

## Supplementary Data

SUPPLEMENTARY TABLE S1. SUMMARY OF MEAN TISSUE AREA PERCENTAGE BY COHORT AND REGIONS

Cohort	Region	Group	New lamellar bone, %		New woven bone, %		Residual allograft, %		Fibrous marrow, %		Sinus, %		Hematopoietic marrow, %		Void, %								
			SE	p	SE	p	SE	p	SE	p	SE	p	SE	p	SE	p							
Cohort I	Overall	BMA	20.6	2.2	0.83	2.8	0.6	0.46	6	1.0	0.88	18.5	3.3	0.74	6.6	1.6	0.59	30.8	3.1	0.48	14.6	1.6	0.54
		DS	19.9	2.2	0.57	2.2	0.6	0.1	5.8	1.0	0.8	17	3.3	0.9	7.9	1.6	0.77	34	3.1	0.35	13.3	1.6	0.4
	IM	BMA	20.2	2.4	0.85	2.9	0.6	0.1	5.1	1.2	0.8	12.9	4	0.9	7.4	1.8	0.77	35.6	3.6	0.35	15.8	1.8	0.4
		DS	18.3	2.4	0.85	1.5	0.6	0.77	5.6	1.2	0.6	12.5	4	0.6	8.1	1.8	0.46	40.4	3.6	0.76	13.7	1.8	0.8
	PC	BMA	20.9	2.4	0.85	2.7	0.6	0.77	6.9	1.2	0.6	24.2	4	0.6	5.9	1.8	0.46	25.9	3.6	0.76	13.3	1.8	0.8
		DS	21.6	2.4	0.85	3	0.6	0.77	6	1.2	0.6	21.4	4	0.6	7.7	1.8	0.46	27.5	3.6	0.76	12.8	1.8	0.8
Cohort II	Overall	DS-T	16.2	1.7	0.88	3.2	0.4	0.21	5.8	0.8	0.34	21.8	5.1	0.14	8.2	1.5	0.48	28.1	4.3	0.08	16.6	1.2	0.65
		SR	15.6	1.7	0.88	2.5	0.4	0.21	4.7	0.8	0.34	10.9	5.1	0.14	9.7	1.5	0.48	39.5	4.3	0.08	17.3	1.2	0.65
	IM	DS-T	16.4	1.9	0.24	3.1	0.5	0.26	6.1	1	0.28	18.5	5.8	0.21	9.5	1.7	0.34	26.4	4.7	0.04 <sup>a</sup>	15.8	1.8	0.4
		SR	13.2	1.9	0.35	2.3	0.5	0.39	4.5	1	0.72	8.1	5.8	0.21	11.9	1.7	0.78	40.6	4.7	0.2	13.7	1.8	0.8
	PC	DS-T	15.7	1.9	0.35	3.3	0.5	0.39	5.4	1	0.72	25.6	5.8	0.13	6.9	1.7	0.78	29.8	4.7	0.2	13.3	1.8	0.8
		SR	18.2	1.9	0.35	2.7	0.5	0.39	4.9	1	0.72	13	5.8	0.13	7.6	1.7	0.78	38.5	4.7	0.2	12.8	1.8	0.8
DS group only	Overall	DS	19.9	1.9	0.18	2.2	0.4	0.12	5.8	2.3	0.98	17	4.6	0.46	7.9	1.7	0.9	29.8	4.7	0.2	13.2	1.2	0.07
	Defect	DS-T	16.1	2	0.18	3.2	0.4	0.12	5.7	2.5	0.98	22.1	5	0.46	8.2	1.9	0.9	38.5	4.7	0.2	16.6	1.3	0.07

<sup>a</sup>Statistically significant at  $p < 0.05$  (ANOVA).

BMA, bone marrow aspirate; IM, intramedullary; DS, density separation; PC, pericortical; SE, standard error; SR, selective retention.