

## Supplemental Materials.

**Supplemental Figure 1.** Heat map of 52 select proteins detected in serum from control and delirium cohorts clustered by Normalized Protein eXpression (NPX) values (Log<sub>2</sub> abundance).

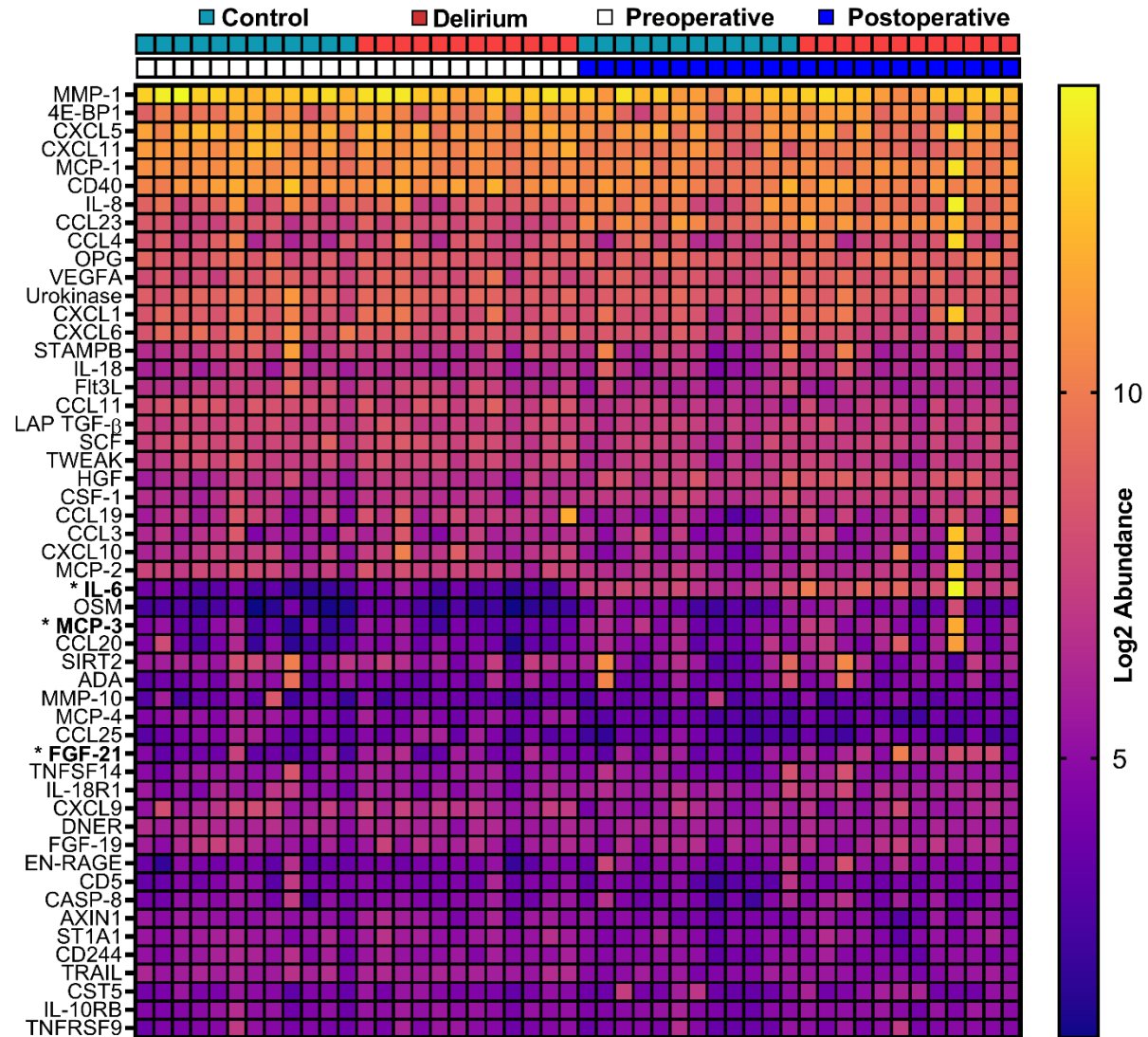
**Supplemental Figure 2.** Confusion assessment method-long form (CAM-LF) scores from postoperative day (POD) 1 through 3, recorded twice daily and shown relative to FGF-21 levels detected at POD1 morning (POD1am).

**Supplemental Figure 3.** Pearson correlation coefficients ( $r$ ) comparing relationships between multiple variables including FGF-21 and IL-6 expression.

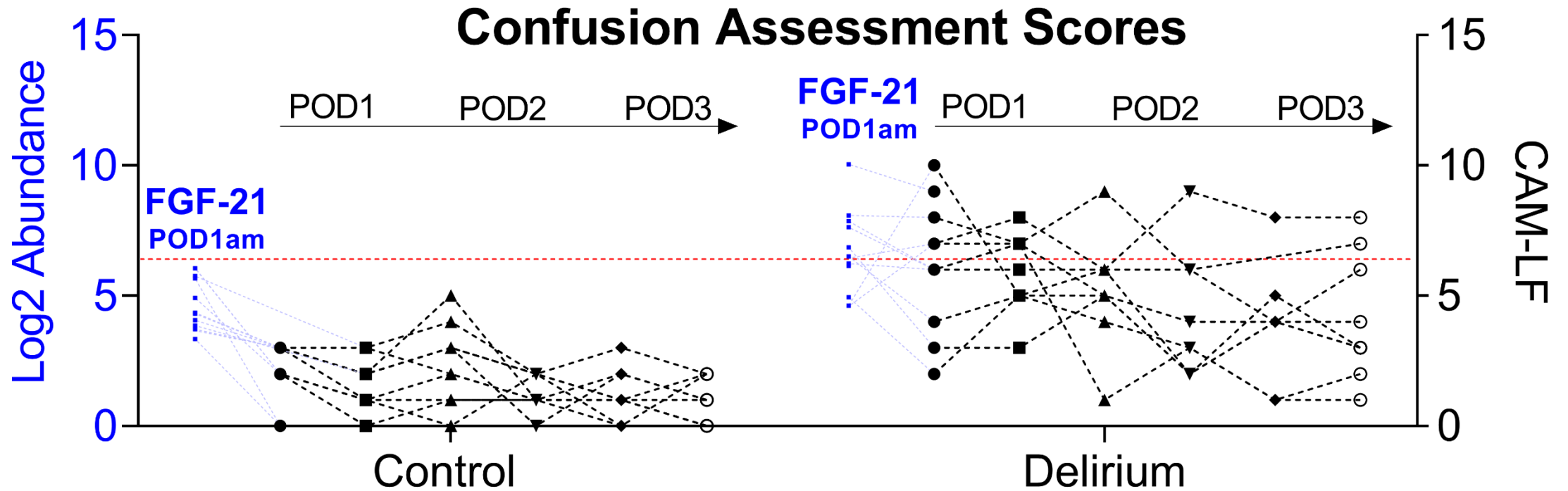
**Appendix A.** Individual graphs of proteins detected in the Olink proximity extension assays.

**Appendix B.** Individual graphs of proteins showing patient-specific changes from preoperative day 0 to postoperative day 1.

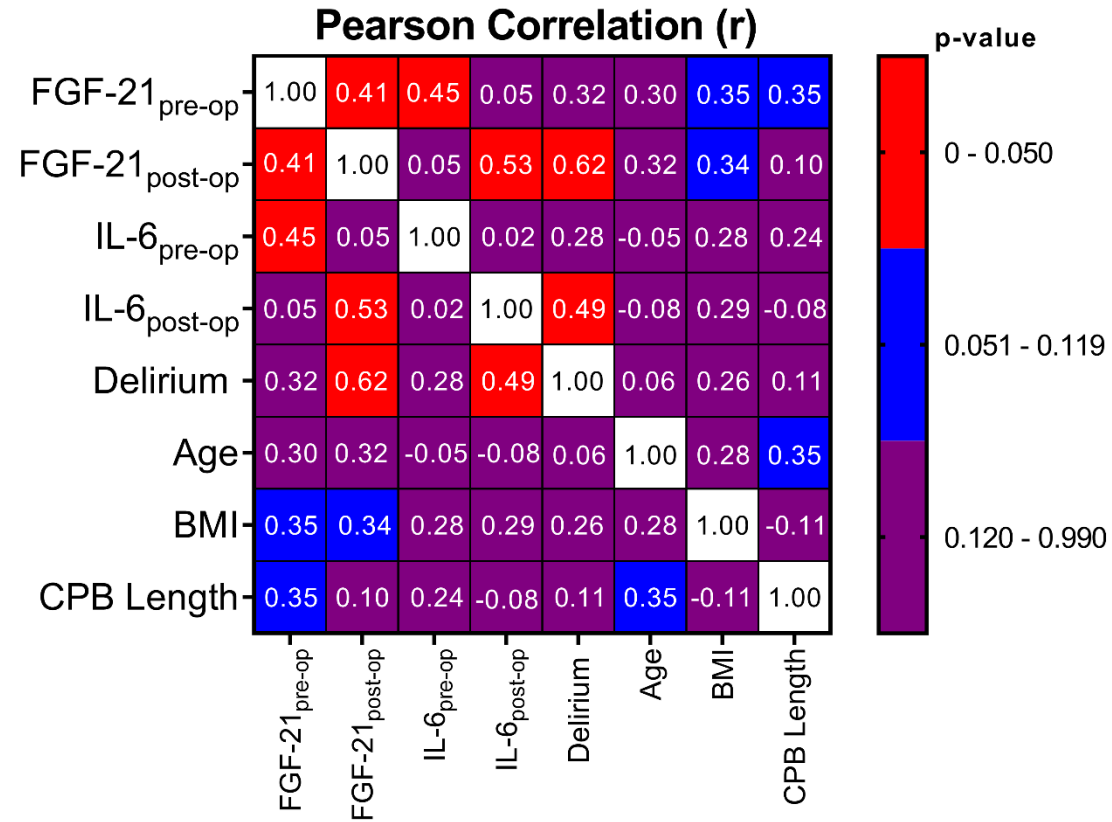
**Supplemental Figure 1.** Heat map of 52 select proteins detected in serum from control and delirium cohorts clustered by Normalized Protein eXpression (NPX) values (log2 abundance).



**Supplemental Figure 2.** Confusion assessment method-long form (CAM-LF) scores from postoperative day (POD) 1 through 3, recorded twice daily and shown relative to FGF-21 levels detected at POD1 morning (POD1am). The dotted red line represents the average postoperative FGF-21 level detected in the delirium cohort.



**Supplemental Figure 3.** Pearson correlation coefficients ( $r$ ) comparing relationships between multiple variables including FGF-21 and IL-6 expression.

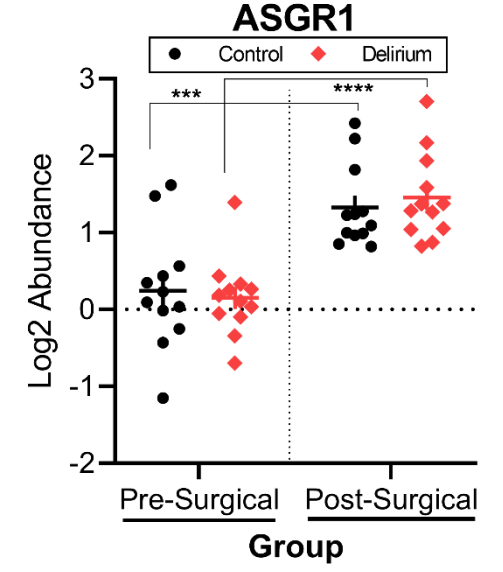
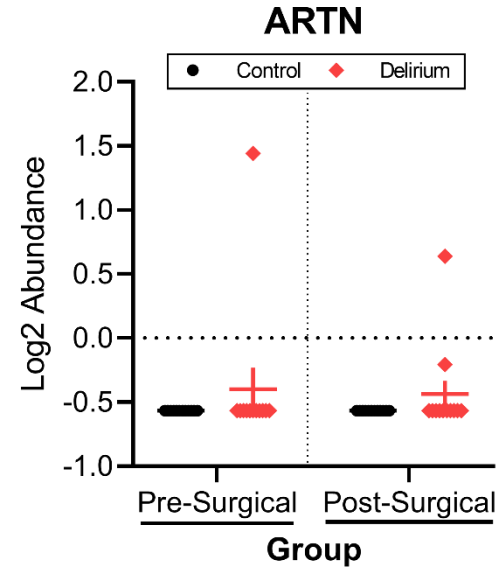
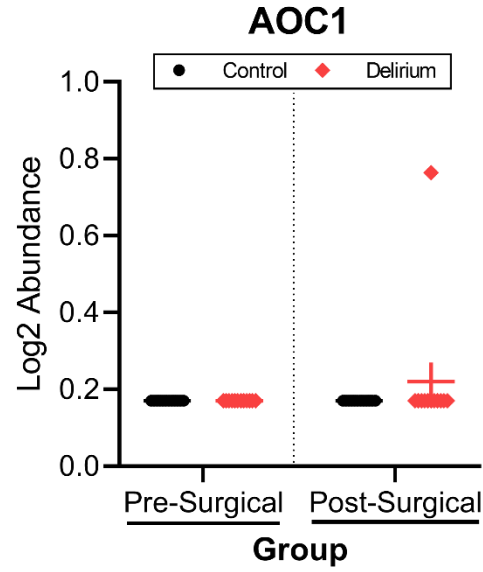
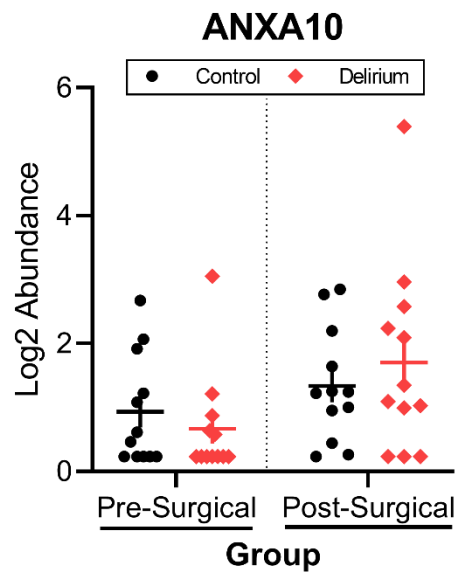
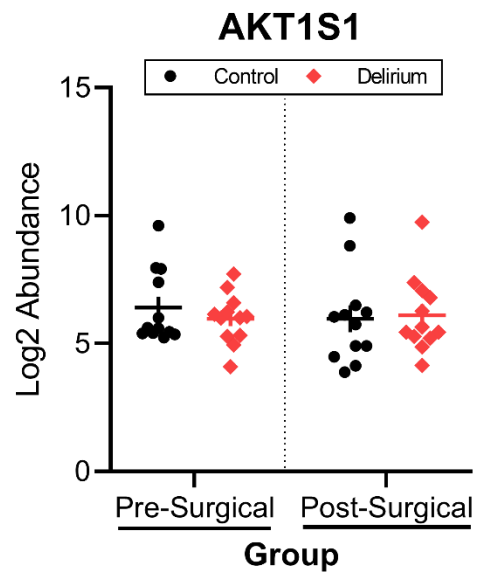
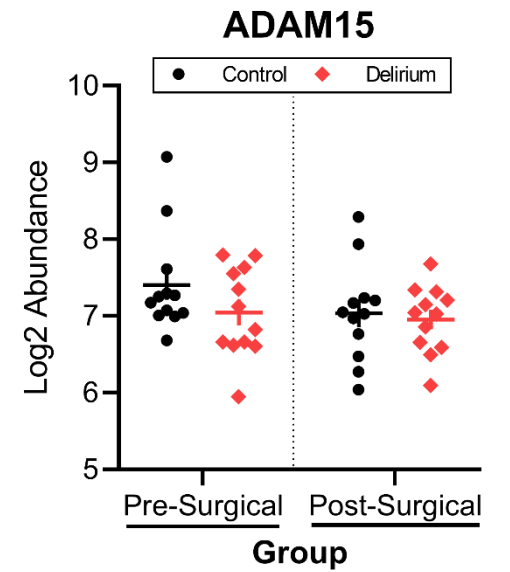
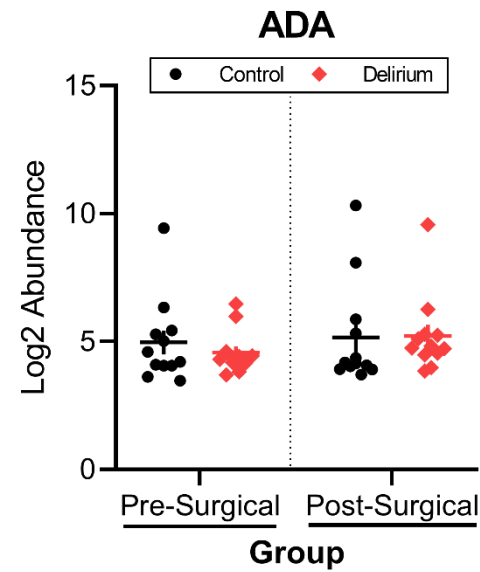
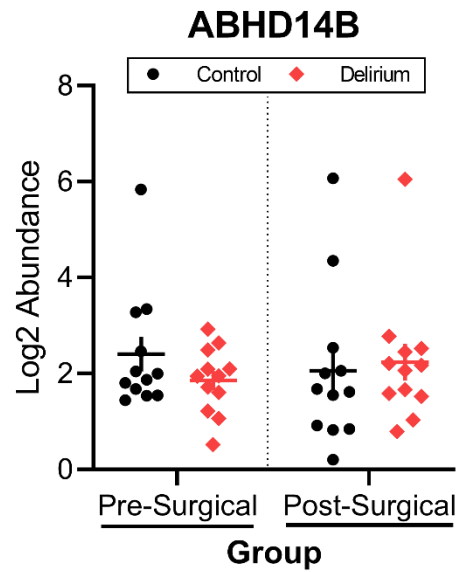
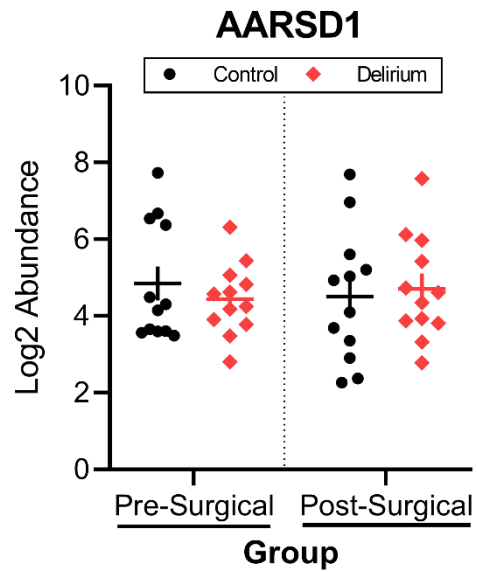
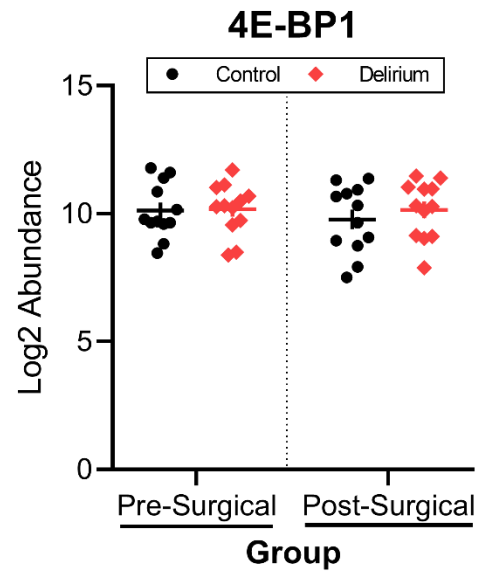


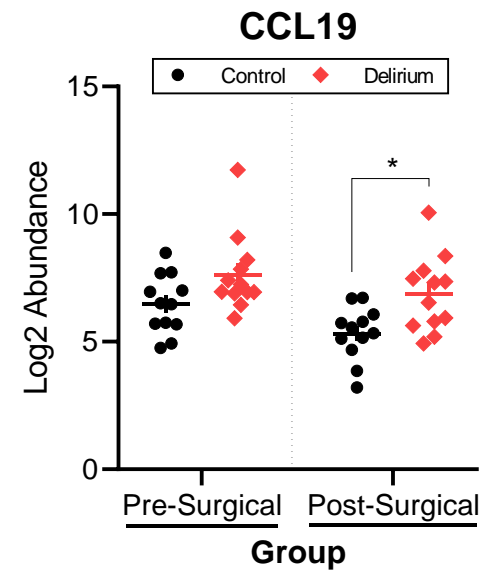
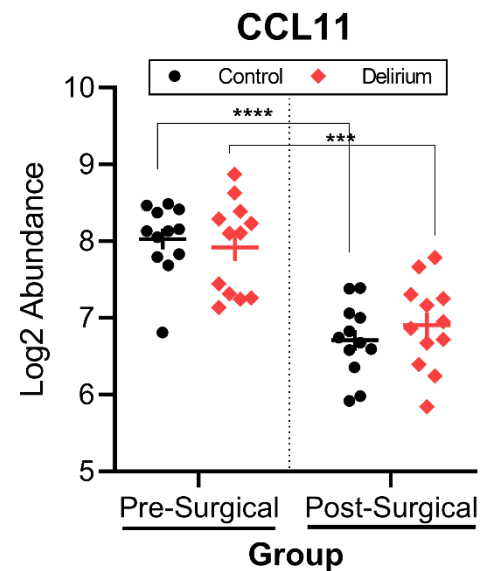
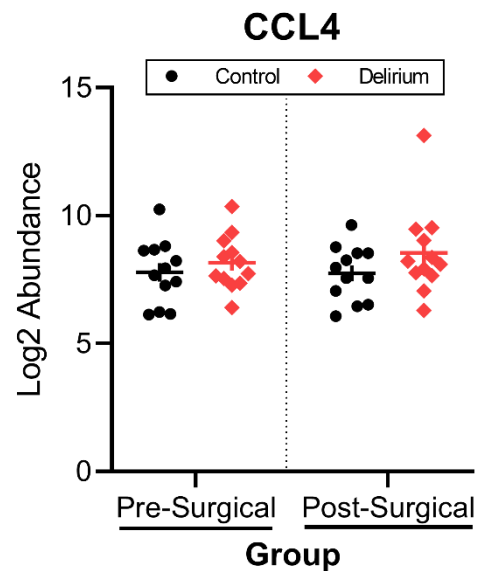
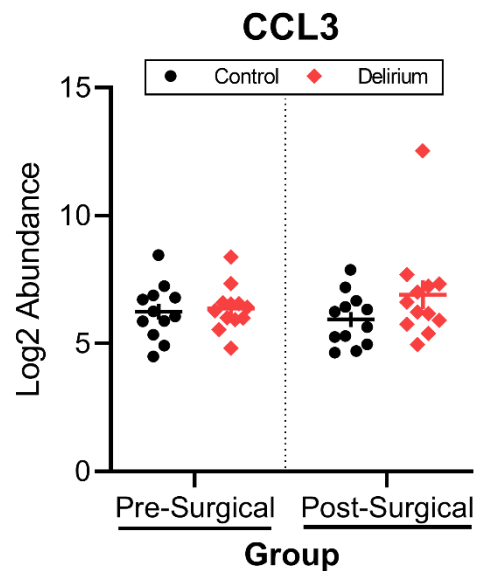
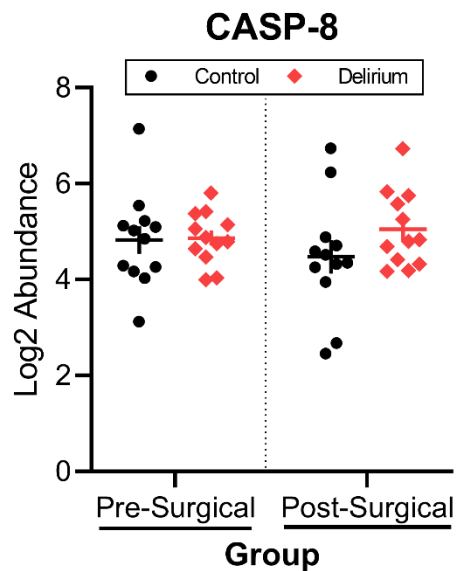
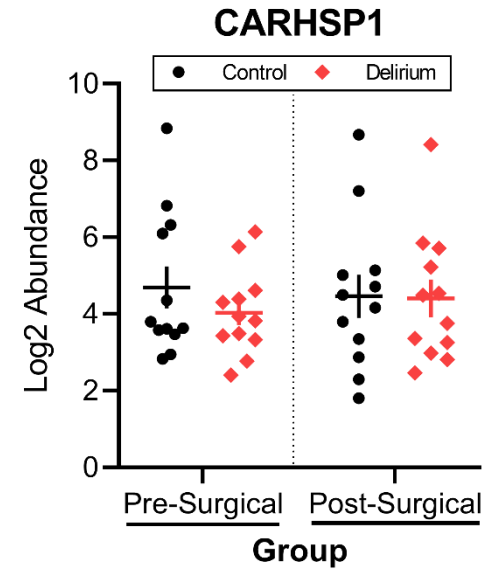
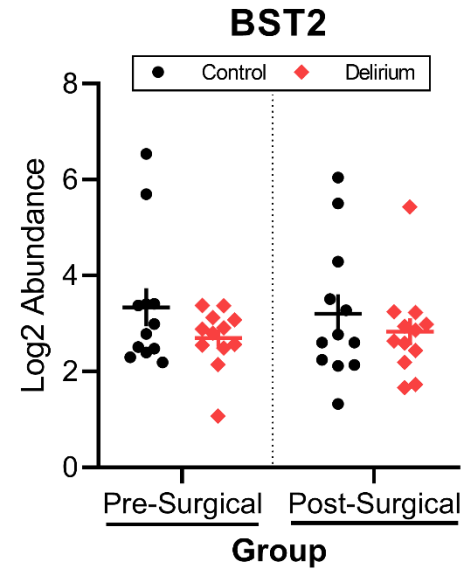
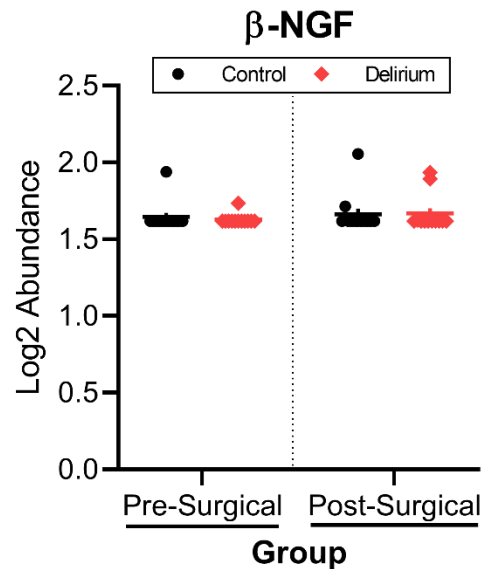
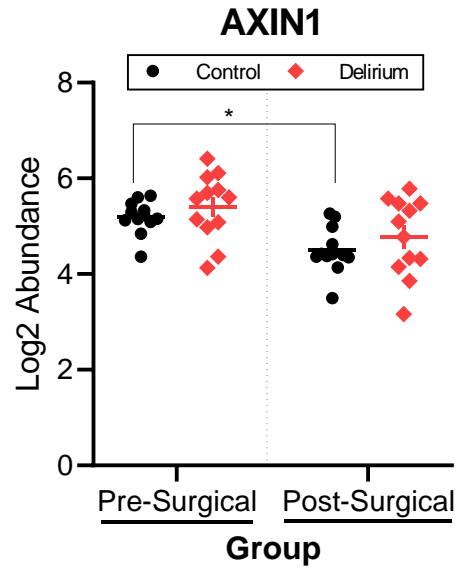
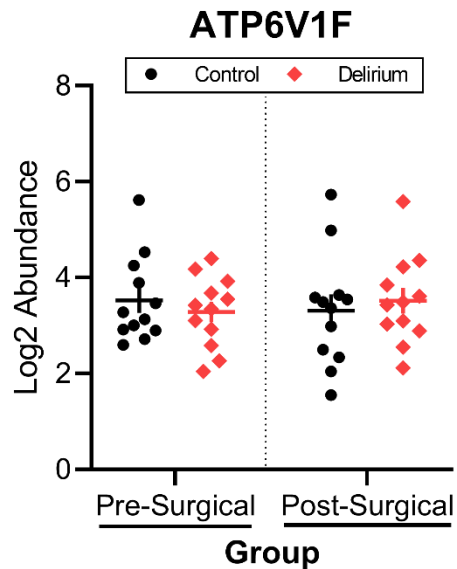
**Appendix A.** Individual graphs of proteins detected in the Olink proximity extension assays.

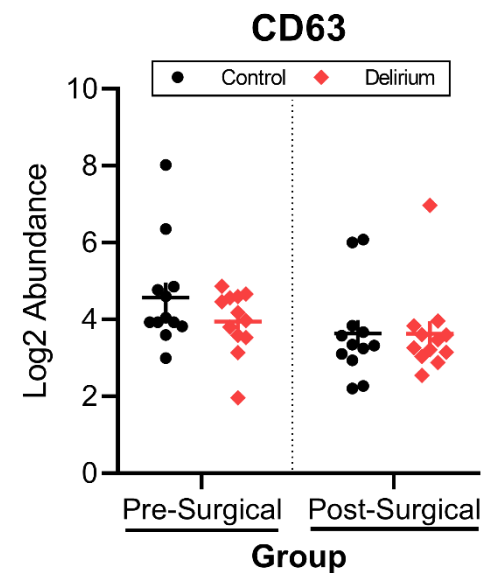
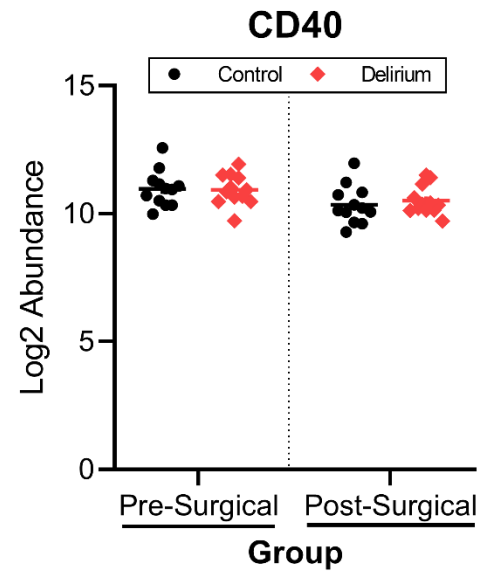
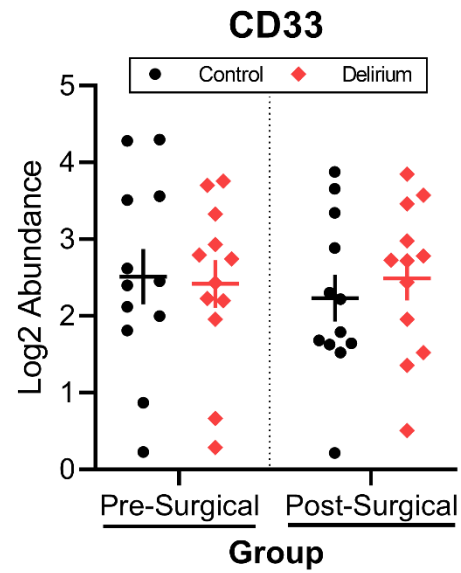
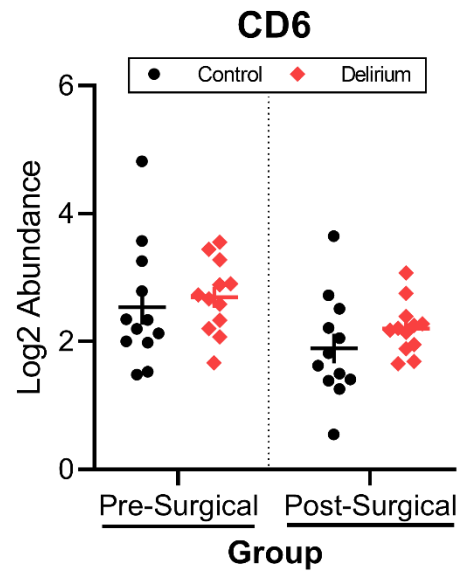
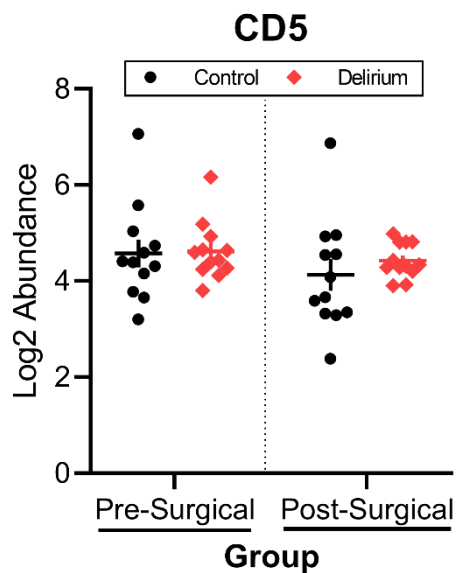
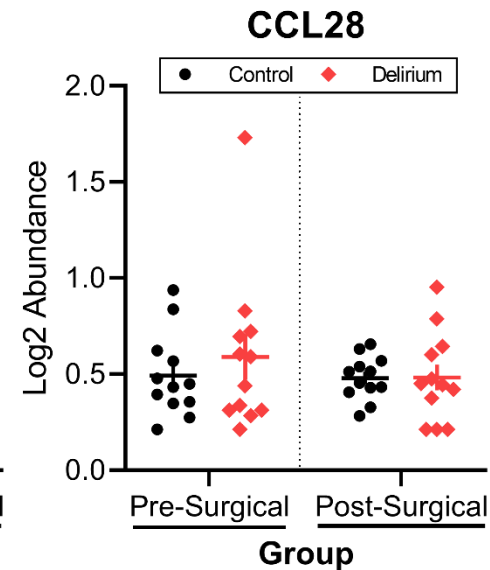
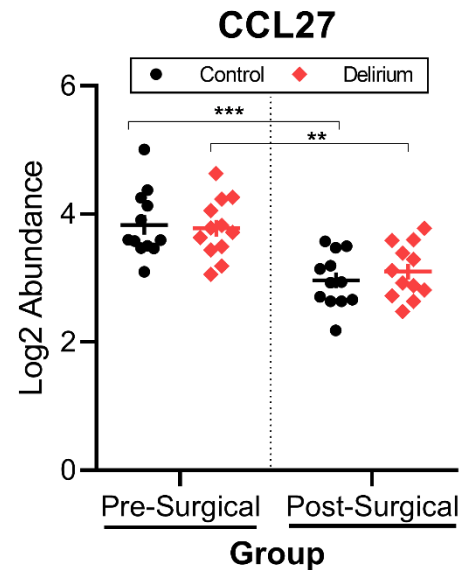
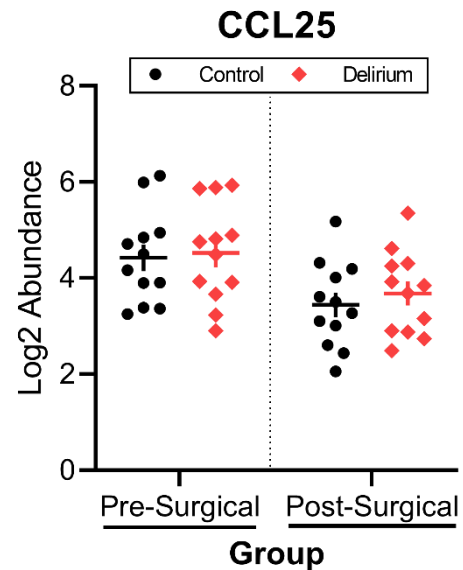
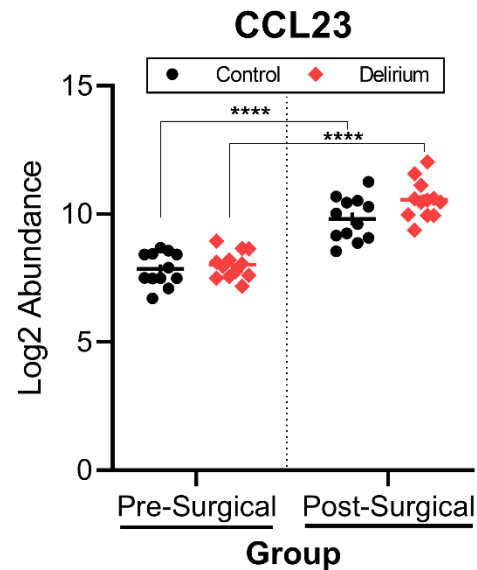
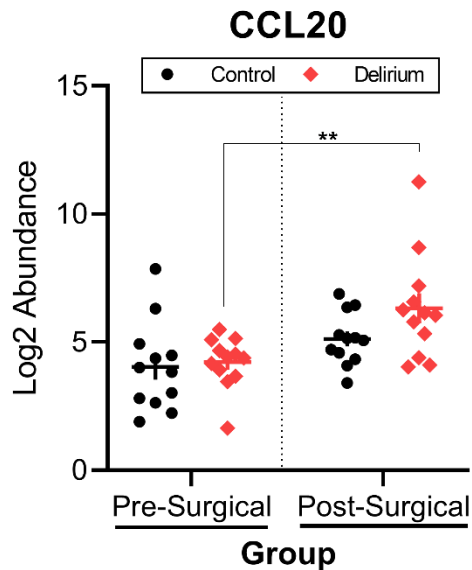
**Panels:**

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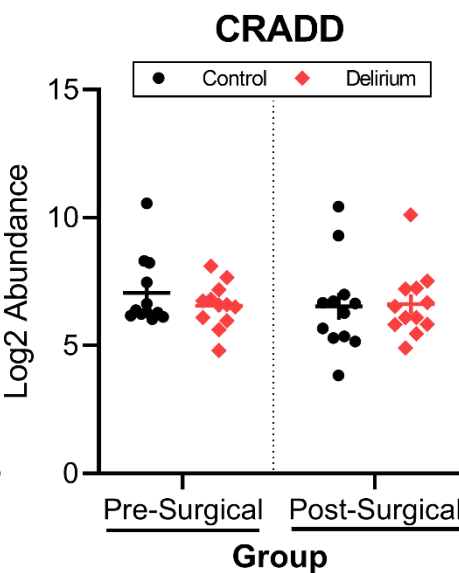
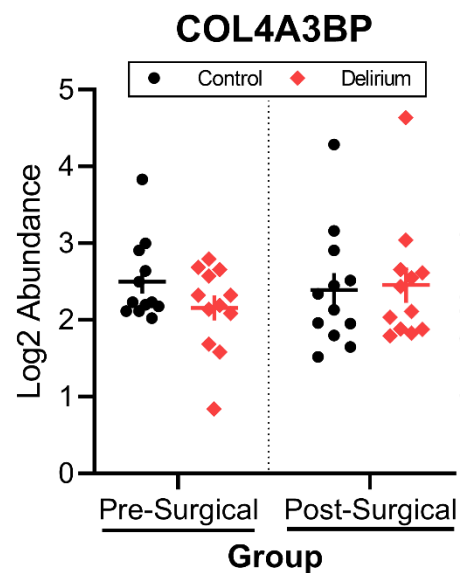
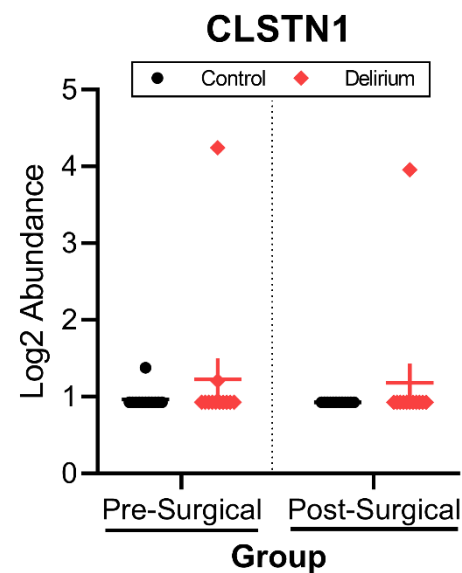
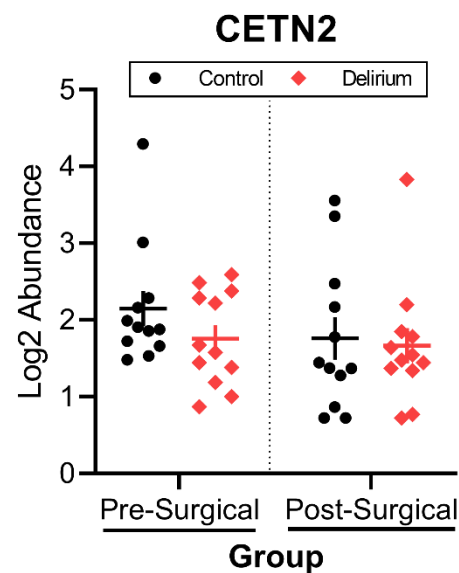
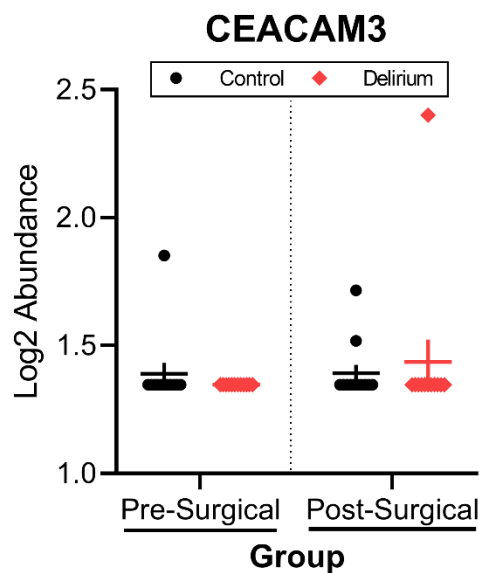
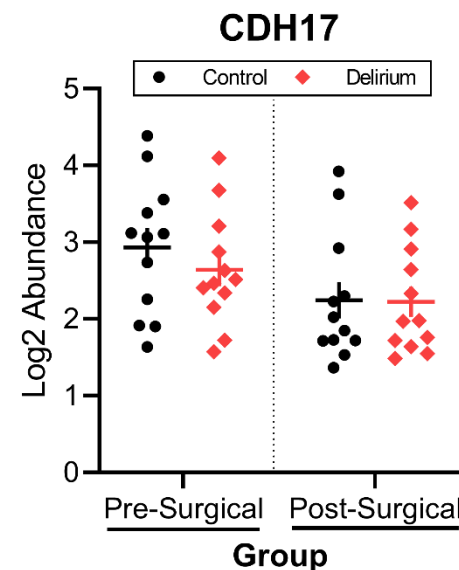
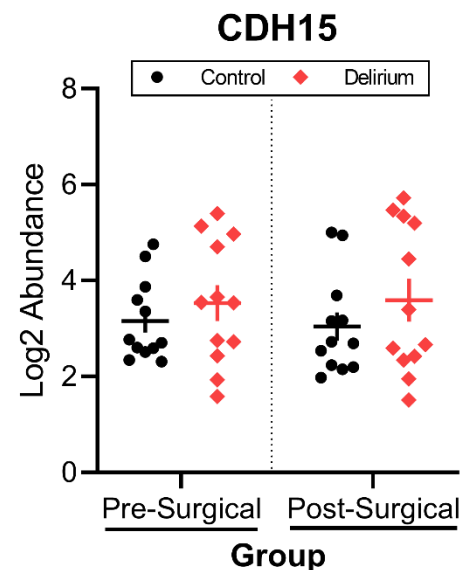
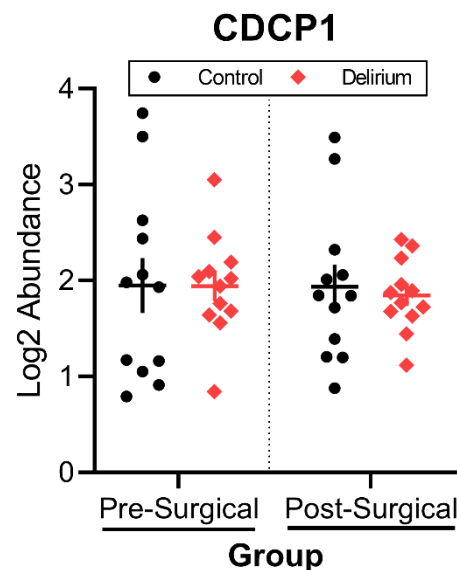
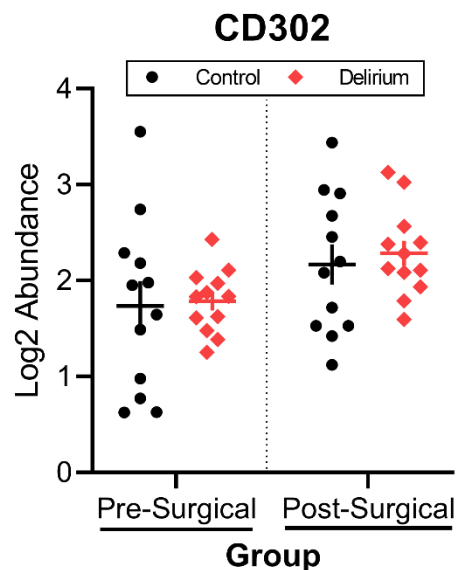
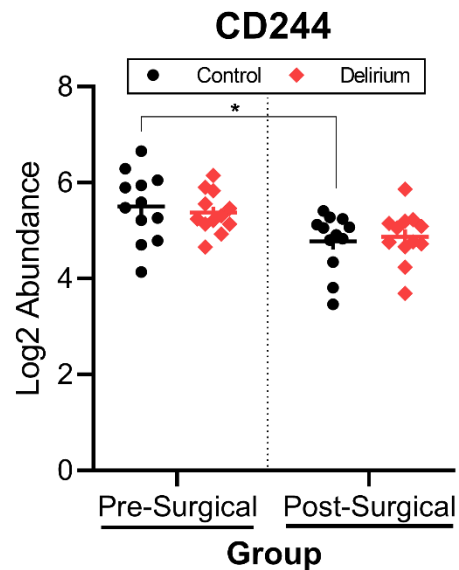
Olink NEURO EXPLORATORY (v.3901) Panel

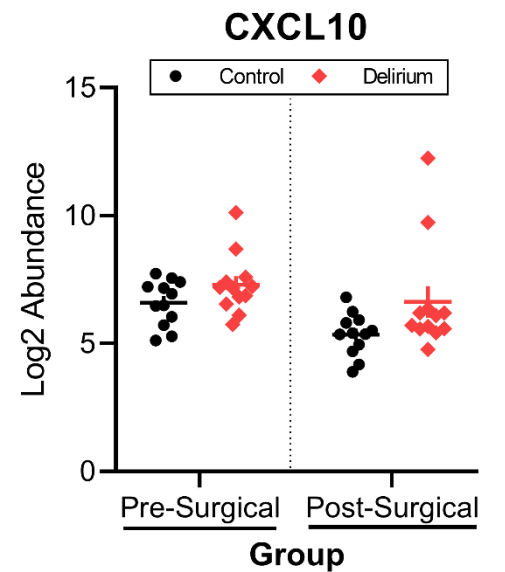
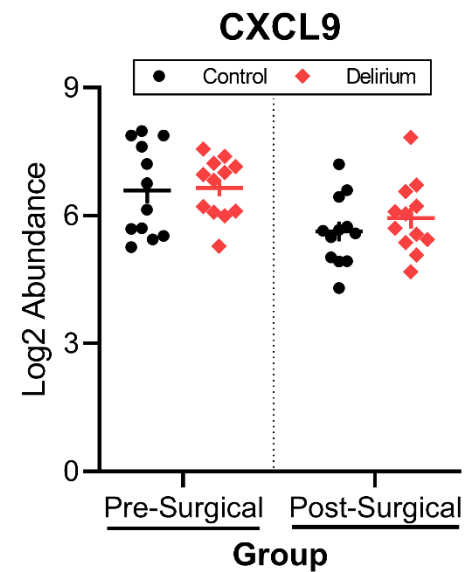
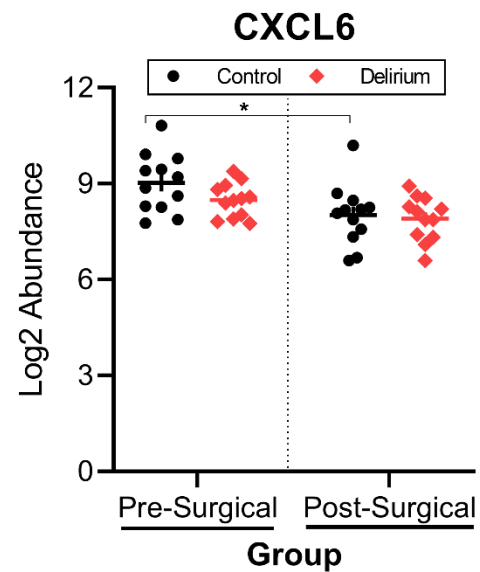
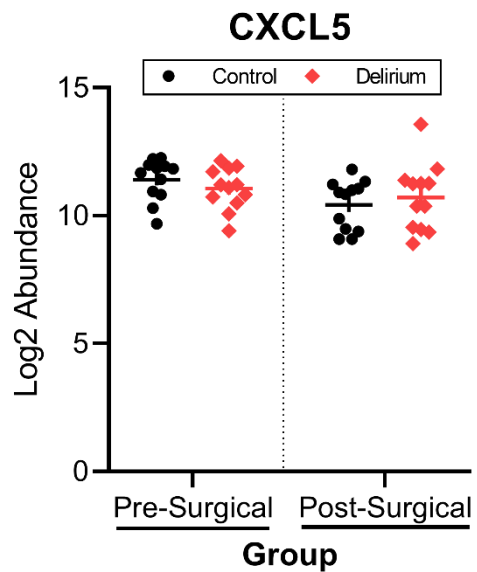
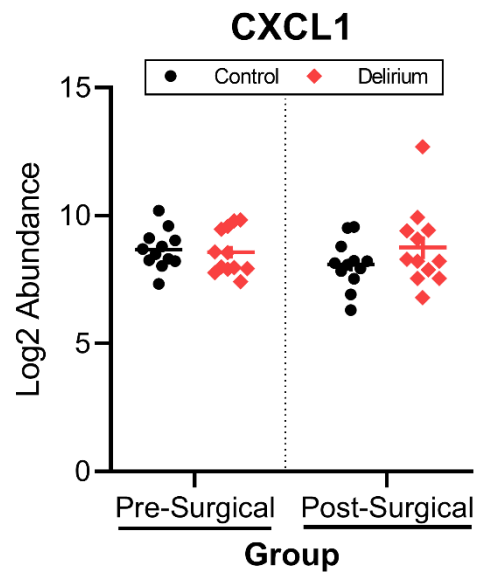
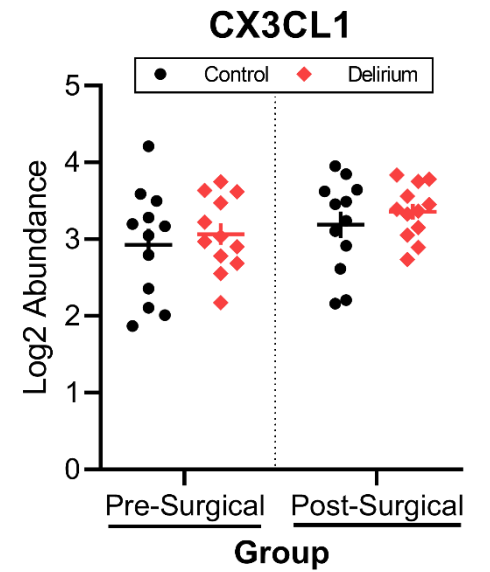
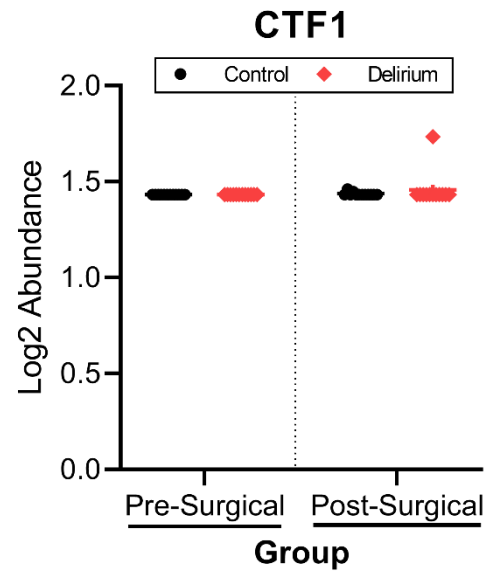
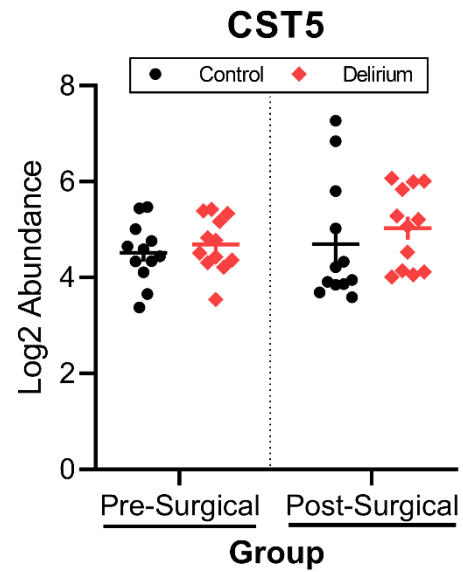
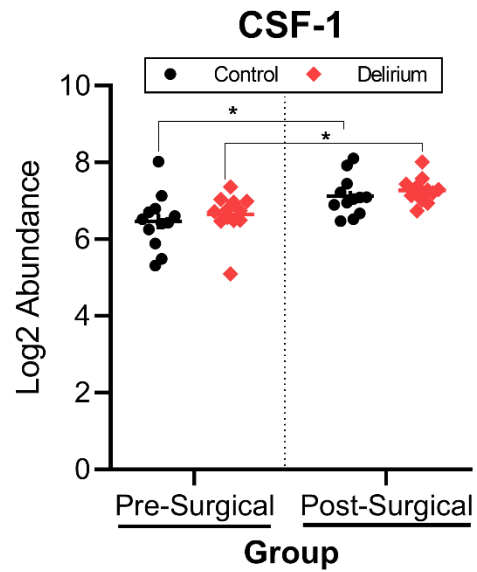
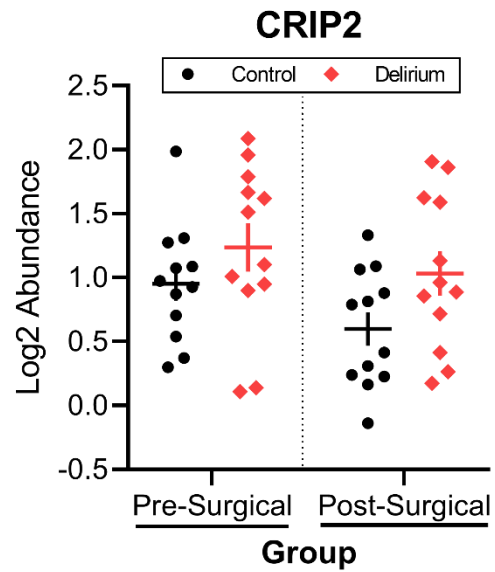


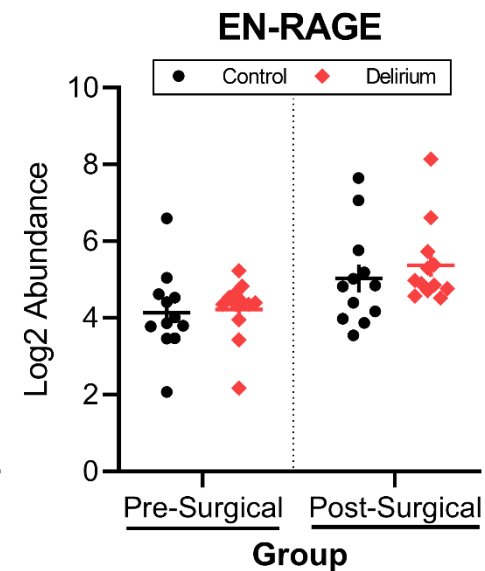
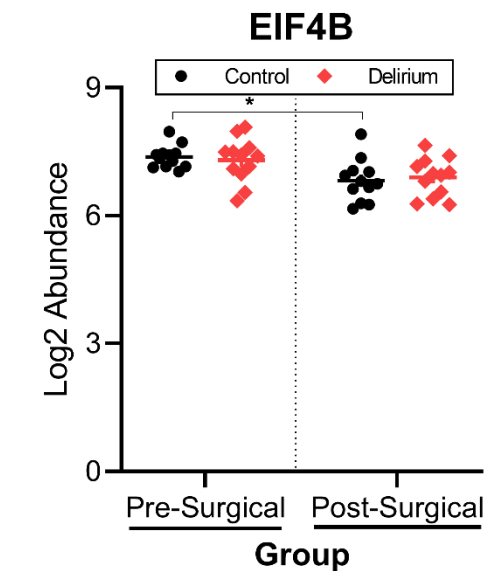
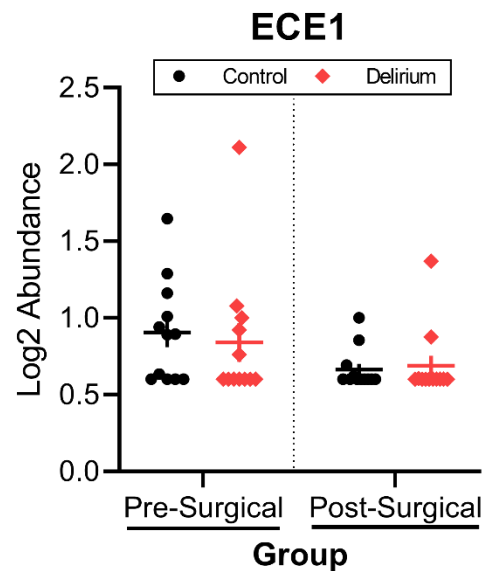
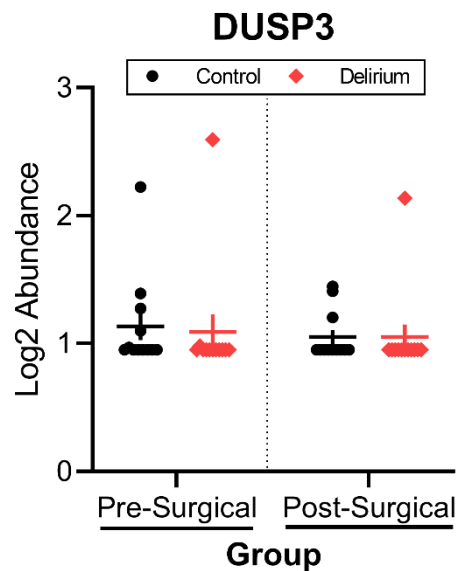
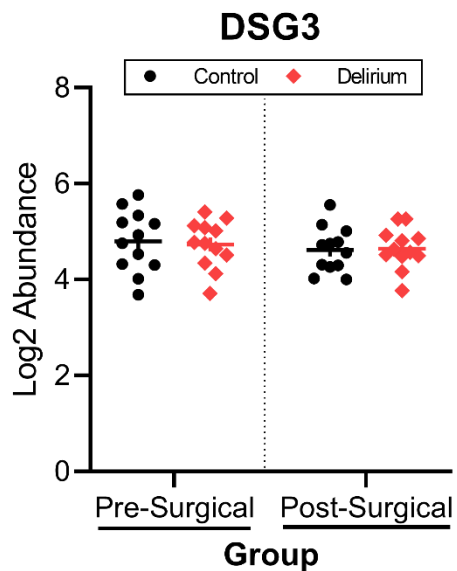
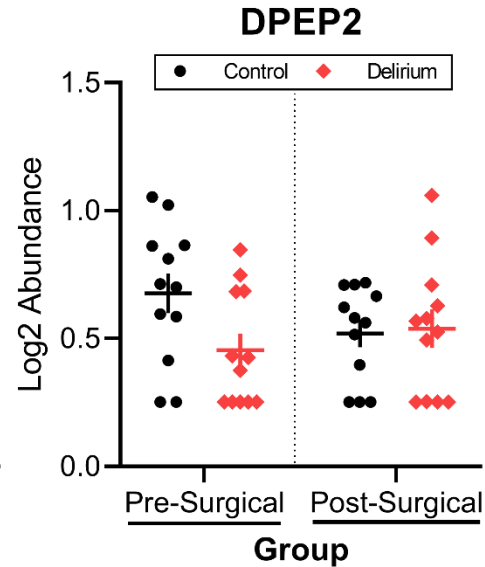
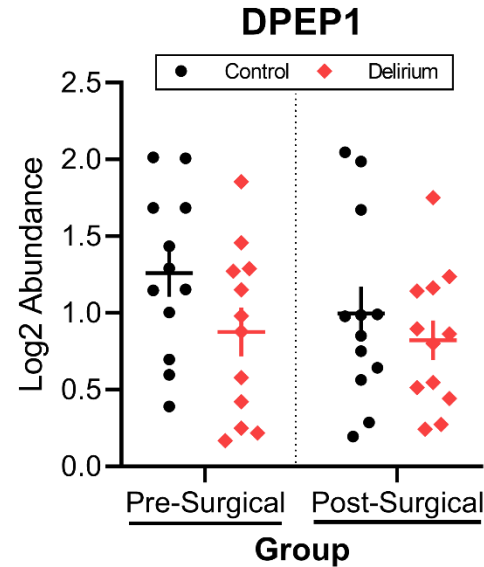
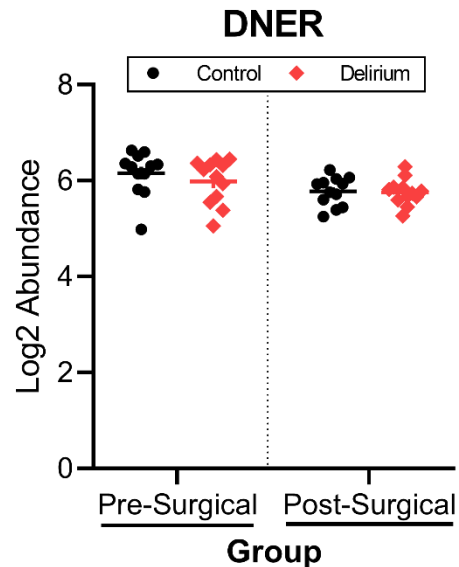
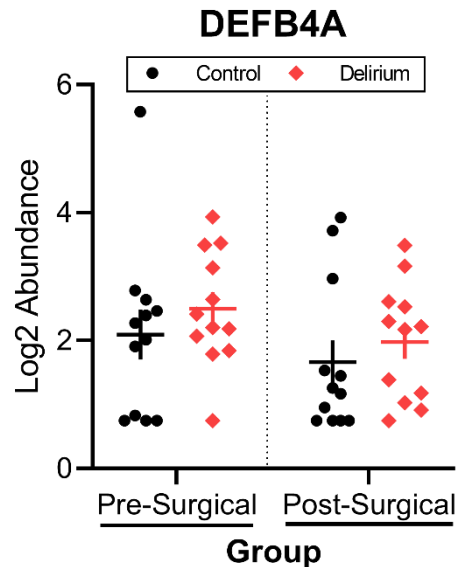
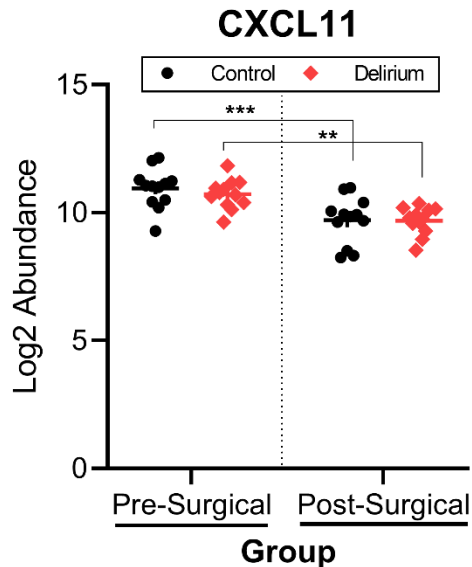


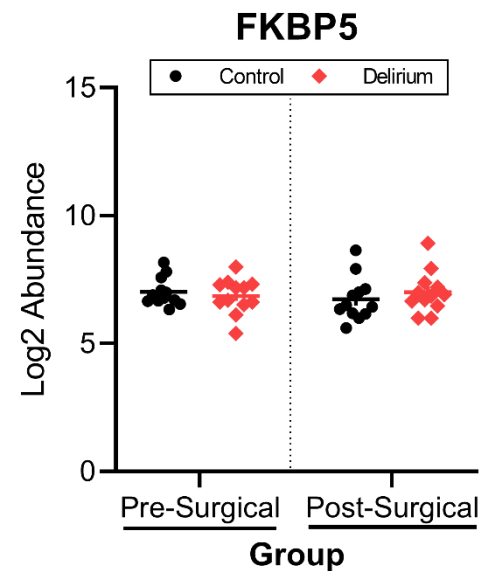
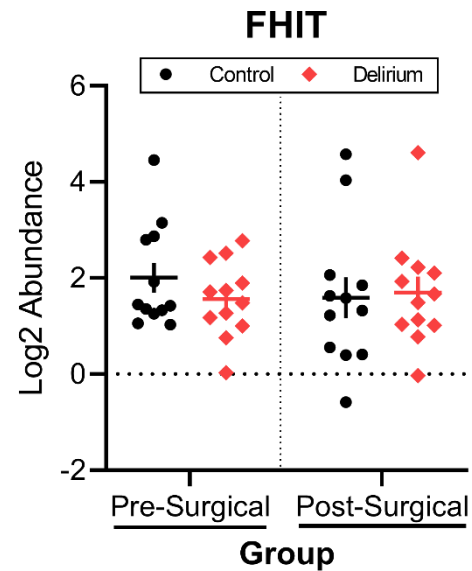
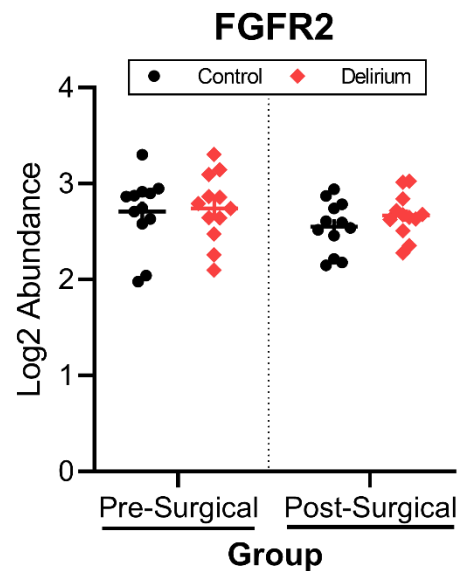
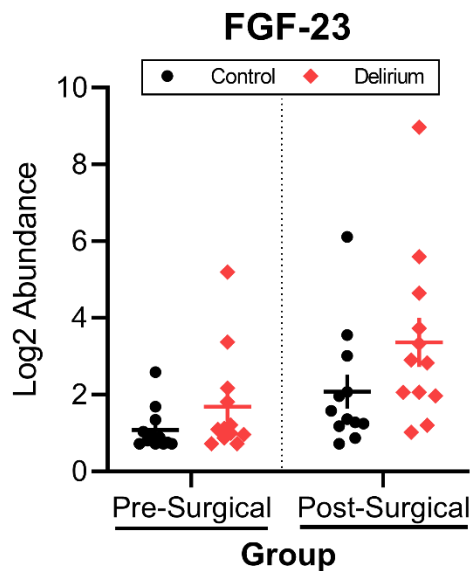
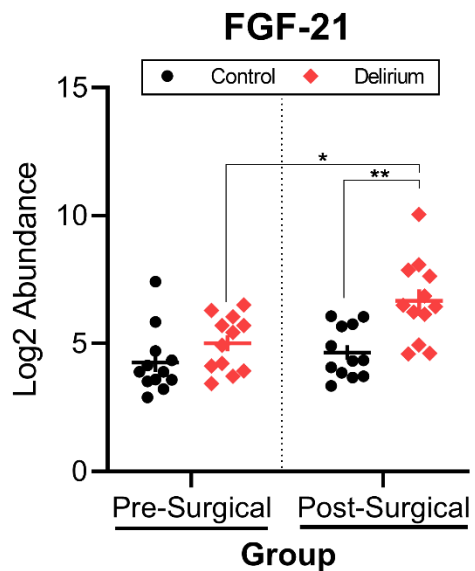
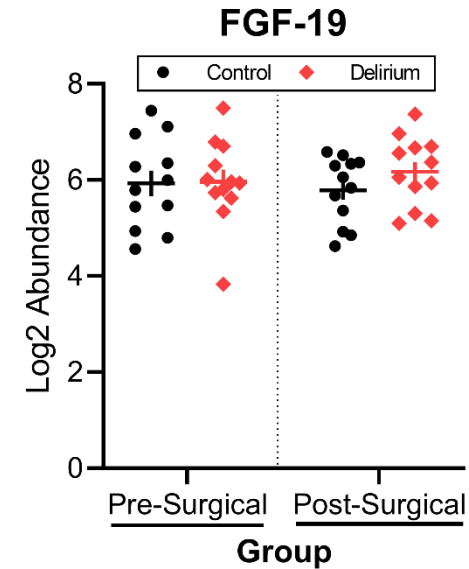
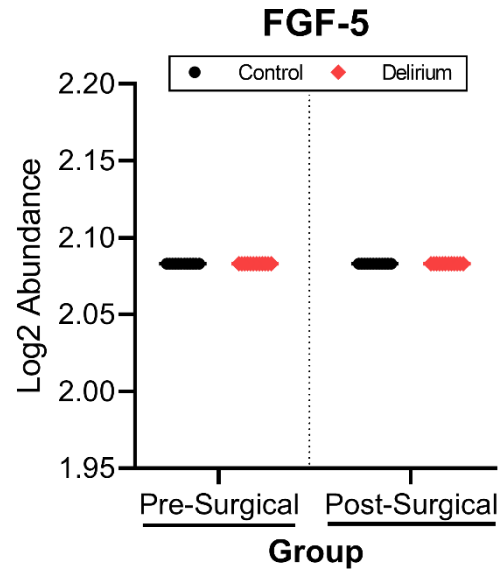
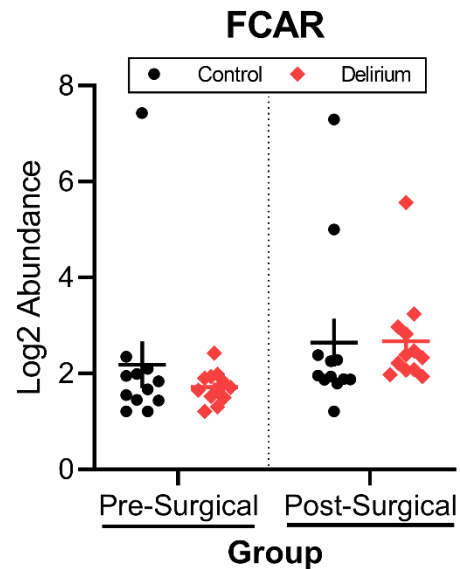
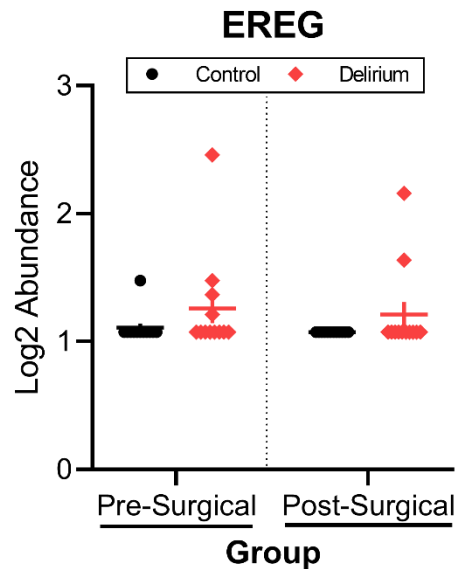
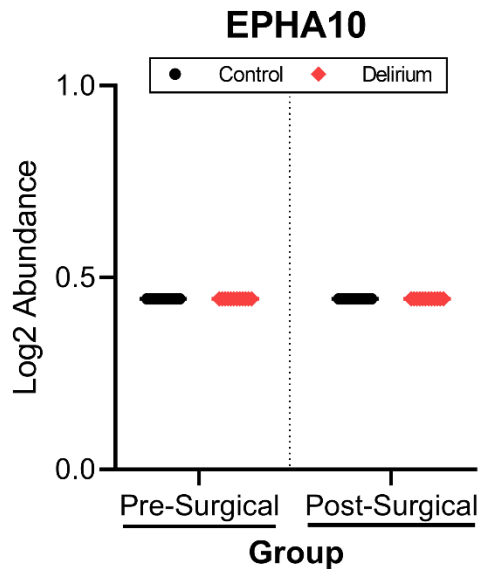


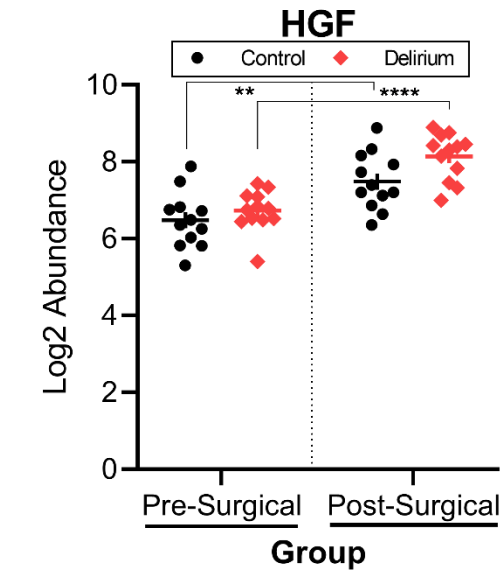
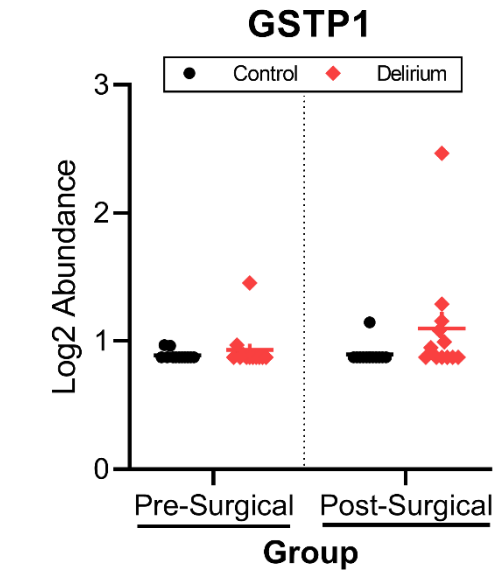
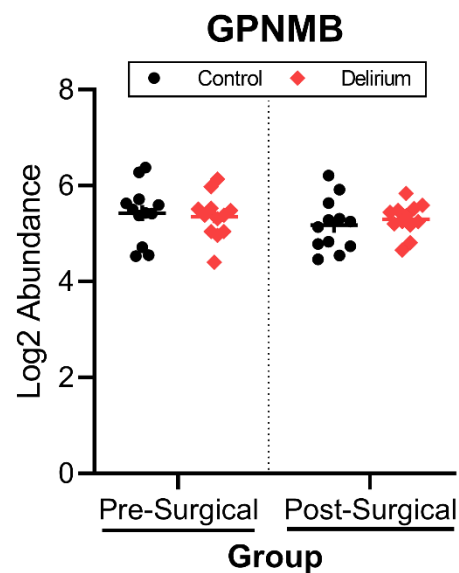
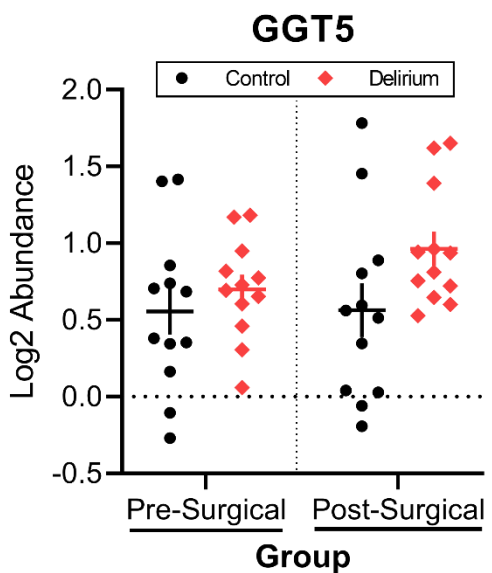
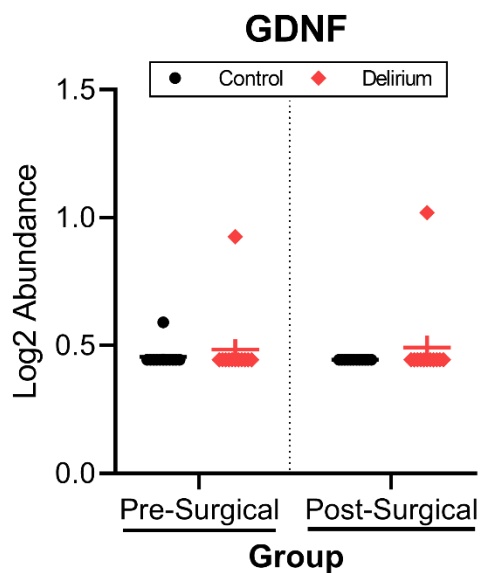
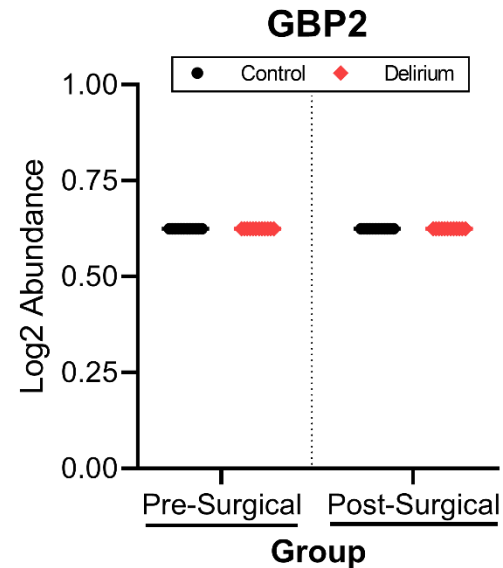
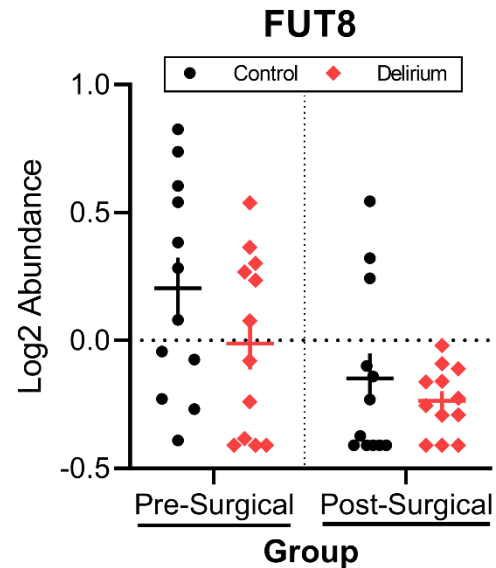
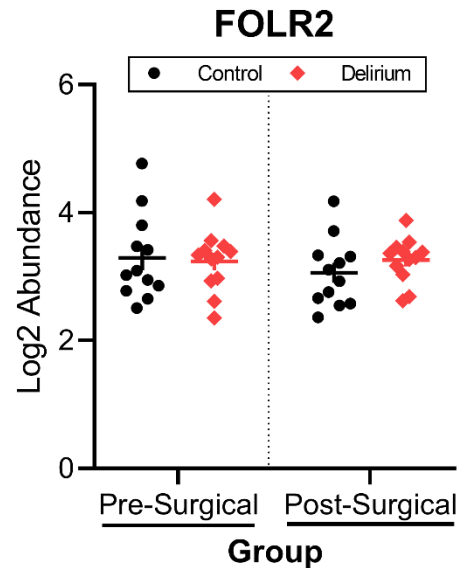
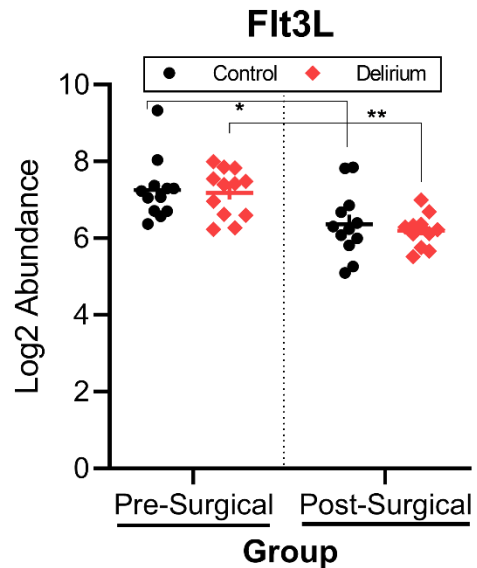
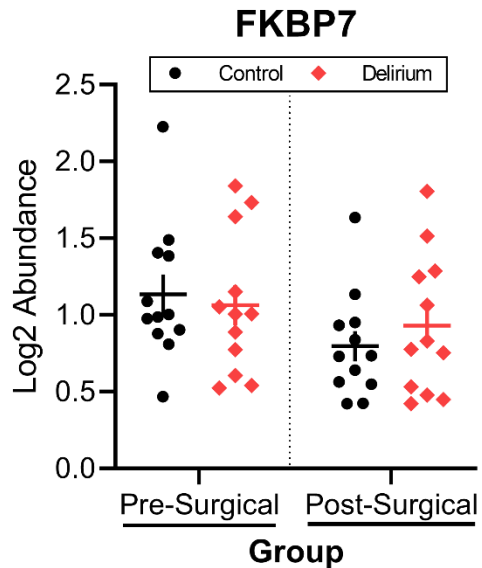


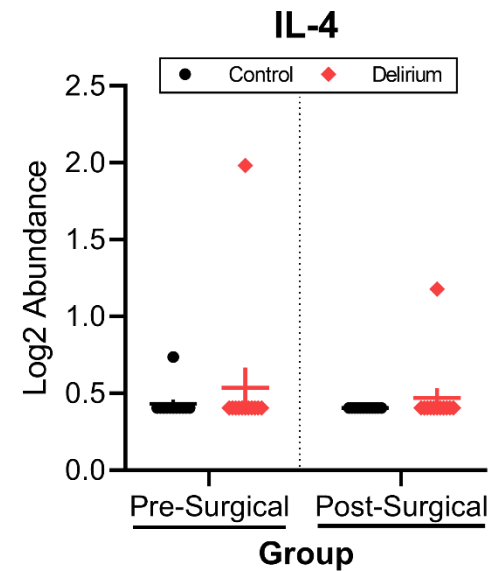
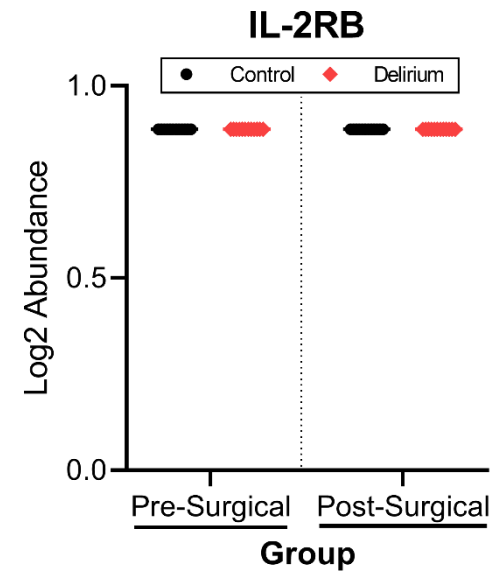
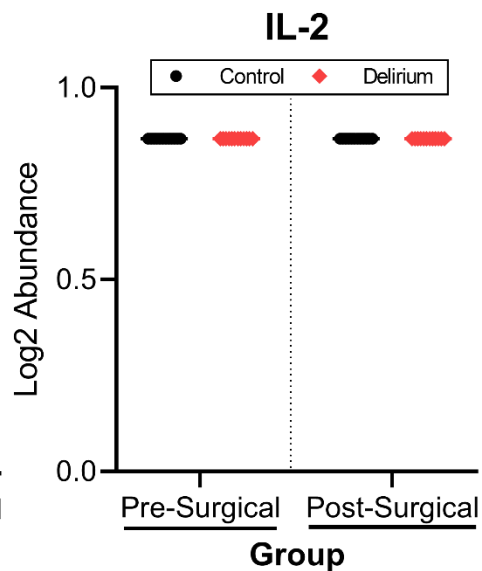
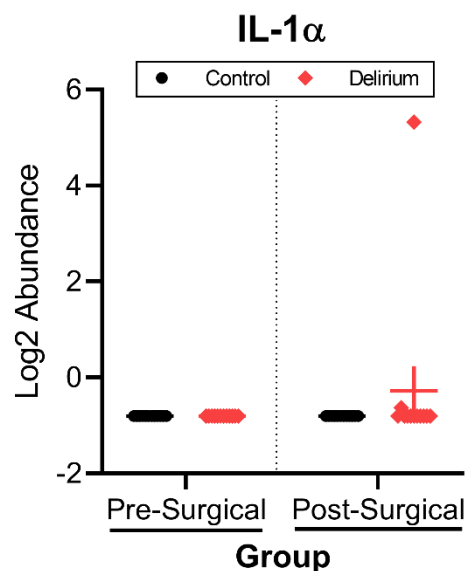
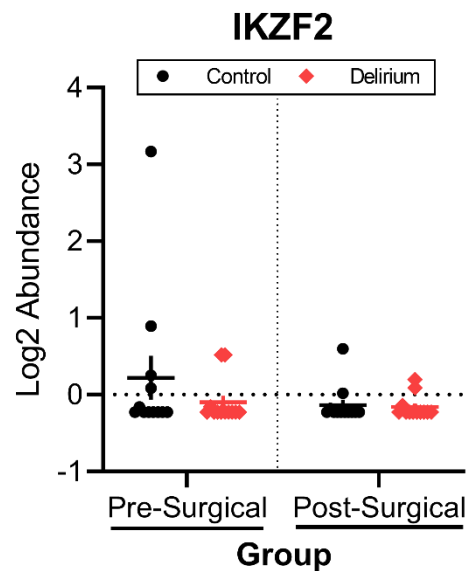
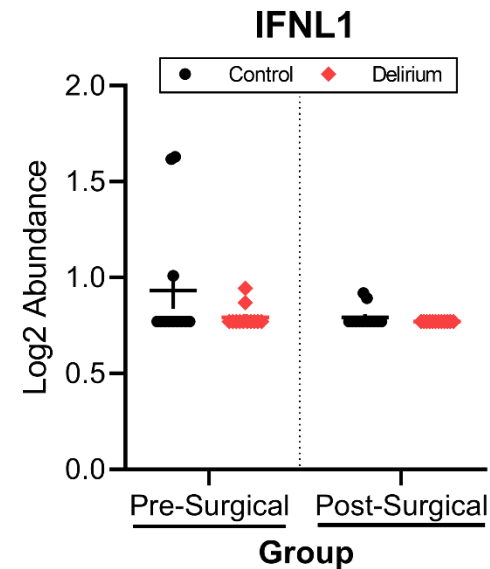
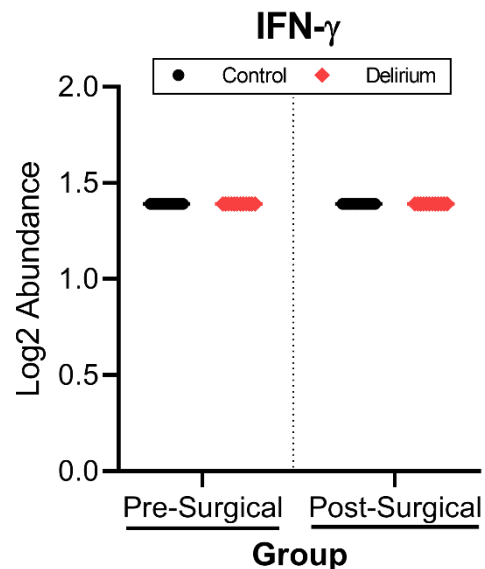
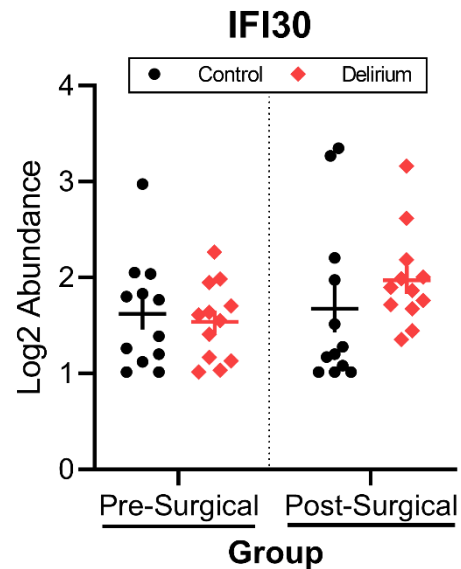
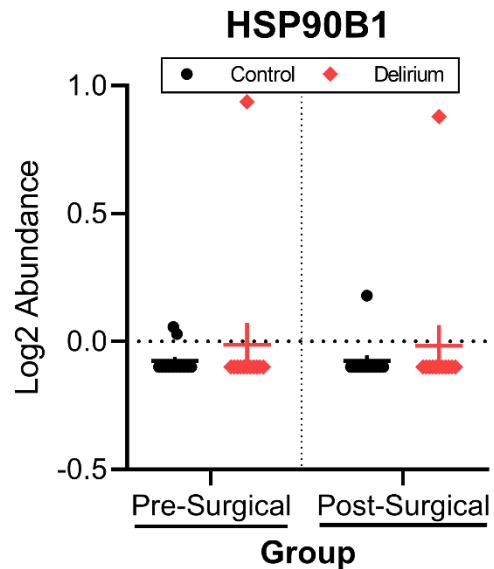
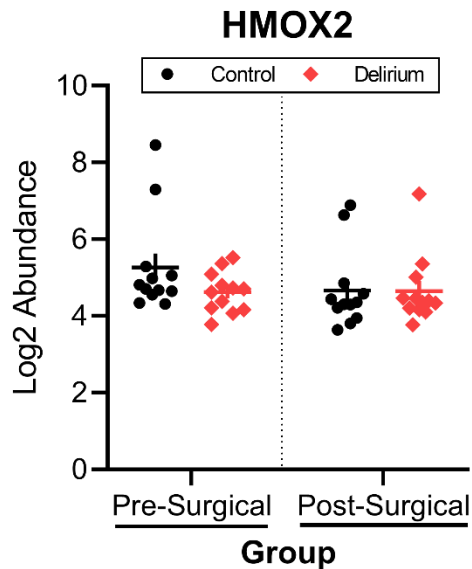


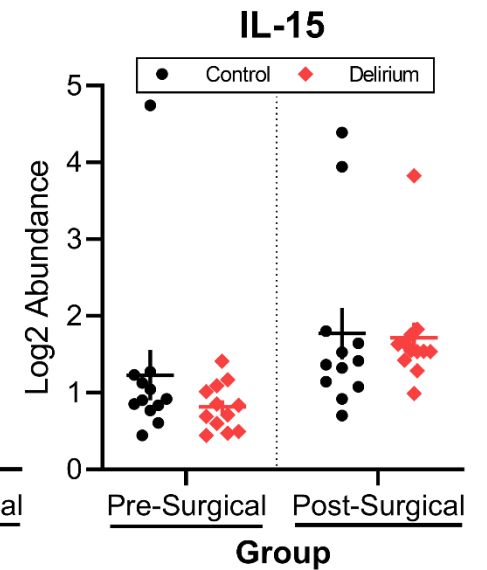
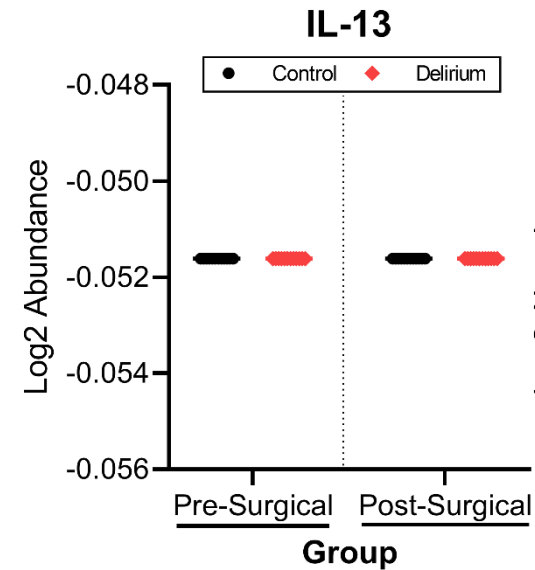
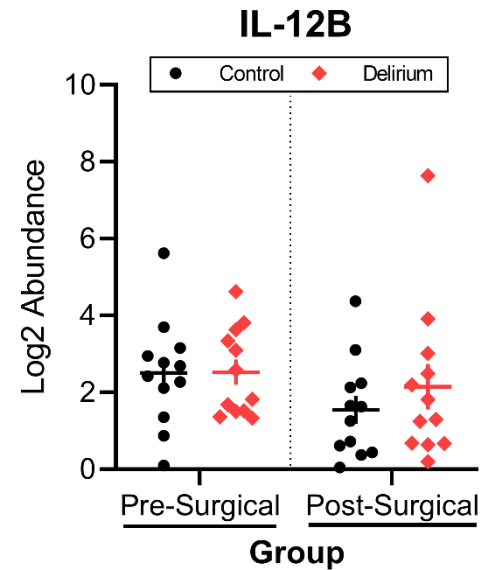
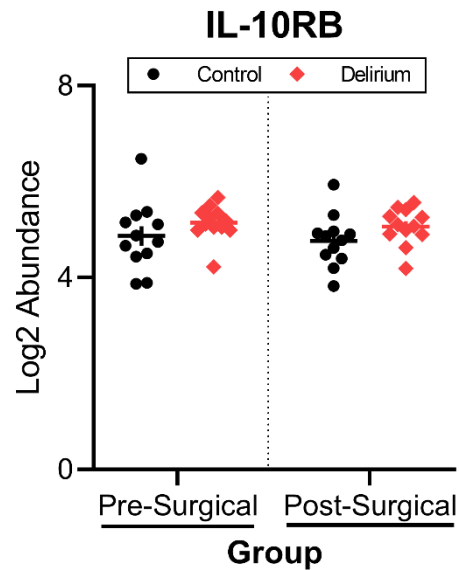
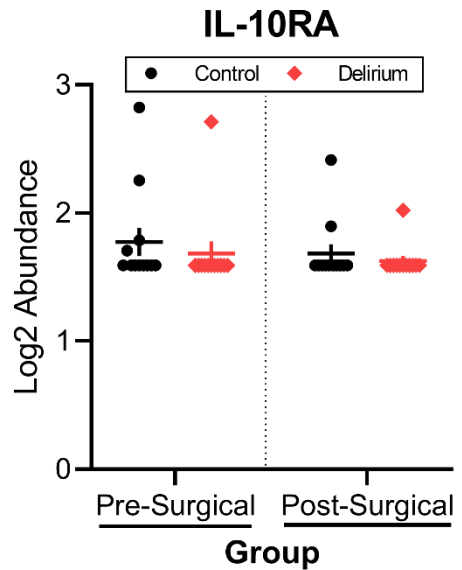
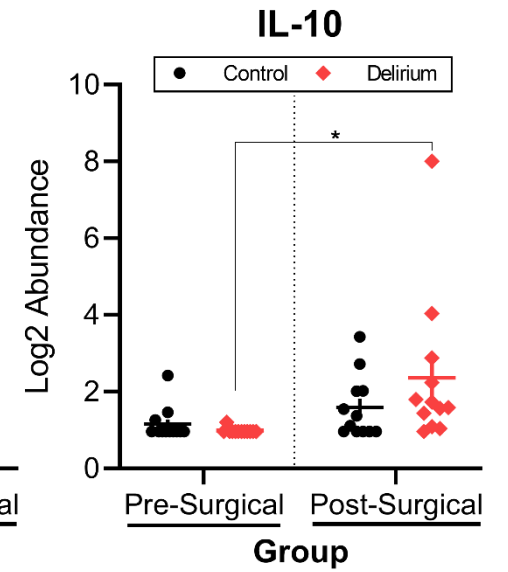
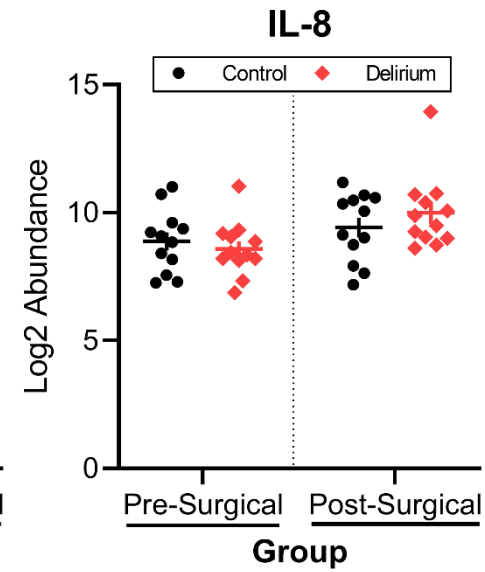
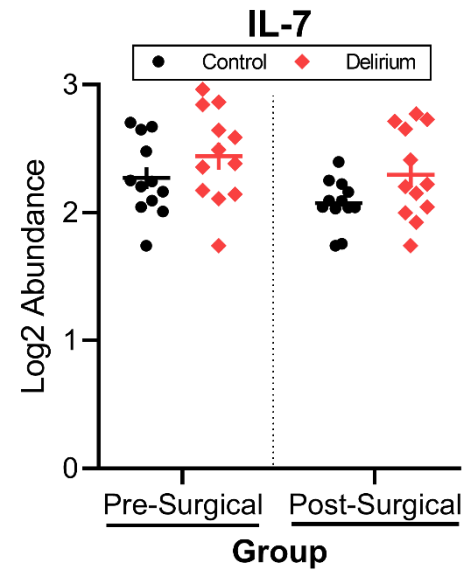
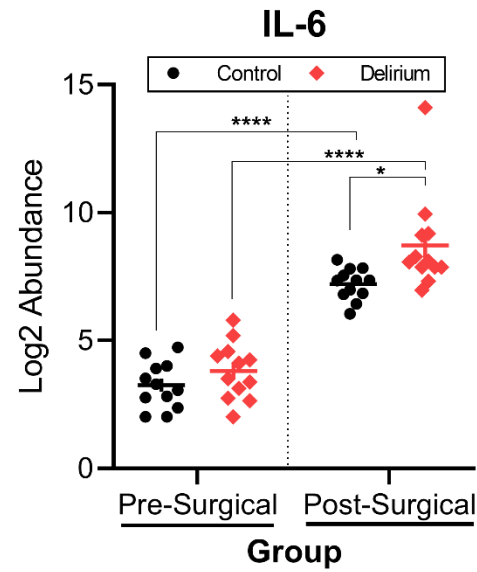
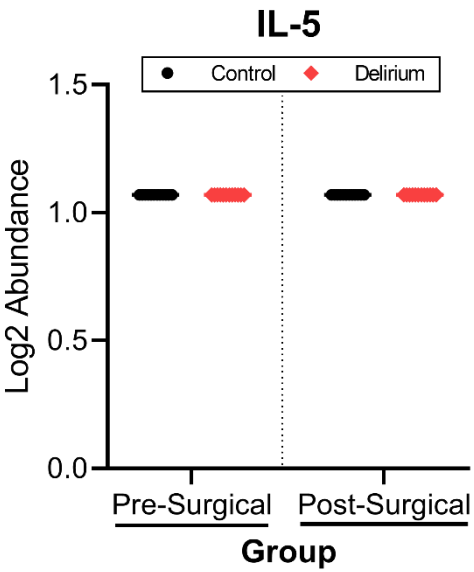


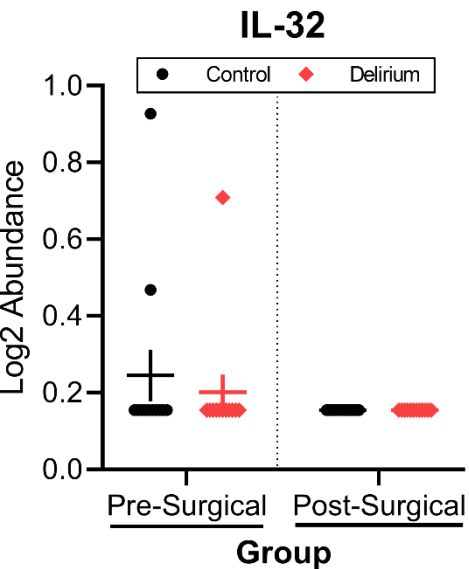
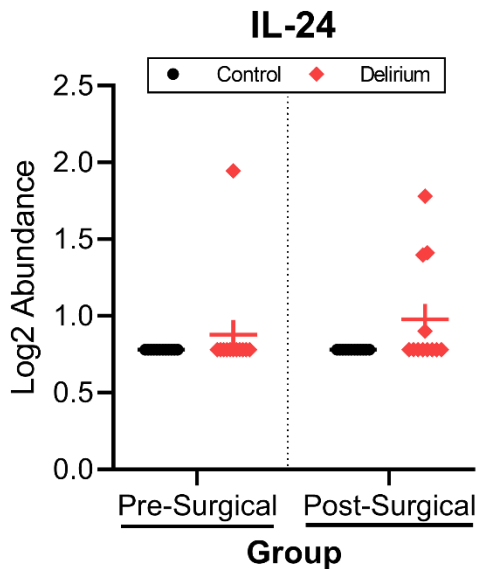
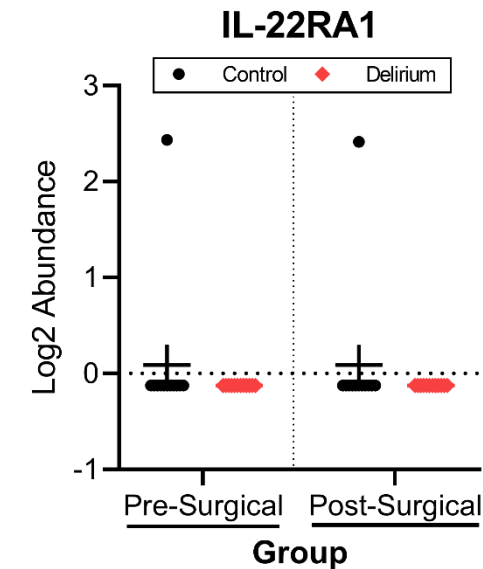
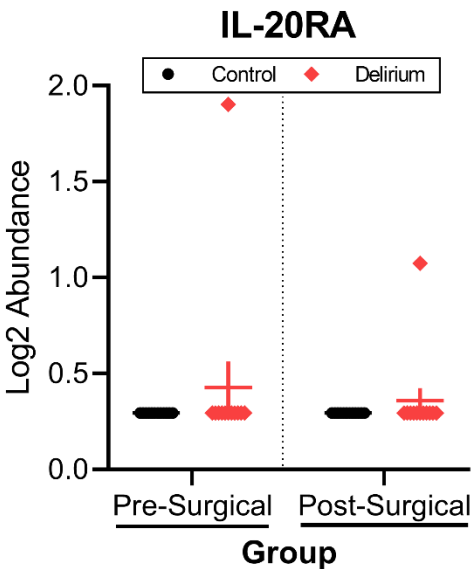
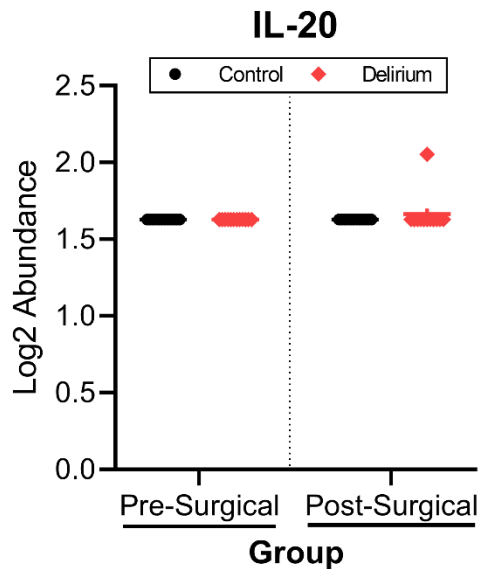
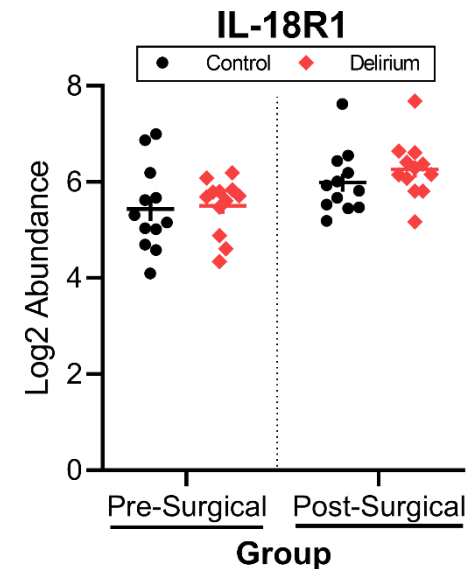
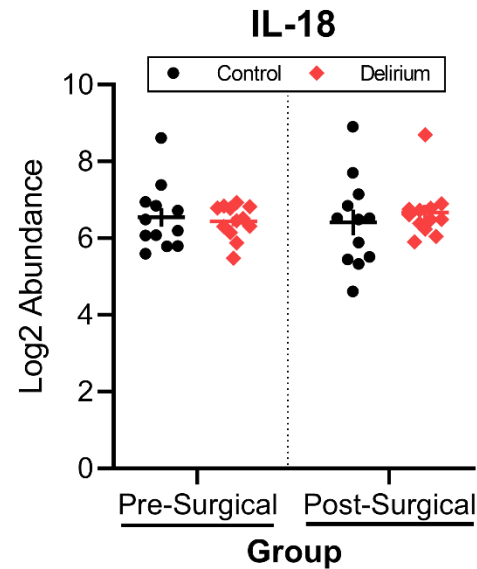
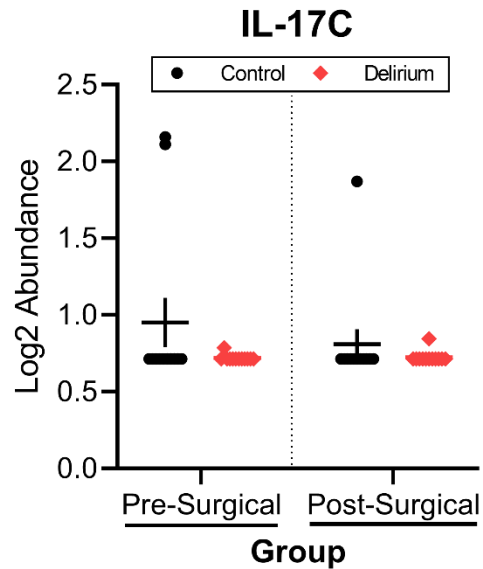
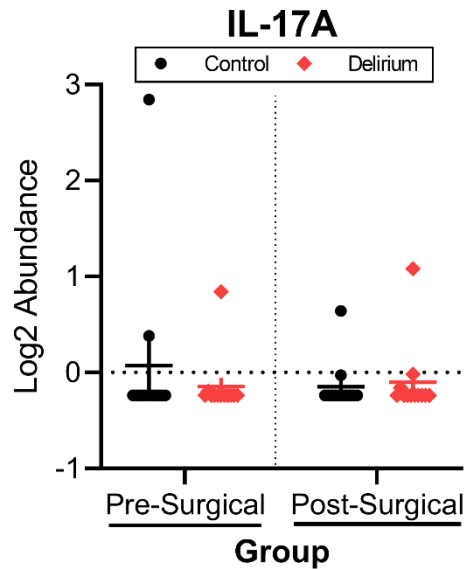
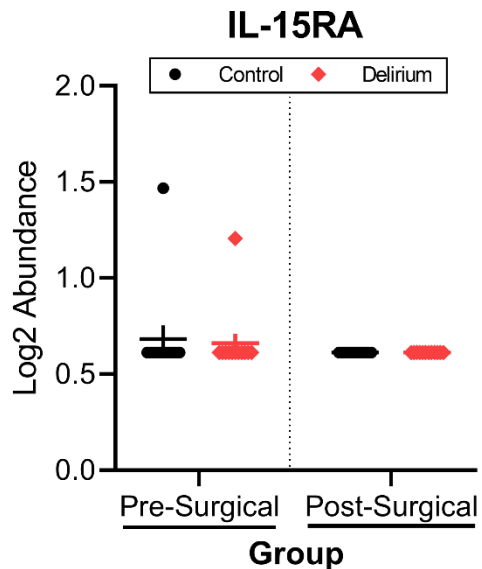




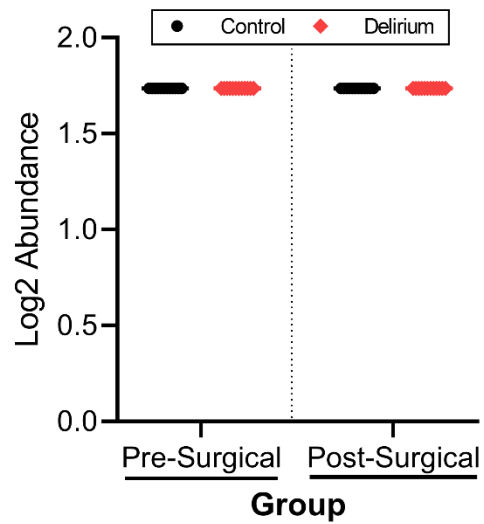
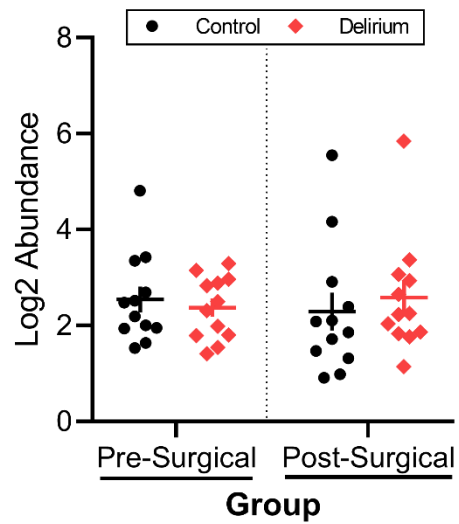
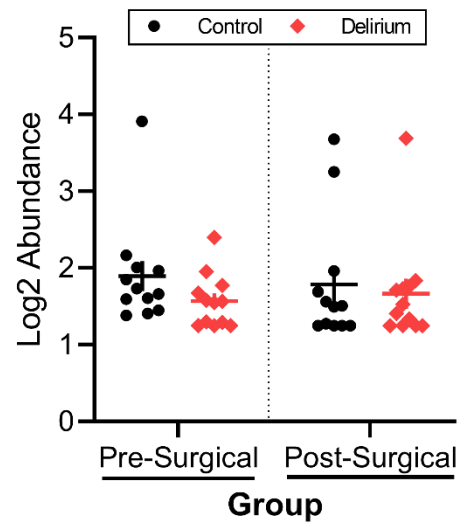
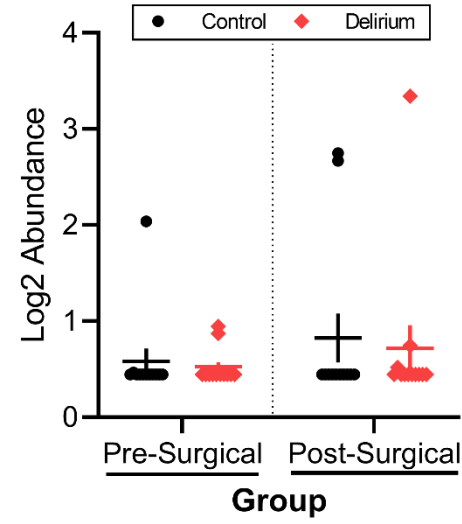
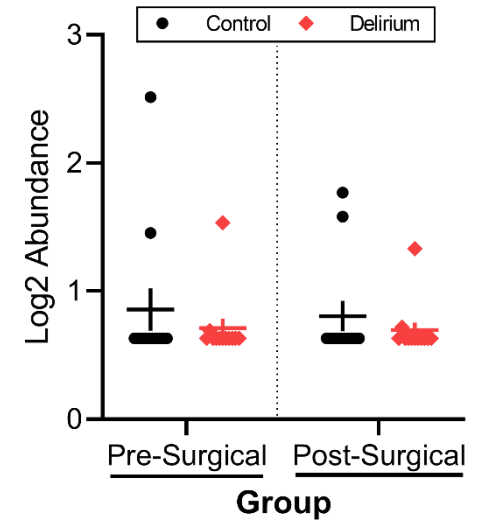
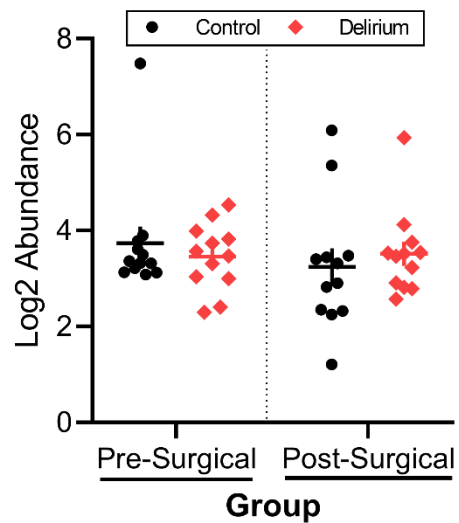
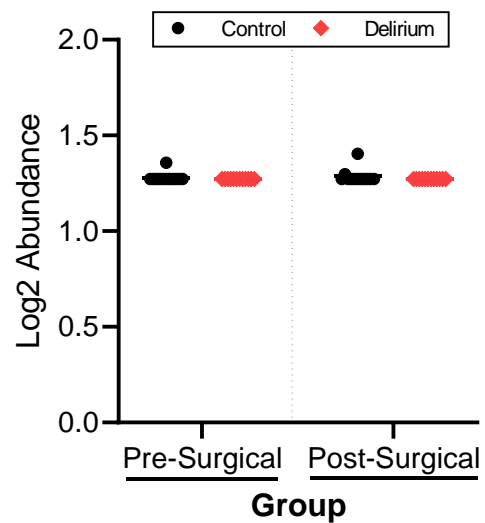
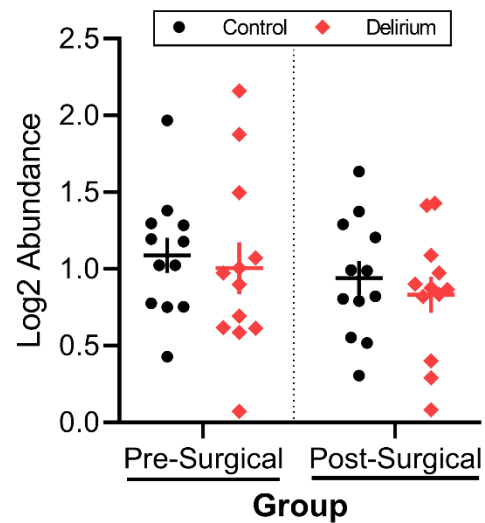
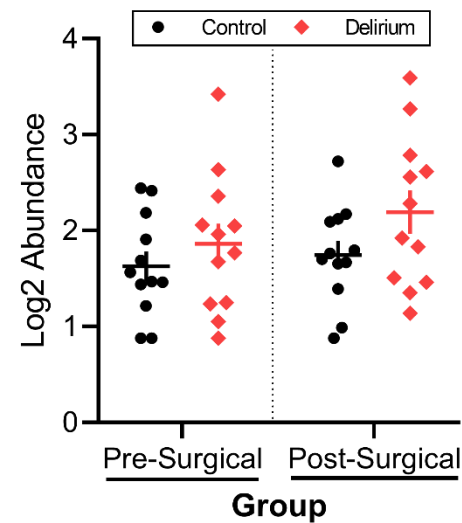
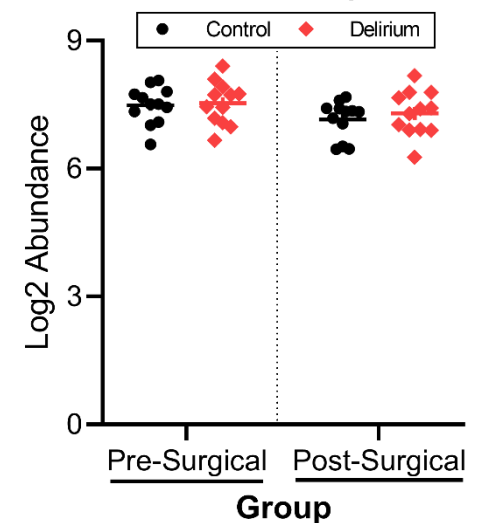


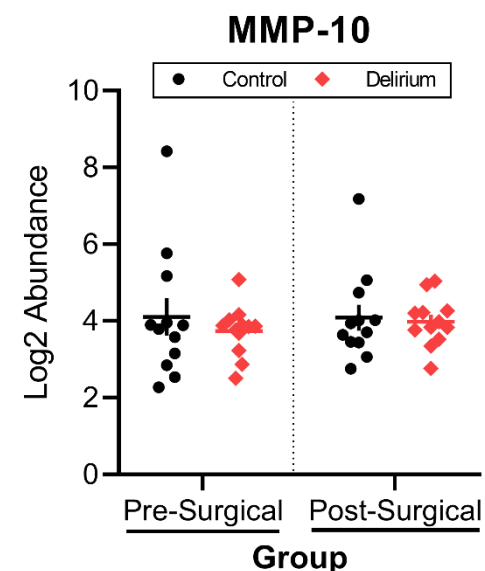
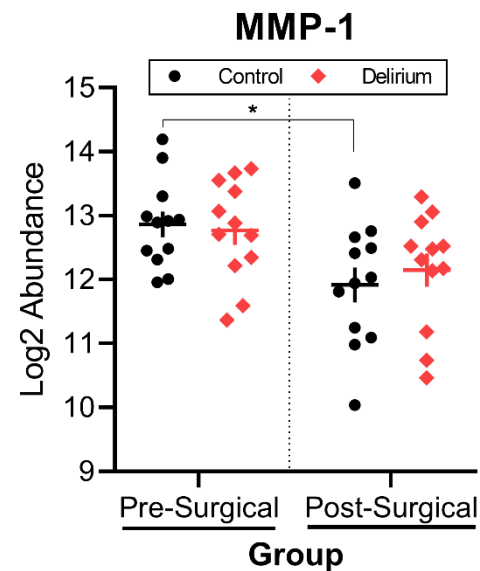
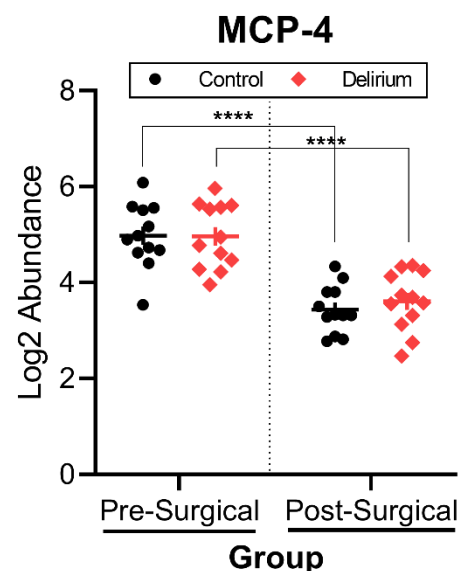
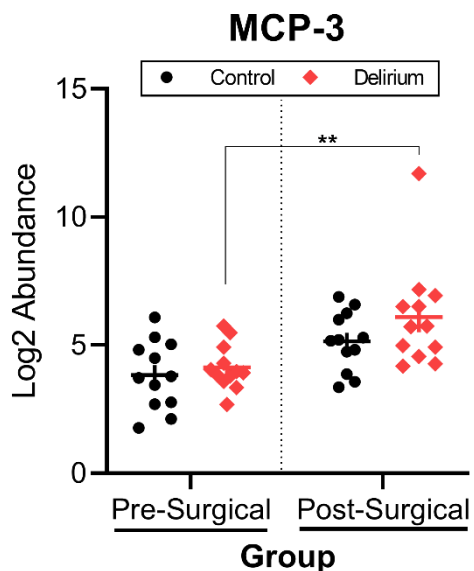
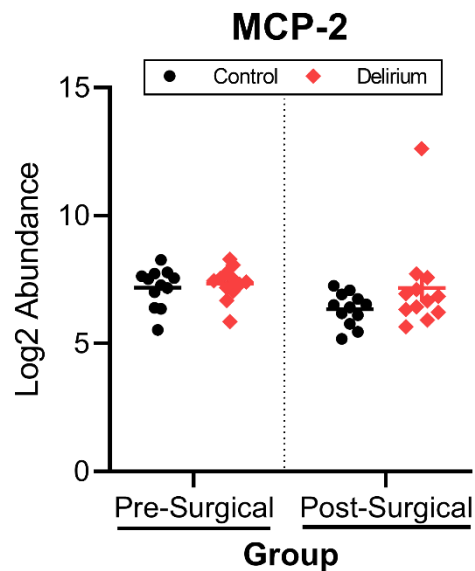
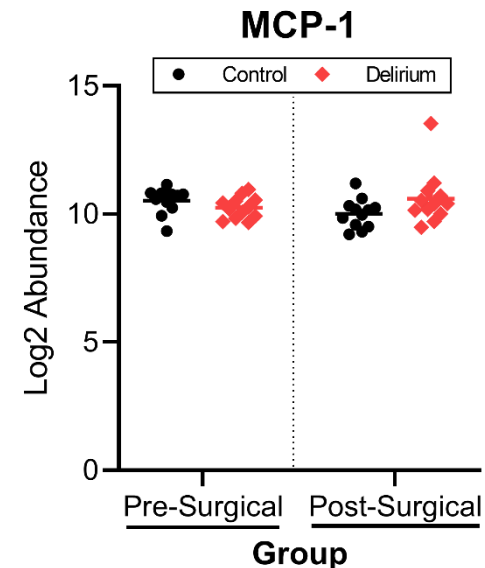
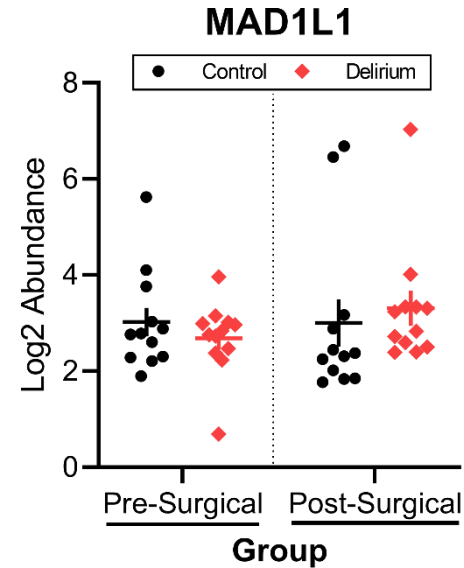
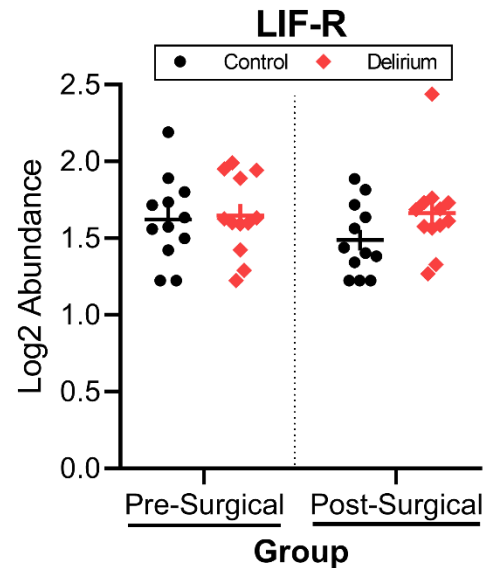
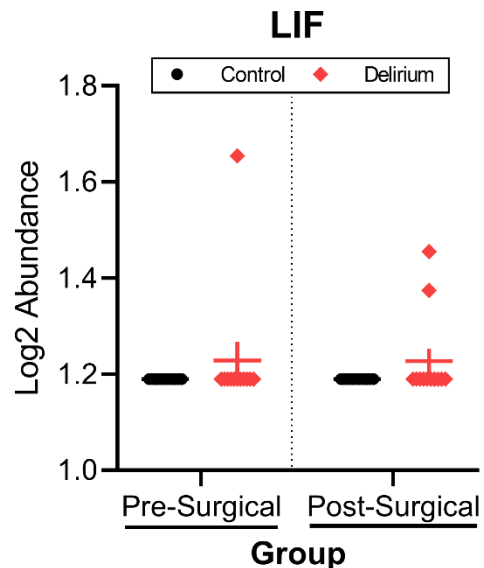
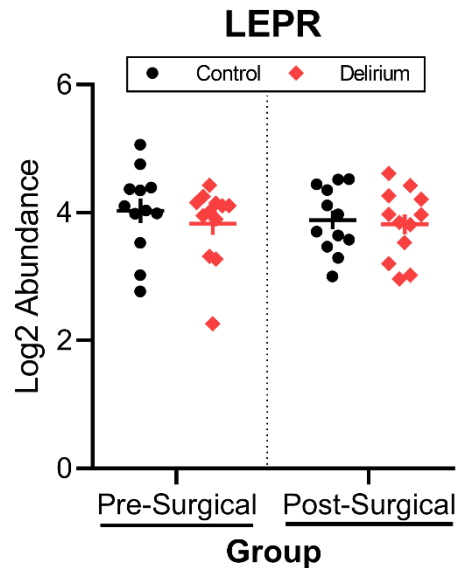


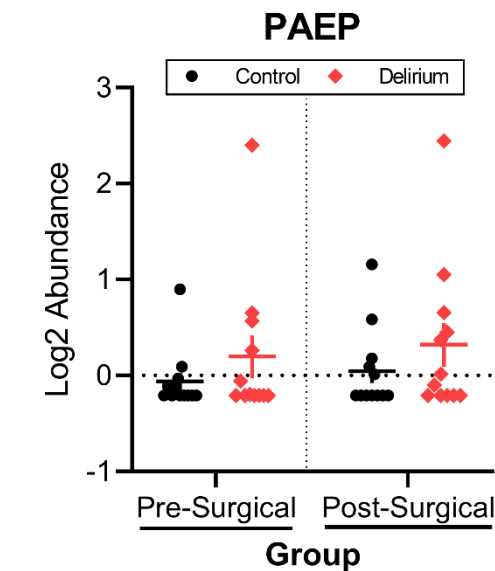
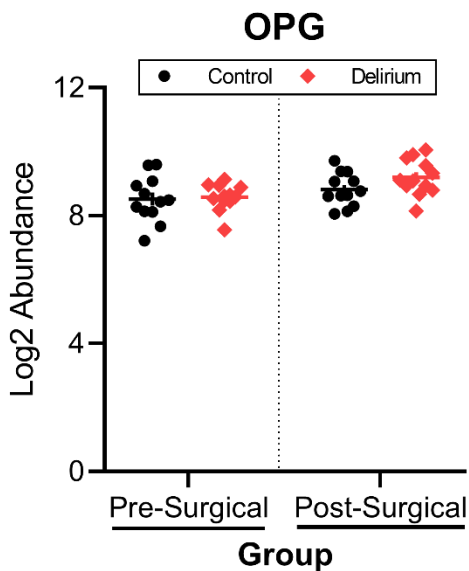
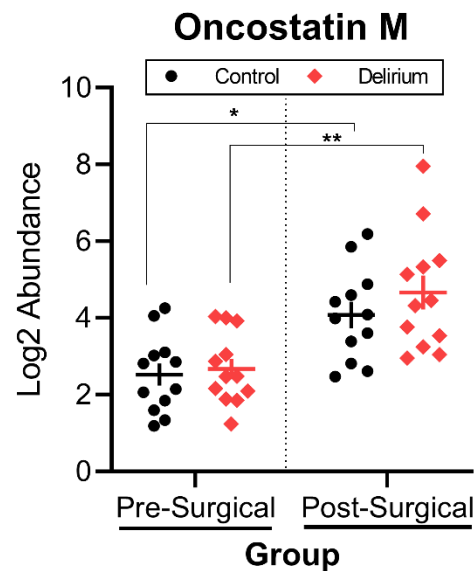
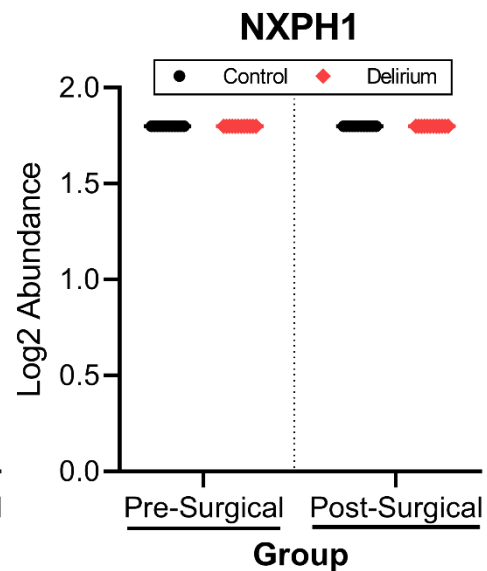
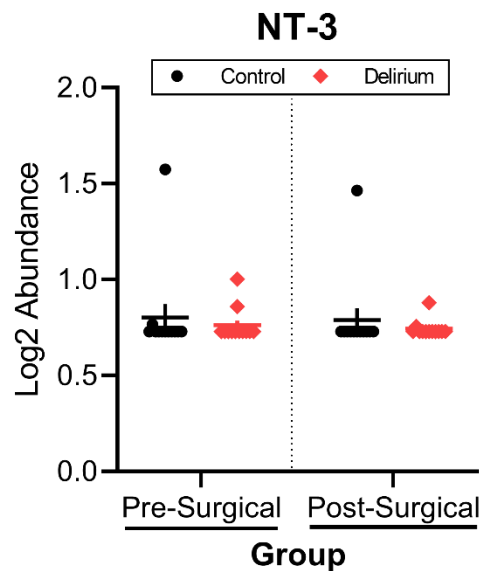
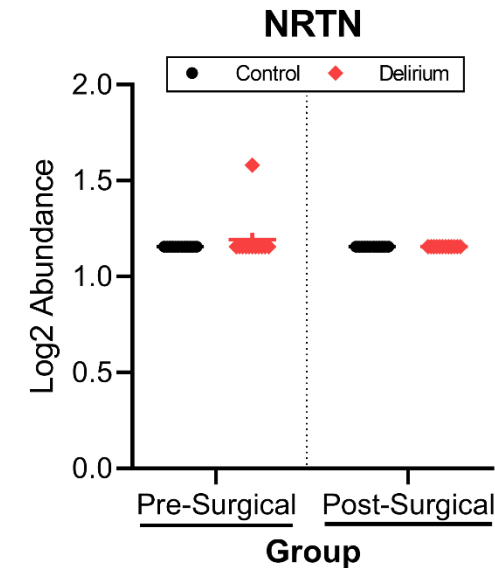
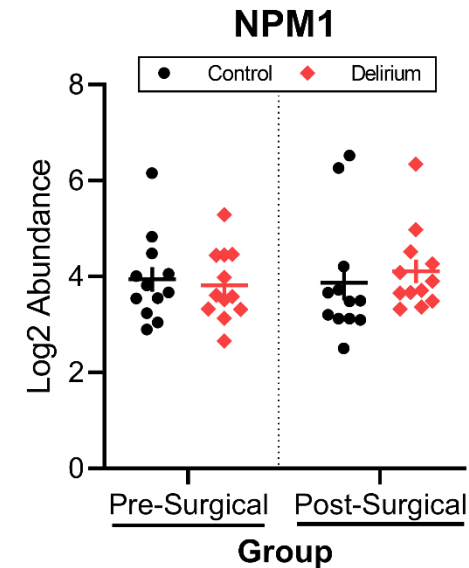
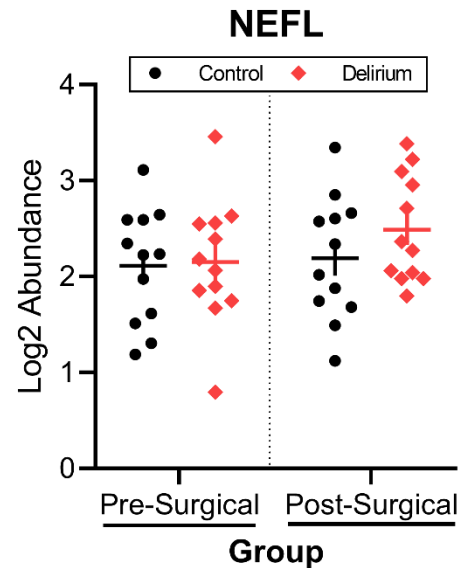
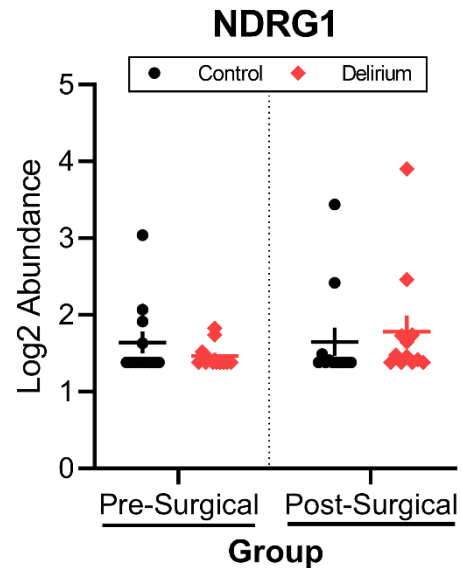
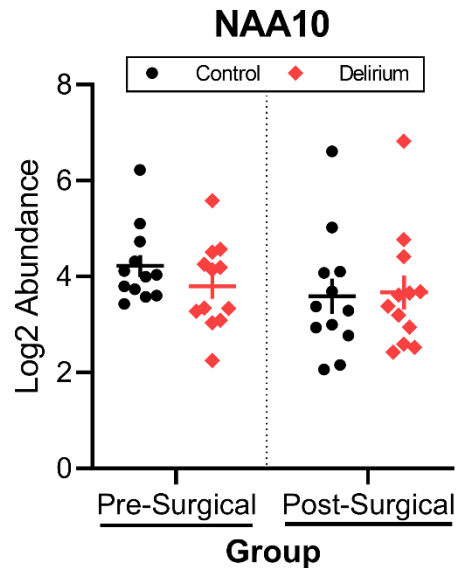


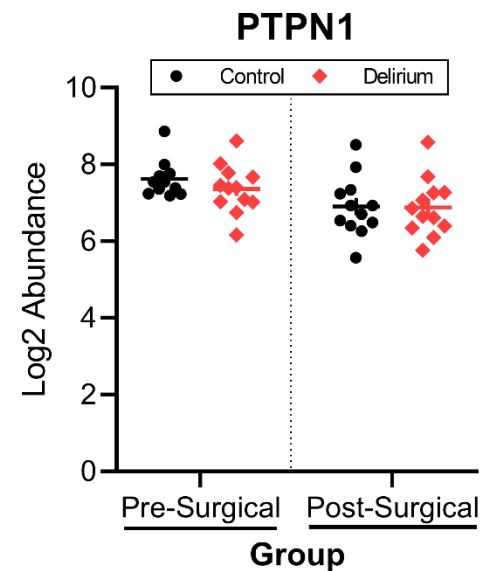
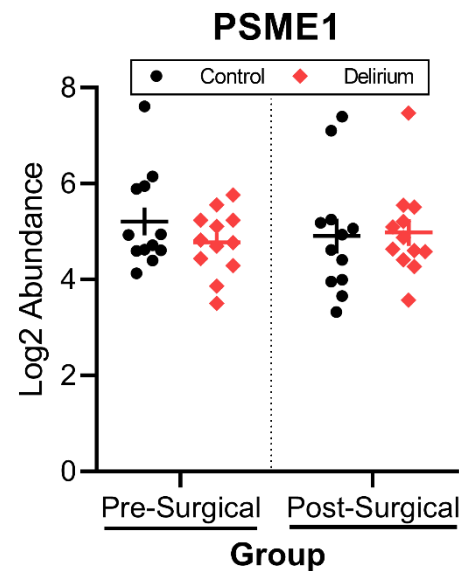
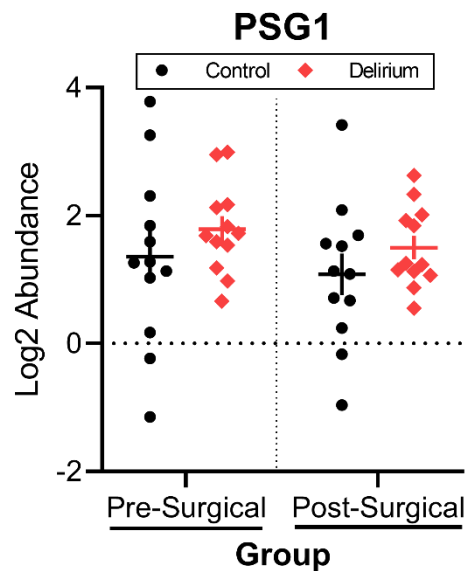
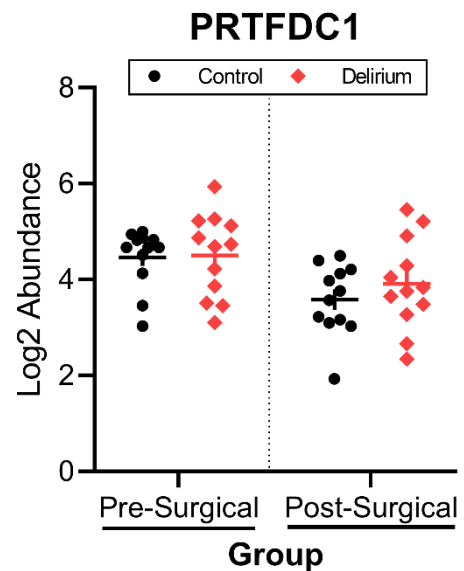
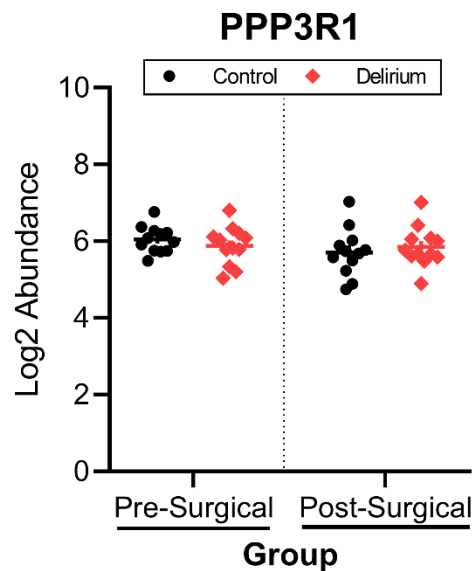
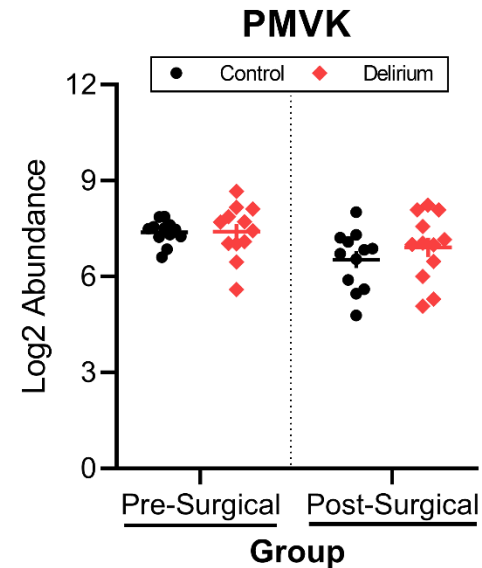
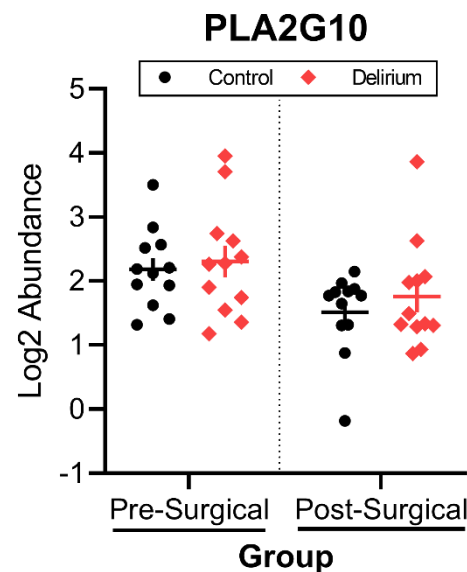
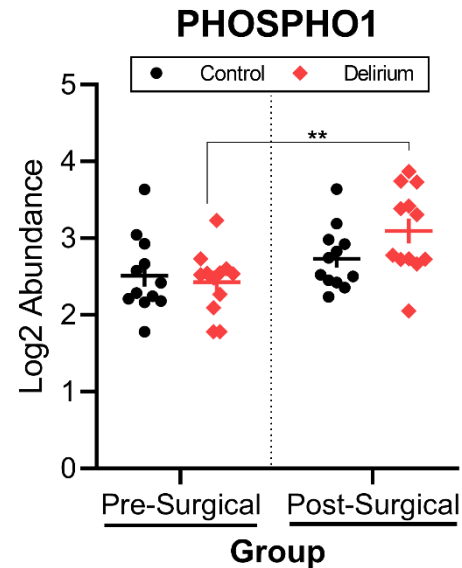
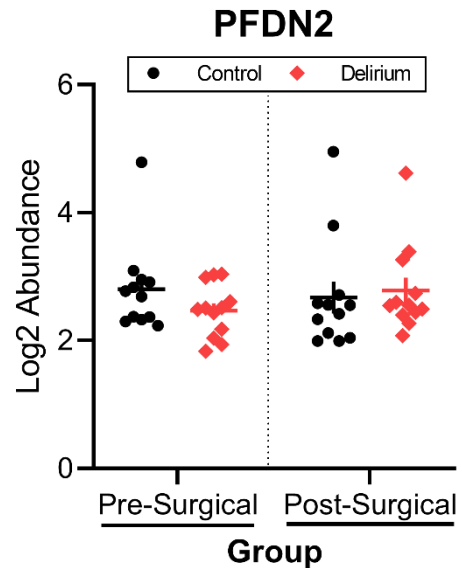
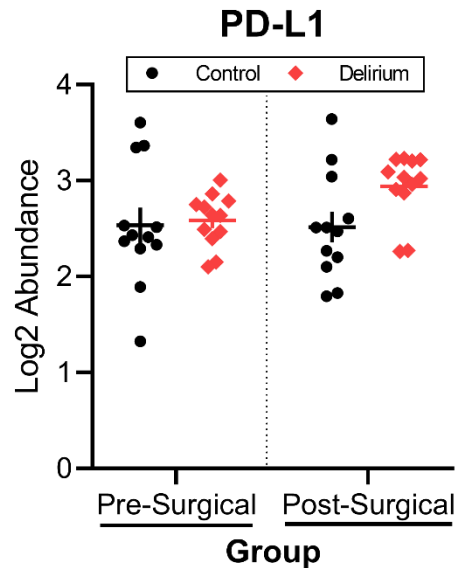




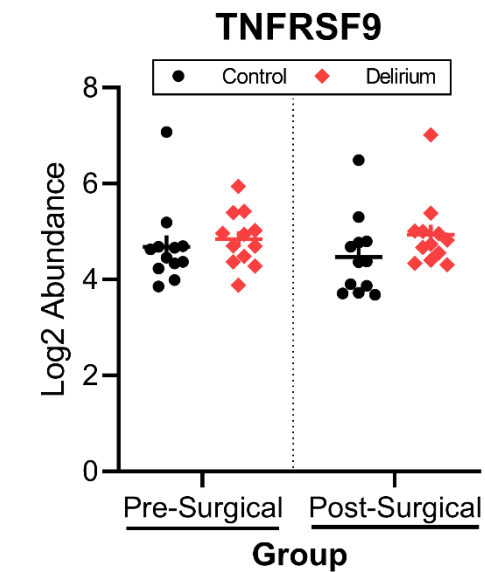
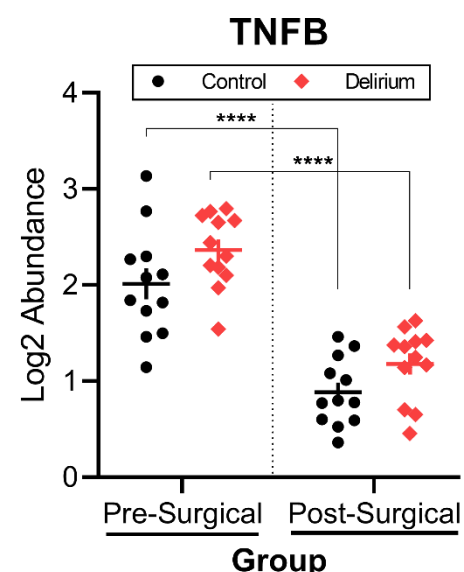
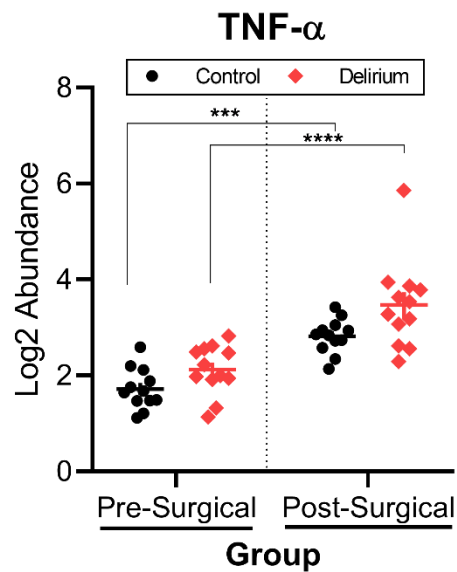
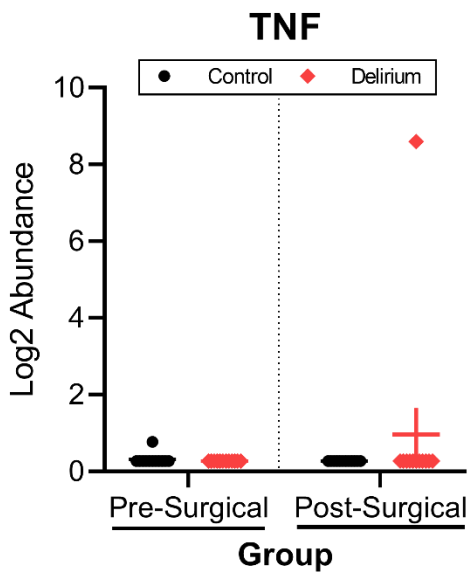
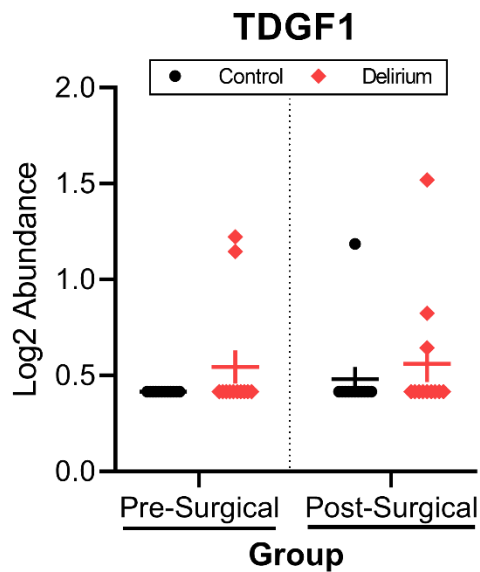
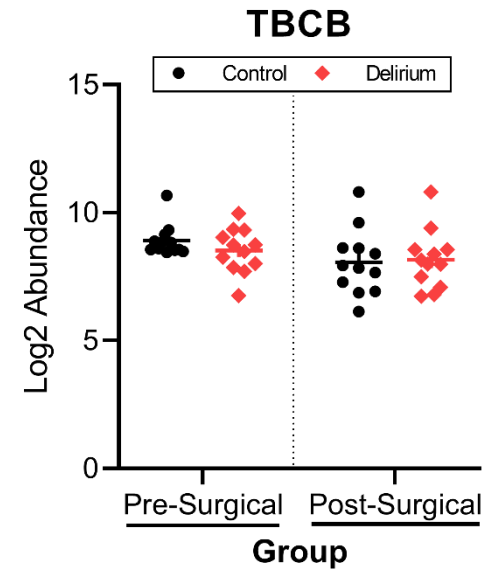
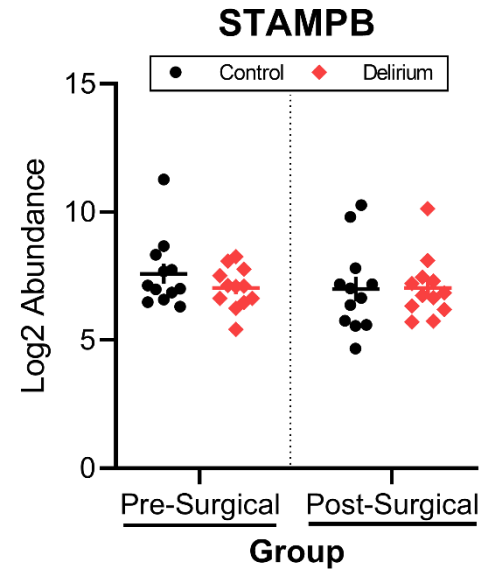
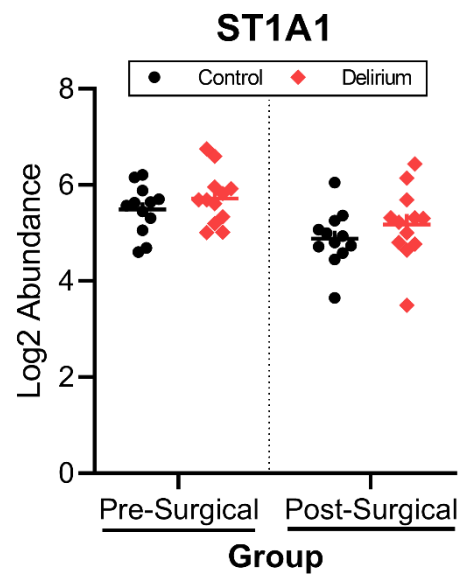
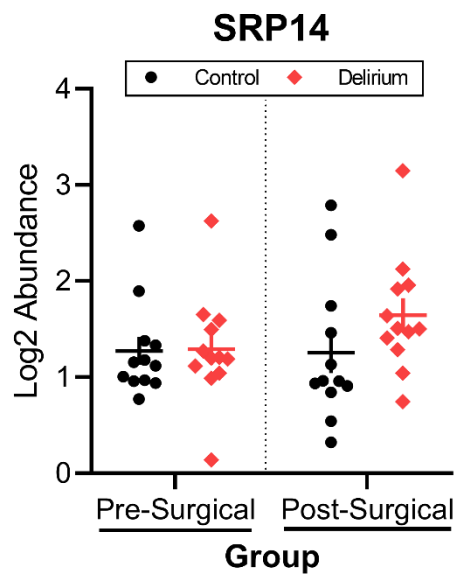
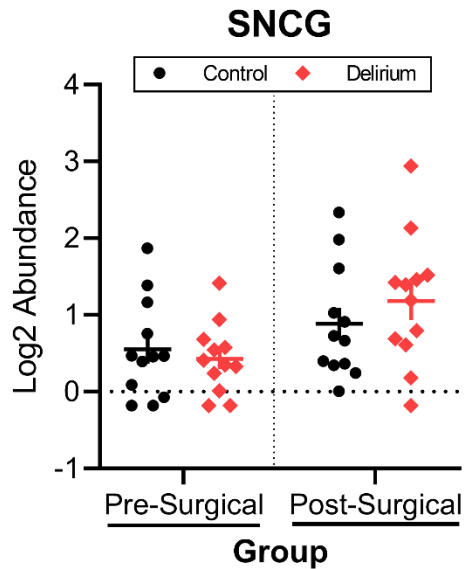
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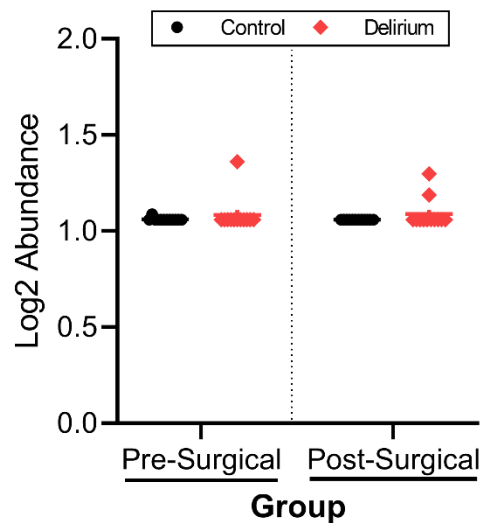
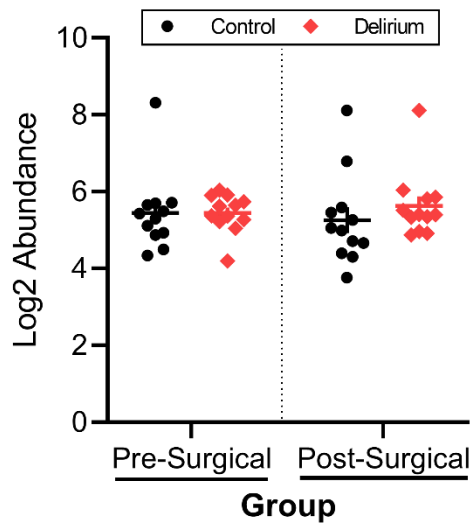
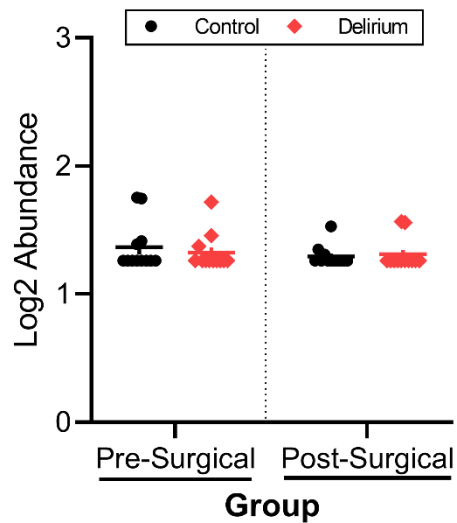
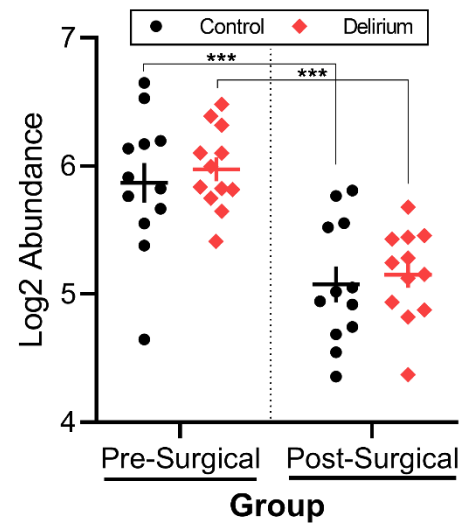
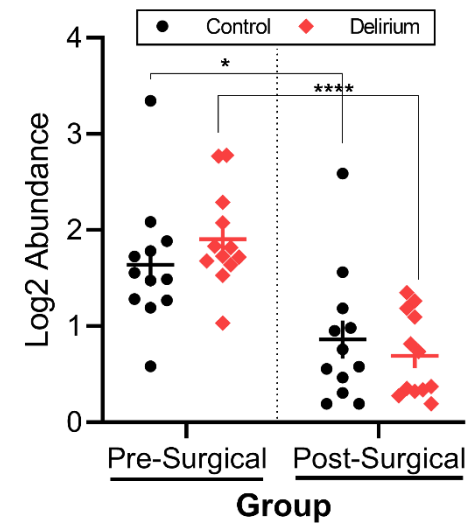
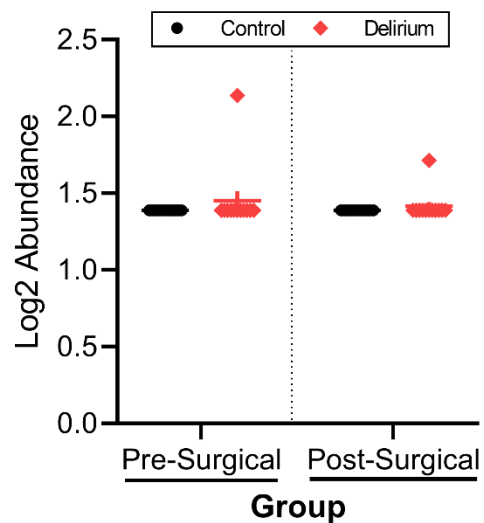
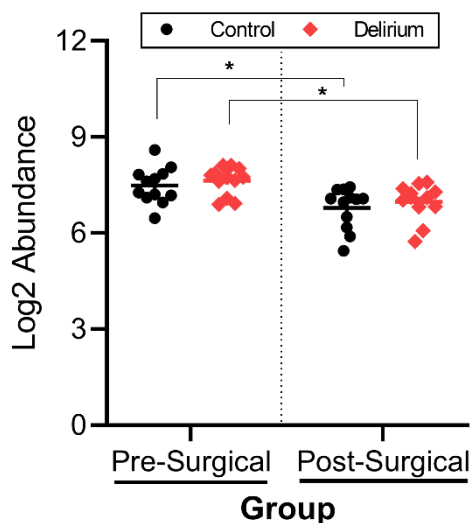
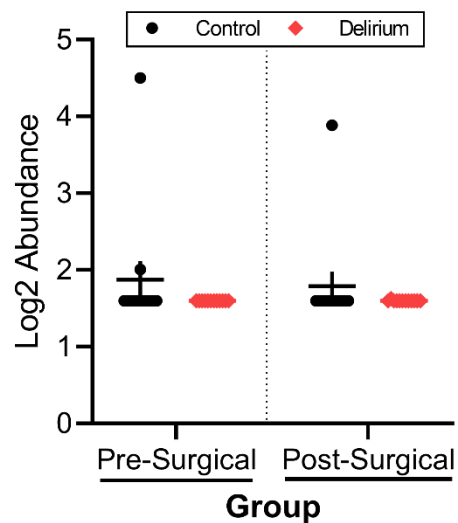
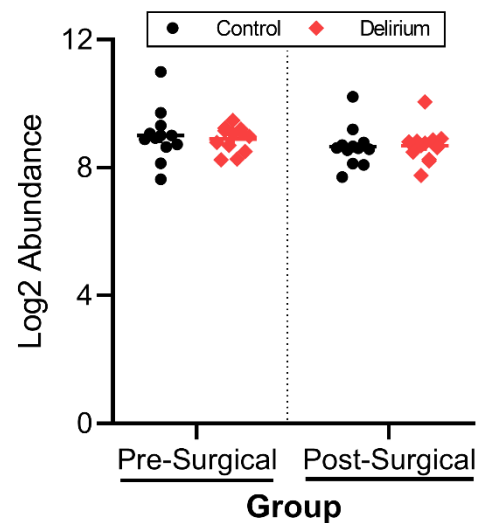
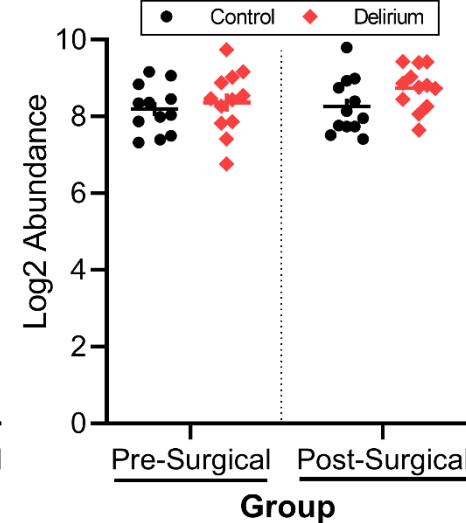


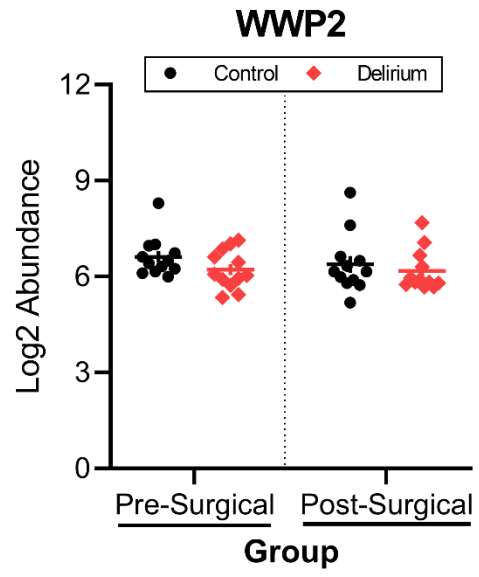
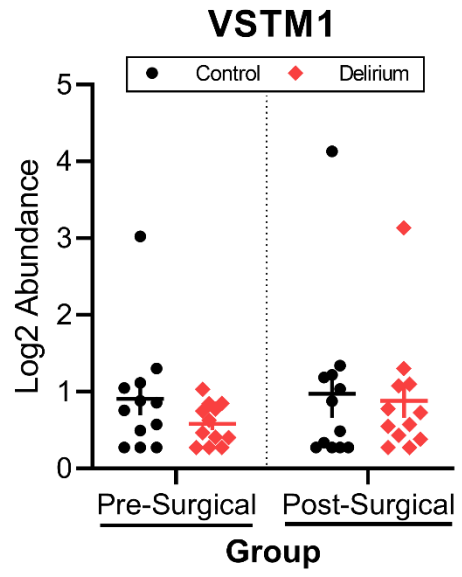








**TNFRSF13C****TNFSF14****TPPP3****TRAIL****TRANCE****TSLP****TWEAK****UBE2F****Urokinase****VEGF-A**



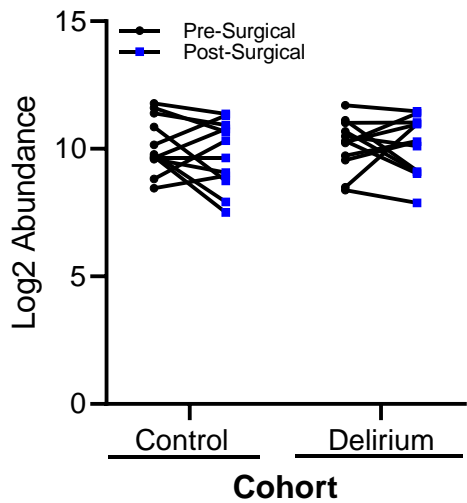
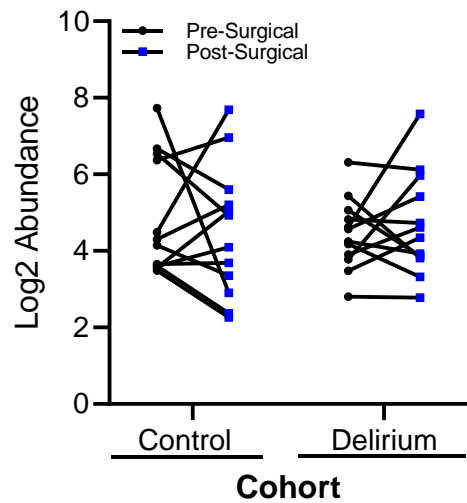
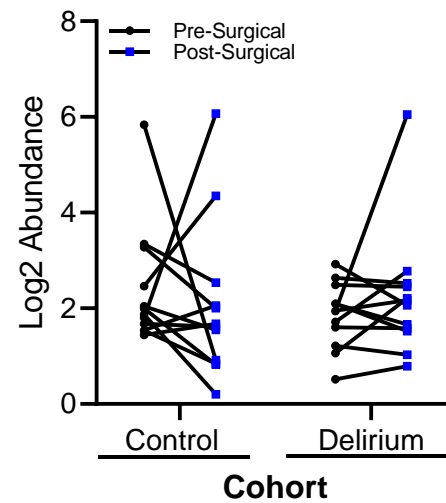
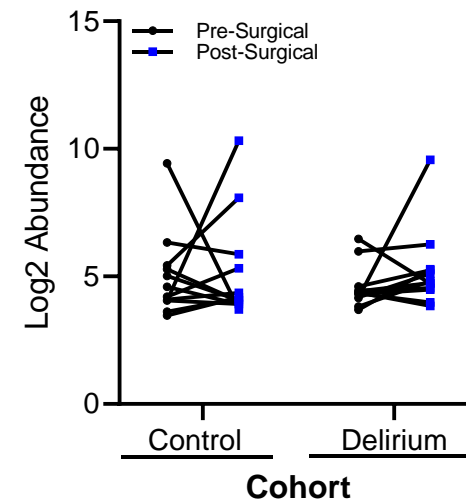
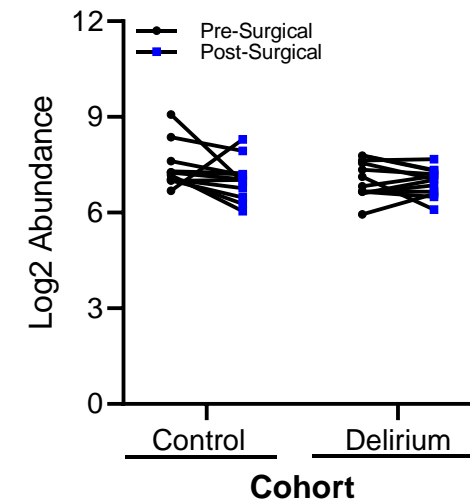
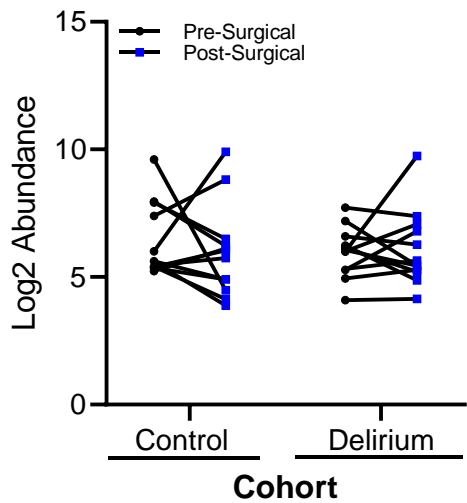
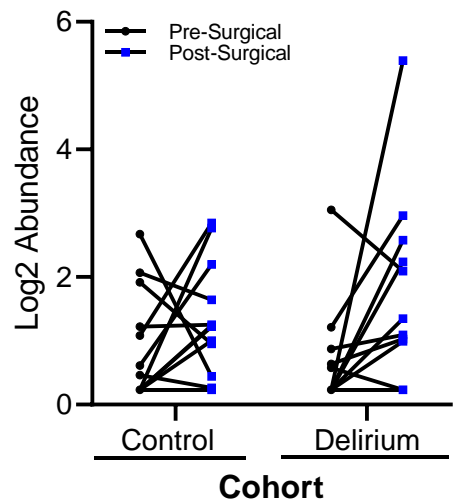
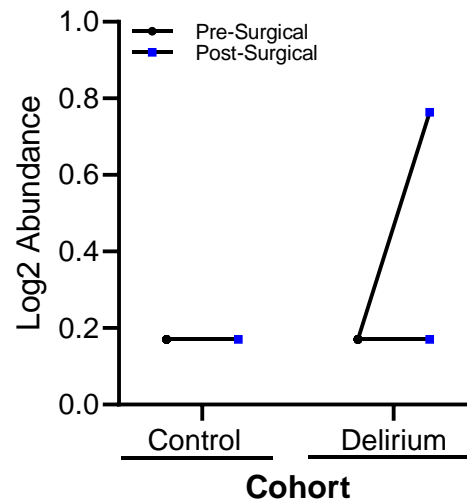
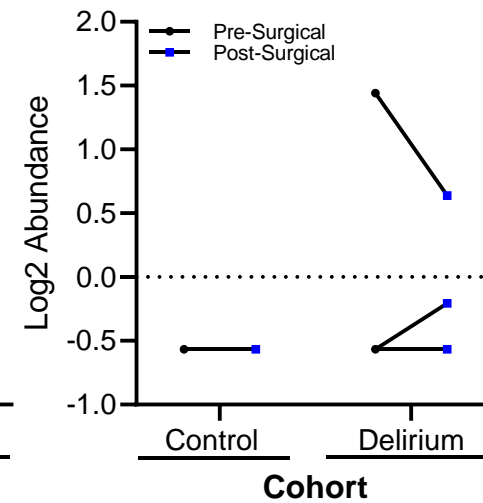
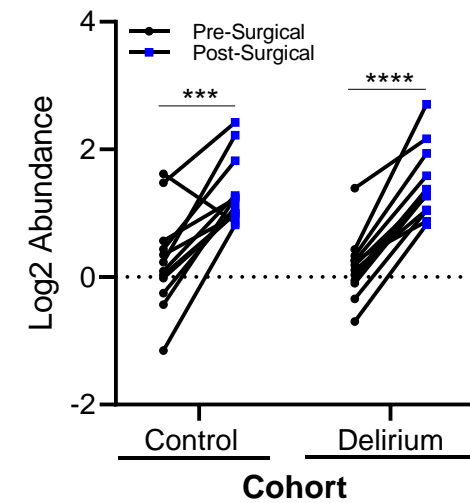


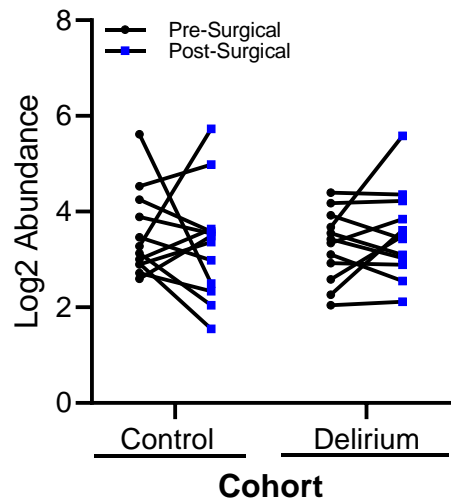
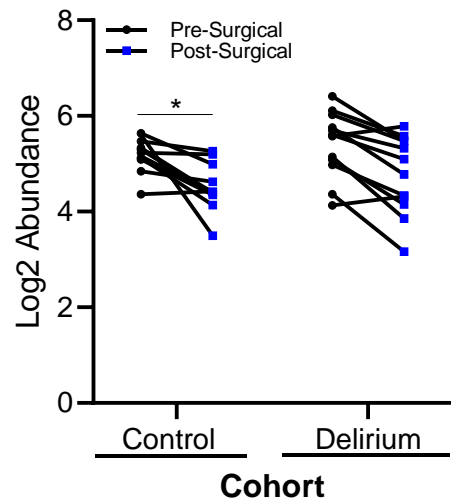
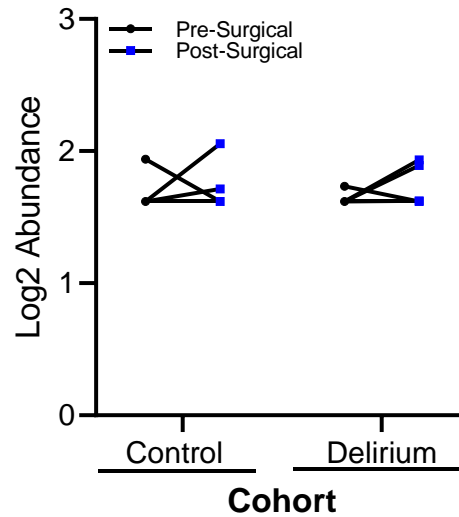
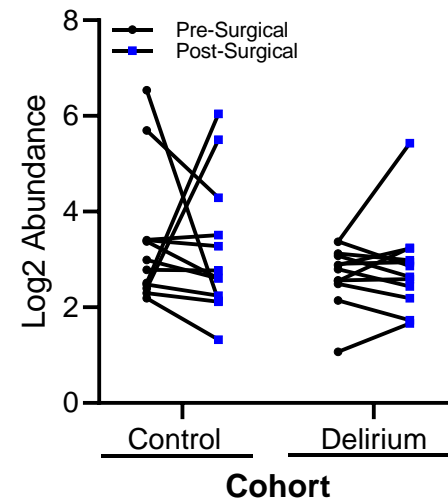
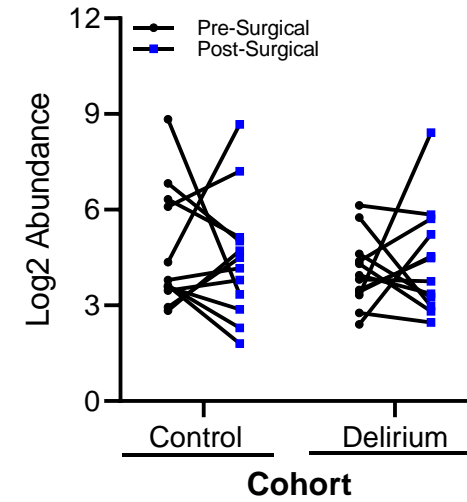
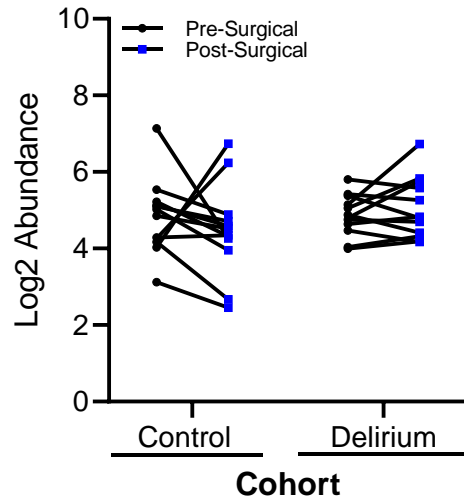
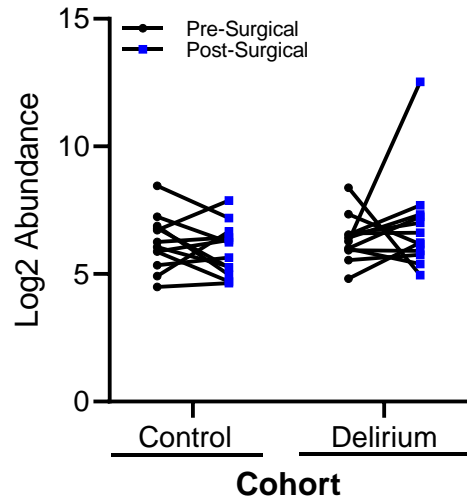
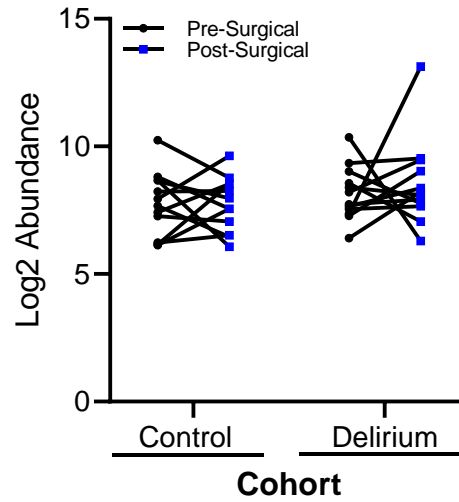
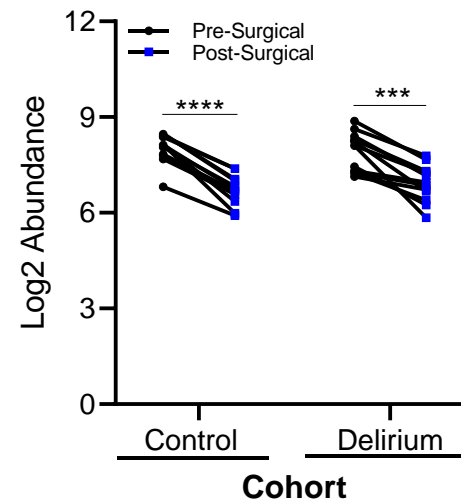
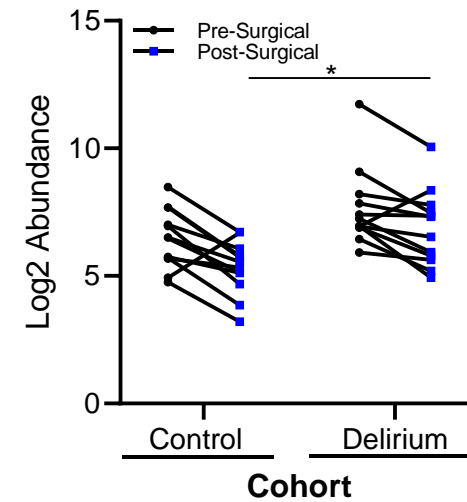
**Appendix B.** Individual graphs of proteins showing patient-specific changes from preoperative day 0 to postoperative day 1.

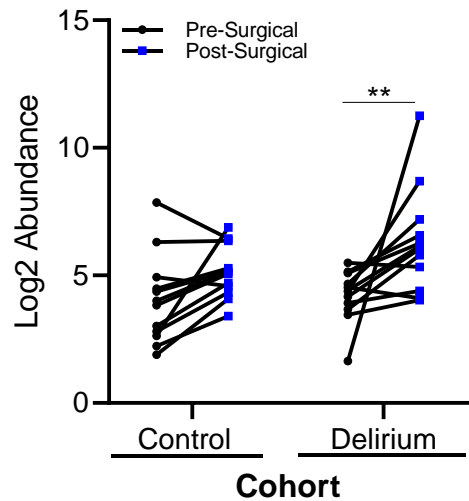
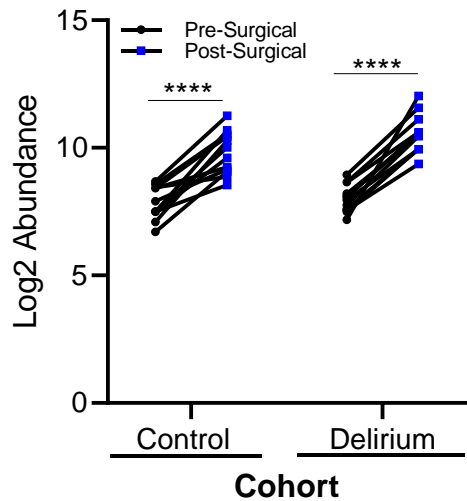
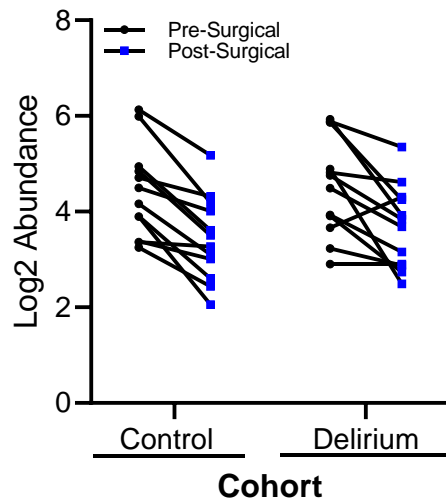
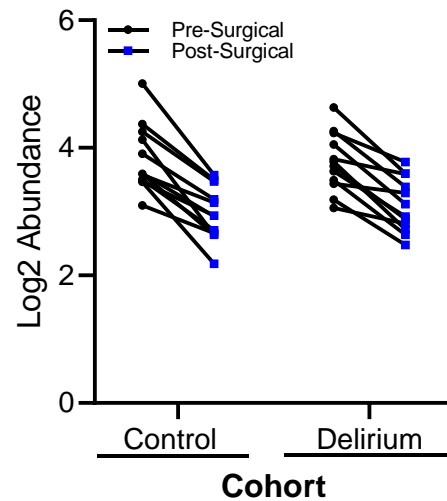
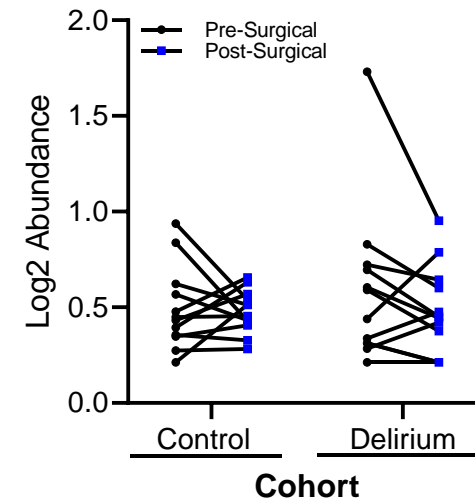
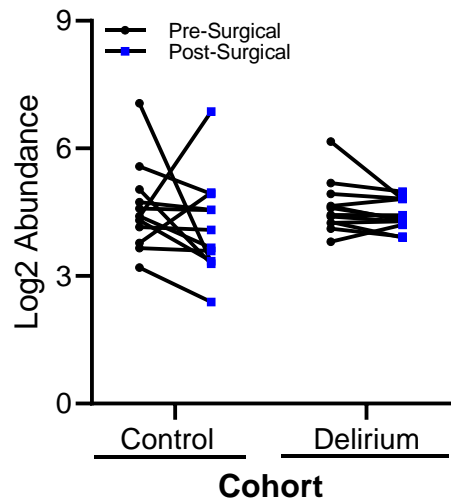
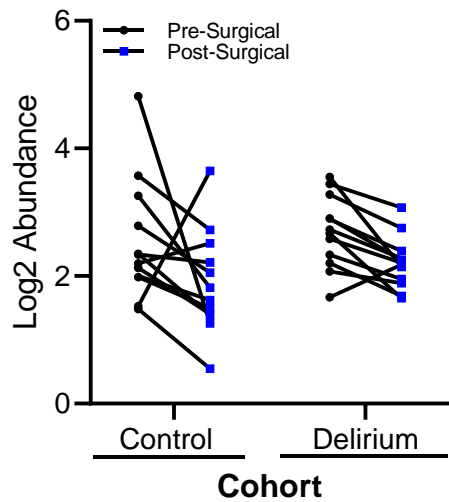
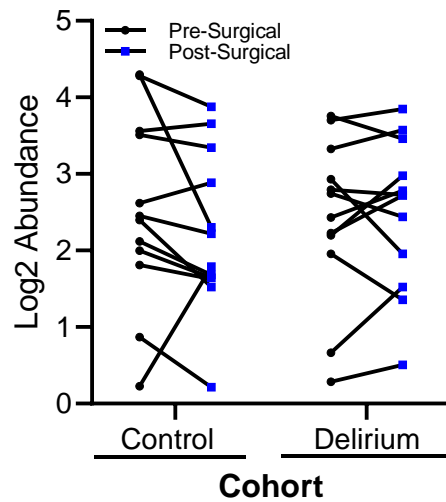
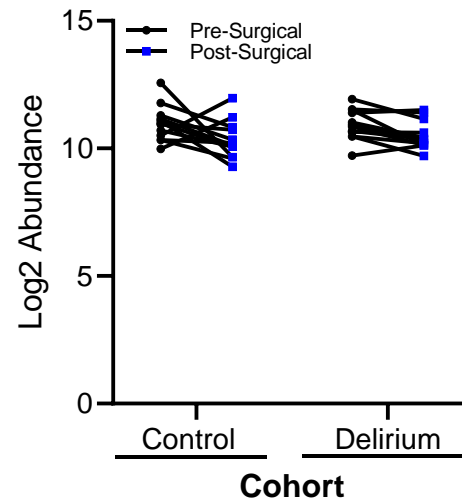
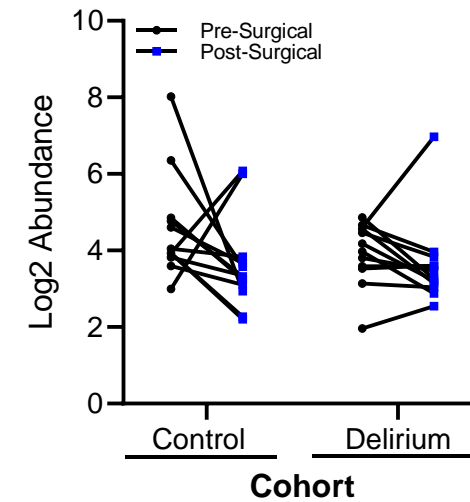
**Panels:**

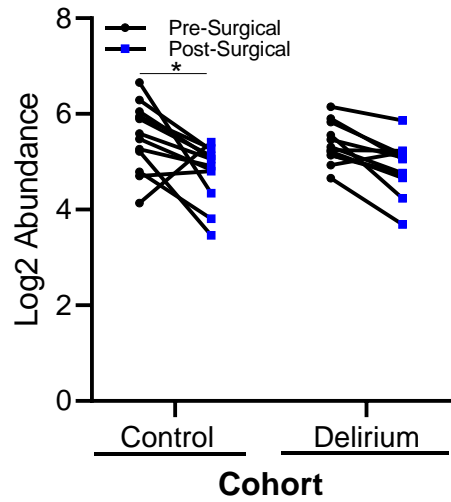
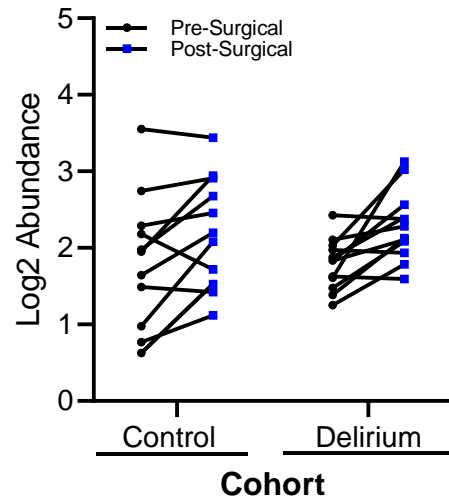
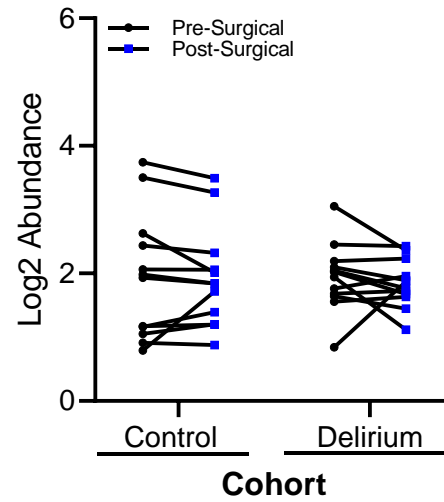
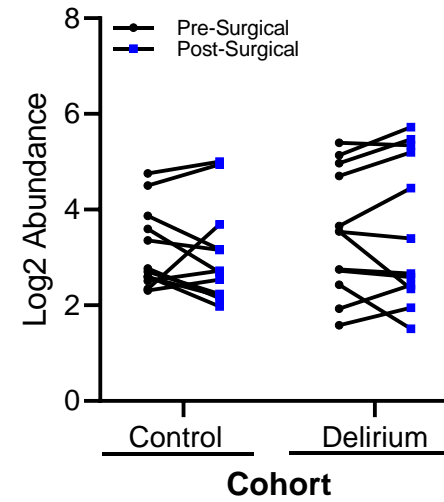
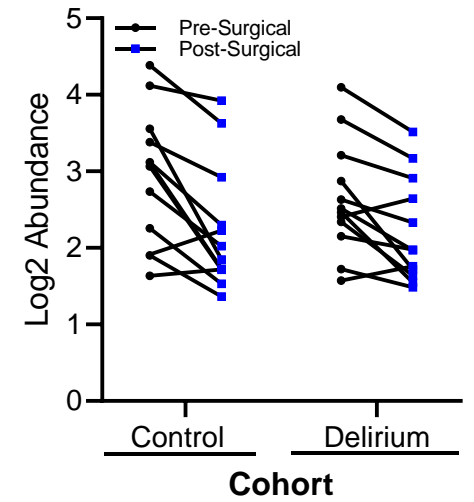
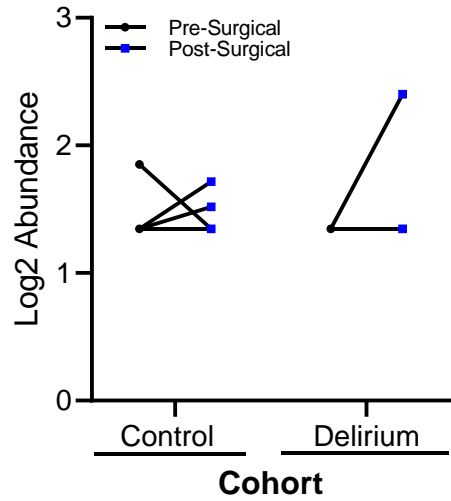
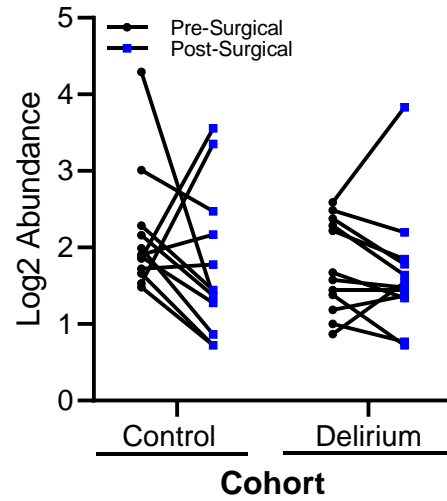
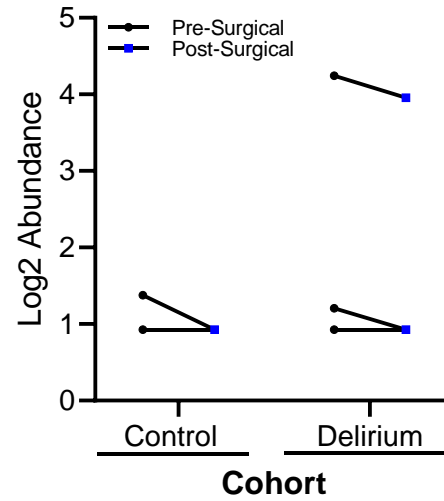
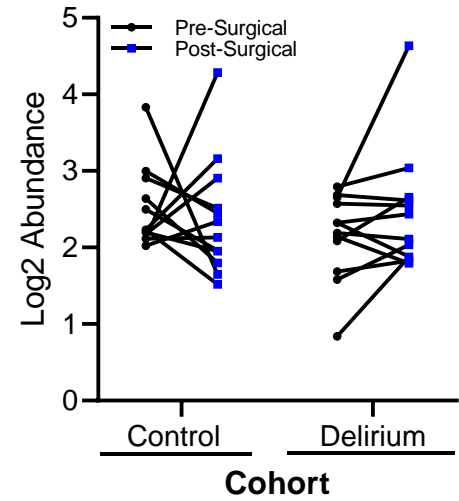
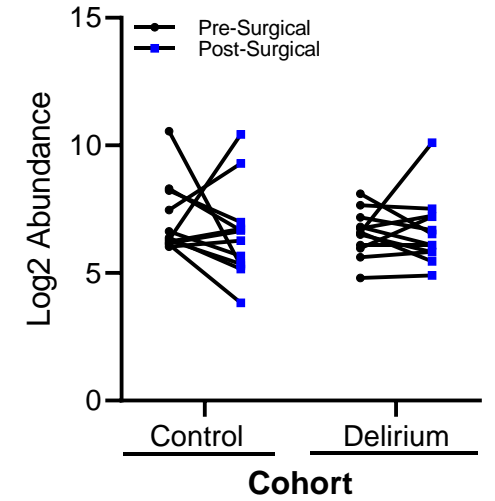
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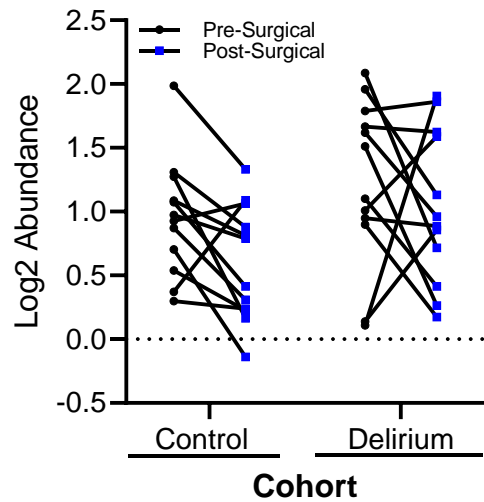
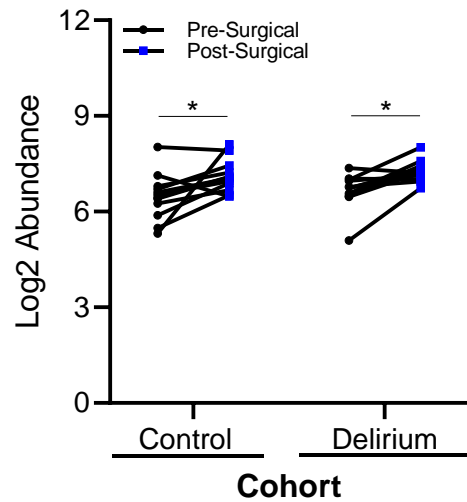
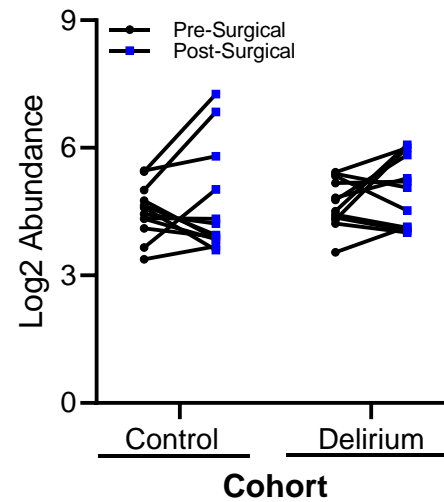
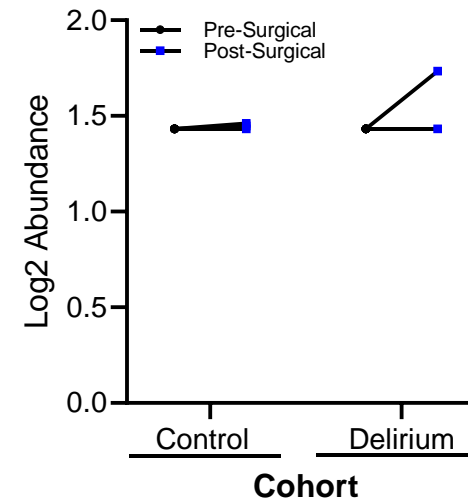
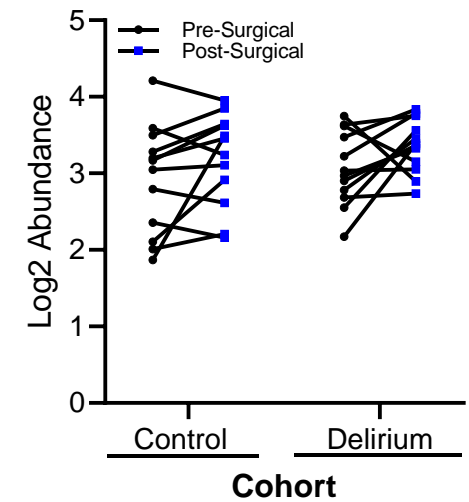
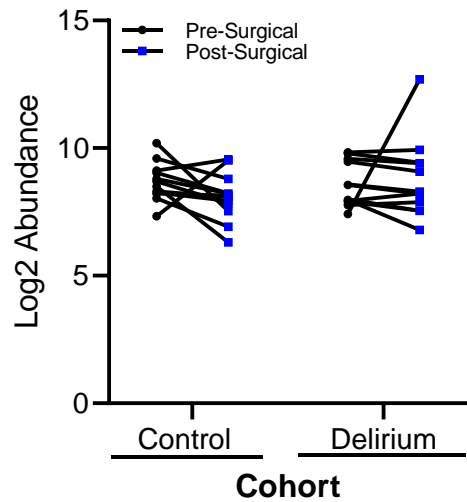
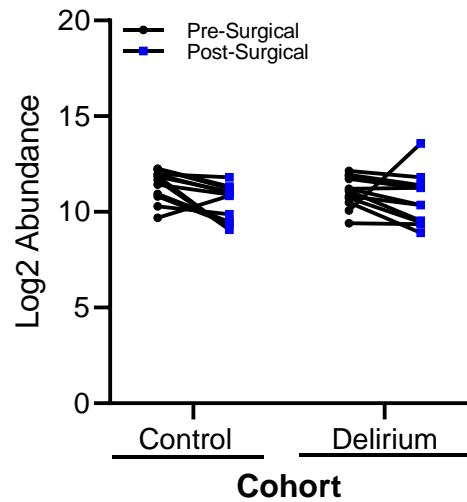
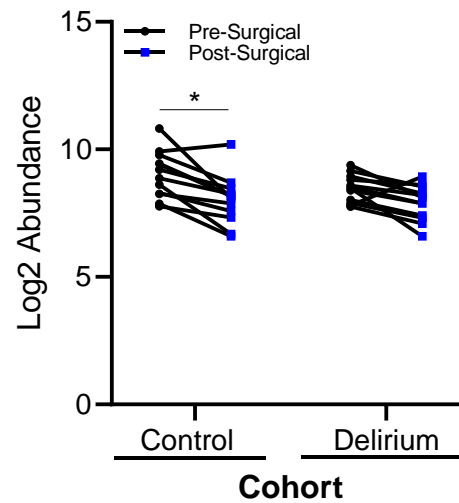
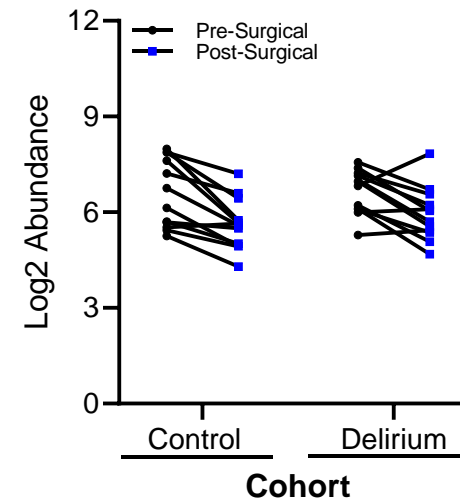
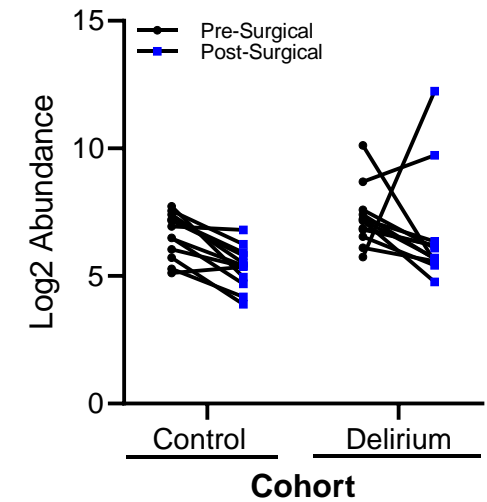
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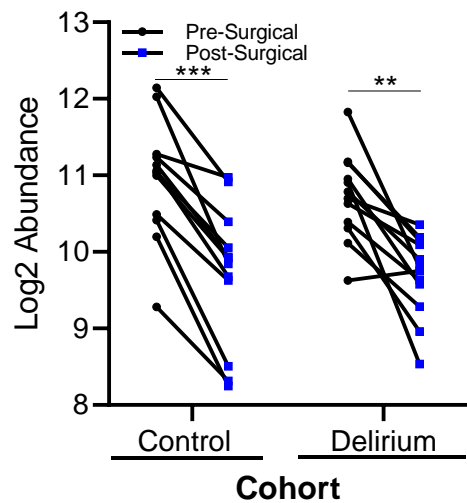
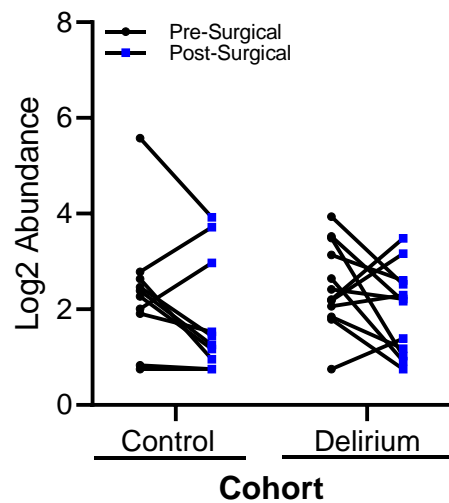
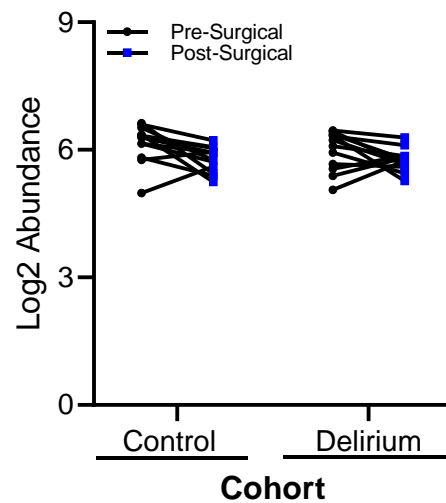
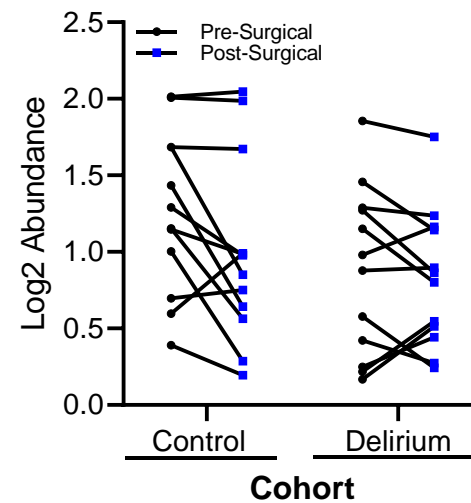
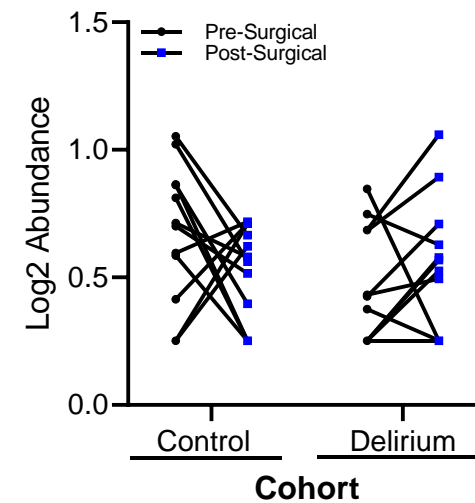
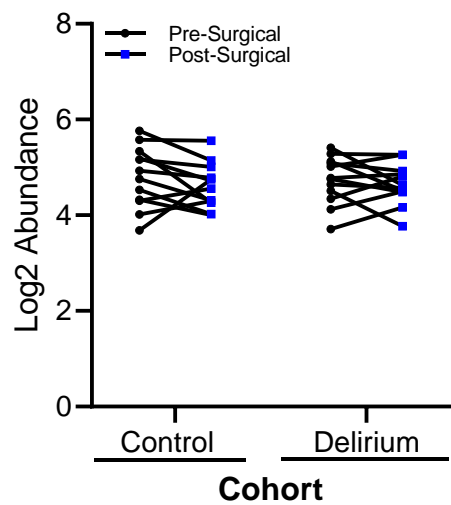
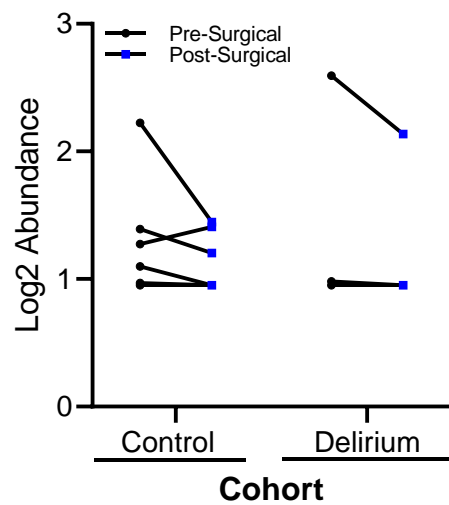
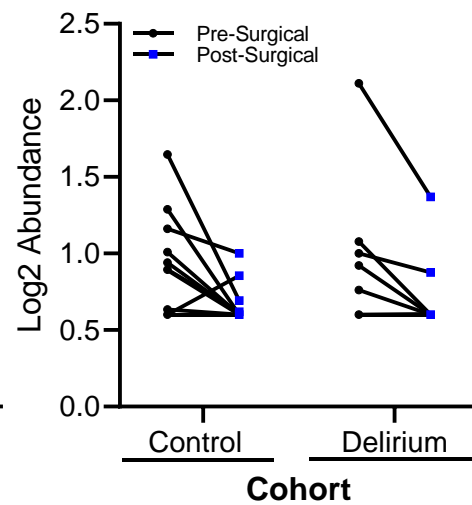
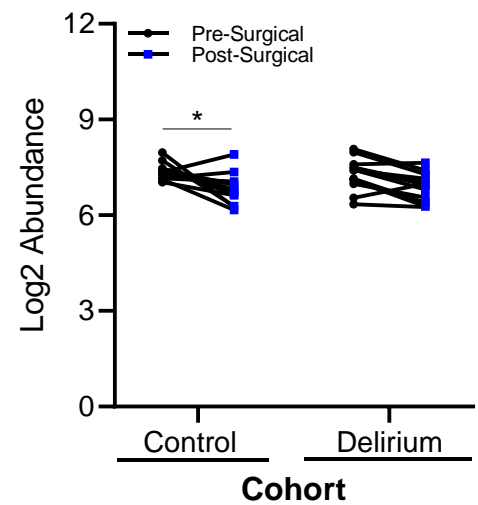
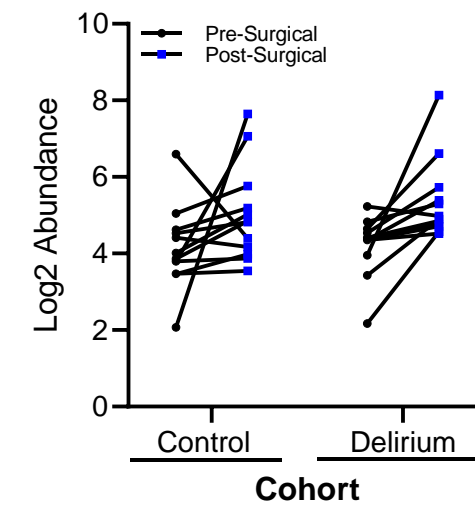
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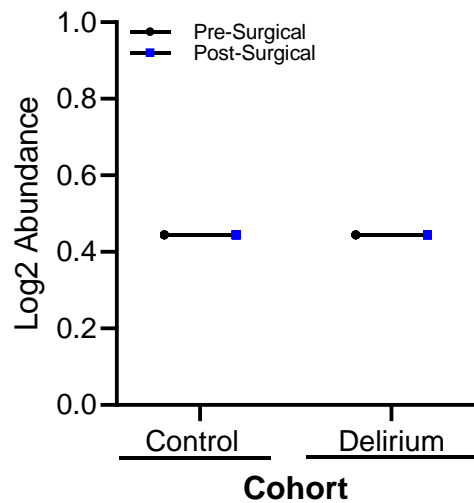
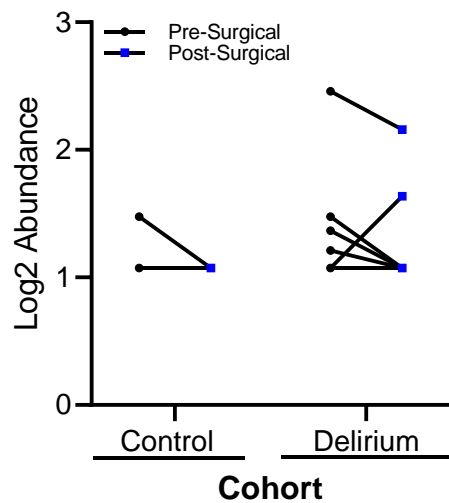
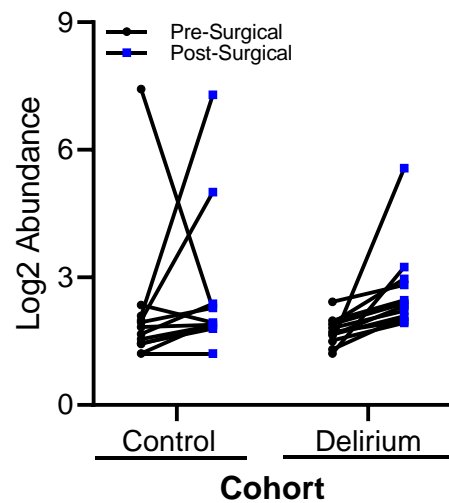
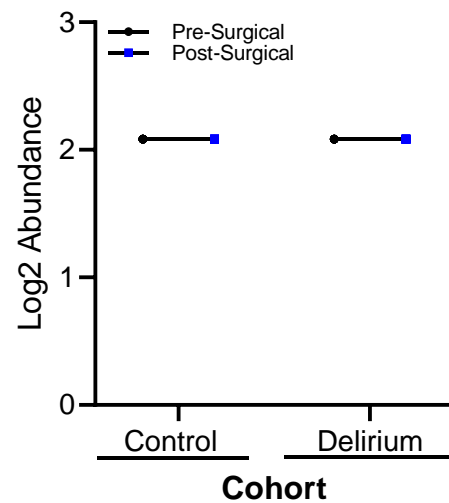
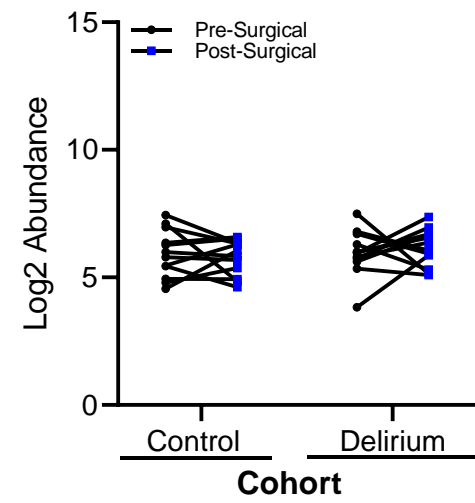
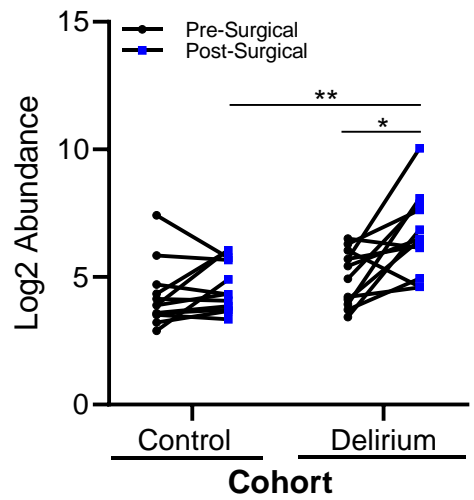
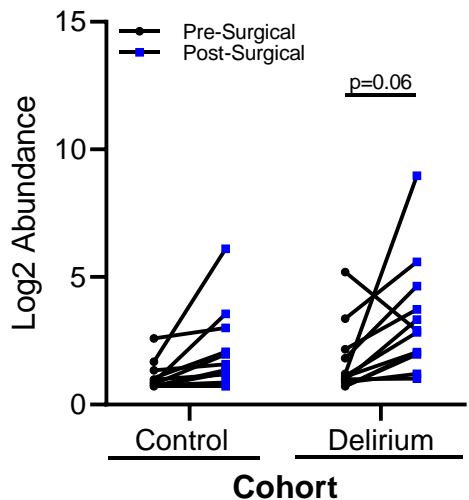
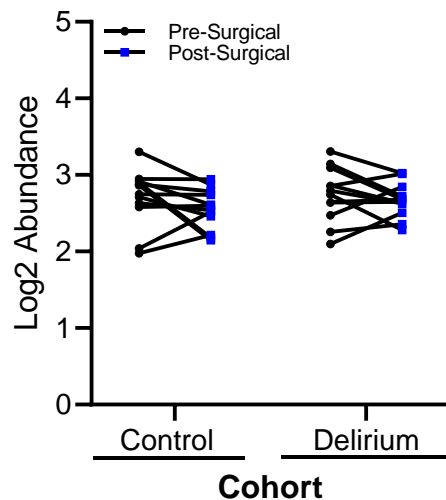
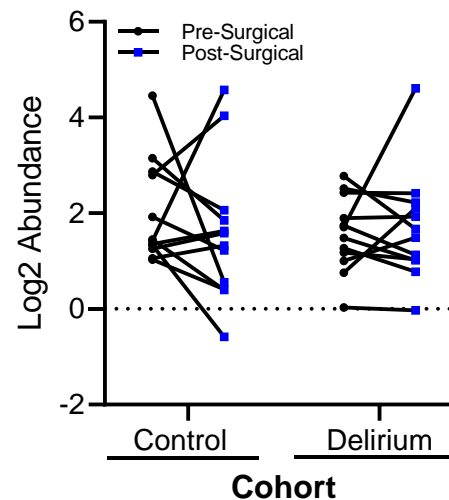
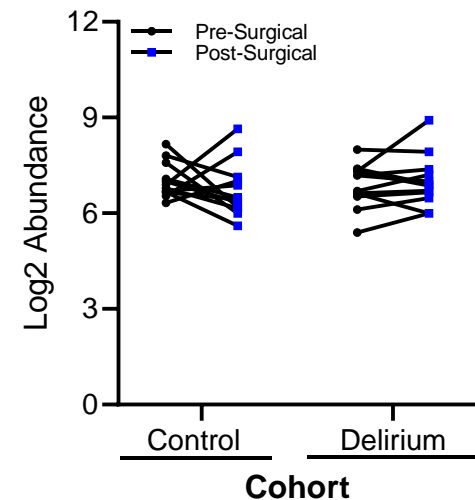
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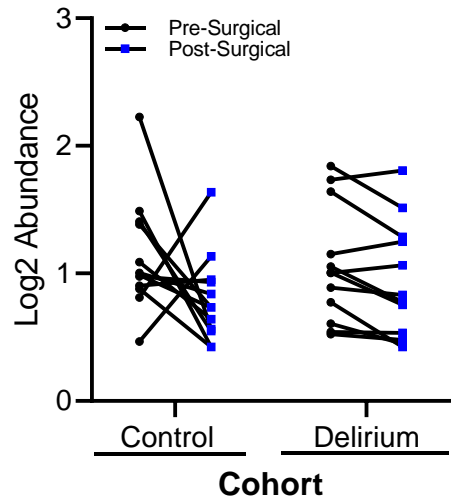
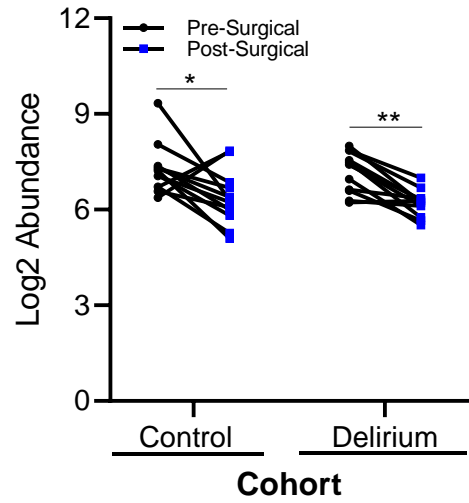
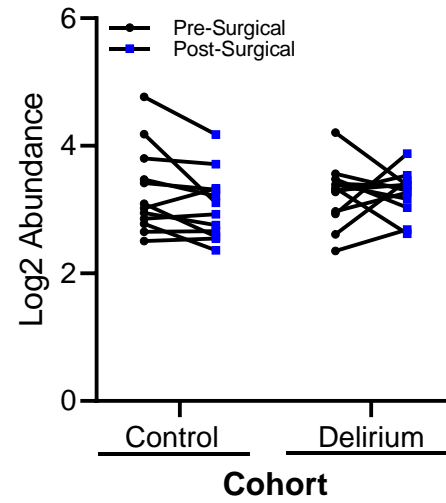
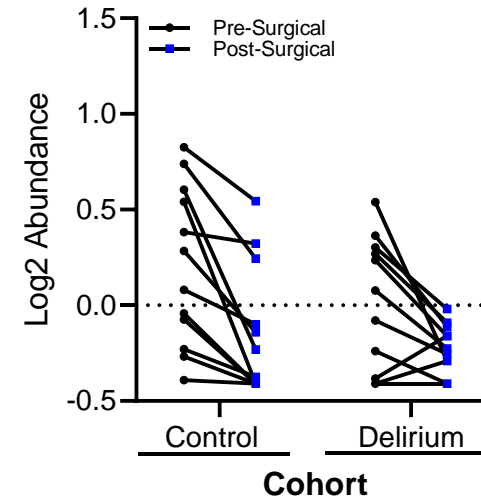
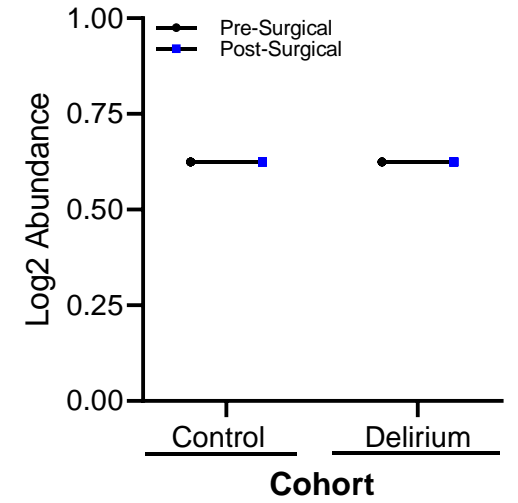
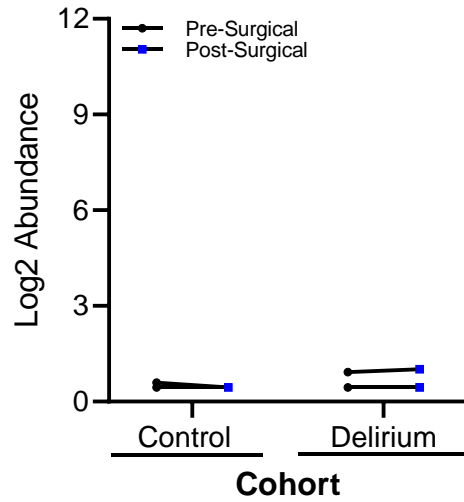
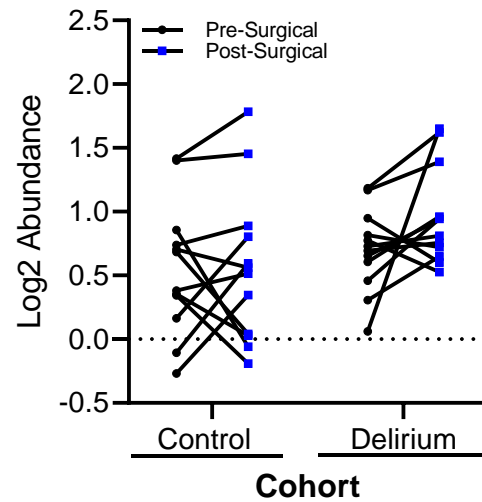
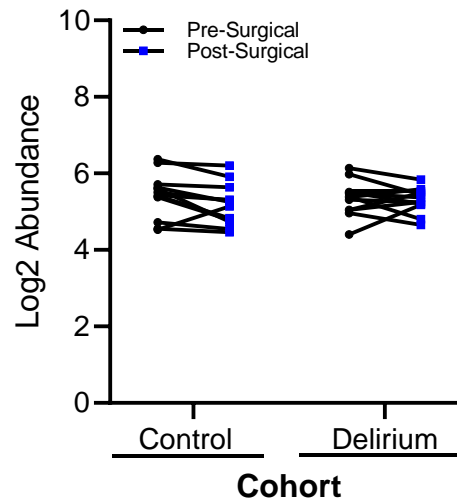
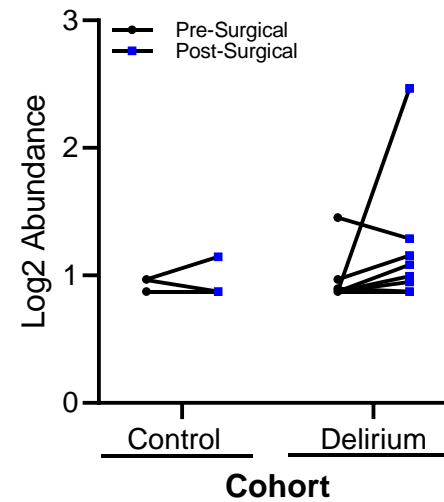
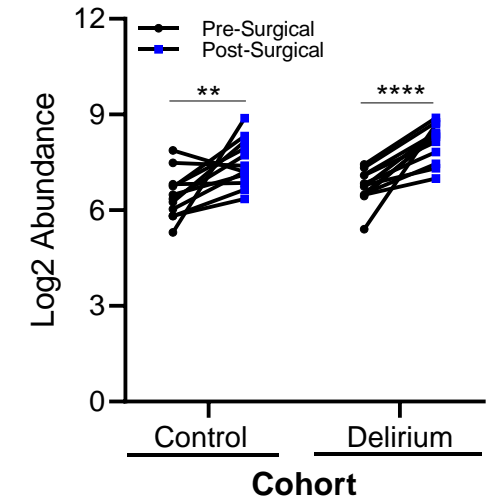
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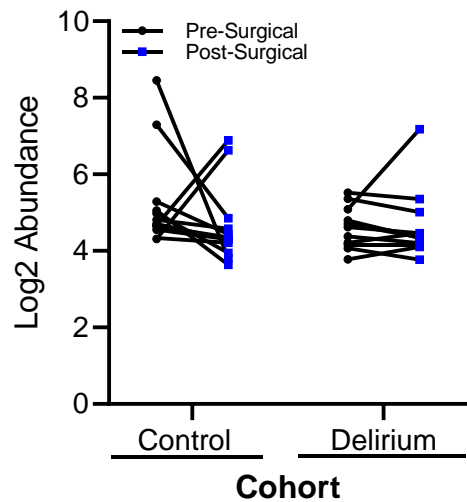
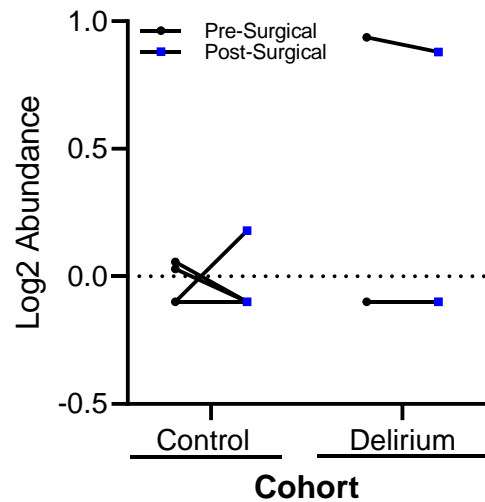
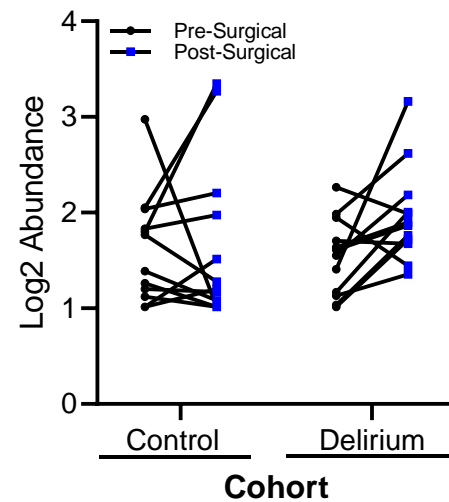
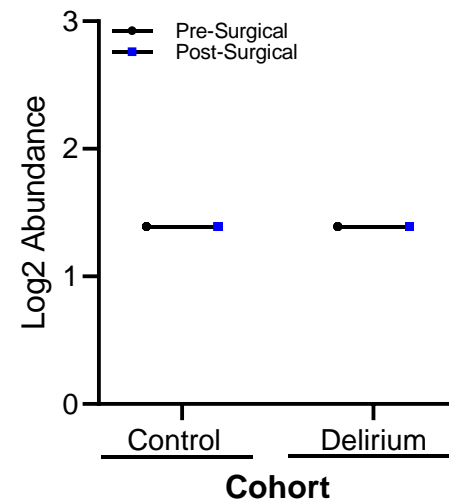
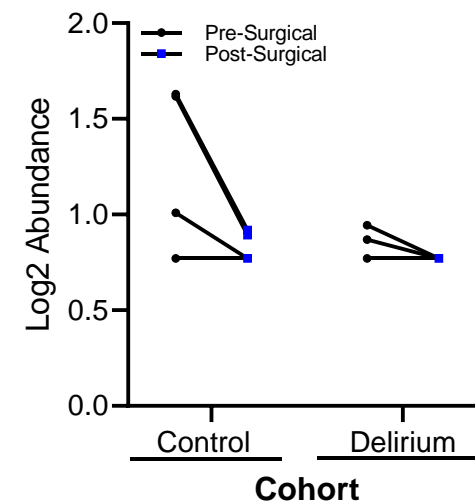
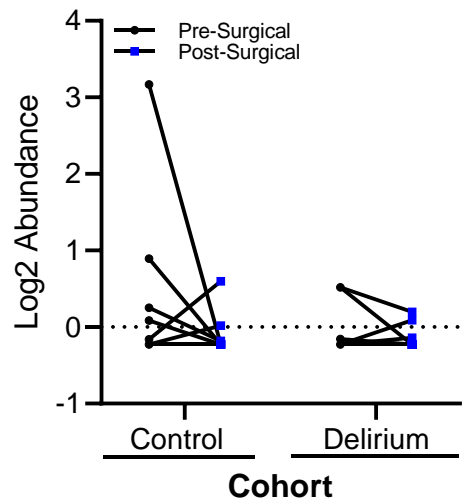
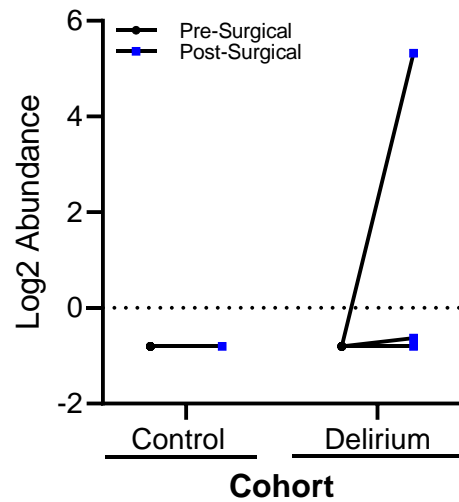
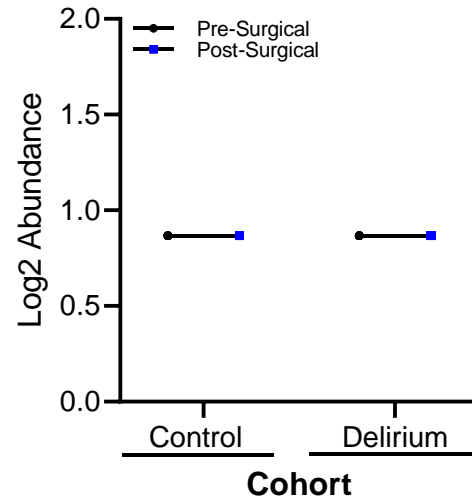
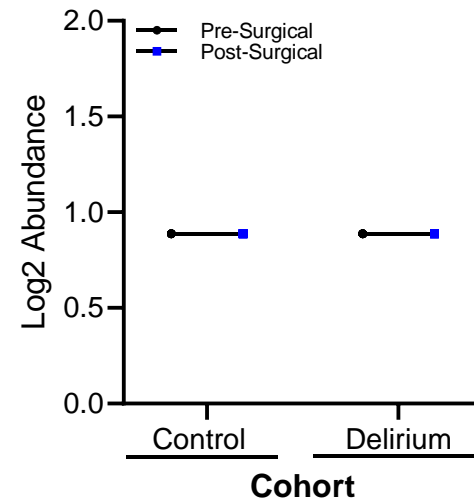
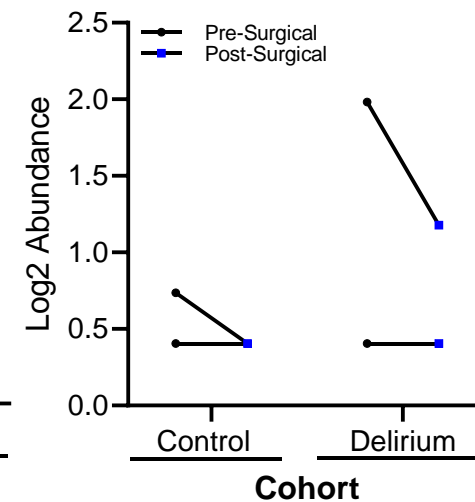
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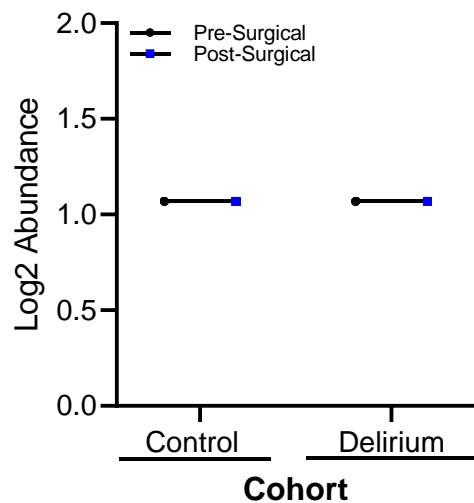
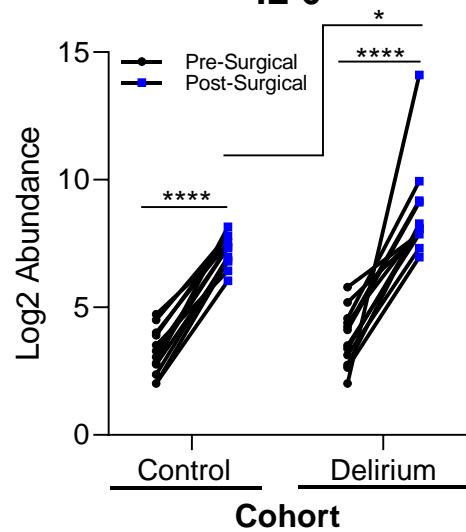
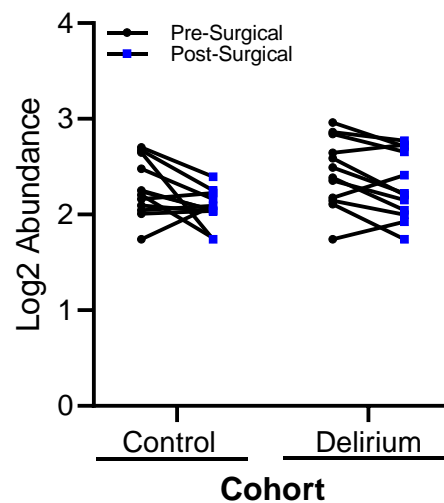
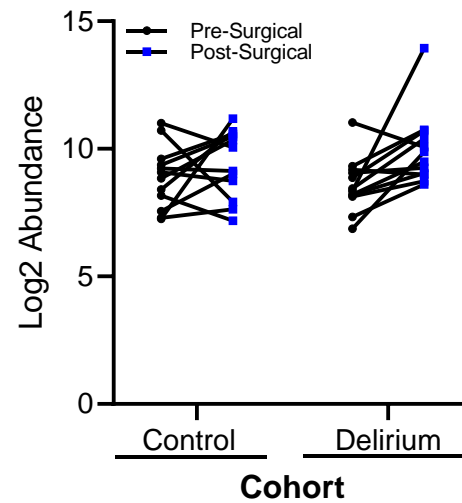
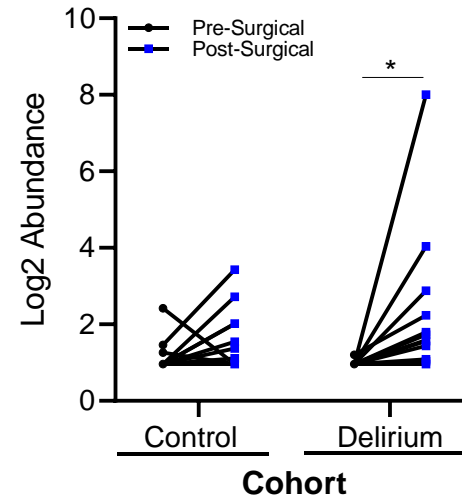
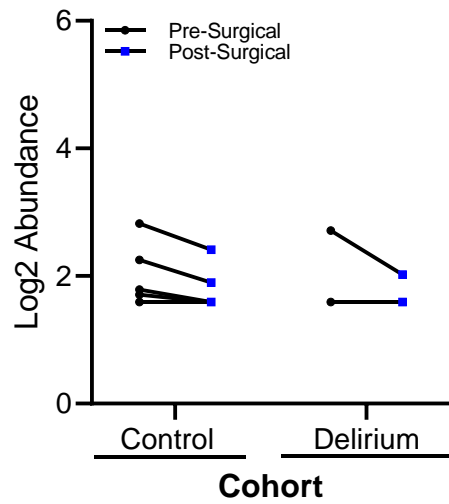
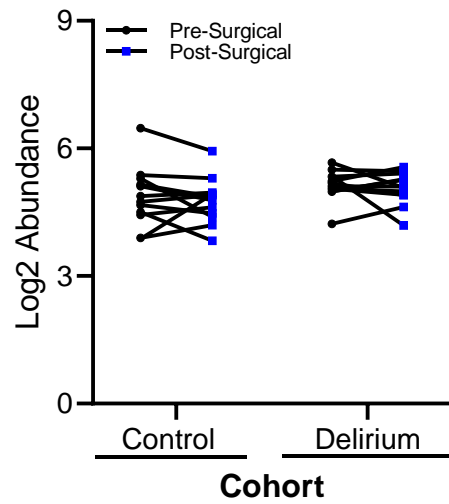
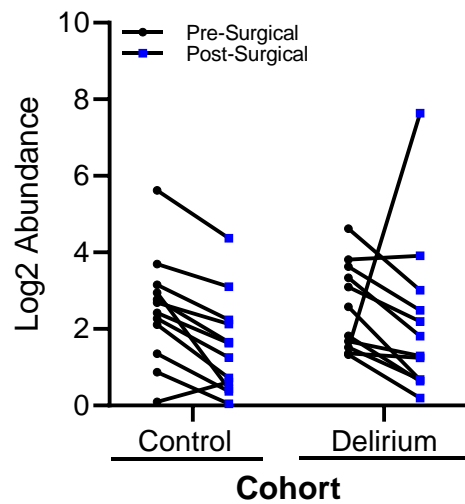
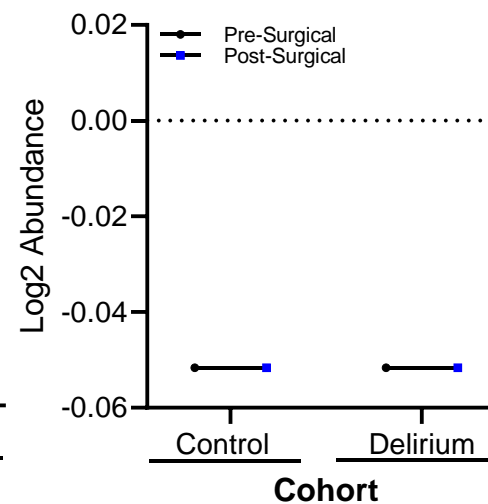
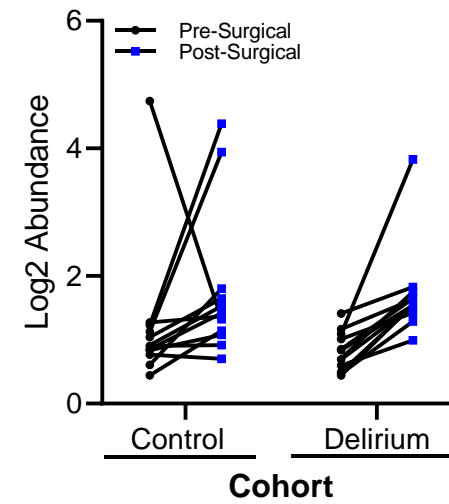
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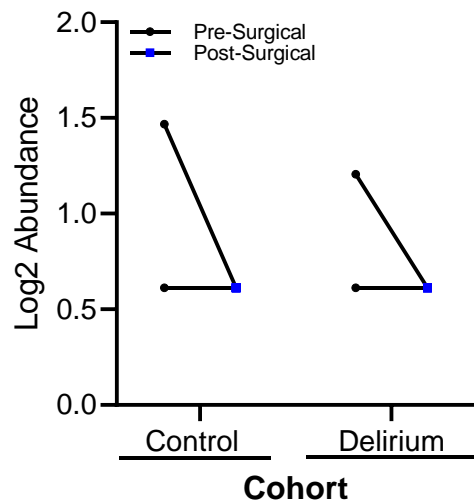
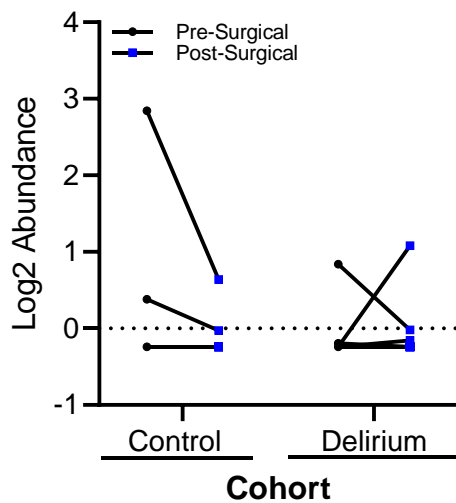
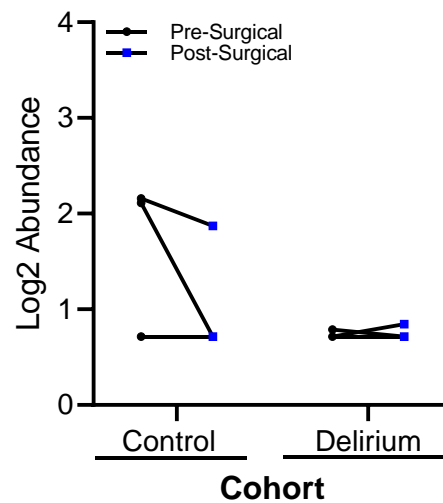
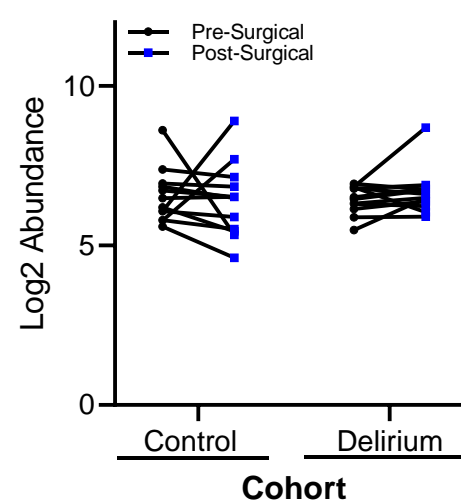
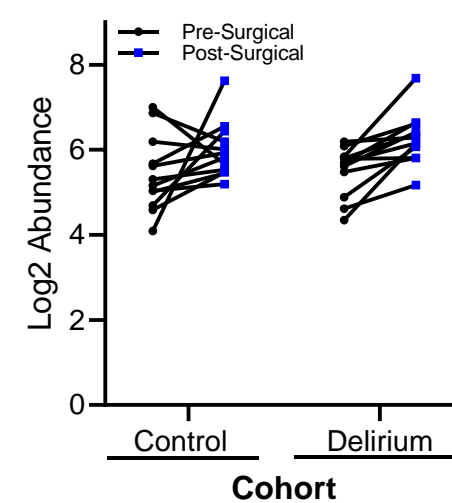
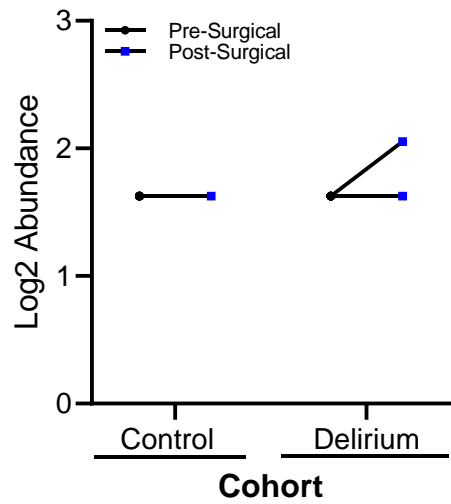
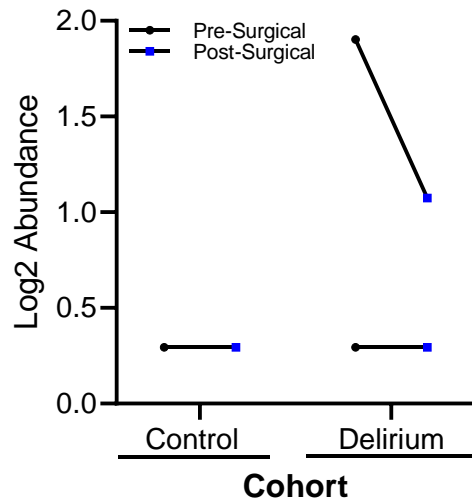
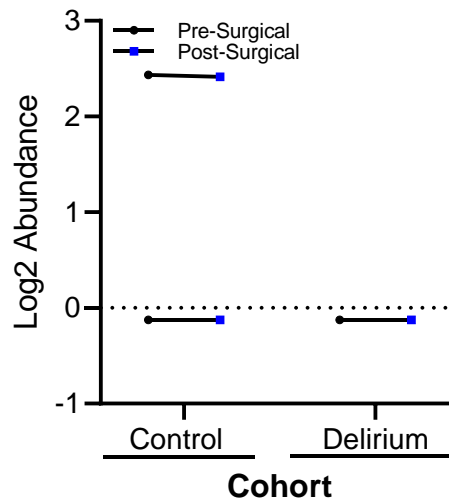
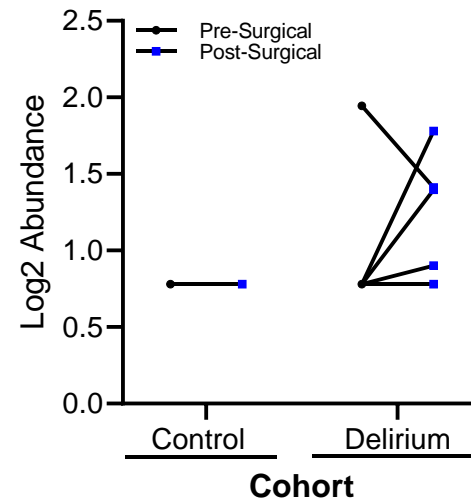
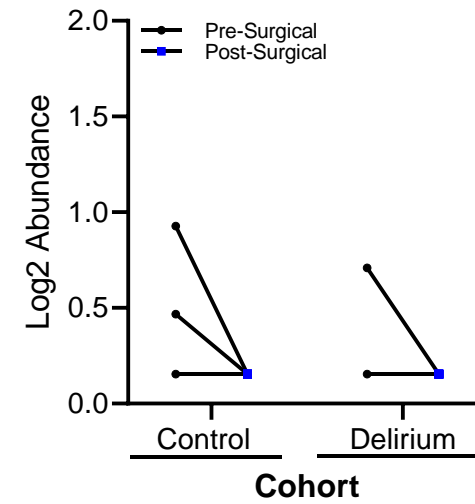
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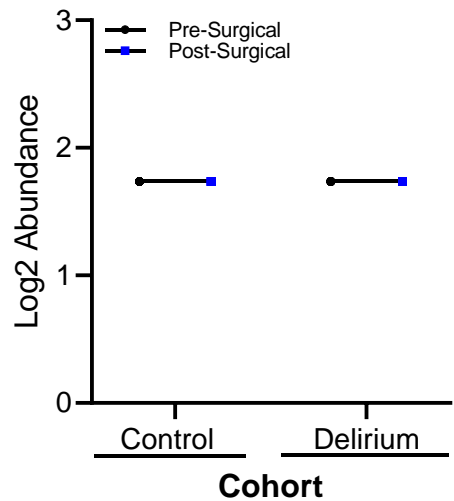
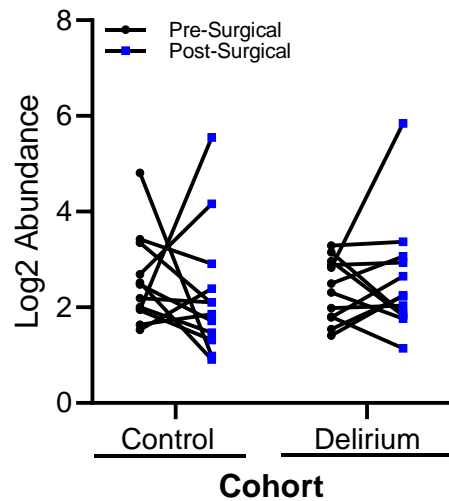
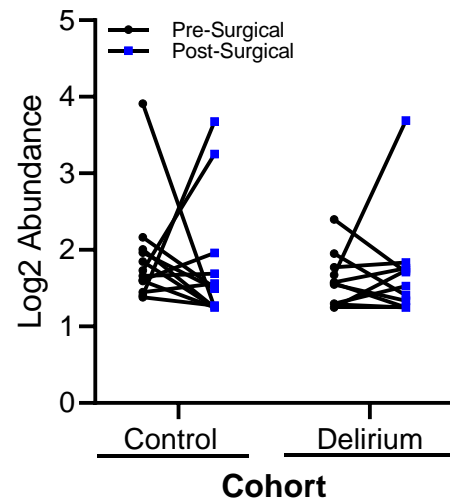
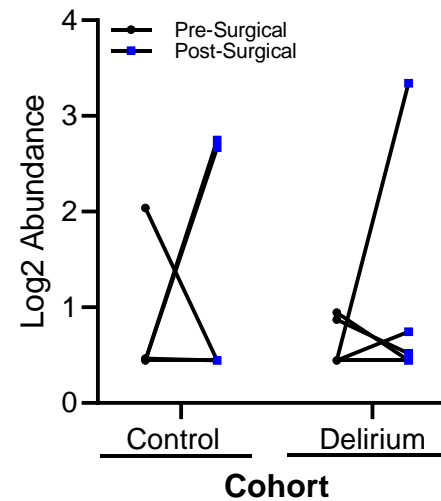
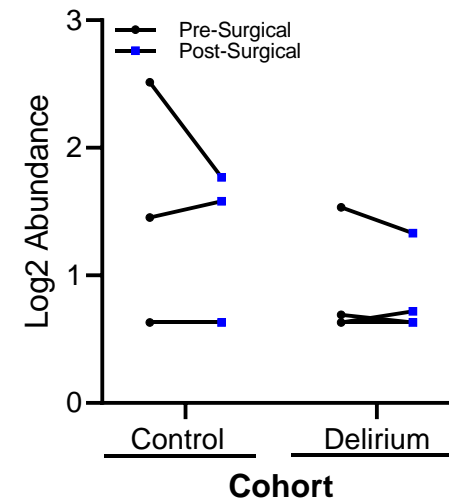
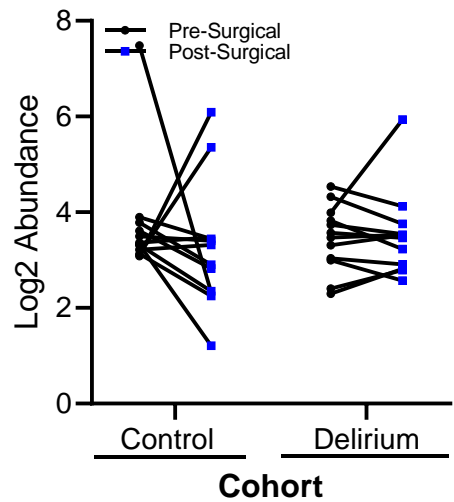
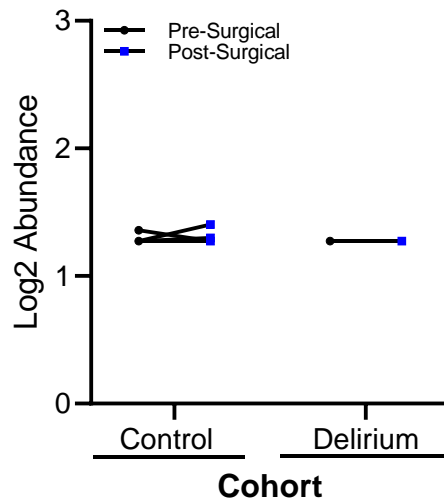
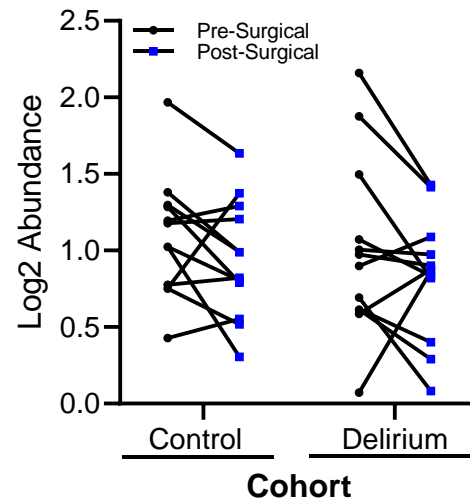
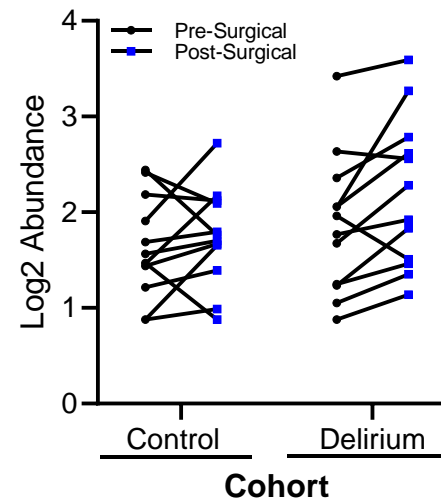
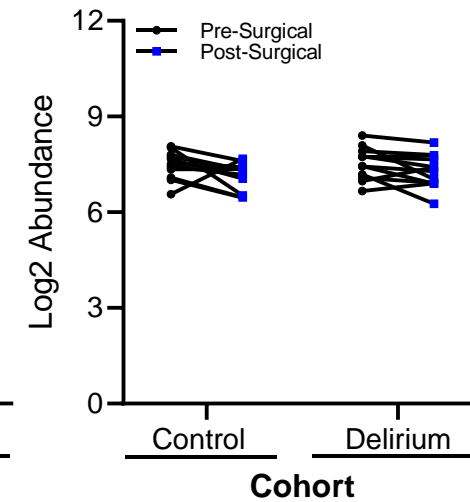


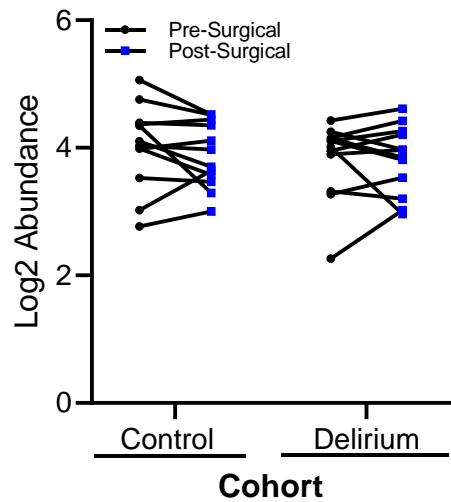
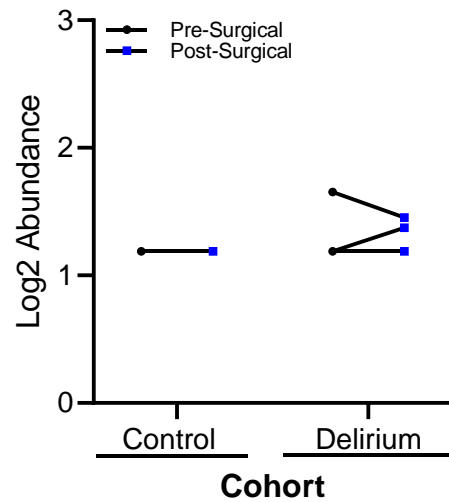
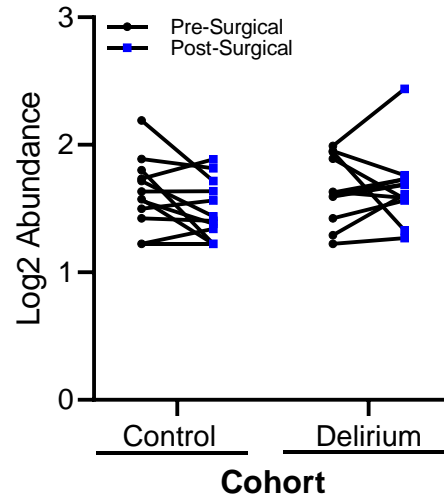
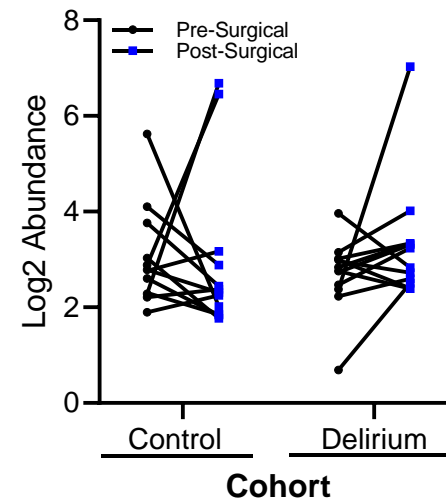
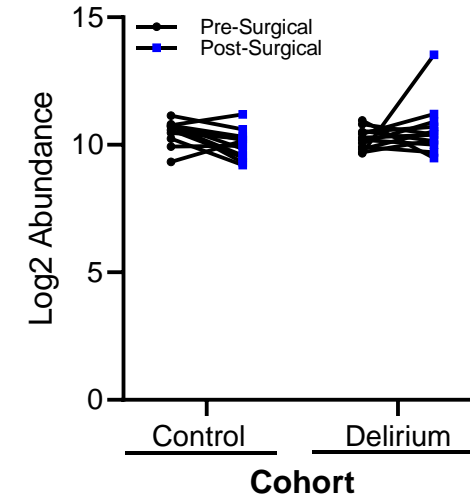
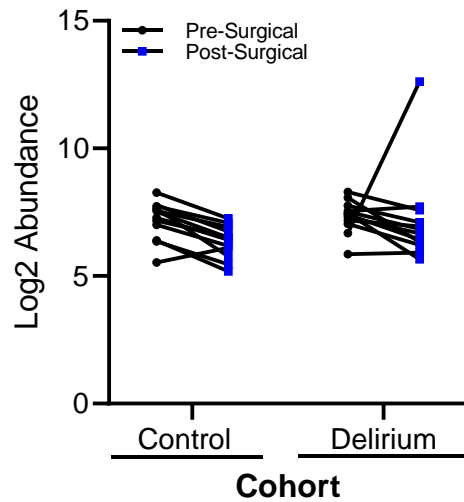
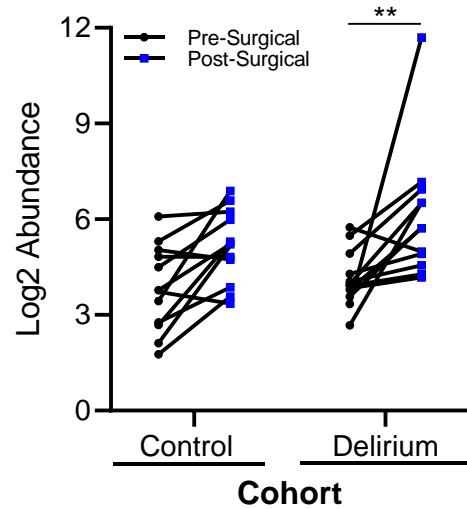
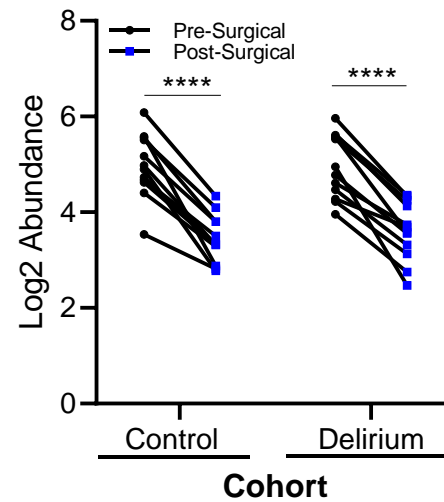
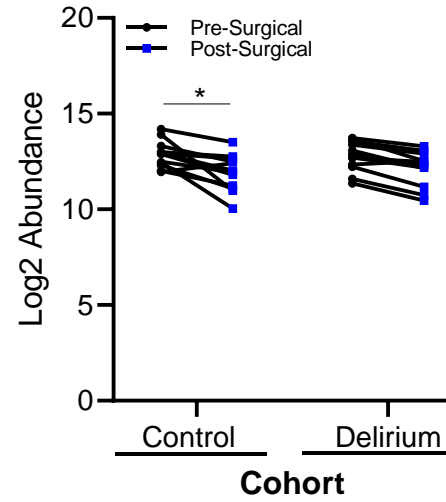
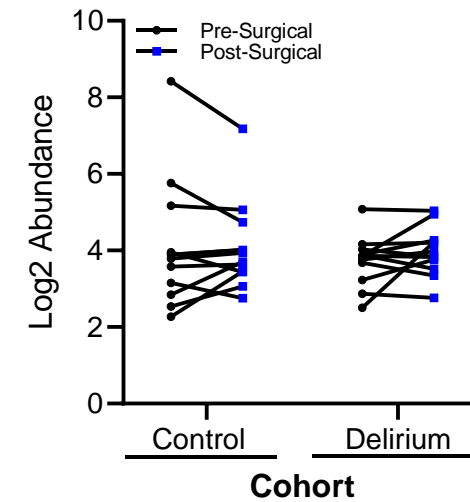
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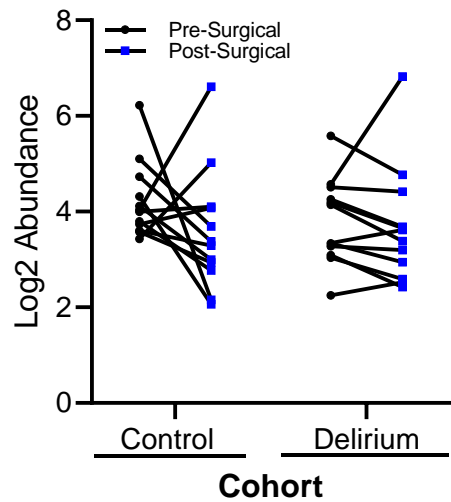
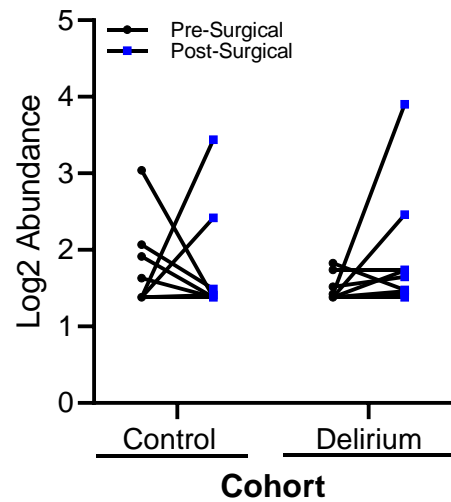
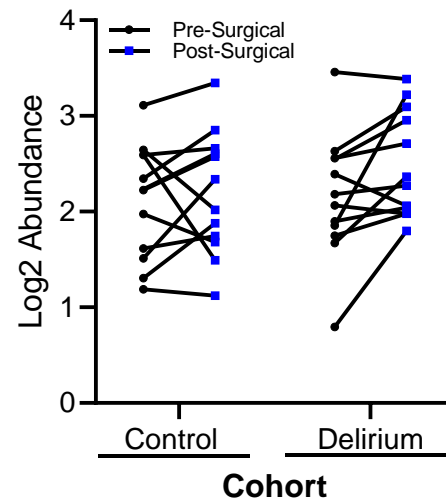
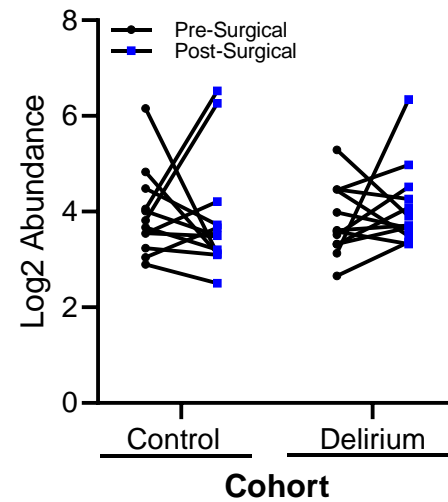
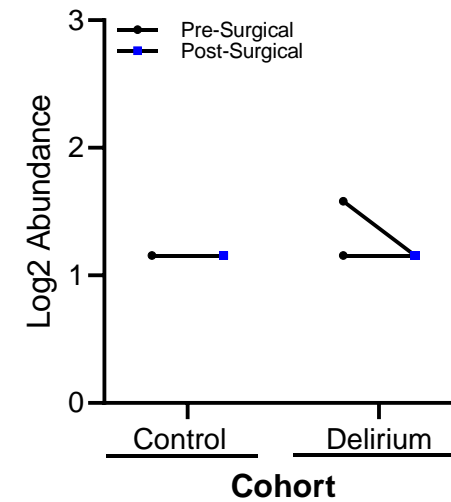
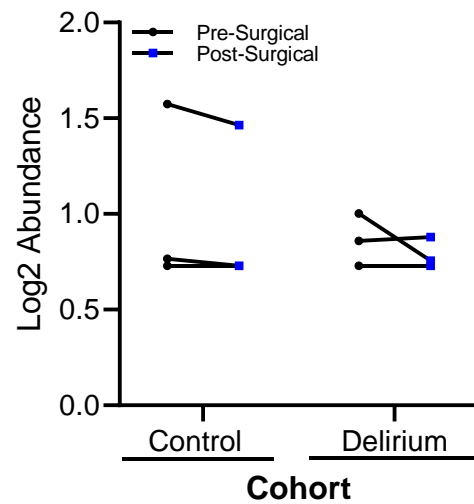
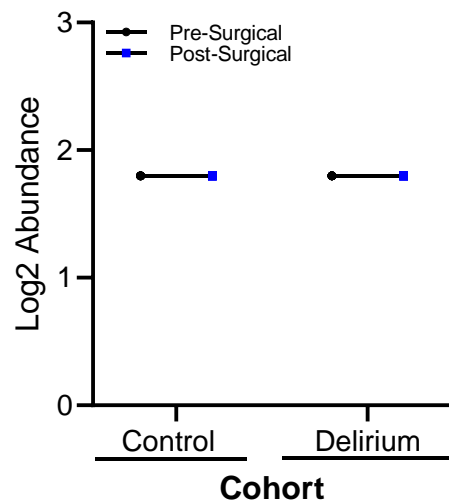
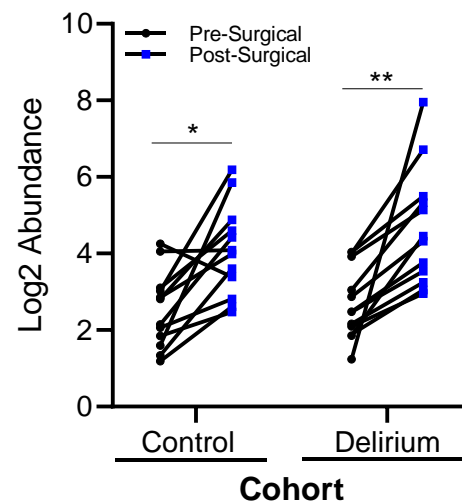
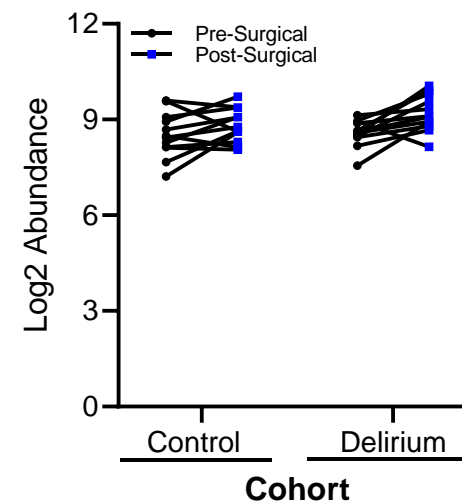
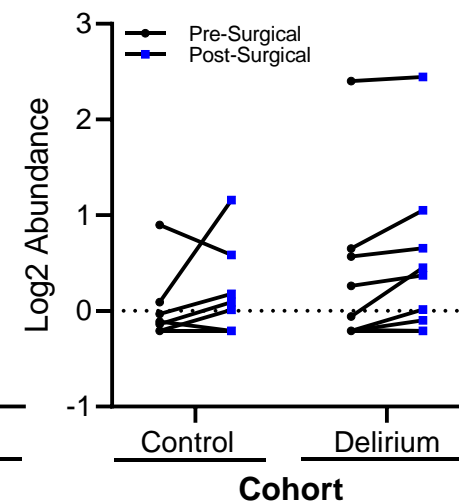
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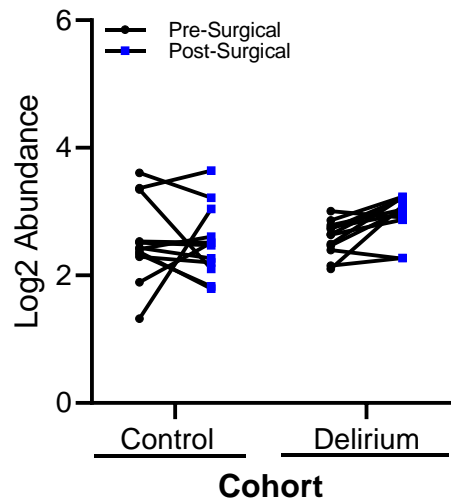
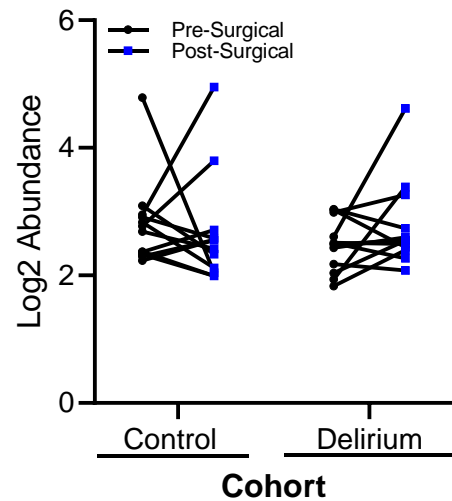
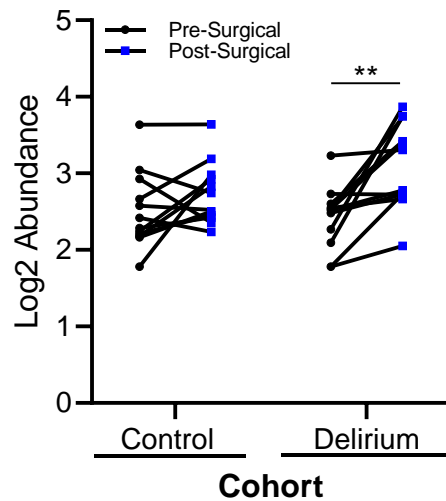
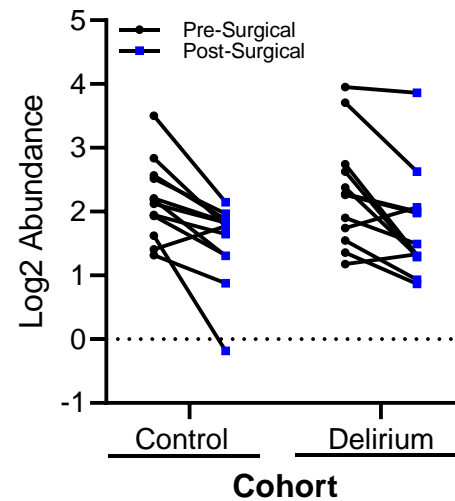
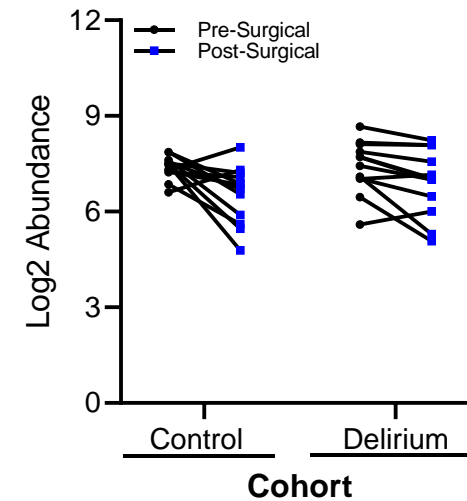
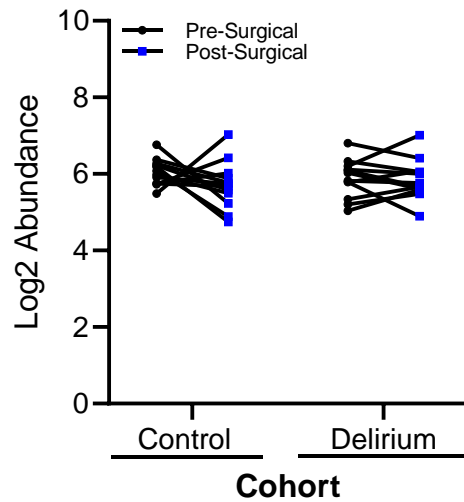
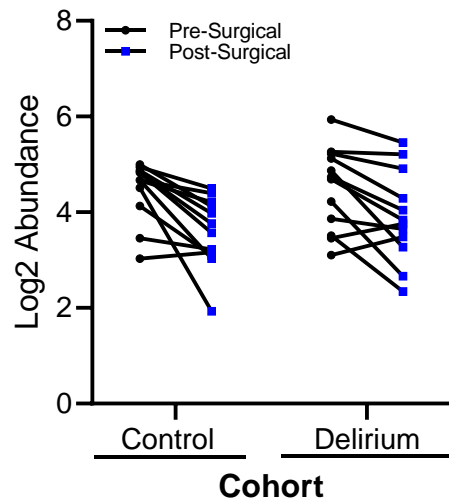
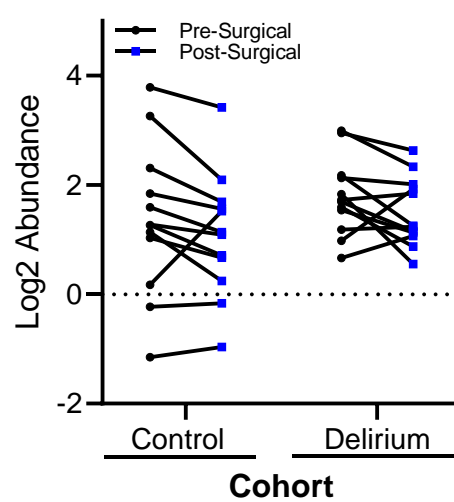
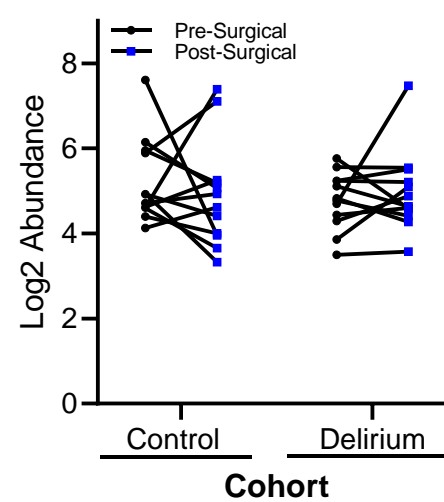
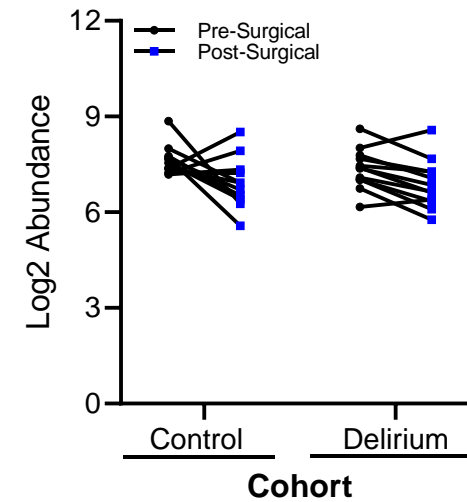
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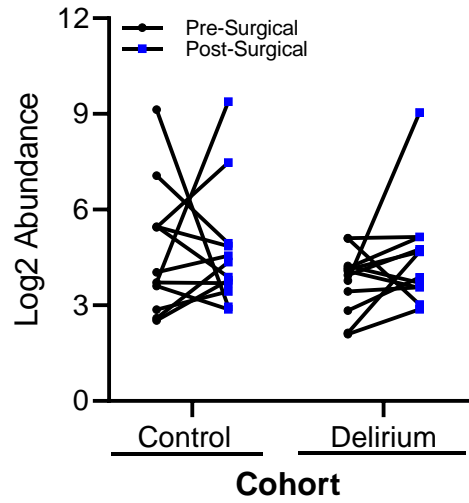
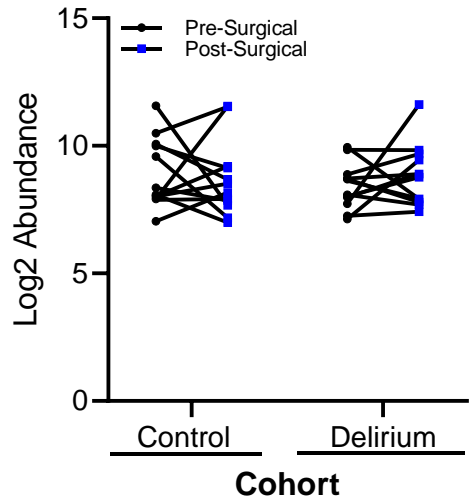
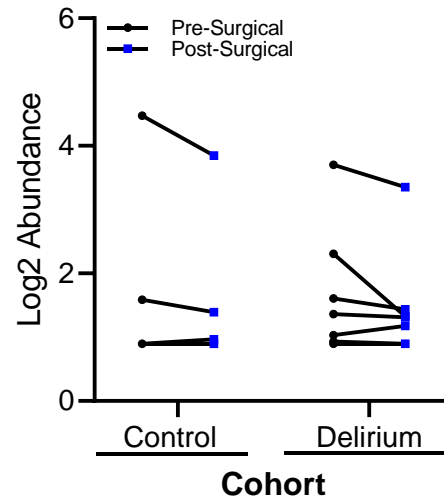
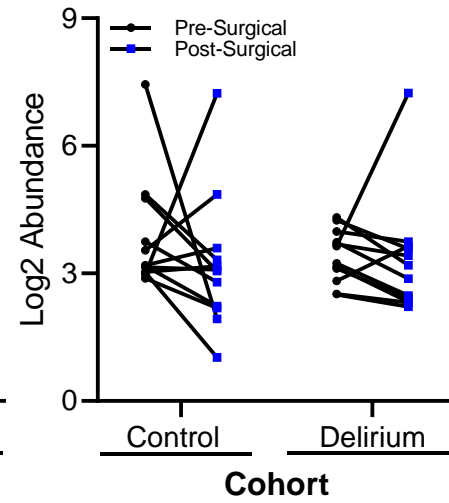
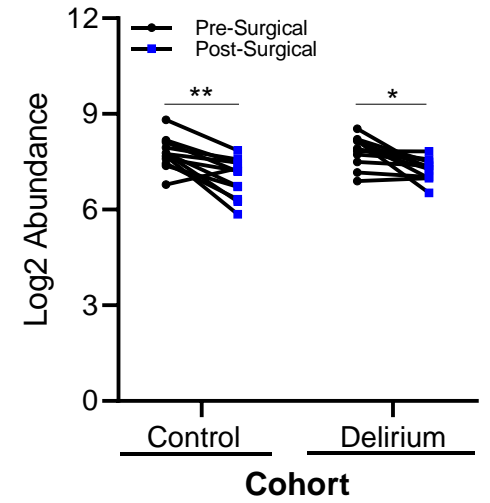
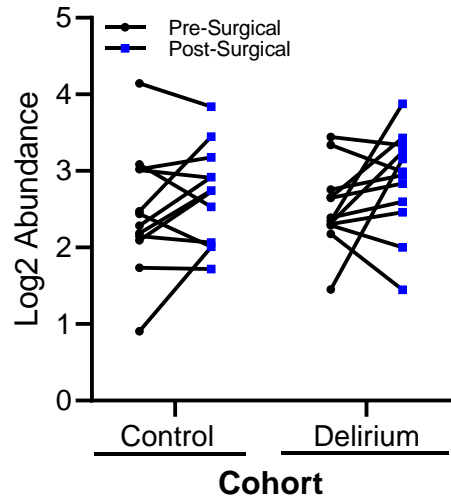
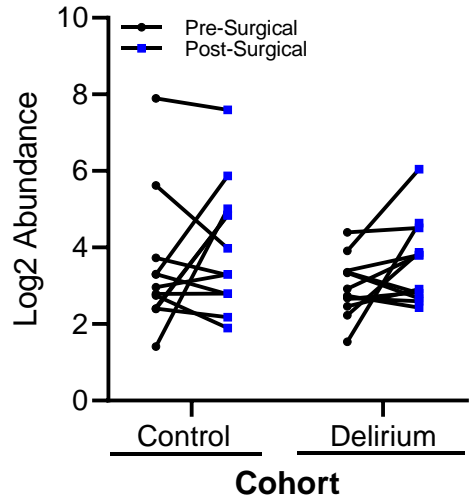
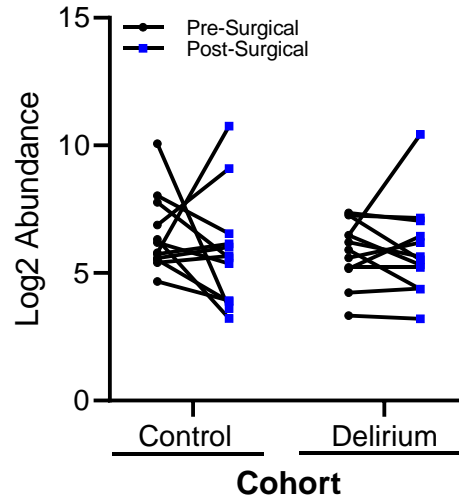
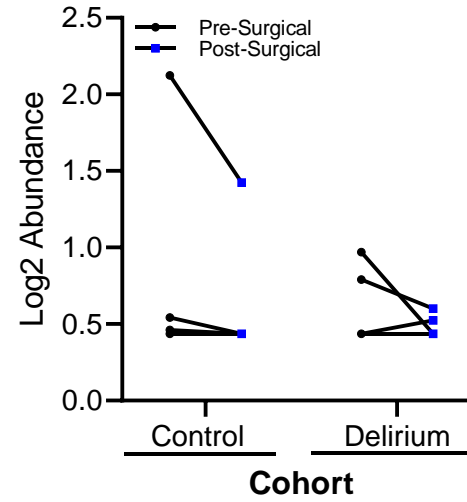
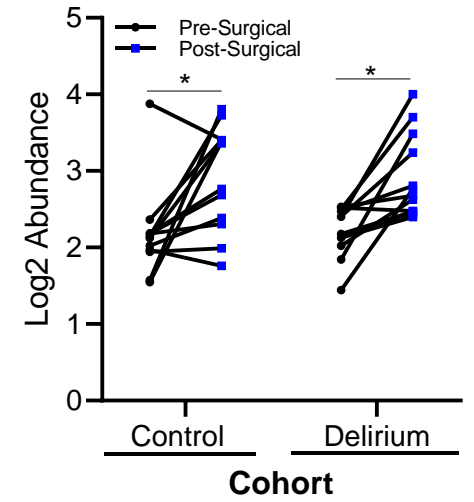
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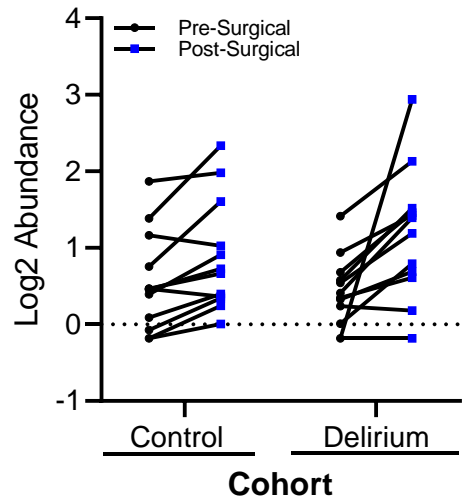
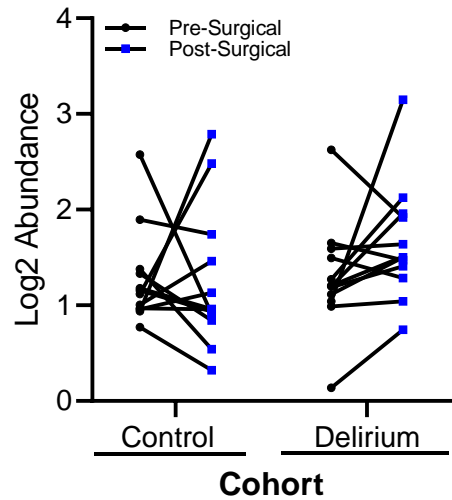
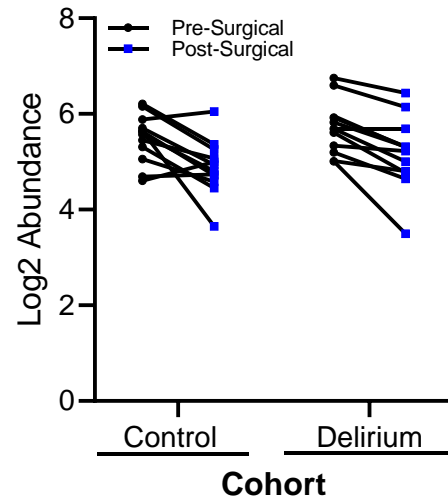
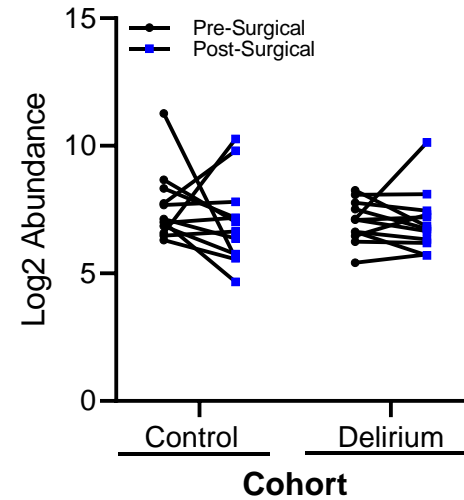
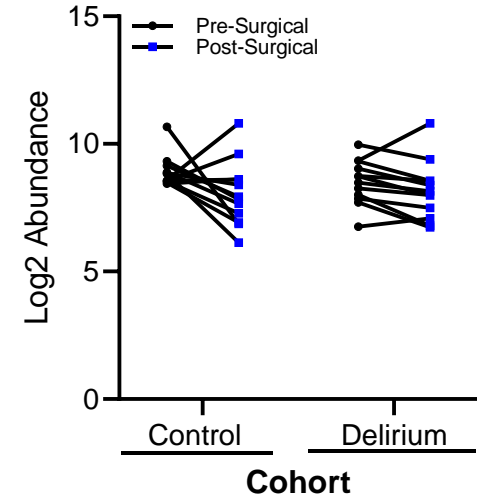
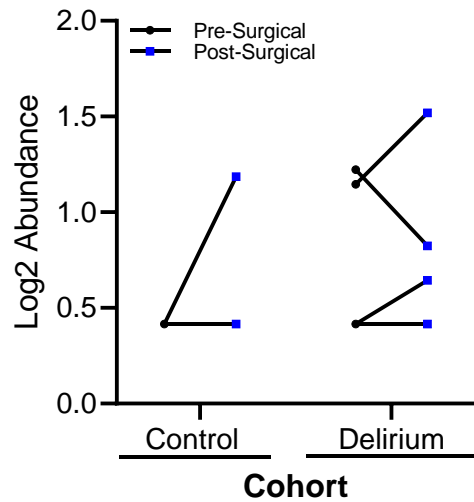
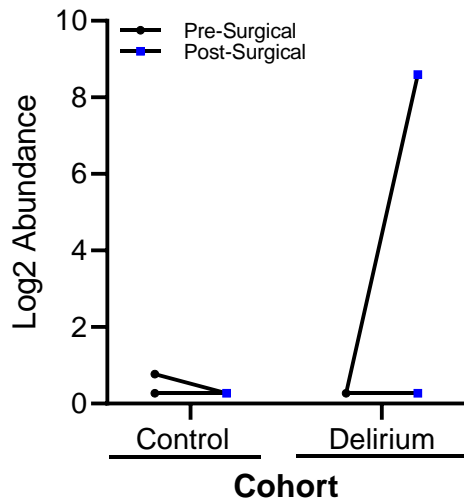
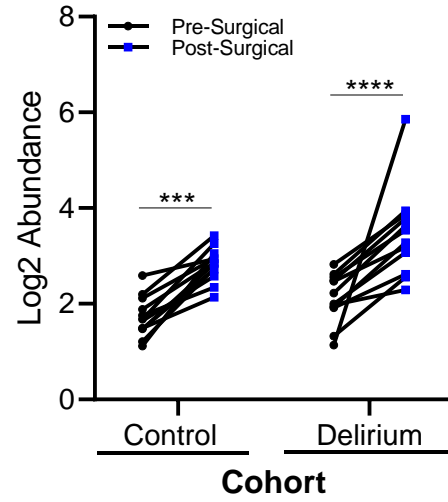
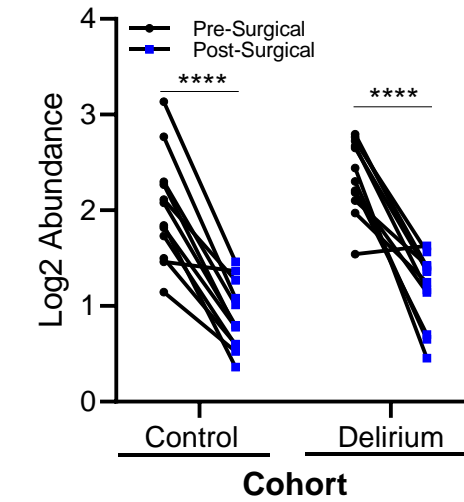
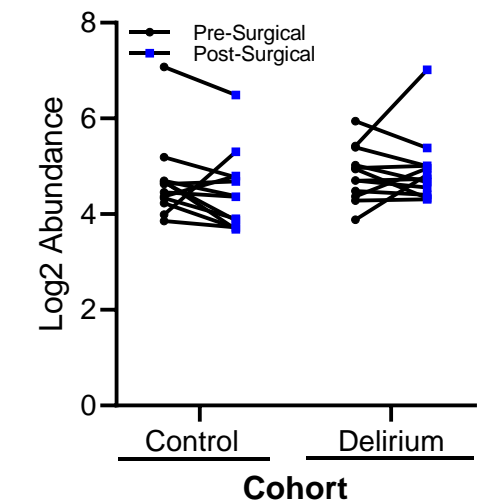
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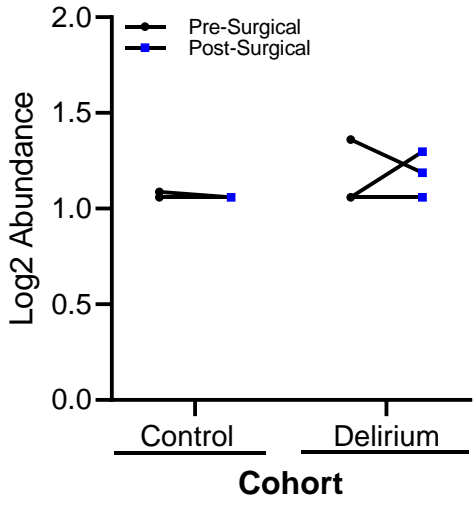
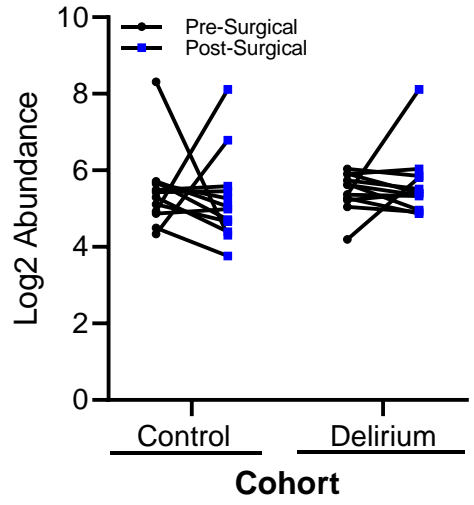
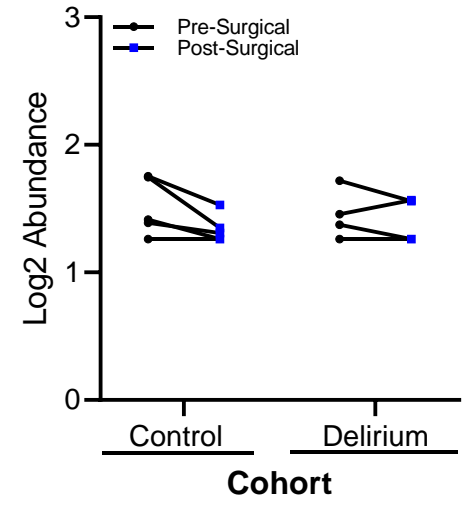
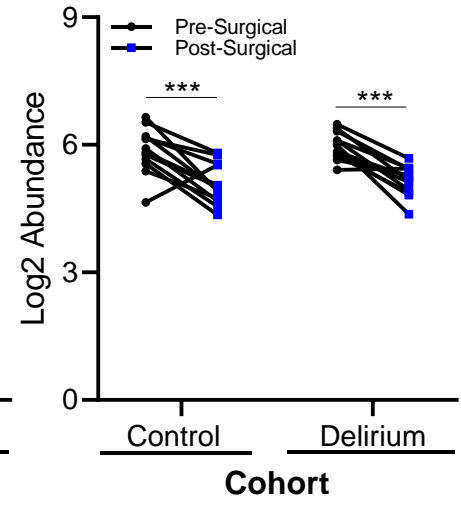
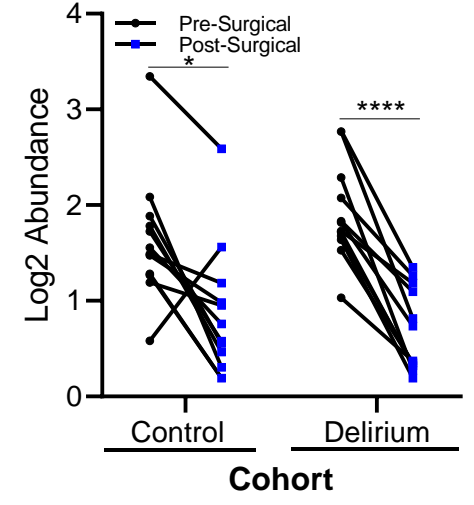
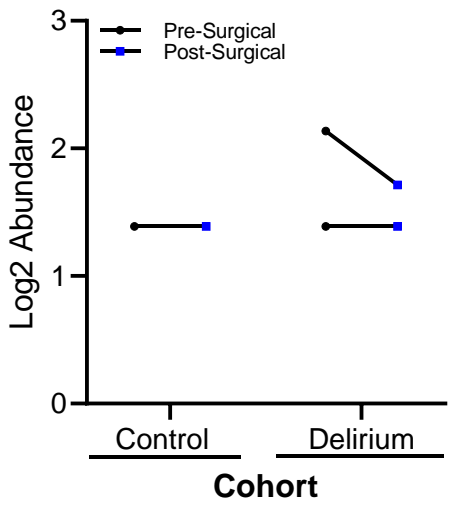
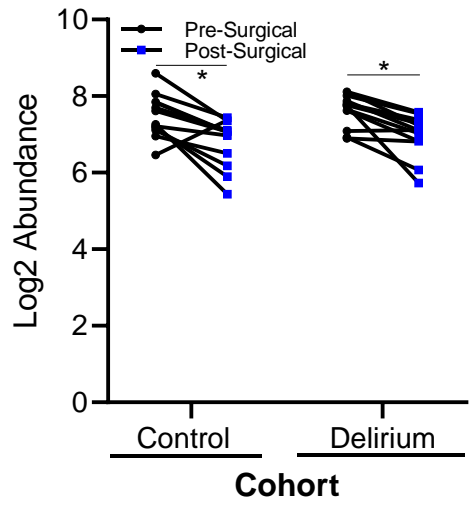
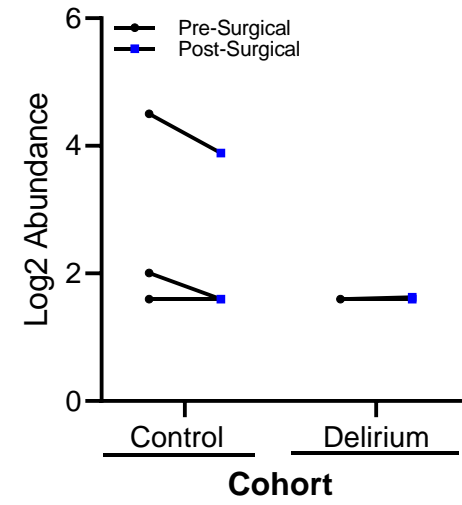
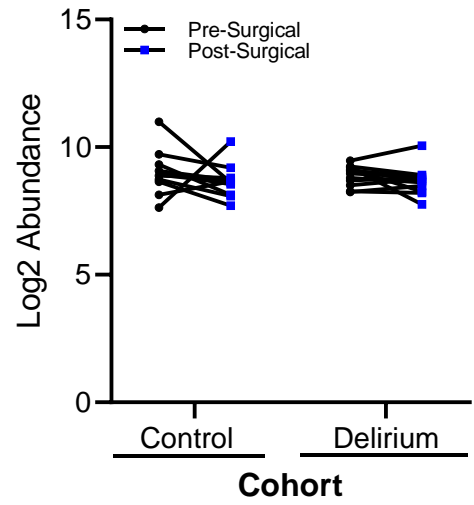
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