

Title: How Accurately Do Patients and Their Care Partners Report Results of Amyloid- β PET Scans for Alzheimer's Disease Assessment?

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Software used for analyses: StataSE 16.0

Syntax for: Data Cleaning

```
drop if REC_part_CrrctIntrtScn_Bnry == . | REC_part_CrrctIntrtScn_Bnry == .r | REC_part_CrrctIntrtScn_Bnry == .m | REC_part_CrrctIntrtScn_Bnry == .e
```

Recode variables for preferred specification

```
gen rec_cpait_white_imp=1 if rec_cpait_race_imp==1
replace rec_cpait_white_imp=0 if rec_cpait_race_imp!=1
tab rec_cpait_white_imp
```

```
gen rec_part_white_imp=1 if rec_part_race_imp==1
replace rec_part_white_imp=0 if rec_part_race_imp!=1
```

```
gen rec_part_relat_sl=1 if rec_part_relat==1
replace rec_part_relat_sl=0 if rec_part_relat_sl!=1
```

* Creating labels*

```
label variable impairment_level "Patient level of impairment"
label variable rec_cpait_tics_total_imp "Patient abbreviated TICS-M score"
label variable rec_cpait_white_imp "Patient white"
label variable rec_cpait_male "Patient male"
label variable rec_cpait_age "Patient age"
label variable rec_cpait_edu_4cat_imp "Patient education"
label variable cpait_helphospmaterials_imp "Patient Health literacy"
label variable rec_part_relat_sl "Relationship (the patient is my...)"
label variable rec_part_tics_total_imp "Care partner abbreviated TICS-M score"
label variable rec_part_white_imp "Care partner white"
label variable rec_part_male "Care partner male"
label variable rec_part_age "Care partner age"
label variable rec_part_edu_4cat_imp "Care partner education"
label variable part_helphospmaterials_imp "Care partner health literacy"
label variable rec_part_capacity_comm "CAPACITY communication score"
```

```
label define yesno 0 "No" 1 "Yes"
```

```
label define education 1 "High school graduate or less" 2 "Some college" 3 "Bachelor's degree" 4 "Graduate degree"
```

```
label define spouse 0 "Other" 1 "Spouse/Significant other"
```

```
label define impairment 1 "MCI" 2 "Dementia"
```

```
label values rec_cpait_white_imp rec_part_white_imp rec_cpait_male rec_part_male yesno
```

```
label values rec_cpait_edu_4cat_imp rec_part_edu_4cat_imp education
```

```
label values rec_part_relat_sl spouse
```

* Analyzing missingness*

```
mdesc impairment_level rec_cpait_tics_total_imp rec_cpait_male rec_cpait_white_imp rec_cpait_age
rec_cpait_edu_4cat_imp cpait_helphospmaterials_imp rec_part_white rec_part_male rec_part_tics_total_imp
rec_part_edu_4cat_imp part_helphospmaterials_imp rec_part_capacity_comm rec_part_relatt_sl
```

Variables missing values: patient age, care partner age, and Capacity Communication Score

```
tab rec_cpait_age, m
tab rec_part_age, m
tab rec_part_capacity_comm, m
```

8 missing for cpait_age, 11 missing for part_age, and 125 missing for part_capacity_comm

imputing median value for missing values

```
sum rec_cpait_age if rec_cpait_age>0 & rec_cpait_age<200, d
replace rec_cpait_age=r(p50) if missing(rec_cpait_age)
```

```
sum rec_part_age if rec_part_age>0 & rec_part_age<200, d
replace rec_part_age=r(p50) if missing(rec_part_age)
```

```
sum rec_part_capacity_comm if rec_part_capacity_comm>0, d
replace rec_part_capacity_comm=r(p50) if missing(rec_part_capacity_comm)
```

* Generating difference in patient and care partner age*

```
gen agediff= rec_cpait_age-rec_part_age
label variable agediff "Patient minus CP age"
```

* Generating dyadic concordance variable*

```
gen ptcpconcordance=1
replace ptcpconcordance=. if rec_part_crrctintrtsch_bnr==. | rec_cpait_crrctintrtsch_bnr==.
replace ptcpconcordance=0 if rec_part_crrctintrtsch_bnr==0 & rec_cpait_crrctintrtsch_bnr==1
replace ptcpconcordance=0 if rec_part_crrctintrtsch_bnr==1 & rec_cpait_crrctintrtsch_bnr==0
```

Syntax for: Table 1

```
table1, by(impairment_level) vars(rec_cpait_tics_total_imp contn %2.1f\ rec_cpait_male bin\
rec_cpait_white_imp bin\rec_cpait_age contn %2.1f\rec_cpait_edu_4cat_imp cat\cpait_helphospmaterials_imp
cat\rec_part_relatt_sl bin) format(%2.1f) onecol saving(Table1pt_Plassman.xls, replace)
table1, vars(rec_part_tics_total_imp contn %2.1f\ rec_part_male bin\ rec_part_white_imp bin\rec_part_age
contn %2.1f\rec_part_edu_4cat_imp cat\rec_part_capacity_comm contn %2.1f\ part_helphospmaterials_imp
cat\rec_part_relatt_sl cat) format(%2.1f) onecol saving(Table1cp_Plassman.xls, replace)
```

Syntax for: Table 2

```
tab cpait_rsltposneg af_amyloid_result, cell
```

```
tab cpait_rsltposneg af_amyloid_result if impairment_level==1, cell
tab part_rsltposneg af_amyloid_result if impairment_level==1, cell
```

```
tab cpait_rsltposneg af_amyloid_result if impairment_level==2, cell
tab part_rsltposneg af_amyloid_result if impairment_level==2, cell
```

```
tab part_rsltposneg af_amyloid_result, cell
di 59.19 + 25.75
```

```
tab part_rsltposneg af_amyloid_result if impairment_level==1, cell
di 55.45 + 28.09
```

```
tab part_rsltposneg af_amyloid_result if impairment_level==2, cell
```

di 69.35 + 19.35

/******

Chi-square test of if
result concordance is significantly different for those with
dementia and their CPs compared to patients with MCI and their
CPs

*****/

```
tab rec_cpait_crrctintrtsn_bnry impairment_level, chi2
tab rec_part_crrctintrtsn_bnry impairment_level, chi2
```

Syntax for: Table 3

```
tab rec_part_crrctintrtsn_bnry rec_cpait_crrctintrtsn_bnry, cell
```

Syntax for: Table 4

Outcome is patient's report of outcome

```
foreach var of varlist rec_cpait_tics_total_imp rec_cpait_age agediff rec_part_capacity_comm
rec_part_tics_total_imp{
```

```
quiet logistic rec_cpait_crrctintrtsn_bnry c.`var'
margins, dydx(*)
```

```
}
```

```
foreach var of varlist impairment_level rec_cpait_male rec_cpait_white_imp rec_cpait_edu_4cat_imp
cpait_helphospmaterials_imp rec_part_white rec_part_male rec_part_edu_4cat_imp
part_helphospmaterials_imp rec_part_relat_sl{
quiet logistic rec_cpait_crrctintrtsn_bnry i.`var'
margins, dydx(*)
}
```

```
quiet logit rec_cpait_crrctintrtsn_bnry i.impairment_level c.rec_cpait_tics_total_imp i.rec_cpait_male
i.rec_cpait_white_imp c.rec_cpait_age i.rec_cpait_edu_4cat_imp i.cpait_helphospmaterials_imp c.agediff
i.rec_part_white i.rec_part_male c.rec_part_tics_total_imp i.rec_part_edu_4cat_imp
i.part_helphospmaterials_imp c.rec_part_capacity_comm i.rec_part_relat_sl
margins, dydx(*)
outreg, stat(b_dfdx ci_dfdx) level(95)
```

outcome changed to CP correctly reporting result

```
foreach var of varlist rec_cpait_tics_total_imp rec_cpait_age agediff rec_part_tics_total_imp
rec_part_capacity_comm {
```

```
logistic rec_part_crrctintrtsn_bnry c.`var'
margins, dydx(*)
```

```
}
```

```
foreach var of varlist impairment_level rec_cpait_male rec_cpait_white_imp rec_cpait_edu_4cat_imp
cpait_helphospmaterials_imp rec_part_white rec_part_male rec_part_edu_4cat_imp
part_helphospmaterials_imp rec_part_relat_sl{
```

```
quiet logistic rec_part_crrctintrtsch_bnr i.`var`
margins, dydx(*)
```

```
}
```

```
quiet logit rec_part_crrctintrtsch_bnr i.impairment_level c.rec_cpait_tics_total_imp i.rec_cpait_male
i.rec_cpait_white_imp c.rec_cpait_age i.rec_cpait_edu_4cat_imp i.cpait_helphospmaterials_imp c.agediff
i.rec_part_white i.rec_part_male c.rec_part_tics_total_imp i.rec_part_edu_4cat_imp
i.part_helphospmaterials_imp c.rec_part_capacity_comm i.rec_part_relat_sl
margins, dydx(*)
outreg, stat(b_dfdx ci_dfdx) level(95)
```

Syntax for: Table 5

```
foreach var of varlist rec_cpait_tics_total_imp rec_cpait_age agediff rec_part_tics_total_imp
rec_part_capacity_comm {
```

```
quiet logistic ptcpcorrelation c.`var`
margins, dydx(*)
```

```
}
```

```
foreach var of varlist impairment_level rec_cpait_male rec_cpait_white_imp rec_cpait_edu_4cat_imp
cpait_helphospmaterials_imp rec_part_white rec_part_male rec_part_edu_4cat_imp
part_helphospmaterials_imp rec_part_relat_sl{
quiet logistic ptcpcorrelation i.`var`
margins, dydx(*)
}
```

```
quiet logit ptcpcorrelation i.impairment_level c.rec_cpait_tics_total_imp i.rec_cpait_male
i.rec_cpait_white_imp c.rec_cpait_age i.rec_cpait_edu_4cat_imp i.cpait_helphospmaterials_imp c.agediff
i.rec_part_white i.rec_part_male c.rec_part_tics_total_imp i.rec_part_edu_4cat_imp
i.part_helphospmaterials_imp c.rec_part_capacity_comm i.rec_part_relat_sl
margins, dydx(*)
outreg, stat(b_dfdx ci_dfdx) level(95)
```