

**Supplementary Table S3. Mean differences (95% CI) for ovarian response and preimplantation IVF outcomes by metal concentration. Supplementary data from Main Table 3.**

	Anti-müllerian hormone		Trigger day Estradiol		Number of retrieved oocytes		Number of mature oocytes		Number of fertilized embryos		Number of blastocysts		Number of euploid embryos	
	p20 vs p80 (95%CI)	p trend	p20 vs p80 (95%CI)	p trend	p20 vs p80 (95%CI)	p trend	p20 vs p80 (95%CI)	p trend	p20 vs p80 (95%CI)	p trend	p20 vs p80 (95%CI)	p trend	p20 vs p80 (95%CI)	p trend
<b>Follicular Fluid</b>														
Barium (Ba)	0.59 (0.27, 1.30)	0.86	0.83 (0.70, 0.97)	*0.019	0.81 (0.66, 0.99)	*0.042	0.81 (0.66, 0.99)	*0.041	0.79 (0.64, 0.99)	*0.038	0.78 (0.63, 0.97)	*0.027	0.73 (0.60, 0.90)	**0.004
Strontium (Sr)	0.41 (0.15, 1.14)	0.085	0.88 (0.71, 1.10)	0.251	0.83 (0.65, 1.05)	0.123	0.81 (0.65, 1.01)	0.062	0.81 (0.65, 1.01)	0.06	0.76 (0.62, 0.94)	*0.014	0.77 (0.63, 0.93)	**0.008
Rubidium (Rb)	0.57 (0.27, 1.18)	0.127	1.06 (0.91, 1.24)	0.447	0.98 (0.82, 1.18)	0.866	0.99 (0.83, 1.17)	0.871	1.00 (0.84, 1.20)	0.991	0.95 (0.80, 1.12)	0.515	0.89 (0.78, 1.02)	0.102
Mercury (Hg)	1.26 (0.58, 2.77)	0.553	1.03 (0.86, 1.23)	0.743	1.04 (0.85, 1.28)	0.679	1.04 (0.86, 1.26)	0.675	1.02 (0.83, 1.26)	0.814	0.96 (0.79, 1.16)	0.649	0.98 (0.82, 1.18)	0.838
Titanium (Ti)	0.97 (0.33, 2.84)	0.952	1.05 (0.84, 1.31)	0.679	1.05 (0.80, 1.37)	0.733	1.00 (0.75, 1.33)	0.992	0.96 (0.71, 1.30)	0.799	0.96 (0.71, 1.31)	0.811	0.99 (0.72, 1.38)	0.972

Plasma															
Barium (Ba)	1.01 1.57)	(0.65, 0.976	0.97 1.07)	(0.88, 0.527	1.01 1.12)	(0.91, 0.899	1.02 (0.92, 1.12)	0.762	1.02 (0.92, 1.14)	0.677	1.03 (0.92, 1.16)	0.572	1.07 (0.94, 1.21)	0.309	
Strontium (Sr)	0.37 0.91)	(0.15, *0.032	0.85 1.04)	(0.70, 0.113	0.82 1.03)	(0.64, 0.088	0.77 (0.62, 0.96)	*0.022	0.77 (0.61, 0.98)	*0.035	0.77 (0.60, 0.98)	0.036	0.80 (0.62, 1.03)	0.087	
Rubidium (Rb)	0.25 0.81)	(0.08, *0.022	0.88 1.13)	(0.68, 0.310	0.74 1.01)	(0.55, 0.055	0.78 (0.58, 1.03)	0.083	0.83 (0.61, 1.12)	0.213	0.89 (0.65, 1.22)	0.453	0.94 (0.69, 1.28)	0.69	
Arsenic (As)	0.52 1.33)	(0.21, 0.17	0.93 1.13)	(0.76, 0.451	0.74 0.92)	(0.59, **0.009	0.75 (0.61, 0.92)	**0.008	0.77 (0.62, 0.97)	*0.028	0.83 (0.65, 1.05)	0.116	0.80 (0.63, 1.01)	0.065	
Tin (Sn)	2.76 7.94)	(0.96, 0.059	0.94 1.18)	(0.75, 0.596	0.87 1.14)	(0.66, 0.31	0.90 (0.69, 1.16)	0.400	0.92 (0.70, 1.22)	0.563	0.97 (0.73, 1.30)	0.835	1.01 (0.76, 1.33)	0.948	
Cesium (Cs)	1.21 1.85)	(0.79, 0.37	1.00 1.09)	(0.91, 0.993	0.99 1.11)	(0.89, 0.91	0.99 (0.89, 1.10)	0.864	0.99 (0.88, 1.11)	0.833	0.98 (0.86, 1.11)	0.698	0.94 (0.82, 1.07)	0.36	
Titanium (Ti)	0.52 1.35)	(0.20, 0.175	1.01 1.24)	(0.83, 0.894	0.95 1.23)	(0.74, 0.702	0.98 (0.77, 1.24)	0.841	1.00 (0.77, 1.30)	0.992	0.98 (0.74, 1.29)	0.864	1.07 (0.82, 1.40)	0.617	
Lead (Pb)	1.05 2.94)	(0.38, 0.923	0.97 1.20)	(0.78, 0.750	0.79 1.04)	(0.61, 0.089	0.80 (0.62, 1.04)	0.096	0.85 (0.64, 1.11)	0.228	0.78 (0.58, 1.05)	0.096	0.90 (0.65, 1.23)	0.493	

Antimony (Sb)	1.45 (0.59, 3.56)	0.416	0.94 (0.78, 1.14)	0.536	0.85 (0.69, 1.06)	0.139	0.88 (0.72, 1.08)	0.205	0.89 (0.72, 1.11)	0.294	0.90 (0.72, 1.13)	0.373	0.91 (0.73, 1.14)	0.422
<b>Urine</b>														
Barium (Ba)	0.84 (0.30, 2.36)	0.735	0.93 (0.75, 1.15)	0.500	0.88 (0.69, 1.11)	0.273	0.82 (0.66, 1.02)	0.069	0.80 (0.64, 1.00)	0.055	0.88 (0.69, 1.11)	0.276	0.90 (0.70, 1.16)	0.406
Strontium (Sr)	1.11 (0.38, 3.27)	0.844	0.89 (0.72, 1.12)	0.315	0.85 (0.66, 1.09)	0.194	0.85 (0.67, 1.08)	0.185	0.86 (0.67, 1.11)	0.232	0.95 (0.73, 1.23)	0.674	0.95 (0.71, 1.27)	0.717
Rubidium (Rb)	1.32 (0.53, 3.30)	0.543	1.06 (0.89, 1.27)	0.508	0.99 (0.79, 1.23)	0.931	1.01 (0.81, 1.26)	0.918	1.00 (0.80, 1.26)	0.974	0.98 (0.78, 1.24)	0.888	0.98 (0.76, 1.26)	0.856
Arsenic (As)	2.09 (0.73, 6.03)	0.168	1.18 (0.95, 1.47)	0.136	1.21 (0.95, 1.54)	0.116	1.19 (0.95, 1.49)	0.122	1.16 (0.92, 1.48)	0.204	1.15 (0.91, 1.47)	0.233	1.16 (0.91, 1.50)	0.227
Tin (Sn)	0.88 (0.35, 2.23)	0.792	0.86 (0.72, 1.04)	0.126	0.88 (0.70, 1.11)	0.275	0.89 (0.71, 1.12)	0.315	0.85 (0.67, 1.09)	0.192	0.90 (0.70, 1.16)	0.405	1.03 (0.80, 1.33)	0.802
Cesium (Cs)	1.06 (0.45, 2.47)	0.896	1.06 (0.89, 1.26)	0.536	0.98 (0.80, 1.20)	0.849	0.97 (0.80, 1.18)	0.778	0.95 (0.78, 1.16)	0.616	0.97 (0.80, 1.19)	0.798	0.95 (0.77, 1.18)	0.653
Mercury (Hg)	1.53 (0.53, 4.42)	0.425	0.95 (0.76, 1.18)	0.623	1.02 (0.78, 1.34)	0.860	1.09 (0.84, 1.41)	0.516	1.08 (0.81, 1.42)	0.601	1.02 (0.77, 1.35)	0.870	1.01 (0.75, 1.35)	0.961

Lead (Pb)	1.06 3.07	(0.36, 0.917	0.95 1.18)	(0.76, 0.610	0.97 1.28)	(0.74, 0.840	1.02 (0.78, 1.33)	0.885	1.03 1.37)	(0.78, 0.810	1.06 1.41)	(0.80, 0.672	1.04 (0.76, 1.42)	0.805
Cesium (Cs)	0.61 1.72)	(0.22, 0.343	1.04 1.26)	(0.87, 0.640	0.89 1.12)	(0.70, 0.304	0.82 (0.66, 1.02)	0.069	0.84 1.06)	(0.66, 0.132	0.81 1.02)	(0.65, 0.073	0.84 (0.67, 1.04)	0.107
Mercury (Hg)	1.25 3.22)	(0.48, 0.642	1.00 1.19)	(0.85, 0.969	1.13 1.38)	(0.92, 0.243	1.07 (0.88, 1.30)	0.487	1.08 1.34)	(0.87, 0.471	0.96 1.18)	(0.78, 0.68	0.89 (0.73, 1.09)	0.259

Multivariate models were adjusted for age (continuous), BMI (continuous), race/ethnicity, and smoking habits (never, ever). The 20th and 80th percentiles of metal distributions for follicular fluid were respectively as follows: Ba (1.50 and 2.80), Sr (22.03 and 34.21), Rb (103.20 and 134.00), As (0.50 and 0.50), Ti (2.12 and 3.10), Hg (1.19 and 2.98), Pb (0.50 and 0.50). The 20th and 80th percentiles of metal distributions for plasma were respectively as follows: Ba (19.99 and 30.09), Sr (31.01 and 45.39), Rb (264.71 and 578.41), As (3.43 and 5.29), Sn (6.57 and 14.81), Cs (2.45 and 3.93), Ti (328.86 and 908.26), Hg (1.01 and 2.84), Pb (3.03 and 5.65), Sb (6.46 and 14.11). Percentiles 20th and 80th of metal distributions for urine (CR corrected) were respectively as follows: Ba (0.01 and 0.03), Sr (0.53 and 1.90), Rb (9.24 and 18.85), As (0.06 and 0.38), Sn (0.01 and 0.02), Cs (0.04 and 0.08), Ti (0.06 and 0.21), Hg (0.01 and 0.02), Pb (0.02 and 0.01). \*P<0.05, \*\*P<0.01.