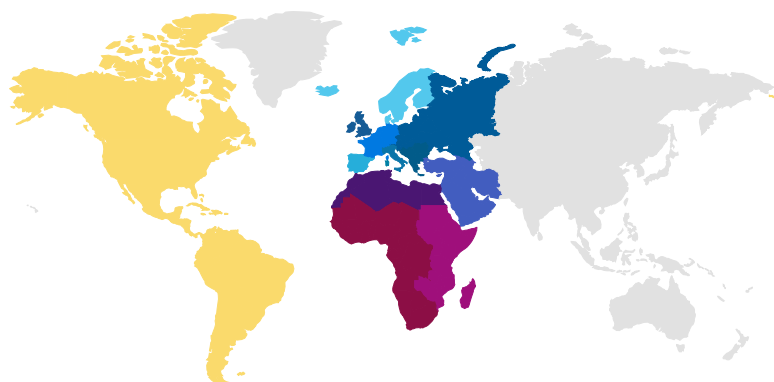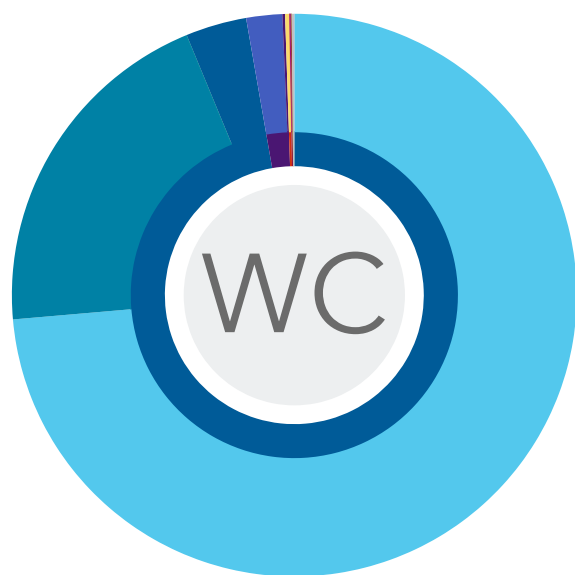# Ancestry Composition

Your genome tells the unique story of your ancestry: where your ancestors lived, when they contributed to your family tree, and how their DNA was passed down to you through your parents. For more information about your results, see [Frequently Asked Questions](#).

William Colucci		100%
European	**97.3%**	British & Irish — 44.7%
● Northwestern European	73.6%	French & German — 6.7%

Broadly Northwestern European	22.2%

● Southern European		20.1%
	Balkan	5.3%
	Italian	4.5%
	Iberian	0.7%
	Broadly Southern European	9.7%

● Broadly European	3.5%

Middle Eastern & North African — 2.2%

● Middle Eastern	2.1%
● Broadly Middle Eastern & North African	0.1%

East Asian & Native American — 0.2%

● Native American	0.2%

Sub-Saharan African — 0.1%

● East African	< 0.1%
● Broadly Sub-Saharan African	< 0.1%

Unassigned — 0.1%

Your Ancestry Timeline

How many generations ago was your most recent ancestor for each population?

1	2	3	4	5	6	7	8	8+
1930	1900	1870	1840	1810	1780	1750	1720	1690

British & Irish

Balkan

French & German

Italian

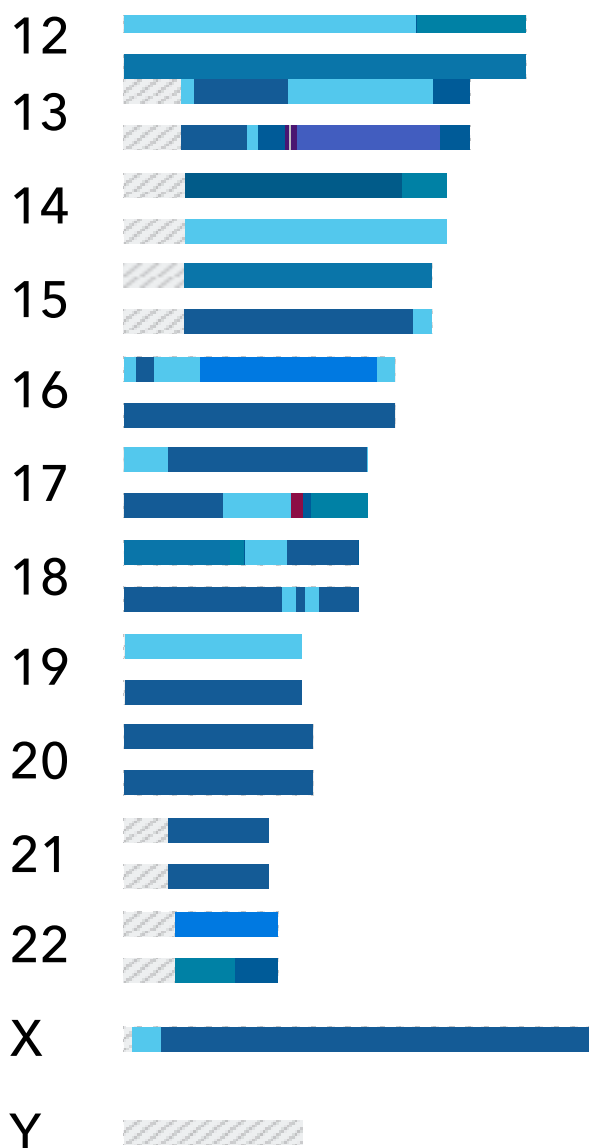Middle Eastern

Iberian
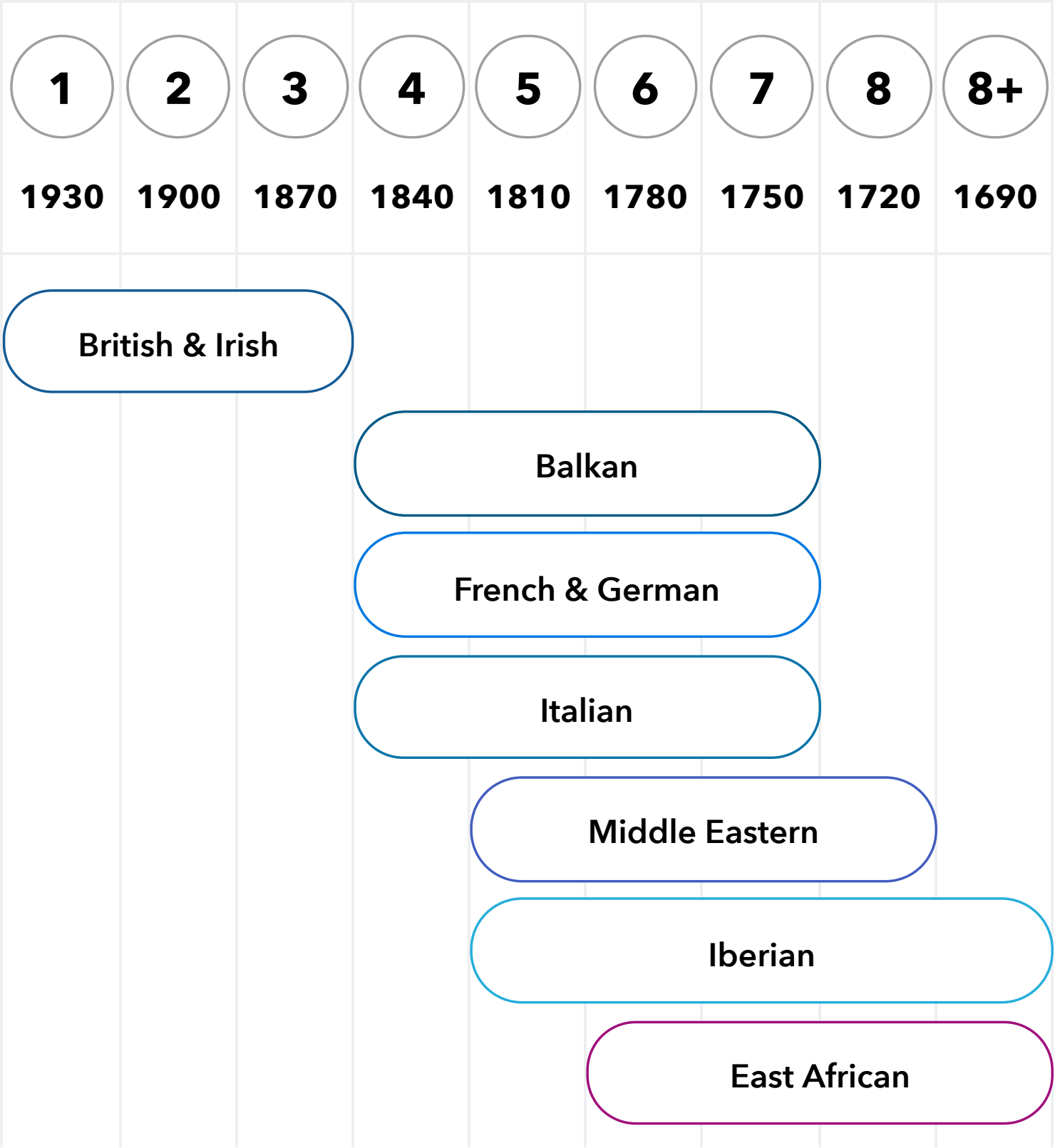
East African

How to interpret this result

- This module uses your Ancestry Composition results to estimate the generation range where you are likely to have had a single relative who descended from a single population.

- These results may be helpful for learning about your genealogy, in figuring out from which ancestors a particular ancestry may have been inherited, or for piecing together the history of their likely migrations.

- For technical details on how this feature works, read our white paper.

Your Ancestry Composition Chromosome Painting

These are your chromosomes; we've painted them with your Ancestry Composition results. The first 22 are called autosomes and come in pairs of two, each represented by one of the colored horizontal lines in the graphic below. Chromosomes have different lengths, and are named 1 through 22, when sorted by size (scientists are not very creative). Lastly, we also look at ancestry on your X chromosome: two copies like the autosomes if you are female, and only one copy if you're male (that you got from mom).

William Colucci   100%

● **European**   **97.3%**

   ○ Northwestern European   73

      ◉ British & Irish   44.7%

      ◉ French & German   6.7%

      ○ Broadly Northwestern European

   ● Southern   20.1%

12
13
14
15
16
17
18
19
20
21
22
X
Y
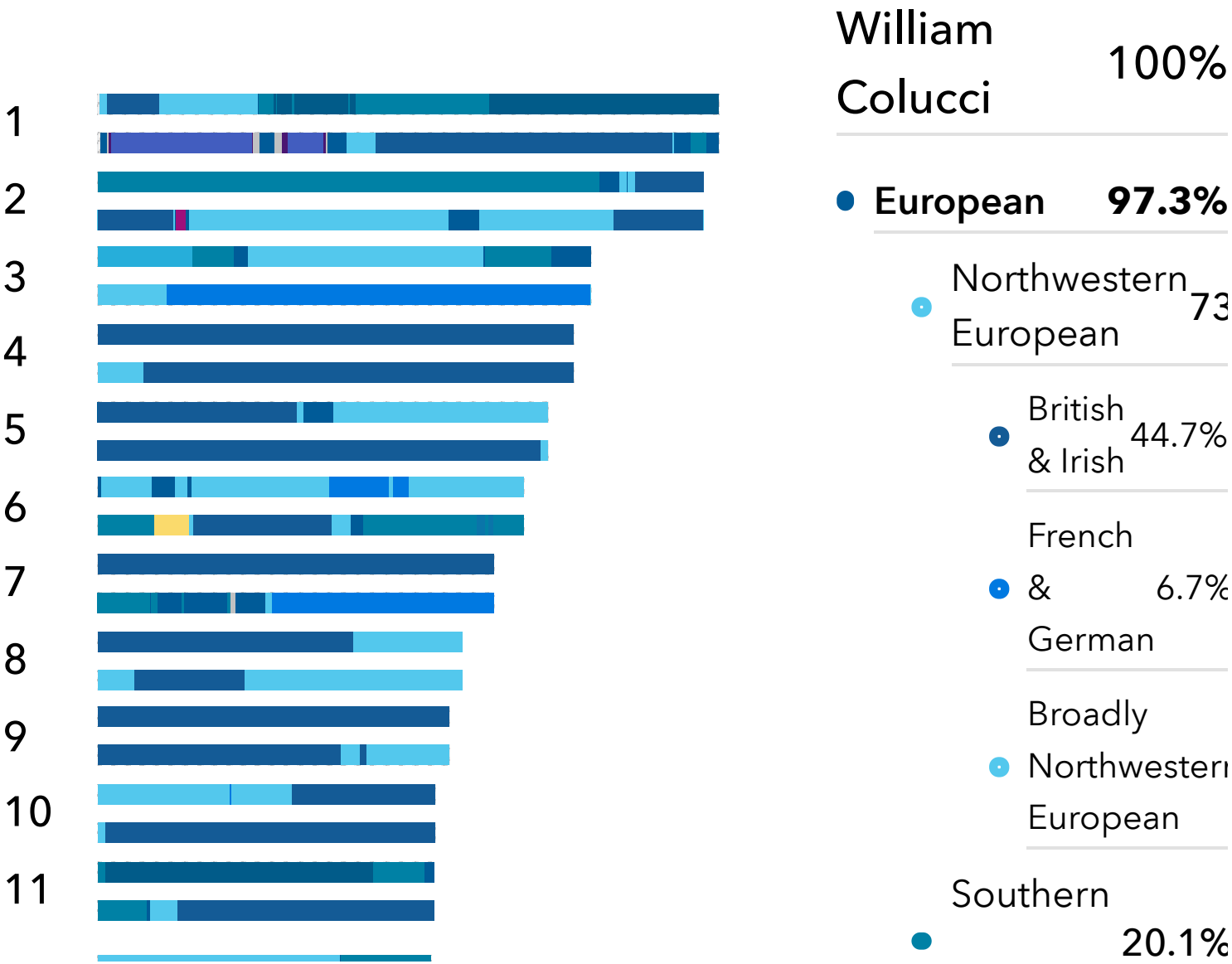
European

- Balkan 5.3%
- Italian 4.5%
- Iberian 0.7%

Broadly
- Southern 9.7
European

- Broadly European 3.5%

Middle Eastern & North African **2.2%**

- Middle Eastern 2.1%

- Broadly Middle Eastern & North African 0.1%

East Asian & Native American **0.2%**

- Native American 0.2%

- **Sub-Saharan African** **0.1%**

  - East African   < 0.1%

  - Broadly Sub-Saharan African   < 0.1%

- **Unassigned** **0.1%**

- **No Data Available --**

Genotype data is not available for these regions because their genetic sequence is highly repetitive, and therefore not readily tested via current genotyping technology.

Broad regional assignments: Sometimes a piece of DNA matches a regional population but cannot be assigned to a more specific population. In

such a case we assign the DNA "broadly" to that regional population rather than a specific one.
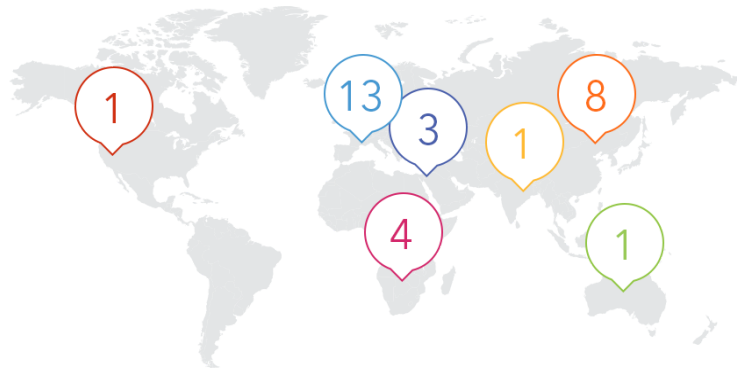
Do more with your Ancestry Composition results.

- Contribute to research and help us understand patterns of genetic variation around the world.

- Learn more about the reference populations we use to determine your result.

- Join the discussion with other 23andMe customers interested in Ancestry Composition results.

Scientific Details

We determine your Ancestry Composition by comparing your DNA to public and private reference data.

To determine your Ancestry Composition, we use an algorithm that looks at short, non-overlapping segments of your DNA. We compare each segment of your DNA to reference DNA sequences. We have defined 31 ancestry populations from around the world using reference datasets that include over 10,000 individuals with known ancestry. When a segment of your DNA matches the reference DNA from a specific population with a high degree of certainty, the segment is assigned to that population. Sometimes the segment matches reference DNA from several populations, in which case it is assigned to a broad ancestry (e.g. Northwestern

European). The results of all of these assignments are then tallied across your genome to determine your Ancestry Composition. Read more about how we assign your DNA to different ancestries

This table shows the number of reference individuals used to define each broad ancestry population. The reference datasets are made up of over 10,000 people, including publicly available data from the Human Genome Diversity Project , HapMap , and the 1000 Genomes project , as well as a large number of 23andMe customers who have consented to participate in research.

Ancestry Composition Populations	23andMe Customers	Public Data*	Total Individuals
East Asian and Native American	808	560	1368
Native American (Colombian, Karitiana, Maya, Pima, Surui), **East Asian, Japanese, Korean** (South Korean), **Yakut, Mongolian** (Daur, Hezhen, Mongolian, Oroqen, Tu, Xibo), **Chinese** (Chinese, Han, Hong Kongese, Taiwanese) **Southeast Asian** (Burmese, Cambodian, Indonesian, Lao, Malaysian, Filipino, Thai, Vietnamese)			

European	6421	421	6842

Southern European, **Italian** (Italian, Northern Italian, Tuscan), **Balkan** (Albanian, Bosnian and Herzegovinian, Bulgarian, Croatian, Greek, Macedonian, Maltese, Montenegrin, Romanian, Serbian), **Sardinian, Iberian** (France Basque, Portuguese, Spanish), **Northwestern European, British and Irish** (Irish, United Kingdom), **French and German** (Austrian, French, German, Belgian, Dutch, Swiss), **Scandinavian** (Danish, Norwegian, Swedish), **Finnish, Ashkenazi, Eastern European** (Belarusians, Czechs, Hungarians, Polish, Russian, Slovak, Slovene, Ukrainian)

Middle Eastern and North African	550	176	726

Middle Eastern (Armenian, Azerbaijani, Cypriot, Georgian, Druze, Iranian, Iraqi, Lebanese, Turkish, Syrian), **North African** (Algerian, Bahrani, Bedouin, Egyptian, Jordanian, Kuwaiti, Moroccan, Mozabite, Palestinian, Saudi Arabian, Tunisian, Emirati, Yemeni)

Oceanian	3	36	39

Broadly Oceanian (Non-Austronesian Melanesian, Palauan, Tongan)

	207	615	822
South Asian			

Broadly South Asian (Afghan, Balochi, Bangladeshi, Brahui, Burusho, Hazara, Indian, Kalash, Makrani, Nepalese, Pakistani, Pathan, Sindhi, Sri Lankan, Uygur)

	228	393	621
Sub-Saharan African			

West African (Bantu, Cameroonian, Ghanian, Ivorian, Liberian, Luhya, Mandenka, Nigerian, Sierra Leonean, Yoruba), **East African** (Eritrean, Ethiopian, Maasai, Somali), **Central and South African** (Biaka Pygmies, Mbuti Pygmies, San)

* Public Reference Set includes HGDP, 1000 Genomes, HapMap3

Change Log

Your report may occasionally be updated based on new information. This Change Log describes updates and revisions to this report.

Date	Change
Nov. 8, 2017	The Ancestry Composition results of customers on the V5 platform were updated to reflect improvements in our algorithm.
Oct. 21, 2015	Ancestry Composition report created.

| Dec. 20, 2014 | Most recent Ancestry Composition results calculated. |
| Dec. 2, 2013 | Your genetic results were first available from 23andMe. |

William Colucci's Report, printed on 2018-03-04 UTC