

Metal Ions Report – Summary of Evidence

What is the evidence for metal ion levels and/or rates of cancer in patients who have metal hip replacements?

DrE ID	Inclusion criteria	Type of Hip Replacement	Rate of cancer hip replacement group	Rate of cancer control group	Follow-up	Metal ion levels: metal ion levels
471937	54 female, 44 male patients, average age of 56 years (range 22-79 years),	Cement-less primary total hip prostheses with metal-on-metal articulating surfaces	5/98 (5.1%) patients diagnosed with primary malignant tumor between time of implantation and 10 year follow-up: 2 rectum carcinoma, 1 breast cancer, 1 unknown	No control group	10 year follow-up	-Median serum cobalt concentration .75 ug/L (range, 0.3-50.1 ug/L) -Median serum chromium level was 0.95 ug/L (range, 0.3-58.6 ug/L). -available ion levels for individuals given in pg. 843 under serum analysis section
472827	average age at study entry was 68 years, average mean age at diagnosis of cancer is 76.1 years	Primary total hip arthroplasty or primary resurfacing arthroplasty	13,946/71,900 (19.4%) diagnosed during follow-up	No control group in the study	7.6 years	Not provided in the study
472828	No inclusion criteria, average age at baseline is given in table 1	Stemmed metal-on-metal, other bearing surfaces, and resurfacing	N/A. For a complete list of different cancer rates (hazard ratios), please look at table 2 in page 7	No control group	1 year	Not provided in the study