



Fig. E-1

A bar graph showing the age distribution of patients diagnosed with extraskeletal osteosarcoma (n = 53).

TABLE E-1 Competing Risks Analysis Comparing the Cumulative Incidence of Death Due to Disease in Patients with Localized Extraskeletal Osteosarcoma and Primary Surgical Treatment at Our Institution

Variable	No. of Patients	No. of Events	Three-Year Cumulative Incidence of Death Due to Disease*	P Value
Patients who underwent primary surgery at our institution	32	12	0.41 (0.22 to 0.60)	—
Patient age				0.26
Fifty years or less	8	1	0.20 (0.00 to 0.59)	
More than fifty years	24	11	0.45 (0.24 to 0.67)	
Patient sex				0.55
Female	16	6	0.51 (0.20 to 0.83)	
Male	16	6	0.33 (0.08 to 0.58)	
Site of primary tumor				0.68
Axial	5	1	0.38 (0.00 to 1.00)	
Extremity	27	11	0.42 (0.21 to 0.62)	
Tumor grade				0.22
Low	2	0	0.00 (0.00 to 0.00)	
High	30	12	0.44 (0.24 to 0.65)	
Tumor size				0.24
≤5 cm	9	2	0.24 (0.00 to 0.55)	
>5 cm	23	10	0.47 (0.24 to 0.71)	
Tumor depth				0.03
Superficial	6	0	0.00 (0.00 to 0.00)	
Deep	26	12	0.51 (0.29 to 0.73)	
Resection margin status				0.92
R0	25	10	0.42 (0.20 to 0.63)	
R1	7	2	0.38 (0.00 to 0.85)	
Patient history of radiation therapy				0.18
No	29	12	0.46 (0.25 to 0.67)	
Yes	3	0	0.00 (0.00 to 0.00)	
Treatment type				0.17
Surgery alone	16	5	0.39 (0.10 to 0.68)	
Surgery and chemotherapy	4	0	0.00 (0.00 to 0.00)	
Surgery, radiation therapy, and chemotherapy	6	2	0.38 (0.00 to 0.85)	
Surgery and radiation therapy	6	5	0.67 (0.22 to 1.00)	
*The values are given as the three-year cumulative incidence of death due to disease, with the 95% confidence interval in parentheses.				

TABLE E-2 Log-Rank Test Comparing Event-Free Survival Rates in Patients with Localized Extraskeletal Osteosarcoma and Primary Surgical Treatment at Our Institution

Variable	No. of Patients	No. of Events	Three-Year Event-Free Survival Rate*	P Value
Patients who underwent primary surgery at our institution	32	16	0.44 (0.29 to 0.67)	—
Patient age				0.15
Fifty years or less	8	2	0.67 (0.38 to 1.00)	
More than fifty years	24	14	0.37 (0.21 to 0.65)	
Patient sex				0.64
Female	16	8	0.40 (0.20 to 0.80)	
Male	16	8	0.48 (0.28 to 0.81)	
Site of primary tumor				0.17
Axial	5	3	NA†	
Extremity	27	13	0.48 (0.31 to 0.72)	
Tumor grade				0.92
Low	2	1	0.50 (0.13 to 1.00)	
High	30	15	0.43 (0.27 to 0.68)	
Tumor size				0.21
≤5 cm	9	3	0.67 (0.42 to 1.00)	
>5 cm	23	13	0.34 (0.18 to 0.64)	
Tumor depth				0.10
Superficial	6	1	0.83 (0.58 to 1.00)	
Deep	26	15	0.35 (0.20 to 0.62)	
Resection margin status				0.06
R0	25	11	0.51 (0.33 to 0.77)	
R1	7	5	0.17 (0.03 to 1.00)	
Patient history of radiation therapy				0.12
No	29	14	0.46 (0.30 to 0.70)	
Yes	3	2	NA†	
Treatment type				0.60
Surgery alone	16	7	0.49 (0.28 to 0.86)	
Surgery and chemotherapy	4	1	0.75 (0.43 to 1.00)	
Surgery, radiation therapy, and chemotherapy	6	3	0.50 (0.23 to 1.00)	
Surgery and radiation therapy	6	5	0.17 (0.03 to 1.00)	

*The values are given as the three-year event-free survival rate, with the 95% confidence interval in parentheses. †NA = not available. These values are not estimable for axial sites and those with prior radiation therapy because the last event occurred before year 3.

TABLE E-3 Summary of Published Series on Extraskeletal Osteosarcoma

Series	No. of Patients	Age (yr)	Male Sex (%)	Treatment			Follow-up
				Surgery	Chemotherapy	Radiation Therapy	
Torigoe ¹³ (2007)	20	50*	70	19	15	—	45 mo*
Goldstein-Jackson ¹² (2005)	17	44†	—	16	16	1	3.2 yr†
Ahmad ¹¹ (2002)	60	55†	68	35	24	6	50 mo†
McCarter ⁶ (2000)	15	61†	67	15	6	5	35 mo†
Lidang Jensen ¹⁰ (1998)	25	67†	52	—	—	—	16 mo†
Lee ⁹ (1995)	40	50.7*	65	19	2	11	5.9 yr*
Patel ²⁵ (1995)	10	50†	50	4	10	2	—
Bane ⁸ (1990)	26	54†	65	25	13	7	—
Chung ⁷ (1987)	88††	59†	68	58	10	7	1.7 yr†
Sordillo ⁵ (1983)	48	51†	48	43	6	—	—
Allan ² (1971)	26	47.5*	54	24	7	14	—

*The value was given as the mean. †This prognosis was for overall survival. ‡The value was given as the median. §The rates were for five years. #This prognosis was for disease-specific survival. **This was for median survival. ††Of these patients, sixty-five had follow-up.

TABLE E-3 (continued)

Recurrence Rate (%)		Survival Rate (%)			Worse Prognosis
Local	Distant	Event-Free	Disease-Specific	Overall	
25	—	—	—	66	71% recurrence versus 33%†
—	—	56§	—	77	No macroscopic remission†
20§	37§	47§	46§	—	>10 cm, positive margin, greater than stage II#
—	40	—	50§	50§	—
36	60	—	—	<25§	—
45	65	—	—	37§	Osteoblastic worse than chondroblastic
—	—	—	—	12 mo**	—
50	61.5	—	—	~30§	≥5 cm†
43	63	—	—	1.7 yr**	—
69	80	—	—	31 mo**	—
62	—	—	—	—	—