates for others who have also taken the new WGS kit
- One of my favorite movies:

https://youtu.be/o3c_pJ_CLJQ

- “If you build it, he (they) will come
 - I’m referring to giving developers the ability to see more DNA data they will build new, amazing tools

Why not??

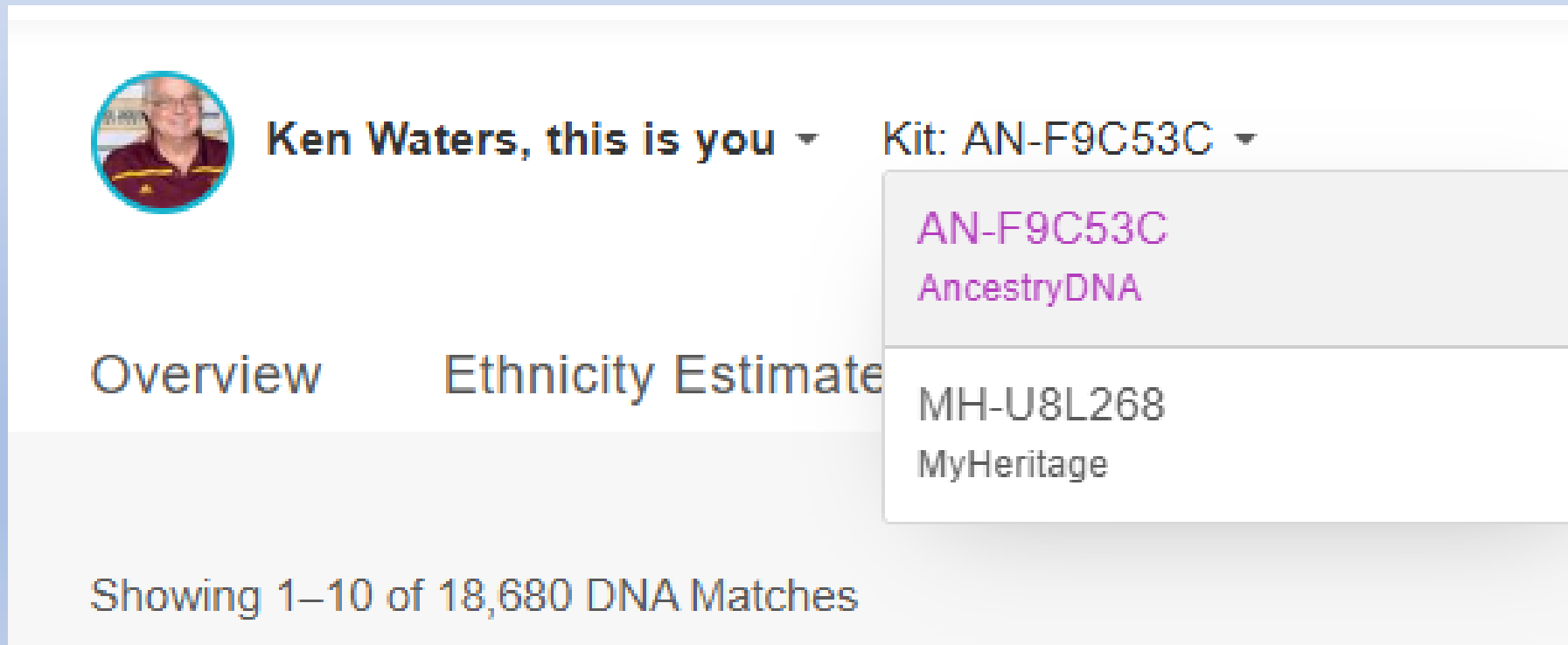
- MH kits are really cheap now, \$19.99 plus shipping
- I would encourage everyone to go for this
- You will get new low-level matches that do not exist in the original MH kit
- Plus, there's always the MH advantages that we are familiar with:
 - Upgrade for chromosome browser for nominal fee
 - Much greater access to matches living in Europe

Not a Perfect Comparison But Still Useful

- I have two MyHeritage kits for myself at this time
 - One was an uploaded from Ancestry
 - The second was purchased from MyHeritage and processed in 2026
- Ideal situation would be to compare a previously purchased MyHeritage kit (pre-WGS) to the new WGS kit

How it works when you log in

- Easy selection of kit to use



The screenshot shows a user profile for Ken Waters. The profile includes a circular profile picture of a man with glasses and a mustache. To the right of the picture is the text "Ken Waters, this is you" followed by a dropdown arrow. Further right is the text "Kit: AN-F9C53C" followed by a dropdown arrow. Below the profile picture are two tabs: "Overview" and "Ethnicity Estimate". A dropdown menu is open, showing two options: "AN-F9C53C AncestryDNA" and "MH-U8L268 MyHeritage". At the bottom of the page, it says "Showing 1–10 of 18,680 DNA Matches".

 **Ken Waters, this is you** ▾ Kit: AN-F9C53C ▾

Overview Ethnicity Estimate

AN-F9C53C
AncestryDNA

MH-U8L268
MyHeritage

Showing 1–10 of 18,680 DNA Matches

of Matches

- Original kit from Ancestry:

DNA Matches You currently have 18,680 matches

- New kit:

DNA Matches You currently have 19,132 matches

- 452 new matches !!

To do a deeper analysis...

- Use DNAGedcom to download both kits from MH



- Then use Excel (etc.) to compare the kits to find who the new matches are that aren't on the original kit
- A project for the future! 😊

Top 10 match Comparison

Known Relationship	Original Transferred Kit (Ancestry)	New 2026 MyHeritage WGS Kit
Son	3,541.1 cM, 22 segs, 284.3 largest	3,540.8 cM, 22 segs, 284.3 largest
Daughter	3,540.7 cM, 22 segs, 284.3 largest	3,540.8 cM, 22 segs, 284.3 largest
Mother	3,533.9 cM, 22 segs, 284.3 largest	3,540.8 cm, 22 segs, 284.3 largest
Brother	2,581.4 cM, 56 segs, 186.9 largest	2,653.3 cM, 49 segs, 186.9 largest
Paternal Uncle	1,612.7 cM, 35 segs, 133.4 largest	1,638.4 cM, 33 segs, 163.5 largest
Paternal 1C	725.1 cM, 20 segs, 123.8 largest	756.7 cM, 19 segs, 124.2 largest
Half-niece (paternal)	595.5 cM, 17 segs, 81.2 largest	622.8 cM, 18 segs, 81.2 largest
Paternal 1C1R	476.3 cM, 19 segs, 65.5 largest	495.5 cM, 20 segs, 65.5 largest
Paternal 1C1R	387.5 cM, 15 segs, 65.6 largest	387.1 cM, 15 segs, 65.6 largest
Paternal 2C1R	227.3 cM, 12 segs, 43.1 largest	210.1 cM, 10 segs, 43.1 largest

Some matches increase in cM strength

Some segment # decreases---likely due to concatenation of close segments

Now, look at more distant matches

Known Relationship	Original Transferred Kit (Ancestry)	New 2026 MyHeritage WGS Kit
4C (paternal)	39.4 cm, 1 Seg, 39.4 largest	39.4 cM, 1 seg, 39.4 largest
Unknown relationship (JJ)	40.1 cM, 2 segs, 29.2 largest	40.1 cM, 2 segs, 29.2 largest
Unknown relationship (from NZ, NL on page 1240 original test)	10.2 cM, 1 seg, 10.2 largest	10.2 cM, 1 seg, 10.2 largest

No differences...!

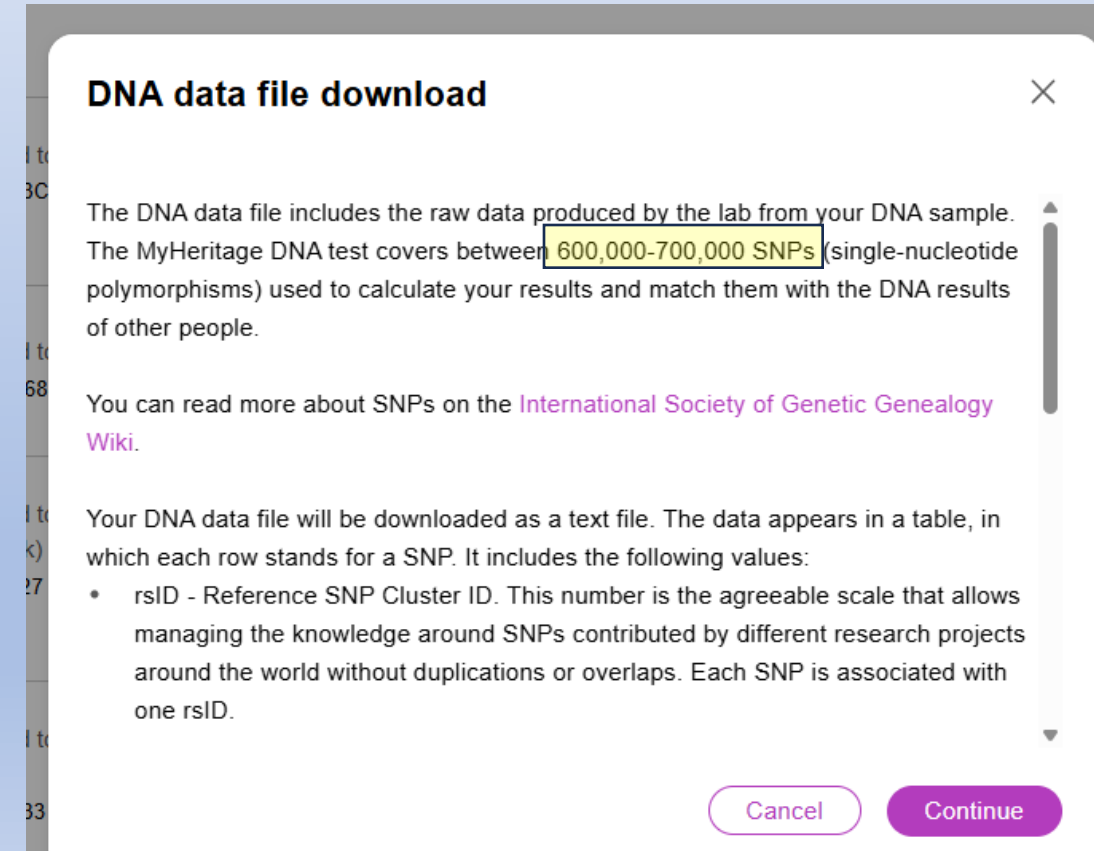
How about the last 10? Same? Different?

Initials	Original Kit	New Kit
RC	8.0 cM, 1 seg	8.0 cM, 1 seg
KH	8.0 cM, 1 seg	8.0 cM, 1 seg
BM	8.0 cM, 1 seg	8.0 cM, 1 seg
AD	8.0 cM, 1 seg	8.0 cM, 1 seg
PC	8.0 cM, 1 seg	8.0 cM, 1 seg
CC	8.0 cM, 1 seg	8.0 cM, 1 seg
GS	8.0 cM, 1 seg	8.0 cM, 1 seg
MF	8.0 cM, 1 seg	8.0 cM, 1 seg
FS	8.0 cM, 1 seg	8.0 cM, 1 seg
MS	8.0 cM, 1 seg	8.0 cM, 1 seg

All in the bottom 10 for the original kit are in the new kit at the same strength. HOWEVER: the new kit has many new matches in the bottom 10 that are not in the original kit. So, you do have access to some newer low strength (above 8.0 cM) matches with the WGS kit.

What about downloading?

- It appears if you select the option to download your new kit you are only given a limited # of SNPs just like the old kits
- HOWEVER: MH has previously said there will be a way to download the entire genome (aka the CRAM file). From what I can see it appears that option is not available yet



Ethnicity (aka, admixture)



Your Ethnicity Estimate is being recalculated

For your privacy, Ethnicity Estimates may be removed after a long period of inactivity. Your DNA data remains safe and unchanged.

Your Ethnicity Estimate will be ready within 24 hours, and we'll email you as soon as it's available.



My fault for trying to do a presentation at the last minute!

Can I just update my previous MH kit for WGS?

- No. You must purchase a new kit from MH to get the WGS benefits.

Useful References

- Roberta Estes: <https://dna-explained.com/2026/02/19/myheritage-whole-genome-sequencing-wgs-results-and-comparison/>
- Numerous articles in the “Genetic Genealogy Tips & Techniques” group on Facebook
- <https://www.myheritage.com/help/en/articles/12852568-what-is-whole-genome-sequencing-wgs-that-myheritage-now-uses-for-its-dna-tests>

To sum up.....

- Get all (or nearly all) of your genome identified by SNPs
- This is the first time a WGS kit has been made available to genetic genealogists at a very reasonable price for just the cost of an ordinary DNA kit
- Can introduce new distant matches for your kit
- Expect more tools and capabilities to come to use this new capability

Questions?





Presentations:

<http://familytreeaz.com/Presentations>



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