

TABLE E-1 Anatomic Location of Lesions According to Study Group\*

	Total	TCP/BM Group	TCP Group
Lower extremity (n = 41)			
Femur			
Proximal	7	5	2
Shaft	1	0	1
Distal	12	5	7
Total	20	10	10
Tibia			
Proximal	6	4	2
Distal	8	4	4
Total	14	8	6
Fibula			
Proximal	1	0	1
Distal	2	2	0
Total	3	2	1
Foot			
Toes	2	0	2
Talus	1	1	0
Total	3	1	2
Ilium	1	1	0
Upper extremity (n = 14)			
Humerus			
Proximal	4	3	1
Distal	2	2	0
Total	6	5	1
Radius	2	1	1
Clavicle	2	0	2
Hand			
Metacarpals	2	1	1
Phalanges	2	0	2
Total	4	1	3

\*TCP = ultraporous  $\beta$ -tricalcium phosphate, and BM = bone marrow aspirate.

TABLE E-2 Amount of BM and TCP Used According to Anatomic Location and Study Group\*

Bone/Area	TCP/BM Group			TCP Group	
	No. of Subjects	Amount of BM ( $cm^3$ )	Amount of TCP ( $cm^3$ )	No. of Subjects	Amount of TCP ( $cm^3$ )
Lower extremity (n = 41)					
Femur	10	24.8	72.5	10	65
Tibia	8	16	49.5	6	42.2
Fibula	2	10	26.5	1	15.0
Foot	1	15	40	2	3.5
Pelvis	1	10	30	0	—
Total	22			19	
Avg.		19.1	56.5		48.7
Upper extremity (n = 14)					
Humerus	5	22.2	36.6	1	60
Radius	1	9	18	1	25
Clavicle	0	—	—	2	10
Hand	1	6	12	3	8.333
Total	7			7	
Avg.		18	30.4		18.571
Overall total/avg.	29	18.9	50.2	26	40.6

\*TCP = ultraporous  $\beta$ -tricalcium phosphate, and BM = bone marrow aspirate.

TABLE E-3 Comparison of Baseline Characteristics Between TCP and TCP/BM Groups\*

	TCP/BM Group (N = 29)	TCP Group (N = 26)	P Value
Follow-up time† ( <i>mo</i> )	18 $\pm$ 7.7	20.2 $\pm$ 7.2	0.296
Age† ( <i>yr</i> )	21.2 $\pm$ 12.8	26.2 $\pm$ 17.9	0.230
Sex ( <i>no. [%] of patients</i> )			0.701
Male	13 (45)	13 (50)	
Female	16 (55)	13 (50)	
Size of defect†‡ ( $cm^3$ )	65.7 $\pm$ 76.3	70.9 $\pm$ 199.7	0.918

\*TCP = ultraporous  $\beta$ -tricalcium phosphate, and BM = bone marrow aspirate. †The values are given as the mean and standard deviation. ‡Thirty-nine patients (eighteen in the TCP group and twenty-one in the TCP/BM group) had baseline values for defect size.

TABLE E-4 Histologic Diagnoses According to Study Group\*

	Total	TCP/BM Group	TCP Group
Nonossifying fibroma	14	9	5
Low-grade chondroid neoplasms†	13	2	11
Aneurysmal bone cyst	5	3	2
Intraosseous ganglion/other benign cyst	4	2	2
Fibrosis‡	4	3	1
Unicameral bone cyst§	3	3*	0
Chondroblastoma	2	1	1
Giant cell tumor of bone w/secondary aneurysmal bone cyst	1	1	0
Langerhans cell histiocytosis	2	0	2
Atypical osteoblastic lesion	1	1	0
Dyschondroplasia	1	0	1
Giant cell reparative granuloma	1	0	1
Osteochondroma	1	1	0
Osteofibrous dysplasia	1	0	1
Osteoid osteoma	1	1	0
Osteochondral ossification	1	1	0
Total	55	28	27

\*TCP = ultraporous  $\beta$ -tricalcium phosphate, and BM = bone marrow aspirate. †Includes enchondromas (six), low-grade chondroid neoplasm (not otherwise specified) (six), and low-grade chondrosarcoma (one). ‡Includes one each with a histologic diagnosis of fibrosis; “normal bone fragments with fibrosis”; “acute and chronic inflammation, fibrosis, and reactive changes”; and “soft tissue and bone with nonspecific reactive changes and bone remodeling.” §The only tumor that recurred during follow-up was in a patient with unicameral bone cyst in the TCP/BM group.

TABLE E-5 Difference Between CT and Radiographic Measurements at Twelve Months\*

	TCP/BM Group (N = 16)	TCP Group (N = 12)	P Value
GST	0 (0)	0 (0)	NA (100% agreement/no variation)
RSGD	-45.3 $\pm$ 40.0	-31.3 $\pm$ 40.1	0.366
SR	-45.3 $\pm$ 40.0	-31.3 $\pm$ 40.1	0.366
GR	-12.5 $\pm$ 25.5	-6.3 $\pm$ 41.5	0.642
BT	-6.3 $\pm$ 28.1	2.1 $\pm$ 24.9	0.423
PGML	-1.6 $\pm$ 21.3	-4.2 $\pm$ 36.7	0.815
DS	-3.8 $\pm$ 45.8	20.8 $\pm$ 37.6	0.241

\*The values are given as the mean and standard deviation for the difference between the CT and radiographic measurements at twelve months. NA = not applicable, TCP = ultraporous  $\beta$ -tricalcium phosphate, BM = bone marrow aspirate, GST = presence of graft within soft tissue, RSGD = rim of radiolucency surrounding grafted defect, SR = size of rim of radiolucency surrounding graft, GR = graft resorption, BT = bone trabeculation through defect, PGML = persistent graft material through lesion, and DS = defect size.

TABLE E-6 Twelve-Month Measurements Seen on CT\*

Outcomes	TCP/BM Group (N = 17)	TCP Group (N = 17)	P Value
GST	1.5 ± 6.1	0 ± 0	NA (no variability in TCP group)
RSGD	14.7 ± 19.9	23.5 ± 34.8	0.372
SR	14.7 ± 19.9	23.5 ± 34.8	0.372
GR	33.3 ± 29.4	23.5 ± 27.2	0.335
BT	67.6 ± 27.6	72.1 ± 32.9	0.675
PGML	45.6 ± 32.2	60.3 ± 35.4	0.214
DS	48.0 ± 50.1	41.5 ± 64.0	0.757

\*The values are given as the mean and standard deviation. NA = not applicable, TCP = ultraporous  $\beta$ -tricalcium phosphate, BM = bone marrow aspirate, GST = presence of graft within soft tissue, RSGD = rim of radiolucency surrounding grafted defect, SR = size of rim of radiolucency surrounding graft, GR = graft resorption, BT = bone trabeculation through defect, PGML = persistent graft material through lesion, and DS = defect size.