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| Supplementary Table 1. Clinical and prognostic details of entire 121 cases with IMC |
| N | Author, year | Age (yrs)/Sex | Gen. loc./Ten. loc./Sku. base/Bone inv. | Tum. size (cm)/edema/ki-67 (%) | GTR/RT/CMT | Progression/PFS (mon.)/Death/OS (mon.) |
| 1 | Dahlin et al., 1962[10] | 44/F | Parietal/sup./no/yes | 6/nana/na | yes/no/no | yes/25/yes/108 |
| 2 | Flyger et al., 1963[16] | 11/M | Frontal/sup./no/na | 5/na/na | yes/no/no | no/5/no/5 |
| 3 | Raskind et al., 1966[43] | 48/F | Frontoparietal/sup./no/na | 8/na/na | no/no/no | yes/yes/yes/0,1 |
| 4 | Wu et al., 1970[66] | 18/F | Frontao-parietal/sup./no/yes | 10.4/na/na | no/no/no | yes/14/yes/14 |
| 5 | Salvador et al., 1971[49] | 17/F | Occiput/inf./no/yes | na/na/na | na/na/na | na/na/na/na |
| 6 | Salvador et al., 1971[49] | 24/F | Skull/na/na/yes | na/na/na | no/na/na | na/na/na/na |
| 7 | Waga et al., 1972[63] | 51/F | Frontoparietal/sup./no/na | na/na/na | yes/yes/no | yes/2/yes/11 |
| 8 | Seth et al., 1973[54] | 32/M | Skull base/sup./yes/yes | 5/na/na | nana/yes/no | na/na/na/na |
| 9 | Lynch et al., 1973[31] | 13/M | Frontal /sup./no/yes | 2.5/na/na | yes/no/no | no/18/no/18 |
| 10 | Guccion et al., 1973[19] | 19/M | Parietal/sup./no/na | na/na/na | no/yes/no | yes/na/no/12 |
| 11 | el-Gindi et al., 1974[14] | 23/M | Parietotemporal/sup./no/no | na/na/na | na/yes/no | no/8/na/8 |
| 12 | Scheithauer et al., 1978[52] | 40/M | Convexity/sup./no/na | 8/na/na | na/no/no | na/na/yes/0,27 |
| 13 | Scheithauer et al., 1978[52] | 7/M | Temperal/sup./na/na | na/na/na | na/na/na | yes/na/yes/84 |
| 14 | Scheithauer et al., 1978[52] | 17/F | Frontal/inf./na/na | na/na/na | yes/na/na | no/24/yes/24 |
| 15 | Zucker and Horoupian et al., 1978[71] | 19/M | Occipital/sup./na/na | na/na/na | yes/no/no | na/na/na/na |
| 16 | Rollo et al., 1979[46] | 11/M | Parieto-occipital/sup./na/na | na/na/na | no/yes/no | na/na/no/96 |
| 17 | Heros et al., 1980[22] | 22/F | Parasagittal/sup./no/na | na/na/na | yes/no/no | yes/3/yes/0,1 |
| 18 | Heros et al., 1980[22] | 23/F | Parietal/sup./no/na | na/na/na | yes/yes/no | no/54/no/54 |
| 19 | Heros et al., 1980[22] | 26/F | Cerebellum/inf./no/na | na/na/na | yes/no/no | no/30/no/30 |
| 20 | Heros et al., 1980[22] | 33/M | Sphenoid wing/sup./yes/yes | na/na/na | no/no/no | no/36/no/36 |
| 21 | Harwood et al., 1981[20] | 22/M | Cerebellum/inf./no/na | na/na/na | na/no/no | yes/4/yes/4 |
| 22 | Kubota et al., 1982[26] | 21/F | Frontal/sup./no/na | na/na/na | yes/no/no | no/84/yes/84 |
| 23 | Rodda and Franklin et al., 1984[45] | 12/F | Frontal/sup./no/na | na/na/na | yes/no/no | yes/3/yes/7 |
| 24 | Hassounah et al., 1985[21] | 65/M | Petrous pyramid and jugular foramen/inf./yes/yes | 3/na/na | yes/no/no | no/10/no/10 |
| 25 | Nagata et al., 1986[36] | 15/M | Falx cerebri/sup./no/no | 3/na/na | yes/no/no | no/60/no/60 |
| 26 | Nokes et al., 1987[38] | 61/F | Parietal/sup./no/na | na/na/na | na/yes/no | no/na/no/na |
| 27 | Shuangshoti et al., 1989[57] | 14/M | Occipital/sup./na/yes | 15/na/na | no/na/na | na/na/na/na |
| 28 | Greenblatt et al., 1990[18] | 19/M | Occipital/sup./no/yes | na/yes/na | no/no/yes | yes/30/no/66 |
| 29 | Paulus et al., 1991[40] | 17/M | Tentorium/na/no/na | na/na/na | nana/na/na | na/na/na/na |
| 30 | Chhem et al., 1992[6] | 11/F | Parietal/sup./no/no | na/yes/na | na/yes/no | yes/na/yes/18 |
| 31 | Morimoto et al., 1992[35] | 21/F | Anterior fossa/sup./yes/yes | na/na/na | no/yes/yes | yes/4/no/24 |
| 32 | Cho et al., 1993[7] | 13/F | Frontoparietal/sup./no/yes | na/na/na | yes/no/no | yes/21/no/38 |
| 33 | Schut et al., 1994[53] | 12/F | PreFrontal/sup./no/na | na/na/na | na/yes/yes | yes/na/yes/na |
| 34 | Schut et al., 1994[53] | 0,9/M | Frontal/sup./no/na | na/na/na | na/yes/no | na/na/yes/na |
| 35 | Rushing et al., 1996[47] | 0,4/M | Frontal/sup./no/yes | na/na/na | yes/yes/no | no/14/no/14 |
| 36 | Rushing et al., 1996[47] | 7/F | Sphenoid ridge/sup./yes/yes | na/na/na | no/no/no | yes/60/yes/60 |
| 37 | Rushing et al., 1996[47] | 11/F | Frontal/sup./no/no | na/na/na | no/yes/no | yes/20/yes/20 |
| 38 | Rushing et al., 1996[47] | 13/F | Sphenoid ridge/sup./yes/yes | na/na/na | yes/no/no | no/15/no/15 |
| 39 | Rushing et al., 1996[47] | 15/M | Parasagittal (falcine)/sup./no/na | na/na/na | no/yes/no | yes/na/yes/72 |
| 40 | Rushing et al., 1996[47] | 17/F | Frontal/sup./no/no | na/na/na | yes/yes/no | yes/84/yes/84 |
| 41 | Rushing et al., 1996[47] | 45/M | Meckel’s cave/sup./yes/yes | na/na/na | yes/yes/no | no/28/no/28 |
| 42 | Rushing et al., 1996[47] | 68/M | Parasagittal (Falcine)/na/no/na | na/na/na | yes/yes/no | yes/na/yes/120 |
| 43 | Malik et al., 1996[32] | 8/M | Cerebellum/inf./no/na | na/na/na | yes/yes/yes | na/na/no/18 |
| 44 | Nozaki et al., 1999[39] | 15/M | Jugular foramen/inf./yes/yes | 5/na/na | no/yes/no | no/36/no/35 |
| 45 | Crosswell et al., 2000[9] | 6/M | Frontoparietal/sup./no/yes | 10/na/na | yes/no/yes | yes/2/yes/2 |
| 46 | Crosswell et al., 2000[9] | 24/F | Frontal/sup./no/na | na/na/na | yes/yes/no | no/30/no/30 |
| 47 | Bingaman et al., 2000[3] | 21/F | Falcine/sup./no/na | 6/na/na | yes/no/no | no/18/no/18 |
| 48 | Merimsky et al., 2000[34] | 33/F | Temporal/sup./no/yes | na/na/na | no/yes (50 Gy)/no | yes/8/yes/12 |
| 49 | Demirtaş et al., 2000[12] | 15/M | Frontal/sup./no/na | na/na/20 | yes/yes/yes | no/42/no/42 |
| 50 | Crockard et al., 2001[8] | 26/F | Foramen magnum/inf./yes/yes | na/na/na | na/no/yes | yes/na/yes/20 |
| 51 | Marshman et al., 2001[33] | 17/F | Temporoparietal/sup./no/no | na/yes/na | yes/no/no | yes/4/yes/4 |
| 52 | Inega et al., 2003[24] | 21/M | Sella and caver nous sinus/sup./yes/yes | na/na/13,2 | no/yes (30 Gy)/no | yes/4/yes/31 |
| 53 | La Spi et al., 2003[27] | 14/F | Posterior fossa/inf./no/yes | 7/na/na | no/yes/yes | no/24/no/24 |
| 54 | Bose et al., 2003[1] | 60/M | BiFrontal/sup./no/na | 7/na/na | yes/yes/no | yes/na/yes/27 |
| 55 | Huang et al., 2004[23] | 13/F | Parafalcine Frontal/sup./no/no | 7/yes/na | yes/no/no | no/24/no/24 |
| 56 | Chen et al., 2004[5] | 13/F | Bi-Frontal falcine/sup./no/na | 8/na/na | yes/no/no | na/na/no/30 |
| 57 | Yassa et al., 2005[70] | 44/M | Cerebellum/inf./no/no | 2/na/na | yes/yes/no | no/60/no/60 |
| 58 | Salvati et al., 2005[50] | 30/F | Frontoparietal/sup./no/na | na/na/na | yes/no/no | yes/na/no/38 |
| 59 | Salvati et al., 2005[50] | 42/F | Frontal/sup./no/na | na/na/na | yes/no/no | no/3/yes/0.9 |
| 60 | Chatzipantelis et al., 2006[4] | 17/M | na/na/na/na | na/na/na | na/na/na | yes/na/no/108 |
| 61 | Waliuddin et al., 2006[64] | 5/M | Temporal/sup./no/no | 9/na/na | yes/yes/no | yes/4/yes/4 |
| 62 | Reyaz et al., 2006[44] | 26/F | Posterior fossa/inf./na/na | 5.5/na/na | na/na/na | na/na/na/na |
| 63 | Förander et al., 2006[17] | 36/F | Falcine/sup./no/na | na/na/na | yes/yes/no | yes/45/no/90 |
| 64 | Förander et al., 2006[17] | 39/F | Petrous bone apex/sup./yes/yes | na/na/na | na/yes/no | yes/12/yes/15 |
| 65 | De Cecio et al., 2008[11] | 0,2/M | Parietal/sup./no/yes | 11/na/na | yes/no/no | yes/yes/yes/1 |
| 66 | Tobias et al., 2008[59] | 15/F | Skull base/na/yes/yes | 7,5/na/na | no/yes (44.4 Gy)/yes | yes/2,6/yes/4,6 |
| 67 | Tobias et al., 2008[59] | 15/F | Parieal skull/sup./no/na | 7.5/na/na | no/no/yes | na/na/yes/06 |
| 68 | Sheth et al., 2009[56] | 42/M | Temporal/sup./no/no | na/na/na | na/yes (60 Gy)/no | yes/10,5/yes/15 |
| 69 | Fanburg-Smith et al., 2010[15] | 32/F | Frontal/sup./no/na | na/na/na | na/na/na | na/na/na/na |
| 70 | Vij et al., 2010[62] | 22/M | Frontal/sup./no/no | 3/na/na | yes/na/na | na/na/na/na |
| 71 | Fanburg-Smith et al., 2010[15] | 13/F | Frontal/sup./no/na | na/na/na | na/na/na | na/na/na/na |
| 72 | Fanburg-Smith et al., 2010[15] | 12/F | Frontal/sup./no/na | na/na/na | na/na/na | na/na/na/na |
| 73 | Fanburg-Smith et al., 2010[15] | 32/F | Frontal/sup./no/na | na/na/na | na/na/na | na/na/na/na |
| 74 | Rachel et al., 2011[41] | 17/M | Skull bone/na/na/na | na/na/na | na/no/no | na/na/no/21,8 |
| 75 | Rachel et al., 2011[41] | 16/M | Skull bone/na/na/na | na/na/na | na/yes/no | na/na/no/6 |
| 76 | Rachel et al., 2011[41] | 30/F | Skull bone/sup./no/yes | na/na/na | na/na/na | na/na/no/1.2 |
| 77 | Sardi et al., 2011[51] | 16/na  | Frontal/sup./no/no | na/na/na | yes/yes (50.4Gy)/yes | no/55,2/no/55 |
| 78 | Sardi et al., 2011[51] | 9/na | Infratentorial/inf./no/no | na/na/na | yes/yes (54 Gy)/yes | no/33/no/33 |
| 79 | Ramesh et al., 2011[42] | 15/F | Frontoparietal/sup./no/no | na/yes/na | na/no/no | yes/6/no/6 |
| 80 | Lin et al., 2012[29] | 22/F | Middle fossa/sup./yes/yes | na/na/na | yes/no/no | yes/36/no/36 |
| 81 | Lin et al., 2012[30] | 21/F | Tentorium cerebelli/inf./no/no | 2.8/na/1 | yes/yes/yes | yes/na/no/6 |
| 82 | Kan et al., 2012[25] | 31/F | Bi-Frontal/sup./no/no | 7.2/na/na | yes/yes/no | no/3/no/3 |
| 83 | Vergeer et al., 2012[61] | 71/F | Frontal/sup./no/no | 5.6/yes/na | yes/yes/yes | yes/3/yes/48 |
| 84 | Nguyen et al., 2013[37] | 30/M | Frontal (skull base)/sup./yes/yes | na/no/60 | no/yes/no | yes/3/no/25 |
| 85 | Thakar et al., 2013[58] | 35/F | BiFrontal (2x)/sup./yes/yes | 6/yes/na | no/na/no | na/na/na/na |
| 86 | Xiao et al., 2014[67] | 23/M | Tentorium/inf./no/no | 5.7/yes/2 | no/yes/no | no/30/no/30 |
| 87 | Yan et al., 2015[68] | 22/F | Frontal gyrus/sup./no/no | 1.7/yes/na | yes/na/na | na/na/na/na |
| 88 | Sadashiva et al., 2016[48] | 42/F | ACB/sup./yes/yes | na/yes/na | yes/yes/no | no/66/no/66 |
| 89 | Sadashiva et al., 2016[48] | 7/M | Falx cerebri/sup./no/yes | na/yes/na | yes/yes/no | no/21/no/21 |
| 90 | Sadashiva et al., 2016[48] | 52/F | Frontal/sup./no/no | na/na/na | yes/no/no | yes/7/no/16 |
| 91 | Laghari et al., 2017[28] | 28/M | CPA/inf./yes/yes | na/na/na | no/na/no | na/na/na/na |
| 92 | Wang et al., 2018[65] | 57/M | Parietal/sup./no/no | 3,3/na/na | yes/yes/no | yes/13/yes/21 |
| 93 | Wang et al., 2018[65] | 40/F | Frontoparietal/sup./no/no | 2,7/na/na | no/yes/no | yes/32/yes/48 |
| 94 | Wang et al., 2018[65] | 38/M | Sphenoethmoidal synchondrosis/sup./yes/yes | 6,48/na/na | no/yes/no | yes/6/yes/17 |
| 95 | Wang et al., 2018[65] | 32/F | Sphenopetrosal synchondrosis/sup./yes/yes | 3/na/na | no/yes/no | yes/60/no/78 |
| 96 | Wang et al., 2018[65] | 28/M | Sphenopetroclival synchondrosis/sup./yes/yes | 5/na/na | no/yes/no | yes/13/no/14 |
| 97 | Wang et al., 2018[65] | 16/F | Sphenopetroclival synchondrosis/sup./yes/yes | 10/na/10 | yes/yes/no | no/69/no/69 |
| 98 | Wang et al., 2018[65] | 22/M | Sphenopetrosal synchondrosis/sup./yes/yes | 4,9/na/5 | no/yes/no | yes/6/no/62 |
| 99 | Wang et al., 2018[65] | 2/M | Temproral/sup./no/no | 5/na/na | no/no/no | no/51/no/51 |
| 100 | Wang et al., 2018[65] | 24/F | Forth ventricular /inf./no/no | 4/na/na | yes/no/no | yes/46/no/48 |
| 101 | Wang et al., 2018[65] | 7/M | Lateral ventricle/sup./no/no | 7,6/na/na | yes/yes/no | yes/46/no/46 |
| 102 | Wang et al., 2018[65] | 15/M | Sphenopetroclival synchondrosis/sup./yes/yes | 6,5/na/10 | no/no/no | no/na/no/na |
| 103 | Wang et al., 2018[65] | 13/M | Frontal /sup./no/no | 5,9/na/na | yes/no/no | no/10/no/10 |
| 104 | Wang et al., 2018[65] | 31/M | Temporal /sup./no/no | 2,8/na/30 | yes/no/no | no/34/no/34 |
| 105 | Wang et al., 2018[65] | 21/F | Sphenoethmoidal synchondrosis/sup./yes/yes | 6,3/na/15 | no/no/no | yes/24/yes/24 |
| 106 | Wang et al., 2018[65] | 10/M | Temporal /sup./no/no | 7/na/na | yes/no/no | no/26/no/26 |
| 107 | Wang et al., 2018[65] | 10/M | Petrooccipital /sup./yes/yes | 8,9/na/na | no/no/no | no/16/no/16 |
| 108 | Dutta et al., 2019[13] | 20/F | BiFrontal/sup./no/yes | 6.5/yes/na | yes/yes (40 Gy)/no | yes/24/no/24 |
| 109 | Shabani et al., 2019[55] | 21/F | Parietal/sup./no/no | 6.7/na/na | yes/yes/yes | yes/12/yes/35 |
| 110 | Bhardwaj et al., 2020[2] | 26/M | Temporal/sup./yes/yes | na/no/na | yes/no/no | yes/2/yes/2 |
| 111 | Uneda et al., 2020[60] | 28/F | Temporal/sup./yes/yes | 5/yes/20 | no/yes (70.4 Gy)/no | no/6/no/6 |
| 112 | Yapicier et al., 2020[69] | 1,3/M | Temporooccipiital/sup./no/yes | 6/no/70 | yes/no/yes | no/21/no/21 |
| 113 | Present, 2020 | 3/M | Frontal/na/no/no | 3/no/5 | yes/yes/no | yes/48/yes/54 |
| 114 | Present, 2020 | 5/F | Sphenopetroclival /na/yes/yes | 4/no/9 | yes/yes/no | yes/30/no/42 |
| 115 | Present, 2020 | 12/F | Temperal/na/no/no | 6/yes/25 | no/no/yes | yes/21/yes/30 |
| 116 | Present, 2020 | 23/M | Tentorium/na/no/no | 6/yes/8 | no/yes/no | no/21/no/25 |
| 117 | Present, 2020 | 24/M | PCB/na/no/yes | 5.5/no/12 | yes/no/no | yes/24/yes/26 |
| 118 | Present, 2020 | 27/F | Frontal/na/no/no | 6/yes/40 | no/no/no | yes/5/yes/7 |
| 119 | Present, 2020 | 30/F | Jugular foramen/na/yes/yes | 7,4/no/9 | yes/yes/yes | yes/28/yes/28 |
| 120 | Present, 2020 | 41/F | Parietal/na/no/no | 4.2/no/17 | no/yes/no | no/21/no/15 |
| 121 | Present, 2020 | 46/F | Temperal/na/yes/yes | 3/no/3 | yes/no/no | na/na/na/na |
| Gen. loc., general location; Ten. loc, tentorial location; sku. skull; inv., involvement; ACB, anterior cranial base; MCB, middle cranial base; PCB, posterior cranial base |

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