Analysis of Epigenetic Gestational Age Acceleration Relative to Chronological Age

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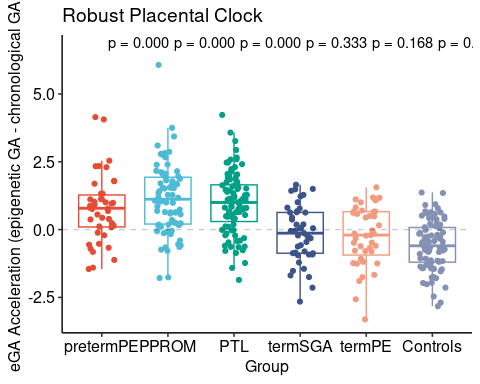
9/13/2024

### Calculate,compare, and plot epigenetic gestational age acceleration

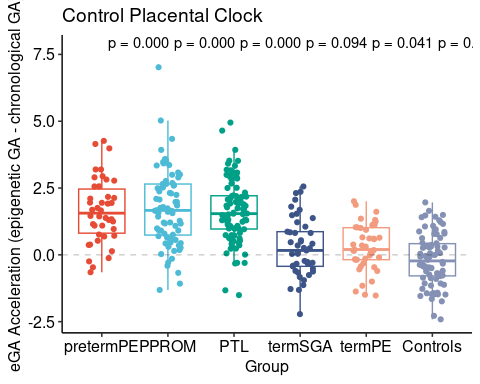
groups <- c("pretermPE","PPROM","PTL","termSGA","termPE","Controls")

## Compare eGA acceleration Using different clocks

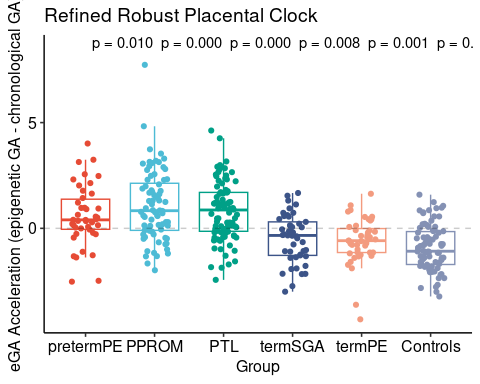
rpc\_results <- analyze\_eGA\_acceleration(ano, "ga\_rpc", "Del\_GA\_Calc",  
 groups=groups,  
 title="Robust Placental Clock")  
rpc\_results



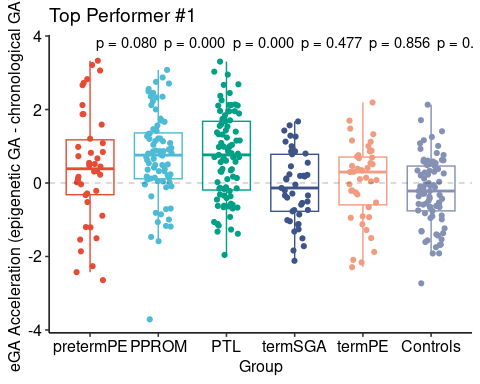
cpc\_results <- analyze\_eGA\_acceleration(ano, "ga\_cpc", "Del\_GA\_Calc",  
 groups=groups,  
 title="Control Placental Clock")  
cpc\_results



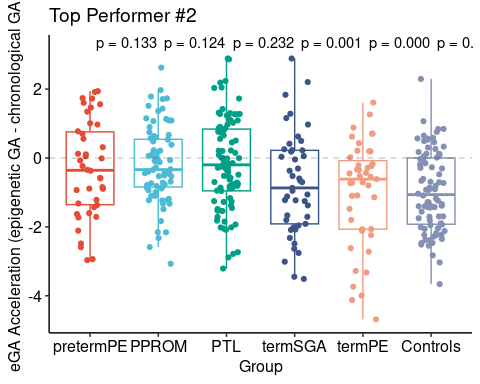
rrpc\_results <- analyze\_eGA\_acceleration(ano, "ga\_rrpc", "Del\_GA\_Calc",  
 groups=groups,  
 title="Refined Robust Placental Clock")  
rrpc\_results



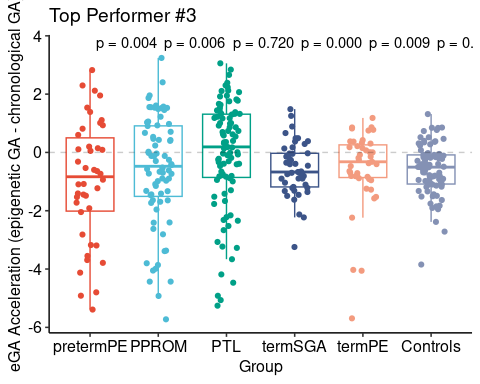
top\_teams <- test\_ranking |>   
 group\_by(submitterid) |>   
 slice\_min(Test\_rmse, n = 1, with\_ties = FALSE) |>   
 ungroup() |>   
 slice\_min(Test\_rmse, n = 3, with\_ties = FALSE) |>   
 mutate(stamp = paste("ga", submitterid, evaluationid, sep = "\_")) |>   
 pull(stamp)  
  
top\_team\_results\_1 <- analyze\_eGA\_acceleration(ano, top\_teams[1],"Del\_GA\_Calc",  
 groups=groups,  
 title="Top Performer #1")  
top\_team\_results\_1



top\_team\_results\_2 <- analyze\_eGA\_acceleration(ano, top\_teams[2],"Del\_GA\_Calc",  
 groups=groups,  
 title="Top Performer #2")  
top\_team\_results\_2



top\_team\_results\_3 <- analyze\_eGA\_acceleration(ano, top\_teams[3],"Del\_GA\_Calc",  
 groups=groups,  
 title="Top Performer #3")  
top\_team\_results\_3



woc\_results <- analyze\_eGA\_acceleration(ano, "ga\_woc","Del\_GA\_Calc",  
 groups=groups,  
 title="Wisdom of Crowd")  
woc\_results

