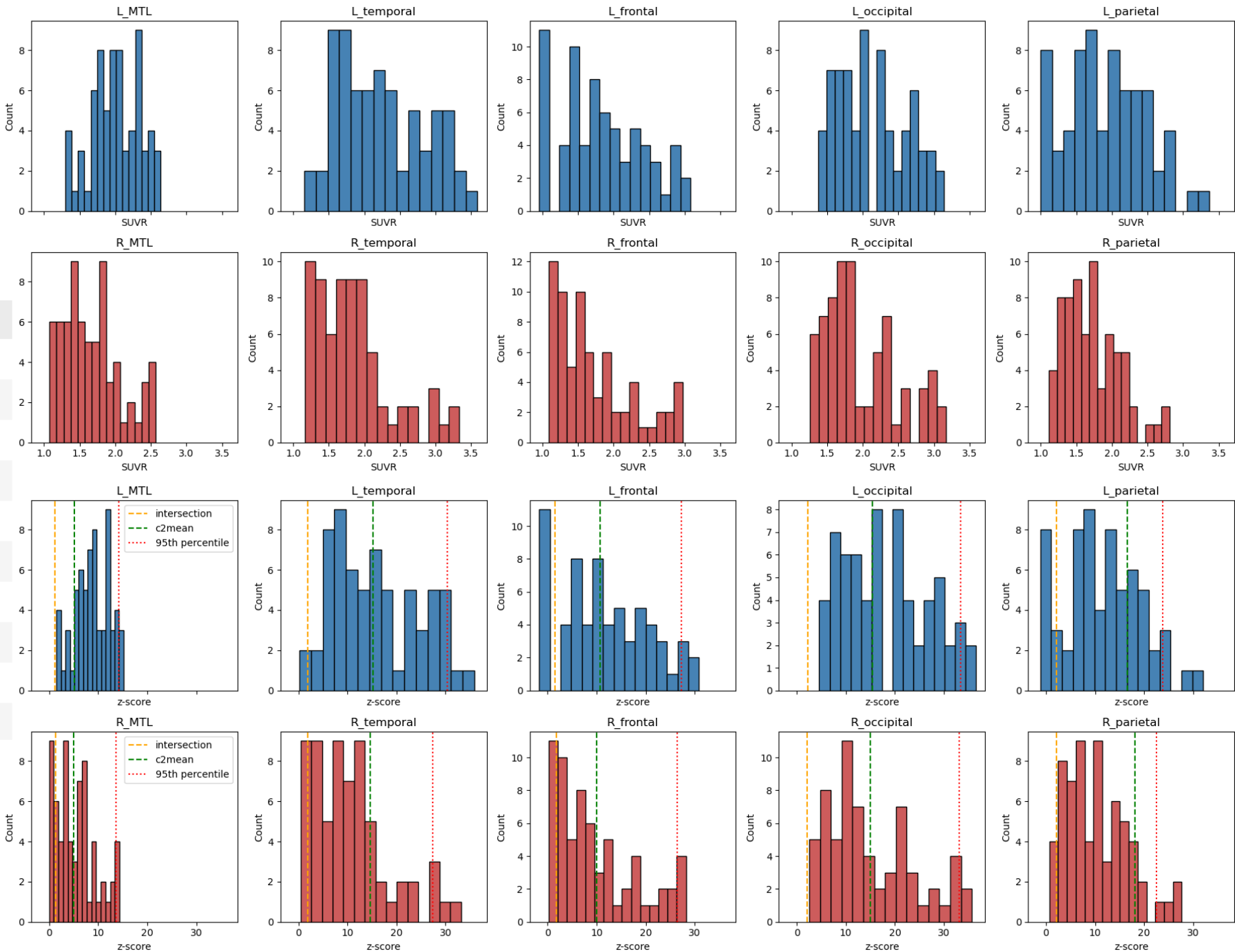
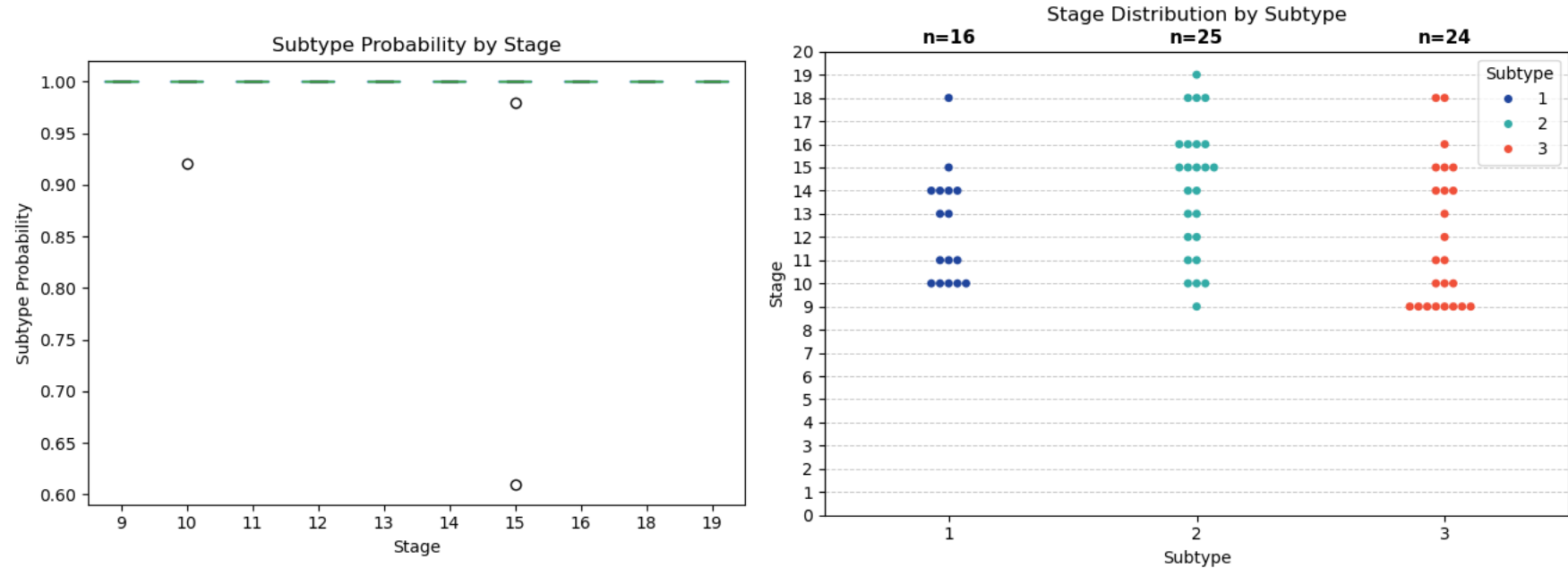


SUVR (Top) and z-score (Bottom) + thresholds



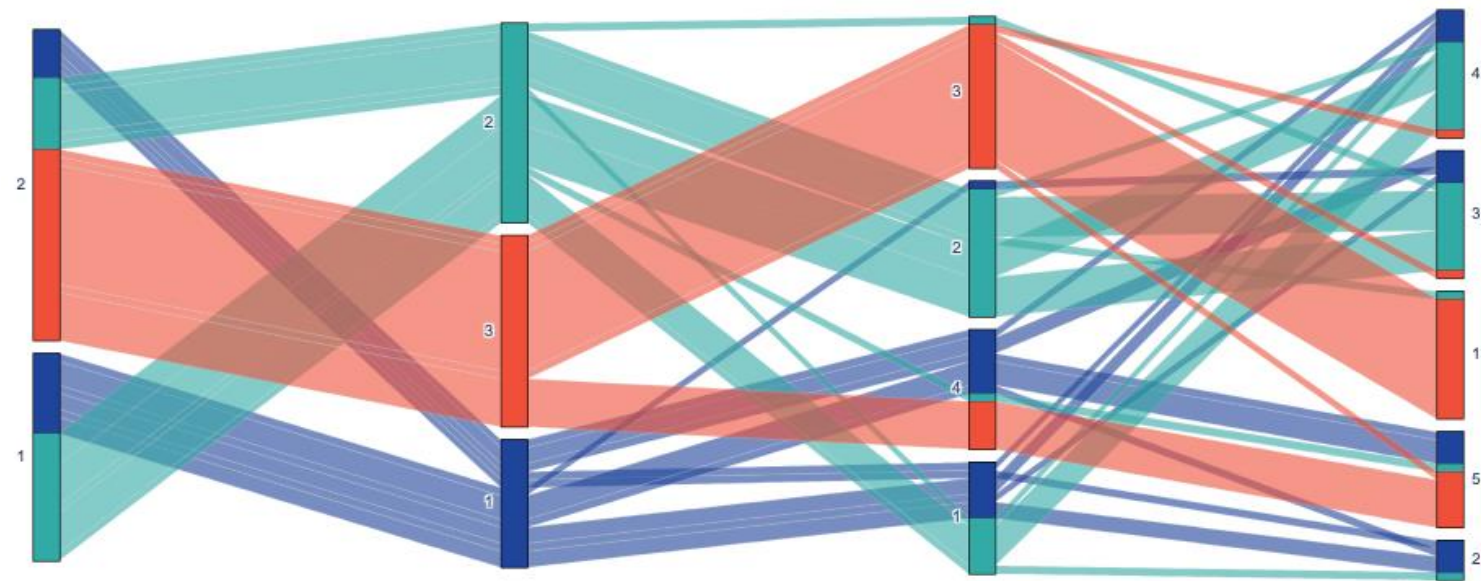
Subtype and staging

The one < 0.7 here are amnestic/S1 stage 15



No exclusion by model fit (<50%)

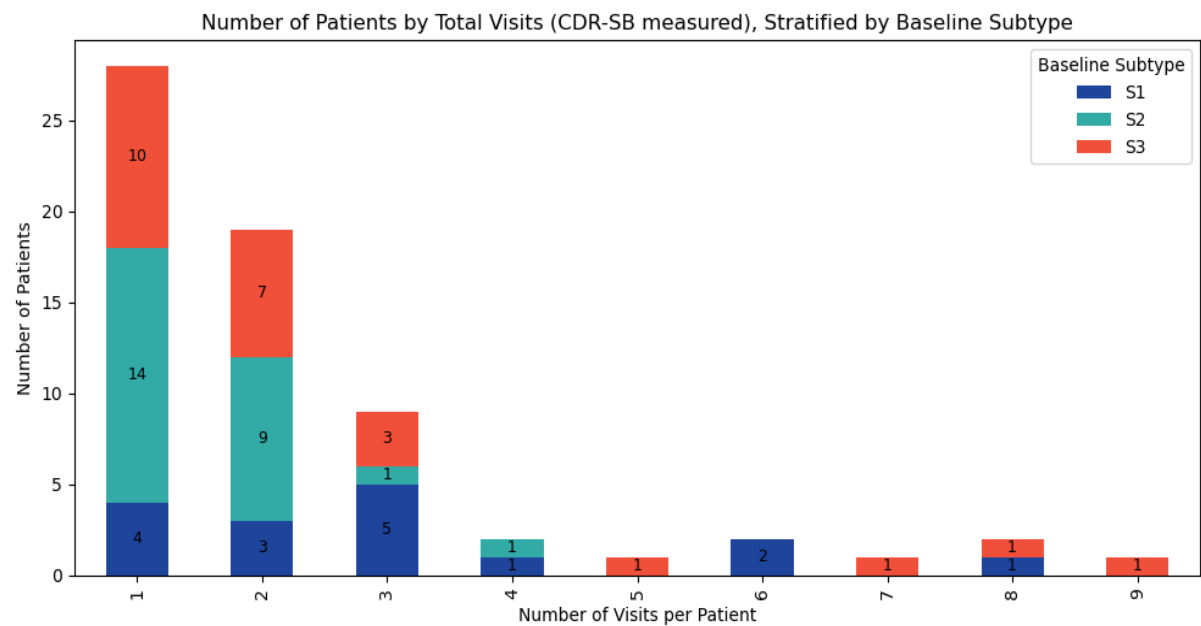
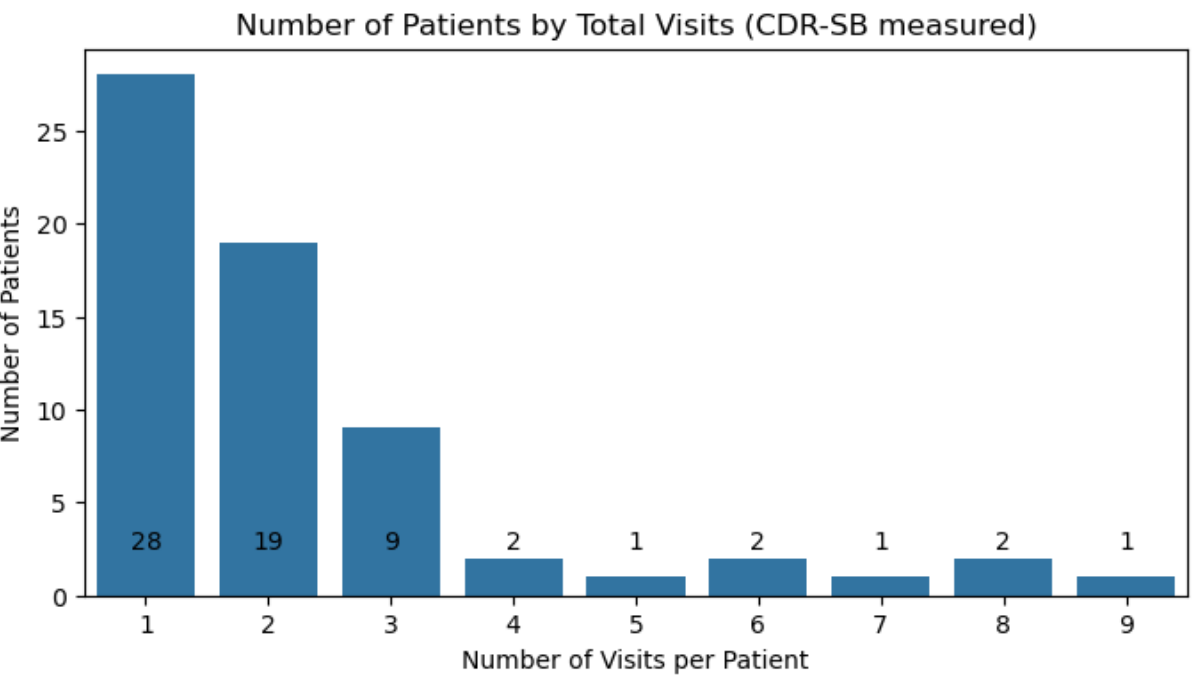
No low stage scans at baseline



Assignment change (order by prevalence)

| Table one | | Missing | Overall | 1 | 2 | 3 | P-Value |
|--|--------------------------------------|---------|--------------|-------------|--------------|-------------|---------|
| <ul style="list-style-type: none"> - No significant differences in age, years of educ., sex, clinical stage, APOE status, centiloid or FTP SUVR measures. - SuStaln stage: S2 has higher average. - Clinical phenotypes: S3 has most PCA and S2 has most PPA, but these two phenotypes were spread out across S2/S3. - S1 is mostly amnestic, but is now the least prevalent with lower subtype probability - No significant differences (p > 0.05), but S2 performs worse on Digit span, semantic fluency, CVLT, Trail, MMSE, and CDRSB. - S1 seems more preserved on Benson figure while S1 and S2 have similar average | n | | 65 | 16 | 25 | 24 | |
| | age, mean (SD) | 0 | 58.0 (4.3) | 57.7 (5.0) | 57.7 (4.4) | 58.4 (3.8) | 0.818 |
| | stage, mean (SD) | 0 | 12.9 (2.9) | 12.4 (2.4) | 14.0 (2.9) | 12.0 (3.1) | 0.035 |
| | Trails, mean (SD) | 24 | 80.9 (39.5) | 65.2 (42.4) | 92.5 (35.8) | 79.0 (39.8) | 0.227 |
| | MMSETot, mean (SD) | 5 | 21.1 (6.1) | 22.5 (6.7) | 19.1 (7.0) | 22.0 (4.4) | 0.171 |
| | CDRSUM, mean (SD) | 5 | 4.2 (2.4) | 4.2 (2.7) | 4.5 (2.4) | 4.0 (2.4) | 0.841 |
| | DigitFW, mean (SD) | 6 | 5.3 (1.4) | 5.7 (1.5) | 5.0 (1.4) | 5.3 (1.3) | 0.358 |
| | DigitBW, mean (SD) | 8 | 3.5 (1.6) | 3.9 (1.8) | 3.1 (1.8) | 3.5 (1.1) | 0.310 |
| | SemanticFluency, mean (SD) | 8 | 11.6 (5.8) | 12.8 (5.7) | 9.8 (5.0) | 12.6 (6.4) | 0.200 |
| | BensonCopy, mean (SD) | 5 | 10.8 (5.3) | 12.3 (4.4) | 10.7 (5.5) | 9.9 (5.7) | 0.429 |
| | BensonDelay, mean (SD) | 6 | 4.8 (4.2) | 5.8 (4.3) | 4.4 (4.3) | 4.6 (4.2) | 0.596 |
| | CVLT, mean (SD) | 4 | 2.4 (2.8) | 2.7 (3.1) | 1.5 (2.1) | 3.2 (3.0) | 0.104 |
| | Educ, mean (SD) | 3 | 16.5 (2.8) | 16.2 (2.5) | 16.2 (2.7) | 17.0 (3.1) | 0.588 |
| | subtype_prob, mean (SD) | 0 | 1.0 (0.0) | 1.0 (0.1) | 1.0 (0.0) | 1.0 (0.0) | 0.123 |
| | cortical_ftp_suvr, mean (SD) | 0 | 1.9 (0.4) | 1.9 (0.4) | 2.0 (0.4) | 1.9 (0.4) | 0.770 |
| | Centiloid, mean (SD) | 0 | 100.8 (29.9) | 99.2 (36.3) | 105.5 (32.5) | 96.8 (22.1) | 0.583 |
| | metaROI_FTP_SUVR, mean (SD) | 0 | 2.2 (0.5) | 2.1 (0.5) | 2.2 (0.5) | 2.2 (0.5) | 0.778 |
| | cortical_summary_PiB_SUVR, mean (SD) | 0 | 2.1 (0.3) | 2.1 (0.4) | 2.2 (0.3) | 2.1 (0.2) | 0.583 |
| | sex, n (%) | | | | | | |
| | | Female | 38 (58.5) | 9 (56.2) | 16 (64.0) | 13 (54.2) | 0.767 |
| | | Male | 27 (41.5) | 7 (43.8) | 9 (36.0) | 11 (45.8) | |
| ucsf_dx, n (%) | amnestic | | 34 (52.3) | 11 (68.8) | 13 (52.0) | 10 (41.7) | 0.634 |
| | nonamnestic | | 7 (10.8) | 1 (6.2) | 2 (8.0) | 4 (16.7) | |
| | pca | | 12 (18.5) | 2 (12.5) | 4 (16.0) | 6 (25.0) | |
| | ppa | | 12 (18.5) | 2 (12.5) | 6 (24.0) | 4 (16.7) | |
| | | | | | | | |
| clin_severity, n (%) | MCI | | 10 (15.4) | 4 (25.0) | 2 (8.0) | 4 (16.7) | 0.331 |
| | dementia | | 55 (84.6) | 12 (75.0) | 23 (92.0) | 20 (83.3) | |
| APOEStatus, n (%) | carrier | | 37 (56.9) | 11 (68.8) | 15 (60.0) | 11 (45.8) | 0.331 |
| | non-carrier | | 28 (43.1) | 5 (31.2) | 10 (40.0) | 13 (54.2) | |

Longitudinal (CDR) – follow up



37 participants (pretty evenly split among subtypes)
with at least two CDR-SB recorded

Follow-up intervals:

Overall: 0.85 ± 0.83

S1: 0.75 ± 0.65

S2: 1.43 ± 0.83

S3: 0.72 ± 0.89

This is not matched on taudate!

Just grabbing whatever exist for the baseline cohort I have

| PIDN | DCDate | AgeAtDC | InstrID | CDRSUM |
|-------|------------|---------|---------|--------|
| 18551 | 2015-07-27 | 60 | 406595 | 3.5 |
| 18551 | 2016-01-07 | 60 | 382270 | 4.5 |
| 18551 | 2016-04-01 | 60 | 403877 | 4.5 |
| 18551 | 2016-04-29 | 60 | 408377 | 5.0 |
| 18551 | 2016-05-27 | 60 | 411519 | 6.0 |
| 18551 | 2016-06-24 | 61 | 412124 | 5.0 |
| 18551 | 2016-07-11 | 61 | 413653 | 4.0 |
| 18551 | 2017-07-20 | 62 | 468423 | 5.0 |
| 18551 | 2018-07-10 | 63 | 497140 | 6.0 |

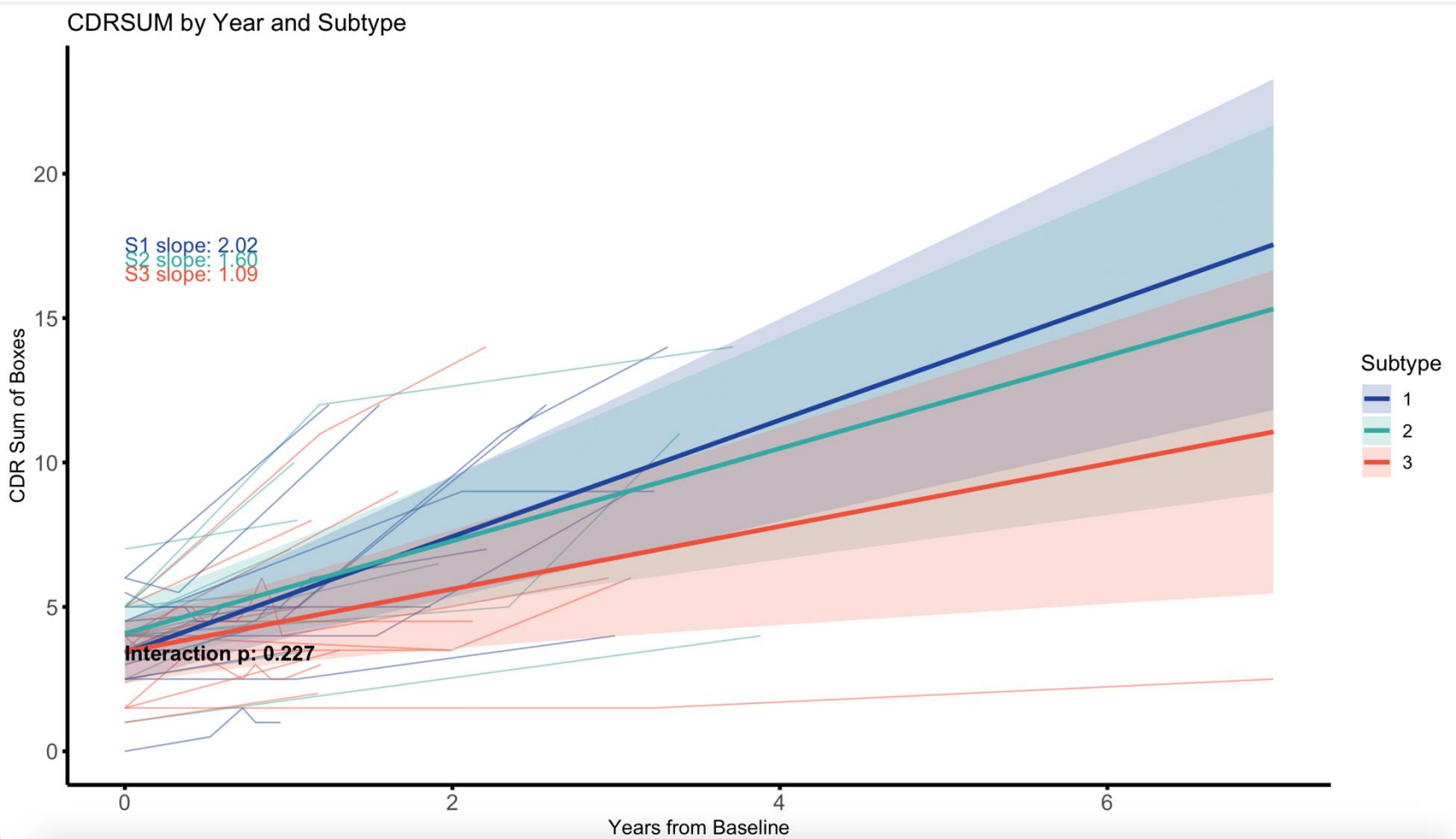
The one having 9 records (S3 – amnestic - 60 at baseline) seems valid but it’s not at annual interval

Longitudinal (CDR) – model

Model: CDR-SB ~ baseline subtype *
time from baseline + baseline age +
baseline sex + baseline Centiloid +
baseline years of education
+ (1 + time | PIDN)

| | PIDN | DCDate | AgeAtDC | InstrID | CDRSUM |
|-----|-------|------------|---------|---------|--------|
| 133 | 24581 | 2017-06-22 | 62 | 455094 | 0.5 |
| 134 | 24581 | 2017-06-22 | 62 | 491981 | 0.5 |

Actually it's **n = 36** because one (S3 –
amnesic) patient has duplicates
record = 120



Patient 17177 has the longest span: 2562 days (7.01 years)

| | PIDN | baseline_subtype | DCDate | CDRSUM | baseline_sex | baseline_Educ | baseline_Centiloid | baseline_age | diff_yr | visit_ct |
|----|-------|------------------|------------|--------|--------------|---------------|--------------------|--------------|----------|----------|
| 12 | 17177 | 3 | 2015-09-09 | 1.5 | Male | 22.0 | 32.192797 | 64 | 0.000000 | 1 |
| 13 | 17177 | 3 | 2018-11-30 | 1.5 | Male | 22.0 | 32.192797 | 64 | 3.225188 | 2 |
| 14 | 17177 | 3 | 2022-09-14 | 2.5 | Male | 22.0 | 32.192797 | 64 | 7.014374 | 3 |

The flat line at the bottom: