

Table S1: Summary of *MN1*-altered and related tumors in literature

Case #	Sex	Age	Tumor location	Methylation Diagnosis	MN1 break apart FISH (or EWSR1 FISH)	Sequencing	Reference
<i>MN1:BEND2</i> fusion							
18	F	5	Frontal lobe	N/A	N/A	<i>MN1:BEND2</i> fusion (RNA-seq)	Lake et al., 2020 [1]
dkfz_ABM_15-0004	F	N/A	N/A	CNS_NET-MN1	N/A	<i>MN1:BEND2</i> fusion (RNA-seq)	Sturm et al., 2016 [2]
dkfz_CNS-PNET_15-0280	F	8	Occipital lobe	CNS_NET-MN1	<i>MN1</i> -rearranged	<i>MN1:BEND2</i> fusion (RNA-seq)	
dkfz_EPN_15-0032	F	15	Supratentorial (NOS)	CNS_NET-MN1	<i>MN1</i> -rearranged	<i>MN1:BEND2</i> fusion (RNA-seq)	
13	F	15	Parietooccipital	CNS_NET-MN1	N/A	<i>MN1:BEND2</i> fusion (RNA-seq + RT-PCR + qPCR)	Boisseau et al., 2019 [3]
1	F	6	L parietal; multifocal recurrences	N/A	<i>MN1:BEND2</i> fusion by dual-fusion probe	<i>MN1:BEND2</i> fusion (RNA-seq + RT-PCR)	Burford et al., 2018 [4]
1	F	4	R frontal lobe	CNS_NET-MN1	N/A	<i>MN1:BEND2</i> fusion (DNA-seq)	Jamshidi et al., 2022 [5]
1	F	9	L frontoparietal	N/A	N/A	<i>MN1:BEND2</i> fusion	Chen et al., 2020 [6]
C3	F	16	L parietooccipital	CNS_NET-MN1	<i>MN1</i> -rearranged	<i>MN1:BEND2</i> fusion (RNA-seq)	Lehman et al., 2022 [7]
C10	F	12	R frontoparietal	CNS_NET-MN1	<i>MN1</i> -rearranged	<i>MN1:BEND2</i> fusion (RNA-seq)	
C13	F	9	R frontoparietal	CNS_NET-MN1	<i>MN1</i> -rearranged	<i>MN1:BEND2</i> fusion (RNA-seq)	
C21	F	4	L parietooccipital	CNS_NET-MN1	<i>MN1</i> -rearranged	<i>MN1:BEND2</i> fusion (RNA-seq)	
C29	F	18	L parietal lobe	CNS_NET-MN1	<i>MN1</i> -rearranged	<i>MN1:BEND2</i> fusion (RNA-seq)	
C44	F	9	R parietal lobe	CNS_NET-MN1	N/A	<i>MN1:BEND2</i> fusion (RNA-seq)*	
1†	F	9.3	L frontoparietal	CNS_NET-MN1	N/A	<i>MN1:BEND2</i> fusion (RT-PCR)	Lubieniecki et al. 2022 [8]
2	F	10.8	L frontoparietal	N/A	N/A	<i>MN1:BEND2</i> fusion (RT-PCR)	
3†	F	6.1	L parietal lobe	CNS_NET-MN1	N/A	<i>MN1:BEND2</i> fusion (RT-PCR)	
4†	F	4.9	R parietal lobe	N/A	N/A	<i>MN1:BEND2</i> fusion (RT-PCR)	
6	F	12	Spinal cord (T3 to L5)	N/A	N/A	<i>MN1:BEND2</i> fusion (RT-PCR)	

<i>EWSR1-BEND2</i> fusion and/or <i>EWSR1</i> rearrangement by FISH (fusion status not reported)							
1	M	3M	Brainstem/spinal cord (medulla to C4)	CNS_NET-MN1	<i>EWSR1</i> and <i>BEND2</i> colocalization detected	<i>EWSR1-BEND2</i> fusion (RNA-seq + RT-PCR)	Yamasaki et al., 2020 [9]
1	M	36	Spinal cord (T3 to T5)	CNS_NET-MN1	<i>EWSR1</i> and <i>BEND2</i> colocalization detected	N/A	Tsutsui et al., 2020 [10]
1	M	20	Brainstem (NOS)	<i>EWSR1-BEND2</i> (subclass)	N/A	<i>EWSR1-BEND2</i> (DNA-seq)	Lucas et al., 2021 [11]
2	F	6	Cervical spinal cord	<i>EWSR1-BEND2</i> (subclass)	N/A	<i>EWSR1-BEND2</i> (DNA-seq)	
3	F	26	R frontal lobe	<i>EWSR1-BEND2</i> (subclass)	N/A	<i>EWSR1-BEND2</i> (DNA-seq)	
4	F	6	L frontal lobe	<i>EWSR1-BEND2</i> (subclass)	N/A	<i>EWSR1-BEND2</i> (DNA-seq)	
1	N/A	N/A	Spinal cord (NOS)	N/A	N/A	<i>EWSR1-BEND2</i> (DNA-seq)	Ramkissoon et al., 2017 [12]
1	M	38	Brainstem (Cervicomedullary)	CNS_NET-MN1	N/A	<i>EWSR1-BEND2</i> (RNA-seq)	Smith-Cohn et al., 2021 [13]
5†	F	6.1	Spinal cord (C3 to T8)	CNS_NET-MN1	<i>EWSR1</i> -rearranged	N/A	Lubieniecki et al. 2022 [8]
<i>MN1:CXXC5</i> fusion							
dkfz_CNS-PNET_15-0184	M	16	Parietal lobe	CNS_NET-MN1	<i>MN1</i> -rearranged	<i>MN1:CXXC5</i> fusion (RNA-seq)	Sturm et al., 2016 [2]
19	M	3	Temporal lobe	N/A	N/A	<i>MN1:CXXC5</i> fusion (RNA-seq)	Lake et al., 2020 [1]
1	F	36	L parietal lobe	N/A	N/A	<i>MN1:CXXC5</i> fusion (DNA-seq)	Wallace et al., 2022 [14]
HGNET-MN1 methylation class and/or <i>MN1</i> rearrangement by FISH (fusion status not reported)							
dkfz_ABM_15-0001	F	14	Frontotemporal	CNS_NET-MN1	N/A	N/A	Sturm et al., 2016 [2]
dkfz_ABM_15-0002	F	40	L frontal lobe	CNS_NET-MN1	N/A	N/A	
dkfz_ABM_15-0003	F	N/A	N/A	CNS_NET-MN1	N/A	N/A	
dkfz_ABM_15-0005	F	N/A	N/A	CNS_NET-MN1	N/A	N/A	
dkfz_ABM_15-0006	F	7	R parietal lobe	CNS_NET-MN1	N/A	N/A	
dkfz_ABM_15-0008	F	27	L parietal lobe	CNS_NET-MN1	N/A	N/A	
dkfz_ABM_15-0009	F	16	R frontal lobe	CNS_NET-MN1	N/A	N/A	
dkfz_ABM_15-0010	F	19	Frontal lobe	CNS_NET-MN1	N/A	N/A	
dkfz_ABM_15-0011	F	10	Temporal lobe	CNS_NET-MN1	<i>MN1</i> -rearranged	N/A	
dkfz_ABM_15-0012	F	3	Frontal lobe	CNS_NET-MN1	<i>MN1</i> -rearranged	N/A	
dkfz_ABM_15-0013	F	25	N/A	CNS_NET-MN1	N/A	N/A	

dkfz_ABM_15-0014	F	18	Intraventricular	CNS_NET-MN1	N/A	N/A	
dkfz_ABM_15-0015	F	7	R central region	CNS_NET-MN1	N/A	N/A	
dkfz_ABM_15-0016	F	19	Parietal lobe	CNS_NET-MN1	<i>MN1</i> -rearranged	N/A	
dkfz_ABM_15-0017	F	17	Parietooccipital	CNS_NET-MN1	<i>MN1</i> -rearranged	N/A	
dkfz_CNS-NET_15-0001	F	6	R hemispheric (NOS)	CNS_NET-MN1	N/A	N/A	
dkfz_CNS-PNET_15-0130	F	N/A	N/A	CNS_NET-MN1	<i>MN1</i> -rearranged	N/A	
dkfz_CNS-PNET_15-0144	F	2	R parietal lobe	CNS_NET-MN1	<i>MN1</i> -rearranged	N/A	
dkfz_CNS-PNET_15-0200	F	20	R frontal lobe	CNS_NET-MN1	N/A	N/A	
dkfz_CNS-PNET_15-0235	F	14	L frontotemporal	CNS_NET-MN1	N/A	N/A	
dkfz_CNS-PNET_15-0274	F	8	N/A	CNS_NET-MN1	<i>MN1</i> -rearranged	N/A	
dkfz_CNS-PNET_15-0297	F	N/A	N/A	CNS_NET-MN1	N/A	N/A	
dkfz_CNS-tumor_15-0001	F	11	L frontal lobe	CNS_NET-MN1	<i>MN1</i> -rearranged	N/A	
dkfz_EPN_15-0020	F	5	Frontal lobe	CNS_NET-MN1	N/A	N/A	
dkfz_EPN_15-0021	F	5	Frontal lobe	CNS_NET-MN1	N/A	N/A	
dkfz_EPN_15-0024	F	22	Frontobasal	CNS_NET-MN1	N/A	N/A	
dkfz_EPN_15-0031	F	17	Spinal (C2)	CNS_NET-MN1	N/A	N/A	
dkfz_ETMR_15-0013	F	N/A	Hemispheric (NOS)	CNS_NET-MN1	N/A	N/A	
dkfz_GBM_15-0009	F	13	Thalamic	CNS_NET-MN1	Negative	N/A	
dkfz_MNG_15-0012	F	36	R temporooccipital	CNS_NET-MN1	N/A	N/A	
dkfz_CNS-PNET_15-0131	M	11	Frontal lobe	CNS_NET-MN1	<i>MN1</i> -rearranged	N/A	
dkfz_CNS-PNET_15-0229	M	11	Parieto-central	CNS_NET-MN1	N/A	N/A	
dkfz_EPN_15-0018	M	11	Cerebellar	CNS_NET-MN1	N/A	N/A	
dkfz_EPN_15-0028	M	N/A	Posterior fossa	CNS_NET-MN1	N/A	N/A	
dkfz_EPN_15-0035	M	31	Temporal lobe	CNS_NET-MN1	N/A	N/A	
dkfz_CNS-PNET_15-0106	N/A	N/A	N/A	CNS_NET-MN1	N/A	N/A	
dkfz_EPN_15-0026	N/A	N/A	N/A	CNS_NET-MN1	N/A	N/A	

1	F	16	Frontoparietal	N/A	<i>MN1</i> -rearranged	N/A	Mhatre et al., 2019 [15]
2	F	23	Parietal lobe	N/A	<i>MN1</i> -rearranged	N/A	
4	F	14	Parietal lobe	N/A	<i>MN1</i> -rearranged	N/A	
5	F	27	Frontal lobe	N/A	<i>MN1</i> -rearranged	N/A	
6	F	10	Parietal lobe	N/A	<i>MN1</i> -rearranged	N/A	
1	F	6	L frontal lobe	N/A	<i>MN1</i> -rearranged	N/A	Hirose et al., 2018 [16]
2	F	6	Occipital lobe	N/A	<i>MN1</i> -rearranged	N/A	
3	F	18	R frontal lobe	N/A	<i>MN1</i> -rearranged	N/A	
4	F	24	L frontal lobe	N/A	<i>MN1</i> -rearranged	N/A	
8	F	37	L occipital lobe	N/A	<i>MN1</i> -rearranged	N/A	
1	F	4	L parietal lobe	CNS_NET-MN1	N/A	N/A	Petruzzellis et al., 2019 [17]
1	F	6	L parietal lobe	N/A	<i>MN1</i> -rearranged	N/A	Fudaba et al., 2020 [18]
1	F	36	Brainstem (Cervicomedullary)	CNS_NET-MN1	N/A	N/A	Gopakumar et al., 2022 [19]
1	7	F	L parietal lobe	CNS_NET-MN1	<i>MN1</i> -rearranged	N/A	Sari et al., 2021 [20]
1	M	11	Dorsal brainstem (pontomedullary)	N/A	<i>MN1</i> -rearranged	N/A	Shin et al., 2018 [21]
1	M	35	L frontal lobe	Unclassifiable	<i>MN1</i> -rearranged	CDKN2A/B deep deletion, TERT promoter mutation (DNA-seq)	Wood et al., 2018 [22]
3	F	9	R frontal lobe	CNS_NET-MN1	<i>MN1</i> -rearranged	NA	
4	F	10	L parietal lobe	CNS_NET-MN1	<i>MN1</i> -rearranged	NA	
8	F	31	L parietal lobe	CNS_NET-MN1	<i>MN1</i> -rearranged	ATM mutation, NF2 structural rearrangement (DNA-seq)	
1	F	20	Spinal cord, T1-T2	N/A	<i>MN1</i> -rearranged	N/A	Yamada et al., 2018 [23]
28	N/A	7	V3	CNS_NET-MN1	Four cases were <i>MN1</i> rearranged; one case was uninterpretable	N/A	Pages et al., 2019 [24]
29	N/A	4	Frontal lobe	CNS_NET-MN1		N/A	
30	N/A	11	Frontal lobe	CNS_NET-MN1		N/A	
31	N/A	6	Temporoparietal	CNS_NET-MN1		N/A	
32	N/A	17	N/A	CNS_NET-MN1		N/A	

42	M	36	Spinal cord, thoracic	CNS_NET-MN1	Negative	N/A	Neumann et al., 2020 [25]
43	F	11	Supratentorial (NOS)	CNS_NET-MN1	Rearranged	N/A	
C32	F	12	Cerebral (NOS)	CNS_NET-MN1	Rearranged	N/A	Lehman et al., 2019 [26]
C33	F	13	Parietal lobe	CNS_NET-MN1	Rearranged	N/A	
C34	F	3	Parietal lobe	CNS_NET-MN1	Rearranged	N/A	
1	F	4.8	R parietal lobe	CNS_NET-MN1	N/A	N/A	Baroni et al., 2020 [27]
2	F	5.8	L parietal lobe	CNS_NET-MN1	N/A	N/A	
3	F	8.9	L parietal lobe	CNS_NET-MN1	N/A	N/A	
4	F	5	Cervicothoracic spinal	CNS_NET-MN1	N/A	N/A	
5	F	4.5	R frontal lobe	CNS_NET-MN1	N/A	N/A	
6	F	7	L parietooccipital	CNS_NET-MN1	N/A	N/A	
7	F	3.6	L parietooccipital	CNS_NET-MN1	N/A	N/A	
8	F	6.7	R parietal lobe	CNS_NET-MN1	N/A	N/A	
9	M	14.6	Cervicothoracic spinal	CNS_NET-MN1	N/A	N/A	
10	F	13	R frontoparietal	CNS_NET-MN1	N/A	N/A	
11	M	36	Spinal cord	CNS_NET-MN1	N/A	N/A	
12	F	10	L frontoparietal	CNS_NET-MN1	N/A	N/A	
13	F	8	L parietal lobe	CNS_NET-MN1	N/A	N/A	
14	F	14	R parietal lobe	CNS_NET-MN1	N/A	N/A	
C7	F	33	L temporal lobe	CNS_NET-MN1	Rearranged	N/A	Lehman et al. 2022 [7]
C43	F	10	R parietal lobe	CNS_NET-MN1	N/A	N/A	

*RNA sequencing was performed as part of the clinical testing (unpublished).

†These cases were also included in the series by Baroni et al. [27] listed above.

*RNA sequencing was performed as part of the clinical testing (unpublished).

Abbreviations: N/A, not performed or reported; NOS, not otherwise specified.

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