## TrisoNIM ${ }^{\oplus}$ neosea

## This test contains variants amounts 2038, as described in the following table:

| Disease: Thanatophoric dysplasia, type I | Gene: FGFR3 | Gene OMIM Number: 134934 | NM ID: NM_000142.4 | NO. of Variants:5 | Phenotype OMIM Number: 187600 |
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| Variant: c.1948A>G, c.742C>T, c.1108G>T, c.1118A>G, c.746C>G |  |  |  |  |  |
| Disease: Thanatophoric dysplasia, type II | Gene: FGFR3 | Gene OMIM Number: 134934 | NM ID: NM_000142.4 | NO. of Variants:1 | Phenotype OMIM Number: 187601 |
| Variant: c.1948A>G |  |  |  |  |  |
| Disease: Cardiofaciocutaneous syndrome IV | Gene: MAP2K2 | Gene OMIM Number: 601263 | NM ID: NM_030662.3 | NO. of Variants:4 | Phenotype OMIM Number: 615280 |
| Variant: c.401A>G, c.383C>A, c. $170 T>G, \mathrm{c} .169 T>G$ |  |  |  |  |  |
| Disease: Cardiofaciocutaneous syndrome III | Gene: MAP2K1 | Gene OMIM Number: 176872 | NM ID: NM_002755.3 | NO. of Variants:4 | Phenotype OMIM Number: 615279 |
| Variant: c.158T>C, c.199G>A, c.607G>C, c.389A>G |  |  |  |  |  |
| Disease: Cardiofaciocutaneous syndrome II | Gene: KRAS | Gene OMIM Number: 190070 | NM ID: NM_004985.3 | NO. of Variants:10 | Phenotype OMIM Number: 615278 |

Variant: c.466T>A, c.458A>T, c.455T>G, c.439A>G, c.173C>T, c.101C>T, c.40G>A, c.64C>G, c.178G>C, c.101C>G

| Disease: Cardiofaciocutaneous syndrome | Gene: BRAF | Gene OMIM Number: 164757 | NM ID: NM_004333.4 | NO. of Variants: $\mathbf{3 3}$ | Phenotype OMIM Number: 115150 |
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Variant: c. $741 T>G, c .739 T>C, c .1495 A>G, c .1743 T>A, c .1455 G>T, c .2126 A>G, c .1914 T>G, c .1785 T>A, c .1695 T>G, c .1502 A>G, c .1502 A>C, c .1497 A>C, c .1399 T>G, c .823 G>A, c .784 C>A, c .721 A>C, c .1722 C>G$,


| Disease: Achondroplasia | Gene: FGFR3 | Gene OMIM Number: 134934 | NM ID: NM_000142.4 | NO. of Variants: 6 | Phenotype OMIM Number: 100800 |
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| Variant: c. $1138 \mathrm{G}>\mathrm{A}, \mathrm{c} .835 \mathrm{~A}>\mathrm{T}$, c.1031C>G, c. $1138 \mathrm{G}>\mathrm{C}, \mathrm{c} .1180 \mathrm{~A}>\mathrm{T}$, c.1130T>G |  |  |  |  |  |
| Disease: Campomelic dysplasia with autosomal sex reversal | Gene: S0X9 | Gene OMIM Number: 608160 | NM ID: NM_000346.3 | NO. of Variants:19 | Phenotype OMIM Number: 114290 |

Variant: c.323C>T, c.427T>C, c.432-2A>C, c.685+1G>A, c.788_789insG, c.985_986insG, c.1123C>T, c.1320C>G, c.462C>G, c.236A>C, c.506A>C, c.738delG, c.296delG, c.441delC, c.600delC, c.611delT, c. 1372 delC, c.442G $>$ T, c. $472 \mathrm{G}>\mathrm{A}$

Variant: c.236A>C, c.506A>C, c.738delG, c.296delG, c.441delC, c.600delC, c.611delT, c.1372delC, c.442G>T, c.473C>T, c.517A>G, c.509C>G, c.472G>A, c.316A>G, c.337A>G, c.495C>G, c.527C>T, c.1514_1515insC

| Disease: Campomelic dysplasia | Gene: S0X9 | Gene OMIM Number: 608160 | NM ID: NM_000346.3 | NO. of Variants:33 |  |
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Variant: c.462C>G, c.236A>C, c.506A>C, c.738delG, c.296delG, c.441deIC, c.600delC, c.611delT, c.1372delC, c.442G>T, c.473C>T, c.517A>G, c.509C>G, c.338T>C, c.358C>T, c.507C>G, c.122C>A, c.227C>A, c.258_259insG, c. $257 \mathrm{G}>\mathrm{A}, \mathrm{c} .349 \mathrm{C}>\mathrm{T}, \mathrm{c} .432-2 \mathrm{~A}>\mathrm{G}, \mathrm{c} .451 \mathrm{~A}>\mathrm{T}, \mathrm{c} .455 \mathrm{G}>\mathrm{C}, \mathrm{c} .583 \mathrm{C}>\mathrm{T}, \mathrm{c} .694 \mathrm{C}>\mathrm{T}, \mathrm{c} .715 \mathrm{dupA}, \mathrm{c} .736 \mathrm{dupC}, \mathrm{c} .886 \_887 \mathrm{insC}$, c.1198G>T, c.1242_1243insT, c.1456_1457insG, c.1495_1496insG

| Disease: Tuberous sclerosis II | Gene: TSC2 | Gene OMIM Number: 191092 | NM ID: NM_000548.3 | NO. of Variants:476 | Phenotype OMIM Number: 613254 |
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Variant: c.139_140deIGA, c.488_489deITT, c.1565_1566deIAC, c.2071deIC, c.3206_3207deITG, c.4115_4116deITG, c.4180_4181deICT, c.4207deIG, c.4422_4423deIAG, c.4544deIA, c.4642delC, c.4934_4935delTT, c.5259delG, c.45delT, c.219deIT, c.415delA, c.440_441deICA, c.462delC, c.529deIC, c.633delC, c.703_704delAG, c.729_730deICT, c.799delC, c.909_910delCT, c.976delG, c.1002_1003deIGT, c.1143deIG, c.1185_1186deITG, c.1331deIA, c.1391deIA, c.1410delC, c.1491delC, c.1642_1643insA, c.1693deIC, c.1796delA, c.2182delT, c.2395deIC, c.2539delC, c.2639deIA, c.2643deIT, c.2690deIT, c.2784delC, c.3128deIA, c.3214delA, c.3294_3295insC, c.3319_3320insG, c.3337_3338insG, c.3351delG, c.3390deIC, c.3401delG, c.3520delC, c.3574deIC, c.3984delG, c.4279delA, c.4473delA, c.4472_4473delAA, c.4504deIC, c.4578delC, c.4591delG, c.4704delC, c.4710delG, c.4717_4718insG, c.4762_4763insC, c.4925delG, c.4938_4939delGT, c.5024delC, c.5074_5075insG, c.5136_5137delCC, c.5170_5171deICA, c.5173_5174insG, c.5422_5423deITG, c.45_46insT, c.109_110insG, c.832_833insC, c.871_872insC, c.910_911insCT, c.1628_1629insC, c.2090_2091insT, c.2295_2296insCC, c.2709_2710insC, c.2717_2718insA, c.2784_2785insC, c.4442_4443insA, c.4991_4992insG, c.5247_5248insG, c.5408_5409insT, c.478C>G, c. $1599 \mathrm{G}>\mathrm{C}, \mathrm{c} .2197 \mathrm{C}>\mathrm{G}, \mathrm{c} .4807 \mathrm{G}>\mathrm{T}, \mathrm{c} .4942 \mathrm{~A}>\mathrm{T}, \mathrm{c} .5160+4 \mathrm{~A}>\mathrm{T}$, c. $224 A>G, c .849-3 T>G, c .976-15 G>A, c .976-3 C>G, c .1001 T>C, c .1001 T>G, c .1347 G>C, c .1789 C>T, c .1796 A>T, c .1831 C>T, c .1864 C>T, c .2114 T>A, c .2150 T>G, c .2198 T>C, c .2713 C>G, c .2726 T>A, c .2747 T>G$, c.3082G>A, c.3106T>C, c.3178T>C, c.3182T>C, c.3596T>G, c.3608C>A, c.3884A>T, c.4489C>A, c.4490C>G, c.4601T>A, c.4604A>C, c.4643T>C, c.4646A>G, c.4700G>A, c.4708A>T, c.4711T>A, c.4735G>A, c. $4751 T>G, c .4780 C>A, c .4787 G>T, c .4790 T>C, c .4828 T>G, c .4859 A>G, c .4868 C>T, c .4928 A>G, c .4928 A>T, c .4929 C>G, c .4937 T>G, c .4949 A>G, c .4952 A>G, c .4957 T>C, c .5017 G>T, c .5018 T>A, c .5057 A>C$, $\mathrm{c} .5126 \mathrm{C}>\mathrm{G}, \mathrm{c} .5160+5 \mathrm{G}>\mathrm{T}, \mathrm{c} .5138 \mathrm{G}>\mathrm{A}, \mathrm{c} .139-1 \mathrm{G}>\mathrm{A}, \mathrm{c} .500 \mathrm{G}>\mathrm{A}, \mathrm{c} .826 \_827$ delAT, c.1111C>T, c.1119+1G>C, c.1474C>T, c.1760_1761delAT, c.1946+1G>A, c.3180G>A, c.3797dupT, c.3999C>A, c.4183C>T, c. $5160+1 \mathrm{G}>$ T, c. $5161-2 \mathrm{~A}>\mathrm{G}$, c.100A>T, c.115deIA, c.139-2A>G, c.169delC, c.187deIC, c.266T>A, c.334C>T, c.337-2A>G, c.357deIC, c.501G>A, c.509_510insAT, c.516_517deIGT, c.602deIT, c.606delC, c.644_645deITA, c.648+1G>T, c.826delA, c.855C>A, c.899_900insT, c.908T>C, c.949_950insTA, c.1008T>G, c.1094_1095delTC, c.1228_1229insG, c.1323G>A, c.1361+1G>A, c.1407delG, c.1528C>T, c.1599+2T>A, c.1616deIT, c.1839+1G>A, c.1960_1961deIGG, c.1976_1977insA, c.2074delG, c.2157T>A, c.2163deIG, c.2235_2236delGA, c.2240_2241deITG, c.2417_2418dupTG, c.2433delC, c.2452dupA,
 c. $3131+2 T>C$, c.3240dupA, c.3312_3313delGA, c.3316A>T, c.3383deIT, c.3397+1G>A, c.3581G>A, c.3599G>C, c.3611-1delG, c.3695delC, c.3755C>A, c.3884-1G>A, c.3982dupA, c.4013_4014deICA, c.4014dupA, c.4027G>T, c.4030G>T, c.4051G>T, c.4176_4177delGA, c.4235_4236deICT, c.4236dupT, c.4255delC, c.4264delA, c.4344dupC, c.4537G>T, c.4569+2T>C, c.4630A>T, c.4662+1G>T, c.46632 4663-1delAG, c. 4743 delC, c. 4854 delC, c. 4870 4871delCT, c. 4909 4910delAA, c. 5025 delG, c. $5160+2 T>G, c .5161$ delA, c. $5402 \_5403 \mathrm{delAG}, \mathrm{c} .3 \mathrm{G}>\mathrm{A}, \mathrm{c} .34 \mathrm{~A}>\mathrm{T}, \mathrm{c} .138+1 \mathrm{G}>\mathrm{A}, \mathrm{c} .138+2 \mathrm{~T}>\mathrm{C}, \mathrm{c} .225+2 \mathrm{~T}>\mathrm{A}, \mathrm{c} .226-$ $2 A>G, c .246 \mathrm{G}>\mathrm{A}, \mathrm{c} .268 \mathrm{C}>\mathrm{T}, \mathrm{c} .336+1 \mathrm{G}>\mathrm{A}, \mathrm{c} .336+2 \mathrm{~T}>\mathrm{G}, \mathrm{c} .337-1 \mathrm{G}>\mathrm{T}, \mathrm{c} .403 \mathrm{dupG}, \mathrm{c} .451 \mathrm{~A}>\mathrm{T}, \mathrm{c} .465 \mathrm{C}>\mathrm{G}, \mathrm{c} .469 \mathrm{G}>\mathrm{T}, \mathrm{c} .496 \mathrm{C}>\mathrm{T}, \mathrm{c} .569 \mathrm{dupA}, \mathrm{c} .598 \mathrm{C}>\mathrm{T}, \mathrm{c} .600-2 \mathrm{~A}>\mathrm{G}, \mathrm{c} .600-1 \mathrm{G}>\mathrm{A}, \mathrm{c} .618 \mathrm{C}>\mathrm{A}, \mathrm{c} .648+1 \mathrm{G}>\mathrm{A}, \mathrm{c} .684 \mathrm{C}>\mathrm{A}$, c. 707 dupT, c. $731 \mathrm{G}>\mathrm{A}, \mathrm{c} .759 \mathrm{C}>\mathrm{A}, \mathrm{c} .760 \mathrm{G}>\mathrm{T}, \mathrm{c} .767 \mathrm{dupG}, \mathrm{c} .768 \mathrm{C}>\mathrm{A}, \mathrm{c} .770 \mathrm{G}>\mathrm{A}, \mathrm{c} .774+2 \mathrm{~T}>\mathrm{A}, \mathrm{c} .775-1 \mathrm{G}>\mathrm{A}, \mathrm{c} .848+1 \mathrm{G}>\mathrm{A}, \mathrm{c} .849-2 \mathrm{~A}>\mathrm{T}, \mathrm{c} .849-1 \mathrm{G}>\mathrm{A}, \mathrm{c} .880 \mathrm{G}>\mathrm{A}, \mathrm{c} .911 \mathrm{G}>\mathrm{A}, \mathrm{c} .972 \mathrm{C}>\mathrm{G}, \mathrm{c} .975+1 \mathrm{G}>\mathrm{T}, \mathrm{c} .976-1 \mathrm{G}>\mathrm{A}$, c. 979 980dupAT, c.1042A>T, c.1060C>T, c.1096G>T, c.1108C>T, c.1117C>T, c.1249C>T, c.1255C>T, c.1257+2T>C, c.1258-2A>C, c.1258-1G>A, c.1322G>A, c.1327C>T, c.1336C>T, c.1348G>T, c.1362-2A>G, $c .1362-1 G>A, c .1372 C>T, c .1432 C>T, c .1444-2 A>C, c .1444-1 G>A, c .1447 G>T, c .1472 C>A, c .1507 C>T, c .1513 C>T, c .1563 d u p A, c .1599+1 G>A, c .1599+2 T>C, c .1661 C>A, c .1714 C>T, c .1783 C>T, c .1790 A>G$, c.1792T>C, c.1794C>G, c.1820C>A, c.1832G>A, c.1839+1G>T, c.1840-2A>T, c.1841C>A, c.1844T>C, c.1901_1902insAT, c.1942dupT, c.1947-2A>G, c.1965dupT, c.1969A>T, c.2083C>T, c.2087_2088insAA, c. 2098-2A>G, c. $2098 \mathrm{G}>\mathrm{A}, \mathrm{c} .2103$ dupT, c. 2106 dupC, c. $2108 \mathrm{G}>\mathrm{A}, \mathrm{c} .2109 \mathrm{G}>\mathrm{A}, \mathrm{c} .2113 \mathrm{G}>\mathrm{A}, \mathrm{c} .2158 \mathrm{~A}>\mathrm{T}, \mathrm{c} .2194 \mathrm{C}>\mathrm{T}, \mathrm{c} .2221-2 \mathrm{~A}>\mathrm{C}, \mathrm{c} .2225 \mathrm{C}>\mathrm{G}, \mathrm{c} .2251 \mathrm{C}>\mathrm{T}, \mathrm{c} .2328 \mathrm{C}>\mathrm{A}, \mathrm{c} .2353 \mathrm{C}>\mathrm{T}, \mathrm{c} .2355+1 \mathrm{G}>\mathrm{T}, \mathrm{c} .2355+2 \mathrm{~T}>\mathrm{C}$, c.2356-2A>C, c.2356-1G>A, c.2370C>G, c.2375T>G, c.2404dupA, c.2410T>C, c.2430dupC, c.2461A>T, c.2489T>G, c.2491_2492insTA, c.2531T>G, c.2540T>C, c.2546-2A>G, c.2546-2A>T, c.2590C>T, c. $2639+1 \mathrm{G}>\mathrm{C}$, c. $2661 \mathrm{~T}>\mathrm{A}, \mathrm{c} .2665 \mathrm{G}>\mathrm{C}$, c. $2666 \mathrm{C}>$ T, c. $2687 \mathrm{G}>\mathrm{A}, \mathrm{c} .2688 \mathrm{G}>\mathrm{A}, \mathrm{c} .2690 \mathrm{~T}>\mathrm{C}, \mathrm{c} .2713 \mathrm{C}>\mathrm{T}, \mathrm{c} .2714 \mathrm{G}>\mathrm{A}, \mathrm{c} .2742+1 \mathrm{G}>\mathrm{A}, \mathrm{c} .2743-2 \mathrm{~A}>\mathrm{C}, \mathrm{c} .2743-2 A>\mathrm{G}, \mathrm{c} .2743-1 \mathrm{G}>\mathrm{C}, \mathrm{c} .2768 \mathrm{dupC}, \mathrm{c} .2785 \mathrm{G}>\mathrm{T}, \mathrm{c} .2824 \mathrm{G}>\mathrm{T}$, $c .2837+1 G>T, c .2974 C>T, c .3028 C>T, c .3076 d u p T, c .3094 C>T, c .3095 G>C, c .3098 d u p A, c .3099 C>G, c .3099 C>A, c .3131+1 G>A, c .3132-2 A>C, c .3203 C>T, c .3212 C>G, c .3265 C>T, c .3284+1 G>C, c .3355 C>T$, $c .3397+2 T>G, c .3412 C>T$, c.3425dupT, c.3442C>T, c.3532C>T, c.3574C>T, c.3575dupA, c.3598C>T, c.3610+1G>A, c.3610+1G>C, c.3662C>A, c.3685C>T, c.3696dupT, c.3750C>G, c.3755C>G, c.3884-1G>C, c. $4005+1 G>T, c .4037 C>A, c .4096 G>T, c .4129 C>T, c .4255 C>T, c .4289 G>A, c .4298 C>A, c .4318 C>T, c .4375 C>T, c .4397 C>A, c .4438 \_4439 i n s A, c .4439 T>A, c .4493 G>C, c .4493 G>A, c .4494-1 \_4494 i n s C$, c. $4507 \mathrm{C}>\mathrm{T}, \mathrm{c} .4515 \mathrm{C}>\mathrm{A}, \mathrm{c} .4573 \mathrm{C}>\mathrm{T}, \mathrm{c} .4606 \mathrm{C}>\mathrm{T}, \mathrm{c} .4620 \mathrm{C}>\mathrm{G}, \mathrm{c} .4620 \mathrm{C}>\mathrm{A}, \mathrm{c} .4662 \mathrm{G}>\mathrm{T}, \mathrm{c} .4663-1 \mathrm{G}>\mathrm{A}, \mathrm{c} .4672 \mathrm{G}>\mathrm{A}, \mathrm{c} .4700 \mathrm{G}>\mathrm{T}, \mathrm{c} .4713 \mathrm{C}>\mathrm{G}, \mathrm{c} .4744 \mathrm{dupA}, \mathrm{c} .4779 \mathrm{C}>\mathrm{G}, \mathrm{c} .4813 \mathrm{C}>\mathrm{T}, \mathrm{c} .4830 \mathrm{G}>\mathrm{A}, \mathrm{c} .4846 \mathrm{C}>\mathrm{T}, \mathrm{c} .4850-$ $2 A>C, c .4850-1 \mathrm{G}>\mathrm{A}, \mathrm{c} .4858 \mathrm{C}>\mathrm{T}, \mathrm{c} .4871 \mathrm{~T}>\mathrm{C}, \mathrm{c} .4918 \mathrm{C}>\mathrm{T}, \mathrm{c} .4925 \mathrm{G}>\mathrm{A}, \mathrm{c} .4989+1 \mathrm{G}>\mathrm{A}, \mathrm{c} .4989+1$ _4989+2insA, c.4993C>T, c.5024C>T, c.5032dupT, c.5034C>G, c.5043C>G, c.5069-2A>G, c.5069-1G>A, c.5069$1 \mathrm{G}>\mathrm{T}, \mathrm{c} .5112 \mathrm{dupT}, \mathrm{c} .5160+1 \mathrm{G}>\mathrm{A}, \mathrm{c} .5160+1 \_5160+2 \mathrm{insT}, \mathrm{c} .5161-1 \mathrm{G}>\mathrm{A}, \mathrm{c} .5161-1 \mathrm{G}>\mathrm{C}, \mathrm{c} .5161-1 \mathrm{G}>\mathrm{T}, \mathrm{c} .5170 \mathrm{C}>\mathrm{T}, \mathrm{c} .5208 \mathrm{C}>\mathrm{A}, \mathrm{c} .5220 \mathrm{G}>\mathrm{A}, \mathrm{c} .5227 \mathrm{C}>\mathrm{T}, \mathrm{c} .5228 \mathrm{G}>\mathrm{A}, \mathrm{c} .5388 \mathrm{dupC}$

| Disease: Tuberous sclerosis I | Gene: TSC1 | Gene OMIM Number: 605284 | NM ID: NM_000368.4 | NO. of Variants:176 | Phenotype OMIM Number: 191100 |
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Variant: c.988_989deICT, c.90deIA, c.901_902delCA, c.834_835deITC, c.831_832deIGT, c.749delT, c.749_750insT, c.723_724insA, c.658deIG, c.654_655insA, c.648delT, c.647_648deITT, c.63_64insTG, c.563_564delTT, c.433_434deICA, c.2701_2702deIAG, c.2672deIA, c.2672_2673insA, c.2569deIG, c.2569_2570insG, c.252_253insC, c.2510_2511insA, c.2501_2502insA, c.2470_2471delAC, c.2364deIA, c.2342_2343insAA, c.2319delC, c.2175_2176insA, c.2145delG, c.2109_2110delCT, c.195delA, c.1907_1908delAG, c.1904_1905deICA, c.1841delA, c.1823_1824deITT, c.1792_1793insAA, c.1788delT, c.1697delC, c.1656_1657insT, c.1551delG, c.1516_1517insTC, c.1490_1491deITG, c.148delC, c.1434delA, c.1425delA, c.1271_1272delGA, c.1257deIC, c.1020delA, c.1015_1016insA, c.2177C>A, c.1030$3 C>G, c .671 T>G, c .611 G>c, c .473 T>C, c .350 T>C, c .2530 C>T, c .2272 C>T, c .2111 \_2112 d e l A T, ~ c .1781 d e I T, c .1708 \_1709 d e I A G, c .1580 \_1581 d e l A G, c .1530 \_1531 d e I C A, ~ c .1453 G>T, ~ c .2698 \_2699 d e I C A, ~$ c.2668A>T, c.2582deIT, c.2503-2deIA, c.2287C>T, c.2263C>T, c.2155delC, c.2022delC, c.1997+1G>c, c.1966G>T, c.1964delA, c.1958dupT, c.1955_1956deITG, c.1846delG, c.1799delA, c.1615deIT, c.1560deIC, c.1533deIT, c.1250deIC, c.1203deIT, c.1119C>G, c.1027C>T, c.989delT, c.988delC, c.913+1G>A, c.893dupC, c.801dupA, c.745deIA, c.591dupC, c.585C>A, c.562T>G, c.533dupT, c.527_528deIAT, c.508+1G>A, c.433C>T, c.338T>A, c.203_204delAT, c.70delG, c.2698C>T, c.2692C>T, c.2689C>T, c.2650dupT, c.2503-1G>C, c.2503-1G>T, c.2503-2A>G, c.2497C>T, c.2389C>T, c.2362G>T, c.2356C>T, $\mathrm{c} .2332 \mathrm{C}>\mathrm{T}, \mathrm{c} .2299 \mathrm{C}>\mathrm{T}, \mathrm{c} .2293 \mathrm{C}>\mathrm{T}, \mathrm{c} .2283 \mathrm{C}>\mathrm{G}, \mathrm{c} .2283 \mathrm{C}>\mathrm{A}, \mathrm{c} .2250 \mathrm{G}>\mathrm{A}, \mathrm{c} .2227 \mathrm{C}>\mathrm{T}, \mathrm{c} .2074 \mathrm{C}>\mathrm{T}, \mathrm{c} .2042-2 \mathrm{~A}>\mathrm{G}, \mathrm{c} .2041+2 \mathrm{~T}>\mathrm{C}, \mathrm{c} .2028 \mathrm{G}>\mathrm{A}, \mathrm{c} .1963 \mathrm{C}>\mathrm{T}, \mathrm{c} .1883 \mathrm{~T}>\mathrm{A}, \mathrm{c} .1773 \_1774 \mathrm{dupGA}, \mathrm{c} .1759 \mathrm{~A}>\mathrm{T}, \mathrm{c} .1729 \mathrm{G}>\mathrm{T}$, c.1717C>T, c.1676dupG, c.1525C>T, c.1498C>T, c.1439-2A>G, c.1432_1433dupGA, c.1411_1412insT, c.1331C>G, c.1118dupA, c.1030-1G>A, c.1001C>A, c.989dupT, c.988dupC, c.982C>T, c.936C>A, c.901C>T, c.891T>G, c.814G>T, c.772G>T, c.749T>G, c.745A>T, c.737+1G>A, c.733C>T, c.709dupT, c.682C>T, c.664-1G>A, c.647T>C, c.572T>G, c.572T>A, c.569G>C, c.539T>C, c.495C>A, c.397G>T, c.395G>A, c.372dupT, c.325C>T, c.309G>A, c.308G>A, c.278T>G, c.272C>A, c.215T>C, c.211-1G>A, c.210+1G>A, c.196G>T, c.182T>G, c.182T>C, c.149T>C, c.107-2A>G

| Disease: Osteogenesis imperfecta, type I | Gene: C0L1A1 | Gene OMIM Number: 120150 | NM ID: NM_000088.3 | NO.of Variants:322 | Phenotype OMIM Number: 166200 |
| :---: | :---: | :---: | :---: | :---: | :---: |

Variant: c.809deIT, c.809_810insT, c.768_769insC, c.700deIG, c.671deIG, c.614delC, c.569delC, c.540_541insC, c.533delC, c.484delC, c.4332_4333insC, c.3765delC, c.3749delG, c.3699_3700insC, c.3638deIG, c.3584deIG, c.3560deIG, c.3540deIC, c.3402deIC, c.3371deIG, c.3258delC, c.3168_3169insC, c.3065delG, c.3026delC, c.3008delC, c.3008_3009insC, c.2774delC, c.2732deIG, c.2684deIC, c.2612delC, c.2522delC, c.246delC, c.2450_2451insC, c.2444delG, c.2426_2427insG, c.2424delC, c.2390delG, c.2366delC, c.2321delC, c.2097delC, c.2084delG, c.2072delC, c.2037_2038delAG, c.2016_2017insC, c.1994delG, c.1920_1921insC, c.1893_1894delAG, c.1886deIG, c.1865deIC, c.1814delG, c.1787deIG, c.1667deIC, c.1667_1668insC, c.1661delG, c.157_158deITG, c.1486_1487delCC,
 c. $3045+1 \mathrm{G}>\mathrm{A}, \mathrm{c} .2089 \mathrm{C}>\mathrm{T}$, c.1057-1G>T, c.1057-2A>G, c.1003-1G>C, c.1003-2A>G, c.642+5G>A, c.299-2A>G, c.904-9G>A, c.3470G>A, c.3263G>A, c.3208G>A, c.788G>T, c.588+5G>A, c.543+5G>A, c.3825G>A, c.3360deIT, c.3207+1_3207+2deIGT, c.3162deIT, c.2991delT, c.2784deIT, c.2775deIT, c.2010delT, c.1812deIT, c.1452delT, c.1128delT, c.1057-1G>A, c.1002+2T>C, c.751-1G>A, c.579delT,
 c.3079deIG, c.2646_2647deIAG, c.2614-1G>A, c.2451deIT, c.2329delG, c.2236-1G>A, c.2235_2235+1delAG, c.2085_2086deITC, c.1983+2T>G, c.1944deIT, c.1900C>T, c.1876-2deIA, c.1858G>T, c.1668delT, c.1608deIT, c.1201_1202deIGG, c.1200+1_1200+2deIGT, c.1200+1G>C, c.1155+2T>G, c.1128_1129insC, c.1065delT, c.982_983dupAC, c.775delG, c.697-2deIA, c.669delA, c.358C>T, c.143dupA, c.67C>T, c. $38 \mathrm{~T}>\mathrm{G}, \mathrm{c} .4338 \mathrm{dupC}, \mathrm{c} .4021 \mathrm{C}>\mathrm{T}, \mathrm{c} .4005+1 \mathrm{G}>\mathrm{C}, \mathrm{c} .4005+1 \mathrm{G}>\mathrm{A}, \mathrm{c} .3975 \mathrm{G}>\mathrm{A}, \mathrm{c} .3974 \mathrm{G}>\mathrm{A}, \mathrm{c} .3925 \mathrm{C}>\mathrm{T}, \mathrm{c} .3838 \mathrm{C}>\mathrm{T}, \mathrm{c} .3815-2 \mathrm{~A}>\mathrm{G}, \mathrm{c} .3814+2 \mathrm{~T}>\mathrm{C}, \mathrm{c} .3814+2 \mathrm{~T}>\mathrm{G}, \mathrm{c} .3814+1 \mathrm{G}>\mathrm{C}, \mathrm{c} .3807 \mathrm{G}>\mathrm{A}, \mathrm{c} .3607 \mathrm{C}>\mathrm{T}, \mathrm{c} .3532-$ $1 \mathrm{G}>\mathrm{A}, \mathrm{c} .3531+2 \mathrm{~T}>\mathrm{C}, \mathrm{c} .3531+1 \mathrm{G}>\mathrm{A}, \mathrm{c} .3423+1 \mathrm{G}>\mathrm{A}, \mathrm{c} .3421 \mathrm{C}>T, c .3385 \mathrm{C}>\mathrm{T}, \mathrm{c} .3369+1 \mathrm{G}>\mathrm{A}, \mathrm{c} .3369+1 \mathrm{G}>\mathrm{T}, \mathrm{c} .3285 \mathrm{dupC}, \mathrm{c} .3262-1 \mathrm{G}>\mathrm{A}, \mathrm{c} .3207+2 \mathrm{~T}>\mathrm{C}, \mathrm{c} .3207+1 \mathrm{G}>\mathrm{A}, \mathrm{c} .3207+1 \mathrm{G}>\mathrm{C}, \mathrm{c} .3100-1 \mathrm{G}>\mathrm{A}, \mathrm{c} .3099+1 \mathrm{G}>\mathrm{A}$, c. $3076 C>T, c .3046-2 A>G, c .3045+1 G>T, c .2938-1 G>A, c .2938-2 A>G, c .2869 C>T, c .2668-1 G>A, c .2667+1 G>A, c .2594 d u p G, c .2560-1 G>A, c .2559+2 T>A, c .2550 d u p T, c .2464 C>T, c .2452-1 G>A, c .2452-2 A>G$, $c .2452-2 A>T, c .2451+1 G>A, c .2451+1 G>T, c .2398-1 G>A, c .2397 \_2397+1 i n s C, c .2344-1 G>A, c .2343+1 G>A, c .2236-2 A>G, c .2128-1 G>A, c .2127+2 T>G, c .2127+1 G>A, c .2032 G>T, c .2028+2 T>G, c .1984-1 G>A$, c. 1983+1G>A, c.1930-1G>A, c.1930-1G>C, c.1930-2A>G, c.1929+1G>C, c.1929+1G>A, c.1876-1G>A, c.1875+1G>A, c.1821+1G>C, c.1821+1G>T, c.1768-1G>A, c.1718_1719insAC, c.1615-1G>C, c.1615$1 G>T, c .1614+1 G>C, c .1614+1 G>A, c .1516-1 G>C, c .1516-1 G>T, c .1516-2 A>G, c .1461+1 G>C, c .1414 C>T, c .1354-1 G>A, c .1354-1 G>T, c .1354-2 A>G, c .1353+2 T>C, c .1353+1 G>C, c .1300-1 G>A, c .1299+1 G>A$, c.1201-1G>A, c.1200+1G>T, c.1156-1G>A, c.1155+1G>A, c.1099C>T, c.1081C>T, c.1057-2A>T, c.983_984dupCT, c.958-1G>A, c.858+1G>A, c.858+1G>T, c.757C>T, c.751-2A>G, c.697-1G>A, c.697-2A>G, c.697-2A>T, c.696+2T>G, c.696+1G>A, c.589-1G>A, c.589-2A>G, c.588+1G>A, c.543+2T>A, c.543+2T>C, c.543+1G>T, c.472-2A>G, c.370-1G>A, c.334-2A>G, c.333+2T>C, c.333+1G>A, c.333+1G>T, c.299$1 \mathrm{G}>\mathrm{A}, \mathrm{c} .299-1 \mathrm{G}>\mathrm{C}, \mathrm{c} .141 \mathrm{C}>\mathrm{A}, \mathrm{c} .104-1 \mathrm{G}>\mathrm{T}, \mathrm{c} .103+1 \mathrm{G}>\mathrm{A}, \mathrm{c} .103+1 \mathrm{G}>\mathrm{C}, \mathrm{c} .2 \mathrm{~T}>\mathrm{G}, \mathrm{c} .2 \mathrm{~T}>\mathrm{C}, \mathrm{c} .3790 \mathrm{~A}>\mathrm{G}, \mathrm{c} .2644 \mathrm{C}>\mathrm{T}, \mathrm{c} .2559+1 \mathrm{G}>\mathrm{A}, \mathrm{c} .2155 \mathrm{G}>\mathrm{A}, \mathrm{c} .2028+1 \mathrm{G}>\mathrm{A}, \mathrm{c} .1984-2 \mathrm{~A}>\mathrm{C}, \mathrm{c} .1155+1 \mathrm{G}>\mathrm{C}, \mathrm{c} .1056+1 \mathrm{G}>\mathrm{A}, \mathrm{c} .859-$ $2 A>C, c .4166 T>C, c .3380 G>A, c .3290 G>T, c .4321 G>T, c .3505 \mathrm{G}>\mathrm{A}, \mathrm{c} .769 \mathrm{G}>\mathrm{A}, \mathrm{c} .3567$ deIT, c.3495deIT, c.2685delT, c.517G>T, c.3987delC, c.3531+1G>T, c.3477deIT, c.3450dupT, c.3241delG, c.3135delT, c.3114delG, c.3027deIT, c.2410G>T, c.1930-2A>C, c.1866deIT, c.898C>T, c.804+2_804+3delTG, c.750+2T>A, c.484C>T, c.268G>T, c.253G>T, c.189C>A, c.144deIT, c.4006-1G>A, c.3910C>T, c.3349C>T, c.2533G>A, c.2451_2451+1insT, c.1696G>A, c.1405C>T, c.1200+1G>A, c.967G>T, c.750+1G>A, c.697-1G>C, c.104-1G>A, c.671G>A

| Disease: Osteogenesis imperfecta, type II | Gene: COL1A1 | Gene OMIM Number: 120150 | NM ID: NM_000088.3 | No. of Variants:32 | Phenotype OMIM Number: 166210 |
| :--- | :--- | :--- | :--- | :--- | :--- |

Variant: c.1102G>A, c. $760 \mathrm{G}>\mathrm{A}, \mathrm{c} .4163 \mathrm{~T}>\mathrm{G}, \mathrm{c} .3515 \mathrm{G}>\mathrm{A}, \mathrm{c} .3496 \mathrm{G}>\mathrm{T}, \mathrm{c} .3073 \mathrm{G}>\mathrm{A}, \mathrm{c} .2605 \mathrm{G}>\mathrm{T}, \mathrm{c} .2317 \mathrm{G}>\mathrm{T}, \mathrm{c} .1966 \mathrm{G}>\mathrm{A}, \mathrm{c} .957+5 \mathrm{G}>\mathrm{A}, \mathrm{c} .64 \mathrm{G}>\mathrm{C}, \mathrm{c} .4247 \mathrm{deIC}, \mathrm{c} .4309 \mathrm{deIC}, \mathrm{c} .4105 \mathrm{delC}, \mathrm{c} .4265 \mathrm{G}>\mathrm{A}, \mathrm{c} .3969 \mathrm{dupT}$, c. $3424-1 \mathrm{G}>\mathrm{C}, \mathrm{c} .3423+2 \mathrm{~T}>\mathrm{A}, \mathrm{c} .3370 \mathrm{G}>\mathrm{T}, \mathrm{c} .3261+2 \mathrm{~T}>\mathrm{C}, \mathrm{c} .3261+1 \mathrm{G}>\mathrm{A}, \mathrm{c} .3100-2 \mathrm{~A}>\mathrm{C}, \mathrm{c} .3100-2 \mathrm{~A}>\mathrm{G}, \mathrm{c} .2228 \mathrm{G}>\mathrm{T}, \mathrm{c} .2227 \mathrm{G}>\mathrm{A}, \mathrm{c} .1767+2 \mathrm{~T}>\mathrm{C}, \mathrm{c} .1705 \mathrm{G}>\mathrm{C}, \mathrm{c} .1669-2 \mathrm{~A}>\mathrm{G}, \mathrm{c} .1668+1 \mathrm{G}>\mathrm{A}, \mathrm{c} .957+2 \mathrm{~T}>\mathrm{A}, \mathrm{c} .957+1 \mathrm{G}>\mathrm{T}$, c. $2235+1 \mathrm{G}>\mathrm{A}$

| Disease: Osteogenesis imperfecta, type III | Gene: C0L1A1 | Gene OMIM Number: 120150 | NM ID: NM_000088.3 | NO. of Variants:45 | Phenotype OMIM Number: 259420 |
| :---: | :---: | :---: | :---: | :---: | :---: |





| Disease: Osteogenesis imperfecta, type IV | Gene: C0L1A1 | Gene OMIM Number: 120150 | NM ID: NM_000088.3 | NO. of Variants:48 | Phenotype OMIM Number: 166220 |
| :---: | :---: | :---: | :---: | :---: | :---: |



 c. $642+5 G>A, c .299-2 A>G$

| Disease: Osteogenesis imperfecta, type I | Gene: C0L1A2 | Gene OMIM Number: 120160 | NM ID: NM_000089.3 | NO. of Variants:18 | type OMIM Number: 166200 |
| :---: | :---: | :---: | :---: | :---: | :---: |

 c. $3105+2 T>C, c .4060 C>T, c .577 G>A$

| Disease: Osteogenesis imperfecta, type II | Gene: C0L1A2 | Gene OMIM Number: 120160 | NM ID: NM_000089.3 | NO. of Variants:9 | Phenotype OMIM Number: 166210 |
| :---: | :---: | :---: | :---: | :---: | :---: |

Variant: c. $1863 \mathrm{G}>\mathrm{A}$, c. $1316 \mathrm{G}>\mathrm{A}, \mathrm{c} .1532 \mathrm{G}>\mathrm{A}, \mathrm{c} .1720-2 \mathrm{~A}>\mathrm{G}, \mathrm{c} .2673+1 \mathrm{G}>\mathrm{A}, \mathrm{c} .2944-2 \mathrm{~A}>\mathrm{G}, \mathrm{c} .1433 \mathrm{G}>\mathrm{A}, \mathrm{c} .2386 \mathrm{G}>\mathrm{A}, \mathrm{c} .3008 \mathrm{G}>\mathrm{A}$

| Disease: Osteogenesis imperfecta, type III | Gene: C0L1A2 | Gene OMIM Number: 120160 | NM ID: NM_000089.3 | NO. of Variants:12 | Phenotype OMIM Number: 259420 |
| :---: | :---: | :---: | :---: | :---: | :---: |

Variant: c.982G>A, c.1406G>C, c.3350A>G, c.1035_1035+1delTG, c.792+2T>A, c.1099G>T, c.1162G>C, c.1937G>T, c.1433G>A, c.2386G>A, c.3008G>A, c.3089G>C

| Disease: Osteogenesis imperfecta, type IV | Gene: C0L1A2 | Gene OMIM Number: 120160 | NM ID: NM_000089.3 | NO. of Variants:19 | Phenotype OMIM Number: 166220 |
| :---: | :---: | :---: | :---: | :---: | :---: |

 c. $982 \mathrm{G}>\mathrm{A}, \mathrm{c} .1406 \mathrm{G}>\mathrm{C}, \mathrm{c} .3350 \mathrm{~A}>\mathrm{G}, \mathrm{c} .433-1 \mathrm{G}>\mathrm{C}$

| Disease: Hyper-IgE recurrent infection syndrome | Gene: STAT3 | Gene OMIM Number: 102582 | NM ID: NM_139276.2 | NO. of Variants:45 | Phenotype OMIM Number: 147060 |
| :---: | :---: | :---: | :---: | :---: | :---: |


 $c .1151 T>G, c .1151 T>C, c .1145 G>A, c .1144 C>G, c .1144 C>T, c .1140-2 A>G, c .1139+1 G>T, c .1110-1 G>T, c .1110-2 A>G, c .1025 G>A, c .995 A>T, c .994 C>T$

| Disease: Stickler syndrome, type I | Gene: C0L2A1 | Gene OMIM Number: 120140 | NM ID: NM_001844.4 | NO.of Variants:157 | Phenotype OMIM Number: 108300 |
| :---: | :---: | :---: | :---: | :---: | :---: |










 c. $655-1 \mathrm{G}>\mathrm{C}, \mathrm{c} .654+1 \mathrm{G}>\mathrm{A}, \mathrm{c} .625 \mathrm{C}>\mathrm{T}, \mathrm{c} .556 \mathrm{G}>\mathrm{T}, \mathrm{c} .430-1 \mathrm{G}>\mathrm{C}, \mathrm{c} .342+1 \mathrm{G}>\mathrm{A}, \mathrm{c} .293-1 \mathrm{G}>\mathrm{A}, \mathrm{c} .258 \mathrm{C}>\mathrm{A}, \mathrm{c} .192 \mathrm{C}>\mathrm{A}, \mathrm{c} .123 \mathrm{~T}>\mathrm{A}, \mathrm{c} .3 \mathrm{G}>\mathrm{T}, \mathrm{c} .1962 \mathrm{C}>\mathrm{T}$

| Disease: Stickler syndrome, type II | Gene: C0L11A1 | Gene OMIM Number: 120280 | NM ID: NM_001854.3 | NO. of Variants:17 | Phenotype OMIM Number: 604841 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Variant: $c .3168+5 G>A, \quad c .3816+2 \_3816+3 i n s T, \quad c .3816+1 G>A, \quad c .3168+1 G>T, \quad c .1630-2 d e l A, \quad c .2808+1 G>C, \quad c .2043+1 G>T, \quad c .1845+1 G>A, \quad c .1191 d e l T, \quad c .4554+1 G>A, \quad c .4519-2 A>G, \quad c .3978+1 G>A$, c. $3762+1 G>A, c .2043+1 G>A, c .1900-1 G>A, c .1681 C>T, c .1245+1 G>A$ |  |  |  |  |  |
| Disease: Pfeiffer syndrome | Gene: FGFR2 | Gene OMIM Number: 176943 | NM ID: NM_000141.4 | NO.of Variants:8 | Phenotype OMIM Number: 101600 |
| Variant: c.1988G>A, c.1198A>G, c.1922A>G, c.1646A>C, c.1024T>G, c.940-1G>A, c.940-2A>T, c.870G>C |  |  |  |  |  |
| Disease: Pfeiffer syndrome | Gene: FGFR1 | Gene OMIM Number: 136350 | NM ID: FGFR1 | NO.of Variants:1 | Phenotype OMIM Number: 101600 |
| Variant: c.755C>G |  |  |  |  |  |
| Disease: Jackson-Weiss syndrome | Gene: FGFR2 | Gene OMIM Number: 176943 | NM ID: NM_000141.4 | NO. of Variants:2 | Phenotype OMIM Number: 123150 |
| Variant: c.958_959delAC, c.1040C>G |  |  |  |  |  |
| Disease: Hutchinson-Gilford progeria | Gene: LMNA | Gene OMIM Number: 150330 | NM ID: NM_170707.3 | NO. of Variants:1 | Phenotype OMIM Number: 176670 |
| Variant: c.1824C>T |  |  |  |  |  |
| Disease: Crouzon syndrome with acanthosis nigricans | Gene: FGFR3 | Gene OMIM Number: 134934 | NM ID: NM_000142.4 | NO. of Variants:1 | Phenotype OMIM Number: 612247 |
| Variant: c.1172C>A |  |  |  |  |  |
| Disease: Crouzon syndrome | Gene: FGFR2 | Gene OMIM Number: 176943 | NM ID: NM_000141.4 | NO. of Variants:19 | Phenotype OMIM Number: 123500 |
| Variant: c. 1024 T>C, c. $1021 A>C, c .812 G>T, c .1040 C>G, c .2032 A>G, c .184 T>C, c .1851 G>C, c .1084+1 G>T, c .817 \_818 i n s G A G, c .1645 A>C, c .1084+2 T>C, c .1084+1 G>A, c .1061 C>G, c .1025 G>A, c .1024 T>A$, c. $923 \mathrm{~A}>\mathrm{G}, \mathrm{c} .866 \mathrm{~A}>\mathrm{C}$, , c.863T>A, c.799T>C |  |  |  |  |  |
| Disease: Costello syndrome | Gene: HRAS | Gene OMIM Number: 190020 | NM ID: NM_005343.2 | NO.of Variants:4 | Phenotype OMIM Number: 218040 |
| Variant: c.34G>A, c.350A>G, c.436G>A, c.34G>T |  |  |  |  |  |
| Disease: CHARGE syndrome | Gene: CHD7 | Gene OMIM Number: 608892 | NM ID: NM_017780.3 | NO.of Variants:560 | Phenotype OMIM Number: 214800 |
| Variant: c.718deIC, c.1925deIA, c.2990deIT, c.3572_3573deIAA, c.3937deIT, c.4634delT, c.7524deIC, c.160delC, c.257deIC, c.285deIG, c.284_285deIGG, c.595deIT, c.627deIG, c.674deIC, c.729deIC, c.780deIC, c.791_792deITC, c.865deIA, c.1044deIC, c.1168_1169insTT, c.1319deIC, c.1374_1375deITC, c.1388deIG, c.1544delC, c.1678deIG, c.1683deIC, c.1686deIT, c.1793deIA, c.2034deIA, c.2118delA, c.2180deIT, c.2566deIA, c.2585deIA, c.2620deIG, c.2669_2670deITT, c.2735delC, c.2859delG, c.2908delG, c.3165deIC, c.3318deIA, c.3322deIC, c.3339delG, c.3359deIG, c.3377_3378insT, c.3548delA, c.3693delA, c.3807deIT, c.4087deIC, c.4171deIC, c.4183deIC, c.4226_4227deITG, c.4253delA, c.4257delC, c.4270delA, c.4402delG, c.4517_4518insG, c.4527deIT, c.4656_4657insT, c.4686delC, c.5054deIT, c.5097_5098insA, c.5250delA, c.5499_5500deIAA, c.5574delA, c.5588delC, c.5680_5681deIAG, c.5776deIA, c.5800delC, c.5932deIG, c.5991deIT, c.6018delA, c.6044deIT, c.6224delG, c.6304delG, c.6320_6321deIAC, c.6393deIT, c.6405_6406delAG, c.6461deIC, c.6667delG, c.6705deIA, c.6998delC, c.7027delC, c.7180deIC, c.7184_7185deICT, c.7219deIA, c.7231delG, c.7320delA, c.7384deIT, c.7400deIT, c.7577deIT, c.7650_7651deIGA, c.7782deIG, c.7895deIA, c.7921_7922deITT, c.8279deIA, c.8459_8460insCT, c.8491deIT, c.8507deIC, c.8565delA, c.327_328insC, c.900_901insC, c.1247_1248insG, c.1730_1731insA, c.1865_1866insG, c.1925_1926insA, c.1936_1937insAA, c.1953_1954insA, c.1989_1990insAA, c.1989_1990insA, c.2438_2439insA, c.2571_2572insA,c.2577_2578insT, c.2689_2690insC, c.3122_3123insT, c.3573_3574insA, c.3728_3729insA, c.4112_4113insT, c.4667_4668insC, c.4723_4724insG, c.4850_4851insG, c.5069_5070insC, c.5332_5333insC, c.5564_5565insC, $\mathrm{c} .5636 \_5637 \mathrm{insA}, \mathrm{c} .5910 \_5911 \mathrm{insA}, \mathrm{c} .6018 \_6019 \mathrm{insA}, \mathrm{c} .6169 \_6170 \mathrm{insC}, \mathrm{c} .6857 \_6858 \mathrm{insG}, \mathrm{c} .7227 \_7228 \mathrm{insT}, \mathrm{c} .7593 \_7594 \mathrm{insG}, \mathrm{c} .7655 \_7656 \mathrm{insC}, \mathrm{c} .2096 \mathrm{G}>\mathrm{A}, \mathrm{c} .2219 \mathrm{~A}>\mathrm{G}, \mathrm{c} .2613 \mathrm{G}>\mathrm{T}, \mathrm{c} .2957+5 \mathrm{G}>\mathrm{A}$, c. $3202-3 T>G, c .3378+5 G>C$, c. $3952 T>C, c .4353+3 A>G, c .4406 A>G, c .4644+5 G>A, c .5050+3 A>T, c .5390 G>T, c .5405-17 G>A, c .5405-7 G>A, c .5534 G>A, c .6103+5 G>C, c .6271 T>C, c .6857 G>C, c .7165-$ $4 A>G, c .8077-10 T>A, c .232 C>T, c .934 C>T, c .1714 C>T, c .6272 G>A, c .282 d e I T, c .3209 d e I T, c .3490 C>T, c .3526 C>T, c .5210+2 T>C, c .5405-2 A>G, c .6243 C>A, c .6892 C>T, c .77 \_78 d e l A A, ~ c .219 d u p T, c .222 d e I G, ~$ c.235A>T, c.317delA, c.360delC, c.378C>A, c.635deIA, c.669_670insG, c.781deIT, c.785delC, c.799G>T, c.808delG, c.921_922deIAG, c.959_960delAG, c.964_965delTT, c.1141_1142delAT, c.1152delA, c.1295deIA, c.1528deIC, c.1665+1G>C, c.1683_1684deICT, c.1740deIA, c.1918deIG, c.2049delG, c.2145deIC, c.2157deIA, c.2236deIC, c.2238delG, c.2238+2T>A, c.2244_2245deIAC, c.2362C>T, c.24431delG, c.2464G>T, c.2490C>A, c.2499-2A>C, c.2517delG, c.2706_2707deITC, c.2739deIT, c.2829delG, c.2836-2A>G, c.2886T>G, c.2905_2906delAG, c.2916_2917delGT, c.2966delG, c.3023_3024delAT, c.3138deIT, c.3177T>G, c.3336delC, c.3514_3515delGA, c.3640C>T, c.3734delT, c.3750delG, c.4012_4013delGG, c.4203_4204deITA, c.4295_4296deITG, c.4354-1G>A, c.4361_4362delAG, c.4393delC, c.4424delA, c.4645-1G>C, c.4665deIT, c.4731delA, c.4862G>A, c.5051-1G>A, |  |  |  |  |  |





















 c. $8055 \mathrm{G}>\mathrm{A}, \mathrm{c} .8077-.1 \mathrm{G}>\mathrm{A}, \mathrm{c} .8093 \mathrm{C}>\mathrm{A}, \mathrm{c} .8356 \mathrm{G}>\mathrm{T}, \mathrm{c} .8682 \_8683 \mathrm{insT}, \mathrm{c} .8737 \mathrm{dupC}, \mathrm{c} .8956 \_8957 \mathrm{insA}, \mathrm{c} .469 \mathrm{C}>\mathrm{T}$

| Disease: Apert syndrome | Gene: FGFR2 | Gene OMIM Number: 176943 | NM ID: NM_000141.4 | NO.of Variants:2 | e OMIM Number: 10120 |
| :---: | :---: | :---: | :---: | :---: | :---: |

sease: Apert syndrome
Gene: FGFR2 Gene OMIM Number: 176943
NM ID: NM_000141.4
NO. of Variants:2
Phenotype OMIM Number: 101200
Variant: c.940-2A>G, c.758C>G

