

Supplementary Table 1 Patient and Hospital Characteristics in Heredity Hemochromatosis (excluding liver diseases) Patients

Variables	Weighted, <i>n</i>	Weighted, % (95% Confidence Interval)
Total, <i>n</i>	18031	
Primary Payer status		
Medicare	9338	51.71 (49.9 – 53.6)
Medicaid	1307	7.23 (6.36 – 8.13)
Private	6536	36.26 (34.5 – 38.0)
Self-Pay	249	1.41 (0.94 – 1.83)
No charge	21	0.11 (0.01 – 0.22)
Other	580	3.28 (2.56 – 3.87)
Median socioeconomic status by national quartiles		
0-25	3177	17.61 (16.2 – 18.9)
25-50	4482	24.86 (23.3 – 26.4)
50-75	4887	27.10 (25.5 – 28.7)
75-100	5198	28.83 (27.2 – 30.5)
Other	288	1.60 (1.13 – 2.06)
Hospital Bed Size		
Small	3505	19.44 (18.7 – 20.2)
Medium	4579	25.39 (24.5 – 26.3)
Large	9937	55.11 (53.9 – 56.3)

**Location/teaching status
of hospital**

Rural	1584	8.79 (8.30 – 9.26)
Urban nonteaching	3841	21.30 (20.5 – 22.1)
Urban teaching	12596	69.86 (68.9 – 70.8)

Hospital Region

Northeast	3846	21.32 (20.3 – 22.3)
Midwest or North Central	4890	27.11 (25.9 – 28.3)
South	5496	30.48 (29.4 – 31.6)
West	3799	21.07 (20.1 – 22.1)

Supplementary Table 2 Pearson correlation matrix analyzing risk factors of HCC for multicollinearity

Variables	Pearson Correlation Matrix																											
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	
1. HH (without Cirrhosis)	1	0.65	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.13
2. HH (with Cirrhosis)	0.65	1	0	0.01	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.02
3. Alcoholic Cirrhosis	0	0	1	-0.14	-0.01	0.97	-0.07	0	0.21	0.11	-0.01	0	0	-0.03	-0.02	-0.01	-0.03	0.05	0.02	0	0	0	0	0.1	0.69	0.03	0.02	0.28
4. Non-alcoholic Cirrhosis	0	0.01	-0.14	1	0	-0.14	0.35	0.14	0.4	0.03	0.03	0.03	0.04	-0.01	0.02	0.04	-0.03	0.06	0	0	0	0	0.03	-0.09	0	0.03	0.44	
5. Biliary Cirrhosis	0	0	-0.01	0	1	-0.01	-0.01	0	-0.01	0.02	0	0	0	0	0	0	0.01	0	0	0	0	0	0	-0.01	0	0	0	0.04
6. Alcoholic liver disease	0	0	0.97	-0.14	-0.01	1	-0.07	0	0.21	0.18	-0.01	0	0	-0.03	-0.02	-0.01	-0.04	0.06	0.03	0	0	0	0.1	0.71	0.04	0.02	0.28	
7. NASH / NAFLD	0	0	-0.07	0.35	-0.01	-0.07	1	-0.04	-0.11	-0.01	-0.01	0	-0.01	0.05	0.02	0.1	0	-0.01	0	0	0	0	-0.04	-0.06	-0.02	-0.02	0.17	
8. Hepatitis B	0	0	0	0.14	0	0	-0.04	1	0.01	0	0.07	0.23	0.03	-0.04	-0.02	-0.01	-0.02	0.02	0	0	0	0	0	0	0	0	0	0.16
9. Hepatitis C	0	0	0.21	0.4	-0.01	0.21	-0.11	0.01	1	0.01	0.07	0.01	0.14	-0.07	-0.04	-0.02	-0.02	0.04	0	0	0	0	0.14	0.2	0.06	0.1	0.43	
10. Other viral hepatitis	0	0	0.11	0.03	0.02	0.18	-0.01	0	0.01	1	0	0	0	-0.01	-0.02	0	-0.01	0.01	0	0.02	0	0	0.01	0.13	0.01	0.01	0.06	
11. HIV	0	0	-0.01	0.03	0	-0.01	-0.01	0.07	0.07	0	1	0.4	0.68	-0.02	-0.02	-0.02	-0.02	0	0	0	0	0.02	0	0.02	0	0.02	0.04	0.03
12. HIV - Hepatitis B	0	0	0	0.03	0	0	0	0.23	0.01	0	0.4	1	0.17	-0.01	-0.01	-0.01	-0.01	0	0	0	0	0	0	0	0	0	0	0.03
13. HIV - Hepatitis C	0	0	0	0.04	0	0	-0.01	0.03	0.14	0	0.68	0.17	1	-0.01	-0.01	-0.01	-0.01	0	0	0	0	0	0.01	0	0.01	0.05	0.05	
14. Obesity	0	0	-0.03	-0.01	0	-0.03	0.05	-0.04	-0.07	-0.01	-0.02	-0.01	-0.01	1	0.12	0.07	0.05	0	0	0	0	0	0	0	-0.05	-0.02	0	-0.08
15. Diabetes complications	0	0	-0.02	0.02	0	-0.02	0.02	-0.02	-0.04	-0.02	-0.02	-0.01	-0.01	0.12	1	-0.19	-0.07	0.06	0	0	0	0	0	-0.04	-0.01	0	-0.03	
16. Diabetes without complications	0	0	-0.01	0.04	0	-0.01	0.1	-0.01	-0.02	0	-0.02	-0.01	-0.01	0.07	-0.19	1	0.17	-0.03	0	0	0	0	-0.03	-0.04	-0.03	-0.03	0.03	
17. Hypertension	0	0	-0.03	-0.03	0	-0.04	0	-0.02	-0.02	-0.01	-0.02	-0.01	-0.01	0.05	-0.07	0.17	1	-0.03	0	0	0	0	0.06	0	0	0	-0.06	
18. Blood Transfusion	0	0	0.05	0.06	0.01	0.06	-0.01	0.02	0.04	0.01	0	0	0	0	0.06	-0.03	-0.03	1	0	0	0	0	0.04	0	0	0	0.08	
19. Alpha1-antitrypsin deficiency	0	0	0	0.02	0	0	0.03	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0.02	
20. Disorders of porphyrin metabolism	0	0	0	0	0	0	0	0	0.02	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0.01	0	0	0.01	
21. Glycogen storage diseases	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	
22. Wilson disease	0	0.01	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	
23. Smoking	0	0	0.1	0.03	0	0.1	-0.04	0	0.14	0.01	0.02	0	0.01	0	0	-0.03	0.06	0	0	0	0	0	1	0.16	0.08	0.07	0.04	
24. Alcohol	0	0	0.69	-0.09	-0.01	0.71	-0.06	0	0.2	0.13	0	0	0	-0.05	-0.04	-0.04	0	0.04	0	0.01	0	0	0.16	1	0.09	0.06	0.19	
25. Cannabis	0	0	0.03	0	0	0.04	-0.02	0	0.06	0.01	0.02	0	0.01	-0.02	-0.01	-0.03	0	0	0	0	0	0	0.08	0.09	1	0.07	0	
26. Opioids	0	0	0.02	0.03	0	0.02	-0.02	0	0.1	0.01	0.04	0	0.05	0	0	-0.03	0	0	0	0	0	0	0.07	0.06	0.07	1	0.03	
27. Liver Cancer	0.13	0.02	0.28	0.44	0.04	0.28	0.17	0.16	0.43	0.06	0.03	0.03	0.05	-0.08	-0.03	0.03	-0.06	0.08	0.02	0.01	0	0	0.04	0.19	0	0.03	1	