

Supplementary Material

Raman and photoemission spectroscopic analyses of explanted BioloX[®] delta femoral heads showing metal transfer

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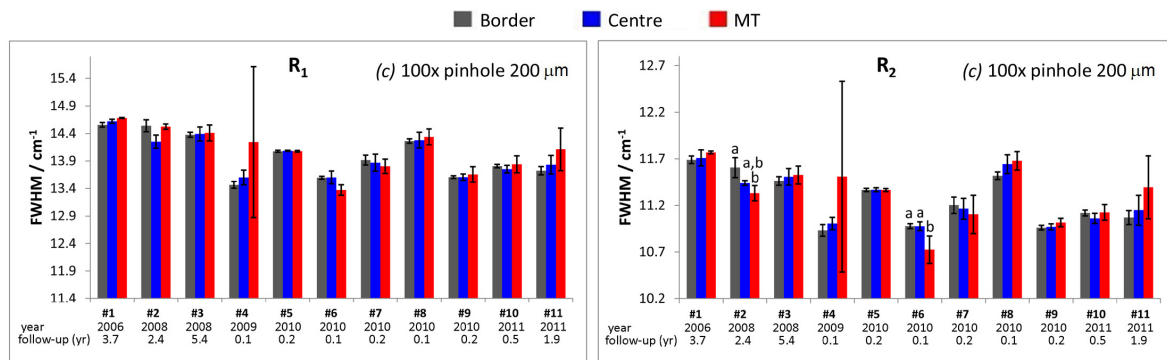


Figure S1. Average FWHM values (FWHM ± standard deviation) of R₁ and R₂ bands obtained from the fitting of the emission spectra recorded under optical conditions (c) in different areas of the explanted BioloX[®] delta femoral heads. When present, different letters on the histogram bars indicate significant differences among the areas of each retrieval.

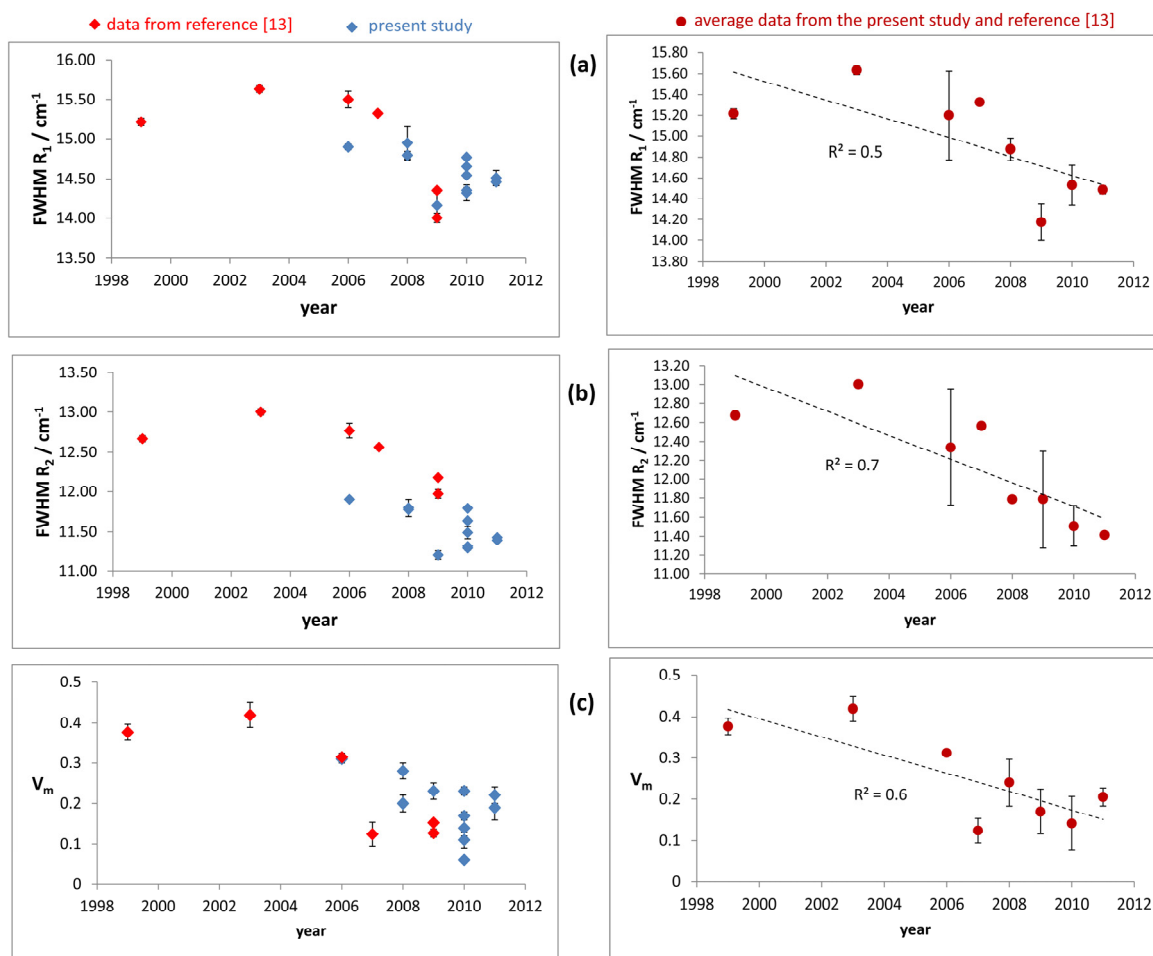


Figure S2. Trend of the FWHM of R₁ (a) and R₂ (b) photoemission bands and V_m monoclinic zirconia content (c) measured in the border control areas of the retrievals as a function of the implantation year. Left: single retrievals data from the present study and reference [13]; right: average data from the present study and reference [13].

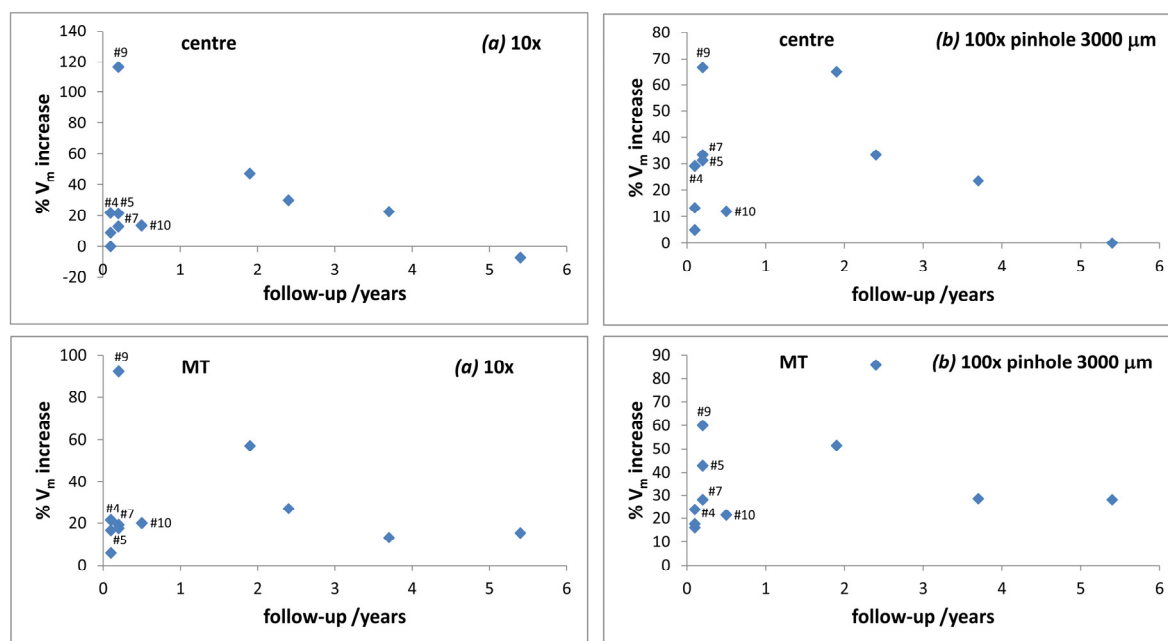


Figure S3. Trend of the % V_m increase observed in the centre and MT areas of the retrievals under study as a function of follow-up. The % V_m increase was calculated with respect to the control border of the same femoral head, under the same optical conditions ((a) or (b)).

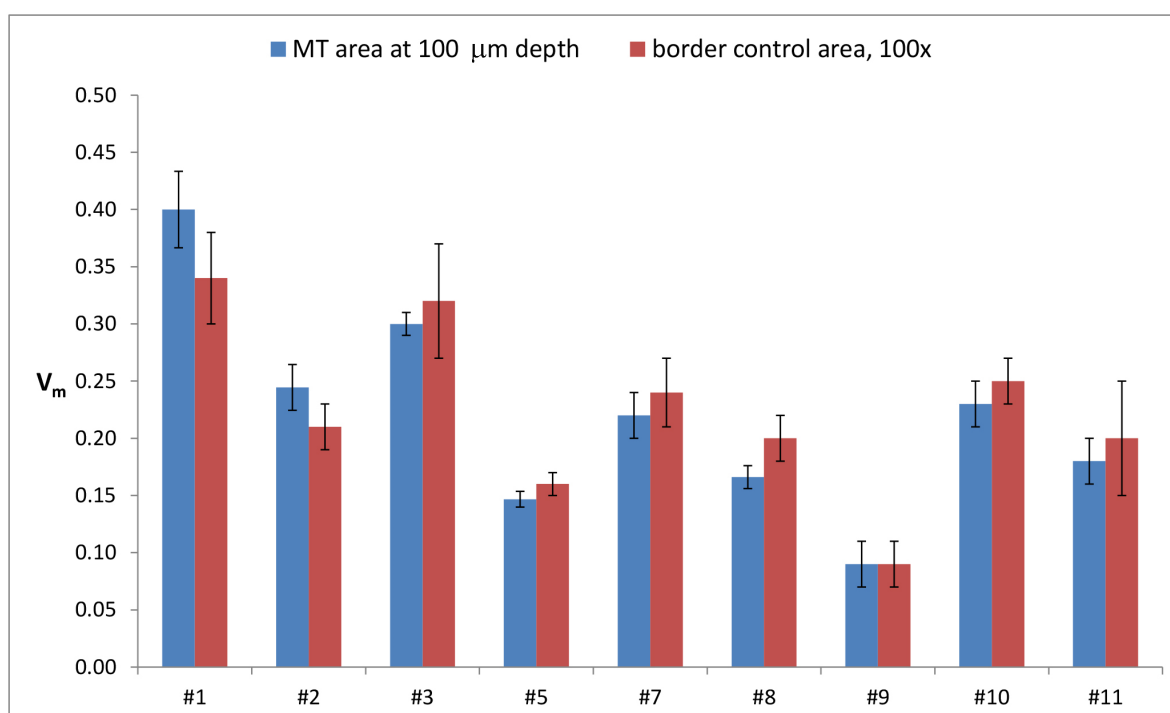


Figure S4. V_m values measured 100 μm below the surface of retrievals #1, #2, #3, #5, #7, #8, #9, #10, #11 in depth profiling analyses and in their border control area under optical conditions (b).