

If two men share a surname, how should the genetic distance at 111 Y-Chromosome STR markers be interpreted?

In cultures where surnames are passed from father to son, there is additional evidence beyond a DNA match that two men who share a surname are related. Y-Chromosome DNA (Y-DNA) test results should be interpreted based on both this information and the actual results.

Genetic Distance	Relationship	Interpretation	Related in This Number of Generations or LESS			
			Confidence			
			50%	90%	95%	99%
0	Very Tightly Related	A 111/111 match indicates a very close or immediate relationship. Most exact matches are 3rd cousins or closer, and over half are related within two generations (1st cousins).	2	4	5	6
1	Tightly Related	A 110/111 match indicates a close relationship. Most one-off matches are 5th or more recent cousins, and over half are 2nd cousins or closer.	3	6	7	9
2	Tightly Related	A 109/111 match indicates a close relationship. Most matches are 7th cousins or closer, and over half are 4th or more recent cousins.	5	8	9	11
3	Related	A 108/111 match indicates a genealogical relationship. Most matches at this level are related as 9th cousins or closer, and over half will be 5th or more recent cousins. This is well within the range of traditional genealogy.	6	10	11	14
4	Related	A 107/111 match indicates a genealogical relationship. Most matches at this level are related as 10th or more recent cousins, and over half will be 6th or more recent cousins. This is well within the range of traditional genealogy.	7	11	13	16
5	Related	A 106/111 match indicates a genealogical relationship. Most matches at this level are related as 12th cousins or more recently, and over half will be 7th cousins or closer. This is well within the range of traditional genealogy.	8	13	15	18
6	Probably Related	A 105/111 match indicates a more distant genealogical relationship. Over half of matches will be 9th cousins or closer, and most matches at this level are related as or more recently than 14th cousins. If there is a tradition of a recent genealogical relationship, the best way to confirm it is to test additional family lines. By testing additional family lines you can find the person in between who is a closer match to each of the others tested. This 'in between' is essential for you to find as their match proves the connection between the more distant matches.	10	15	17	20
7	Probably Related	A 104/111 match indicates a more distant genealogical relationship. Over half of matches at this level are related as 10th cousins or closer. Most matches at this level are related as 16th cousins or more recently. If there is a tradition of a recent genealogical relationship, the best way to confirm it is to test additional family lines. By testing additional family lines you can find the person in between who is a closer match to each of the others tested. This 'in between' is essential for you to find as their match proves the connection between the more distant matches.	11	17	19	22
8	Only Possibly Related	A 103/111 match indicates a distant cousinship with only a chance of a genealogical relationship. Over half of matches at this level are related as 12th cousins or more recently. Most matches at this level are related as 18th cousins or more recently. The connections here can be highly informative for relationships with historic groups and events. If there is a tradition of a recent genealogical relationship, the best way to confirm it is to test additional family lines. By testing additional family lines you can find the person in between who is a closer match to each of the others tested. This 'in	13	19	21	24

		betweenner' is essential for you to find as their match proves the connection between the more distant matches.				
9	Only Possibly Related	A 102/111 match indicates a distant cousinship with a chance of a genealogical relationship. Over half of matches at this level are related as 13th cousins or closer. Most matches at this level are related as or more recently than 20th cousins. The connections here can be highly informative for relationships with historic groups and events.If there is a tradition of a recent genealogical relationship, the best way to confirm it is to test additional family lines. By testing additional family lines you can find the person in between who is a closer match to each of the others tested. This 'in betweenner' is essential for you to find as their match proves the connection between the more distant matches.	14	21	23	27
10	Only Possibly Related	A 101/111 match indicates a distant cousinship with some chance of a distant genealogical relationship. Over half of matches at this level are related as 15th cousins or closer. Most matches at this level are related as 22nd cousins or more recently. The connections here can be highly informative for relationships with historic groups and events.If there is a tradition of a recent genealogical relationship, the best way to confirm it is to test additional family lines. By testing additional family lines, you can find the person in between who is a closer match to each of the others tested. This 'in betweenner' is essential for you to find as their match proves the connection between the more distant matches.	16	23	25	29
>10	Not Related	The two men are totally unrelated within the genealogical time-frame on their direct paternal line. Their shared ancestry is historical or anthropological.	-	-	-	-