

	Plane	Slice thickness (mm)	Repetition time/ Echo time (ms)	Flip angle (°)	Field of view (mm)	Phase FoV (%)	Matrix size
T1w VIBE Dixon	coronal	3.12	3.6 / 1.23 (1 st) and 2.46 (2 nd)	10	500	65.6	192 x 79
STIR	coronal	5	5990 / 57 Inversion time: 220ms	135	380	75.0	384 x 288
T1w TSE	axial	5	616 / 12	150	380	68.8	512 x 256
T2w TSE	axial	5	4860 / 106	150	380	68.8	512 x 256
DW EPI (b-values: 0, 500, 1000 s/mm²)	axial	5	7400 / 72	9	420	75.0	160 x 120
T1w VIBE dynamic imaging fat saturated	axial	3.5	4.32 / 2.21	9	380	68.8	512 x 308
T1w TSE post contrast fat saturated	coronal	5	542 / 13	160	380	75	512 x 256
T1w TSE post contrast fat saturated	axial	5	663 / 13	160	380	68.8	512 x 256

SUPPLEMENT TABLE 1: Illustration of the sequence parameters of the MR imaging protocol.

Patient	Histological subtypes	Vital tumor (%)	Necrosis (%)	Fibrosis/Sclerosis (%)	Hemorrhage
1	Undifferentiated pleomorphic sarcoma	5	60	35	+
2	Undifferentiated pleomorphic sarcoma	<1	70	<30	-
3	Undifferentiated pleomorphic sarcoma	<10	60	>30	+
4	Liposarcoma	90	10	0	-
5	Liposarcoma	20	30	50	-
6	Undifferentiated spindle cell sarcoma	<1	70	<30	-
7	Undifferentiated pleomorphic sarcoma	5	95	0	-
8	Undifferentiated pleomorphic sarcoma	40	50	10	+
9	Liposarcoma	80	20	0	-
10	Synovial sarcoma	5	90	5	-
11	Leiomyosarcoma	5	70	25	-
12	Myxofibrosarcoma	<10	70	>20	-
13	Synovial sarcoma	90	0	10	+
14	Undifferentiated spindle cell sarcoma	40	40	20	-
15	Undifferentiated spindle cell sarcoma	0	70	30	-
16	Synovial sarcoma	<1	30	<70	-
17	Undifferentiated pleomorphic sarcoma	<1	>90	<10	-
18	Synovial sarcoma	5	90	5	-
19	Myxofibrosarcoma	<10	60	>30	+
20	Synovial sarcoma	<1	60	<40	-
21	Synovial sarcoma	40	40	20	+

22	Myxofibrosarcoma	<10	80	>10	-
23	Liposarcoma	50	40	10	-
24	Myxofibrosarcoma	80	10	10	-
25	Undifferentiated pleomorphic sarcoma	0	70	30	-
26	Synovial sarcoma	40	30	30	-
27	Myxofibrosarcoma	100	0	0	-
28	Liposarcoma	<5	0	>95	-
29	Synovial sarcoma	0	60	40	+
30	Leiomyosarcoma	5	80	15	+
31	Epitheloid sarcoma	5	90	5	-
32	Undifferentiated pleomorphic sarcoma	0	0	100	-
33	Synovial sarcoma	50	40	10	-
34	Myxofibrosarcoma	90	0	10	-
35	Malignant peripheral nerve sheath tumor	<30	60	>10	-
36	Undifferentiated pleomorphic sarcoma	0	0	100	+
37	Liposarcoma	95	0	5	-

SUPPLEMENT TABLE 2: Illustration of the histological subtypes for all patients and histological results after tumor resection.