

Table S1 The 75 single nucleotide variants (SNVs) found in the GC tissue

| Gene | Transcript | c. | p. | Mutation frequency |
|----------------|----------------|--------------|---------------|--------------------|
| <i>ARAF</i> | NM_001654.4 | c.1199G>A | p.R400H | 13.90% |
| <i>MED12</i> | NM_005120.2 | c.5711C>T | p.A1904V | 13.80% |
| <i>MLH1</i> | NM_000249.3 | c.791-1G>T | . | 11.00% |
| <i>BCORL1</i> | NM_021946.4 | c.5036C[7>6] | p.P1681Qfs*20 | 11.00% |
| <i>ETV6</i> | NM_001987.4 | c.985G>A | p.A329T | 10.00% |
| <i>CHEK1</i> | NM_001114121.2 | c.1115G>A | p.R372Q | 8.00% |
| <i>SOX9</i> | NM_000346.3 | c.1004G>A | p.W335* | 7.80% |
| <i>RNASEL</i> | NM_021133.3 | c.172G[5>6] | p.W60Lfs*6 | 7.40% |
| <i>FLT4</i> | NM_182925.4 | c.1790C>T | p.T597M | 7.40% |
| <i>CDH11</i> | NM_001797.2 | c.1196G>T | p.G399V | 7.40% |
| <i>ROS1</i> | NM_002944.2 | c.6773T>C | p.I2258T | 7.30% |
| <i>EP300</i> | NM_001429.3 | c.752A>G | p.N251S | 7.20% |
| <i>EPAS1</i> | NM_001430.4 | c.2254C>T | p.P752S | 7.10% |
| <i>SOX9</i> | NM_000346.3 | c.1033C[5>4] | p.P346Rfs*37 | 7.10% |
| <i>JAK3</i> | NM_000215.3 | c.523C>T | p.R175* | 7.10% |
| <i>MTHFR</i> | NM_005957.4 | c.659C>T | p.A220V | 6.90% |
| <i>FAT1</i> | NM_005245.3 | c.9589C>A | p.L3197I | 6.90% |
| <i>B2M</i> | NM_004048.2 | c.19T[2>3] | p.L7Ffs*50 | 6.90% |
| <i>PBRM1</i> | NM_018313.4 | c.4133G>A | p.G1378D | 6.80% |
| <i>FAM175A</i> | NM_139076.2 | c.299A>G | p.Y100C | 6.80% |
| <i>MAGI2</i> | NM_012301.3 | c.1609A>G | p.M537V | 6.80% |
| <i>NOTCH1</i> | NM_017617.3 | c.2644G>A | p.A882T | 6.80% |
| <i>POLE</i> | NM_006231.2 | c.5312C>T | p.T1771M | 6.70% |
| <i>AURKB</i> | NM_004217.3 | c.809A>G | p.N270S | 6.70% |
| <i>MPL</i> | NM_005373.2 | c.565G>A | p.A189T | 6.60% |
| <i>EPHB6</i> | NM_004445.3 | c.2130A>C | p.E710D | 6.60% |
| <i>BRCA2</i> | NM_000059.3 | c.6700T>G | p.F2234V | 6.60% |
| <i>RPTOR</i> | NM_020761.2 | c.928G>T | p.G310C | 6.60% |
| <i>SRC</i> | NM_198291.1 | c.1335G>T | p.K445N | 6.60% |
| <i>BARD1</i> | NM_000465.2 | c.943C>T | p.P315S | 6.50% |
| <i>ATR</i> | NM_001184.3 | c.1817G>A | p.G606D | 6.50% |
| <i>CDK12</i> | NM_016507.2 | c.2594T[4>3] | p.L866Cfs*2 | 6.50% |
| <i>BRIP1</i> | NM_032043.2 | c.688T>C | p.S230P | 6.50% |
| <i>CD74</i> | NM_001025159.2 | c.797G>A | p.R266H | 6.40% |
| <i>ACTB</i> | NM_001101.3 | c.1022T>G | p.I341S | 6.40% |
| <i>DDR1</i> | NM_001954.4 | c.352T>A | p.Y118N | 6.30% |
| <i>B2M</i> | NM_004048.2 | c.35T>C | p.L12P | 6.30% |

Table S1 (continued)

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| Gene | Transcript | c. | p. | Mutation frequency |
|----------------|----------------|--|---------------|--------------------|
| <i>NOTCH3</i> | NM_000435.2 | c.5062T>A | p.S1688T | 6.30% |
| <i>PIK3CA</i> | NM_006218.2 | c.1634A>G | p.E545G | 6.20% |
| <i>PDGFRB</i> | NM_002609.3 | c.1712_1713delCT | p.S571Cfs*4 | 6.20% |
| <i>FAT2</i> | NM_001447.2 | c.2304G>T | p.E768D | 6.20% |
| <i>MAP2K1</i> | NM_002755.3 | c.199G>A | p.D67N | 6.20% |
| <i>SMAD4</i> | NM_005359.5 | c.290G>A | p.R97H | 6.10% |
| <i>EPCAM</i> | NM_002354.2 | c.497T>C | p.L166P | 6.00% |
| <i>XRCC1</i> | NM_006297.2 | c.637G>T | p.A213S | 6.00% |
| <i>IGF1R</i> | NM_000875.3 | c.3469A>G | p.T1157A | 5.90% |
| <i>CREBBP</i> | NM_004380.2 | c.4996G>A | p.A1666T | 5.90% |
| <i>RECQL4</i> | NM_004260.3 | c.3136GAG[2>1] | p.E1046[2>1] | 5.80% |
| <i>RECQL</i> | NM_002907.3 | c.1058A>C | p.K353T | 5.80% |
| <i>DICER1</i> | NM_030621.3 | c.1469G>A | p.R490H | 5.80% |
| <i>EPHA5</i> | NM_004439.5 | c.2810G>A | p.R937H | 5.60% |
| <i>ROS1</i> | NM_002944.2 | c.4596A[6>5] | p.N1534Ifs*69 | 5.60% |
| <i>MLL2</i> | NM_003482.3 | c.7057C[5>4] | p.P2354Lfs*30 | 5.50% |
| <i>RB1</i> | NM_000321.2 | c.2521-1G>T | . | 5.50% |
| <i>DOT1L</i> | NM_032482.2 | c.2011C>A | p.L671M | 5.50% |
| <i>POLD1</i> | NM_002691.3 | c.31_37delCCCGGGG | p.P11Cfs*28 | 5.50% |
| <i>SMARCA4</i> | NM_003072.3 | c.265C>T | p.R89C | 5.40% |
| <i>FAM5C</i> | NM_199051.1 | c.1261G>A | p.E421K | 5.30% |
| <i>EPHB1</i> | NM_004441.4 | c.1789C>A | p.P597T | 5.10% |
| <i>NSD1</i> | NM_022455.4 | c.7703G>A | p.G2568E | 5.10% |
| <i>MLL</i> | NM_001197104.1 | c.11281T>G | p.L3761V | 5.10% |
| <i>BRCA2</i> | NM_000059.3 | c.9247A[7>6] | p.T3085Qfs*19 | 5.10% |
| <i>ATR</i> | NM_001184.3 | c.3396T[7>8] | p.N1135*fs*1 | 5.00% |
| <i>SMARCB1</i> | NM_003073.3 | c.1085AGA[3>2] | p.K363[2>1] | 4.90% |
| <i>BUB1</i> | NM_004336.3 | c.1753C>T | p.R585C | 4.80% |
| <i>EPHA5</i> | NM_004439.5 | c.1443A[6>5] | p.N483Tfs*18 | 4.60% |
| <i>NSD1</i> | NM_022455.4 | c.7697C[4>5] | p.G2568Rfs*4 | 4.50% |
| <i>EIF2AK3</i> | NM_004836.5 | c.2723AG[5>6] | p.S912Gfs*23 | 3.90% |
| <i>MLL2</i> | NM_003482.3 | c.12560G>T | p.G4187V | 2.40% |
| <i>LRP1B</i> | NM_018557.2 | c.5656C>A | p.H1886N | 1.80% |
| <i>ARID1A</i> | NM_006015.4 | c.31_56delAGCAGCCTGGGCAA CCCGCCGCCGCC | p.S11Afs*91 | 1.30% |
| <i>EP300</i> | NM_001429.3 | c.4432C>T | p.R1478C | 1.30% |
| <i>PTPRD</i> | NM_002839.3 | c.2569C>T | p.R857C | 1.20% |
| <i>ERRFI1</i> | NM_018948.3 | c.529T>A | p.S177T | 1.10% |
| <i>ERBB2</i> | NM_004448.2 | c.1805G>A | p.S602N | 1.10% |