



Next Steps DNA Bootcamp

With Michelle Leonard

We hope you enjoyed the first webinar in the 'Next Steps' DNA Bootcamp; here is a list of your *optional* DNA Bootcamp tasks for the first week. Please note that this is a basic version of this week's handout and a fuller extended version will be added to the hub page early next week.

DNA Bootcamp Webinar One Tasks:

TASK 1

Segment Data Task:

- Study the great grandparent to you chromosome pair inheritance chart to understand how DNA breaks down into segments over generations
- Create a similar chart for yourself and plug your ancestral names into it to get a feel for what may have happened on one of your own chromosome pairs – you can do this on paper or digitally (it doesn't need to be fancy!)
- It might also be fun to try to work out ballpark percentages for how much DNA has been inherited from each of the eight great grandparents on my chart!

TASK 2

23andMe Chromosome Browser Tasks:

- Check out how you match ten or more of your highest matches via 23andMe's one-to-one chromosome browser using the 'View DNA Details' box on the individual match page
- Try out the 'Advanced DNA Comparison' tool and look at the same one-to-ones but this time also study the DNA Segment Data table
- Add several sets of five known and unknown matches to compare with your test using the 'Advanced DNA Comparison' tool
- Swap over the base 'Compare' person so you can see how it looks with the other four people as the base person instead
- What have you gleaned from this exercise? Jot it down in a 'Bootcamp' research log and let's discuss it at the follow-ups

TASK 3

MyHeritage Chromosome Browser Tasks:

- Check out your shared segments with ten or more of your highest matches via MyHeritage's one-to-one chromosome browser on the individual match pages
- Try out the 'One-to-Many' chromosome browser and look at the same one-on-ones but this time also study the DNA Segment Data tables available at the bottom of the page
- Add several sets of 5-7 known and unknown matches to compare with your test using the 'One-to-Many' browser
- If you have access to more than one MyHeritage kit, repeat this process with a different base person
- Investigate the 'automated triangulated segments' icon
- What did you learn during this exercise? Add notes to your research log

TASK 4

FTDNA Chromosome Browser Tasks:

- FTDNA has an amalgamated one-to-one and one-to-many chromosome browser; first try out the one-to-one capability and then add several sets of 5-7 matches into the browser to check out how it all works
- Make sure you look at the 'Detailed Segment Data' table under the separate heading within the browser
- Try out the 'Matrix tool' to see if people with overlapping segments match each other (in some way!) or not
- Try using the 'Not In Common' tool to identify matches who share on the same segment on different copies
- What did you learn while doing this exercise?

TASK 5

Triangulation:

- This task merges with all the chromosome browser tasks because that's where you will identify triangulations
- While investigating your segment data in the site chromosome browsers did you come across any triangulations along the way?
- If so, did this tell you anything you didn't already know or help you in any way?
- Remember not to obsess over trying to find triangulations as all the other segments are just as useful!

PREPARATION TASKS

Preparation Task:

- If you have only tested at Ancestry and are only working with Ancestry data, it's important to get into at least one of the other databases in order to take part in the tasks in relation to segment data/chromosome browsers
- You can upload your Ancestry raw data to MyHeritage and FTDNA for free but you will need to pay the small unlock fees to access the chromosome browsers
- You can also upload Ancestry raw data to third party tools website GEDmatch (this is optional but I will be covering it and will include optional tasks for it in later webinars - make sure you are comfortable with the T&Cs)

Preparation Tasks:

- In the upcoming webinars we will be delving into third party tools so make sure you have created accounts at the following sites so you can play along:
 - **DNA Painter:** free to use but there is also a subscription option
 - **GEDmatch:** also free but I will also be covering the Tier 1 set of tools which costs \$15 per month as of 1st May (the price has remained at \$10 per month/\$100 annually for recurring subscribers)
 - **DNAGedcom client:** silver access costs \$5 per month (or \$50 annually) and I would recommend getting a month's access at this level to try it out but this is optional
 - **Genetic Affairs:** there are subscription levels from \$5 per month but a new account offers 200 free credits which is more than enough to try it out

NOTE: the webinar nights will be packed with information but don't feel overwhelmed as I know it's impossible to take so much in at one sitting – I have designed the course so that you can attend the live events and just listen along the first time then watch the replays in bite-size chunks stopping at each task to work on it, if you wish, before carrying on to the next section and task. Please don't feel any pressure to complete the tasks by a certain time; they are suggestions to help you get hands on with your DNA results but entirely optional and it is fine for everyone to learn at their own pace!

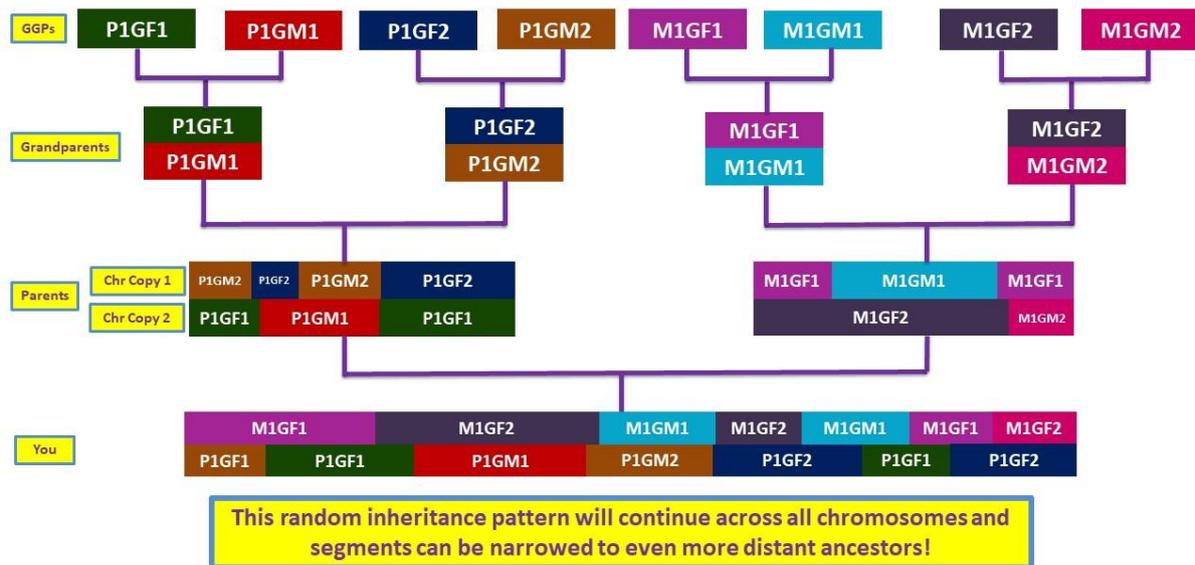
If you have the Original Workbook then it's a good idea to read over the following pages at the end of the Workbook:

1. What is segment data? (page 43)
2. Chromosome browsers (pages 44-45)
3. Triangulation (pages 48-49)

NOTE: these subjects belong more as part of this Bootcamp but the Workbook was in production before 'Next Steps' was created and, therefore, they were included at that time. Don't worry if you don't have the Workbook, though, as I will be repeating and expanding upon this content in your extended handout which will be with you early next week.

Great Grandparent Chromosome Pair Inheritance Chart

How does DNA break up into segments?



Key Points: this chart represents the inheritance pattern of one autosomal chromosome pair (e.g. maternal chromosome 15 and paternal chromosome 15) from great grandparent level down to you.

The eight great grandparents have only been assigned one colour to represent the entirety of their DNA even although they also, like all of our ancestors, will have had two copies of this chromosome (one from each of their parents). This is just to make the chart manageable in size terms but do remember the colour for the great grandparents represents an amalgamation of their copies in much the way we see on a chromosome browser line.

I have used my pedigree codes to name the eight great grandparents: P1GF1 is the great grandfather at the top while M1GM2 is the great grandmother at the bottom of your pedigree chart.

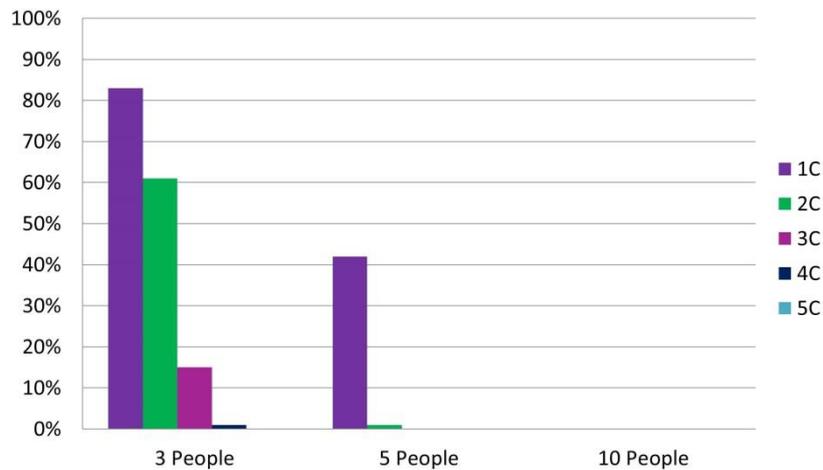
From the 'grandparents' section down, the top line represents one copy of the chromosome and the bottom line represents the other copy: on the 'parents' and 'you' sections I have switched around which side is on top just to demonstrate that in most cases we won't know which copy is the maternal copy and which is the paternal one.

The 'You' section does not have the codes attached since the segments are too small in some places to place readable text.

Triangulation Probabilities Graph

How Likely Is True Triangulation?

Triangulation Probabilities



This data was created by ancestry.com simulations and first appeared in the article 'Do all members of a DNA Circle share the same matching segment?' (please note that DNA Circles no longer exist and this article is no longer accessible)

The Workbook

If you would like to purchase an official printed copy of the Original DNA Bootcamp Workbook, it is available to be ordered at the following link: <https://www.family-tree.co.uk/store/genealogy-tools/family-tree-magazine/dna-workbook/> (It is priced £20; £12 for Family Tree subscribers and also £12 for DNA Bootcamp Students – orders may be placed over the phone using the code DNAWB12 - please call 01778 392008).

The DNA Bootcamp follow-up sessions

Scroll down the hub page (<https://www.family-tree.co.uk/information/DNS22>) to find the Zoom links, choose your preferred time, and we look forward to seeing you on Thursday at the follow-up sessions. Any queries in the meantime, please email helen.t@family-tree.co.uk 🌿

About Michelle

Contact & Social Media Links:

Email: michelle@genesandgenealogy.com

Facebook: www.facebook.com/genesandgenealogy

Twitter: www.twitter.com/genealogylass

LinkedIn: <https://www.linkedin.com/in/michelleleonardgenealogist>

APG: <https://www.apgen.org/profiles/michelle-leonard>

Ancestry Hour: <http://www.ancestryhour.co.uk/michelle-leonard.html>

