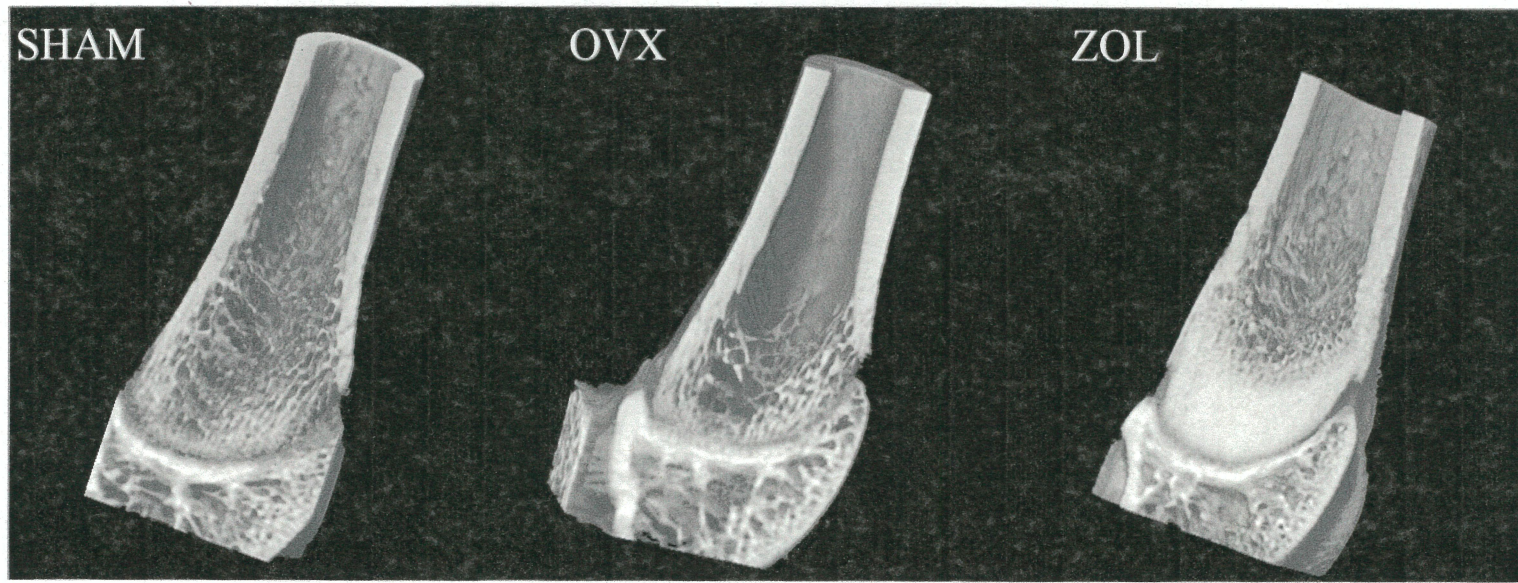
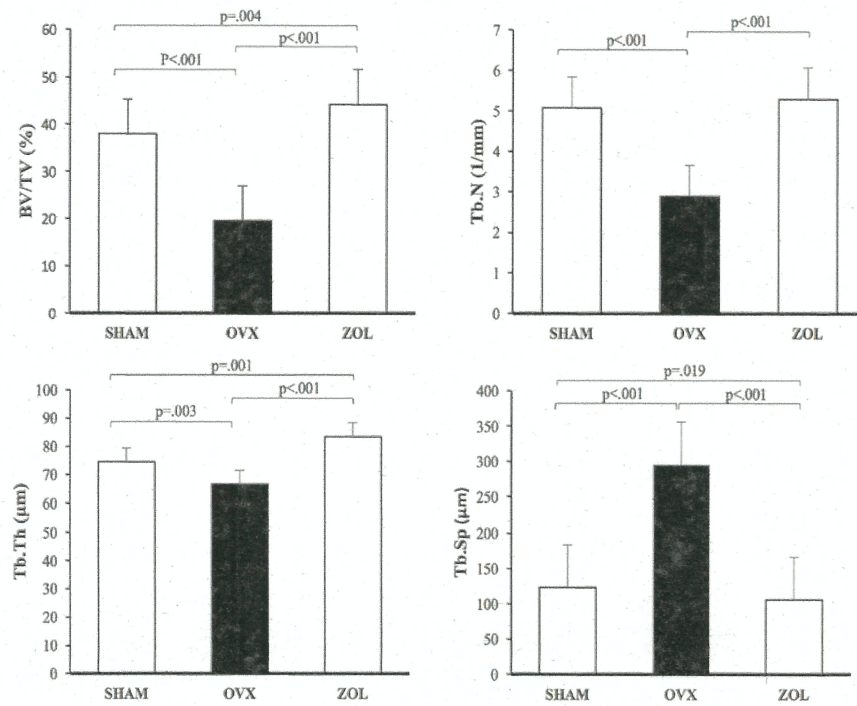


Fig. 1

a



b



c

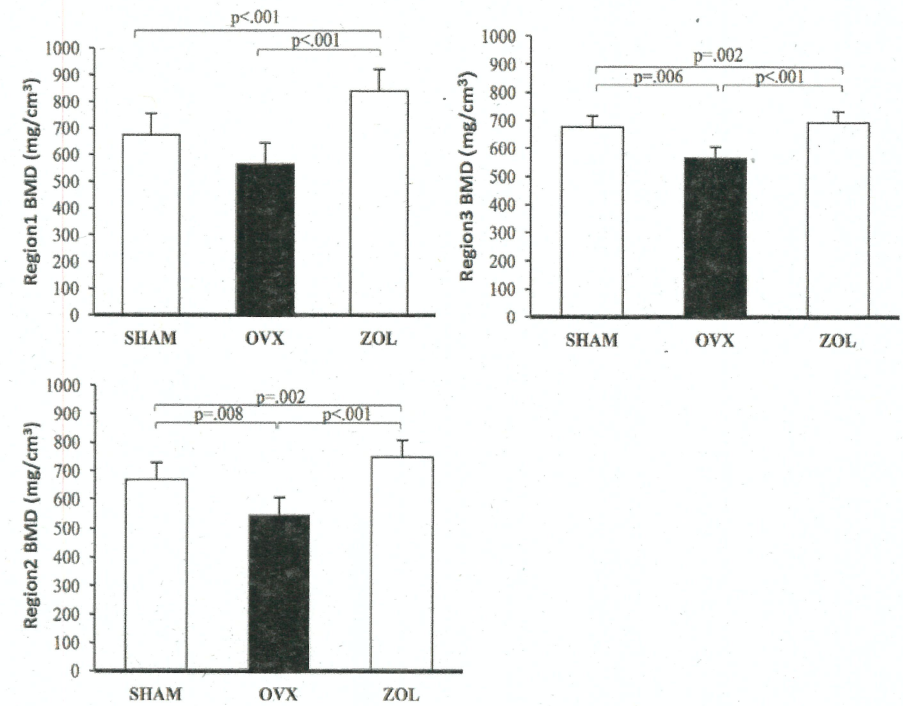


Fig. 2

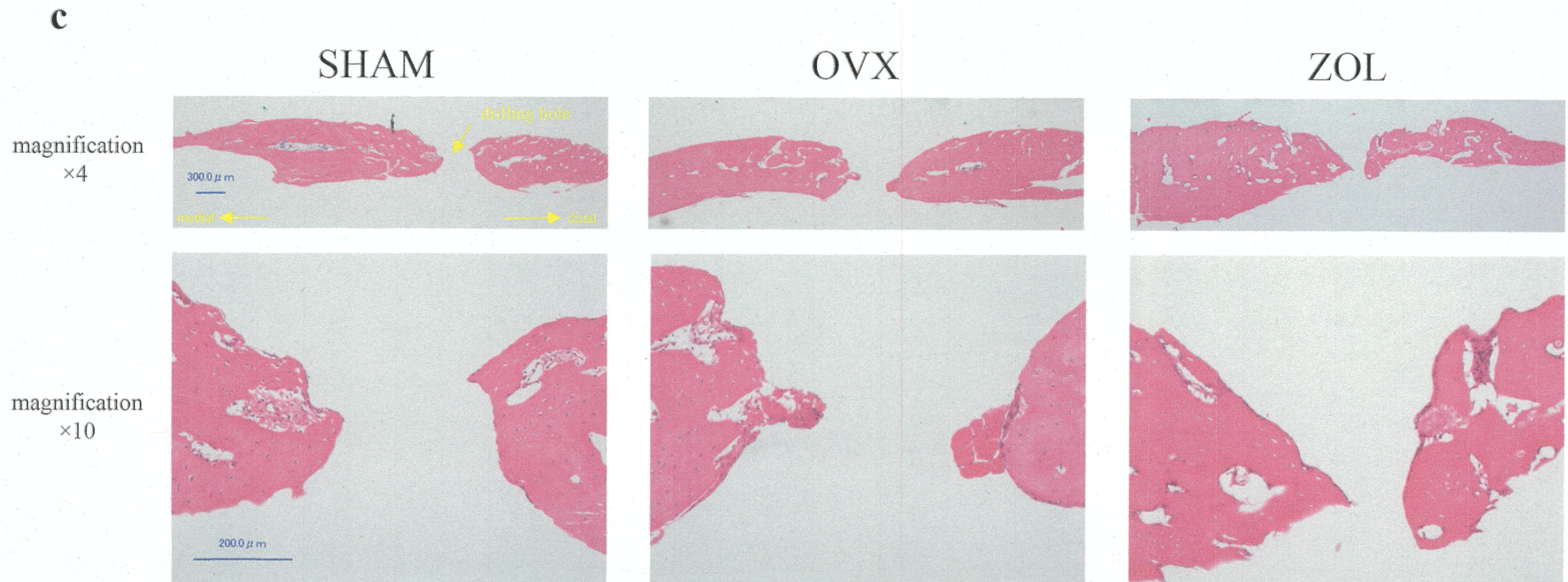
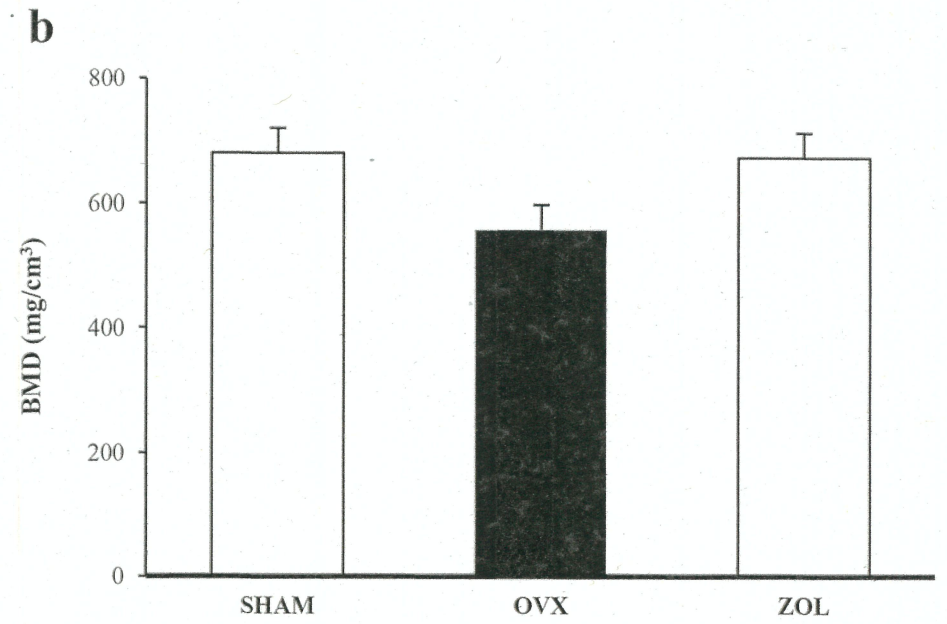
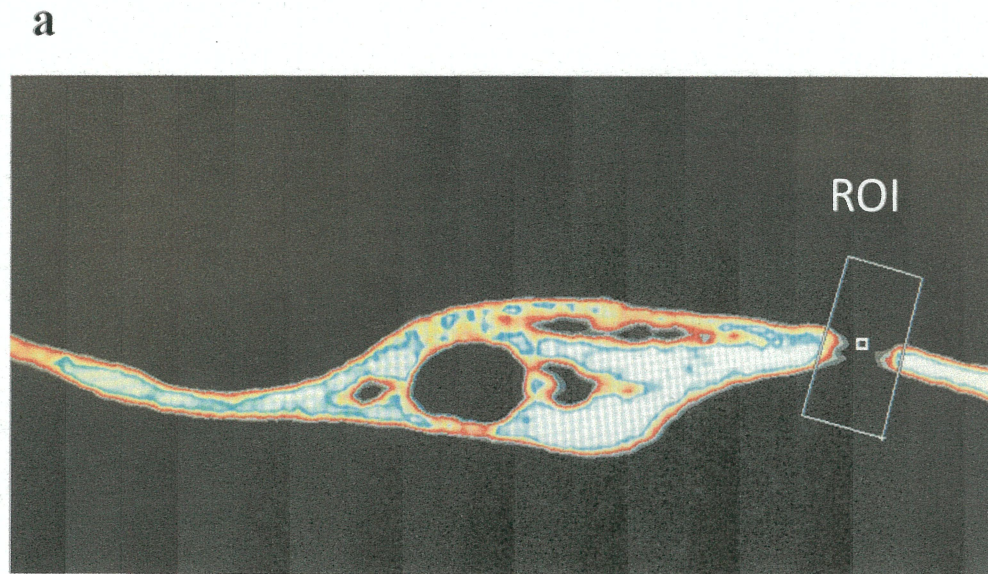


Fig. 3

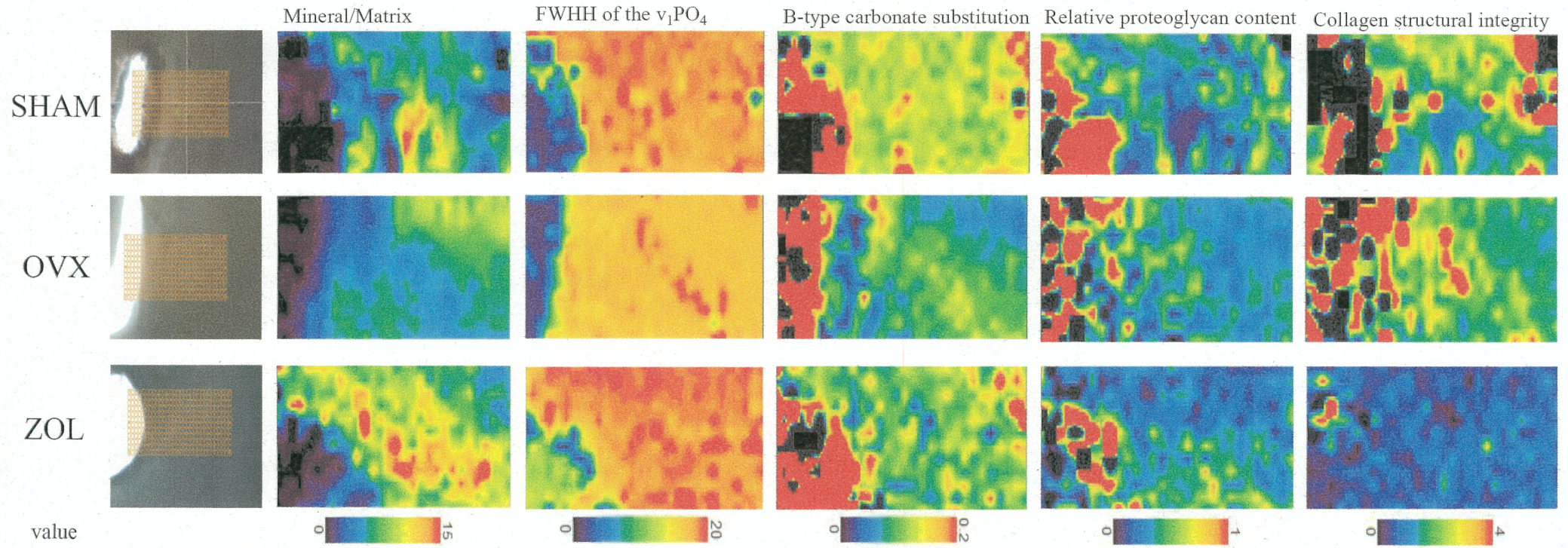


Fig. 4

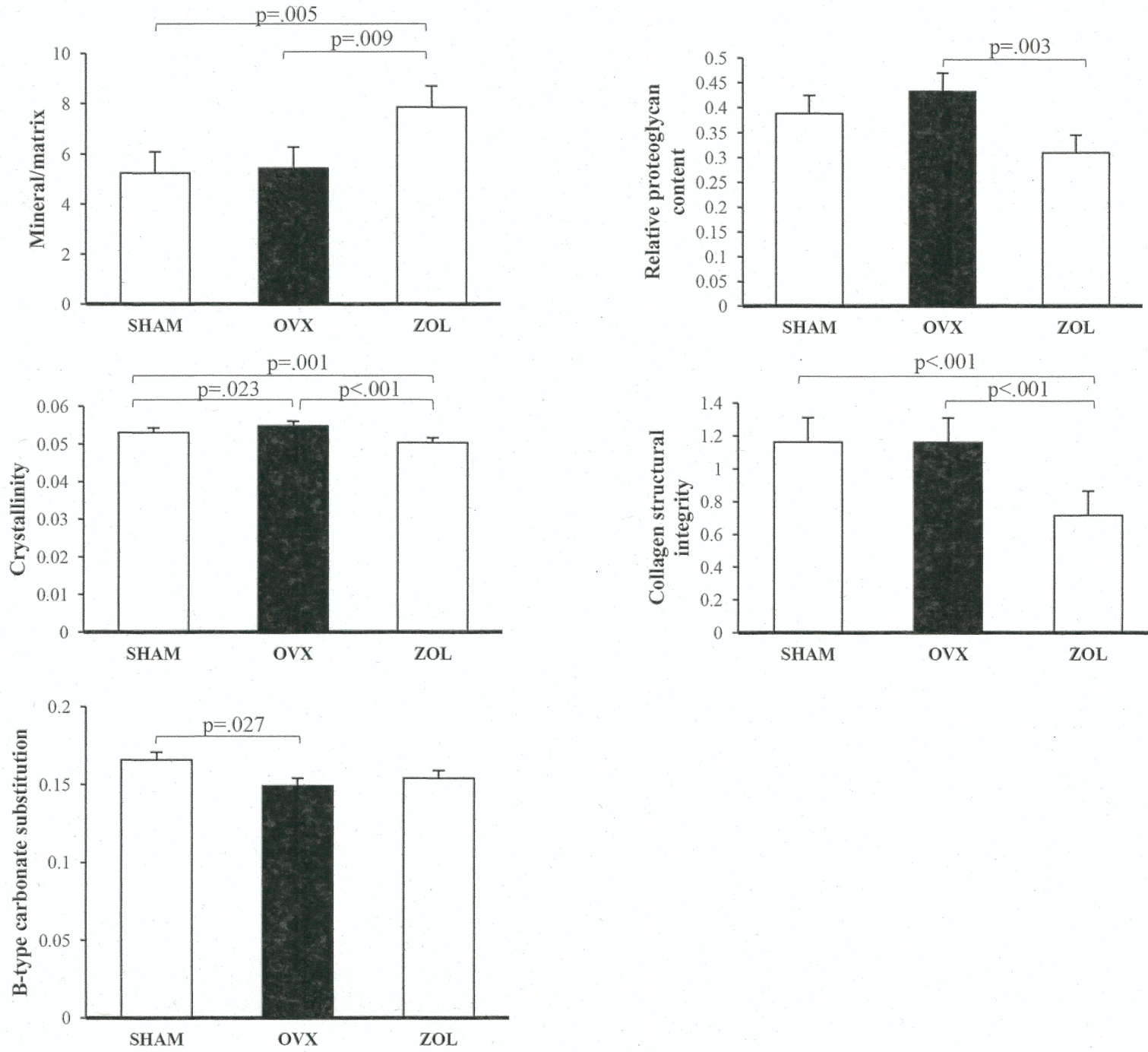


Table 1

Descriptive statistics value for MicroCT analysis and pQCT to assess osteoporotic development									
		number	mean value	standard deviation	standard error	95% confidence interval of the mean value		minimum value	maximum value
						lower limit	upper limit		
BV.TV (%)	SHAM	12	37.92	4.10	1.18	35.32	40.53	30.31	44.37
	OVX	12	19.46	5.32	1.54	16.08	22.83	11.72	26.15
	ZOL	11	44.18	3.05	0.92	42.13	46.23	40.58	50.56
	total number	35	33.56	11.43	1.93	29.63	37.49	11.72	50.56
Tb.Th (µm)	SHAM	12	74.56	4.07	1.18	71.97	77.14	68.30	80.25
	OVX	12	66.58	6.12	1.77	62.69	70.47	52.74	72.05
	ZOL	11	83.52	5.91	1.78	79.55	87.49	73.30	93.29
	total number	35	74.64	8.73	1.48	71.64	77.64	52.74	93.29
Tb.N (1/mm)	SHAM	12	5.08	0.33	0.10	4.86	5.29	4.44	5.53
	OVX	12	2.88	0.59	0.17	2.51	3.26	1.96	3.65
	ZOL	11	5.30	0.40	0.12	5.03	5.57	4.91	6.12
	total number	35	4.40	1.20	0.20	3.98	4.81	1.96	6.12
Tb.Sp (µm)	SHAM	12	123.26	16.26	4.69	112.93	133.59	100.64	157.03
	OVX	12	295.56	87.36	25.22	240.06	351.07	202.36	447.02
	ZOL	11	105.93	11.24	3.39	98.37	113.48	85.04	118.30
	total number	35	176.89	101.03	17.08	142.18	211.59	85.04	447.02
BMD in region 1 (mg/cm ³)	SHAM	12	14.44	2.86	0.82	12.62	16.25	11.35	22.56
	OVX	12	12.27	2.24	0.65	10.85	13.70	9.43	16.68
	ZOL	11	18.64	1.63	0.49	17.55	19.74	16.73	22.10
	total number	35	15.02	3.48	0.59	13.82	16.21	9.43	22.56
BMD in region 2 (mg/cm ³)	SHAM	12	12.06	1.97	0.57	10.81	13.32	9.84	17.28
	OVX	12	9.83	1.25	0.36	9.03	10.62	7.78	11.84
	ZOL	11	14.76	1.84	0.55	13.53	16.00	12.39	18.75
	total number	35	12.15	2.62	0.44	11.25	13.05	7.78	18.75
BMD in region 3 (mg/cm ³)	SHAM	12	10.18	1.27	0.37	9.38	10.99	8.39	12.92
	OVX	12	8.47	0.86	0.25	7.93	9.02	7.06	9.99
	ZOL	11	12.15	1.57	0.47	11.09	13.21	9.91	15.66
	total number	35	10.22	1.94	0.33	9.55	10.88	7.06	15.66
Descriptive statistics value for pQCT analysis of newly formed bone of the mandible									
		number	mean value	standard deviation	standard error	95% confidence interval of the mean value		minimum value	maximum value
						lower limit	upper limit		
BMD (mg/cm ³)	SHAM	12	680.45	248.99	71.88	522.25	838.65	297.30	1164.60
	OVX	12	558.14	213.57	61.65	422.45	693.84	72.40	785.00
	ZOL	11	673.38	141.09	42.54	578.59	768.17	411.70	896.60
	total number	35	636.29	209.66	35.44	564.27	708.32	72.40	1164.60
Descriptive statistics value for Raman bone metrics									
		number	mean value	standard deviation	standard error	95% confidence interval of the mean value		minimum value	maximum value
						lower limit	upper limit		
mineral/matrix ratio	SHAM	12	5.24	1.55	0.45	4.25	6.23	3.28	8.43
	OVX	12	5.43	1.88	0.54	4.23	6.63	3.67	9.61
	ZOL	11	7.86	2.05	0.62	6.49	9.24	4.72	11.80
	total number	35	6.13	2.14	0.36	5.39	6.87	3.28	11.80
Crystallinity	SHAM	12	0.053	0.001	0.000	0.052	0.054	0.051	0.055
	OVX	12	0.055	0.002	0.000	0.054	0.056	0.052	0.057
	ZOL	11	0.050	0.002	0.001	0.049	0.052	0.049	0.055
	total number	35	0.053	0.002	0.000	0.052	0.054	0.049	0.057
B-type carbonate substitution	SHAM	12	0.17	0.02	0.00	0.16	0.18	0.15	0.20
	OVX	12	0.15	0.01	0.00	0.14	0.16	0.12	0.17
	ZOL	11	0.15	0.02	0.01	0.14	0.17	0.13	0.18
	total number	35	0.16	0.02	0.00	0.15	0.16	0.12	0.20
Relative proteoglycan content	SHAM	12	0.39	0.09	0.02	0.33	0.44	0.28	0.56
	OVX	12	0.43	0.10	0.03	0.37	0.50	0.29	0.68
	ZOL	11	0.31	0.05	0.02	0.27	0.34	0.23	0.40
	total number	35	0.38	0.10	0.02	0.35	0.41	0.23	0.68
Collagen structural integrity	SHAM	12	1.16	0.18	0.05	1.05	1.28	0.96	1.50
	OVX	12	1.16	0.21	0.06	1.03	1.29	0.97	1.70
	ZOL	11	0.72	0.06	0.02	0.68	0.75	0.63	0.82
	total number	35	1.02	0.26	0.04	0.93	1.11	0.63	1.70