Table S1: Cholesterol weighted mean difference.

Study	LMWH	UFH	WMD (95% CI) (mg/dl)
	mean change, SD (mg/dl)	mean change, SD (mg/dl)	
Al-Saran et al**	-47.95 ± 57.87	-20.88 ± 38.81	-27.07 (-55.55, 1.41)
Deuber et al (part 1)	-44 ± 18.52	3 ± 29.72	-47.00 (-77.69, -16.31)
Deuber et al (part 2)	-73 ± 66.14	112 ± 49.03	-185.00 (-257.17, -112.83)
Elisaf et al	-21 ± 45.74	-5 ± 41.73	-16.00 (-35.68, 3.68)
Kronenberg et al	9.5 ± 43.13	-14.20 ± 42.05	23.70 (-0.40. 47.80)
Lai et al**	-7.34 ± 38.43	-14.69 ± 41.72	7.35 (-10.23, 24.93)
Leu et al**	-50.65 ± 43.15	25.13 ± 42.54	-75.78 (-102.34, -49.22)
Saltissi et al**	-1.16 ± 34.86	0 ± 35.58	-1.16 (-17.43, 15.11)
Schmitt et al	-30 ± 54.25	26 ± 52.03	-56.00 (-87.41, -24.59
Schrader et al	11 ± 66.78	5 ± 50.51	6.00 (-21.74, 33.74)
Summary			-28.70 (-51.43, -5.98)

**Results were expressed in mmol/L, we converted them in mg/dl to be able to pool them.

Table S2: Triglycerides weighted mean difference.

Study	LMWH	UFH	
	mean change, SD (mg/dl)	mean change, SD (mg/dl)	WMD (95% CI) (mg/dl)
Al-Saran et al**	-4.43 ± 168.40	-35.43 ± 72.30	31.00 (-43.90, 105.90)
Deuber et al (part 1)	-151 ± 31.48	-11 ± 83.22	-140.00 (-217.99, -62.01)
Deuber et al (part 2)	-120 ± 99.24	249 ± 128.21	-369.00 (-511.11, -226.89)
Elisaf et al	-15 ± 50.57	-1 ± 77	-14.00 (-43.29, 15.29)
Kronenberg et al	-0.20 ± 90.01	-27.3 ± 86.96	27.10 (-22.97, 77.17)
Lai et al**	-31.00 ± 63.62	-11.52 ± 108.19	-19.48 (-53.38, 19.42)
Leu et al**	-28.34 ± 285.14	18.60 ± 273.65	-46.94 (-220.15, 126.27)
Saltissi et al**	5.31 ± 53.60	-14.17 ± 71.13	19.48 (-9.61, 48.57)
Schmitt et al	-3 ± 105.70	38 ± 114.60	-41.00 (-106.14, 24.14)
Schrader et al**	0 ± 122.50	68 ± 156.70	-68.00 (-133.90, -2.10)
Stefoni et al	-28.90 ± 72.07	3.10 ± 74.50	-32.00 (-59.65, -4.35)
Yang et al (part 2)	-146.7 ± 89.76	64.30 ± 63.44	-211.00 (-279.12, -142.88)
Summary			-55.57 (-94.49, -16.66)

**Results were expressed in mmol/L, we converted them in mg/dl to be able to pool them.
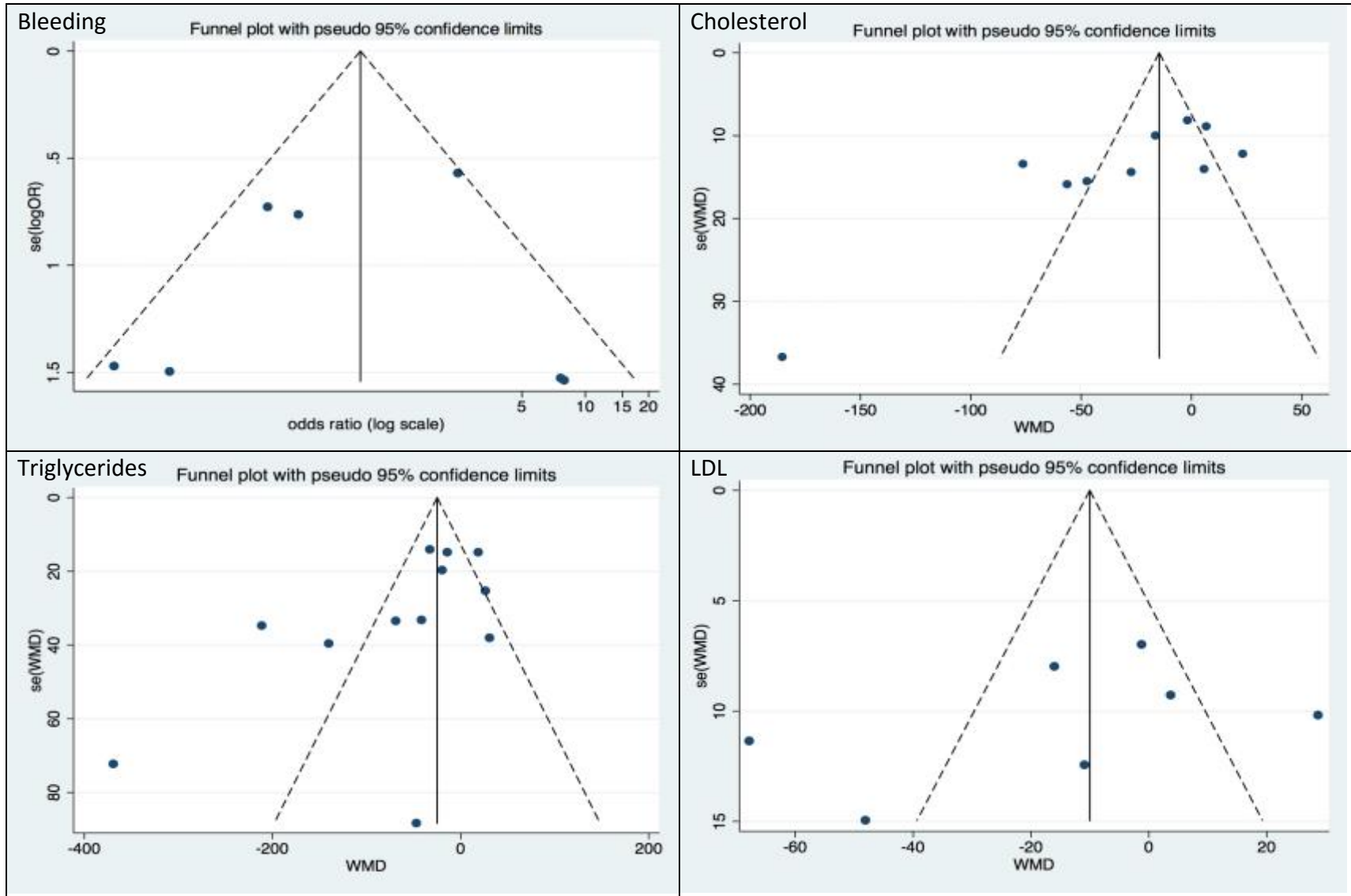
Table S3: Osteoporosis expressed by OPG/RANKL ratio changes.

Study	Measure type	OPG				RANKL			
		LMWH		UFH		LMWH		UFH	
		Start of study	End of study	Start of study	End of study	Start of study	End of study	Start of study	End of study
Cianciolo et al	Mean ± SD (log transf)	2.66 ± 0.98	2.85 ± 0.96	2.96 ± 0.85	2.80 ± 091	1.07 ± 1.13	0.83 ± 0.60	2.17 ± 1.84	1.24 ± 1.0
Klejna et al	Median (range)	10.1 (4.2-28.1)	10.9 (4.6-26.5)	11.1 (4.9-19.1)	10.6 (5.7-33.4)	109 (40-301)	151.2 (43.4-386)	144 (83-361)	136 (81.7-315)

Table S4: Sensitivity analyses with for cholesterol, triglycerides, LSL-cholesterol with different correlation factors

Outcome	Correlation factor of 0.3	Correlation factor of 0.5	Correlation factor of 0.8
	WMD (%95 CI)	WMD (%95 CI)	WMD (%95 CI)
Total cholesterol	-27.38 (-50.78, -3.98)	-28.70 (-51.43, -5.98)	-32.25 (-55.08, -9.42)
Triglycerides	-53.76 (-94.98, -12.53)	-55.57 (-94.49, -16.66)	-60.78 (-97.74, -23.83)
LDL-cholesterol	-14.49 (-35.73, 6.75)	-14.88 (-36.27, 6.51)	-15.49 (-37.56, 6.57)

WMD: weighed mean difference in mg/dl; results from correlation factor of 0.5 are the reference (main analysis)

Supplementary figure S1: Funnel plots for publication bias evaluating bleeding, cholesterol, triglycerides and LDL-cholesterol