

How do I find the shared centiMorgans?

To find out more about the possible relationship between you and a DNA match, you need to know how many cMs (centiMorgans) of DNA you have in common. You can also make the comparison using percentages, which are given by some testing companies.

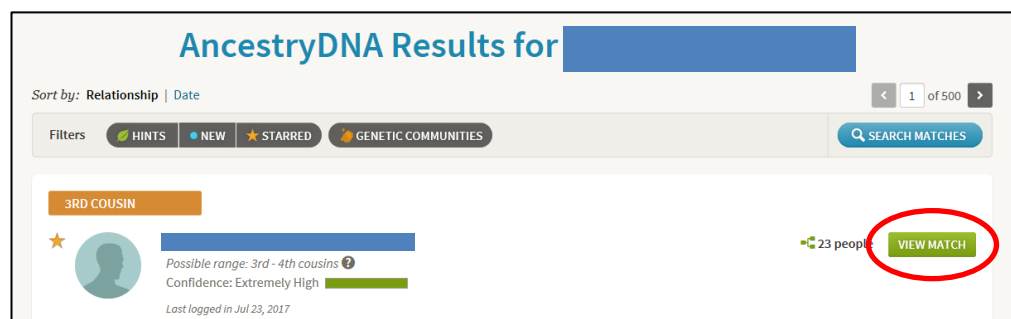
You can then use the relationship predictor charts/sites discussed in the [Understanding Relationship \(Part Two\): How Much DNA do we share?](#) information sheet to see a range of possible relationships – usually a far wider selection than those suggested by the testing company.



AncestryDNA

- 1 View your **AncestryDNA Results match list**.

Click the **VIEW MATCH** button on the right of the screen to see more information.

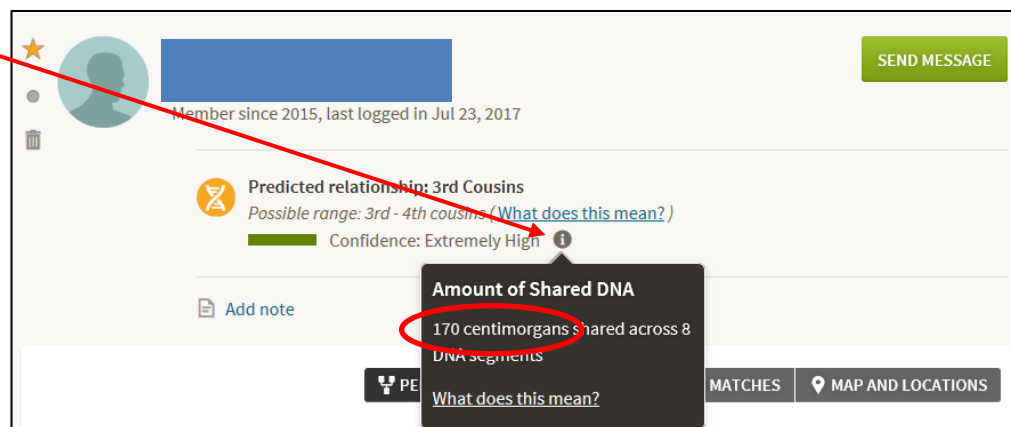


- 2 Click on the "i" to view the amount of shared DNA in centimorgans.

You may find it helpful to type this figure in the notes box, so it is more easily accessible in future.

You can now use this figure to consider potential relationships using the relationships predictor charts.

NB The actual relationship may vary from Ancestry's initial (often somewhat conservative) prediction. The illustrated match was my 2c1r, so a little closer than the 3rd - 4th cousin prediction.



Family Tree DNA

FTDNA's match list provides a suggested **Relationship Range** and lists the amount of **Shared Centimorgans** for each match. However, these may be higher than would be given by other testing companies, as FTDNA's total cMs includes small segments of shared DNA which would not be considered significant elsewhere. To be able to examine this further you need access to the chromosome browser, which is only available if you have paid the \$19 fee to use the tools. If you do not have the tools available, just bear in mind that the number provided could be higher than would be suggested by most other DNA testing sites – uploading to GEDMatch would allow further comparisons.

1 To refine the amount of shared centiMorgans:

- Click to **add a tick** to the box next to the match you are interested in
- Click on the **Chromosome Browser** button at the top of the list



2 To see the detail of the shared segments that make up the total cMs, click on **View this data in a table**.



3 Look at the numbers in the **centiMorgans (cM)** column.

- Disregard any amount under 7cM and any amount on the X chromosome.
- Add up the remaining amounts to get a new total.

In the illustrated example, it makes a considerable difference to the total. This match is my third highest, and shows as sharing 85 cM on the main match list.

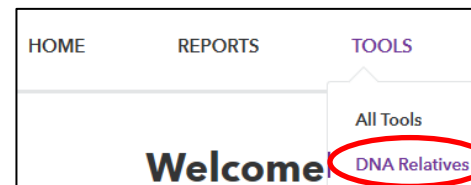
- The table view shows a total of 104.65 cM (85.2 cM plus 19.45 cM on the X).
- After removing the small segments and X amounts, the total reduces to 64.25 cM.
- However, the predicted relationship shown in the top right corner of the table (3rd cousin) was correct.

Chromosome	Start Location	End Location	centiMorgans (cM)	# of Matching SNPs
3	10833014	25394306	19.85	4400
3	98884091	101156783	1.36	500
3	133142435	142494320	9.38	2200
6	30632403	32519013	1.4	2900
7	139362114	151182018	18.97	2822
10	59062724	61184043	1.83	500
10	113554620	115302801	2.41	500
11	46718718	55878633	1.24	700
11	72539536	75653949	3.62	700
12	20668638	21882887	3.81	700
12	83951822	87831110	3.06	500
16	25030370	51271739	16.25	2952
17	40240064	43903843	2.42	600
X	30046242	33183825	10.11	825
X	49746067	69989884	9.34	1150

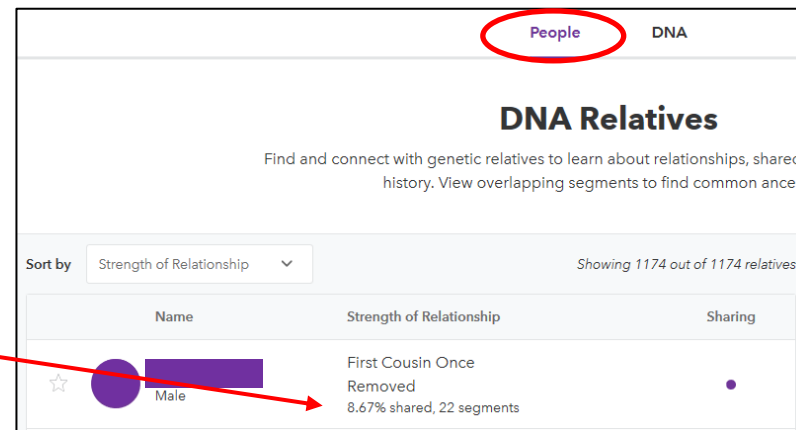
23andMe

23andMe uses both percentages and cMs to express the amount of DNA shared between matches. Percentages are shown on many of the relationship calculator charts (eg, the [DNA Detectives "green chart"](#)), so you do not have to convert percentages to cMs, but it is possible to do so if you wish.

- 1 Once you have signed in to 23andMe, click on the **Tools** option at the top of the screen, then click on **DNA Relatives**.



- 2 There are two tabs, click on the **People** tab to display your list of matches, which will have the closest match at the top.



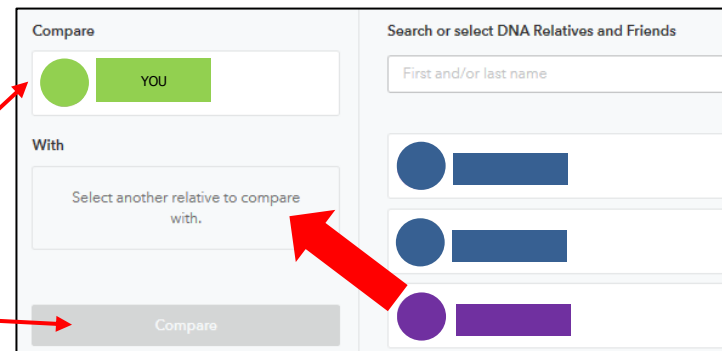
If your match has opted for open sharing, or has shared their DNA with you, there will be a blue or purple dot under the **Sharing** heading. You can then follow the instructions in Step 3 to see the amount of shared DNA in cMs without doing any calculations.

The shared DNA will be shown as a percentage

If the match is not sharing with you, you will need to do some maths! I have seen various figures given as the correct amount to multiply by, but the DNA Detectives group suggests 71.4 – so for this match I would multiply 8.67 by 71.4 = 619 cM (23andMe's own figure for this match was 646 cM – see Step 4).

- 3 To compare matches who have opted to share with you:

- Click on **DNA** at the top of the screen
- You will see that you are automatically displayed in the **Compare box** (you can change this if you want to compare two of your matches against each other)
- **Click the match** you want to compare, to move them to the "**With**" box.
- Click the **Compare** button.



- 4 You will then see a comparison between the selected matches, including the amount of cMs shared.



MyHeritage

1 The cMs are very easy to find on MyHeritage!

Each match has an information box showing the estimated relationship and details of the amount of shared DNA both as a percentage and in cMs.

I have some matches who have tested at several sites, so can compare the amounts of shared DNA provided by the different companies for the same relationship. So far, I have found that my matches seem to share more DNA on MyHeritage than on any other site, so bear this in mind.

As yet, no information is available as to how MyHeritage calculate the shared DNA – it seems to be very similar to the totals generated by Family Tree DNA.

Age: 70's
From: USA

Contact

Estimated relationships
2nd - 4th cousin

DNA Match quality

Shared DNA	1.2% (86.6 cM)
Shared segments	7
Largest segment	36.0 cM

GEDMatch

GEDMatch is not a testing company, but a site where you can choose to upload your raw DNA to compare it with other uploaded results. More details on using GEDMatch will be provided in a separate information sheet.

- 1 Run the **One-to-many report** for your kit number.

Look at the columns under the heading **Autosomal** – your matches should automatically be displayed with the closest match/largest **Total cM** at the top.

Autosomal			
Details	Total cM	largest cM	Gen

- 2 To double-check the amount of shared **Total cM**, click the "A" to the left of the total amount for the match you are interested in.

Autosomal			
Details	Total cM	largest cM	Gen
	▼	▼	▼
A	144.8	26.1	3.3

- 3 A new window will appear, listing the kit numbers you have asked to be compared. Scroll down and click the **Submit** button at the very bottom of the screen to generate a one-to-one report.

GEDmatch.Com DNA one-to-one Comparison Entry Form

This utility allows you to make detailed comparisons of 2 DNA kits. Results may be based on either default thresholds, or thresholds that you provide. Estimates of 'generations' are provided as a relative means of comparison, and should not be taken too literally, especially for more than a couple of generations back.

- 4 The report gives a detailed breakdown of how much DNA is shared on each chromosome, with the one-to-one comparison total shown underneath the table after the heading **Total of segments > 7cM**.

You may find that there is only a minor difference between the amount given on the main one-to-many report and the one-to-one comparison!

Chr	Start Location	End Location	Centimorgans (cM)	SNPs
3	10,616,274	25,490,365	19.5	1,904
3	132,856,980	142,541,377	10.3	969
7	139,341,130	151,879,762	19.5	1,270
9	3,898,403	10,653,815	15.5	1,350
9	10,682,461	23,068,402	20.5	1,901
10	86,791,009	95,385,717	8.0	907
15	18,421,386	30,816,842	24.2	1,138
16	18,856,267	51,629,620	26.0	1,755

Largest segment = 26.0 cM
 Total of segments > 7 cM = 143.5 cM
 8 matching segments
 Estimated number of generations to MRCA = 3.3

For further help discovering your DNA family, [visit DNADiscoveries.co.uk](http://visit.DNADiscoveries.co.uk)



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