

Fig. E-1
 Cobalt ion levels (in ppb) in erythrocytes (left) and serum (right) in the three treatment groups over time. The number of patients with data is indicated by the N value for each analysis. The laboratory upper limits of the normal range for cobalt in erythrocytes and serum are 0.23 and 0.40 ppb, respectively, in the general population.

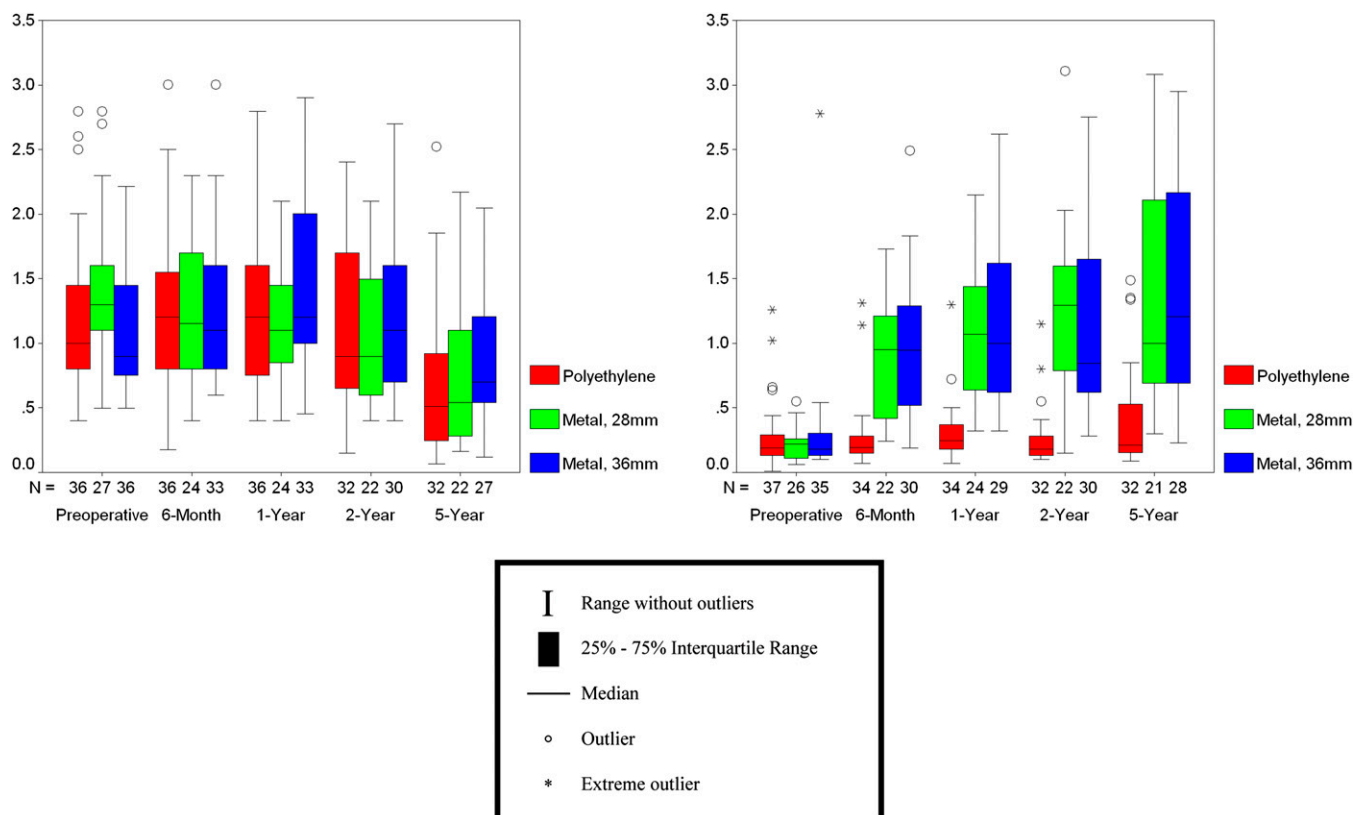


Fig. E-2
 Chromium ion levels (in ppb) in erythrocytes (left) and serum (right) in the three treatment groups over time. The number of patients with data is indicated by the N value for each analysis. The laboratory upper limits of the normal range for chromium in erythrocytes and serum are 3.0 and 0.2 ppb, respectively, in the general population.

TABLE E-1 Comparison of Published Cobalt Ion Levels						
Study	Follow-up (yr)	Blood Component	Preop. Level (ppb)	Postop. Level (ppb)	Increase Factor	
Brodner 2003 ³⁵	5	Serum	0.15	0.70	4.7	
MacDonald 2003 ²⁹	2	Erythrocytes	0.14	1.10	7.9	
Hailer 2011 ³⁶	6	Serum	0.09	0.86	9.6	
Pattyn 2011 ³⁷	2	Whole blood	0.48	1.35	2.8	
Present study, 28 mm	5	Erythrocytes	0.13	0.42	3.2	
Present study, 28 mm	5	Serum	0.16	0.78	4.9	
Present study, 36 mm	5	Erythrocytes	0.11	0.58	5.3	
Present study, 36 mm	5	Serum	0.14	1.13	8.1	