## inv(1)(q21.1q21.2)

- inversion on Chr1: 146342447(q21.1) 149354622(q21.2)
- all genes near breakpoints: ['RNU1-1', 'RNVU1-18', 'LOC729737', 'WASH7P', 'FAM138F', 'NUDT4P2', 'MIR1302-9', 'MIR1302-11', 'RNU1-3', 'RNU1-4', 'DDX11L1', 'RNU1-2', 'MIR6859-1', 'NUDT4B', 'NOTCH2NLC', 'NBPF19', 'FAM138A', 'HYDIN2', 'NOTCH2NLA', 'OR4F5', 'LOC653513', 'MIR1302-10', 'NBPF10', 'DDX11L17', 'MIR6859-4', 'MIR6859-2', 'SEC22B2P', 'SEC22B3P', 'FAM138C', 'MIR6859-3', 'PPIAL4H', 'MIR1302-2']
- genes near breakpoints documented in DDG2P: None

## inv(1)(q21.1q21.2)

- inversion on Chr1: 146342447(q21.1) 149354622(q21.2)
- all genes near breakpoints: ['RNU1-1', 'RNVU1-18', 'LOC729737', 'WASH7P', 'FAM138F', 'NUDT4P2', 'MIR1302-9', 'MIR1302-11', 'RNU1-3', 'RNU1-4', 'DDX11L1', 'RNU1-2', 'MIR6859-1', 'NUDT4B', 'NOTCH2NLC', 'NBPF19', 'FAM138A', 'HYDIN2', 'NOTCH2NLA', 'OR4F5', 'LOC653513', 'MIR1302-10', 'NBPF10', 'DDX11L17', 'MIR6859-4', 'MIR6859-2', 'SEC22B2P', 'SEC22B3P', 'FAM138C', 'MIR6859-3', 'PPIAL4H', 'MIR1302-2']
- genes near breakpoints documented in DDG2P: None

## del(3)(p12.3)

- deletion on Chr3: 75345111(p12.3) 75632718(p12.3)
- all genes near breakpoints: ['MIR4444-1', 'LINC02018', 'LINC00960', 'FRG2C', 'CHL1', 'CHL1-AS2', 'FAM86DP', 'LINC01986', 'MIR1324', 'MIR4273', 'MIR4444-2', 'ZNF717']
- genes near breakpoints documented in DDG2P: None
- all genes with -1 CN: ['FAM86DP', 'LINC02018', 'MIR1324']
- genes with -1 CN documented in DDG2P: None