

Supplemental Table S1. Spectrum of ABCC6 mutations in this patient cohort

| ABCC6 Mutation | Mutation type | Clinical Classification | <i>n</i> = 138 [%] |
|-------------------------------|------------------------|-------------------------|--------------------|
| c.3421C>T (p.Arg1141*) | Nonsense | pathogenic | 49 [35.5] |
| c.2787+1G>T (p.?) | Splice-site (nonsense) | pathogenic | 8 [5.8] |
| c.3179C>G (p.Pro1060Arg) | Missense | new, pathogenic | 4 [2.9] |
| c.4182delG (p.Lys1394Asnfs*9) | Deletion (nonsense) | pathogenic | 4 [2.9] |
| c.37-1G>A | Splice-site (nonsense) | pathogenic | 3 [2.2] |
| c.3412C>T (p.Arg1138Trp) | Missense | pathogenic | 3 [2.2] |
| c.EX23_EX29del | Deletion (nonsense) | pathogenic | 3 [2.2] |
| c.3883-6G>A (p.?) | Splice-site (missense) | likely pathogenic | 3 [2.2] |
| c.1171A>G (p.Arg391Gly) | Missense | pathogenic | 3 [2.2] |
| c.1553G>A (p.Arg518Glu) | Missense | pathogenic | 2 [1.4] |
| c.2399G>A (p.Gly800Arg) | Missense | new, pathogenic | 2 [1.4] |
| c.2230A>C (p.Thr744Pro) | Missense | new, pathogenic | 2 [1.4] |
| c.346-6G>A (p.?) | Splice-site (missense) | likely benign | 2 [1.4] |
| c.3413C>T (p.Arg1138Glu) | Missense | pathogenic | 2 [1.4] |
| c.3506+2delTAGG (p.?) | Deletion (nonsense) | pathogenic | 2 [1.4] |
| c.3661C>T (p.Arg1221Cys) | Missense | pathogenic | 2 [1.4] |
| c.EX9del (p.*) | Deletion (nonsense) | pathogenic | 2 [1.4] |
| c.EX24_EX27del (p.*) | Deletion (nonsense) | pathogenic | 2 [1.4] |
| c.3088C>T (p.Arg1030*) | Nonsense | pathogenic | 2 [1.4] |
| c.2090C>T (p.Pro697Leu) | Missense | new, pathogenic | 2 [1.4] |
| c.1132C>T (p.Gln378*) | Nonsense | pathogenic | 1 [0.7] |
| c.1460G>A (p.Arg487Gln) | Missense | pathogenic | 1 [0.7] |
| c.1517G>A (p.Trp506*) | Nonsense | pathogenic | 1 [0.7] |

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|---------------------------------------|---------------------------|------------------------|----------|
| c.3074T>C (p.Leu1025Pro) | Missense | pathogenic | 1 [0.7] |
| c.1999delG p.(Ala667Glnfs*21) | Deletion (nonsense) | pathogenic | 1 [0.7] |
| c.1589T>C (p.Leu530Pro) | Missense | new, pathogenic | 1 [0.7] |
| c.EX18del (p.?) | Deletion (nonsense) | pathogenic | 1 [0.7] |
| c.3450G>C (p.Asn1150Lys) | Missense | benign | 1 [0.7] |
| c.3903C>T (p.Thr1301Ile) | Missense | pathogenic | 1 [0.7] |
| c.4209-2A>C (p.?) | Splice-site (missense) | likely pathogenic | 1 [0.7] |
| c.EX22del (p.?) | Deletion (nonsense) | pathogenic | 1 [0.7] |
| c.3679_3770insC (p.?) | Insertion (nonsense) | new, likely pathogenic | 1 [0.7] |
| c.3634-3C>A (p.?) | Splice-site (nonsense) | pathogenic | 1 [0.7] |
| c.EX28del (p.?) | Deletion (nonsense) | pathogenic | 1 [0.7] |
| c.2071-1G>A (p.?) | Splice-site (nonsense) | new, pathogenic | 1 [0.7] |
| c.(?-1)_(*1_?)del (p.0) | Deletion (nonsense) | pathogenic | 1 [0.7] |
| c.2420G>A (p.Arg807Gln) | Missense | pathogenic | 1 [0.7] |
| c.2252T>A (p.Met751Lys) | Missense | pathogenic | 1 [0.7] |
| c.2342C>A (p.Ala781Glu) | Missense | pathogenic | 1 [0.7] |
| c.754C>T (p.Leu252Phe) | Missense | likely pathogenic | 1 [0.7] |
| c.2294G>A (p.Arg765Gln) | Missense | pathogenic | 1 [0.7] |
| c.1987G>A (p.Gly663Ser) | Missense | pathogenic | 1 [0.7] |
| c.2432C>T (p.Thr811Met) | Missense | pathogenic | 1 [0.7] |
| c.3491G>A (p.Arg1164Gln) | Missense | pathogenic | 1 [0.7] |
| c.1091C>G (p.Thr364Arg) | Missense | pathogenic | 1 [0.7] |
| No mutation on second allele detected | | | 11 [8.0] |