

**Supplementary Table S1:** Affected gene in genetic alterations specific to individual sporadic OKC cases

	<b>Genetic alterations</b>	<b>Affected genes</b>
<b>Case 1</b>	Loss on 1q31.3	<i>CFH, CFHR3, CFHR1, CFHR4, CFHR2, CFHR5, F13B</i>
	Loss on 3q26.1	None
	Loss on 22q11.23	<i>GSTTP1, LOC391322, GSTT1, GSTTP2</i>
<b>Case 2</b>	CNN-LOH on 5p12	<i>LOC648987, ANXA2R, LOC153684, LOC100132356, LOC100506639, ZNF131, NIM1, HMGCS1, CCL28, C5orf28, C5orf34, PAIP1, LOC100652772, NNT, FGF10, MRPS30, HCN1</i>
	CNN-LOH on 8q11.21	<i>SNTG1, PXDNL, PCMTD1, ST18</i>
	CNN-LOH on 10q22.1	<i>ANAPC16, DDIT4, DNAJB12, MIR1256, MICU1, MCU, MIR4676, OIT3, PLA2G12B, P4HA1, NUDT13, ECD, FAM149B1, DNAJC9, DNAJC9-AS1, MRPS16, TTC18, ANXA7, MSS51, PPP3CB, USP54, MYOZ1, SYNPO2L, AGAP5, BMS1P4, GLUD1P3, SEC24C, FUT11, CHCHD1, ZSWIM8, ZSWIM8-AS1, NDST2, CAMK2G, C10orf55, PLAU, VCL, AP3M1, ADK</i>
<b>Case 3</b>	Gain in 1p13.3	<i>GSTM1, GSTM5</i>
	Gain in 10p15.3	<i>PFKP</i>
	CNN-LOH on 16q23.2	<i>DYNLRB2, CDYL2, CMC2, CENPN, ATMIN, C16orf46, GCSH, PKD1L2, BCMO1, GAN, MIR4720, CMIP, LOC100129617, PLCG2, SDR42E1, HSD17B2, MPHOSPH6, CDH13</i>
<b>Case 4</b>	CNN-LOH on 1p31.3	<i>GNG12-AS1, DIRAS3, WLS, MIR1262, RPE65, DEPDC1, LRRC7, PIN1P1, LRRC40, SRSF11, ANKRD13C, HHLA3, CTH</i>
	CNN-LOH on 2q32.3	<i>SLC39A10, DNAH7, STK17B, HECW2, CCDC150, LOC100130452, GTF3C3, C2orf66, PGAP1, ANKRD44</i>
	CNN-LOH on 3p21.31	<i>IP6K2, PRKAR2A, SLC25A20, ARIH2OS, ARIH2, P4HTM, WDR6, DALRD3, MIR425, NDUFAF3, MIR191, IMPDH2, QRICH1, QARS, USP19, LAMB2, LAMB2P1, CCDC71, KLHDC8B, LOC646498, CCDC36, C3orf62, MIR4271, USP4, GPX1, RHOA, TCTA, AMT, NICN1, DAG1, BSN-AS2, BSN, APEH, MST1, RNF123, AMIGO3, GMPPB, IP6K1, CDHR4, FAM212A, UBA7, MIR5193, TRAI, CAMKV, MST1R, MON1A, RBM6, RBM5, RBM5-AS1, SEMA3F, GNAT1, SLC38A3, GNAI2, SEMA3B, LSMEM2, IFRD2, HYAL3, NAT6, HYAL1, HYAL2, TUSC2, RASSF1, ZMYND10, NPRL2, CYB561D2, TMEM115, CACNA2D2, C3orf18, HEMK1, CISH, MAPKAPK3, MIR4787, DOCK3, MANF, RBM15B, VPRBP, RAD54L2, TEX264, GRM2, IQCF6, IQCF4, IQCF3, IQCF2, IQCF5, IQCF1, RRP9, PARP3, GPR62, PCBP4, ABHD14B, ABHD14A, ABHD14A-ACY1, ACY1, RPL29, DUSP7, LINC00696, POC1A, ALAS1, TLR9, TWF2, PPM1M, WDR82, MIRLET7G, GLYCTK, MIR135A1, DNAH1, BAP1, PHF7, SEMA3G, TNNC1, NISCH, STAB1, NT5DC2, SMIM4, PBRM1, GNL3, SNORD19, SNORD19B, SNORD69, GLT8D1, SPCS1, NEK4, ITIH1, ITIH3, ITIH4, MUSTN1, TMEM110-MUSTN1, TMEM110, SFMBT1</i>
	CNN-LOH on 11p11.2	<i>PTPRJ, OR4B1, OR4X2, OR4X1, OR4S1, OR4C3, OR4C45, OR4A47, TRIM49B, TRIM64C, FOLH1, LOC440040, OR4C13, OR4C12, LOC441601, LOC646813, OR4A5, OR4C46</i>

	Gain on 22q11.23	<i>IGLL1, C22orf43, GUSBP11, RGL4, ZNF70, VPREB3, C22orf15, CHCHD10, MMP11, SMARCB1, DERL3, SLC2A11, LOC284889, MIF, GSTT2B, GSTT2, DDTL, DDT, GSTTP1, LOC391322, GSTT1, GSTTP2, CABIN1, SUSD2, GGT5, POM121L9P, SPECC1L, SPECC1L-ADORA2A, ADORA2A, ADORA2A-AS1, UPB1, GUCD1, SNRPD3, GGT1, FAM211B</i>
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**Supplementary Table 2:** Affected genes in genetic alterations specific to individual syndromic OKC cases

	<b>Genetic alterations</b>	<b>Affected genes</b>
<b>Case 1</b>	Loss on 3p26.2	None
	Loss on 14q32.33	<i>LINC00226</i>
	Loss on 19p13.3	<i>STK11, C19orf26, ATP5D, MIDN, CIRBP-AS1, CIRBP, C19orf24</i>
	CNN-LOH on 11p11.12	<i>TRIM49B, TRIM64C, FOLH1, LOC440040, OR4C13, OR4C12, LOC441601, LOC646813, OR4A5, OR4C46</i>
<b>Case 2</b>	CNN-LOH on 2q21.3	<i>LOC100129961, CCNT2, MAP3K19, RAB3GAP1, ZRANB3, R3HDM1, MIR128-1, UBXN4, LCT, LOC100507600, MCM6, DARS, CXCR4, THSD7B</i>
	CNN-LOH on 2q24.2	<i>RBMS1, MIR4785, TANK, PSMD14, TBR1, AHCTF1P1, SLC4A10, DPP4, GCG, FAP, IFIH1, GCA, KCNH7, FIGN</i>
	CNN-LOH on 3p21.31	<i>KIF9, KLHL18, PTPN23, SCAP, ELP6, CSPG5, SMARCC1, DHX30, MIR1226, MAP4, CDC25A, MIR4443, CAMP, ZNF589, NME6, SPINK8, FBXW12, PLXNB1, CCDC51, TMA7, ATRIP, TREX1, SHISA5, PFKFB4, UCN2, COL7A1, MIR711, UQCRC1, TMEM89, SLC26A6, CELSR3, MIR4793, NCKIPSD, IP6K2, PRKAR2A, SLC25A20, ARIH2OS, ARIH2, P4HTM, WDR6, DALRD3, MIR425, NDUF3, MIR191, IMPDH2, QRICH1, QARS, USP19, LAMB2, LAMB2P1, CCDC71, KLHDC8B, LOC646498, CCDC36, C3orf62, MIR4271, USP4, GPX1, RHOA, TCTA, AMT, NICN1, DAG1, BSN-AS2, BSN, APEH, MST1, RNF123, AMIGO3, GMPPB, IP6K1, CDHR4, FAM212A, UBA7, MIR5193, TRAP, CAMKV, MST1R, MON1A, RBM6, RBM5, RBM5-AS1, SEMA3F, GNAT1, SLC38A3, GNAI2, SEMA3B, LSMEM2, IFRD2, HYAL3, NAT6, HYAL1, HYAL2, TUSC2, RASSF1, ZMYND10, NPRL2, CYB561D2, TMEM115, CACNA2D2, C3orf18, HEMK1, CISH, MAPKAPK3, MIR4787, DOCK3, MANF, RBM15B, VPRBP</i>
	CNN-LOH on 9p23	<i>FLJ41200, LINC00583, NFIB, ZDHHC21, CER1, FREM1, LOC389705, TTC39B, SNAPC3, PSIP1, CCDC171, C9orf92, BNC2, CNTLN, SH3GL2, ADAMTSL1, MIR3152, FAM154A, RRAGA, HAUS6, SCARNA8, PLIN2, DENND4C, RPS6, ACER2, SLC24A2, MLLT3, MIR4473</i>

	CNN-LOH on 10q11.21	<i>RSU1P2, ANKRD30BP3, MIR3156-1, OR13A1, ALOX5, MARCH8, ZFAND4, FAM21C, AGAP4, PTPN20A, PTPN20B, BMS1P5, BMS1P1, GLUD1P7, FAM35BP, SYT15, GPRIN2, NPY4R, LINC00842, HNRNPA1P33, ANXA8, ANXA8L1, FAM25C, FAM25B, FAM25G, AGAP9, BMS1P2, BMS1P6, FAM35DP, ANXA8L2, FAM21B, CTSL1P2</i>
	CNN-LOH on 12q21.31	<i>RASSF9, NTS, MGAT4C, MIR548AL, MKRN9P, C12orf50, C12orf29, CEP290, TMTTC3, KITLG</i>
	Loss on 2q37.3	<i>PDCD1, CXXC11, LOC728323</i>
	Gain on 14q11.2	<i>OR4M1, OR4N2, OR4K2, OR4K5, OR4K1, OR4K15, OR4K14, OR4K13, OR4L1</i>
<b>Case 3</b>	CNN-LOH on 2p12	<i>CTNNA2, LRRTM1, LOC1720, FUNDC2P2, SUCLG1, DNAH6, TRABD2A, TMSB10, KCMF1, TCF7L1, TGOLN2, RETSAT, ELMOD3, CAPG, SH2D6, LOC100630918, MAT2A, GGCX, VAMP8, VAMP5, RNF181, TMEM150A, USP39, C2orf68, SFTPB, GNLY, ATOH8, LOC284950, ST3GAL5</i>
	CNN-LOH on 10q22.1	<i>MIR1256, MICU1, MCU, MIR4676, OIT3, PLA2G12B, P4HA1, NUDT13, ECD, FAM149B1, DNAJC9, DNAJC9-AS1, MRPS16, TTC18, ANXA7, MSS51, PPP3CB, USP54, MYOZ1, SYNPO2L, AGAP5, BMS1P4, GLUD1P3, SEC24C, FUT11, CHCHD1, ZSWIM8, ZSWIM8-AS1, NDST2, CAMK2G, C10orf55, PLAU, VCL, AP3M1, ADK, KAT6B, DUPD1, DUSP13</i>
	CNN-LOH on 13q32.1	<i>CLDN10, CLDN10-AS1, DZIP1, DNAJC3, UGGT2, HS6ST3, LINC00359, OXGR1, MBNL2, RAP2A, IPO5</i>
	CNN-LOH on 14q23.3	<i>PLEKHG3, SPTB, CHURC1, CHURC1-FNTB, GPX2, RAB15, FNTB, MAX, MIR4706, LOC100506321, MIR4708, FUT8, FUT8-AS1, LINC00238, GPHN, FAM71D, MPP5, ATP6V1D, EIF2S1, PLEK2</i>
	Loss on 10q11.22	<i>FAM21C, AGAP4, PTPN20A, PTPN20B, BMS1P5, BMS1P1, GLUD1P7, FAM35BP, SYT15, GPRIN2, NPY4R, LINC00842</i>