# RHICCA Six Month Visual Summary

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## RHICCA 6 Month Data: Visual Summary

This document contains graphs and charts showing the RHICCA data collected at six months, including each of the four biomarkers and how they may vary depending on ART status, gender, and age. Of the 827 samples in the six month data, 735 could be successfully matched with clinical data, though some errors and outliers may still be present.

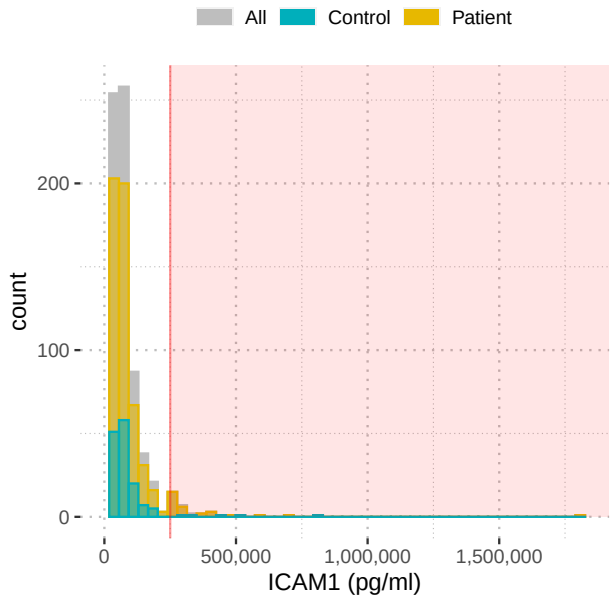
The data for each biomarker is either left-censored or right-censored due to the detection limits imposed by the Luminex Assay. Regions outside of these limits are shaded in red in the histograms, although there is still some uncensored data that lies beyond the detection limits.

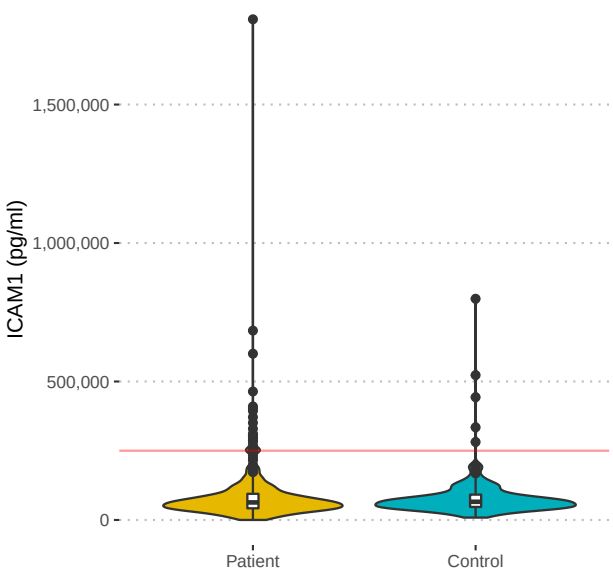
As the data for all biomarkers displays significant rightwards skew, graphs are shown on their original scale as well as a log scale for the purpose of reducing spread, thus enabling easier visual analysis.

### ICAM1: ART vs Control

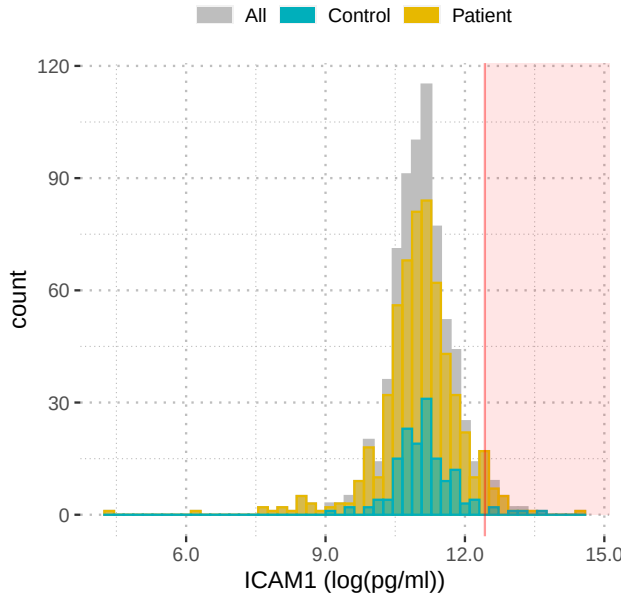
We see that the distribution of ICAM1 is heavily right-skewed. Both control and ART groups seem to be similarly distributed, although the ART patient group seems to have a greater number of extreme values.

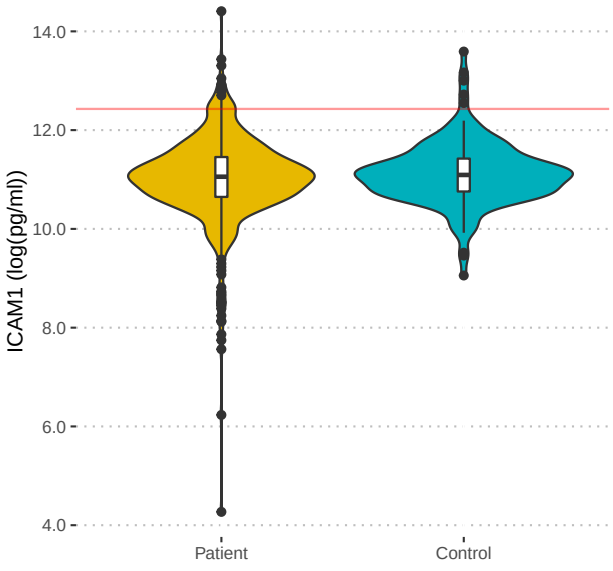
There are seven values which have been censored at 250,000 pg/ml, but these do not form a significant peak.



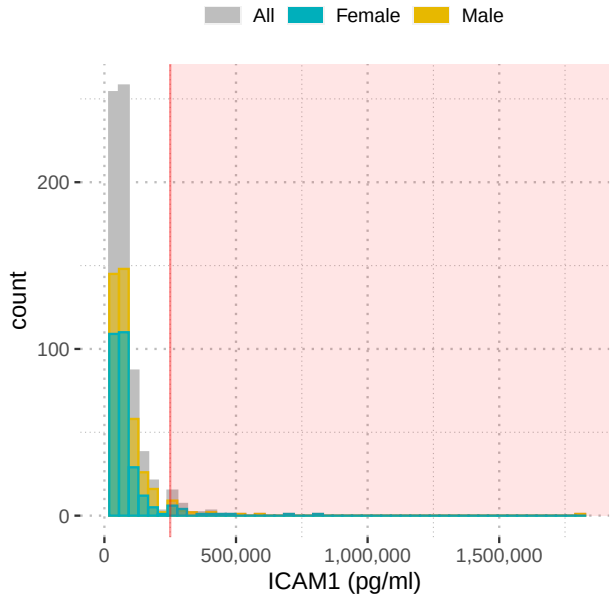

### Log Scale

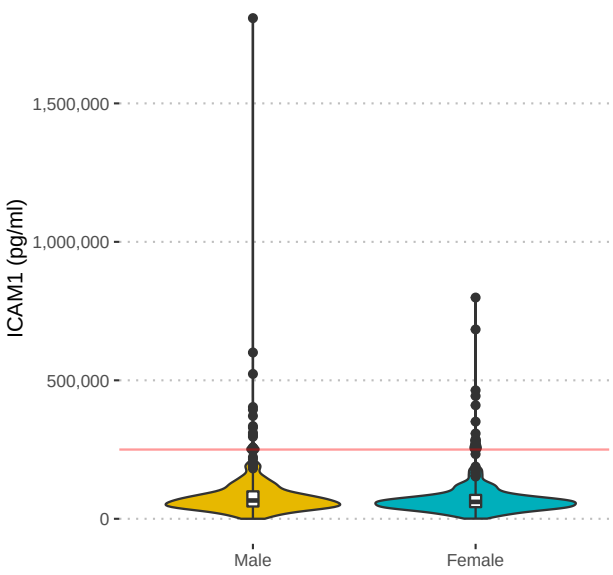


### ICAM1: Gender

The data, when separated by gender, does not seem to show any significant differences in distribution.

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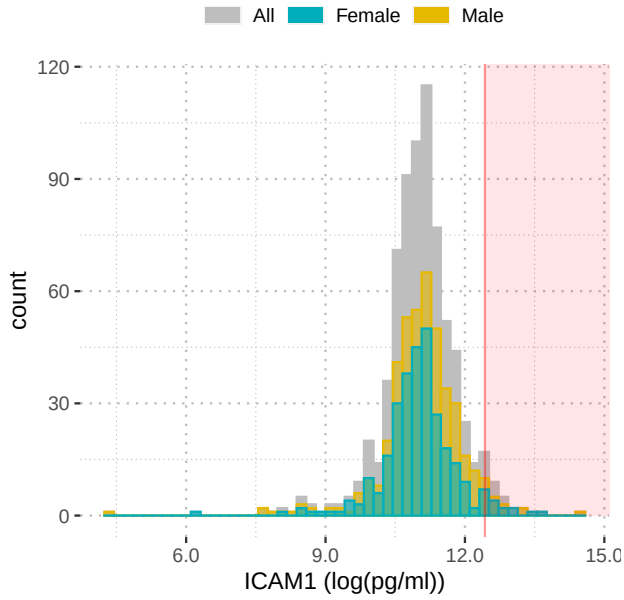
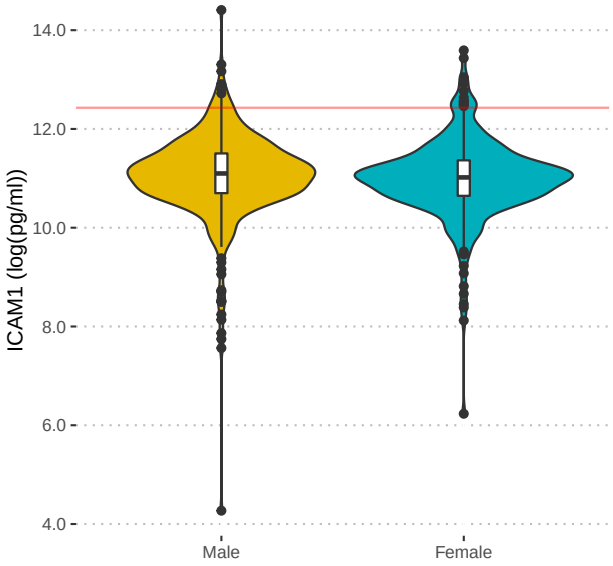
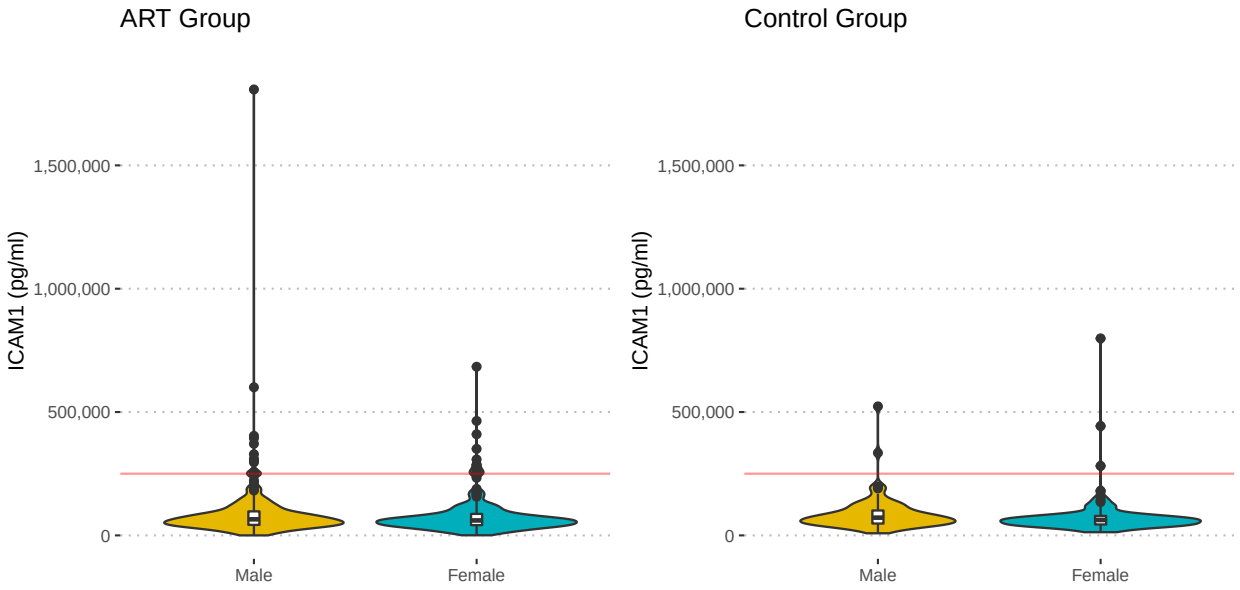


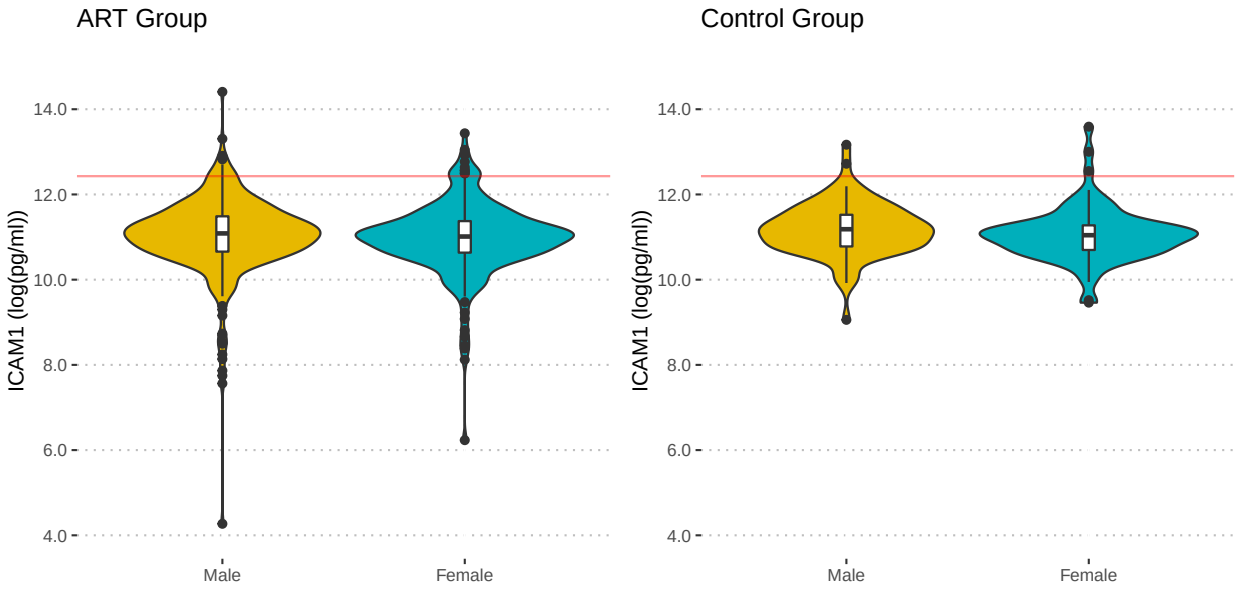



### ICAM: Gender and ART status

The ICAM1 distributions for the ART and control groups do not seem to be impacted differently by gender.

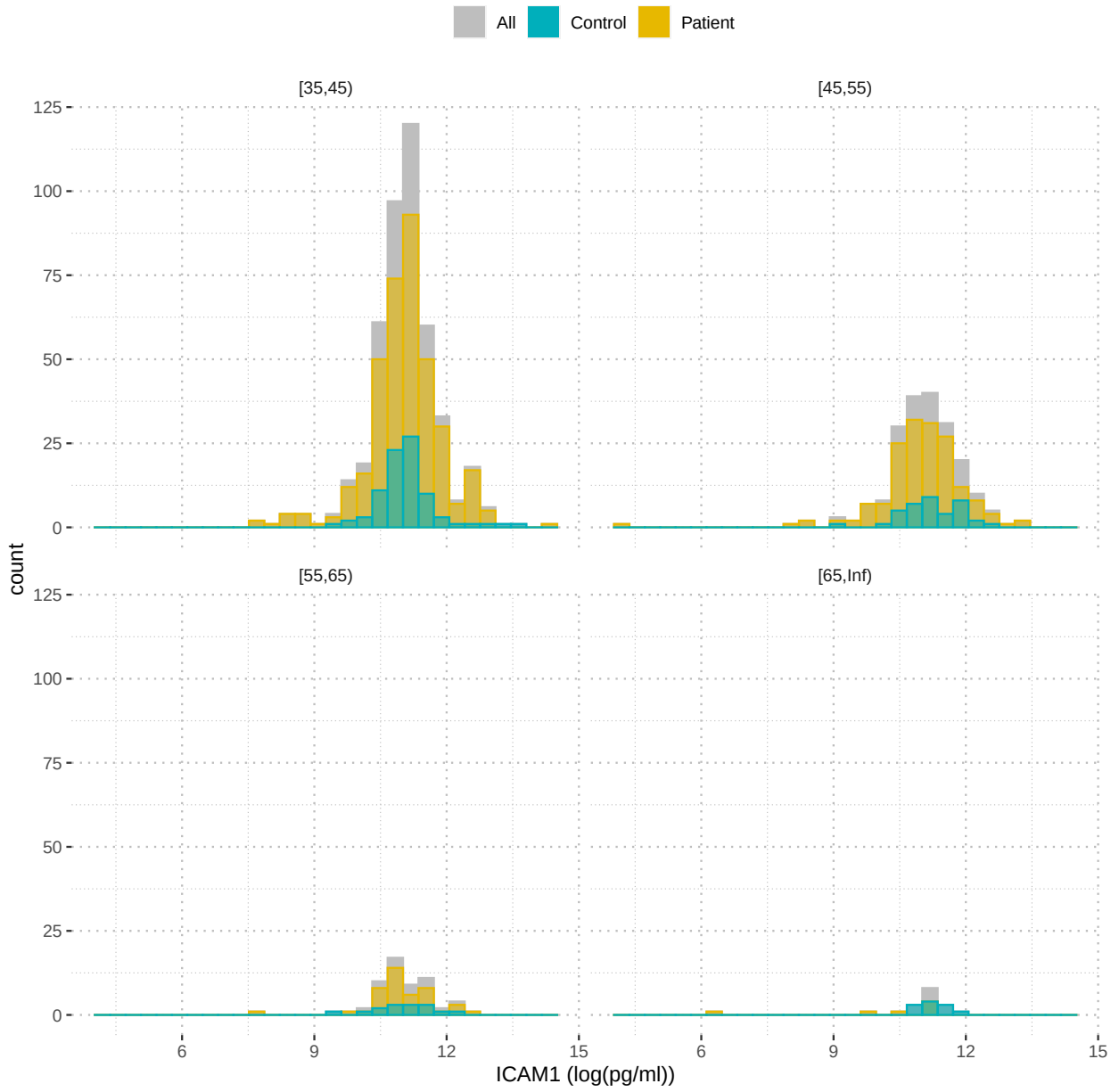



### Log Scale



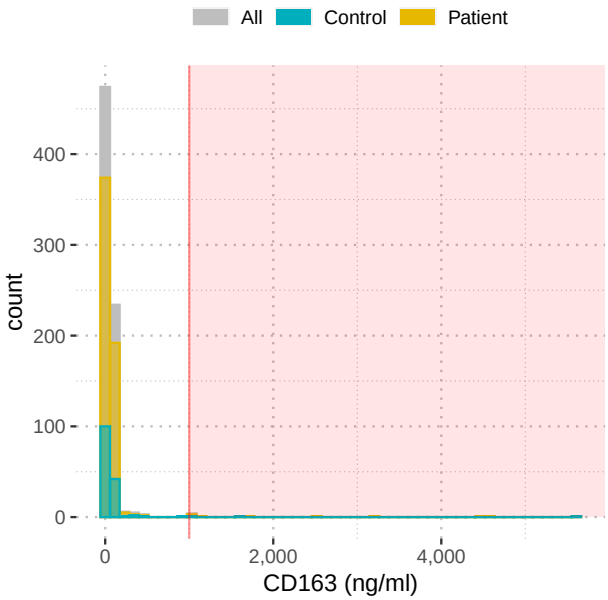
### ICAM1: Age (Log Scale)

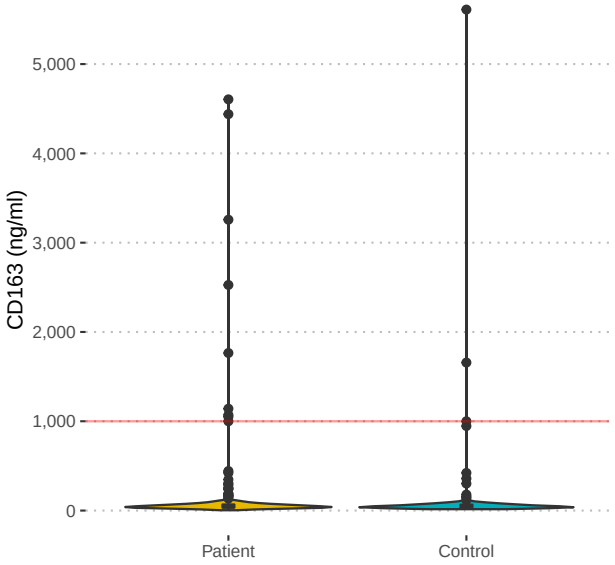
Separating by age group does not seem to show significant differences in distribution.



### CD163: ART vs Control

The CD163 distributions seem very similar for ART and control groups, with a strong right skew. Only 2 values are censored for the 6 month data, so this does not strongly influence the distribution's appearance.

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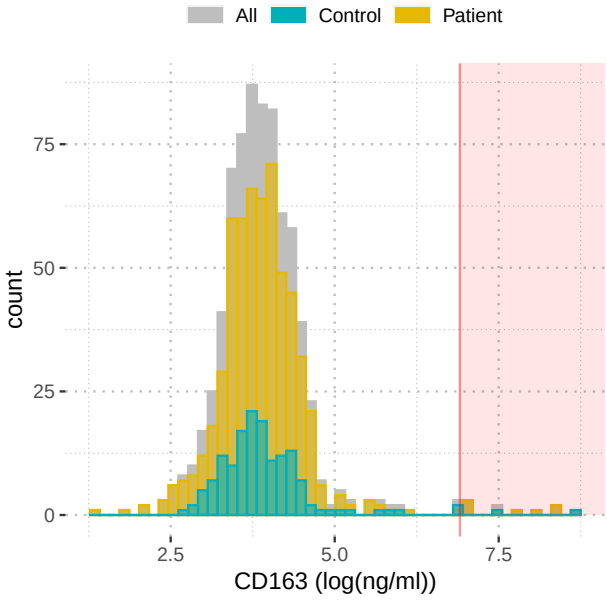
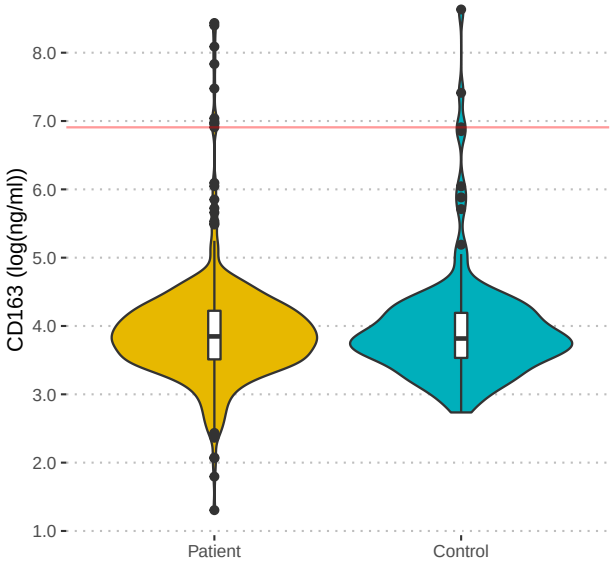
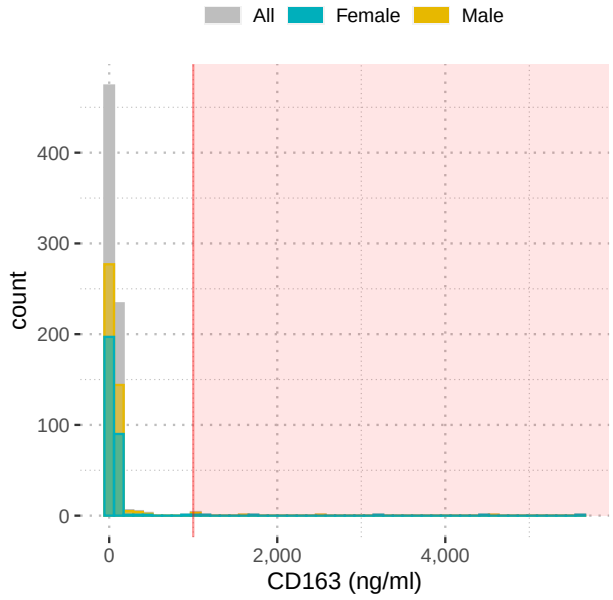
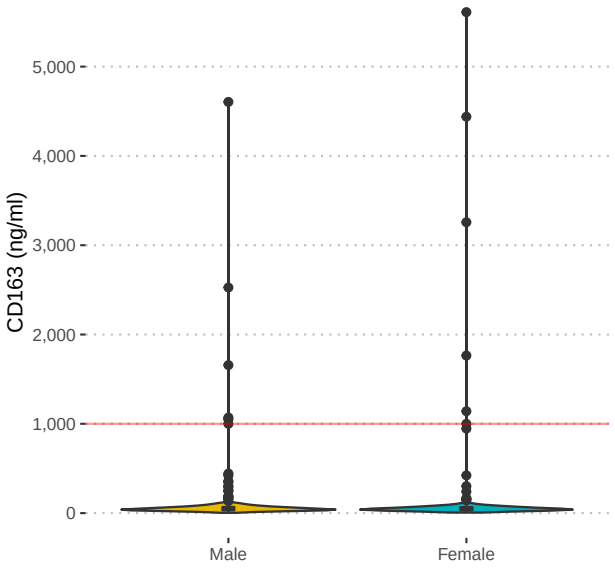


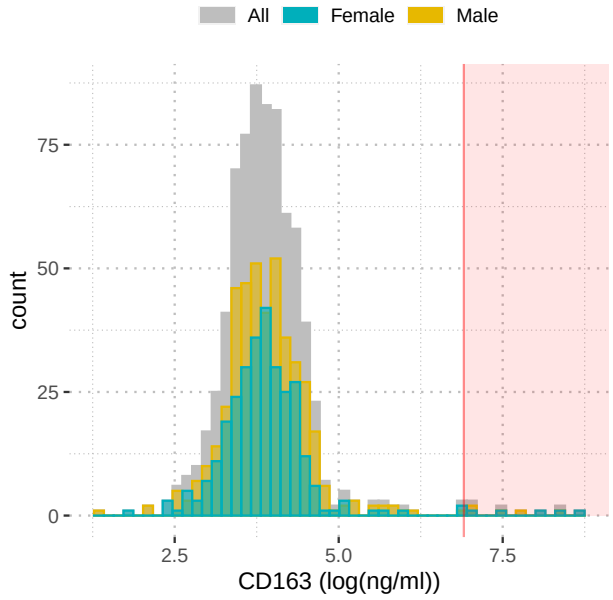
### CD163: Gender

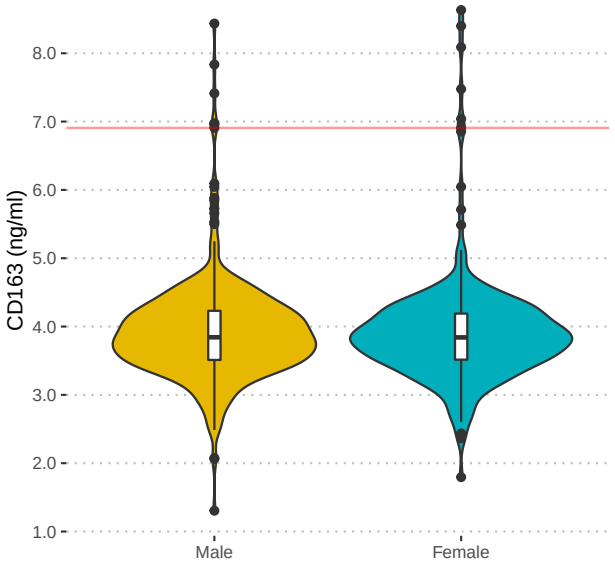
The data does not appear to differ greatly between gender groups.



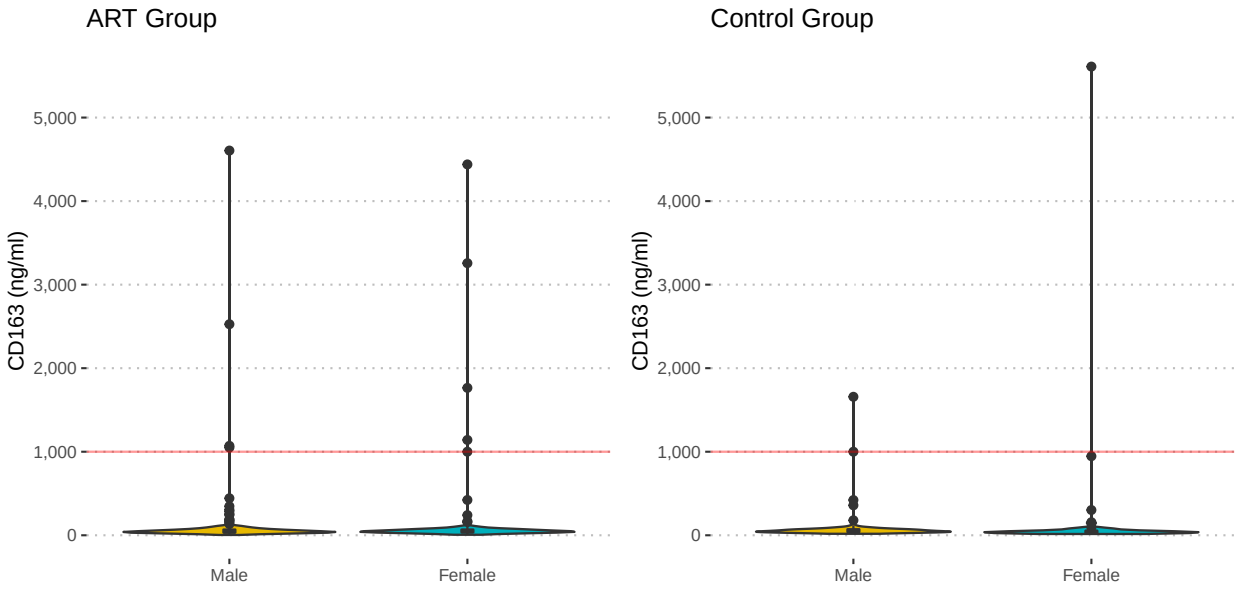

### Log Scale



### CD163: Gender and ART status

It seems that in our sample, there is a greater difference between the ART and control groups' CD163 levels for women than for men, but this appears very small.

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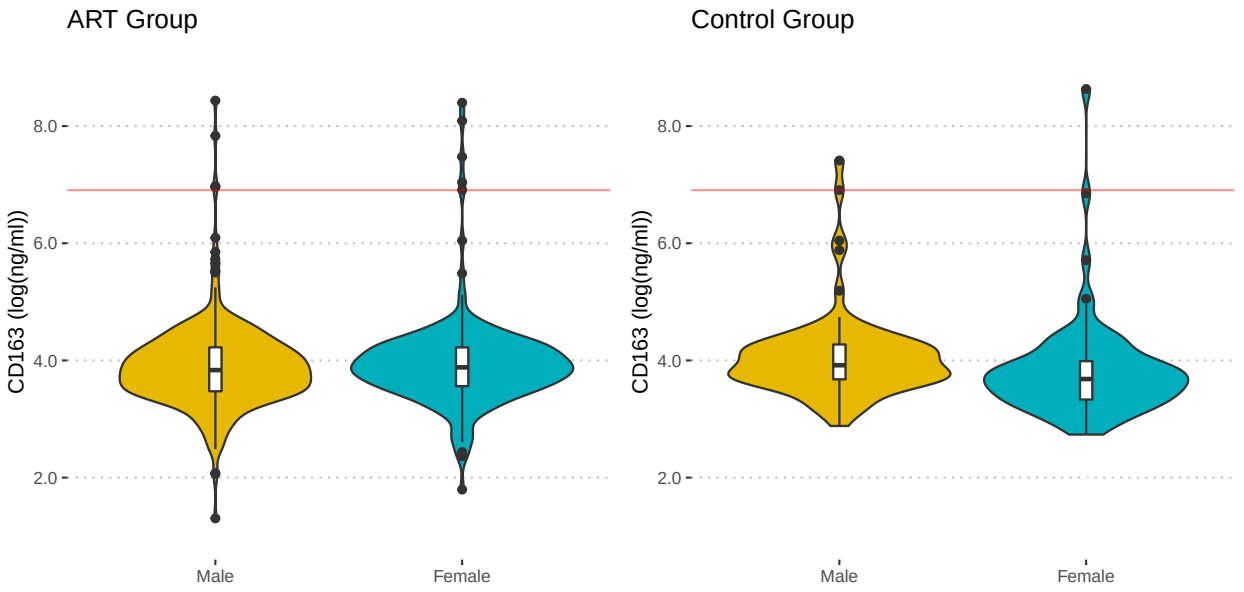
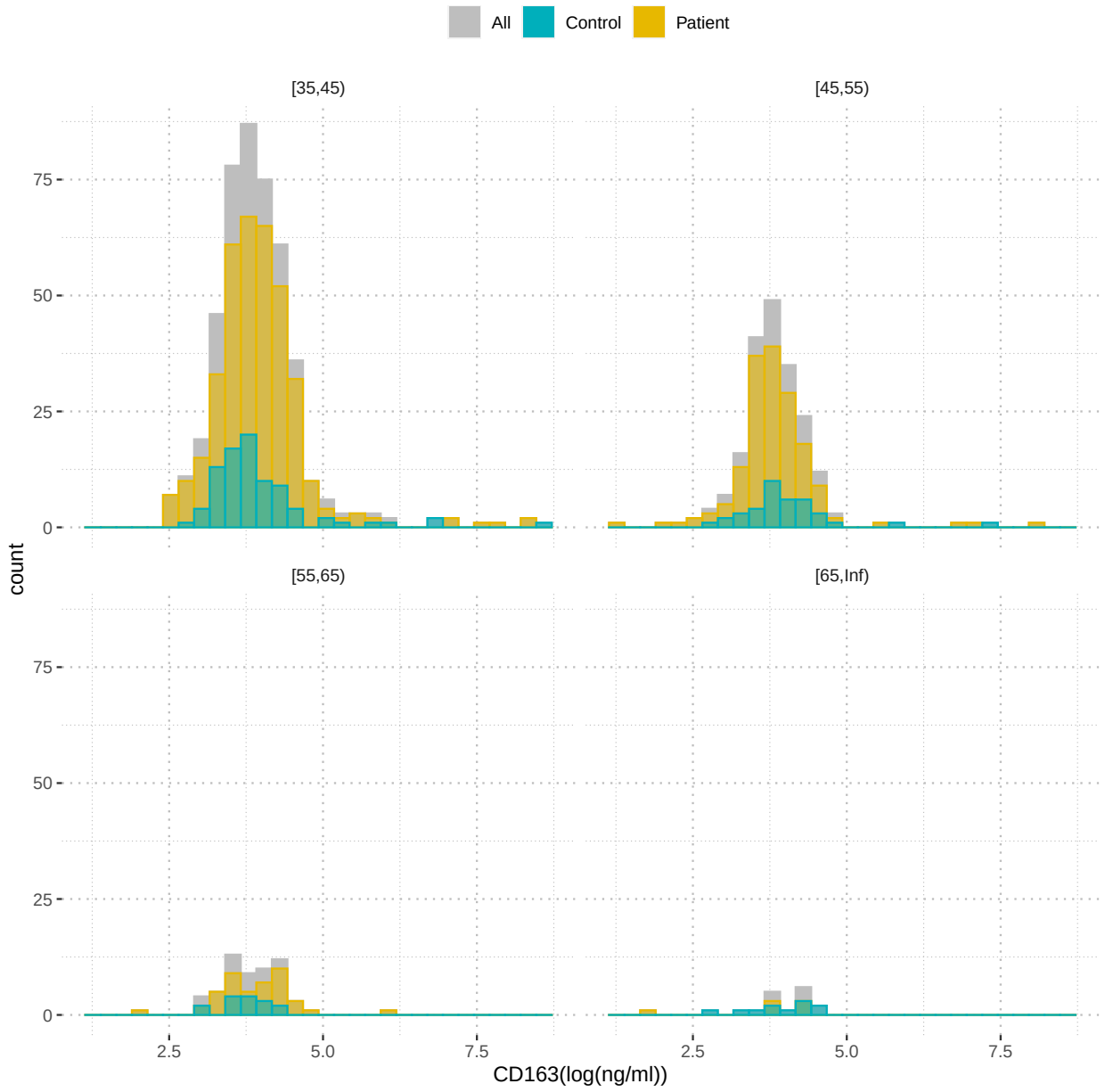


### CD163: Age (Log Scale)

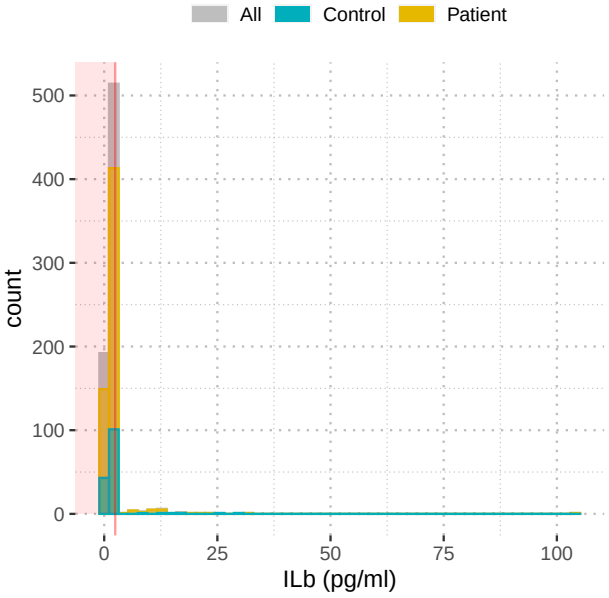
Separating by age group does not seem to show significant differences in distribution.

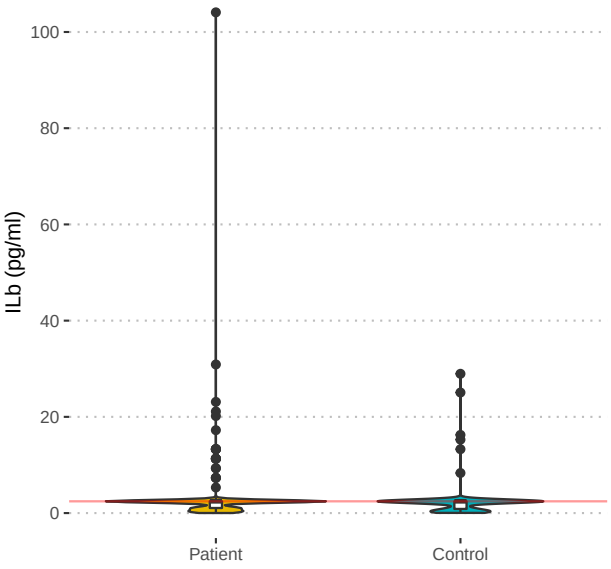


### ILb: ART vs Control

Once again we come across the issue of a large proportion of values being censored. At six months, 466 out of 766 values (about 2/3 of the data) were given as "<2.44140625". The vast majority of the remaining values actually fall below the lower detection limit as well, although these can be presumed to still be valid observations.

There is one very extreme value of 104.081164 in the ART patient group. There is currently no evidence to suggest that this is an error. The relatively small number of non-censored observations makes discerning patterns in the distributions difficult, but the distributions for ART and control patients do seem similar.

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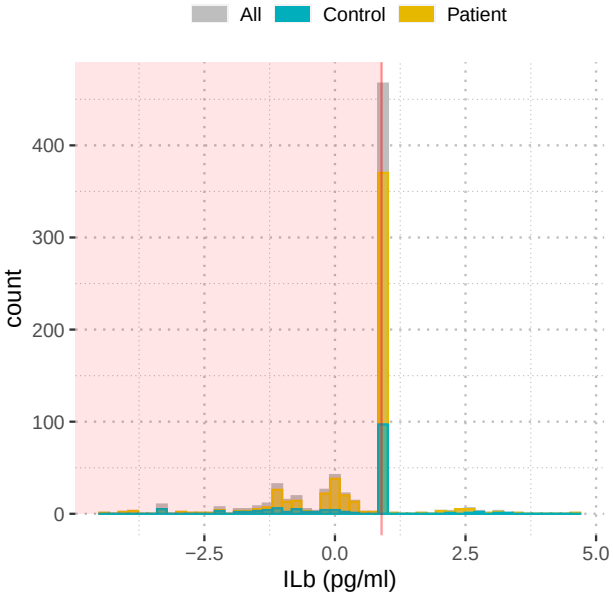
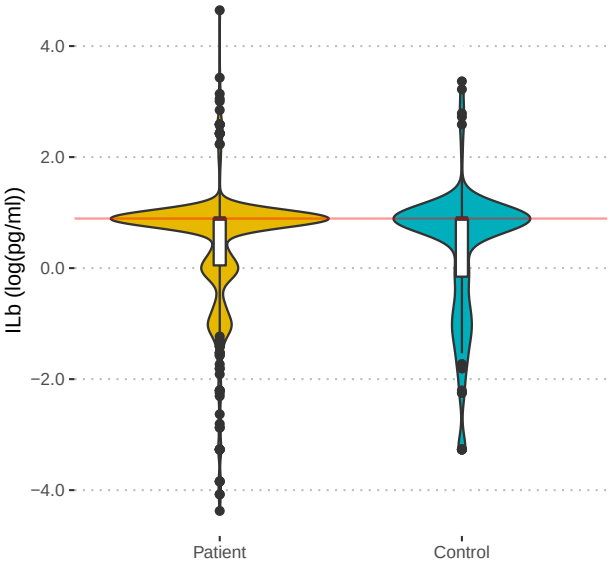
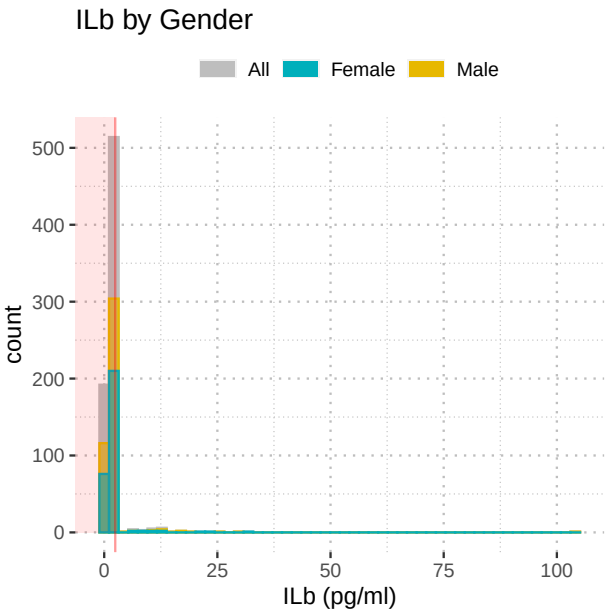
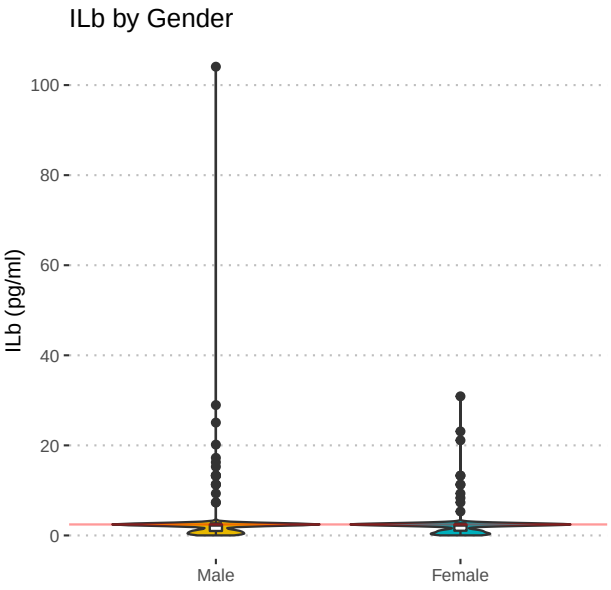


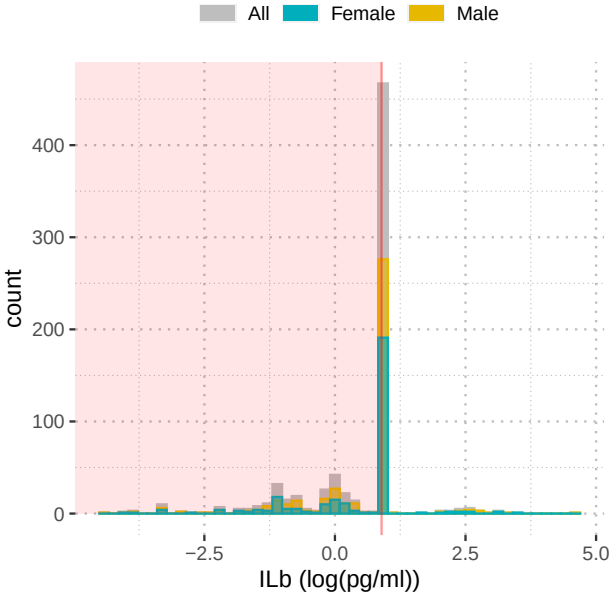
### ILb: Gender

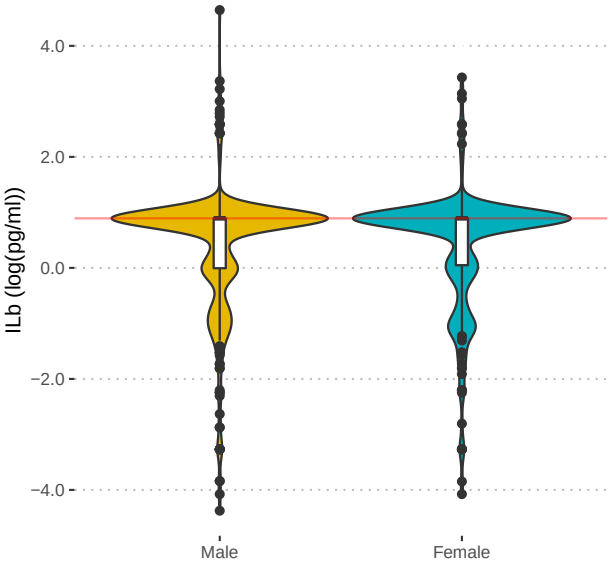
The data does not appear to differ greatly between gender groups.



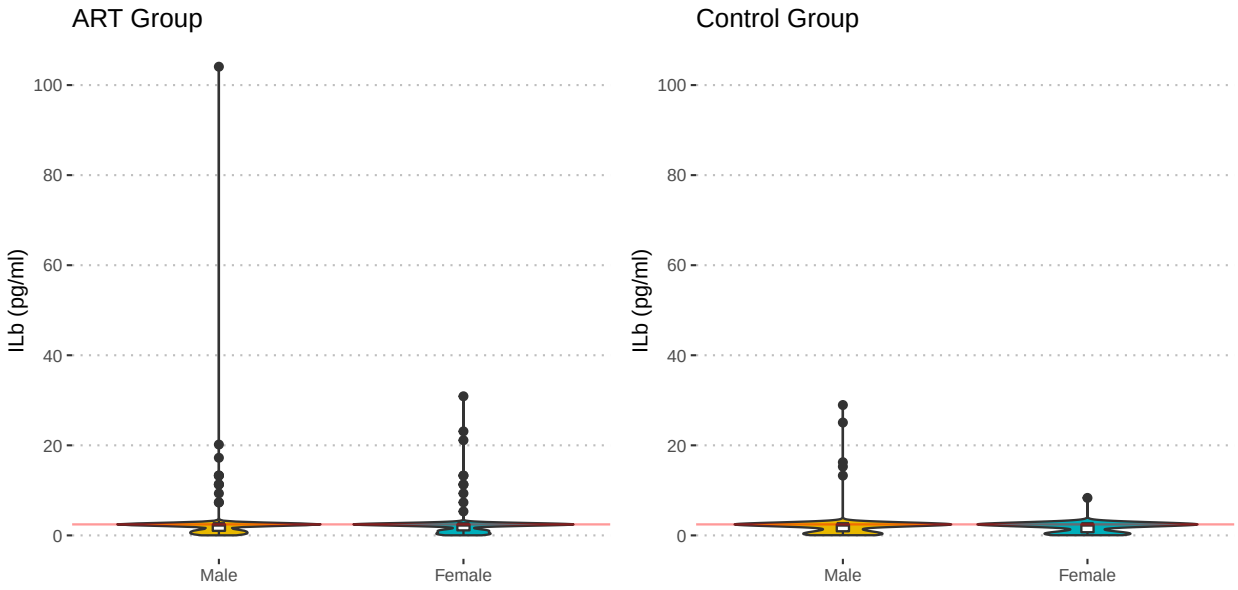

### Log Scale



### ILb: Gender and ART status

The ART and the control groups do not seem to be impacted differently by gender.

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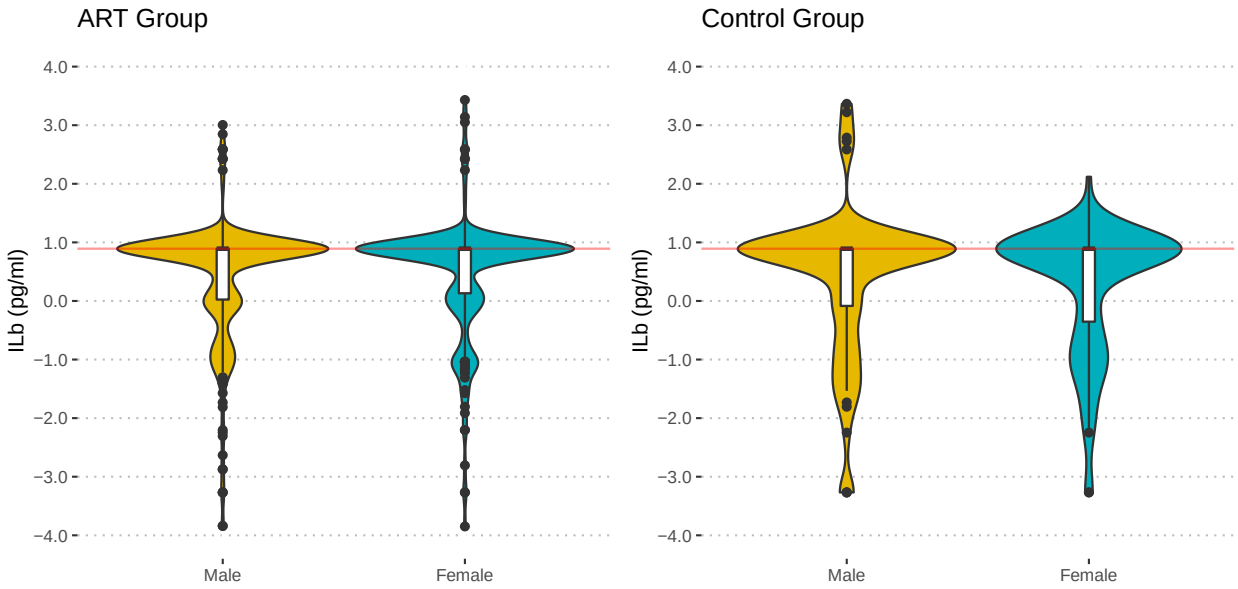
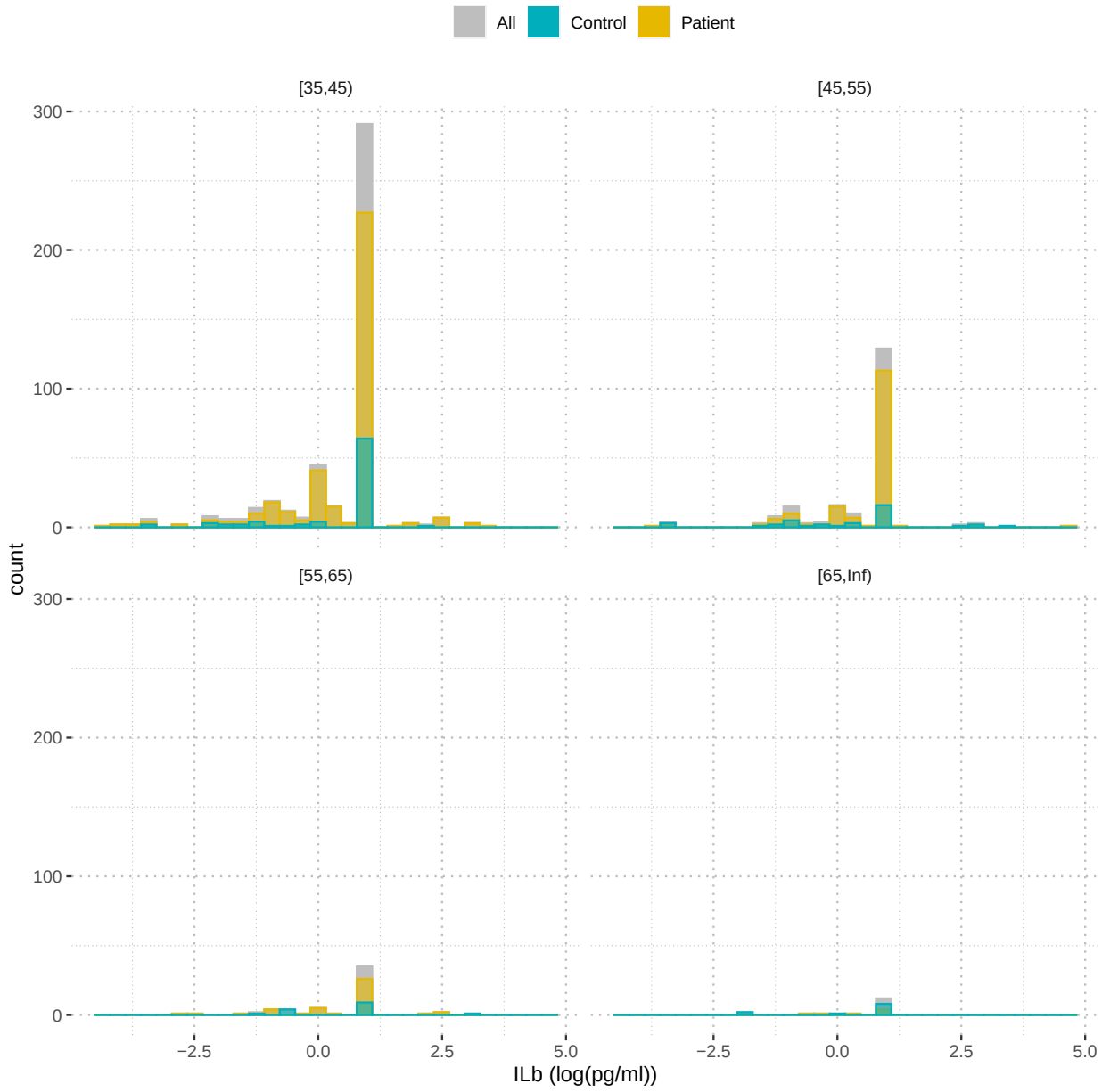


### ILb: Age (Log Scale)

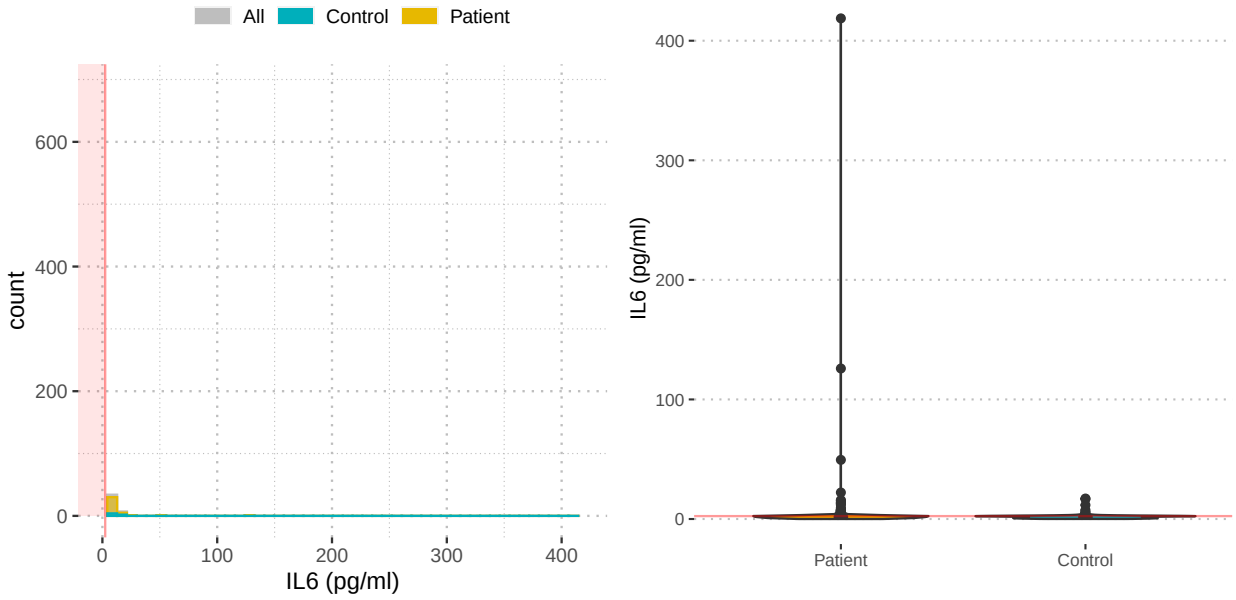
Separating by age group does not seem to show significant differences in distributions



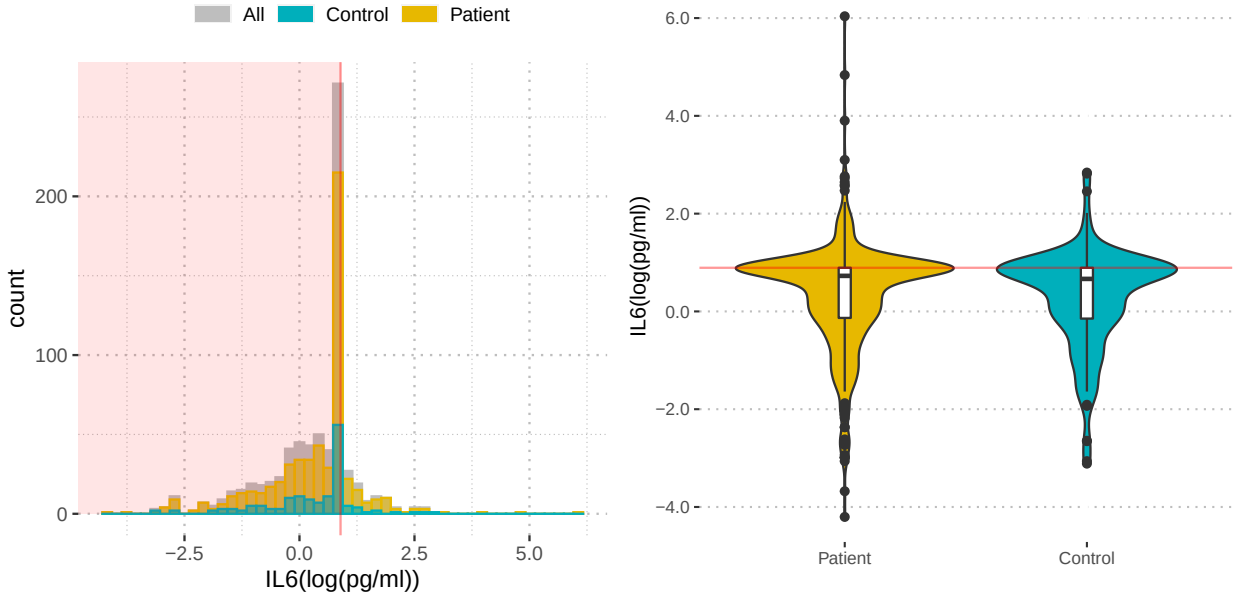
### IL6: ART vs Control

Once again we see a very strong rightwards skew, such the the data is spread out that the original-scale plots look practically flat. There is an extreme value of 418.7081 in the ART group which currently is not known to be an error.

The ART group tends to have slightly higher values than the control group, but the two distributions look very similar overall. When plotted on a log scale we see a peak at log(2.441406) pg/ml, the lower detection limit, as 239 of the samples (around 1/3 of the data) are censored at this limit. A large proportion of uncensored data lies below this limit, although these can be presumed to be valid observations.

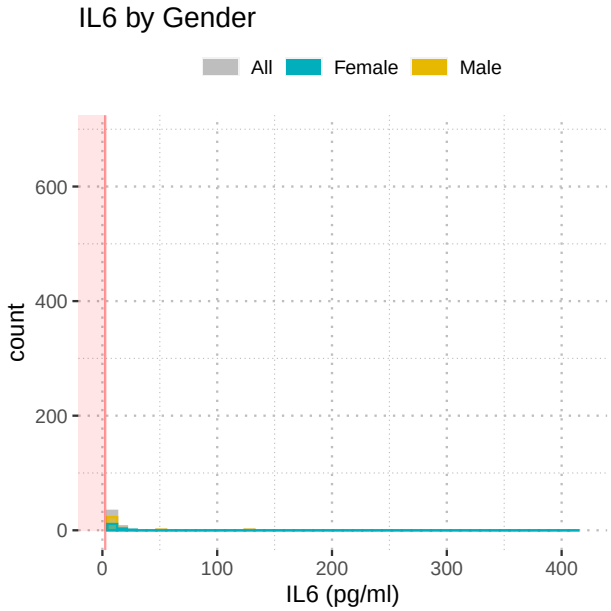


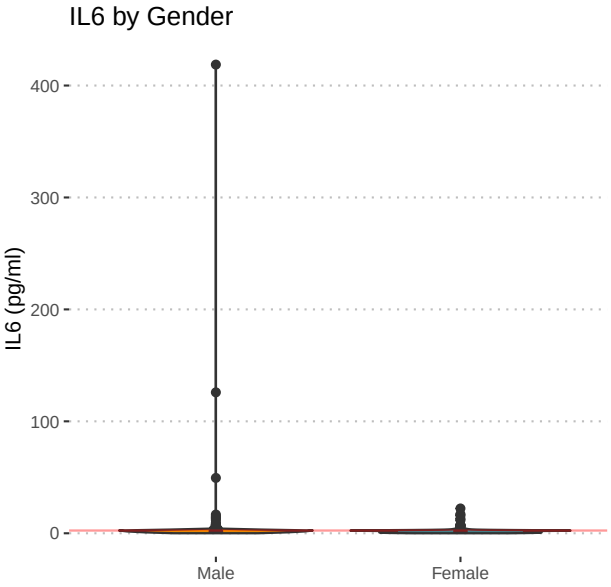

### Log Scale



### IL6: Gender

The data does not appear to differ greatly between gender groups, though the male group does appear slightly more likely to experience higher IL6 levels.

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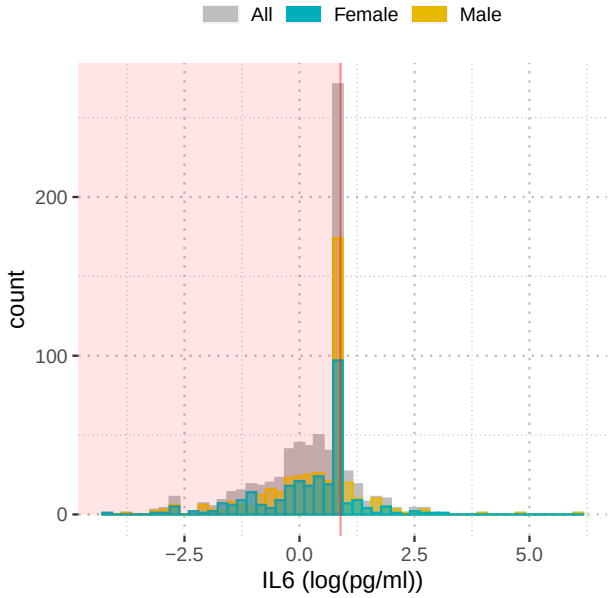
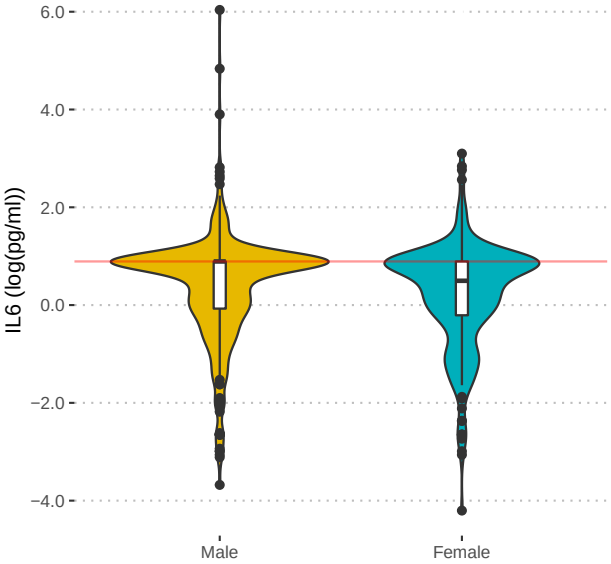
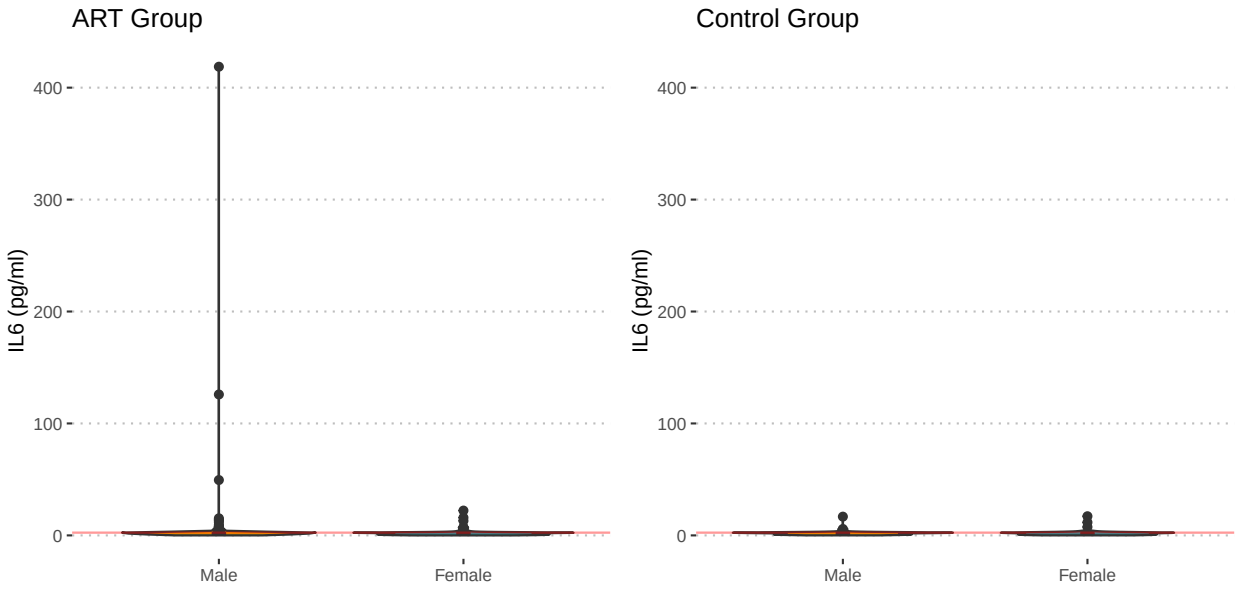


### IL6: Gender and ART Status

The ART and the control groups do not seem to be impacted differently by gender.

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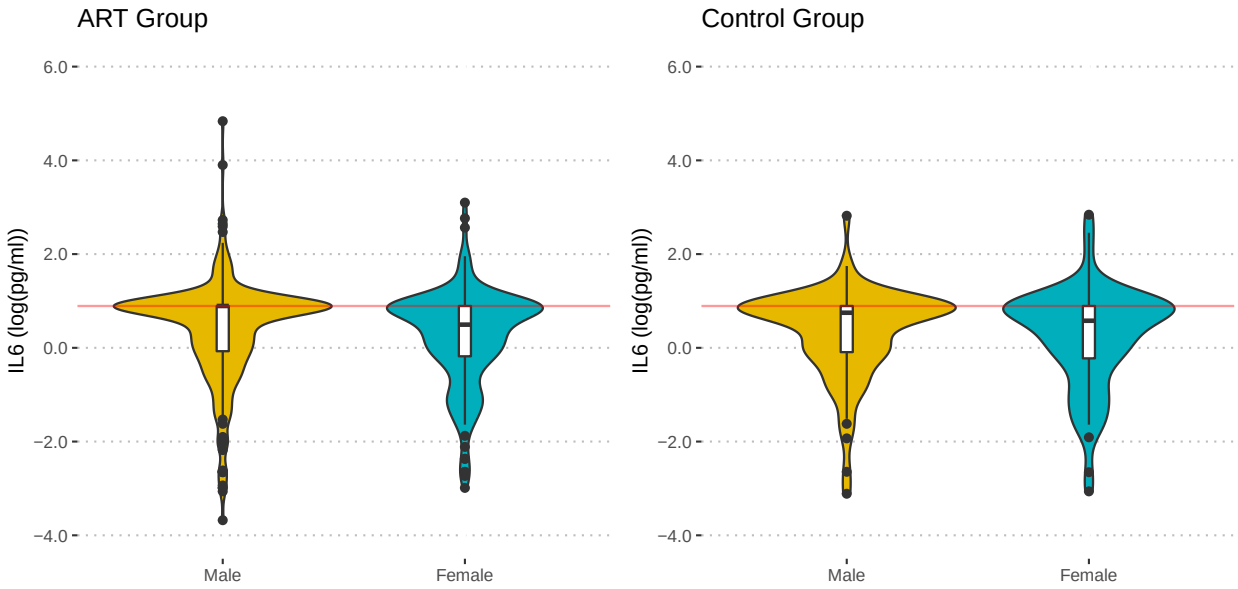

### IL6: Age (Log Scale)

Separating by age group does not seem to show significant differences in distribution