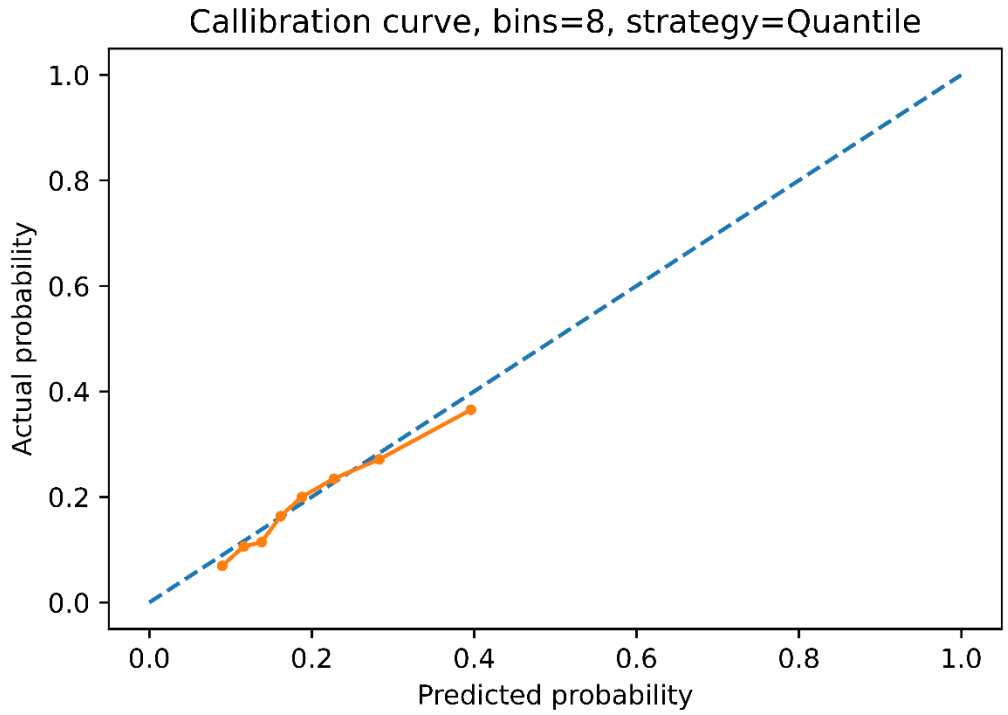
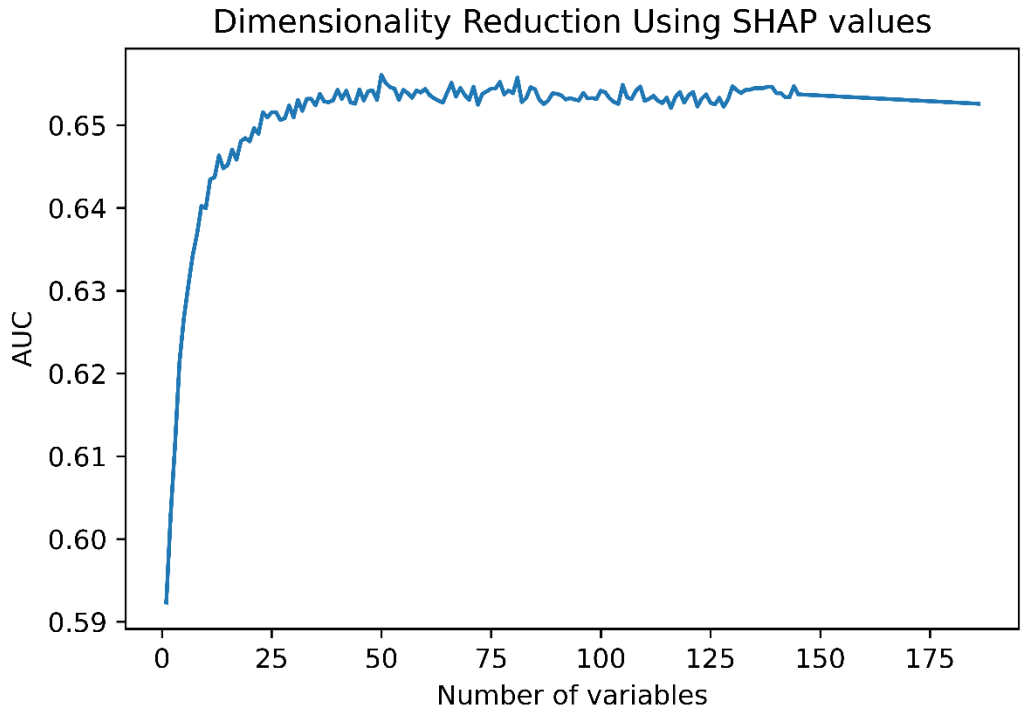
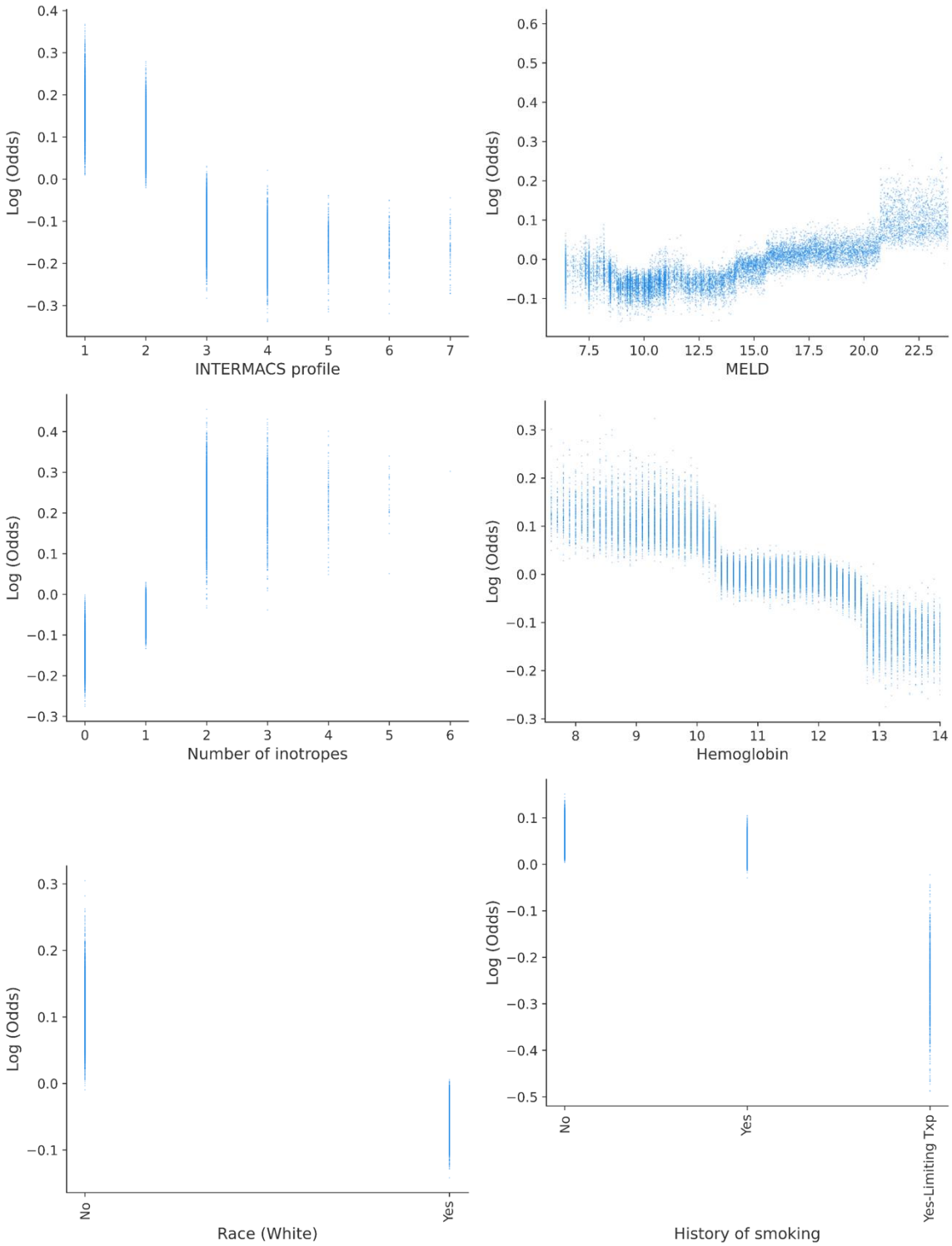
**Supplemental Figure S1. Model calibration.**

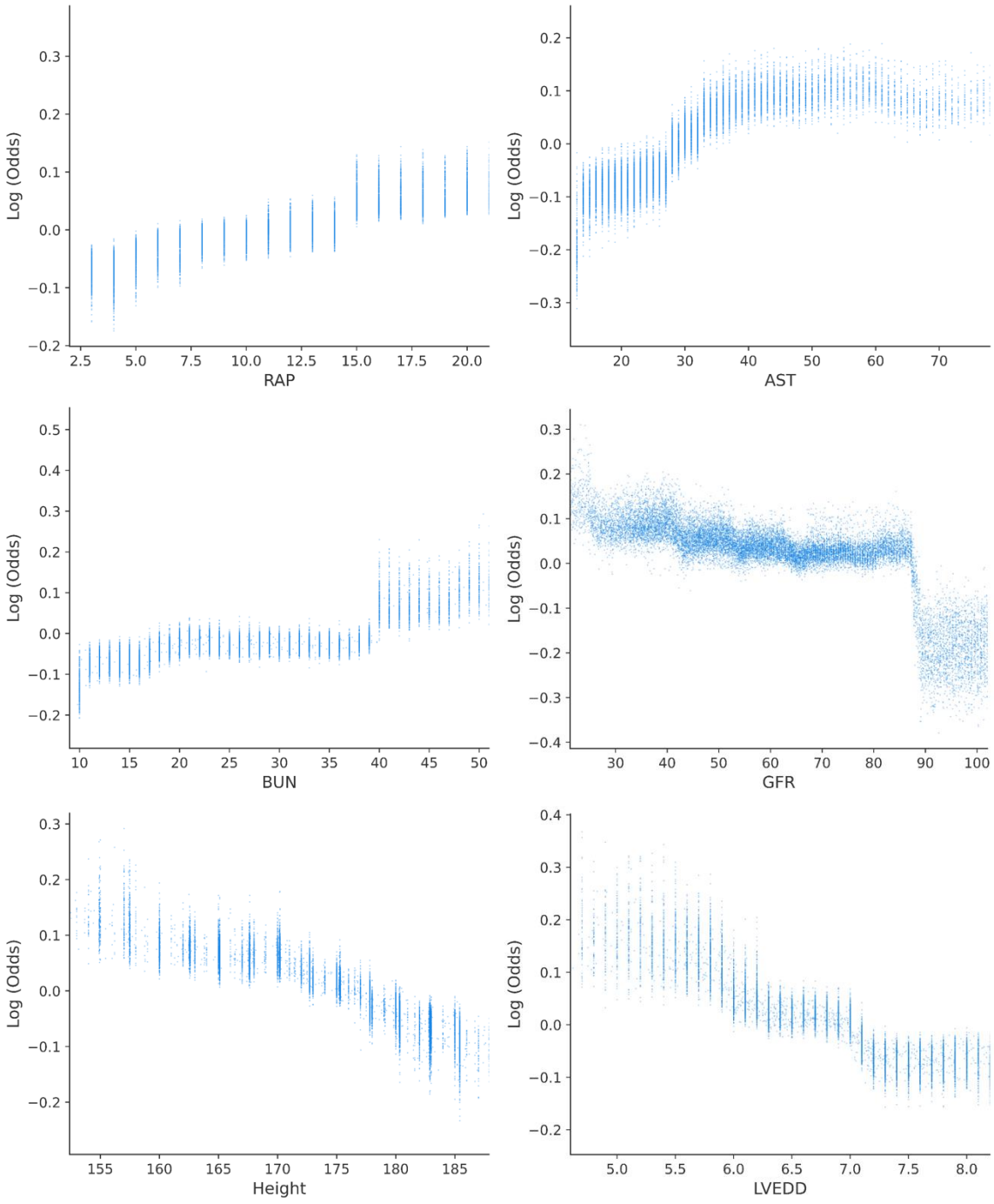


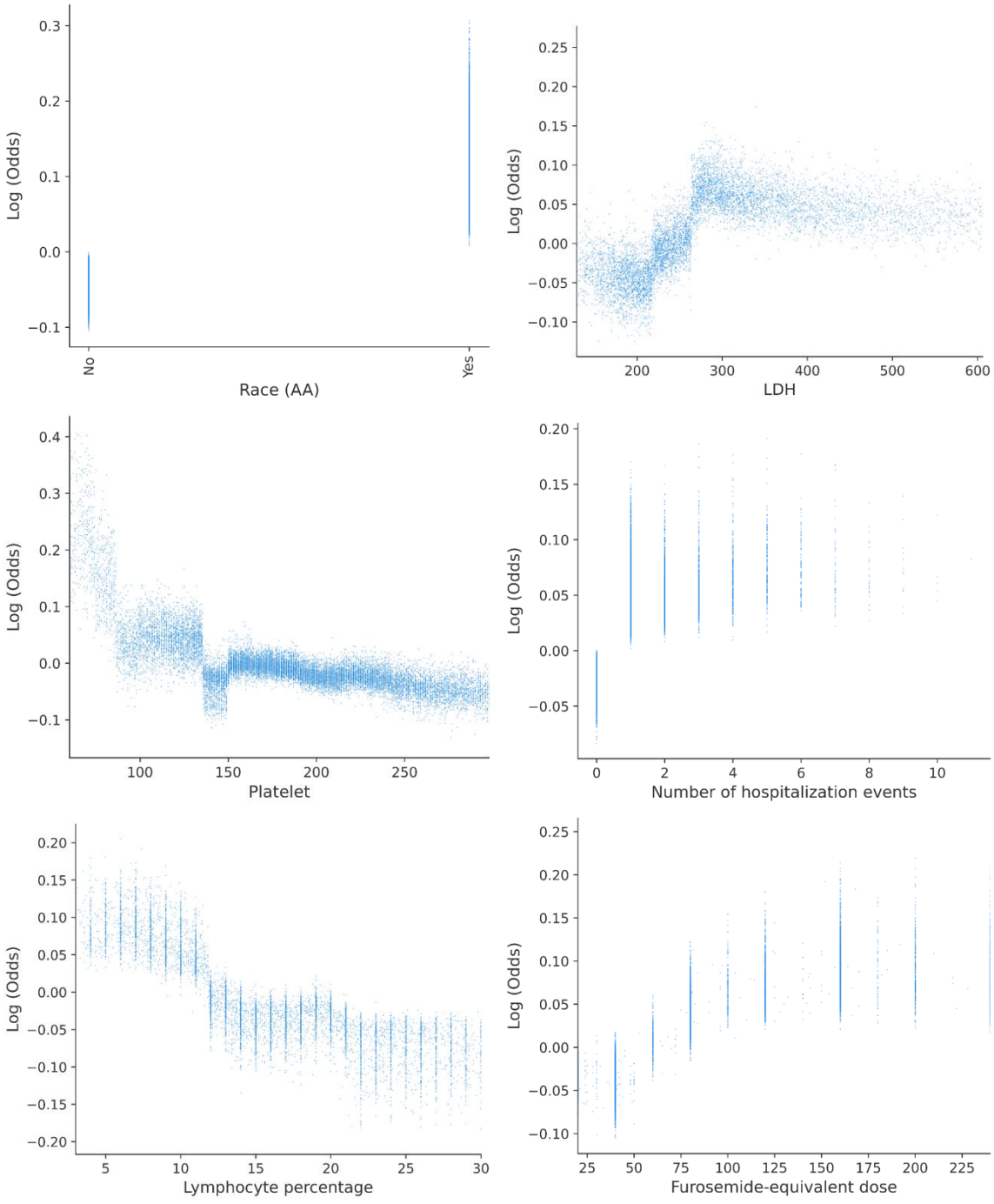
**Supplemental Figure S2. Recursive feature elimination.**

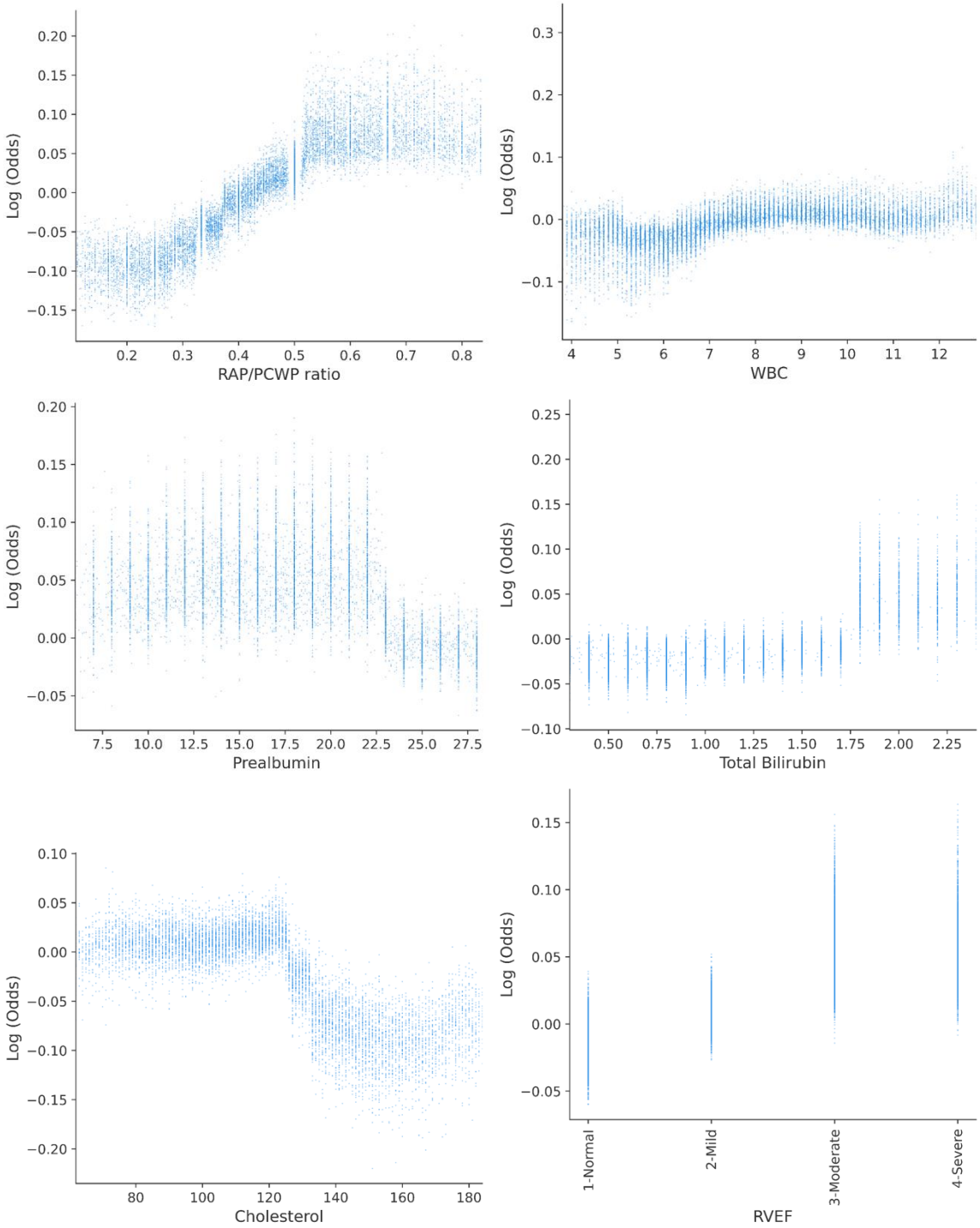


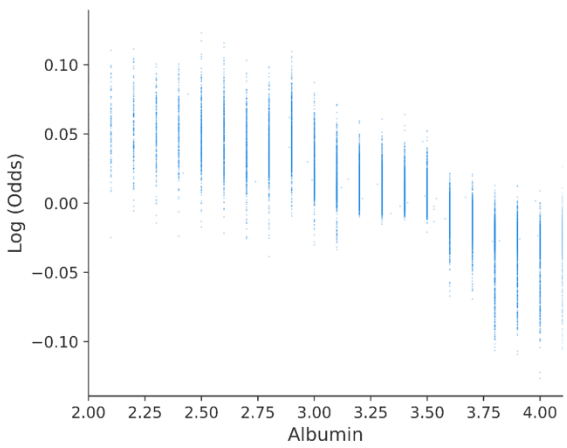
**Supplemental Figure S3. Partial dependence plots of top 30 variables.** The log of odds of RHF is plotted against variable value. Each point in the figure represents a single patient.

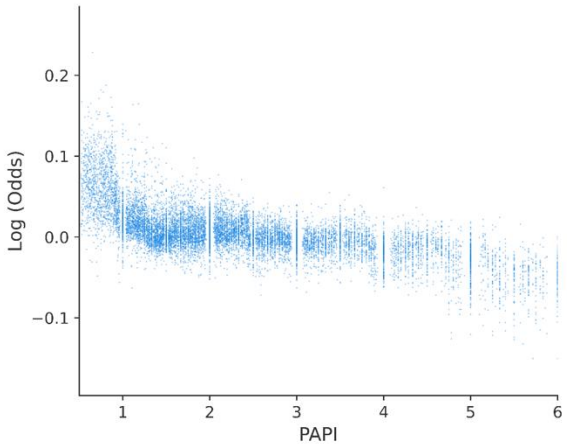


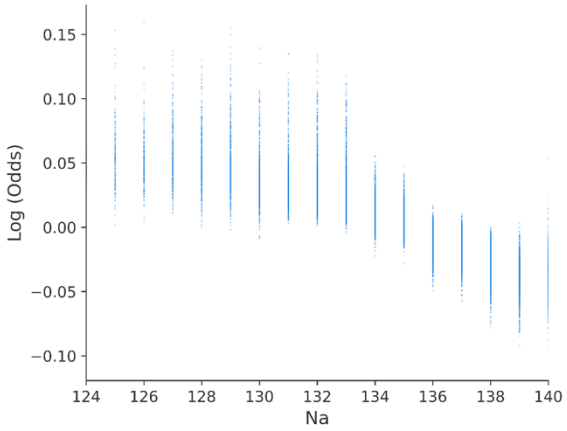

Log (Odds)
RAP
AST
BUN
GFR
Height
LVEDD

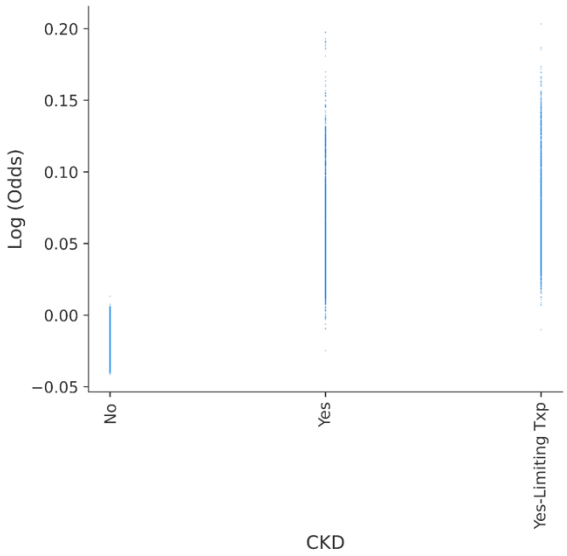

Log (Odds)
0.3
0.2
0.1
0.0
−0.1
No
Yes
Race (AA)
Log (Odds)
0.25
0.20
0.15
0.10
0.05
0.00
−0.05
−0.10
200
300
400
500
600
LDH
Log (Odds)
0.4
0.3
0.2
0.1
0.0
−0.1
100
150
200
250
Platelet
Log (Odds)
0.20
0.15
0.10
0.05
0.00
−0.05
0
2
4
6
8
10
Number of hospitalization events
Log (Odds)
0.20
0.15
0.10
0.05
0.00
−0.05
−0.10
−0.15
−0.20
5
10
15
20
25
30
Lymphocyte percentage
Log (Odds)
0.25
0.20
0.15
0.10
0.05
0.00
−0.05
−0.10
25
50
75
100
125
150
175
200
225
Furosemide-equivalent dose

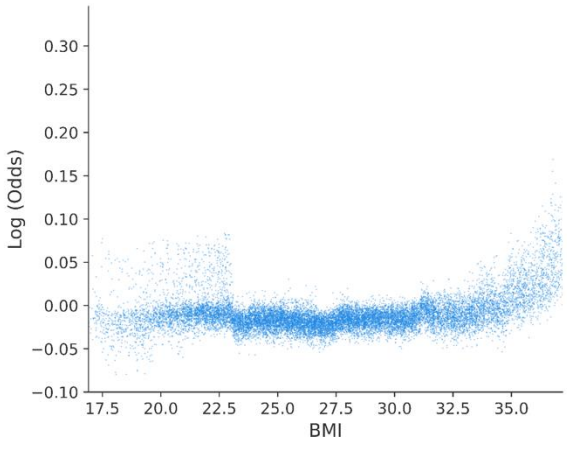

Log (Odds)
RAP/PCWP ratio
WBC
Prealbumin
Total Bilirubin
Cholesterol
RVEF
1-Normal
2-Mild
3-Moderate
4-Severe

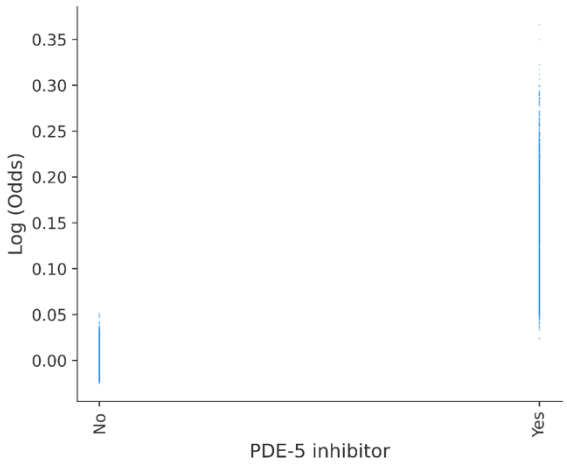

Log (Odds)
0.10
0.05
0.00
−0.05
−0.10
2.00
2.25
2.50
2.75
3.00
3.25
3.50
3.75
4.00
Albumin


Log (Odds)
0.2
0.1
0.0
−0.1
1
2
3
4
5
6
PAPI


Log (Odds)
0.15
0.10
0.05
0.00
−0.05
−0.10
124
126
128
130
132
134
136
138
140
Na


Log (Odds)
0.20
0.15
0.10
0.05
0.00
−0.05
No
Yes
Yes-Limiting Txp
CKD


Log (Odds)
0.30
0.25
0.20
0.15
0.10
0.05
0.00
−0.05
−0.10
17.5
20.0
22.5
25.0
27.5
30.0
32.5
35.0
BMI


Log (Odds)
0.35
0.30
0.25
0.20
0.15
0.10
0.05
0.00
No
Yes
PDE-5 inhibitor