

Table S1. BMD, TBS, FRAX, calcium-phosphate metabolism values in relation to iron parameters and liver function tests in patients with HH.

**sample sizes:**

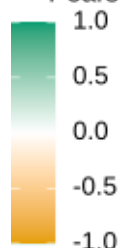
$n_{\min} = 18$

$n_{\text{mode}} = 28$

$n_{\max} = 29$

**correlation:**

Pearson



BMD femur -	-0.09	-0.03	-0.06	0.05	-0.03	0.49	-0.14	-0.12
BMD forearm -	0.32	0.2	0.15	0.26	-0.08	0.36	0.44	0.43
BMD spine -	0.01	0.08	0.17	-0.07	-0.03	0.37	-0.2	-0.19
Femur T-score -	-0.21	0.02	0.05	0.02	-0.41	0.37	-0.18	-0.11
Forearm T-score -	0.17	0.21	0.25	0.08	-0.05	0.5	0.28	0.39
Spine T-score -	-0.01	0.11	0.3	-0.2	-0.51	0.29	-0.28	-0.22
Femur Z-score -	-0.27	-0.11	-0.01	-0.09	-0.08	0.18	-0.2	-0.15
Forearm Z-score -	0.13	0.01	0	0.01	0.06	0.17	0.03	0.07
Spine Z-score -	-0.07	0.03	0.11	-0.21	0.08	0.14	-0.31	-0.28
Vitamin 25-OH-D3 -	-0.46	-0.55	-0.28	-0.18	0.12	-0.28	-0.42	-0.43
Phosphates serum -	0.05	0.16	0.16	-0.12	-0.17	0.11	-0.44	-0.37
Calcium serum -	-0.04	0.13	0.07	0.31	-0.18	0.31	0.28	0.36
TBS -	-0.08	-0.28	-0.43	-0.01	0.1	0.23	-0.16	-0.1
PTH int -	0.19	0.37	0.49	-0.02	-0.11	0.14	0.12	0.1
Calcium urine excretion -	-0.08	-0.07	-0.11	0	-0.56	0.25	-0.22	-0.17
Osteocalcin -	-0.16	-0.41	-0.06	-0.28	-0.28	0.04	-0.09	-0.16
FRAX major (%) -	0.2	0.18	0.12	0.13	0.28	-0.13	0.46	0.33
FRAX femur (%) -	0.08	-0.05	-0.11	0.07	0.31	-0.41	0.35	0.21
	Aspat	Alat	GGTP	Bilirubin	Transferrin saturation	Fe	Ferritin max	Ferritin average

X = non-significant at  $p < 0.05$  (Adjustment: None)

Pearson's correlation coefficients, p-value, and N = number of observations taken to derive a given correlation. Statistically significant results are not crossed, for positive correlation green colour, for negative orange

Table S2. Selected liver function tests, iron parameters and calcium-phosphate metabolism in HH patients in the groups with joint paint present and without joint paint.

	Joint pain present					Joint pain absent					Difference	
	N	Mean ± SEM	Q1	Me	Q3	N	Mean ± SEM	Q1	Me	Q3	U	p
GGTP (U/l)	24	44.71 ± 8.08	19	36	56.75	4	23.5 ± 5.04	16	23.5	31	23	.107
Bilirubin (mg/dl)	24	0.81 ± 0.07	0.60	0.75	1.90	4	0.86 ± 0.14	0.72	0.74	0.89	56	.621
Aspat (U/l)	25	29.56 ± 3.13	19	26	33	4	46.00 ± 7.52	37	43.5	52.5	83	.039
Alat (U/l)	25	39.52 ± 5.69	15	31	54	4	43.00 ± 9.22	31	43.5	55.5	61	.506
Ferrytyna max (µg/l)	25	1083 ± 189.28	500	802	1104	4	582.8 ± 179.69	370	536	748	34	.327
Ferrytyna śr (µg/l)	25	650.8 ± 120.10	260	420	658	4	295 ± 58.93	257.8	307	344.2	32	.268
FALK (U/l)	25	79.04 ± 8.18	51.5	67.5	90	4	52 ± 7.21	45	48	57	15	.113
Fe (µg/dl)	25	216.5 ± 9.83	196	216.5	250	4	234.2 ± 18.71	213.2	240.5	261.5	60	.548
Transferrin saturation (%)	25	88.2 ± 2.04	82	90	95	4	76.5 ± 8.15	63.75	77.5	90.25	26.5	.144
PTH int (pg/ml)	24	28.91 ± 3.37	19.73	25.6	31.5	3	23.5 ± 4.91	20.75	27.80	28.40	32	.787
Ca (mg/dl)	24	9.63 ± 0.08	9.3	9.75	9.9	3	9.70 ± 0.15	9.5	9.7	9.75	31	.727
Pi (mg/dl)	24	3.07 ± 0.09	2.78	3.05	3.3	3	3.43 ± 0.23	3.25	3.5	3.65	51	.259
25-OH-D3 (mg/ml)	24	22.91 ± 2.18	15.72	23	29	3	19.2 ± 6.41	12.8	13.6	22.8	29	.616

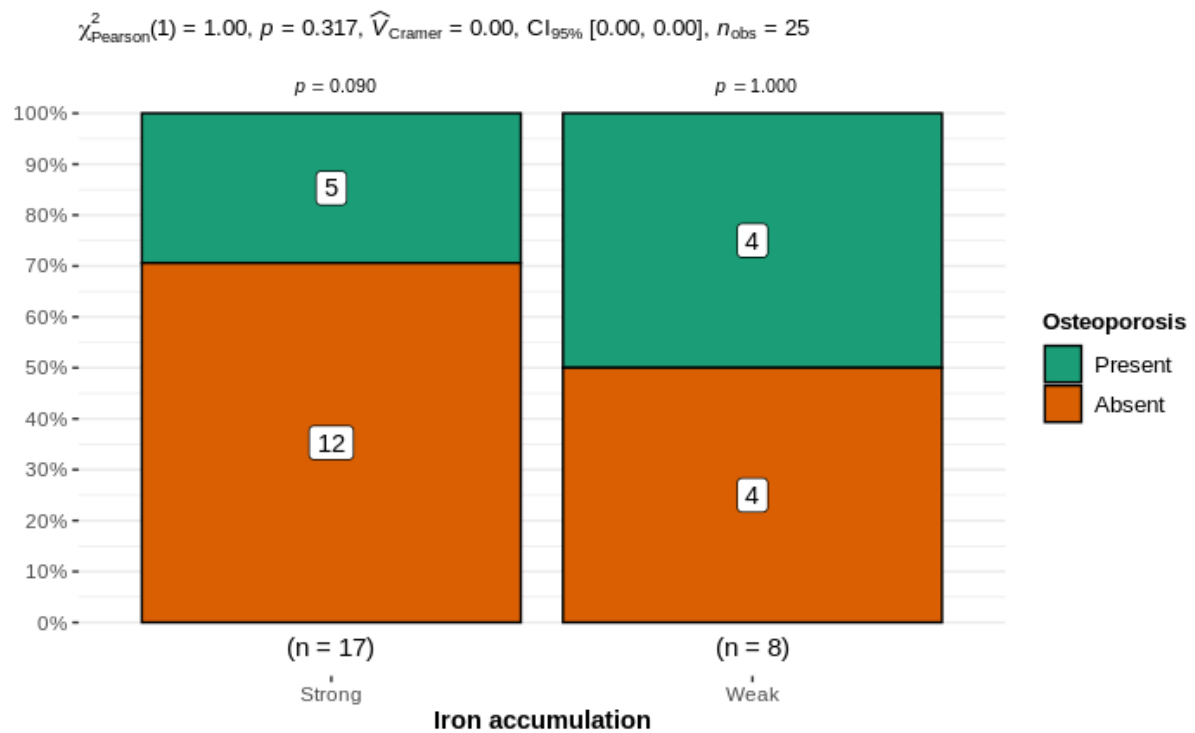


Figure S1. Osteoporosis/osteopenia in relation to iron accumulation in the liver biopsy specimen in HH patients. Left: strong iron accumulation in the liver (G3, G4). Right: weak iron accumulation (G1, G2). ( $p > 0.05$ , Fisher's exact test).