

Table S1. Summary of the reported cases of a mandibular metastasis from hepatocellular carcinoma

Case No.	Authors	Year	Age	Sex	Symptoms	Site	Initial manifestation of HCC	Biopsy	Local treatment for mandibular lesion	Response	F/U duration (mo)	Status
1	Dick et al.	1957	57	M	Swelling, numbness, tingling	Body to ramus	Yes	-	-	-	-	-
2	Cernea et al	1963	57	M	Swelling in left mid-mandible	Body	Yes	-	-	-	-	-
3	Franchebois et al	1966	74	M	-	Body, angle	Yes	-	-	-	-	-
4	Lund et al	1970	52	M	-	Mandibular gingiva	No	-	-	-	-	-
5	Appenzeller et al	1971	70	M	Violaceous tumor formation	Body	Yes	-	Surgical treatment (hemi-mandibulectomy and suprahyoid neck dissection)	-	-	-
6	MacDaniel et al	1971	88	M	-	Body	Yes	-	-	-	-	-
7	Yacabucci et al	1972	51	M	Numbness of the lip and gingiva, looseness of the teeth and bleeding	Body	Yes	-	Surgical treatment (tooth extraction)	-	-	-
8	Lepeteur et al	1973	68	M	-	Body, angle	Yes	-	-	-	-	-
9	Sasaki and Ohosaki	1973	55	M	Painless swelling	Angle	No	-	RT (Co ⁶⁰ 50 Gy)	-	-	-
10	Muldon et al	1974	39	M	Alveolar ulcer	Angle	Yes	-	Surgical treatment (hemi-resection)	-	-	-
11	Sarrazin et al	1974	-	-	-	Ramus, Angle	Yes	-	-	-	-	-
12	Cadenat et al	1976	73	M	-	Ramus	Yes	-	-	-	-	-
13	Ciola et al	1978	82	M	-	-	Yes	-	-	-	-	-
14	Goveia and Bahn	1978	82	M	Swelling	Angle, ramus	Yes	-	-	-	-	-
15	Kinoshita et al	1980	47	M	Paresthesia	Ramus	Yes	-	-	-	-	-
16	Vigneul et al	1982	52	M	Swelling	Premolar	Yes	-	Surgical treatment	-	-	-
17	Ando et al	1985	57	M	Swelling	Angle, Ramus	Yes	-	RT (total of 16 Gy)	-	-	-
18	Horie et al	1985	49	M	Swelling	Ramus to Maxillary wall	Yes	-	RT (Co ⁶⁰ 50 Gy in 25 fx)	-	-	-
19	Horie et al	1985	65	M	Paresthesia	Body	No	-	-	-	-	-
20	Fujiwara et al	1986	53	M	Bleeding	Ramus	Yes	-	-	-	-	-
21	Katoh et al	1988	58	M	Swelling and pain	Angle	No	-	Surgical treatment	-	-	-
22	Mucitelli et al	1988	76	M	Swelling and paresthesia	Ramus	Yes	-	-	-	-	-
23	Kinoshita et al	1989	62	M	Swelling and pain	Angle	Yes	-	-	-	-	-
24	Kizukuri et al	1989	66	M	TMJ arthralgia, mouth opening disturbance	Condyle	No	-	RT (36 Gy in 18 fx)	-	-	-
25	Nakamura et al et al	1989	55	M	Swelling, mouth opening disturbance	Ramus	Yes	-	RT	-	-	-
26	Kitagawa et al	1990	47	M	Swelling and pain	Condyle	Yes	-	RT	-	-	-

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Table 1. Continued

Case No.	Authors	Year	Age	Sex	Symptoms	Site	Initial manifestation of HCC	Biopsy	Local treatment for mandibular lesion	Response	FU duration (mo)	Status
27	Kitagawa et al	1990	63	M	Swelling	Maxilla and mandible	Yes	-	RT	-	-	-
28	Marker and Clausen	1991	70	M	Swelling	Ramus	Yes	-	No treatment	-	-	-
29	Sakai et al	1991	70	M	Swelling	Angle	Yes	-	Surgical treatment	-	-	-
30	Doval et al	1992	65	M	Swelling	Angle	Yes	-	RT (30 Gy in 10 fx)	-	-	-
31	Lalikos et al	1992	16	F	Swelling	Ramus to TMJ	No	-	Surgical treatment	-	-	-
32	Kawahara et al	1992	70	M	Swelling	Ramus	Yes	-	RT	-	-	-
33	Tsuru et al	1992	66	F	Paresthesia	-	No	-	-	-	-	-
34	Yanagisawa et al	1992	79	M	Swelling	Body	Yes	-	RT (45 Gy)	-	-	-
35	Barrera-Franco et al.	1993	74	M	Swelling	Body to condyle	Yes	-	Surgical treatment	-	-	-
36	Michizoe et al	1993	52	M	Paresthesia	-	Yes	-	RT	-	-	-
37	Unoki et al	1993	69	F	Swelling, mouth opening disturbance	Body	Yes	-	-	-	-	-
38	Funaoka et al	1994	58	M	Swelling, mouth opening disturbance, pain	Ramus	Yes	-	RT (Co ⁶⁰)	-	-	-
39	Takagi et al	1994	67	F	Swelling, paresthesia	Ramus	Yes	-	Surgical treatment	-	-	-
40	Nomura et al	1994	61	M	Bleeding, swelling, paresthesia	Body	No	-	-	-	-	-
41	Takinami et al	1995	58	M	Swelling, pain, numbness	Ramus to angle	Yes	-	RT	-	-	-
42	Ashar et al	1997	82	M	Swelling, bleeding	Ramus to body	Yes	Biopsy (severe hemorrhage)	RT (41 Gy in 12 fx)	PR (markedly reduced)	7	Alive
43	Yoshimura et al	1997	61	M	Swelling, pain	Ramus to condyle	No	FNA	No treatment	PD	1	Dead
44	Afroze et al	1998	67	M	Swelling	Ramus	No	-	Surgical treatment	Regrowth	7	Alive
45	Chin et al	1998	70	M	Swelling, paresthesia	Angle	Yes	Incisional biopsy	-	-	-	-
46	Papa et al	2001	55	M	Bleeding	-	No	-	Surgical treatment	-	-	-
47	Pires et al	2004	60	M	Swelling, numbness, bleeding	Body	No	-	Surgical treatment	Regrowth	6	Dead
48	Junquera	2004	54	M	Swelling	Body	No	Curettage-biopsy (severe hemorrhage)	Surgical treatment (curettage)	-	-	-
49	Niedzielska et al	2004	-	-	-	-	-	-	-	-	-	-
50	Chen et al	2005	73	M	Swelling	Angle, body	Yes	Incisional biopsy	-	-	-	-
51	Kim et al	2005	62	M	Pain, swelling	Angle	Yes	-	-	-	-	-
52	Teshigawara et al	2006	76	M	Numbness, Swelling, pain, bleeding	Body	Yes	Incisional biopsy	Surgical treatment	-	9	Alive
53	Huang et al	2007	74	F	Swelling	Ramus	No	Biopsy, uncontrollable bleeding	RT (24 Gy in 6 fx)	Size: PR, Oozing stopped 5 days after RT	5	Alive

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Case No.	Authors	Year	Age	Sex	Symptoms	Site	Initial manifestation of HCC	Biopsy	Local treatment for mandibular lesion	Response	FU duration (mo)	Status
54	Roh et al	2008	-	-	Bleeding	-	-	-	RT	-	-	-
55	Roh et al	2008	-	-	Bleeding	-	-	-	RT	-	-	-
56	Kamatani et al	2008	59	M	Swelling, pain, difficulty opening mouth	Condyle	No	-	RT (20 Gy in 10 fx)	Pain relief	12	Alive
57	Li et al	2008	55	M	Pain, swelling	Body	No	-	Surgical treatment	-	-	-
58	Enokiya	2008	74	F	Swelling, anesthesia	Ramus	Yes	-	-	-	-	-
59	Magliocca et al	2009	76	F	Pain	Body	Yes	-	-	-	-	-
60	Shen et al	2009	54	M	Numbness, loosening of tooth, swelling	-	-	-	-	-	-	-
61	Shen et al	2009	75	M	Bleeding	-	-	-	Surgical treatment (extraction, bleeding)	-	-	-
62	Shen et al	2009	29	F	Pain, loosening of tooth	-	-	-	-	-	-	-
63	Shen et al	2009	29	F	Pain, numbness	-	-	-	-	-	-	-
64	Fujihara et al	2010	62	M	Swelling	Body	No	-	Surgical treatment followed by RT	Remission	6	Alive
65	Lasiter et al	2011	76	M	Numbness	Body	Yes	Open biopsy	Surgical treatment (tooth extraction), RT	-	-	-
66	Yu et al	2012	72	M	Paresthesia, swelling	Ramus	Yes	Incisional biopsy: no bleeding	RT (42 Gy in 14 fx)	Complete pain relief, Satisfactory pain relief	11	Dead
67	Miller et al	2013	55	M	Pain	Angle	No	FNA	RT (20 Gy)	-	12	Dead
68	Piccirillo et al	2013	-	-	-	-	-	-	-	-	-	-
69	Klasser et al	2014	75	M	Pain, swelling, difficulty on jaw	Condyle	No	FNA	RT	-	-	-
70	Pesis et al	2014	54	M	Swelling, numbness, bleeding	Body to ramus	Yes	FNA, Incisional biopsy (severe bleeding)	RT (30 Gy)	PD	15	Dead
71	Du et al	2014	57	M	Swelling	Ramus	Yes	-	Surgical treatment	-	12	Dead
72	Du et al	2014	37	M	Swelling, numbness	Ramus	Yes	FNA	Surgical treatment	-	5	Dead
73	Lee et al	2017	56	F	Pain, swelling	-	-	-	Surgical treatment, RT	-	12	Dead
74	Lee et al	2017	73	M	Pain, swelling	-	-	-	-	-	-	-
75	Lee et al	2017	60	M	Pain, swelling	-	-	-	Surgical treatment, RT	-	35	Dead
76	Lee et al	2017	52	M	Pain	-	-	-	-	-	2	Dead
77	Radzi et al	2018	61	M	Pain, swelling	Ramus	No	Incisional biopsy	-	-	-	-

HCC, hepatocellular carcinoma; RT, radiation therapy; TMJ, temporomandibular joint; FNA, fine needle aspiration; PR, partial response; PD, progressive disease; FU, follow-up.