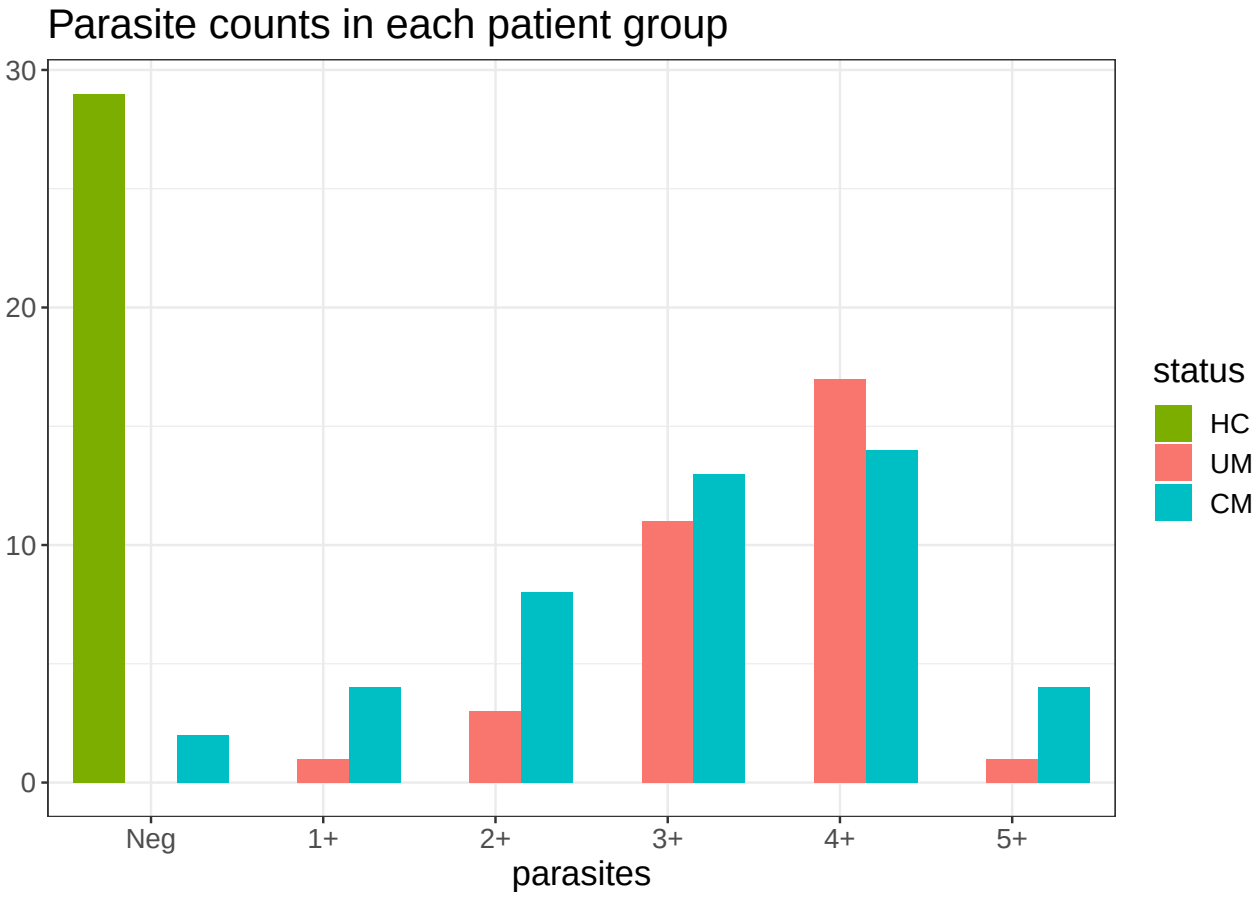
parasitemia

2022-12-18

Parasite counts in each patient group

parasites	HC	UM	CM
Neg	29	0	2
1+	0	1	4
2+	0	3	8
3+	0	11	13
4+	0	17	14
5+	0	1	4



Statistical tests to compare parasites in each patient group

Chi-squared

##

```
##  Pearson's Chi-squared test
##
## data:  df_parasite_counts %>% dplyr::select(-HC) %>% as.data.frame %>%     column_to_rownames("parasi
## X-squared = 6.6407, df = 5, p-value = 0.2488
```

Ordinal regression (?)

```
## # A tibble: 7 x 6
##   term        coefficient std_error t_stat coef_type           p_val
##   <chr>             <dbl>     <dbl>  <dbl> <chr>               <dbl>
## 1 parasites1+        7.45     1.51    4.93 coefficient 0.000000808
## 2 parasites2+        7.05     1.22    5.79 coefficient 0.00000000711
## 3 parasites3+        6.27     1.08    5.81 coefficient 0.00000000621
## 4 parasites4+        5.94     1.05    5.66 coefficient 0.0000000148
## 5 parasites5+        7.45     1.51    4.93 coefficient 0.000000808
## 6 HC|UM              2.61     0.733   3.56 scale       0.000377
## 7 UM|CM              6.05     1.02    5.92 scale       0.00000000319
```

Chi-squared (binarize parasites variable)

parasites_bin	UM	CM
low	15	27
high	18	18

```
##
##  Pearson's Chi-squared test with Yates' continuity correction
##
## data:  df_parasite_counts_binned %>% as.data.frame %>% column_to_rownames("parasites_bin")
## X-squared = 1.0883, df = 1, p-value = 0.2968
```

Logistic regression (binarize parasites variable)

```
## # A tibble: 2 x 5
##   term              coefficient std_error t_stat p_value
##   <chr>                   <dbl>     <dbl>  <dbl>   <dbl>
## 1 (Intercept)             0.370     0.241 1.53     0.125
## 2 parasites_binhigh      19.2    1768.    0.0109   0.991
```

HRP & parasitemia in CM patients

hrp2	parasitemia
9531 (5116.5, 10810.5)	29500 (4593, 162200)