elena\_skin\_analysis

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3/15/2021

## Read in data

Start with FCP and CRP

fcp <- readxl::read\_excel(here("Oct FCP and CRP for charts.xlsx"), sheet = "FCP") %>%   
 mutate(group = case\_when(group == "NOSKIN" ~ "CD-None",  
 group == "SKIN" ~ "CD-ASD")) %>%   
 group\_by(mrn) %>%   
 arrange(mrn, desc(time\_point)) %>%   
 mutate(delta\_fcp = value - lag(value)) %>%   
 mutate(pct\_change\_fcp = 100\*delta\_fcp/lag(value)) %>%   
 ungroup() %>%   
 select(group:pct\_change\_fcp)  
  
crp <- readxl::read\_excel(here("Oct FCP and CRP for charts.xlsx"), sheet = "CRP") %>%   
 mutate(group = case\_when(group == "NOSKIN" ~ "CD-None",  
 group == "SKIN" ~ "CD-ASD")) %>%   
 group\_by(mrn) %>%   
 arrange(mrn, desc(time\_point)) %>%   
 mutate(delta\_crp = value - lag(value)) %>%   
 mutate(pct\_change\_crp = 100\*delta\_crp/lag(value)) %>%   
 ungroup() %>%   
 select(group:pct\_change\_crp)

Now read in Likert values

path\_likert <- readxl::read\_excel(here("Oct Likert Numbers.xlsx"), sheet = "path") %>%   
 mutate(group = case\_when(group == "NOSKIN" ~ "CD-None",  
 group == "SKIN" ~ "CD-ASD")) %>%   
 select(group:path\_likert)  
  
endo\_likert <- readxl::read\_excel(here("Oct Likert Numbers.xlsx"), sheet = "endo") %>%   
 mutate(group = case\_when(group == "NOSKIN" ~ "CD-None",  
 group == "SKIN" ~ "CD-ASD")) %>%   
 select(group:endo\_likert)  
  
imaging\_likert <- readxl::read\_excel(here("Oct Likert Numbers.xlsx"), sheet = "imaging") %>%   
 mutate(group = case\_when(group == "NOSKIN" ~ "CD-None",  
 group == "SKIN" ~ "CD-ASD")) %>%   
 select(group:imaging\_likert)

Now read in demographics

demog <- readxl::read\_excel(here("Oct demographics organized.xlsx")) %>% clean\_names() %>%   
 select(group\_type:stelara\_start) %>%   
 mutate(dob = as.Date(dob),  
 stelara\_start = as.Date(stelara\_start)) %>%   
 rename(group = group\_type) %>%   
 mutate(group = case\_when(group == "NOSKIN" ~ "CD-None",  
 group == "SKIN" ~ "CD-ASD"))

## Demographic table with gtsummary and flextable

demog %>%   
 select(-dob, -stelara\_start) %>%   
 mutate(sex = case\_when(sex == "F" ~ "Female",  
 sex =="M" ~ "Male")) %>%   
 mutate(tobacco = case\_when(tobacco == "Y" ~ "Yes",  
 tobacco == "N" ~ "No")) %>%   
 mutate(race = case\_when(race == "A" ~ "Asian or Pacific Islander",  
 race == "AA" ~ "African-American",  
 race == "C" ~ "Caucasian",  
 race == "HL" ~ "Caucasian",  
 race == "O" ~ "Other",  
 race == "U" ~ "Unknown")) %>%   
 tbl\_summary(  
 by = group, # split table by group  
 missing = "no", # don't list missing data separately  
 label = c(sex ~ "Sex", race ~ "Race",  
 tobacco ~ "Tobacco Use",  
 age\_at\_start ~ "Age"),  
 type = c(sex, race, tobacco) ~ "categorical") %>%  
 add\_p() %>% # test for a difference between groups  
 modify\_header(label = "\*\*Variable\*\*") %>% # update the column header  
 bold\_labels() %>%   
 as\_flex\_table()

| Variable | CD-ASD, N = 791 | CD-None, N = 3161 | p-value2 |
| --- | --- | --- | --- |
| **Sex** |  |  | 0.2 |
| Female | 52 (66%) | 184 (58%) |  |
| Male | 27 (34%) | 132 (42%) |  |
| **Race** |  |  | >0.9 |
| African-American | 6 (7.6%) | 24 (7.6%) |  |
| Asian or Pacific Islander | 0 (0%) | 2 (0.6%) |  |
| Caucasian | 73 (92%) | 287 (91%) |  |
| Other | 0 (0%) | 1 (0.3%) |  |
| Unknown | 0 (0%) | 2 (0.6%) |  |
| **Tobacco Use** |  |  | 0.7 |
| No | 43 (54%) | 180 (57%) |  |
| Yes | 36 (46%) | 136 (43%) |  |
| **Age** | 41 (30, 50) | 39 (28, 52) | 0.8 |
| 1n (%); Median (IQR) | | | |
| 2Pearson's Chi-squared test; Fisher's exact test; Wilcoxon rank sum test | | | |