

Home

Legend for  
accuracy ratings

Quality Rating	Red Content	Green Content	Blue Content	Signature Match	Genetic Distance	Signature Match	Genetic Distance
95	128	255	128	6 or more	6 or less	7 or more	7 or more
90	179	255	128	5	6 or less	6	7 or more
85	230	255	128	4	6 or less	5	7 or more
75	255	225	128	3	6 or less	4	7 or more
60	255	207	128	2	6 or less	3	7 or more
45	255	187	128			2	7 or more
30	255	168	128	1	6 or less		
20	255	148	128			1	7 or more
10	255	128	128	0	all		

This tree building methodology could be automated via developing a software tool that builds the attached chart. A robust functional specification has been created for consistent analysis and potential coding of this charting tool. This tool is now around 75 % completed and is written in C++.

If you have programming skills and are interested in the automation of this tree building methodology into a publicly available software tool, please give me call: Robert Casey at (512) 371-0579 (Austin, TX time zone).

Legend for Information contained for each tester:  
First Field - FTDNA Kit number or YSEARCH ID  
Second Field - Surname of the oldest proven ancestor  
Third Field - Source of YSNP testing - NGS (Big Y or YElite), YSEQ (tested at YSEQ), L226 (L226 SNP pack), Z253 (older Z253 SNP Pack), Indiv (individually tested at FTDNA as well as many other older testing options such as NATGEO) and BLR (not YSNP tested but predicted L226 via binary logistic regression - the math that tracks YDNA testing).

All signatures are based only on the tested submissions. Signature matches and genetic distance are used to predict YSNP assignment.

Signature matches of predicted submissions are the number of mutations shared by the closest matching tested submission and the predicted submission. Genetic distance is the genetic distance between the closest tested submission and the predicted submission.

Note: Since the fastest mutating markers, CDYa/b are not included in this analysis, the signature matches and genetic distances have been lowered for accuracy ratings.

This analysis now predicts around 87 % of the known L226 submissions due to recent extensive testing via L226 SNP packs and Big Y testing.

Note: The “Quality Ratings” are currently only estimates and will be adjusted. If automated via coding, regression testing with and without tested information could adjust the ratings based on how well the model predicts vs. actual test results.

Note: The genetic distance adjustment for “Quality Ratings” will also need to be adjusted over time as well. Very high genetic distances will need to be filtered out.

Boxes that are light purple are YSNP boxes (that can also include YSTR mutations). Boxes that are blue-green are those testers that have been YSNP tested (if tested robustly enough, they are used for YSNP prediction of other testers not YSNP tested). Boxes with no color are YSTR only mutation boxes.

[Home](#)

[Legend for  
TMRCA estimates](#)

For the first time (June, 2019), I have added TMRCA time estimates in two flavors: 1) YSNP based branches based on 60 years per YSNP mutation; 2) surname clusters (finding five surnames variants in any branch that are 50 % or more for the surname).

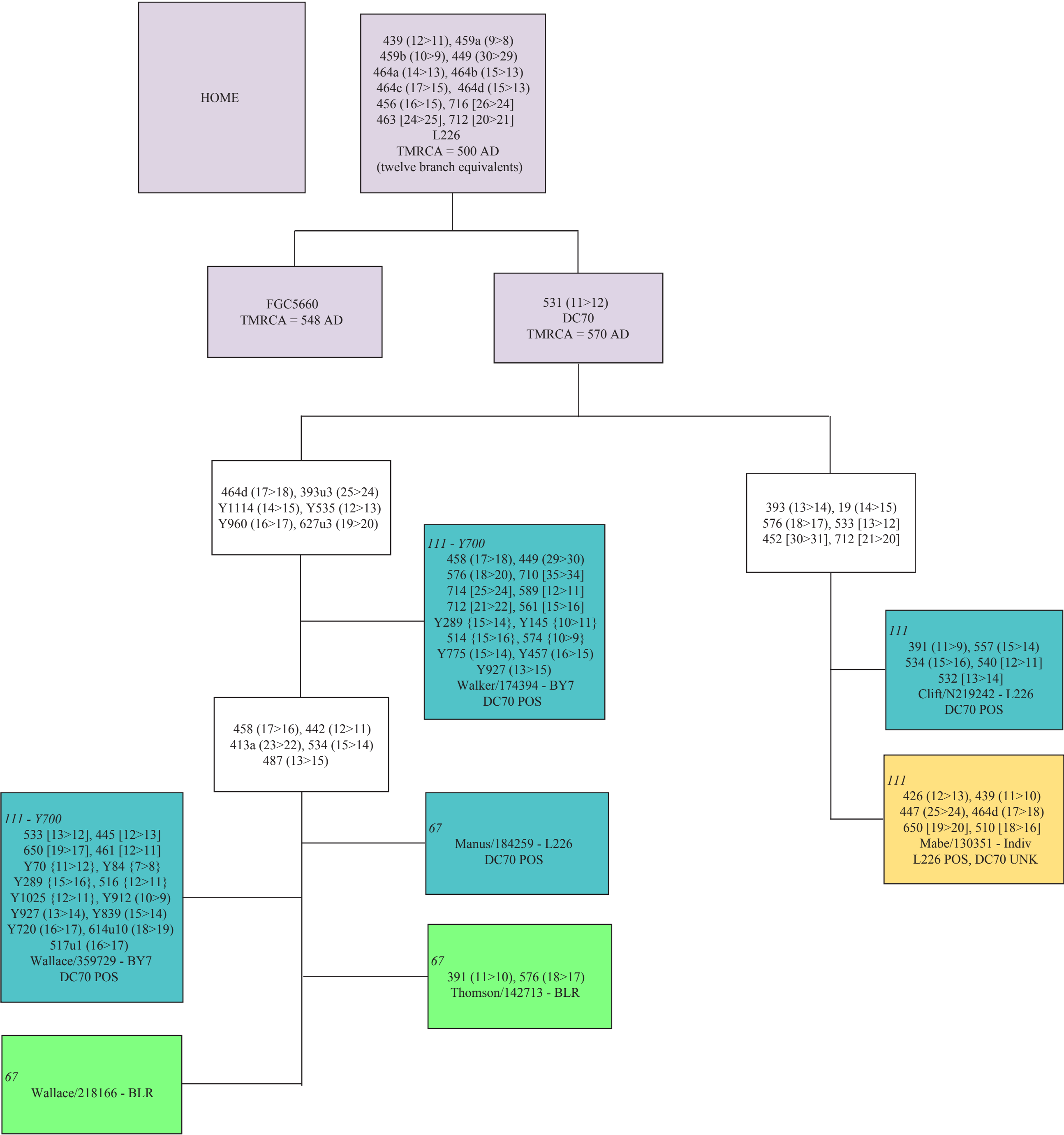
This first pass takes a very simplistic approach to surname clusters - you have at least five testers with the same surname to create a surname cluster and any YSTR or YSNP branch and must have over 50 % of testers with this surname. All reasonable surname variations are included. All YSNP branches below surname clusters revert back to 60 years per YSNP.

I also attempted my first pass on putting real dates vs. age of the events (years before present). I assumed that the average tester was born around 1960 and used the simplistic formula:  $\text{Date} = 1960 - (1500 - (\text{YSNP level} \times 60))$ . Unfortunately, this results in L226 being 460 AD vs. 500 AD and may need some fine tuning in the future. Also, the estimate date for L226 continues to change as more L226 equivalents are converted to be branches just above L226.

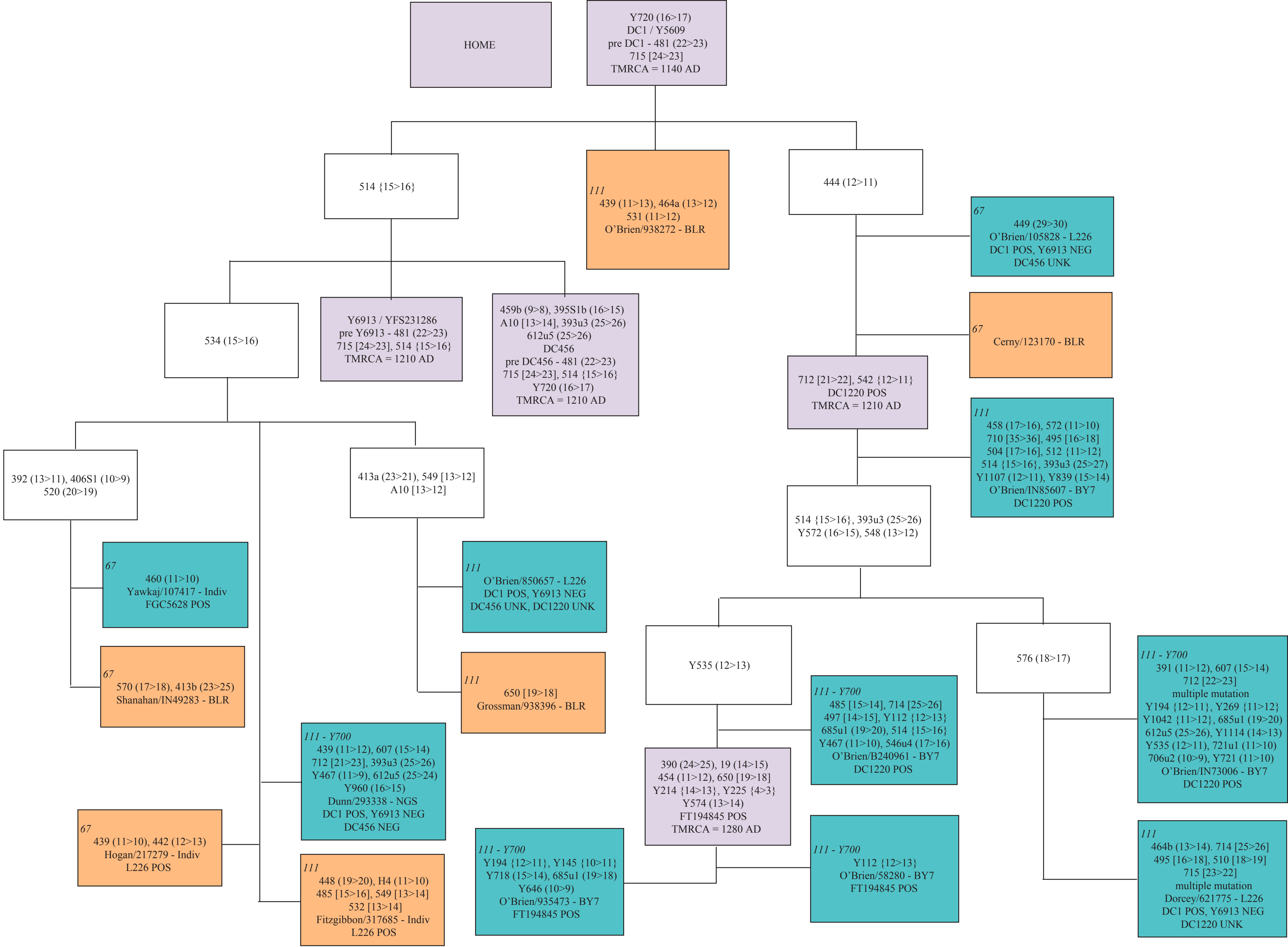
I have also been investigating variable dates on surname cluster dating (changing 1,000 AD to vary from 900 to 1100 AD based on two factors - percent of testers having the surname and allowing up to three surnames to allow for early prolific NPE lines).

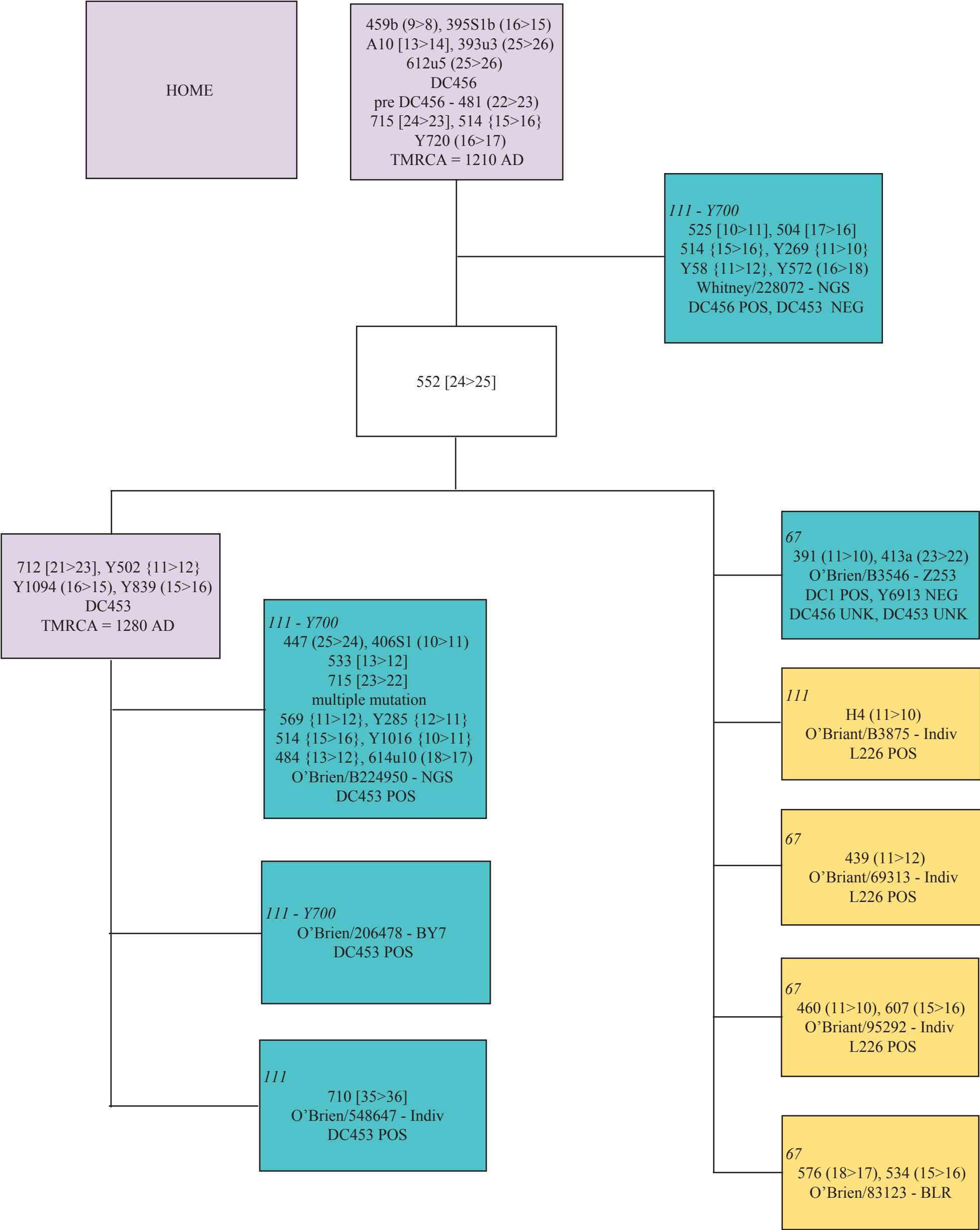
Also, I have experimented with YSTR branches for dating under the most recent YSNP levels and surname clusters. Unfortunately, the sample sizes are very small and the statistical variation is very large which will yield some very speculative dating.

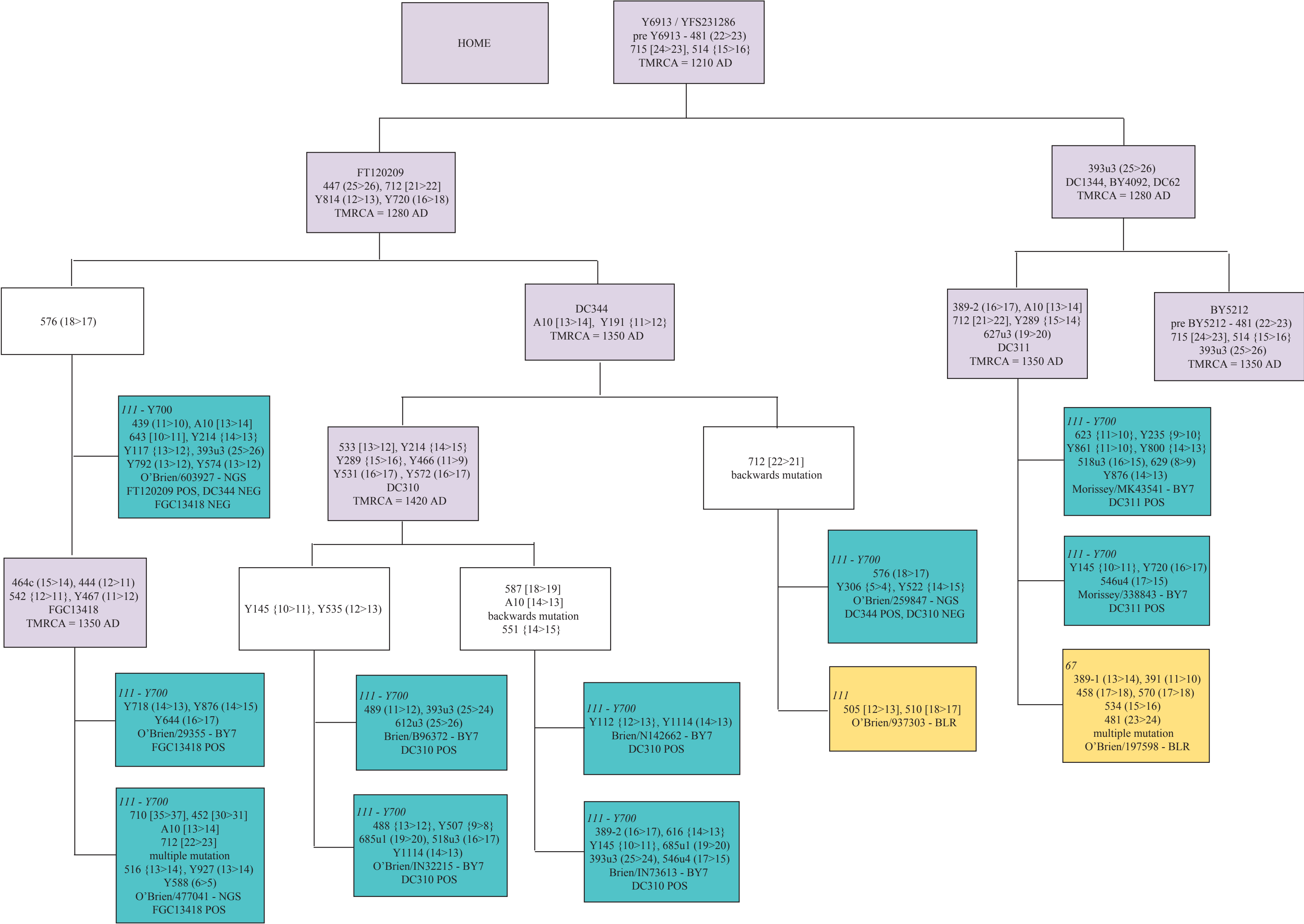
This more simplistic first pass is meant to get feedback on the base calculations. Future updates may fine tune the TMRCA estimate of surname clusters via tables and YSTR only TMRCA estimates may be added if I can figure out how to increase the reliability of these TMRCA estimates. I will not be constantly updating the TMRCA estimates as they would be very labor intensive to maintain.

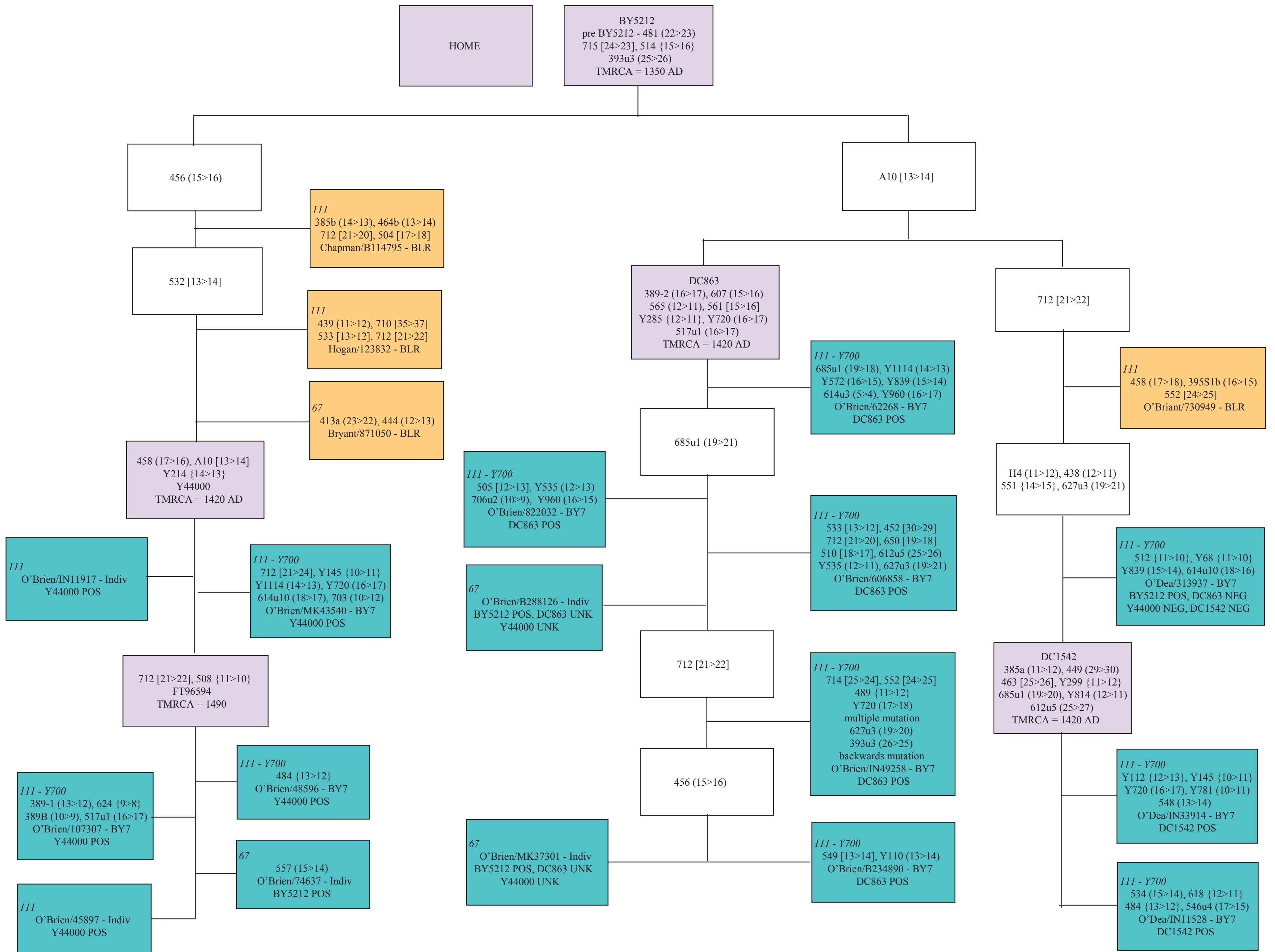




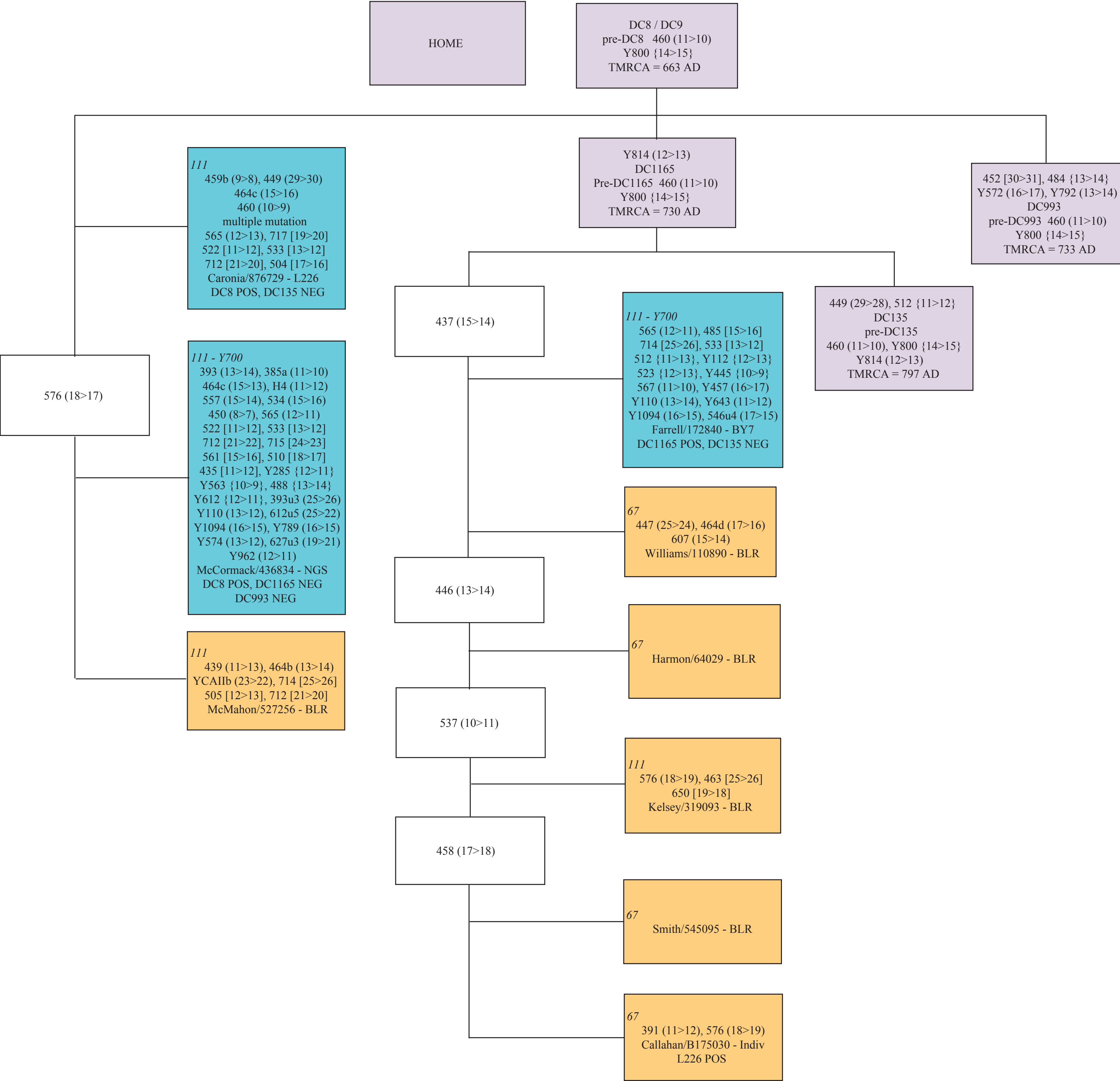


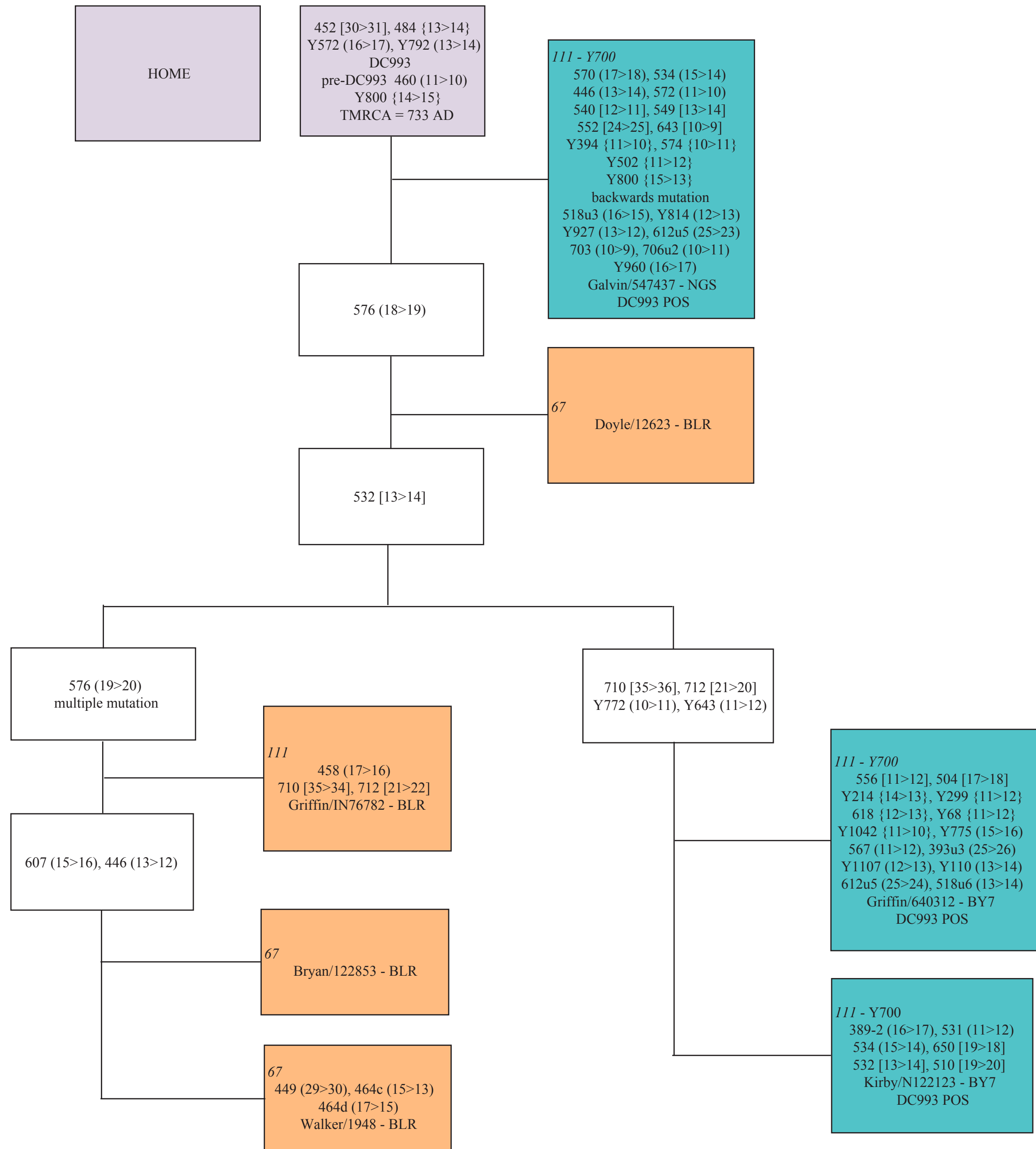


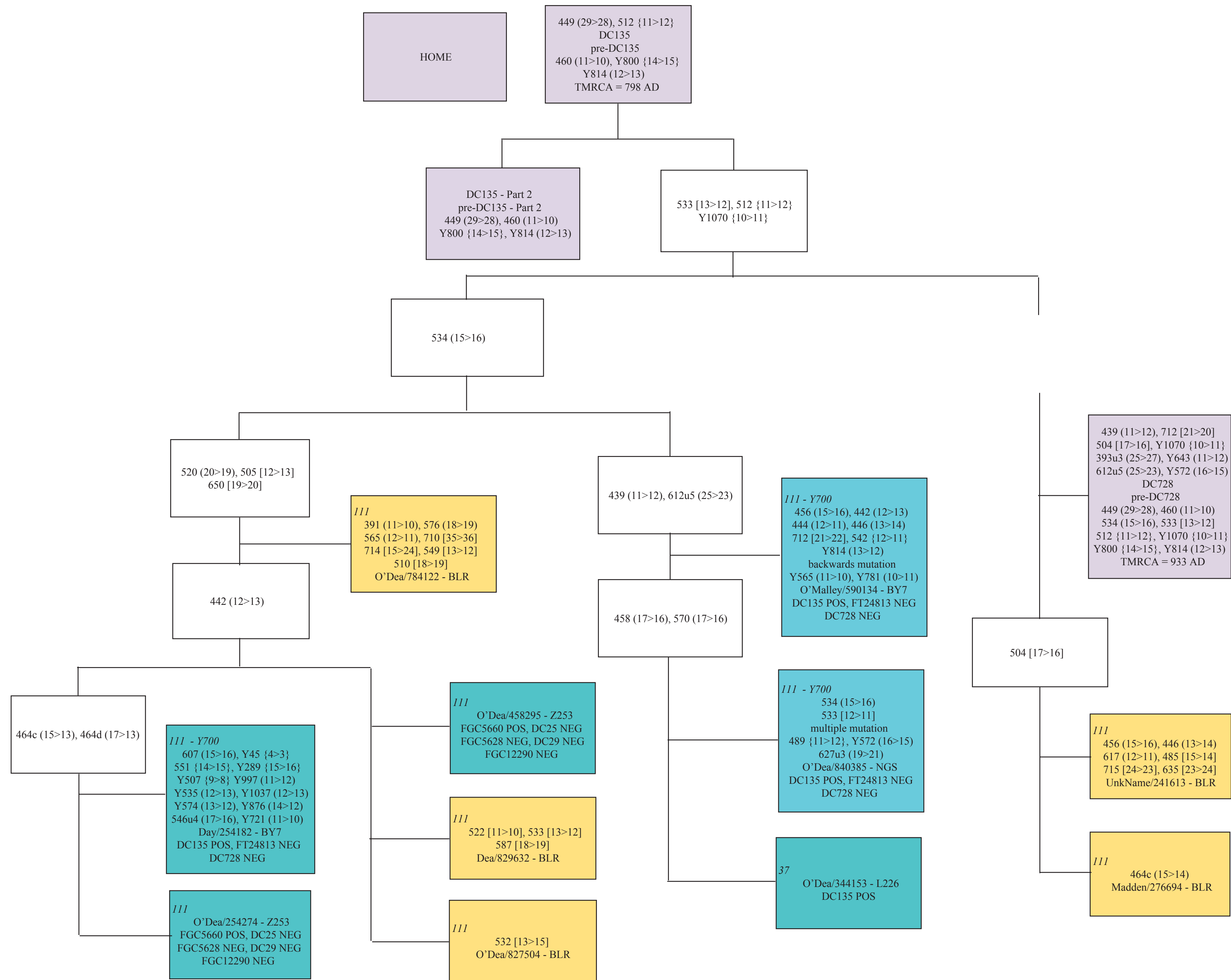


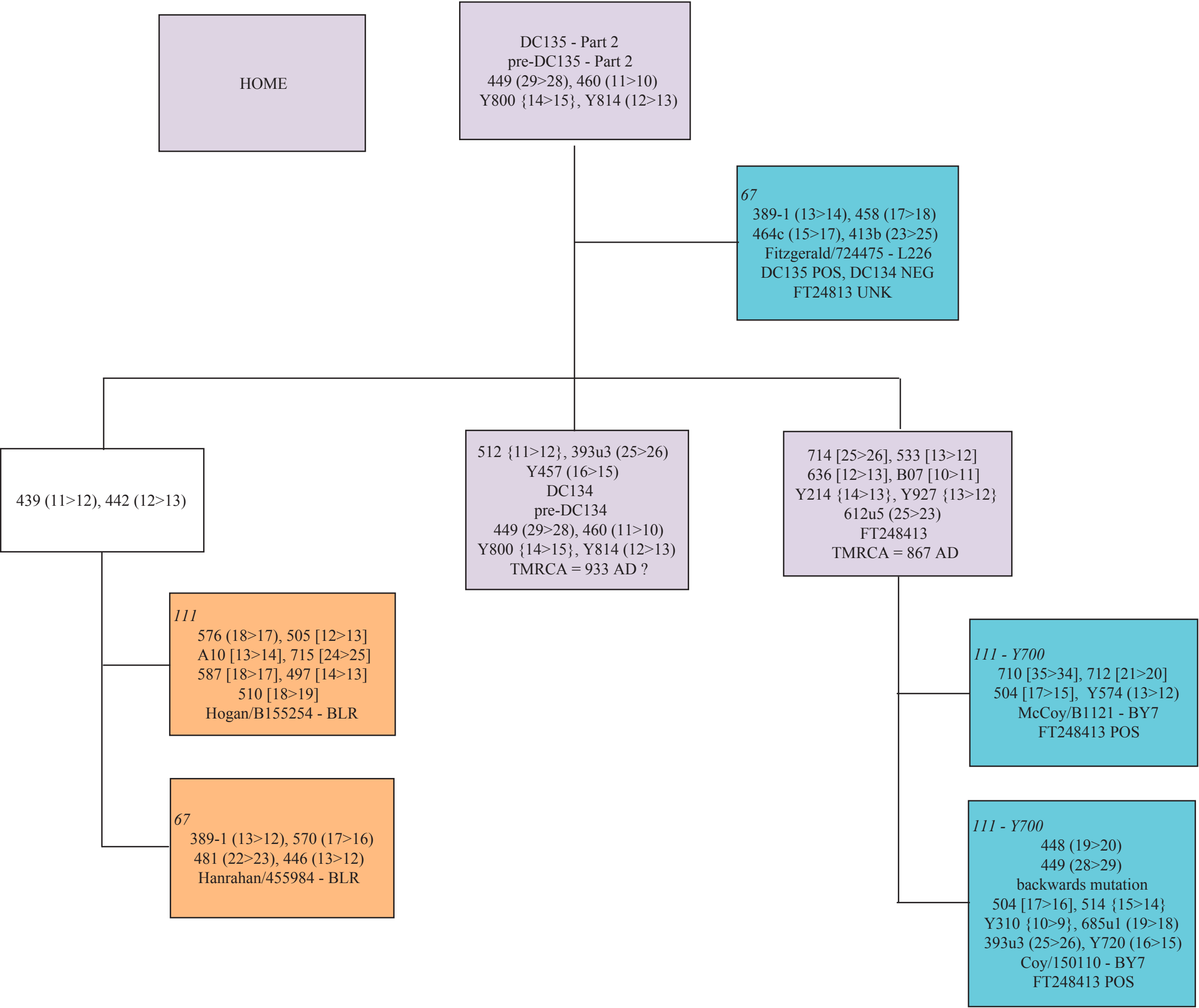


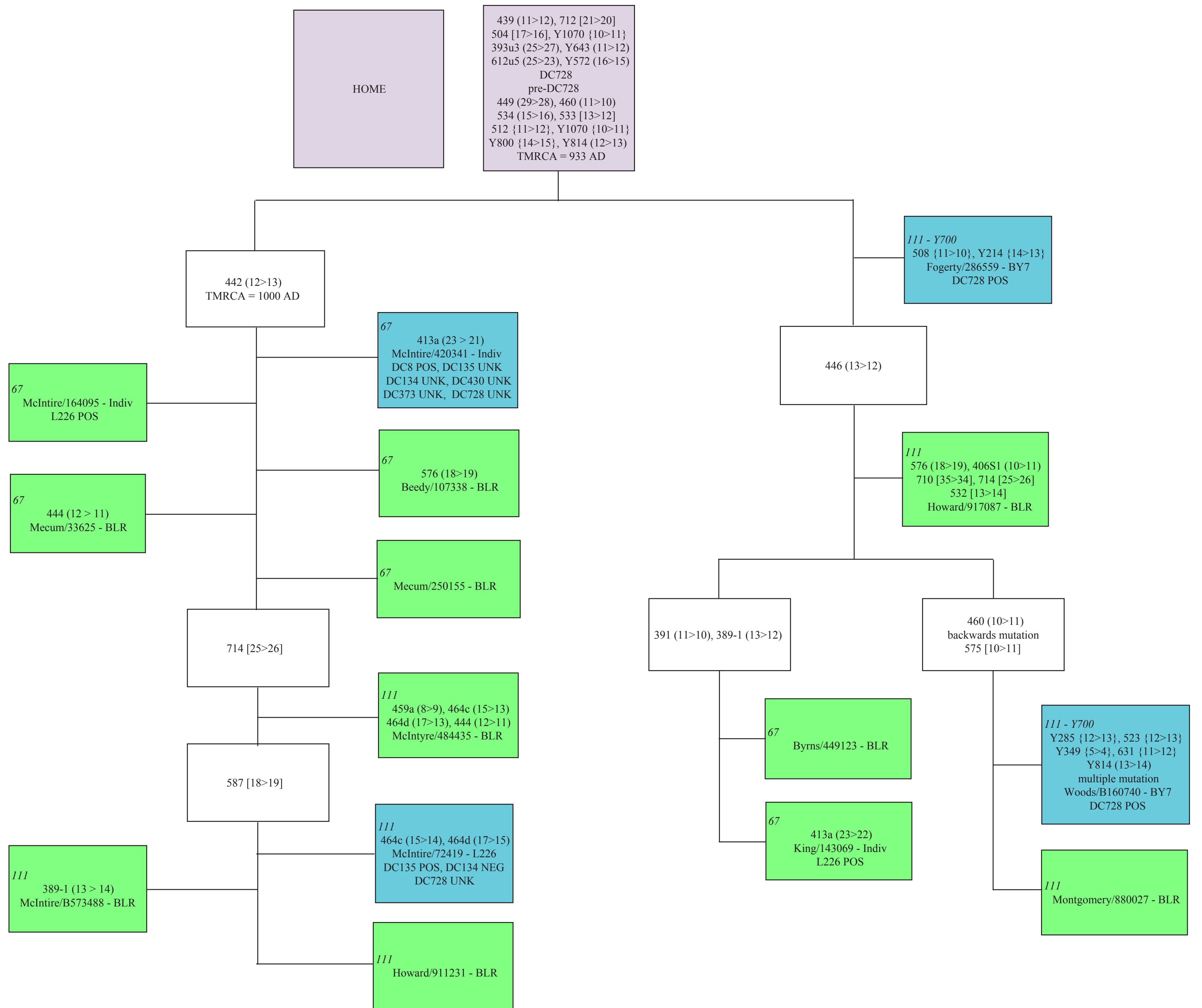




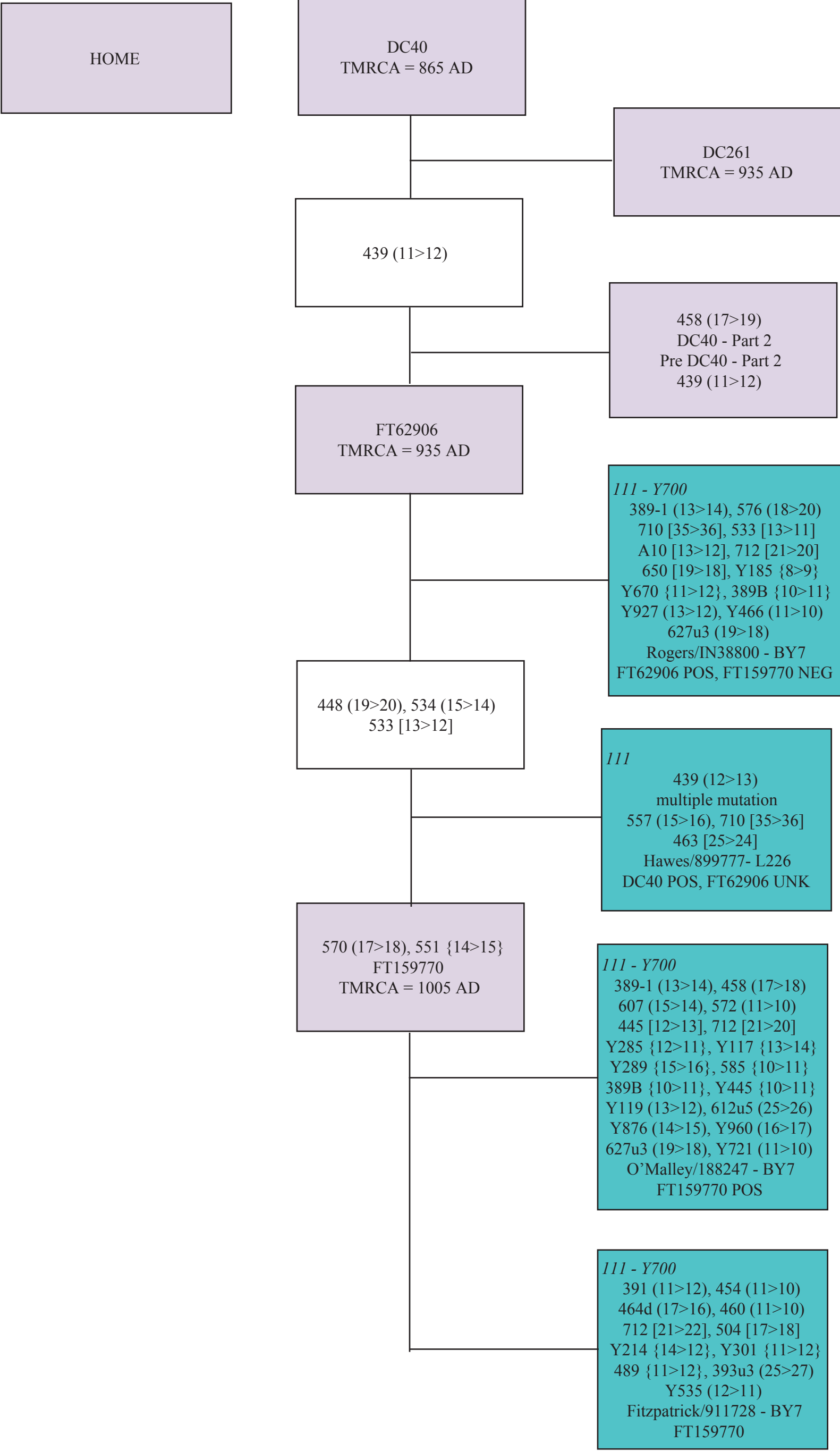


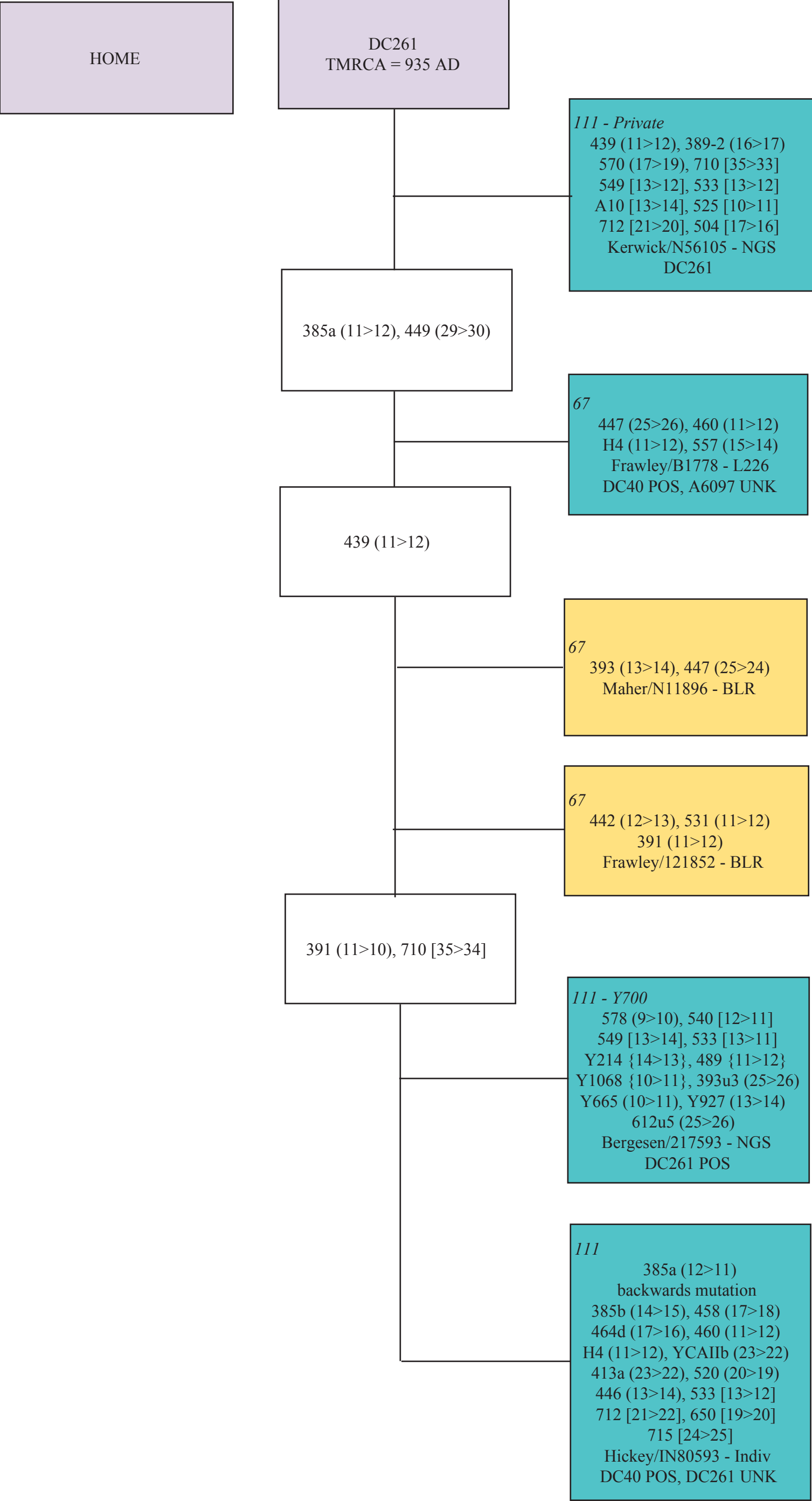


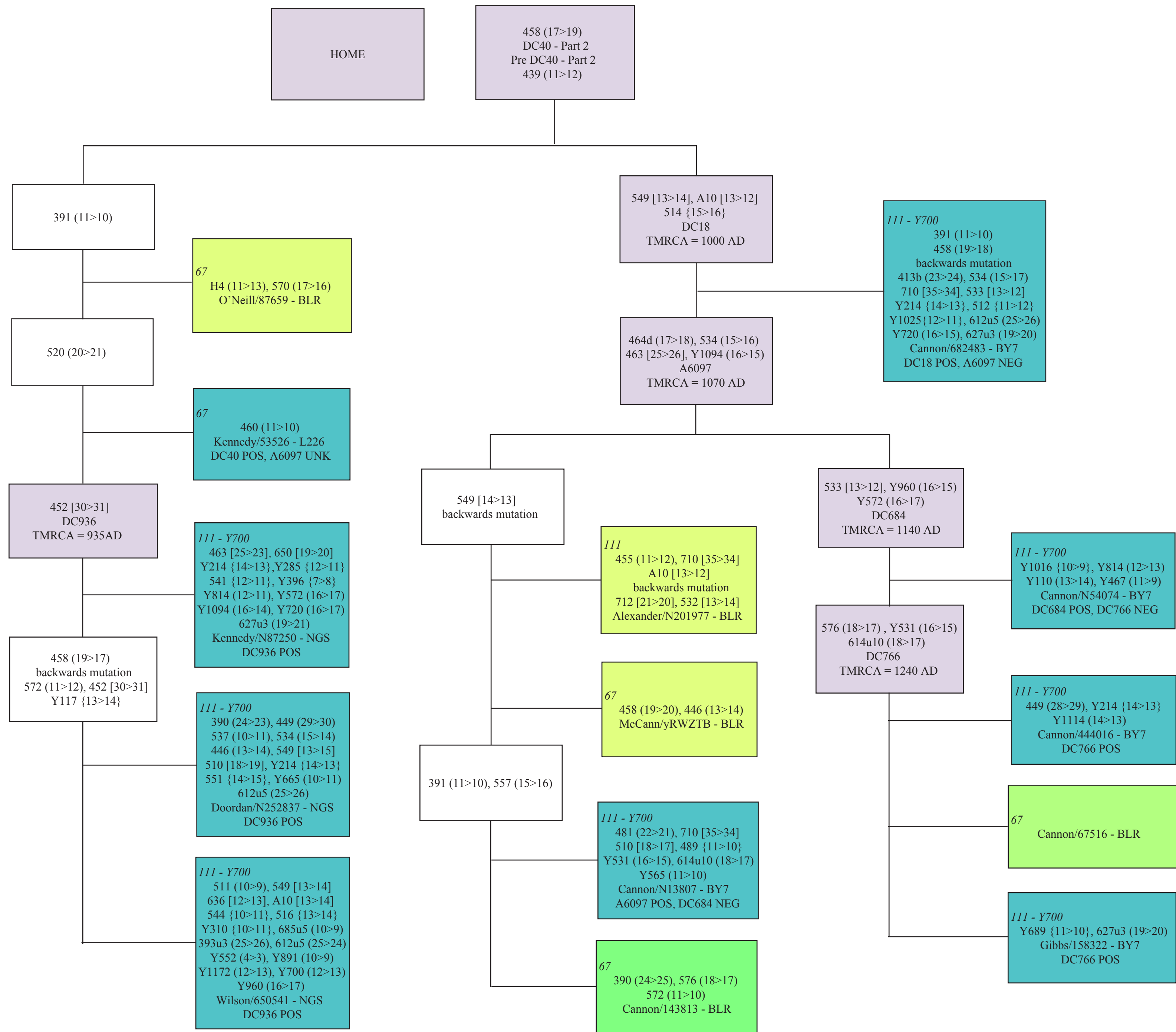


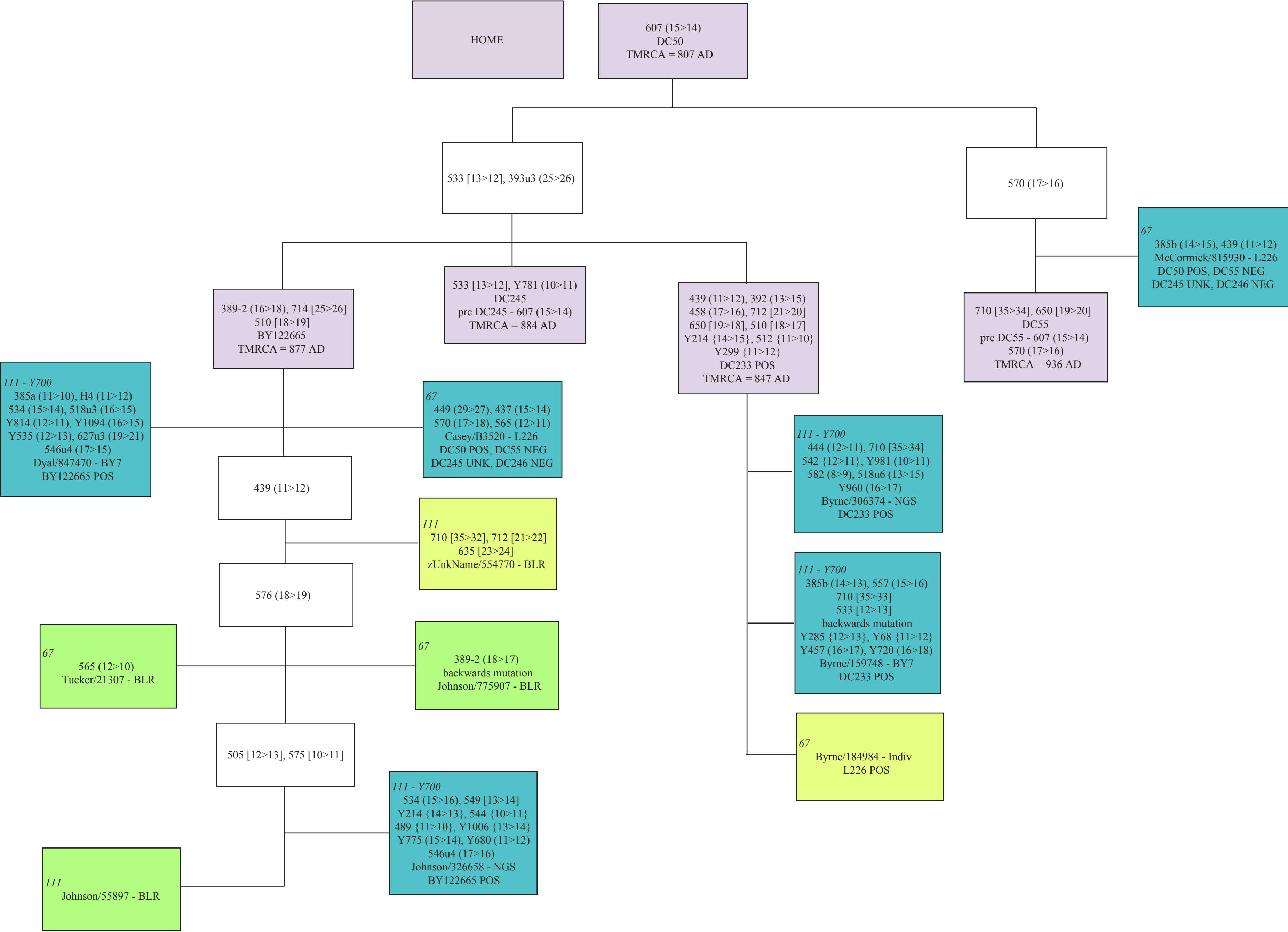


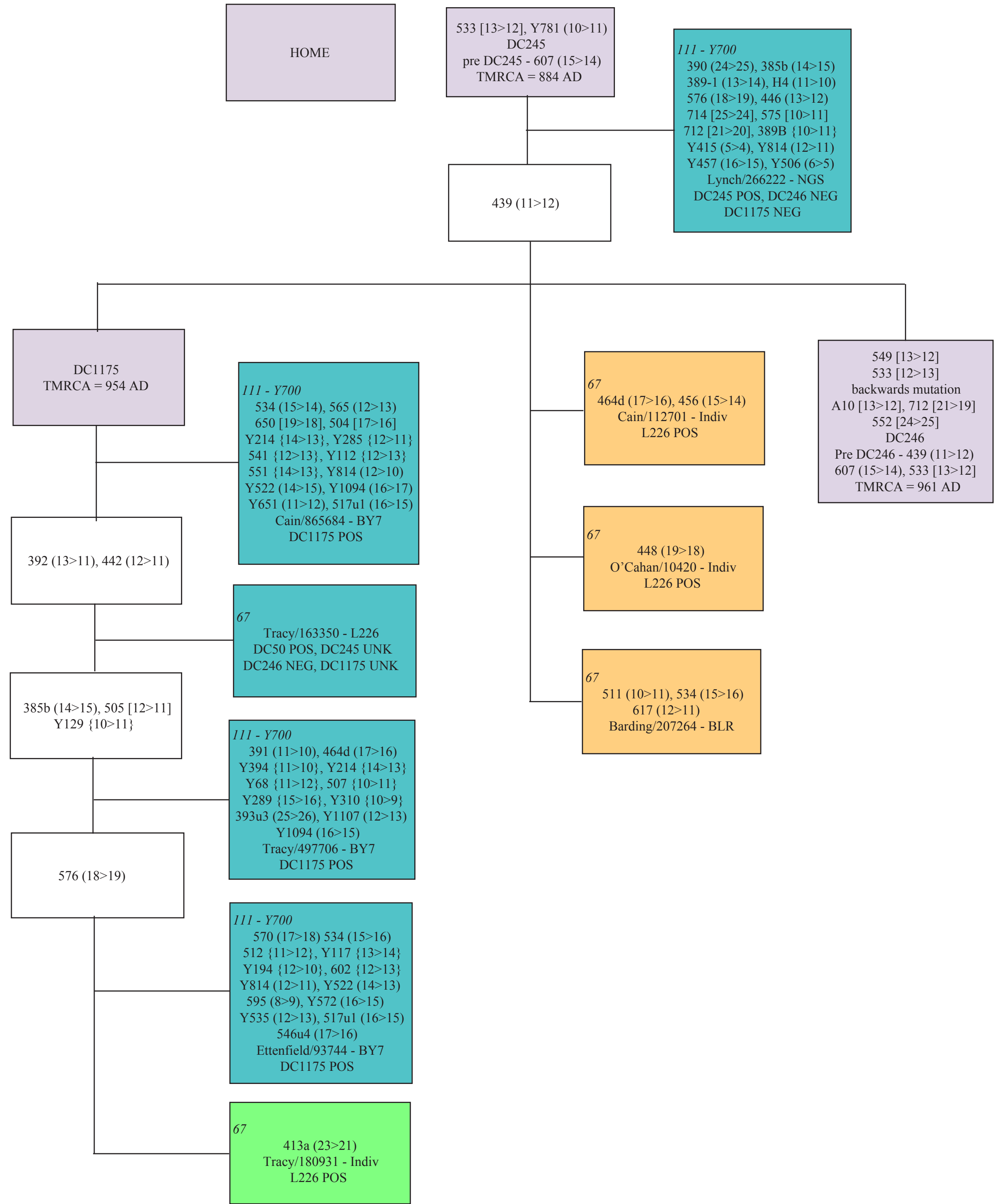




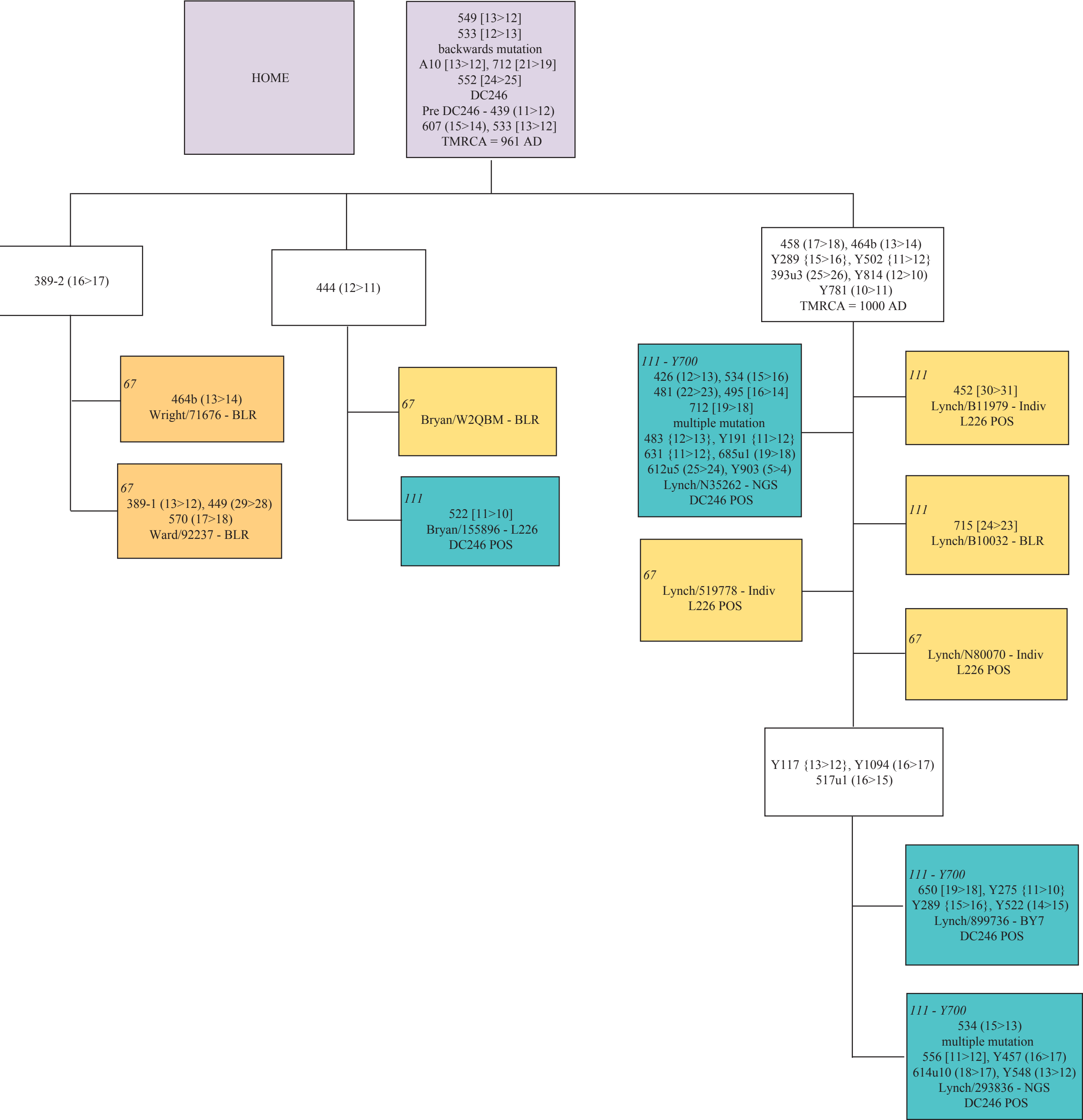


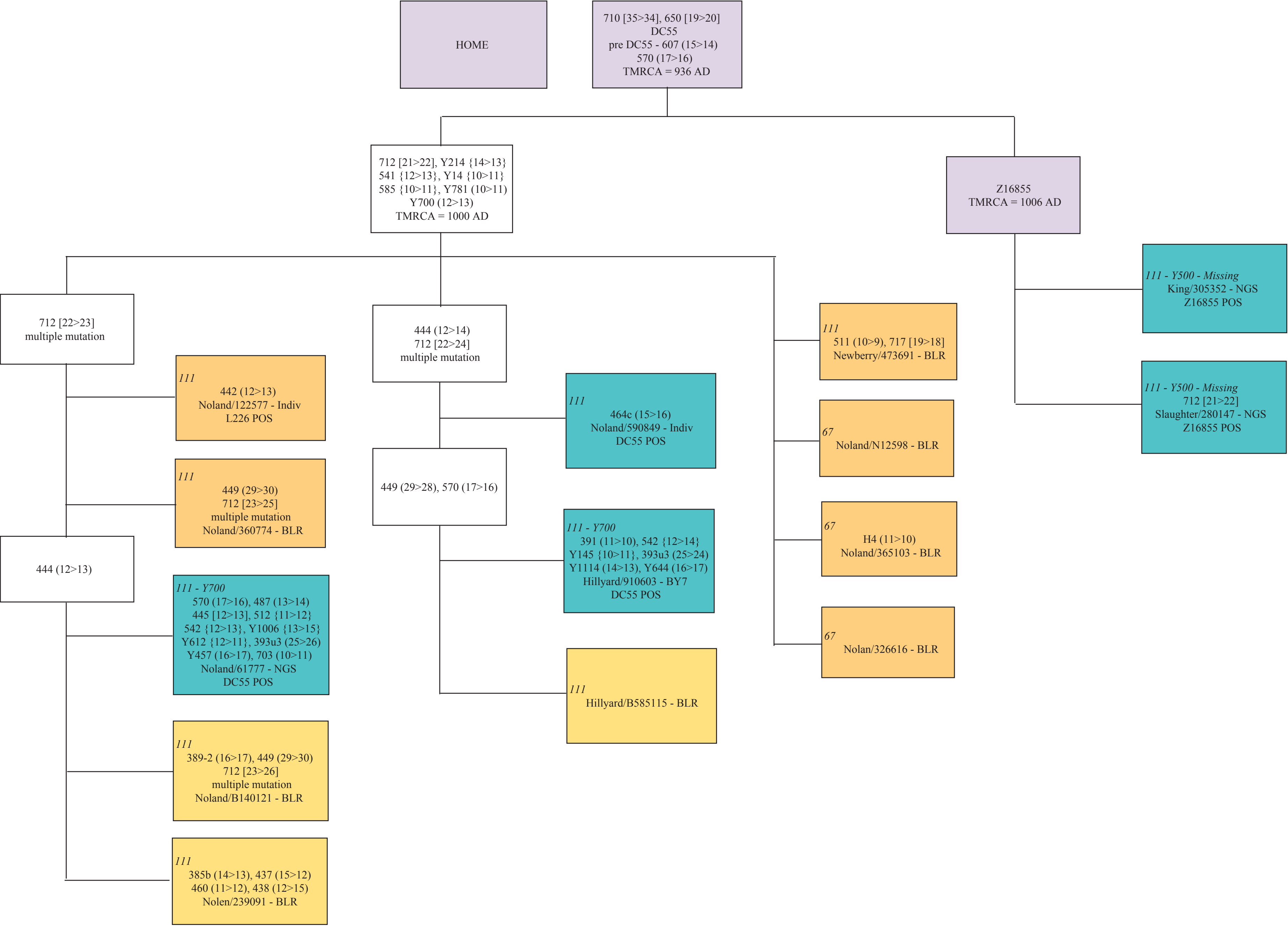


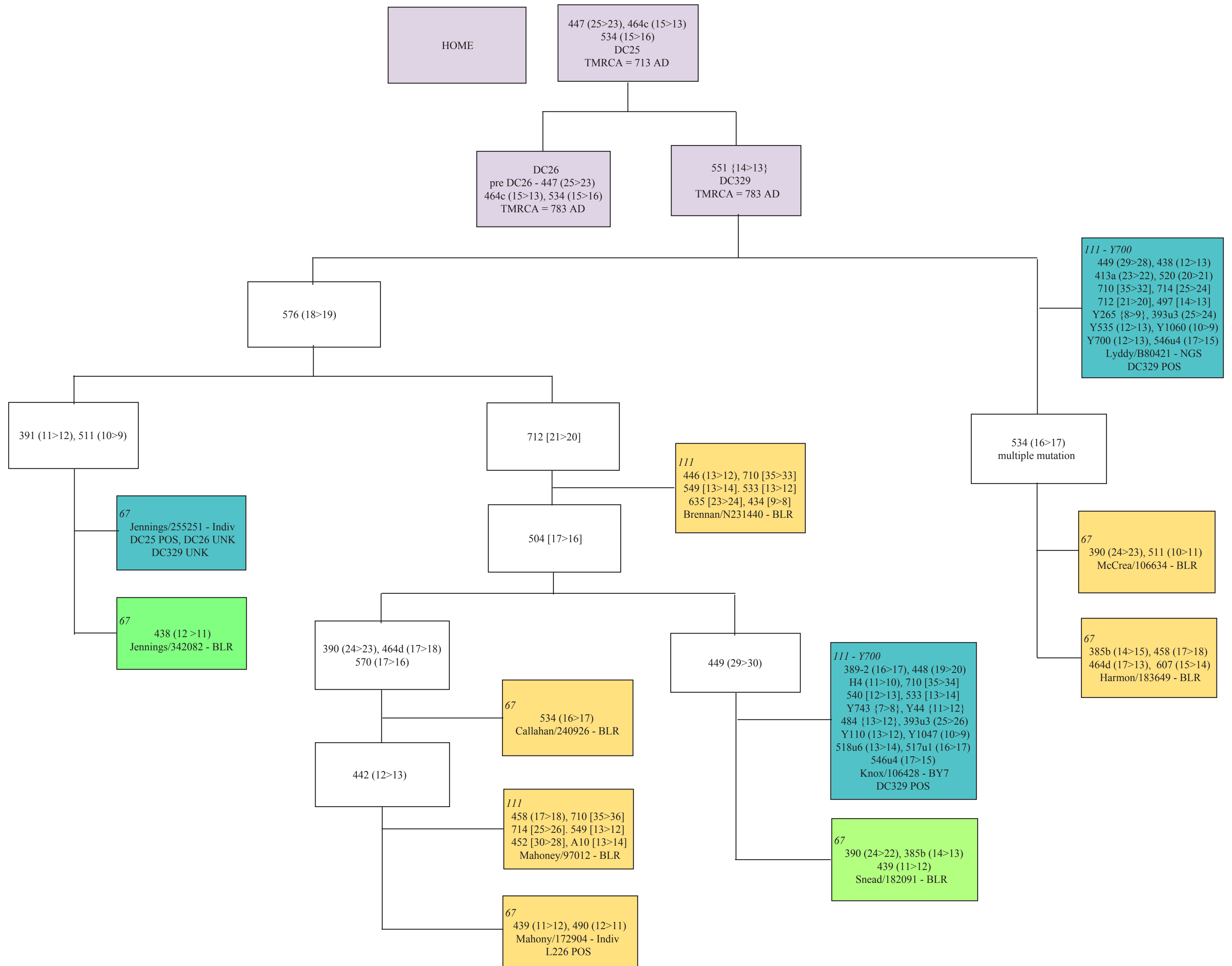


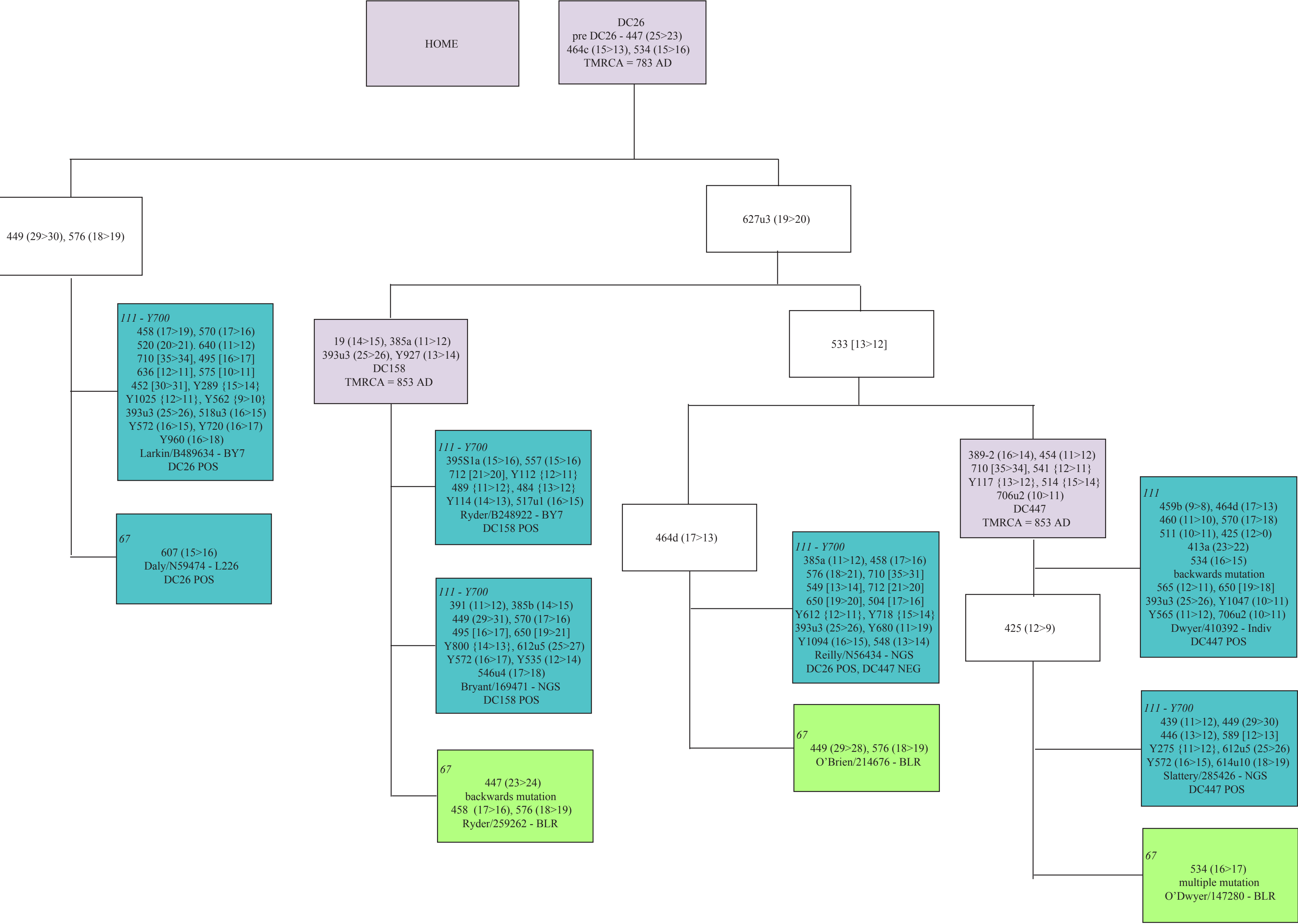


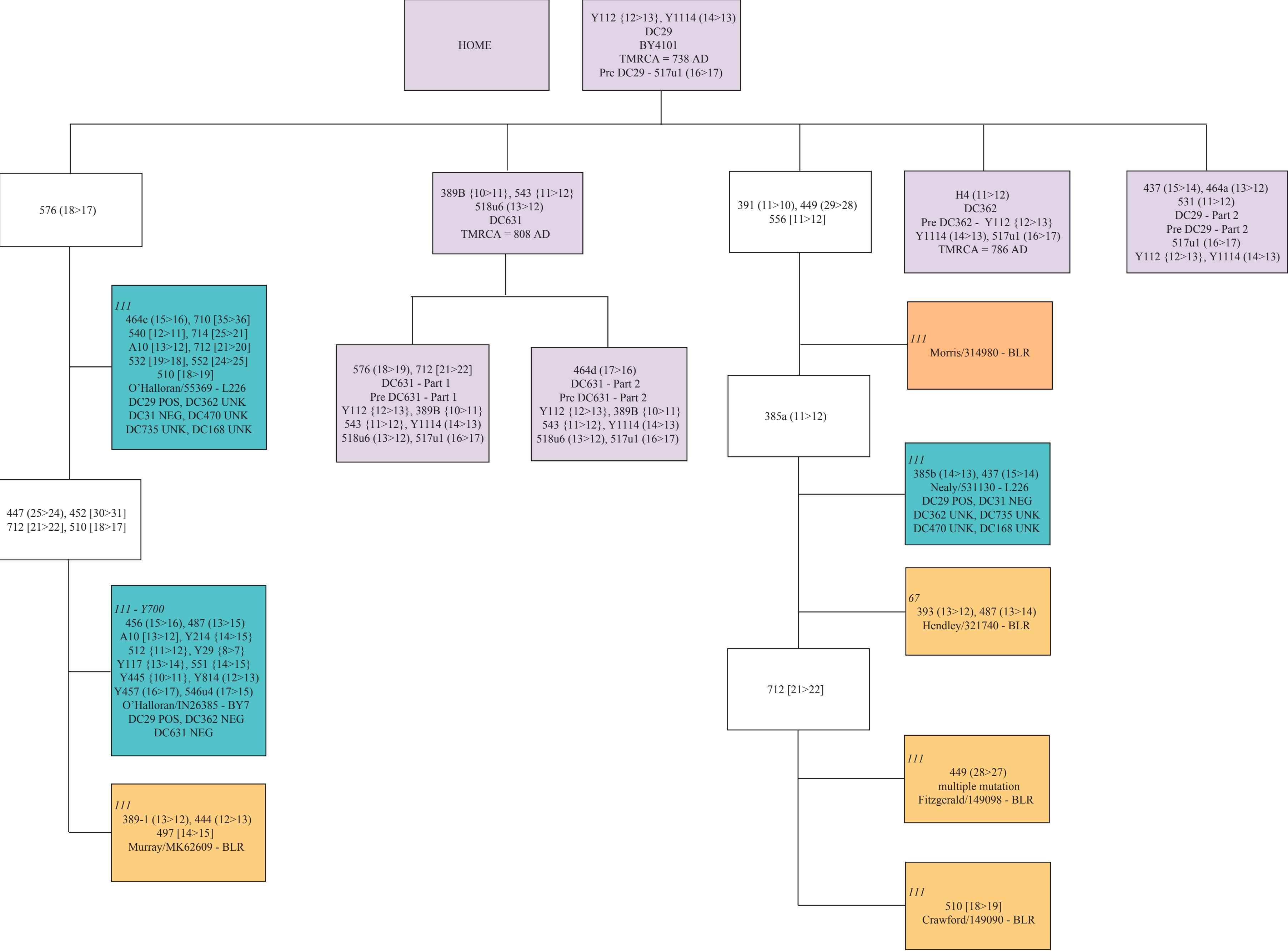




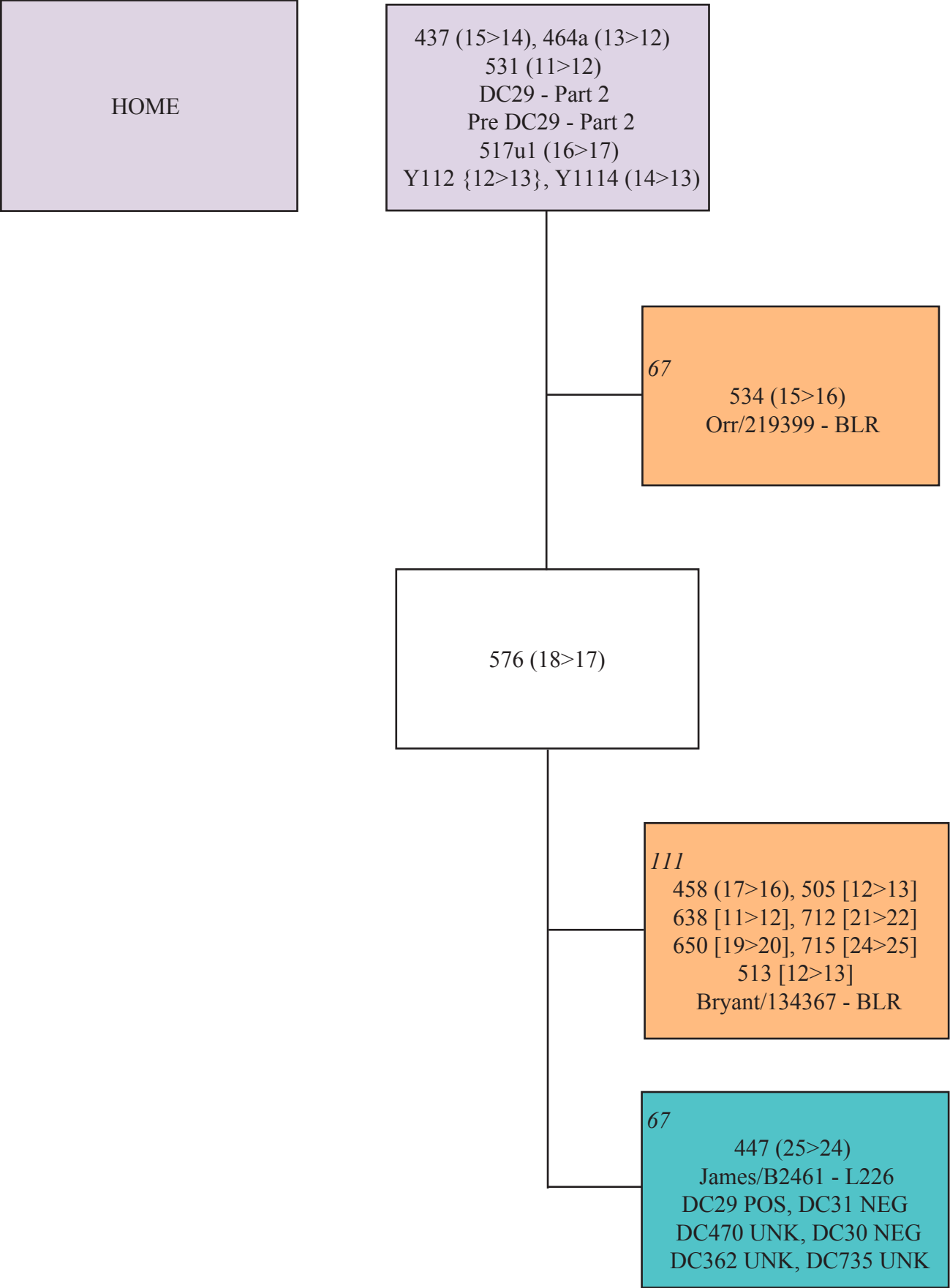


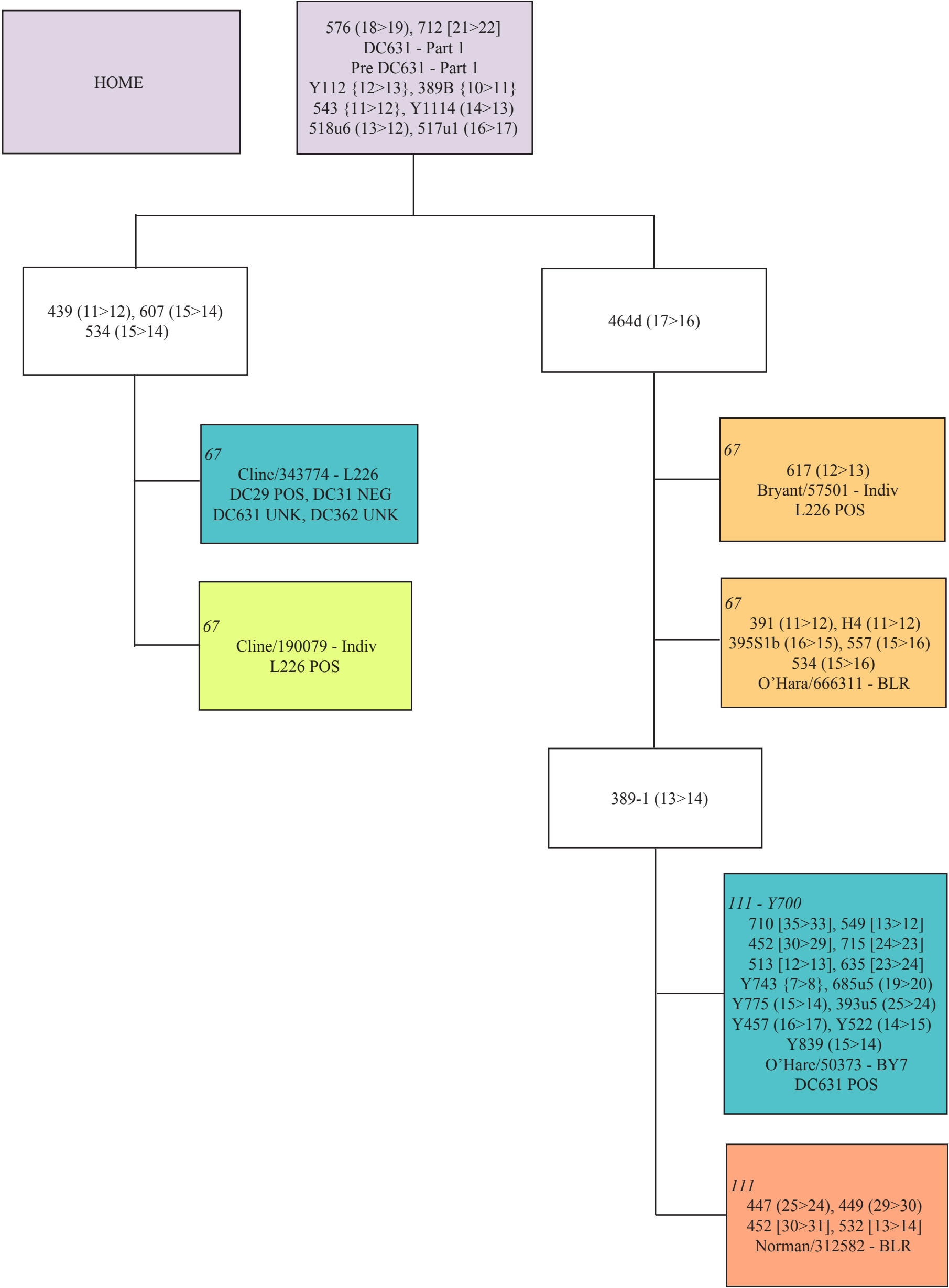


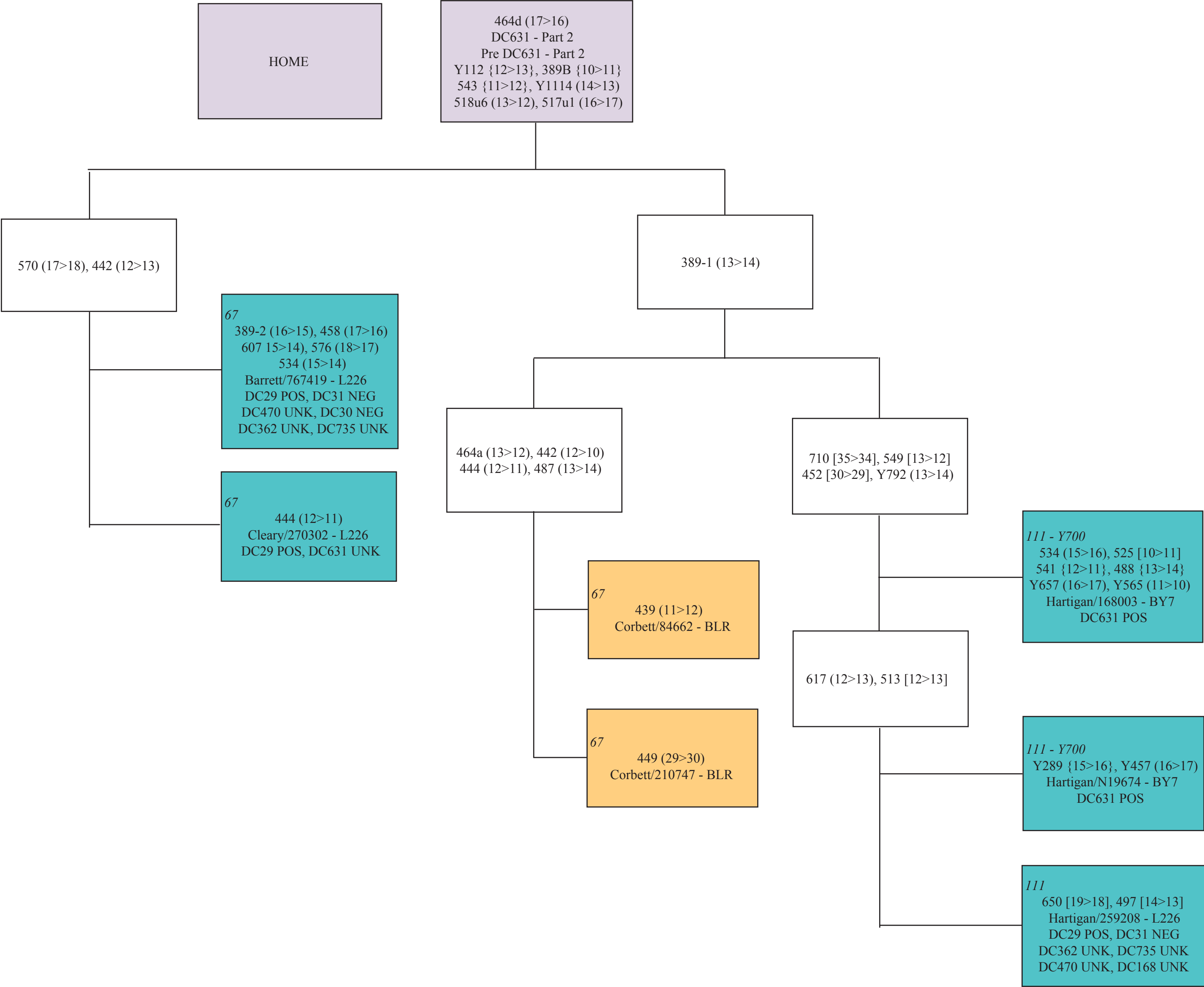


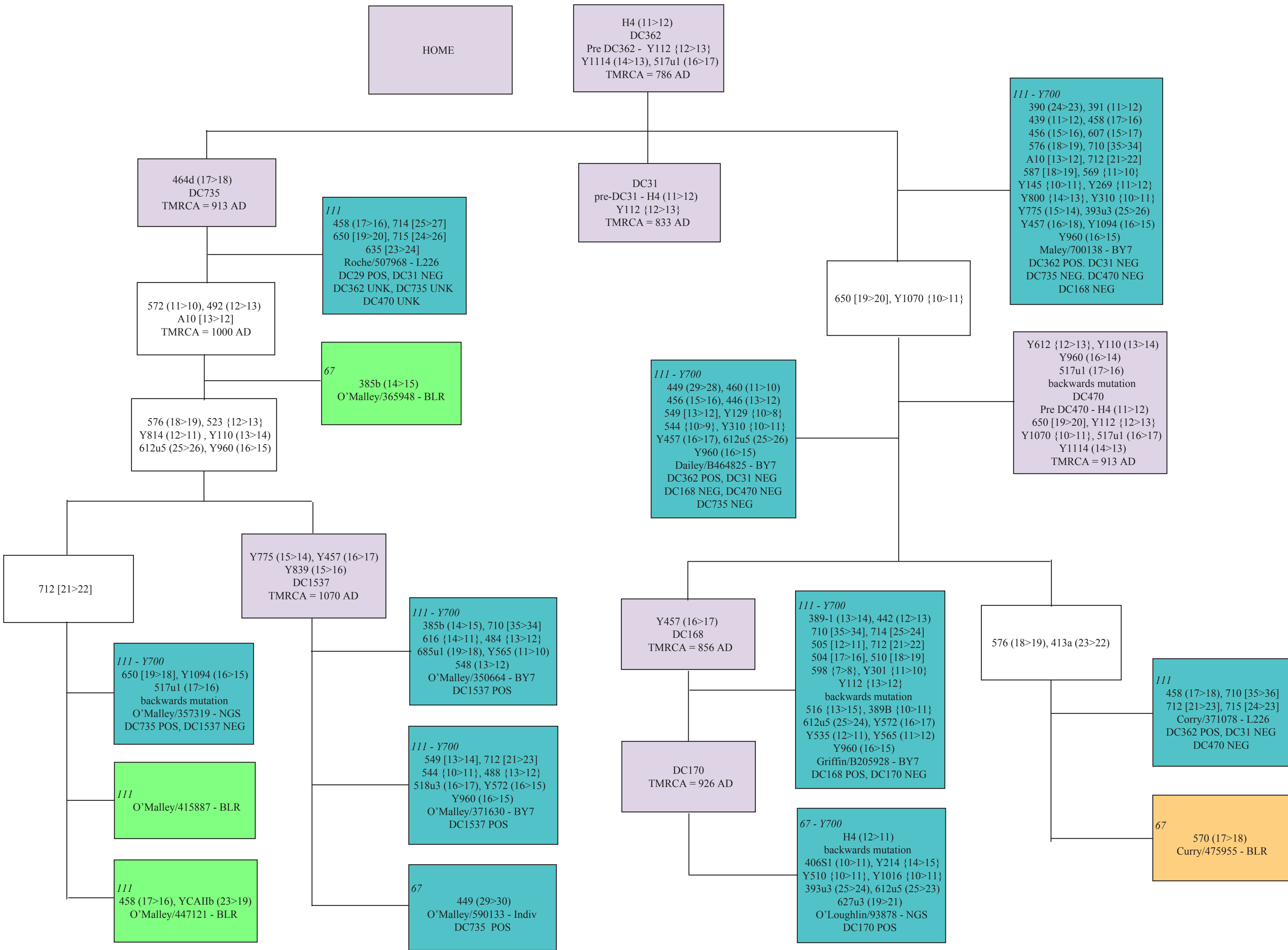


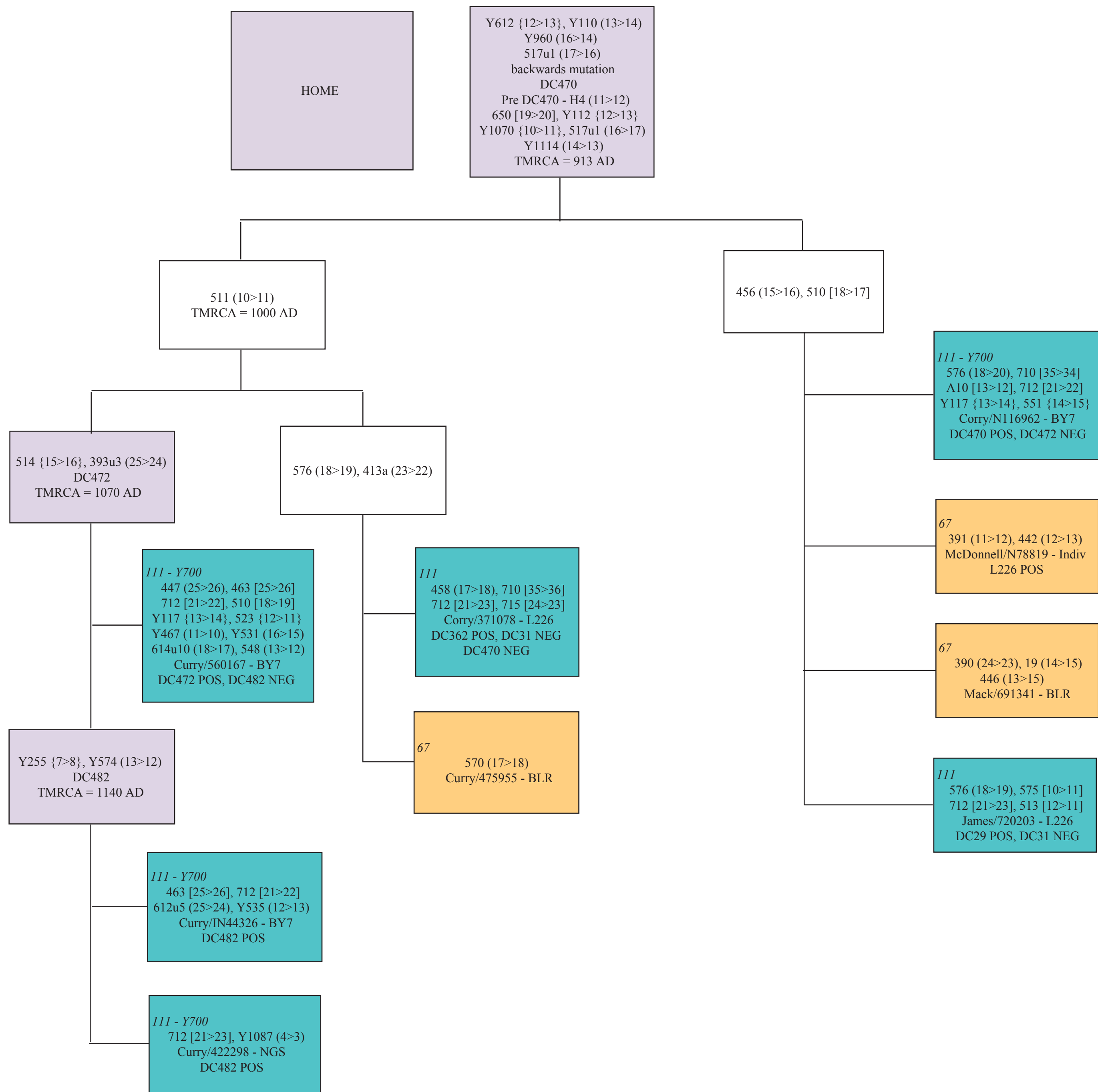




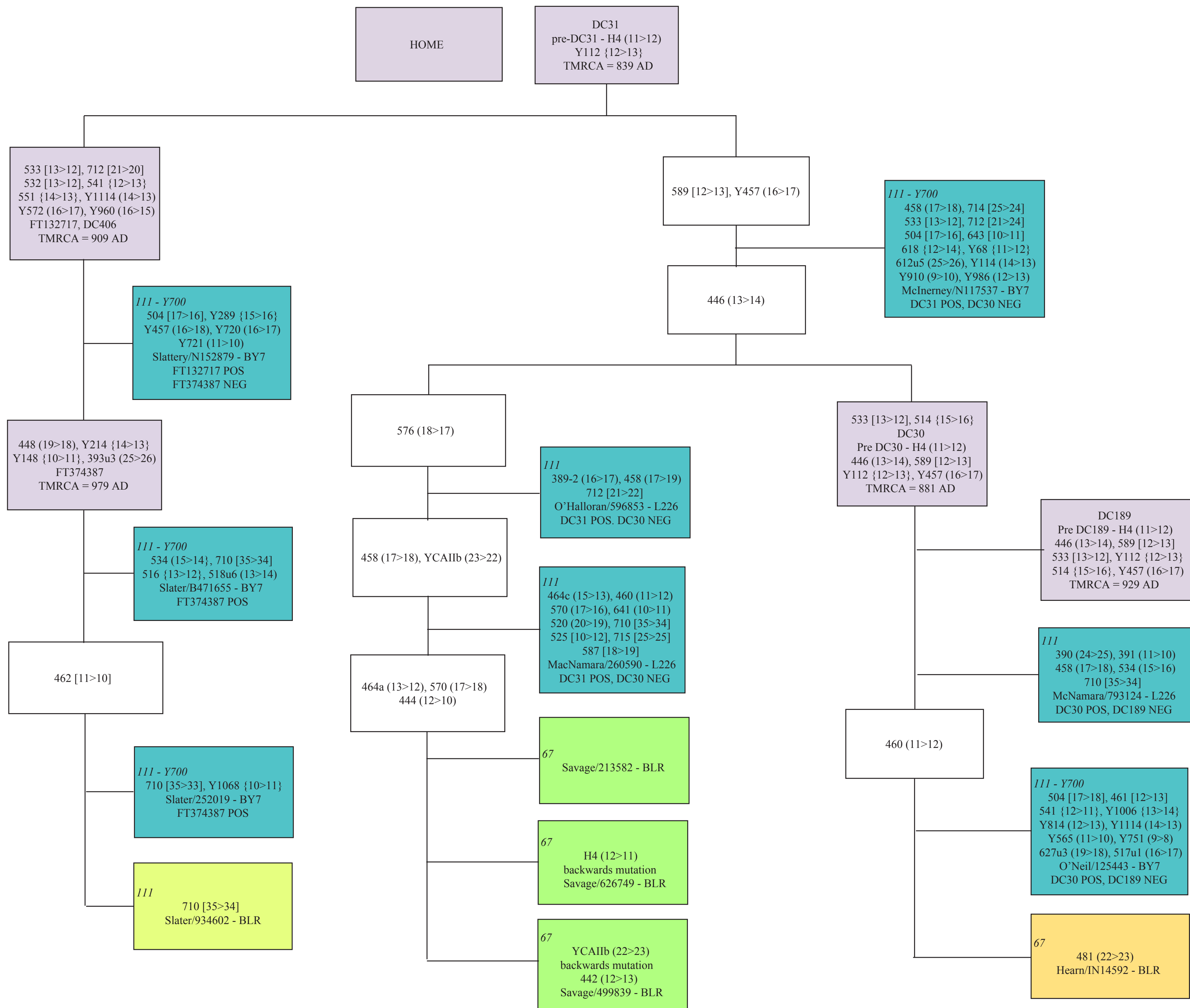


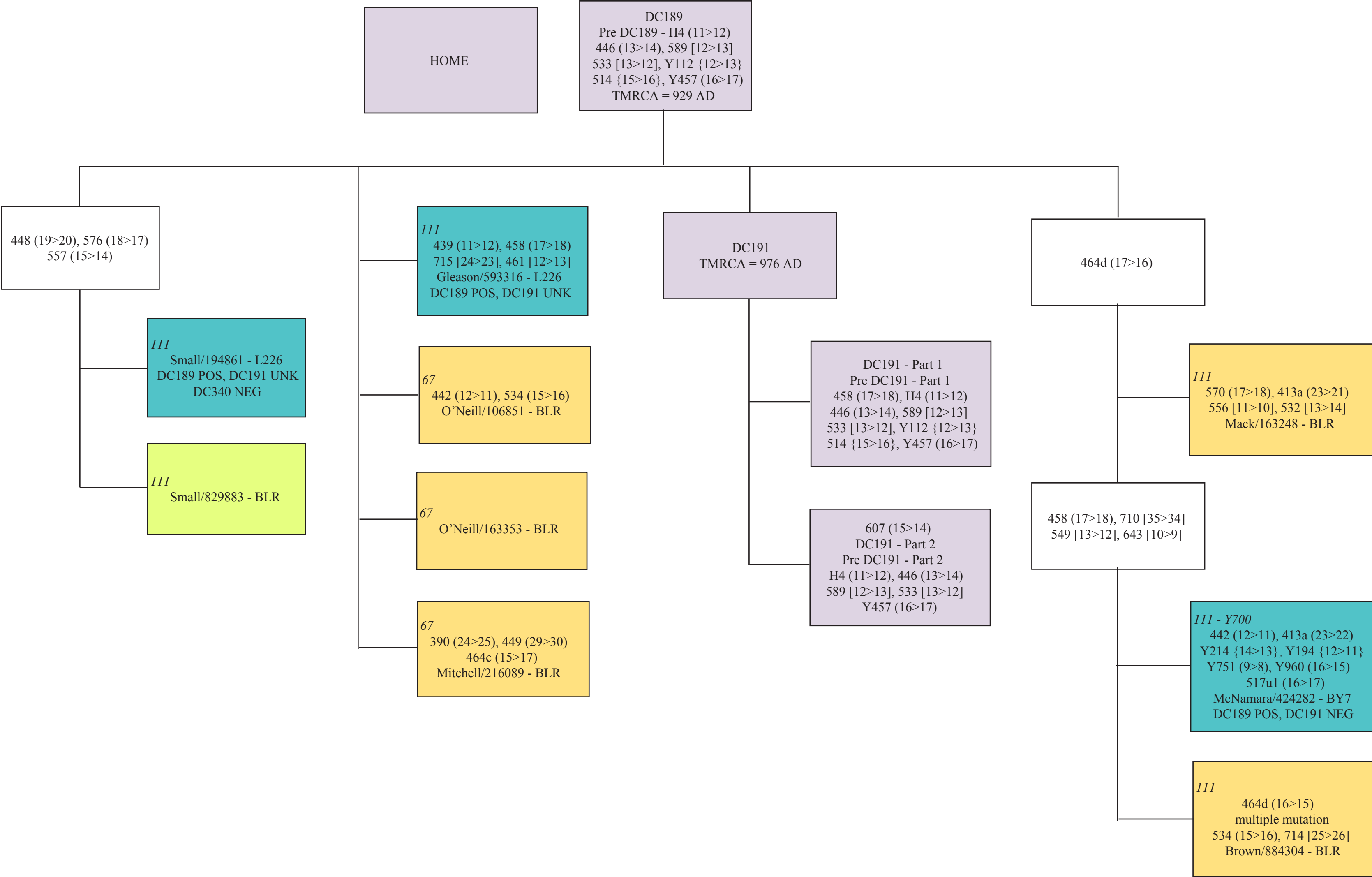


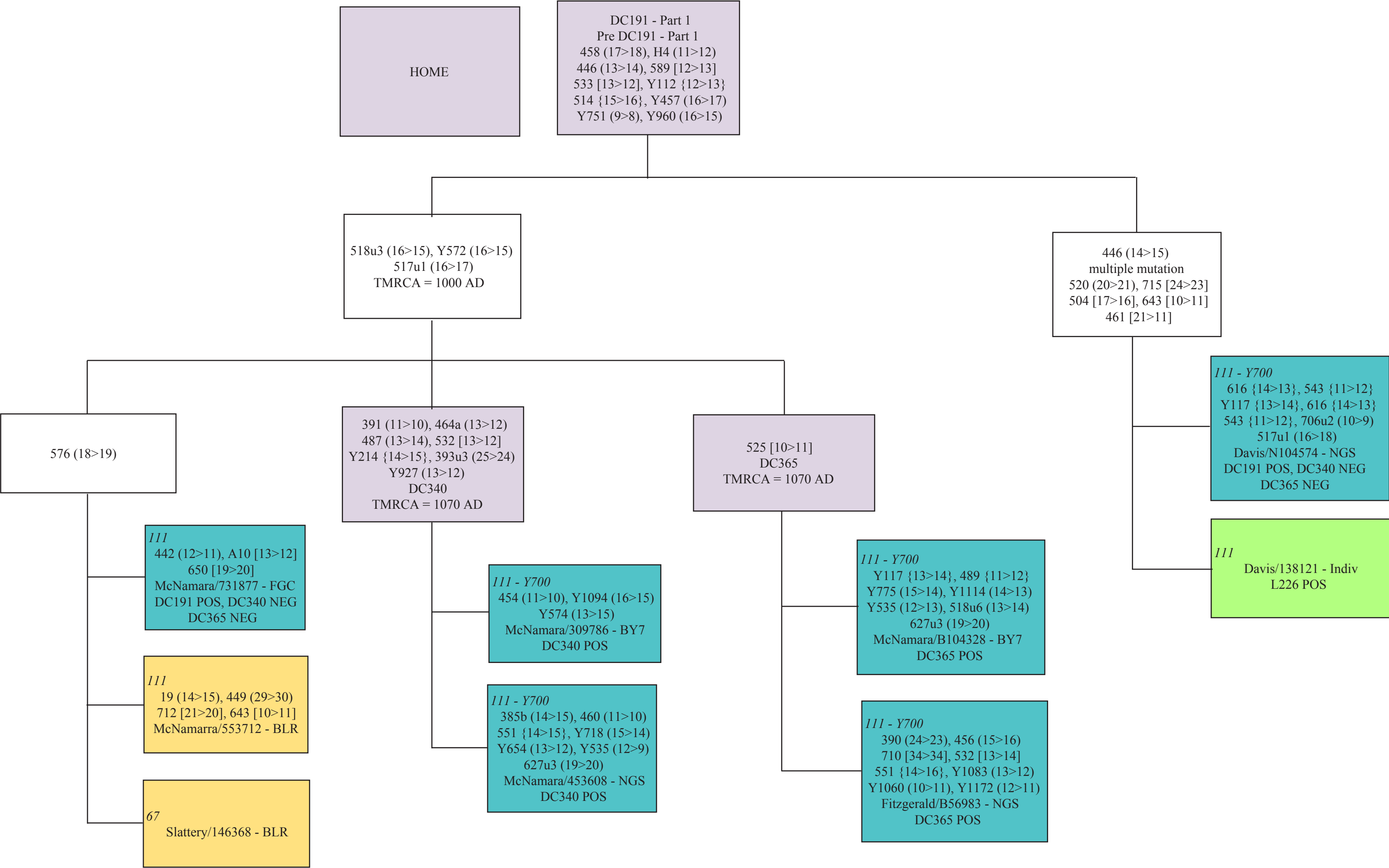


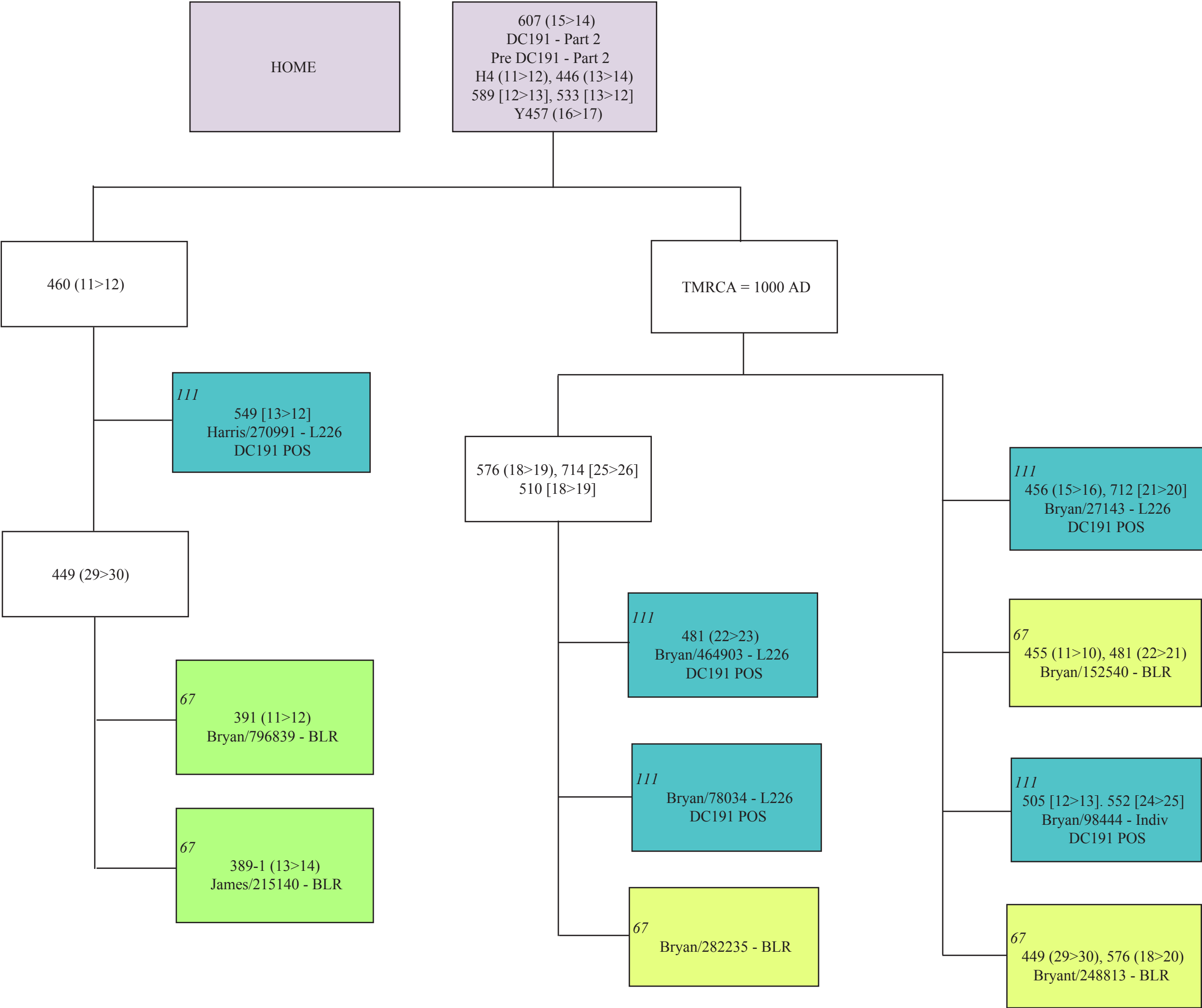


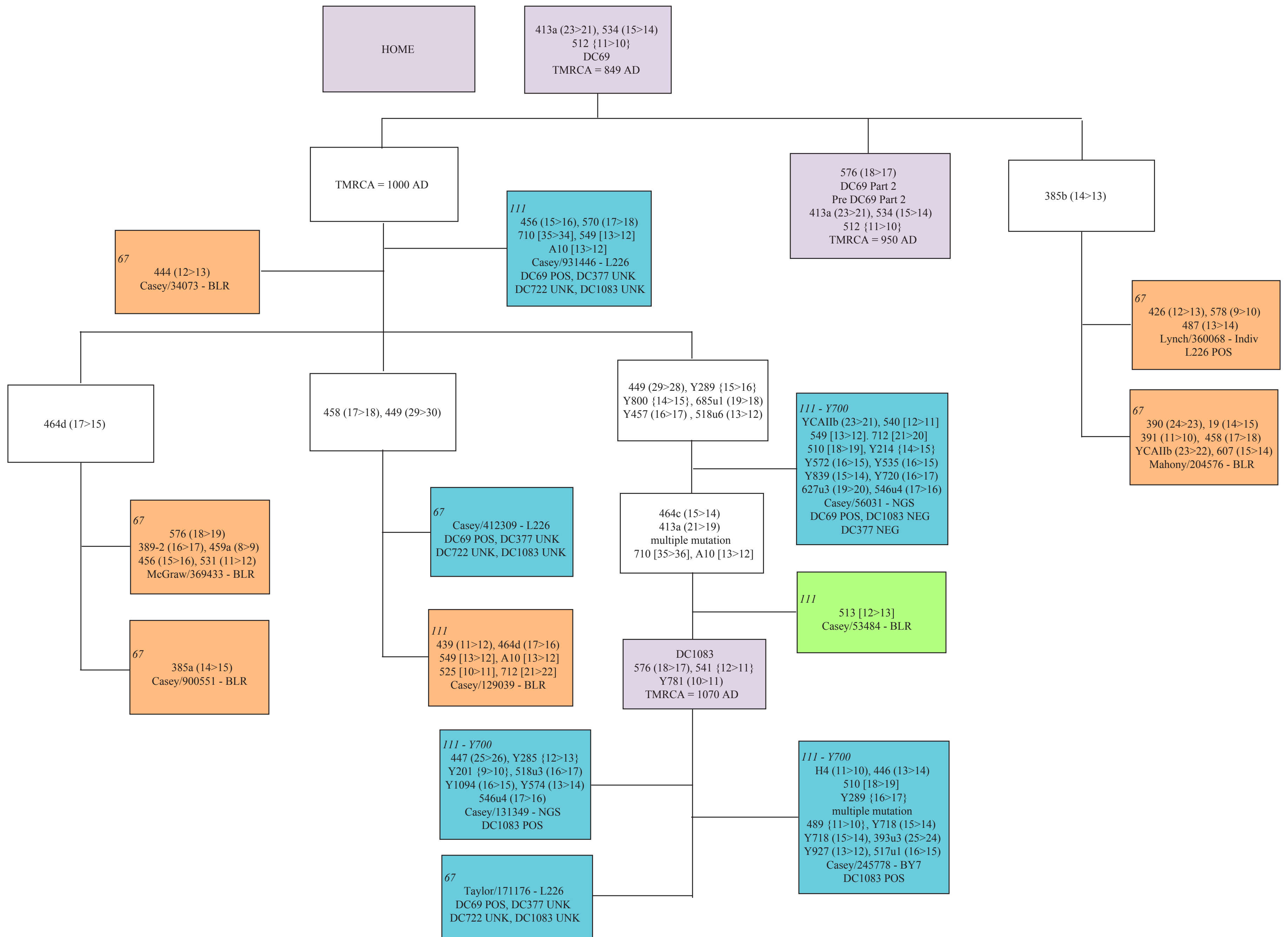


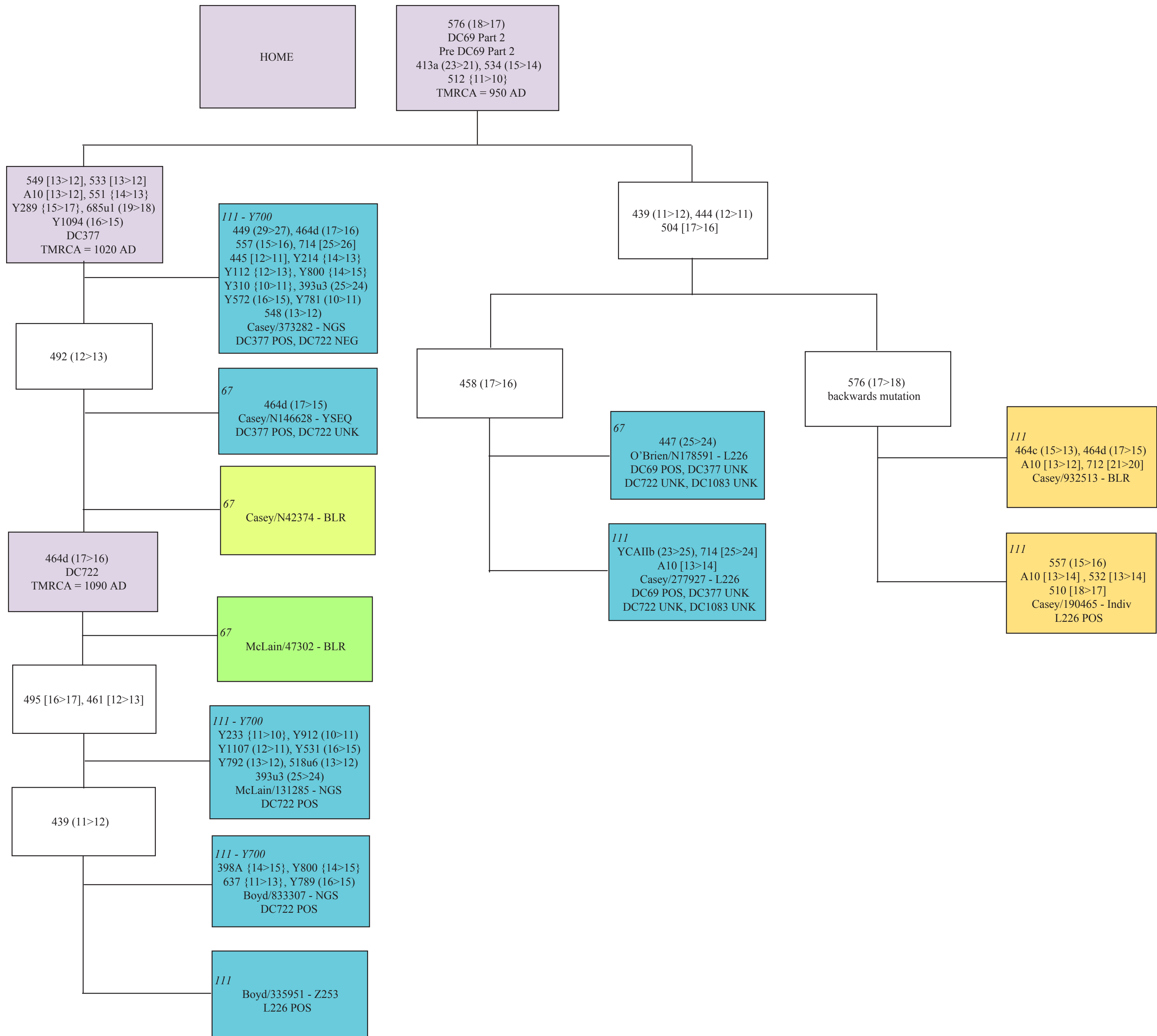




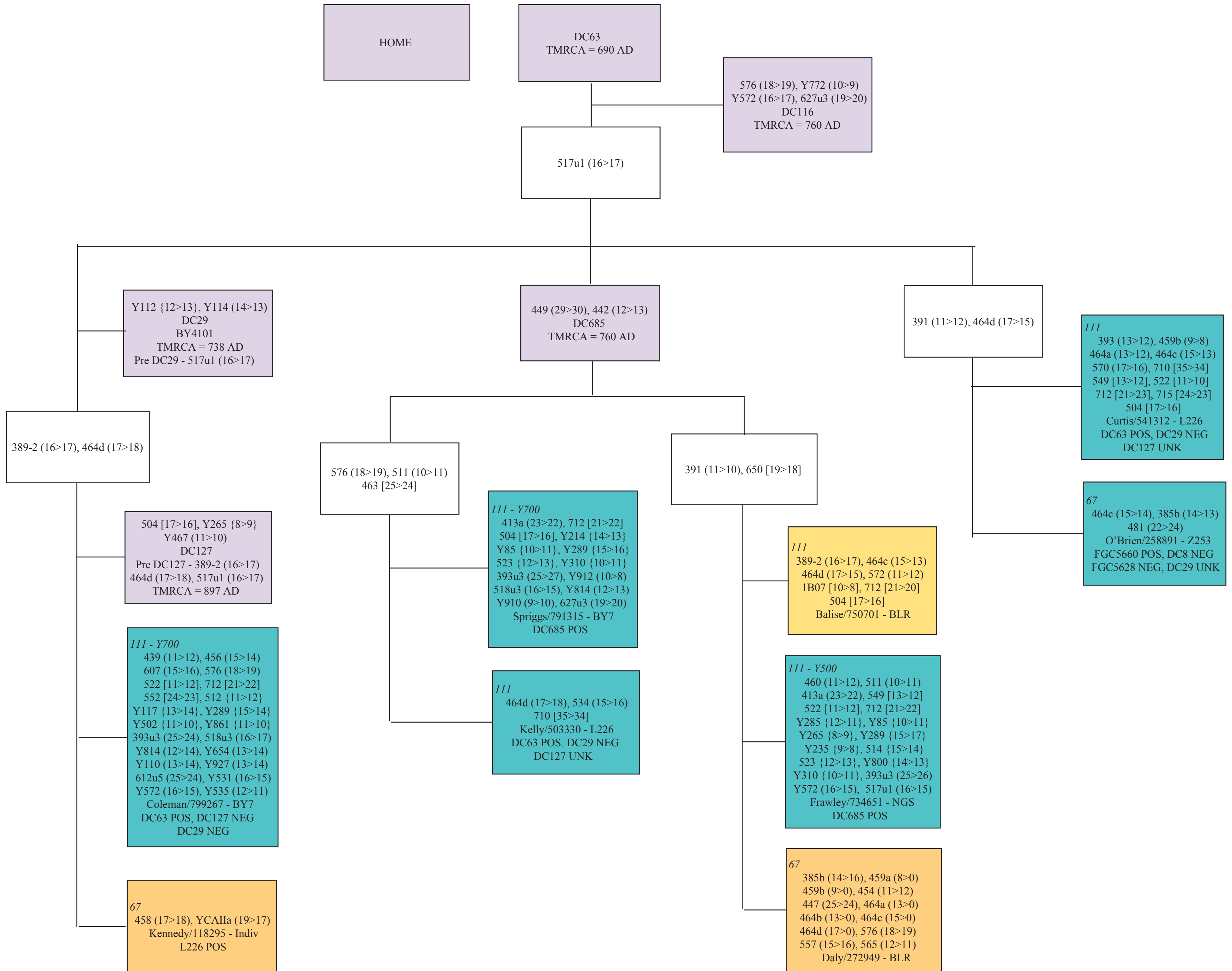


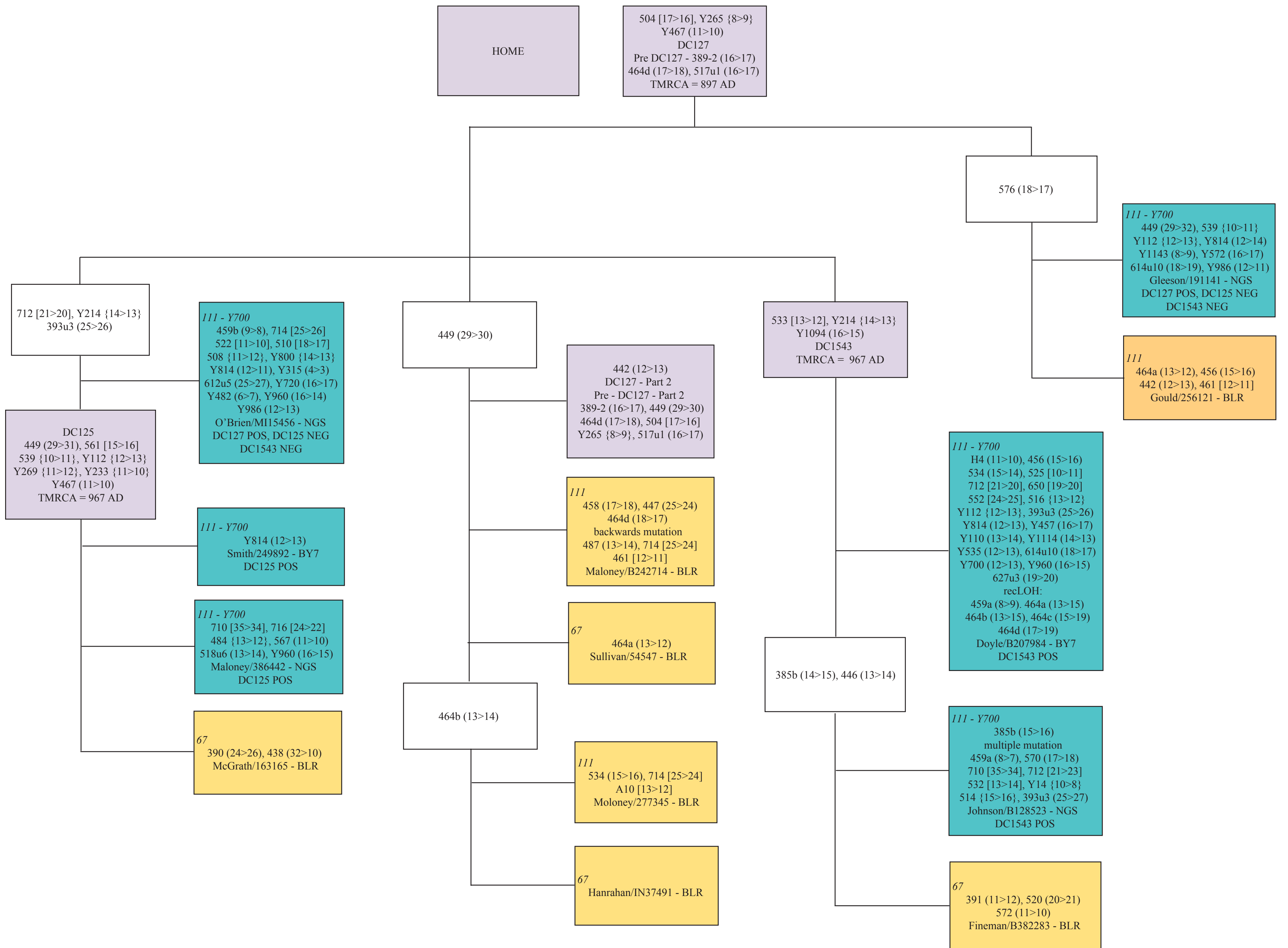


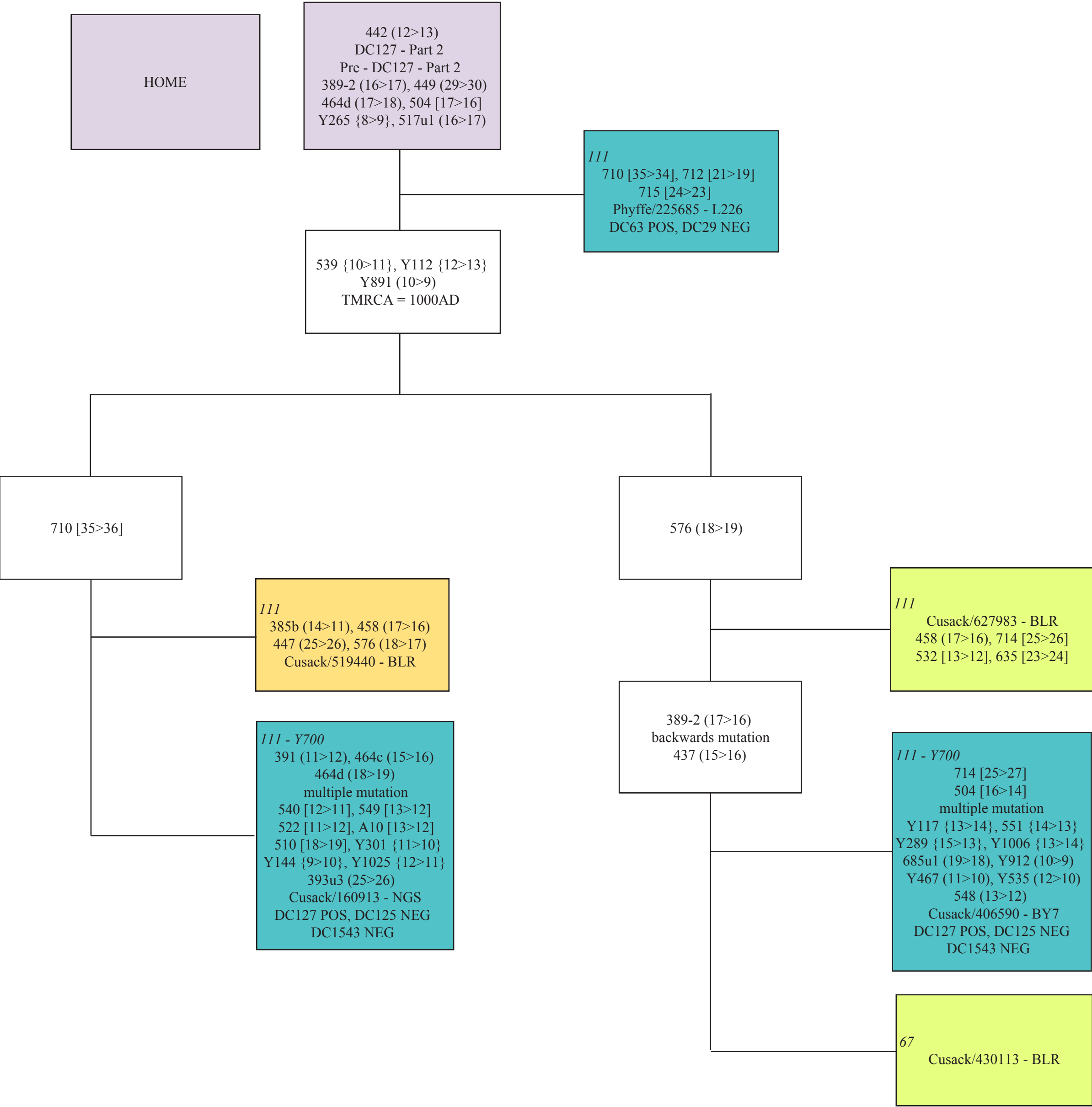


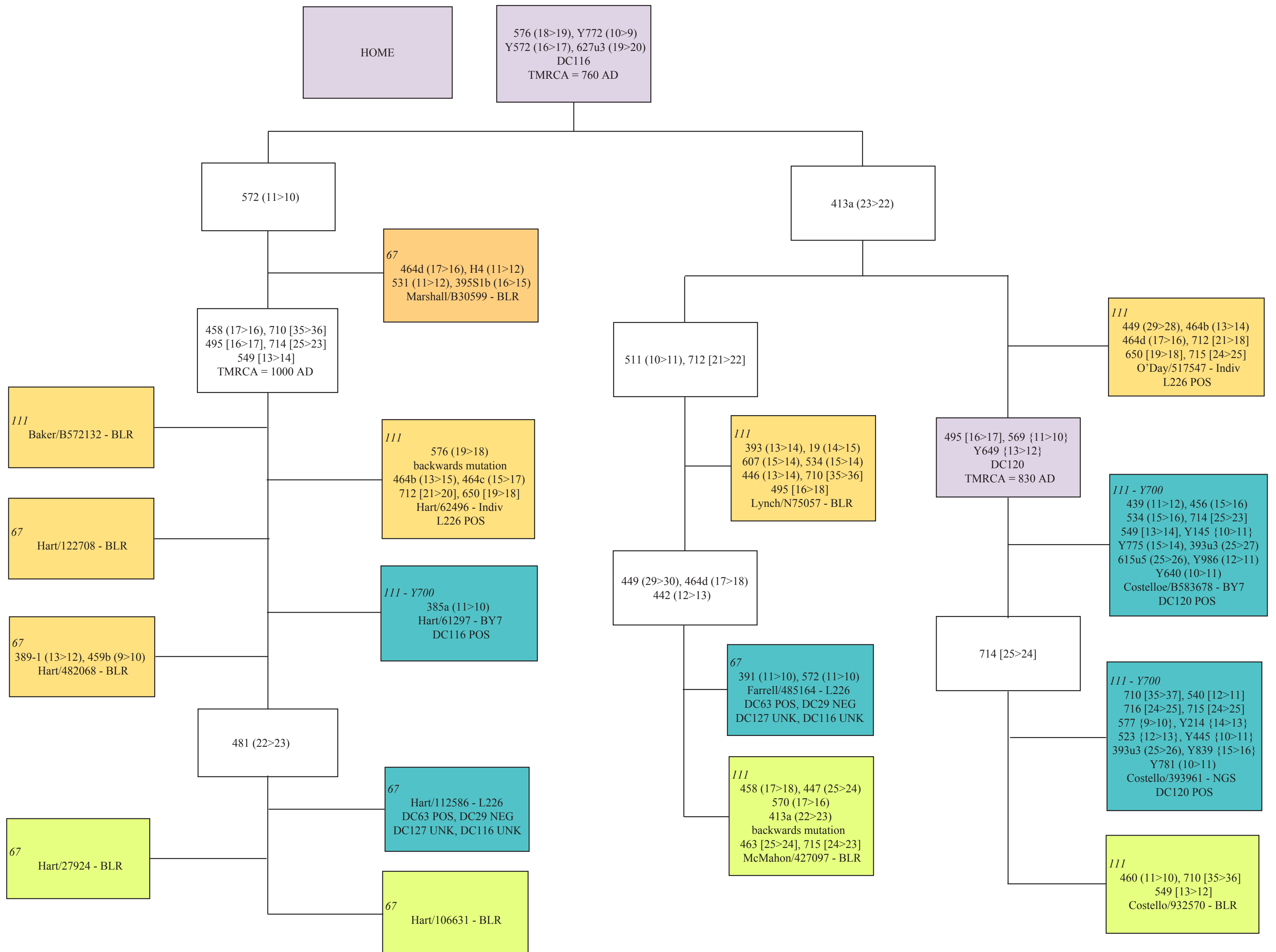


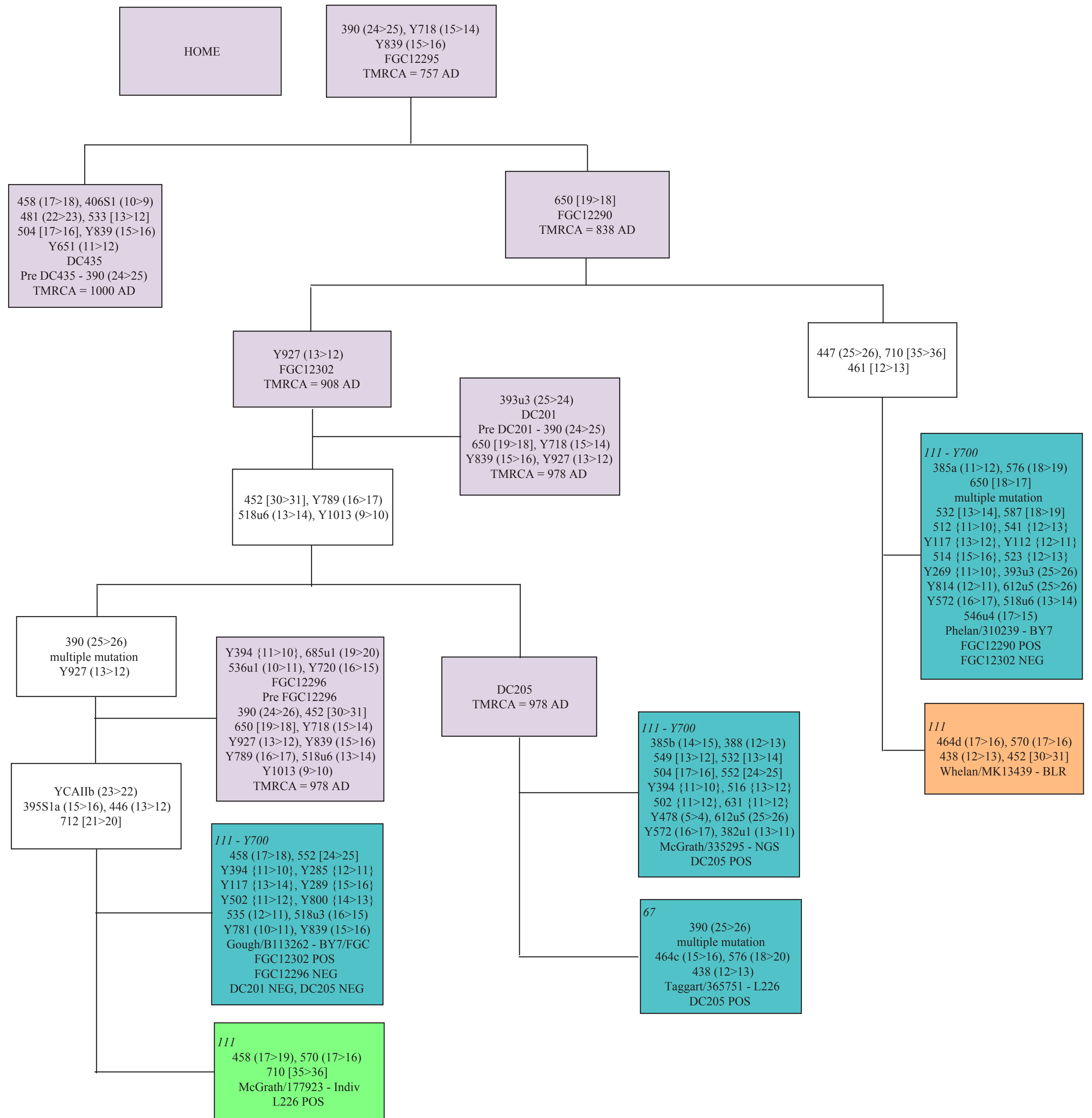












HOME

458 (17>18), 406S1 (10>9)  
481 (22>23), 533 [13>12]  
504 [17>16], Y839 (15>16)  
Y651 (11>12)  
DC435  
Pre DC435 - 390 (24>25)  
TMRCA = 1000 AD

Y1016 {10>9}

<sup>67</sup>  
449 (29>28), 446 (13>12)  
456 (15>16)  
O'Brien/322468 - BLR

464c (15>16)

464d (17>16)

710 [35>36]

391 (11>12), 710 [35>37]  
589 [12>11], 514 {15>16}  
Y1016 {10>9}, Y612 {12>13}  
685u1 (19>18), Y457 (16>17)  
518u6 (13>14), Y986 (12>11)  
DC437  
TMRCA = 1070 AD

464d (17>16)

<sup>67</sup>  
H4 (11>12)  
Bryan/532557 - BLR

*111 - Y700*  
447 (25>24), 520 (20>19)  
650 [19>18], 393u3 (25>26)  
614u10 (18>17), 518u6 (13>14)  
O'Brien/930443 - BY7  
DC435 POS, DC437 NEG

<sup>67</sup>  
391 (11>10), 444 (12>13)  
O'Brien/905248 - BLR

<sup>67</sup>  
O'Brien/310786 - BLR

*111 - Y700*  
576 (18>17), Y214 {14>13}  
512 {11>12}, Y289 {15>16}  
Y283 {8>9}, 393u3 (25>26)  
Y814 (12>13), 559 (9>10)  
612u5 (25>26)  
Bryan/322820 - NGS  
DC435 POS, DC437 NEG

*111 - Y700*  
Y1025 {12>10}, 518u3 (16>15)  
579 (9>8), Y1094 (16>17)  
Y535 (12>13), Y789 (16>17)  
546u4 (17>15)  
O'Brien/AM30369 - BY7  
DC437 POS, DC438 NEG

<sup>67</sup>  
576 (18>17), 442 (12>11)  
Bray/180168 - L226  
FGC12295 POS  
DC437 UNK  
FGC12290 NEG

<sup>67</sup>  
Burton/278397 - BLR

<sup>67</sup>  
Burton/667897 - BLR

Y1094 (16>17)

437 (15>14), 532 [13>14]

Y644 (16>17)  
DC438  
TMRCA = 1140 AD

*111 - Y700*  
Y718 (15>14), Y402 (5>4)  
O'Brien/631722 - BY7  
DC437 POS

406S1 (9>10)  
backwards mutation  
710 [35>36], 452 [30>29]  
650 [19>18], 715 [24>23]

*111 - Y700*  
Y214 {14>13}, 489 {11>9}  
528u6 (13>14)  
Roberts/856410 - NGS  
DC435 POS, DC437 NEG

*111 - Y700*  
391 (11>12), 505 [12>11]  
712 [21>20], 650 [19>18]  
Y489 {11>12}, Y927 (13>11)  
Y565 (11>12), 518u6 (13>11)  
O'Brien/IN26037 - BY7  
DC435 POS, DC437 NEG

*111*  
391 (11>10), 449 (29>30)  
549 [13>14]  
504 [16>17]  
backwards mutation  
552 [24>25]  
O'Brien/894315 - BLR

*111 - Y700*  
Y1006 {13>14}  
OBrien/114201 - NGS  
DC437 POS

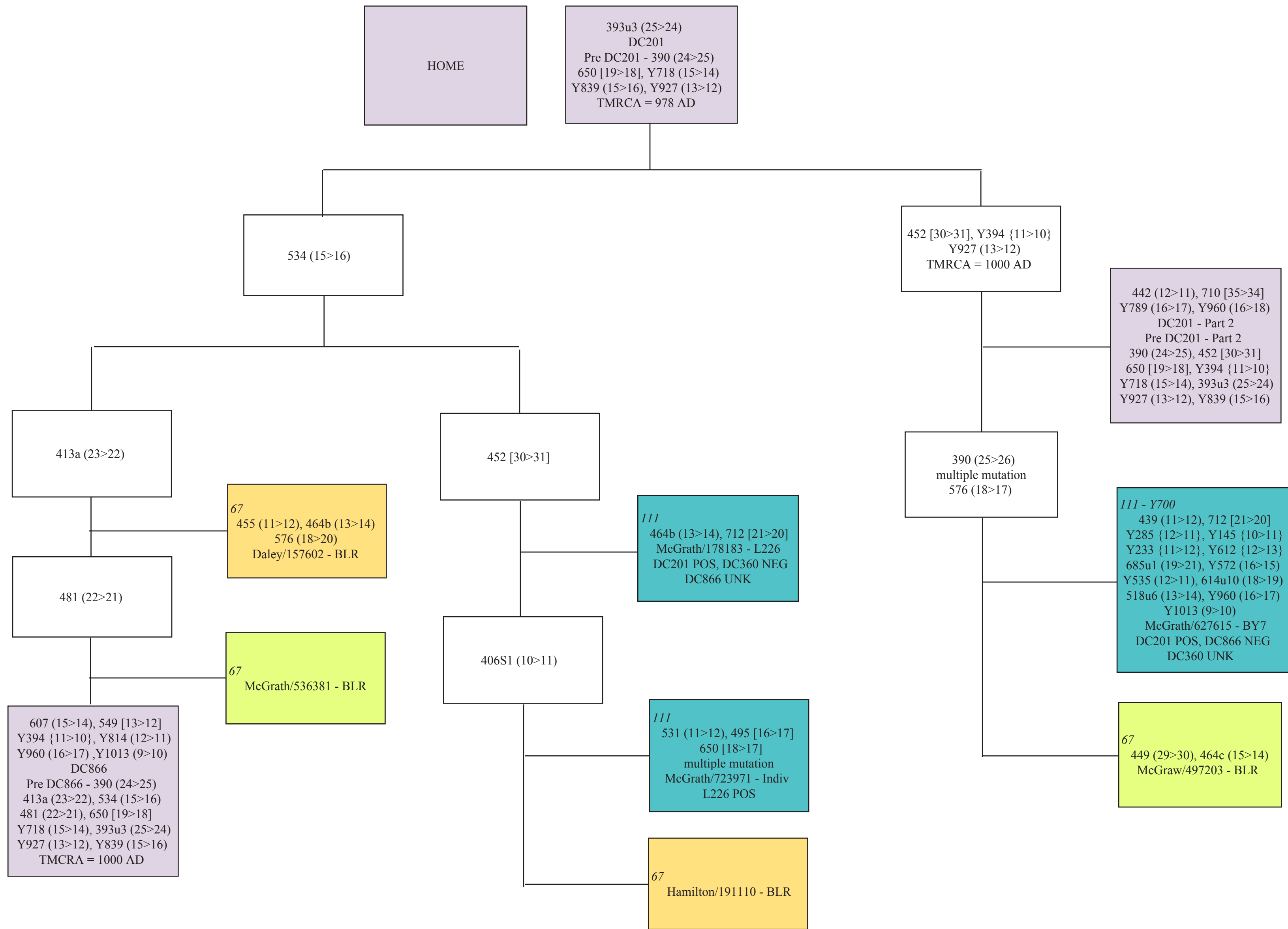
*111*  
Roberts/919229 - BLR

*111 - Y700*  
389-1 (13>14), 576 (18>17)  
710 [35>37], Y285 {12>13}  
Y235 {9>10}, 389B {10>11}  
484 {13>12}, 685u1 (19>20)  
393u3 (25>23), Y457 (16>15)  
518u6 (13>14), 706u2 (10>11)  
McVay/866685 - BY7  
DC435 POS, DC437 NEG

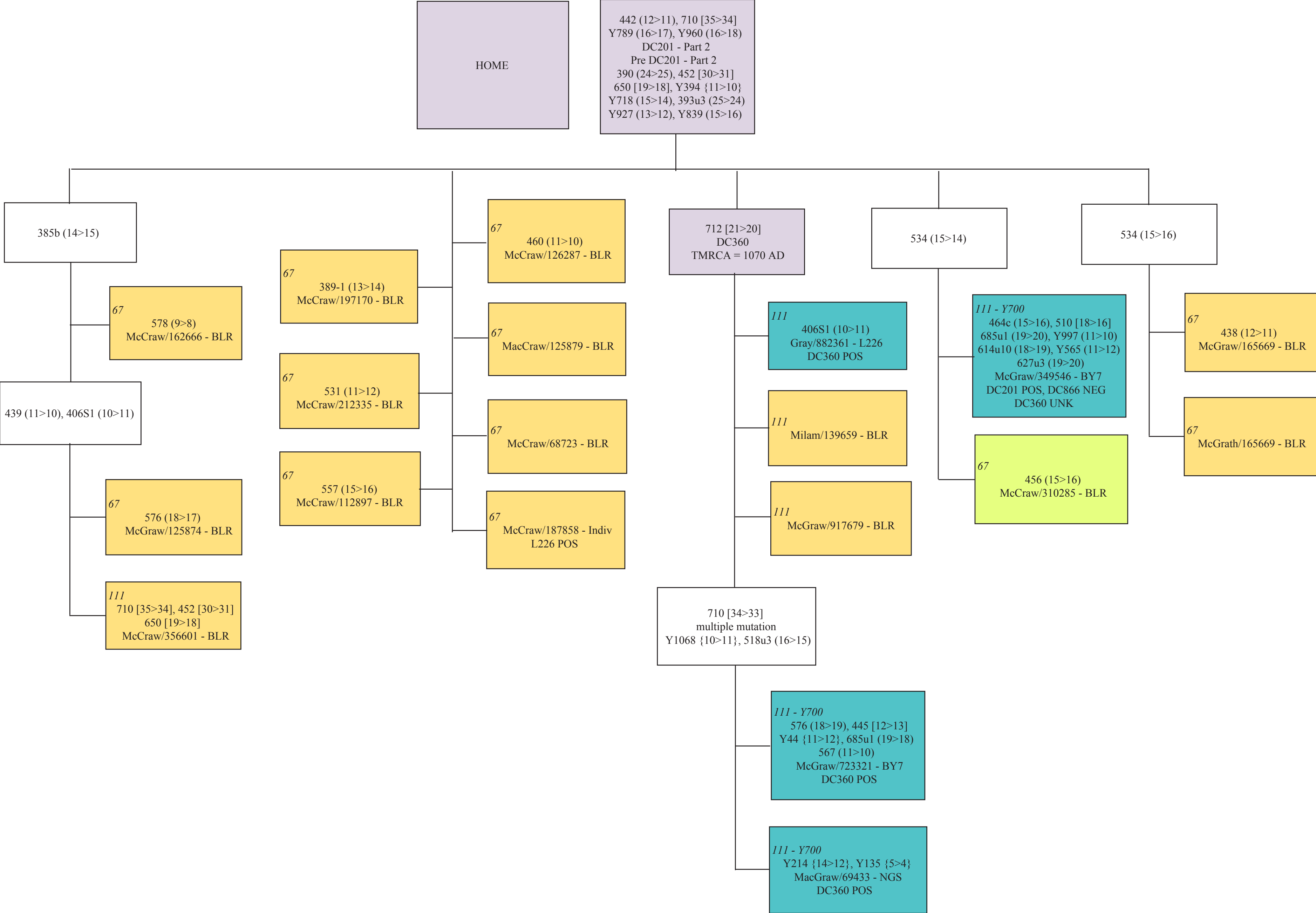
*111*  
570 (17>18), 712 [21>20]  
O'Brien/894315 - BLR

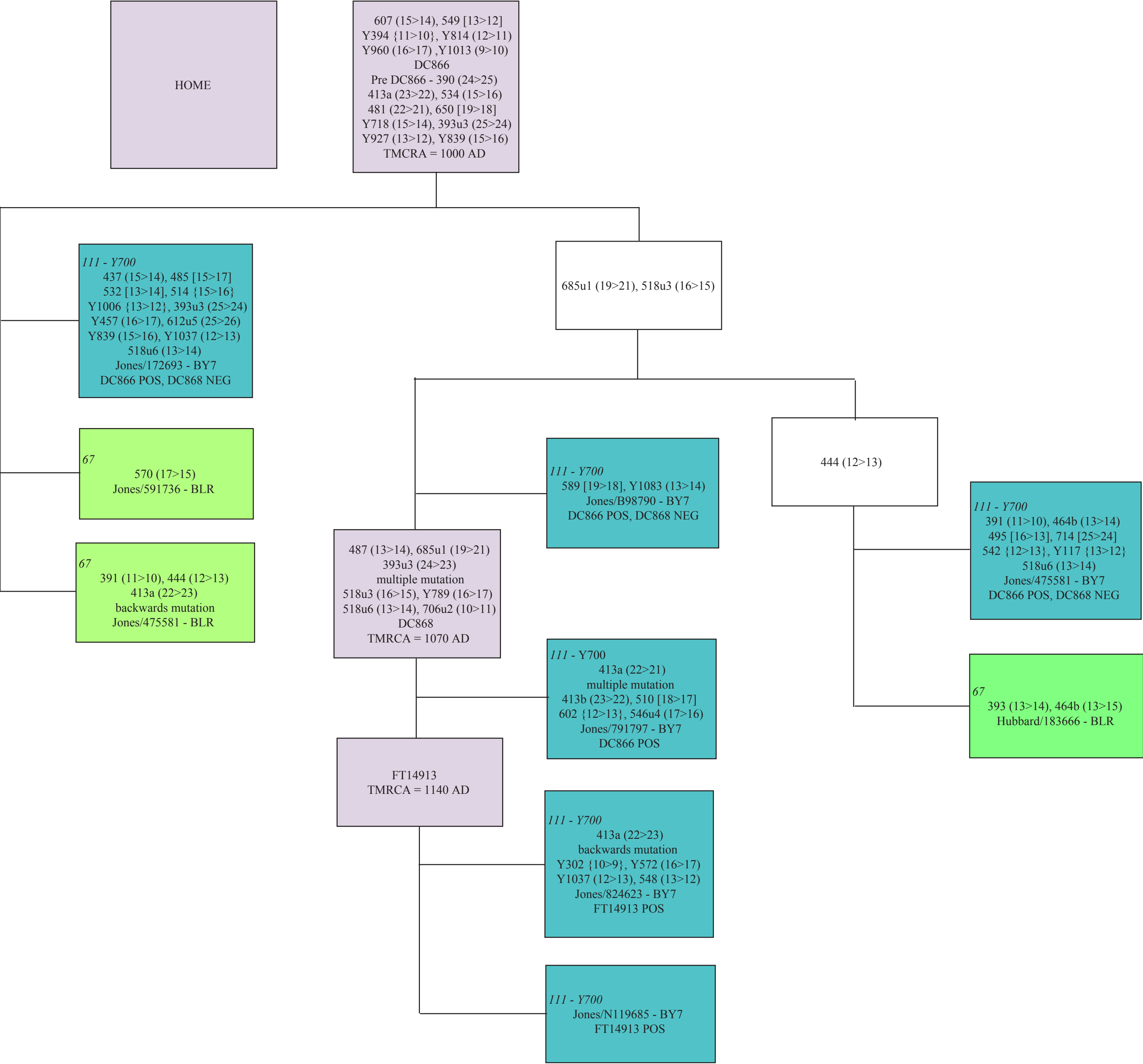
*111 - Y700*  
Y275 {11>12}, 489 {11>12}  
Y1025 {12>10}, Y789 (16>17)  
546u4 (17>15)  
O'Brien/690059 - BY7

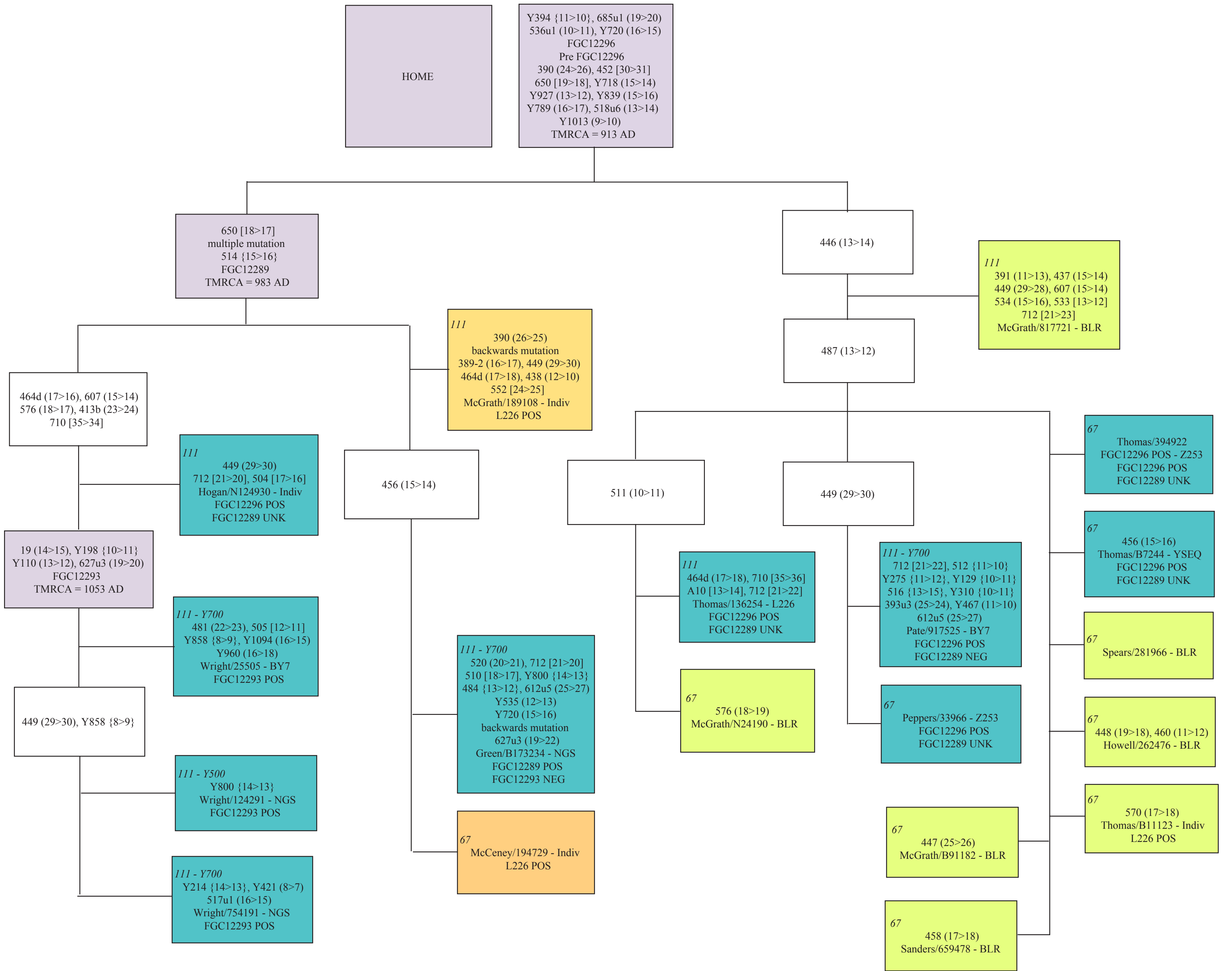


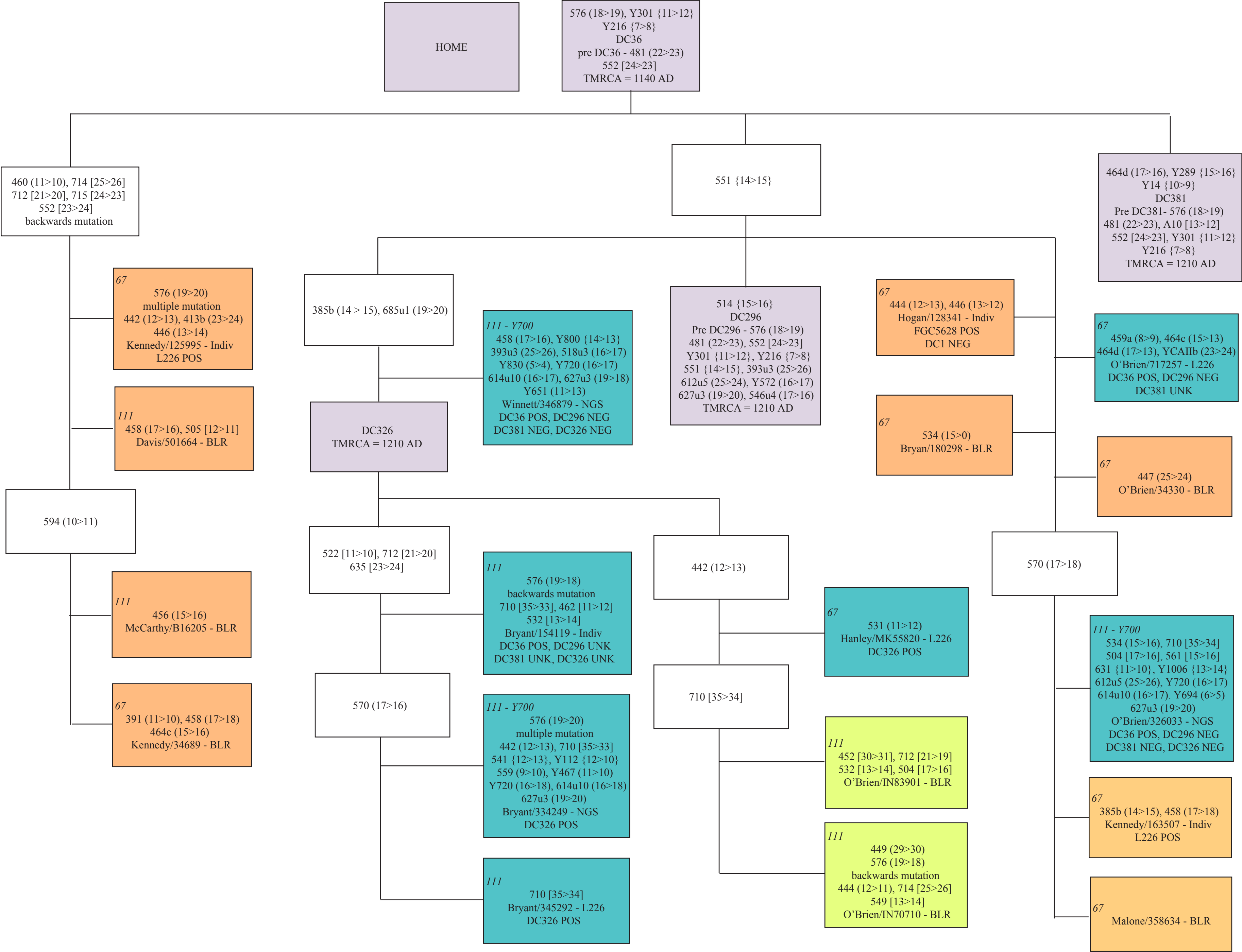


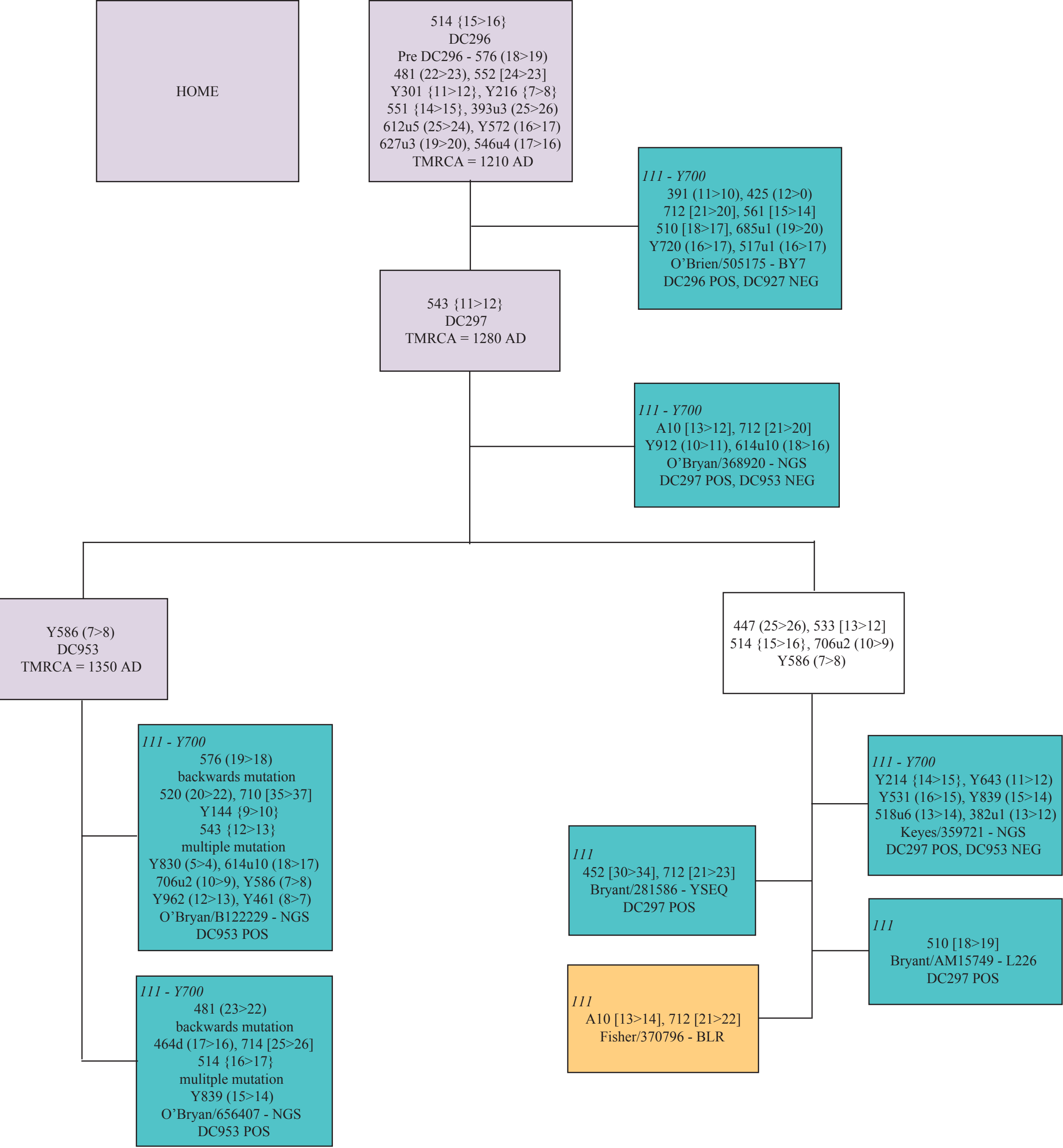


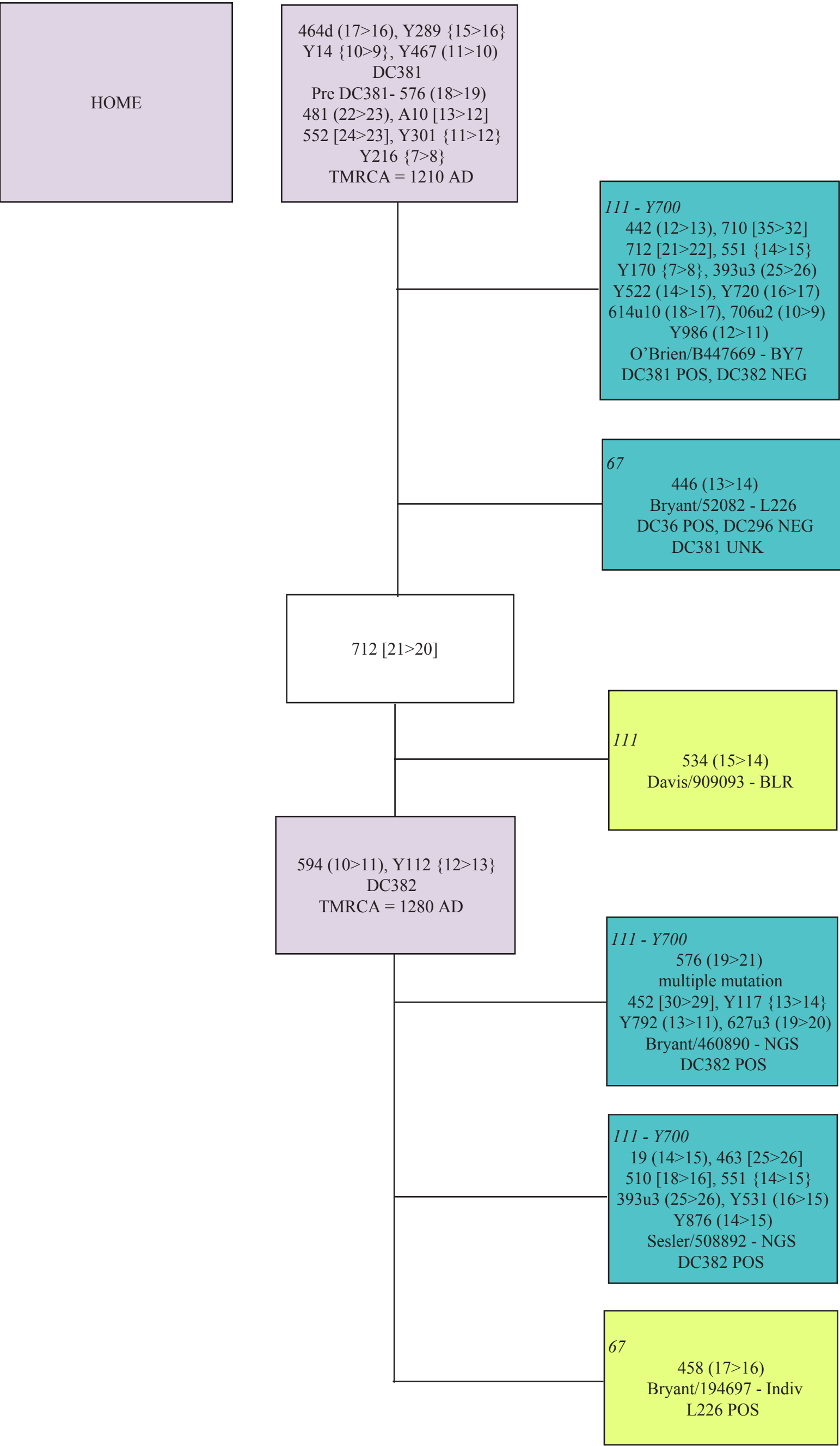


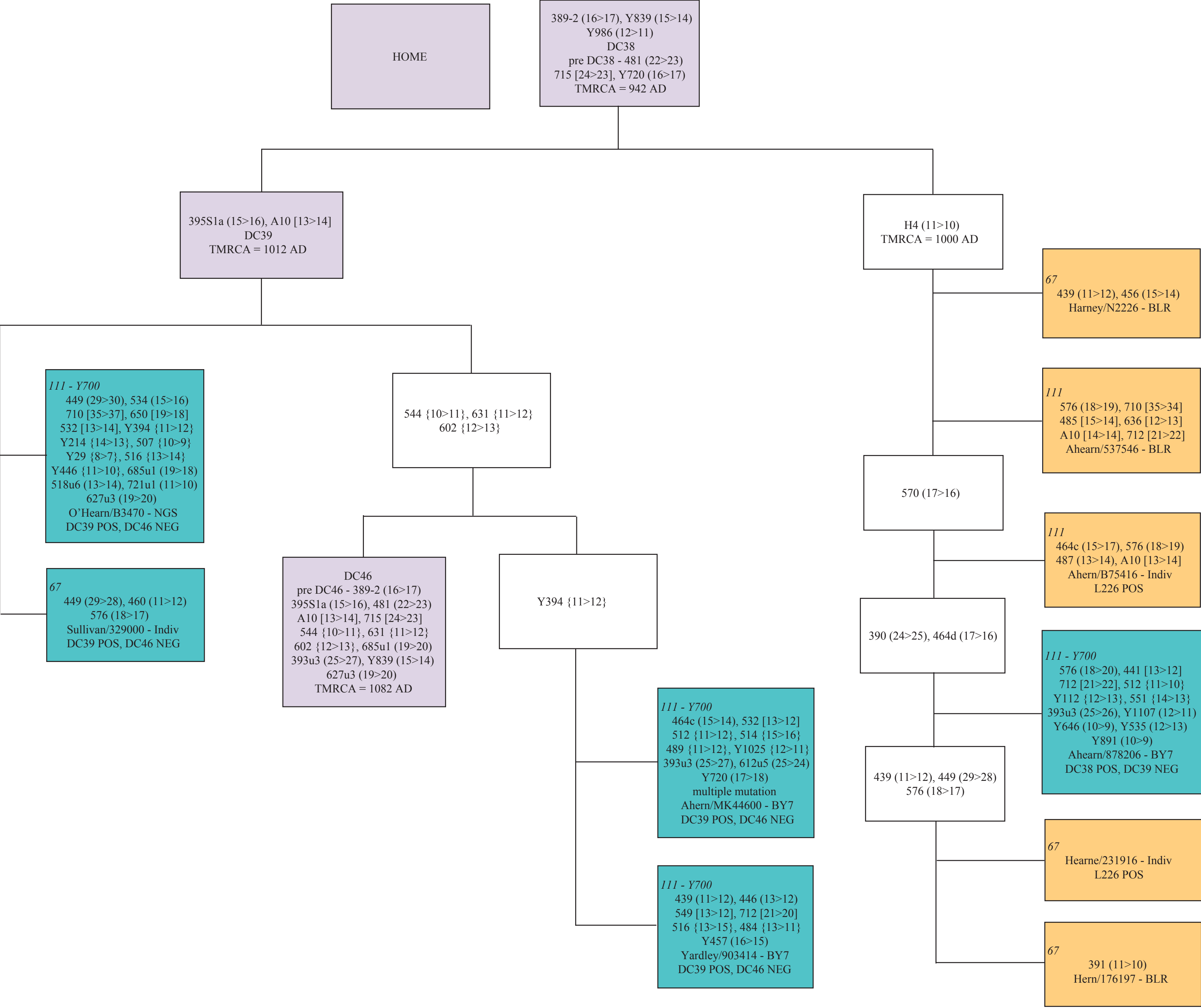




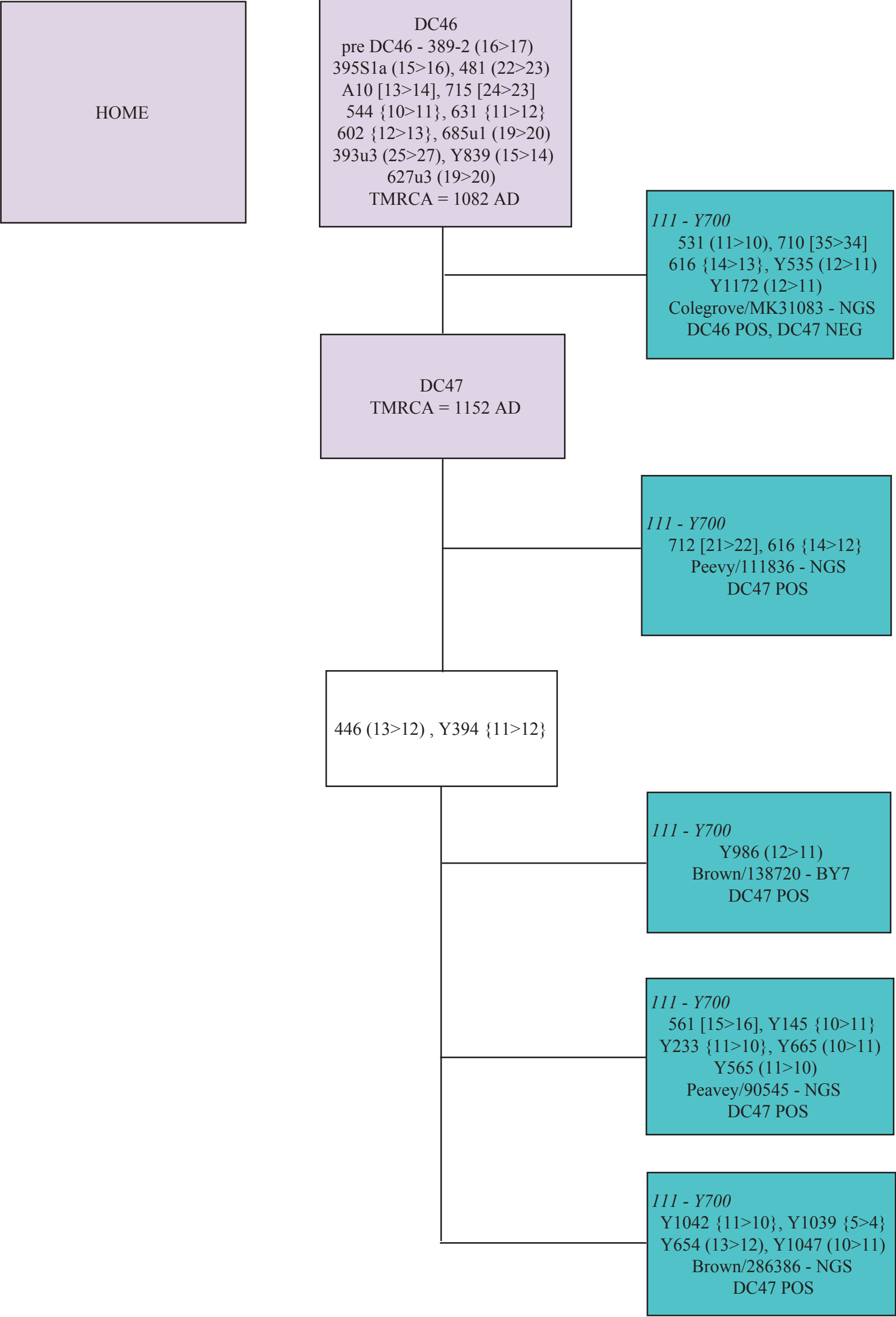


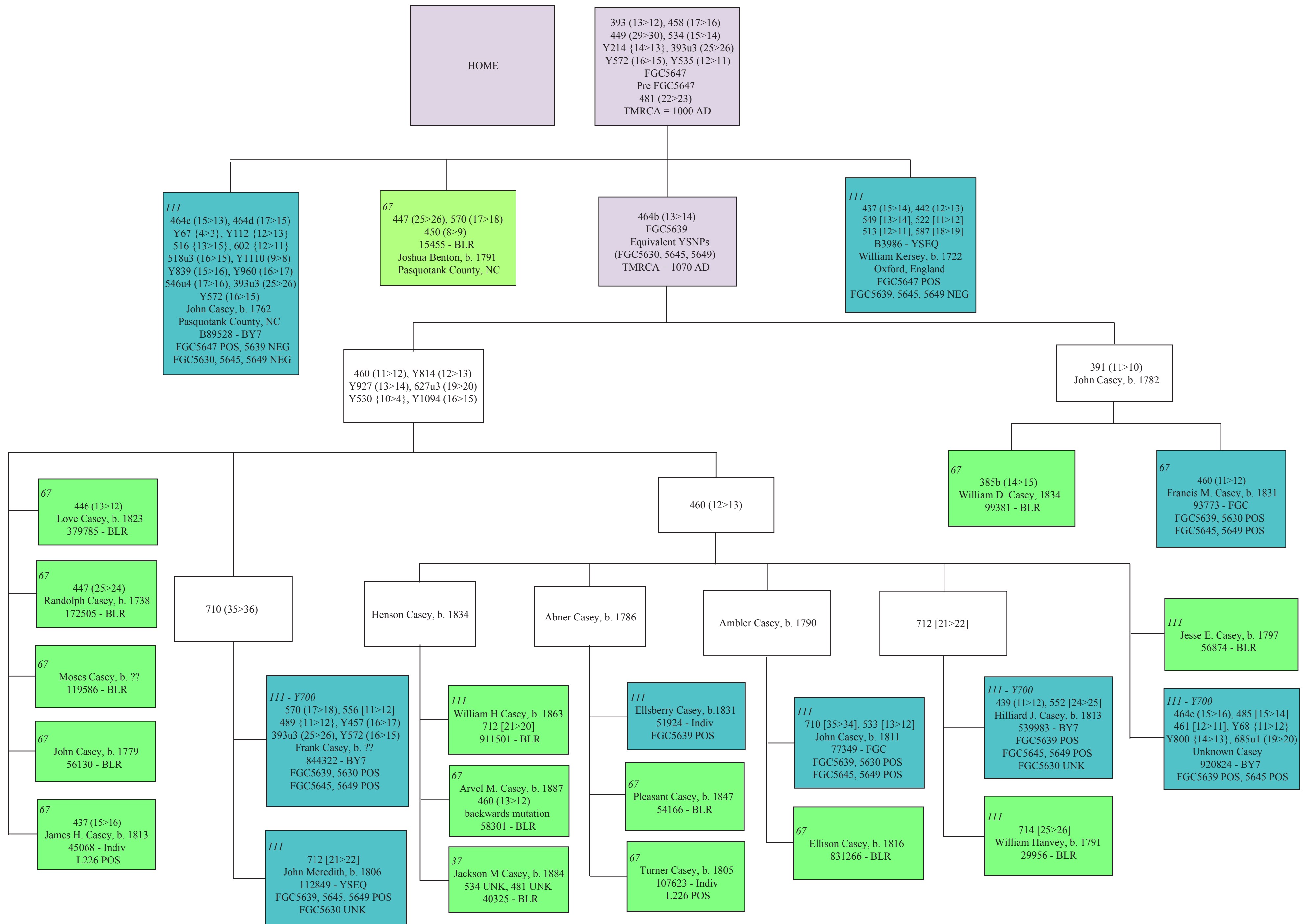


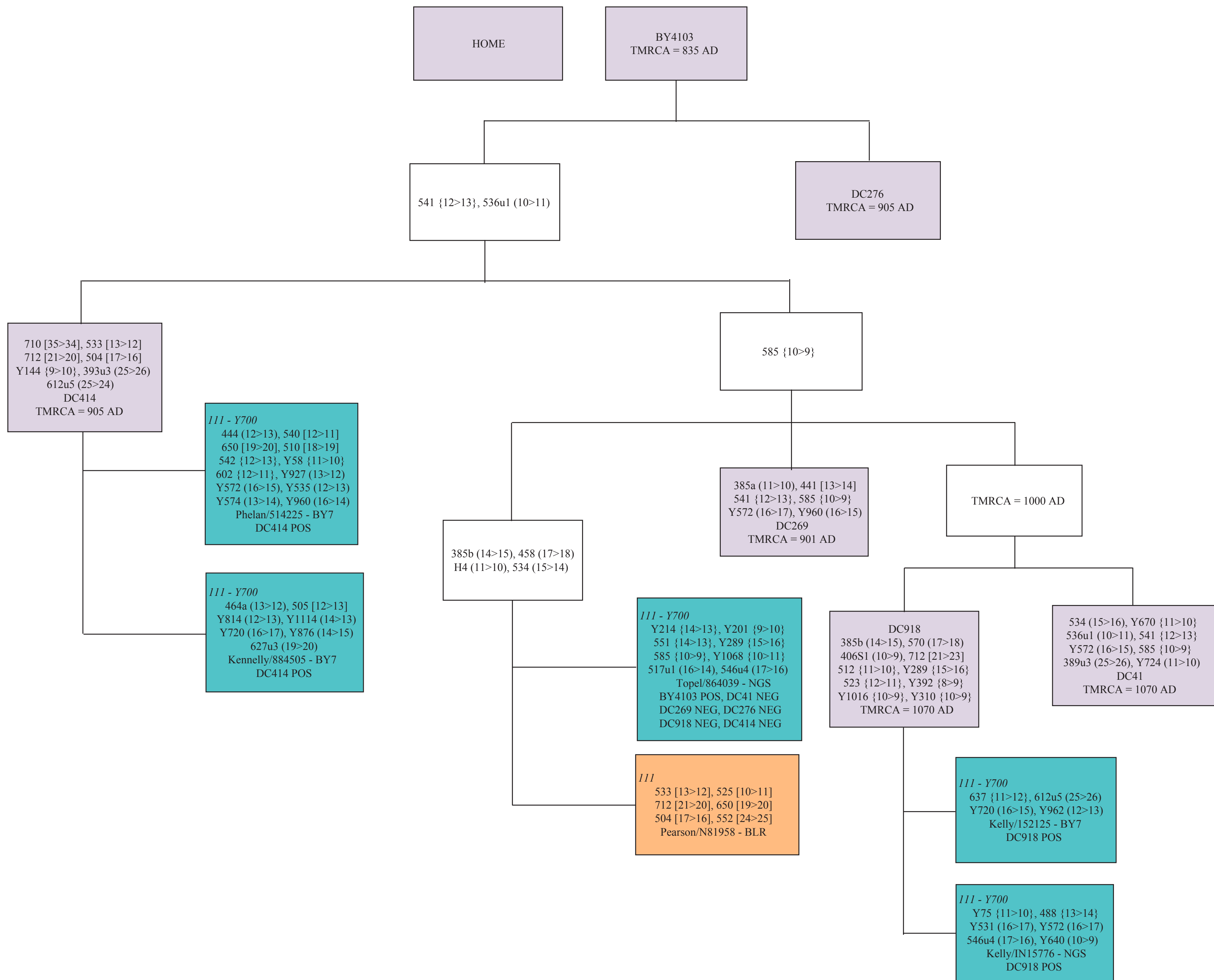


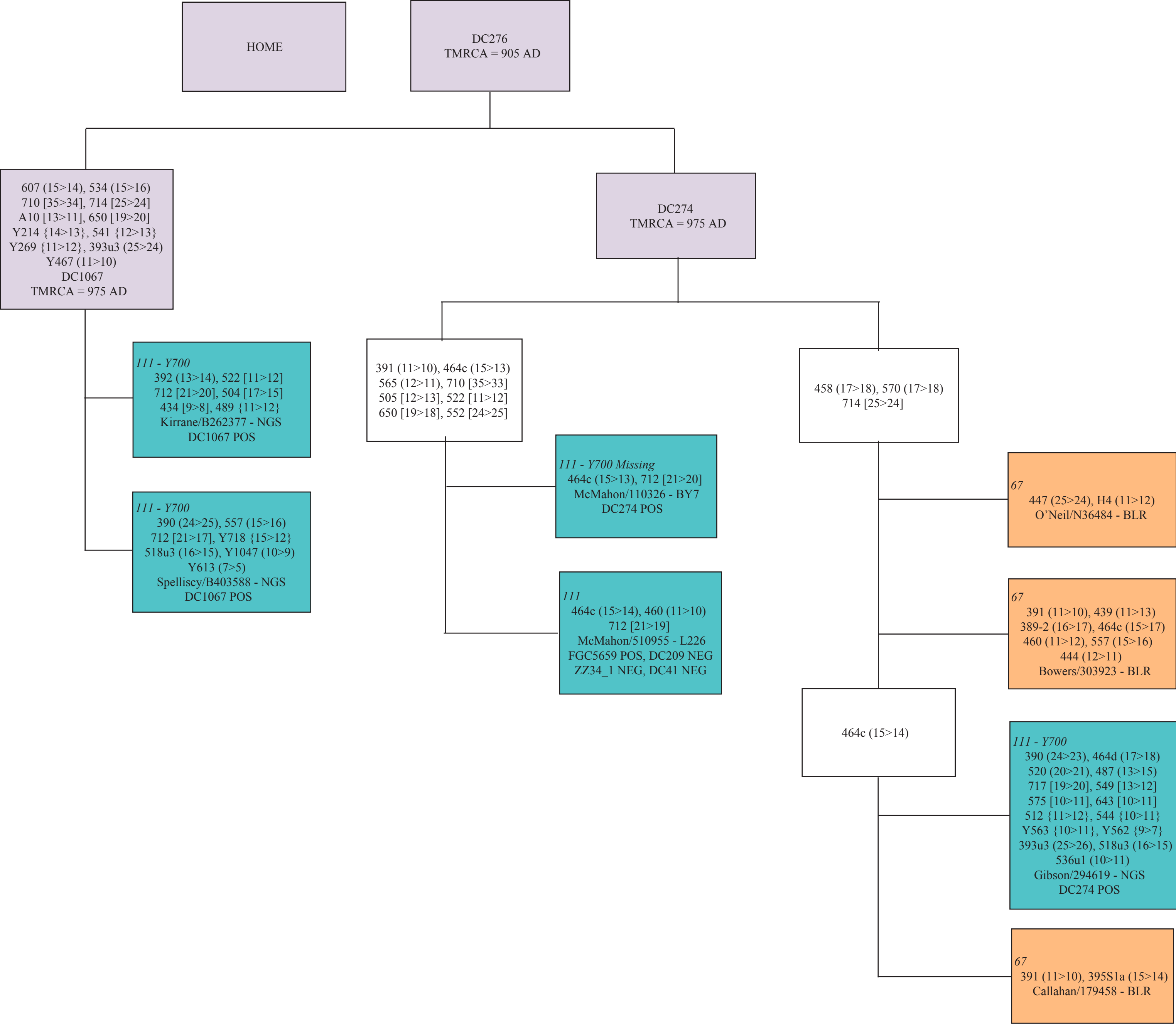


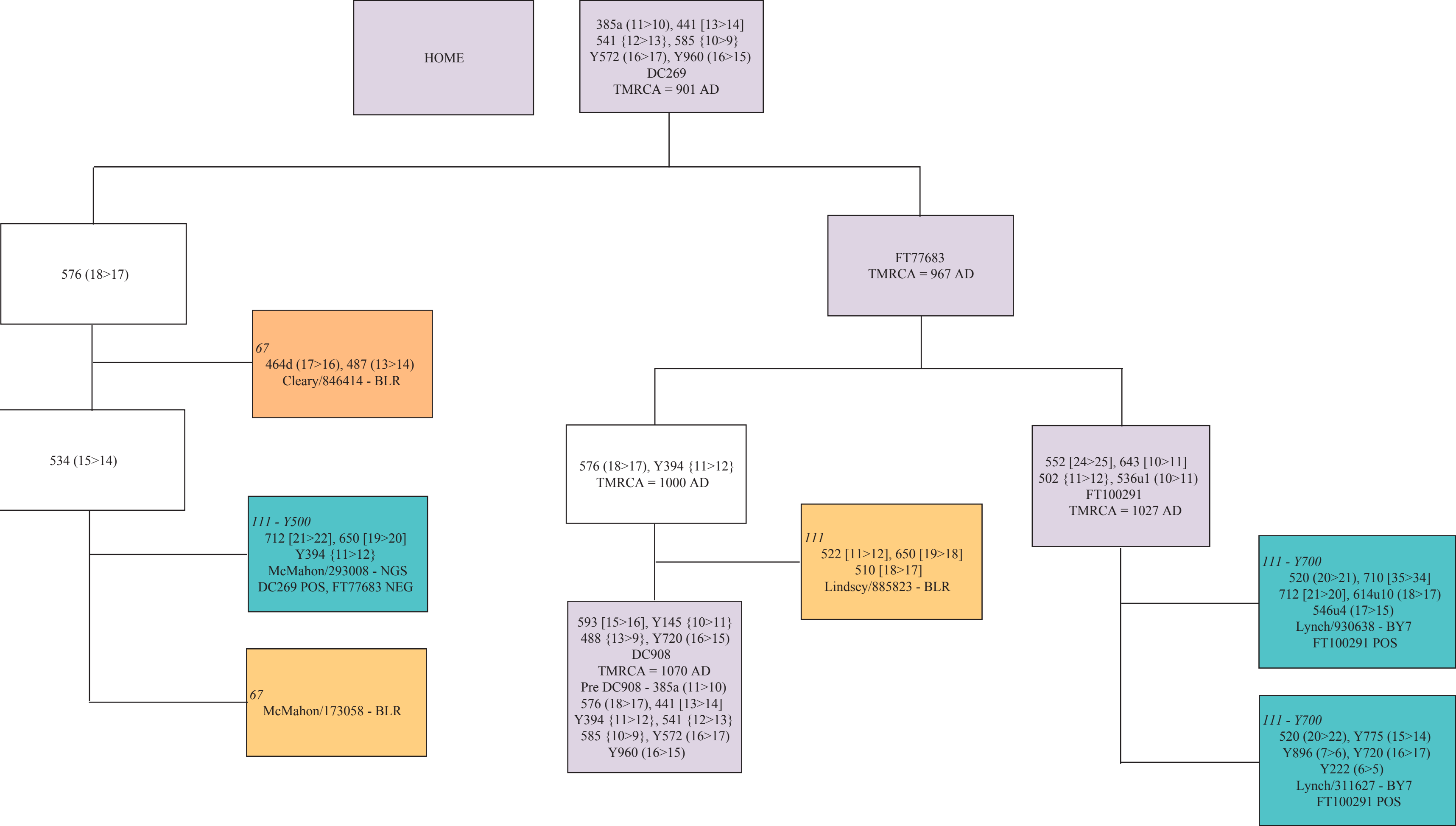


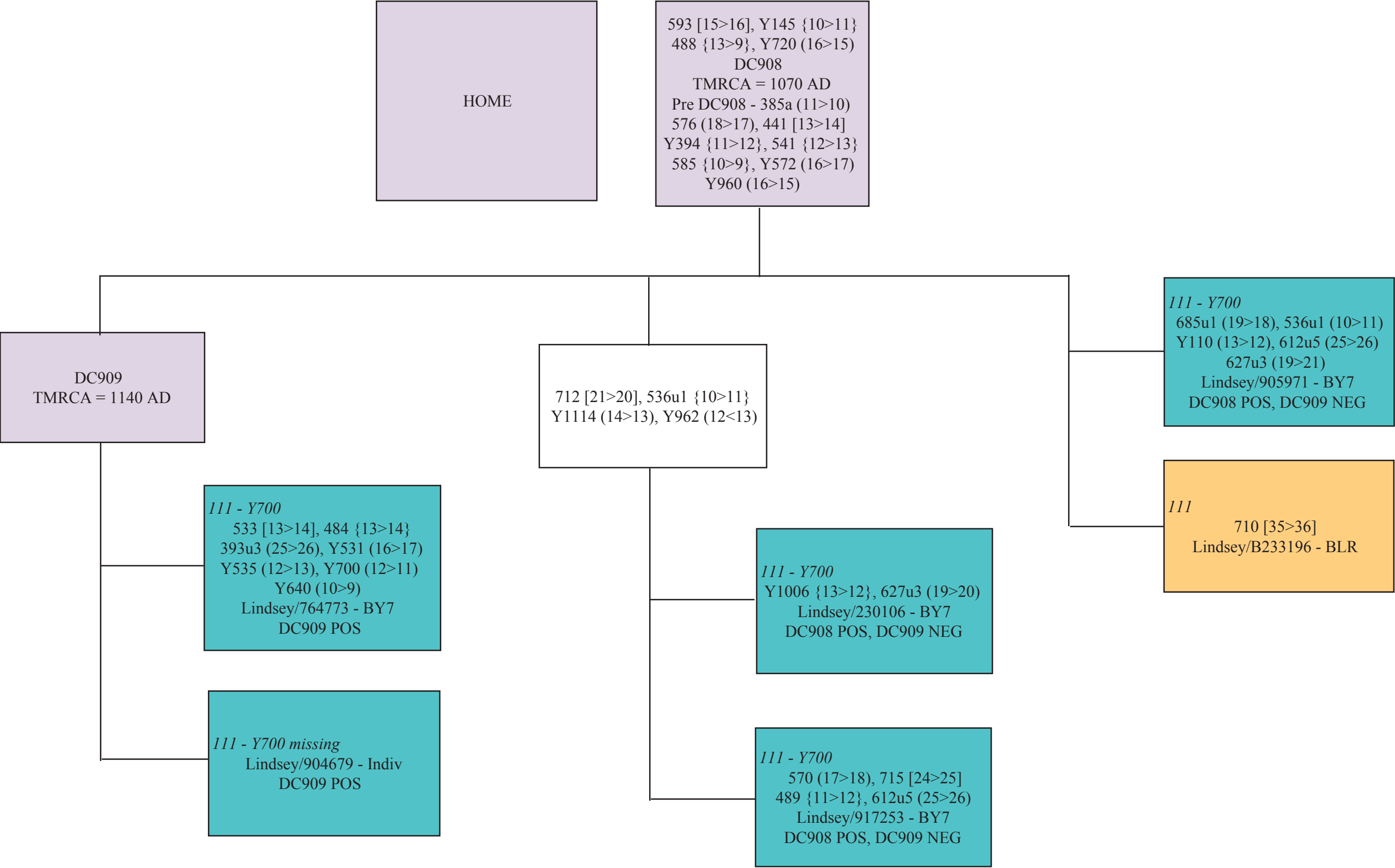


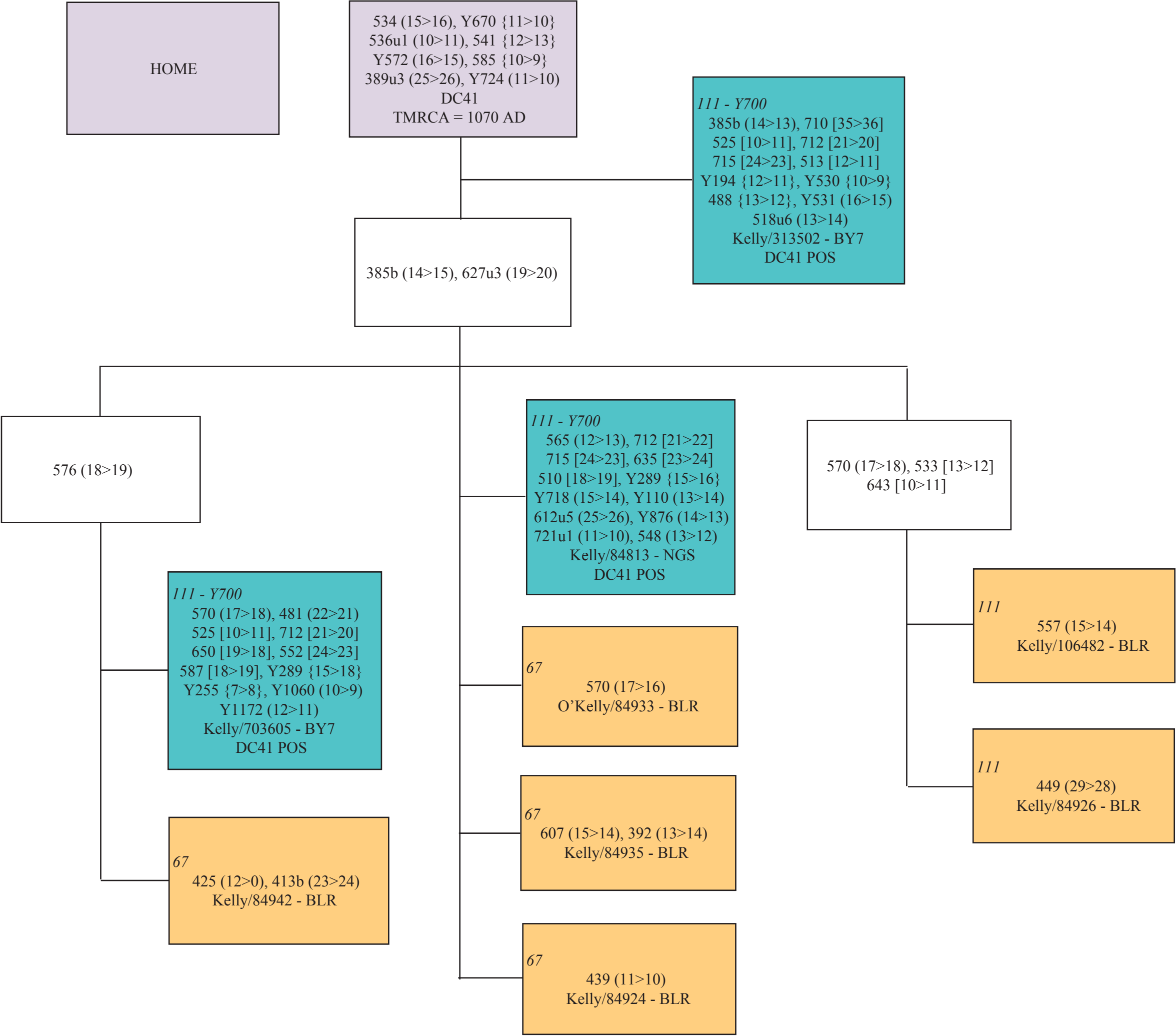




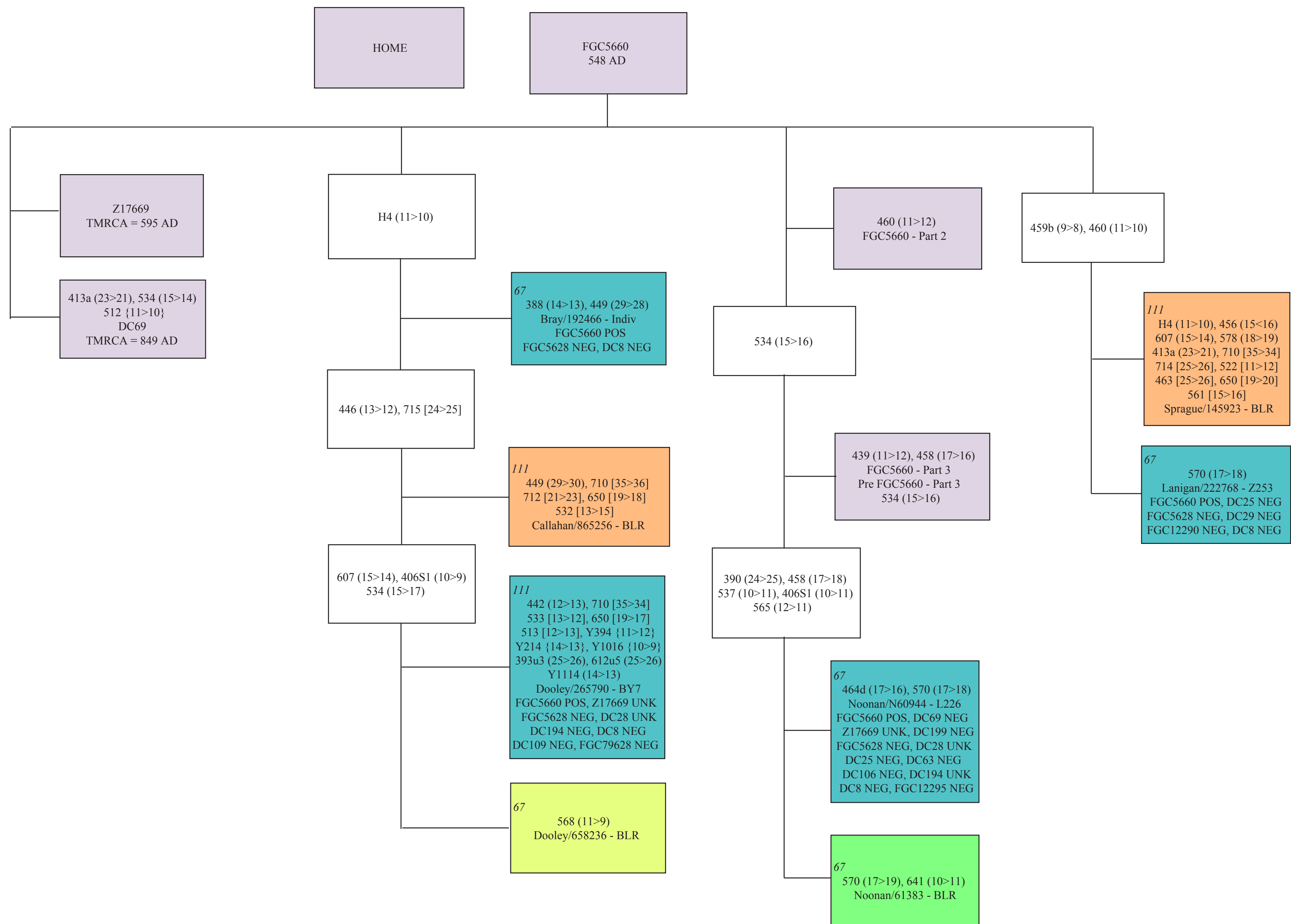


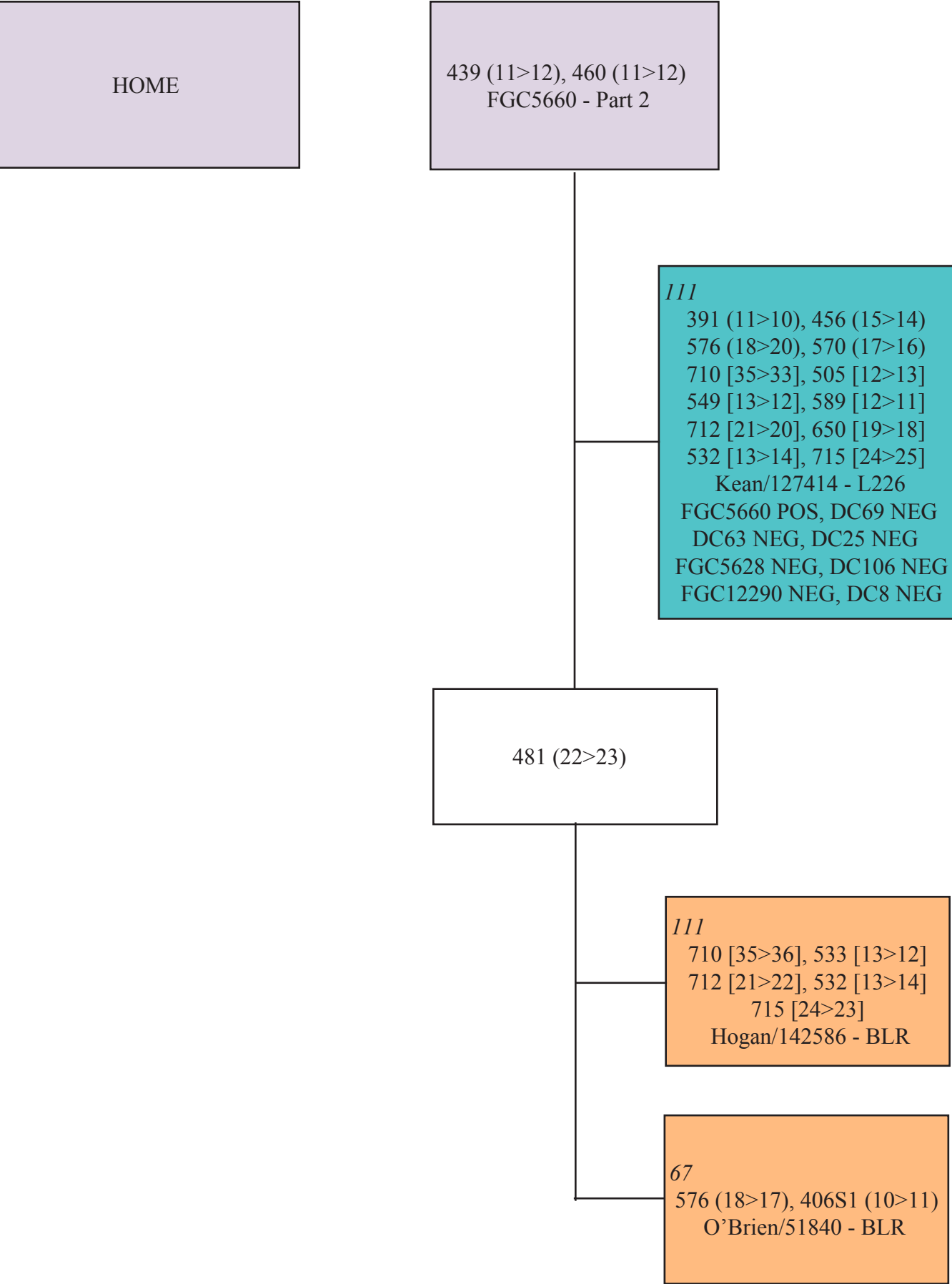


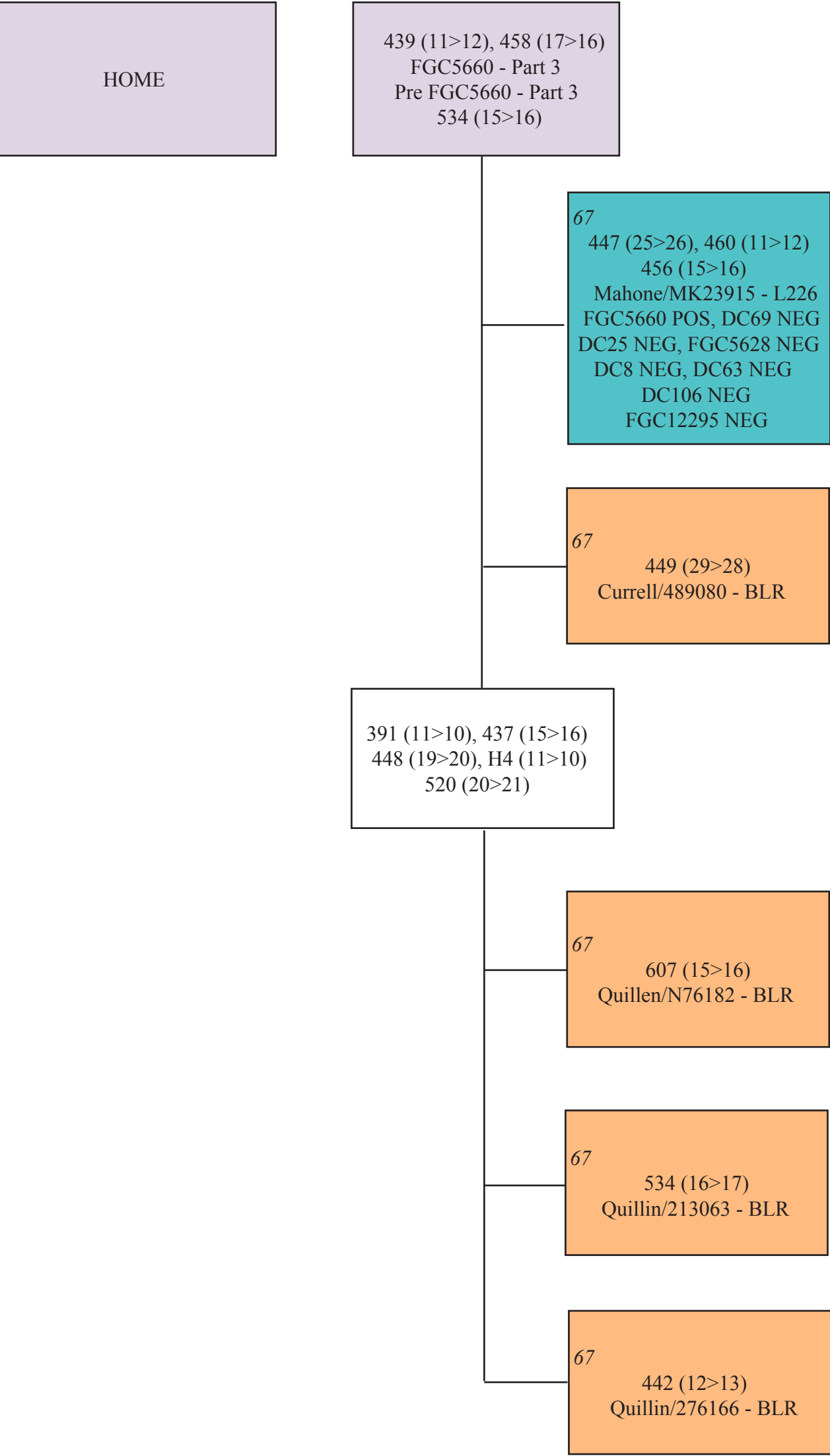


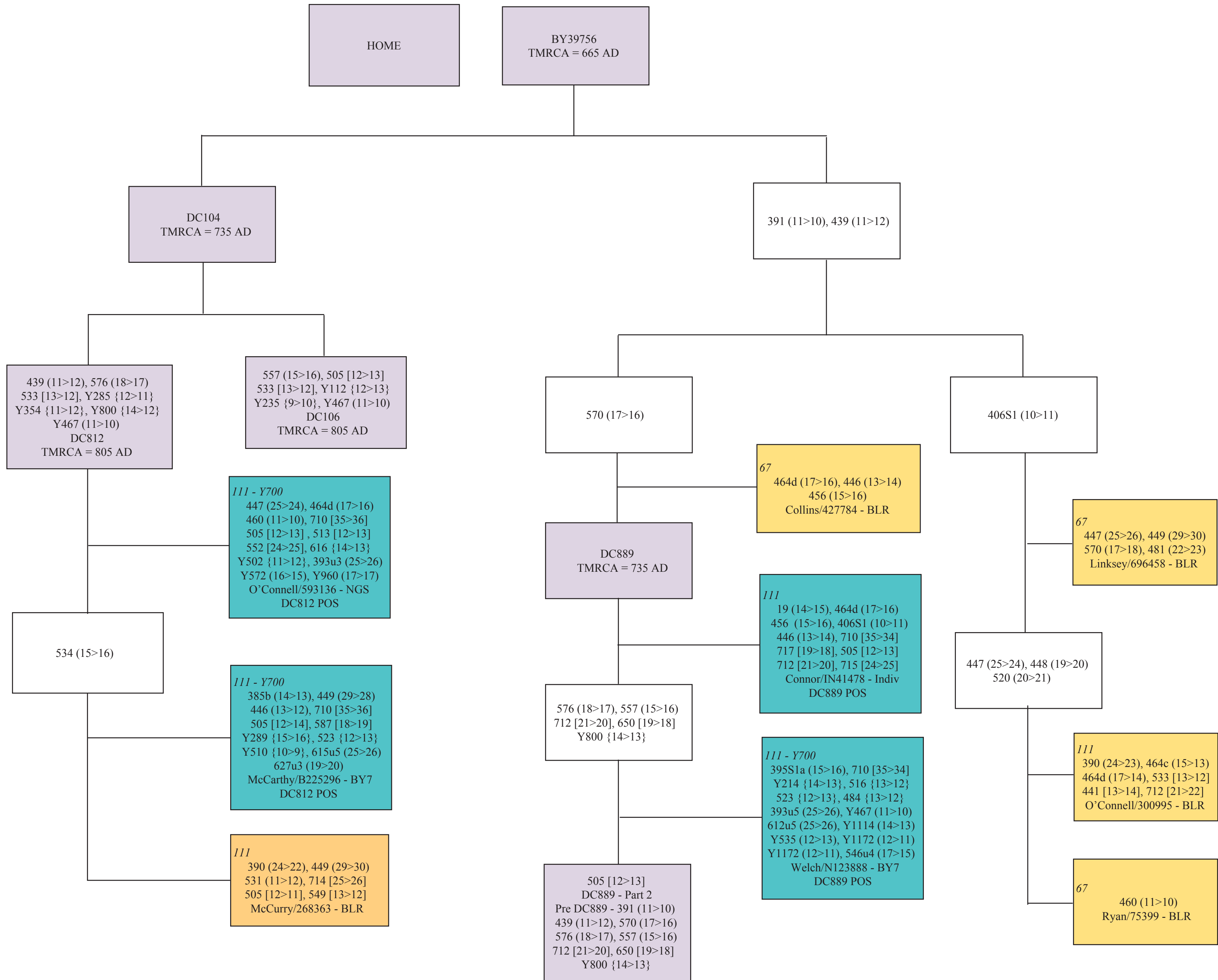


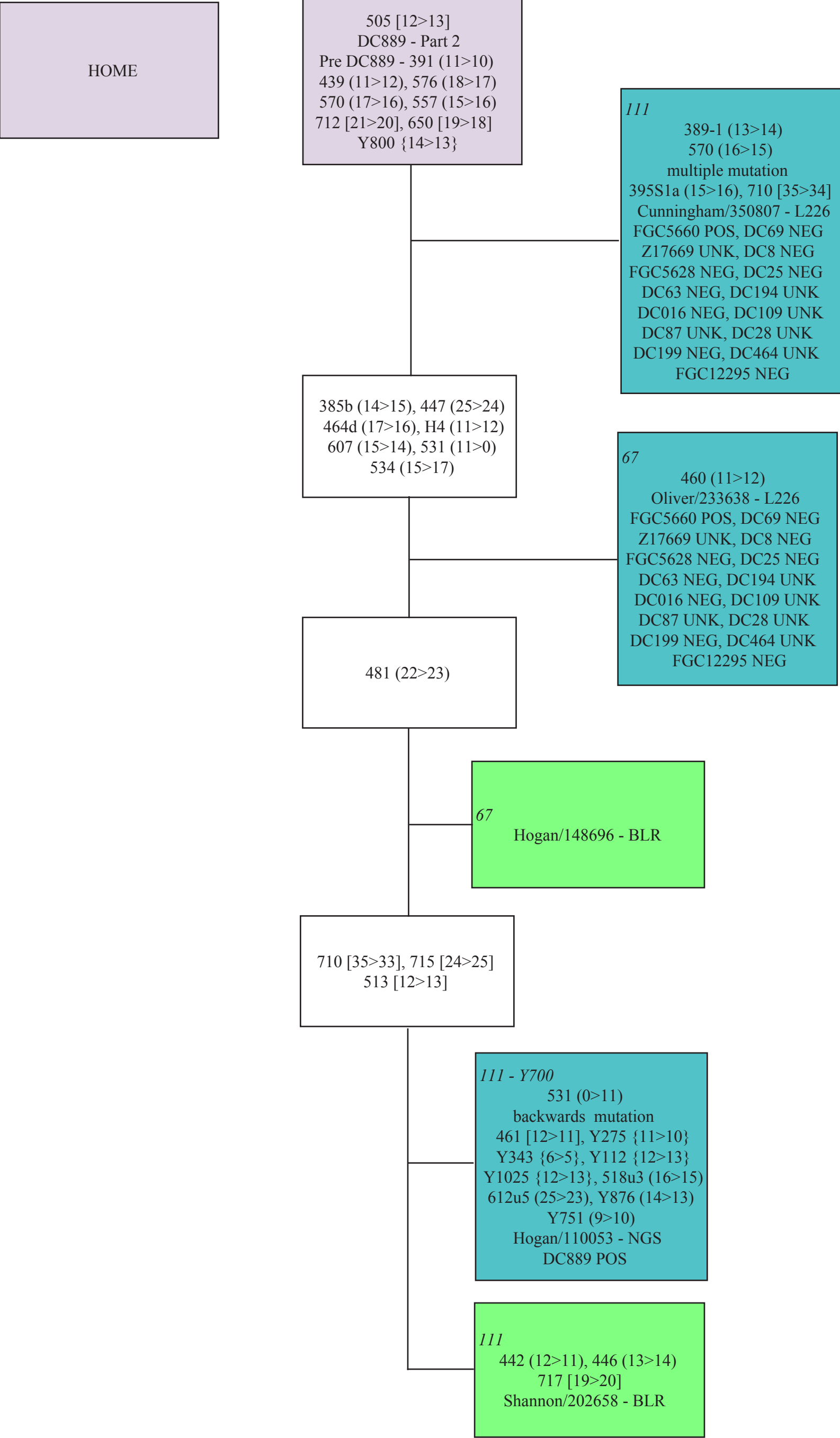


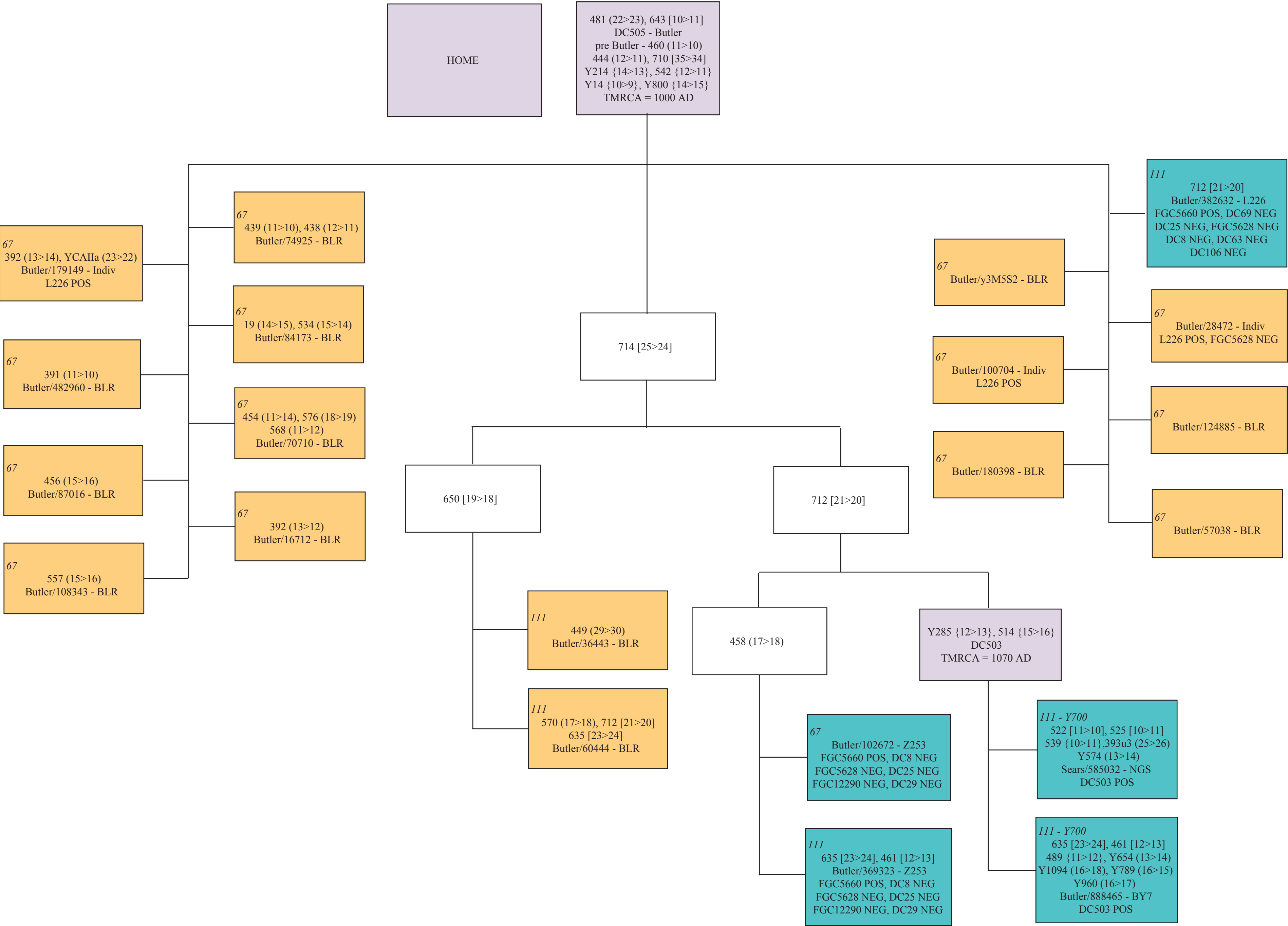


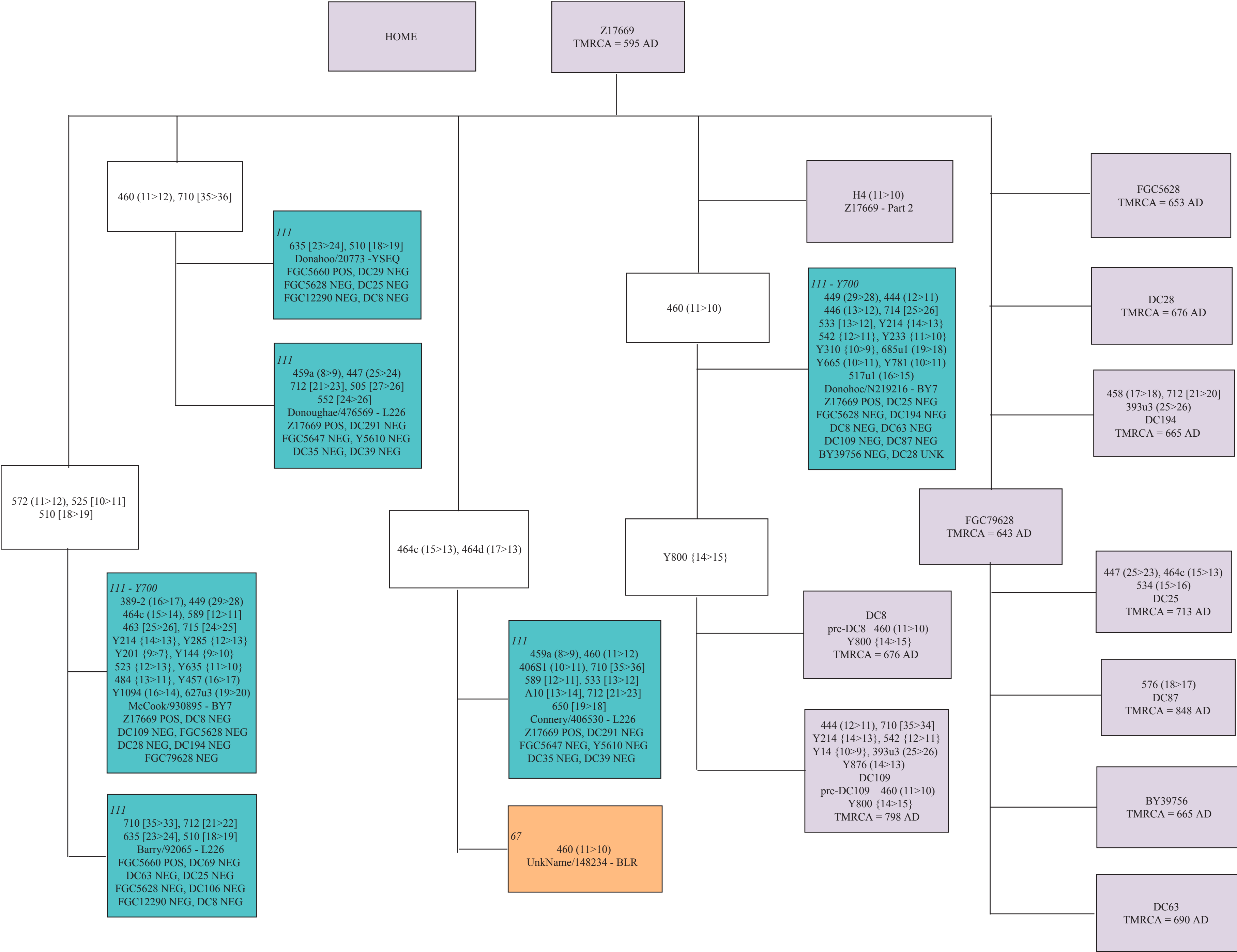




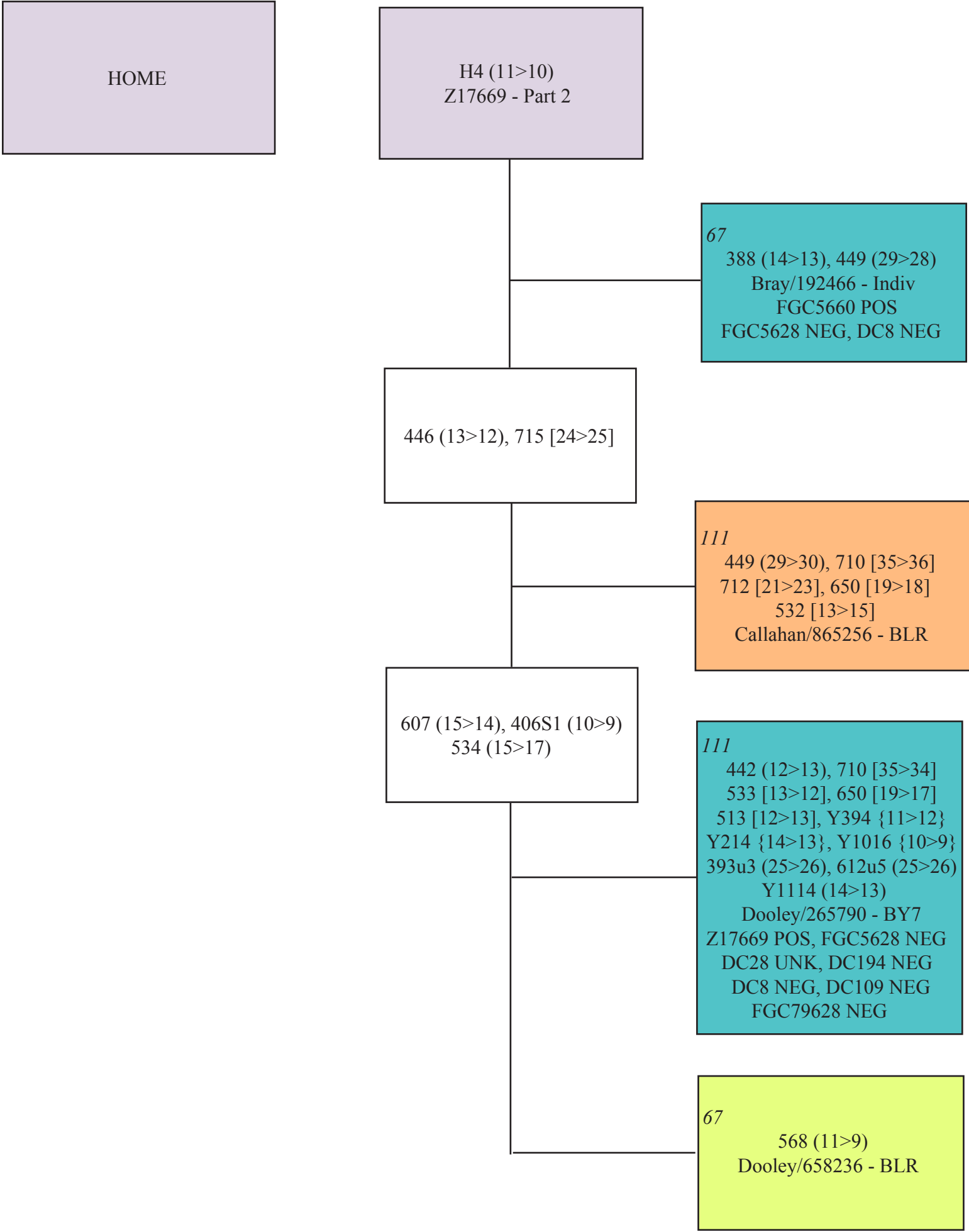


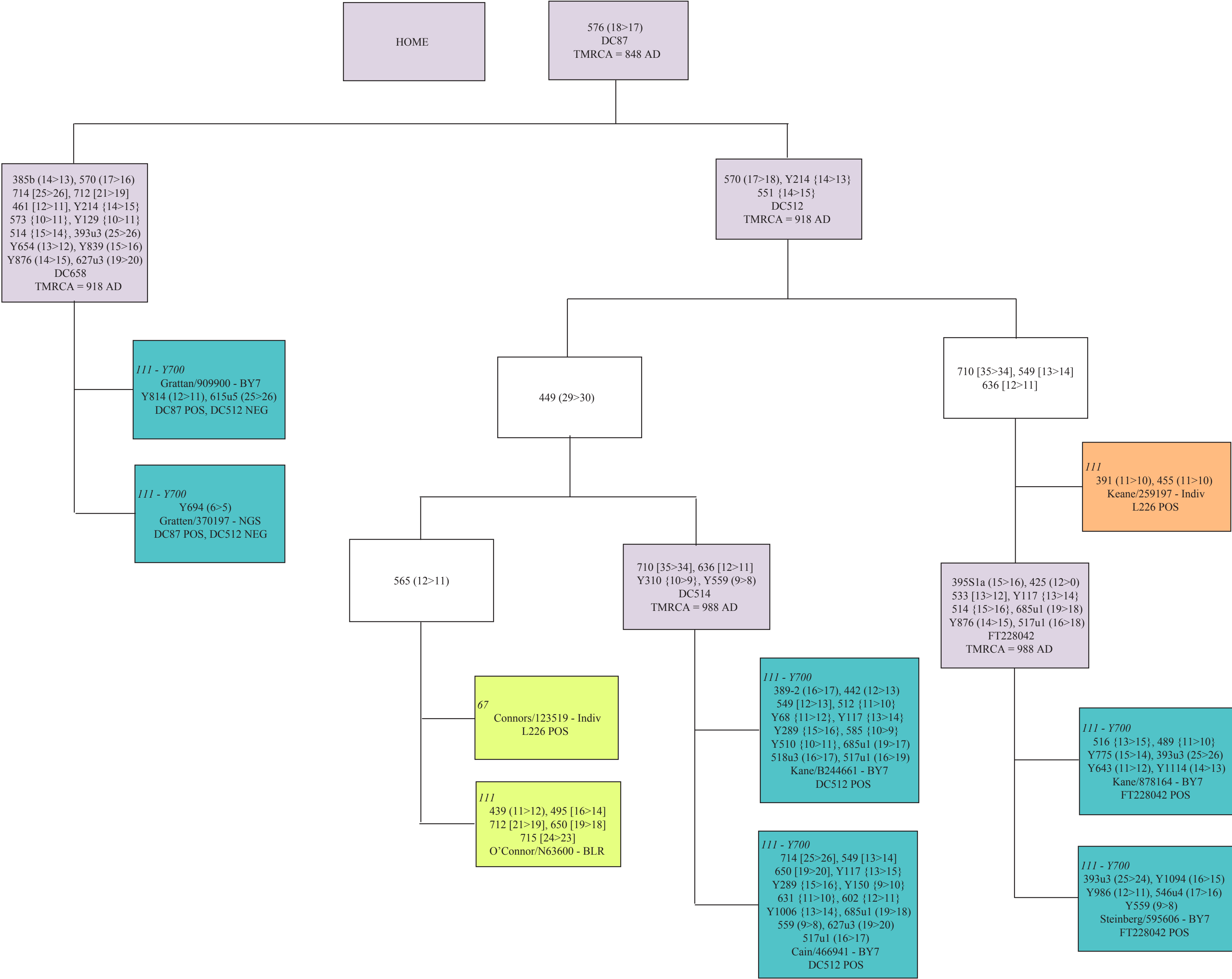


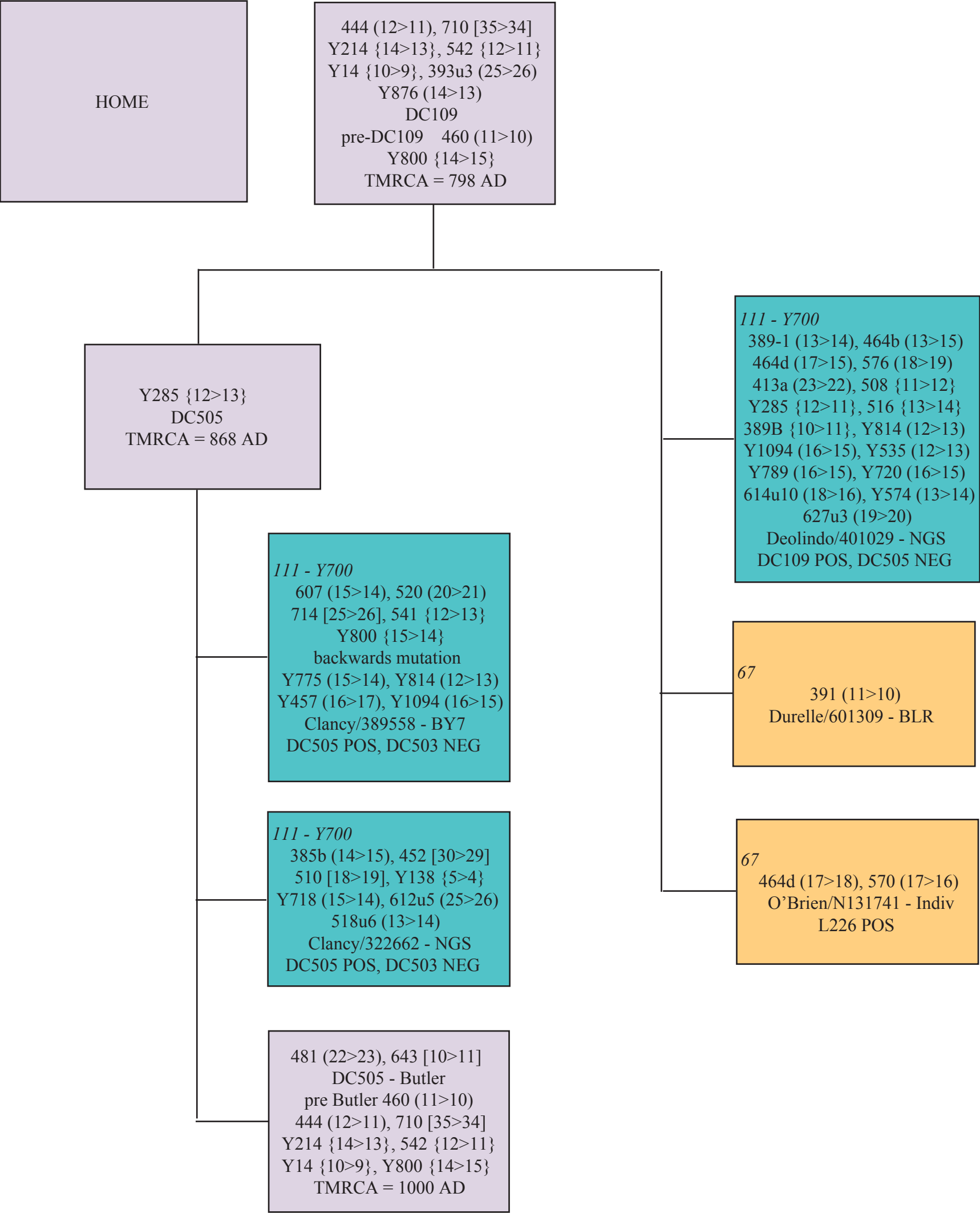


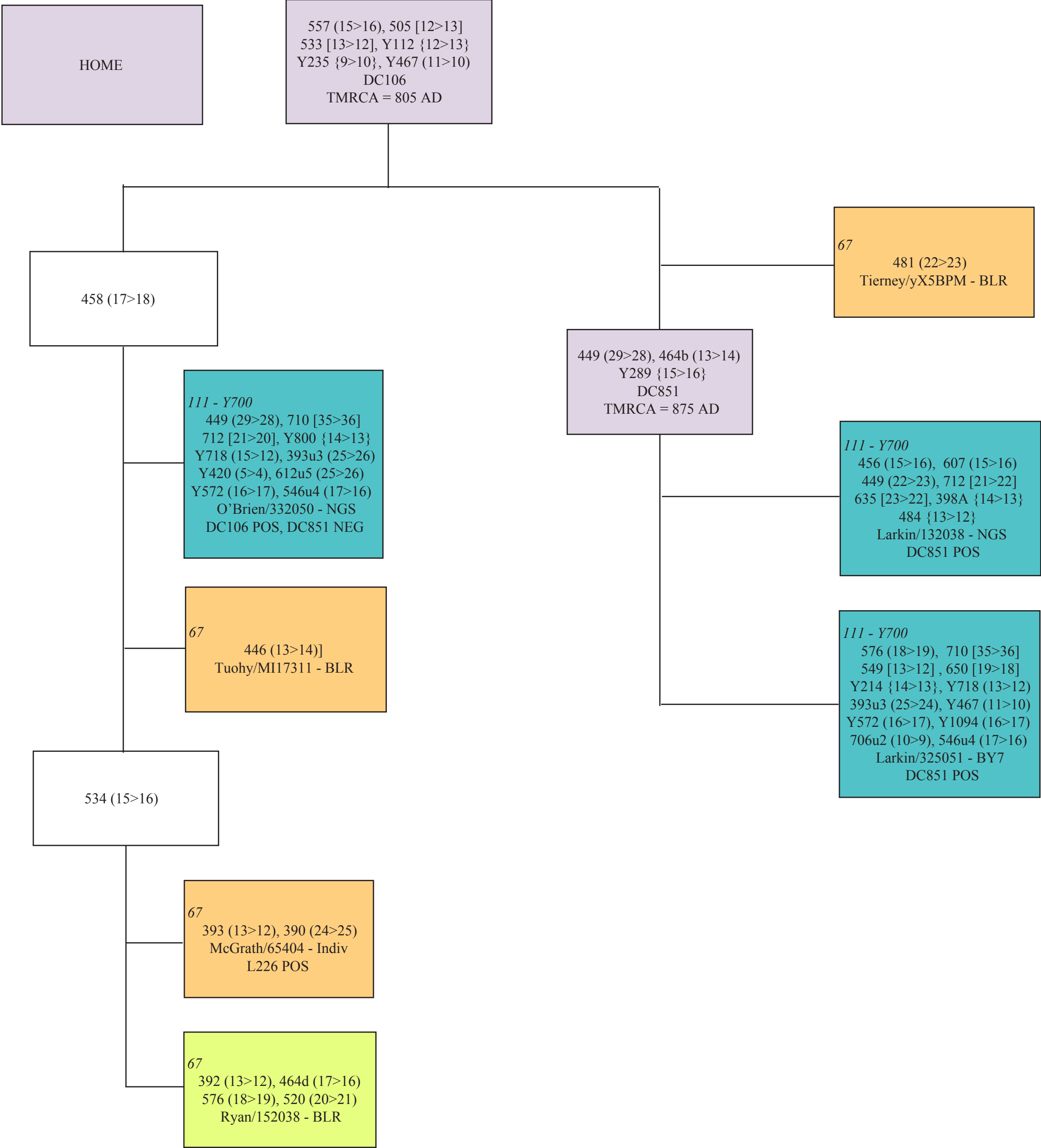


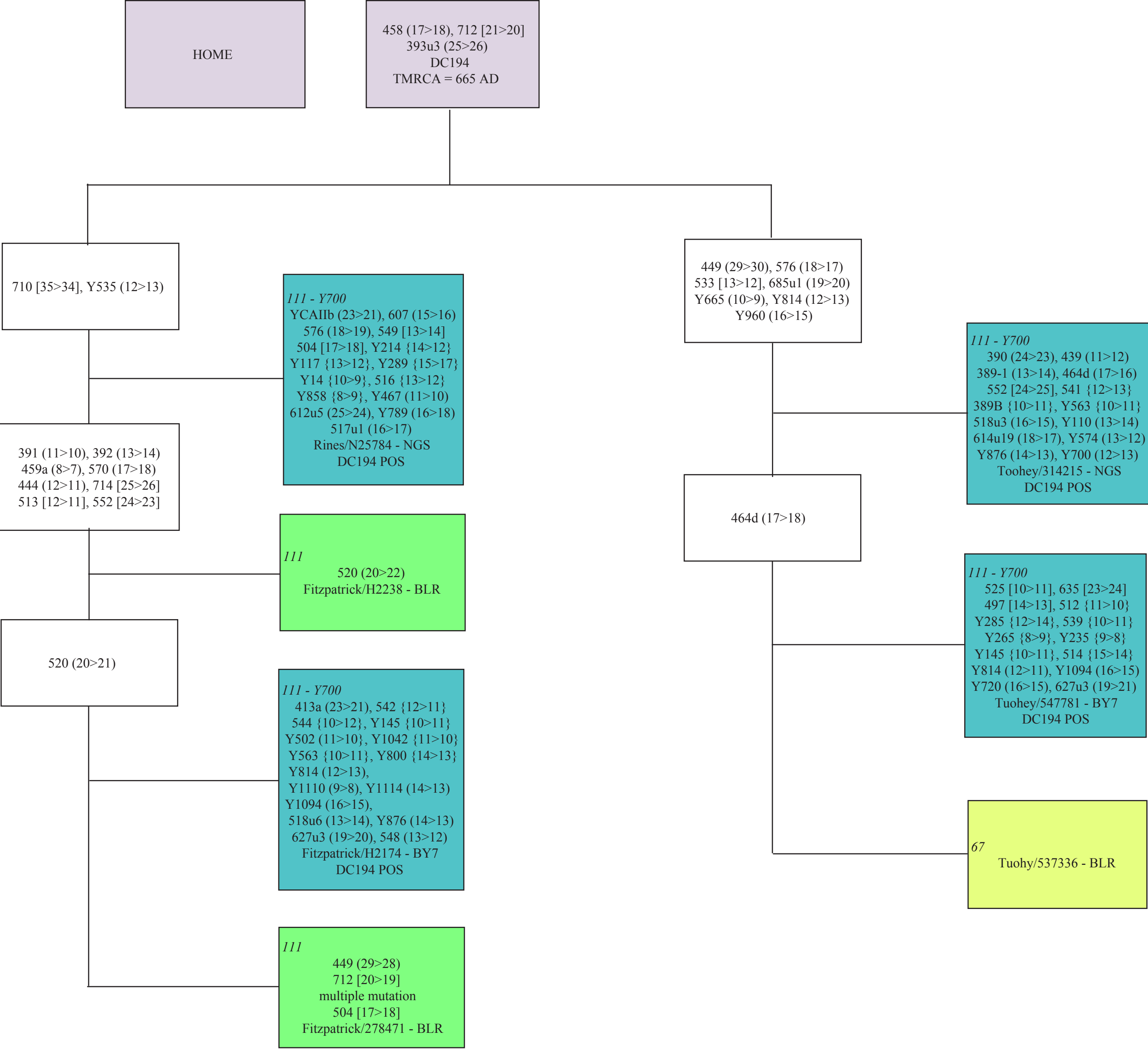


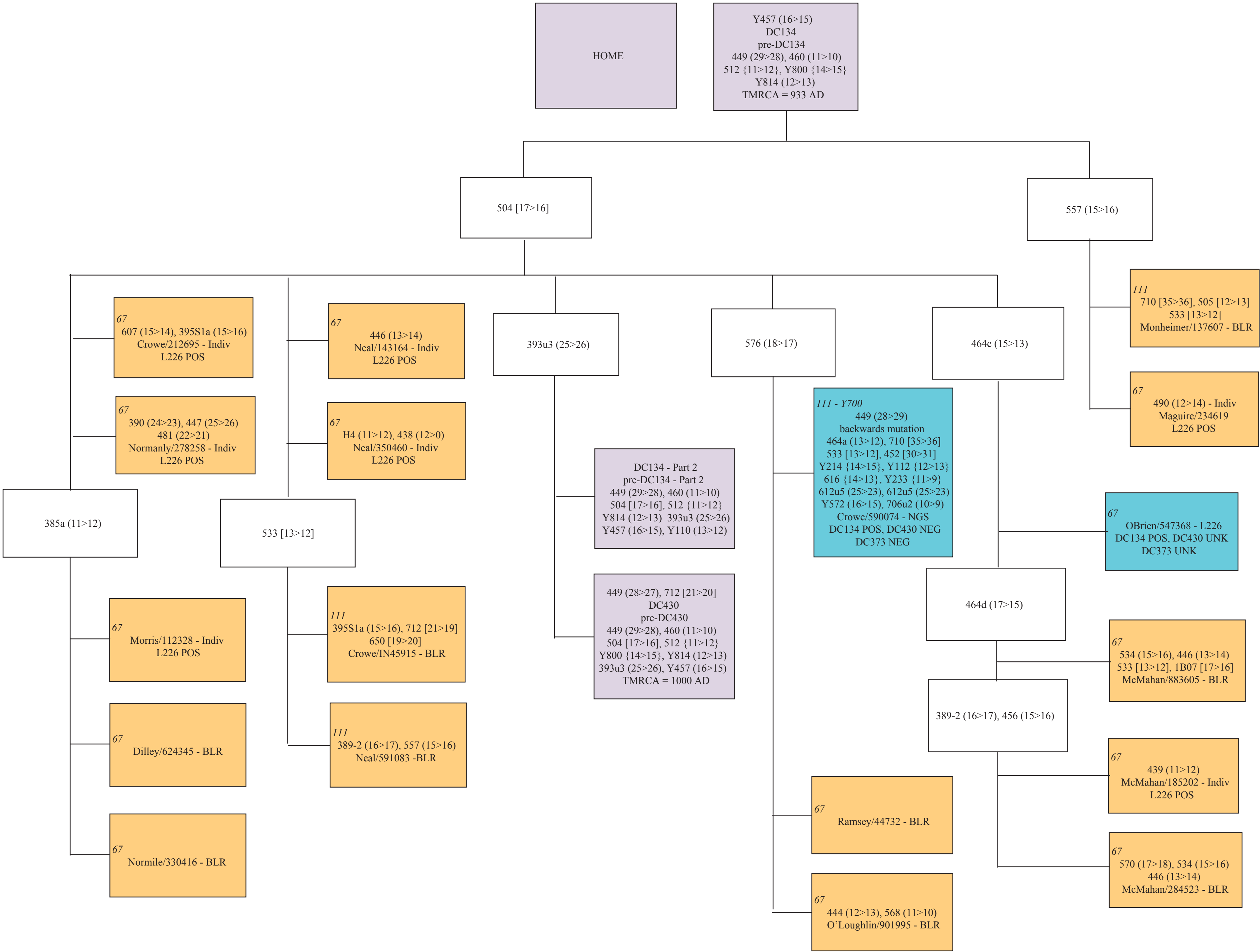


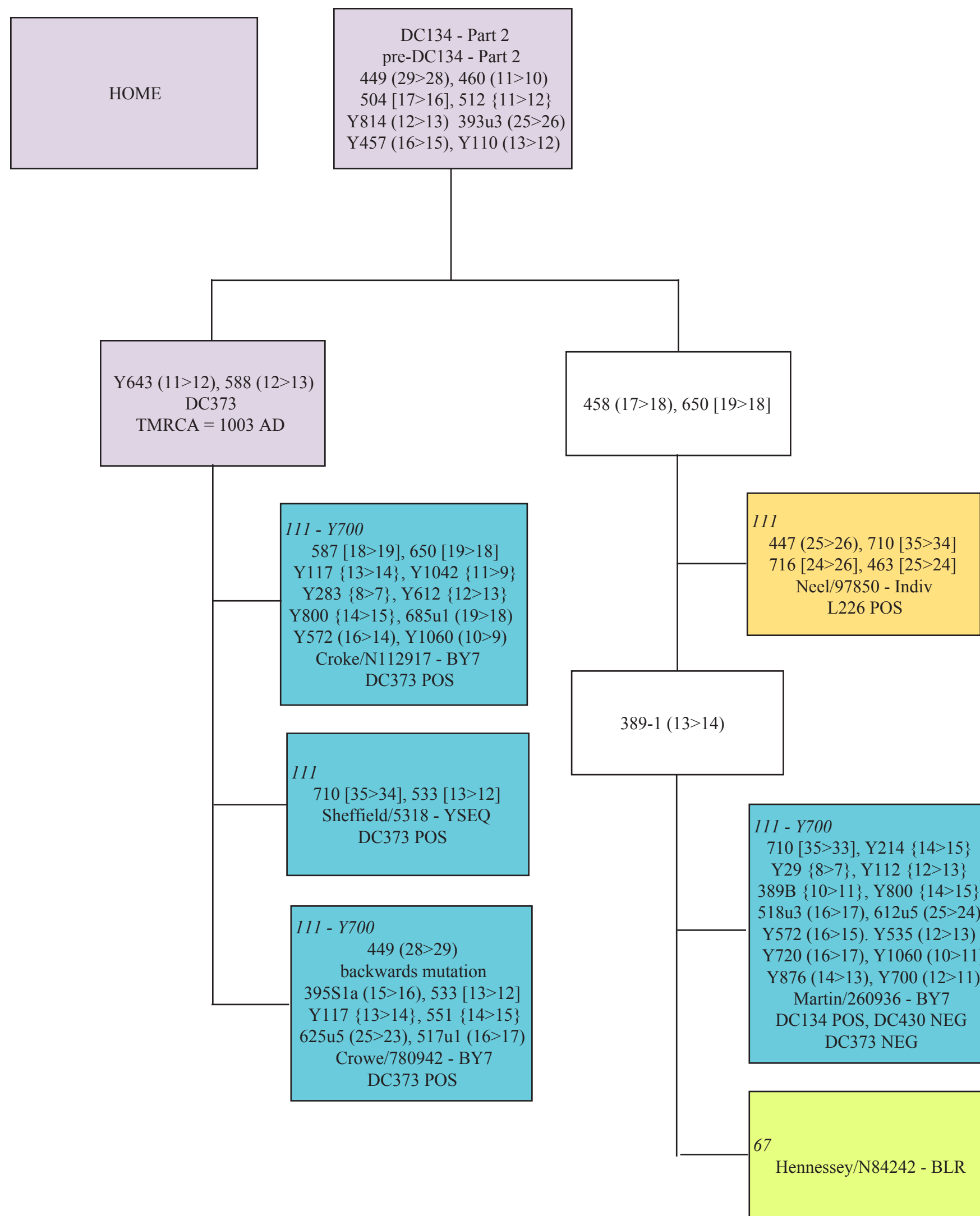




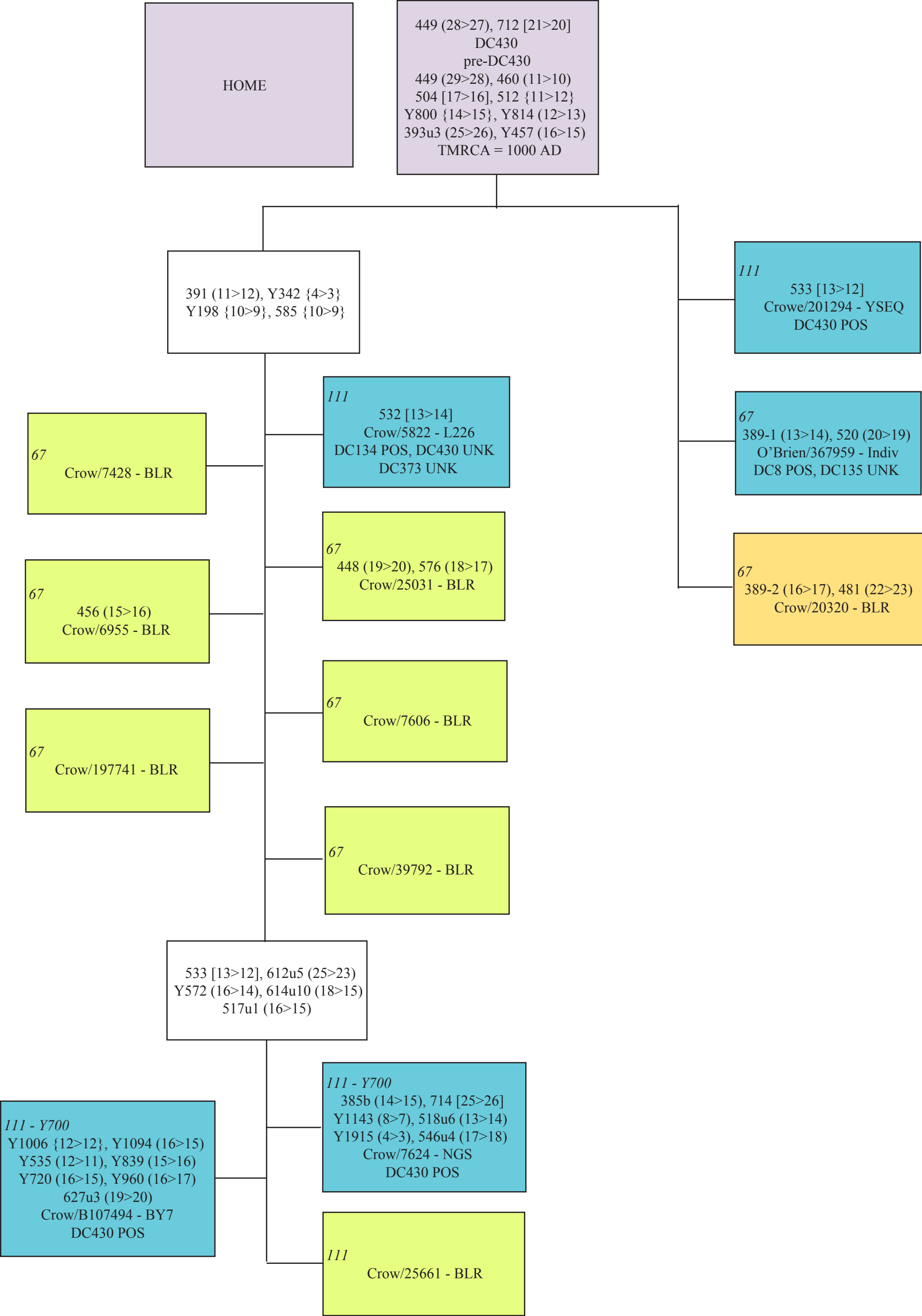


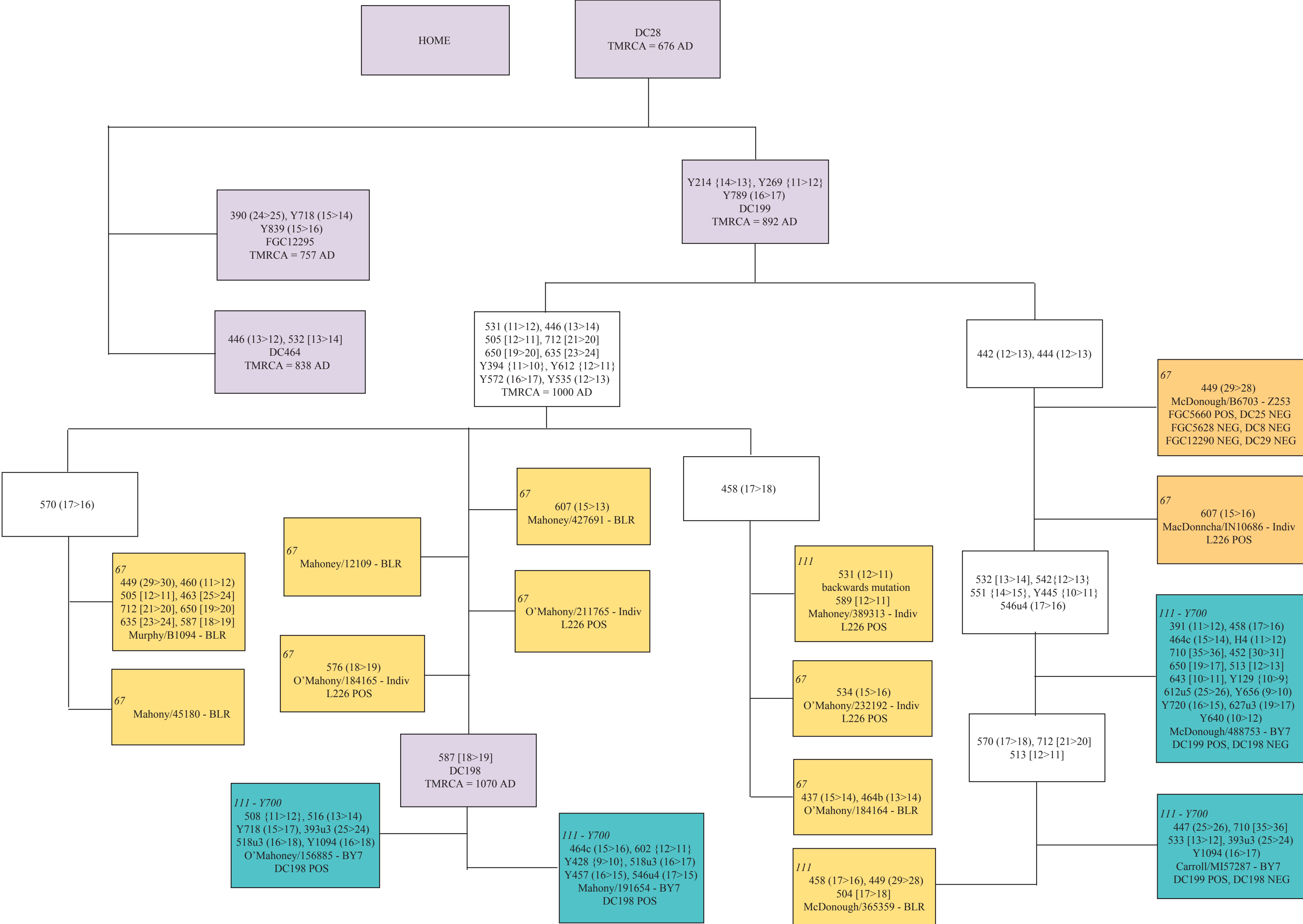


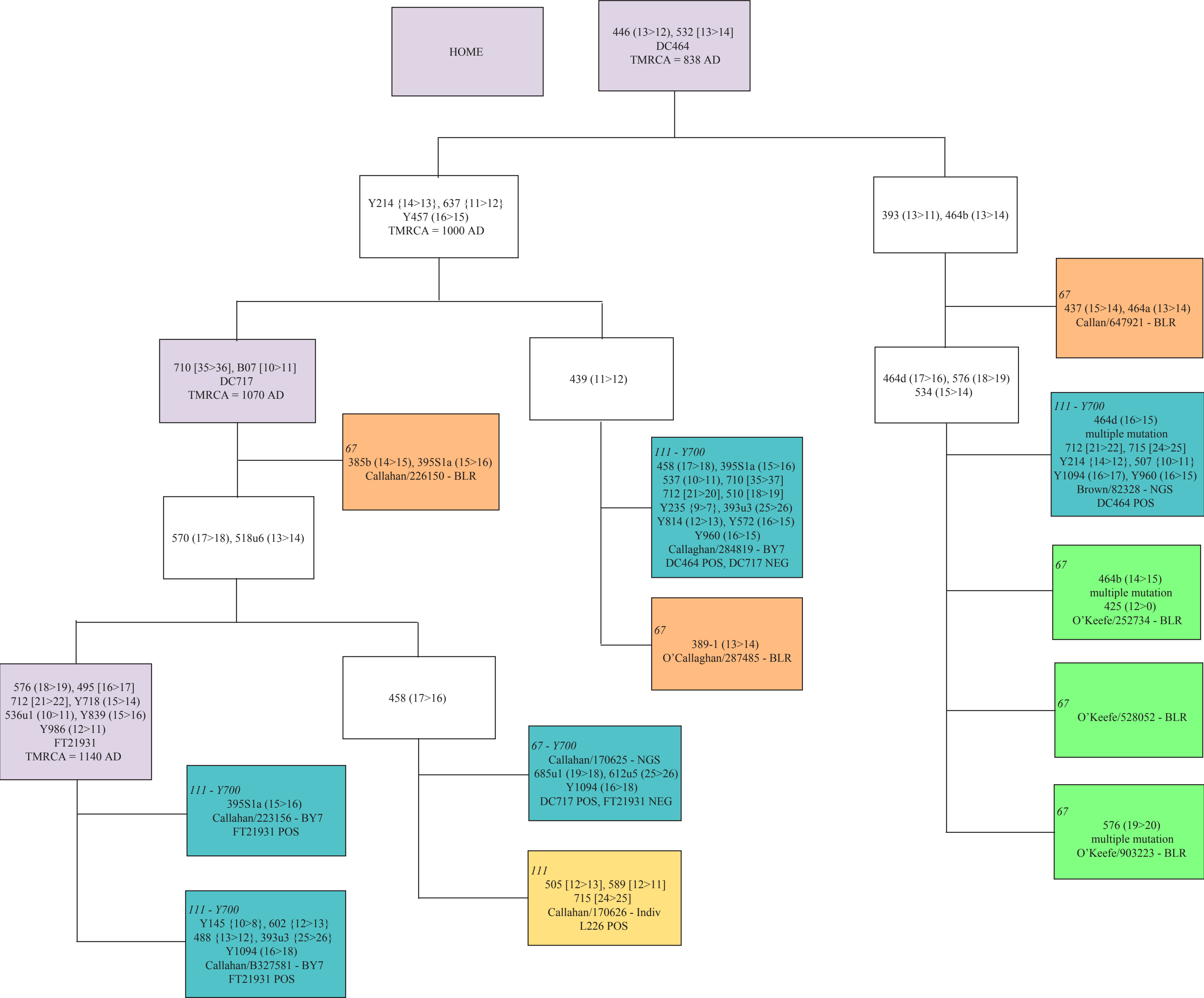


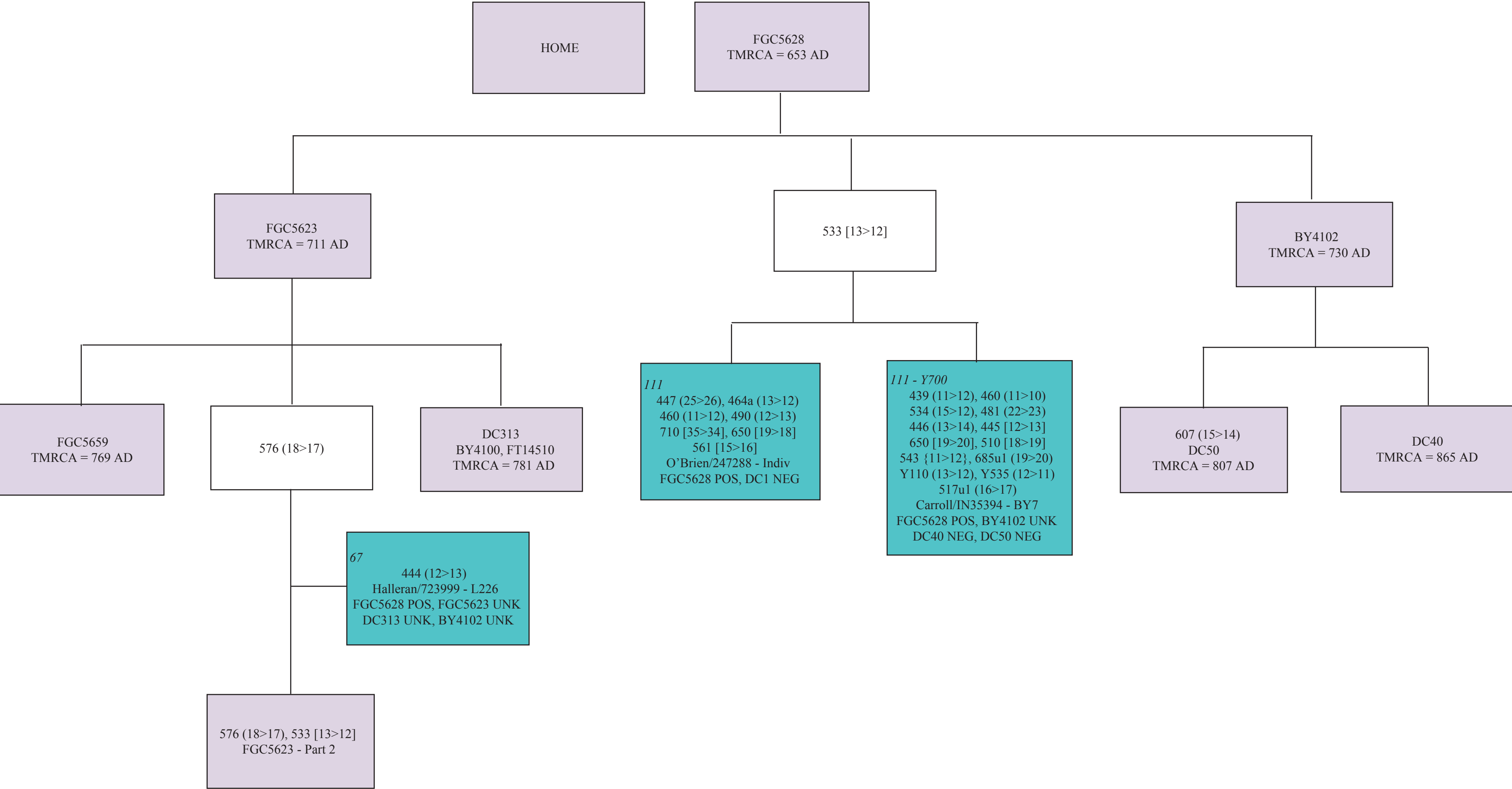


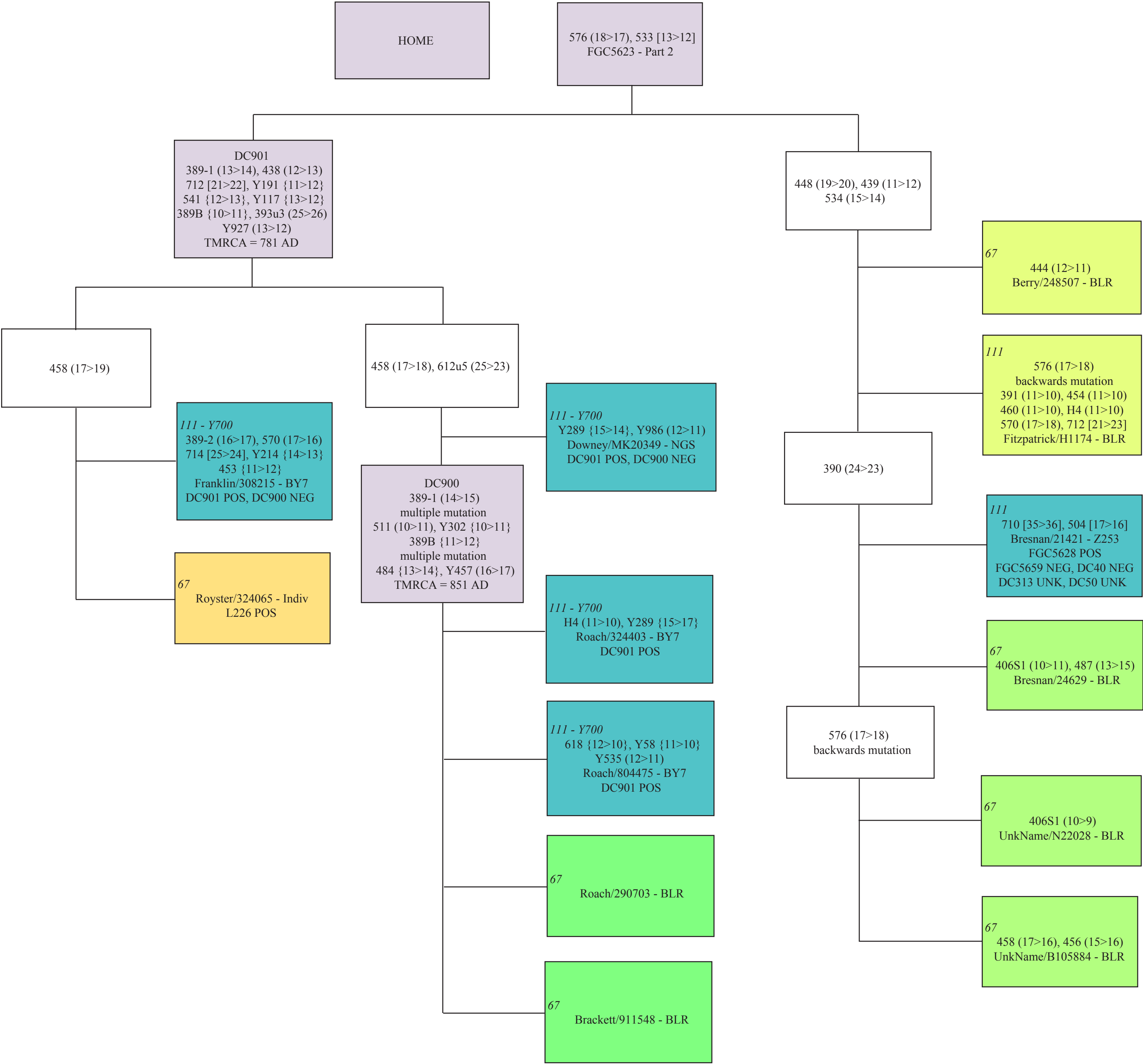


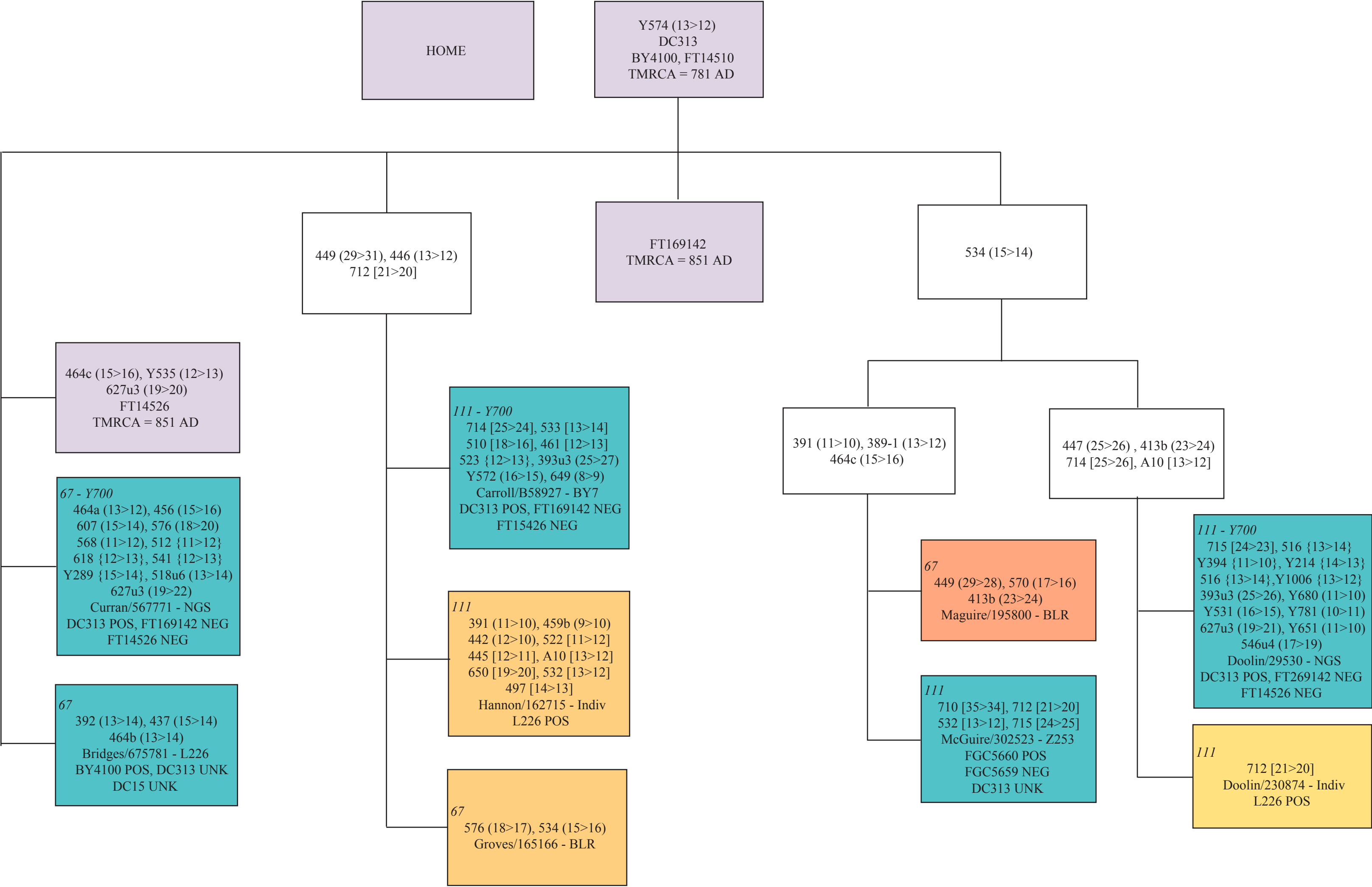


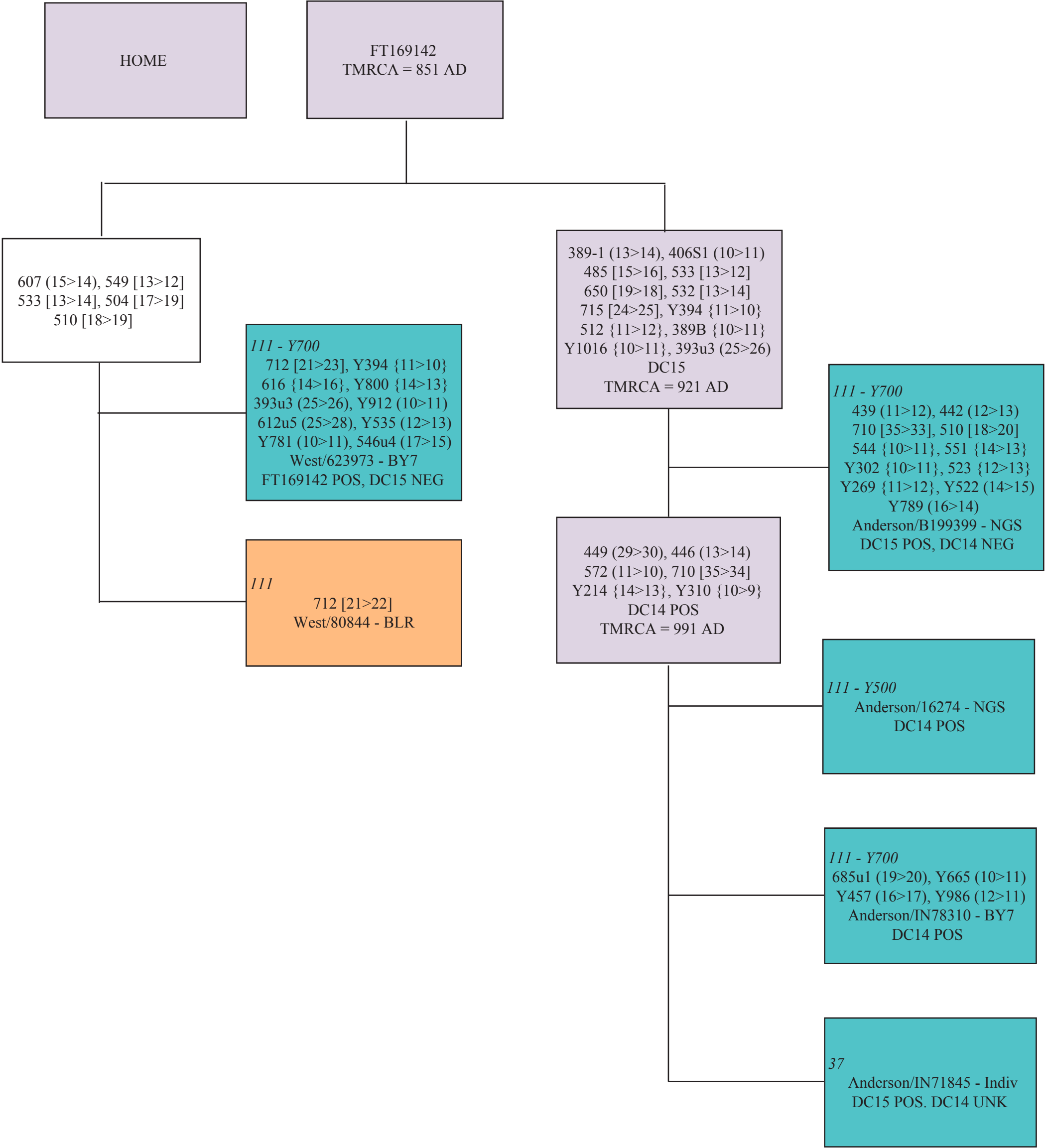




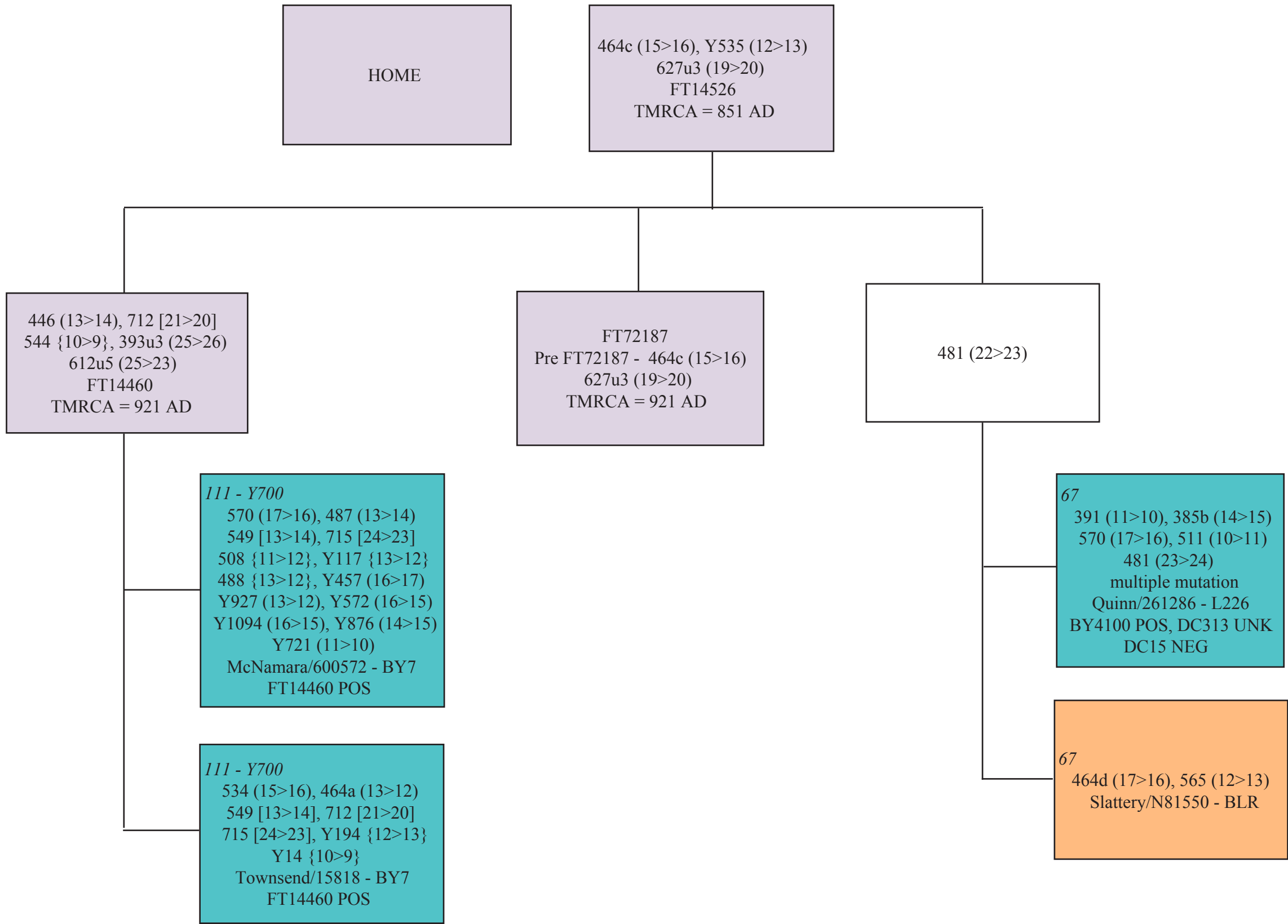


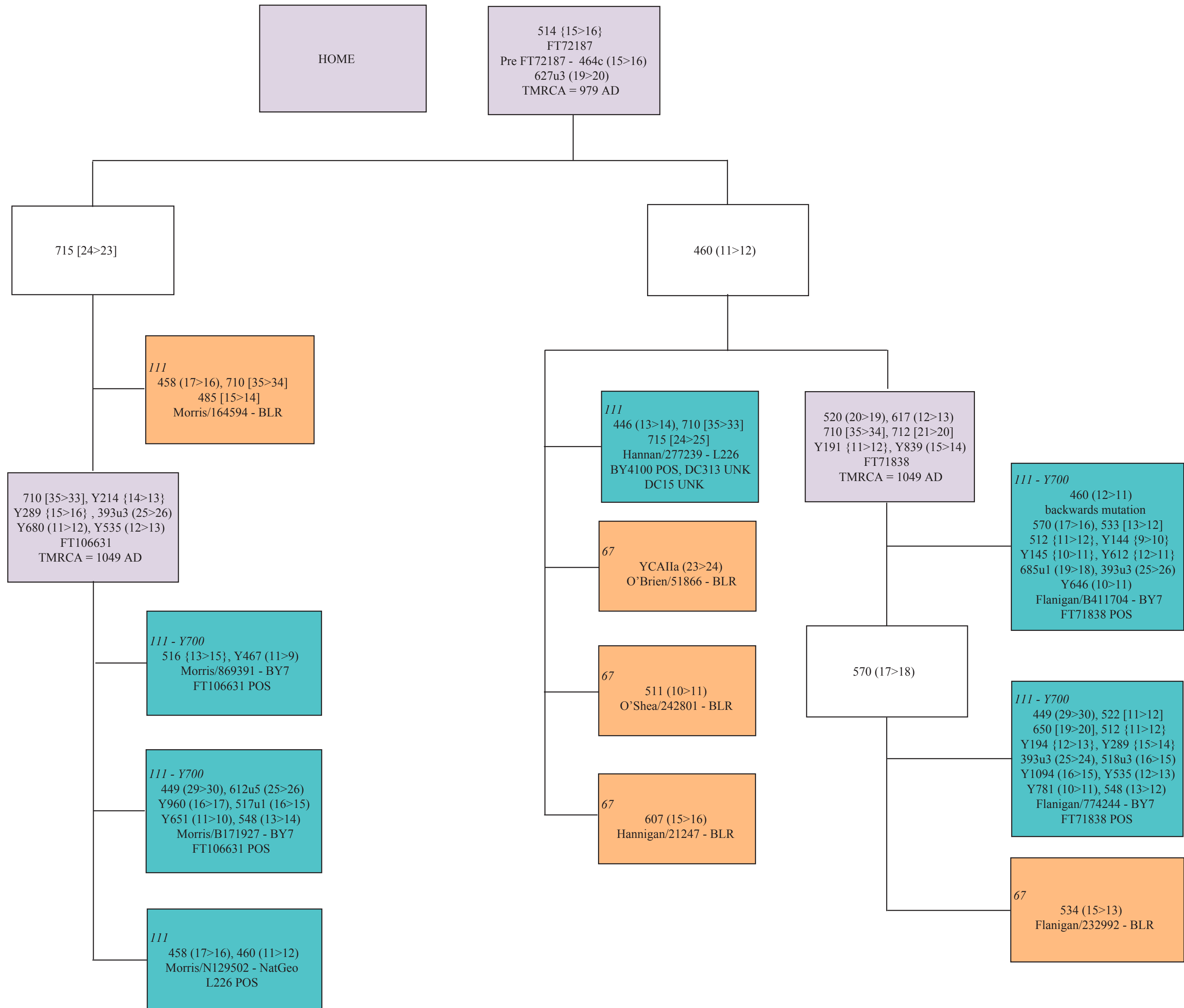


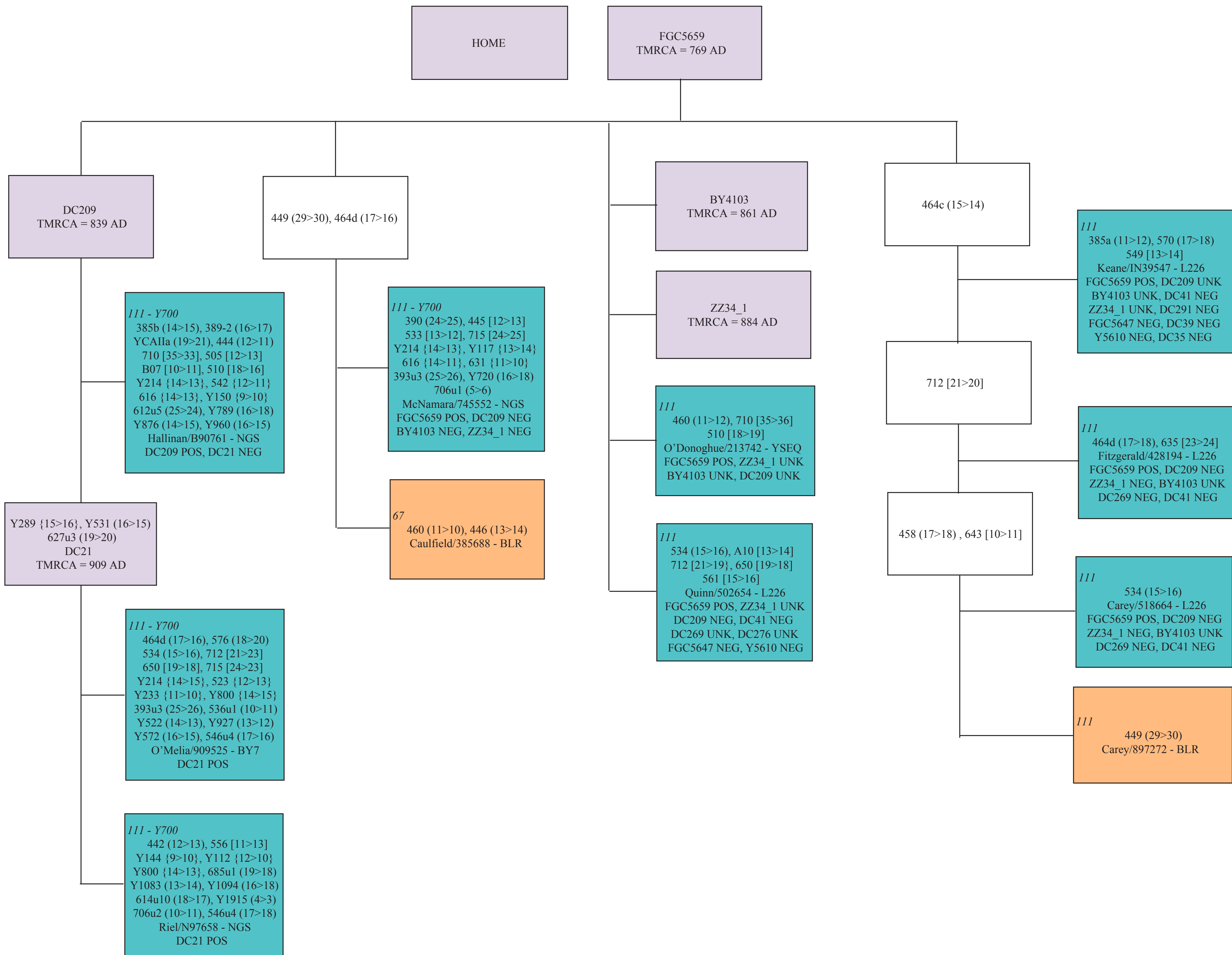


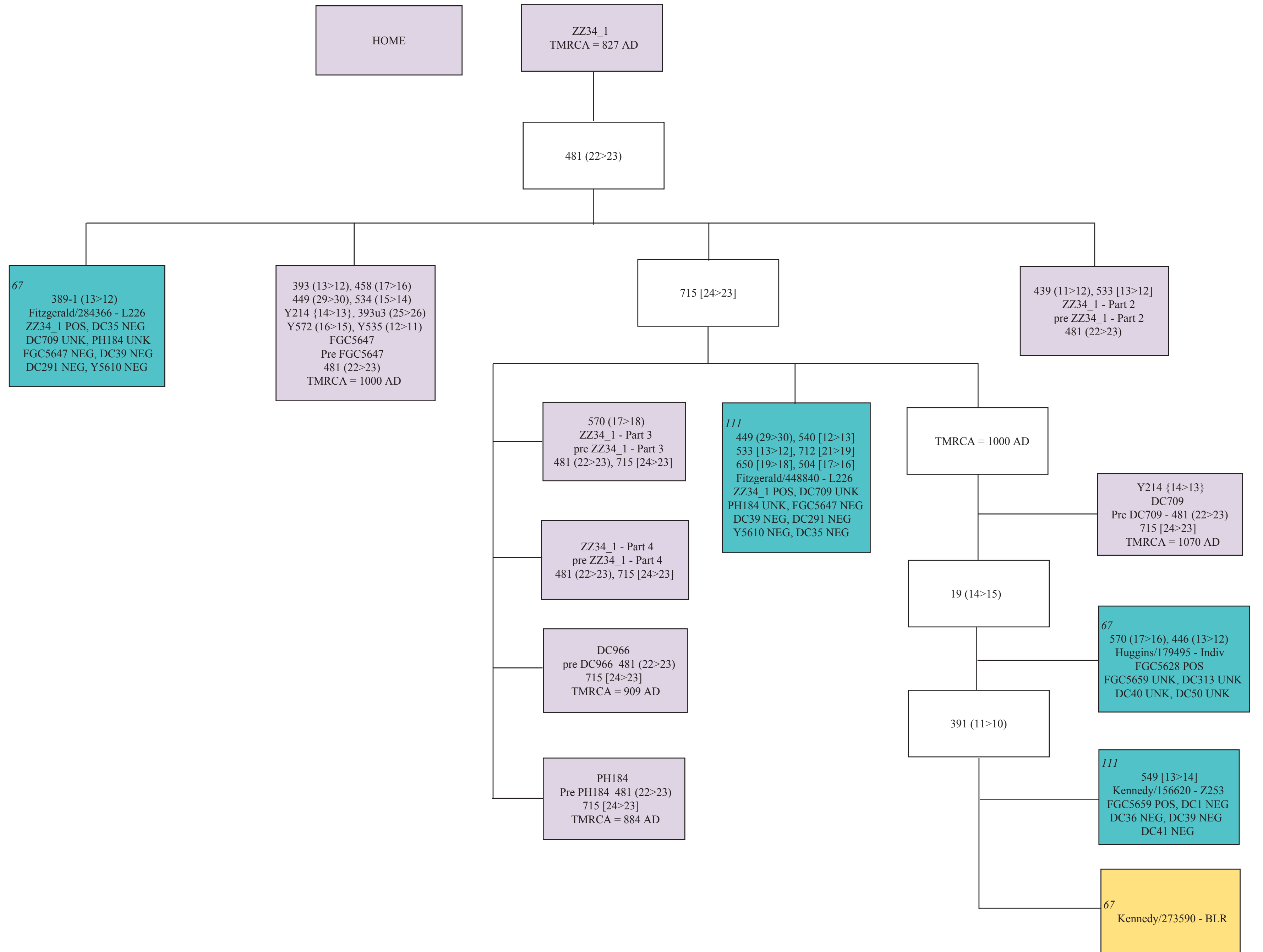


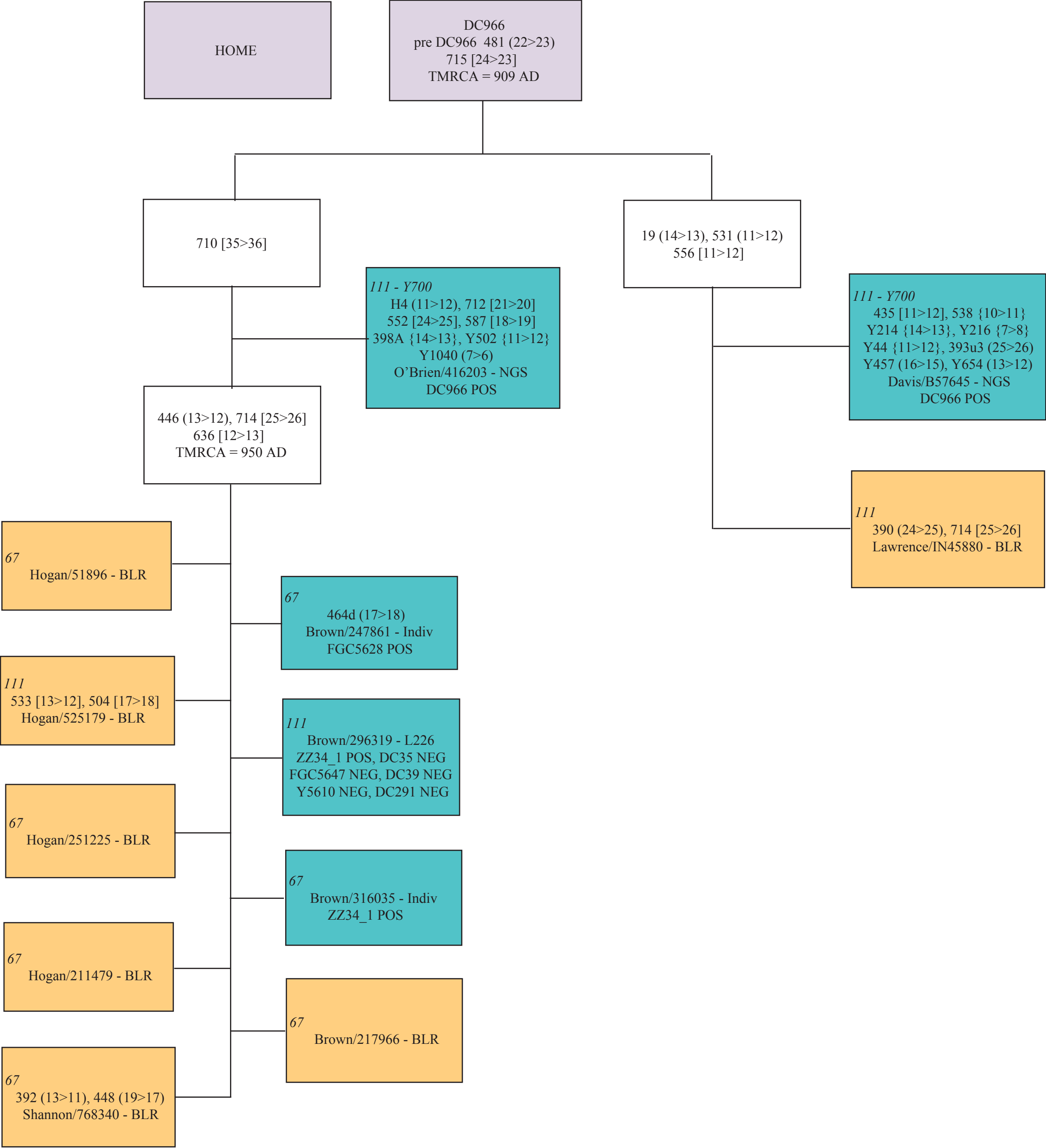


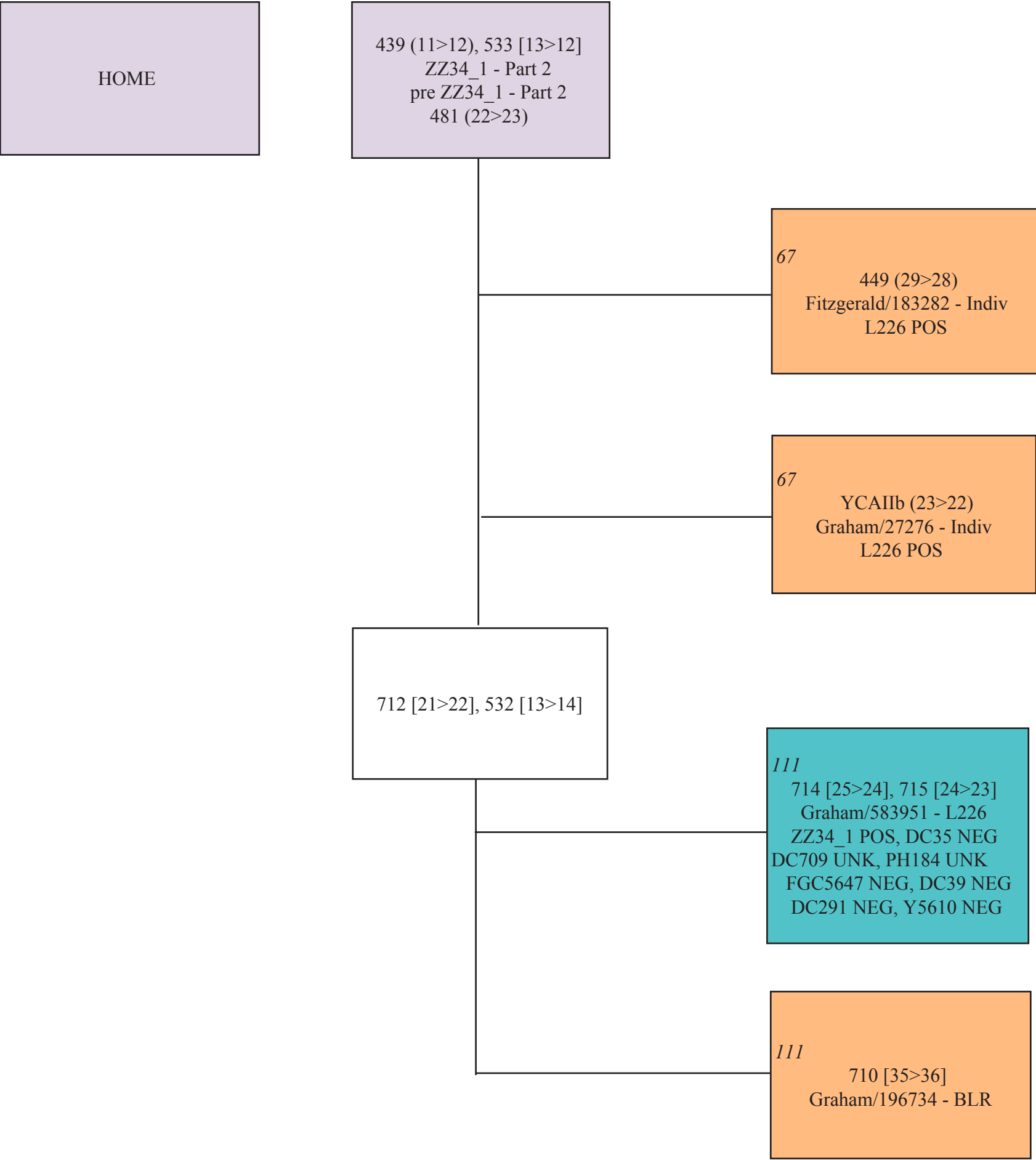


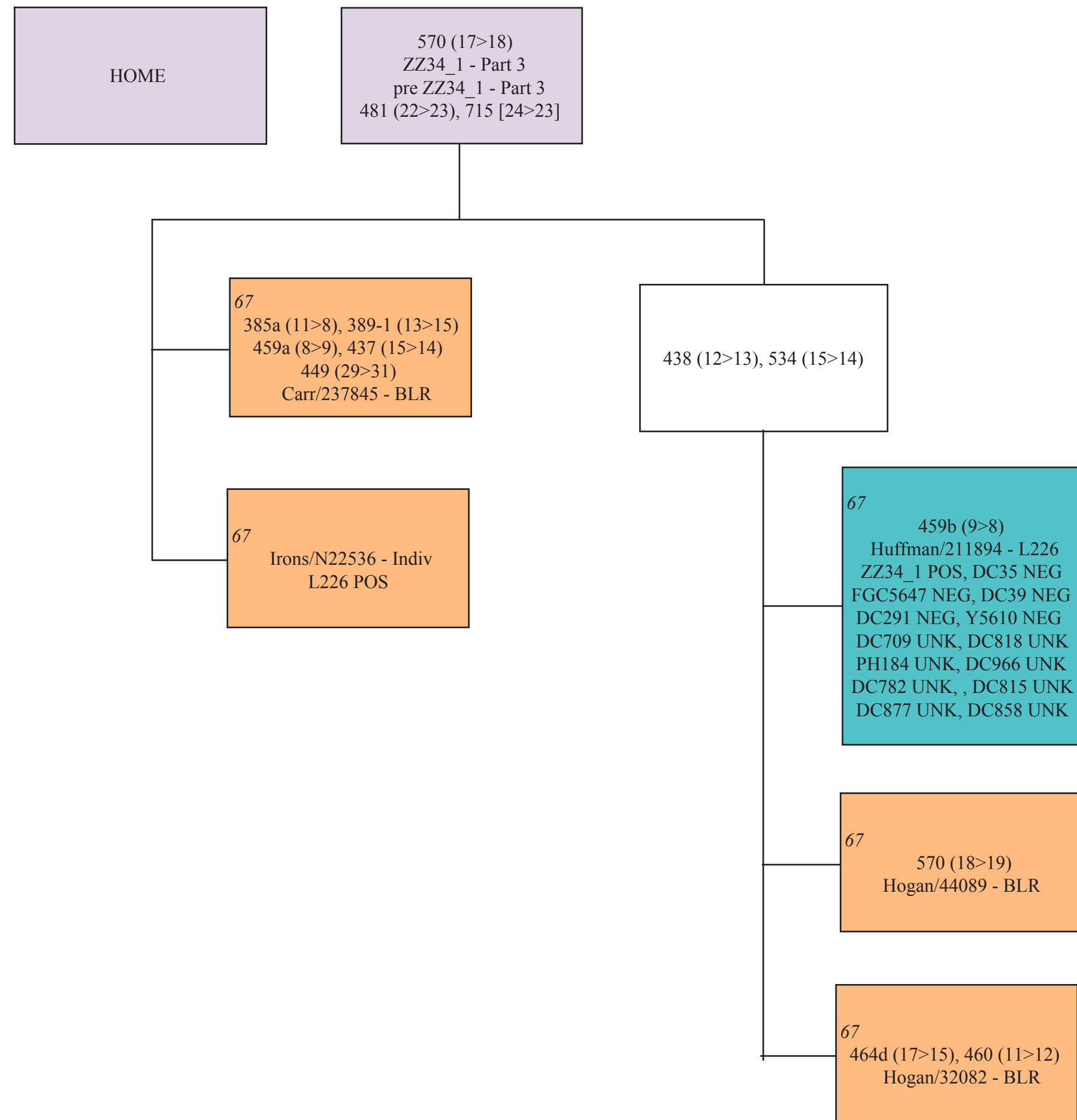




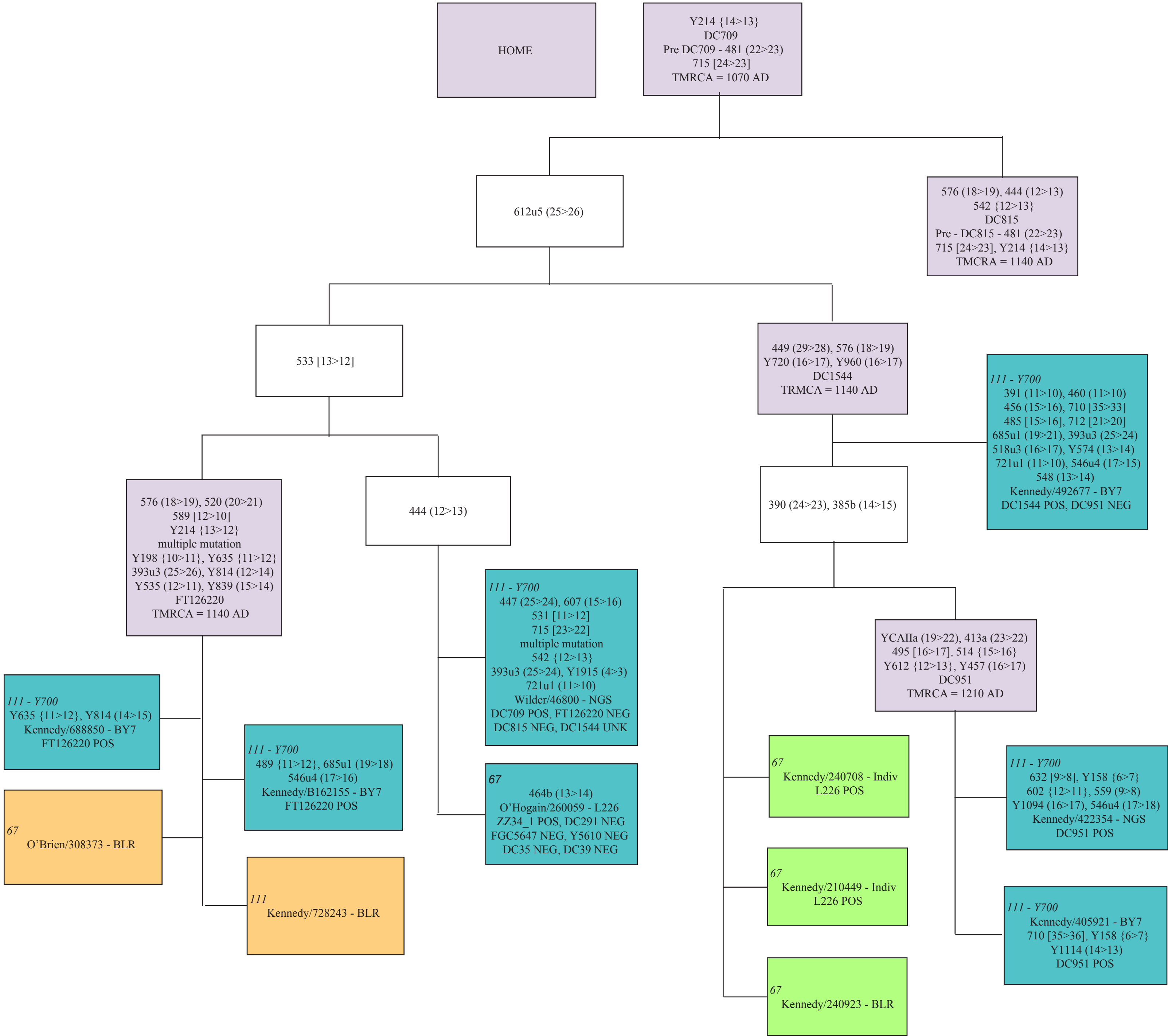


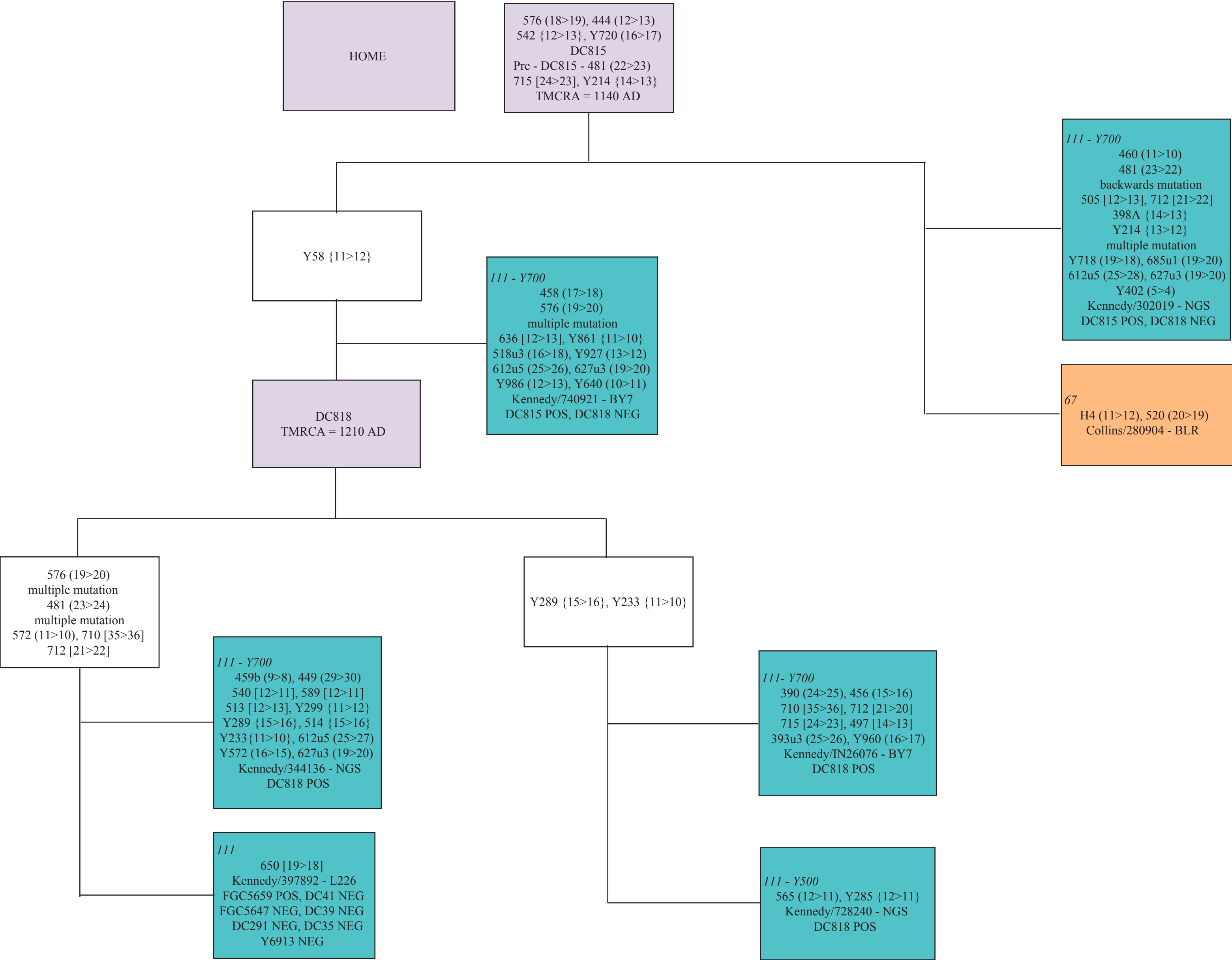


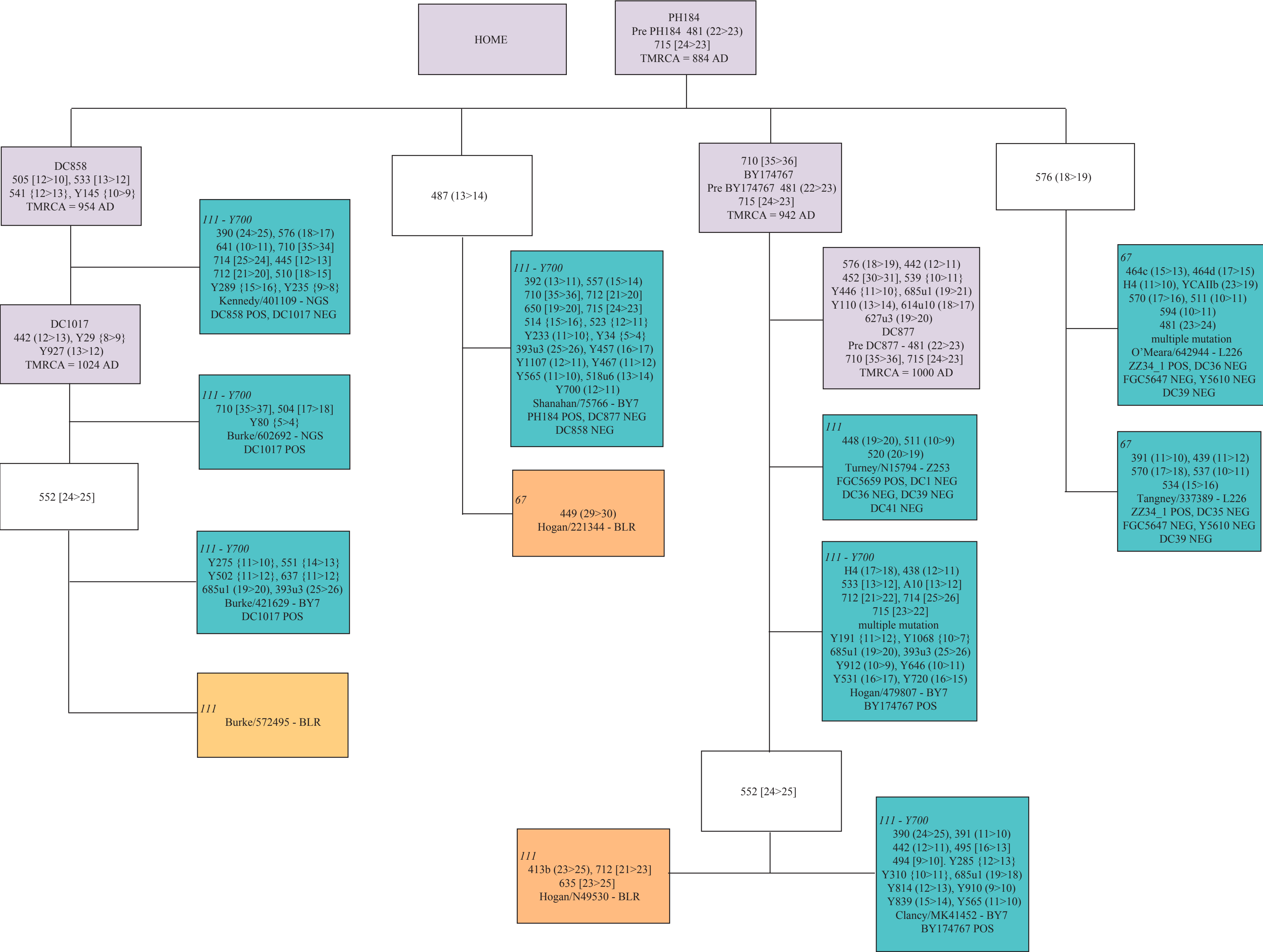


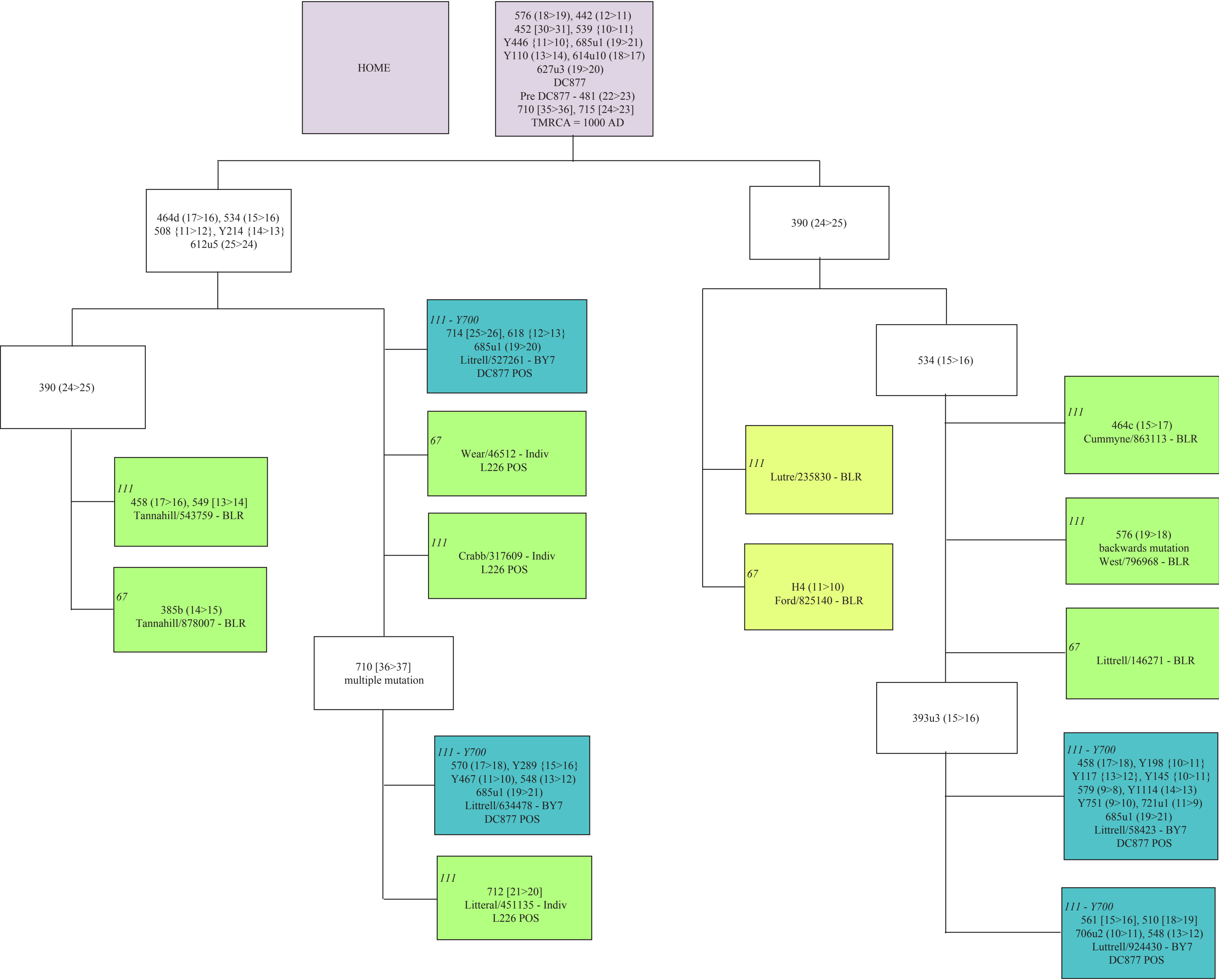


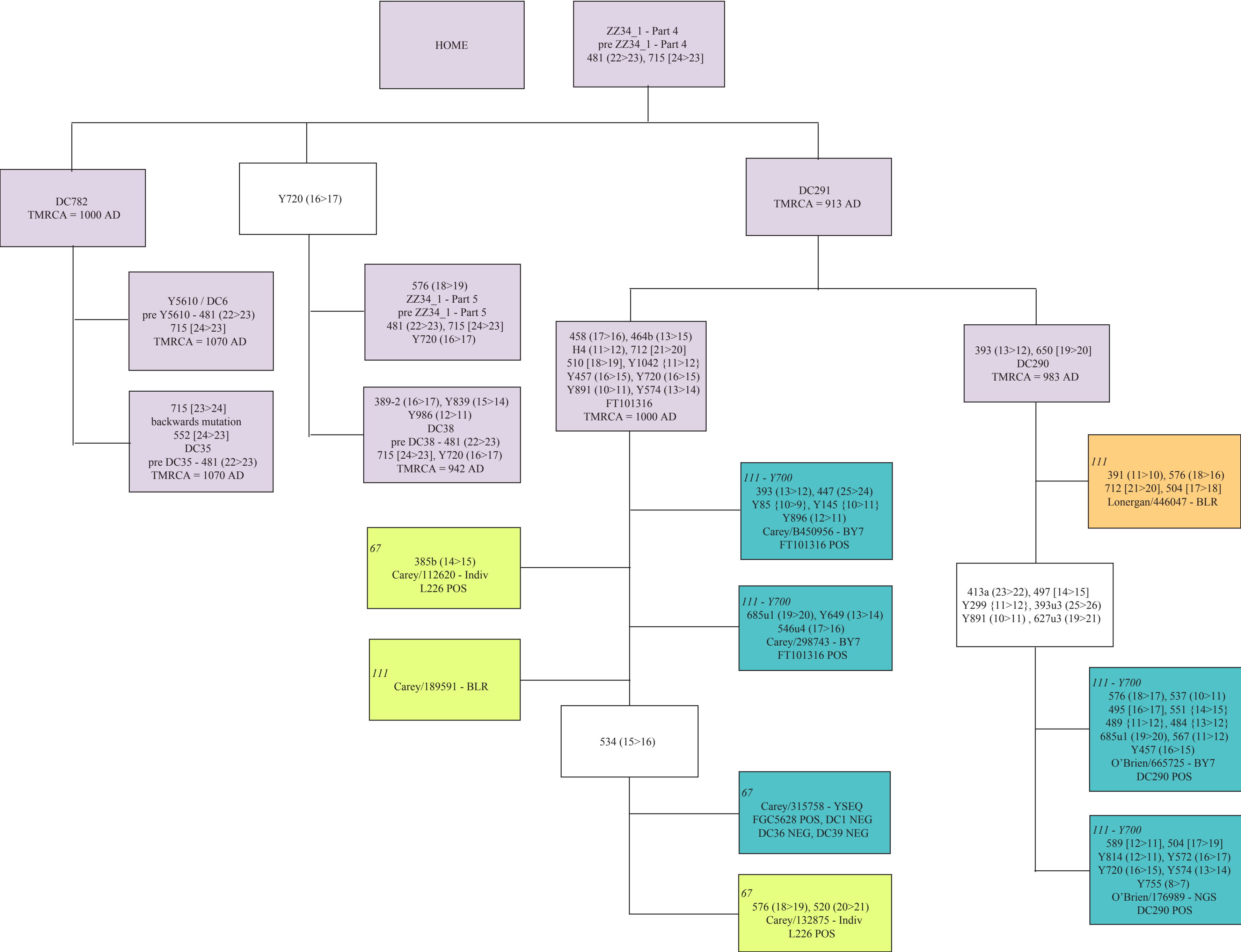


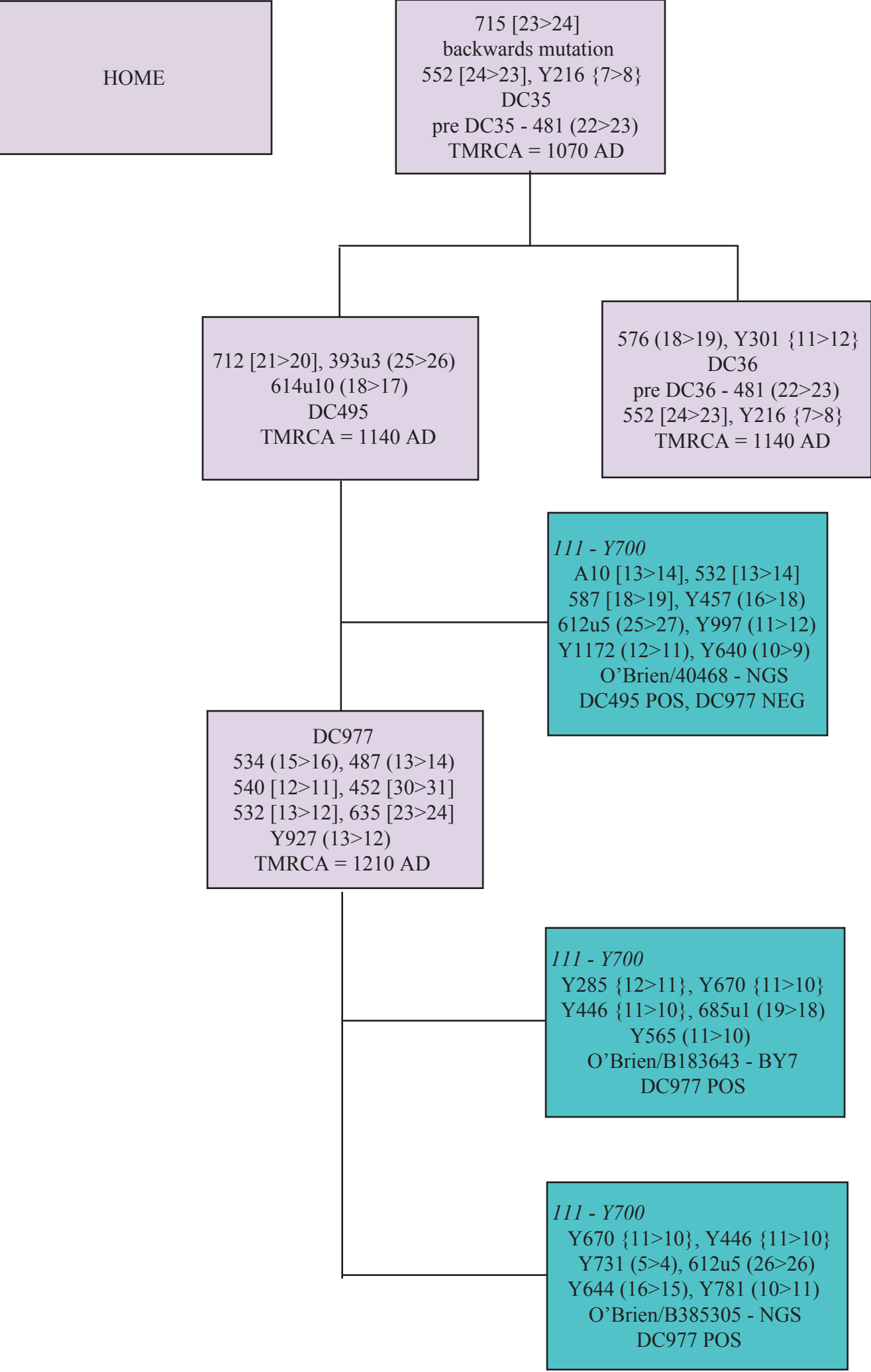


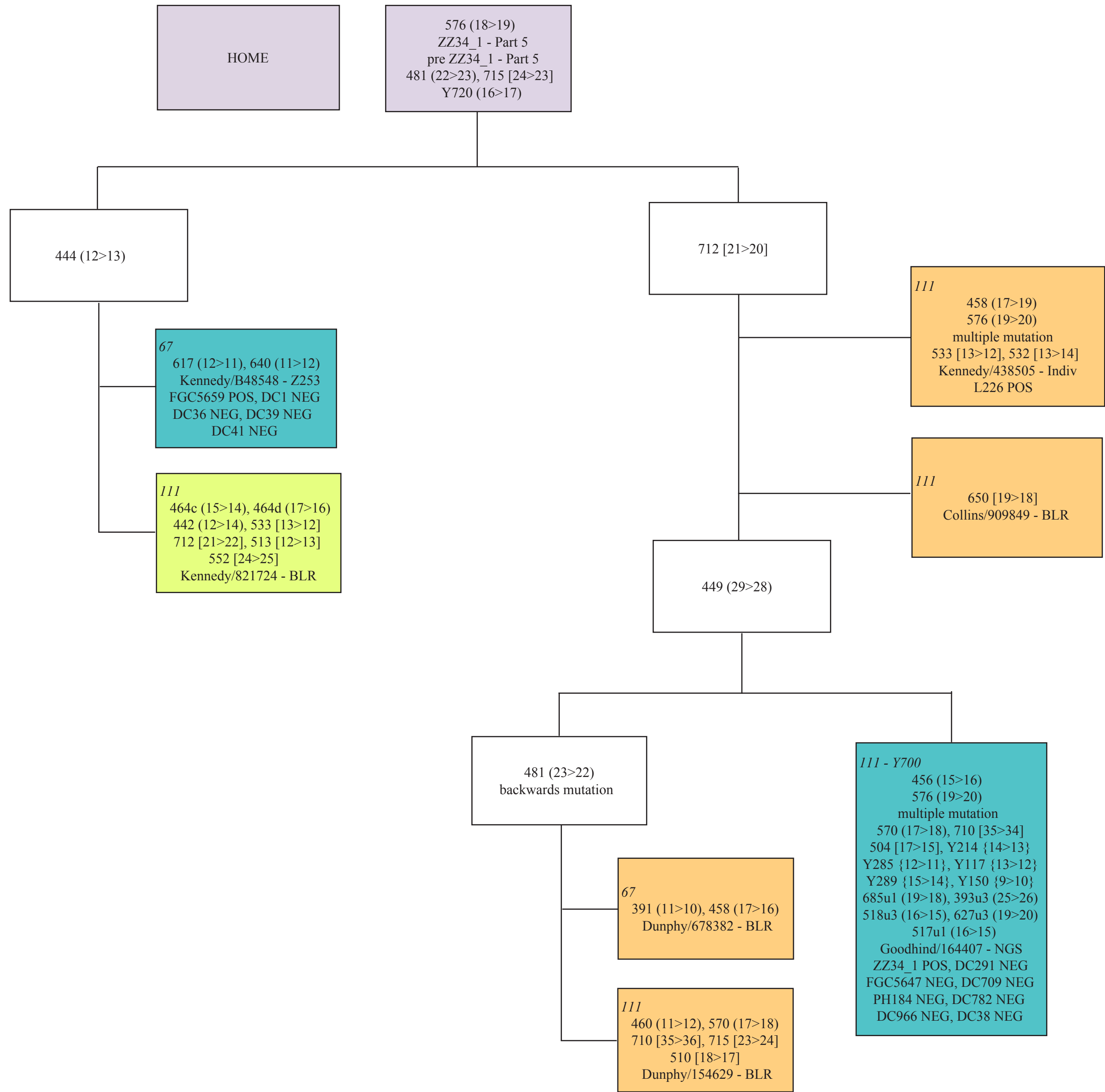




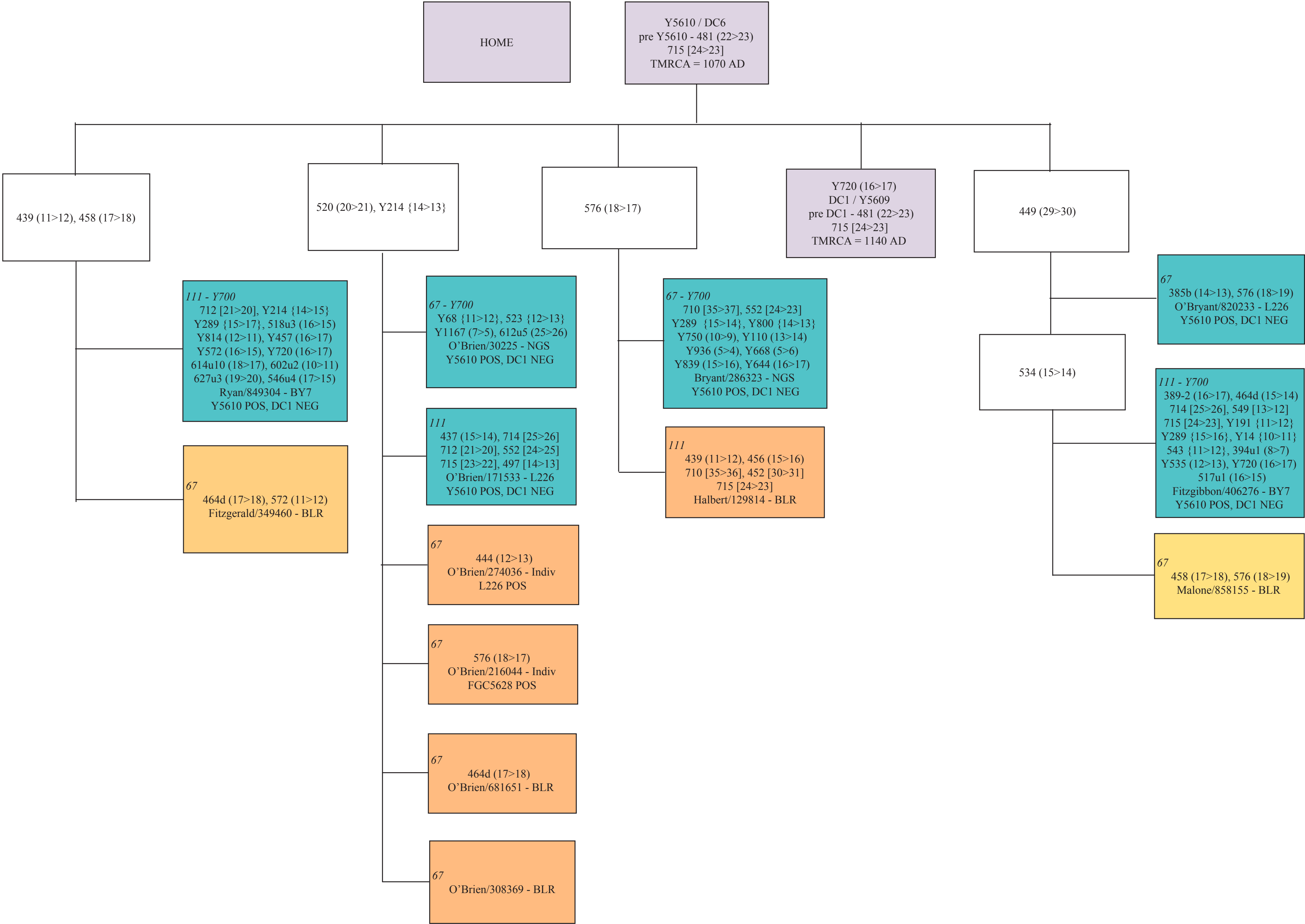












HOME

Unknown1  
Y SNP branch

385b (14>13), 446 (13>12)

*67*  
390 (24>25), 439 (11>12)  
McCarthy/531687 - BLR

*67*  
449 (29>30), 520 (20>21)  
Callaghan/IN53322- BLR

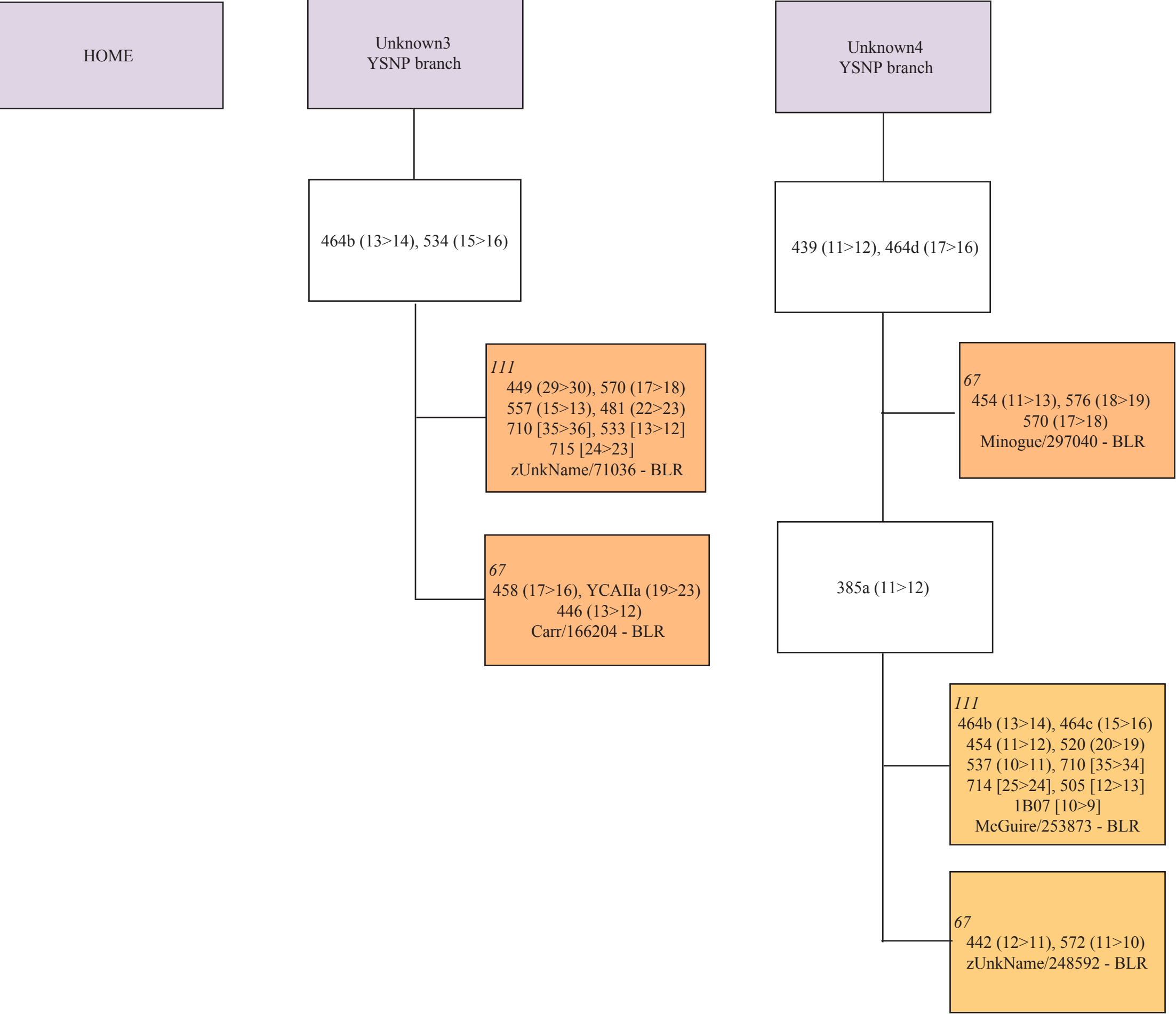
Unknown2  
Y SNP branch

393 (13>14), 460 (11>12)  
576 (18>19)

*111*  
715 [24>25], 461 [12>11]  
Gannon/238126 - Indiv  
L226 POS

385b (14>15), 392 (13>14)  
458 (17>18), 464b (13>14)  
607 (15>12), 570 (17>18)  
557 (15>14), 520 (20>21)

*67*  
Harden/N37434 - BLR



HOME

Unknown5  
Y SNP branch

576 (18>17), 446 (13>14)

*67*  
385a (11>12), 460 (11>10)  
570 (17>16), 395S1b (16>15)  
425 (12>0)  
Kelly/145203 - BLR

391 (11>10), 511 (10>11)

*67*  
Godfrey/110430 - BLR

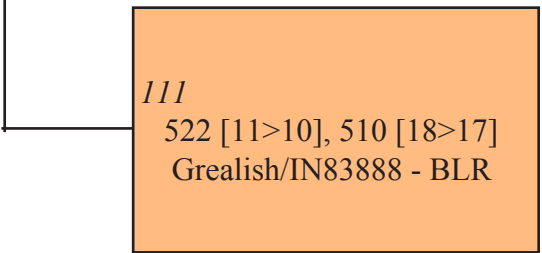
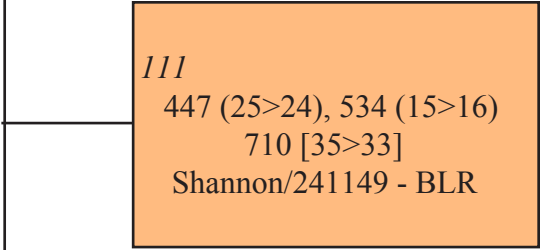
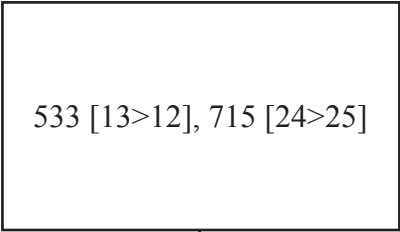
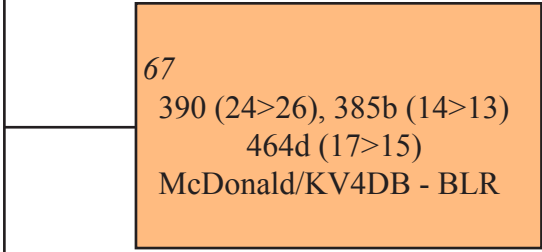
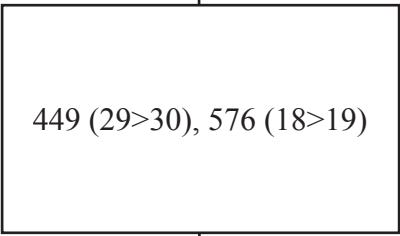
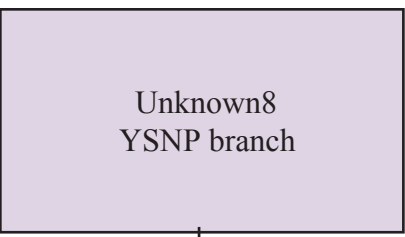
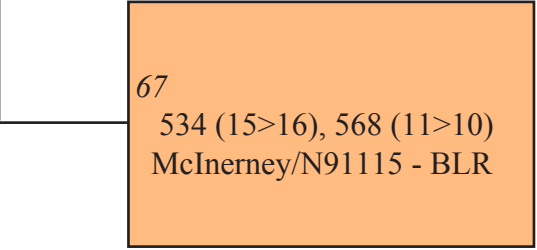
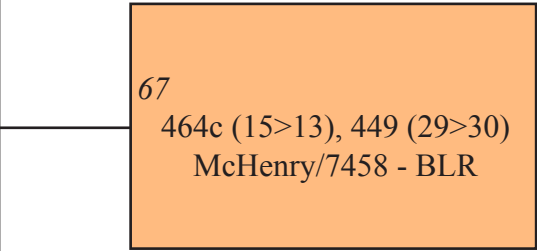
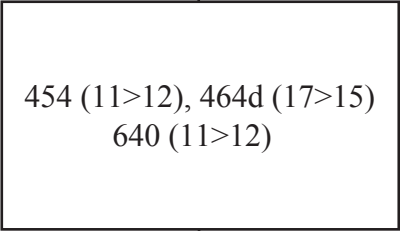
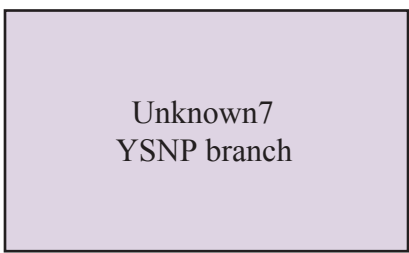
*67*  
Godfrey/S4Z5Q - BLR

Unknown6  
Y SNP branch

448 (19>18), 534 (15>14)

*67*  
458 (17>15), 456 (15>16)  
565 (12>13)  
Cary/N78869 - BLR

*67*  
458 (17>16), 557 (15>14)  
Murray/294666 - BLR



HOME

Unknown9  
Y SNP branch

447 (25>26), 449 (29>30)

*67*  
Coffey/308588 - BLR

*111*  
714 [25>26], 716 [24>26]  
505 [12>13], 522 [11>10]  
462 [11>10], 452 [30>31]  
Crawford/229314 - BLR

*67*  
439 (11>12), 459b (9>10)  
395S1b (15>16)  
534 (15>14), 446 (13>12)  
Cummins/75681 - BLR

Unknown10  
Y SNP branch

534 (15>16), 565 (12>11)

*67*  
464d (17>18), 576 (18>17)  
570 (17>18)  
Finn/87703 - BLR

446 (13>14)

*67*  
456 (15>16), 570 (17>19)  
413a (23>22)  
Luby/222267 - Indiv  
L226 POS

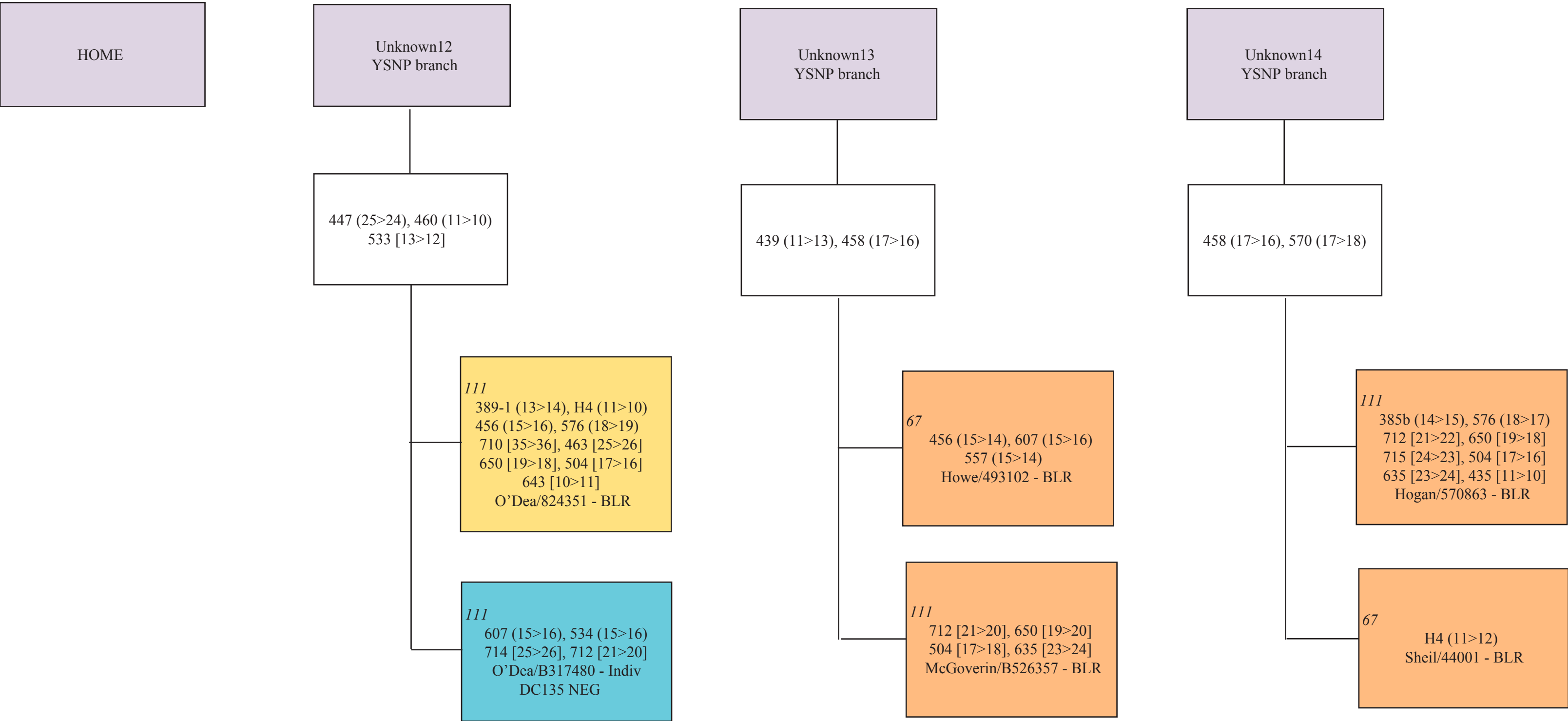
*111*  
385b (14>11), 392 (13>14)  
437 (15>14), 449 (29>30)  
464d (17>16), 712 [21>20]  
532 [13>14], 497 [14>13]  
Kelly/B38857 - BLR

Unknown11  
Y SNP branch

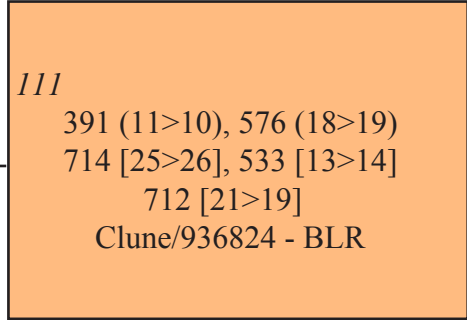
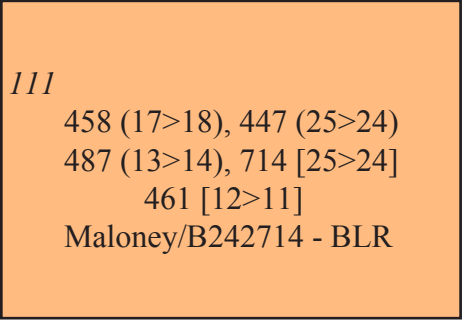
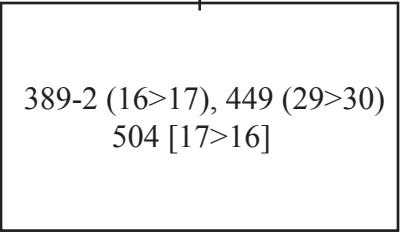
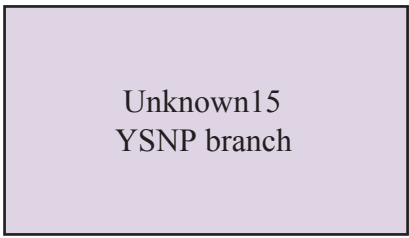
H4 (11>12), 576 (18>20)

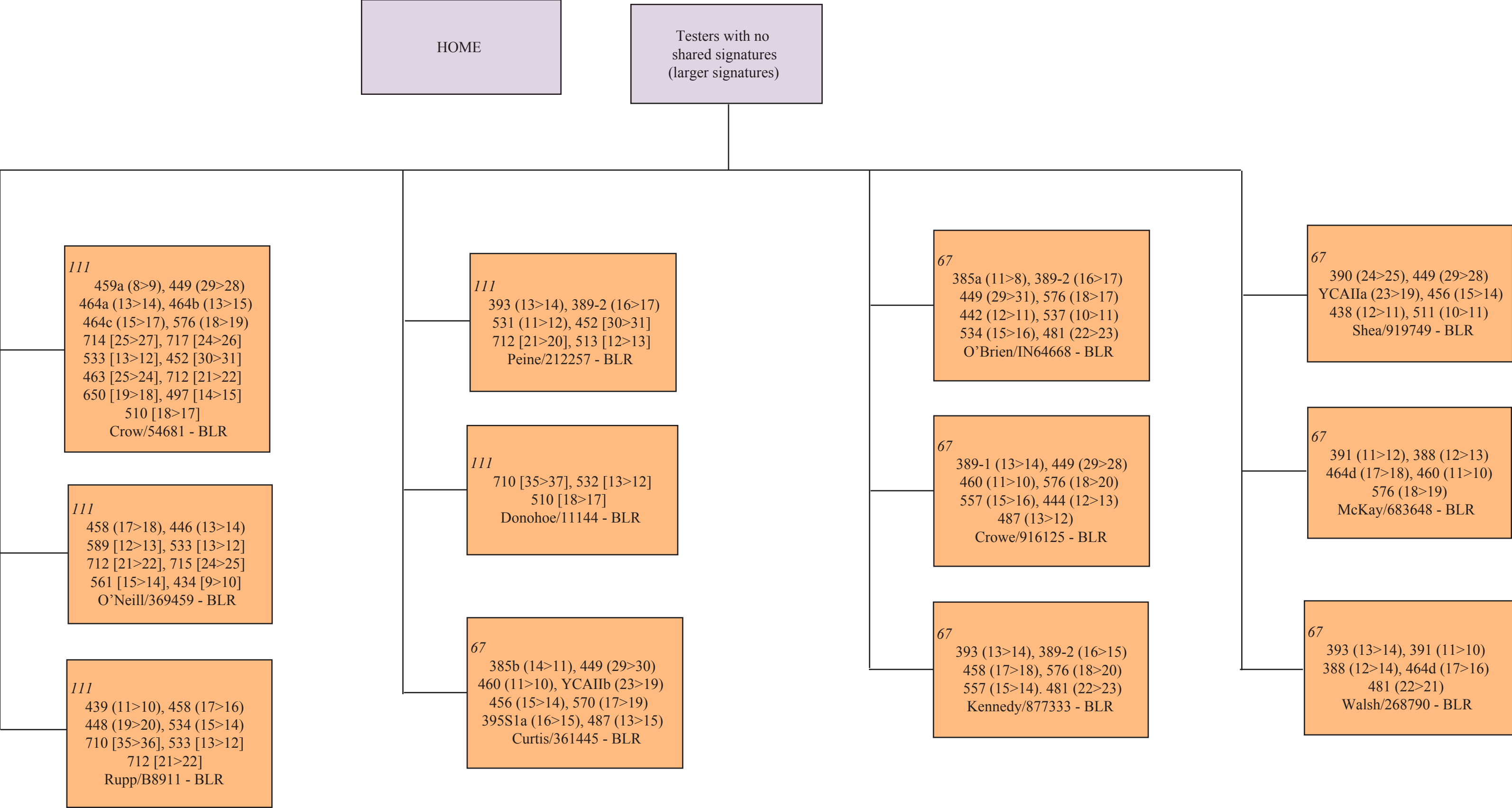
*67*  
389-1 (13>14)  
Pedersen/261971 - BLR

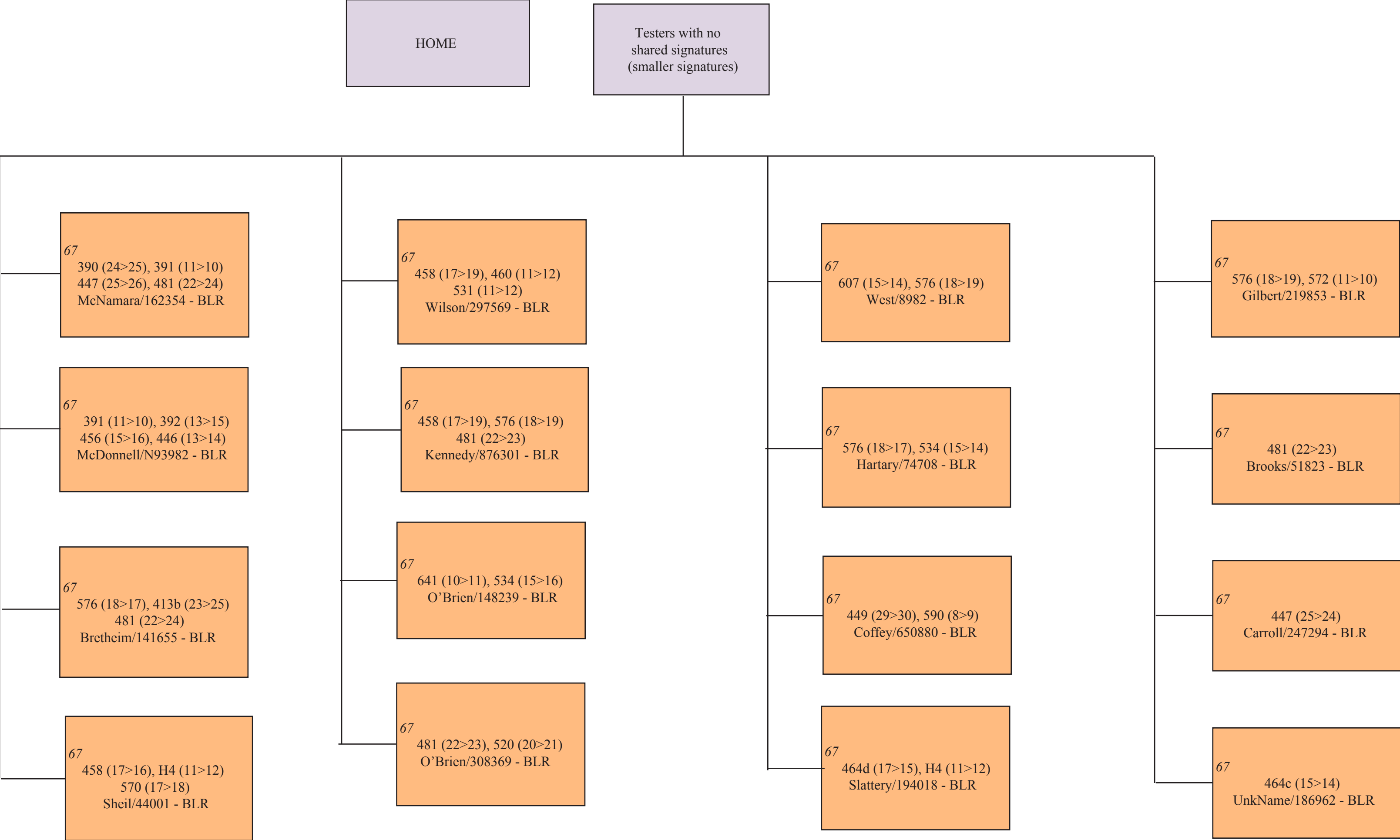
*67*  
520 (20>21)  
UnkName/270662 - BLR











Note: The L21 modal values for Y500 and Y700 YSTRs are not known and the mutations on this page are based on L226 modals which may differ significantly from L21 modal values.

HOME

L21 > Z253 > Z2534  
TMRCA = 1675 BC  
(no branch equivalents)

449 (30>29), Y201 {9>8}  
Y145 {10>11}, 523 {12>13}  
BY25450  
TMRCA = 1470 BC  
(no branch equivalents)

Y289 {15>14}  
FGC5618  
TMRCA = 1100 BC  
(five branch equivalents)

389-2 (16>14), 458 (17>16)  
464c (17>16), 444 (12>11)  
520 (20>21), 446 (13>15)  
714 [25>24], 494 [9>10]  
533 [13>14], 638 [11>10]  
463 [25>23], 441 [13>12]  
712 [20>19], 538 {10>11}  
542 {12>11}, Y372 {8>9}  
551 {14>13}, 514 {15>16}  
585 {10>11}, Y58 {11>12}  
Y612 {12>13}  
BY23454

*III - Y500*  
385b (14>15), 464d (17>16)  
456 (16>15), 534 (15>17)  
481 (22>21), 710 [35>37]  
650 [19>18], 532 [13>15]  
513 [12>13], Y214 {14>13}  
Y285 {12>13}, Y112 {12>13}  
Y800 {14>13}  
Gilmore/300904 - NGS  
BY23454 POS  
BY123821 NEG

557 (16>15), 510 [17>18]  
FGC5625  
TMRCA = 380 BC  
(ten branch equivalents)

439 (12>11), 459a (9>8)  
459b (10>9), 464a (15>13)  
464b (15>13), 464c (17>15)  
464d (15>13), 456 (16>15)  
716 [26>24], 463 [24>25]  
712 [20>21]  
L226  
TMRCA = 500 AD  
(twelve branch equivalents)

391 (11>12), 576 (18>17)  
710 [35>36], 532 [13>14]  
BY123821  
TMRCA = 1000 AD

464a (15>14), 572 (11>10)

*67*  
439 (12>13), 389-1 (13>12)  
389-2 (16>17), 458 (17>18)  
464d (15>13)  
Frost/304112 - L226  
FGC5625 POS  
L226 NEG

YCAIIa (19>21), 710 [35>36]  
533 [13>14], 715 [24>15]  
552 [24>25], 726 [12>13]  
635 [23>24]

*III - Y700*  
712 [20>19], 650 [19>18]  
Y299 {11>12}, Y285 {12>11}  
544 {10>9}, 551 {14>13}  
Y502 {11>12}, Y800 {14>15}  
393u3 (25>23), 518u3 (16>15)  
Y814 (16>17), Y522 (14>15)  
Y110 (13>12), Y572 (16>15)  
Y1094 (16>17), Y839 (15>14)  
Y1037 (12>13), Y720 (16>17)  
Y1060 (10>11), Y565 (11>10)  
Y574 (13>14), Y876 (14>13)  
Joiner/N65344 - BY7  
FGC5625 POS  
L226 NEG

*III*  
385b (14>15), 460 (11>12)  
568 (11>12)  
Johnston/IN89519 - BLR

390 (24>23), 464c (17>16)  
464d (15>18), 570 (17>16)  
406S1 (10>11), 511 (10>11)  
425 (12>13), 490 (12>10)  
534 (15>14), 446 (13>12)  
710 [35>33], 549 [13>12]  
533 [13>12], A10 [13>12]  
441 [13>14], 650 [19>20]  
715 [24>23], 513 [12>14]  
552 [24>25], 538 {10>11}  
Y214 {14>13}, 573 {10>11}  
Y275 {11>12}, Y68 {11>12}  
Y117 {13>12}, Y112 {12>13}  
551 {14>15}, 516 {13>11}  
Y502 {11>12}, Y1016 {10>11}  
Y800 {14>13}, Y310 {10>9}  
Y612 {12>13}, Y775 (15>14)  
393u3 (25>23), Y814 (12>11)  
Y457 (16>14), Y522 (14>15)  
Y1047 (10>11), Y927 (13>14)  
612u5 (25>24), Y572 (16>18)  
Y535 (12>11), Y789 (16>15)  
Y565 (10>11), Y1060 (10>11)  
Y845 (9>10), Y960 (16>17)  
517u1 (16>15)  
BY56070

BY126401

*III - Y700*  
449 (29>30)  
710 [33>32]  
multiple mutation  
635 [23>24], 627u3 (19>22)  
Loiseau/IN31669 - BY7  
BY56070 POS  
BY126401 NEG

*III - Y700*  
Y718 (15>14), 559 (9>8)  
627u3 (19>20), 548 (13>12)  
Loiseau/482623 - BY7  
BY126401 POS

*III - Y700*  
580 {9>8}, 614u10 (18>19)  
Y876 (14>15)  
Loiseau/935329 - BY7  
BY126401 POS

