

Table SI. Characteristics of patients with bone metastases who received radiotherapy before or after the establishment of the multidisciplinary treatment system.

Age, years	Sex	Primary tumor site	Period before or after the establishment of the multidisciplinary treatment system
46	Female	Bile duct	Before
71	Female	Bile duct	Before
86	Female	Bile duct	Before
55	Female	Bile duct	Before
73	Male	Bile duct	Before
47	Male	Bile duct	Before
75	Male	Bile duct	Before
56	Female	Breast	Before
67	Female	Breast	Before
55	Female	Breast	Before
47	Female	Breast	Before
54	Female	Breast	Before
51	Female	Breast	Before
67	Female	Breast	Before
74	Female	Breast	Before
34	Female	Breast	Before
49	Female	Breast	Before
60	Female	Breast	Before
42	Female	Breast	Before
66	Female	Breast	Before
35	Female	Breast	Before
58	Female	Breast	Before
44	Female	Breast	Before
48	Female	Breast	Before
67	Female	Breast	Before
71	Female	Breast	Before
50	Female	Breast	Before
65	Female	Breast	Before
56	Female	Breast	Before
53	Female	Breast	Before
51	Female	Breast	Before
55	Female	Breast	Before
45	Female	Breast	Before
59	Female	Breast	Before
61	Female	Breast	Before
56	Female	Breast	Before
61	Female	Breast	Before
64	Female	Breast	Before
64	Female	Breast	Before
72	Female	Breast	Before
57	Female	Breast	Before
62	Female	Breast	Before
64	Female	Breast	Before
60	Female	Breast	Before
51	Female	Breast	Before
73	Female	Breast	Before
45	Female	Breast	Before
50	Female	Breast	Before
56	Female	Breast	Before
52	Female	Breast	Before
61	Female	Breast	Before

Table SI. Continued.

Age, years	Sex	Primary tumor site	Period before or after the establishment of the multidisciplinary treatment system
59	Female	Breast	Before
77	Female	Breast	Before
60	Female	Breast	Before
73	Female	Breast	Before
46	Female	Breast	Before
35	Female	Breast	Before
67	Female	Breast	Before
45	Female	Breast	Before
61	Female	Breast	Before
64	Female	Breast	Before
48	Female	Breast	Before
48	Female	Breast	Before
63	Female	Breast	Before
62	Female	Breast	Before
35	Female	Breast	Before
55	Female	Breast	Before
53	Female	Breast	Before
60	Female	Breast	Before
66	Female	Breast	Before
73	Female	Breast	Before
58	Female	Breast	Before
57	Female	Breast	Before
43	Female	Breast	Before
43	Female	Colorectum	Before
54	Female	Colorectum	Before
69	Female	Colorectum	Before
69	Female	Colorectum	Before
79	Female	Colorectum	Before
59	Male	Colorectum	Before
79	Male	Colorectum	Before
63	Male	Colorectum	Before
62	Male	Colorectum	Before
80	Male	Colorectum	Before
30	Male	Colorectum	Before
63	Male	Colorectum	Before
59	Male	Esophagus	Before
54	Female	Gallbladder	Before
54	Female	Kidney	Before
89	Female	Kidney	Before
52	Female	Kidney	Before
67	Female	Kidney	Before
66	Male	Kidney	Before
73	Male	Kidney	Before
45	Male	Kidney	Before
58	Male	Kidney	Before
58	Male	Kidney	Before
49	Male	Kidney	Before
81	Male	Kidney	Before
66	Female	Larynx	Before
58	Male	Larynx	Before
73	Female	Liver	Before
80	Female	Liver	Before
59	Female	Liver	Before

Table SI. Continued.

Age, years	Sex	Primary tumor site	Period before or after the establishment of the multidisciplinary treatment system
52	Female	Liver	Before
64	Female	Liver	Before
70	Male	Liver	Before
58	Male	Liver	Before
34	Male	Liver	Before
58	Male	Liver	Before
67	Male	Liver	Before
57	Male	Liver	Before
65	Male	Liver	Before
68	Male	Liver	Before
64	Male	Liver	Before
68	Male	Liver	Before
66	Male	Liver	Before
83	Male	Liver	Before
69	Female	Lung	Before
80	Female	Lung	Before
62	Female	Lung	Before
74	Female	Lung	Before
57	Female	Lung	Before
65	Female	Lung	Before
59	Female	Lung	Before
65	Female	Lung	Before
76	Female	Lung	Before
56	Female	Lung	Before
74	Female	Lung	Before
75	Female	Lung	Before
55	Female	Lung	Before
42	Female	Lung	Before
59	Female	Lung	Before
53	Female	Lung	Before
63	Female	Lung	Before
57	Female	Lung	Before
82	Female	Lung	Before
67	Female	Lung	Before
68	Female	Lung	Before
70	Female	Lung	Before
82	Female	Lung	Before
67	Female	Lung	Before
30	Female	Lung	Before
77	Female	Lung	Before
70	Female	Lung	Before
60	Female	Lung	Before
77	Female	Lung	Before
76	Female	Lung	Before
63	Female	Lung	Before
75	Female	Lung	Before
80	Female	Lung	Before
66	Female	Lung	Before
32	Male	Lung	Before
68	Male	Lung	Before
76	Male	Lung	Before
71	Male	Lung	Before
76	Male	Lung	Before

Table SI. Continued.

Age, years	Sex	Primary tumor site	Period before or after the establishment of the multidisciplinary treatment system
37	Male	Lung	Before
65	Male	Lung	Before
65	Male	Lung	Before
74	Male	Lung	Before
40	Male	Lung	Before
80	Male	Lung	Before
61	Male	Lung	Before
76	Male	Lung	Before
68	Male	Lung	Before
75	Male	Lung	Before
73	Male	Lung	Before
73	Male	Lung	Before
75	Male	Lung	Before
68	Male	Lung	Before
52	Male	Lung	Before
81	Male	Lung	Before
41	Male	Lung	Before
61	Male	Lung	Before
60	Male	Lung	Before
79	Male	Lung	Before
69	Male	Lung	Before
69	Male	Lung	Before
78	Male	Lung	Before
75	Male	Lung	Before
66	Male	Lung	Before
81	Male	Lung	Before
74	Male	Lung	Before
77	Male	Lung	Before
56	Male	Lung	Before
50	Male	Lung	Before
52	Male	Lung	Before
79	Male	Lung	Before
59	Male	Lung	Before
71	Male	Lung	Before
57	Male	Lung	Before
65	Male	Lung	Before
79	Male	Lung	Before
69	Male	Lung	Before
54	Male	Lung	Before
59	Male	Lung	Before
61	Male	Lung	Before
54	Male	Lung	Before
68	Male	Lung	Before
60	Male	Lung	Before
81	Male	Lung	Before
55	Male	Lung	Before
55	Male	Lung	Before
84	Male	Lung	Before
64	Male	Lung	Before
52	Male	Lung	Before
81	Male	Lung	Before
71	Male	Lung	Before
64	Male	Lung	Before

Table SI. Continued.

Age, years	Sex	Primary tumor site	Period before or after the establishment of the multidisciplinary treatment system
64	Male	Lung	Before
70	Male	Lung	Before
78	Male	Lymphoma	Before
80	Female	Multiple myeloma	Before
64	Male	Multiple myeloma	Before
65	Male	Multiple myeloma	Before
66	Female	Paget	Before
82	Female	Pancreas	Before
73	Female	Pancreas	Before
61	Female	Pancreas	Before
52	Female	Pancreas	Before
50	Male	Pancreas	Before
64	Male	Pancreas	Before
60	Male	Pancreas	Before
59	Male	Pancreas	Before
57	Male	Parotid gland	Before
64	Female	Pharynx	Before
77	Male	Prostate	Before
63	Male	Prostate	Before
80	Male	Prostate	Before
88	Male	Prostate	Before
79	Male	Prostate	Before
58	Male	Prostate	Before
81	Male	Prostate	Before
82	Male	Prostate	Before
76	Male	Prostate	Before
53	Male	Prostate	Before
89	Male	Prostate	Before
66	Male	Prostate	Before
61	Male	Prostate	Before
77	Male	Prostate	Before
55	Male	Prostate	Before
63	Male	Prostate	Before
62	Male	Prostate	Before
84	Male	Prostate	Before
60	Male	Prostate	Before
62	Male	Prostate	Before
82	Male	Prostate	Before
80	Male	Prostate	Before
71	Male	Prostate	Before
85	Male	Prostate	Before
74	Male	Prostate	Before
82	Male	Prostate	Before
58	Male	Prostate	Before
68	Female	Sarcoma	Before
76	Male	Sarcoma	Before
78	Male	Sarcoma	Before
50	Male	Sarcoma	Before
69	Female	Stomach	Before
74	Female	Stomach	Before
49	Female	Stomach	Before
43	Female	Stomach	Before
48	Female	Stomach	Before

Table SI. Continued.

Age, years	Sex	Primary tumor site	Period before or after the establishment of the multidisciplinary treatment system
47	Female	Stomach	Before
38	Female	Stomach	Before
67	Female	Stomach	Before
75	Male	Stomach	Before
60	Male	Stomach	Before
60	Male	Stomach	Before
60	Male	Stomach	Before
61	Male	Stomach	Before
48	Male	Stomach	Before
73	Male	Stomach	Before
47	Male	Stomach	Before
71	Male	Stomach	Before
79	Female	Thyroid	Before
72	Female	Thyroid	Before
65	Male	Thyroid	Before
55	Male	Thyroid	Before
55	Male	Thyroid	Before
69	Female	Tongue	Before
68	Male	Tongue	Before
37	Female	Uterus	Before
56	Female	Uterus	Before
76	Female	Uterus	Before
84	Female	Vulva	Before
60	Female	Bile duct	After
80	Female	Bladder	After
65	Female	Breast	After
76	Female	Breast	After
48	Female	Breast	After
79	Female	Breast	After
67	Female	Breast	After
58	Female	Breast	After
70	Female	Breast	After
62	Female	Breast	After
65	Female	Breast	After
57	Female	Breast	After
61	Female	Breast	After
61	Female	Breast	After
55	Female	Breast	After
62	Female	Breast	After
58	Female	Breast	After
61	Female	Breast	After
65	Female	Breast	After
55	Female	Breast	After
60	Female	Breast	After
61	Female	Breast	After
67	Female	Breast	After
52	Female	Breast	After
61	Female	Breast	After
33	Female	Breast	After
65	Female	Breast	After
57	Female	Breast	After
68	Female	Breast	After
48	Female	Breast	After

Table SI. Continued.

Age, years	Sex	Primary tumor site	Period before or after the establishment of the multidisciplinary treatment system
67	Female	Breast	After
78	Female	Breast	After
70	Female	Breast	After
50	Female	Breast	After
61	Female	Breast	After
72	Female	Breast	After
56	Female	Breast	After
59	Female	Breast	After
73	Female	Breast	After
59	Female	Breast	After
50	Female	Breast	After
68	Female	Breast	After
55	Female	Breast	After
68	Female	Breast	After
62	Female	Breast	After
56	Female	Breast	After
62	Female	Breast	After
83	Female	Breast	After
70	Female	Colorectum	After
72	Female	Colorectum	After
77	Female	Colorectum	After
55	Female	Colorectum	After
77	Female	Colorectum	After
76	Female	Colorectum	After
69	Female	Colorectum	After
72	Male	Colorectum	After
62	Male	Colorectum	After
56	Male	Colorectum	After
56	Male	Colorectum	After
58	Male	Colorectum	After
61	Male	Colorectum	After
59	Female	Esophagus	After
61	Female	Esophagus	After
25	Male	Esophagus	After
75	Female	Kidney	After
75	Female	Kidney	After
57	Male	Kidney	After
66	Male	Kidney	After
69	Male	Kidney	After
56	Male	Kidney	After
71	Male	Larynx	After
64	Female	Liver	After
64	Male	Liver	After
69	Male	Liver	After
61	Male	Liver	After
56	Male	Liver	After
67	Male	Liver	After
71	Female	Lung	After
66	Female	Lung	After
62	Female	Lung	After
71	Female	Lung	After
77	Female	Lung	After
68	Female	Lung	After

Table SI. Continued.

Age, years	Sex	Primary tumor site	Period before or after the establishment of the multidisciplinary treatment system
27	Female	Lung	After
59	Female	Lung	After
74	Female	Lung	After
63	Female	Lung	After
77	Female	Lung	After
61	Female	Lung	After
66	Female	Lung	After
61	Female	Lung	After
60	Female	Lung	After
83	Female	Lung	After
66	Female	Lung	After
59	Female	Lung	After
51	Female	Lung	After
62	Female	Lung	After
85	Female	Lung	After
58	Female	Lung	After
88	Female	Lung	After
49	Female	Lung	After
86	Female	Lung	After
70	Female	Lung	After
72	Female	Lung	After
78	Male	Lung	After
71	Male	Lung	After
73	Male	Lung	After
84	Male	Lung	After
52	Male	Lung	After
71	Male	Lung	After
67	Male	Lung	After
49	Male	Lung	After
76	Male	Lung	After
56	Male	Lung	After
62	Male	Lung	After
71	Male	Lung	After
79	Male	Lung	After
85	Male	Lung	After
66	Male	Lung	After
67	Male	Lung	After
51	Male	Lung	After
70	Male	Lung	After
78	Male	Lung	After
60	Male	Lung	After
52	Male	Lung	After
65	Male	Lung	After
77	Male	Lung	After
60	Male	Lung	After
74	Male	Lung	After
64	Male	Lung	After
67	Male	Lung	After
67	Male	Lung	After
59	Male	Lung	After
40	Male	Lung	After
53	Male	Lung	After
84	Male	Lung	After

Table SI. Continued.

Age, years	Sex	Primary tumor site	Period before or after the establishment of the multidisciplinary treatment system
71	Male	Lung	After
76	Male	Lung	After
50	Male	Lung	After
83	Male	Lung	After
78	Male	Lung	After
	Male	Lung	After
67	Female	Malignant melanoma	After
69	Male	Mesothelioma	After
78	Female	Multiple myeloma	After
67	Male	Multiple myeloma	After
55	Female	Paget	After
68	Female	Pancreas	After
83	Female	Pancreas	After
76	Male	Pancreas	After
78	Male	Pharynx	After
66	Male	Primary unknown	After
54	Male	Primary unknown	After
74	Male	Primary unknown	After
66	Male	Primary unknown	After
80	Male	Prostate	After
62	Male	Prostate	After
90	Male	Prostate	After
78	Male	Prostate	After
69	Male	Prostate	After
67	Male	Prostate	After
73	Male	Prostate	After
90	Male	Prostate	After
83	Male	Prostate	After
61	Male	Prostate	After
80	Male	Prostate	After
66	Male	Prostate	After
73	Male	Prostate	After
76	Male	Prostate	After
63	Male	Prostate	After
61	Male	Prostate	After
79	Male	Prostate	After
62	Male	Prostate	After
77	Male	Prostate	After
72	Male	Prostate	After
67	Male	Prostate	After
73	Male	Prostate	After
83	Male	Prostate	After
71	Male	Prostate	After
66	Male	Prostate	After
66	Male	Prostate	After
58	Male	Prostate	After
77	Male	Prostate	After
75	Male	Prostate	After
72	Male	Prostate	After
74	Male	Prostate	After
72	Male	Prostate	After
54	Male	Prostate	After
87	Male	Prostate	After

Table SI. Continued.

Age, years	Sex	Primary tumor site	Period before or after the establishment of the multidisciplinary treatment system
76	Female	Sarcoma	After
74	Male	Sarcoma	After
67	Male	Skin	After
67	Female	Stomach	After
30	Female	Stomach	After
54	Female	Stomach	After
65	Male	Stomach	After
68	Male	Stomach	After
42	Male	Stomach	After
63	Male	Stomach	After
62	Male	Stomach	After
49	Female	Thyroid	After
63	Male	Thyroid	After
79	Female	Tongue	After
42	Female	Uterus	After
42	Female	Uterus	After
58	Female	Uterus	After

Table SII. Characteristics of patients with neurological deficits before or after the establishment of the multidisciplinary treatment system.

Sex	Age, years	Location	Primary tumor site	Period before or after the establishment of the multidisciplinary treatment system	The interval between the recognition of neurological deficits by physicians and the start of treatment, days		Neurological deficits at the time of recognition by physicians (Frankel classification)	Neurological deficits after treatment (Frankel classification)	Referral to orthopedists before treatment	The use of BMAs before the recognition of neurological deficits by physicians
					The interval between the recognition of neurological deficits by physicians and the start of treatment, days	The interval between the recognition of neurological deficits by physicians and the start of treatment, days				
Female	71	Lumbar spine	Bile duct	Before	23	24	D	C	Yes	Yes
Female	67	Thoracic spine	Breast	Before	3	6	C	A	No	No
Female	49	Thoracic spine	Breast	Before	3	4	D	D	Yes	Yes
Female	54	Lumbar spine	Breast	Before	No MRI	0	D	D	No	Yes
Female	56	Thoracic spine	Breast	Before	4	5	D	D	Yes	Yes
Female	60	Cervical spine	Breast	Before	4	13	C	B	Yes	Yes
Female	48	Thoracic spine	Breast	Before	5	1	D	D	Yes	Yes
Female	58	Thoracic spine	Breast	Before	6	7	C	C	No	Yes
Female	56	Thoracic spine	Breast	Before	13	15	D	C	Yes	No
Female	51	Thoracic spine	Breast	Before	8	10	D	D	Yes	Yes
Female	61	Thoracic spine	Breast	Before	0	0	D	D	Yes	Yes
Female	61	Lumbar spine	Breast	Before	0	0	C	A	Yes	Yes
Female	55	Lumbar spine	Breast	Before	0	1	D	D	No	Yes
Male	30	Thoracic spine	Colorectum	Before	2	4	B	B	No	No
Male	62	Thoracic spine	Colorectum	Before	0	3	C	C	No	No
Male	63	Thoracic spine	Colorectum	Before	0	2	C	B	No	No
Male	63	Thoracic spine	Colorectum	Before	2	2	C	C	Yes	No
Male	76	Thoracic spine	Lung	Before	7	10	D	D	No	No
Male	61	Thoracic spine	Lung	Before	No MRI	8	D	C	No	No
Female	68	Thoracic spine	Lung	Before	14	1	D	B	No	No
Male	56	Thoracic spine	Lung	Before	1	1	C	C	No	No
Female	67	Thoracic spine	Lung	Before	6	8	D	D	Yes	No
Male	52	Thoracic spine	Lung	Before	18	2	D	E	No	No
Male	61	Lumbar spine	Lung	Before	2	3	D	C	Yes	Yes
Male	71	Thoracic spine	Lung	Before	1	2	D	C	No	No
Male	65	Thoracic spine	Multiple myeloma	Before	2	2	C	C	Yes	No
Male	77	Thoracic spine	Prostate	Before	20	21	D	C	No	No
Male	88	Thoracic spine	Prostate	Before	10	3	D	C	No	No
Male	58	Thoracic spine	Prostate	Before	5	5	D	D	No	Yes
Male	58	Lumbar spine	Prostate	Before	4	5	D	D	Yes	No

Table SII. Continued.

Sex	Age, years	Location	Primary tumor site	Period before or after the establishment of the multidisciplinary treatment system	The interval between the recognition of neurological deficits by physicians and MRI scanning, days	The interval between the recognition of neurological deficits by physicians and the start of treatment, days	Neurological deficits at the time of recognition by physicians (Frankel classification)	Neurological deficits after treatment (Frankel classification)	Referral to orthopedists before treatment	The use of BMAs before the recognition of neurological deficits by physicians
Male	82	Lumbar spine	Prostate	Before	9	9	D	E	No	No
Male	62	Thoracic spine	Prostate	Before	0	0	C	C	No	No
Male	80	Thoracic spine	Prostate	Before	2	3	D	D	Yes	Yes
Male	74	Thoracic spine	Prostate	Before	1	1	C	C	Yes	No
Male	60	Thoracic spine	Stomach	Before	1	2	C	A	No	No
Female	38	Thoracic spine	Stomach	Before	1	1	C	A	No	Yes
Male	47	Thoracic spine	Stomach	Before	0	0	D	D	No	No
Male	71	Thoracic spine	Stomach	Before	1	1	A	A	Yes	No
Female	55	Thoracic spine	Breast	After	1	0				
Female	61	Thoracic spine	Breast	After	0	0				
Female	33	Thoracic spine	Breast	After	0	0				
Female	63	Thoracic spine	Lung	After	1	1				
Female	59	Thoracic spine	Lung	After	0	1				
Male	83	Thoracic spine	Lung	After	0	0				
Male	71	Cervical spine	Lung	After	0	0				