Supplement to Example Manuscript Template for a Data Analysis Project

# 1. Overview

This supplement has a few exploratory figures and discussion of additional methods that can be used for disproportionality analysis.

# 2. Code and file information

To reproduce this study: First run the processing code file. This processed the raw data in the ‘data’ subfolder and saves it as an rds file. Then, run the exploratory data (eda) code file. This file produces summary tables and figures. The figures are available in this supplement. Then, run the analysis file. This conducts a disproportionality analysis and runs a random forest model to assess serious vs non-serious cases based on age, sex, and ICI.

# 3. Additional Method Details

This part will be updated in part 5 - after improving the random forest code.

# 4. Additional results

[Figure 1](#fig-result) shows the number of reactions by drug, along with the seriousness of the reaction.

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| Figure 1: Bar chart of outcome of immune checkpoint inhibitors |

[Figure 2](#fig-result1) shows the bar chart by type of organ system involved in the reaction.

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| Figure 2: Bar chart of types of reactions |

[Figure 3](#fig-result2) shows the bar chart by type of organ system involved in the reaction.

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| Figure 3: ROC Curve - Logistic Regression |

[Figure 4](#fig-result3) shows the bar chart by type of organ system involved in the reaction.

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| Figure 4: ROC Curve - Decision Tree |

[Figure 5](#fig-result4) shows the bar chart by type of organ system involved in the reaction.

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| Figure 5: ROC Curve - Random forest |

# 5. Discussion

Additional discussion will be done in part 5 after improving the random effects model.1 is a placeholder reference.

# 6. References

1. Leslie SW, Soon-Sutton TL, Aeddula NR. Bladder cancer. StatPearls. Treasure Island (FL): StatPearls Publishing; 2025.