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Supplementary material

Title: Auto-Antibodies to Post-Translationally Modified Proteins in Osteoarthritis

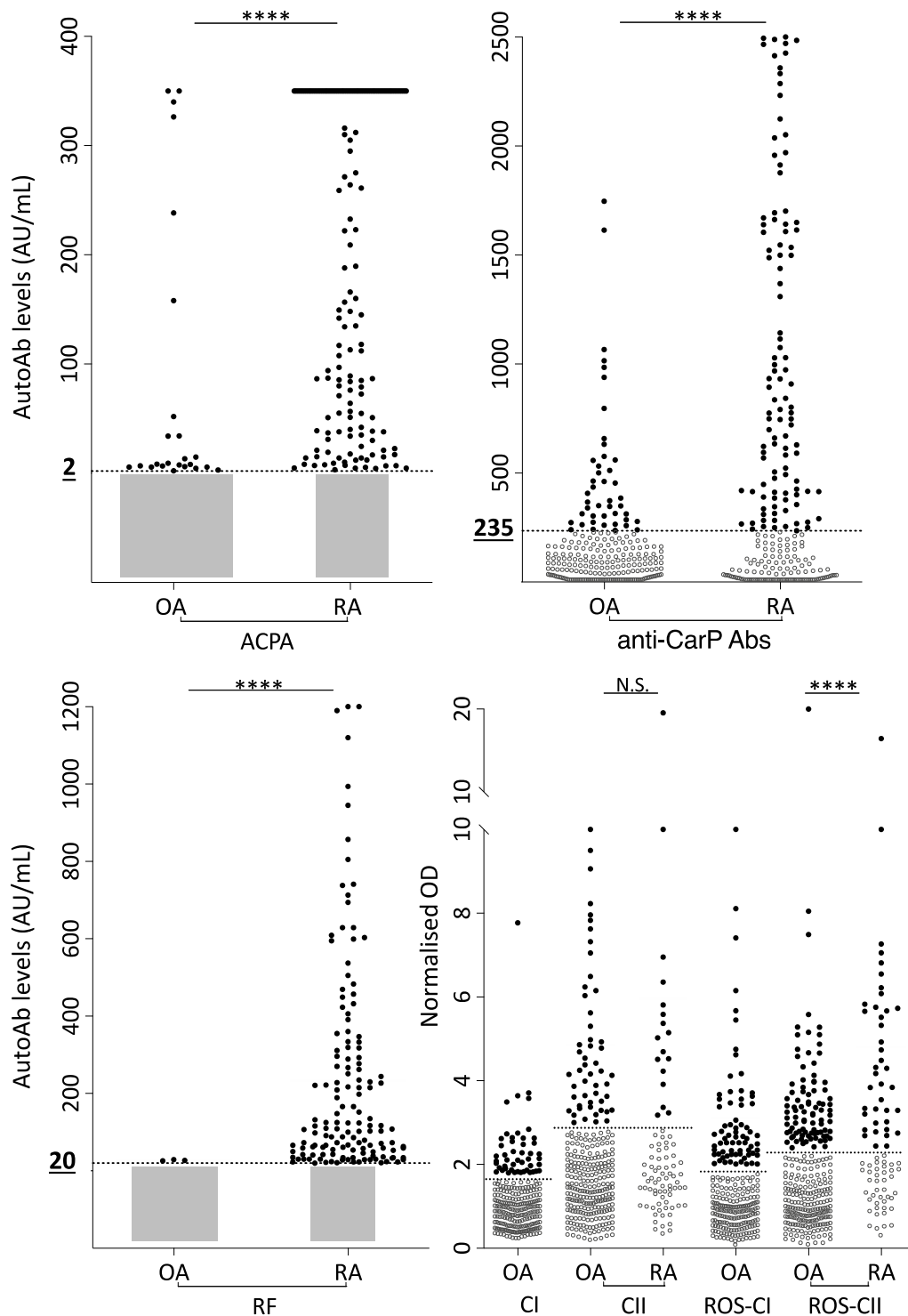
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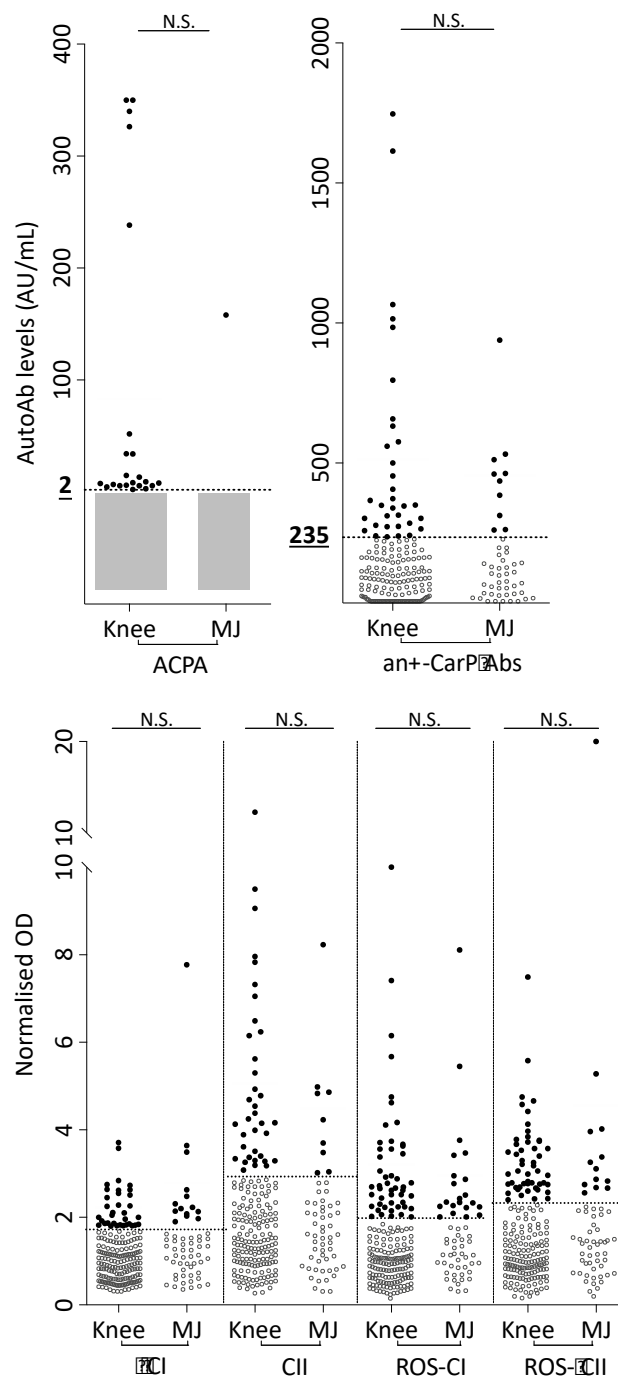
SUP Table 1: Lack of an effect of age or gender on AutoAbs levels (continuous) in Health

	n	range	Median IQR	Cut-off Mean + 2SD	Cut-off 95% CI	Age relationship (Rho value) (95% CI)	Sex / levels (p-value) U-stat (95%CI)
Anti-CarP (AU/mL)	174	1-556	30.7 (0-94.6)	235	250	-0.122 (0.063-0.349)	0.215 0.484 (0.389-0.581)
CI (norm OD)	98	0.1-3.1	0.8 (0.4-1.2)	1.82	1.95	0.127 (-0.79-0.314)	0.151 0.562 (0.418-0.694)
CII (norm OD)	98	0.1-3.5	1.3 (0.6-1.8)	3.07	3.01	0.125 (-0.076-0.317)	0.201 0.579 (0.436-0.708)
ROS-CI (norm OD)	98	0.1-2.8	0.8 (0.4-1.2)	2.04	1.97	0.155 (-0.046-0.344)	0.137 0.549 (0.408-0.681)_
ROS-CII (norm OD)	98	0.1-3.2	0.9 (0.4-1.5)	2.39	2.51	0.133 (-0.068-0.323)	0.286 0.577 (0.434-0.705)

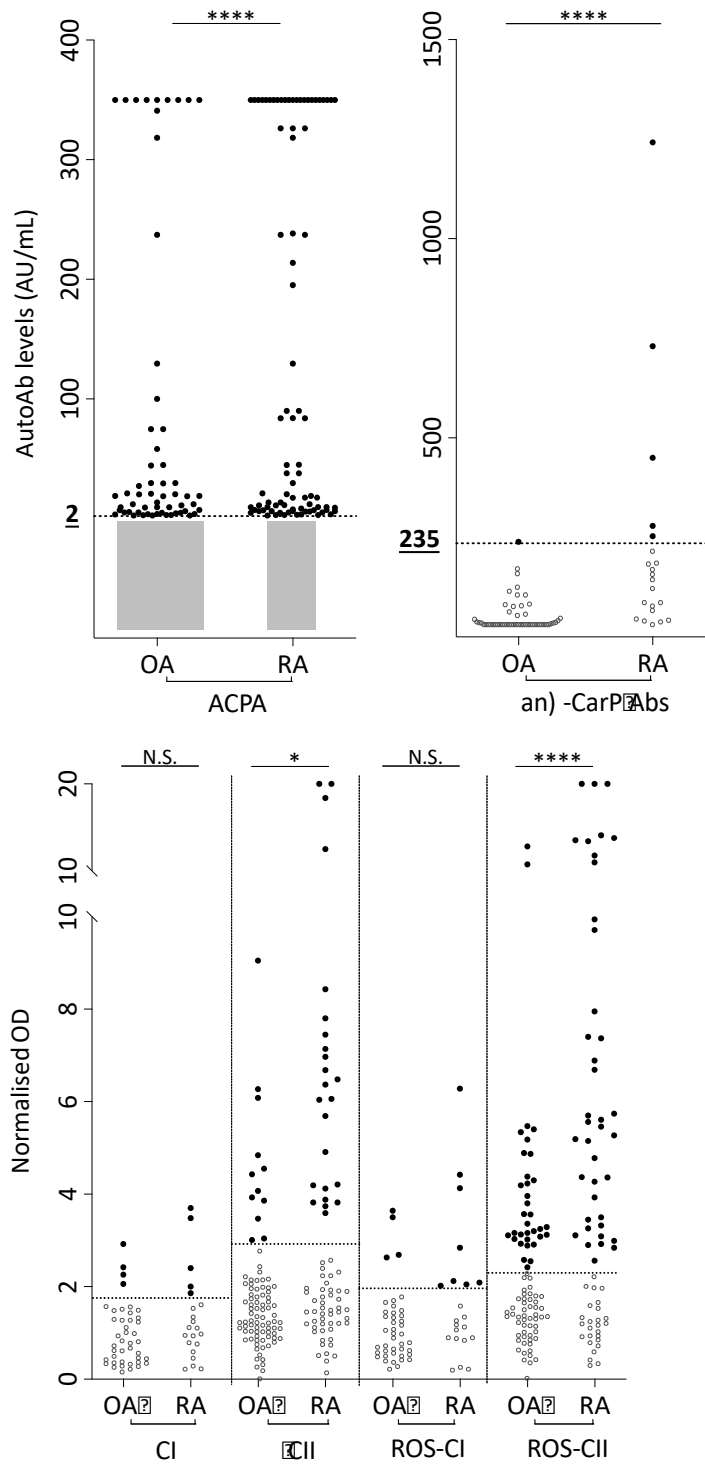
Relationship between age and continuous levels of AutoAbs were assessed by Spearman test (rho value (95% CI)) while a MWY test (p-values and U-stat (95% CI)) was used to compare levels between gender.



Sup Figure 1: Serum levels of AutoAbs positive patients in disease groups, OA (overall n=415) and RA (n=303). Each dot represents a patient: open dots represent negative levels and black dot positive ones. The grey box for ACPA and RF represent the patients with negative AutoAbs status but no numerical values for negative levels. Dotted lines represent cut-off. Mann-Whitney U test for level were performed between two groups. *P*-value are given on the top of groups. *****p*<0.0001, N.S: not significant. U-stat (95% CI) were 0.201 (0.0124- 0.2314) for ACPA, 0.362 (0.314-0.414) for anti-CarP, 0.079 (0.013- 0.403) for RF and 0.291 (0.232- 0.359) for anti-ROS-CII.



Sup Figure 2: AutoAbs Serum levels in OA patients by anatomical sites. The OA group was subdivided into knee (overall n=322) and MJ OA (n=77). Each dot represents a patient: open dots represent negative levels and black dot positive ones. The grey box for ACPA represents the patients with negative AutoAbs status but no numerical values for negative levels. Dotted lines represent cut-off. Mann-Whitney U test for level were performed between groups. *P*-value are displayed on the top of groups. N.S: not significant.



Sup Figure 3: Synovial fluid levels of AutoAbs positive patients in disease groups, OA (overall n=151) and RA (n=139). Each dot represents a patient: open dots represent negative levels and black dot positive ones. The grey box for ACPA represents the patients with negative AutoAbs status but no numerical values for negative levels. Dotted lines represent cut-off. Mann-Whitney U test for level were performed in groups. *P*-value are displayed on the top of groups; * $p=0.024$; **** $p<0.0001$; N.S: not significant. U-stat (95% CI) were 0.588 (0.491- 0.678) for ACPA, 0.859 (0.737 – 0.927) for anti-CarP 0.635 (0.543 - 0.716) for anti-CII and 0.649 (0.555 - 0.725) for anti-ROS-CII.