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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, 2018), 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.

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[History of
Changes](#)

Part 6 - Charting currently includes 91 % of 763 67 marker submissions under L226. Added four 37 to 111 marker upgrades: Kennedy/344136, Kane/B244661, Jones/824623 and O'Dea/IN11528. Added ten new 67 to 111 marker upgrades: Cain/865684, Crowe/201294, O'Brien/B240961, Wallace/359729, McVay/866685, McNamara/600572, Ettenfield/93744, Flannigan/774244, Dyal/847470 and O'Brien/40468. Added four new 37 to 67 marker upgrades: Flannigan/774244, McVay/866685, Slattery/194018 and Normile/330416. Added four new 67 marker testers: O'Brien/62268, Johnson/775907, McNamara/600572 and Ryan/849304. Added six new 111 marker testers: Galvin/547437 (with Big Y500), Spelliscy/B403588 (with Big Y500 pending), Clancy/MK41452, O'Brien/MI15456, Curry/IN44326 (with Big Y500 pending) and Crowe/IN45915. Added seventeen Y500 results: Galvin/547437, Kennedy/492677, Crow/780942, Cannon/682483, Topel/864039, O'Brien/385305, O'Dea/840385, Kirrane/B262377, Brien/B96372, Johnson/326658, O'Brien/MI15456, Phelan/514225, Casey/131349, Wright/754191, Spelliscy/B403588, Whitney/228072, Gleeson/191141, Kennedy/N26076, O'Connell/ 593136, O'Brien/368920 and Kennedy/344136. Added 96th branch under L226, DC933 (son of DC8) discovered by Griffin/640312 and Galvin/547437. Added 97th branch: DC18 (father of A6097) discovered by Cannon/682483 and Cannon/444016. Added 98th branch: DC977 (son of DC495) discovered by O'Brien/B385305 and O'Brien/B183643. Added 99th branch, DC276 (son of BY4103) discovered by Gibson/294619 and Kirrane/B262377. Added 100th branch, DC456 (father of DC453) discovered by Whitney/228072. Added 101st branch, DC1067, son of DC276 discovered by Kirrane/B262377 and Spelliscy/B403588. Added 102nd branch, DC818 (son of DC815) from Kennedy/728240 and Kennedy/IN26076. Added three L226 SNP pack results: DC50 POS for McCormick/815930, ZZ34_1 for Clancy/MK41452 and DC29 for O'Halloran/55369. Added two individual YSNP tests: Coleman/799267 who was DC127 NEG and O'Brien/B234890 who was BY5212 POS. Added six Big Y results - Kennedy/492672 who is DC709, Johnson/326658 who is DC50 (not a L226 project member yet), Crowe/780942 who is DC373, Phelan who is BY4103, 368920/O'Bryan who is DC297 and 344136/Kennedy who is DC818.

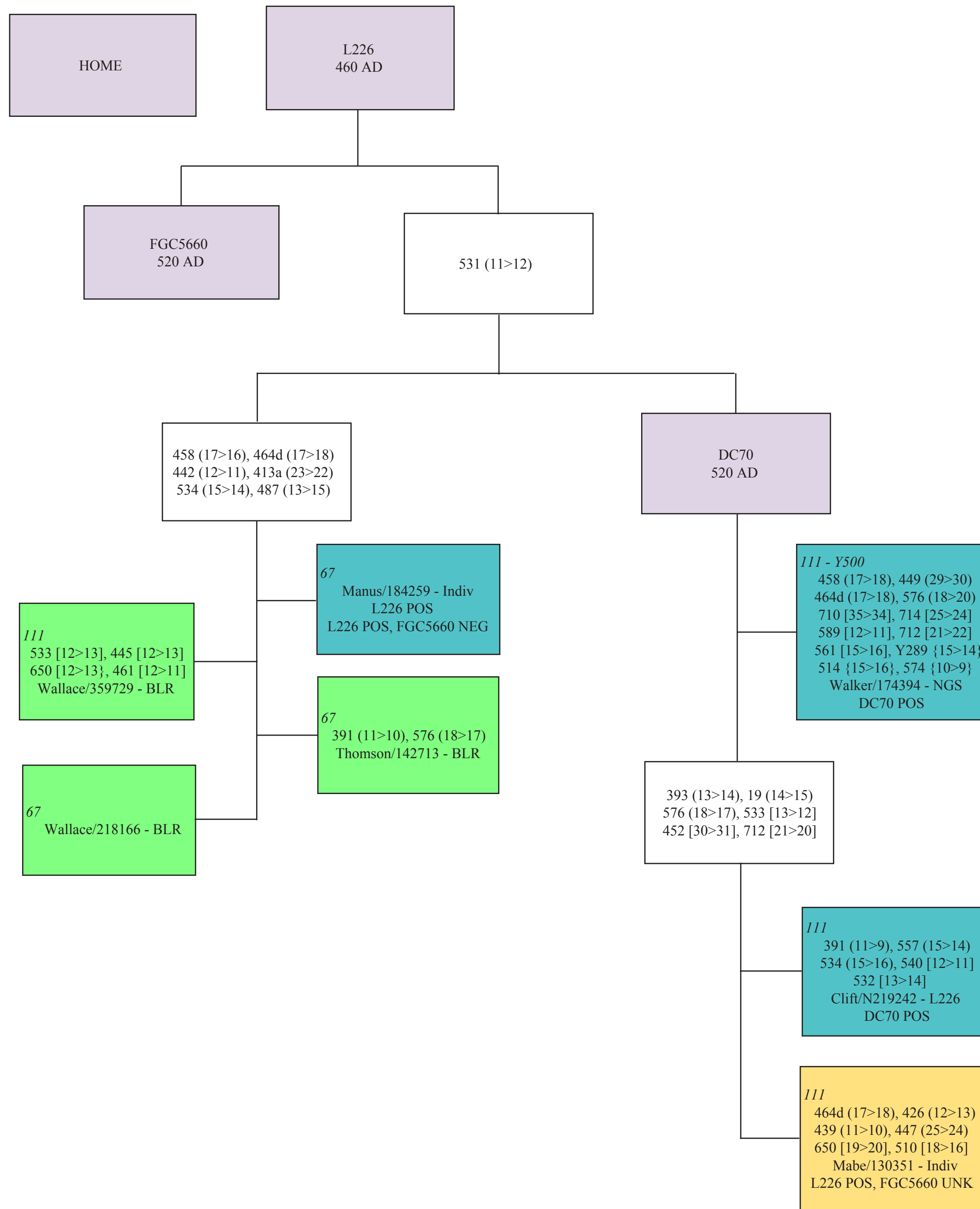
Part 5 - For more historical changes, see page 5. Charting currently includes 90 % of 747 67 marker submissions under L226. Added ten new 67 marker testers: Callahan/865256, Bryan/796839, Hanrahan/IN37491, Malone/858155, Cain/865684, Bryant/871050, O'Brien/B234890, zUnkName/B105884, zUnkName/303923 and zUnkName/123170. Added four new 111 marker testers: Lonergan/446047, Cusack/627983, O'Dea/840385 and O'Brien/B385305. Added 85th branch, DC310, son of Y6913 from Brien/N142662 and O'Brien/IN32215. Added 86th branch, DC877, son of PH184 from Rowland/527261 and 58423/Littrell. Added 87th branch, DC495, son of DC35 from O'Brien/40468 and O'Brien/B183643. Added 88th branch, DC365, son of DC191 from McNamara/B104328 and Fitzgerald/B56983. Added 89th branch, DC505, son of DC109 from Clancy/322662 and Sears/585032. Added 90th branch, DC899, son of BY39756 from Hogan/110053 and Welch/N123888. Added 91st branch, DC782, son of DC33 and father of DC35 and Y5610. Added 92nd branch, DC344, son of Y6913 and father of DC310 from O'Brien/259847. Added 93rd branch DC858, son of PH184 from Burke/602692 and Kennedy/401109. Added 94th branch, DC966, son of ZZ34_1, from Davis/B57645 and O'Brien/416203. Added 95th branch, DC209, son of FGC5659 from Hallinan/B90761 and Riel/N97658. Added nineteen new 67 to 111 marker upgrades: Townsend/15818, O'Halloran/596853, Kennedy/IN26076, Kennedy/821724, Whitney/228072, Fitzgerald/428194, McCoy/B1121, Crowe/590074, Jones/172693, Kennedy/302019, O'Carroll/IN35394, Curtis/541312, Sears/585032, Connyll/593136, Casey/131349, Gleeson/191141, Topel/864039, Cannon/682483, Cummyne/863113 and Butler/36443. Added eleven new 37 to 67 marker upgrades: Morris/314980, Ahearn/537546, Topel/864039, Quinn/502654, O'Brien/B240961, Jones/791797, O'Brien/310786, Ryder/B248922, Crow/197741, Benton/15455 and O'Brien/MK37301. Whitney/228072 tested DC453 which was negative. Added three new 37 to 111 marker upgrades: West/623973, Kelsey/319093 and Kirrane/B262377. Added three L226 SNP packs: Dyal/847470, Fitzgerald/284366 and O'Halloran/596853. Added thirteen new Y500 upgrades: Roberts/856410, O'Brien/B183643, Wilson/650541. Griffin/640312, Crowe/590074, Fitzgerald/B56983, Clancy/322662, Kennedy/302019, Davis/B57645, Burke/602692 and Colegrove/MK31083.

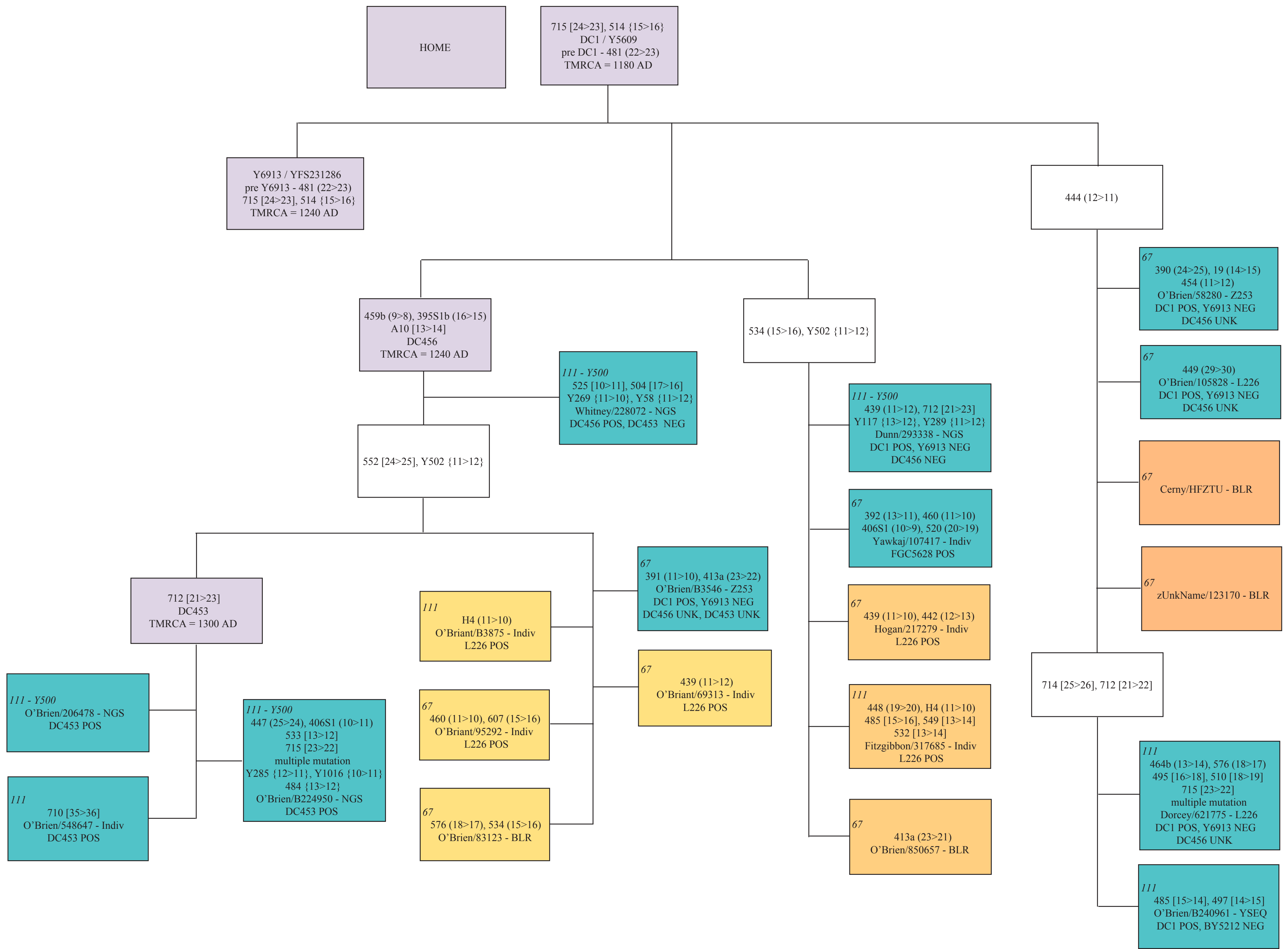
Historical changes - Part 1 - Added numerous new testers: Kennedy/688850, Johnson/B128523, O'Malley/590133, Madden/276694, Fitzgibbon/317685, Roach/324403, Coffey/650880, Smith/545095, Currell/489080, O'Brien/B224950, O'Malley/415887, Butler/482960, O'Brien/532557, Burke/602692, O'Bryan/656407, Burton/667897, Bryan/94700, McCarthy/B225296, Kennedy/740921, Sesler/508892, Lindsey/B233196, Hallinan/B90761, Shannon/768340, O'Halloran, Litteral/451135, Jones/475581, Bryant/AM15749, Kelly/503330, Cusack/430113, Cusack/519440, O'Day/517547, 745552/McNamara, Kennedy/728243, Brown/296319, OBrien/547368, Fitzgibbon/406276, Wright/754191, Kennedy/728240, Kennedy/492677, Graham/583951, Tuohy/537336, Fitzgerald/724475, Balise/750701, Brown/286386, Barrett/767419, Fitzgerald/B56983, Maloney/B242714, Kennedy/401109, McNamara/793124, Kennedy/55009 and Wilson/650541. Big Y results for Green/B173234 placed him under FGC12296 and McLain/131285 under DC377. New Big Y results for Cain/466941 which reveals the 57th branch, DC87. SNP pack added for Burke/421629, Crow/590074, Blair/5822, Kennedy/B162155 and James/B2461. YSEQ testing revealed our 59th branch, DC373. Big Y testers Lyddy/B80421 and Knox/106428 revealed our 60th branch, DC329. Big Y testers Brown/82328 and Callahan/170626 revealed our 61st branch, DC464. O'Laughlin/93878 and O'Hara/50373 revealed the 62nd branch, DC362. O'Malley/357319 and O'Malley/350664 revealed the 63rd branch, DC735. O'Brien/206478 and O'Brien/B224950 revealed our 64th branch, DC453. O'Brien/631722 and O'Brien/114201 revealed our 65th branch, DC437. Kennedy/B162155 and Wilder/46800 revealed our 66th branch, DC709. Added all 111 markers. Added new 111 markers: Brown/286386, Kennedy/401109, O'Brien/477041, Frawley/734651, Crow/B107494 and O'Brien/368920.

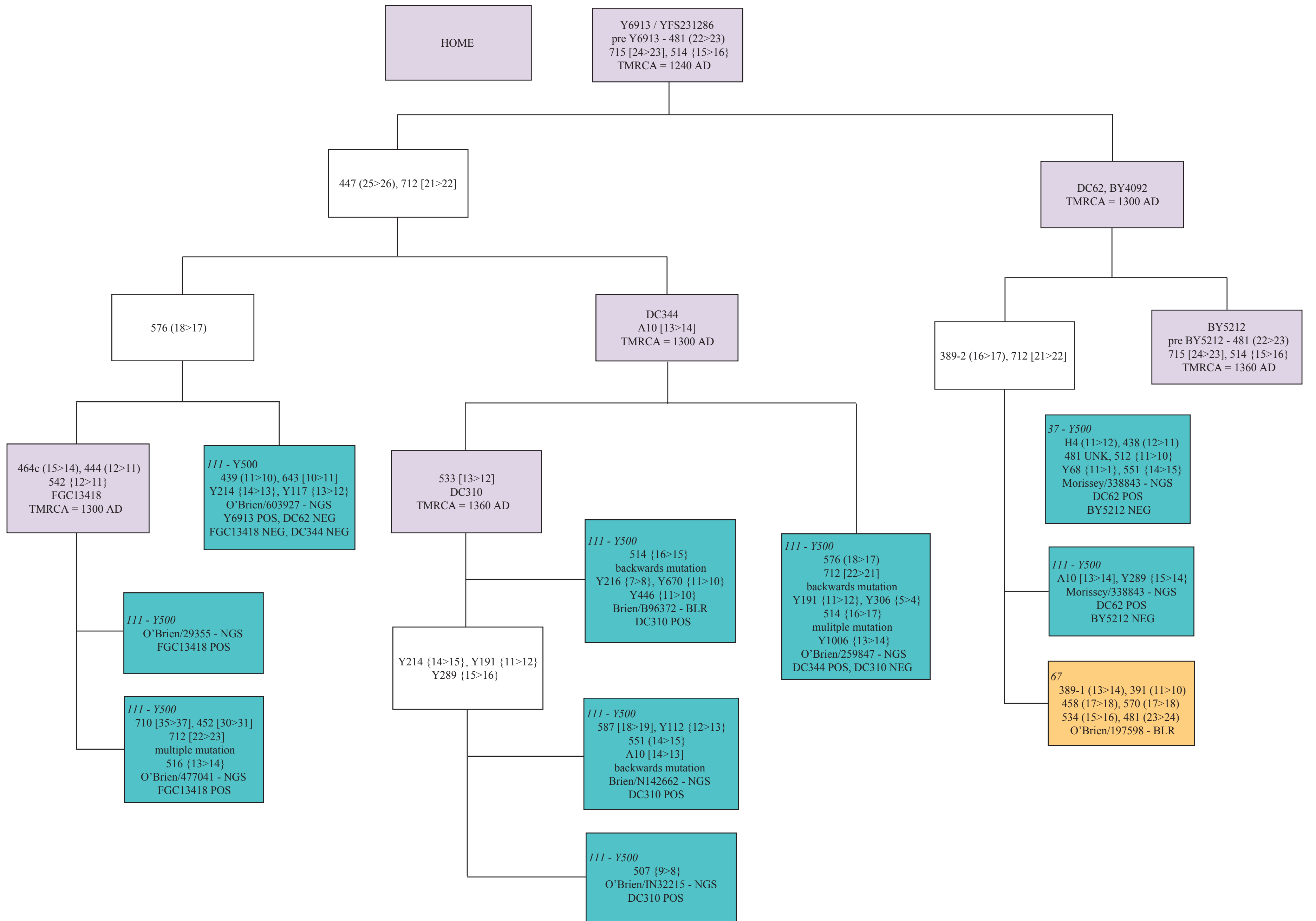
Historical changes - Part 2 - Added sixteen new 67 testers: MacDonncha/IN10686, O'Brien/603927, Sullivan/54547, Marshall/B30599, Coleman/799267, Bridges/675781, Hogan/251225, O'Bryant/820233, Ford/825140, McMahan/427097, Hearn/IN14592, Hart/482068, Callan/647921, Mack/691341, Daly/272949 and McCormick/815930. Added thirteen new 67 to 111 marker upgrades: Peavy/111836, Lyddy/B80421, O'Brien/603927, Green/B173234, Noland/61777, Curry/560167, O'Malley/371630, O'Brien/114201, O'Brien/322820/ O'Brien/606858, Wilson/650541, McGrath/723971, Milam/139659 and Crawford/149090. Added two 37 to 111 upgrades: McGrath/335295 and Gibson/294619. Added eight new 111 marker testers: Dorsey/621775, Cannon/444016, O'Malley/447121, O'Bryan/B122229, Noland/590849, O'Brien/IN11917, Anderson/B199399 and Burke/572495. Added fifteen new L226 SNP pack results: Hart/112586, Oliver/233638, Hannon/277239, Fitzgerald/724475, Kennedy/740921, Barrett/767419, O'Malley/590133, O'Brien/547368, Hogan/260059, McKinze/171176, Jones/N119685, Carey/518664, Crowe/780942, Dorsey/621775 and Cunningham/350807. Added one individual YSNP test, BY5212, for O'Brien/74637. Added the 67th branch with the Big Y results of McNamara/424282 with DC191, son of DC189 and father of DC340. Added 68th branch with Big Y results of Selser/508892 and Bryant/460890 with DC381, son of DC36. Added 69th branch with Big Y results of Fogerty/286559 and Woods/B160740 with DC728, son of DC135. Added 70th branch with Big Y results of Johnson/B128523 and Smith/249892 with DC127, son of DC63. Added the 71st branch with Big Y results of Wright/25505 and Wright/124291 with FGC12293, son of FGC12296. Added 72nd branch with Big Y results of O'Loughlin/93878 and Griffin/B205928 with DC168, son of DC362.

Historical changes - Part 3 - Added eleven new 67 marker testers: Tuohy/MI17311, Nealy/531130, Malone/358634, Colegrove/MK31083, Brown/316035, Connery/406530, O'Brien/B288126, Dooley/658236 and Boyd/833307. Added five new 111 marker testers: Lindsey/764773, James/720203, O'Dea/827504, Casey/844322 and Donoughae/476569. Added ten new 67 to 111 marker upgrades: Morris/164594, O'Day/517547, zUnkName/305352, O'Brien/107307, McGrath/189108, Kennedy/N87250, Colegrove/MK31083, Doordan/N252837, O'Brien/45897 and Small/194861. Added five new 37 to 67 marker upgrades: O'Brien/367959, Caulfield/385688, Crow/39792, O'Brien/822032 and Gleeson/191141. Added three 37 to 111 marker upgrades: 110053/Hogan, Kelly/IN15776 and Small/829883. Added eight new L226 SNP packs: McNamara/793124, O'Brien/820233, Mahone/MK23915, Fitzgerald/B56983 and Kelly/503330, Nealy/531130, James/720203 and O'Dea/810625. Added five individual YSNP tests: IN11917/O'Brien is BY5212, OBrien/822032 is BT5212, Gibbs/158322 is A6097, O'Brien is BY5212 and McNamara/731877 is DC189. Added 73rd branch with Big Y results of Rowland/527261 and Kennedy/401109 - PH184, son of ZZ34_1. Added 74th branch with Big Y results of McCarthy/B225296 and Hogan/110053 - BY39756, son of Z17669 and father of DC106. Added 75th branch with Big Y results of O'Brien/107307 and O'Brien/48596 - Y44000, son of BY5212. Added 76th branch, DC889, son of BY39756 with Big Y results of Hogan/110053 and Welch/N123888. Added 77th branch, DC104, son of BY39756 and father of DC106 with Big Y tester McCarthy/B225296. Added 78th branch, DC360, son of DC201 with Big Y results from Jones/N119685 and McGraw/69433. Added 79th branch, DC901, son of FGC5638 with Big Y testers, Roach/324403 and Downey/MK20349. For the first time, I have removed one tester from the L226 chart - Gardner/N70597 has been confirmed to be L226 negative (signature match = 6 and genetic distance = 10). Added 112 Y500 markers (the first release of Y500 results). Added eight new Y500 testers: O'Day/313938, Littrell/527261, Jones/N119685, Kelly/IN15776, Doordan/N252837, Kennedy/N87250, Anderson/B199399 and Downey/MK20349.

Historical changes - Part 4 - Added eighteen 67 to 111 marker upgrades: McNamara/793124, Maloney/386442, Littrell/58423, O'Bryan/B122229, McGraw/723321, Kennedy/492677, Hartigan/168003, Crowe/5318, Nealy/531130, Boyd/833307, West/80844, Boyd/833307, Thomas/136254, Brien/B96372, Fisher/370796, Carroll/IN35394, Roberts/856410, Hart/62496 and McLain/131285. Added six individual YSNP tests: Maloney (DC127), O'Brien/548647 (DC453), O'Brien (Y44000), O'Brien/IN11917 (Y44000), O'Malley/590133 (DC735) and Noland (DC55). Added six Big Y upgrades: Kennedy/422354 who is DC709, O'Bryan/B122229 who is DC297, Boyd/833397 who is DC377, O'Bryan/IN32215 who is Y6913 positive, Peavy/90545 who is DC49 positive and Littrell/58423 who is PH184 positive. Added thirteen new 67 marker testers: O'Hara/666311, O'Brien/850657, Brien/B96372, Dilley/624345, Barding/207264, Durelle/601309, Dyal/847470, Mahoney/427691, Roberts/856410, Kennedy/IN26076, Kennedy/821724, Collins/427784 and Cummyne/863113. Added seven new 111 marker testers: Fitzpartick/H2174, McIntyre/484435, O'Brien/IN32215, Kennedy/438505, Griffin/640312, Littrell/634478 and Kennedy/397892. Added ten 37 to 67 marker upgrades: O'Connell/593136, West/796968, McGrath/811896, Fisher/370796, Crowe/780942, King/143069, Jones/172693, Cannon/682483, Halleran/723999 and O'Brien/B183643. Added seven 37 to 111 marker upgrades: O'Dea/824351, Cusack/160913, O'Dea/784122, Kelly/106482, Cusack/160913, Welch/N123888 and O'Day/313937. Added eight 111 to Y500 upgrades: Kennedy/422354, O'Bryan/B122229, Boyd/833307, Cusack/160913, O'Brien/416203, O'Bryan/IN32215, Peavy/90545 and Littrell/58423. Added six L226 SNP packs: Connery/406530, Huffman/211894, Hartigan/168003, Hartigan/N19674, Fitzgerald/428194 and Donoughae/476569. Added 81st branch, DC936, son of DC40 from Big Y testers, N87250/Kennedy and N252837/Doordan. Added 82nd branch, DC15, son of BY4100, from Anderson/16274 and Anderson/B199399. Added 83rd branch, DC70, son of L226 via Big Y tester Walker/174394 and L226 SNP pack tester N219242/Clift. Added 84th branch, DC722, son of DC377 from Casey/131285 and Boyd/833307.







HOME

BY5212
pre BY5212 - 481 (22>23)
715 [24>23], 514 {15>16}
TMRCA = 1360 AD

456 (15>16), 532 [13>14]

A10 [13>14]

111
439 (11>12), 710 [35>37]
533 [13>12], 712 [21>22]
Hogan/123832 - BLR

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

389-2 (16>17), 607 (15>16)
565 (12>11), 561 [15>16]

H4 (11>12), 438 (12>11)

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

111 - Y500
533 [13>12], 452 [30>29]
712 [21>20], 650 [19>18]
510 [18>17], Y285 {12>11}
O'Brien/606858 - NGS
BY5212 POS, Y44000 NEG

111 - Y500
712 [21>22], 512 {11>10}
Y68 {11>10}, 551 {14>15}
O'Dea/313937 - NGS
BY5212 POS, Y44000 NEG

111
O'Brien/IN11917 - Indiv
Y44000 POS

67
O'Brien/822032 - Indiv
BY5212 POS

712 [21>22], 508 {11>10}
Y214 {14>13}

67
O'Brien/62268 - BLR

67
385a (11>12), 449 (29>30)
534 (15>14)
O'Dea/IN11528 - L226
BY5212 POS, Y44000 UNK

111 - Y500
O'Brien/48596 - NGS
Y44000 POS

111 - Y500
389-1 (13>12), 624 {9>8}
O'Brien/107307 - NGS
Y44000 POS

67
O'Brien/B288126 - Indiv
BY5212 POS

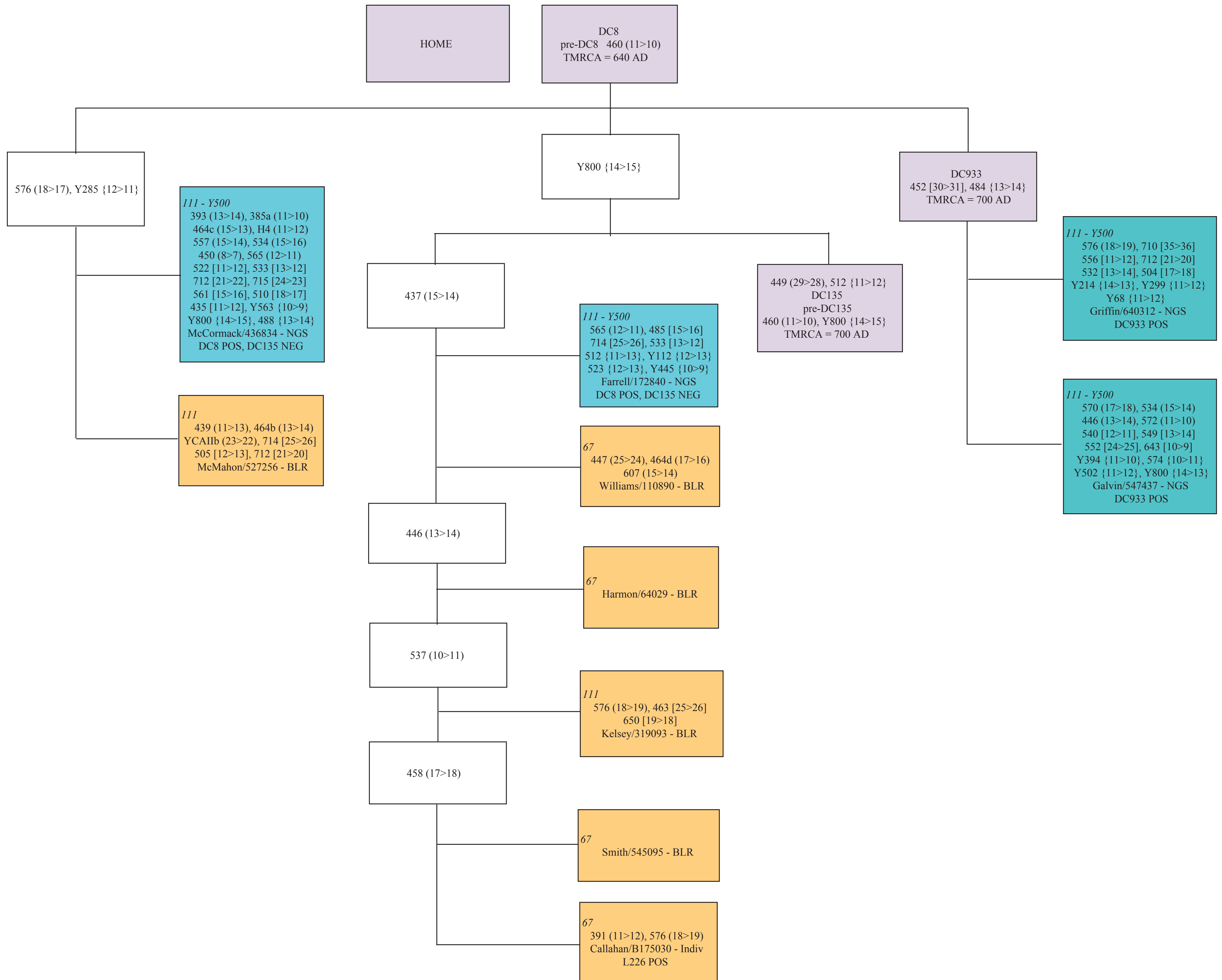
67
557 (15>14)
O'Brien/74637 - Indiv
BY5212 POS

456 (15>16)

111
O'Brien/45897 - Indiv
Y44000 POS

111
549 [13>14], 712 [21>22]
O'Brien/B234890 - Indiv
BY5212 POS, Y44000 UNK

67
O'Brien/MK37301 - Indiv
BY5212 POS



HOME

449 (29>28)
DC135
pre-DC135
460 (11>10), Y800 {14>15}
TMRCAs = 700 AD

533 [13>12], 504 [17>16]
TMRCAs = 1000 AD

512 {11>12}

111 - Y500
439 (11>12), 458 (17>16)
570 (17>16), 534 (15>16)
533 [12>11]
multiple mutation
Y214 {14>13}, 541 {12>13}
Y269 {11>12}, 489 {11>12}
O'Dea/840385 - NGS
DC135 POS, DC134 NEG
DC728 NEG

DC134
pre-DC134
449 (29>28), 460 (11>10)
512 {11>12}, Y800 {14>15}
TMRCAs = 760 AD

534 (15>16), 533 [13>12]

67
389-1 (13>14), 458 (17>18)
464c (15>17), 413b (23>25)
Fitzgerald/724475 - L226
DC135 POS, DC134 NEG
DC728 UNK

111
389-1 (13>14), 447 (25>24)
449 (28>29)
backwards mutation
H4 (11>10), 456 (15>16)
576 (18>19), 710 [35>36]
463 [25>26], 650 [19>18]
643 [10>11]
O'Dea/824351 - BLR

520 (20>19), 505 [12>13]
650 [19>20]

504 [17>16]

439 (11>12)
712 [21>20], 504 [17>16]
DC728
pre-DC728
449 (29>28), 460 (11>10)
534 (15>16), 533 [13>12]
512 {11>12}, Y800 {14>15}
TMRCAs = 760 AD

67
439 (11>12), 389-1 (13>12)
570 (17>16), 442 (12>13)
481 (22>23), 446 (13>12)
Hanrahan/455984 - BLR

111
391 (11>10), 576 (18>19)
565 (12>11), 710 [35>36]
714 [15>24], 549 [13>12]
510 [18>19]
O'Dea/784122 - BLR

442 (12>13)

111
456 (15>16), 446 (13>14)
617 (12>11), 485 [15>14]
715 [24>23], 635 [23>24]
UnkName/241613 - BLR

464c (15>13), 464d (17>13)

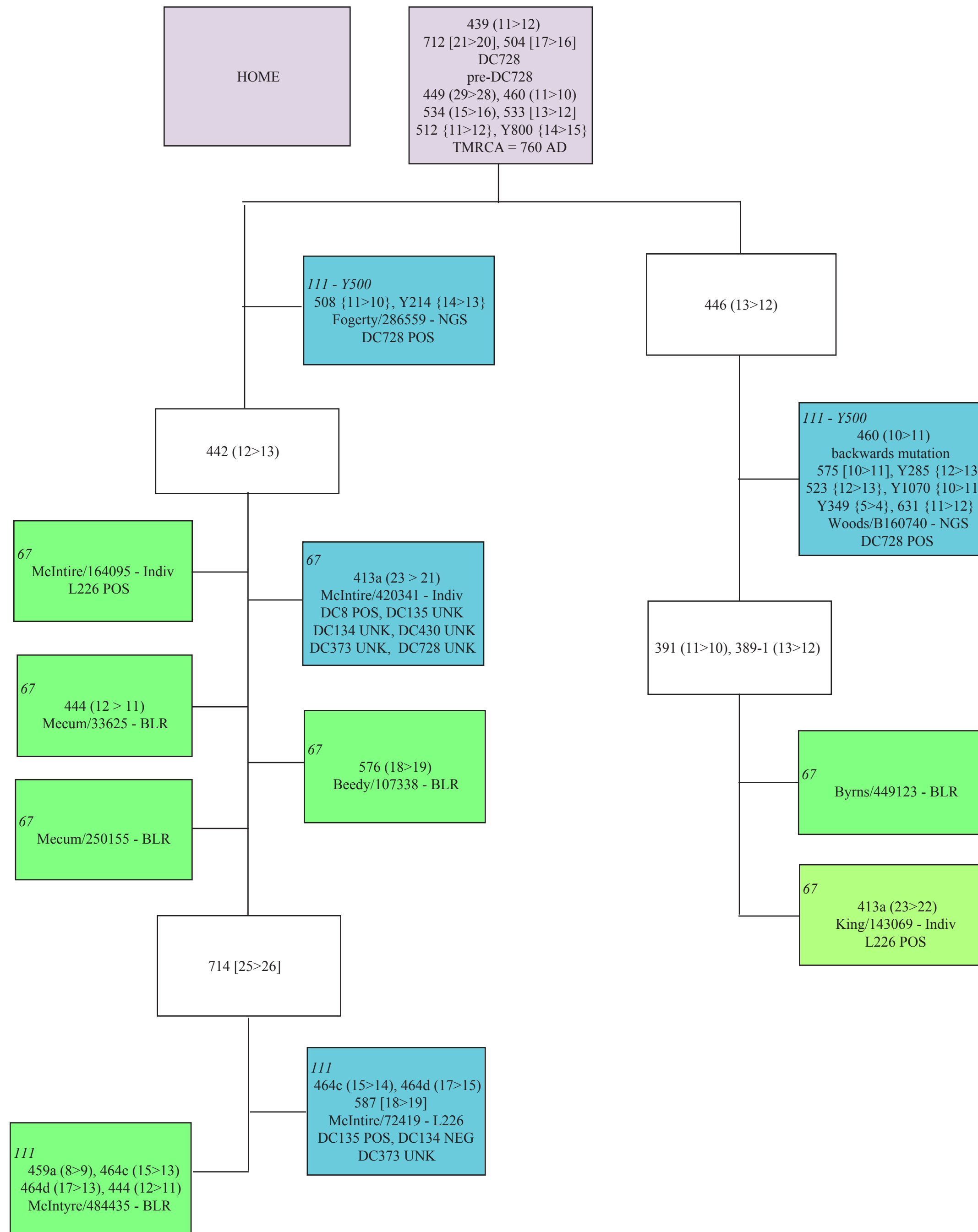
111
O'Dea/458295 - Z253
FGC5660 POS, DC25 NEG
FGC5628 NEG, DC29 NEG
FGC12290 NEG

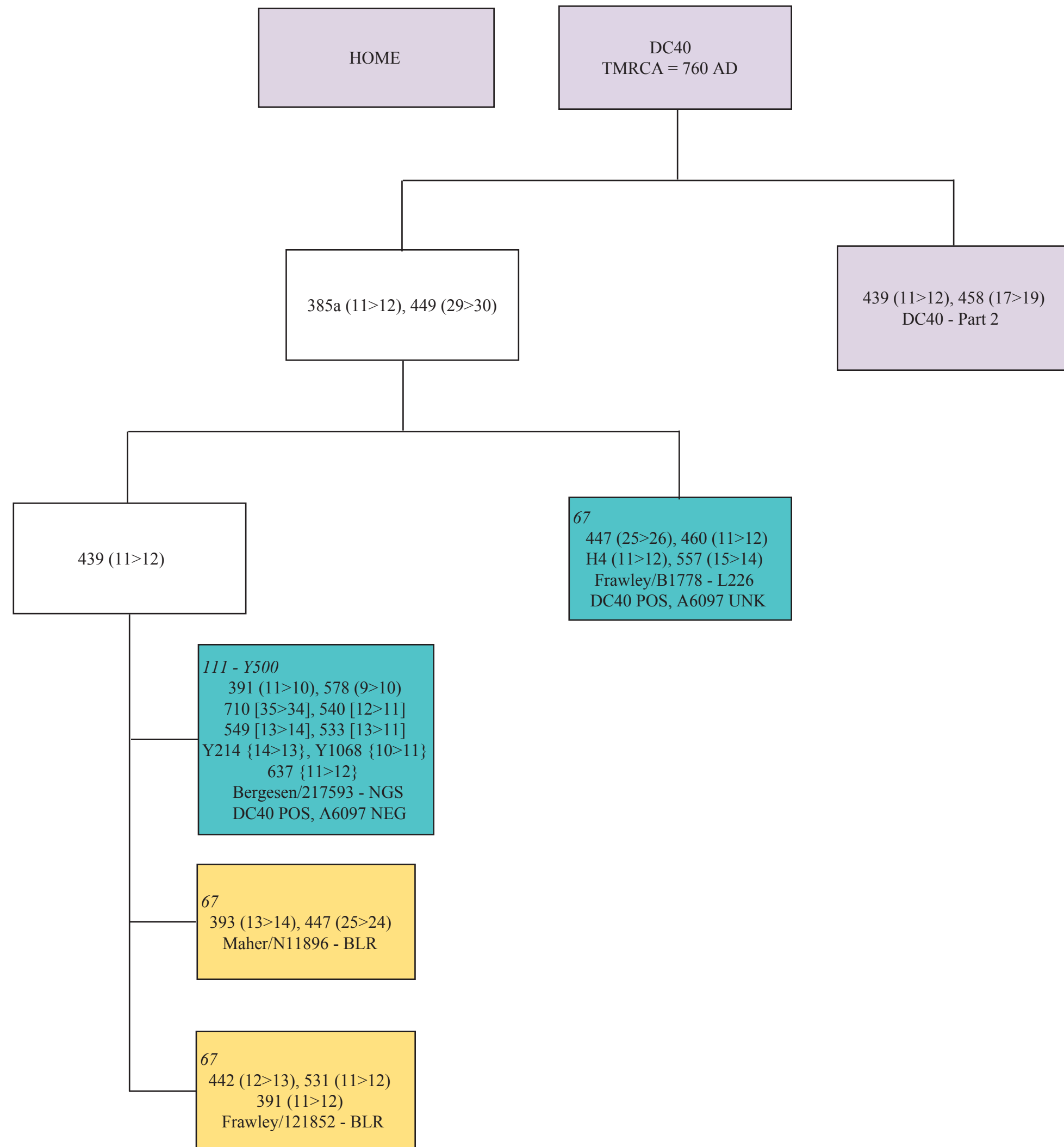
111
464c (15>14)
Madden/276694 - BLR

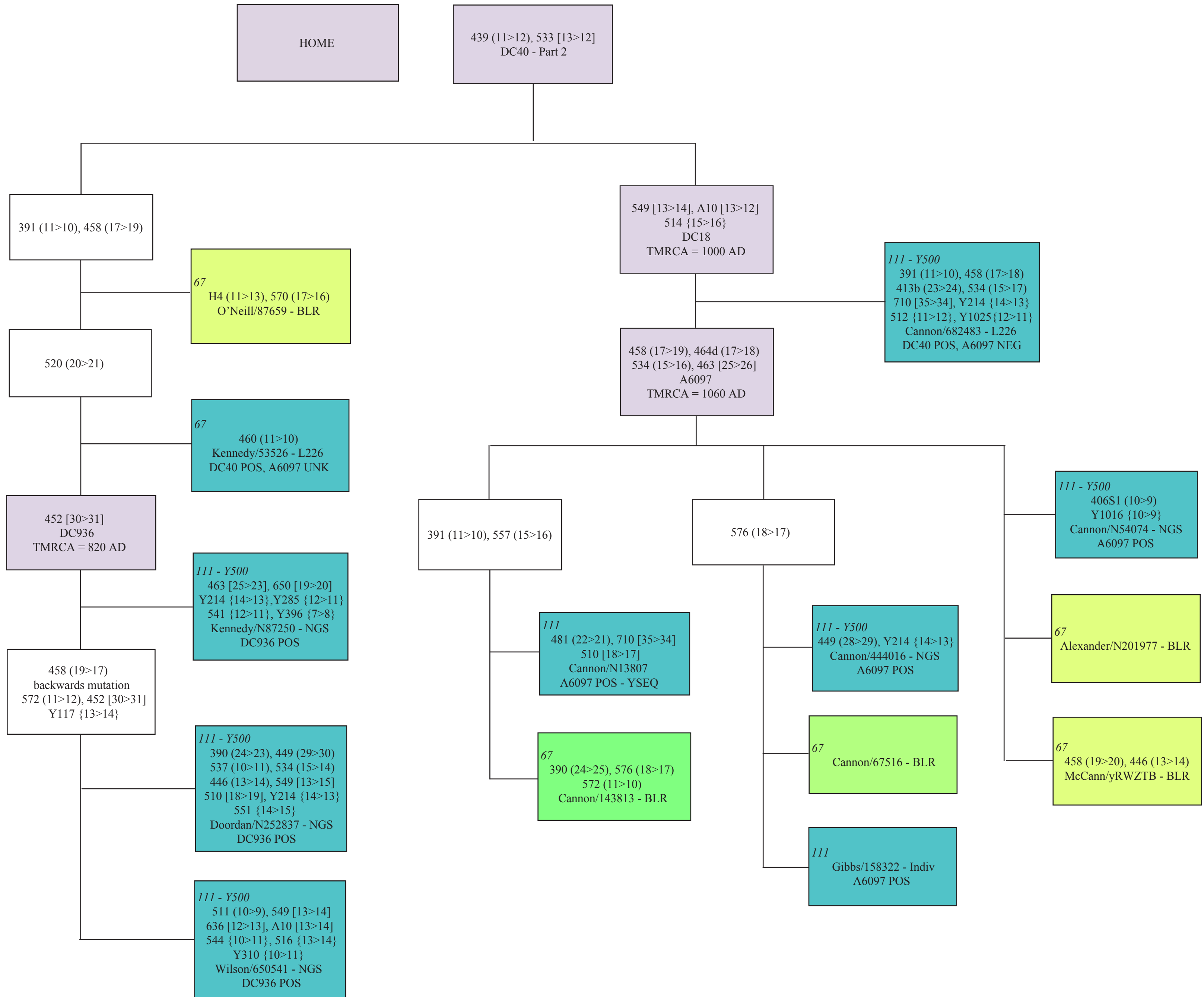
111
607 (15>16)
Day/254182 - Z253
FGC5660 POS, DC25 NEG
FGC5628 NEG, DC29 NEG
FGC12290 NEG

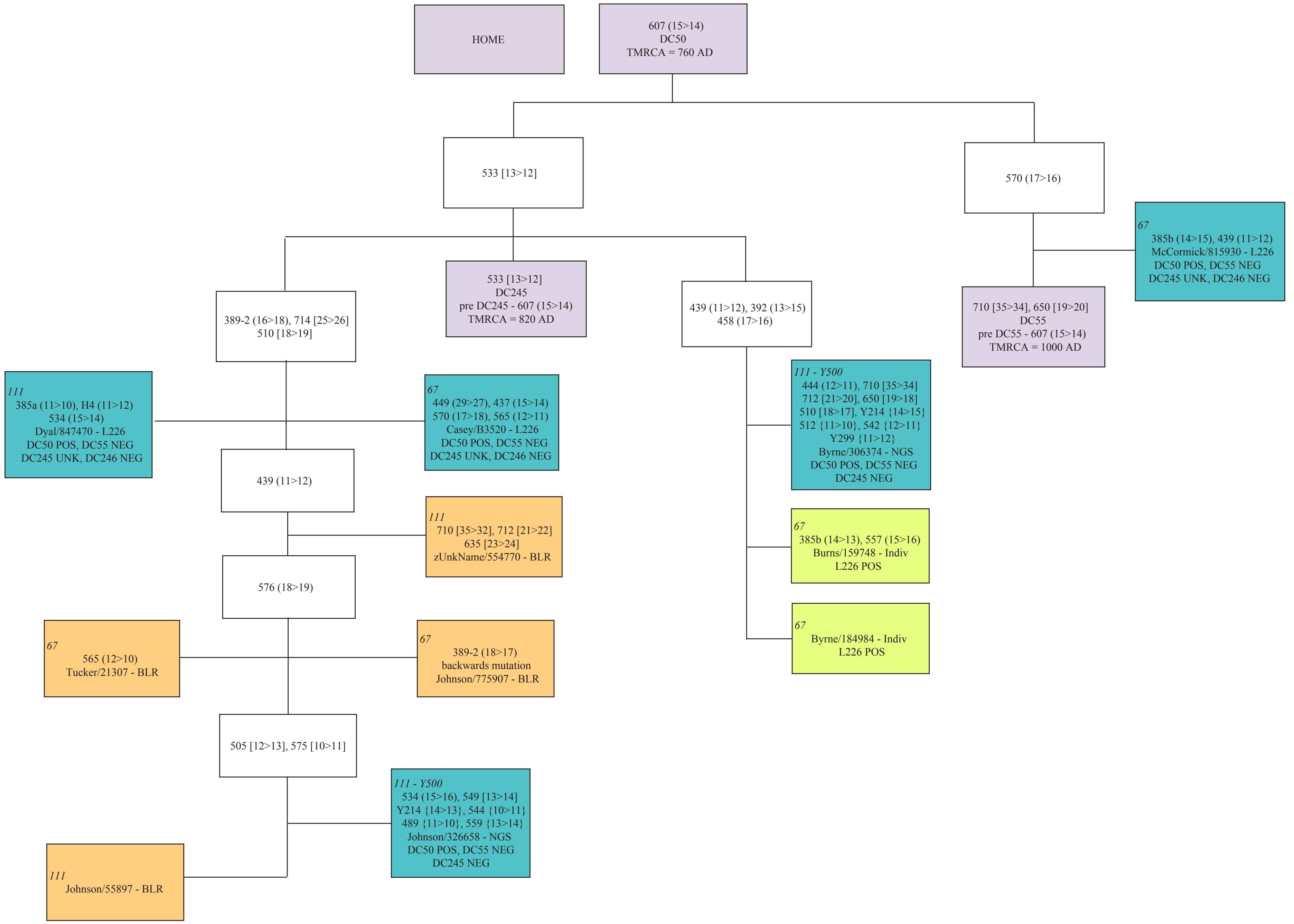
111
O'Dea/254274 - Z253
FGC5660 POS, DC25 NEG
FGC5628 NEG, DC29 NEG
FGC12290 NEG

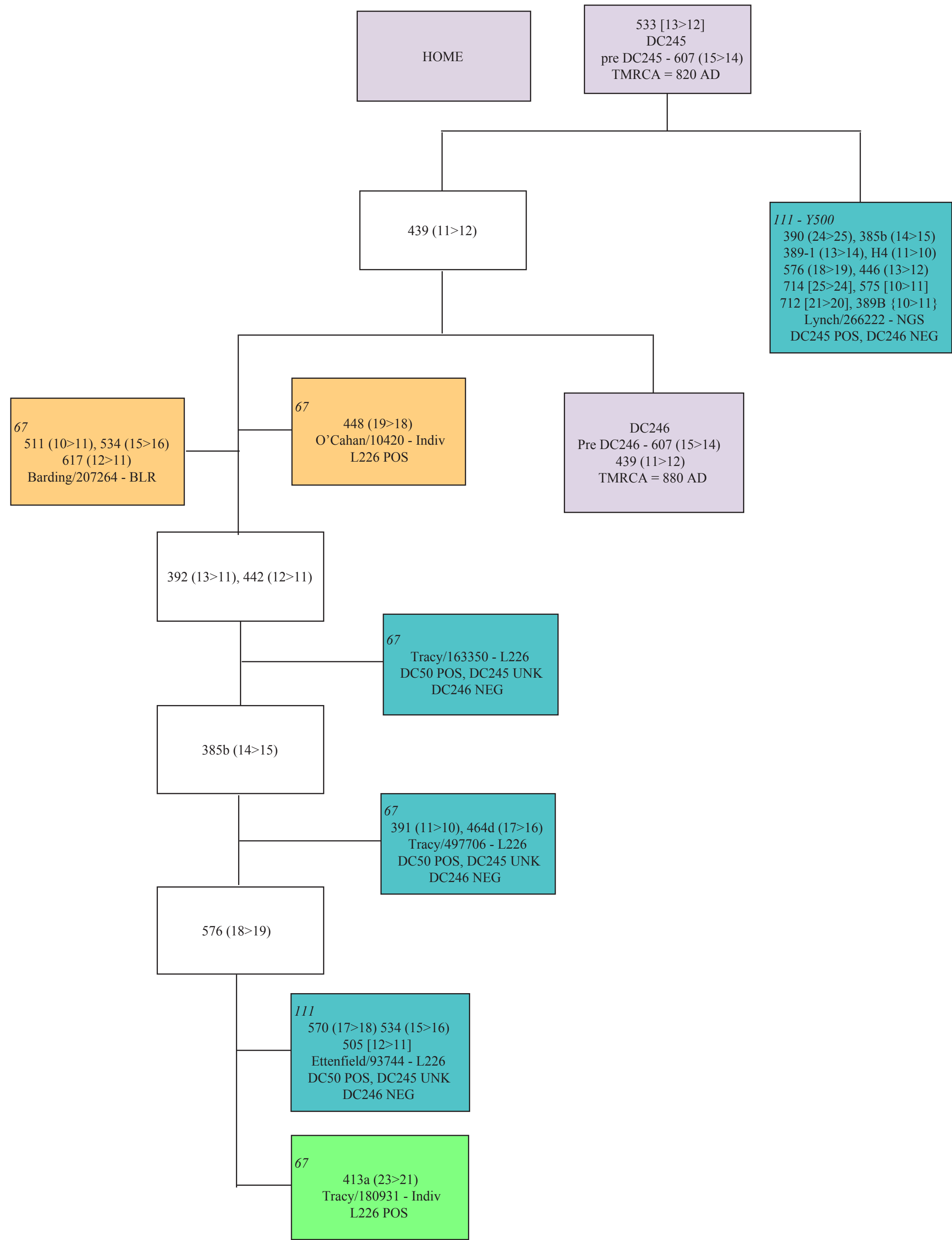
111
532 [13>15]
O'Dea/827504 - BLR

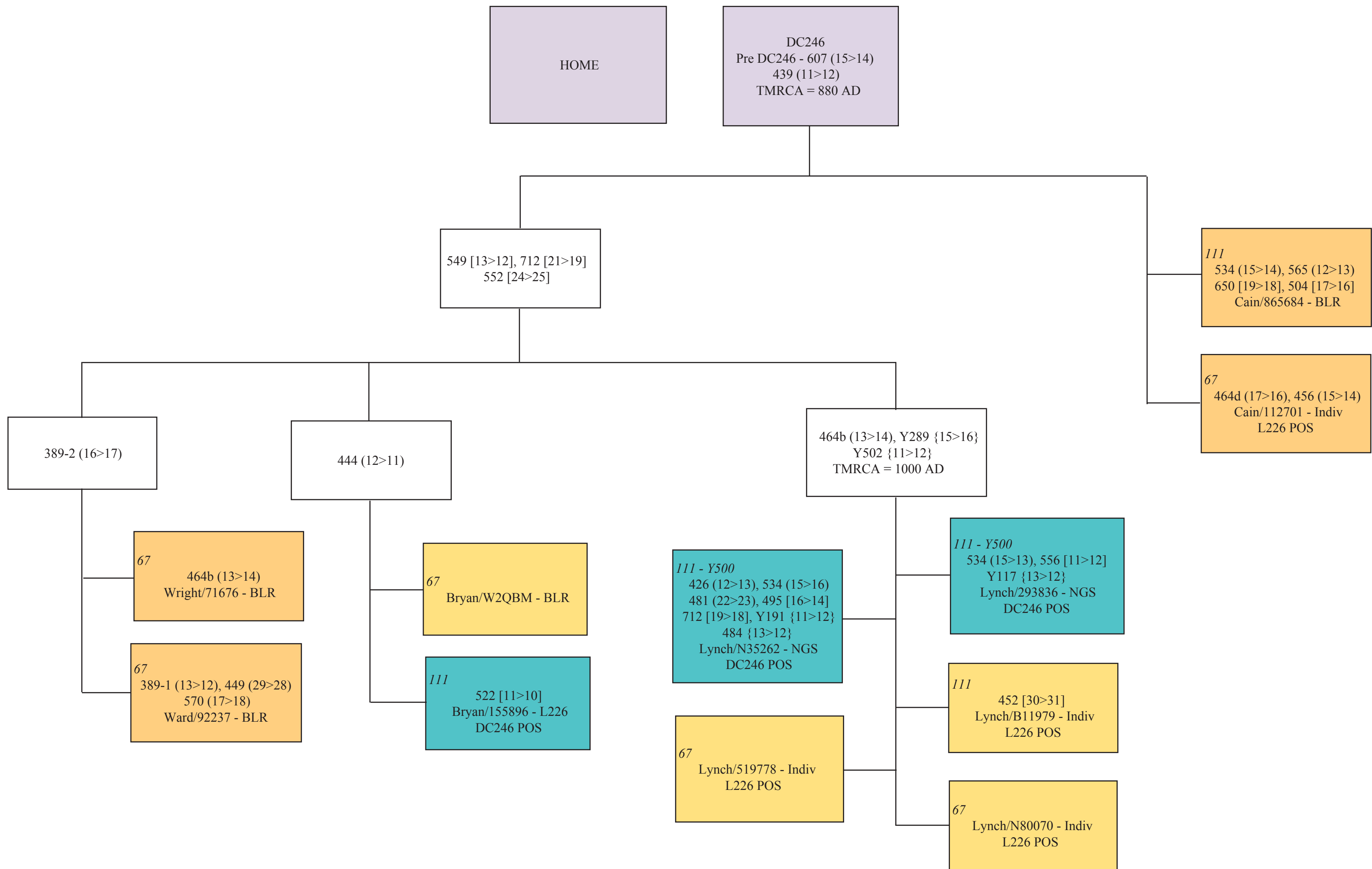


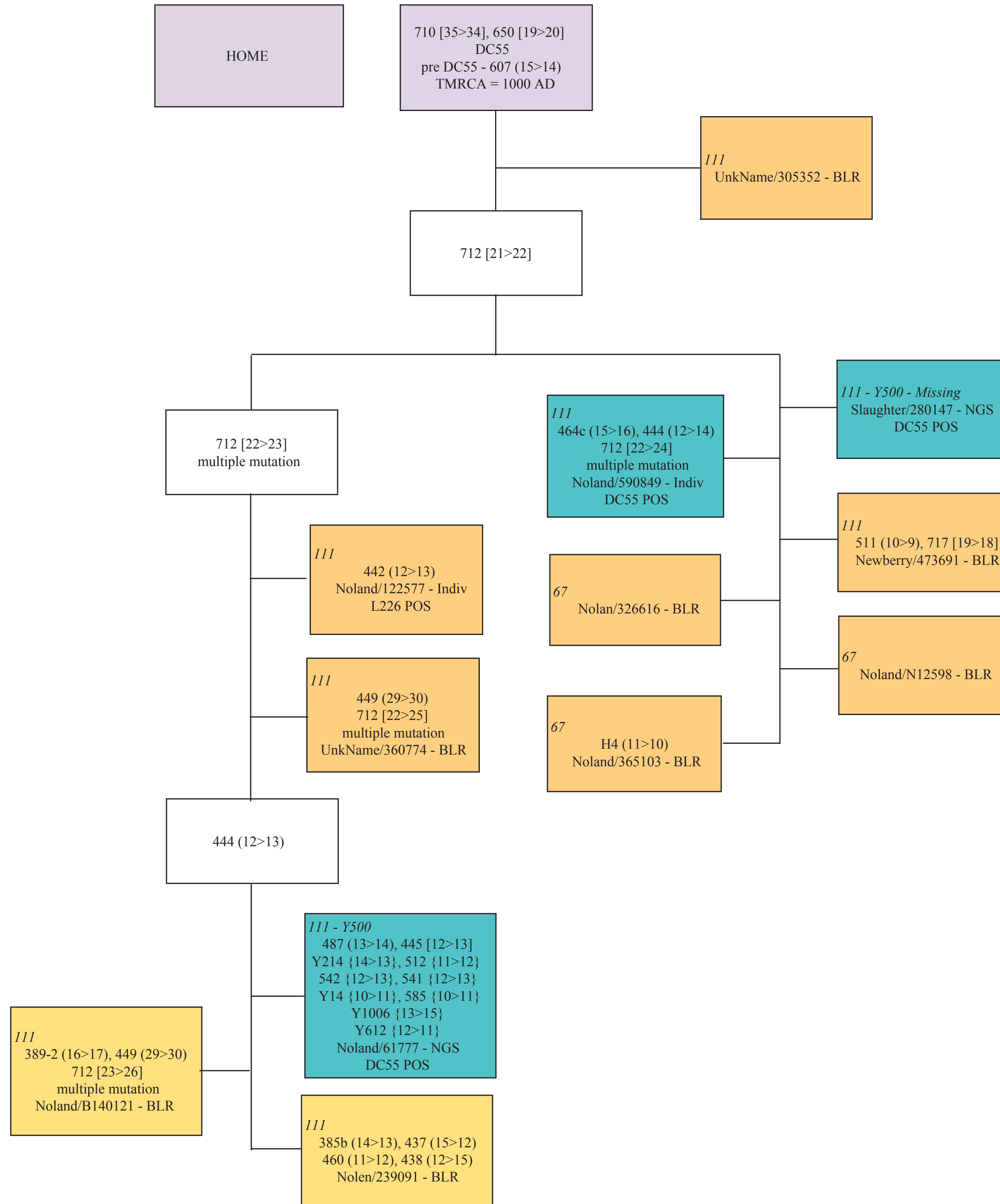


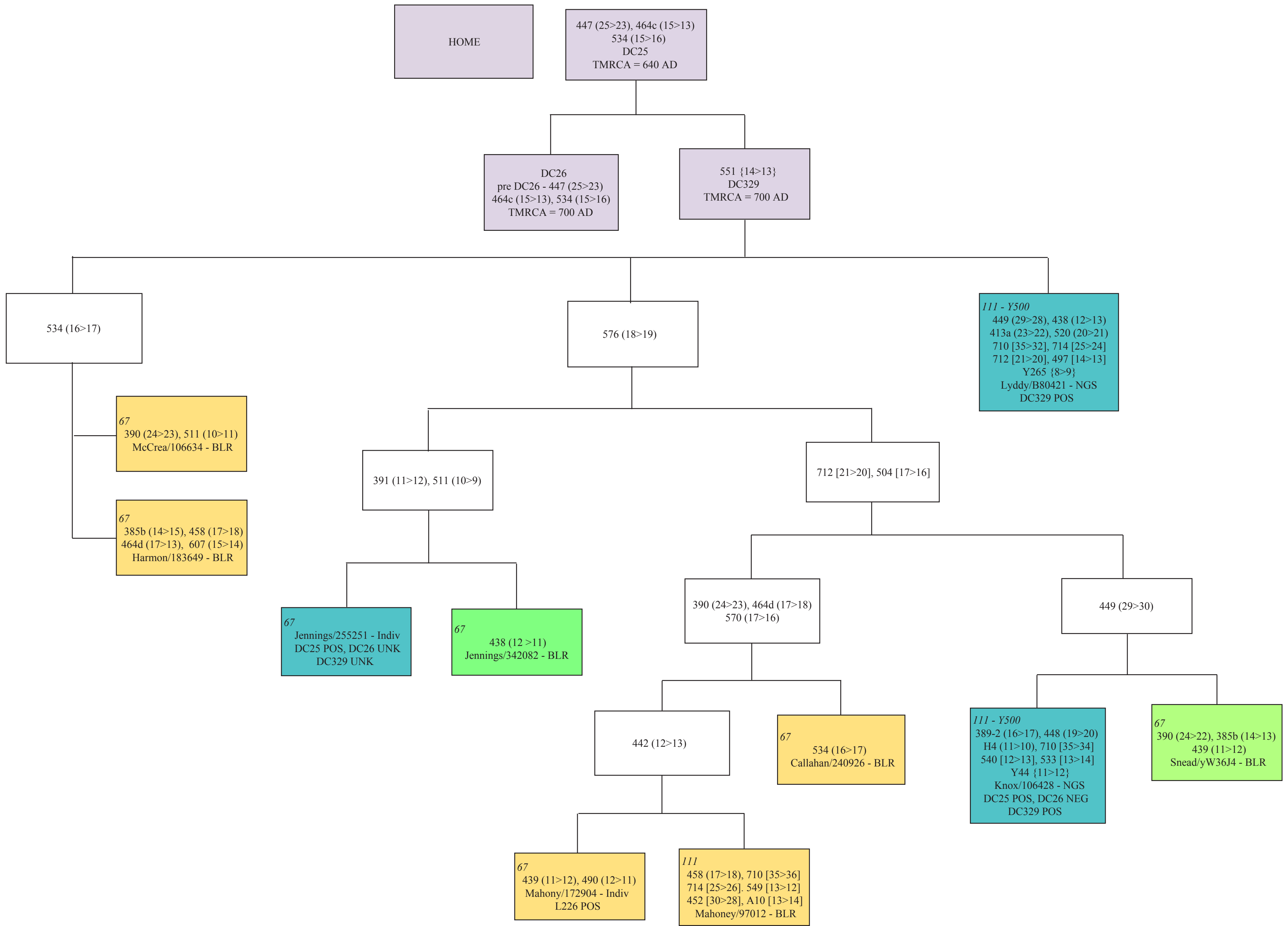


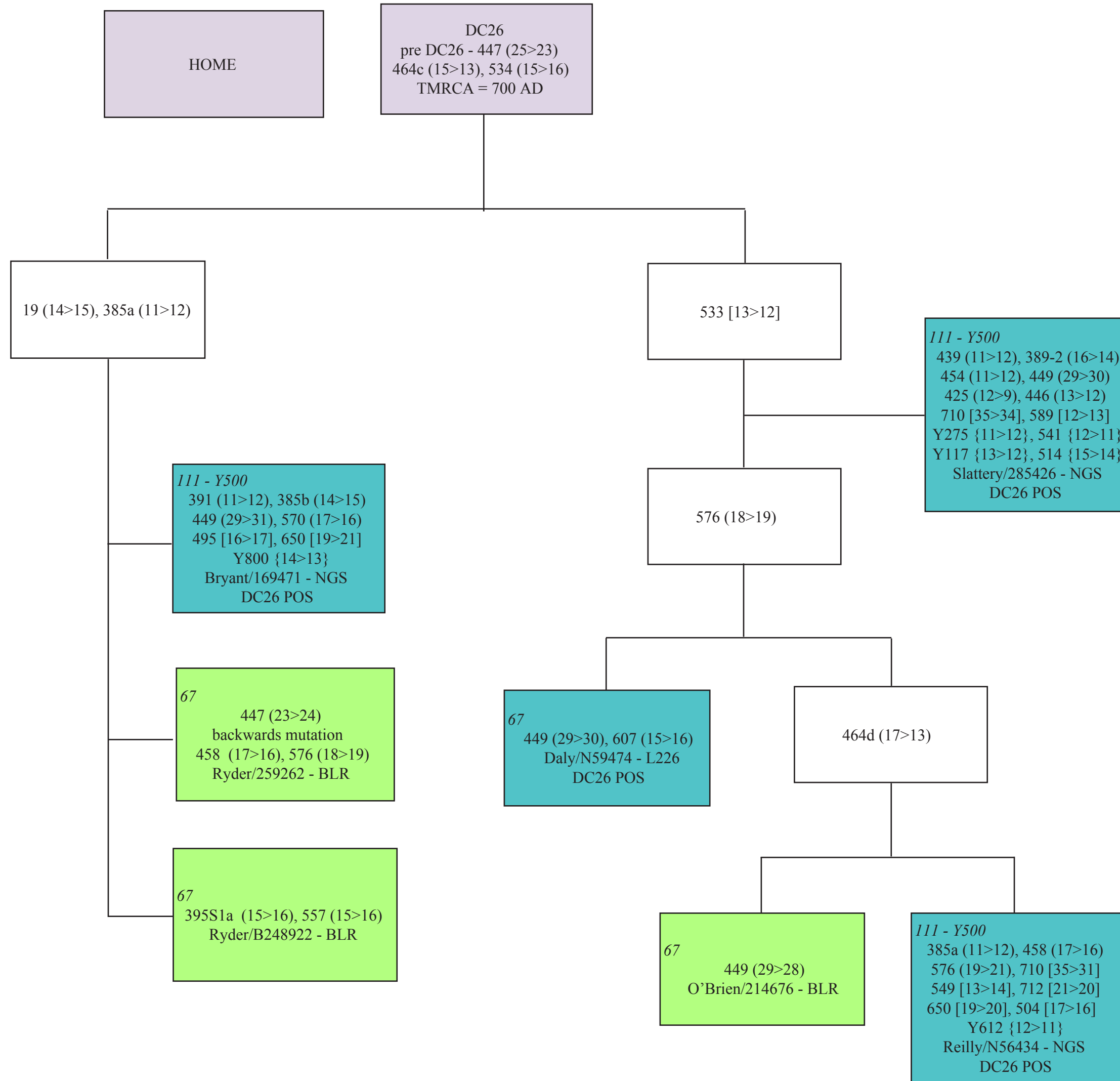


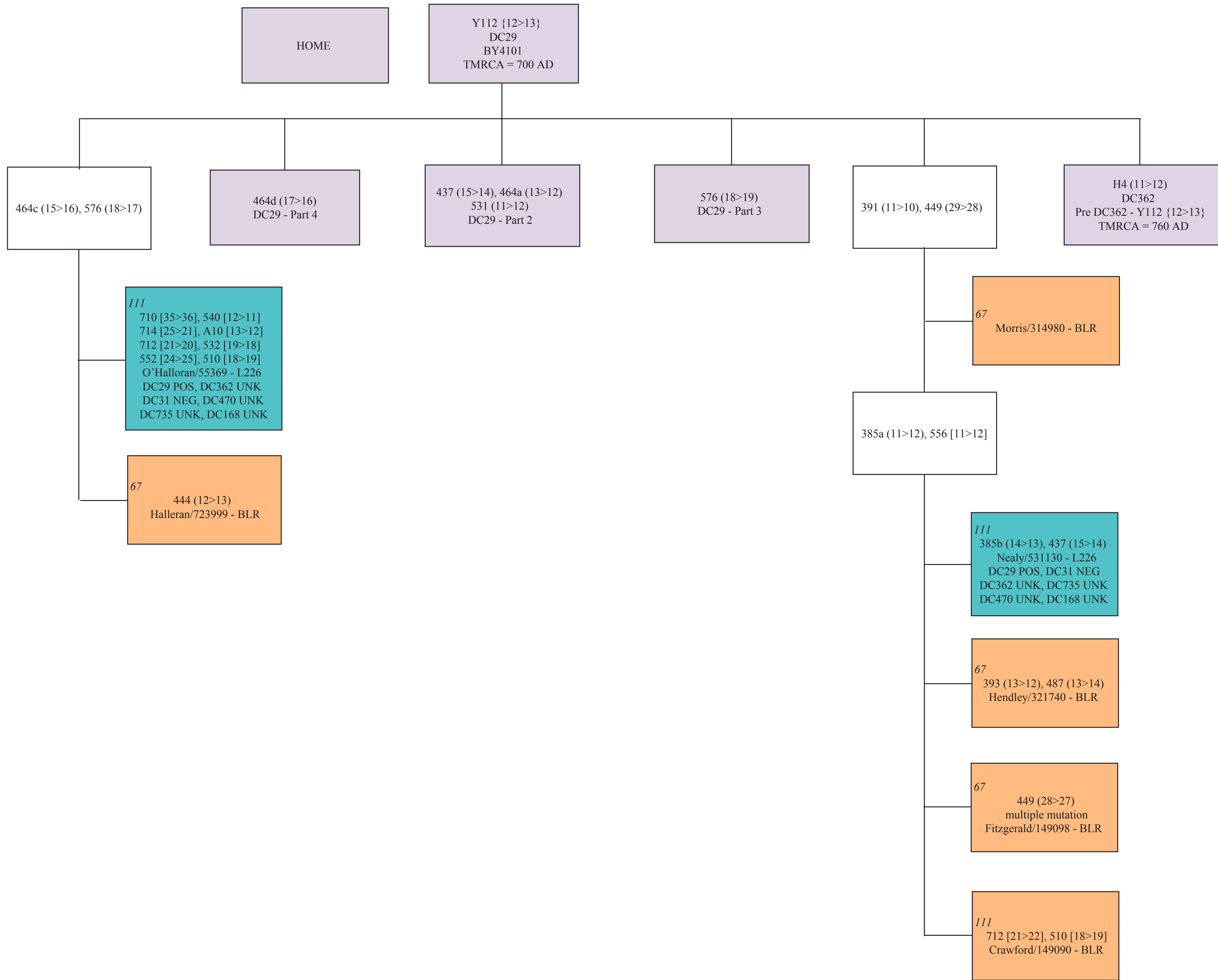












HOME

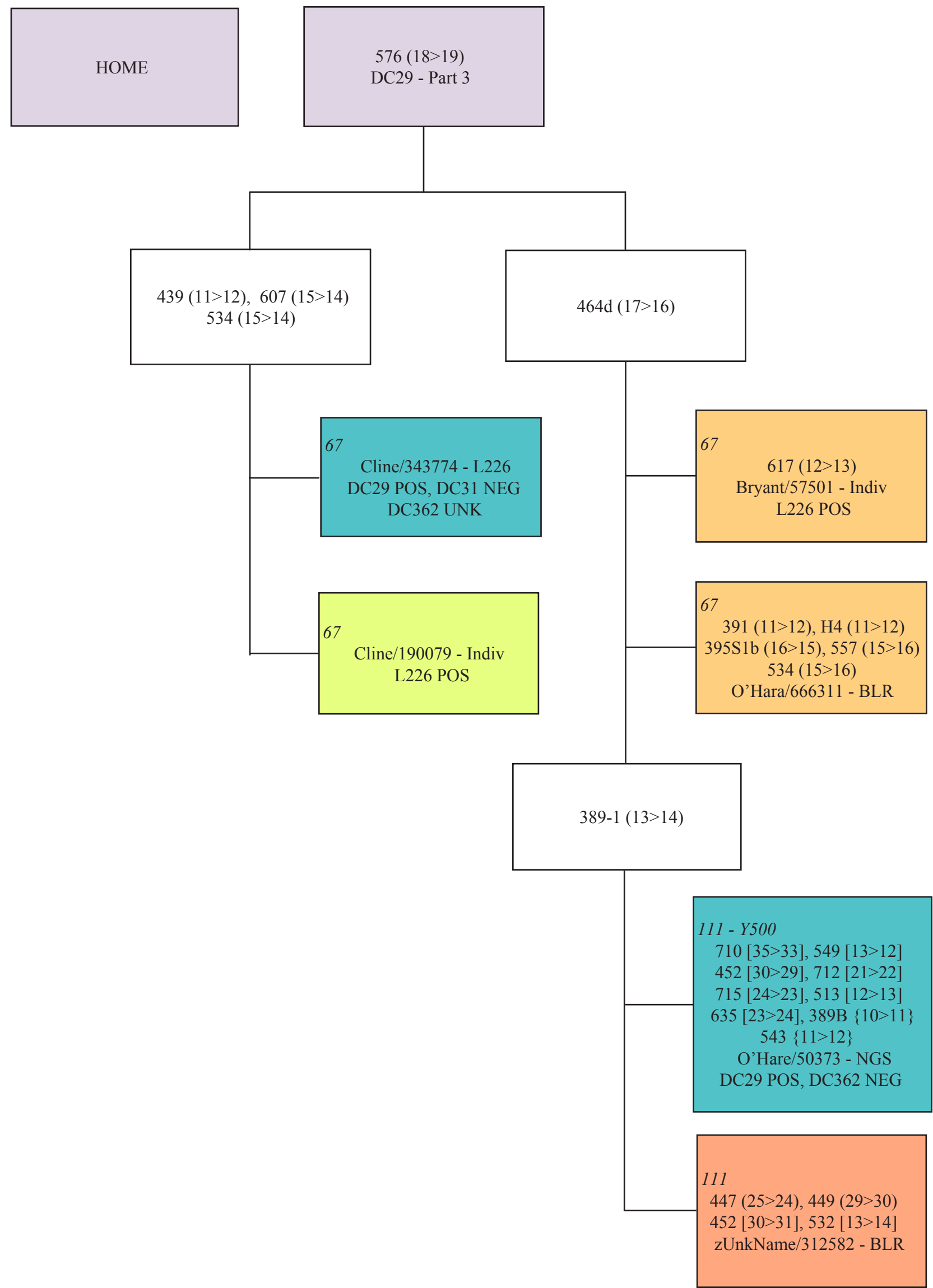
437 (15>14), 464a (13>12)
531 (11>12)
DC29 - Part 2

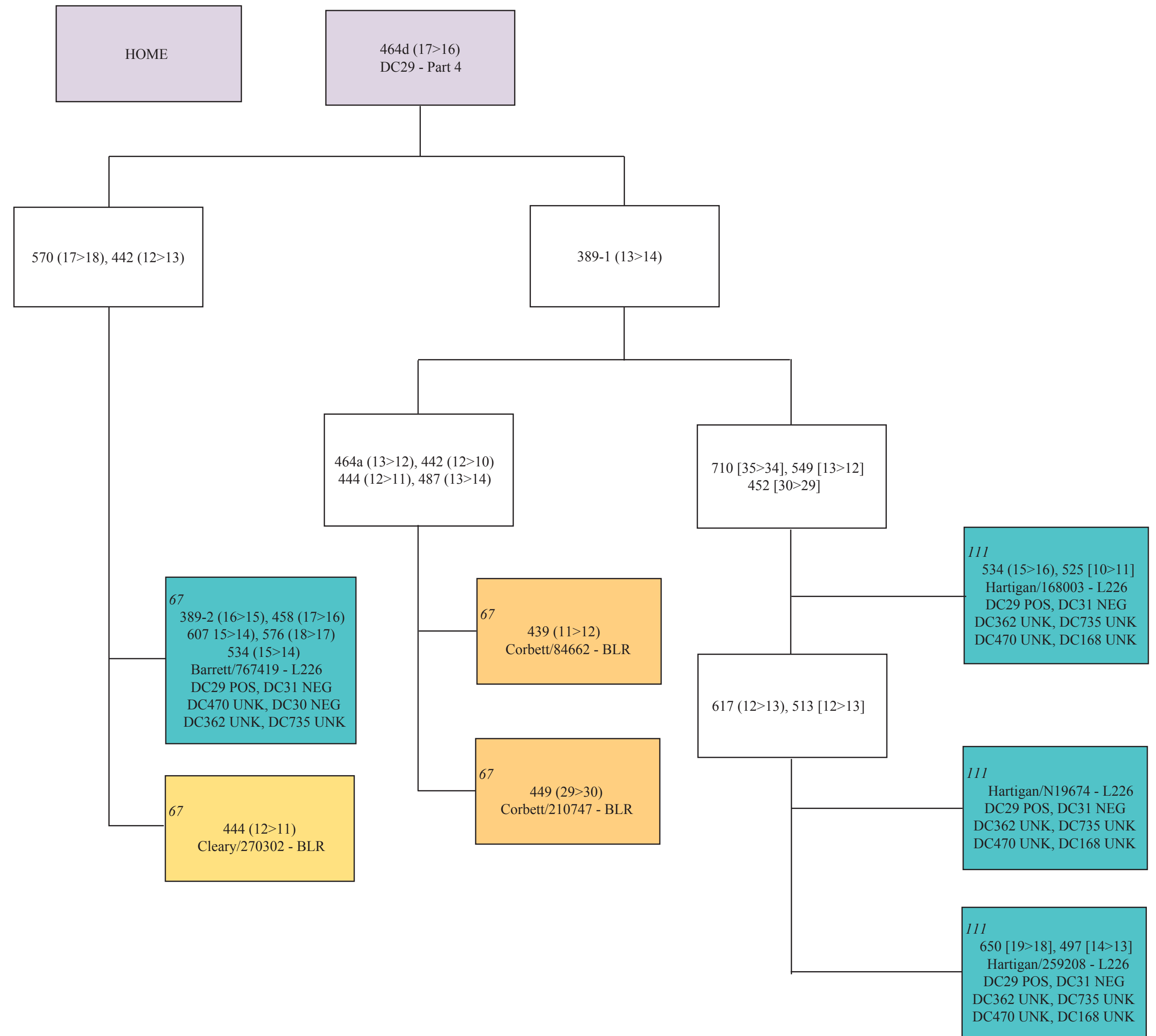
67
534 (15>16)
Orr/219399 - BLR

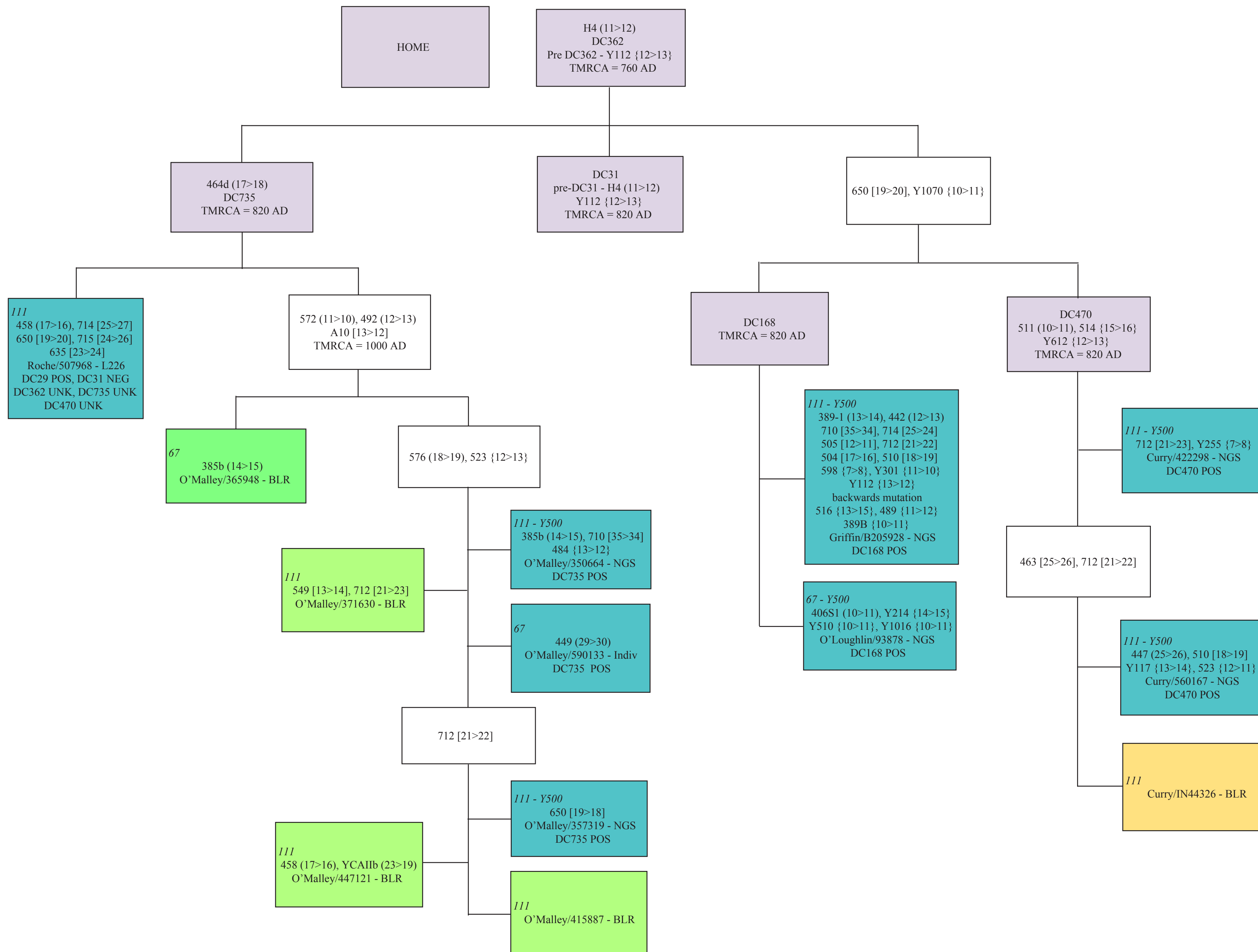
576 (18>17)

67
458 (17>16)
Bryant/134367 - BLR

67
447 (25>24)
James/B2461 - L226
DC29 POS, DC31 NEG
DC470 UNK, DC30 NEG
DC362 UNK, DC735 UNK



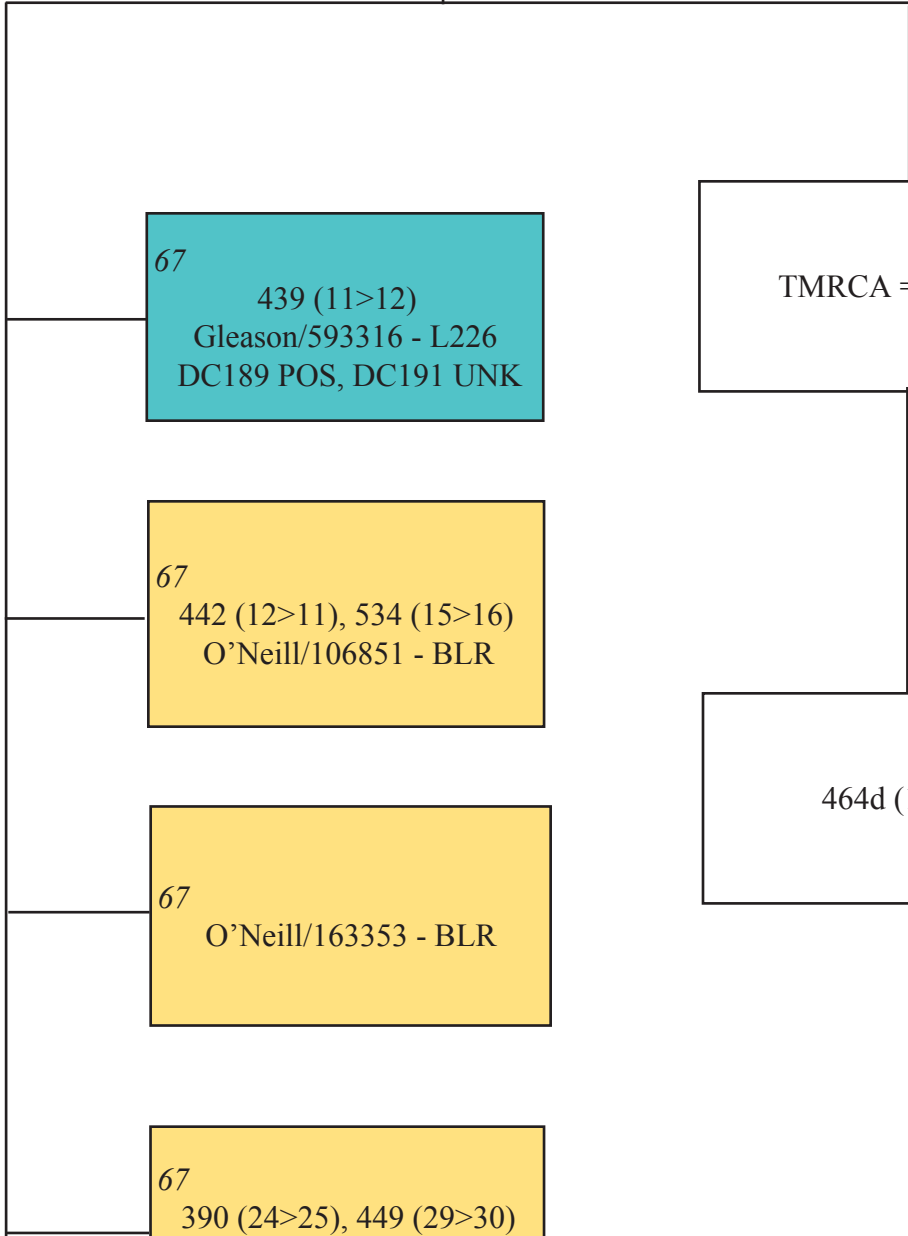




HOME

DC189
Pre DC189 - H4 (11>12)
446 (13>14), 589 [12>13]
533 [13>12], Y112 {12>13}
514 {15>16}
TMRCA = 940 AD

607 (15>14)
DC189 - Part 2
Pre DC189 - Part 2
H4 (11>12), 446 (13>14)
589 [12>13], 533 [13>12]
TMRCA = 1000 AD



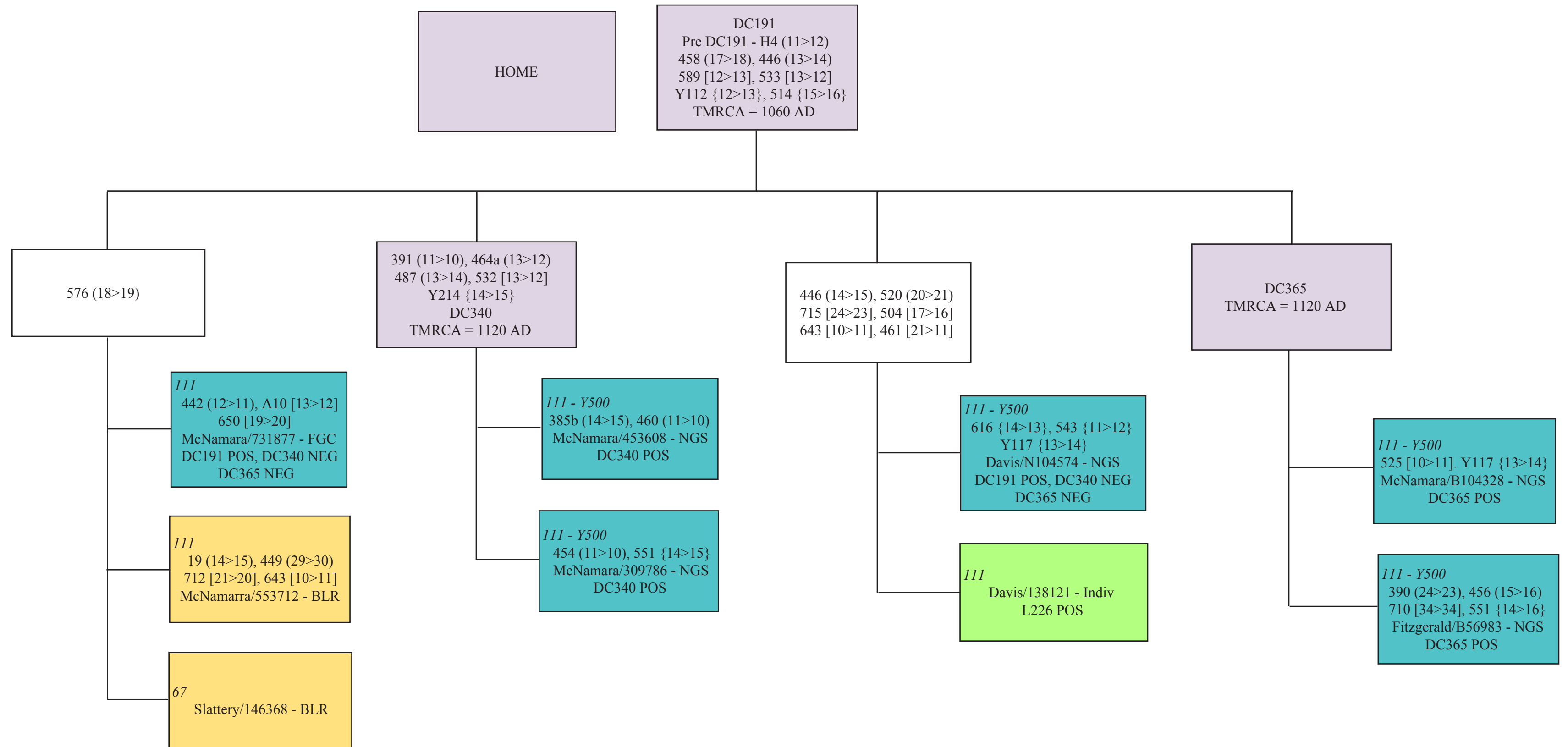
TMRCA = 1000 AD

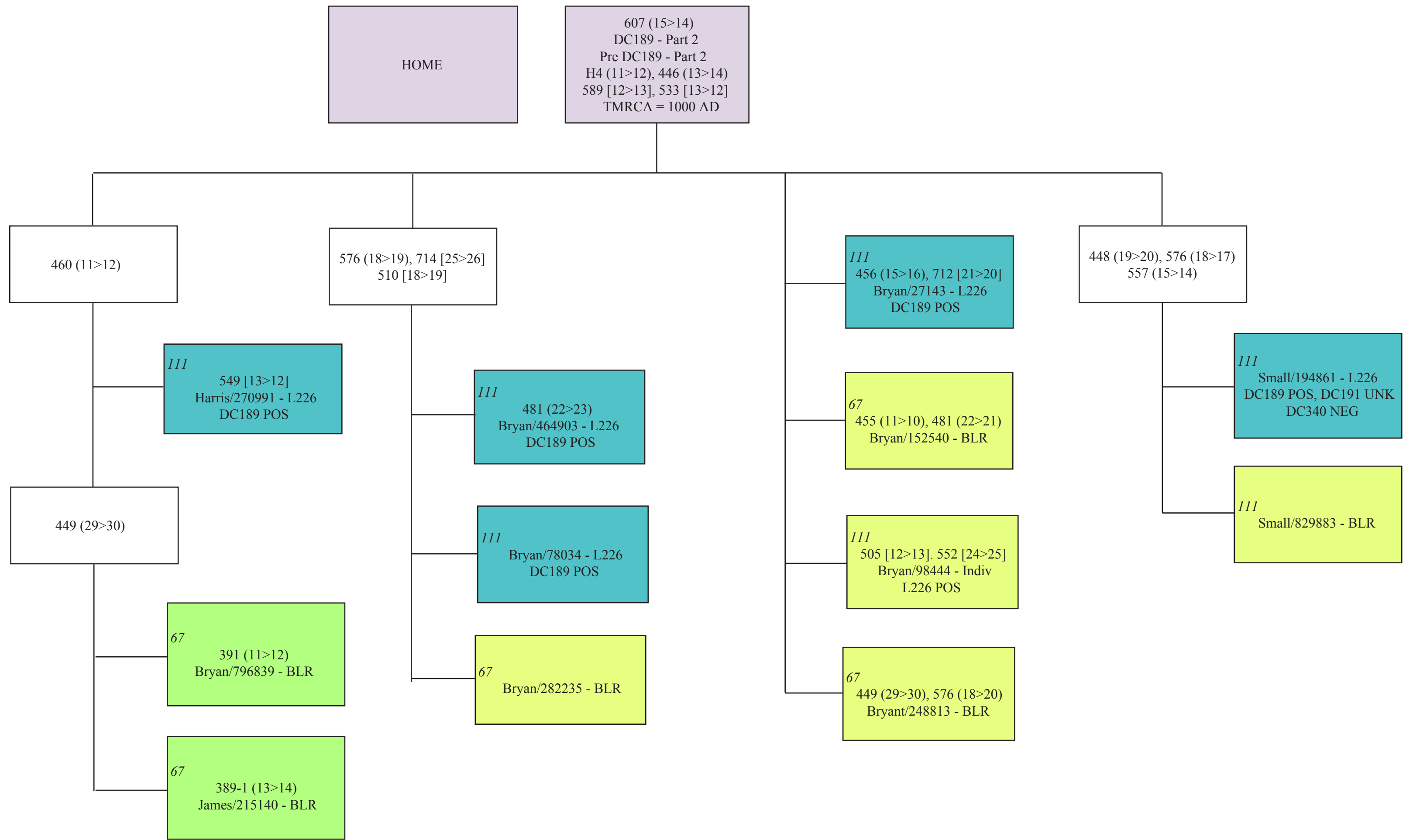
DC191
Pre DC191 - H4 (11>12)
458 (17>18), 446 (13>14)
589 [12>13], 533 [13>12]
Y112 {12>13}, 514 {15>16}
TMRCA = 1060 AD

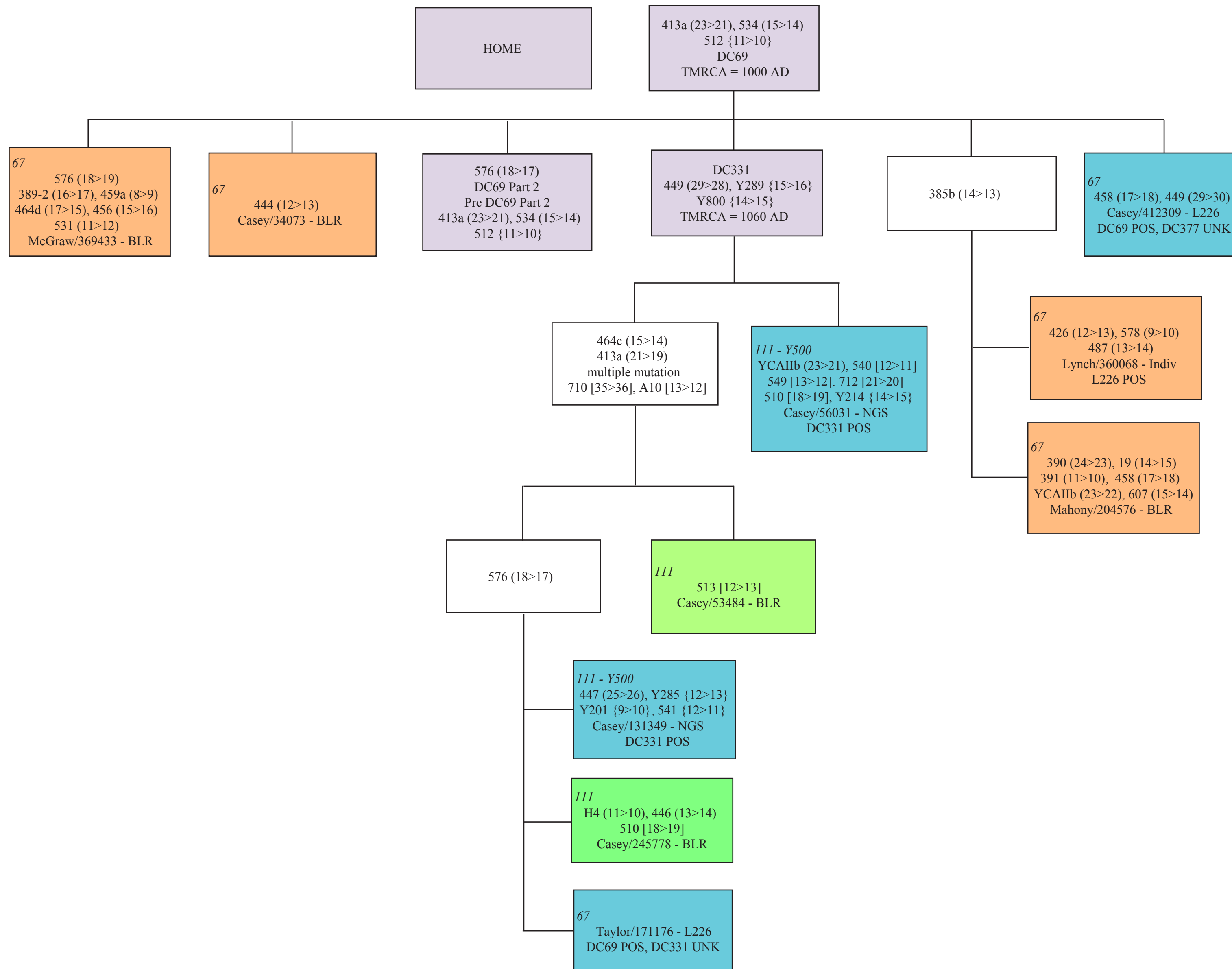
464d (17>16)

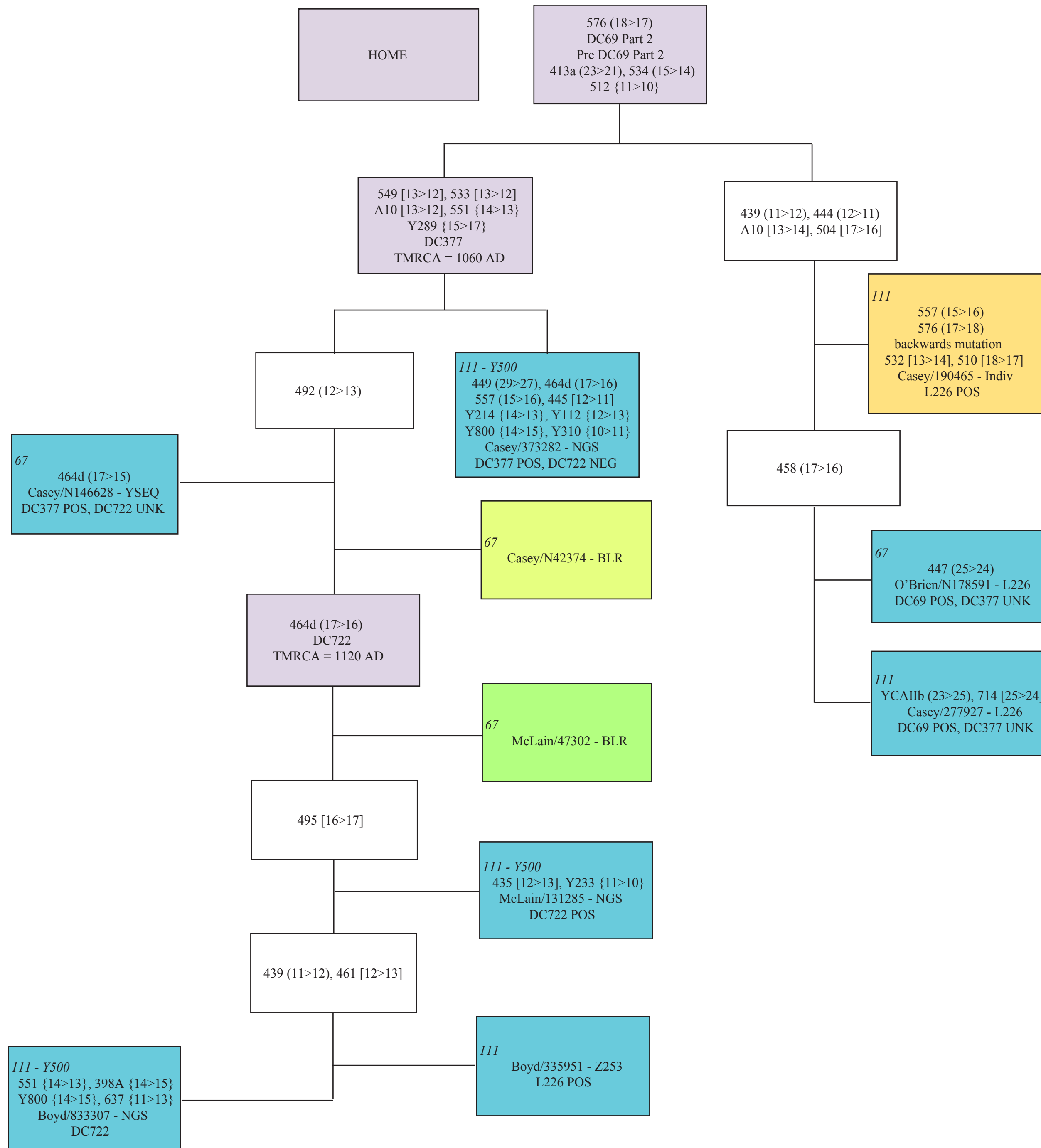
111
570 (17>18), 413a (23>21)
556 [11>10], 532 [13>14]
Mack/163248 - BLR

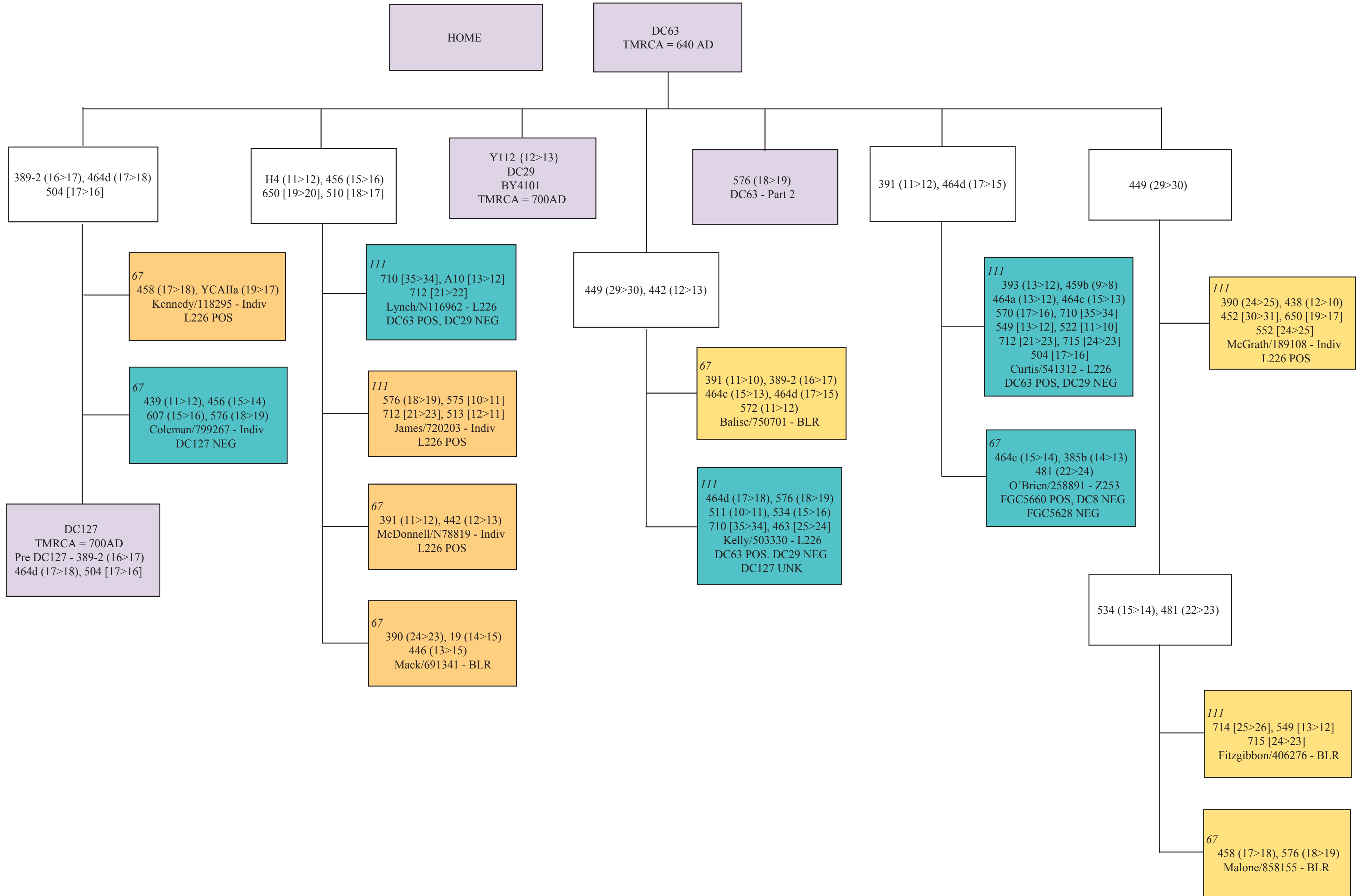
111 - Y500
442 (12>11), 413a (23>22)
710 [35>34], 549 [13>12]
643 [10>9], Y214 {14>13}
McNamara/424282 - NGS
DC189 POS, DC191 NEG

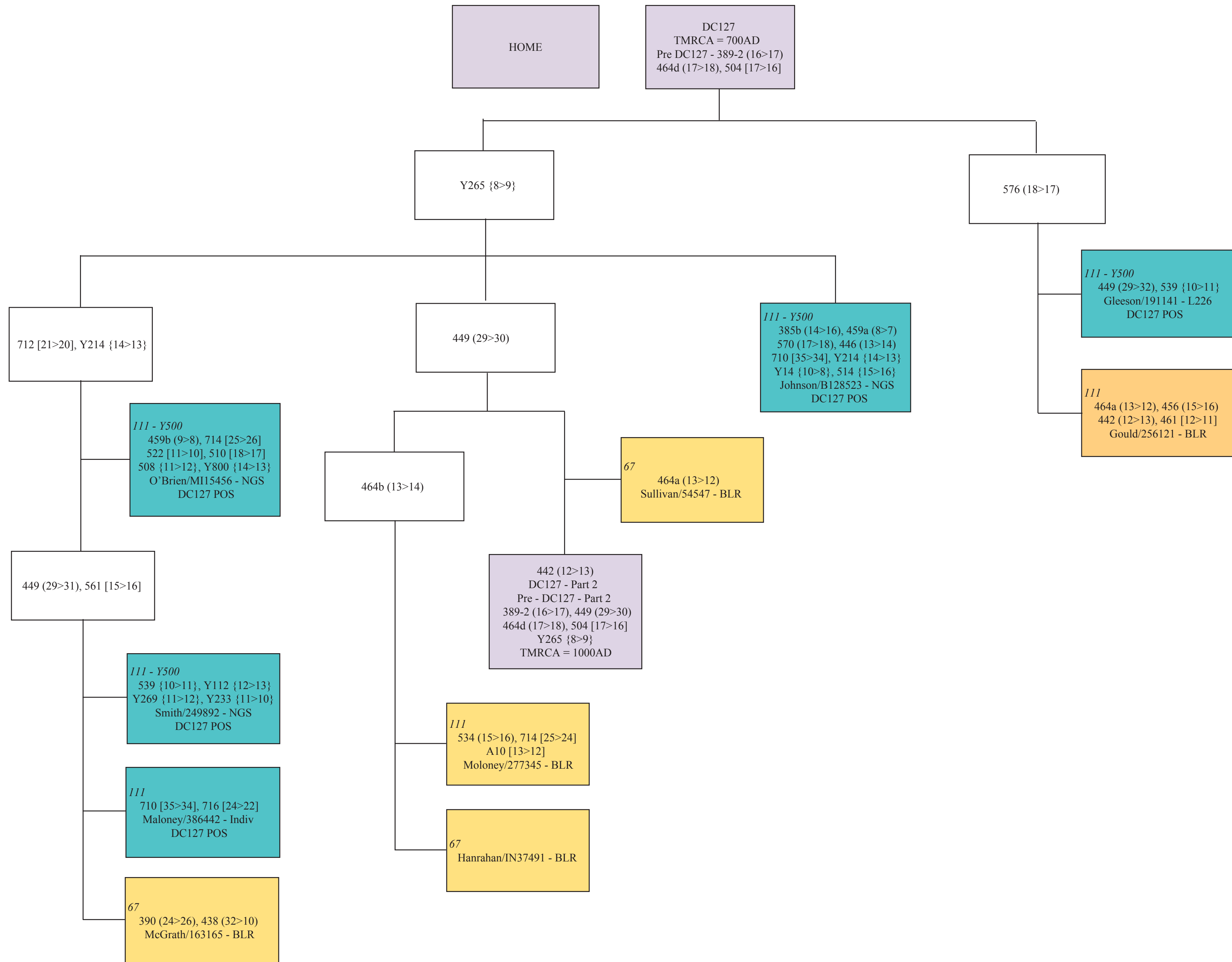


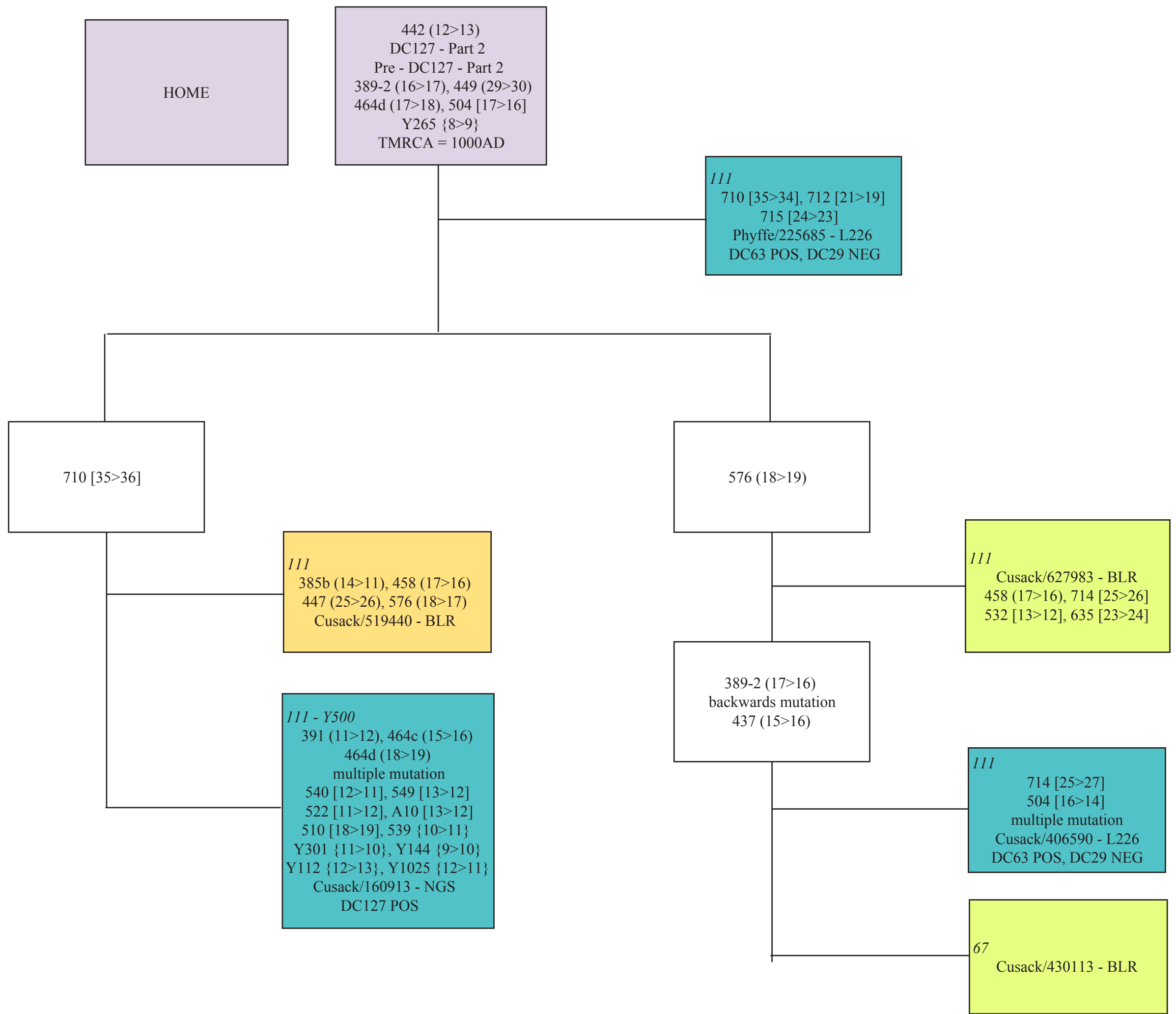


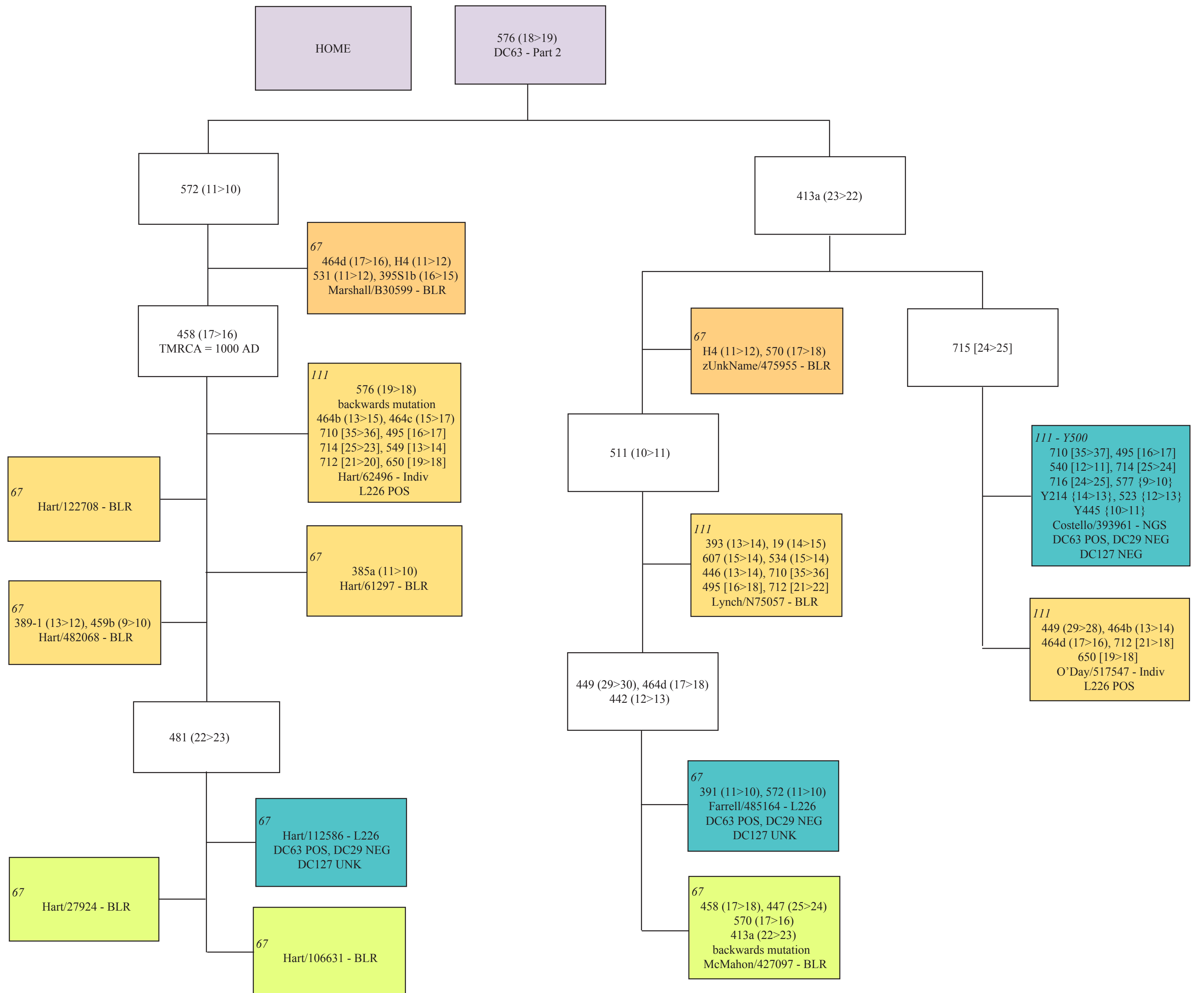


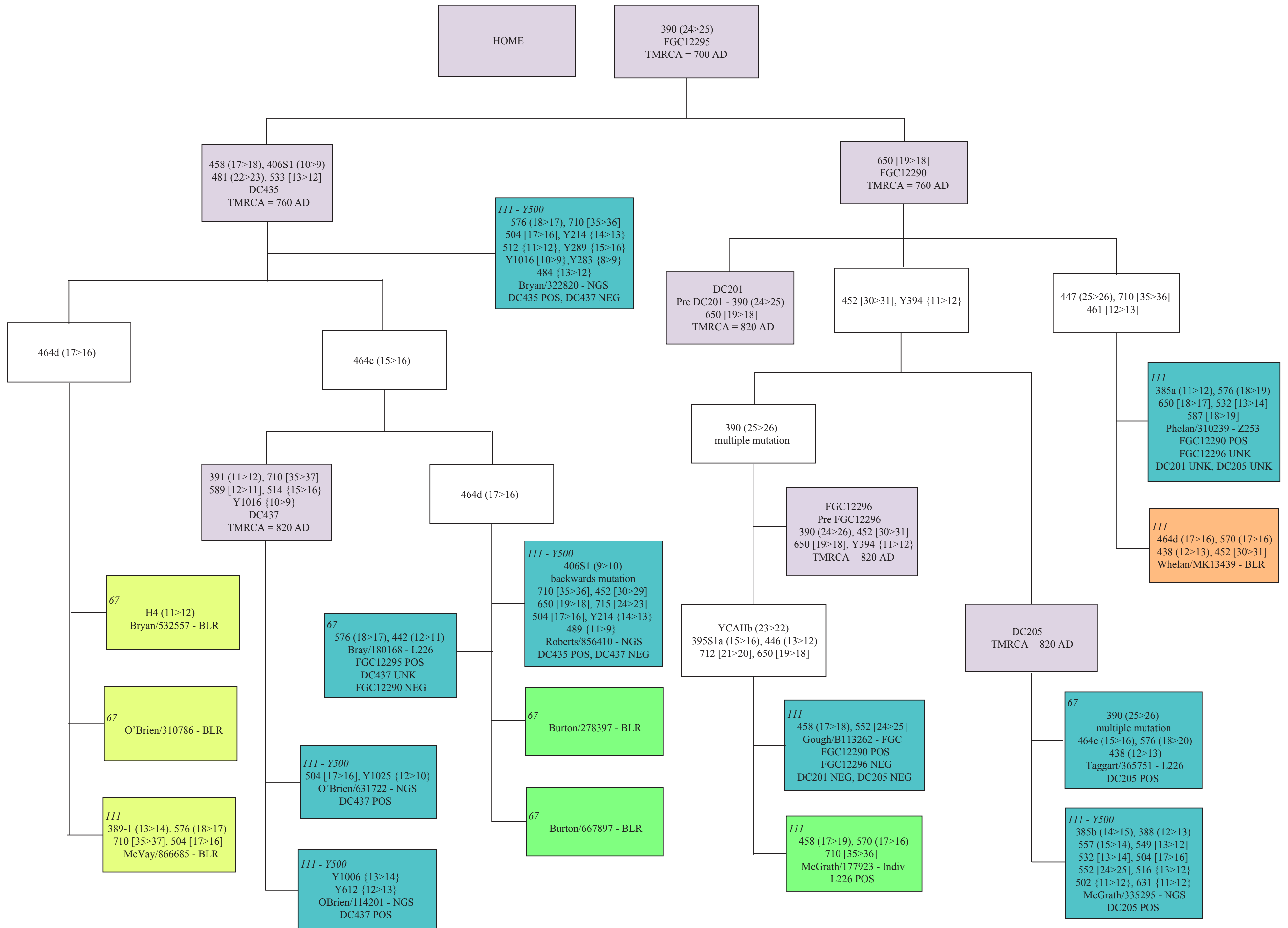


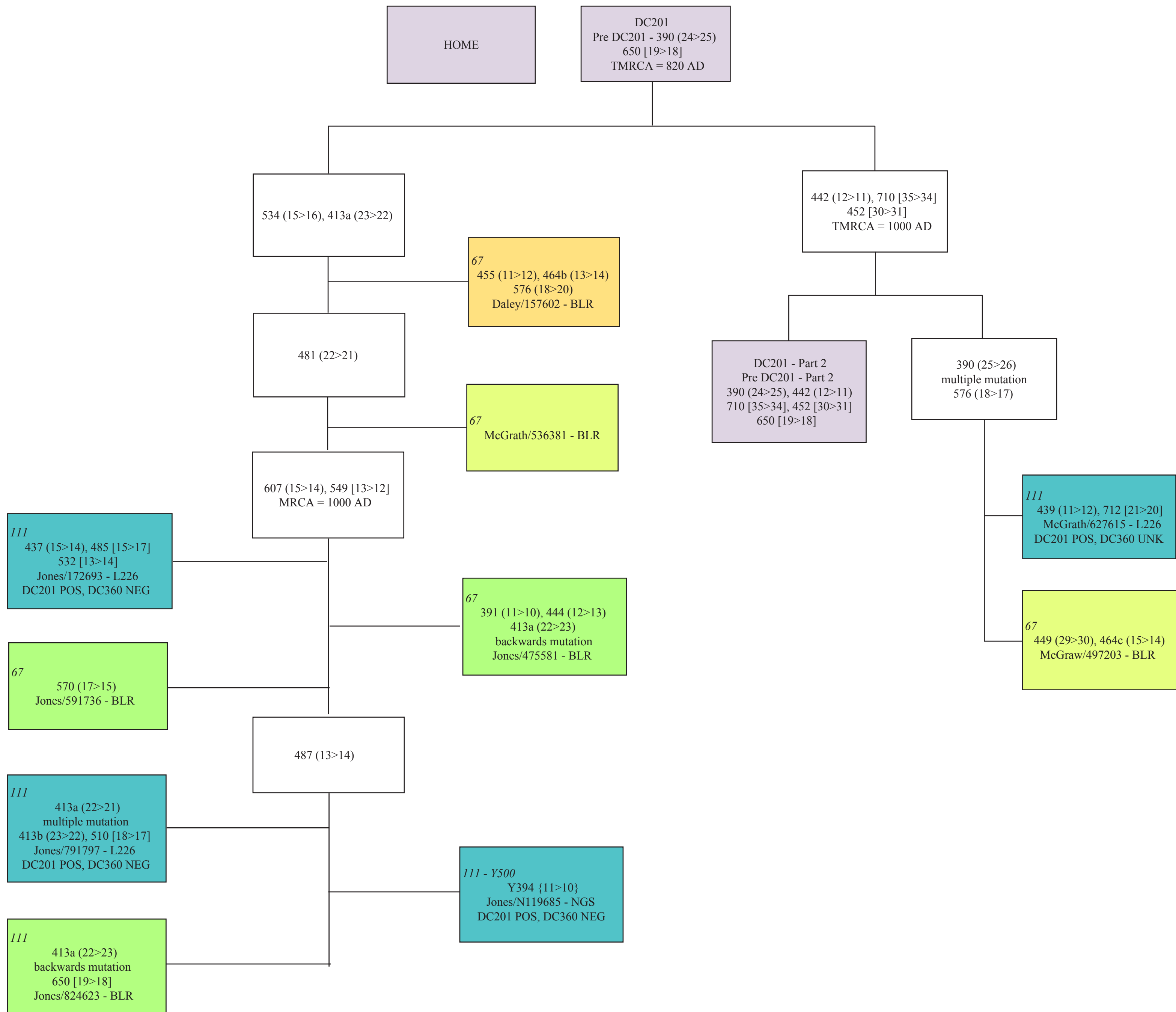


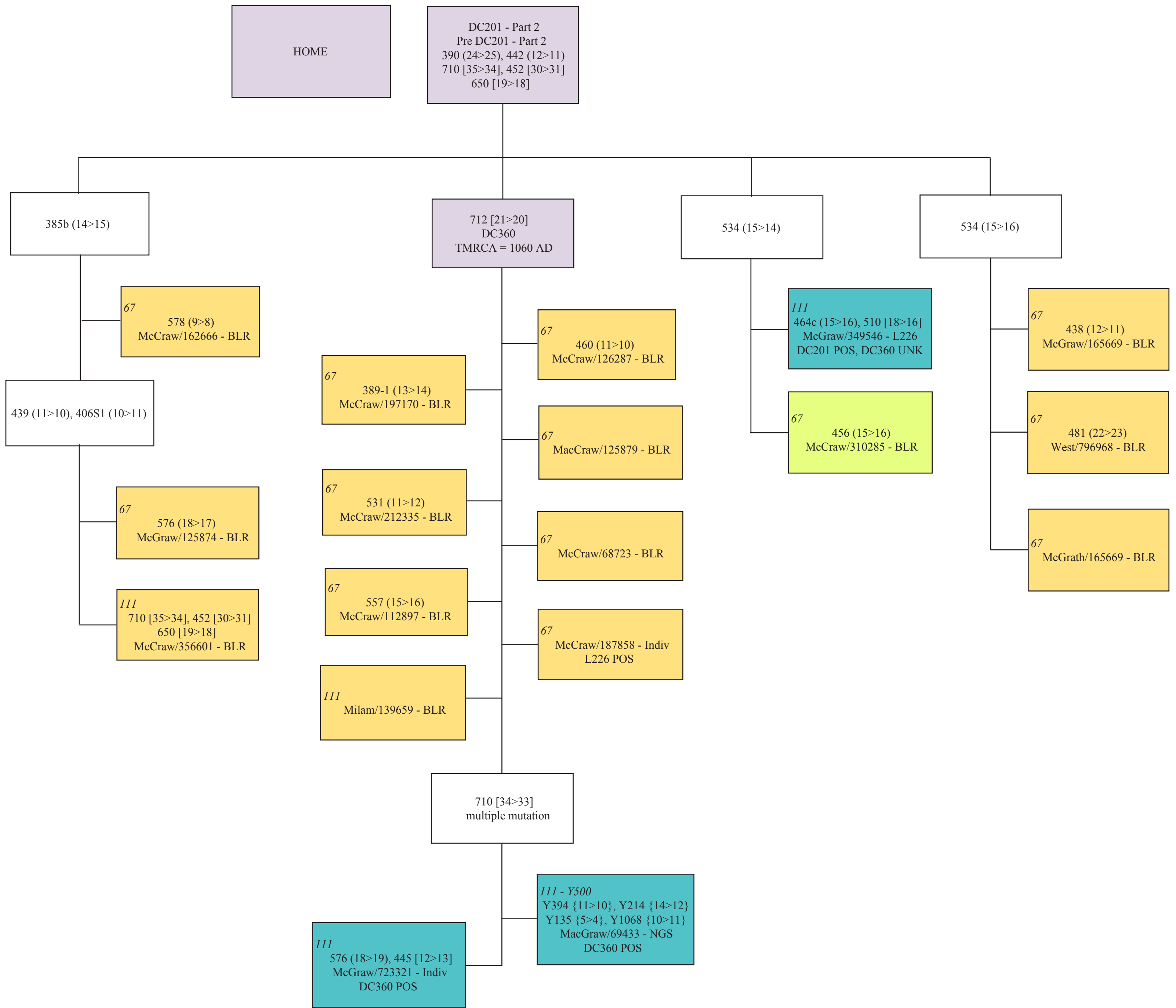


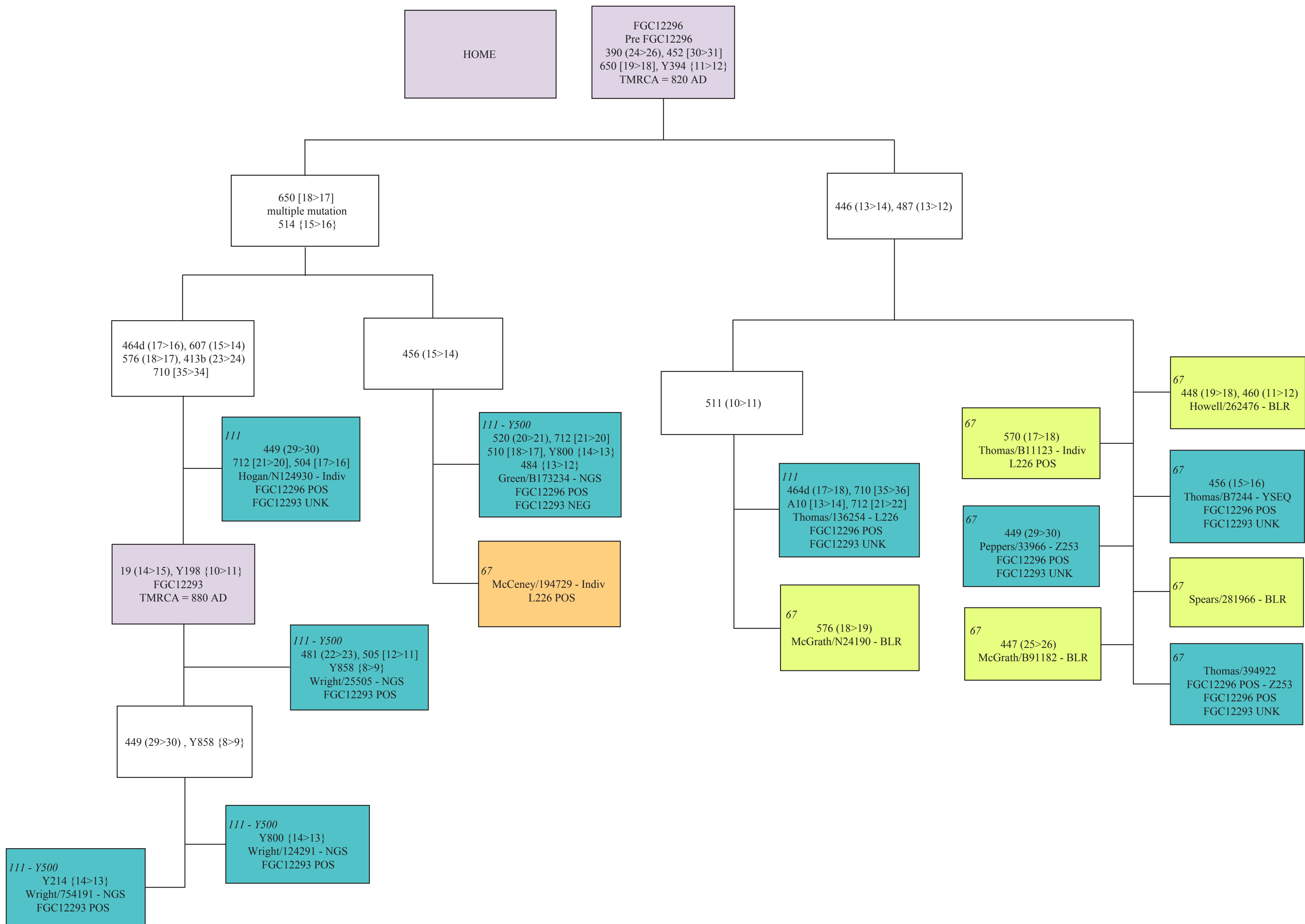


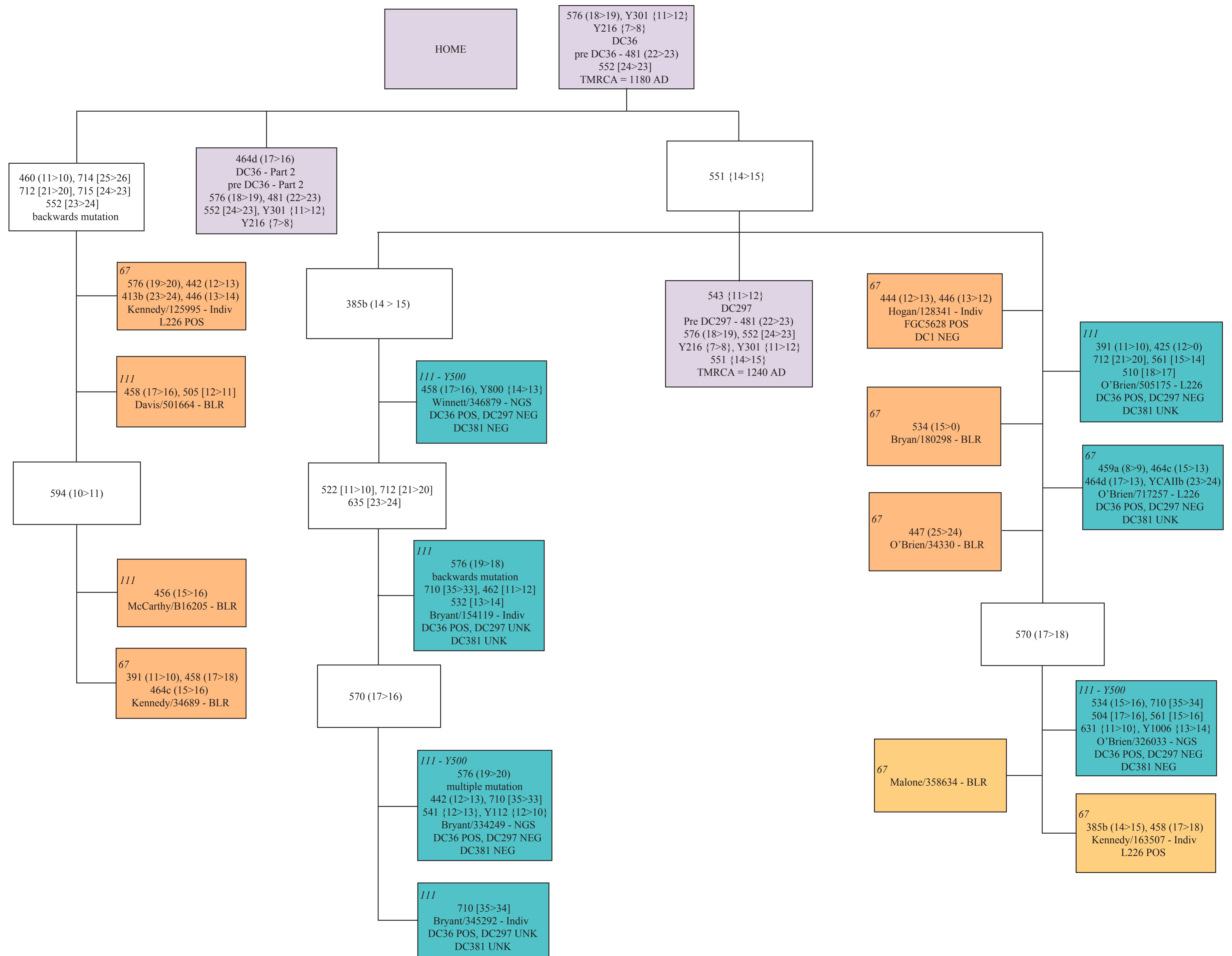


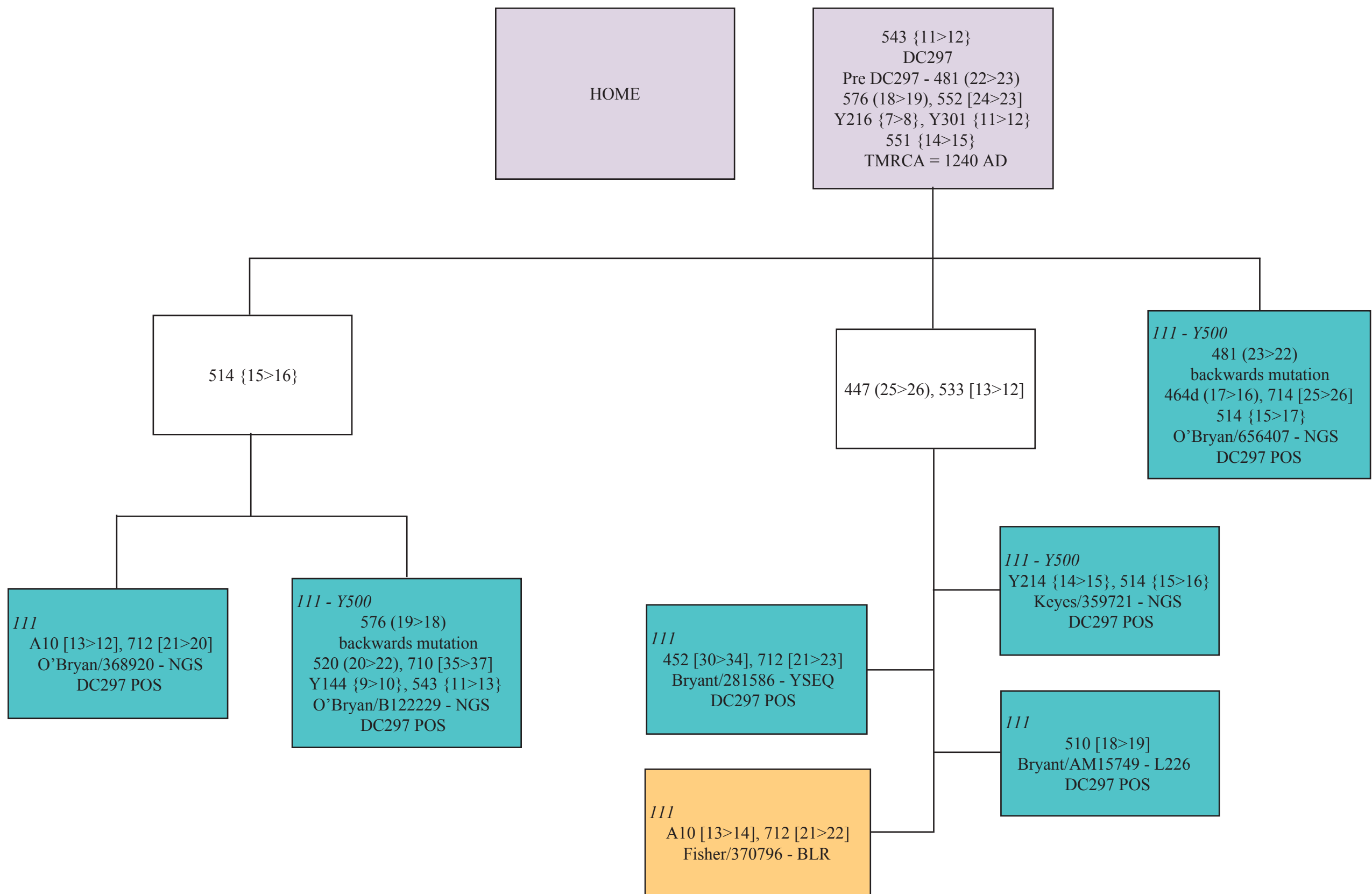


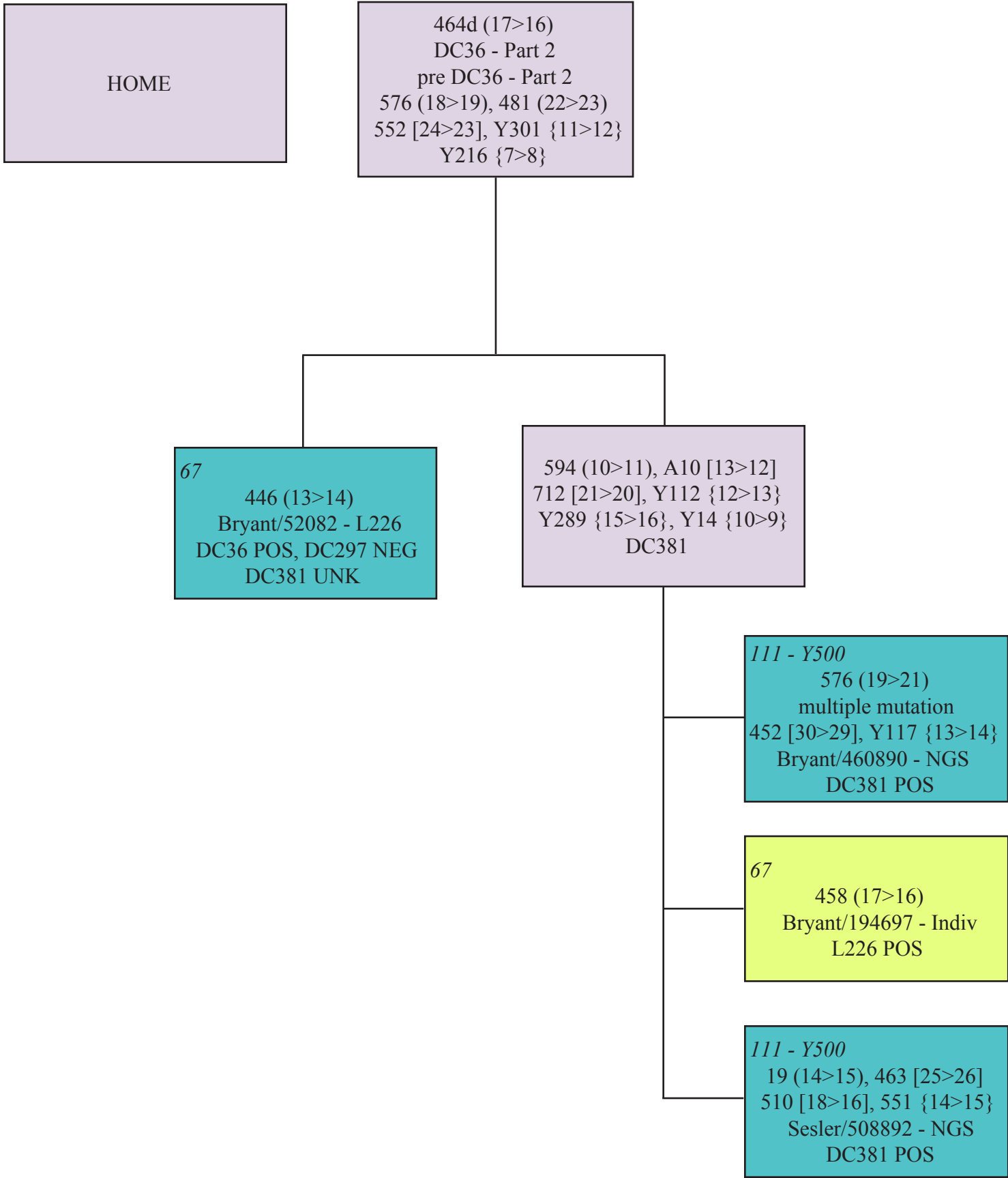


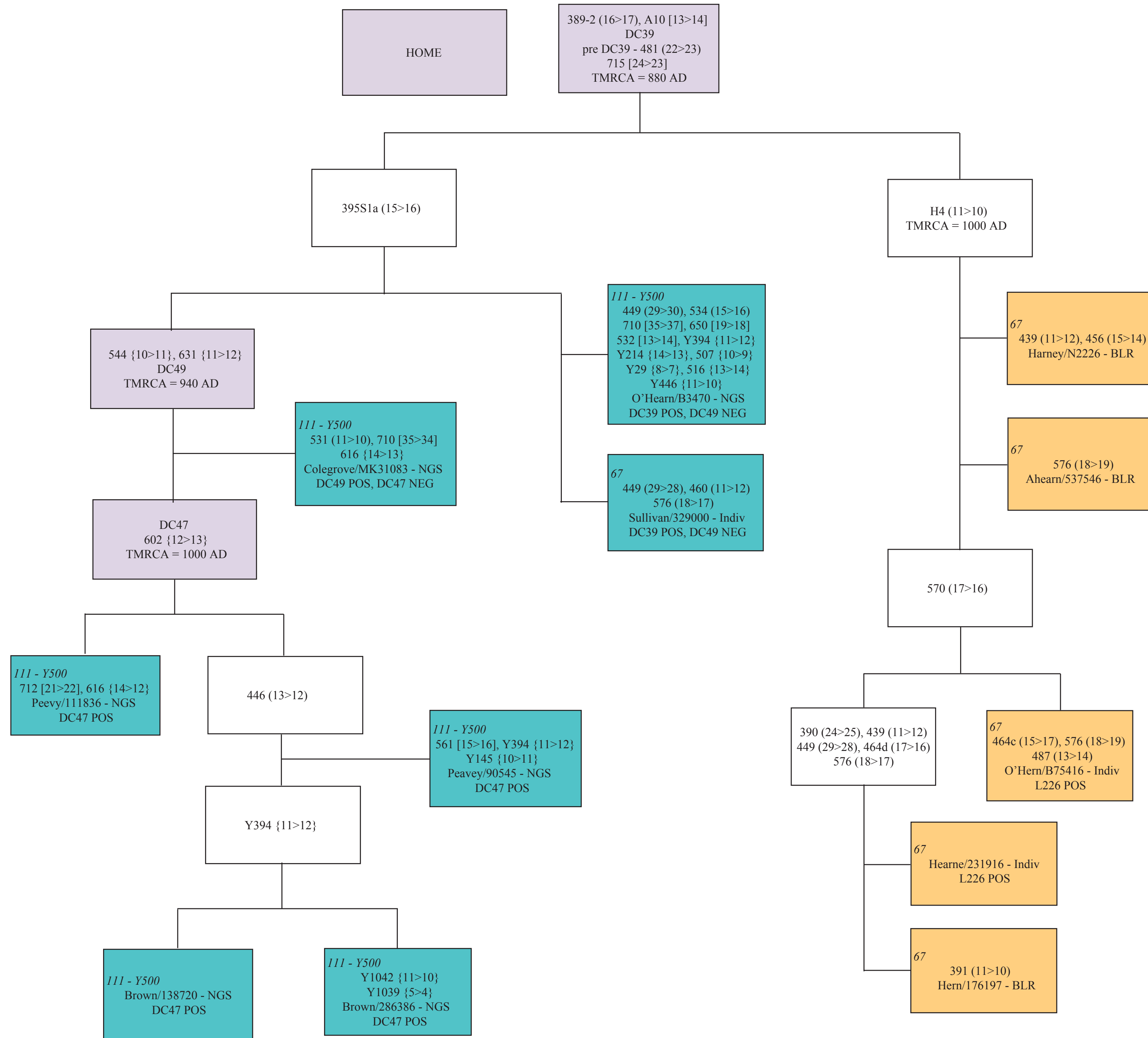


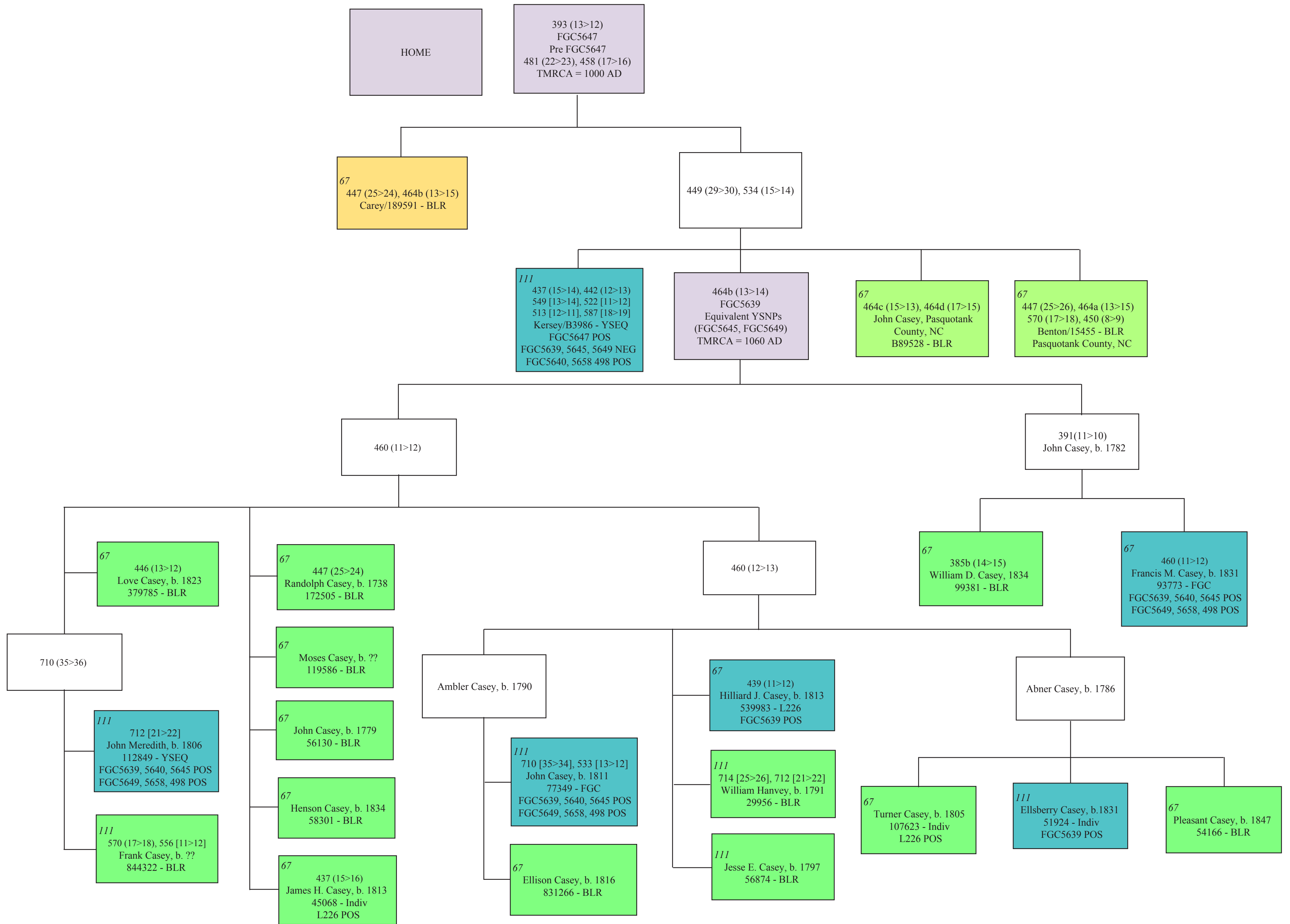


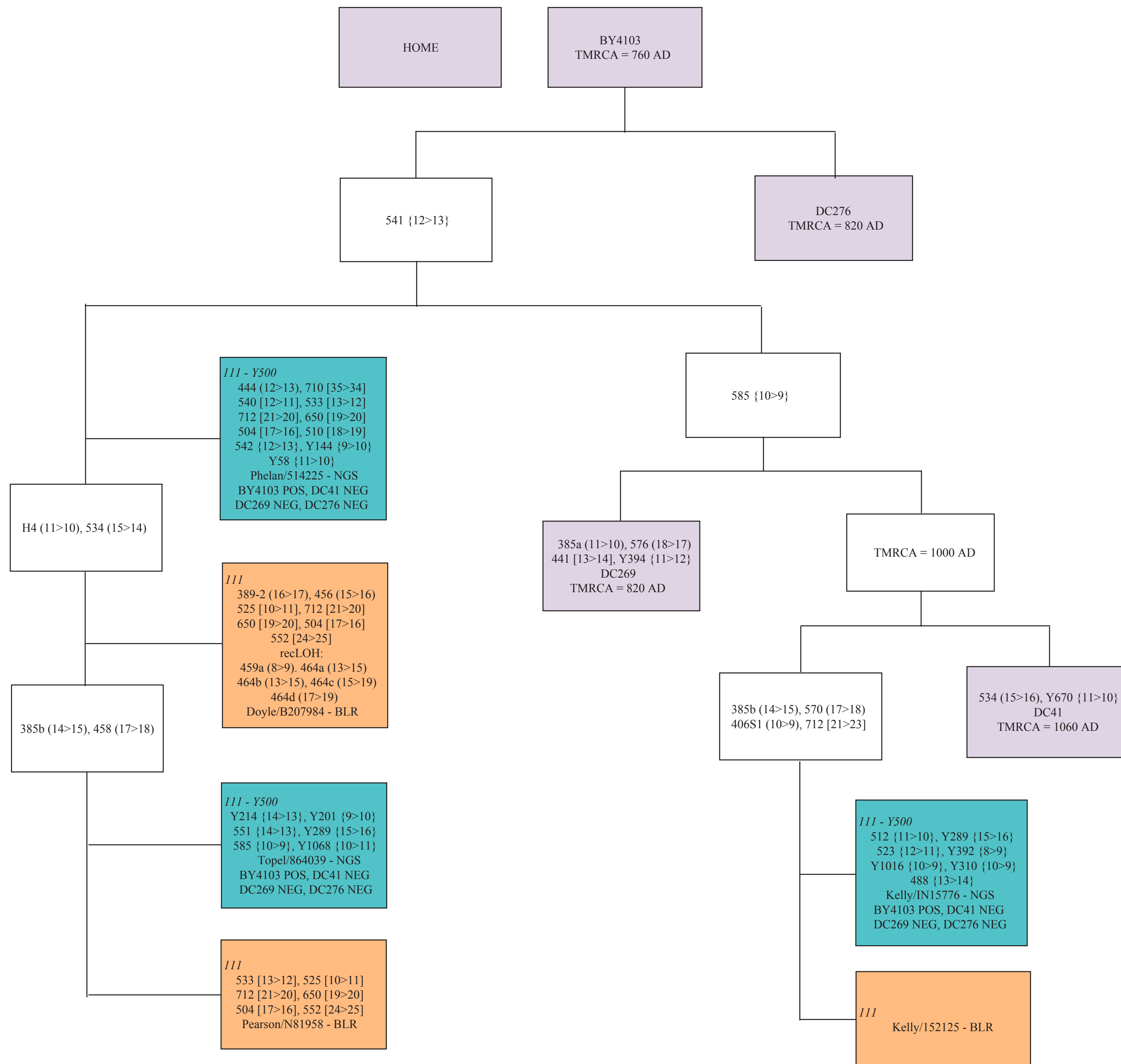


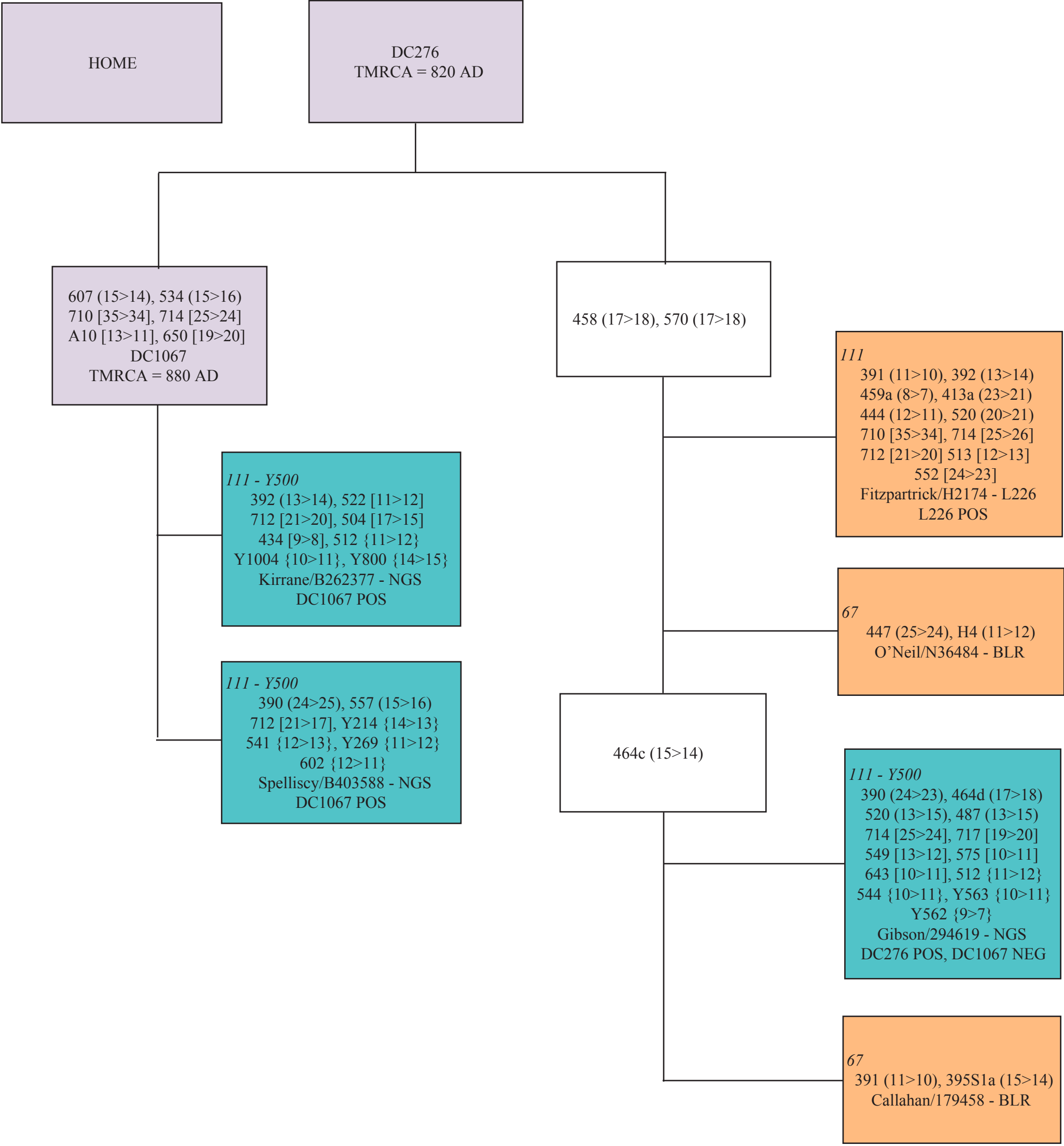


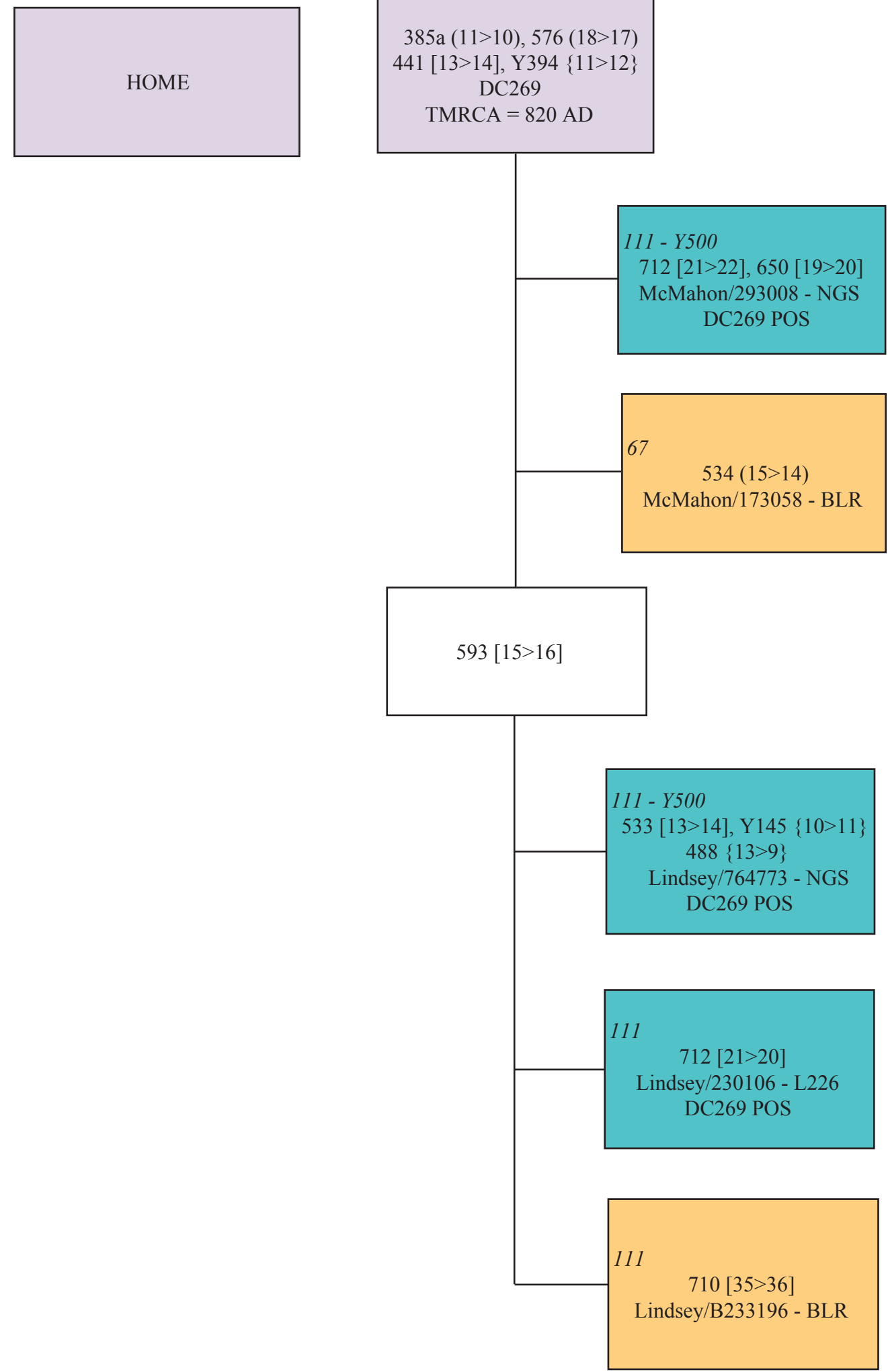


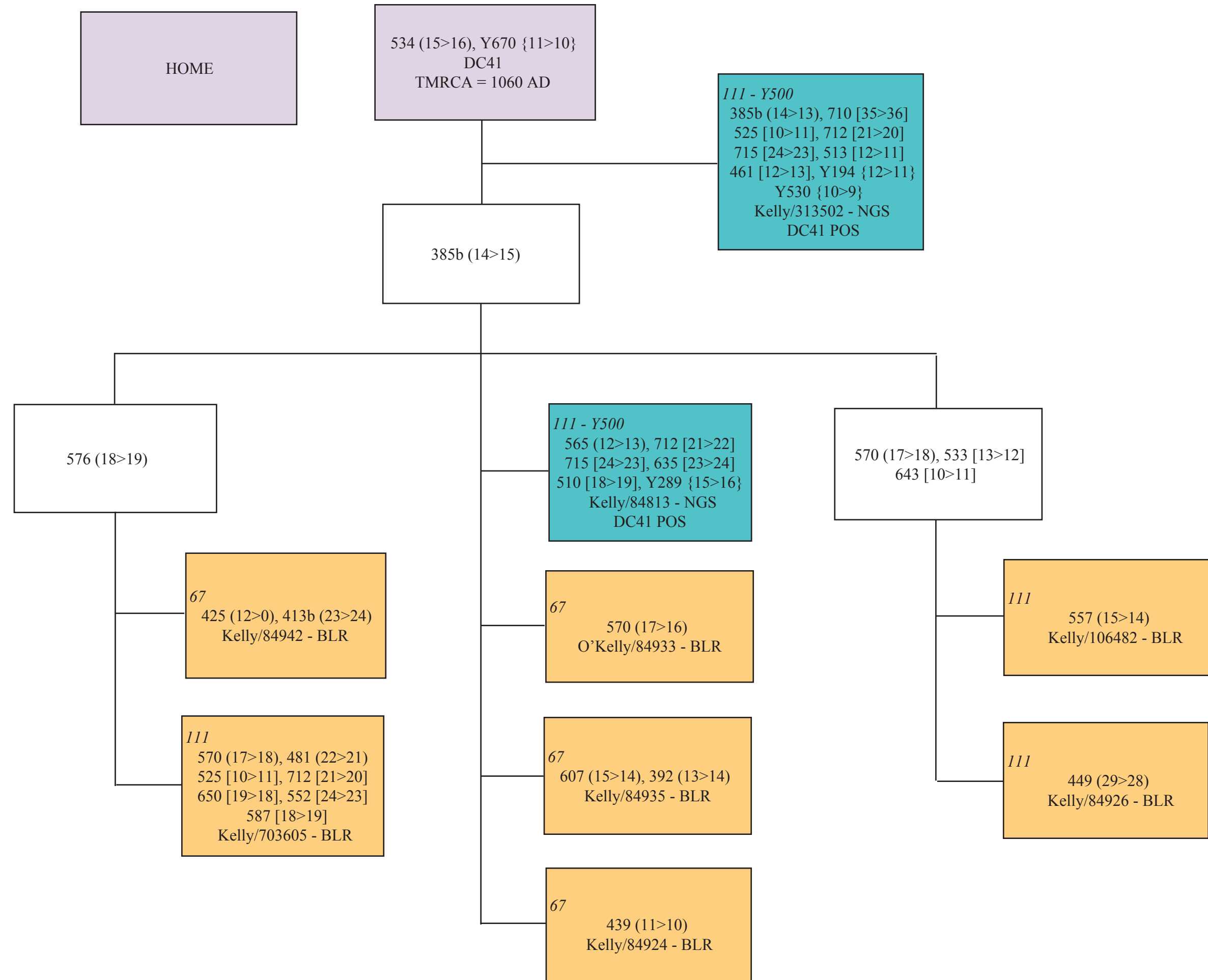






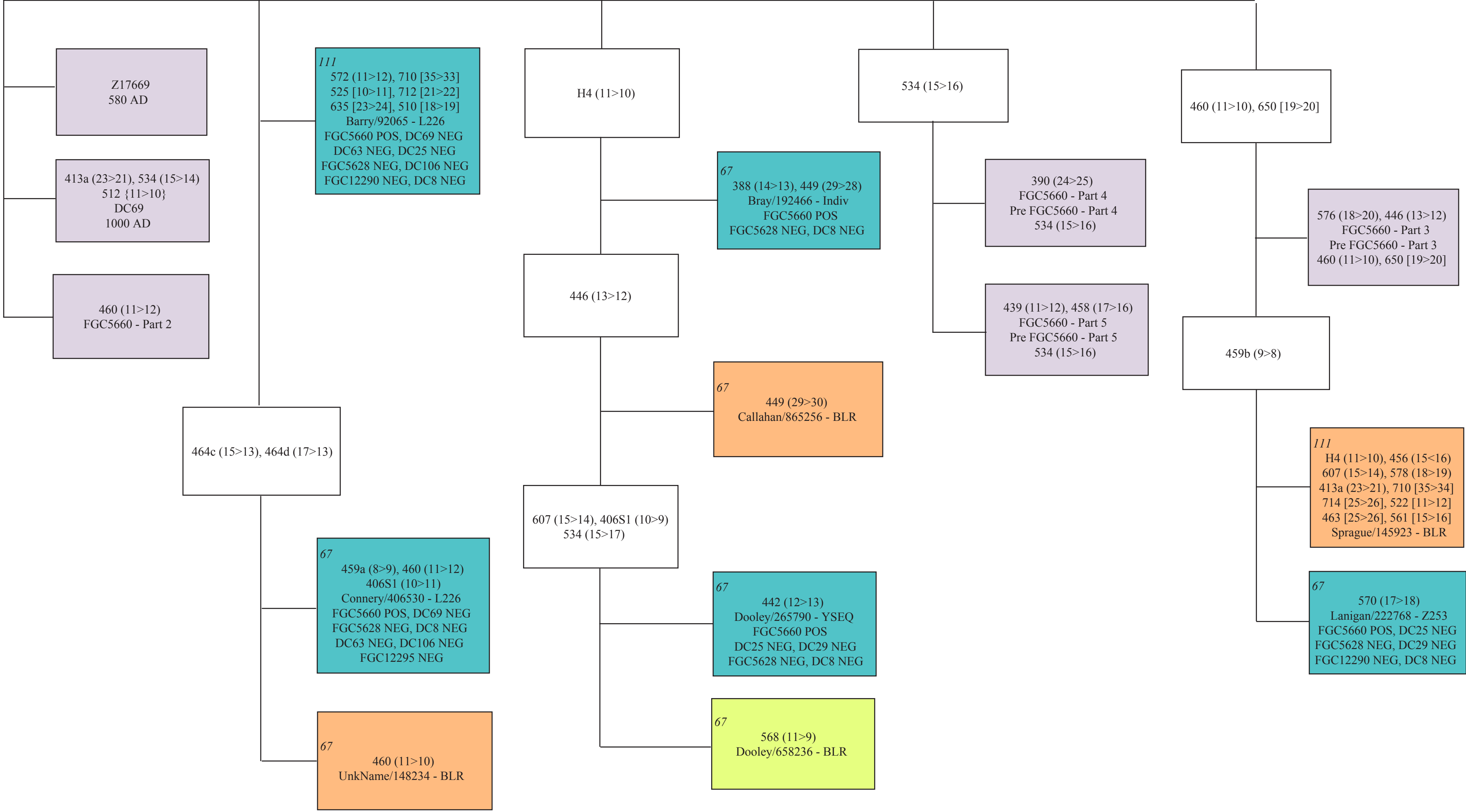






HOME

FGC5660
520 AD



HOME

460 (11>12)
FGC5660 - Part 2

710 [35>36]

439 (11>12)

111
635 [23>24], 510 [18>19]
Donahoo/20773 - YSEQ
FGC5660 POS, DC29 NEG
FGC5628 NEG, DC25 NEG
FGC12290 NEG, DC8 NEG

111
459a (8>9), 447 (25>24)
712 [21>23], 505 [27>26]
552 [24>26]
Donoughae/476569 - L226
FGC5660 POS, DC69 NEG
Z17669 UNK, DC28 UNK
FGC5628 NEG, DC8 NEG
DC63 NEG, DC109 UNK
DC87 UNK, BY39756 UNK
DC194 UNK, FGC12295 NEG
DC199 NEG, DC464 UNK
DC889 UNK, DC194 UNK
DC106 NEG

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

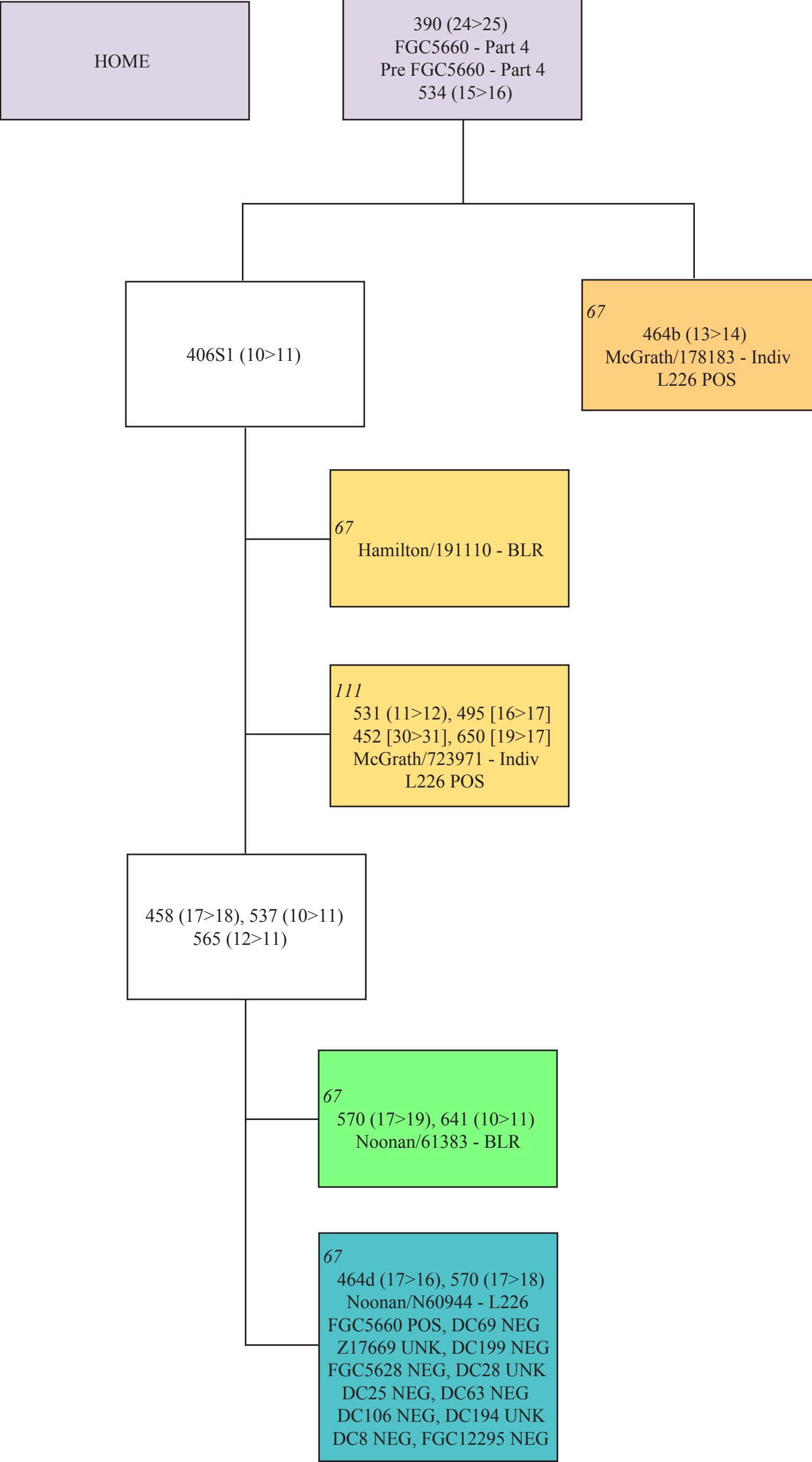
576 (18>20), 446 (13>12)
FGC5660 - Part 3
Pre FGC5660 - Part 3
460 (11>10), 650 [19>20]

67
389-2 (16>17), 531 (11>12)
534 (15>14)
Kirby/N122123 - Indiv
L226 POS

607 (15>16)

67
Bryan/122853 - BLR

67
449 (29>30), 464c (15>13)
464d (17>15)
Walker/1948 - BLR



HOME

439 (11>12), 458 (17>16)
FGC5660 - Part 5
Pre FGC5660 - Part 5
534 (15>16)

67
447 (25>26), 460 (11>12)
456 (15>16)
Mahone/MK23915 - L.226
FGC5660 POS, DC69 NEG
DC25 NEG, FGC5628 NEG
DC8 NEG, DC63 NEG
DC106 NEG
FGC12295 NEG

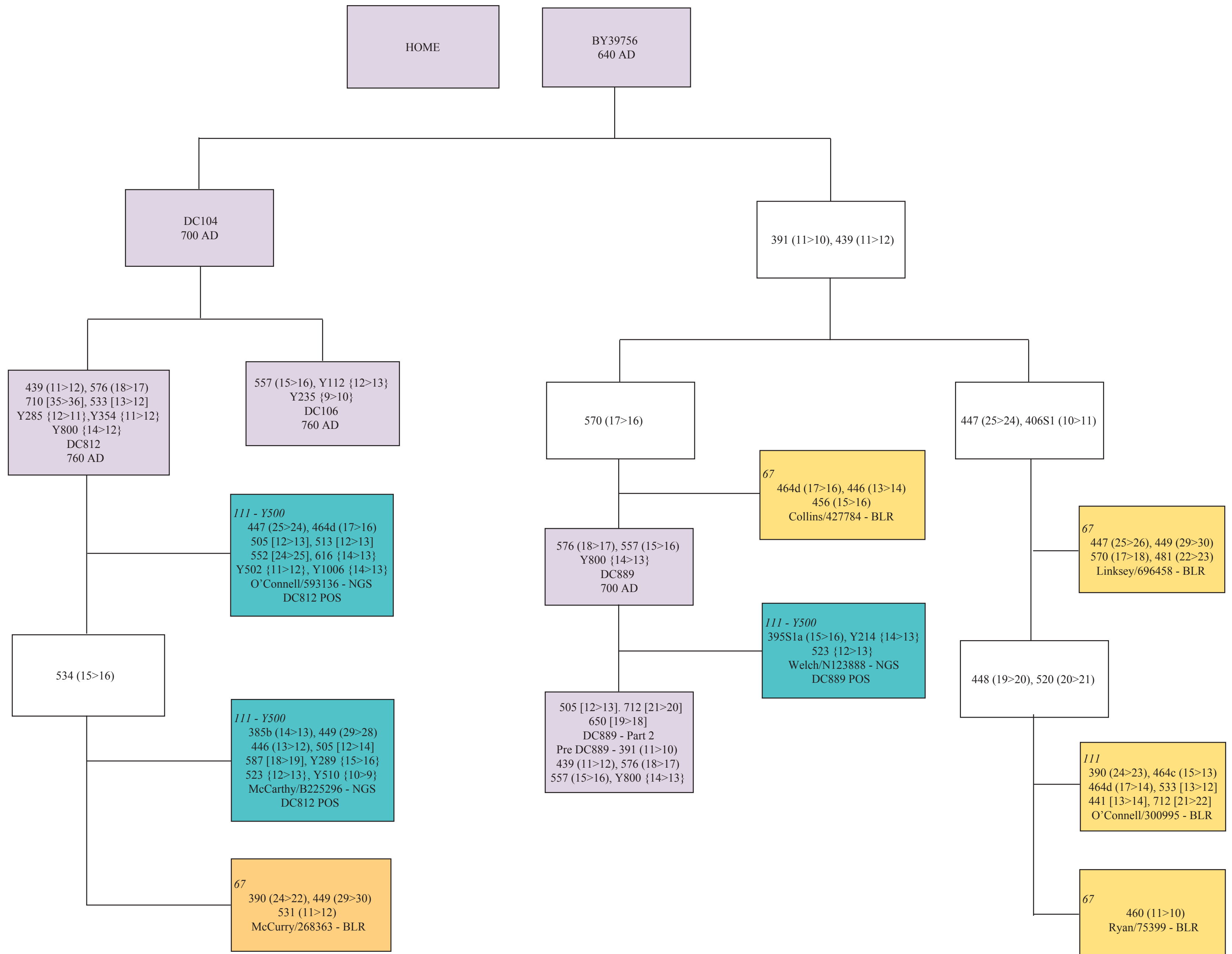
67
449 (29>28)
Currell/489080 - BLR

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

111
389-1 (13>14), 570 (17>15)
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

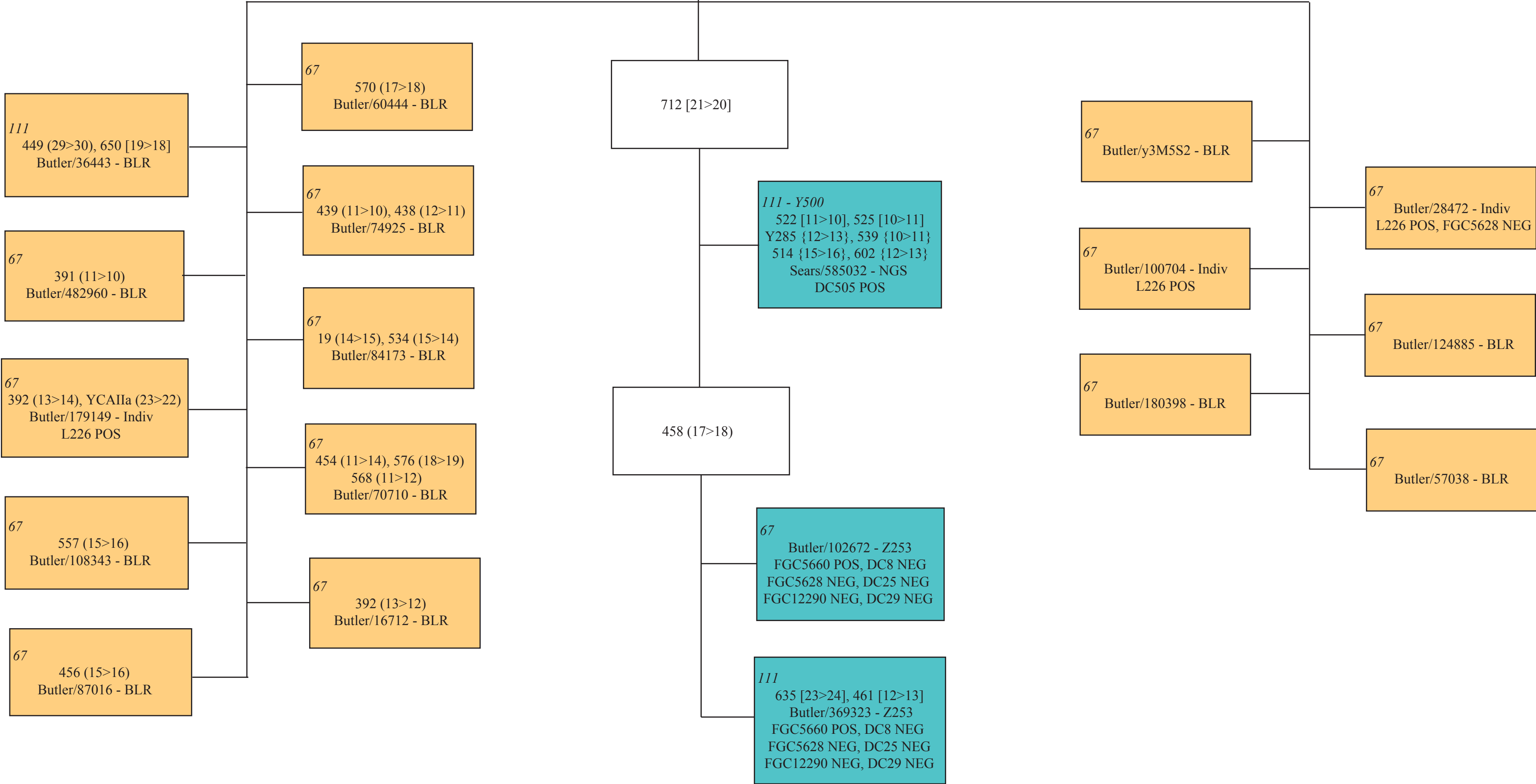
710 [35>33], 715 [24>25]
513 [12>13]

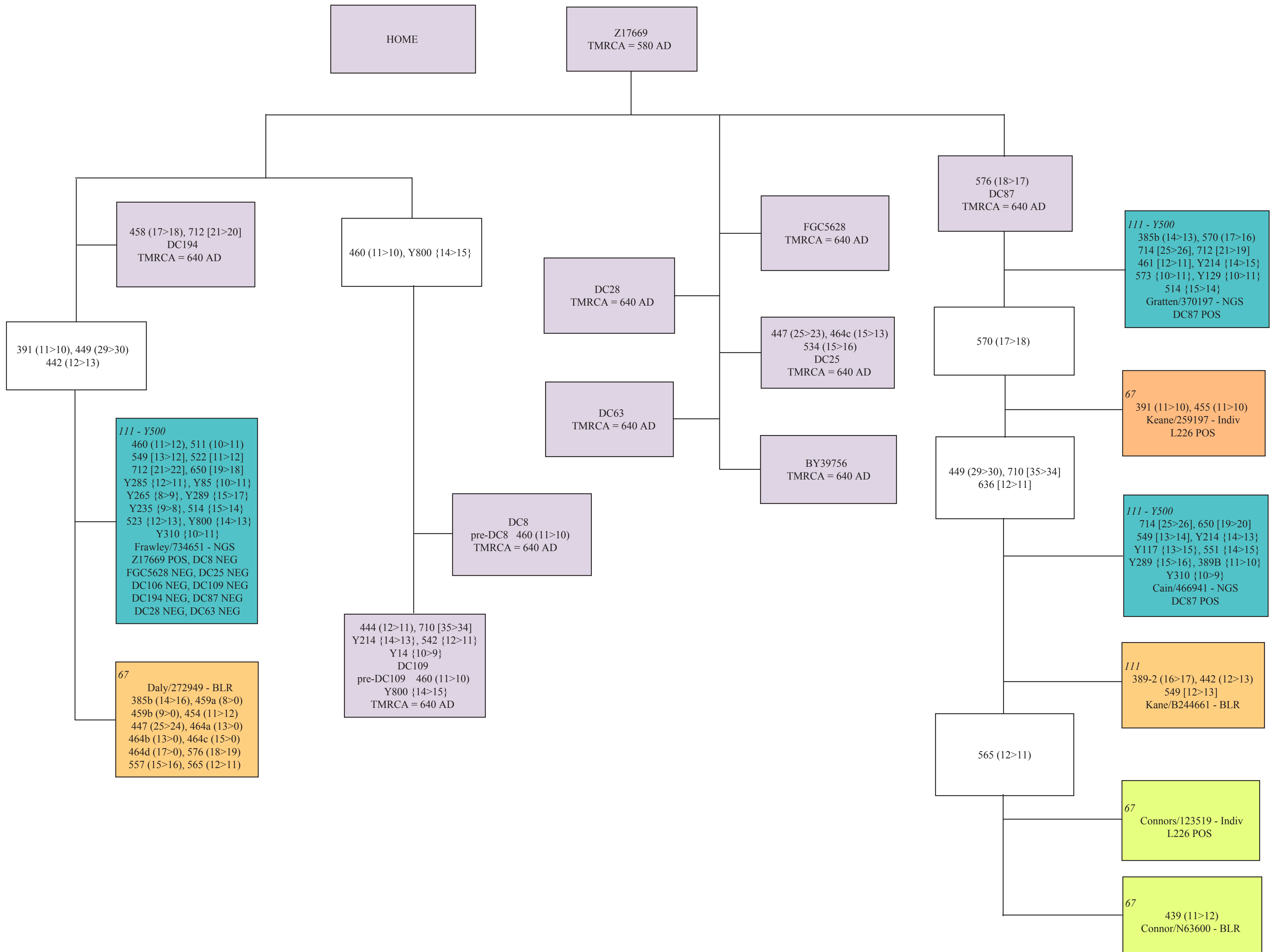
111 - Y500
531 (0>11)
backwards mutation
461 [12>11], Y275 {11>10}
Y343 {6>5}, Y112 {12>13}
Y1025 {12>13}
Hogan/110053 - NGS
DC889 POS

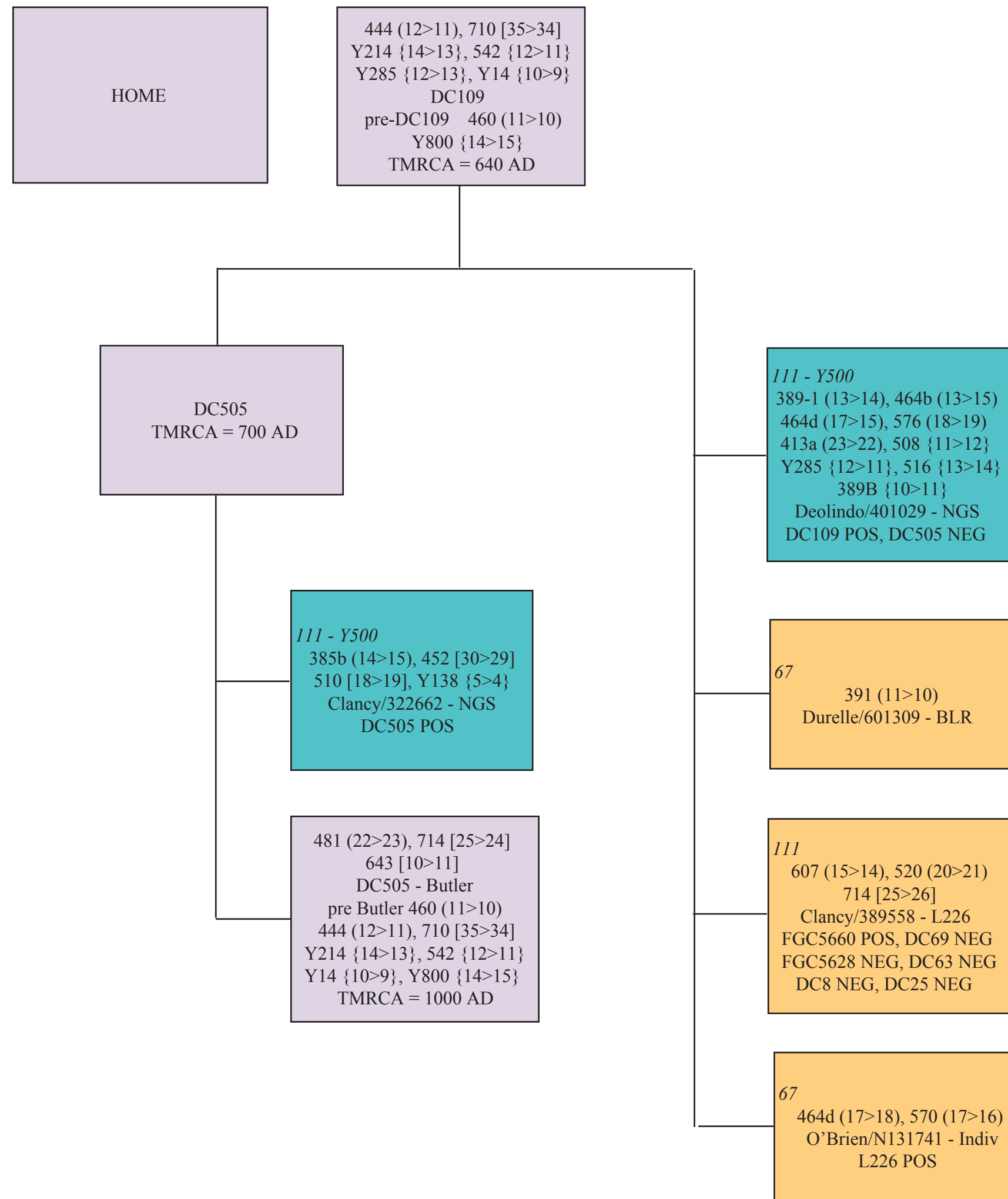
111
442 (12>11), 446 (13>14)
717 [19>20]
Shannon/202658 - BLR

HOME

481 (22>23), 714 [25>24]
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







HOME

557 (15>16), 533 [13>12]
Y112 {12>13}, Y235 {9>10}
DC106
760 AD

458 (17>18)

481 (22>23)

111 - Y500
449 (29>28), 710 [35>36]
712 [21>20], Y800 {14>13}
O'Brien/332050 - NGS
DC106 POS

111 - Y500
449 (29>28), 464b (13>14)
456 (15>16), 607 (15>16)
505 [12>13], 712 [21>22]
635 [23>22], Y289 {15>16}
398A {14>13}, 484 {13>12}
Larkin/132038 - NGS
DC106 POS

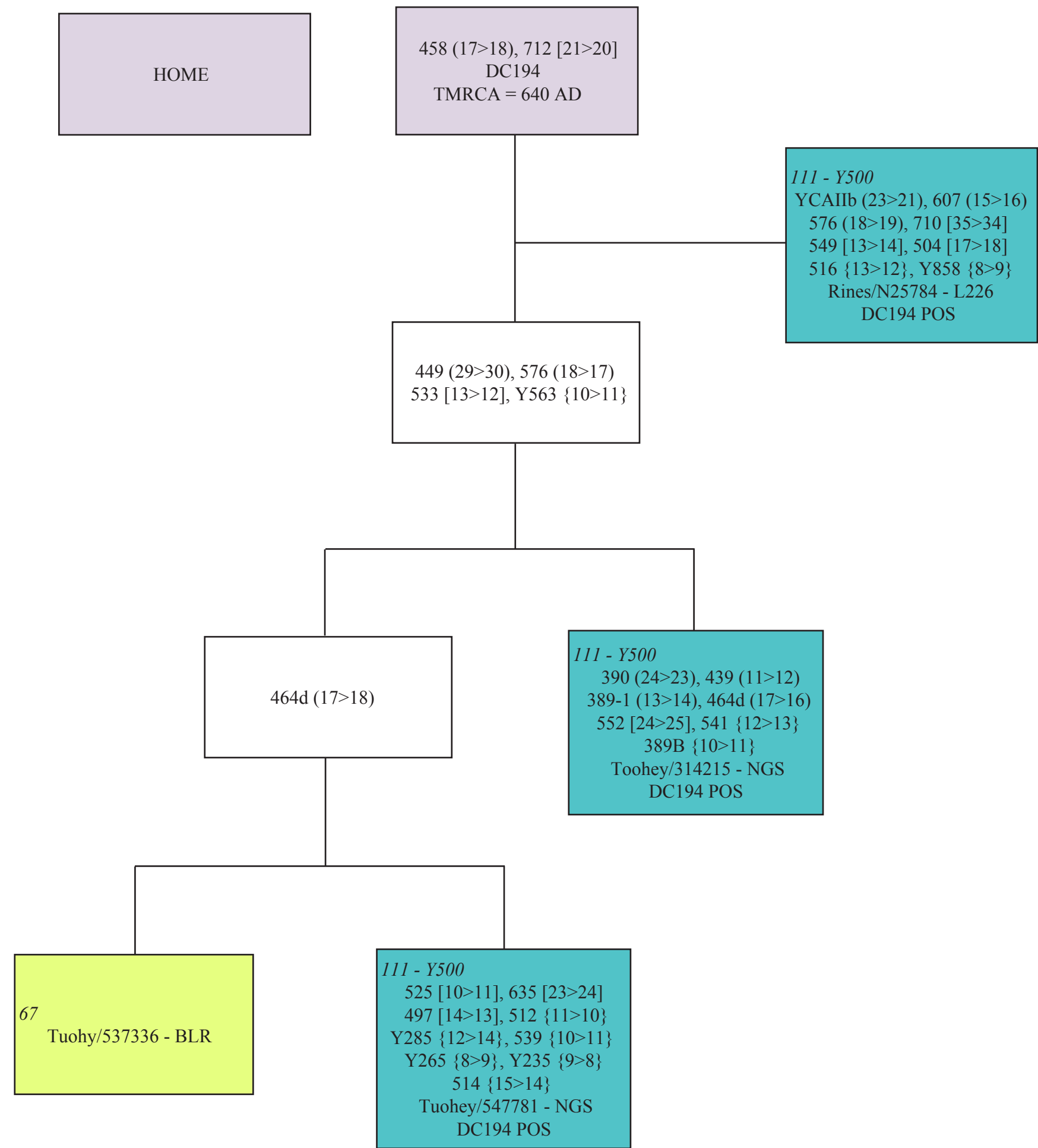
67
446 (13>14)]
Tuohy/MI17311 - BLR

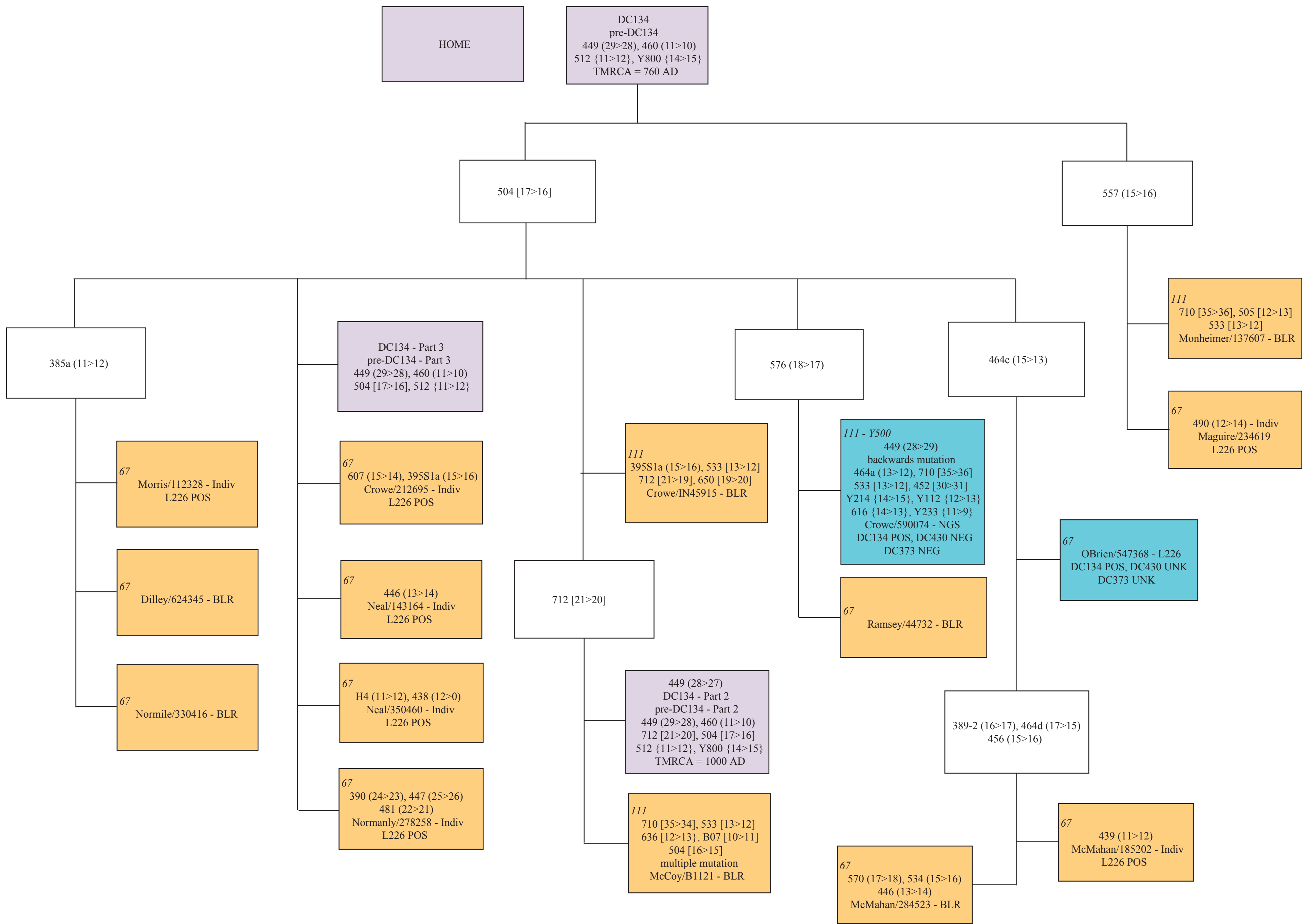
67
Tierney/yX5BPM - BLR

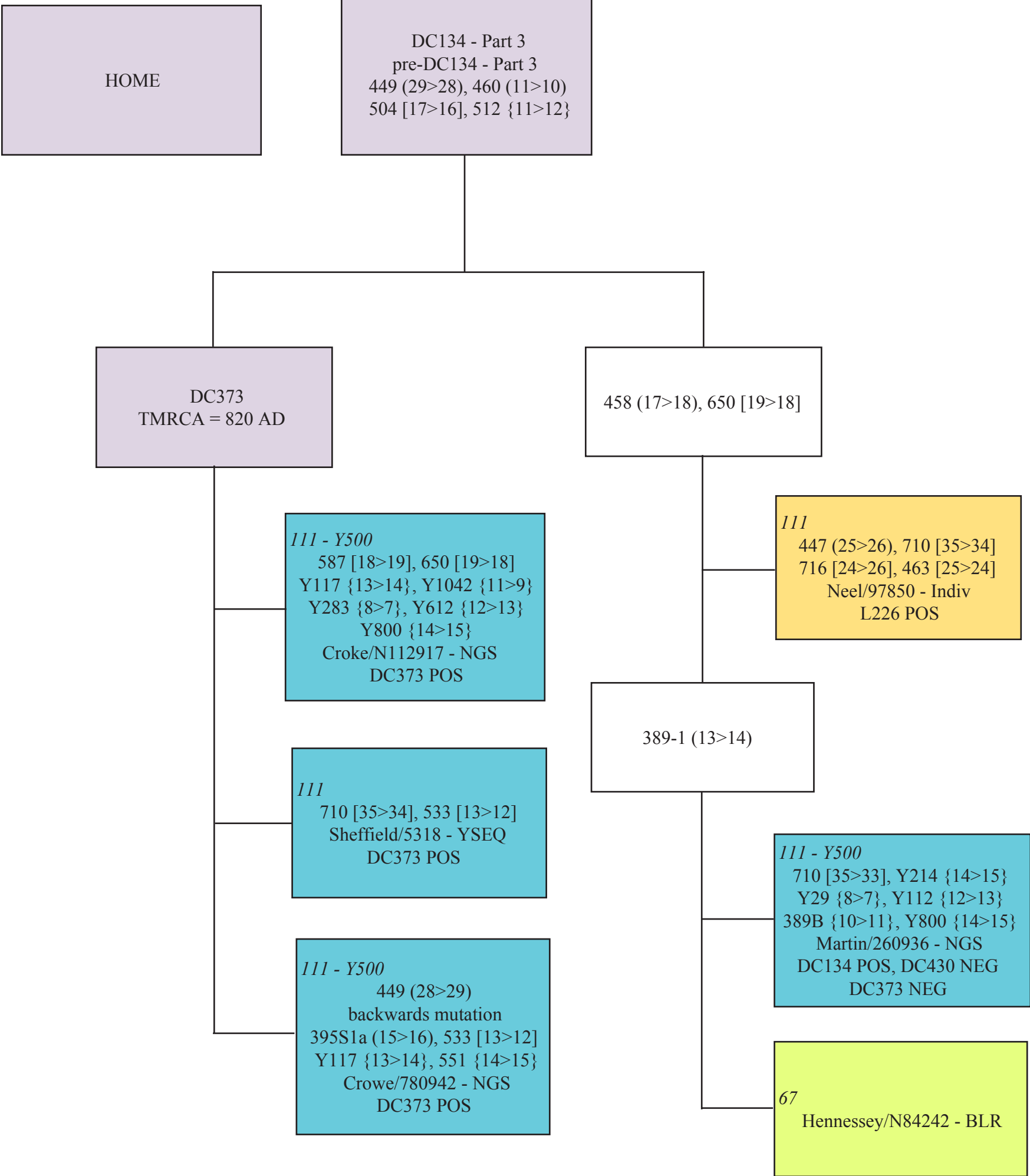
534 (15>16)

67
393 (13>12), 390 (24>25)
McGrath/65404 - Indiv
L226 POS

67
392 (13>12), 464d (17>16)
576 (18>19), 520 (20>21)
Ryan/152038 - BLR







HOME

449 (28>27)
DC134 - Part 2
pre-DC134 - Part 2
449 (29>28), 460 (11>10)
712 [21>20], 504 [17>16]
512 {11>12}, Y800 {14>15}
TMRCA = 1000 AD

391 (11>12), Y342 {4>3}
Y198 {10>9}, 585 {10>9}
DC430
TMRCA = 1060 AD

111
533 [13>12]
Crowe/201294 - L226
DC134 POS, DC135 UNK

111 - Y500
385b (14>15), 714 [25>26]
Crow/7624 - NGS
DC430 POS

111
532 [13>14]
Blair/5822 - L226
DC134 POS, DC430 UNK
DC373 UNK

67
389-1 (13>14), 520 (20>19)
O'Brien/367959 - Indiv
DC8 POS, DC135 UNK

67
Crow/7428 - BLR

67
448 (19>20), 576 (18>17)
Crow/25031 - BLR

67
389-2 (16>17), 481 (22>23)
Crow/20320 - BLR

67
456 (15>16)
Crow/6955 - BLR

67
Crow/7606 - BLR

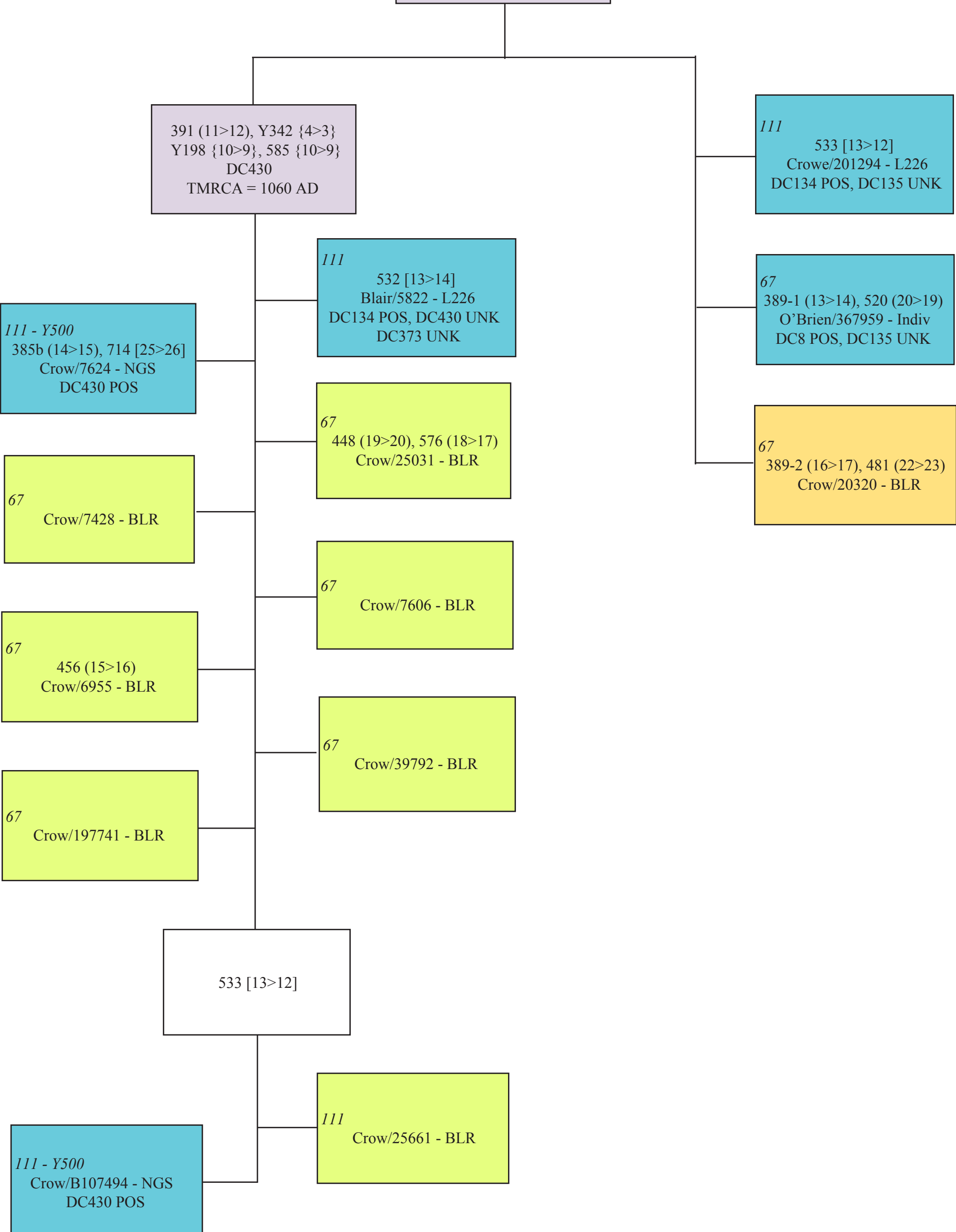
67
Crow/197741 - BLR

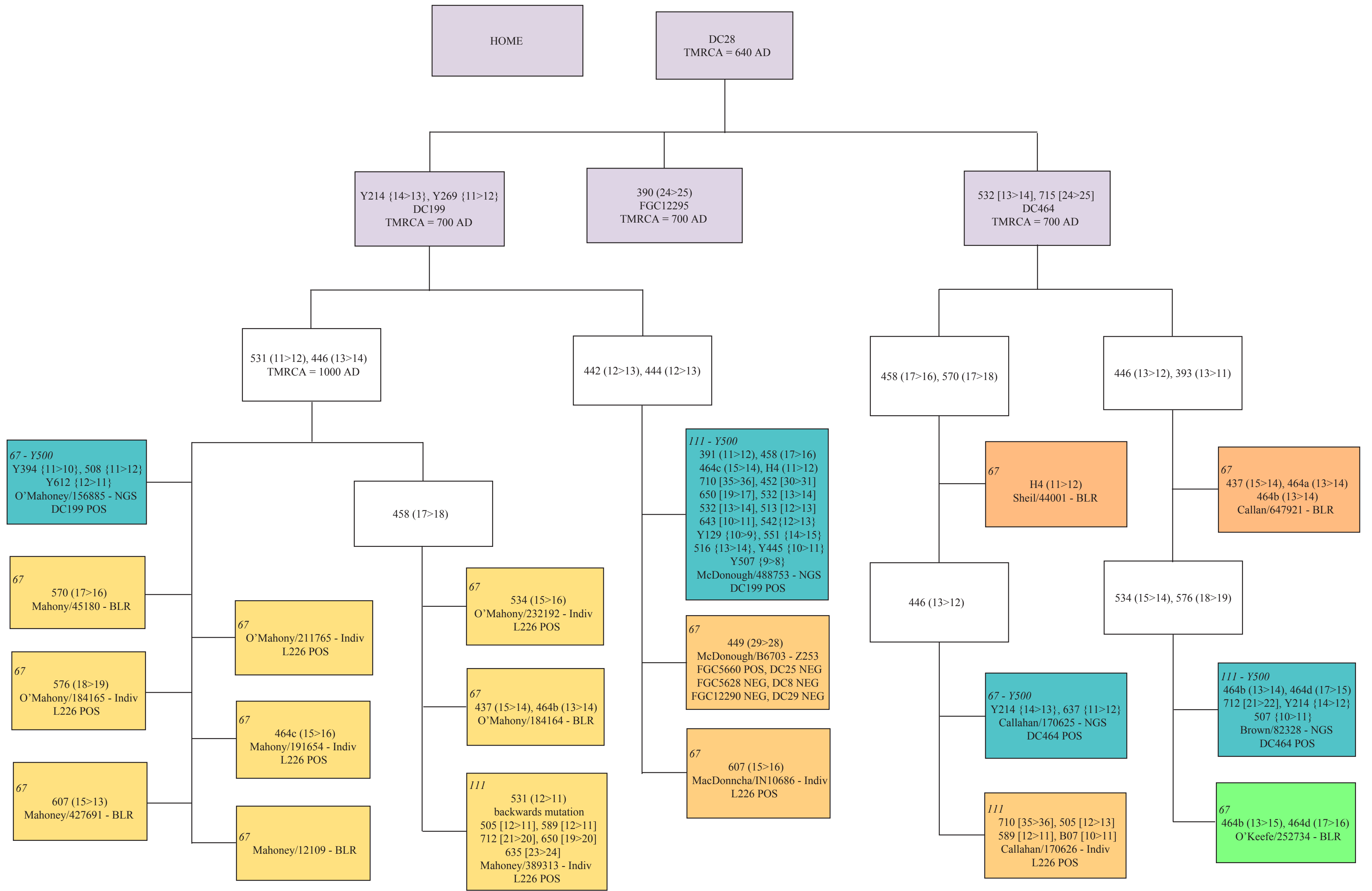
67
Crow/39792 - BLR

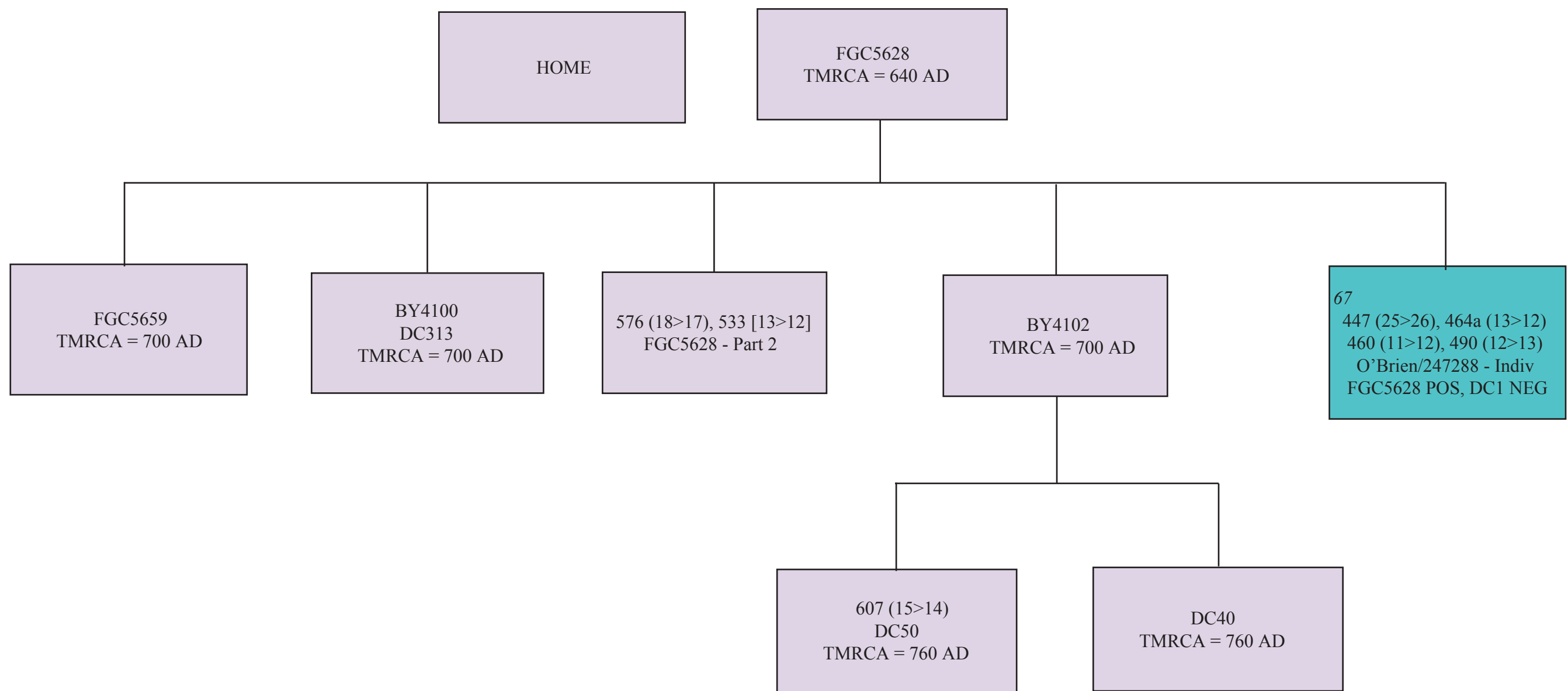
533 [13>12]

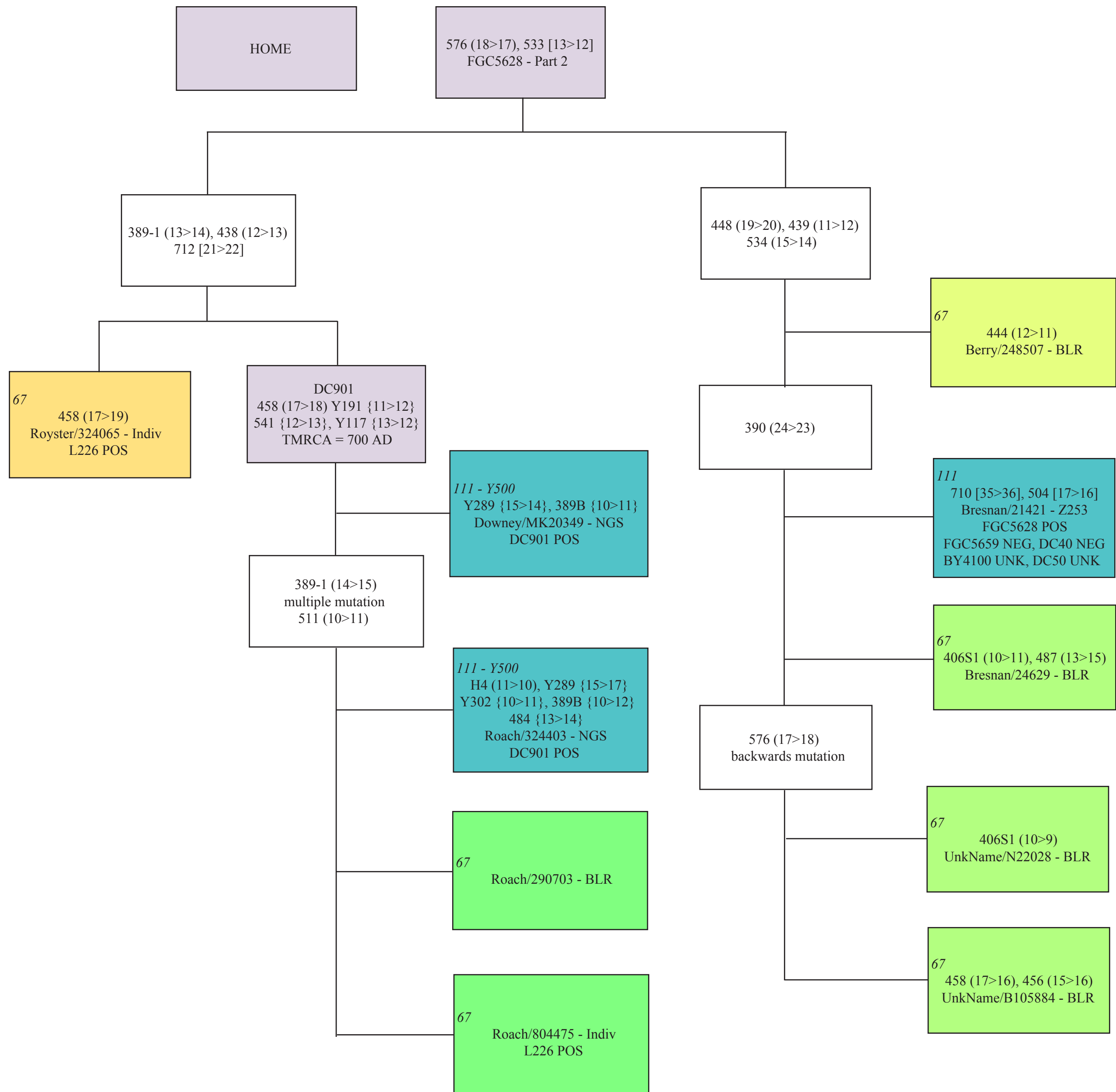
111 - Y500
Crow/B107494 - NGS
DC430 POS

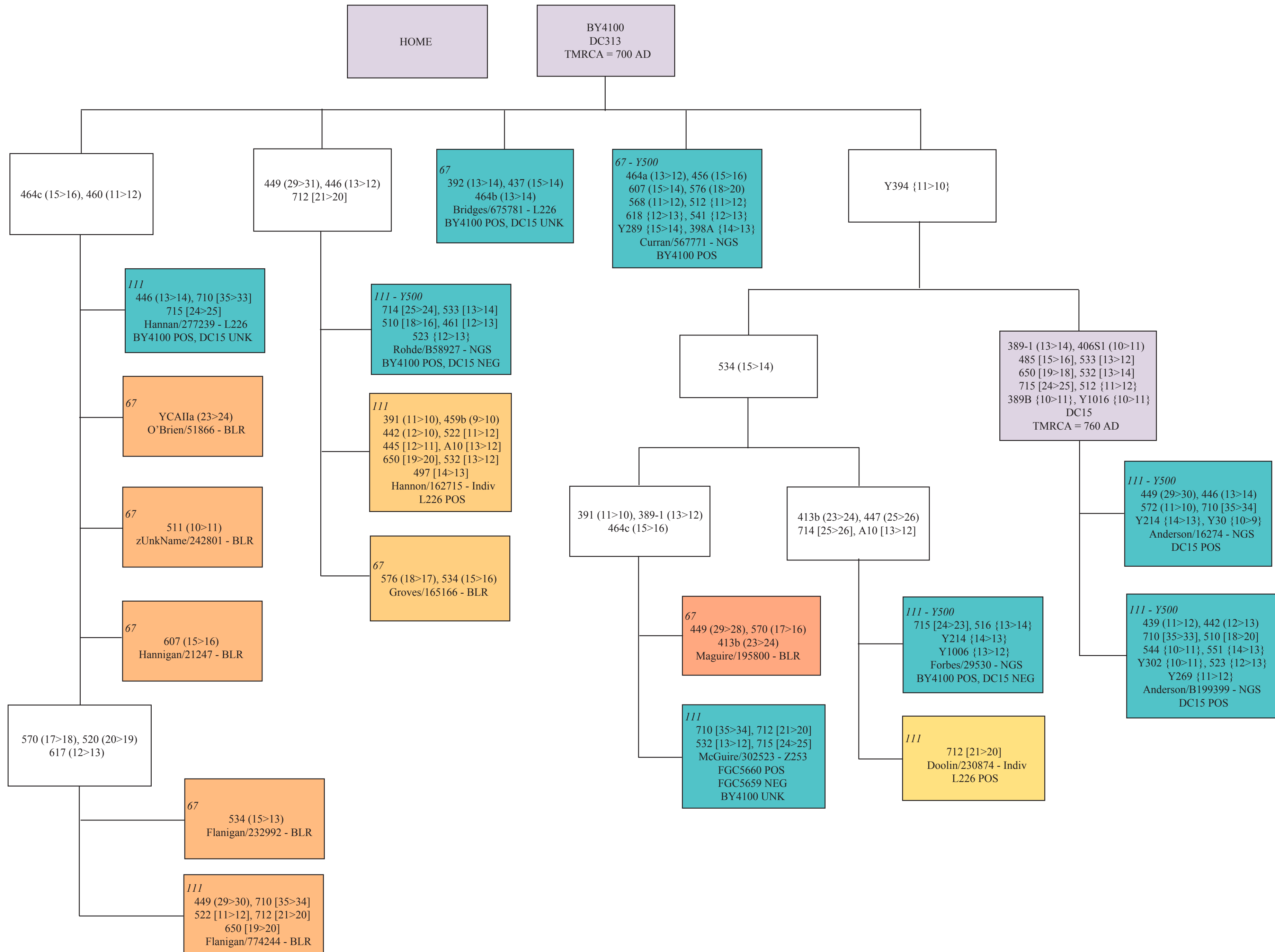
111
Crow/25661 - BLR

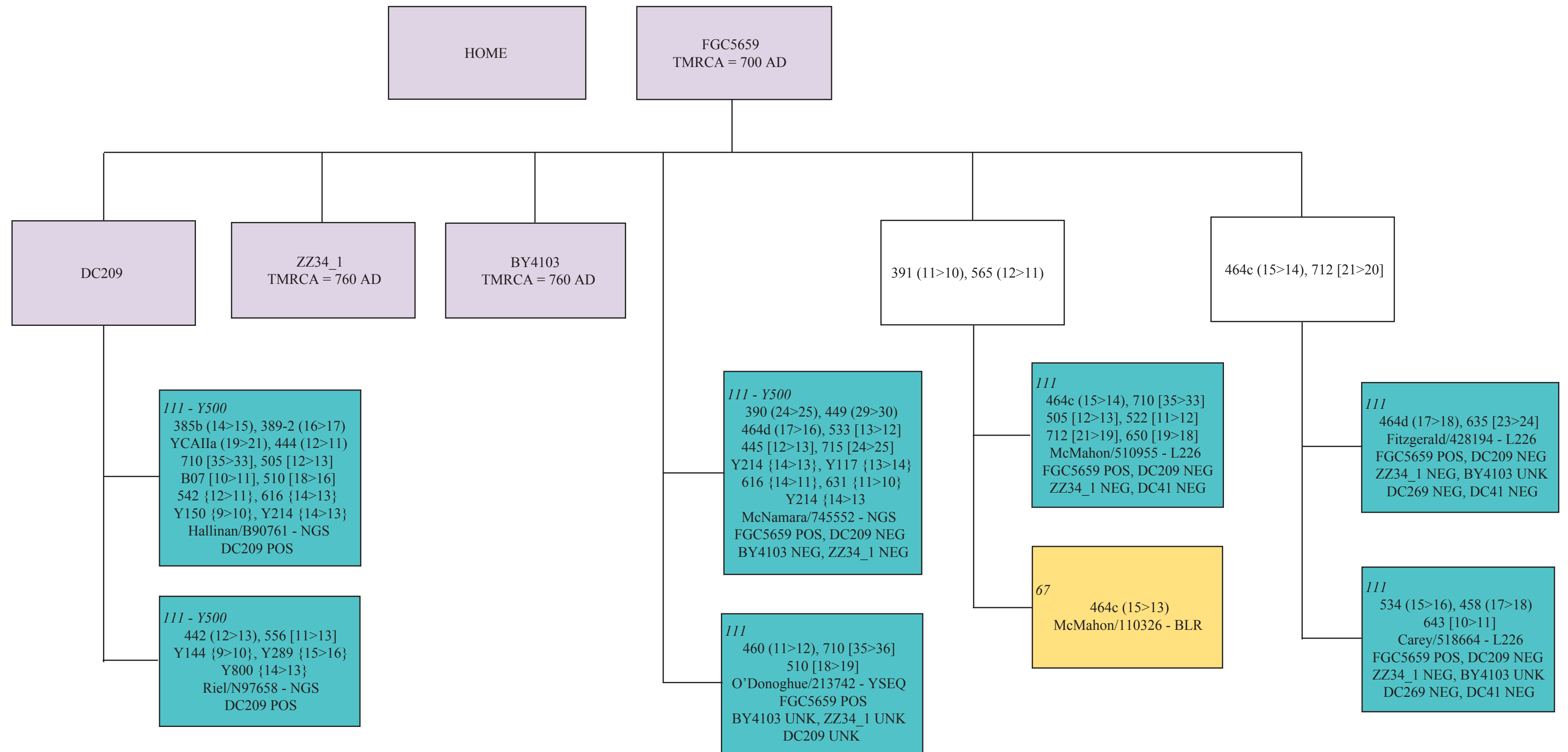


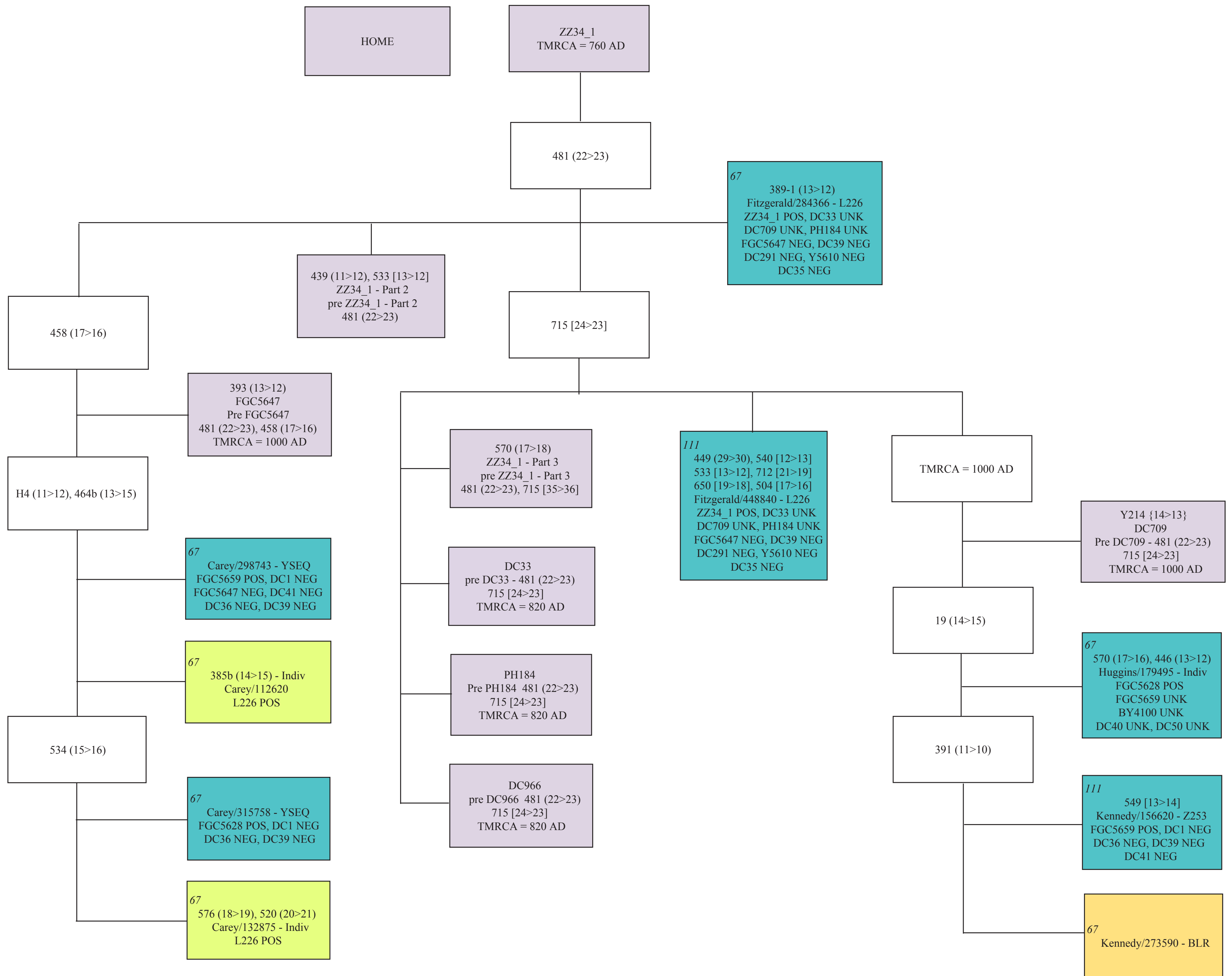


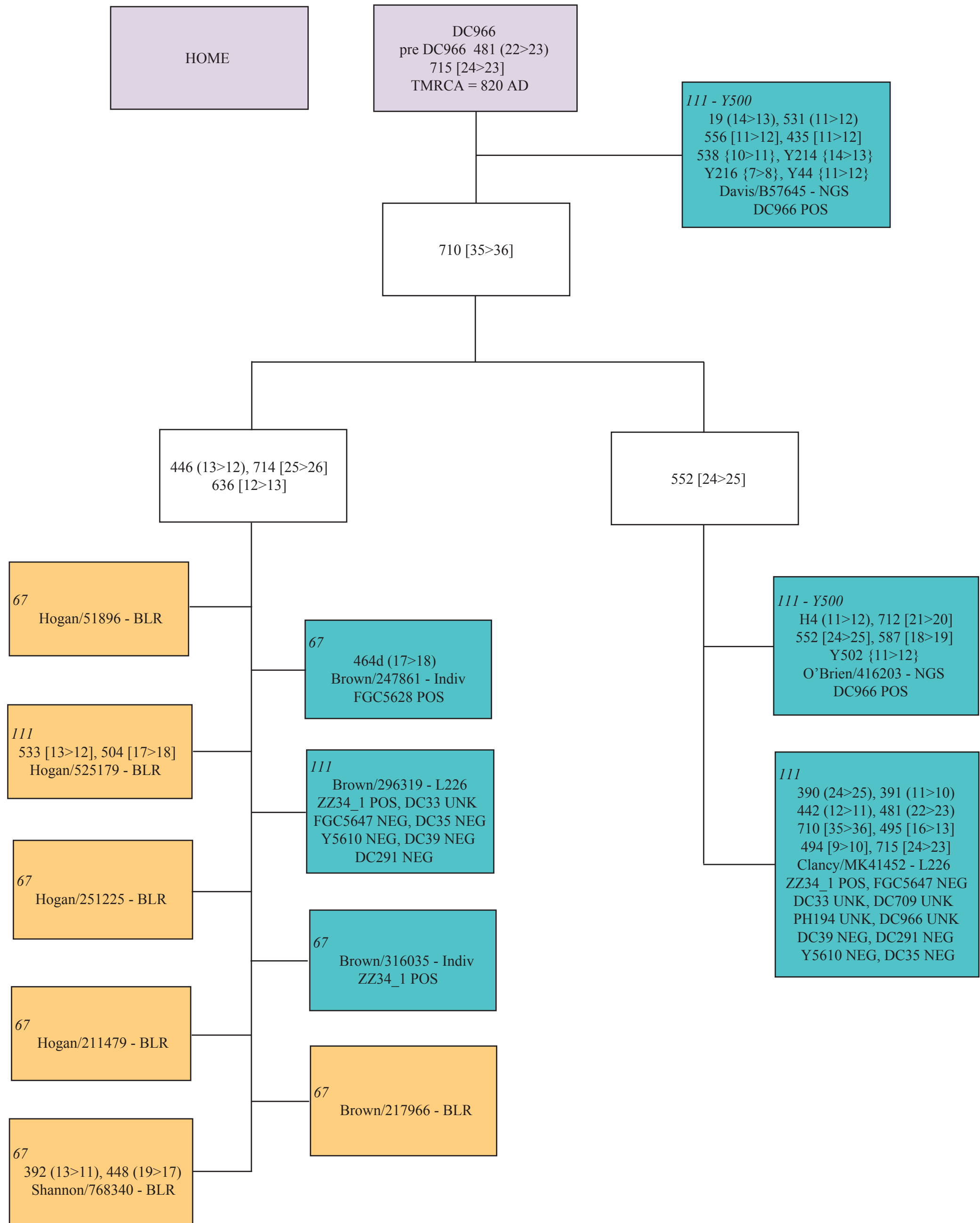












HOME

439 (11>12), 533 [13>12]
ZZ34_1 - Part 2
pre ZZ34_1 - Part 2
481 (22>23)

458 (17>18)

67
464d (17>18), 572 (11>12)
Fitzgerald/349460 - BLR

67
Ryan/849304 - BLR

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

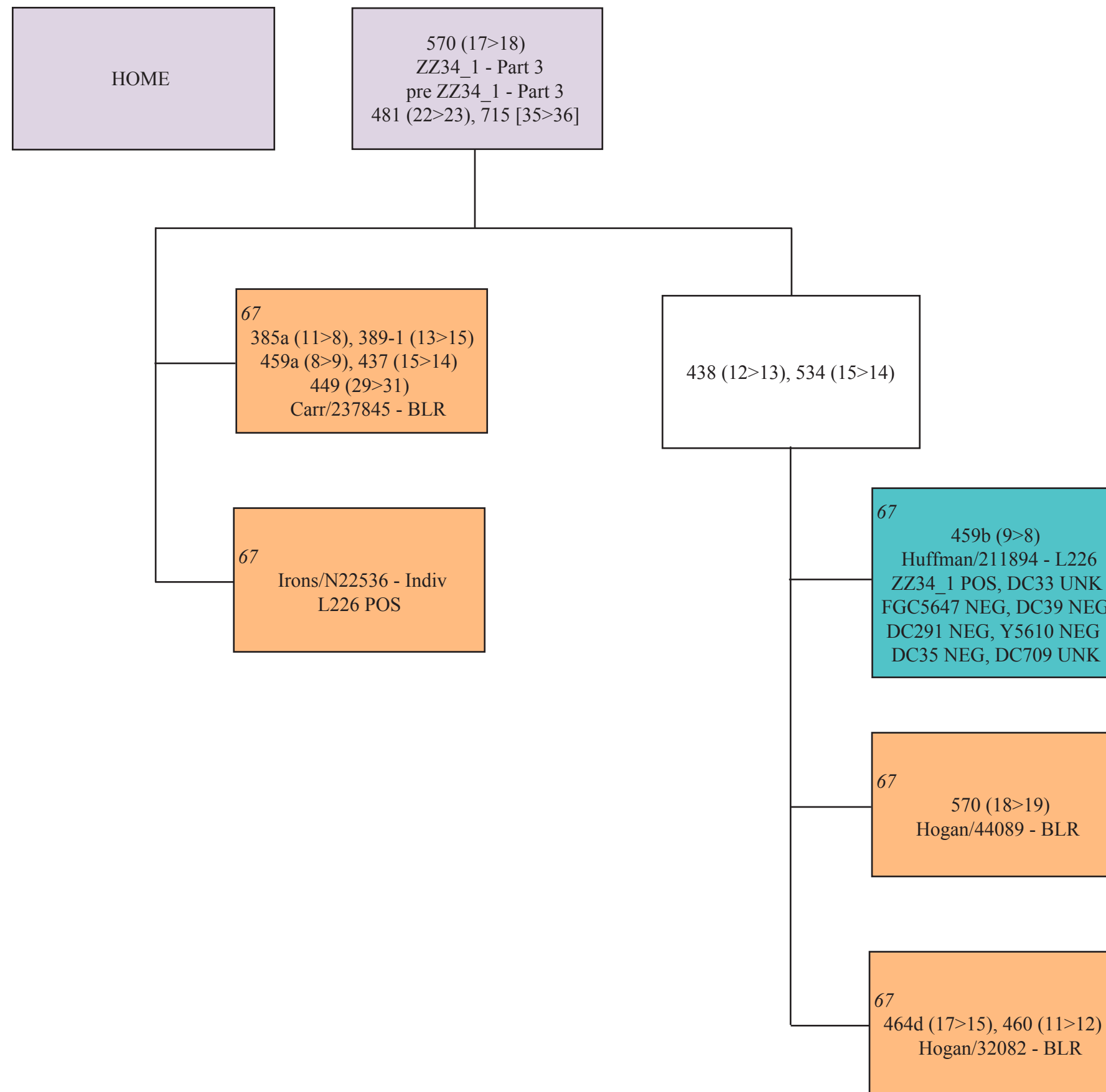
111
460 (11>10), 534 (15>12)
445 [12>13], 650 [19>20]
510 [18>19]
Carroll/IN35394 - BLR

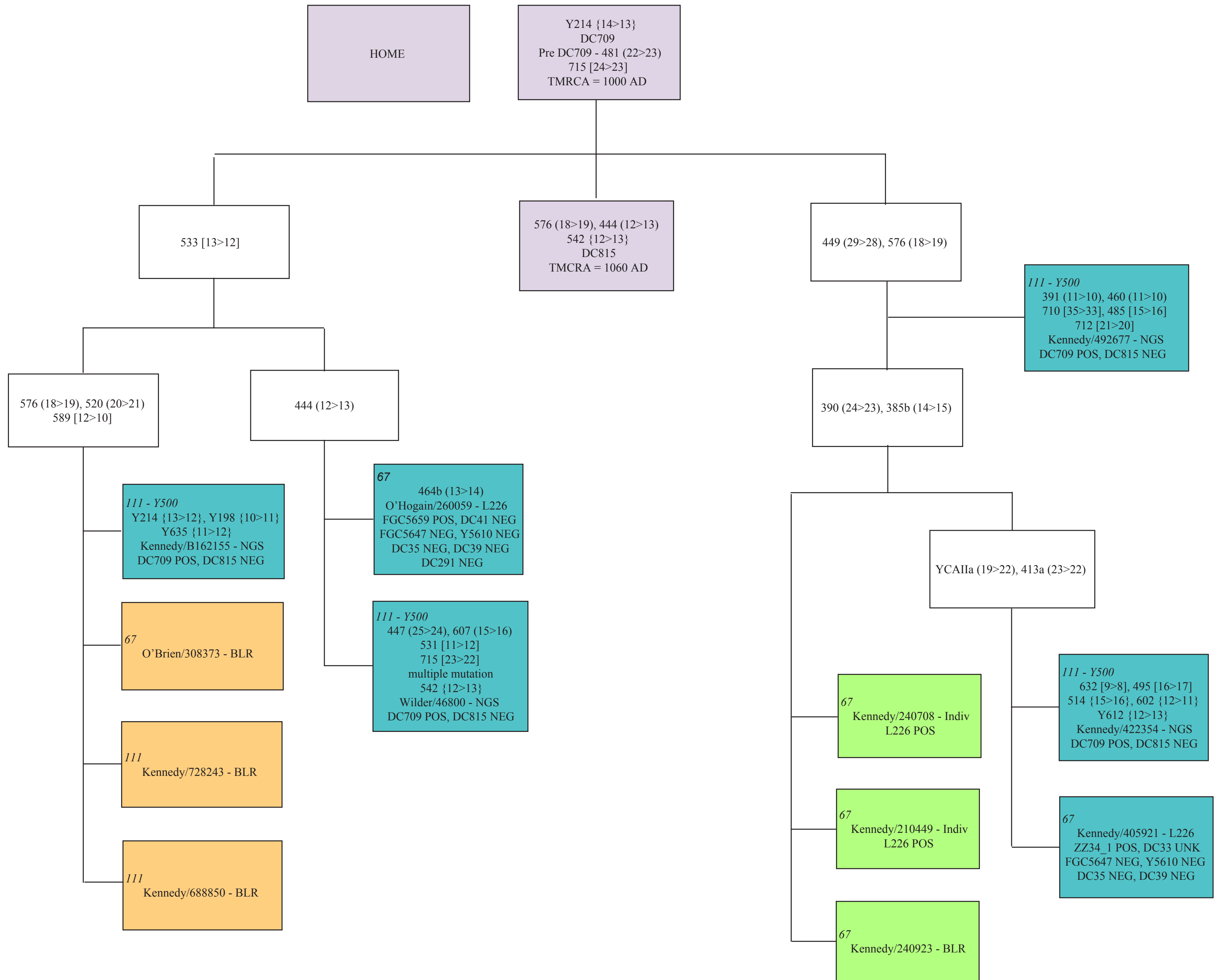
67
YCAIIb (23>22)
Graham/27276 - Indiv
L226 POS

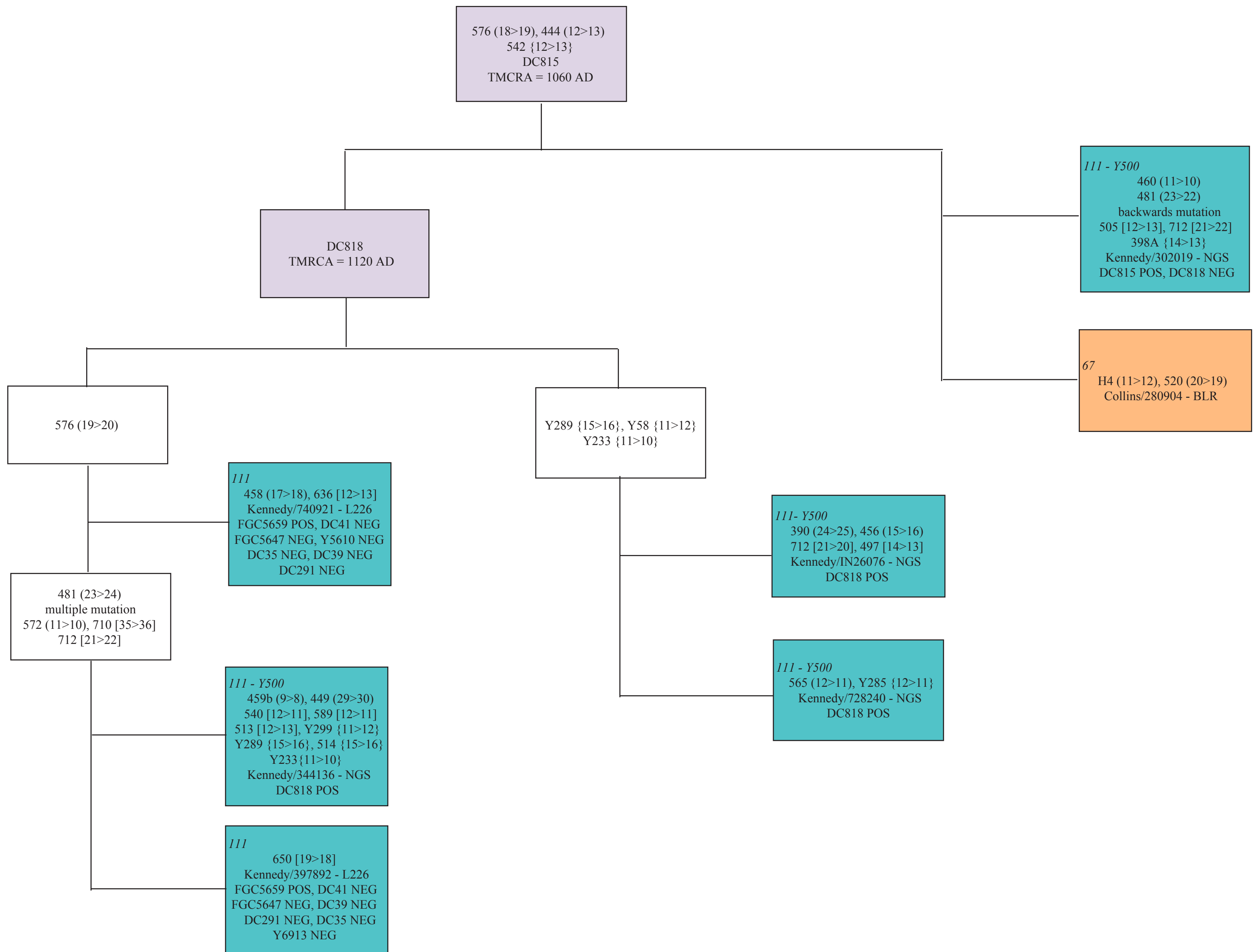
712 [21>22], 532 [13>14]

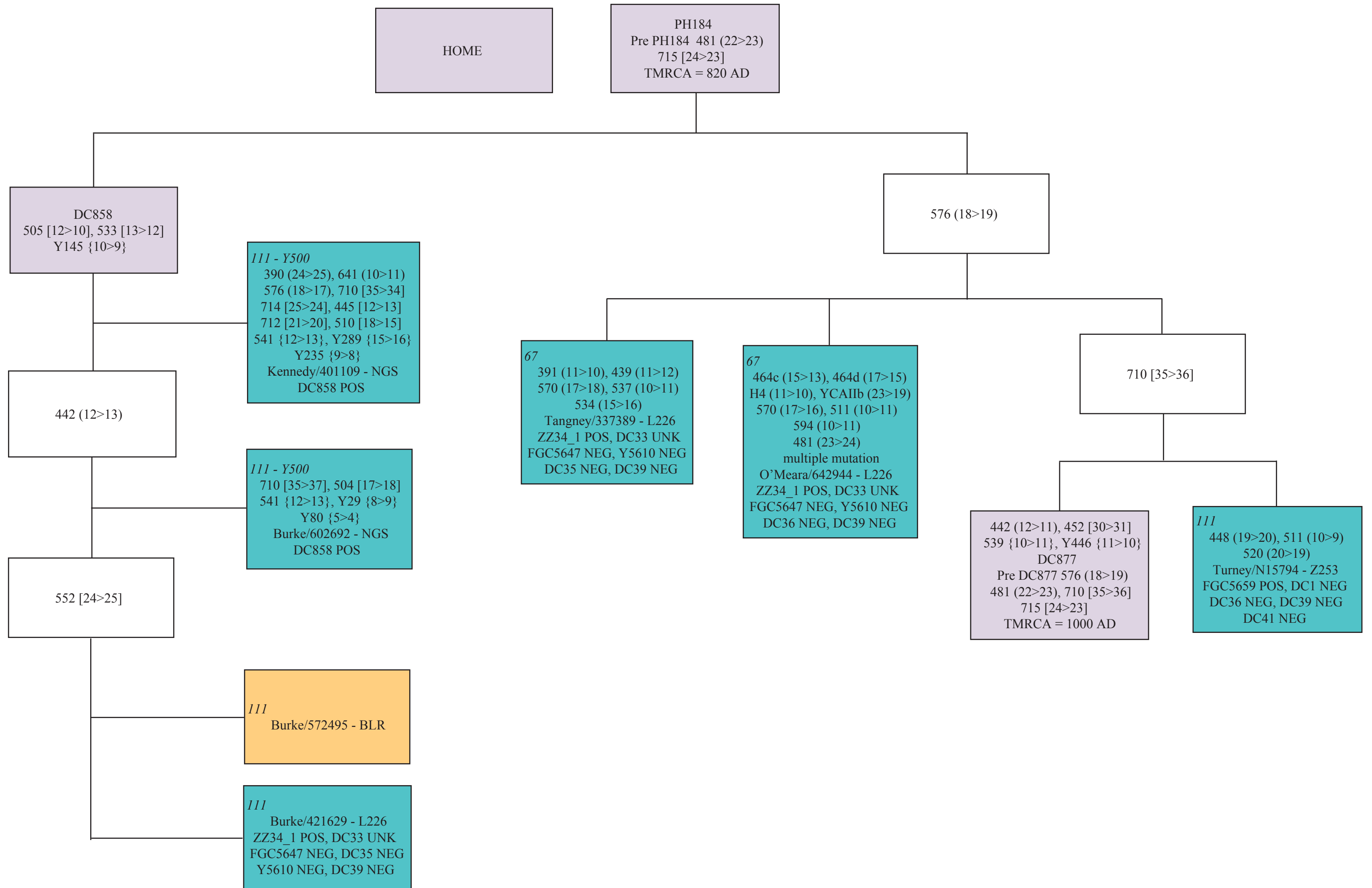
111
714 [25>24], 715 [24>23]
Graham/583951 - L226
ZZ34_1 POS, DC33 UNK
DC709 UNK, PH184 UNK
FGC5647 NEG, DC39 NEG
DC291 NEG, Y5610 NEG
DC35 NEG

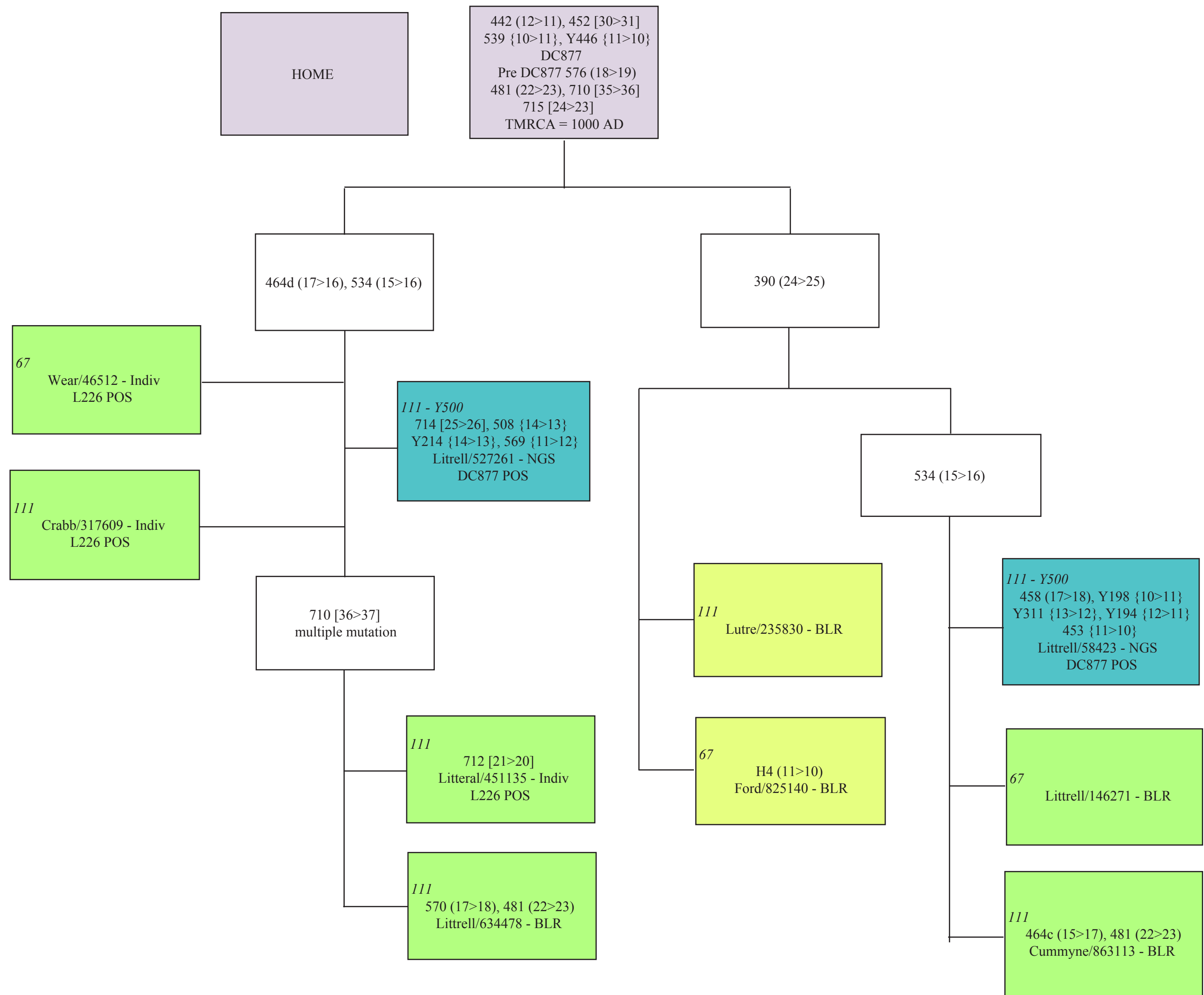
111
710 [35>36]
Graham/196734 - BLR

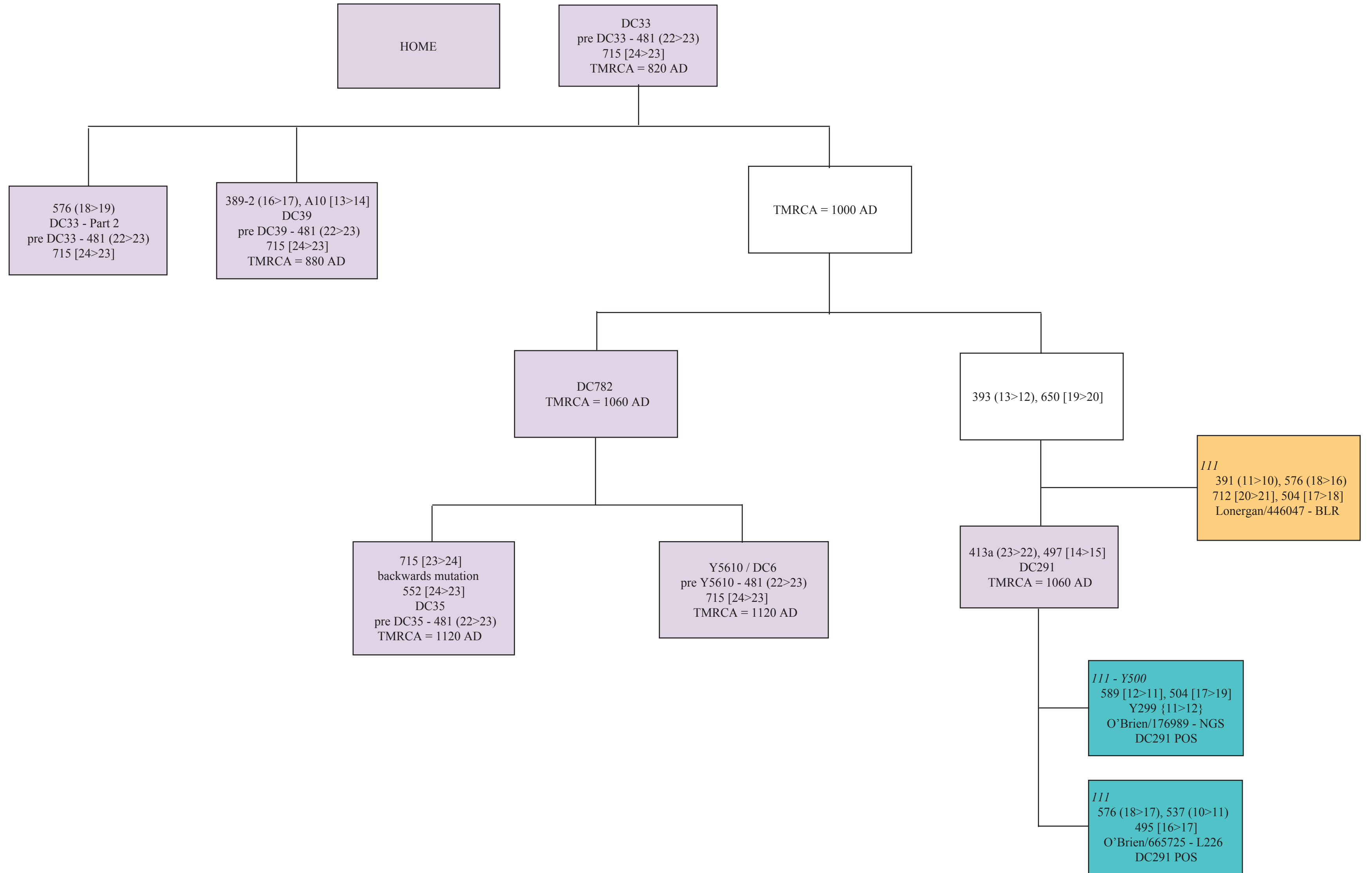


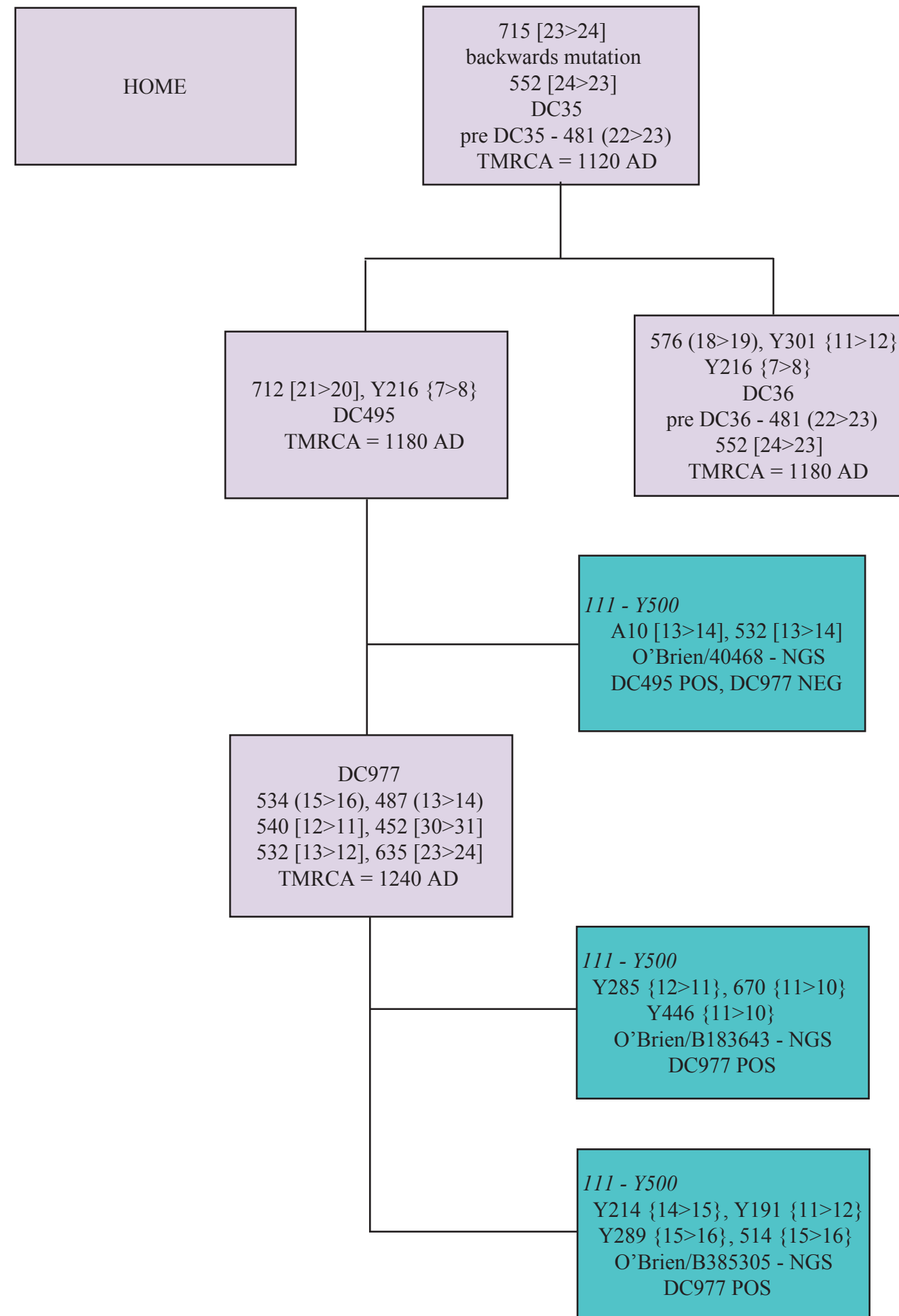


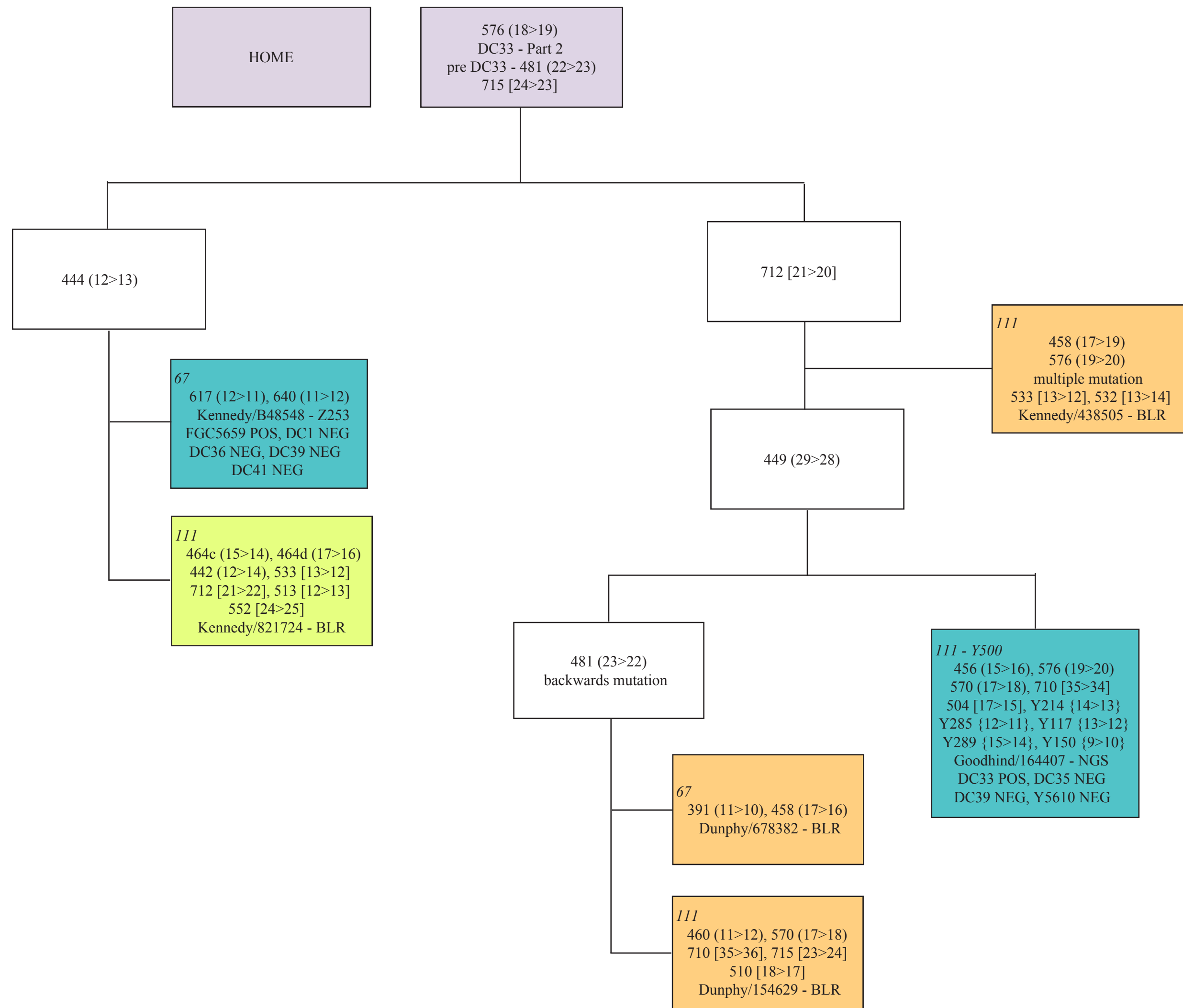


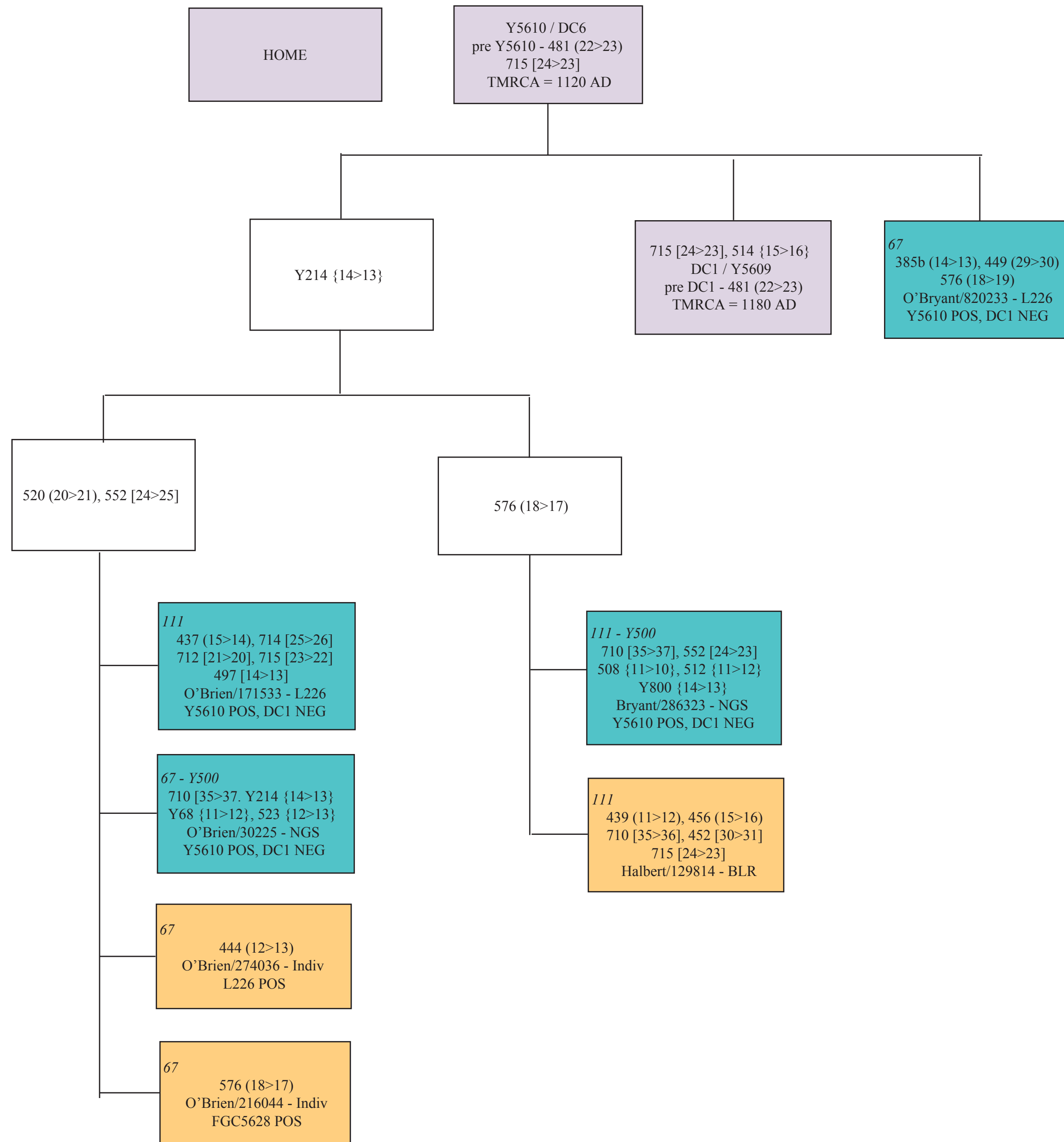












HOME

Unknown1
Y SNP branch

439 (11>12), 446 (13>12)

111
458 (17>18), 395S1a (15>16)
537 (10>11), 710 [35>37]
712 [21>20], 532 [13>14]
510 [18>19]
Callaghan/284819 - Indiv
L226 POS

67
389-1 (13>14)
O'Callaghan/287485 - 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)

67
449 (29>30), 570 (17>18)
557 (15>13), 481 (22>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

67
449 (29>30), 460 (11>10)
446 (13>14)
Caulfield/385688 - 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

Unknown6
Y SNP branch

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

481 (22>23), 487 (13>14)

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

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

67
Godfrey/110430 - BLR

67
Godfrey/S4Z5Q - BLR

67
449 (29>30)
Hogan/221344 - BLR

67
392 (13>11), 557 (15>14)
Shanahan/75766 - BLR

HOME

Unknown7
Y SNP branch

464c (15>16), 446 (13>14)
712 [21>20]

111
534 (15>16), 464a (13>12)
549 [13>14], 712 [21>20]
715 [24>23]
Townsend/15818 - BLR

111
570 (17>16), 487 (13>14)
549 [13>14], 715 [24>23]
McNamara/600572 - BLR

Unknown8
Y SNP branch

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

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

67
460 (11>10)
Doyle/12623 - BLR

111
447 (25>24), 534 (15>16)
710 [35>33], 533 [13>12]
715 [24>25]
Shannon/241149 - 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 - Individ
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

HOME

Unknown11
Y SNP branch

464c (15>16), 481 (22>23)

67
391 (11>10), 385b (14>15)
570 (17>16), 511 (10>11)
481 (23>24)
Quinn/261286 - Indiv
L226 POS

67
464d (17>16), 565 (12>13)
Slattery/N81550 - BLR

Unknown12
Y SNP branch

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

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

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

HOME

Unknown13
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

Unknown14
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

HOME

Unknown15
Y SNP branch

607 (15>14), 549 [13>12]
533 [13>14], 504 [17>19]
510 [18>19]

111
712 [21>23]
West/623973 - BLR

111
712 [21>22],
West/80844 - BLR

Unknown16
Y SNP branch

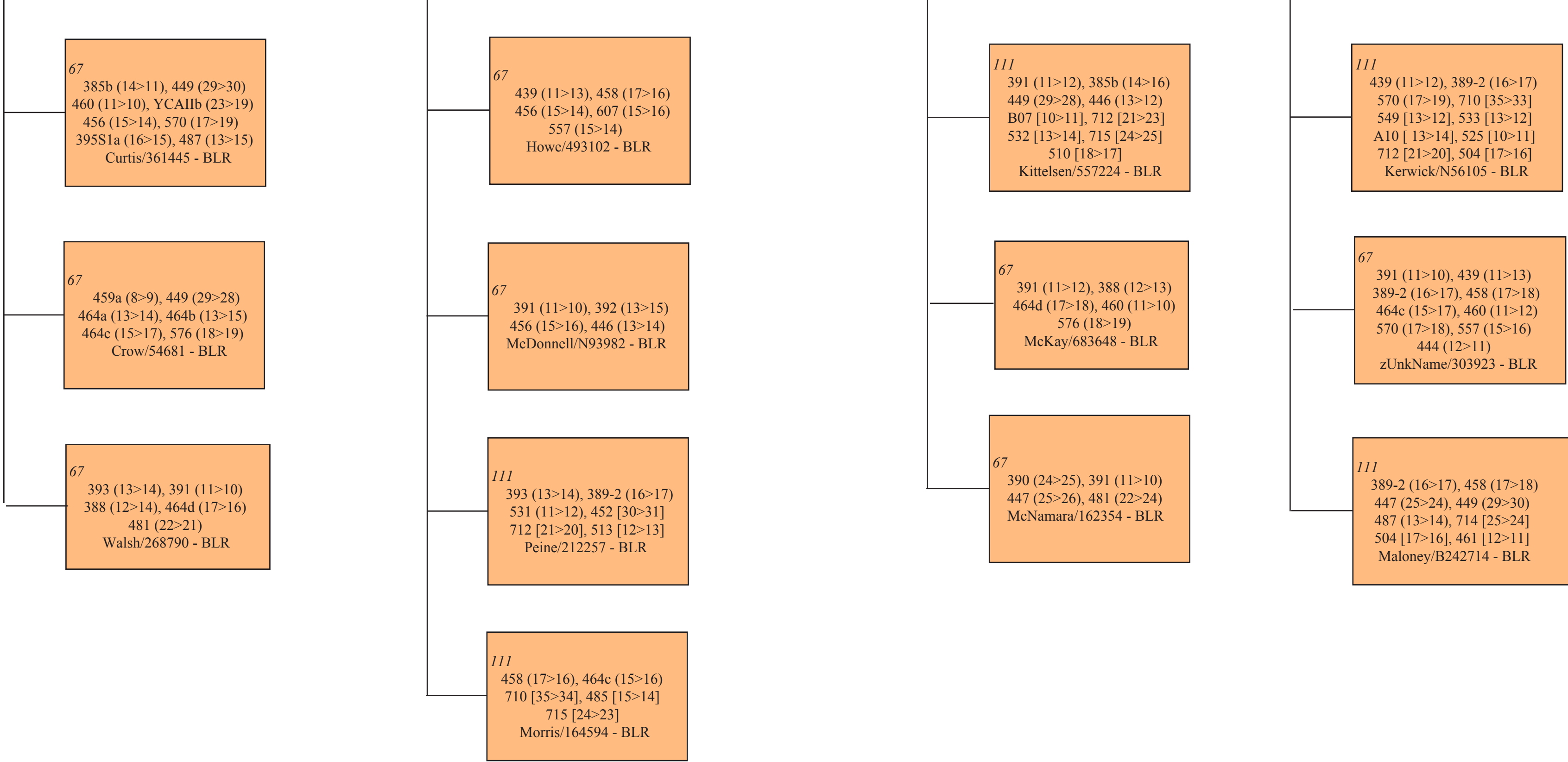
395S1a (15>16), 446 (13>12)

67
385b (14>15), 395S1a (15>16)
446 (13>12)
Callahan/226150 - BLR

111
576 (18>19), 570 (17>18)
710 [35>36], 495 [16>17]
B07 [10>11], 712 [21>22]
532 [13>14]
Callahan/226150 - BLR

HOME

Testers with no shared signatures (larger signatures)



HOME

Testers with no shared signatures (smaller signatures)

