



NOTES:  
1. These SNP and STR mutations could have occurred in any order.  
2. Where listed.  
3. A defining SNP is apparent on the Y-chromosome, but its location is uncertain.  
4. This tree combines postulated relationships based on STR test data with Y-FM definition enforced by SNP testing. It is intended primarily to serve R-L21 Group E in the McCarthy Surname Study but detail for some others sharing common ancestry prior to the introduction of surnames is provided.  
5. Shared ancestry based on common STR mutations is speculative but the more reliable the higher up the tree.

McCarthy (Y-DNA) SURNAME STUDY  
POSTULATED PHYLOGENETIC TREE FOR SNP Z255 MCCARTHY'S  
(McCarthy R-L21 GROUP 'E')  
AND SHOWING PROBABLE RELATION TO SOME OTHER SURNAMEN IN THIS HAPLOGROUP  
N McCarthy - Last updated - 01 April 2017  
Thanks are due to Alex Williamson for determination of the principal SNP structure of this tree (http://www.ytree.net/DisplayTree.php?FileID=5316) and to James Kane for use of his R-Z220 Combonetrix (at http://haplogroup.com/main.html). Both sources have been available in supplementing my own analysis. Any errors through interpretation are my own!  
© COPYRIGHT NIGEL MCCARTHY 2017

Estimated ancestral haplotype for R-DF13 (values at CDYs and DYS 333 uncertain)

FTDNA Panel 1		FTDNA Panel 2		FTDNA Panel 3		FTDNA Panel 4		FTDNA Panel 5			
390	390	390	391	390a	390b	426	398	436	389-1	392	389-2
13	24	14	11	11	14	12	12	12	13	13	20

SNP Z233  
McCarthy R-L21 Group F1

SNP Z255 and 19 other SNPs  
McCarthy R-L21 Group G1

SNP Z254  
SNP Z1515  
SNP Z1913

SNP Z255 (1440723 C-T)  
SNP Z256 (1732916 A-C)  
SNP Z257 (426-17-16)  
SNP Z258 (1407-36-40)  
SNP Z259 (13-14 PS, Name B)  
SNP Z260 (1503761 del G)  
SNP Z261 (390-24-23)  
SNP Z262 (456-15-16)  
SNP Z263 (2077829 C-T)  
SNP Z264 (2417419 T-C)  
SNP Z265 (2521276 G-A)

SNP Z233 (11-15-14)  
SNP Z234 (44-15-14)  
SNP Z235 (227-38-29)  
SNP Z236 (227-38-29)  
SNP Z237 (44-12-11)  
SNP Z238 (221-18-17)  
SNP Z239 (44-13-14)  
SNP Z240 (710-25-28)  
SNP Z241 (710-25-28)  
SNP Z242 (55-11-12)  
SNP Z243 (45-24-23)  
SNP Z244 (225-18-11)  
SNP Z245 (113-12-13)  
McCarthy Group E subdivisions  
E1  
E2

LEGEND (see key to highlighting):  
STR Mutation:  
Very slow moving STR markers (very low mutation rates) or rare multi-step mutation  
Slow moving STR markers (low mutation rates)  
Postulated STR back-mutation where earlier mutation occurs on this tree  
Participant kit number and testing details:  
No. of STR markers to which results have been published  
Has taken 'Big Y' test  
Has taken 'Y-Elite' test with FOC or other 'full Y' genome test elsewhere (P.C., P.R.E.E.)  
Participant ancestral surname / kit no.  
Following a DYS number denotes a STR mutation, e.g. DYS 18-17 indicates a mutation from 18 to 17 at DYS 18. Elsewhere (in cases it is used to indicate 'later than')  
FTDNA Z255 Pack or YSeq Z255 Panel tested  
To be confirmed (A-G) by Single SNP sequencing  
STR marker in FTDNA Panel 4 (380-478 markers in FTDNA sequence)  
PS STR marker in FTDNA Panel 5 (269-1118 markers in FTDNA sequence)  
AAAGAGGNN(-) Result of individual SNP testing (positive / negative) where an NGS test has not been taken.

To GLEASON TREE (and LITTLE)  
https://www.familytree.com/gleanings/gleanings-2008/1/21/gleason.pdf?b=0