

1 **Supplementary material for:**

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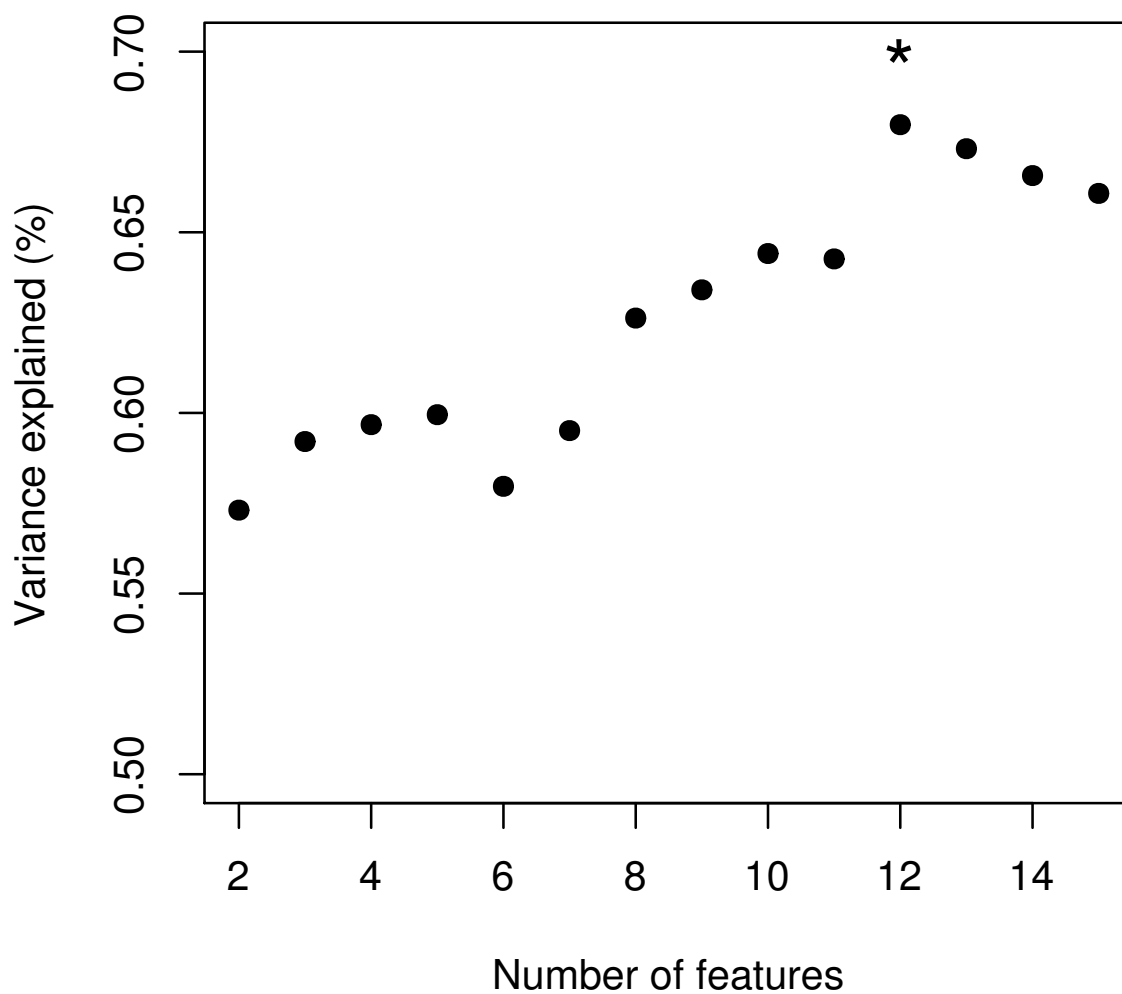
3 **Manipulation of the Gut Microbiota Reveals Role of Gut Microbiota in Colon**

4 **Tumorigenesis**

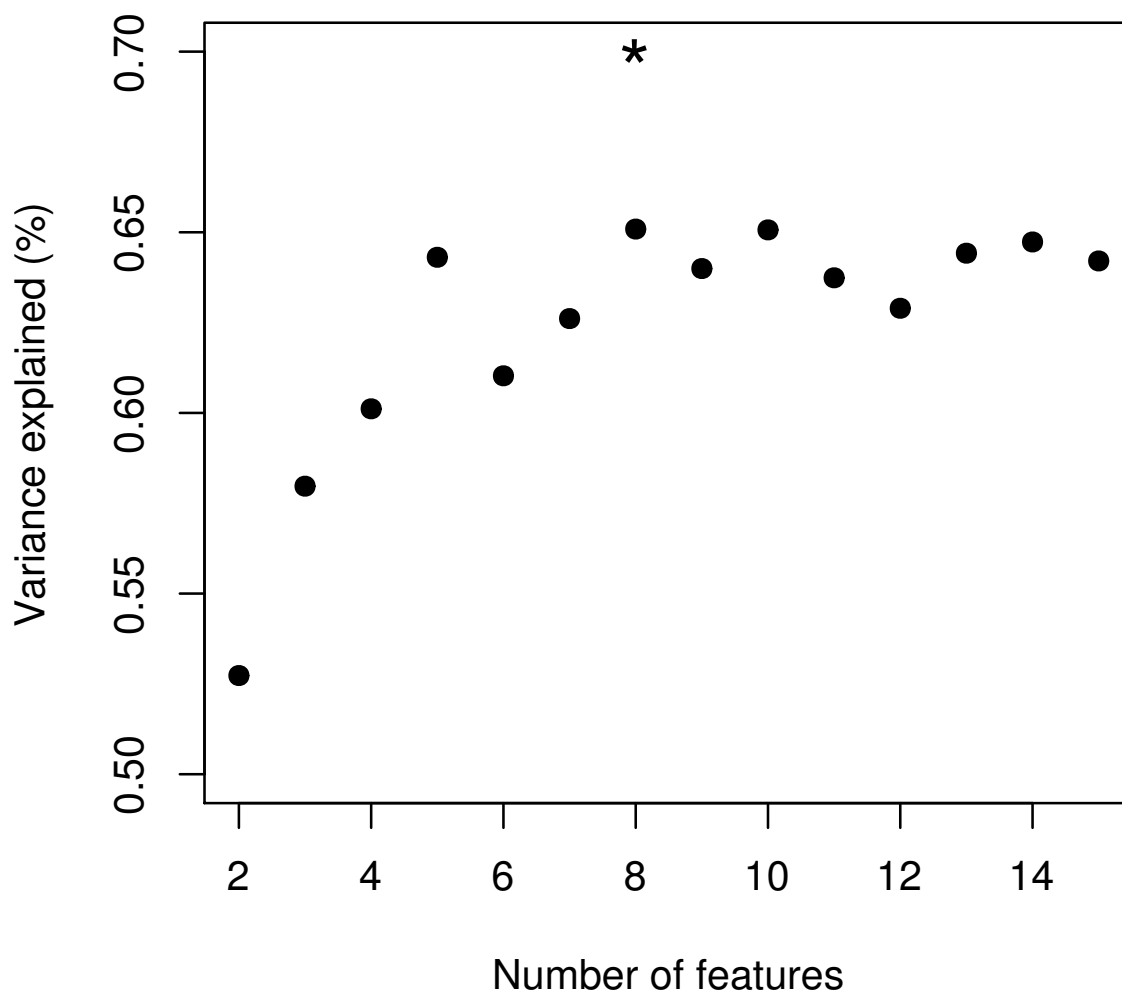
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6 Joseph P. Zackular¹, Nielson T. Baxter¹, Grace Y. Chen^{2*}, and Patrick D. Schloss^{1*}

1 **Supplemental Figure 1. Effect of pruning the number of OTUs included in the random**
2 **forest model for predicting the number of tumors at the end of the model based on the**
3 **microbiota found at the start of the model.** The order of OTUs was set by the percent
4 increase in mean square error when that OTU was removed from the model. The percent of the
5 variance explained here indicates the quality of the fit when the top features were used to
6 generate a model. The star indicates the number of OTUs that resulted in the model explaining
7 the maximum percent of the variance.

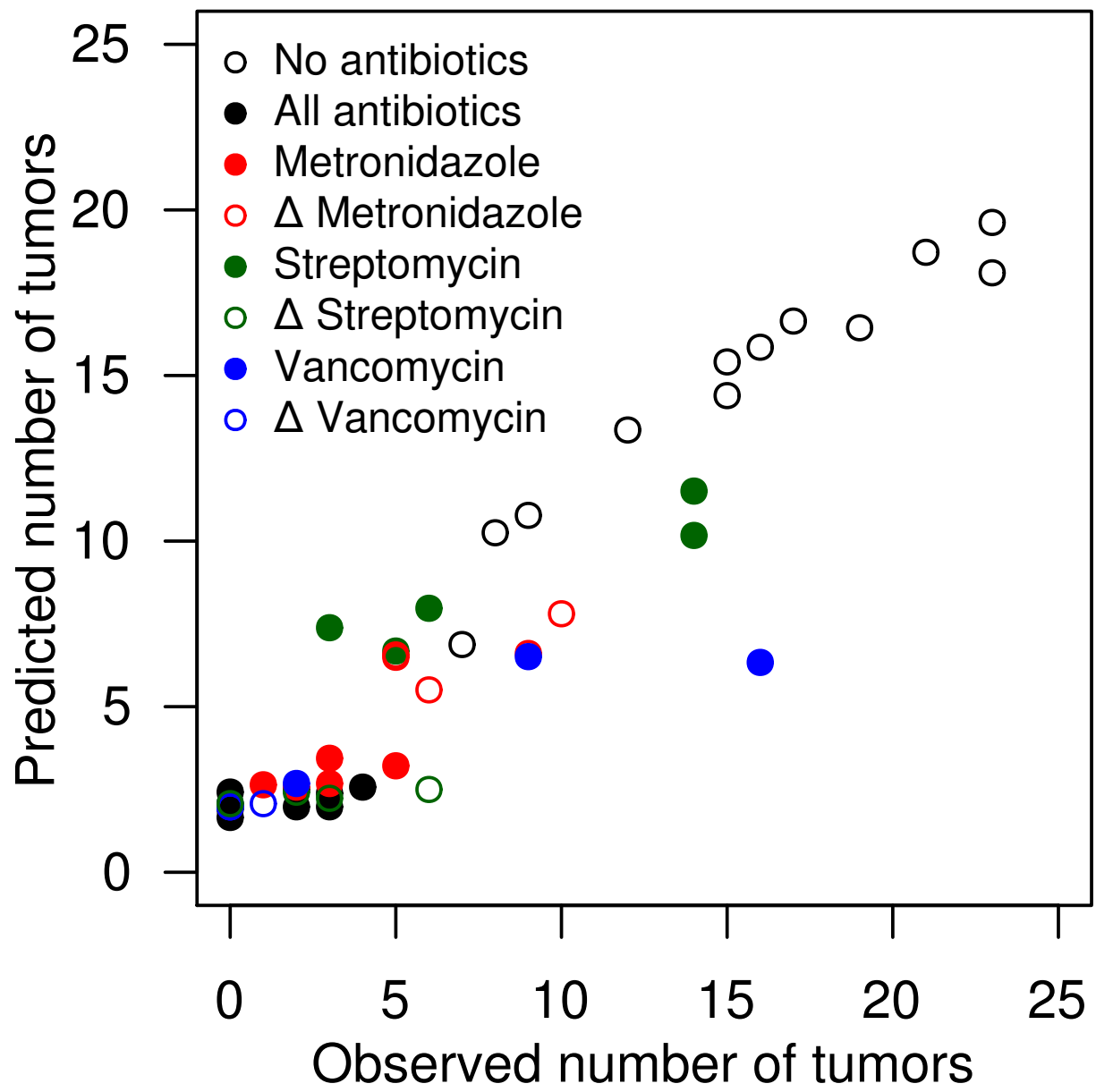


9 **Supplemental Figure 2. Effect of pruning the number of OTUs included in the random**
10 **forest model for predicting the number of tumors at the end of the model based on the**
11 **microbiota found at the end of the model.** The order of OTUs was set by the percent
12 increase in mean square error when that OTU was removed from the model. The percent of the
13 variance explained here indicates the quality of the fit when the top features were used to
14 generate a model. The star indicates the number of OTUs that resulted in the model explaining
15 the maximum percent of the variance.



17 **Supplemental Figure 3. A random forest model successfully predicted the number of**
18 **tumors in the mice at the end of the model based on their microbiota composition at the**
19 **end of the model.** The model explains 65.6% of the variation in the data.

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22 **Supplemental Figure 4. Relationship between the final relative abundance of the most**
 23 **informative OTUs from the random forest model with the number of tumors found in the**
 24 **mice at the end of the model.** The vertical gray line indicates the limit of detection. Panels are
 25 ordered in decreasing order of the percent increase in the mean squared error of the model
 26 when that OTU was removed. The color and shape of the plotting symbols corresponds to those
 27 used in Figure S3.

