

Legend for box coloring

Legend for TMRCA estimates

05/15/21

L226

FGC5660 > DC70

Z17669 > DC87

FGC5628 > FGC5623 > DC901

FGC5659 > DC209

DC69 > DC1083 & DC377 > DC722

DC109 > DC505

DC8 > DC993 & DC1165 > DC135 > DC728

DC134 > DC430 & DC373

DC25 > DC26 & DC329

DC194

BY39756 > DC889 & DC104 > DC106 & DC812

DC63 > DC116, DC127 & DC685

DC29 > DC361 & DC362

DC470 > DC472 > DC482 & DC735 & DC168

DC31 > DC30

DC189 > DC191 & DC340

DC28 > DC199 & DC464 > DC717 > FT21931

FGC12295 > DC435 > DC437

FGC12290 > DC205

FGC12296 > FGC12293

DC201 > DC360

BY4102

DC313 > DC15 & FT14526

DC40 > A6097 & DC936

DC50

DC55 & DC245 > DC246 & DC1175

ZZ34\_1 > DC291

BY4103 > DC41 & DC269 > DC908 & DC276 & DC918

DC709 > DC815

FGC5647 > FGC5639

PH184 > DC877 & DC858 > DC1017

DC38 > DC39 > DC46

DC782

DC35 > DC495

DC36 > DC296 & DC381 > DC382

Y5610 > DC1

Y6913 > FGC13418 > DC344 > DC310 & DC62

BY5212 > Y44000 > DC863

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.

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[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).

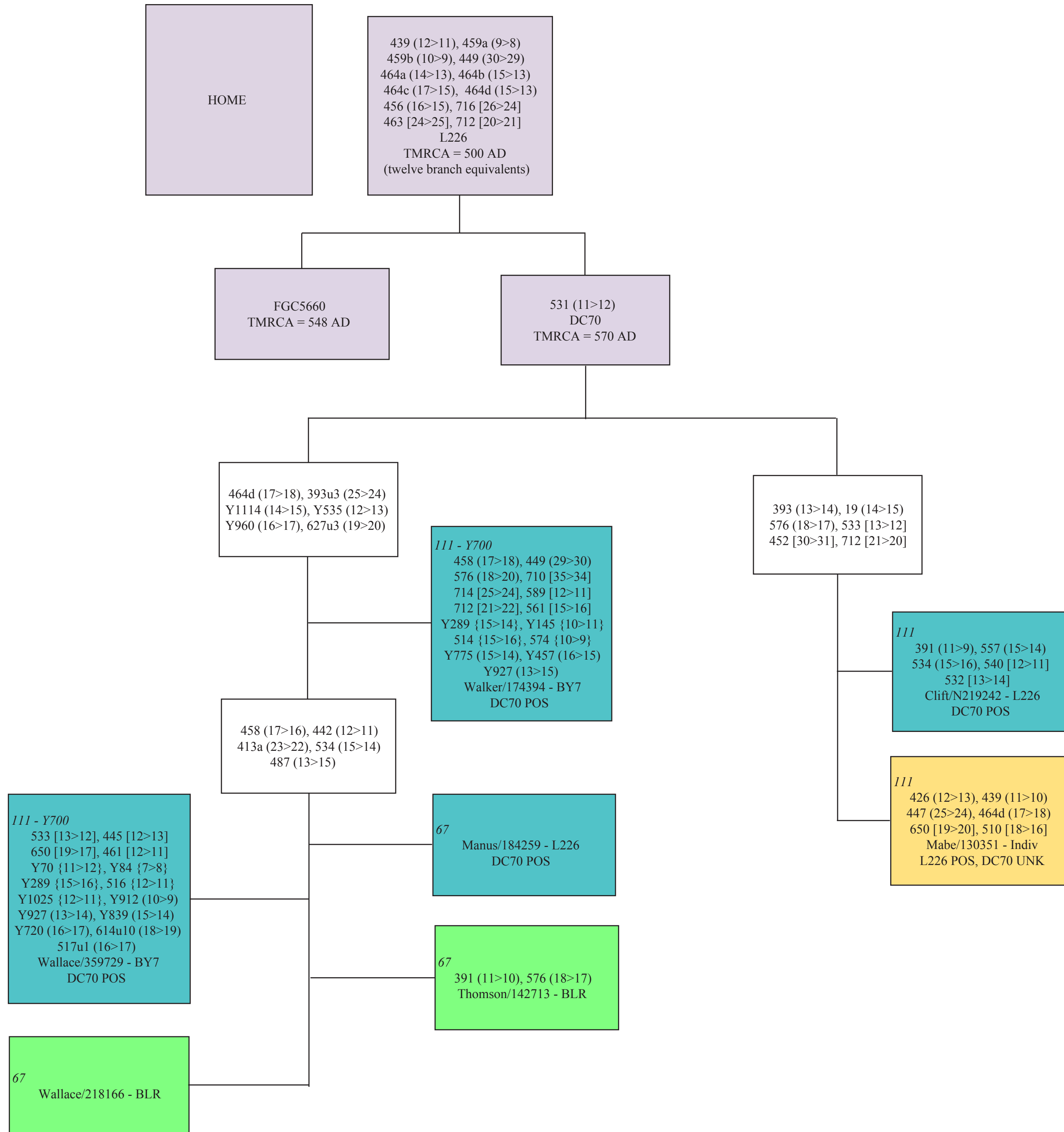
This first pass takes a very simplistic approach to surname clusters - you have at least five testers with the same surname to create a surname cluster and any YSTR or YSNP branch and must have over 50 % of testers with this surname. All reasonable surname variations are included. All YSNP branches below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

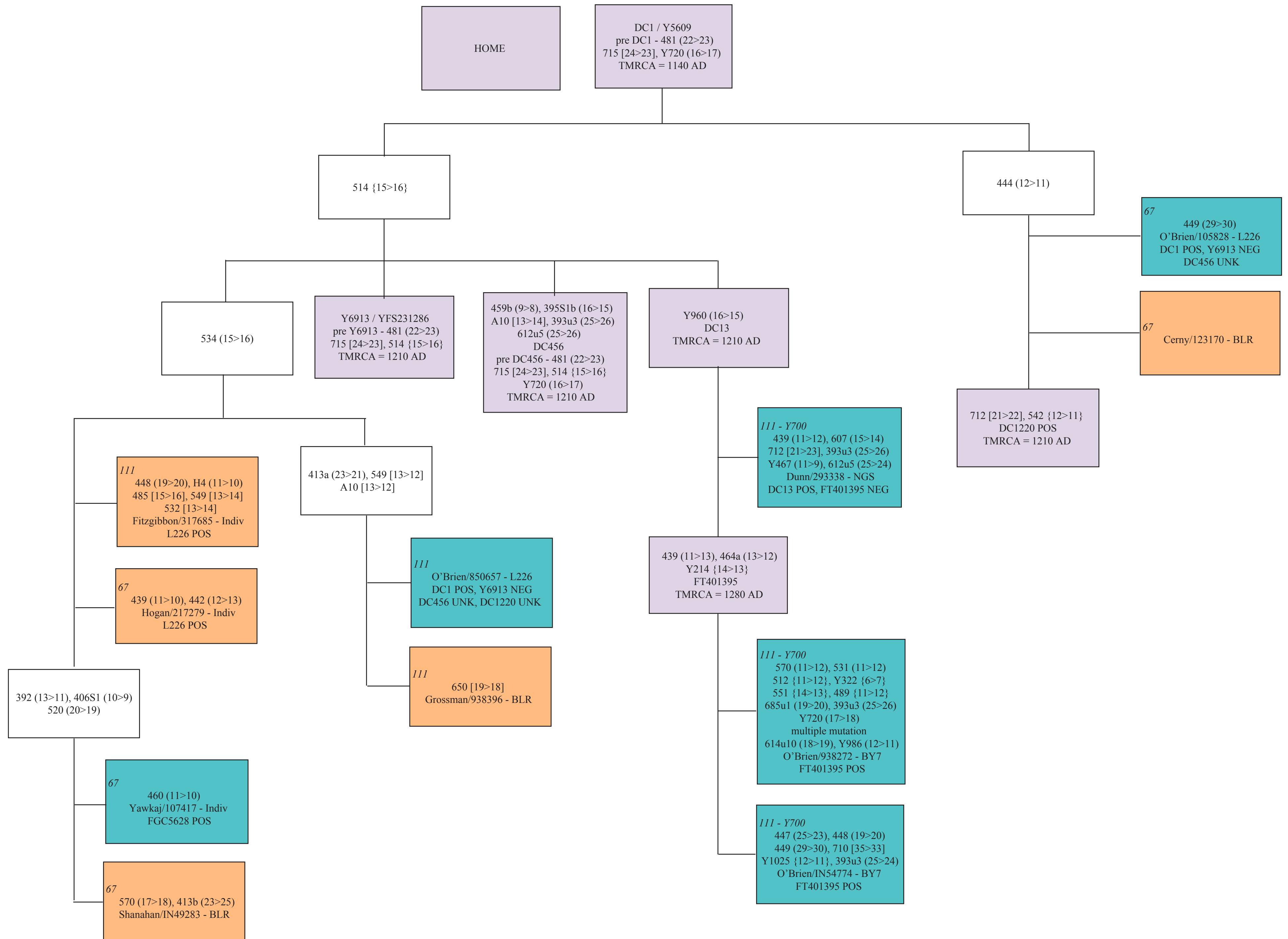
I also attempted my first pass on putting real dates vs. age of the events (years before present). I assumed that the average tester was born around 1960 and used the simplistic formula:  $\text{Date} = 1960 - (1500 - (\text{YSNP level} \times 60))$ . Unfortunately, this results in L226 being 460 AD 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.

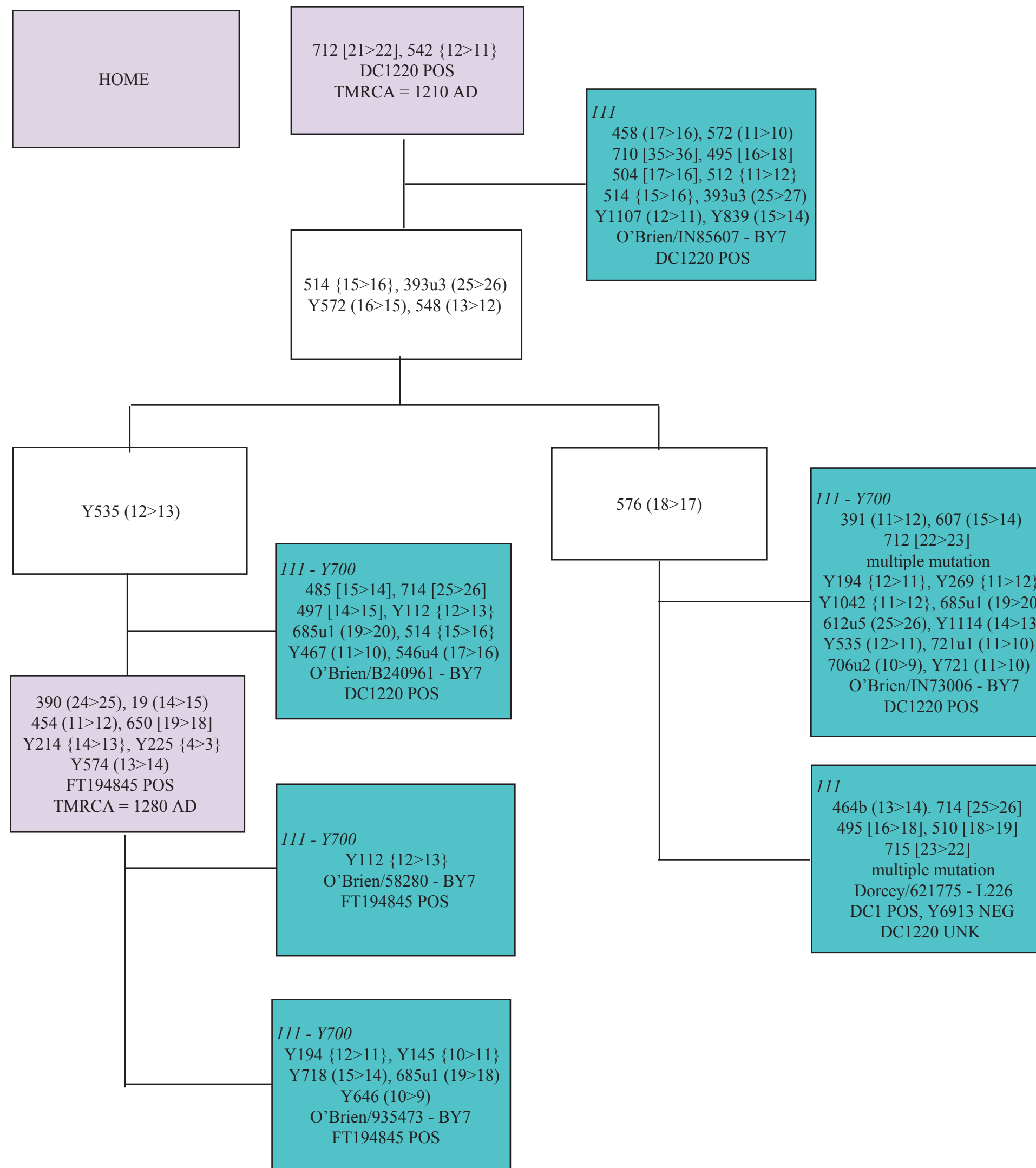
I have also been investigating variable dates on surname cluster dating (changing 1,000 AD to vary from 900 to 1100 AD based on two factors - percent of testers having the surname and allowing up to three surnames to allow for early prolific NPE lines).

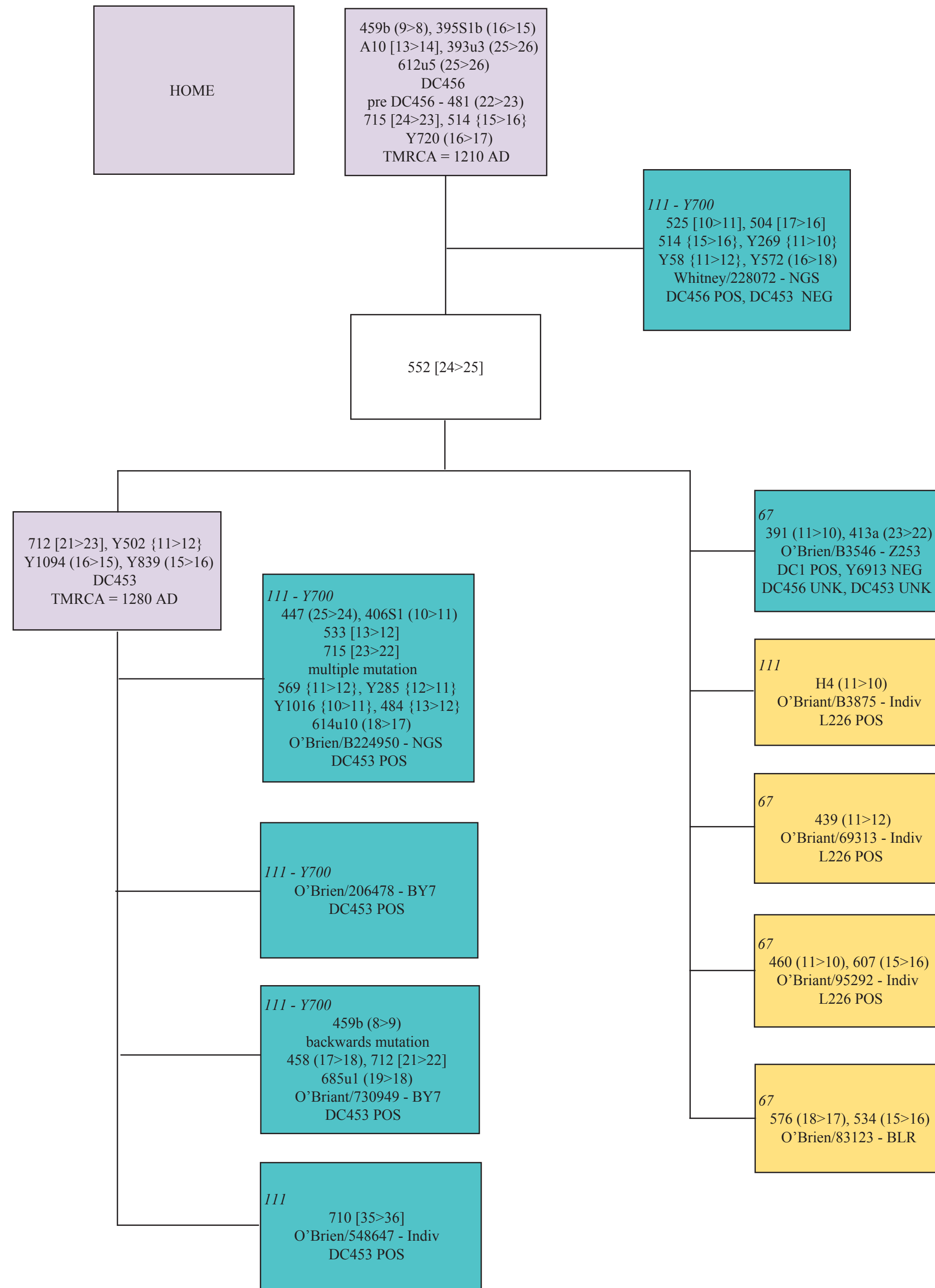
Also, I have experimented with YSTR branches for dating under the most recent YSNP levels and surname clusters. Unfortunately, the sample sizes are very small and the statistical variation is very large which will yield some very speculative dating.

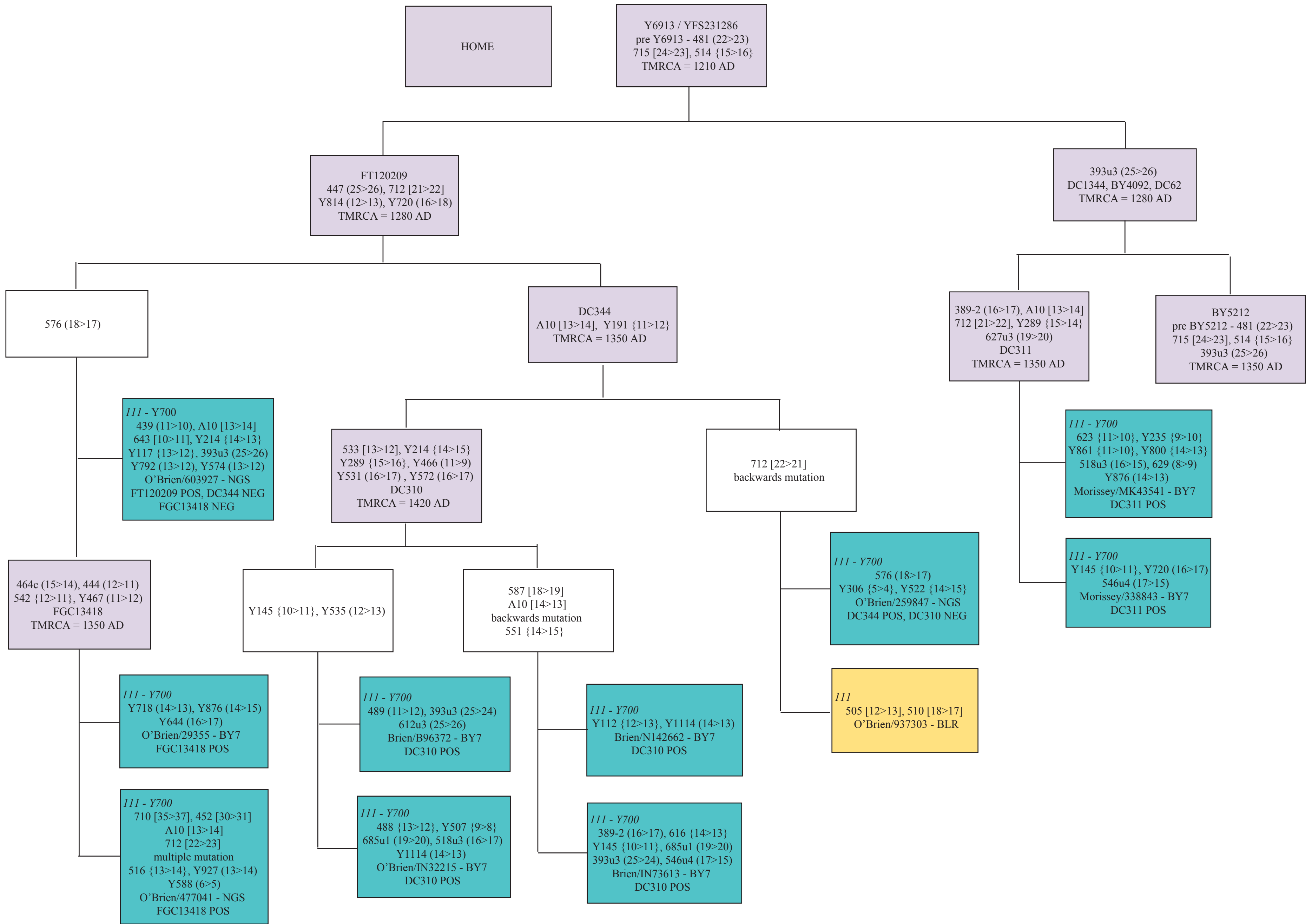
This more simplistic first pass is meant to get feedback on the base calculations. Future updates may fine tune the TMRCA estimate of surname clusters via tables and YSTR only TMRCA estimates may be added if I can figure out how to increase the reliability of these TMRCA estimates. I will not be constantly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













HOME

BY5212  
pre BY5212 - 481 (22>23)  
715 [24>23], 514 {15>16}  
393u3 (25>26)  
TMRCA = 1350 AD

456 (15>16)

A10 [13>14]

*I11*  
385b (14>13), 464b (13>14)  
712 [21>20], 504 [17>18]  
Chapman/B114795 - BLR

532 [13>14]

*I11*  
439 (11>12), 710 [35>37]  
533 [13>12], 712 [21>22]  
Hogan/123832 - BLR

DC863  
389-2 (16>17), 607 (15>16)  
565 (12>11), 561 [15>16]  
Y285 {12>11}, Y720 (16>17)  
517u1 (16>17)  
TMRCA = 1420 AD

H4 (11>12), 438 (12>11)  
712 [21>22], 551 {14>15}  
627u3 (19>21)

*67*  
413a (23>22), 444 (12>13)  
Bryant/871050 - BLR

458 (17>16), A10 [13>14]  
Y214 {14>13}  
Y44000  
TMRCA = 1420 AD

*I11 - Y700*  
505 [12>13], Y535 (12>13)  
706u2 (10>9), Y960 (16>15)  
O'Brien/822032 - BY7  
DC863 POS

685u1 (19>21)

*I11 - Y700*  
685u1 (19>18), Y1114 (14>13)  
Y572 (16>15), Y839 (15>14)  
614u3 (5>4), Y960 (16>17)  
O'Brien/62268 - BY7  
DC863 POS

*I11 - Y700*  
512 {11>10}, Y68 {11>10}  
Y839 (15>14), 614u10 (18>16)  
O'Dea/313937 - BY7  
BY5212 POS, DC863 NEG  
Y44000 NEG, DC1542 NEG

*I11*  
O'Brien/IN11917 - Indiv  
Y44000 POS

*I11 - Y700*  
712 [21>24], Y145 {10>11}  
Y1114 (14>13), Y720 (16>17)  
614u10 (18>17), 703 (10>12)  
O'Brien/MK43540 - BY7  
Y44000 POS

*67*  
O'Brien/B288126 - Indiv  
BY5212 POS, DC863 UNK  
Y44000 UNK

*I11 - Y700*  
533 [13>12], 452 [30>29]  
712 [21>20], 650 [19>18]  
510 [18>17], 612u5 (25>26)  
Y535 (12>11), 627u3 (19>21)  
O'Brien/606858 - BY7  
DC863 POS

DC1542  
385a (11>12), 449 (29>30)  
463 [25>26], Y299 {11>12}  
685u1 (19>20), Y814 (12>11)  
612u5 (25>27)  
TMRCA = 1420 AD

*I11 - Y700*  
Y112 {12>13}, Y145 {10>11}  
Y720 (16>17), Y781 (10>11)  
548 (13>14)  
O'Dea/IN33914 - BY7  
DC1542 POS

712 [21>22], 508 {11>10}  
FT96594  
TMRCA = 1490

712 [21>22]

*I11 - Y700*  
714 [25>24], 552 [24>25]  
489 {11>12}  
Y720 (17>18)  
multiple mutation  
627u3 (19>20)  
393u3 (26>25)  
backwards mutation  
O'Brien/IN49258 - BY7  
DC863 POS

*I11 - Y700*  
534 (15>14), 618 {12>11}  
484 {13>12}, 546u4 (17>15)  
O'Dea/IN11528 - BY7  
DC1542 POS

*I11 - Y700*  
389-1 (13>12), 624 {9>8}  
389B (10>9), 517u1 (16>17)  
O'Brien/107307 - BY7  
Y44000 POS

*I11 - Y700*  
484 {13>12}  
O'Brien/48596 - BY7  
Y44000 POS

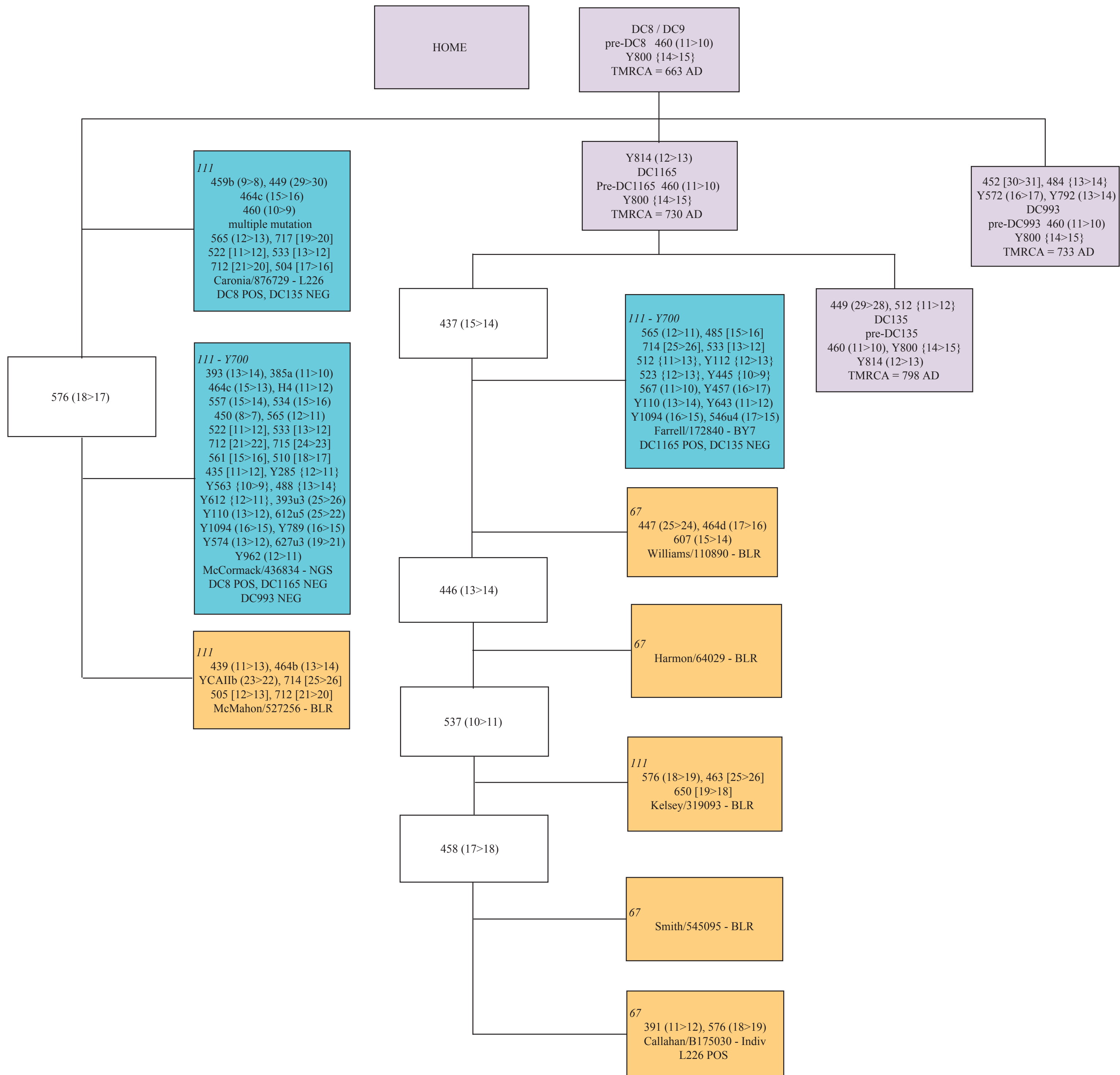
*67*  
O'Brien/MK37301 - Indiv  
BY5212 POS, DC863 UNK  
Y44000 UNK

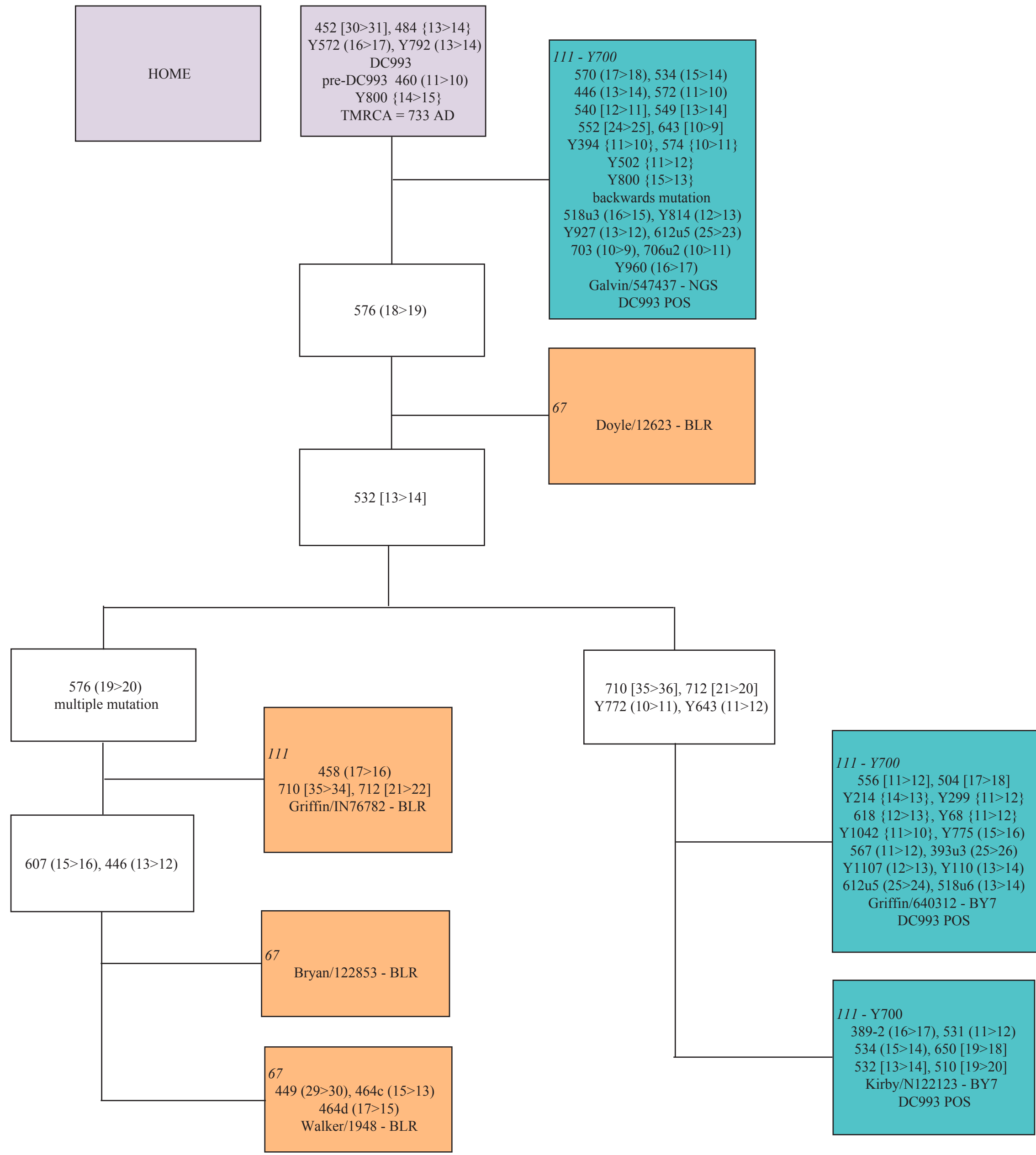
456 (15>16)

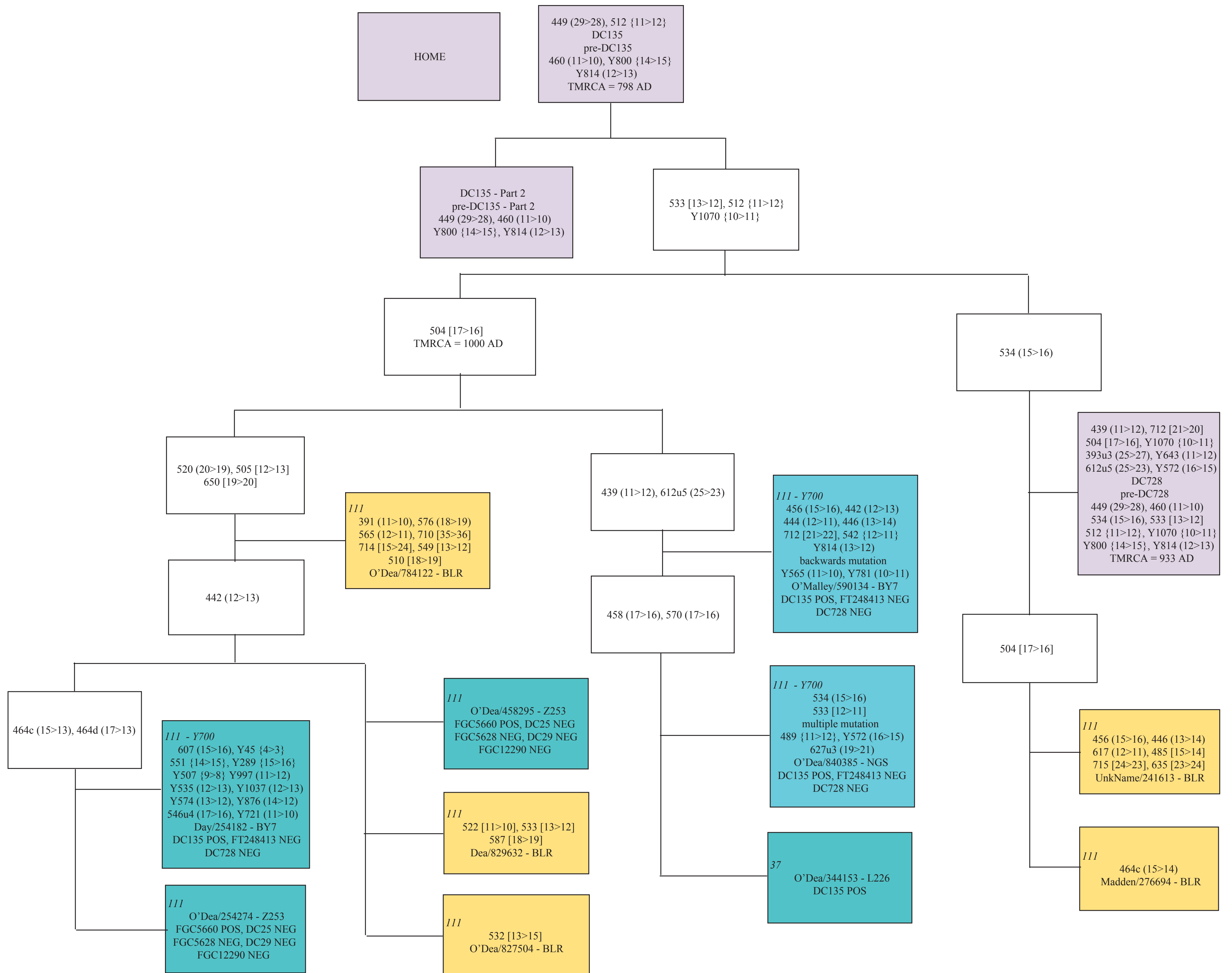
*I11 - Y700*  
549 [13>14], Y110 (13>14)  
O'Brien/B234890 - BY7  
DC863 POS

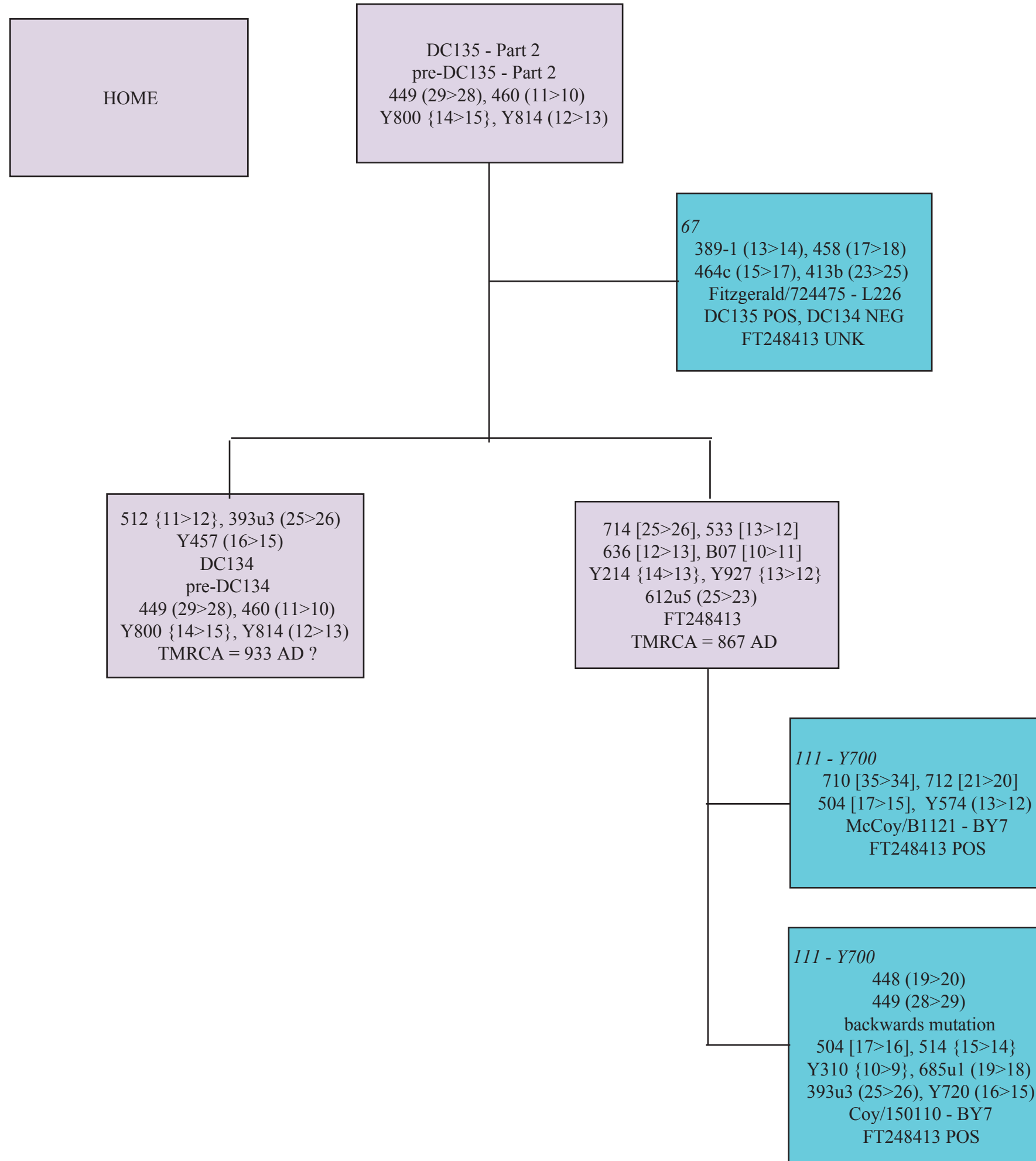
*I11*  
O'Brien/45897 - Indiv  
Y44000 POS

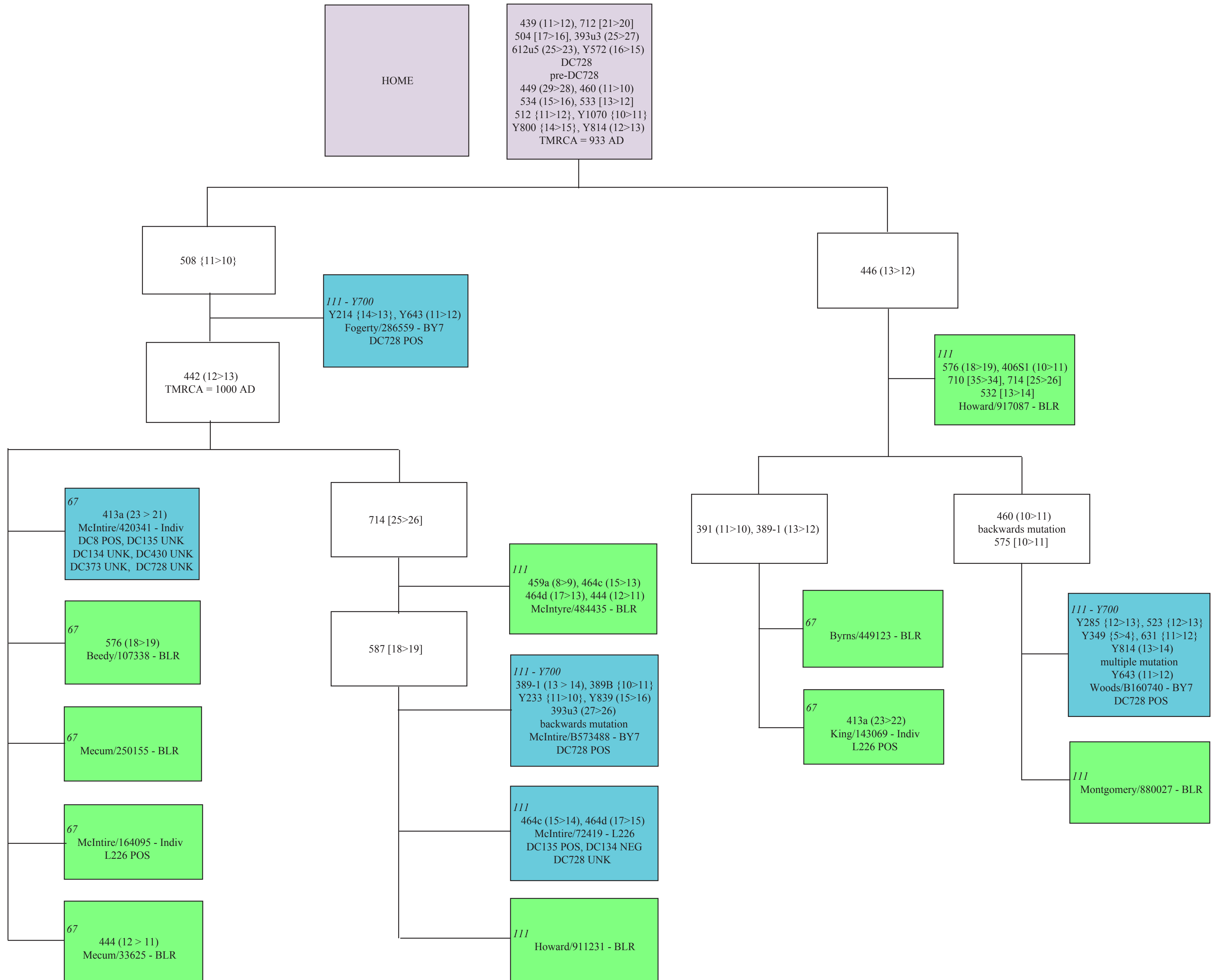
*67*  
557 (15>14)  
O'Brien/74637 - Indiv  
BY5212 POS

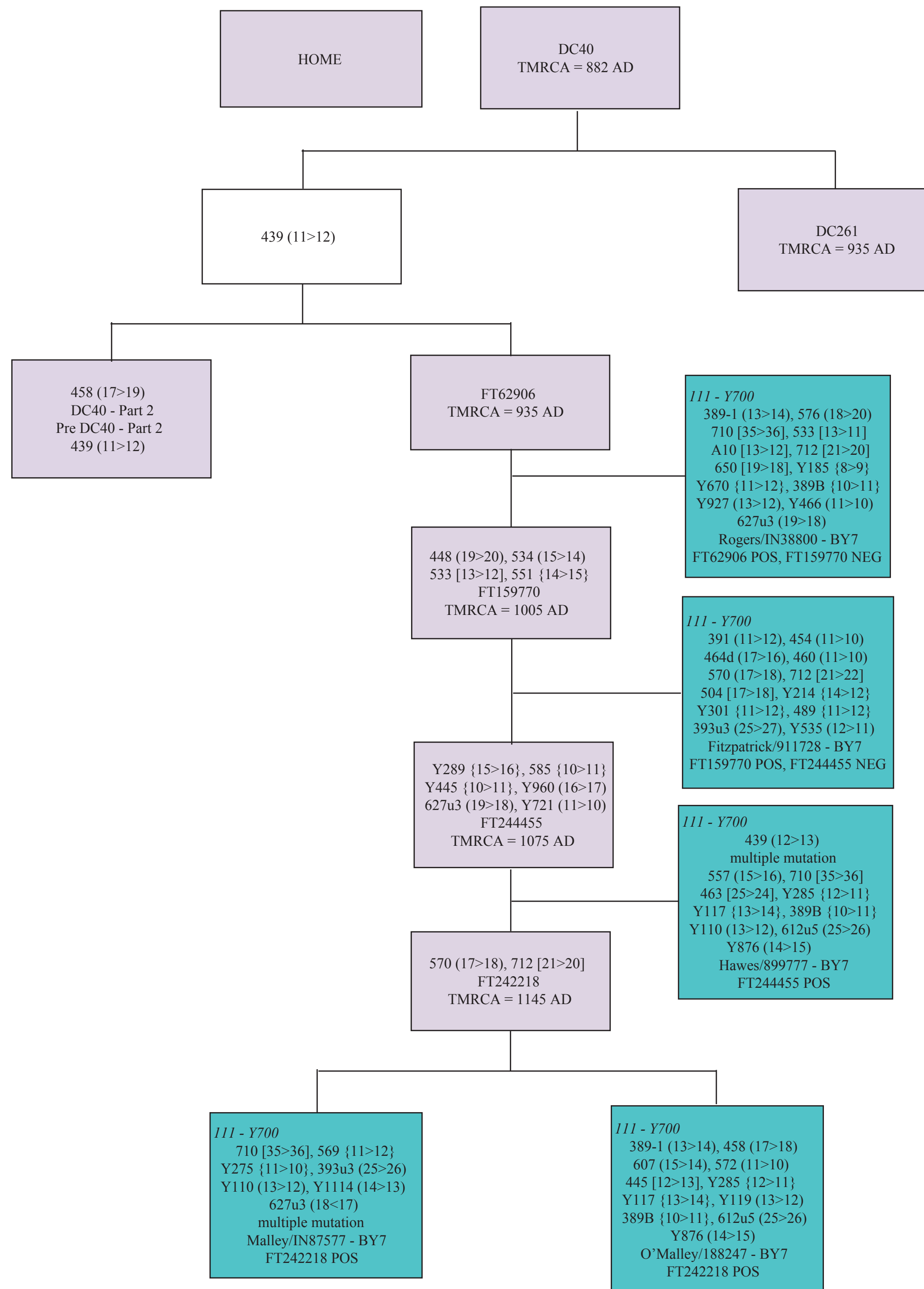












HOME

DC261  
TMRCA = 935 AD

*111 - Private*  
439 (11>12), 389-2 (16>17)  
570 (17>19), 710 [35>33]  
549 [13>12], 533 [13>12]  
A10 [13>14], 525 [10>11]  
712 [21>20], 504 [17>16]  
Kerwick/N56105 - NGS  
DC261

385a (11>12), 449 (29>30)

*67*  
447 (25>26), 460 (11>12)  
H4 (11>12), 557 (15>14)  
Frawley/B1778 - L226  
DC40 POS, A6097 UNK

439 (11>12)

*67*  
393 (13>14), 447 (25>24)  
Maher/N11896 - BLR

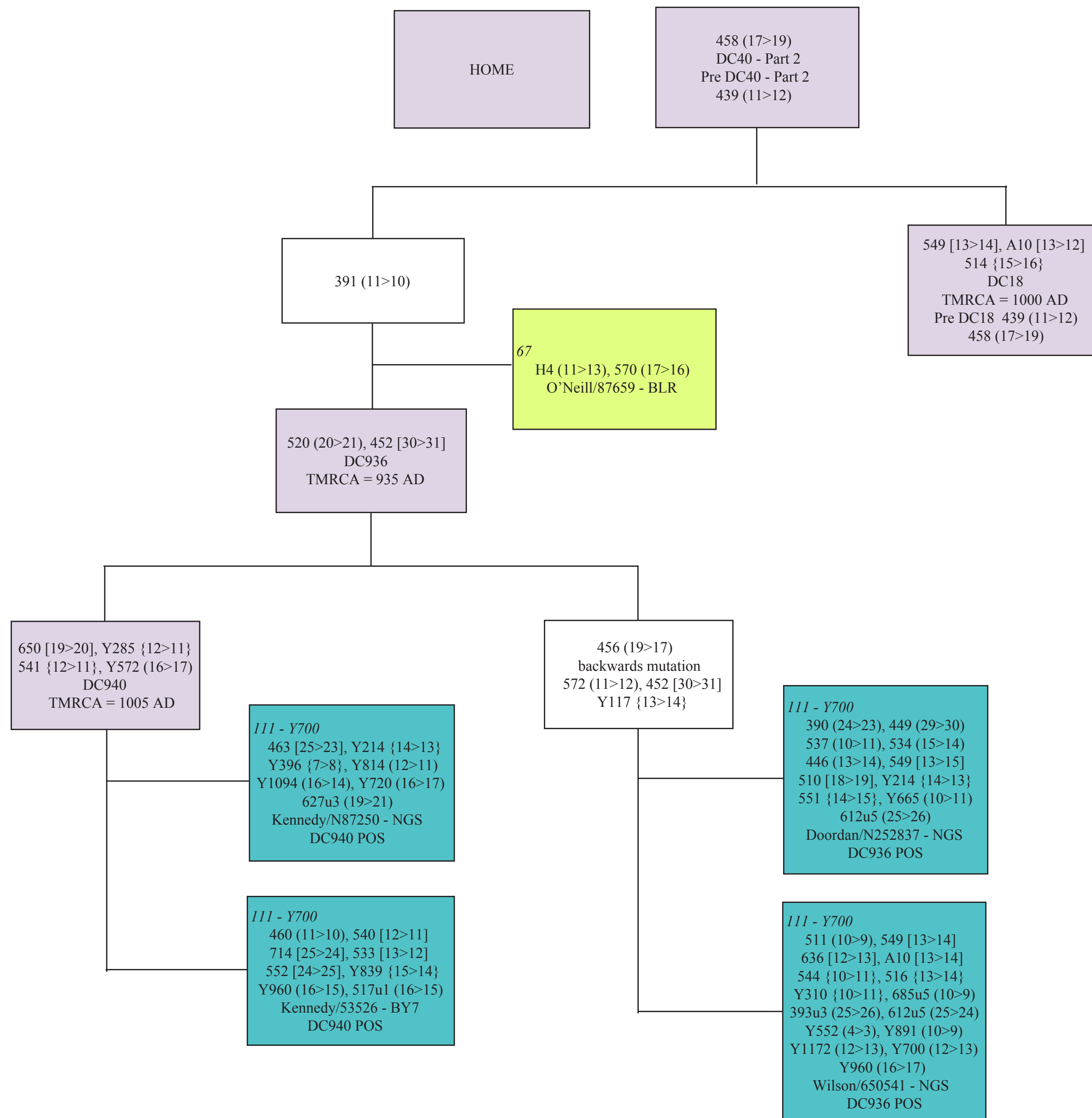
*67*  
442 (12>13), 531 (11>12)  
391 (11>12)  
Frawley/121852 - BLR

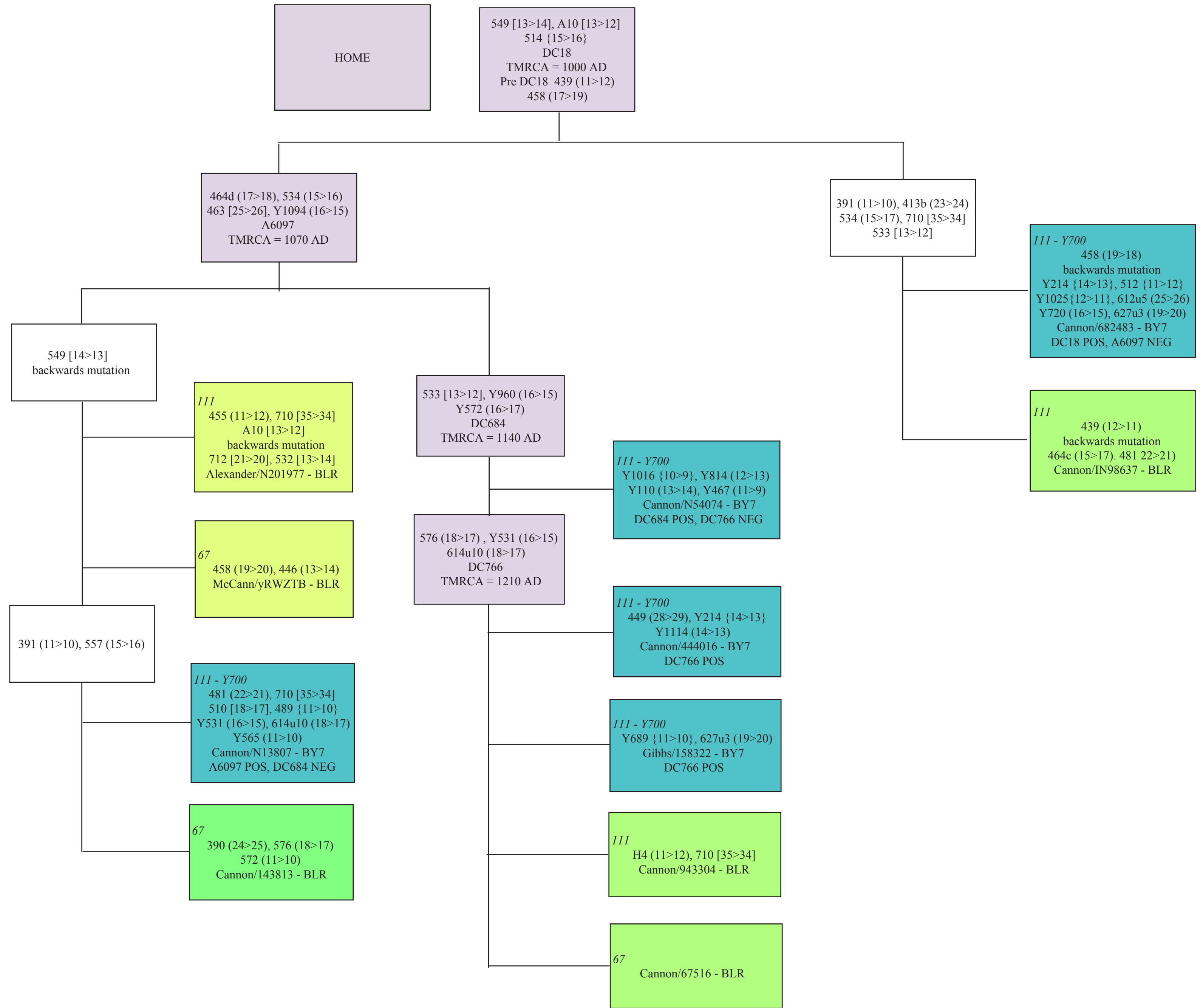
391 (11>10), 710 [35>34]

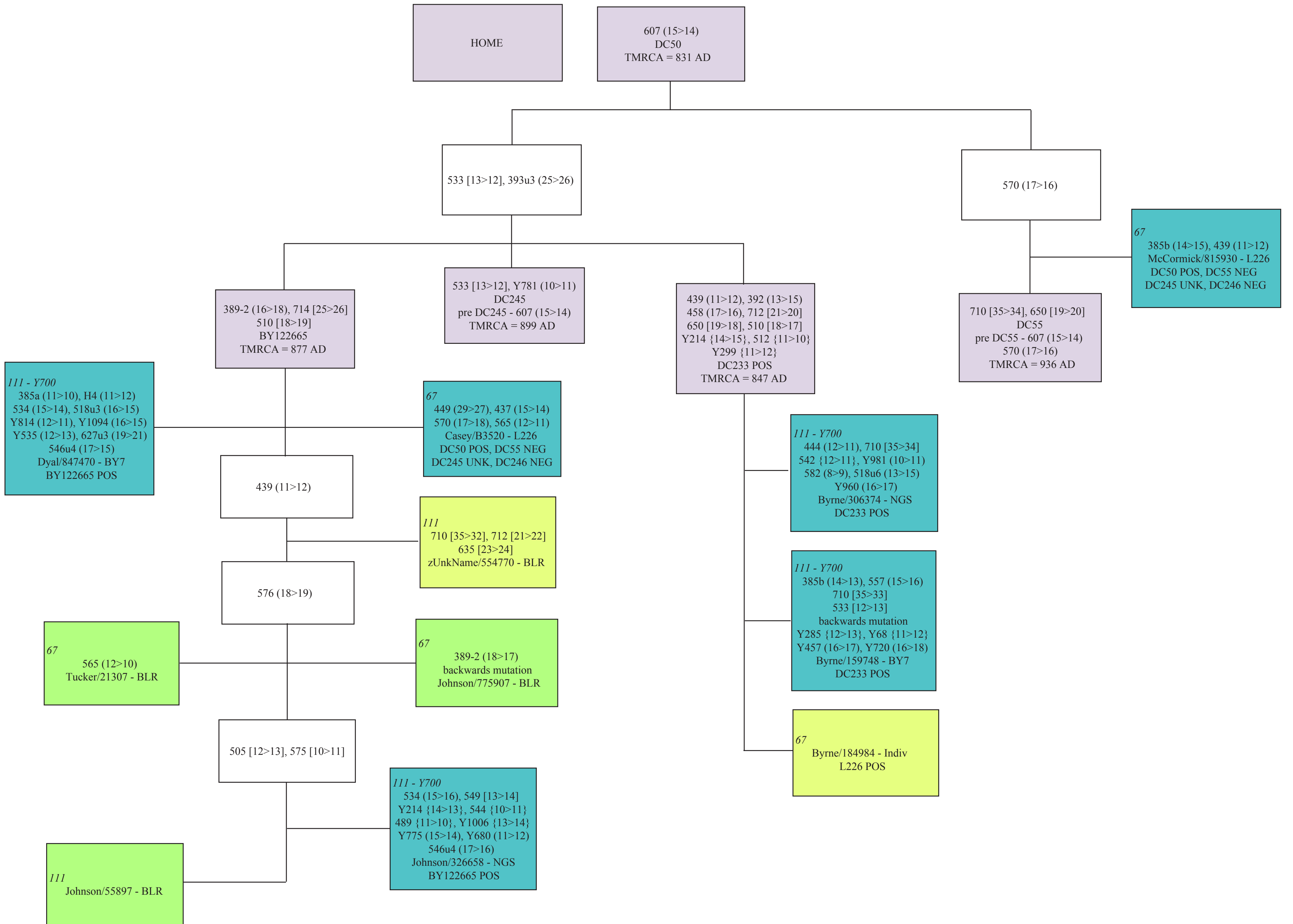
*111 - Y700*  
578 (9>10), 540 [12>11]  
549 [13>14], 533 [13>11]  
Y214 {14>13}, 489 {11>12}  
Y1068 {10>11}, 393u3 (25>26)  
Y665 (10>11), Y927 (13>14)  
612u5 (25>26)  
Bergesen/217593 - NGS  
DC261 POS

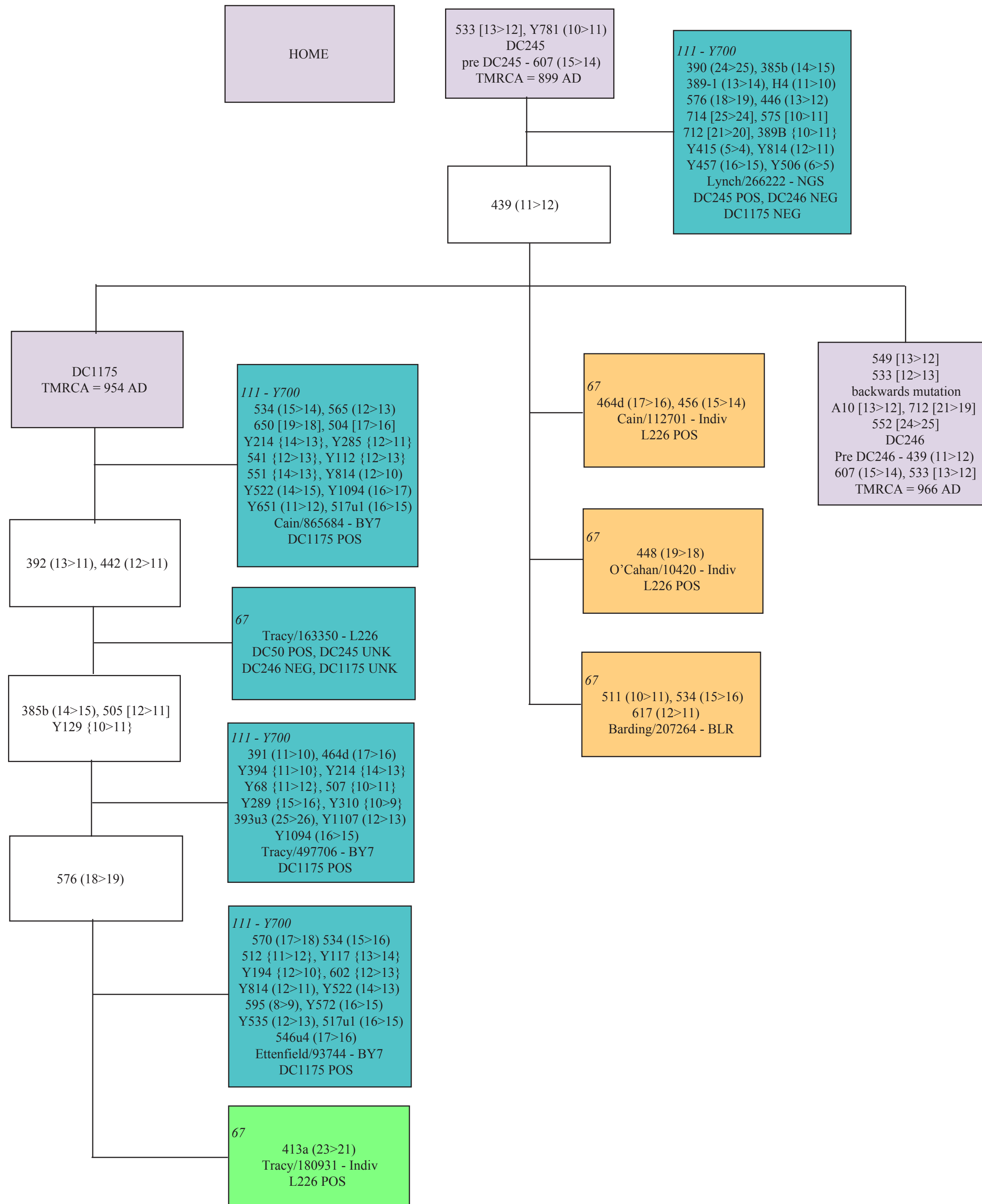
*111*  
385a (12>11)  
backwards mutation  
385b (14>15), 458 (17>18)  
464d (17>16), 460 (11>12)  
H4 (11>12), YCAIIb (23>22)  
413a (23>22), 520 (20>19)  
446 (13>14), 533 [13>12]  
712 [21>22], 650 [19>20]  
715 [24>25]  
Hickey/IN80593 - Indiv  
DC40 POS, DC261 UNK

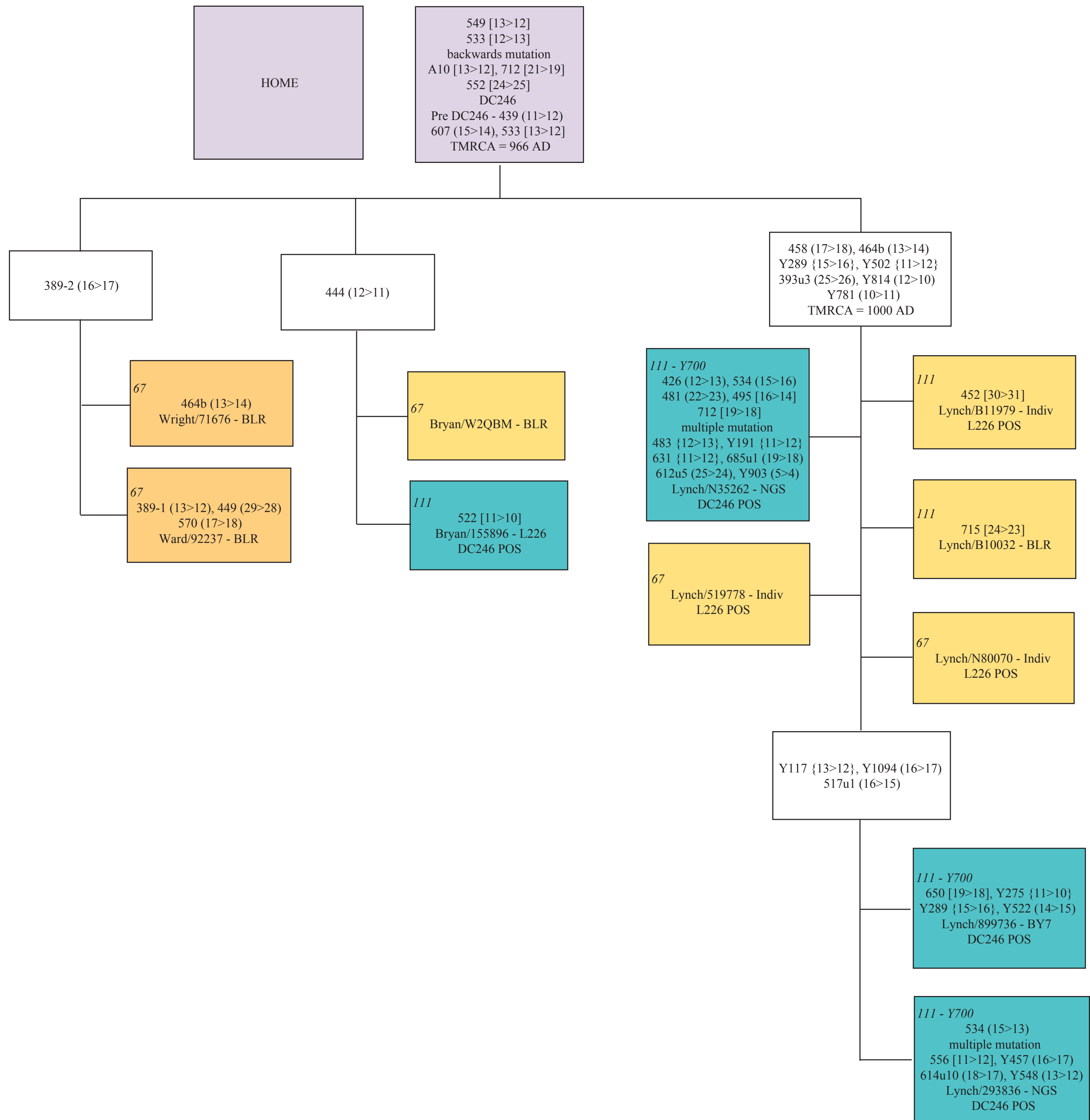


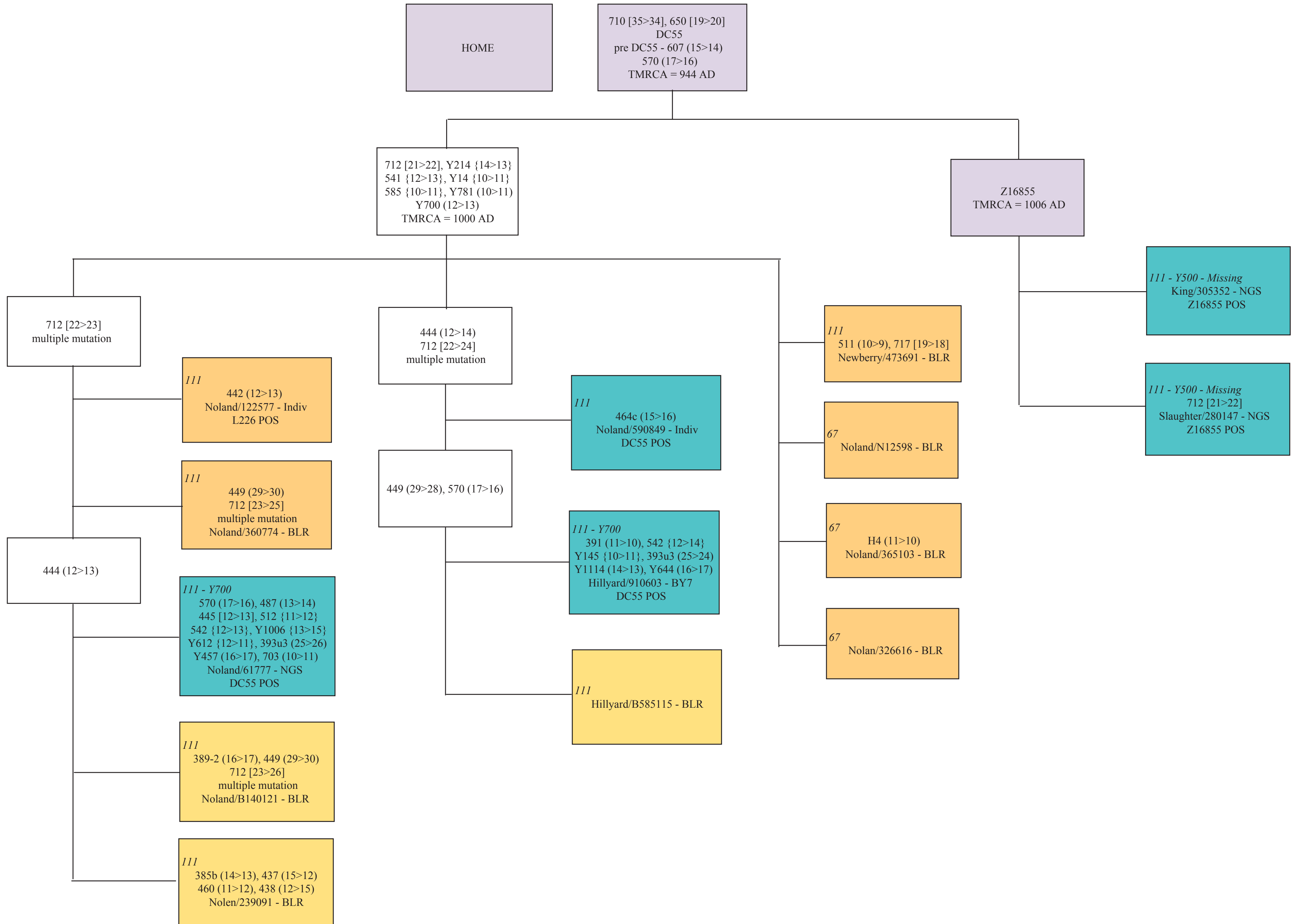


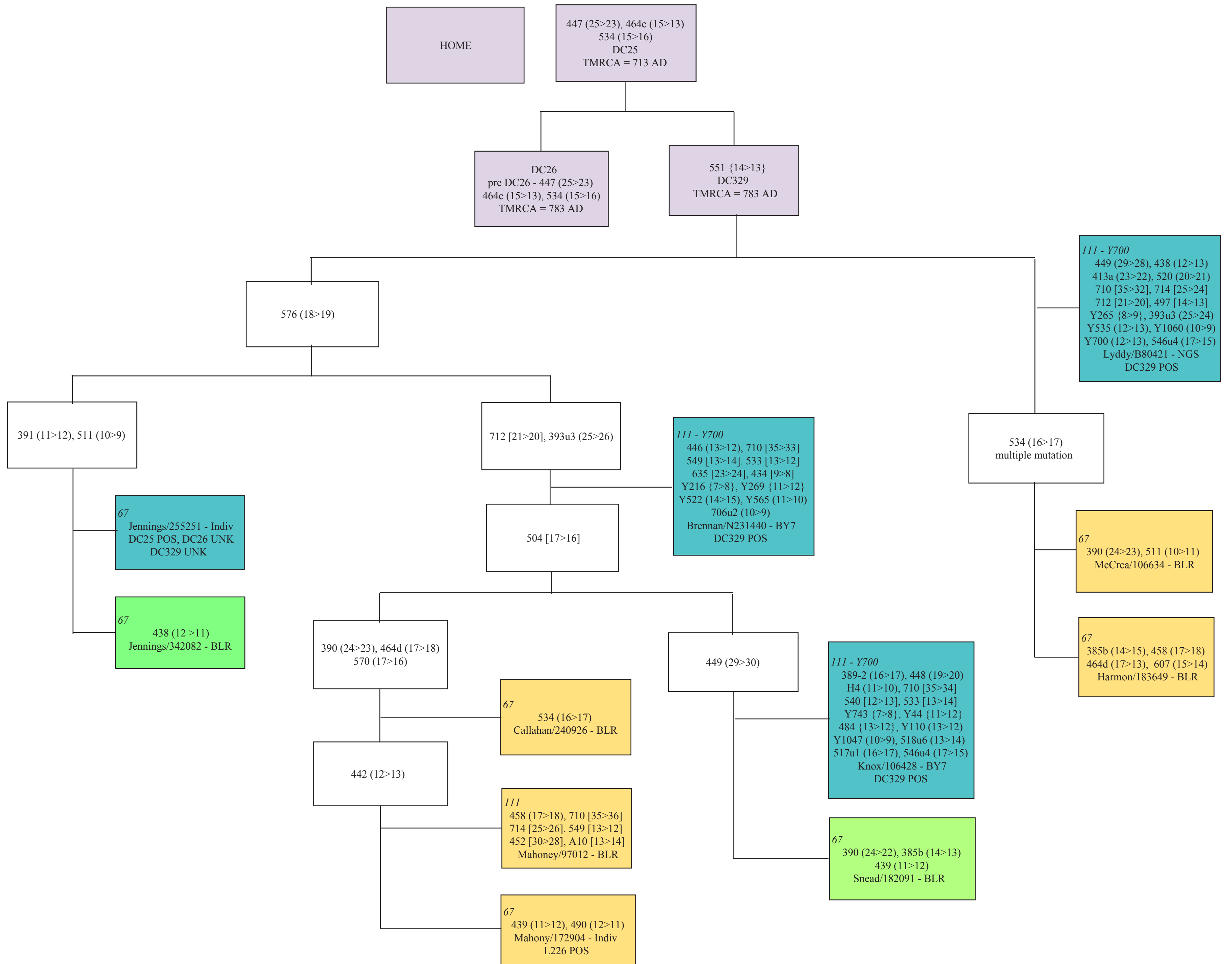


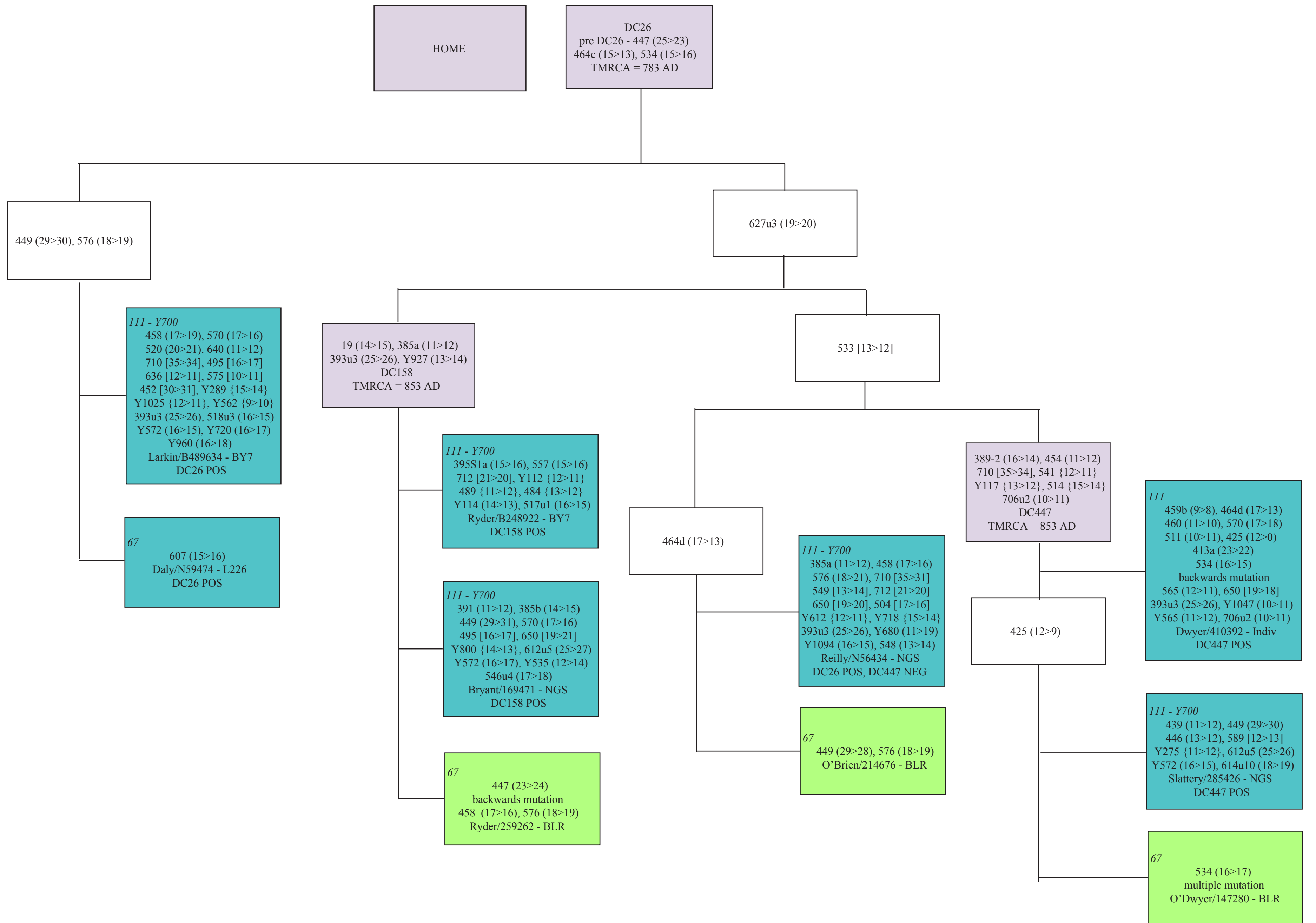








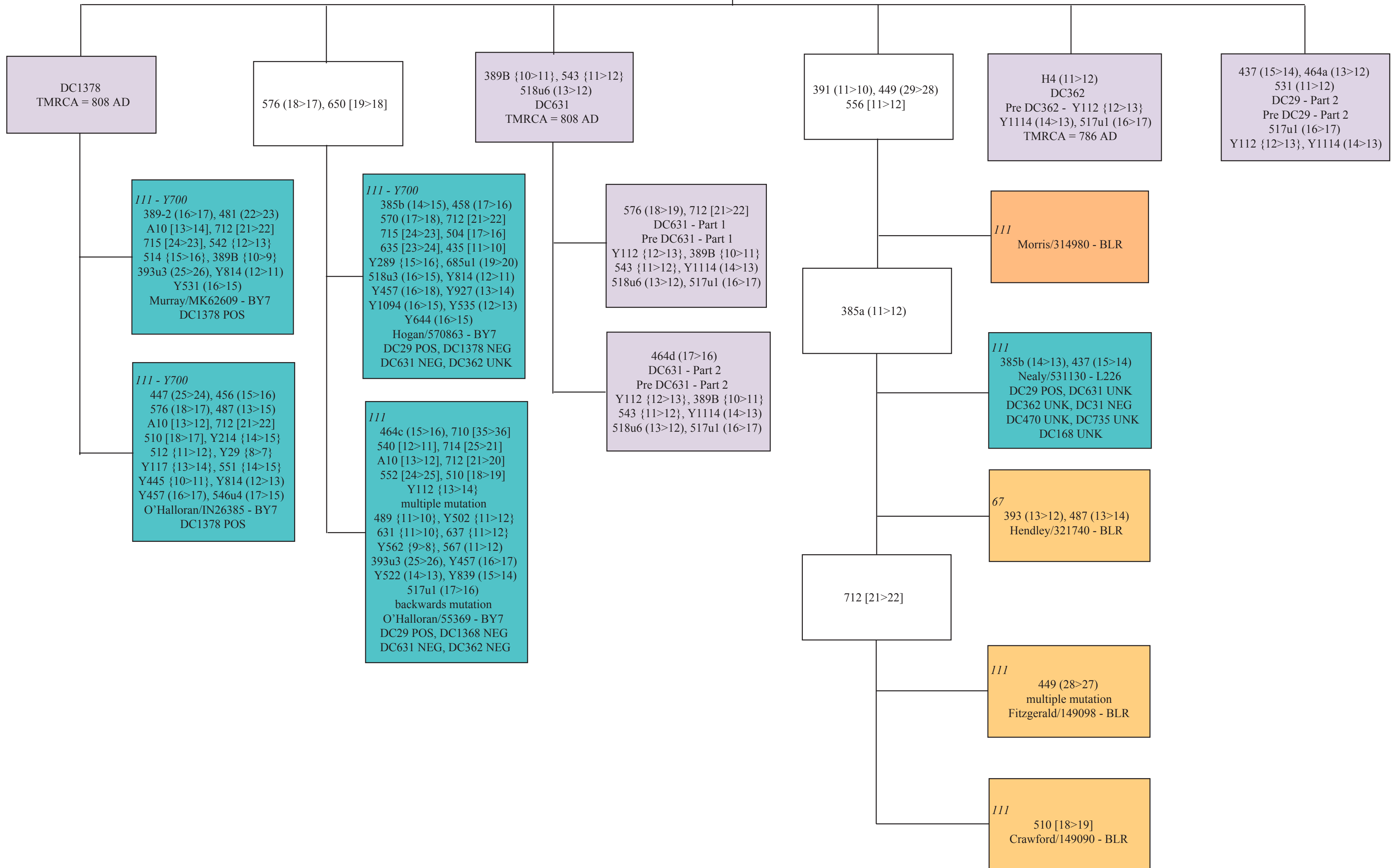


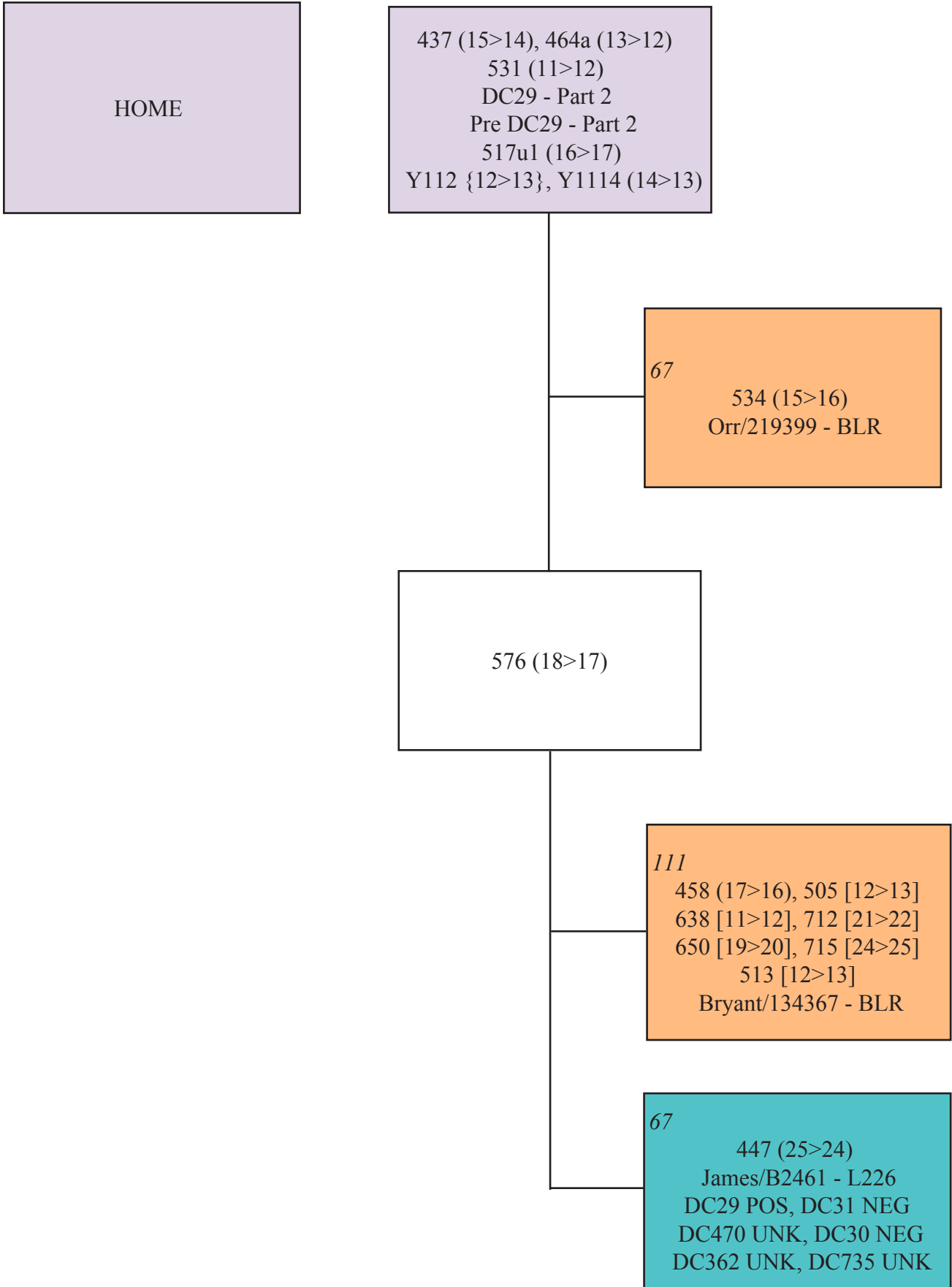




HOME

Y112 {12>13}, Y1114 (14>13)  
DC29  
BY4101  
TMRCA = 738 AD  
Pre DC29 - 517u1 (16>17)





HOME

576 (18>19), 712 [21>22]  
DC631 - Part 1  
Pre DC631 - Part 1  
Y112 {12>13}, 389B {10>11}  
543 {11>12}, Y1114 (14>13)  
518u6 (13>12), 517u1 (16>17)

439 (11>12), 607 (15>14)  
534 (15>14)

464d (17>16)

67  
Cline/343774 - L226  
DC29 POS, DC31 NEG  
DC631 UNK, DC362 UNK

67  
617 (12>13)  
Bryant/57501 - Indiv  
L226 POS

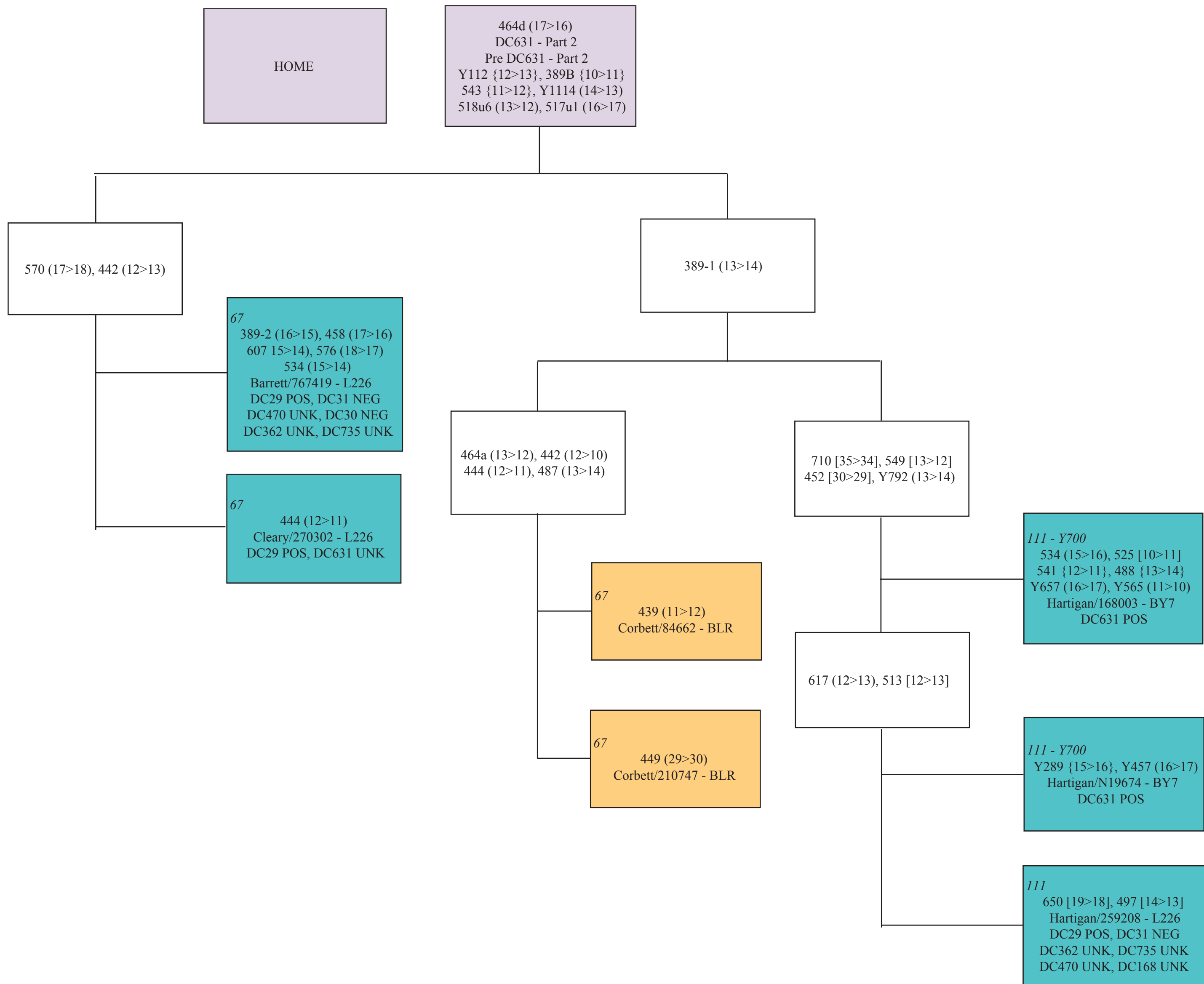
67  
Cline/190079 - Indiv  
L226 POS

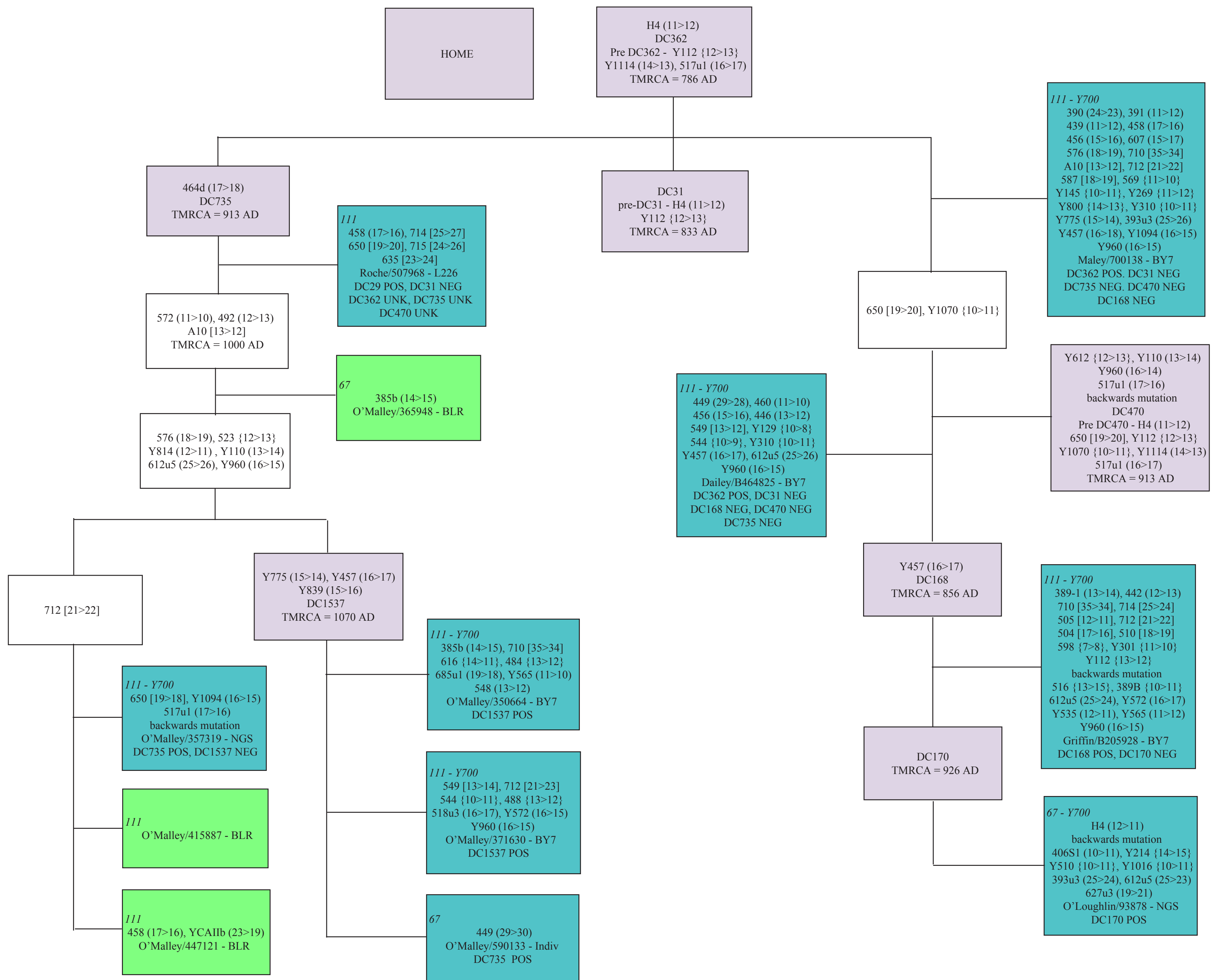
67  
391 (11>12), H4 (11>12)  
395S1b (16>15), 557 (15>16)  
534 (15>16)  
O'Hara/666311 - BLR

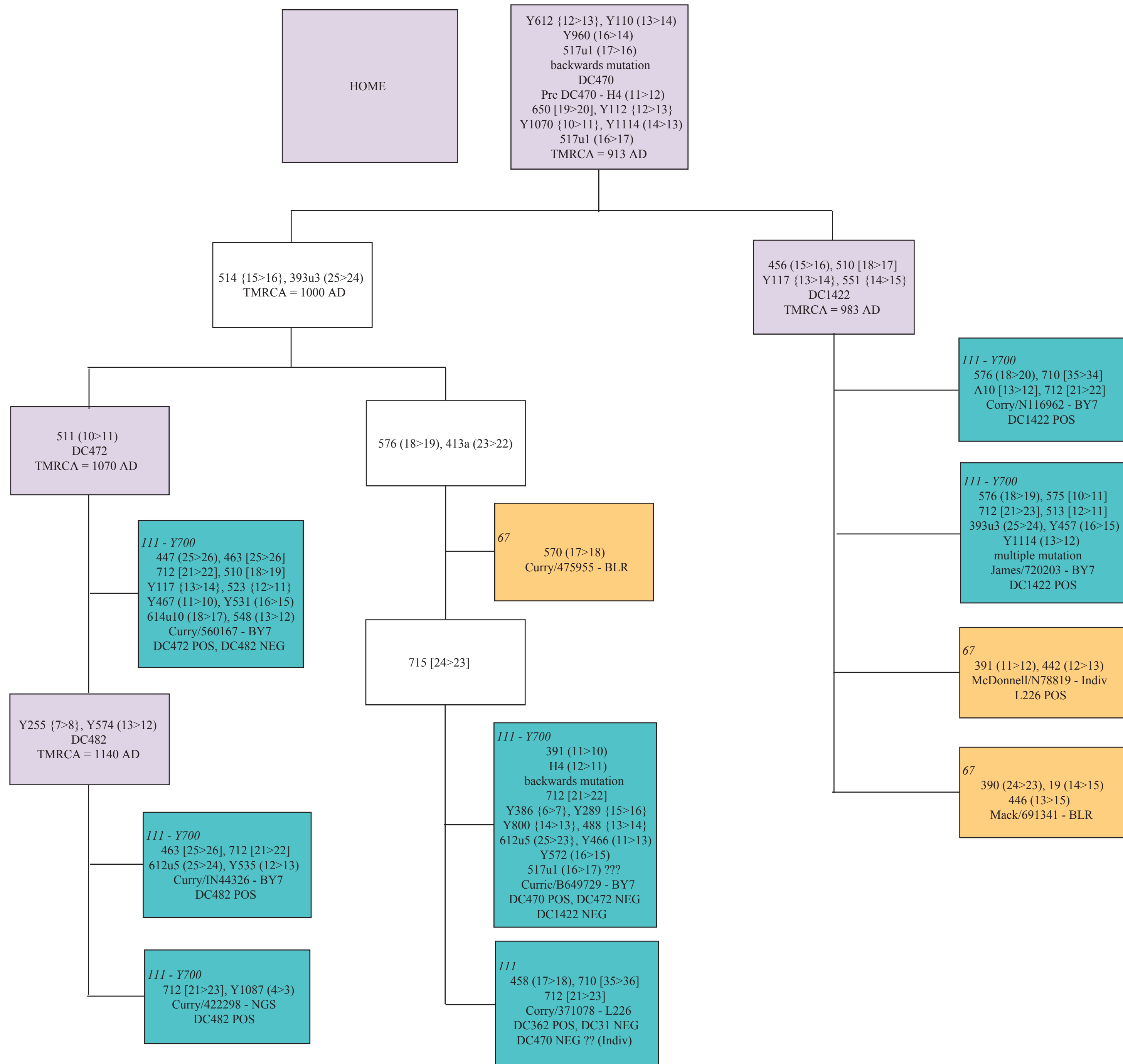
389-1 (13>14)

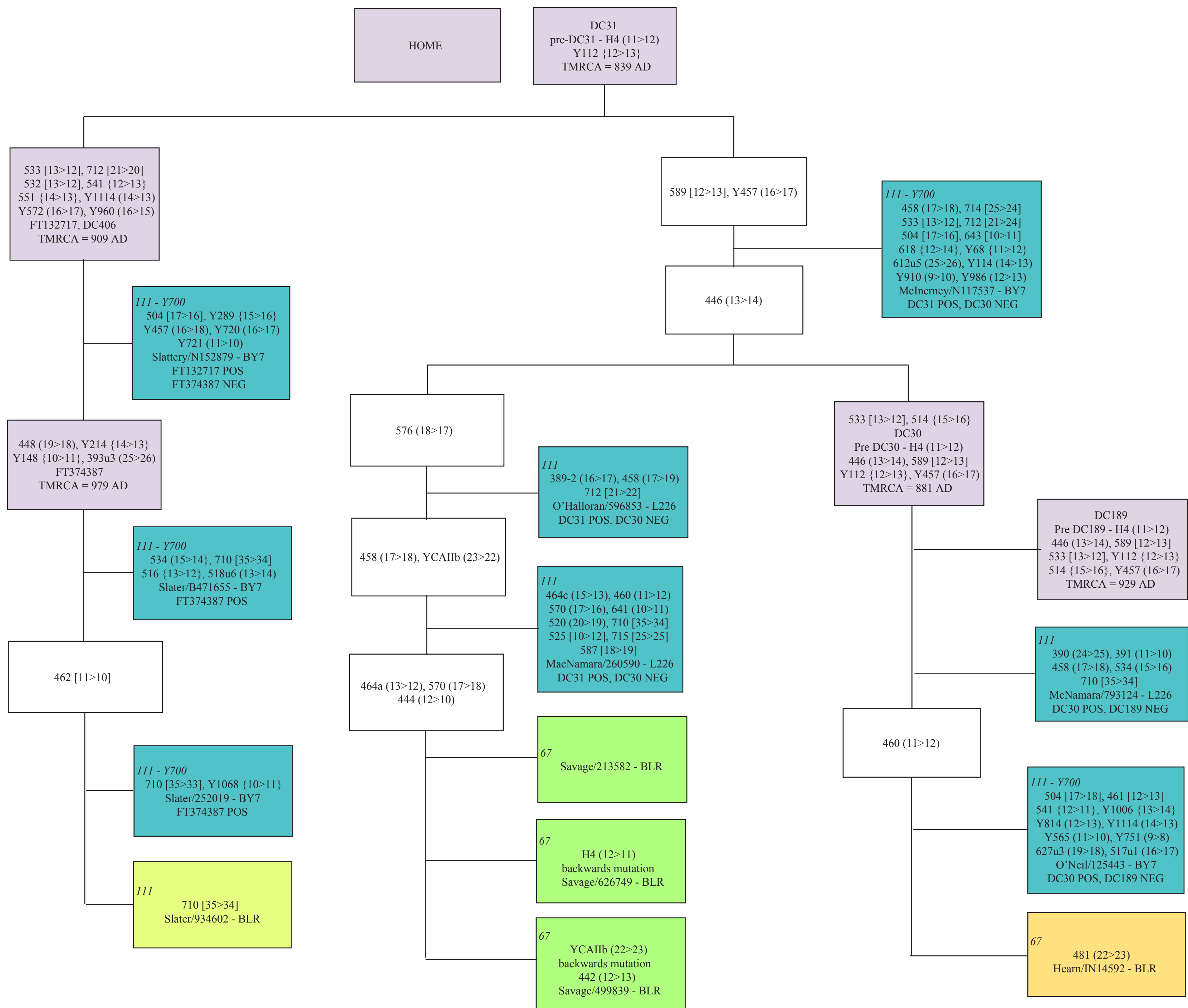
111 - Y700  
710 [35>33], 549 [13>12]  
452 [30>29], 715 [24>23]  
513 [12>13], 635 [23>24]  
Y743 {7>8}, 685u5 (19>20)  
Y775 (15>14), 393u5 (25>24)  
Y457 (16>17), Y522 (14>15)  
Y839 (15>14)  
O'Hare/50373 - BY7  
DC631 POS

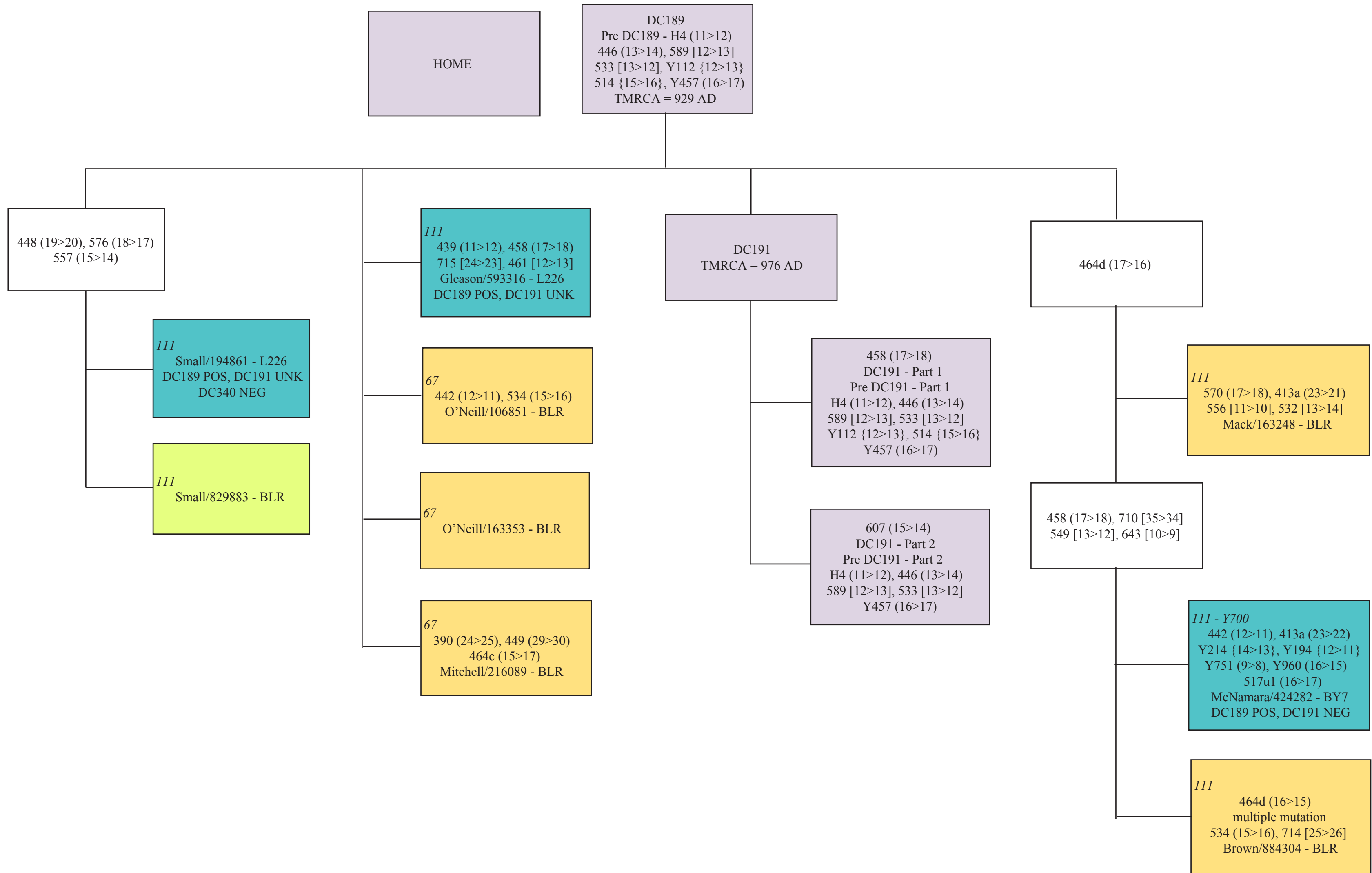
111  
447 (25>24), 449 (29>30)  
452 [30>31], 532 [13>14]  
Norman/312582 - BLR



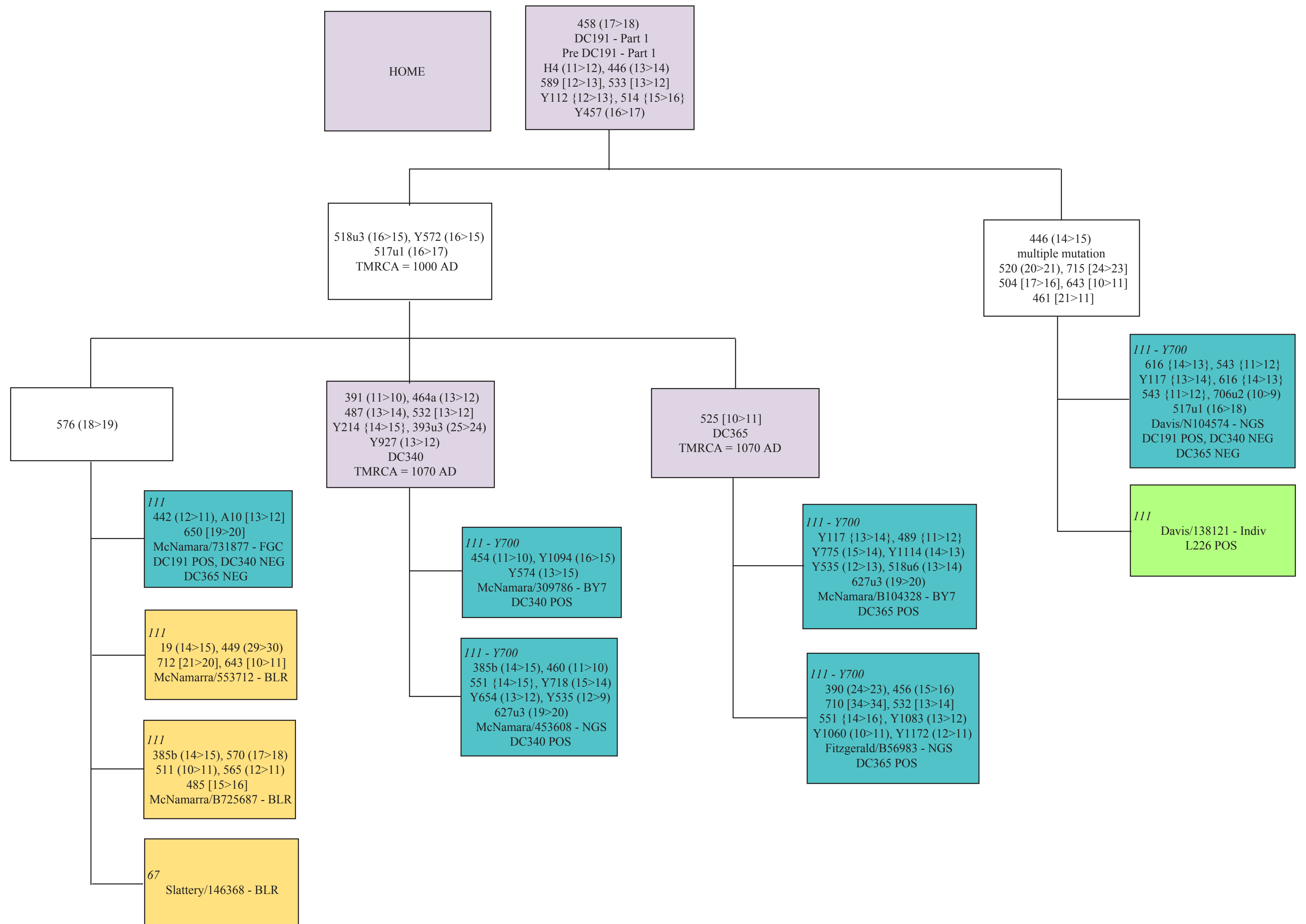


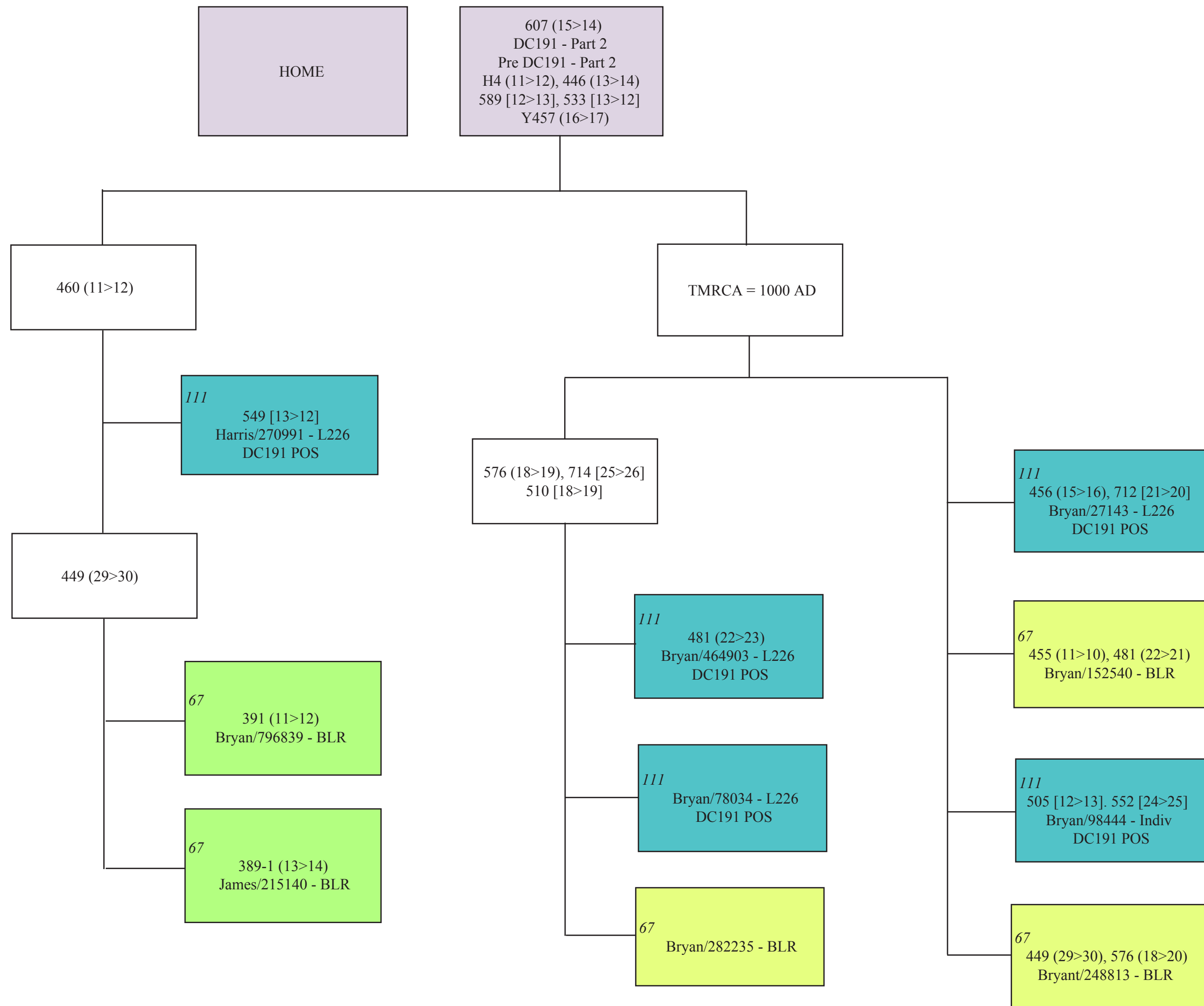


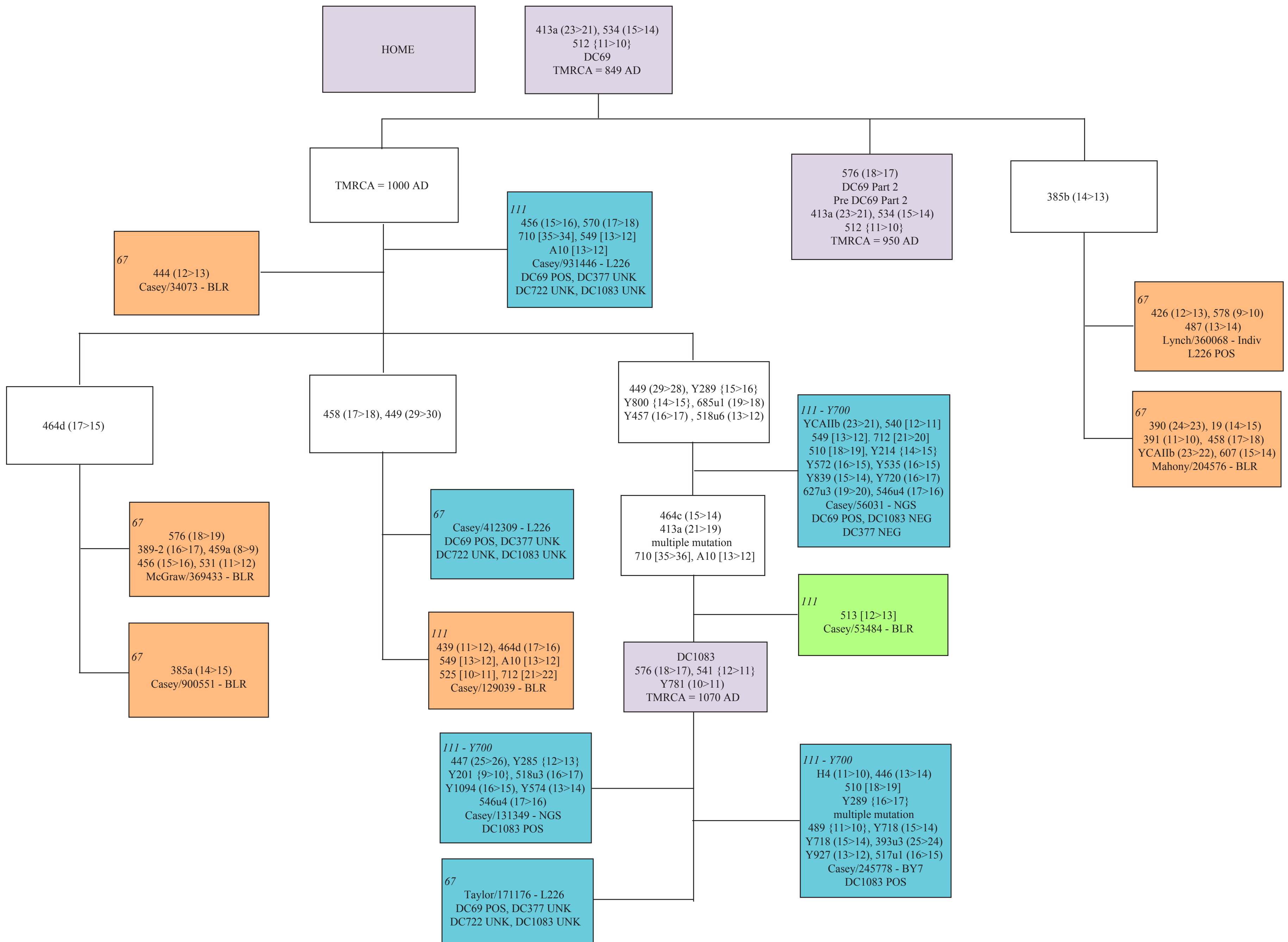


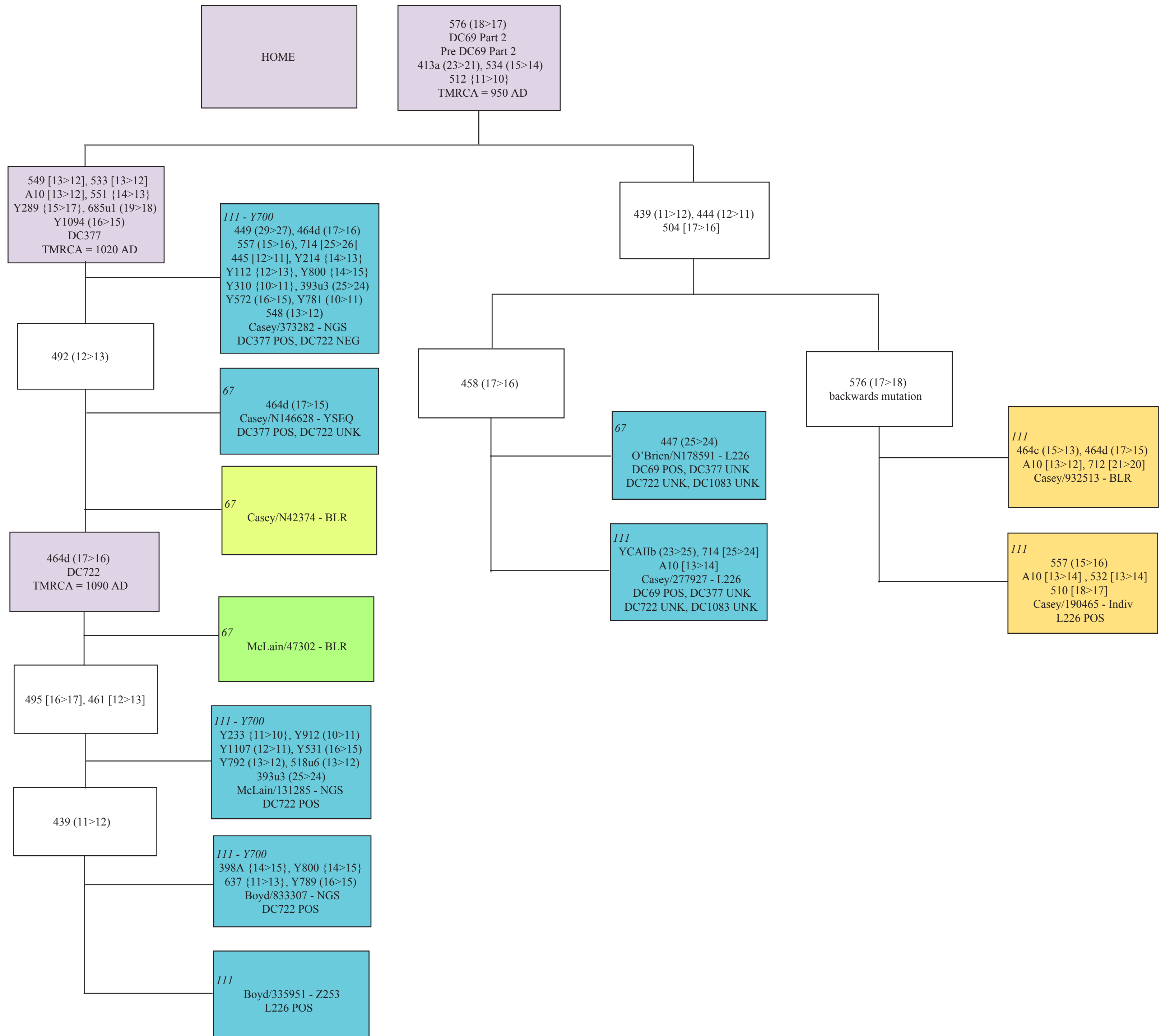


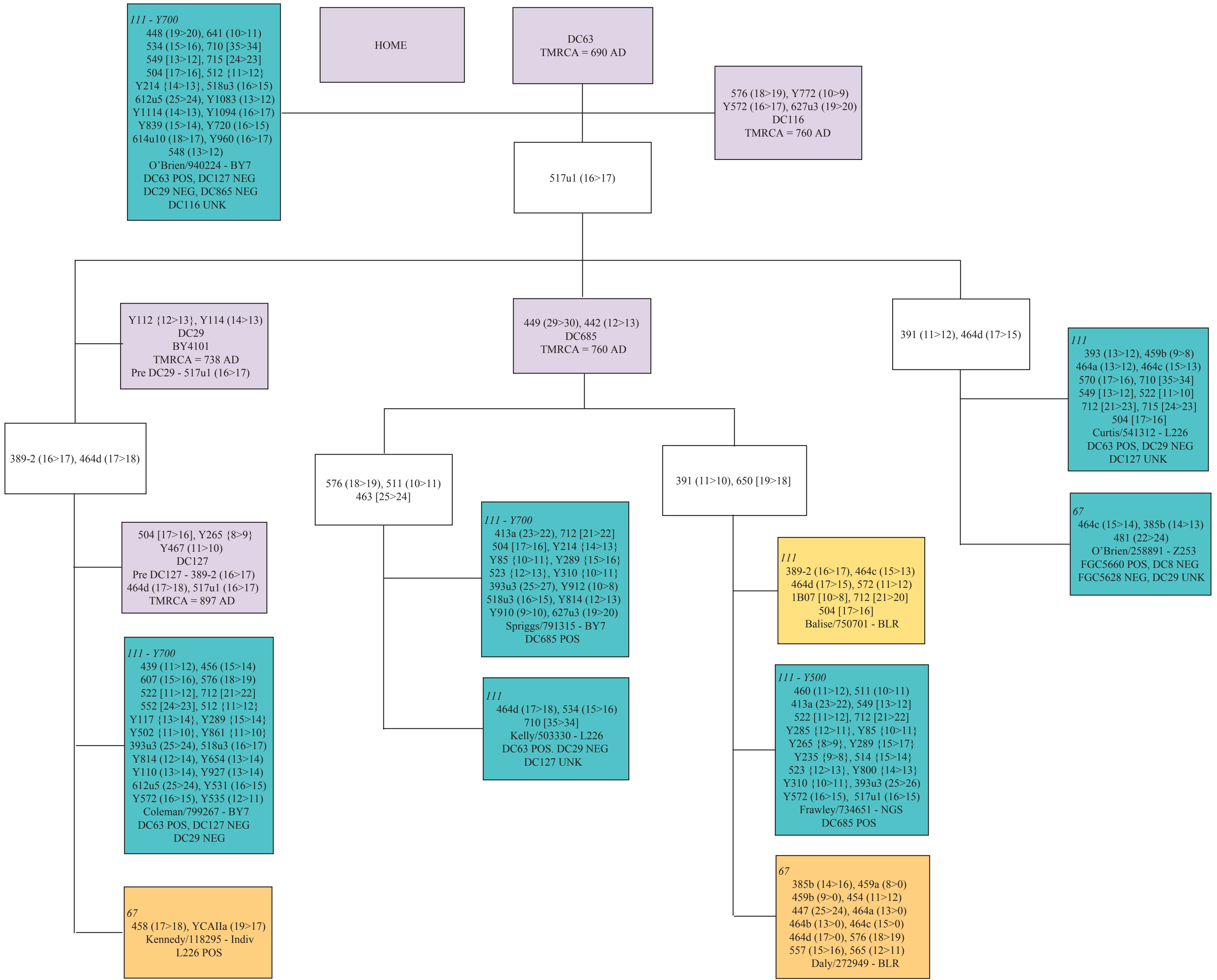


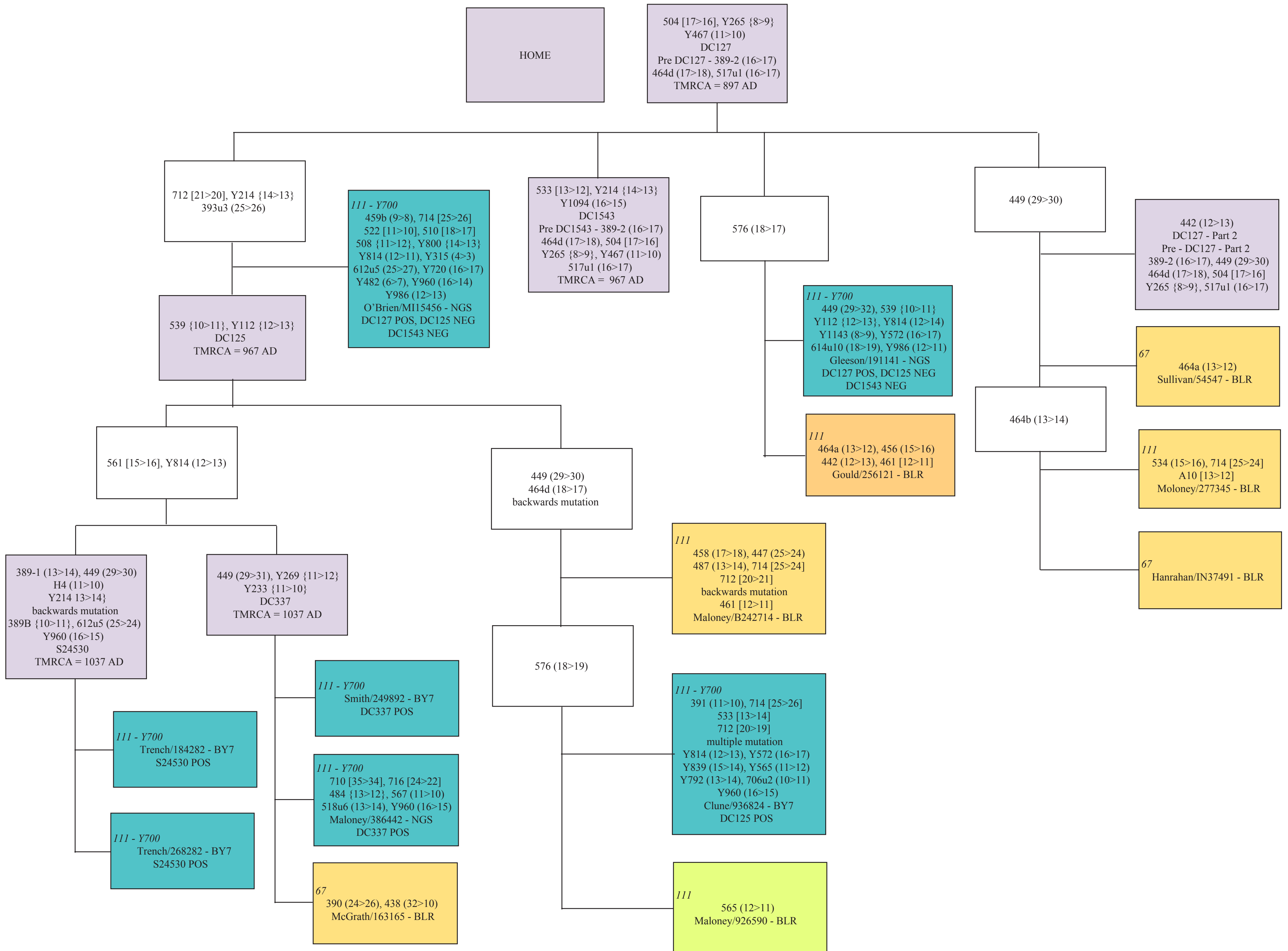


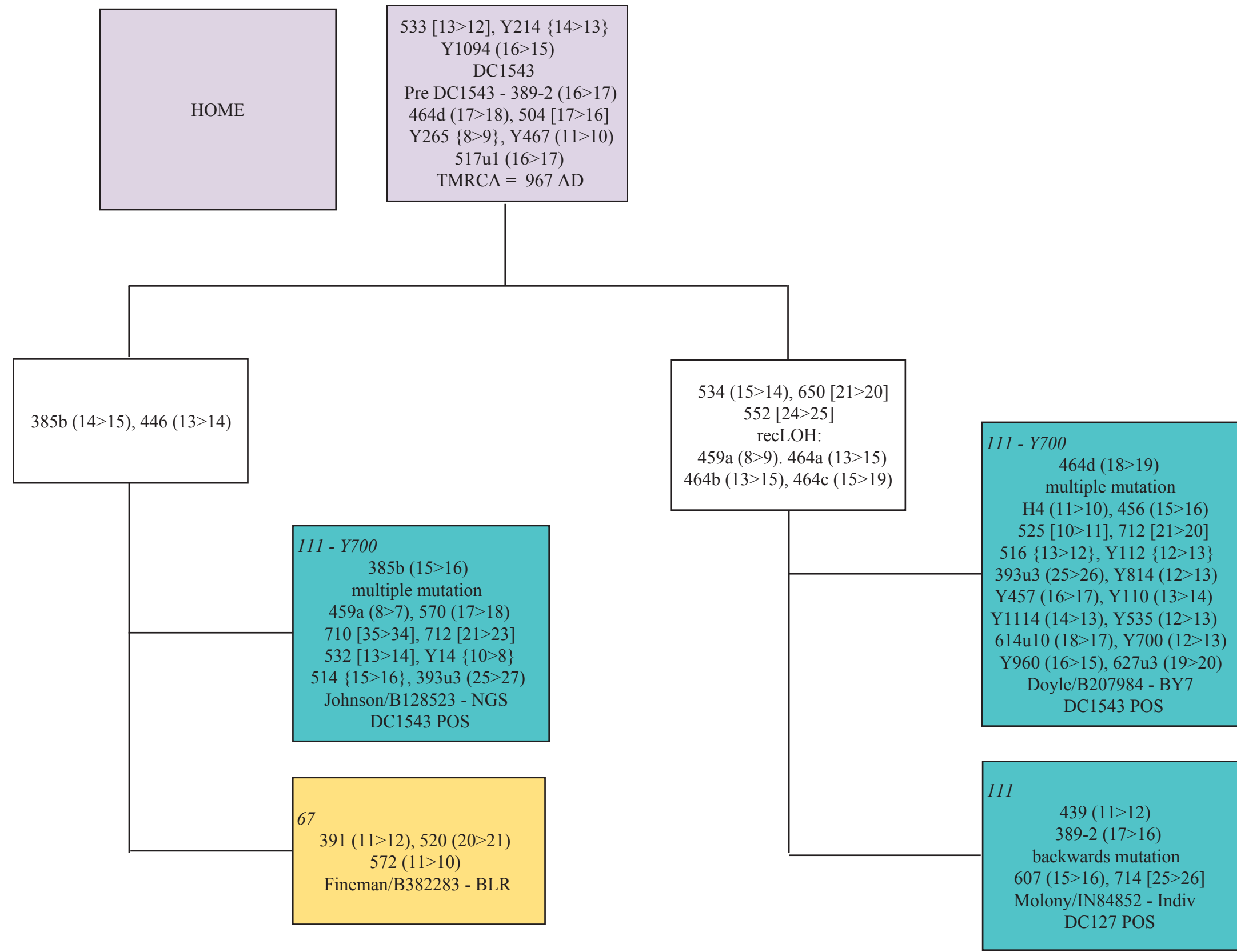


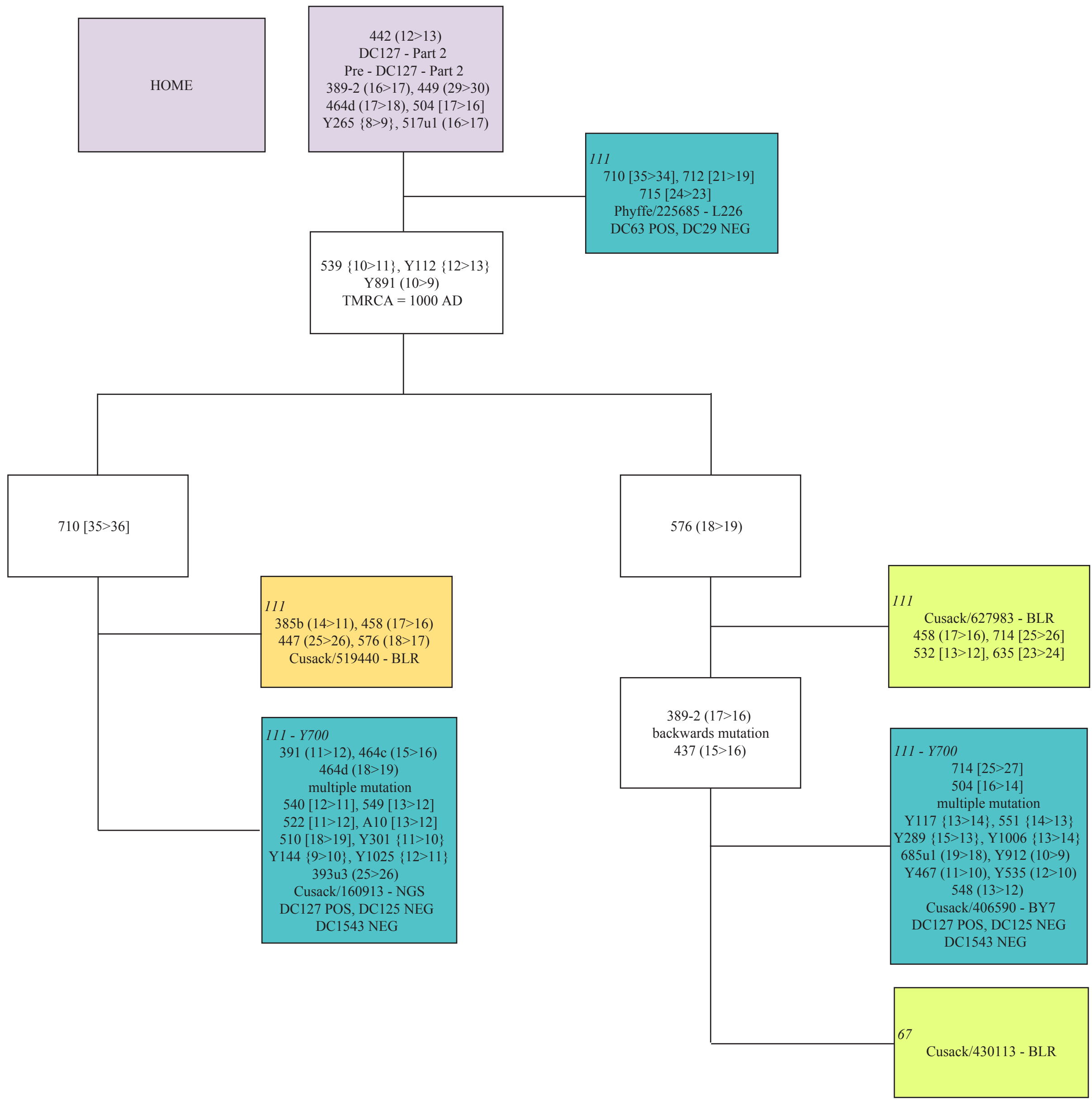




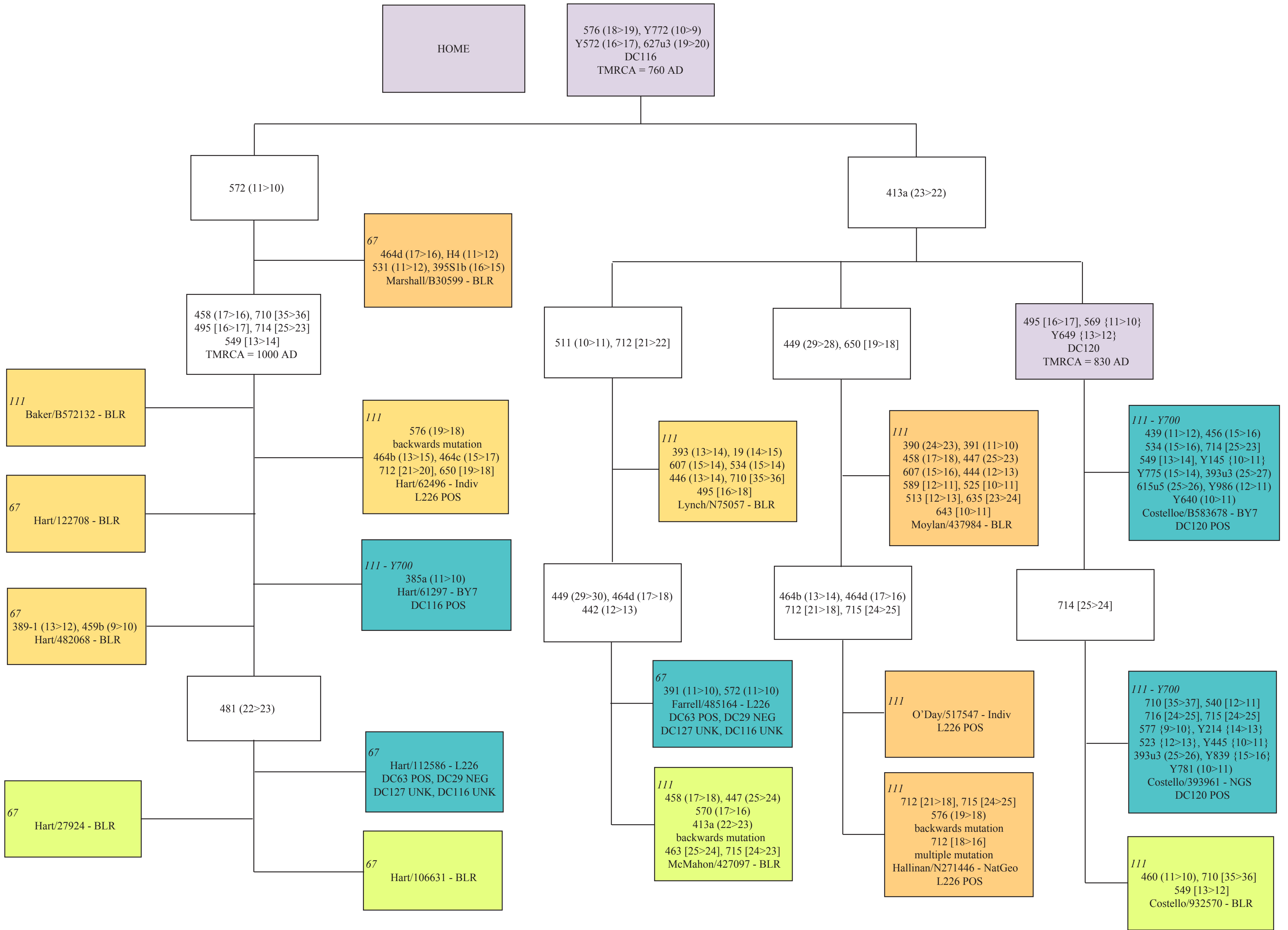


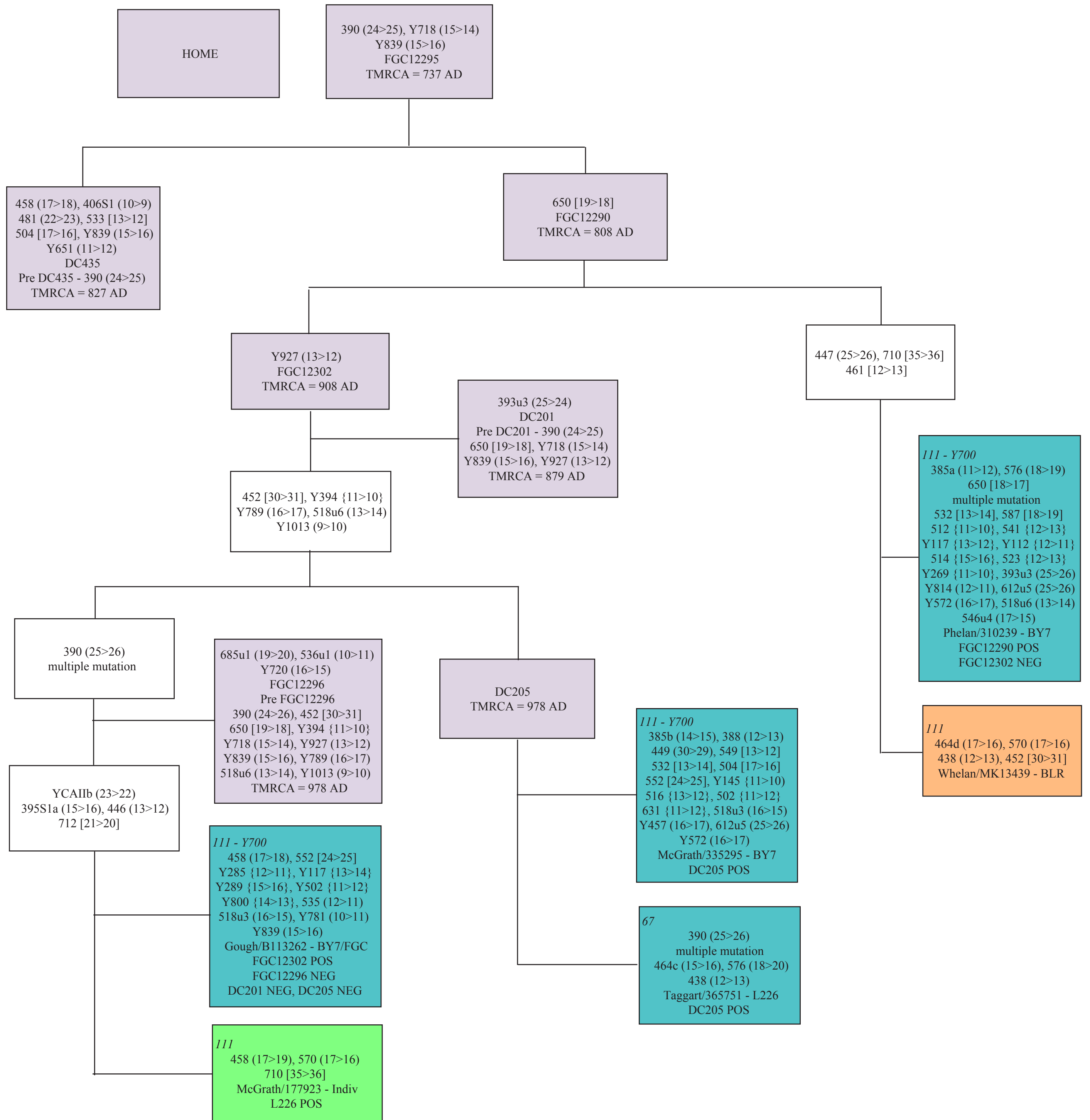












HOME

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 = 929 AD

Y1016 {10>9}  
TMRCA = 1000 AD

464d (17>16)  
ACT3399  
TMRCA = 897 AD

*111 - Y700*  
391 (11>12), 505 [12>11]  
712 [21>20], 650 [19>18]  
Y489 {11>12}, Y1016 {10>9}  
Y927 (13>11), Y565 (11>12)  
518u6 (13>11)  
O'Brien/IN26037 - BY7  
ACT3399 POS, DC977 NEG

464d (17>16)

*67*  
449 (29>28), 446 (13>12)  
456 (15>16)  
O'Brien/322463 - BLR

391 (11>12), 464c (15>16)  
710 [35>37], 589 [12>11]  
514 {15>16}, Y612 {12>13}  
685u1 (19>18), Y457 (16>17)  
518u6 (13>14), Y986 (12>11)  
DC437  
TMRCA = 1070 AD

464c (15>16)

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

*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  
ACT3399 NEG

710 [35>36]

*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  
ACT3399 NEG

Y644 (16>17)  
DC438  
TMRCA = 1140 AD

*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

*67*  
Burton/278397 - 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)  
Y1094 (16>17), 518u6 (13>14)  
706u2 (10>11)  
McVay/866685 - BY7  
DC435 POS, DC437 NEG  
ACT3399 NEG

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

*111*  
391 (11>10), 449 (29>30)  
549 [13>14]  
504 [16>17]  
backwards mutation  
552 [24>25]  
O'Brien/IN92367 - BLR

Y1094 (16>17)

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

*67*  
Burton/667897 - BLR

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

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

Y1094 (16>17)

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

*111 - Y700*  
Y214 {14>13}, 489 {11>9}  
Roberts/856410 - NGS  
DC977 POS

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

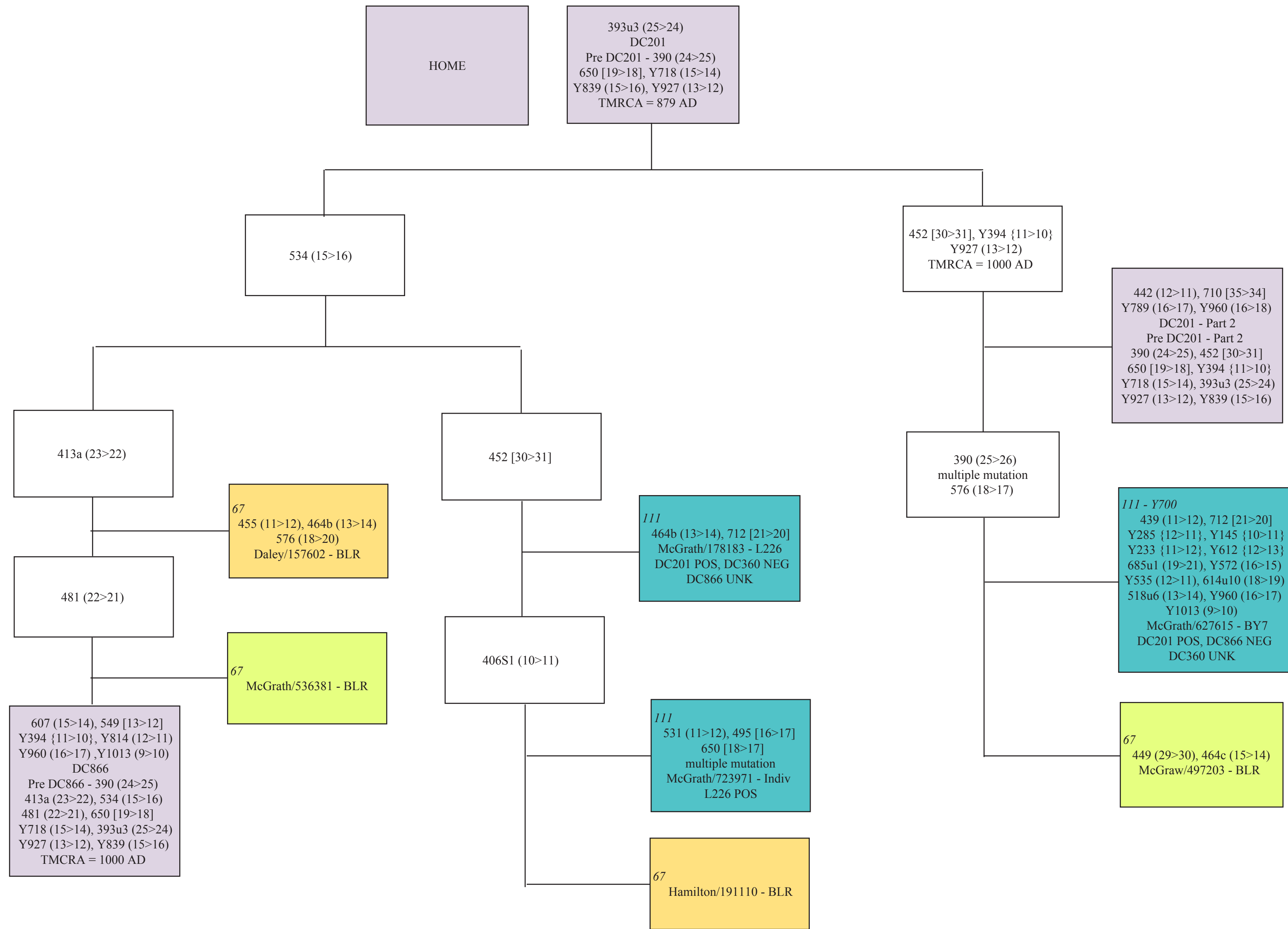
*111 - Y700*  
Y275 {11>12}, 489 {11>12}  
Y1025 {12>10}, Y789 (16>17)  
546u4 (17>15)  
O'Brien/690059 - BY7

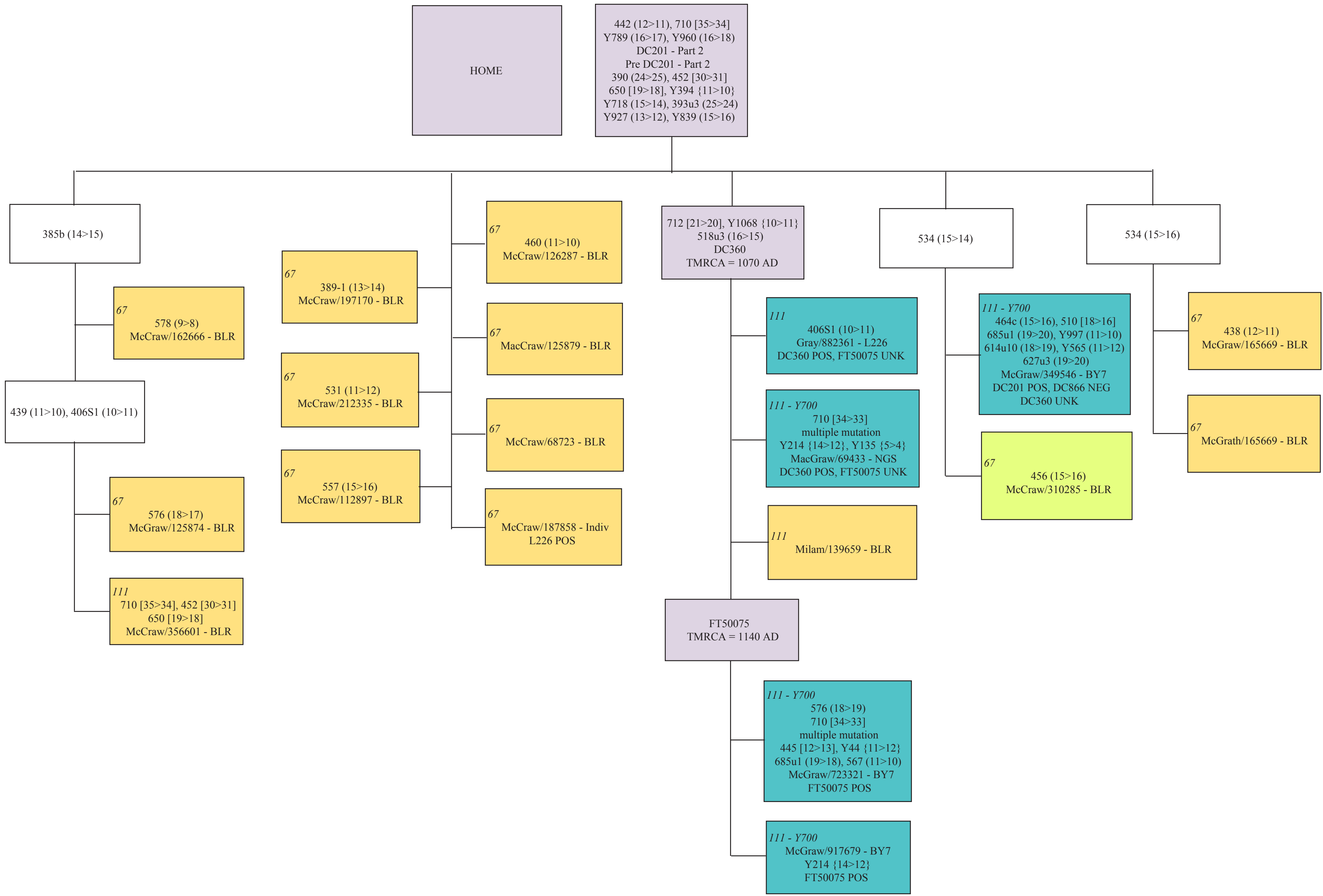
*111 - Y700*  
484 {13>14}, 393u3 (25>26)  
Y1094 (16>17), Y789 (16>17)  
Y565 (11>12), 546u4 (17>16)  
Roberts/919229 - BY7  
DC997 POS

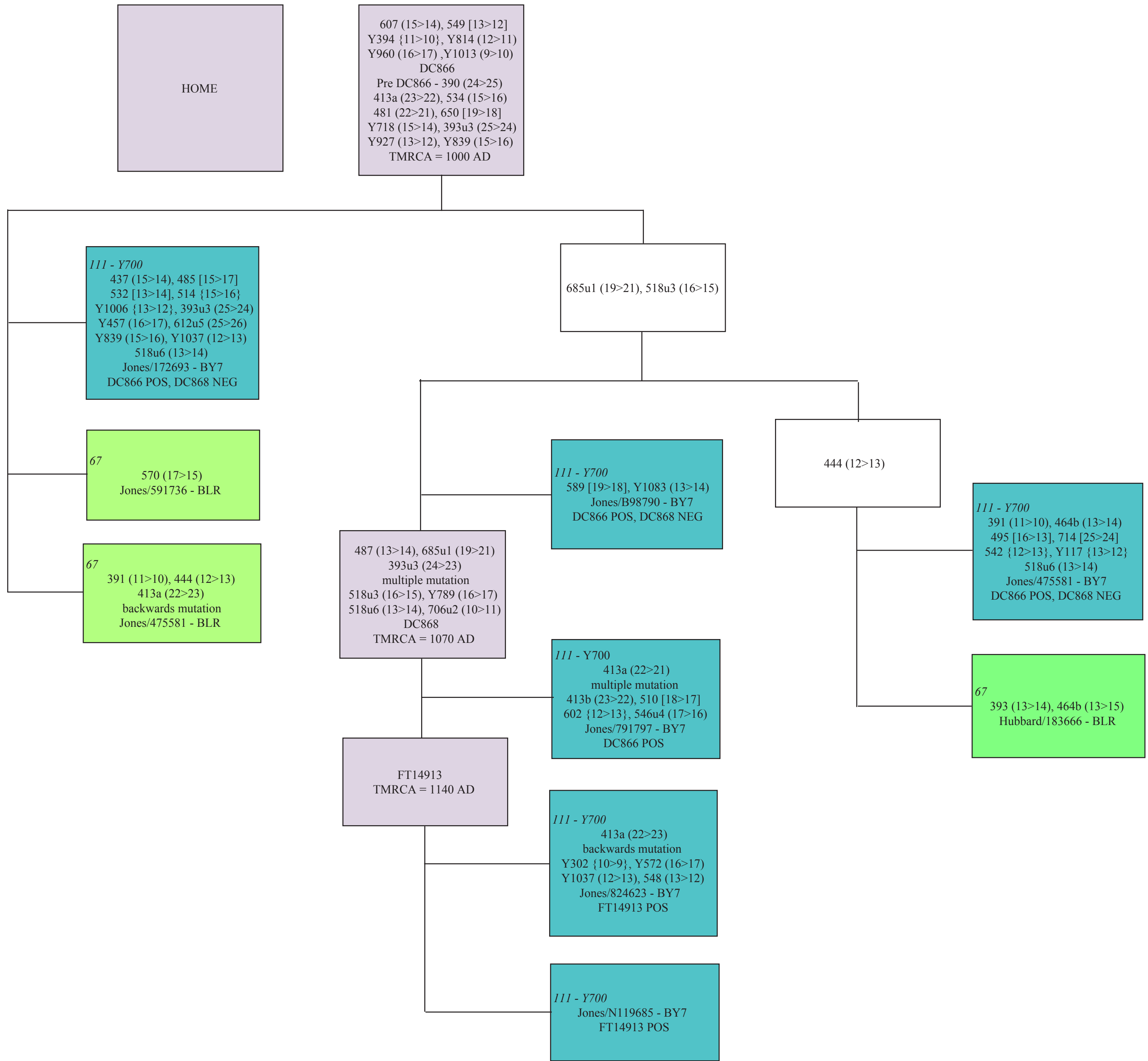
*67*  
O'Brien/310786 - BLR

406S1 (9>10)  
backwards mutation  
710 [35>36], 452 [30>29]  
650 [19>18], 715 [24>23]  
518u6 (13>14)  
DC997  
TMRCA = 967 AD

*111 - Y700*  
484 {13>14}, 393u3 (25>26)  
Y1094 (16>17), Y789 (16>17)  
Y565 (11>12), 546u4 (17>16)  
Roberts/919229 - BY7  
DC997 POS







HOME

685u1 (19>20), 536u1 (10>11)  
Y720 (16>15)  
FGC12296  
Pre FGC12296  
390 (24>26), 452 [30>31]  
650 [19>18], Y394 {11>10}  
Y718 (15>14), Y927 (13>12)  
Y839 (15>16), Y789 (16>17)  
518u6 (13>14), Y1013 (9>10)  
TMRCA = 978 AD

650 [18>17]  
multiple mutation  
514 {15>16}  
FGC12289  
TMRCA = 983 AD

446 (13>14)

*111*  
391 (11>13), 437 (15>14)  
449 (29>28), 607 (15>14)  
534 (15>16), 533 [13>12]  
712 [21>23]  
McGrath/817721 - BLR

487 (13>12)

*111*  
390 (26>25)  
backwards mutation  
389-2 (16>17), 449 (29>30)  
464d (17>18), 438 (12>10)  
552 [24>25]  
McGrath/189108 - Indiv  
L226 POS

464d (17>16), 607 (15>14)  
576 (18>17), 413b (23>24)  
710 [35>34]

*111*  
449 (29>30)  
712 [21>20], 504 [17>16]  
Hogan/N124930 - Indiv  
FGC12296 POS  
FGC12289 UNK

456 (15>14)

*67*  
447 (25>26)  
McGrath/B91182 - BLR

*67*  
Thomas/394922  
FGC12296 POS - Z253  
FGC12296 POS  
FGC12289 UNK

Y310 {10>11}, 393u3 25>24  
Y467 (11>10)  
FT308208 POS  
TMRCA 1048 AD

19 (14>15), Y198 {10>11}  
Y110 (13>12), 627u3 (19>20)  
FGC12293  
TMRCA = 1053 AD

*111 - Y700*  
481 (22>23), 505 [12>11]  
Y858 {8>9}, Y1094 (16>15)  
Y960 (16>18)  
Wright/25505 - BY7  
FGC12293 POS

511 (10>11)

*111*  
464d (17>18), 710 [35>36]  
A10 [13>14], 712 [21>22]  
Thomas/136254 - L226  
FGC12296 POS  
FGC12289 UNK

*67*  
456 (15>16)  
Thomas/B7244 - YSEQ  
FGC12296 POS  
FGC12289 UNK

*111 - Y700*  
712 [21>24], 518u3 (16>15)  
536u1 (10>11), Y457 (16>15)  
612u5 (25>26), Y535 (12>11)  
two backwards mutations  
Y718 (14>15), Y839 (16>15)  
Lindsey/950540 - BY7  
FT308208 POS

449 (29>30), Y858 {8>9}

*111 - Y500*  
Y800 {14>13}  
Wright/124291 - NGS  
FGC12293 POS

*111 - Y700*  
520 (20>21), 712 [21>20]  
510 [18>17], Y800 {14>13}  
484 {13>12}, 612u5 (25>27)  
Y535 (12>13)  
Y720 (15>16)  
backwards mutation  
627u3 (19>22)  
Green/B173234 - NGS  
FGC12289 POS  
FGC12293 NEG

*67*  
576 (18>19)  
McGrath/N24190 - BLR

*67*  
448 (19>18), 460 (11>12)  
Howell/262476 - BLR

449 (29>30)

*67*  
Spears/281966 - BLR

*111 - Y700*  
712 [21>22], 512 {11>10}  
Y275 {11>12}, Y129 {10>11}  
516 {13>15}, 612u5 (25>27)  
Pate/917525 - BY7  
FT308208 POS

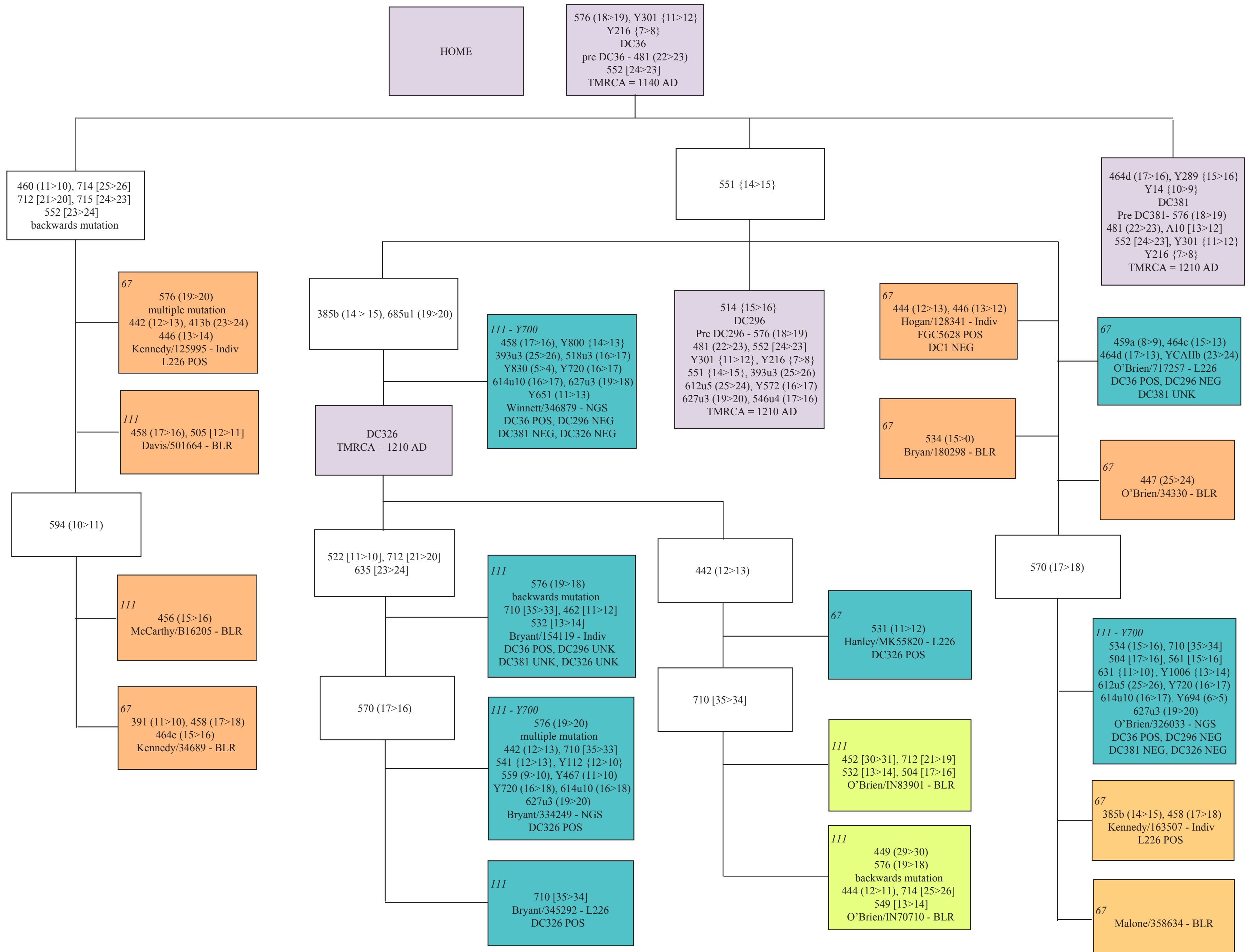
*111 - Y700*  
Y214 {14>13}, Y421 (8>7)  
517u1 (16>15)  
Wright/754191 - NGS  
FGC12293 POS

*67*  
McCeney/194729 - Indiv  
L226 POS

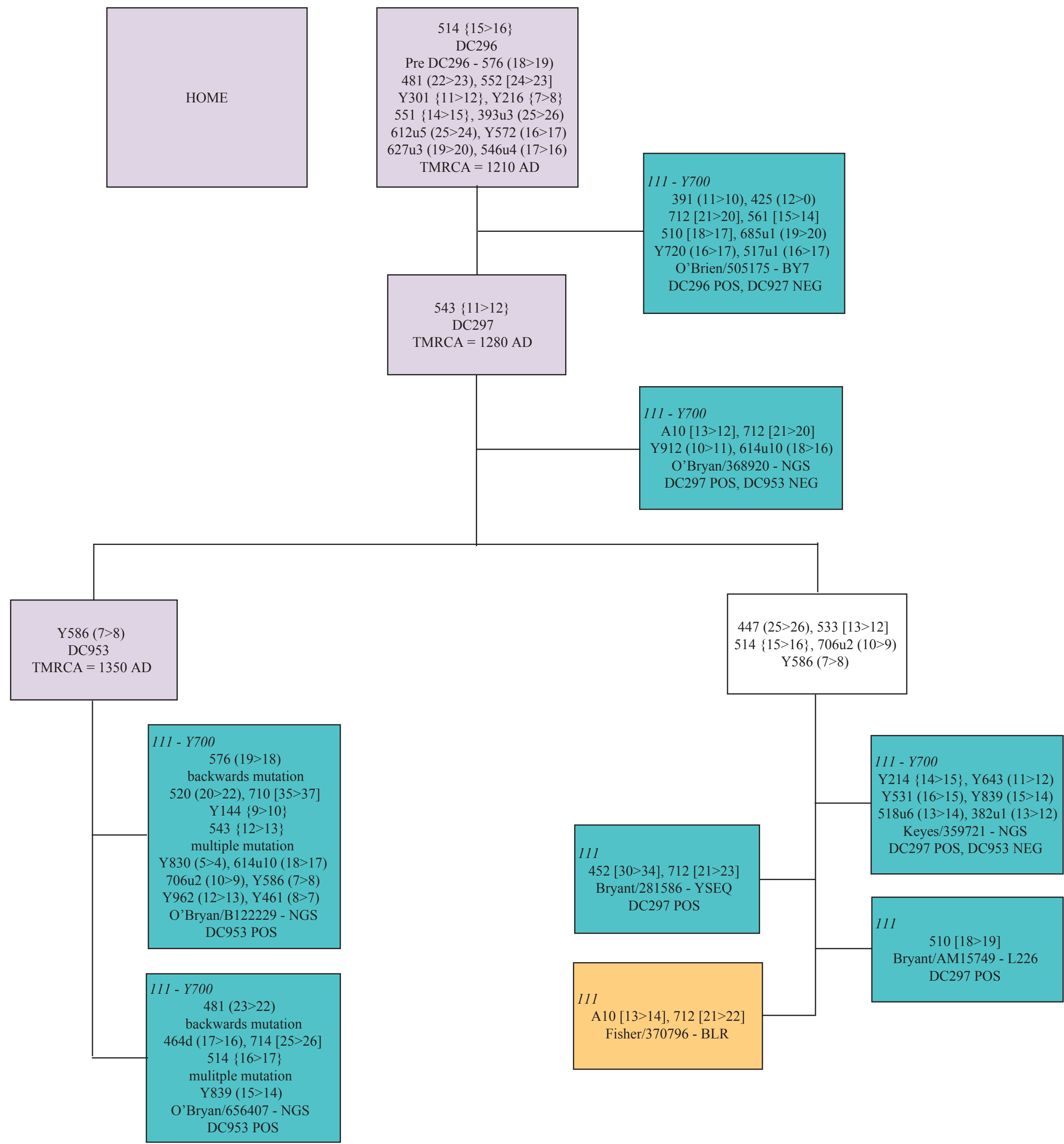
*67*  
458 (17>18)  
Sanders/659478 - BLR

*67*  
Peppers/33966 - Z253  
FGC12296 POS  
FGC12289 UNK

*67*  
570 (17>18)  
Thomas/B11123 - Indiv  
L226 POS







HOME

464d (17>16), Y289 {15>16}  
Y14 {10>9}, Y467 (11>10)  
DC381  
Pre DC381- 576 (18>19)  
481 (22>23), A10 [13>12]  
552 [24>23], Y301 {11>12}  
Y216 {7>8}  
TMRCA = 1210 AD

*111 - Y700*  
442 (12>13), 710 [35>32]  
712 [21>22], 551 {14>15}  
Y170 {7>8}, 393u3 (25>26)  
Y522 (14>15), Y720 (16>17)  
614u10 (18>17), 706u2 (10>9)  
Y986 (12>11)  
O'Brien/B447669 - BY7  
DC381 POS, DC382 NEG

*67*  
446 (13>14)  
Bryant/52082 - L226  
DC36 POS, DC296 NEG  
DC381 UNK

712 [21>20]

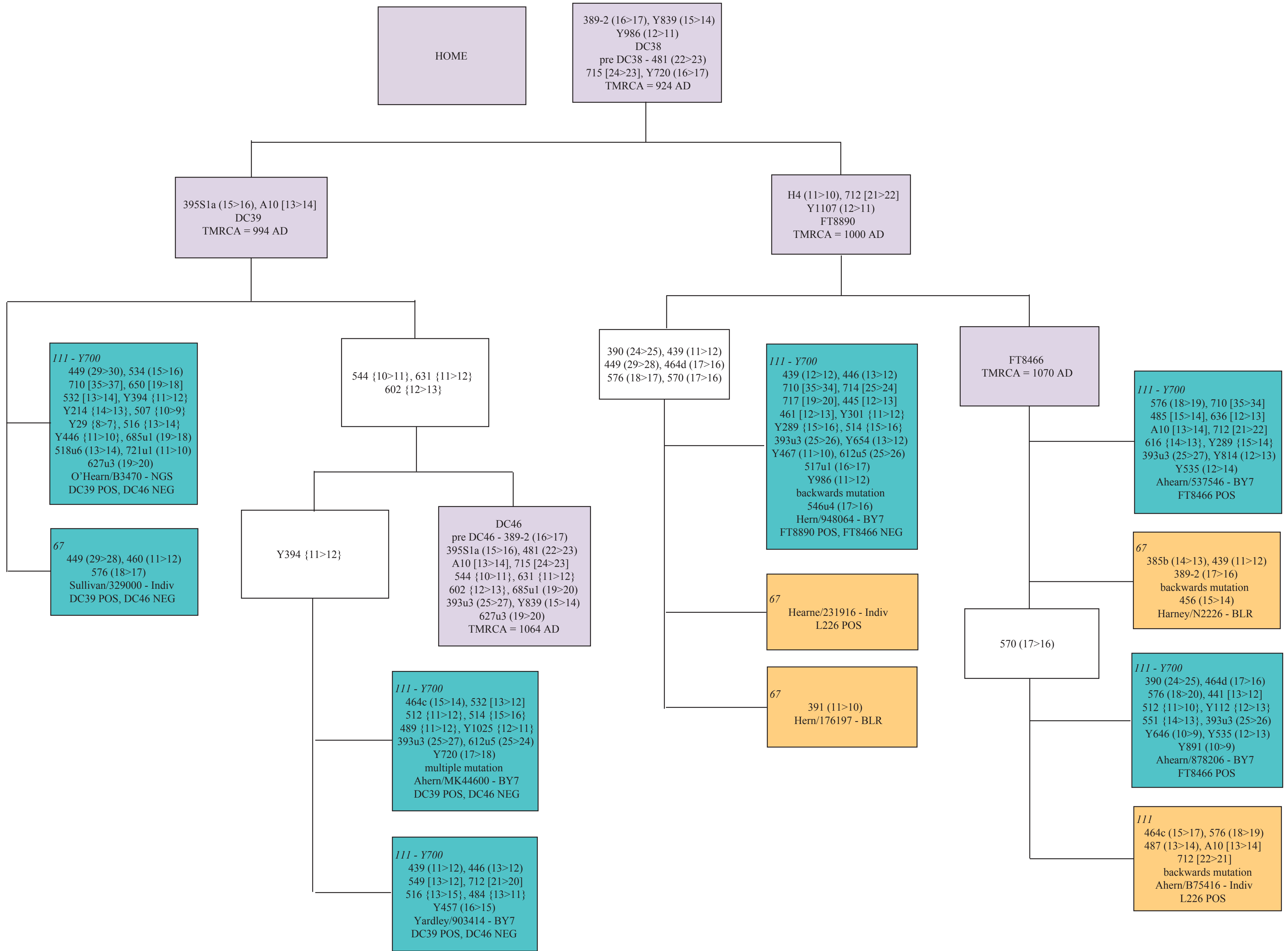
*111*  
534 (15>14)  
Davis/909093 - BLR

594 (10>11), Y112 {12>13}  
DC382  
TMRCA = 1280 AD

*111 - Y700*  
576 (19>21)  
multiple mutation  
452 [30>29], Y117 {13>14}  
Y792 (13>11), 627u3 (19>20)  
Bryant/460890 - NGS  
DC382 POS

*111 - Y700*  
19 (14>15), 463 [25>26]  
510 [18>16], 551 {14>15}  
393u3 (25>26), Y531 (16>15)  
Y876 (14>15)  
Sesler/508892 - NGS  
DC382 POS

*67*  
458 (17>16)  
Bryant/194697 - Indiv  
L226 POS



HOME

DC46  
pre DC46 - 389-2 (16>17)  
395S1a (15>16), 481 (22>23)  
A10 [13>14], 715 [24>23]  
544 {10>11}, 631 {11>12}  
602 {12>13}, 685u1 (19>20)  
393u3 (25>27), Y839 (15>14)  
627u3 (19>20)  
TMRCA = 1064 AD

DC47  
TMRCA = 1134 AD

446 (13>12), Y394 {11>12}

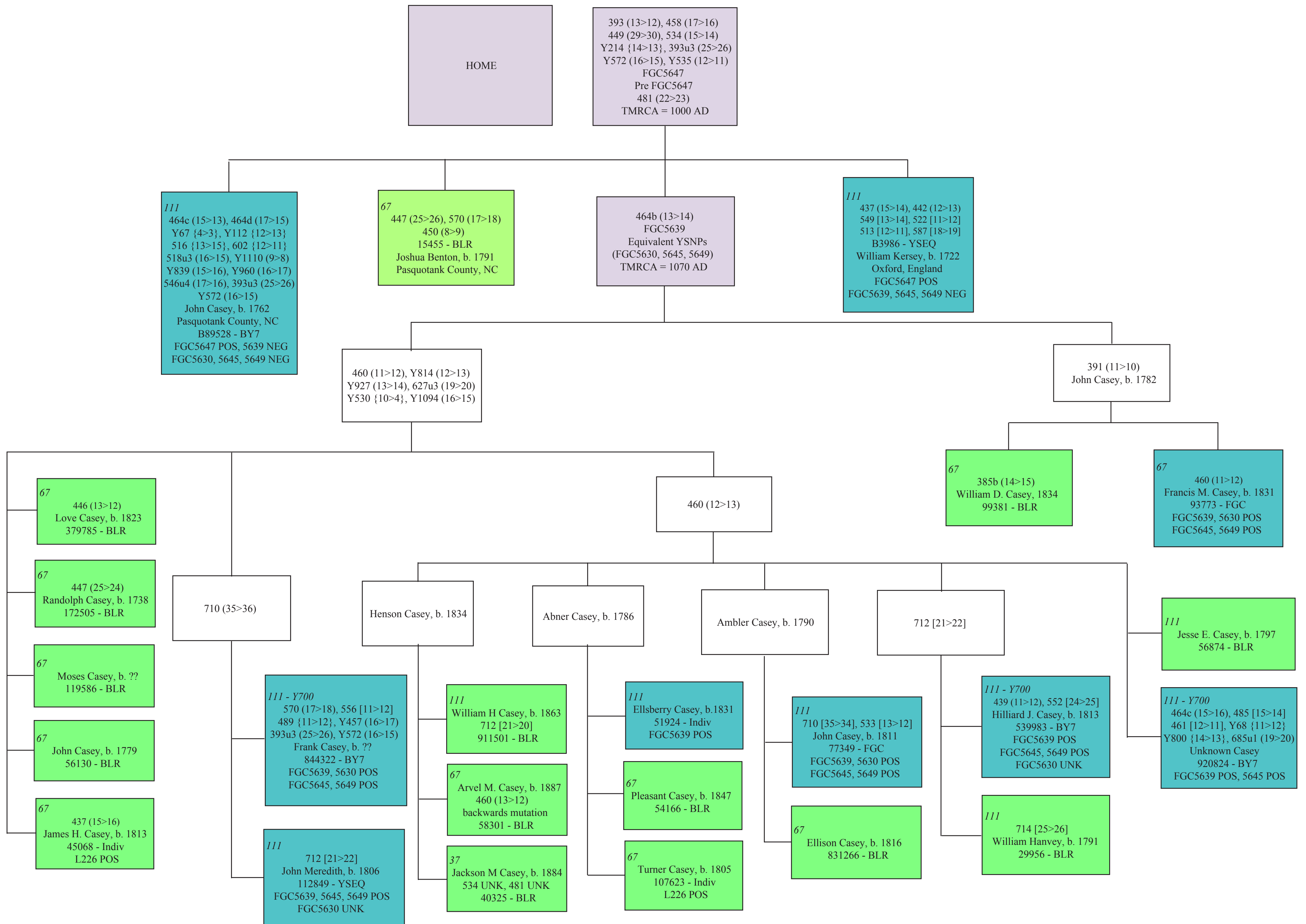
*111 - Y700*  
531 (11>10), 710 [35>34]  
616 {14>13}, Y535 (12>11)  
Y1172 (12>11)  
Colegrove/MK31083 - NGS  
DC46 POS, DC47 NEG

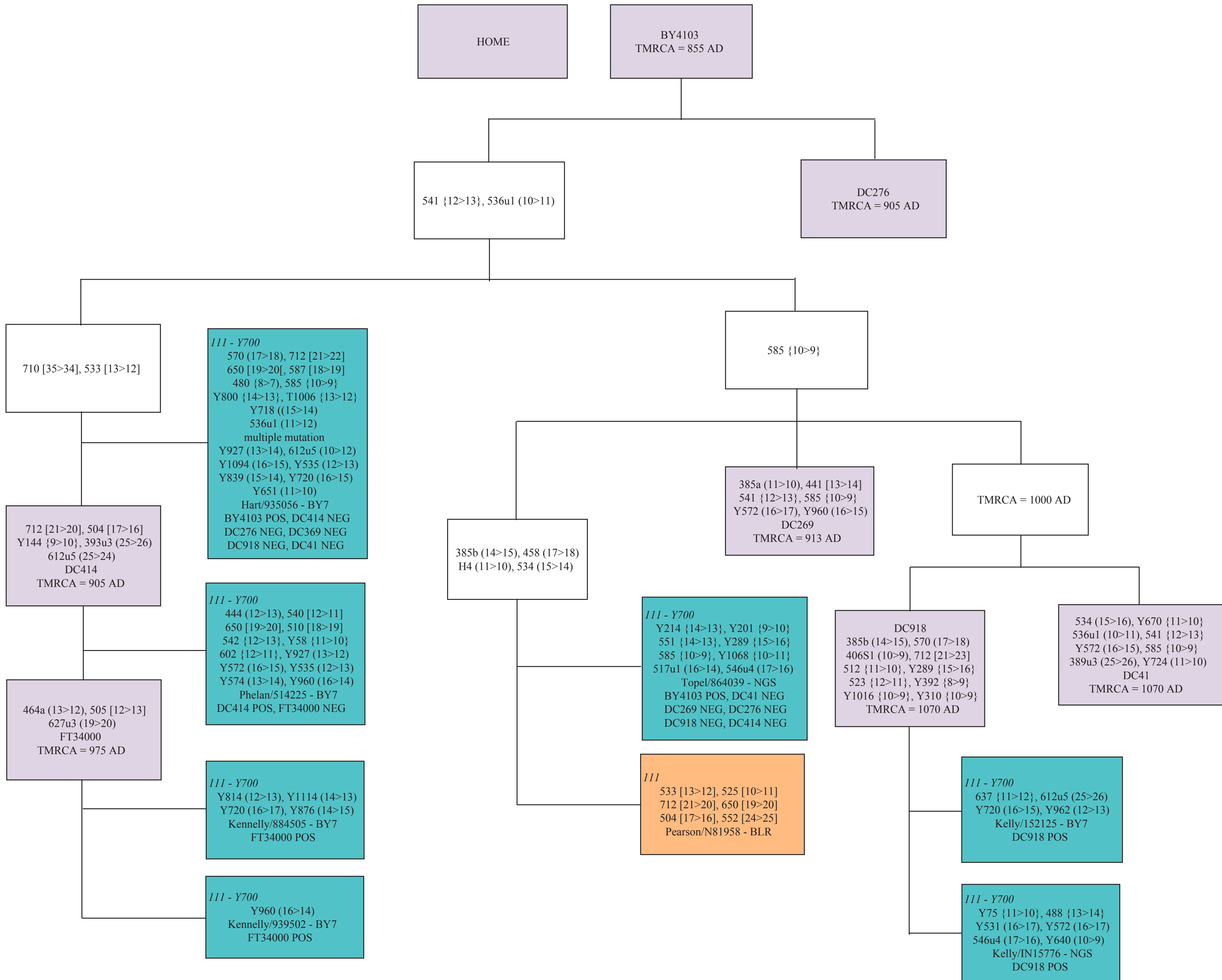
*111 - Y700*  
712 [21>22], 616 {14>12}  
Peevy/111836 - NGS  
DC47 POS

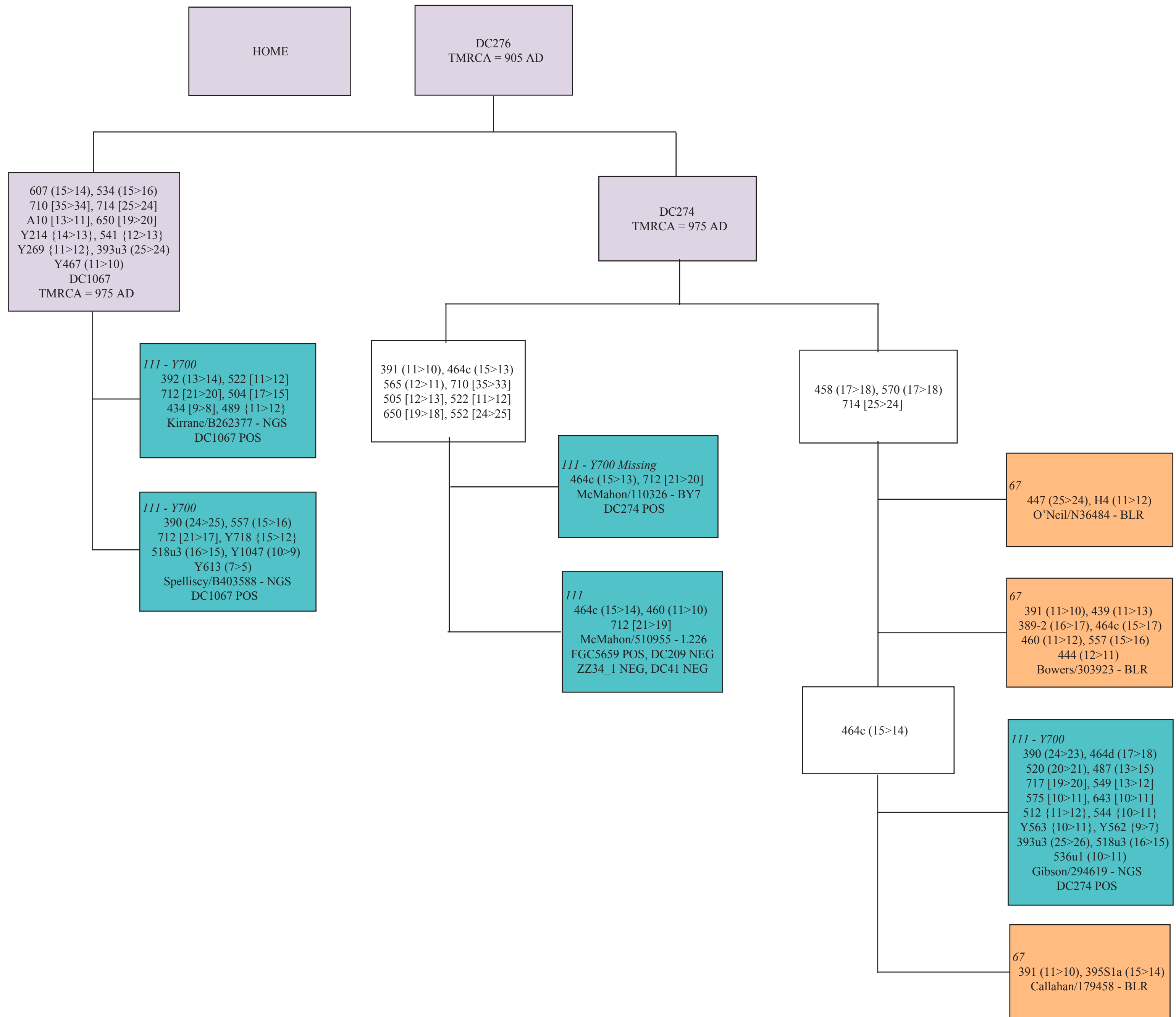
*111 - Y700*  
Y986 (12>11)  
Brown/138720 - BY7  
DC47 POS

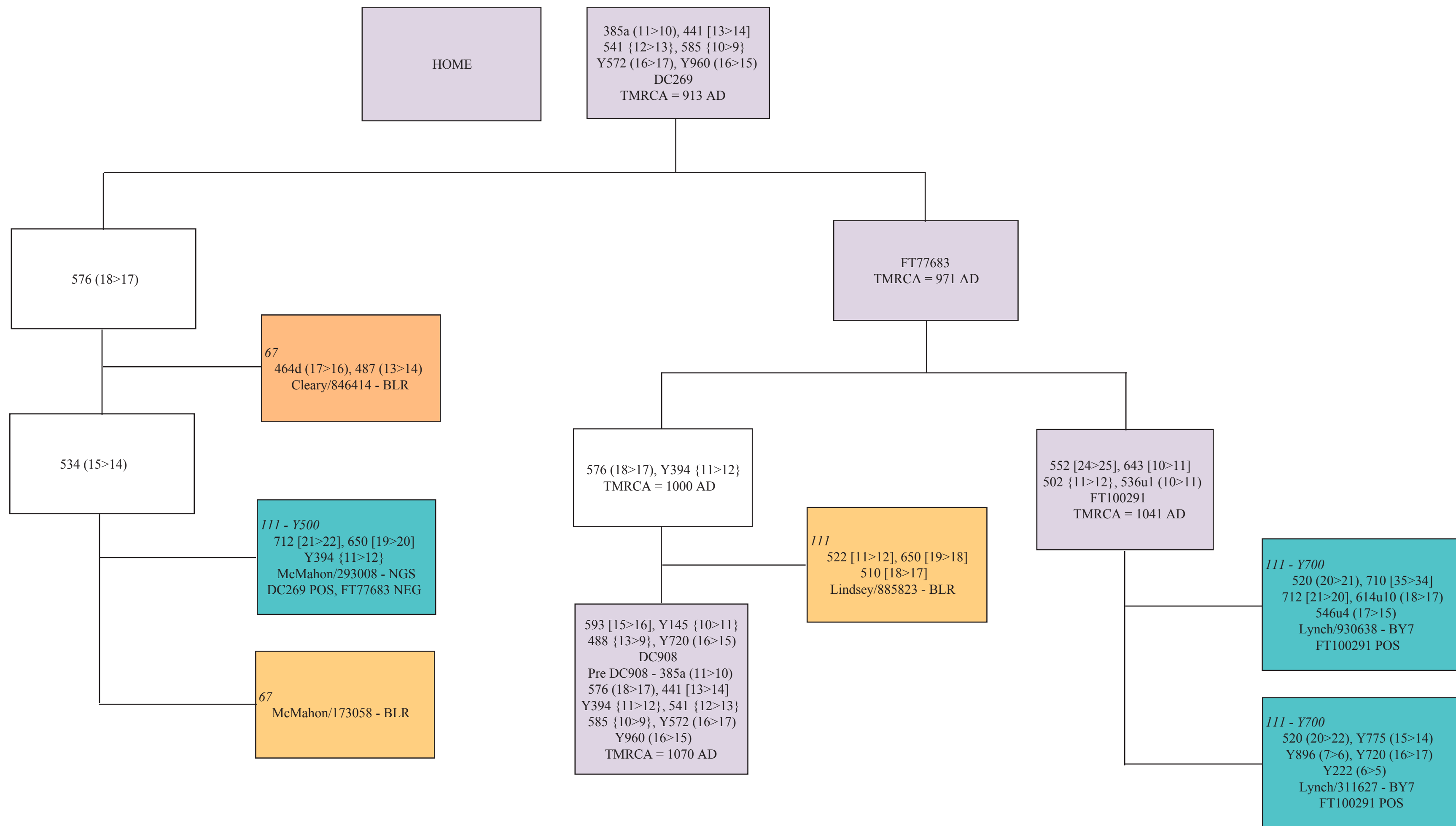
*111 - Y700*  
561 [15>16], Y145 {10>11}  
Y233 {11>10}, Y665 (10>11)  
Y565 (11>10)  
Peavey/90545 - NGS  
DC47 POS

*111 - Y700*  
Y1042 {11>10}, Y1039 {5>4}  
Y654 (13>12), Y1047 (10>11)  
Brown/286386 - NGS  
DC47 POS

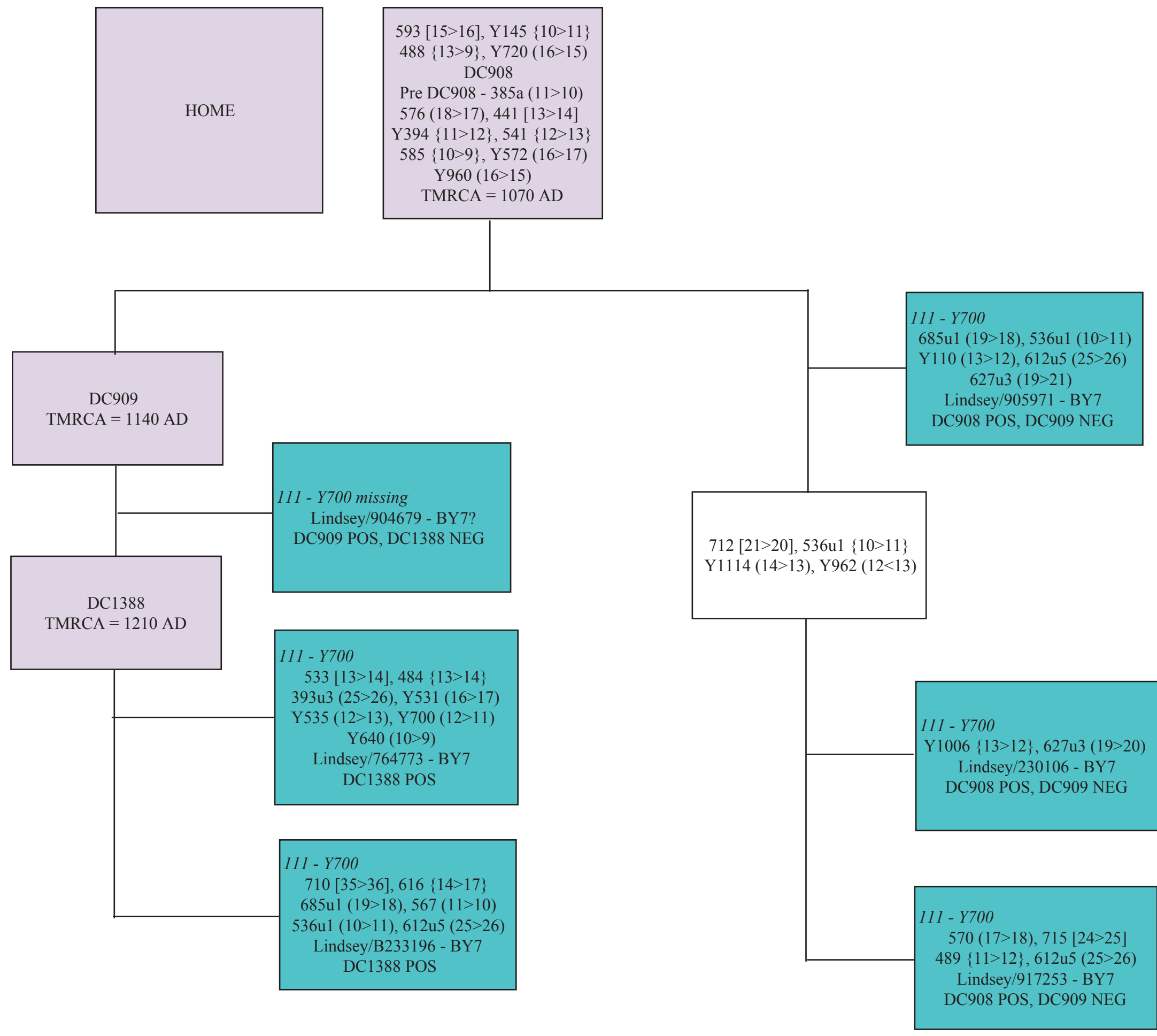


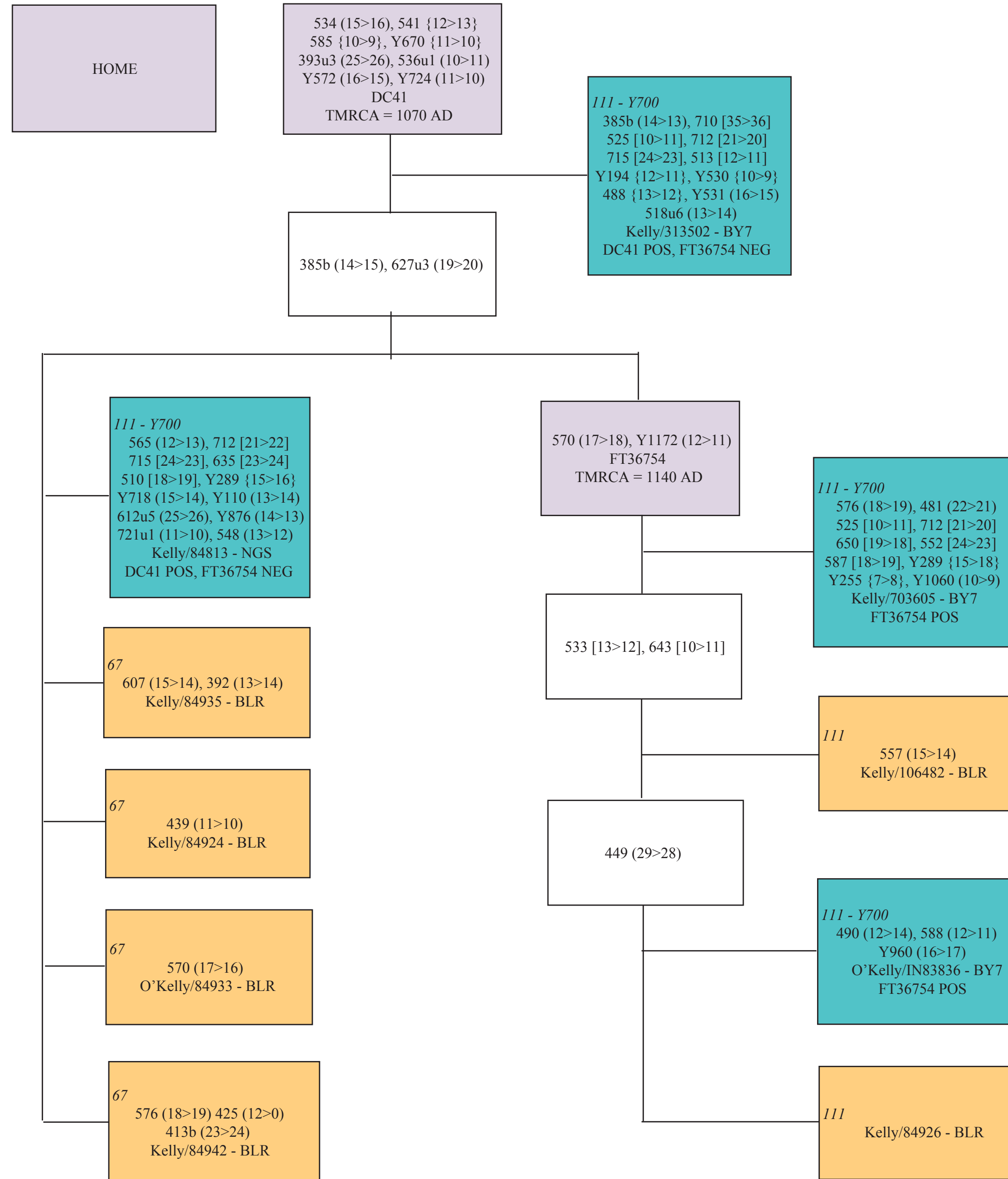


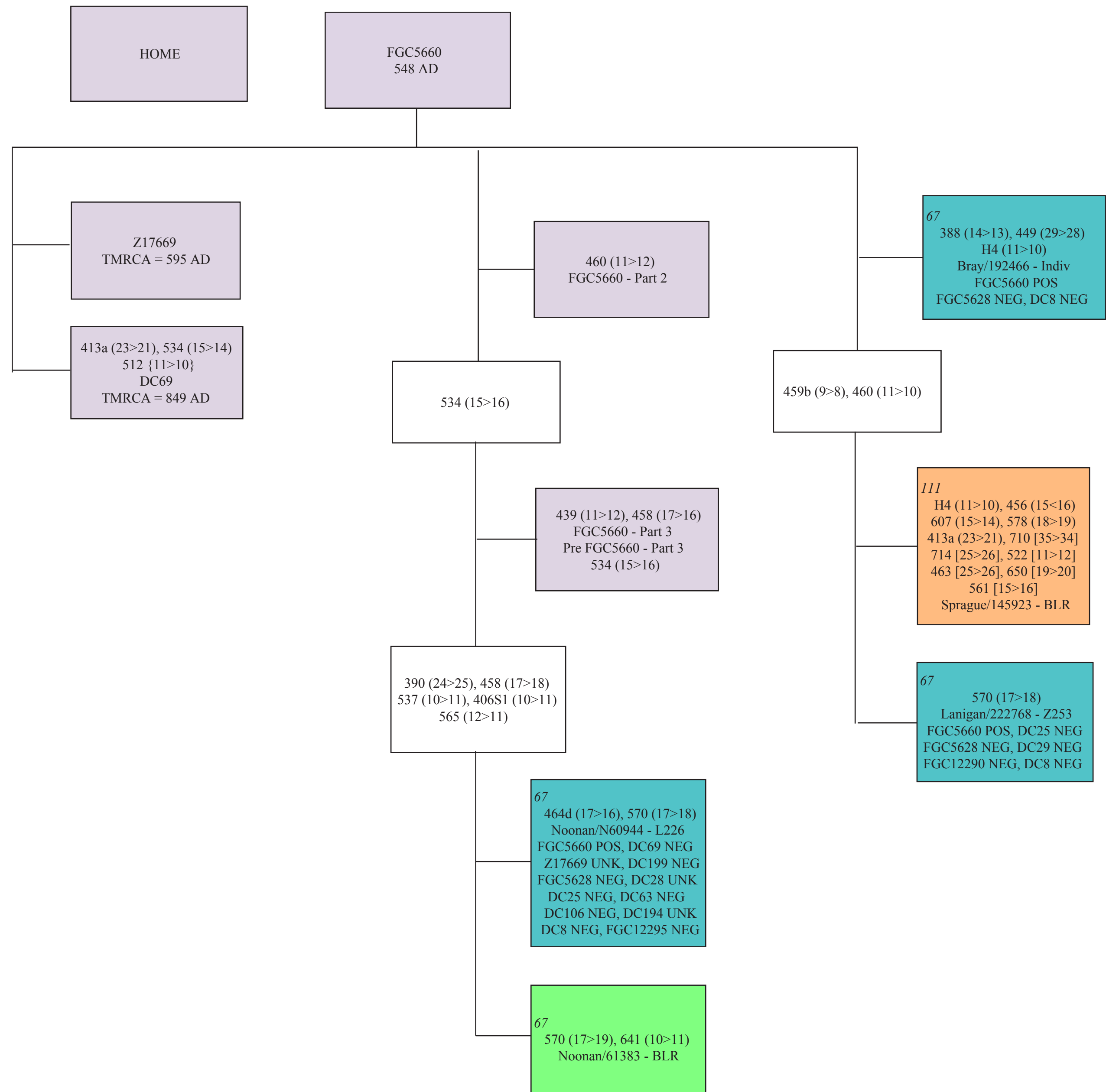












HOME

439 (11>12), 460 (11>12)  
FGC5660 - Part 2

*111*  
391 (11>10), 456 (15>14)  
576 (18>20), 570 (17>16)  
710 [35>33], 505 [12>13]  
549 [13>12], 589 [12>11]  
712 [21>20], 650 [19>18]  
532 [13>14], 715 [24>25]  
Kean/127414 - L226  
FGC5660 POS, DC69 NEG  
DC63 NEG, DC25 NEG  
FGC5628 NEG, DC106 NEG  
FGC12290 NEG, DC8 NEG

481 (22>23)

*111*  
710 [35>36], 533 [13>12]  
712 [21>22], 532 [13>14]  
715 [24>23]  
Hogan/142586 - BLR

*67*  
576 (18>17), 406S1 (10>11)  
O'Brien/51840 - BLR

HOME

439 (11>12), 458 (17>16)  
FGC5660 - Part 3  
Pre FGC5660 - Part 3  
534 (15>16)

67  
447 (25>26), 460 (11>12)  
456 (15>16)  
Mahone/MK23915 - L226  
FGC5660 POS, DC69 NEG  
DC25 NEG, FGC5628 NEG  
DC8 NEG, DC63 NEG  
DC106 NEG  
FGC12295 NEG

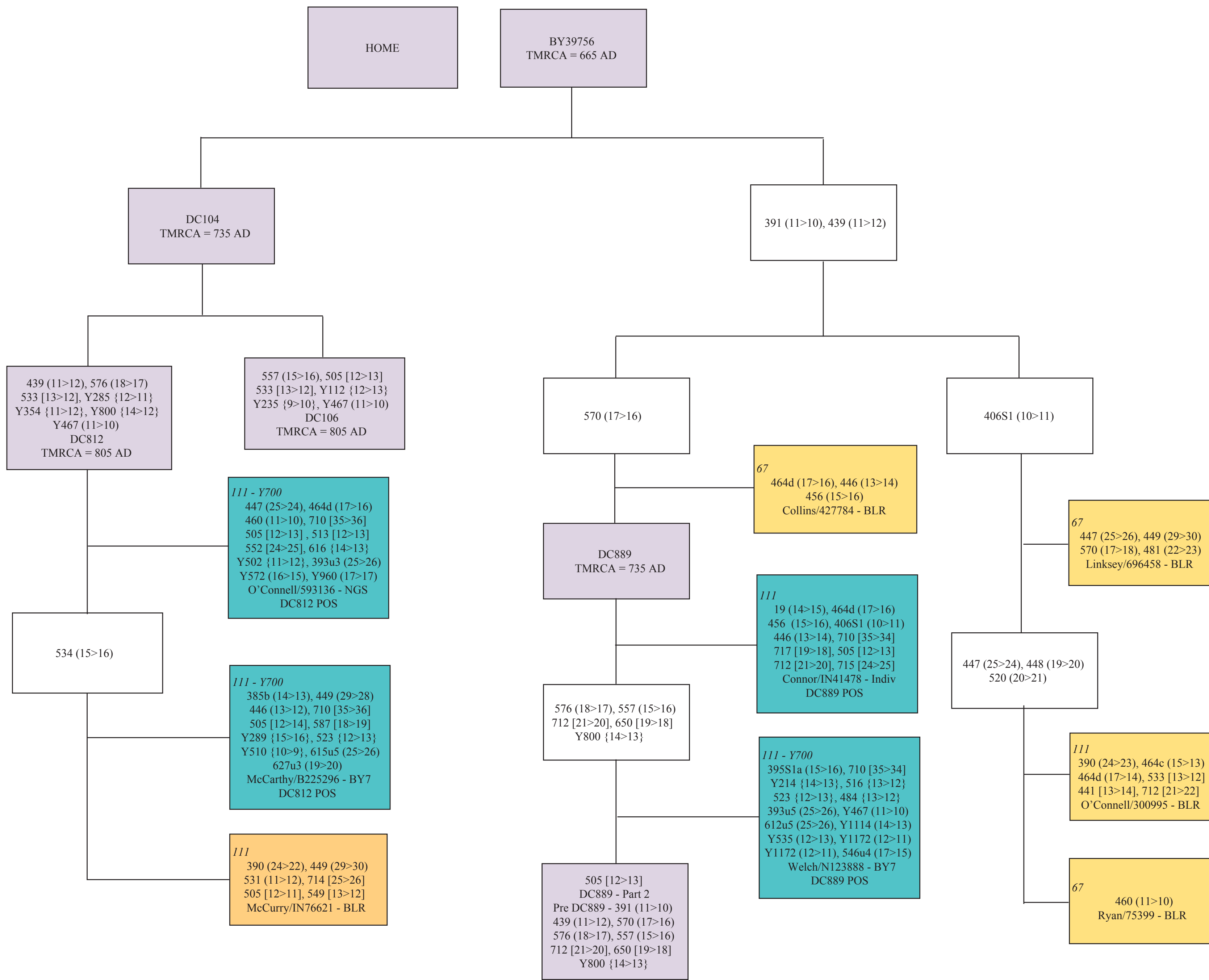
67  
449 (29>28)  
Currell/489080 - BLR

391 (11>10), 437 (15>16)  
448 (19>20), H4 (11>10)  
520 (20>21)

67  
607 (15>16)  
Quillen/N76182 - BLR

67  
534 (16>17)  
Quillin/213063 - BLR

67  
442 (12>13)  
Quillin/276166 - BLR



HOME

505 [12>13]  
DC889 - Part 2  
Pre DC889 - 391 (11>10)  
439 (11>12), 576 (18>17)  
570 (17>16), 557 (15>16)  
712 [21>20], 650 [19>18]  
Y800 {14>13}

111  
389-1 (13>14)  
570 (16>15)  
multiple mutation  
395S1a (15>16), 710 [35>34]  
Cunningham/350807 - L226  
FGC5660 POS, DC69 NEG  
Z17669 UNK, DC8 NEG  
FGC5628 NEG, DC25 NEG  
DC63 NEG, DC194 UNK  
DC016 NEG, DC109 UNK  
DC87 UNK, DC28 UNK  
DC199 NEG, DC464 UNK  
FGC12295 NEG

385b (14>15), 447 (25>24)  
464d (17>16), H4 (11>12)  
607 (15>14), 531 (11>0)  
534 (15>17)

67  
460 (11>12)  
Oliver/233638 - L226  
FGC5660 POS, DC69 NEG  
Z17669 UNK, DC8 NEG  
FGC5628 NEG, DC25 NEG  
DC63 NEG, DC194 UNK  
DC016 NEG, DC109 UNK  
DC87 UNK, DC28 UNK  
DC199 NEG, DC464 UNK  
FGC12295 NEG

481 (22>23)

67  
Hogan/148696 - BLR

710 [35>33], 715 [24>25]  
513 [12>13]

111 - Y700  
531 (0>11)  
backwards mutation  
461 [12>11], Y275 {11>10}  
Y343 {6>5}, Y112 {12>13}  
Y1025 {12>13}, 518u3 (16>15)  
612u5 (25>23), Y876 (14>13)  
Y751 (9>10)  
Hogan/110053 - NGS  
DC889 POS

111  
442 (12>11), 446 (13>14)  
717 [19>20]  
Shannon/202658 - BLR

HOME

481 (22>23), 643 [10>11]  
DC505 - Butler  
pre Butler - 460 (11>10)  
444 (12>11), 710 [35>34]  
Y214 {14>13}, 542 {12>11}  
Y14 {10>9}, Y800 {14>15}  
TMRCA = 1000 AD

714 [25>24]

67  
392 (13>14), YCAIIa (23>22)  
Butler/179149 - Indiv  
L226 POS

67  
439 (11>10), 438 (12>11)  
Butler/74925 - BLR

111  
712 [21>20]  
Butler/382632 - L226  
FGC5660 POS, DC69 NEG  
DC25 NEG, FGC5628 NEG  
DC8 NEG, DC63 NEG  
DC106 NEG

67  
391 (11>10)  
Butler/482960 - BLR

67  
19 (14>15), 534 (15>14)  
Butler/84173 - BLR

67  
Butler/y3M5S2 - BLR

67  
Butler/28472 - Indiv  
L226 POS, FGC5628 NEG

67  
456 (15>16)  
Butler/87016 - BLR

67  
454 (11>14), 576 (18>19)  
568 (11>12)  
Butler/70710 - BLR

712 [21>20]

650 [19>18]

67  
Butler/100704 - Indiv  
L226 POS

67  
Butler/124885 - BLR

67  
557 (15>16)  
Butler/108343 - BLR

67  
392 (13>12)  
Butler/16712 - BLR

111  
650 [19>20], 715 [24>23]  
461 [21>11]  
Butler/850171 - BLR

67  
Butler/180398 - BLR

67  
Butler/57038 - BLR

111  
449 (29>30)  
Butler/36443 - BLR

458 (17>18)

Y285 {12>13}, 514 {15>16}  
DC503  
TMRCA = 1070 AD

111  
570 (17>18), 712 [21>20]  
635 [23>24]  
Butler/60444 - BLR

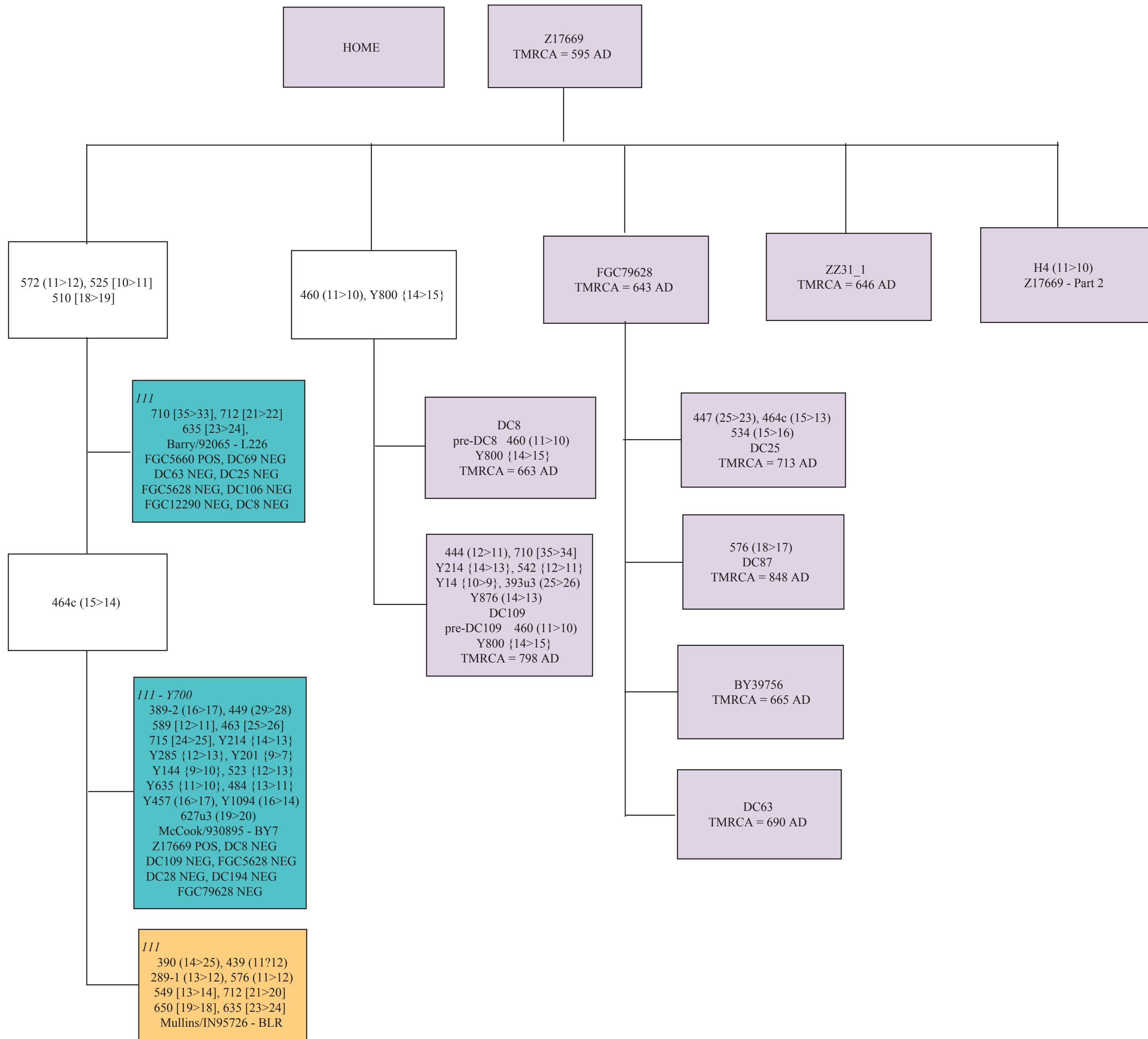
67  
Butler/102672 - Z253  
FGC5660 POS, DC8 NEG  
FGC5628 NEG, DC25 NEG  
FGC12290 NEG, DC29 NEG

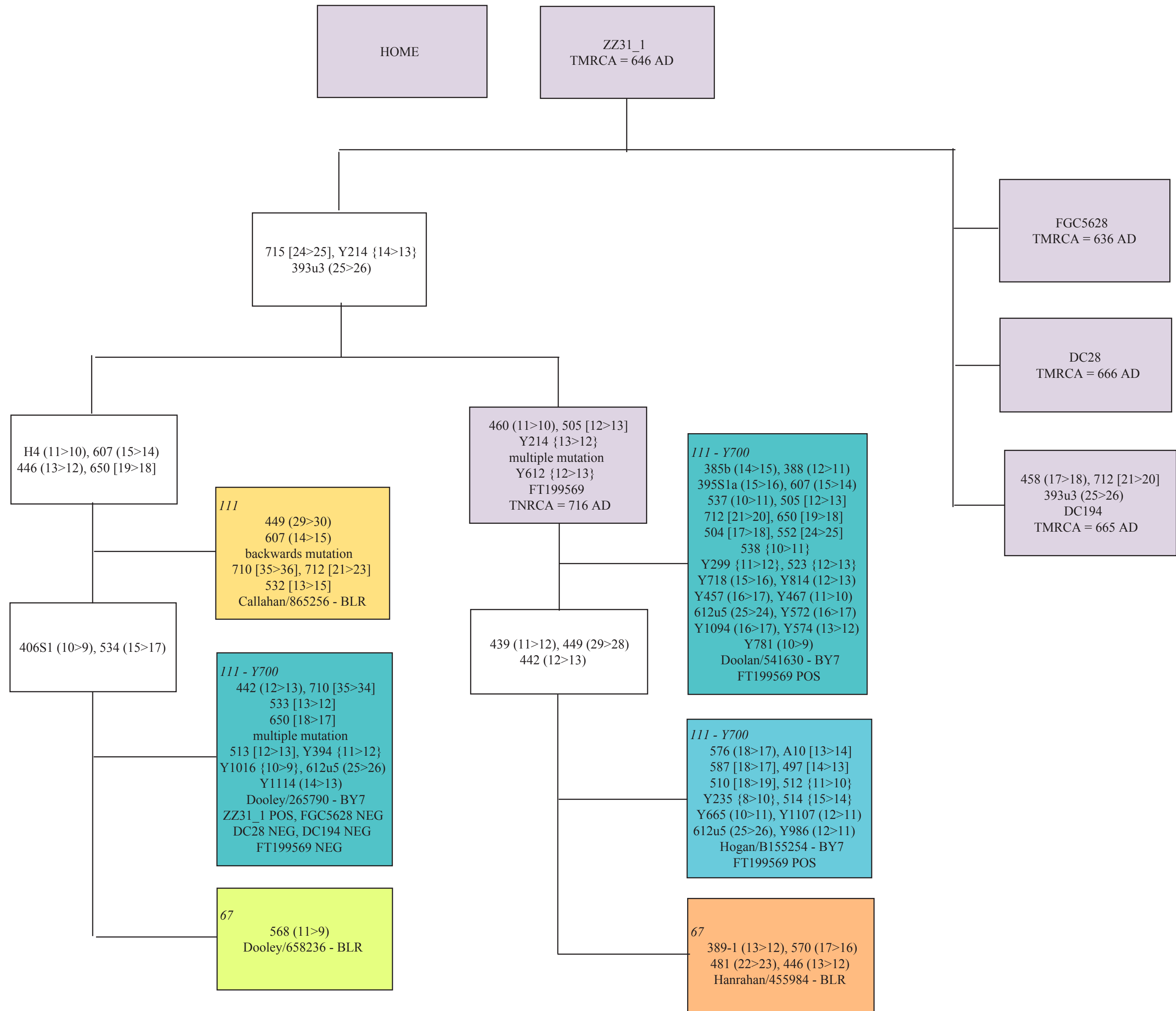
111 - Y700  
522 [11>10], 525 [10>11]  
539 {10>11}, 393u3 (25>26)  
Y574 (13>14)  
Sears/585032 - NGS  
DC503 POS

111  
635 [23>24], 461 [12>13]  
Butler/369323 - Z253  
FGC5660 POS, DC8 NEG  
FGC5628 NEG, DC25 NEG  
FGC12290 NEG, DC29 NEG

111 - Y700  
635 [23>24], 461 [12>13]  
489 {11>12}, Y654 (13>14)  
Y1094 (16>18), Y789 (16>15)  
Y960 (16>17)  
Butler/888465 - BY7  
DC503 POS







HOME

H4 (11>10)  
Z17669 - Part 2

67  
388 (14>13), 449 (29>28)  
Bray/192466 - Indiv  
FGC5660 POS  
FGC5628 NEG, DC8 NEG

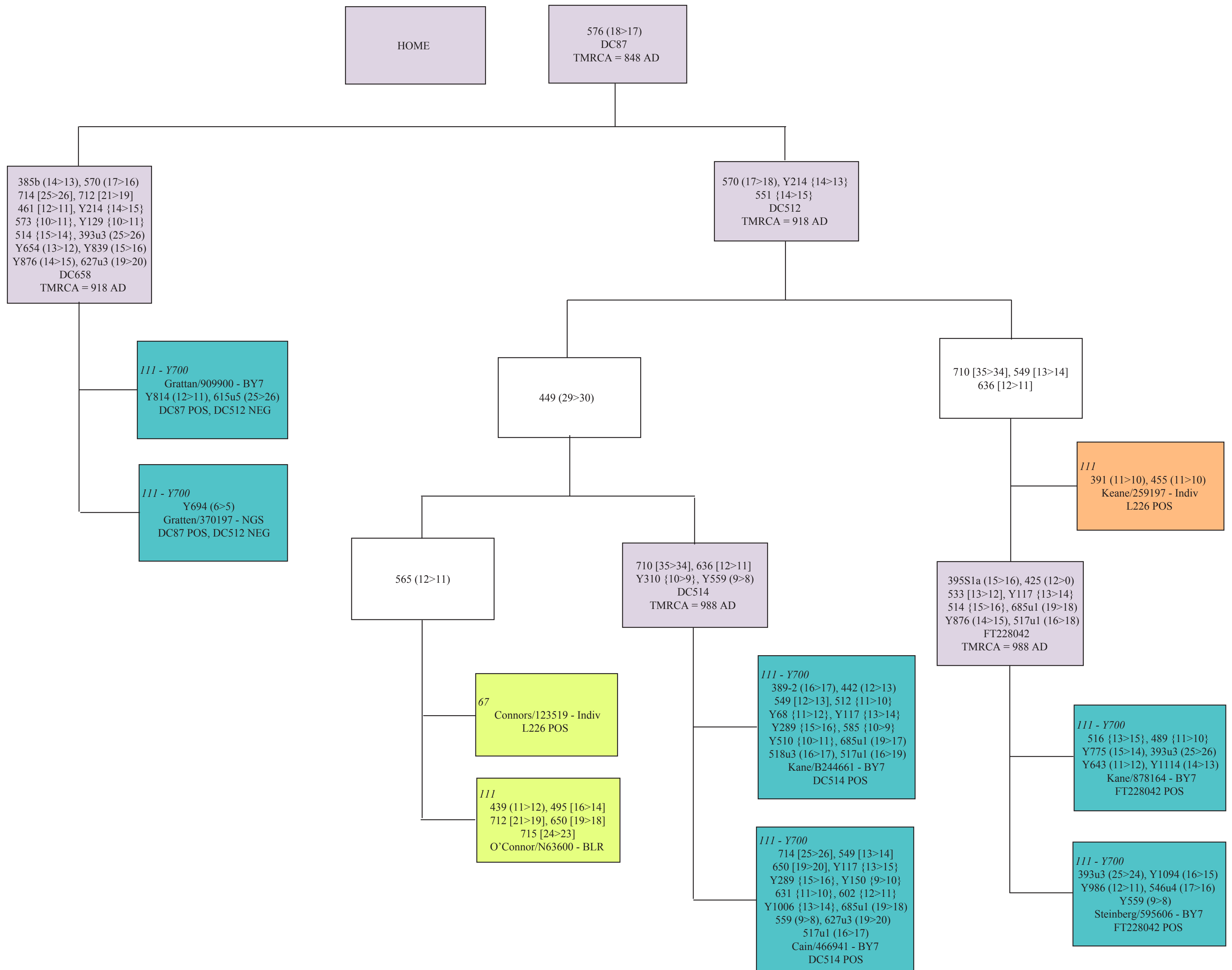
446 (13>12), 715 [24>25]

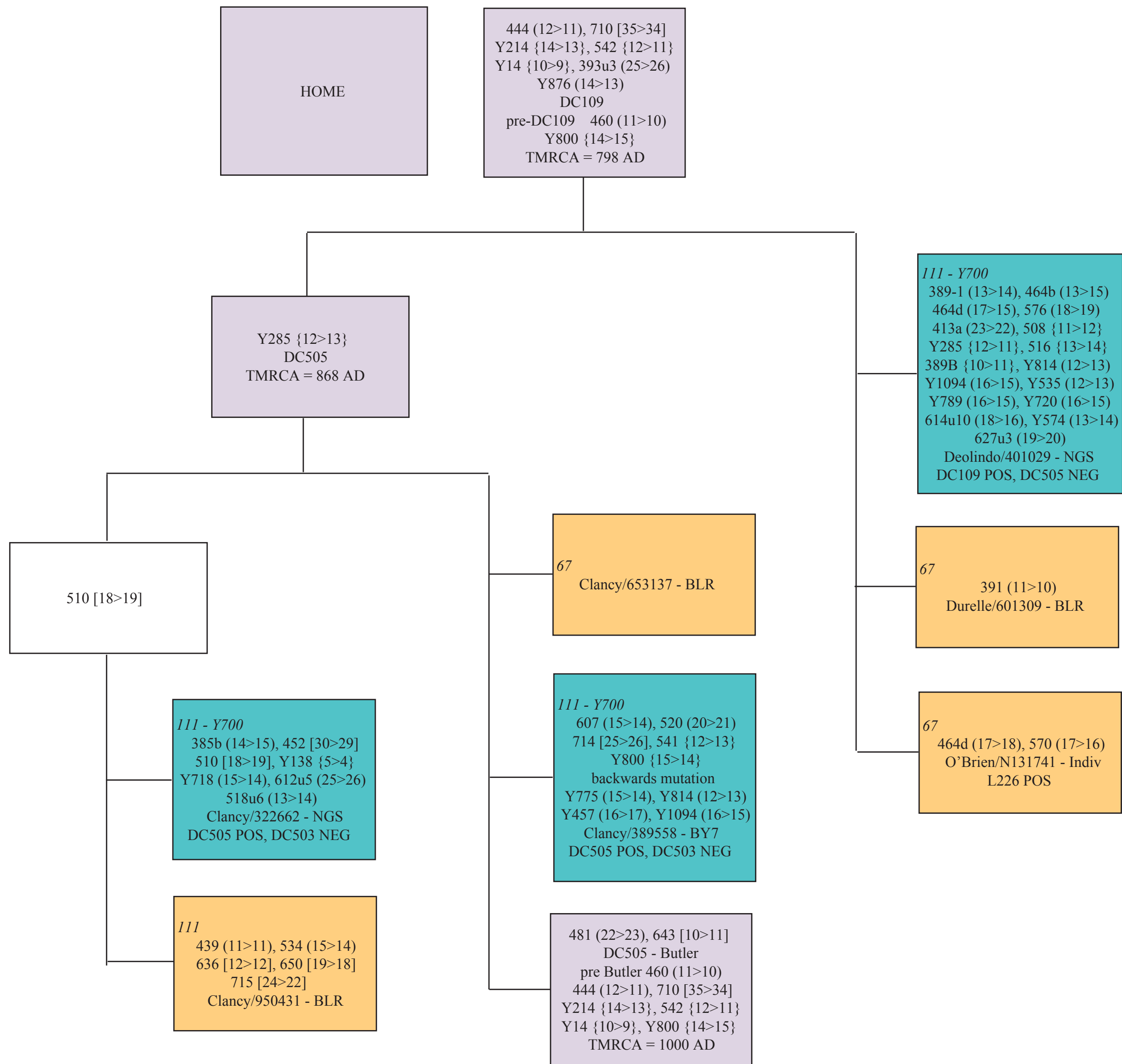
111  
449 (29>30), 710 [35>36]  
712 [21>23], 650 [19>18]  
532 [13>15]  
Callahan/865256 - BLR

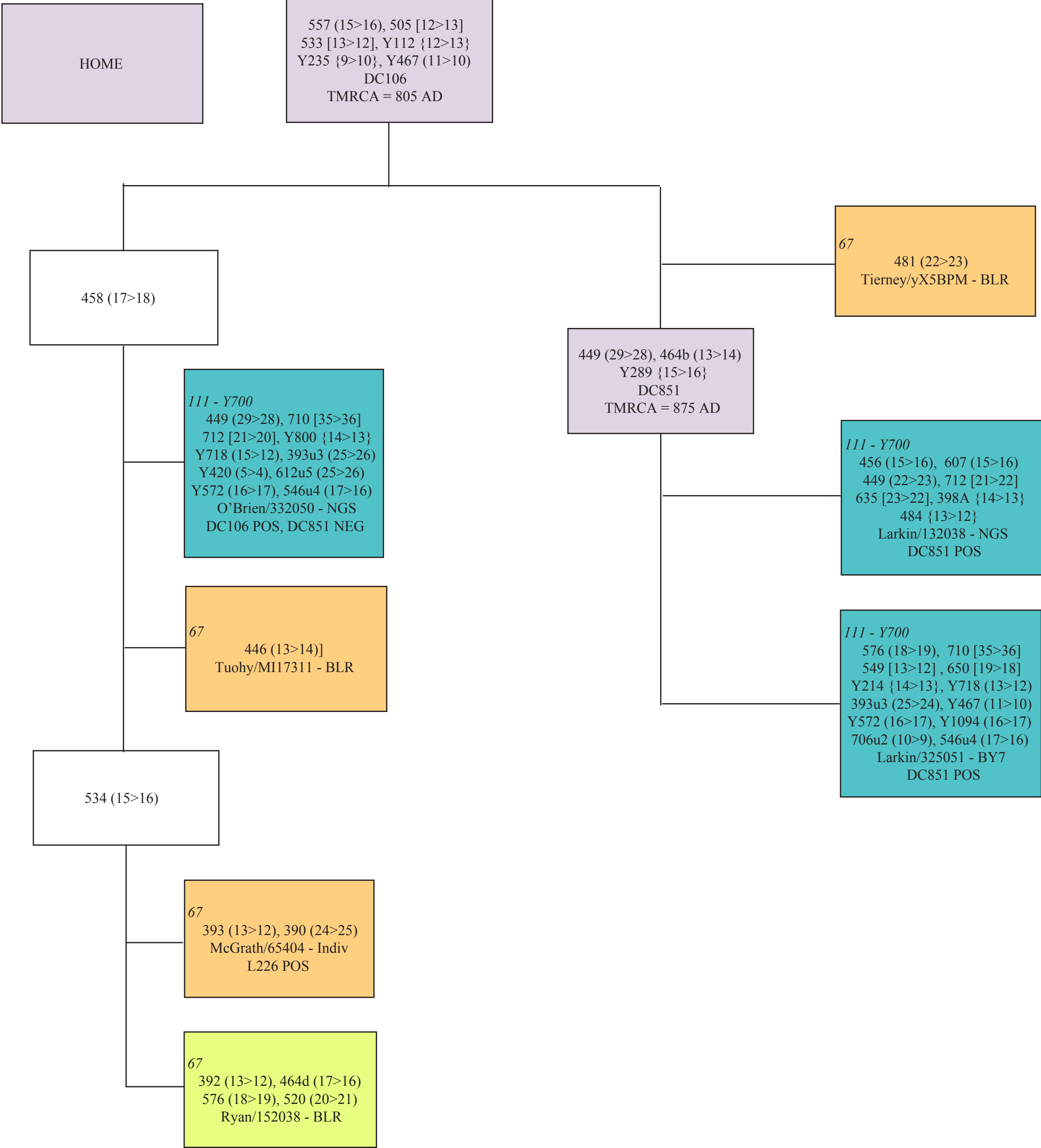
607 (15>14), 406S1 (10>9)  
534 (15>17)

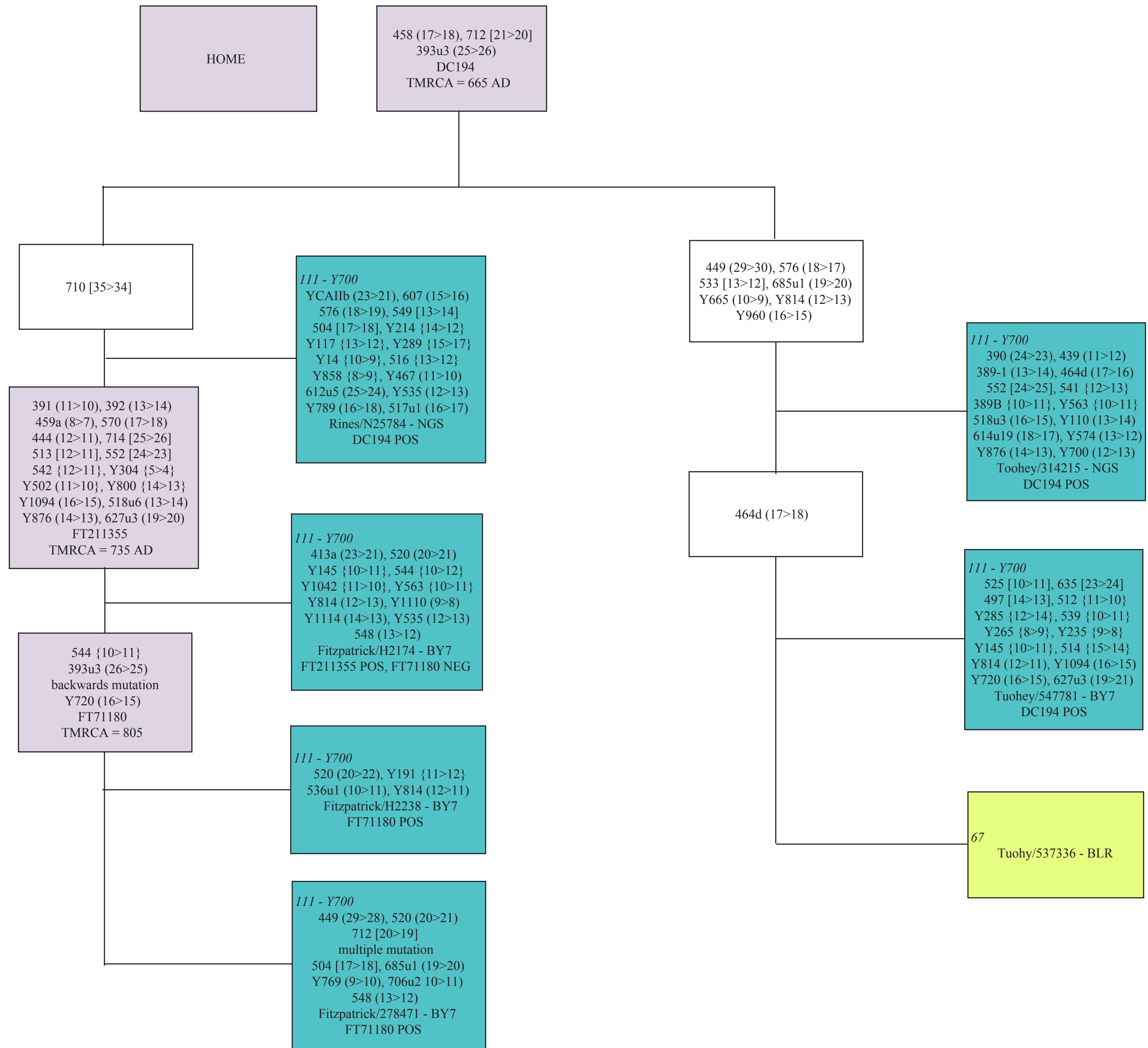
111  
442 (12>13), 710 [35>34]  
533 [13>12], 650 [19>17]  
513 [12>13], Y394 {11>12}  
Y214 {14>13}, Y1016 {10>9}  
393u3 (25>26), 612u5 (25>26)  
Y1114 (14>13)  
Dooley/265790 - BY7  
Z17669 POS, FGC5628 NEG  
DC28 UNK, DC194 NEG  
DC8 NEG, DC109 NEG  
FGC79628 NEG

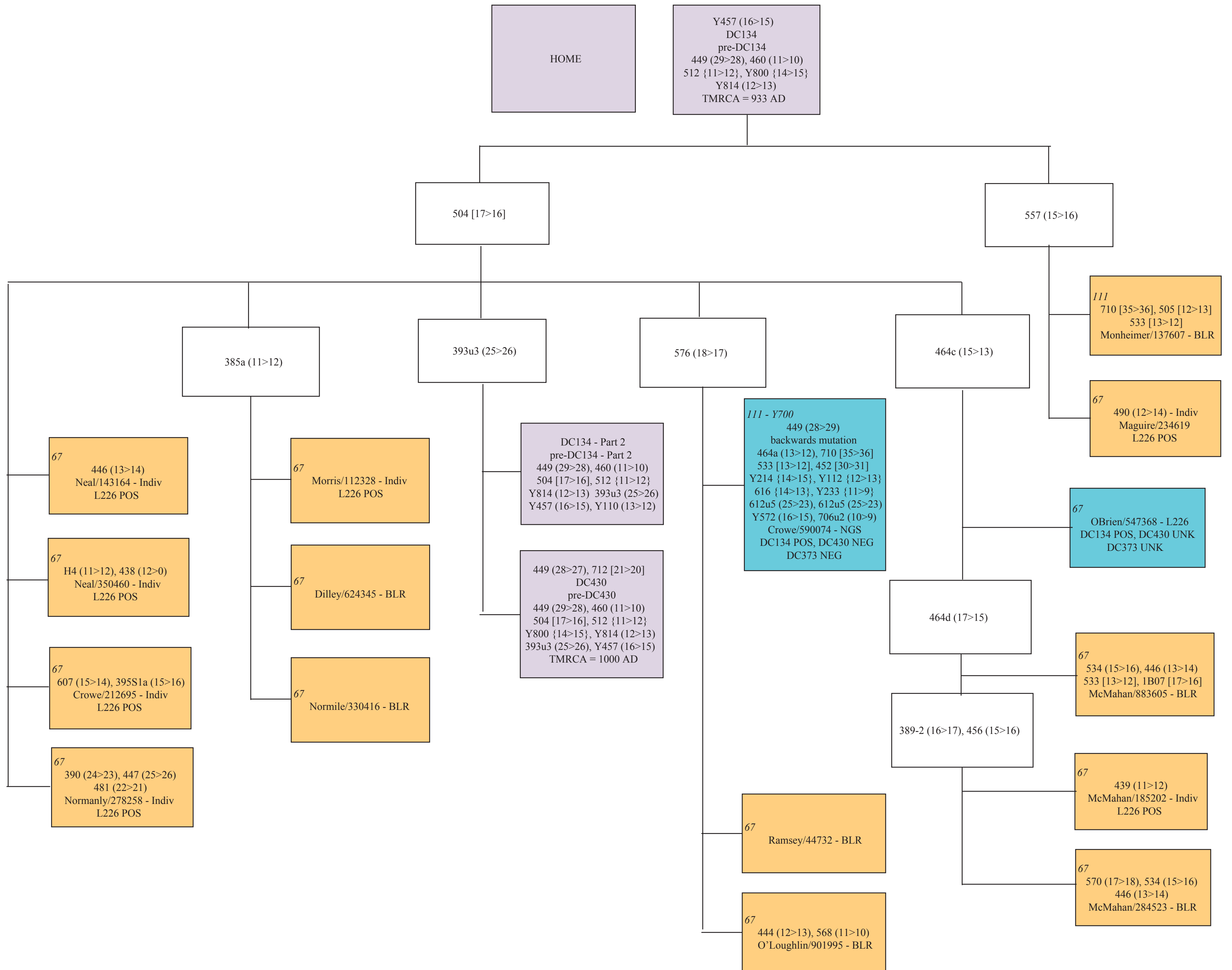
67  
568 (11>9)  
Dooley/658236 - BLR



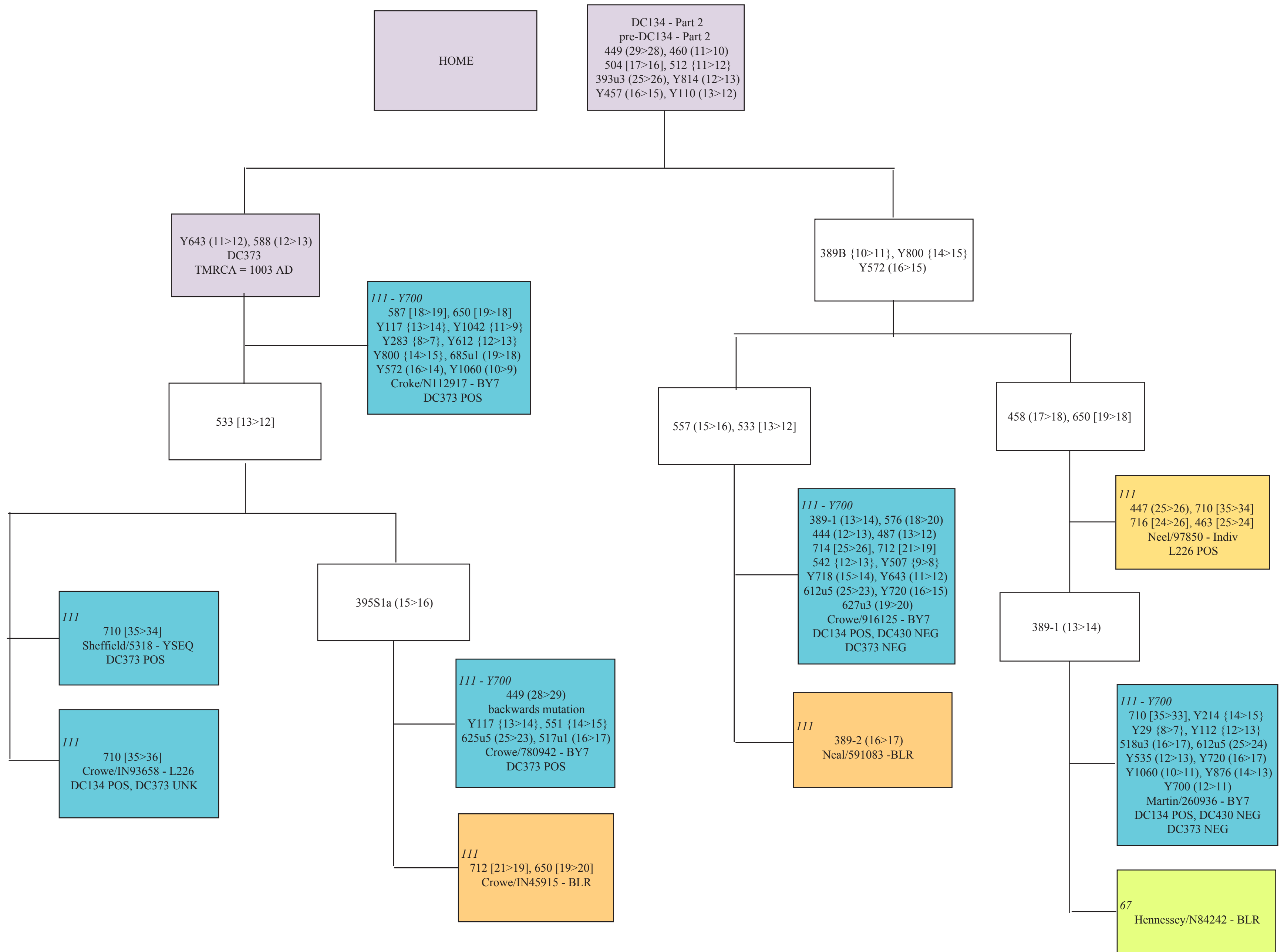


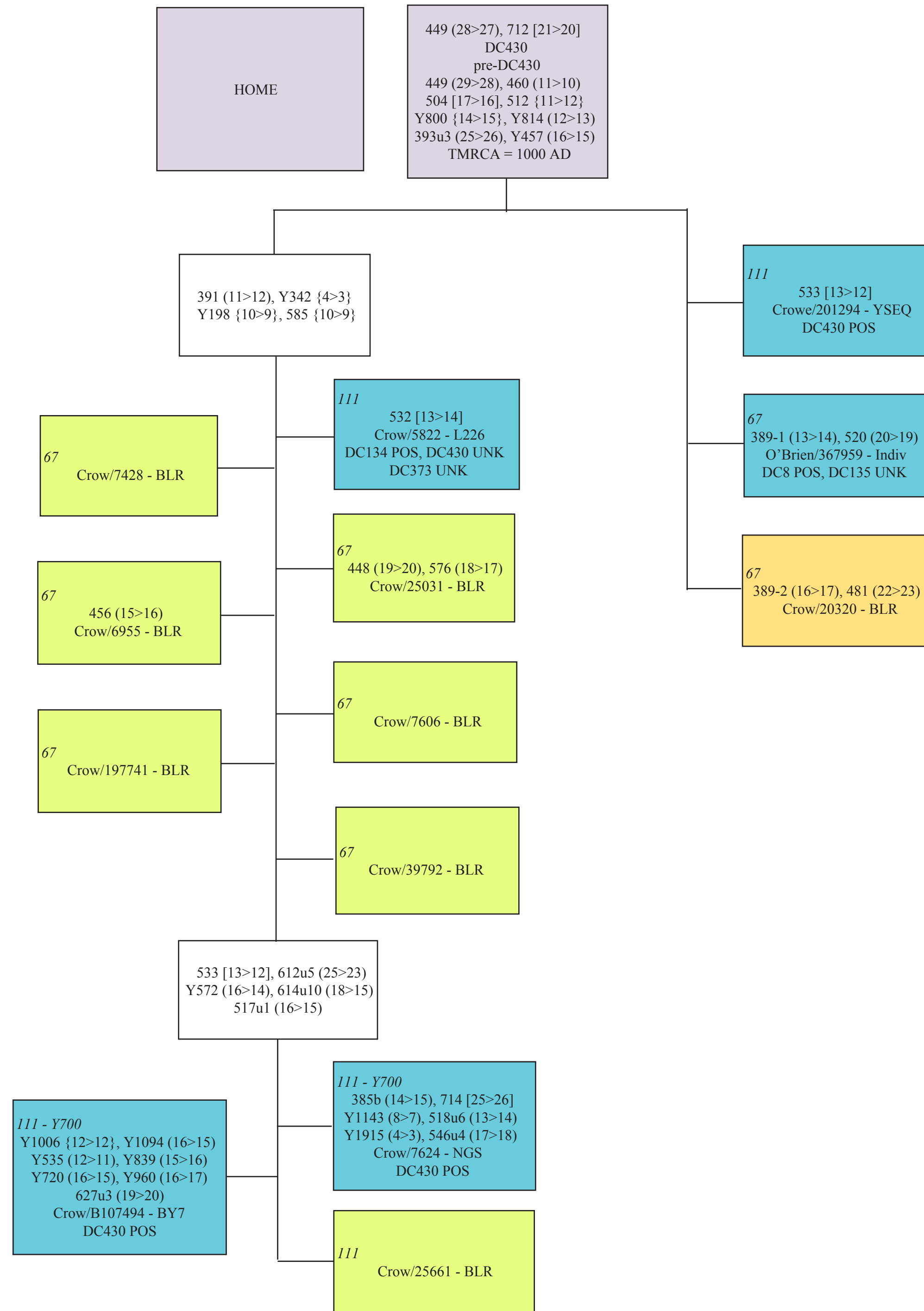


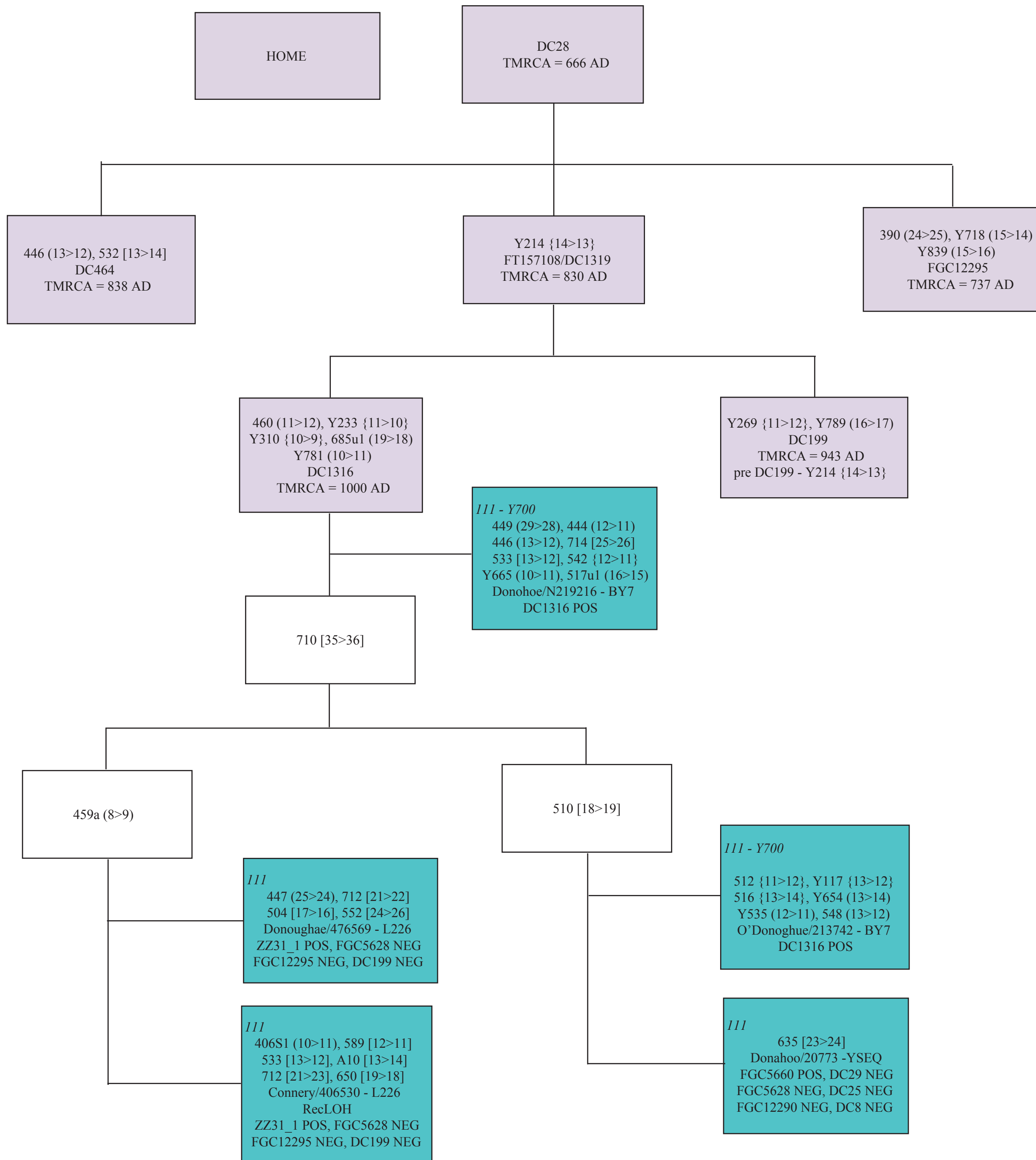


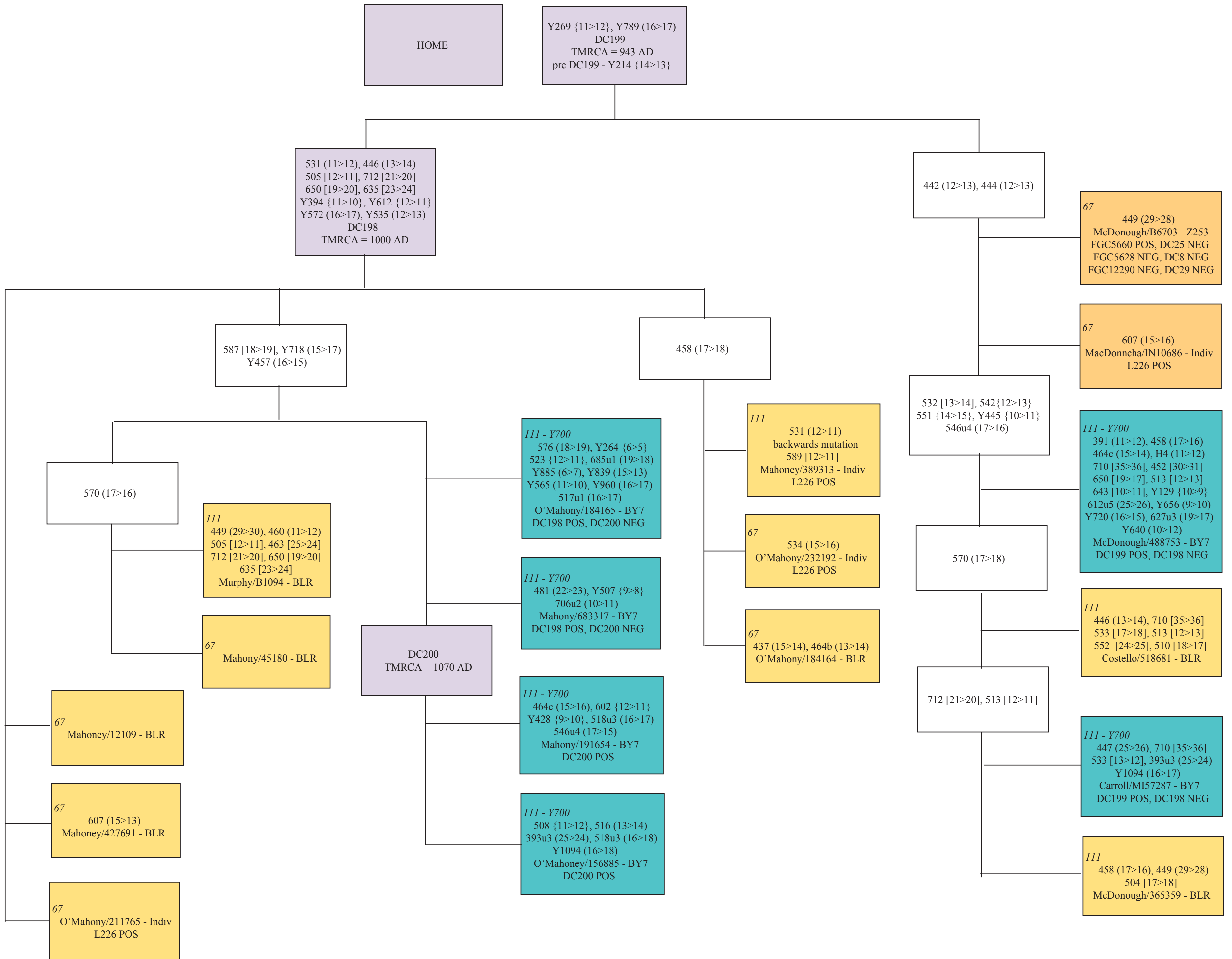


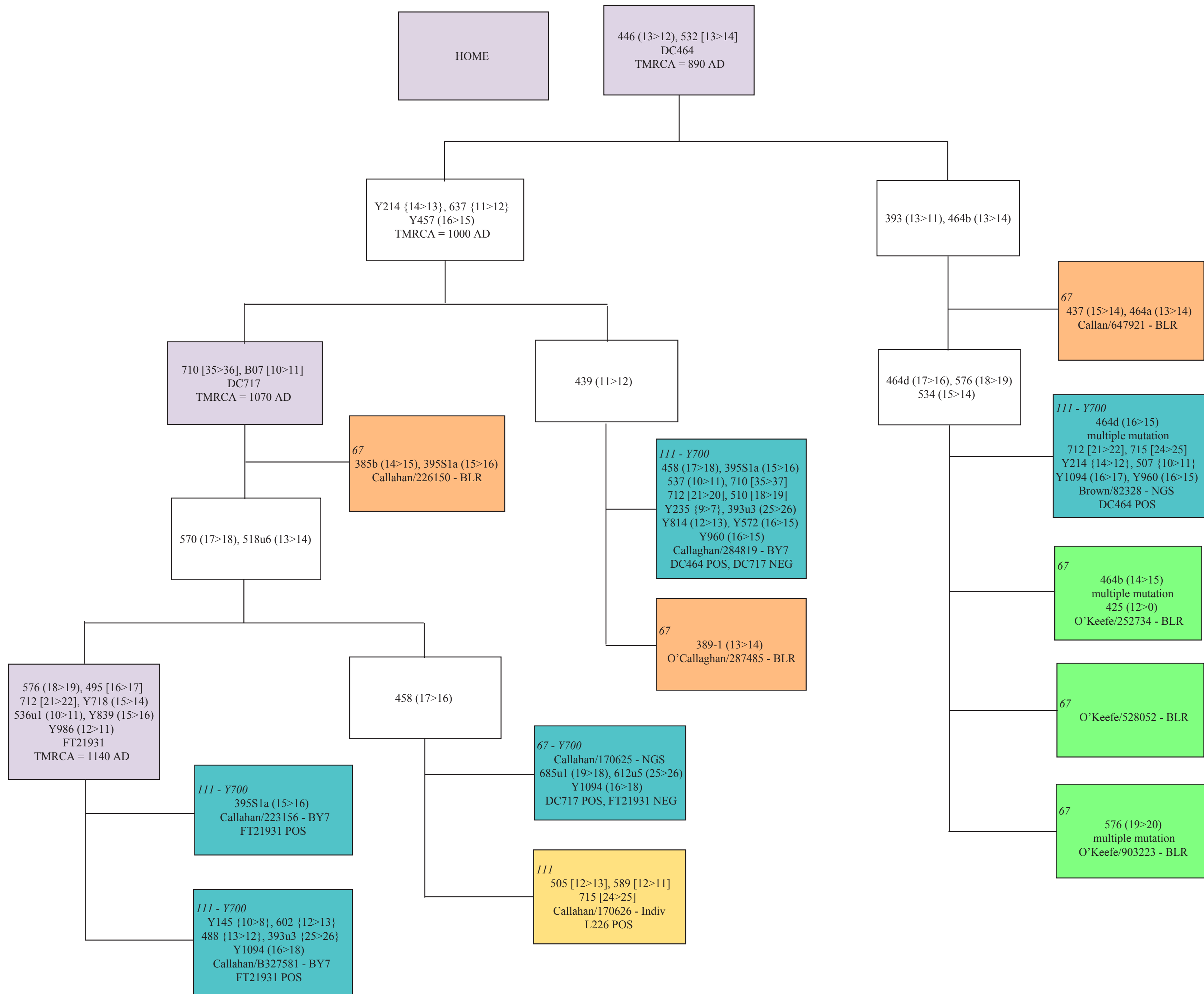


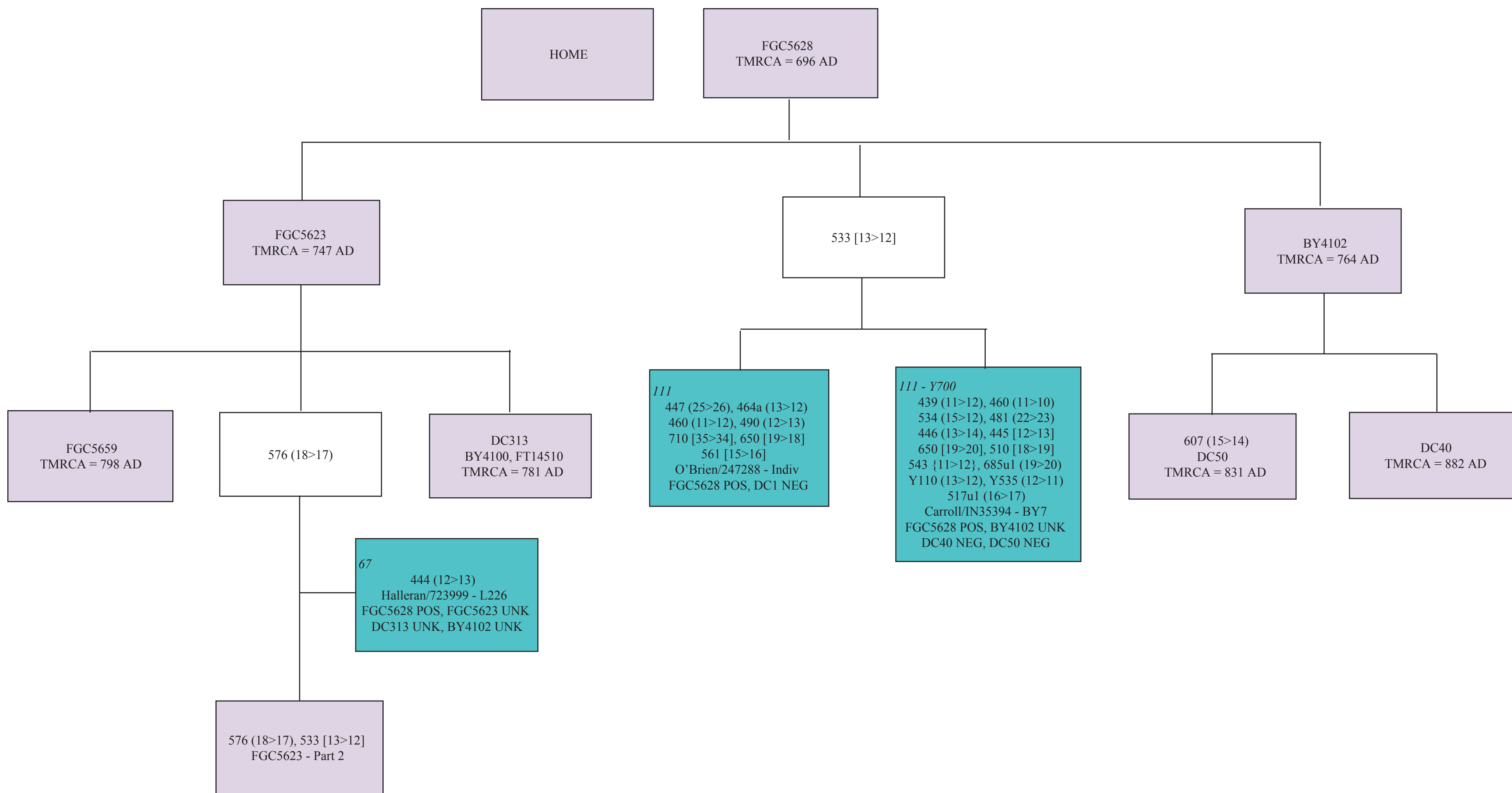


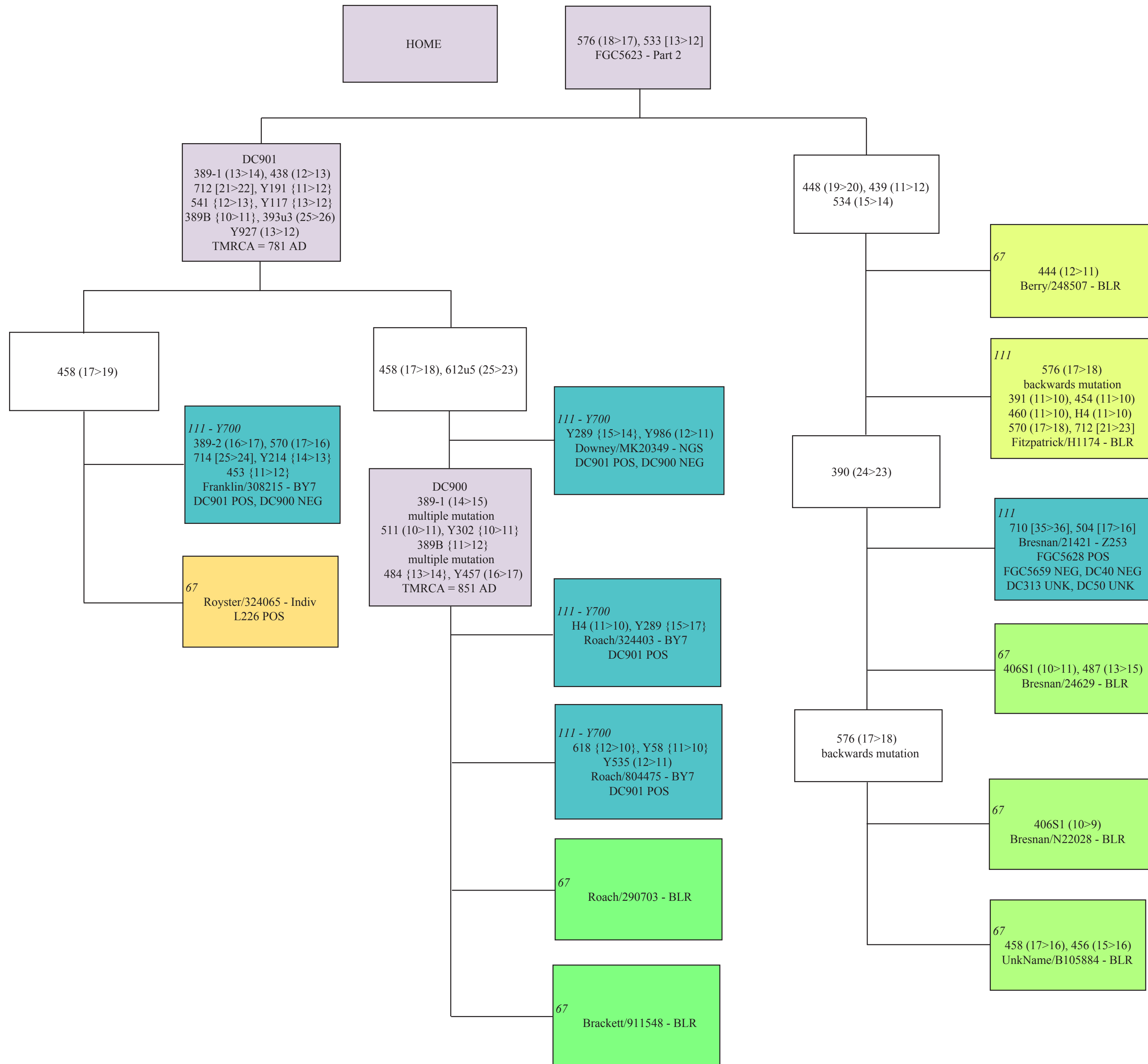


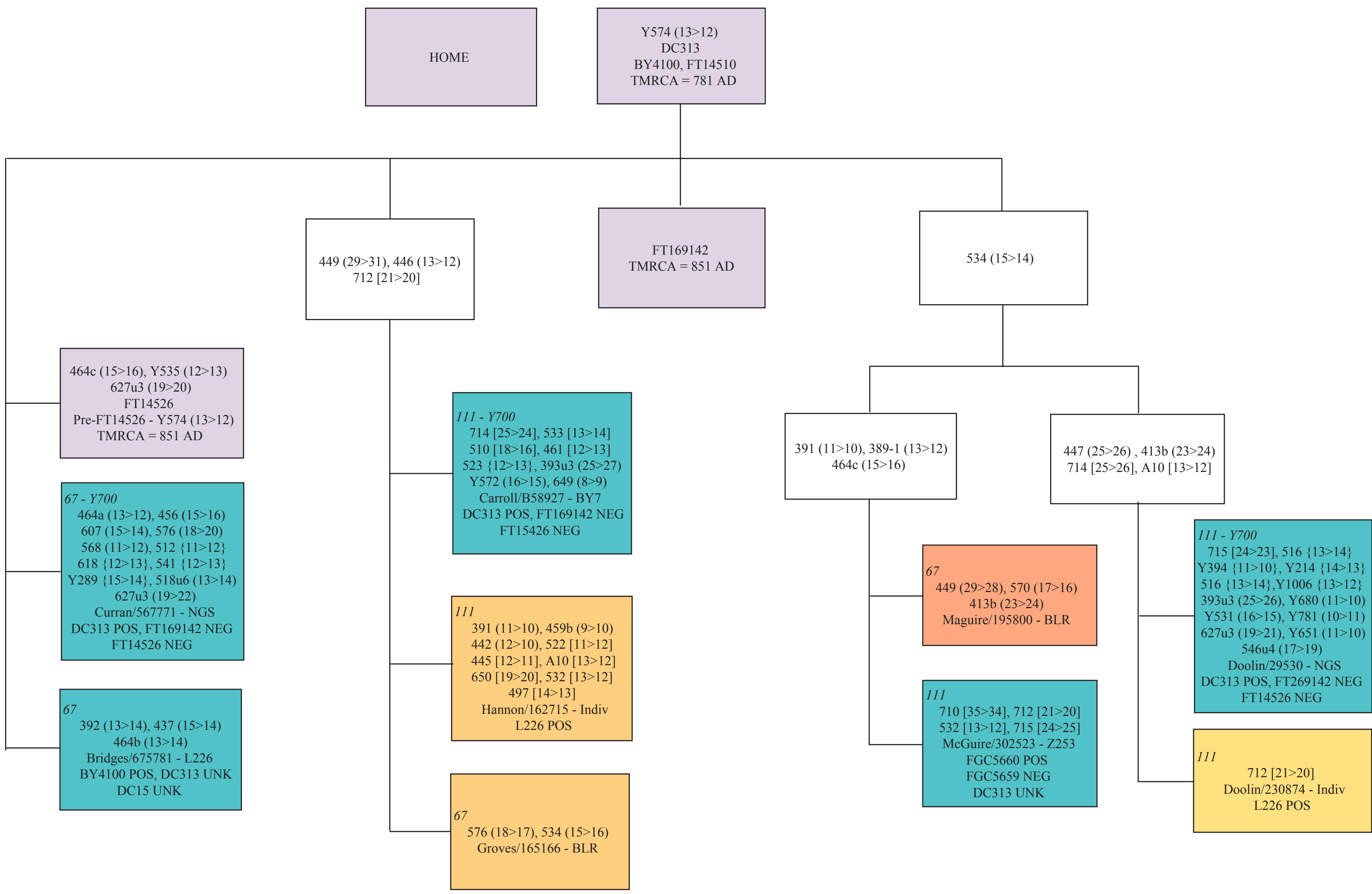




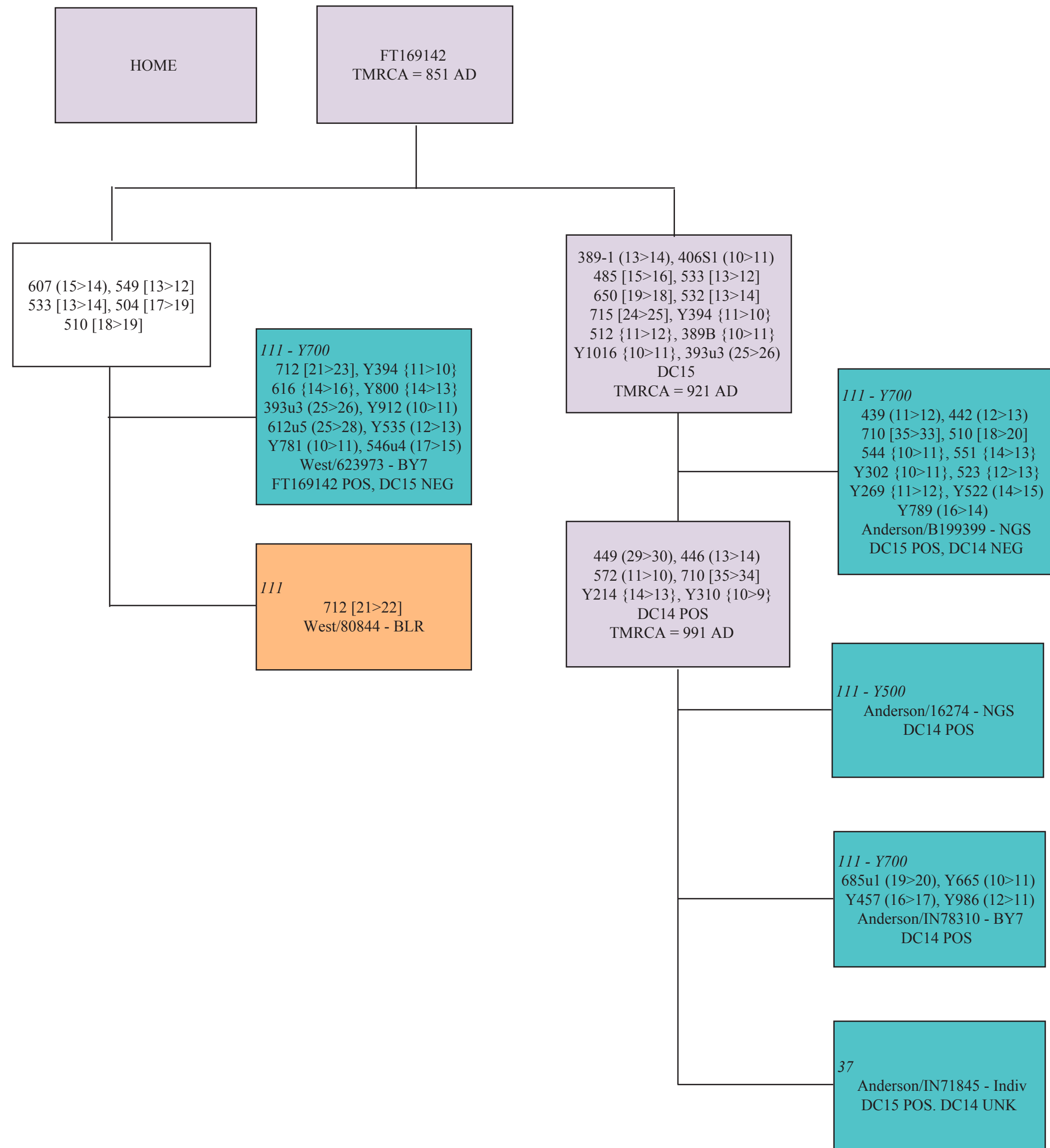


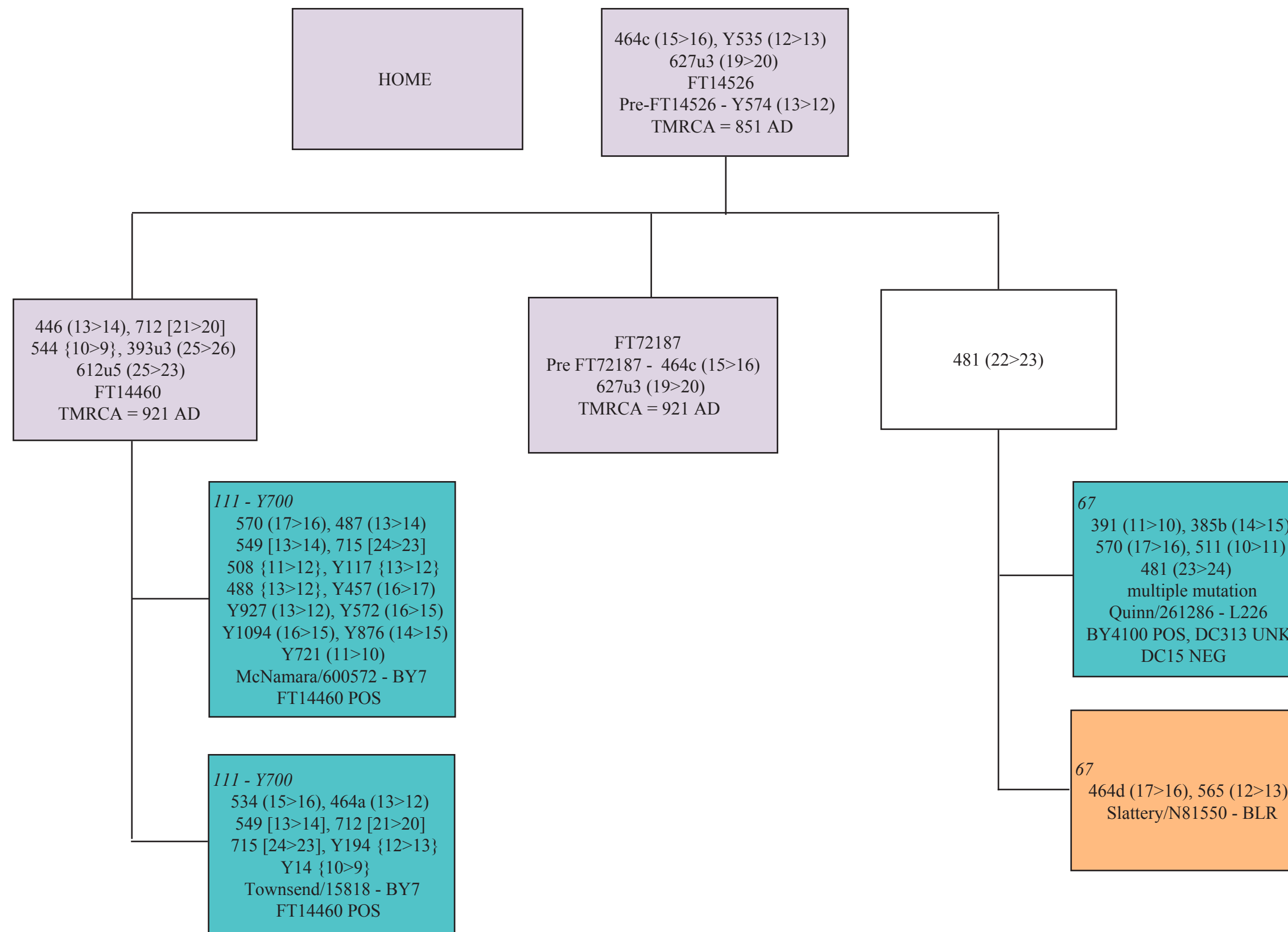


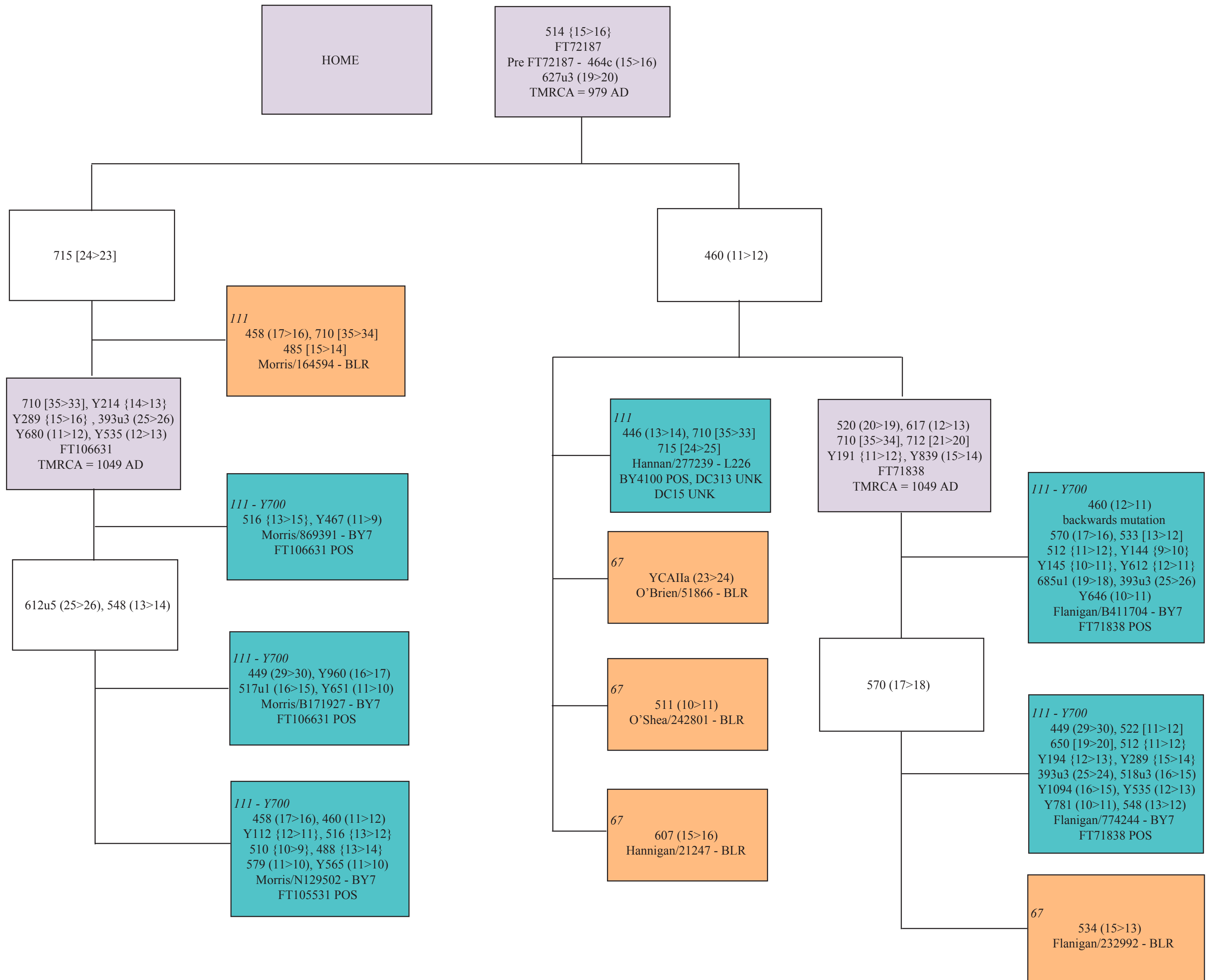


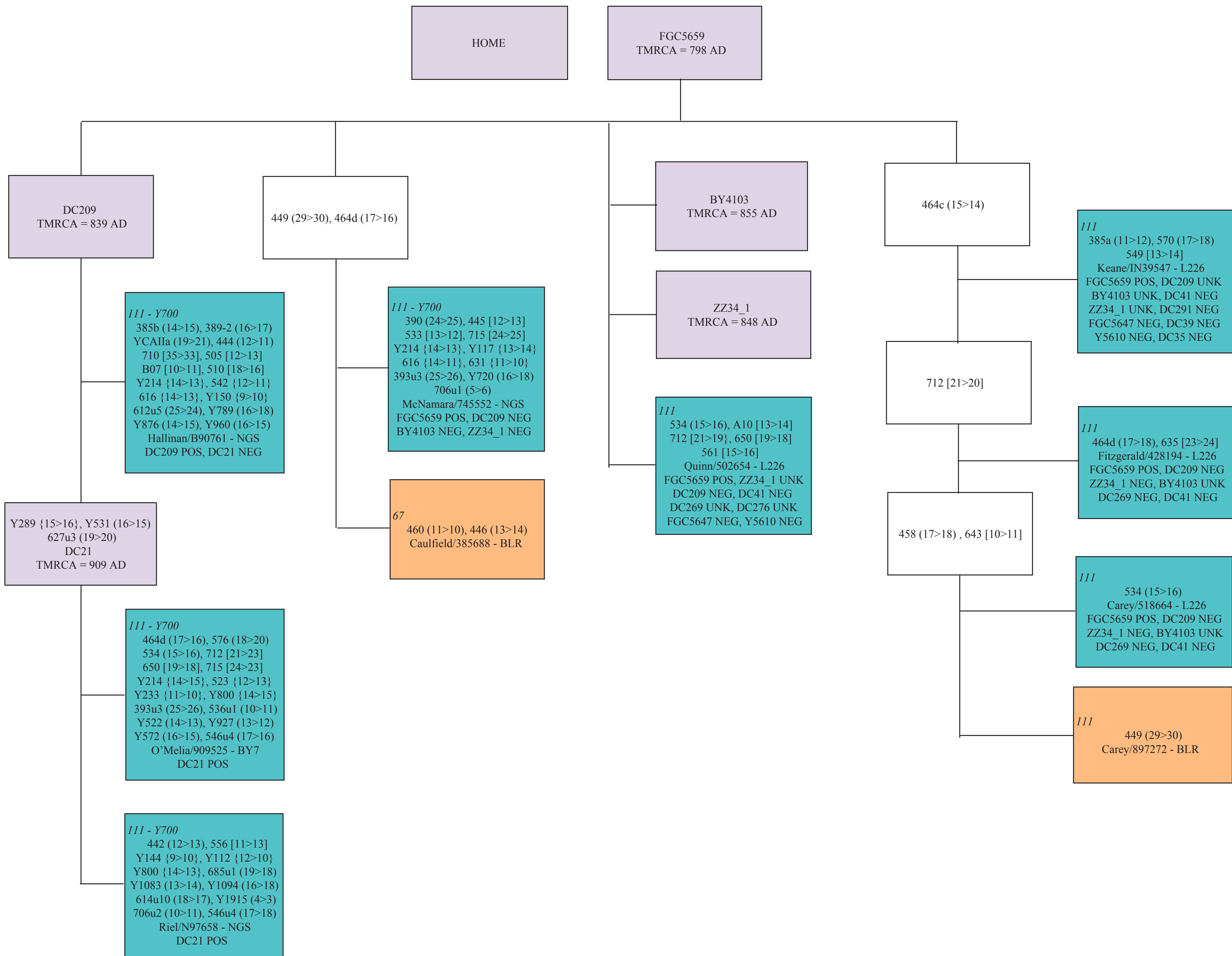


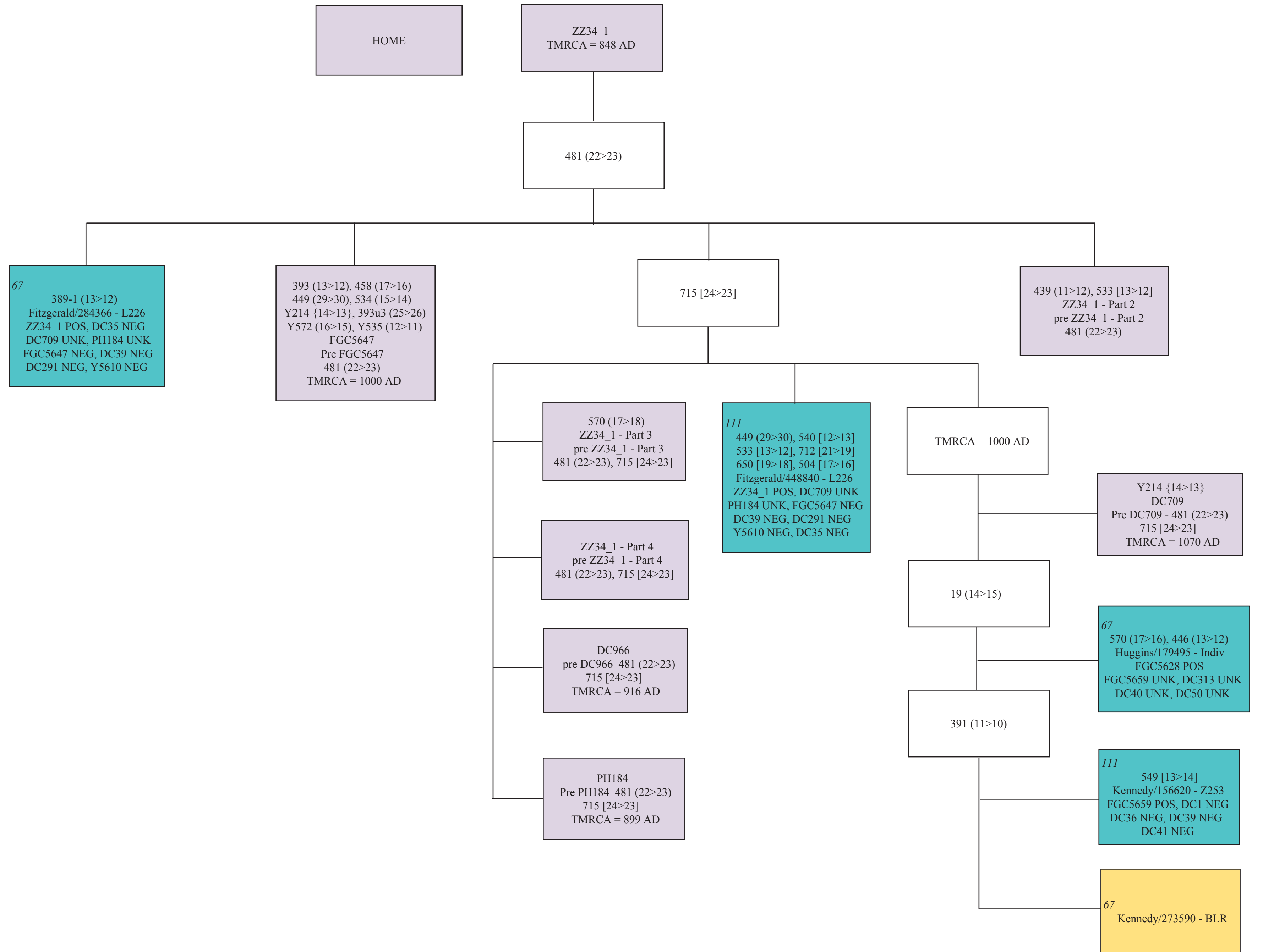


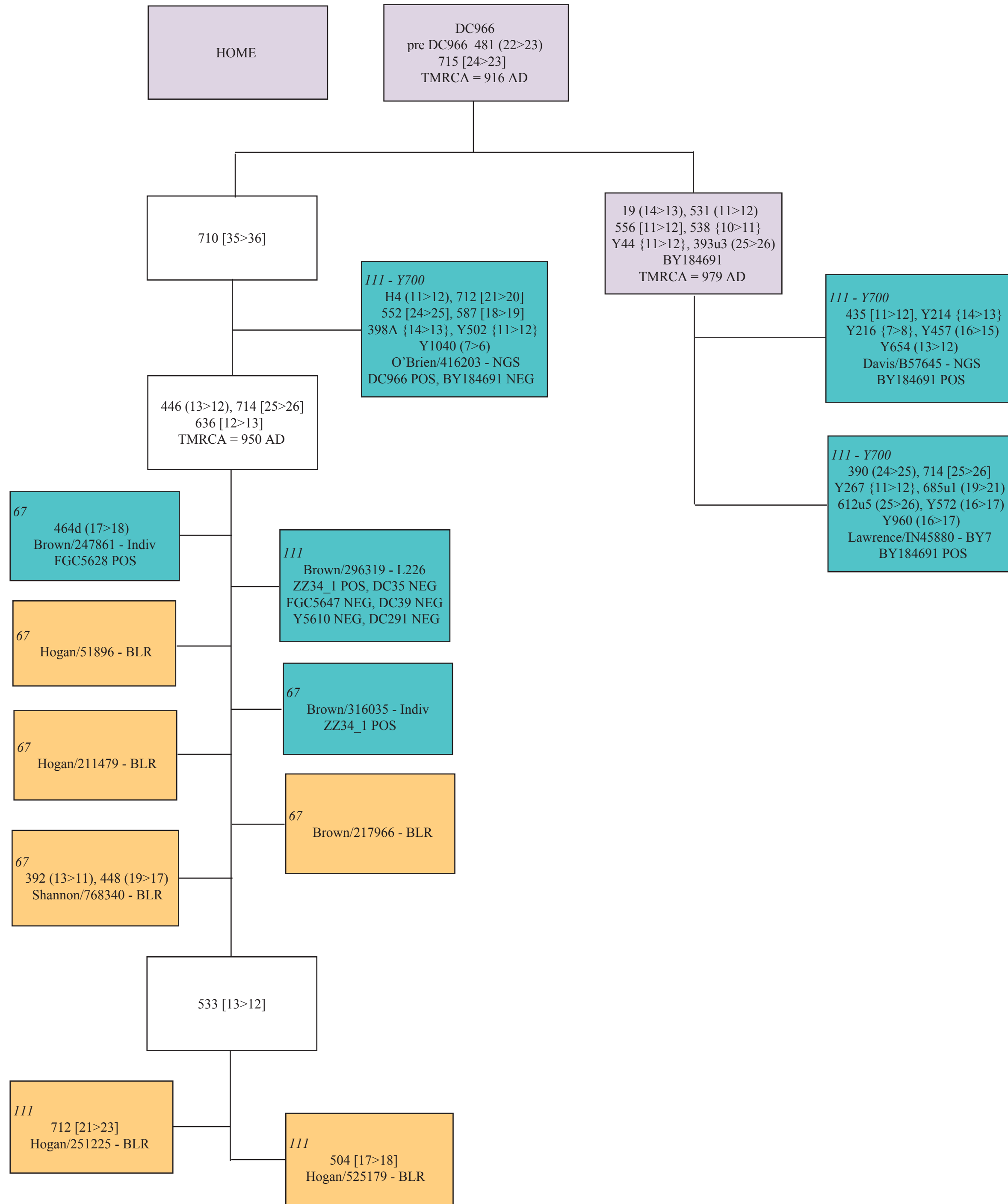












HOME

439 (11>12), 533 [13>12]  
ZZ34\_1 - Part 2  
pre ZZ34\_1 - Part 2  
481 (22>23)

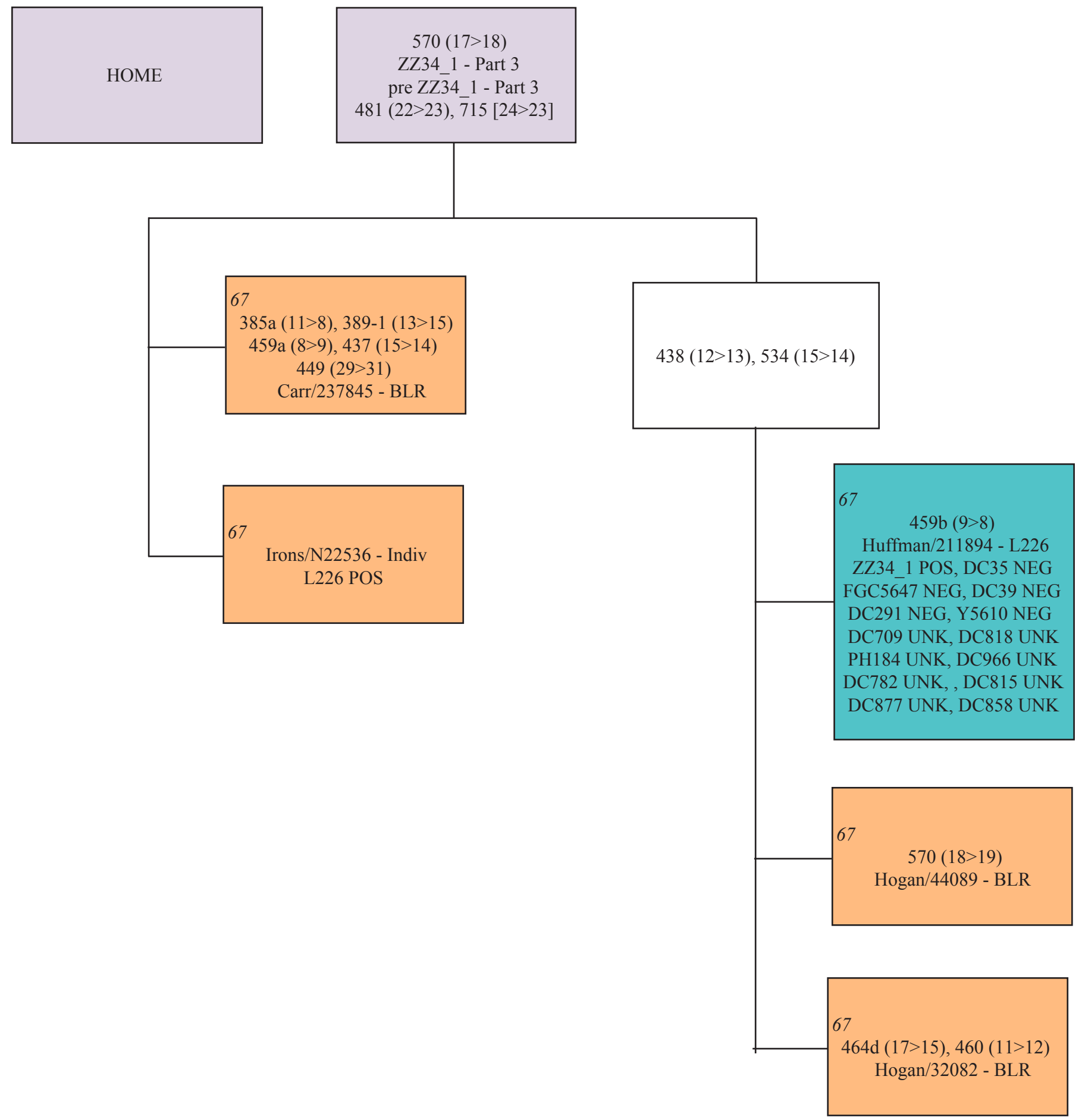
67  
449 (29>28)  
Fitzgerald/183282 - Indiv  
L226 POS

67  
YCAIIb (23>22)  
Graham/27276 - Indiv  
L226 POS

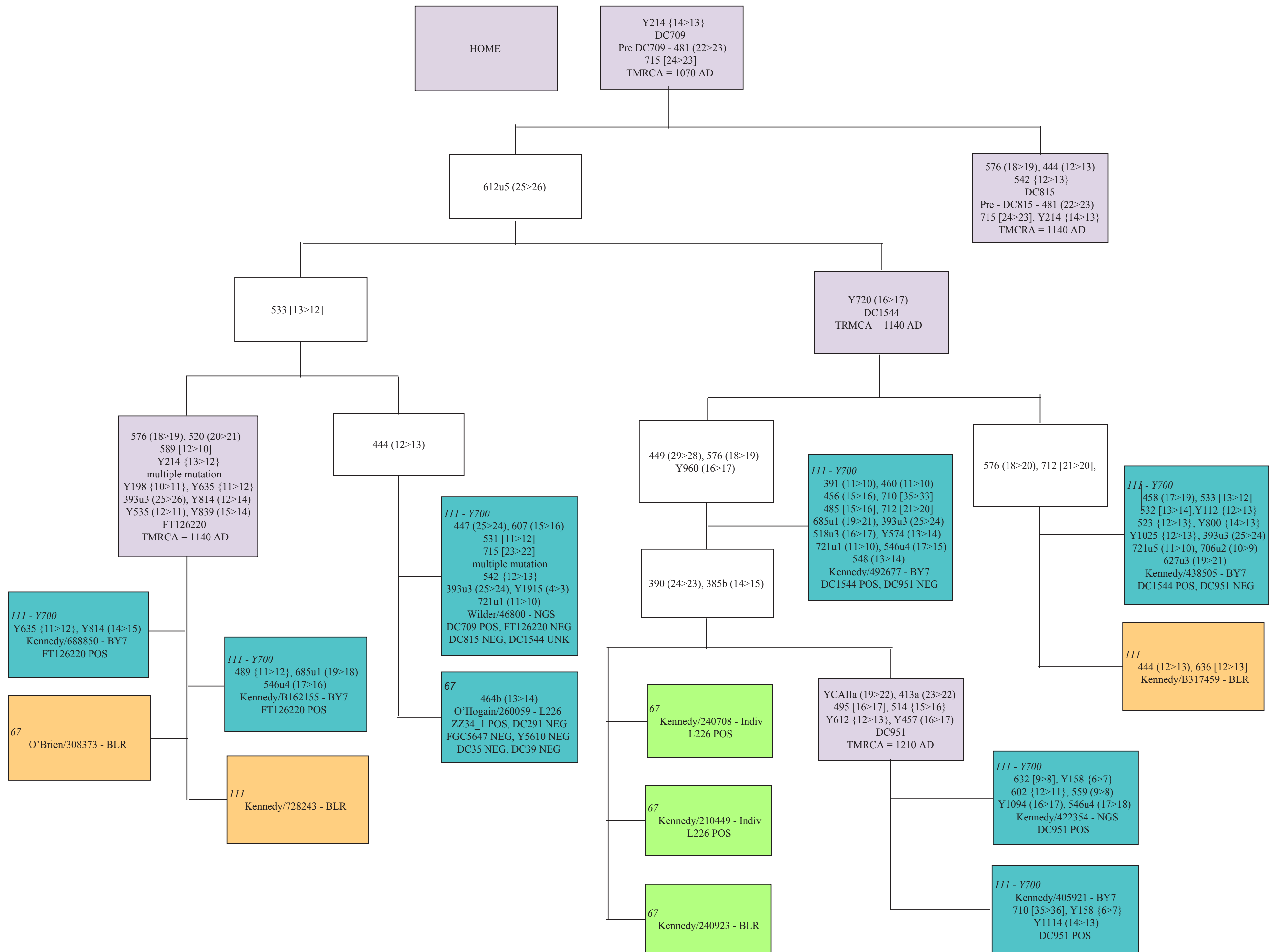
712 [21>22], 532 [13>14]

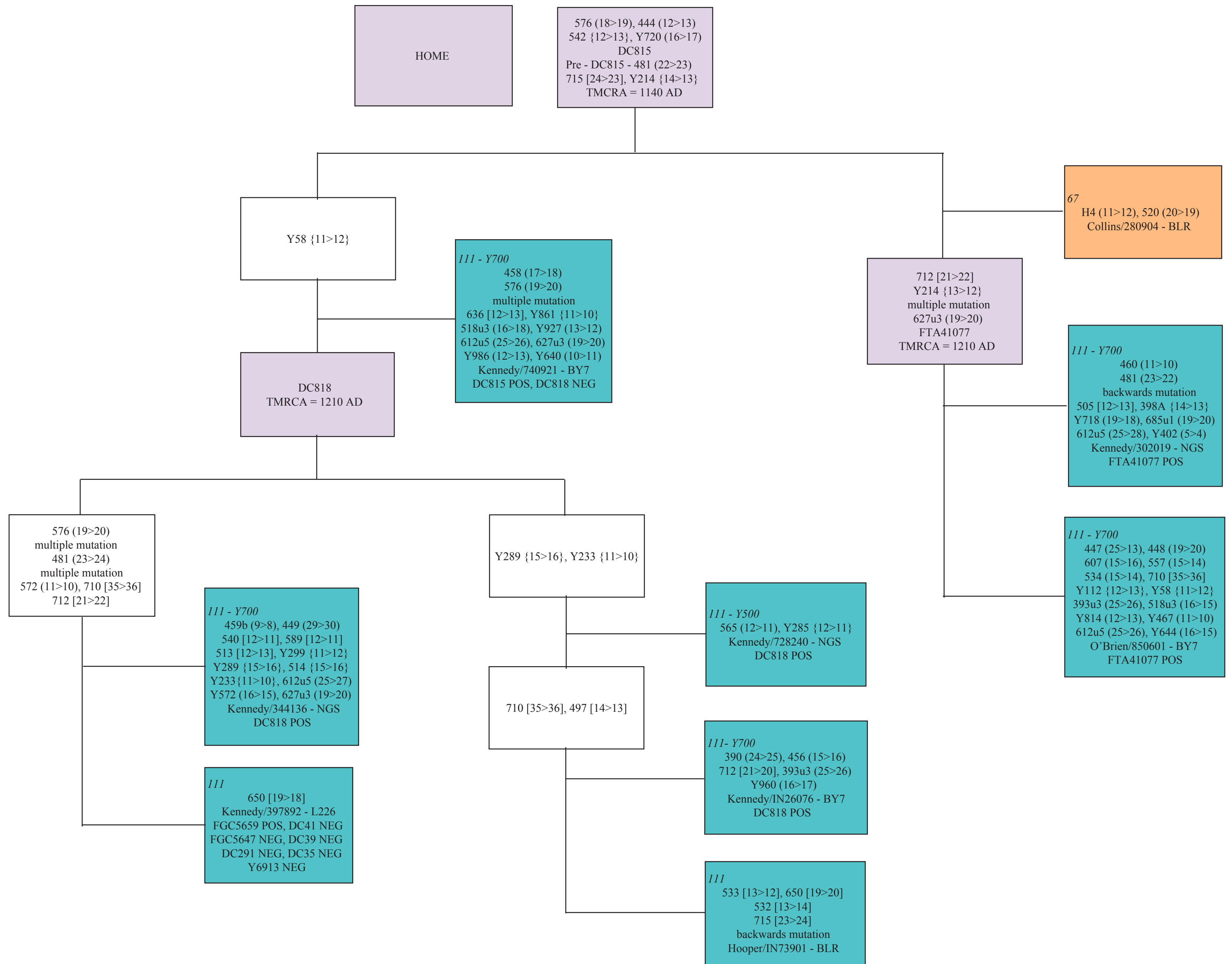
111  
714 [25>24], 715 [24>23]  
Graham/583951 - L226  
ZZ34\_1 POS, DC35 NEG  
DC709 UNK, PH184 UNK  
FGC5647 NEG, DC39 NEG  
DC291 NEG, Y5610 NEG

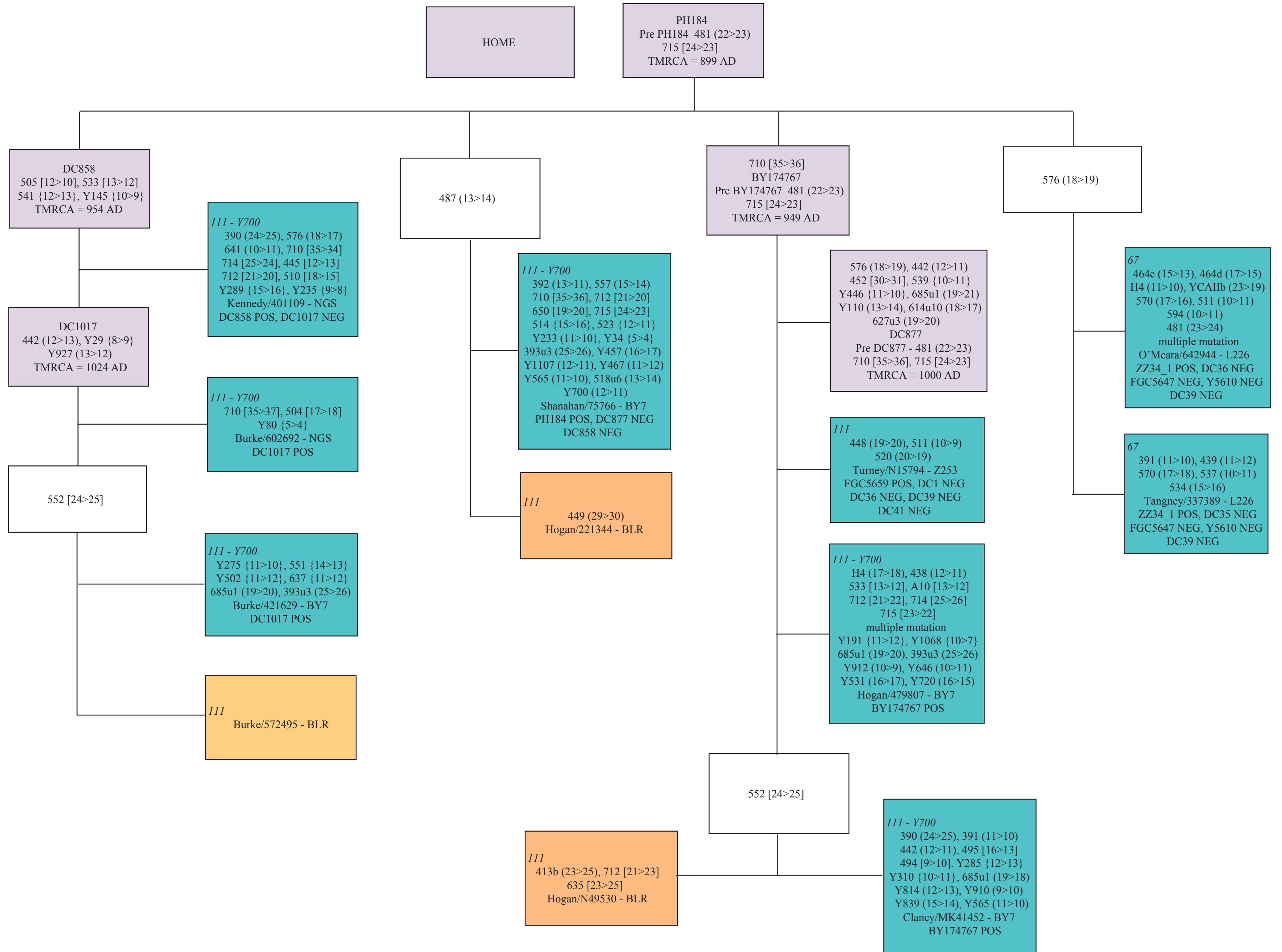
111  
710 [35>36]  
Graham/196734 - BLR





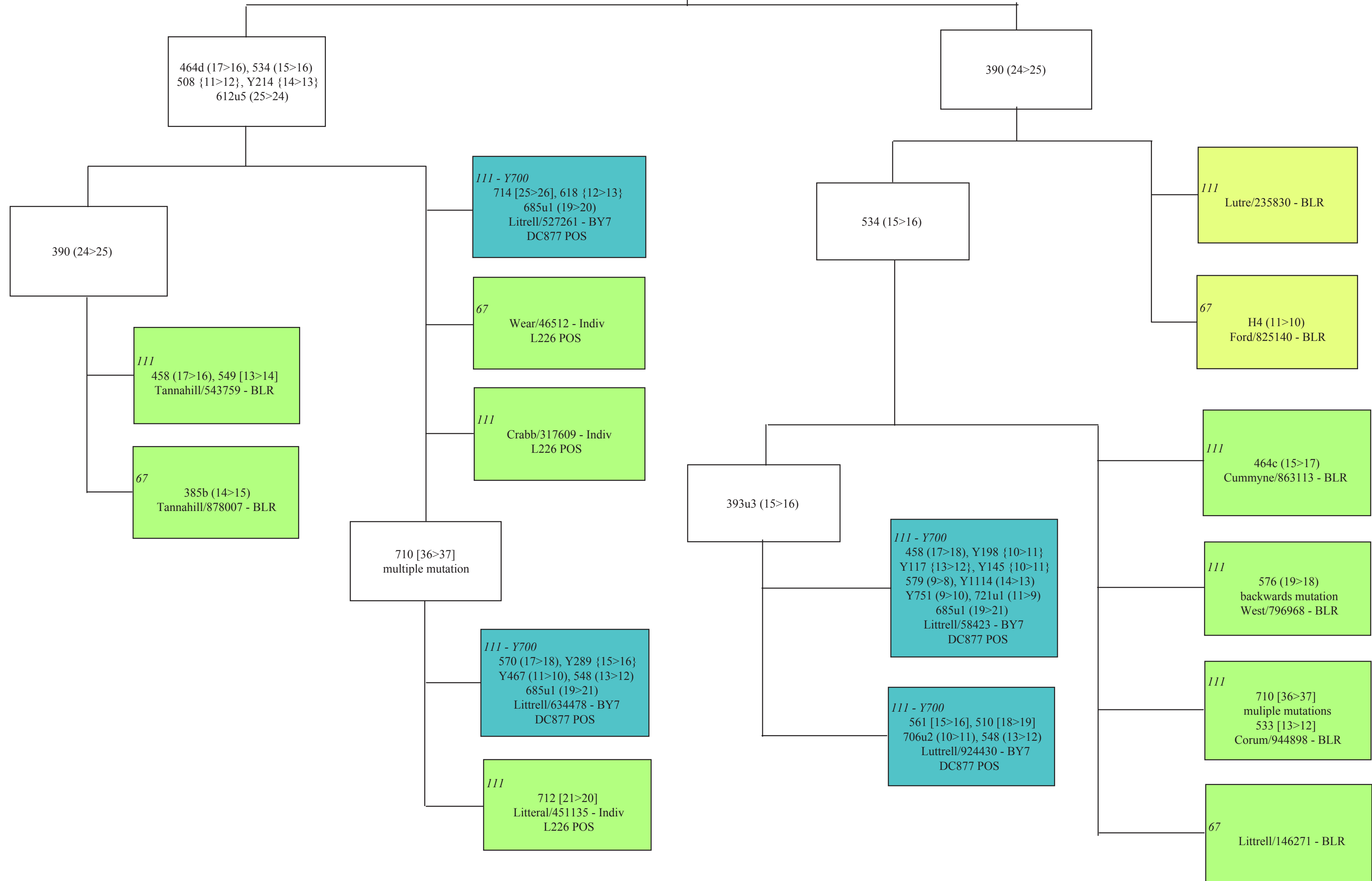






HOME

576 (18>19), 442 (12>11)  
452 [30>31], 539 {10>11}  
Y446 {11>10}, 685u1 (19>21)  
Y110 (13>14), 614u10 (18>17)  
627u3 (19>20)  
DC877  
Pre DC877 - 481 (22>23)  
710 [35>36], 715 [24>23]  
TMRCA = 1000 AD



HOME

ZZ34\_1 - Part 4  
pre ZZ34\_1 - Part 4  
481 (22>23), 715 [24>23]

DC782  
TMRCA = 1000 AD

Y720 (16>17)

DC291  
TMRCA = 924 AD

Y5610 / DC6  
pre Y5610 - 481 (22>23)  
715 [24>23]  
TMRCA = 1070 AD

ZZ34\_1 - Part 5  
pre ZZ34\_1 - Part 5  
481 (22>23), 715 [24>23]  
Y720 (16>17)

458 (17>16), 464b (13>15)  
H4 (11>12), 712 [21>20]  
510 [18>19], Y1042 {11>12}  
Y457 (16>15), Y720 (16>15)  
Y891 (10>11), Y574 (13>14)  
FT101316  
TMRCA = 1000 AD

393 (13>12), 650 [19>20]  
DC290  
TMRCA = 983 AD

715 [23>24]  
backwards mutation  
552 [24>23]  
DC35  
pre DC35 - 481 (22>23)  
TMRCA = 1070 AD

389-2 (16>17), Y839 (15>14)  
Y986 (12>11)  
DC38  
pre DC38 - 481 (22>23)  
715 [24>23], Y720 (16>17)  
TMRCA = 924 AD

111 - Y700  
393 (13>12), 447 (25>24)  
Y85 {10>9}, Y145 {10>11}  
Y896 (12>11)  
Carey/B450956 - BY7  
FT101316 POS

413a (23>22), 497 [14>15]  
Y299 {11>12}, 393u3 (25>26)  
Y891 (10>11), 627u3 (19>21)

712 [21>20]

67  
385b (14>15)  
Carey/112620 - Indiv  
L226 POS

111 - Y700  
685u1 (19>20), Y649 (13>14)  
546u4 (17>16)  
Carey/298743 - BY7  
FT101316 POS

111  
Carey/189591 - BLR

534 (15>16)

111 - Y700  
576 (18>17), 537 (10>11)  
495 [16>17], 551 {14>15}  
489 {11>12}, 484 {13>12}  
685u1 (19>20), 567 (11>12)  
Y457 (16>15)  
O'Brien/665725 - BY7  
DC290 POS

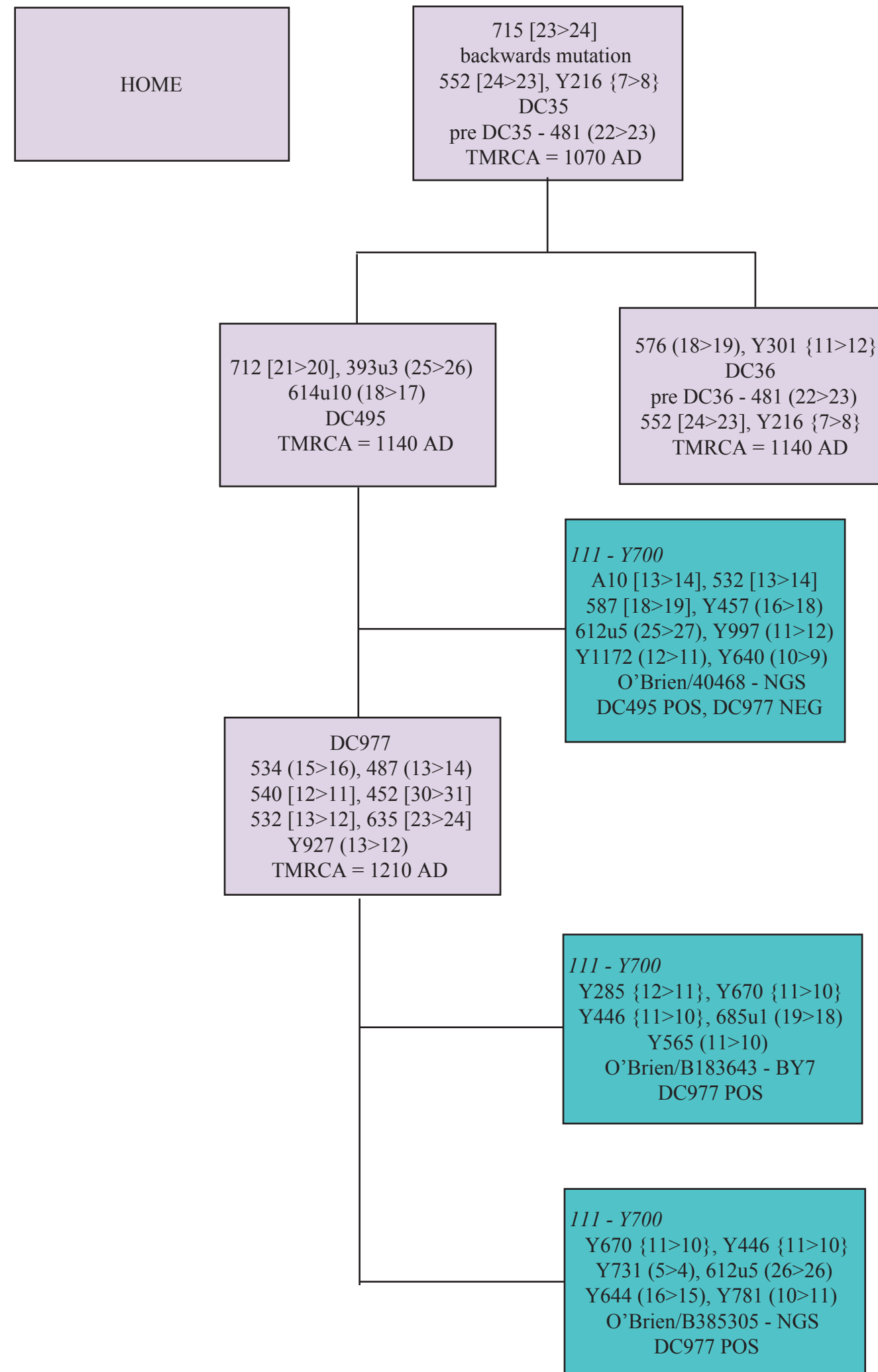
111  
391 (11>10), 576 (18>16)  
504 [17>18]  
Lonergan/446047 - BLR

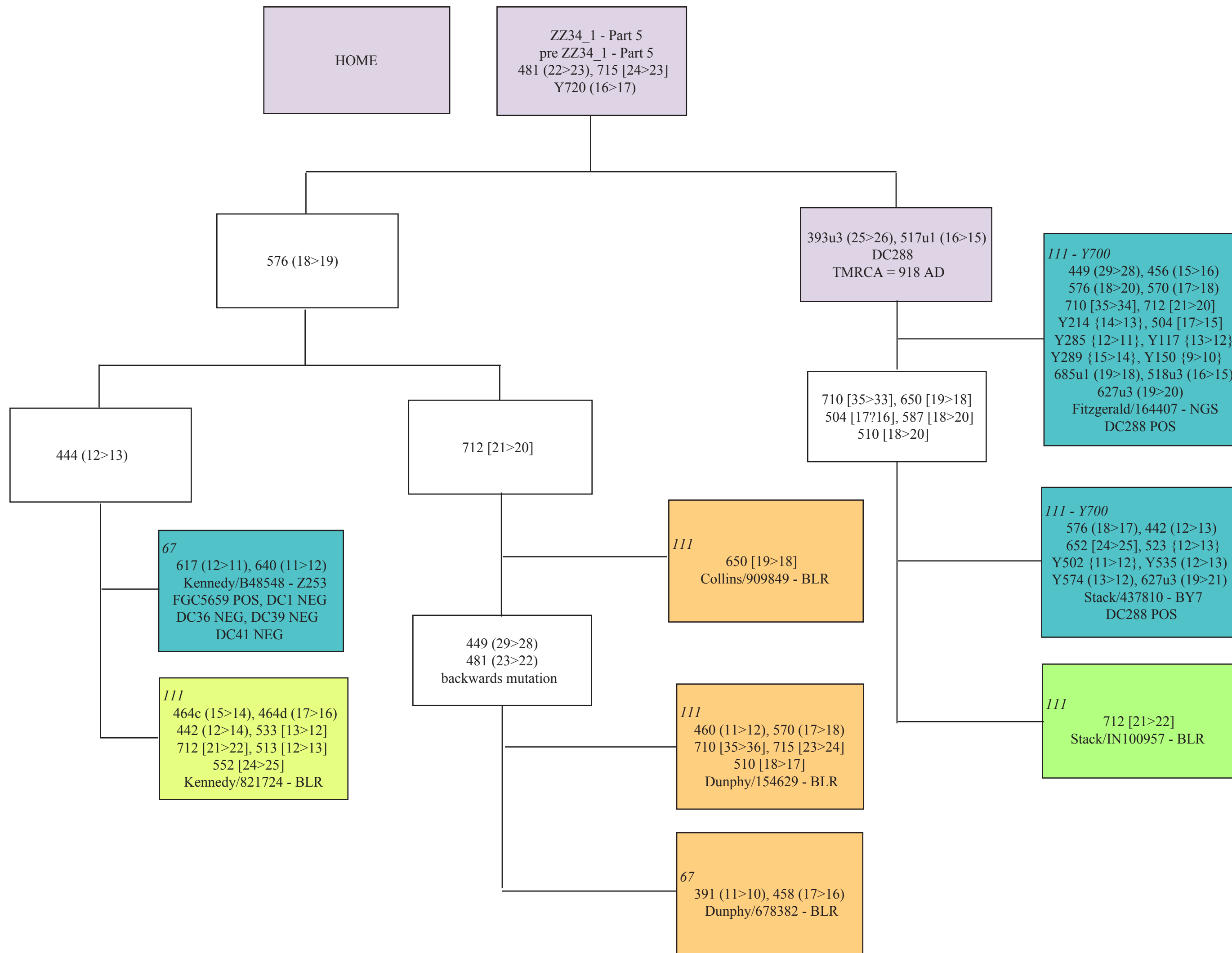
67  
Carey/315758 - YSEQ  
FGC5628 POS, DC1 NEG  
DC36 NEG, DC39 NEG

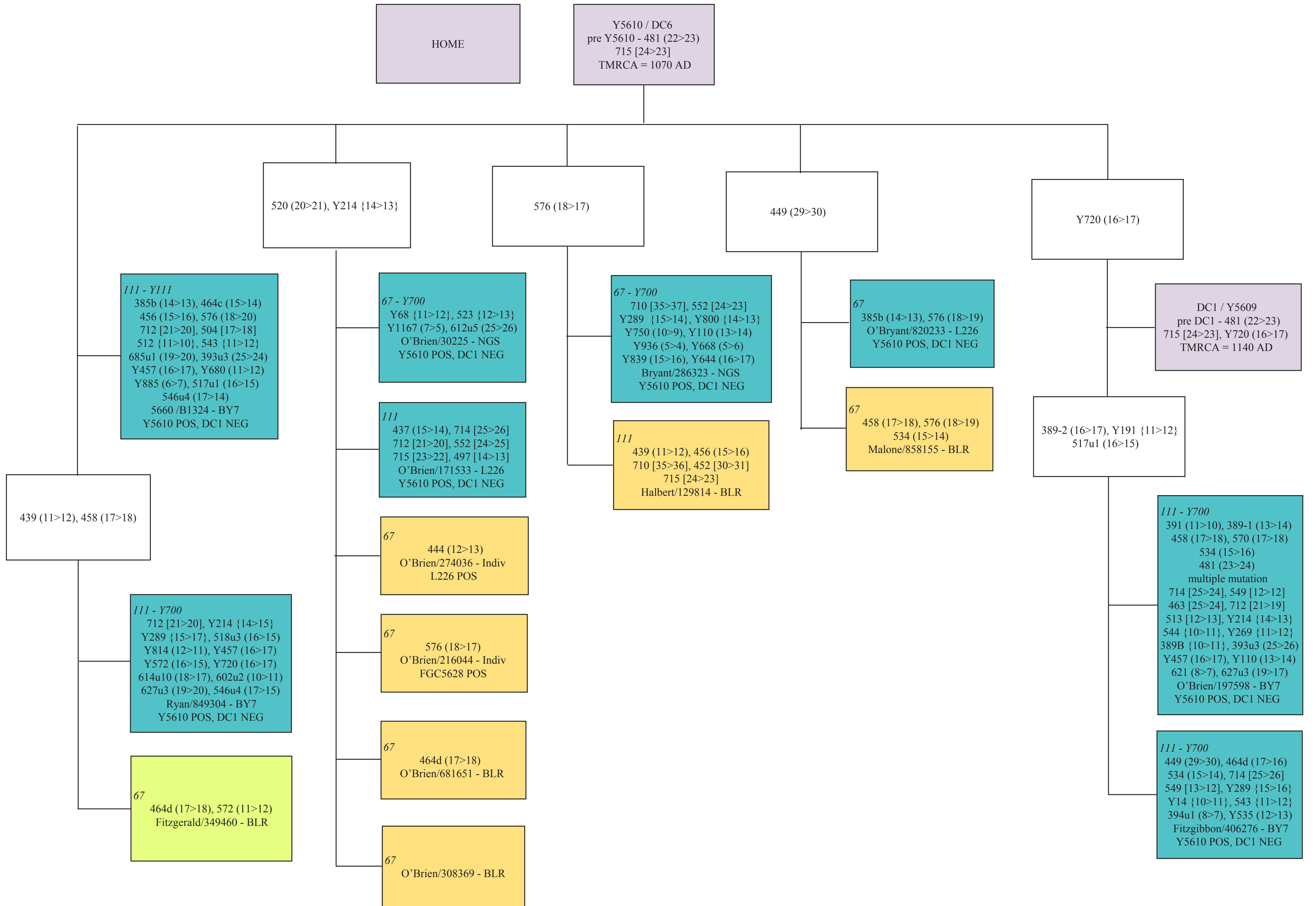
111 - Y700  
589 [12>11], 504 [17>19]  
Y814 (12>11), Y572 (16>17)  
Y720 (16>15), Y574 (13>14)  
Y755 (8>7)  
O'Brien/176989 - NGS  
DC290 POS

111  
504 [17>16]  
Hart/944459 - BLR

67  
576 (18>19), 520 (20>21)  
Carey/132875 - Indiv  
L226 POS









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

Unknown3  
Y SNP branch

464b (13>14), 534 (15>16)

*111*  
449 (29>30), 570 (17>18)  
557 (15>13), 481 (22>23)  
710 [35>36], 533 [13>12]  
715 [24>23]  
zUnkName/71036 - BLR

*67*  
458 (17>16), YCAIIa (19>23)  
446 (13>12)  
Carr/166204 - BLR

Unknown4  
Y SNP branch

439 (11>12), 464d (17>16)

*67*  
454 (11>13), 576 (18>19)  
570 (17>18)  
Minogue/297040 - BLR

385a (11>12)

*111*  
464b (13>14), 464c (15>16)  
454 (11>12), 520 (20>19)  
537 (10>11), 710 [35>34]  
714 [25>24], 505 [12>13]  
1B07 [10>9]  
McGuire/253873 - BLR

*67*  
442 (12>11), 572 (11>10)  
zUnkName/248592 - 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

Unknown7  
Y SNP branch

454 (11>12), 464d (17>15)  
640 (11>12)

*67*  
464c (15>13), 449 (29>30)  
McHenry/7458 - BLR

*67*  
534 (15>16), 568 (11>10)  
McInerney/N91115 - BLR

Unknown8  
Y SNP branch

449 (29>30), 576 (18>19)

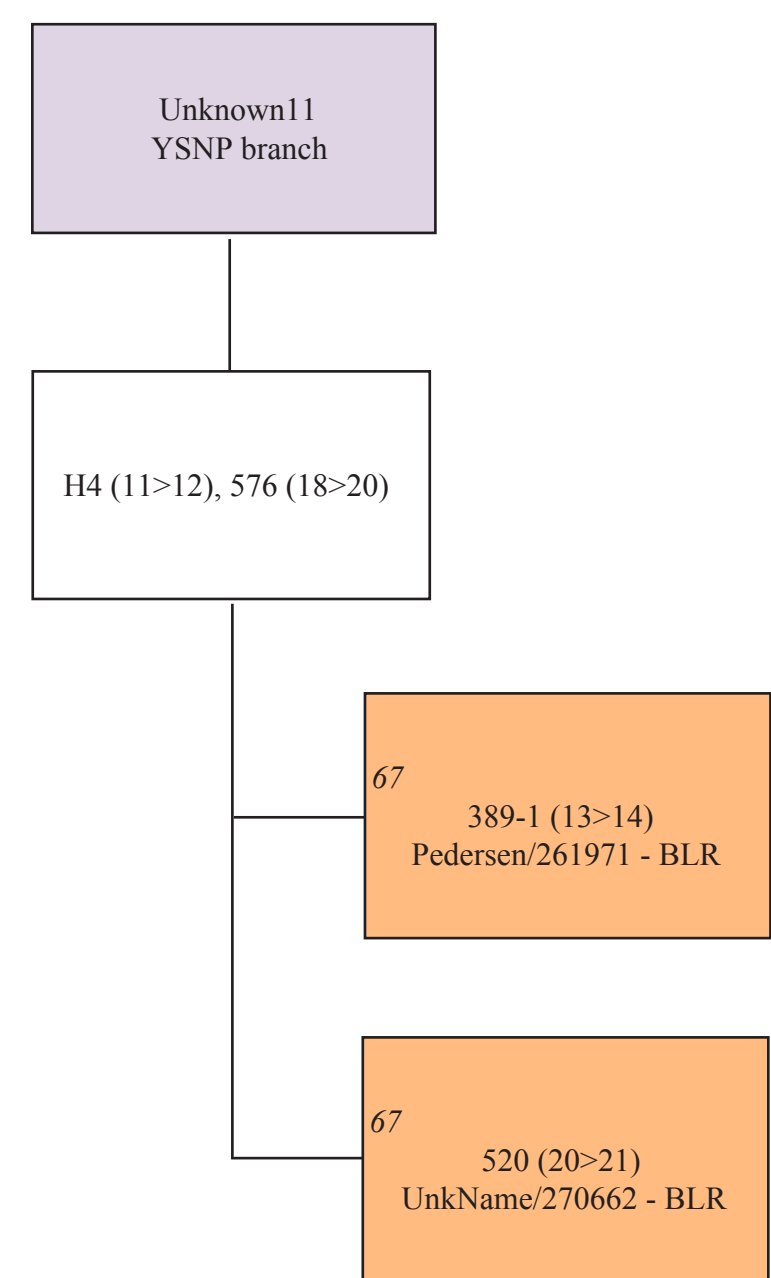
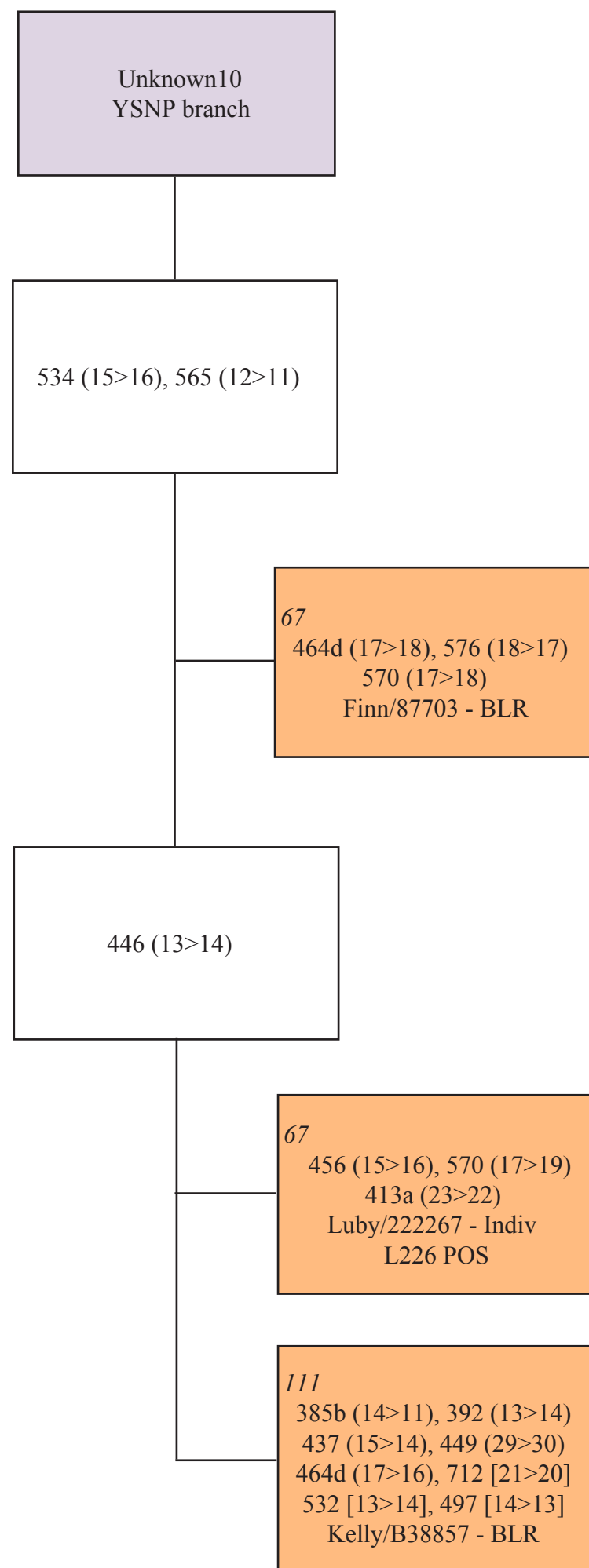
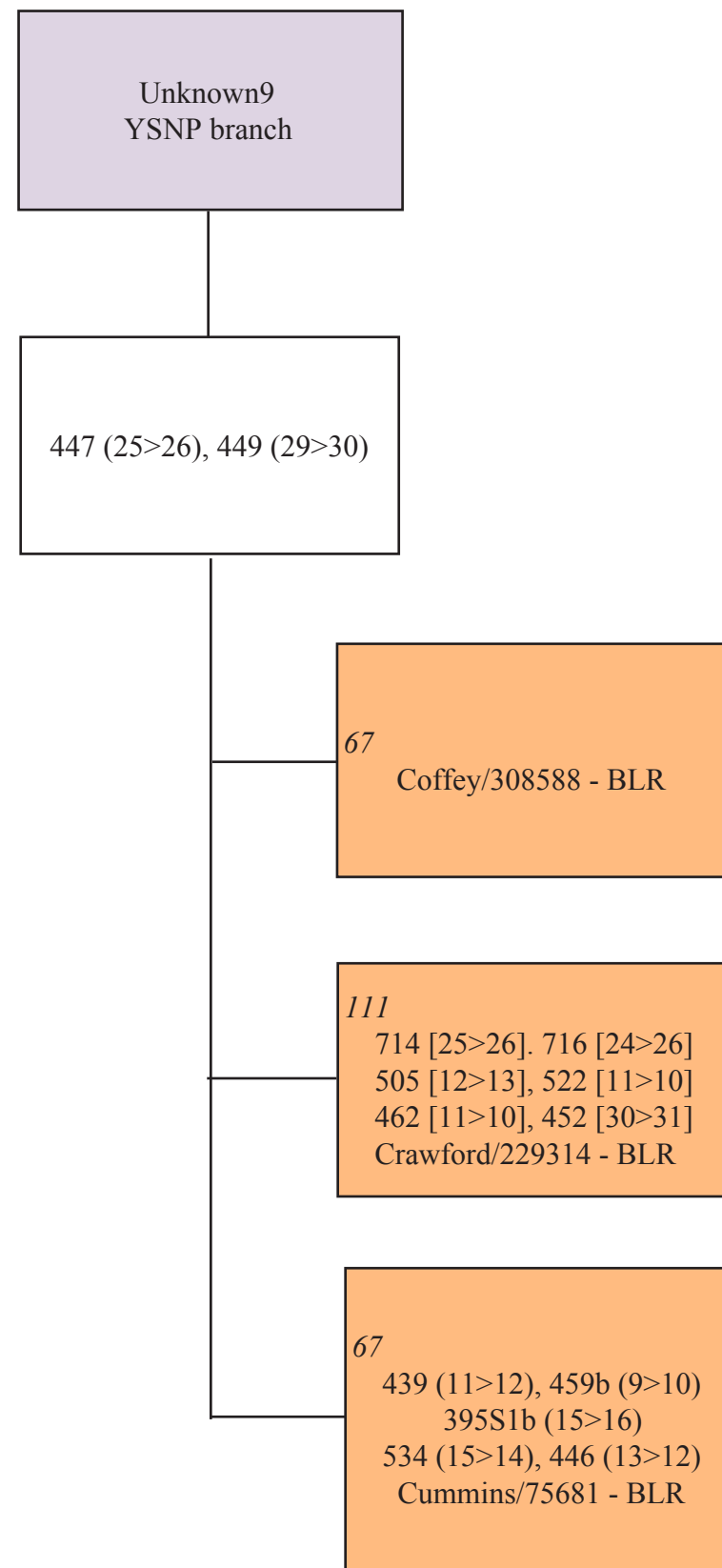
*67*  
390 (24>26), 385b (14>13)  
464d (17>15)  
McDonald/KV4DB - BLR

533 [13>12], 715 [24>25]

*111*  
447 (25>24), 534 (15>16)  
710 [35>33]  
Shannon/241149 - BLR

*111*  
522 [11>10], 510 [18>17]  
Grealish/IN83888 - BLR

HOME



HOME

Unknown12  
Y SNP branch

447 (25>24), 460 (11>10)  
533 [13>12]

*III*  
389-1 (13>14), H4 (11>10)  
456 (15>16), 576 (18>19)  
710 [35>36], 463 [25>26]  
650 [19>18], 504 [17>16]  
643 [10>11]  
O'Dea/824351 - BLR

*III*  
607 (15>16), 534 (15>16)  
714 [25>26], 712 [21>20]  
O'Dea/B317480 - Individ  
DC135 NEG

Unknown13  
Y SNP branch

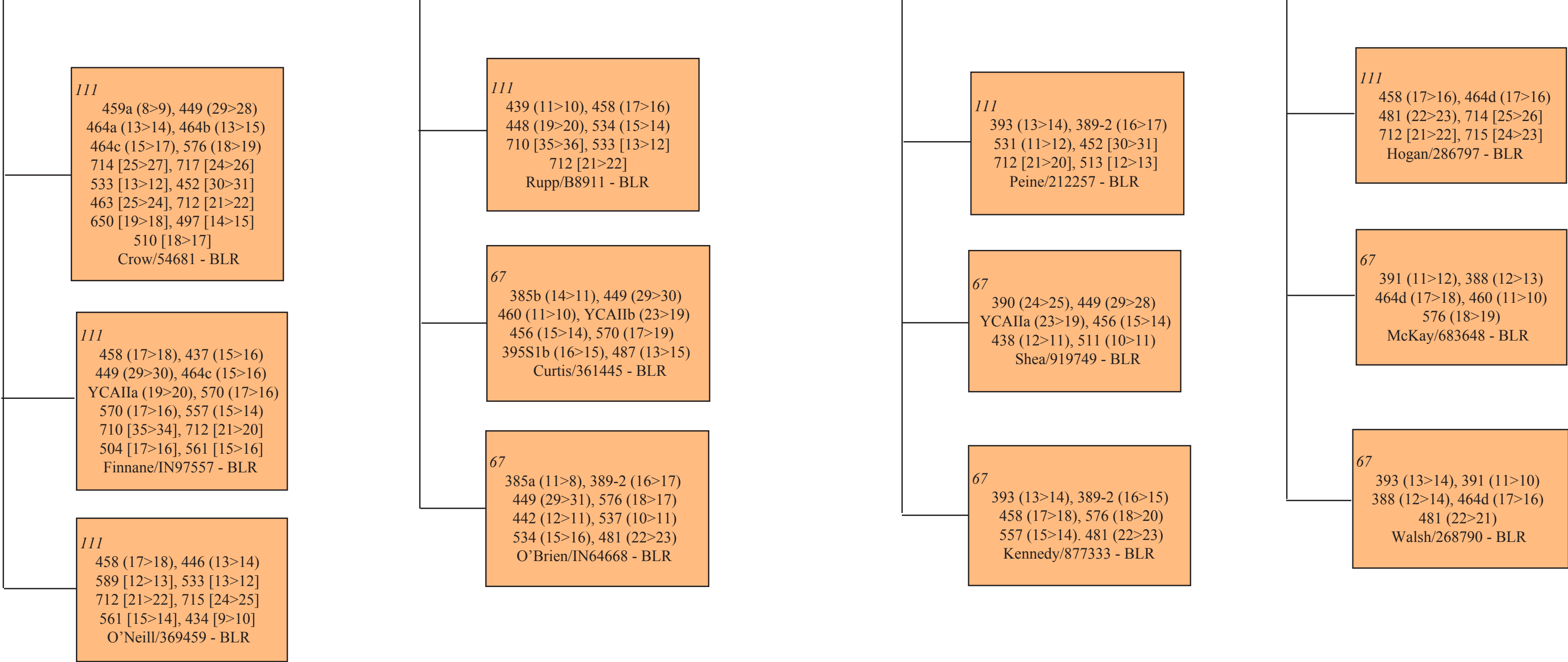
439 (11>13), 458 (17>16)

*67*  
456 (15>14), 607 (15>16)  
557 (15>14)  
Howe/493102 - BLR

*III*  
712 [21>20], 650 [19>20]  
504 [17>18], 635 [23>24]  
McGoverin/B526357 - BLR

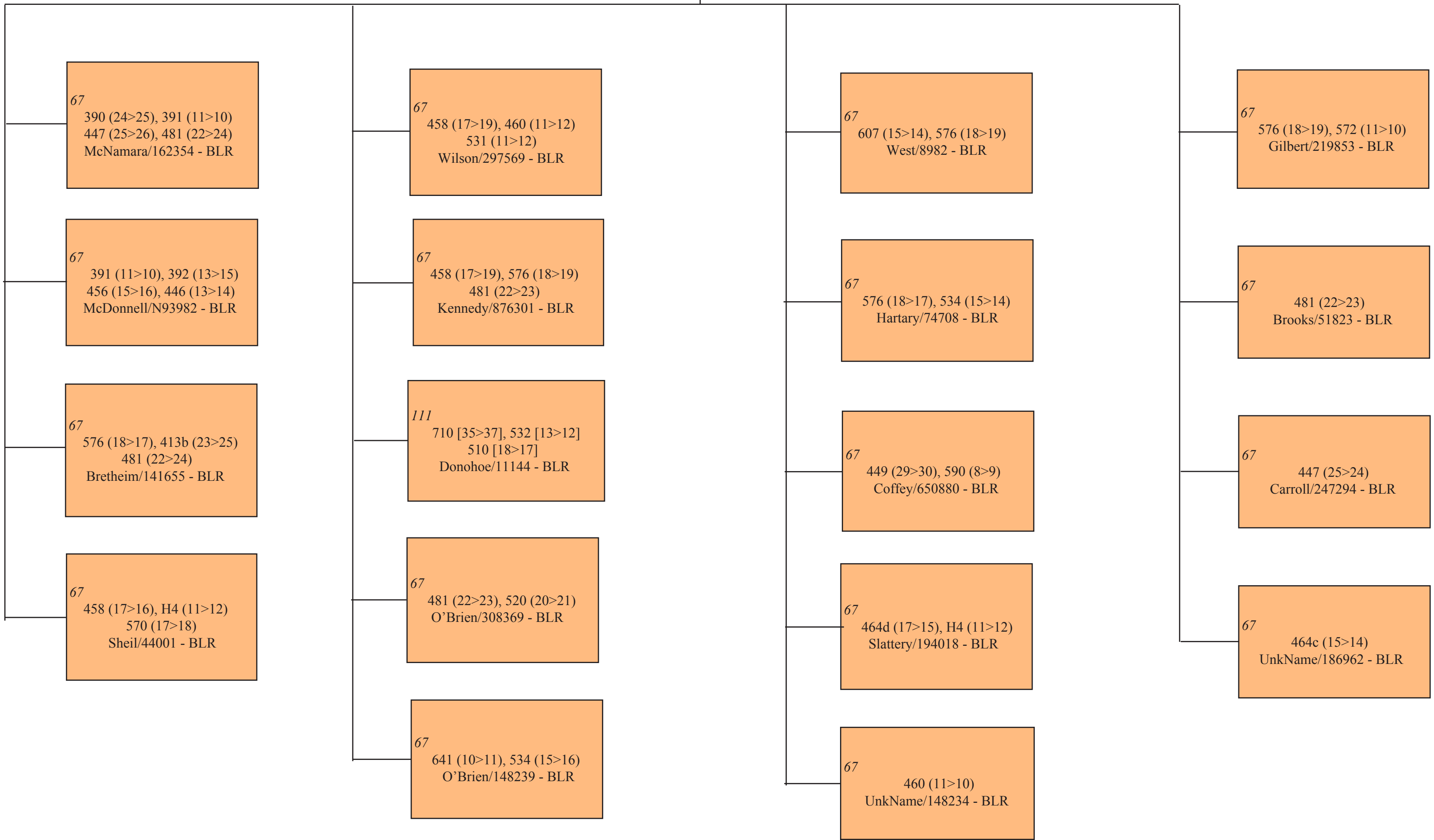
HOME

Testers with no shared signatures (larger signatures)



HOME

Testers with no shared signatures (smaller signatures)





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

*111 - 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

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

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>25]  
552 [24>25], 726 [12>13]  
635 [23>24], Y299 {11>12}  
544 {10>9}, 551 {14>13}  
Y502 {11>12}, Y800 {14>15}  
393u3 (25>23), 522 (14>15)  
Y1094 (16>17), Y839 (15>14)  
Y1037 (12>13), Y720 (16>17)  
Y1060 (10>11), Y574 (13>14)  
Y876 (14>13)  
BY152765  
TMRCA = 310 BC

*111 - Y700*  
712 [20>19], 650 [19>18]  
Y285 {12>11}, 518u3 (16>15)  
Y814 (16>17), Y110 (13>12)  
Y572 (16>15), Y565 (11>10)  
Joiner/N65344 - BY7  
BY152765 POS

*111 - Y700*  
385b (14>15), 460 (11>12)  
568 (11>12), Y391 {7>8}  
Y285 {12>11}, 453 {11>10}  
Y535 (12>11), Y960 (16>17)  
Johnston/IN89519 - BY7  
BY152765 POS

BY126401

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

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

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

