

\\ \\ \\ medicinis romel i dargi aris orientirebul i rogorc avadmyofis, ise misi sagvartomos Seswavl aze?

\\ \\ citogenetika;

\\ \\ genomika;

\\ \\ samedicino genetika;

\\ \\ evgenika

\\ \\ \\ romel i meTodi waroadgens pirvel da mniSvnel ovan safexurs nebi smieri daavadebis anal izisTvis?

\\ \\ oj axis anamnezi;

\\ \\ citogenetikuri kvl eva;

\\ \\ ul trasonografiul i kvl eva;

\\ \\ dnm-is mol ekul uri anal izi.

\\ \\ \\ romel i proeqtis saSual ebiT gaxda SesaZl ebel i adami anis dnm-is srul i Tanamimdevrobis dadgena?

\\ \\ adami anis genomis;

\\ \\ dnm-is mol ekul uri anal izis;

\\ \\ citogenetikuri anal izis;

\\ \\ kartirebis meTodiT.

\\ \\ \\ ra ewodeba saxebis genetikur informacias?

\\ \\ genotipi;

\\ \\ fenotipi;

\\ \\ genomis;

\\ \\ kariotipi

\\ \\ \\ samedicino praqtikaSi gamoyenebis mizniT genetikis romel i dargi Seiswavl is genis eqspresiaze kontrol s?

\\ \\ citogenetika;

\\ \\ radiaciul i genetika;

\\ \\ evgenika;

\\ \\ genomuri medicina

\\ \\ \\ praqtikul medicinaSi gamoyenebis mizniT genetikis romel i dargi Seiswavl is genisa da garemos urTierTqmedebas?

\\ \\ genomuri medicina;

\\ \\ biomedicina;

\\ \\ Terapiul i kl onireba;

\\ \\ mol ekul uri genetika

\\ \\ \\ ramdeni struqturul i geni funqcionirebs adami anis genomSi?

\\ \\ 1000;

\\ \\ 5000;

\\ \\ 25000;

\\ \\ 45000-50000

\\ \\ \\ ra gansazRvavs adami anis organizmis funqcionirebisatvis saWi ro metabol izmisa da reproduqciis procesebs?

\\ \\ birTvul i dnm;

\\ \\ 5000 struqturul i geni;

\\ \\ birTvul i da mitoqondriul i dnm;

\\ \\ mitoqondriul i dnm.

\\ \\ ra ewodeba birTvis struqturul komponents, romel Sic uj redis da organizmis memkvidreobiTi Tvi sebeb ia kodi rebul i?

\\ \\ tel omera;

\\ \\ birTvaki;

\\ \\ qromosoma;

\\ \\ kariopl azma

\\ \\ ra ewodeba saxebisTvis damaxasiaTebel qromosomaTa kompl eqts, gansazRvrul i ricxviT da morfol ogi iT?

\\ \\ genotipi;

\\ \\ genokopia;

\\ \\ fenokopia;

\\ \\ kariotipi

\\ \\ ra ewodeba qromosomaSi genis l okal izaciis saits (adgil s)?

\\ \\ qromosomul i ruka;

\\ \\ l okusi;

\\ \\ egzoni;

\\ \\ maryu Ji

\\ \\ qromosomaSi romel struqtur ebs axasiaTeb s zustad gansazRvrul i TanamimdevrobiT ganl ageba?

\\ \\ genebs;

\\ \\ transl ocirebul fragmenteb s;

\\ \\ inserciul el ementeb s;

\\ \\ transpozonebs.

\\ \\ genetikis romel i dargis ganviTarebis safuZvel i gaxda adamianis normal uri qromosomul i kompl eqtis dadgena?

\\ \\ farmakogenetikis;

\\ \\ citogenetikis;

\\ \\ mol ekul uri genetikis;

\\ \\ simsi vni s genetikis.

\\ \\ klinikuri genetikis kvl evis romel i meTodiT aris SesaZl ebel i somatur uj redebSi warmoSobil i qromosomul i cvl il ebeb is aRmoCena?

\\ \\ dnm-is anal iziT;

\\ \\ kartirebiT;

\\ \\ sauzern-bl otingiT;

\\ \\ citogenetikuriT.

\\ \\ ra ewodeba orive sqesis individebis struqturul ad identur qromosomebs?

\\ \\ heteroqromosoma;

\\ \\ izoqromosoma;

\\ \\ markerul i qromosoma;

\\ \\ autosoma.

\\ \\ ra ewodeba wyvil , morfol ogi urad msgavs qromosomas?

\\ \\ markerul i;

\\ \\ autosoma;

\\ \\ dicentrul i;

\\ \\ homol ogi uri.

\\ \\ ra ewodeba homol ogiuri qromosomebis identur I okusebSi ganl agebul genebs?

\\ al el ebi;

\\ \\ geni regul atori;

\\ \\ struqturul i genebi;

\\ \\ modifikatori.

\\ \\ ra ewodeba homol ogiuri qromosomebis identur I okusSi ganl agebul erTi da igive genis msgavs an mcired gansxvavebul formebs?

\\ al el i;

\\ \\ mul tial el i;

\\ \\ geni modifikatori;

\\ \\ geni regul atrori.

\\ \\ CamoTvl il Tagan romel ia genis makodirebel i ubani?

\\ \\ introni;

\\ \\ egzoni;

\\ \\ kodoni;

\\ \\ antikodoni.

\\ \\ ra ewodeba genis aramakodirebel ubans?

\\ \\ kodoni;

\\ \\ egzoni;

\\ \\ introni;

\\ \\ antikodoni.

\\ \\ CamoTvl il Tagan romel i ar aris genis normal uri eqspresiis regul atori?

\\ \\ enhanseri;

\\ \\ sail enseri;

\\ \\ I okusis makontrol ebel i ubani;

\\ \\ "kepi".

\\ \\ CamoTvl il Tagan romel i ar aris genis normal uri eqspresiis regul atori?

\\ \\ sail enseri;

\\ \\ enhanseri;

\\ \\ "pol i-A" kudi;

\\ \\ I okusis makontrol ebel i ubani.

\\ \\ CamoTvl il Tagan rogori raodenobiT aris warmodgenil i fsevdogenebi adami anis genomSi?

\\ \\ mcire;

\\ \\ gausazRvrel i;

\\ \\ didi;

\\ \\ gaurkvevel i.

\\ \\ CamoTvl il Tagan romel i gziT Camoyal ibda procesirebul i fsevdogenebi?

\\ \\ evol uciis Sedegad;

\\ \\ transl okaciiT;

\\ \\ retrotranspoziciiT;

\\ \\ wertil ovani mutaciebiT.

\\ \\ CamoTvl il Tagan romel monakveTebS Sei cavS procesi rebul i fsevdogenebi?
\\ \\ antikodonebs;
\\ \\ intronebs;
\\ \\ egzonebs;
\\ \\ enhanserebs.

\\ \\ CamoTvl il Tagan egzonebis garda romel monakveTebS Sei cavS araprocesi rebul i fsevdogenebi?
\\ \\ antikodonebs;
\\ \\ intronebs;
\\ \\ enhanserebs;
\\ \\ sail enserrebs.

\\ \\ CamoTvl il Tagan romel i Zafia dnm-is "antisens-Zafi"
\\ \\ transkribirebadi;
\\ \\ aratranskribirebadi;
\\ \\ transl irebul i;
\\ \\ aratransl irebul i.

\\ \\ CamoTvl il Tagan romel i Zafia dnm-is "sens-Zafi"
\\ \\ transkribirebadi;
\\ \\ aratranskribirebadi;
\\ \\ transl irebul i;
\\ \\ aratransl irebul i.

\\ \\ romel i nukl eotidebi miekuTvneba purinebis j gufs?
\\ \\ adenini, Timini;
\\ \\ Timini, citozini, uracil i;
\\ \\ uracil i, guanini;
\\ \\ adenini, guanini

\\ \\ romel i nukl eotidebi miekuTvneba pirimidinebis j gufs?
\\ \\ adenini, Timini, uracil i;
\\ \\ Timini, citozini, uracil i;
\\ \\ uracil i, guanini, citozini;
\\ \\ guanini, Timini, uracil i.

\\ \\ dnm-is pol inukl eotiduri Zafis sigrZe sxvadasxva qromosomaSi gansxvavebul ia, ramdeni f.w. fargl ebSi varirebs misi zoma?
\\ \\ 50ml n-dan 250 ml n f.w.-mde
\\ \\ 15 ml n-dan 100 ml n f.w.-mde;
\\ \\ 10 ml n 20 ml n f.w.-mde;
\\ \\ 20 ml n-dan 430 ml n f.w.-mde

\\ \\ dnm-is mol ekulis romel i Tviseba iZl eva dazianebul i j aWvis Seucdoml ad aRdgenis saSual ebas?
\\ \\ antiparal el uroba;
\\ \\ kompl ementoba;
\\ \\ orZafianoba;
\\ \\ mesameul i struqtura.

\\ \\ histonuri cil ebis oqtamers, romel zedac dnm-is daaxl oebi T 120 f.w. zomis monakveTia daxveul i ewodeba:
\\ \\ I inkeri;
\\ \\ speiseri;

\\ qromatidi;
\\ nukl eosoma.

\\ \\ CamoTvl il idan romel i histonuri cil ebi monawil eoben oqtameris warmoqmnaSi?

\\ H₁, H₂A, H₃B, H₄;
\\ H₂A, H₂B, H₃B, H₄;
\\ H₂A, H₂B, H₃, H₄;
\\ H₁, H₂A, H₂B, H₄.

\\ \\ ra ewodeba msxvil da special izebul histonebs da maT modifikaciebs, roml ebsac SeuZl iaT Caenacvl on H3 da H2A histonebs da genomur dnm-s am adgil ebSi specifikuri Tvisebebi mianiWon?

\\ nukl eosoma;
\\ qromatidi;
\\ histonuri oqtameri;
\\ histonuri kodi.

\\ \\ CamoTvl il idan ras gansazRvravs histonuri kodi?

\\ dnm-is kompaqtizacias;
\\ qromosomis qcevas;
\\ qromosomis segregacias;
\\ repl ikacias.

\\ \\ CamoTvl il idan ra procesebSi monawil eobs histonuri kodi?

\\ genis eqspresiaSi;
\\ qromosomis qcevaSi;
\\ segregaciaSi;
\\ transl okaciaSi.

\\ \\ ra cvl il ebaa mosal odnel i nukl eosomis im ubanSi, roml is histonuri kodic Seicvl eba special izebul i histonebiT?

\\ dnm-is struqturis;
\\ genis eqspresiis;
\\ dnm-is repl ikaciis;
\\ genis struqturis.

\\ \\ CamoTvl il idan romel i faqtori moqmedebs genis eqspresiaze da Sesabamisad fenotipze, magram ar cvl is dnm-is struqturas?

\\ radiaciul i;
\\ epigenetikuri;
\\ mutaciuri;
\\ agregaciul i.

\\ \\ CamoTvl il idan romel ia qromatinis organizaciis umciresi struqturul i erTeul i?

\\ nukl eosoma;
\\ cil ebis RerZi;
\\ sol enoidis maryuJi;
\\ histonuri kodi.

\\ \\ romel i struqtura warmoqmnis interfazul qromatins?

\\ cil ebis RerZi;
\\ nukl eosomuri Zafi;

\\ nukl eosomuri fibril a;
\\ sol enoid.

\\ \\ interfazul i qromatinis romel i struqtura warmoadgens genis repl ikaciis da transkripciis funqciur erTeul s?

\\ sol enoidi;

\\ maryuji;

\\ nukl eosoma;

\\ histonuri kodi.

\\ \\ romel i tandemuri Tanamimdevroba aris mniSvnel ovani qromosomTa swor segregaciaSi mitozis da meiozis dros?

\\ dinamikuri;

\\ al fa-satel ituri;

\\ speiserul i;

\\ Alu-oj axi.

\\ \\ romel i tandemuri Tanamimdevroba monawil eobs adamianis yvel a qromosomis centromeris struqturaSi?

\\ dinamikuri;

\\ al fa-satel ituri;

\\ speiserul i;

\\ Alu-oj axi

\\ \\ ganmeorebadi dnm-is romel Tanamimdevrobebs ar gaaCniaT genomSi garkveul i l okalizacia?

\\ tel omerul s;

\\ satel itebs;

\\ dispersiul s;

\\ tandemurs.

\\ \\ CamoTvl il idan romel i daavadebis gamomwvevi mizezi aris araTanabari krosingoveri Alu oj axis Tanamimdevrobebs Soris?

\\ kisturi fibrozis;

\\ oj axuri hiperqol esterinemiis;

\\ Tei-saqsis;

\\ kunTovani distrofiis.

\\ \\ CamoTvl il idan romel i meqanizmiT axorciel eben ganmeorebadi dnm-is Tanamimdevrobebi genomur dnm-Si inserciis Sedegad funqcionirebadi genebis inaqtivacias?

\\ retrotranspoziciit;

\\ transl okaciiT;

\\ inversiit;

\\ araTanabari segregaciiT.

\\ \\ CamoTvl il idan qromosomis romel i ubani marTavs uj redis sasicocxl o cikl s da misi fazebis xangrZl ivobas?

\\ centromeri;

\\ sakontrol o ubani;

\\ tel omeri;

\\ kinetoqori.

\\ \\ CamoTvl il idan qromosomis romel i ubani akontrol ebs dnm-is repl ikacias, mikromil akebis qsel is warmoqmnas da mikromil akebis dakavSirebas qromosomebTan?

\\ centromerul i;
\\ sakontrol o;
\\ tel omel uri;
\\ qromosomis q mxari.

\\ \\ CamoTvl il Tagan ra process uzrunvel yofs uj redul i cikl is makontrol ebel i ubani reparaciul i sistemis bl okirebis dros?

\\ gayofis;
\\ mikromil akebis daSl is;
\\ repl ikaciis;
\\ apoptozis.

\\ \\ romel i ubani uzrunvel yofs qromosomis struqturebis mTI ianobis SenarCunebas mitozis da meiozis dros?

\\ centromeri;
\\ mxari;
\\ Tanamgzavri struqtura;
\\ tel omeri.

\\ \\ qromosomis romel i monakveTi asrul ebs "biol ogiuri saatis" funqcias?

\\ centromeri;
\\ tel omeri;
\\ kinetoqori;
\\ qromatidi.

\\ \\ romel ubanSi ukavSirdeba erTmaneTs erTi qromosomis SigniT arsebul i ori qromatidi?

\\ tel omeris;
\\ centromeris;
\\ beta-satel itis;
\\ bival entis.

\\ \\ ra struqturas warmoqmni centromeri specifukur cil ebTan dakavSirebis Sedegad?

\\ al fa-satel itur ubans;
\\ kinetoqors;
\\ tel omers;
\\ qiazmas

\\ \\ qromosomaTa ra raodenoba miReba normal uri meiozuri gayofis Sedegad miRebul gametebSi?

\\ dipl oiduri;
\\ tripl oiduri;
\\ hapl oiduri;
\\ pol ipl oiduri.

\\ \\ qromosomaTa ra raodenoba aris ganayofierebul i kvercxuj redis mitozuri gayofis Sedegad warmoqmniL uj redebSi?

\\ dipl oiduri;
\\ tripl oiduri;
\\ hapl oiduri;
\\ pol ipl oiduri.

\\ \\ CamoTvl il Tagan spermatozoidis ra raodenoba monawil eobs kvercxuj redis ganayofierebaSi?

\\ mraval i;

\\ erTi;
\\\\ sami;
\\\\ xuTi.

\\\\\\ CamoTvl il Tagan ramdeni fuZeTa-wyvil is sigrZisaa LINE oj axis warmomadgenl ebi?

\\\\ or kb-mde;
\\ eqvskb-mde;
\\\\ erT kb-mde;
\\\\ sam kb-mde.

\\\\\\ uj redis sasicocxl o cikl is romel fazaSi mimdinareobs qromatinis superspiral izacia?

\\\\ sinTezis;
\\\\ profazis;
\\ metafazis;
\\ tel ofazis.

\\\\\\ uj redis sasicocxl o cikl is romel i faza aris xel sayrel i qromosomebis anal izisaTvis?

\\\\ sinTezis;
\\\\ anafazis;
\\ metafazis;
\\ tel ofazis.

\\\\\\ ZiriTadad interfazis romel stadiaSi aris mosal odnel i dnm-is dazianebs didi al baToba?

\\ G₁;
\\ G₀;
\\ S;
\\ G₂

\\\\\\ CamoTvl il idan romel i meqanizmi uzrunvel yofs dazianebul i genomis mqone uj redebis el iminacias?

\\ apoptozi;
\\ reparacia;
\\ repl ikacia;
\\ regeneracia.

\\\\\\ ra periods moicavs sxvadasxva tipis uj redebis sasicocxl o cikl is xangrZl ivoba?

\\ ramdenime saaTi an Tve;
\\ 16-24 saaTi;
\\ 30-40 saaTi;
\\ 1-2 saaTi.

\\\\\\ romel i mol ekul uri meqanizmi udevs safuZvl ad identuri genomis mqone uj redebis warmoqmnas?

\\ repl ikacia-reparacia;
\\ reparacia – mutacia;
\\ repl ikacia-mutacia;
\\ segregacia – reparacia.

\\\\\\ romel i procesi uzrunvel yofs uj redul doneze genomuri dnm-is mowesrigebul ganawil ebas Svil eul uj redebs Soris?

\\ TiTistaras meqanizmi;

- \\ repl ikacia;
- \\ reparacia;
- \\ transl acia.

\\ \\ CamoTval eT Svil eul uj redebSi genomuri dnm-is mowesrigebul segregaciaSi monawil e sistemebi:

- \\ TiTistara, centromeri, tel omeri;
- \\ TiTistara, tel omeri, l izosoma;
- \\ centromeri, qromatini;
- \\ qromatini, tel omeri, TiTistara.

\\ \\ romel i ubniT arian erTmaneTTan dakavSirebul i erT qromosomaSi l okal izebul i Svil eul i qromatidebi?

- \\ tel omeriT, l inkeriT;
- \\ centromeriT;
- \\ P-mxriT;
- \\ Q-mxriT

\\ \\ romel i mol ekul uri meqanizmi uzrunvel yofs erT qromosomaSi l okal izebul i ori qromatidis identurobas?

- \\ naxevradkonservatul i repl ikacia;
- \\ konservatul i repl ikacia;
- \\ posttranskripciul i procesingi;
- \\ segregacia.

\\ \\ memkvidrul i masal is romel i donisTvis aris damaxasiaTebel i segmenturi dubl ikaciebi?

- \\ genis;
- \\ tripl etis;
- \\ tel omeris;
- \\ qromosomis.

\\ \\ romel diferencirebul uj redebs SeuZl iaT aradayofadi Go fazidan sinTezis fazaSi gadasvl a?

- \\ neironebs;
- \\ l eikocitebs;
- \\ eriTrocitebs;
- \\ hepatocitebs.

\\ \\ ra gansazRvravs mitozis cal keul i fazebis xangrZl ivobas?

- \\ makontrol ebel i ubani;
- \\ mikromil akebis qsel i;
- \\ centromeris ubani;
- \\ tel omeri da kinetoqori.

\\ \\ dnm-is repl ikaciis sizustes, mikromil akebis awyobas da maT dakavSirebas qromosomasTan gansazRvravs:

- \\ mitozis makontrol ebel i ubani;
- \\ mikromil akebis qsel i;
- \\ centromeris ubani;
- \\ tel omerebi.

\\ \\ CamoTvl il Tagan romel i procesi mimdinareobs birTvSi?

- \\ aminmJavebis dakavSireba satransporto rnm-Tan;

\\ posttransl aciuri procesingi;
\\ peptiduri bmebis warmoqmna aminmJavebs Soris;
\\ posttranskrifciul i procesingi.

\\ \\ CamoTvl il Tagan romel i procesi mimdinareobs uj redis birTvSi?
\\ transl acia;
\\ posttransl aciuri procesingi;
\\ transkrifcia;
\\ aminmJavebis dakavSireba satransporto rnm-Tan.

\\ \\ CamoTvl il Tagan romel i procesi mimdinareobs uj redis birTvSi?
\\ rnm-procesingi;
\\ transl acia;
\\ posttransl aciuri procesingi;
\\ aminmJavebis dakavSireba satransporto rnm-Tan.

\\ \\ CamoTvl il Tagan romel i procesi mimdinareobs uj redis birTvSi?
\\ transl acia;
\\ rnm-spl aisingi;
\\ posttransl aciuri procesingi;
\\ aminmJavebis dakavSireba satransporto rnm-Tan.

\\ \\ CamoTvl il Tagan romel i procesi mimdinareobs uj redis ci topl azmaSi?
\\ transkrifcia;
\\ rnm-procesingi;
\\ aminmJavebis dakavSireba satransporto rnm-Tan;
\\ rnm-spl aisingi.

\\ \\ CamoTvl il Tagan romel i procesi mimdinareobs uj redis ci topl azmaSi?
\\ transkrifcia;
\\ transl acia;
\\ rnm-spl aisingi;
\\ rnm-procesingi.

\\ \\ romel informaciul mol ekul ebs Soris kavSirs uzrunvel yofs rnm?
\\ dnm da rnm;
\\ dnm da trnm;
\\ dnm da cil a;
\\ cil a da rnm.

\\ \\ ra ewodeba genis el ementarul informaciul da struqturul erTeul s?
\\ tripl eti;
\\ introni;
\\ antikodoni;
\\ promotori

\\ \\ CamoTvl il idan romel i struqtura monawil eobs genis eqspresiis regul aciaSi?
\\ egzoni;
\\ introni;
\\ antikodoni;
\\ enhanseri.

\\ \\ CamoTvl il idan romel ia genis eqspresiis maregul irebel i Tanami mdevroba?
\\ egzoni;

\\ introni;
\\ genetikuri kodi;
\\ sail enseri.

\\ \\ CamoTvl il idan romel i Tanamimdevroba monawil eobs genis eqspresiis regul aciaSi?

\\ egzoni;
\\ introni;
\\ genetikuri kodi;
\\ I okusis makontrol ebel i ubani.

\\ \\ CamoTvl il idan romel i ubnebi gvxxvdeba genis struqturul nawil Si?

\\ enhanseri da promotori;
\\ promotori da sail enseri;
\\ promotori da egzoni;
\\ egzoni da introni.

\\ \\ CamoTvl il idan genis romel i ubnis informaciaa warmodgenil i pol ipeptidis saxiT?

\\ intronis;
\\ enhanseris;
\\ egzonis;
\\ sail enseris.

\\ \\ CamoTvl il idan adamianis romel i genis Semadgenl obaSi gvxxvdeba intronebi daaxl oebiT 99%-iani sixSiriT?

\\ hemogl obinis;
\\ heqsozami nidazas;
\\ distrofinis;
\\ insul inis.

\\ \\ ra ewodeba i-rnm-Si Caweril i informaciis dekodirebas?

\\ transkripcia;
\\ el ongacia;
\\ iniciacia;
\\ transl acia.

\\ \\ genis romel i ubani Seicavs transkripciis dawyebaze pasuxismgebel nukl eotidTa Tanmimdevrobebs?

\\ egzoni;
\\ enhanseri;
\\ promotori;
\\ sail enseri.

\\ \\ CamoTvl il Tagan romel nivTierebas emateba qimiuri "kepi"?

\\ rnm-is pirvel ad transkrifts;
\\ t-rnm-s;
\\ r-rnm-s;
\\ pol ipeptids.

\\ \\ CamoTvl il Tagan rodis emateba rnm-s qimiuri "kepi"?

\\ transl aciis dros;
\\ spl aisingis dros;
\\ procesingis bol os;
\\ transkripciis Semdeg.

\\ \\ CamoTvl il Tagan romel i aminmJavebi kodirdeba unikal uri erTaderTi kodoniT?

- \\ al anini da arginini;
- \\ cisteini da gl utamini;
- \\ meTionini da triftofani;
- \\ serini da l izini.

\\ \\ CamoTvl il Tagan ra saxis cvl il ebebs iwvevs CAT- boqsis romel ime el ementis mutacia traskrifciis dros?

- \\ mkveTr daqveiTebras;
- \\ mkveTr amaRI ebas;
- \\ mkveTr aCqarebas;
- \\ mkveTr SeCerebas.

\\ \\ CamoTvl il Tagan CAT-boqsi traskrifciis sastarto wertil idan ramdeni nukl eotiduri wyvil iT aris daSorebul i?

- \\ ramdenime erTeul i;
- \\ ramdenime aTeul i;
- \\ ramdenime aseul i;
- \\ ramdenime aTaseul i.

\\ \\ CamoTvl il Tagan rogor icvl eba al ternatiul i spl aisingiT adamianis genomis 25000 genSi Semaval i informacia?

- \\ mcirdeba mniSvnel ovnad;
- \\ izrdeba mniSvnel ovnad;
- \\ mcirdeba umniSvnel od;
- \\ izrdeba umniSvnel od.

\\ \\ CamoTvl il Tagan ra gziT xorciel deba rnm-is pirvel adi transkriptidan momwifebul i rnm-is warmoqmna?

- \\ egzonebis el iminaciiT;
- \\ egzonebis SeerTebiT;
- \\ spl aisingis gareSe;
- \\ procesingis gareSe.

\\ \\ CamoTvl il Tagan ra gziT xorciel deba rnm-is pirvel adi transkriptidan momwifebul i rnm-is warmoqmna?

- \\ procesingis Sedegad;
- \\ egzonebis el iminaciiT;
- \\ intronebis SeerTebiT;
- \\ spl aisingis gareSe.

\\ \\ CamoTvl il Tagan ra gziT xorciel deba rnm-is pirvel adi transkriptidan momwifebul i rnm-is warmoqmna?

- \\ intronebis el iminaciiT;
- \\ egzonebis el iminaciiT;
- \\ spl aisingis gareSe;
- \\ procesingis gareSe.

\\ \\ CamoTvl il Tagan romel i procesi ar xdeba somaturi rekonstruirebis dros?

- \\ dnm-is garkveul i Tanamimdevrobekis amoWra;
- \\ amoWriil i nawil ebis Casma dnm-is sxva ubanSi;
- \\ rnm-spl aisingi da procesingis;
- \\ uj redebSi genebis xel axal i awyoba.

\\ \\ CamoTvl il Tagan romel i procesi mimdinareobs somaturi
rekonstruirebis dros?
\\ \\ rnm-procesingi;
\\ \\ rnm-spl aisingi;
\\ \\ genebis xel axal i awyoba;
\\ \\ posttransl aciuri procesingi.

\\ \\ CamoTvl il Tagan romel i procesebiT aris ganpirobebul i antisxeul ebis
mraval ferozneba?
\\ \\ rnm-procesingiT;
\\ \\ somaturi rekonstruirebiT;
\\ \\ rnm-spl aisingi;
\\ \\ transl aciiT.

\\ \\ CamoTvl il Tagan, rogor moqmedeben transkripciaze enhanserebi?
iwveven procesis:
\\ \\ inicierebas;
\\ \\ gaZl ierebas;
\\ \\ Senel ebas;
\\ \\ inhibierebas.

\\ \\ CamoTvl il Tagan ra Tanamimdevroba SeiZl eba iyos l okal izebul i
transkripciiis sastarto wertil idan orive (5' an 3') mxares?
\\ \\ promotori;
\\ \\ enhanseri;
\\ \\ TATA-bl oki;
\\ \\ praimer i.

\\ \\ rnm-spl aisingisagan gansxvavebiT somaturi rekonstruirebis dros
CamoTvl il Tagan dnm-is romel i monakvetebis amoWra xdeba?
\\ \\ egzonebis;
\\ \\ intronebis;
\\ \\ genebis segmentebis;
\\ \\ promotorul i Tanmimdevrobeb i s.

\\ \\ CamoTvl il Tagan romel nivTiereba ganicdis procesings?
\\ \\ pirvel adi rnm;
\\ \\ momwifebul i rnm;
\\ \\ t-rnm;
\\ \\ r-rnm.

\\ \\ CamoTvl il Tagan romel i nivTiereba ganicdis posttransl aciur
procesings?
\\ \\ cil a;
\\ \\ pirvel adi rnm;
\\ \\ momwifebul i rnm;
\\ \\ t-rnm.

\\ \\ CamoTvl il Tagan ramden struqturul gens Sei cavs adamiani s genomi?
\\ \\ 10 000;
\\ \\ 15 000;
\\ \\ 20 000;
\\ \\ 25 000.

\\ \\ CamoTvl il Tagan romel i ganmarteba Seesabameba individis qromosomaTa nakrebs garkveul i ricxviTa da morfol ogiiT?

\\ \\ genotipi;

\\ \\ genomi;

\\ \\ kariotipi;

\\ \\ fenotipi.

\\ \\ CamoTvl il Tagan ras warmoadgenen germinaciul i uj redebi?

\\ \\ sasqeso uj redebs;

\\ \\ somatur uj redebs;

\\ \\ uj redul xazs saidanac viTardeba sasqeso uj redebi;

\\ \\ kvercxuj redebs.

Q\\ \\ qromatinis pirvel adi struqturul i erTeul i nukl eosoma Sedgeba dnm-sa da Hhistonuri cil ebis mier warmoqmnil i birTvisagan. CamoTvl il Tagan romel iHhistonuri cil ebi monawil eoben nukl eosomis warmoqmnaSi?

\\ \\ H1, H2A, H2B, H4;

\\ \\ H1, H2B, H3, H4;

\\ \\ H2A, H2B, H3, H4;

\\ \\ H1, H2A, H2B, H3.

AAA

\\ \\ qromatinis pirvel adi struqturul i erTeul i nukl eosoma Sedgeba dnm-sa da gul is Hhistonebis kompl eqsisagan. CamoTvl il Tagan romel iHhistonuri cil ebi ar monawil eoben nukl eosomis warmoqmnaSi:

\\ \\ H2A;

\\ \\ H3;

\\ \\ H1;

\\ \\ H₄.

\\ \\ CamoTvl il Tagan romel ia genomur dnm-Si 1 ml n-mde nukl eotidur fuZeTa wyvil is Sesabamisi erTeul i?

\\ \\ 1 mikrobasi;

\\ \\ 1 megabasi;

\\ \\ 1 kil obasi;

\\ \\ 1 mil ibasi.

\\ \\ CamoTvl il Tagan romel ia genomur dnm-Si aTasi nukl eotiduri fuZeTa wyvil is Sesabamisi erTeul i?

\\ \\ 1 kil obasi;

\\ \\ 1 megabasi;

\\ \\ 1 mikrobasi;

\\ \\ 1 mil ibasi.

\\ \\ CamoTvl il Tagan dnm-is ramden nukl eotidur fuZeTa wyvil s Seesabameba erTi megabasi?

\\ \\ 100;

\\ \\ 1 000;

\\ \\ 10 000;

\\ \\ 1 000 000.

\\ \\ CamoTvl il Tagan dnm-is ramden nukl eotidur fuZeTa wyvil s Seesabameba erTi kil obasi?

\\ \\ 100;

\\ \\ 1 000;

\\ \\ 10 000;

\\ \\ 1 000 000.

\\ \\ CamoTvl il Tagan ramdeni nukl eotiduri wvyl is sigrZisaa mitoqondriul i dnm?

\\ \\ 30 000;

\\ \\ 20 000;

\\ \\ 19 000;

\\ \\ 16 000.

\\ \\ CamoTvl il Tagan mitoqondriul i dnm-is sigrZes ramdeni kil obasi Seesabameba?

\\ \\ 16;

\\ \\ 19;

\\ \\ 20;

\\ \\ 30.

\\ \\ CamoTvl il Tagan romel i ricxobrivi maCvenebel i Seesabameba mitoqondriul i genebis raodenobas?

\\ \\ 37;

\\ \\ 50;

\\ \\ 67;

\\ \\ 150.

\\ \\ \\ CamoTvl il Tagan ramdeni fuZe-wvyl is sigrZisaa Alu oj axis ganmeorebadi el ementebi?

\\ \\ samasi;

\\ \\ oTxasi;

\\ \\ orasi;

\\ \\ xuTasi.

\\ \\ \\ CamoTvl il Tagan ra ar Sedis qromosomis Semadgenl obaSi?

\\ \\ grZel i mxari;

\\ \\ mokl e mxari;

\\ \\ centomera;

\\ \\ centriol i.

\\ \\ \\ CamoTvl il Tagan ramden j gufad iyofa adamiyanis qromosomebi zomisa da centromeris mdebareobis mixedviT?

\\ \\ 7;

\\ \\ 8;

\\ \\ 9;

\\ \\ 10.

\\ \\ \\ CamoTvl il Tagan romel i bmebis saSual ebiT ukavSirdebian erTmaneTs dnm-is erT j aWvSi nukl eotidebi?

\\ \\ wyal baduriT;

\\ \\ Saqar-fosfaturiT;

\\ \\ hidrofoburiT;

\\ \\ peptiduriT.

\\ \\ \\ CamoTvl il Tagan romel i bmebiT ukavSirdeba erTmaneTs dnm-is ori j aWvi?

\\ \\ hidrofoburiT;

\\ \\ wyal baduriT;

\\ \\ hidrofil uriT;

\\ peptiduriT.

\\ \\ CamoTvl il Tagan rogoriFformisaaQqromatinis organizaciis ZiriTadi erTeul i sol enoidi?

\\ mrgval i;

\\ spiral uri;

\\ cil indrul i;

\\ maryuJis.

\\ \\ CamoTvl il idan ra procesis Sedegad aris miRebul i procesirebul i fsevdogeni?

\\ procesingiT;

\\ transl okaciiT;

\\ transversiiT;

\\ retrotranspoziciiT

\\ \\ CamoTvl il idan romel i polimeri warmoadgens procesirebul i fsevdogenis matricas?

\\ pirvel adi rnm;

\\ ribosomul i rnm;

\\ momwifebul i rnm;

\\ mikro-rnm.

\\ \\ CamoTvl il idan ra TaviseburebebiT xasiaTdebian procesirebul i fsevdogenebi?

\\ rCebian imave qromosomaSi;

\\ ar rCebian TavianT qromosomaSi;

\\ l okal izdebian funqcionirebad genTan;

\\ cvl ian funqcionirebad gens.

\\ \\ funqcionirebadi genis romel i nawil i aris dakargul i procesirebul fsevdogenSi?

\\ promotori;

\\ terminal uri ubani;

\\ egzoni;

\\ introni

\\ \\ CamoTvl il idan genis romel i ubnis cvl il ebis Sedegad warmoiqunnen arapocesirebul i fsevdogenebi?

\\ Alu;

\\ LINE;

\\ makodirebel i;

\\ aramakodirebel i.

\\ \\ ra raodenobiT gvxdaba genomSi ama Tu im funqcionirebadi genis msgavsi fsevdogeni?

\\ iSviaTad;

\\ sakmaod xSirad;

\\ 5%-iani sixSiriT;

\\ 3%-iani sixSiriT

\\ \\ erTdroul ad romel procesze axdens gavl enas genis eqspresiis mTavari faqtorebi: promotori, regul atorul i el ementebi da spesifikuri cil ebi?

\\ transl aciaze;

\\ el ongaciaze;

\\ terminaciaze;

\\ transkripciaze.

\\ \\ CamoTvl il idan struqturul i genis romel saitebs Seicavs pre-i-rnm?

\\ \\ egzonebs;

\\ \\ intronebs;

\\ \\ promotors da egzons;

\\ \\ egzonebs da intronebs

\\ \\ CamoTvl il idan romel i procesiT mTavrdeba irnm-is momwifeba?

\\ \\ kepirebiT;

\\ \\ transkripciiT;

\\ \\ spl aisingiT;

\\ \\ pol iadenil aciIT.

\\ \\ CamoTvl il idan ra parametrebiT Seesabameba irnm-i dnm-is 5' 3' anu "Sinaarsian" Zafs?

\\ \\ konformaciiT;

\\ \\ fuZeTa TanamimdevrobiT;

\\ \\ promotoriT;

\\ \\ TaTa boqsiT.

\\ \\ CamoTvl il idan ra parametrebiT Seesabameba irnm dnm-is 5' 3' anu "Sinaarsian" Zafs?

\\ \\ konformaciiT;

\\ \\ pol arobiT;

\\ \\ promotoriT

\\ \\ TaTa boqsiT

\\ \\ romel i aminomJavas kodoni aris cil is sinTezis dawyebis sainiciacio kodoni?

\\ \\ prol inis;

\\ \\ serinis;

\\ \\ fenil al aninis;

\\ \\ meTioninis

\\ \\ romel i mol ekul ebi uzrunvel yofen informaciul kavSirs i-rnm-is kodonsa da aminomJavas Soris?

\\ \\ dnm-pol imeraza;

\\ \\ rnm- pol imeraza;

\\ \\ t-rnm;

\\ \\ r-rnm.

\\ \\ transl aciis procesSi mzardi pol ipeptiduri jaWvis romel j gufs ukavSirdeba Sesabamisi aminomJava?

\\ \\ radikal s;

\\ \\ karboqsil is;

\\ \\ aminoj gufs;

\\ \\ wyal bads.

\\ \\ genis eqspresiis romel etapze formirdeba cil is samganzomil ebiani struqtura?

\\ \\ transkripcii;

\\ \\ posttranskripciu i procesingis;

\\ \\ spl aisingis;

\\ \\ posttransl aciuri procesingis.

- \\ \\ genis eqspresiis romel etapze emateba cil is mol ekul as fosfati, naxSirwyal i an sxva naerTebi?
- \\ \\ transkripciis;
- \\ \\ spl aisingis;
- \\ \\ terminaciis;
- \\ \\ posttransl aciuri procesingis.

- \\ \\ \\ genis eqspresiis romel etapze xdeba cil is didi mol ekul is "daWra" an arasaWi ro aminomJavebis Camocil eba?
- \\ \\ transkripciis;
- \\ \\ el ongaciis;
- \\ \\ terminaciis;
- \\ \\ posttransl aciuri procesingis.

- \\ \\ \\ CamoTvl il idan romel mol ekul ebs "mihyavT" cil ebi uj redSi maTi l okal izaciis adgil as?
- \\ \\ radikal ebs;
- \\ \\ l ipidebs;
- \\ \\ adeninis j aWvebs;
- \\ \\ aminoterminal ur mol ekul ebs.

- \\ \\ \\ promotoris romel i Tanamimdevroba gansazRvravs -gl obinis transkripciis sastarto adgil s?
- \\ \\ tandemuri;
- \\ \\ Alu;
- \\ \\ TaTa-boqsi;
- \\ \\ pribnovis bl oki.

- \\ \\ \\ CamoTvl il idan promotoris romel i Tanamimdevrobis mutacia iwevs transkripciis donis mkveTr daqveiTebas?
- \\ \\ Alu;
- \\ \\ tandemuri;
- \\ \\ TaTa-boqsis;
- \\ \\ TaTa da caaT boqsis.

- \\ \\ \\ ra Tvisebis gamo arian dnm-is modifikaciis ZiriTadi samizneebi citoziniT mdidari ubnebi?
- \\ \\ intensiuri karboqsil irebis;
- \\ \\ dezamini rebis;
- \\ \\ intensiuri meTil irebis gamo;
- \\ \\ oqsi genaciis.

- \\ \\ \\ promotoris garda romel i saitia mniSvnel ovani transkripciis procesisaTvis?
- \\ \\ Alu;
- \\ \\ LINE;
- \\ \\ enhanser i;
- \\ \\ Tgaag.

- \\ \\ \\ ZiriTadad romel Tanmimdevrobebs Seicavs qsovil specifikuri genis promotori?
- \\ \\ TaTa;
- \\ \\ ccg;
- \\ \\ cgg;

\\ ccg

\\ \\ romel i segmenti aaqtiurebs qsovil specifikuri genis eqspresias?

\\ \\ I okusis makontrol ebel i ubani;

\\ \\ pribnovis boqsi;

\\ \\ enhanseri;

\\ \\ sail enseri

\\ \\ CamoTvl il idan romel i struqtura iwvevs qsovil specifikuri genebis gaaqtiurebas?

\\ \\ sail enseri;

\\ \\ promotori;

\\ \\ cg;

\\ \\ enhanseri.

\\ \\ romel i meqanizmi uzrunvel yofs pre-i-rnm-dan i-rnm-is miRebas?

\\ \\ procesingi;

\\ \\ kepireba;

\\ \\ spl aisingi;

\\ \\ pol iadenil acia

\\ \\ romel i mol ekul is misaRebad aris aucil ebel i modifikaciaTa seria – kepireba, spl aisingi pol adenil acia?

\\ \\ matricul i dnm-is;

\\ \\ t-rnm-is;

\\ \\ momwifebul i-rnm-is;

\\ \\ pre-i-rnm-is

\\ \\ adamianis cil ebis raodenoba aRemateba maTi makodirebel i genebis raodenobas CamoTvl il idan romel i meqanizmiT aixsneba es faqti?

\\ \\ redupl ikaciiT;

\\ \\ reparaciiT;

\\ \\ rekombinaciiT;

\\ \\ al ternatiul i spl aisingiT

\\ \\ adamianis genebis raodenobas aRemateba cil is raodenoba. rogor aixsneba es faqti?

\\ \\ redupl ikaciiT;

\\ \\ reparaciiT;

\\ \\ rekombinaciiT;

\\ \\ somaturi rekonstruirebiT

\\ \\ ra ganapirobebs imunogl obul inis genebis mier antisxeul ebis mraval ferovani speqtris sinTezs?

\\ \\ spl aisingi;

\\ \\ somaturi rekonstruireba;

\\ \\ procesingi;

\\ \\ reparacia

\\ \\ CamoTvl il idan ra fuqncias asrul ebs T-uj redis receptori?

\\ \\ zrdis stabil urobas;

\\ \\ axangrZl ivebs sicocxl isunarianobas;

\\ \\ amoicnobs antigens;

\\ \\ aqveiTebs aqtivobas

\\ B-uj redebis dnm-Si 1000-jeer ufro xSiria spontanuri wertil ovani mutaciebi. rogor moqmedeben isini antisxeul is Tvisebebeze?

\\ aqveiteben aqtivobas;

\\ zrdian afinurobas antigenis mimaRT;

\\ aqveiteben afinurobas;

\\ Seecvl ebaT funqcia

\\ T-uj redis receptori warmoadgens transmembranul cil as. cil ebis romel kl ass miekuTvneba igi?

\\ Lipoproteins;

\\ martiv cil as;

\\ metaloproteins;

\\ gl ikoproteins.

\\ rogor moqmedebs normaluri genis funqciaze promotoris TanamimdevrobaSi warmoqmnili mutacia?

\\ aZl ierebs cil is sintezi;

\\ asintezebis cil as;

\\ aferxebis cil is sintezis;

\\ cvl is procesings.

\\ ra cvl il ebas gamoiwevs normaluri genis iniciaciis saitis kodonis mutacia?

\\ gaaZl ierebs cil is sintezis;

\\ daasintezebis mutantur cil is;

\\ Seferxebis normalur transkripcia;

\\ Secvl is procesings.

\\ ra cvl il ebis gamoiwevs genis makodirebeli Tanmimdevrobemis del eciis tipis mutacia?

\\ sintezis gaZl ierebas;

\\ transkripcii Seferxebas;

\\ aTvl is CarCos Secvl as;

\\ pol iadenilaciis bl okirebas

\\ ras gamoiwevs normaluri genis stop-kodonSi warmoqmnili mutacia?

\\ spl aisings;

\\ procesings;

\\ transkripciiis gagrZel ebas;

\\ transkripciiis SeCerebas

\\ CamoTvl il idan romel ia normaluri genis funqciadakargul i asl i?

\\ geni-modifikatori;

\\ geni-supresori;

\\ geni-regulatori;

\\ fsevdogeni.

\\ qvemoT CamoTvl ili romeli genis mutacia ar gamoiwevs adamianis daavadebas?

\\ geni-modifikatori;

\\ geni-supresori;

\\ geni-regulatori;

\\ fsevdogenis

\\ \\ memkvidrul i masal is romel i donis cvl il ebas iwvevs anomal iuri spl aisingi?

\\ \\ dnm;

\\ \\ genis;

\\ \\ genetikuri kodis;

\\ \\ i-rnm-is.

\\ \\ mutaciis romel i forma ar cvl is genomur dnm-s?

\\ \\ insercia;

\\ \\ transl okacia;

\\ \\ anomal uri spl aisingi;

\\ \\ inversia

\\ \\ CamoTvl il idan romel i uj redebisTvis aris damaxasiaTebel i unikal uri Tavisebureba somaturi rekonstruqcia?

\\ \\ eriTroci tebisTvis;

\\ \\ monocitebisTvis;

\\ \\ I imfocitebisTvis;

\\ \\ hepatocitebisTvis

\\ \\ romel i procesis dros xdeba dnm-is segmentebis nawil is el iminacia da darCenil i segmentebis rekombinaciis gziT "momwi febul i" genebis warmoqmna?

\\ \\ procesingis;

\\ \\ transl okaciis;

\\ \\ reparaciis;

\\ \\ somaturi rekonstruirebis

\\ \\ CamoTvl il idan romel ia qromosomis ubnebi, romel Tac aqvT kondensaciis dabal i xarisxi da aqtiuri transkripciis unari?

\\ \\ konstituciuri heteroqromatini;

\\ \\ fakul taturi heteroqromatini;

\\ \\ heteroqromatini;

\\ \\ euqromatini

\\ \\ CamoTvl il idan ra ewodeba morfol ogiurad msgavs qromosomebs, roml ebic koniugaciaSi monawil eoben?

\\ \\ heteroqromosoma;

\\ \\ arahomol ogiuri;

\\ \\ homol ogiuri;

\\ \\ derivatul i

\\ \\ CamoTvl il idan romel ia memkvidrul i masal is mdgradobis garanti da genetikuri homeostazis safuZveli?

\\ \\ repl ikacia;

\\ \\ denaturacia;

\\ \\ reparacia;

\\ \\ dubl ikacia

\\ \\ CamoTvl il idan qimiuri organizaciis mixedviT romel nivTierebas mi ekuTvneba qromosoma?

\\ \\ I ipoproteins;

\\ \\ nukl einis mJavas;

\\ \\ nukl eoproteins;

\\ \\ gl ikoproteins

- \\ \\ romel i preparati gamoiyenes 1956 wel s adami anis kariotipis qromosomaTa zusti ricxvis dasadgenad?
- \\ \\ citoarsenini;
- \\ \\ fl uorescentul i saRebavebi;
- \\ \\ quanakrini;
- \\ \\ kol xicini

- \\ \\ CamoTvl il idan dnm-is mol ekul aSi vis mier iqna dadgenil i azotovan fuZeTa specifikuri Sewyvil ebis principi?
- \\ \\ miSuris;
- \\ \\ oCoas;
- \\ \\ nirenbergis;
- \\ \\ krikis da uotsonis

- \\ \\ aRniSneT romel ia genis eqspresiis ribosomul i cikl is faza?
- \\ \\ transkripcia;
- \\ \\ procesingi;
- \\ \\ el ongacia;
- \\ \\ pol iadenil acia

- \\ \\ CamoTvl il idan adami anis romel i uj redi ar Seicavs 46 qromosomas?
- \\ \\ neironi;
- \\ \\ l imfociti;
- \\ \\ kvercxuj redi;
- \\ \\ monociti

- \\ \\ CamoTvl il idan romel i meqanizmi ganapirobebs genotipis stabil urobas?
- \\ \\ repl ikacia;
- \\ \\ denaturacia;
- \\ \\ reparacia;
- \\ \\ adaptacia

- \\ \\ CamoTvl il idan ra Tvisebas aniWebs dnm-s misi j aWvebis antiparal el uri ganl ageba?
- \\ \\ transl aciis;
- \\ \\ el ongaciis;
- \\ \\ Termostabil urobis;
- \\ \\ cval ebadobis.

- \\ \\ aRniSneT CamoTvl il idan mol ekul ur doneze romel i meqanizmi uzrunvel yofs memkvidrul i masal is gadacemas TaobebSi?
- \\ \\ reparacia;
- \\ \\ transl acia;
- \\ \\ repl ikacia;
- \\ \\ koni ugacia

- \\ \\ CamoTvl il idan romel i Tviseba uzrunvel yofs dnm-Si kodirebul i informaciis erTeul an mraVal j er gamoyenebas?
- \\ \\ repl ikacia;
- \\ \\ rekombinacia;
- \\ \\ diskretul oba
- \\ \\ kompl ementaroba

- \\ \\ ra procesis Sedegad gadaecema informacia citopl azmas pol ipeptidur j aWvSi ami nomJavaTa Tanami mdevrobis Sesaxeb?
- \\ \\ transl aciis;

- \\ repl ikaciis;
- \\ procesingis;
- \\ transkripciis

\\ \\ ra ewodeba dnm-is Zafs, romel ic fermentisken 3' bol oTi aris mimarTul i?

- \\ "sens";
- \\ makodirebel i;
- \\ "antisens";
- \\ arakodogenuri

\\ \\ ra ewodeba dnm-is monakveTs, romel sac specificurad amoicnobs rnm-pol imeraza da ganl agebul ia sastarto kodonis win?

- \\ egzoni;
- \\ introni;
- \\ promotori;
- \\ sail enseri

\\ \\ CamoTvl il idan romel i pol imerisTvis aris damaxasiaTebel i kepireba, procesingi, spl aisingi, pol iadenil acia?

- \\ dnm;
- \\ mitogondriul i dnm;
- \\ i-rnm;
- \\ r-rnm

\\ \\ aRniSneT histonuri cil ebis ramden mol ekul as Seicavs nukl eosoma?

- \\ monomers;
- \\ dimers;
- \\ tetramers;
- \\ oqtamers

\\ \\ CamoTvl il idan ra ewodeba dnm-is monakveTs, romel ic aerTebis or nukl eosomas?

- \\ treil eri;
- \\ speiseri
- \\ kodoni;
- \\ antikodoni

\\ \\ CamoTvl il idan romel i warmoadgens qromosomebis identifikaciis ZiriTad safuZvel s?

- \\ zoma da centromeris mdebareoba;
- \\ diakinezis procesi;
- \\ segregaciis dro;
- \\ ganuridebl obis indeqsi.

\\ \\ citogenetikur l laboratoriaSi ZiriTadad bendirebis romel i meTodiT aris SesaZl ebel i individual uri qromosomis homol ogiuri wyvil is amocnoba?

- \\ Q bendirebis;
- \\ C bendirebis;
- \\ G bendirebis;
- \\ prometafazuri bendirebis.

\\ \\ G-bendirebis dros homol ogiuri qromosomis erTidaigive zol Si (bendSi) identuria:

\\ histonuri cil ebi raodenoba;
\\ fuZeTa wyvil ebi procentul i Tanafardoba;
\\ histonuri kodis struqtura;
\\ histonuri da arahistonuri cil ebi

\\ \\ G-bendirebis dros homol ogiuri qromosomis erTidaigive zol Si (bendSi)
identuria:

\\ ganmeorebadi dnm-is ganawil eba;
\\ histonuri cil ebi raodenoba;
\\ histonuri kodis struqtura;
\\ histonuri da arahistonuri cil ebi

\\ \\ CamoTvl il idan, bendirebis meTodis gamoyenebiT, risi advil ad dadgena
aris SesaZl ebel i?

\\ histonuri cil ebi raodenobis;
\\ histonuri kodis struqturis;
\\ histonuri da arahistonuri cil ebis;
\\ qromosomaTa struqturul i anomal iebis;

\\ \\ romel i anomal iebis dadgena aris SesaZl ebel i bendirebis meTodis
gamoyenebiT?

\\ qromosomaTa raodenobis;
\\ histonuri cil ebi raodenobis;
\\ histonuri kodis struqturis;
\\ histonuri da arahistonuri cil ebis

\\ \\ CamoTvl il Tagan homol ogiur qromosomebs Soris mimdinare romel i
procesi a krosingoveri?

\\ Serwyma;
\\ dacal kaveba;
\\ monakveTebis gacvl a;
\\ bival entebis warmoqmna.

\\ \\ adamianis uj redis birTvis 46 qromosomidan ramdeni wyvil i Seadgens
autosomas?

\\ 23;
\\ 21;
\\ 22;
\\ 20.

\\ \\ CamoTvl il Tagan meiozuri gayofis romel fazaSi mimdinareobs
krosingoveri?

\\ I profazaSi;
\\ II profazaSi;
\\ I anafazaSi;
\\ II anafazaSi.

\\ \\ CamoTvl il Tagan uj redis gayofis romel i saxea cnobil i
reduqciul i gayofis saxel wodebiT?

\\ II meiozuri;
\\ I meiozuri;

\\ mitozuri anafaza;
\\ mitozuri profaza.

\\ \\ CamoTvl il Tagan romel fazaSi xdeba dnm-is gaormageba?
\\ I meiozur gayofamde;
\\ II meiozur gayofamde;
\\ mitozis metafazaSi;
\\ mitozis profazaSi.

\\ \\ \\ CamoTvl il Tagan meiozis dros homol ogiur qromosomebs Soris
mimdinare romel process ewodeba krosingoveri?
\\ monakveTebis gacvl as;
\\ dacal kavebas;
\\ Serwymas;
\\ dawyvii ebas.

\\ \\ \\ CamoTvl il Tagan, meiozis dros homol ogiur warmoqmnaTa Soris
mimdinare romel process ewodeba koniugacia?
\\ monakveTebis gacvl as;
\\ dacal kavebas;
\\ daaxl ovebas mTel si grZeze;
\\ dawyvii ebas.

\\ \\ \\ homol ogiur qromosomebSi mimdinare procesebidan romel i SeiZl eba iyos
adamiansi raodenobrivi qromosomul i darRvevebis mizezi?
\\ meiozuri gauTisvel oba;
\\ koniugacia mitozis dros;
\\ koniugacia meiozis dros;
\\ krosingoveri.

\\ \\ \\ romel i procesisaTvis aris gansakuTrebiT mniSvnel ovani I meiozis dros
homol ogiuri qromosomebis urTierTCaxveva rekombinaciis garkveul
wertil ebSi?
\\ identifikaciisa da rekombinaciisaTvis;
\\ qromosomaTa segregaciisa da rekombinaciisaTvis;
\\ qromosomis mTI ianobis SenarCunebisaTvis da segregaciisaTvis;
\\ qromosomis identifikaciisa da replikaciisaTvis.

\\ \\ \\ riT gansxvavdeba II meiozis fazaSi myofi uj redi igive organizmis
somaturi mitozuri uj redisgan?
\\ citoplazmis mocul obiT;
\\ birtvakebis raodenobiT;
\\ zomiT;
\\ qromosomebis raodenobiT.

\\ \\ \\ ganvitarobis romel etapze ewyebaT meiozis pirveli stadiebi
mdedrobiTi sqesis individebs?
\\ bavsvobis;
\\ puberantul ;
\\ nayofis;
\\ dabadebis.

\\ \\ \\ rod is mTavrdeba meiozi mdedrobiTi sqesis individebSi?
\\ ganayofierebis Semdeg;
\\ ganayofierebamde;

\\ Cansaxovan periodSi;
\\ pubertatul periodSi.

\\ \\ CamoTvl il idan romel i daavadebis gamomwvevi mizezia homol ogiur gromosomebs Soris araTanabari krosingoveris Sedegad warmoqnil i del ecia?

\\ -Tal asemiis;
\\ kisturi fibrozis;
\\ al fa-Tal asemiis;
\\ fenil ketonuriis.

\\ \\ rod is gadadis oociti II meozis metafazur stadiaSi?

\\ \\ ovul aciamde;
\\ \\ ovul aciis ganmavl obaSi;
\\ \\ ovul aciis Semdeg;
\\ \\ ganayofierebis Semdeg

\\ \\ CamoTvl il idan romel struqturaSi amTavreben oocitebi II meozur gayofas?

\\ \\ fol ikul ebSi;
\\ \\ sakvercxesi;
\\ \\ primordial ur uj redebSi;
\\ \\ kvercxesaval Si.

\\ \\ rod is amTavreben oocitebi II meozur gayofas?

\\ \\ ovul aciisas;
\\ \\ ovul aciamde;
\\ \\ ganayofierebamde;
\\ \\ ganayofierebis Semdeg.

\\ \\ CamoTvl il idan romel ia arasrul fasovani oogenezit gamowveul i yvel aze gavr cel ebul i mutacia adami anSi?

\\ \\ del ecia;
\\ \\ transl okacia;
\\ \\ inversia;
\\ \\ gauTisvel oba.

\\ \\ ra tipis paTol ogia SeiZl eba ganviTardes eqstraembrional ur qsovil Si mitozuri gauTisvel obis Sedegad?

\\ \\ transl okacia;
\\ \\ insercia;
\\ \\ dubl ikacia;
\\ \\ mozaicizmi.

\\ \\ CamoTvl il idan ra tipis paTol ogia SeiZl eba ganviTardes pl acentaSi mitozuri gauTisvel obis Sedegad?

\\ \\ transl okacia;
\\ \\ insercia;
\\ \\ dubl ikacia;
\\ \\ mozaicizmi?

\\ \\ rogori iqneba adami anis oocitebis genotipi, Tu mas garkveul I okusSi aqvs ori A da a al el i?

\\ \\ mxol od A;
\\ \\ mxol od a;

\\ 50% al baTobiT A an a;

\\ 70% - A, 30% - a

\\ \\ rodis xdeba A da a al el ebis segregacia, Tu qromosomis I okussa da centromers Soris ar xdeba krosingoveri?

\\ I meiozSi;

\\ II meiozSi;

\\ mitozSi;

\\ amitozSi.

\\ \\ gansazRvreT CamoTvl il idan ra aris qromosomebis raodenobis darRvevis mTavari mizezi adamiანიSi?

\\ araTanabari krosingoveri;

\\ del ecia;

\\ dubl ikacia;

\\ gauTiSvel oba.

\\ \\ gansazRvreT ra gamoiwvevs genetikur mraVal ferovnebas, Tu gamovricxavT krosingovers?

\\ mutacia;

\\ repl ikacia;

\\ reparacia;

\\ transl acia.

\\ \\ ramdeni qromosoma da ramdeni qromatidi iqneba adamiანიs uj redSi I meiozuri gayofis Semdeg?

\\ 46 da 46;

\\ 23 da 23;

\\ 46 da 46;

\\ 23 da 46

\\ \\ ramdeni qromosoma da ramdeni qromatidi iqneba adamiანიs TiToeul uj redSi II meiozis bol os?

\\ 46 da 46;

\\ 23 da 23;

\\ 46 da 46;

\\ 23 da 46

\\ \\ gansazRvreT pirvel , me-13, me-18, me-19, 22-e qromosomebSi momxdari Tanabari zomis darRvevebidan romel s eqneba meti kl inikuri efeqti?

\\ 18 da 19;

\\ 22 da 13;

\\ 19 da pirvel i;

\\ 18 da 19.

\\ \\ rodis aRdgeba uj redSi tipiuri metafazuri qromosomis orqromatidiani struqtura?

\\ prometafazaSi;

\\ ganayofirebis dros;

\\ sinTezis fazaSi;

\\ tel ofazis Semdeg.

\\ \\ CamoTvl il idan ra qmnis safuZvel s uj redis cil ebis mraVal ferovani funqciis Sesrul ebisTvis?

\\ genuri qsel is kombinirebul i buneba;

\\ metabol izmis procesebis mraVal ferovneba;

\\ kodirebul i funqciebis sirtul e;
\\ informaciul i resursebis kompl eqsuroba

\\ CamoTvl il idan sad mimdinareobs uj redis funqciis gansazRvrisaTvis genomSi kodirebul i informaciis gamoyeneba:

\\ ribosomebSi;
\\ endopl azmur badeze;
\\ mitoqondriaSi;
\\ citopl azmaSi

\\ \\ CamoTvl il idan romel i gayofis Semdeg iqneba uj redSi 23 qromosoma da 46 qromatidi?

\\ mitozis;
\\ I meiozuri gayofis;
\\ II meiozuri gayofis;
\\ amitozis.

\\ \\ CamoTvl il Tagan romel i gayofis Semdeg iqneba TiToeul uj redSi 23 qromosoma da 23 qromatidi?

\\ mitozis;
\\ I meiozis;
\\ II meiozis;
\\ mitozis profazis.

\\ \\ CamoTvl il Tagan romel ia specifikuri fermentis ukutranskriptazas saSual ebiT miRebul i sinTezuri dnm-i?

\\ zondi;
\\ praimeris;
\\ kompl ementarul i dnm;
\\ veqtori.

\\ \\ ra ewodeba ori kompl ementarul i erTZafiani nukl einis mJavis mol ekul ebidan erTi orZafiani mol ekul is miRebis process, roml is drosac erTZafiani mol ekul ebi fuZeTa dawyvil ebis wesis mixedviT warmoqmian qimiur bmebs A-T-Tan an G-C-Tan?

\\ restriqcia;
\\ hibridizacia;
\\ ligacia;
\\ amplifikacia.

\\ \\ CamoTvl il Tagan romel ia fosfodieTerul i bmebis formirebis procesi, roml is drosac fermenti erTmaneTTan akavSirebs dnm-is or orZafian mol ekul as?

\\ restriqcia;
\\ hibridizacia;
\\ ligacia;
\\ amplifikacia.

\\ \\ CamoTvl il Tagan romel i metodis gamoyenebis dros xdeba praimerebis wyvil s Soris l okal izebul i dnm-is fragmentis fermentul i amplifikacia?

\\ sauzern-bl otingis;
\\ polimerazul i j aWvuri reaqciis;
\\ kl onirebis;
\\ nozern-bl otingis.

\\ \\ CamoTvl il Tagan, mol ekul ur-genetikuri romel i kvl evis meTodis dros xdeba gel -el eqtroforezis Sedegad miRebul i rnm-is gadatana fil trze da misi Semdgomi hibridizacia specifikur zondebTan?

\\ nozern-bl otingis;
\\ sauzern-bl otingis;
\\ vestern-bl otingis;
\\ pol imerazul i j aWvuri reaqciis.

\\ \\ qvemoT CamoTvl il i mol ekul ur-genetikuri kvl evis romel i meTodis dros xdeba restriqciul i fermentebiT daWriil i dnm-is gel -el eqtroforezi da miRebul i dnm-is fraqciebis gadatana fil trze da maTi Semdgomi hibridizacia specifikur zondebTan?

\\ nozern-bl otingis;
\\ sauzern-bl otingis;
\\ vestern-bl otingis;
\\ pol imerazul i j aWvuri reaqciis.

\\ \\ \\ qvemoT CamoTvl il i mol ekul ur-genetikuri kvl evis romel i meTodis dros xdeba gel -el eqtroforezis Sedegad dacal kevebul i cil ebis gadatana fil trze da misi Semdgomi inkubacia antisxeul ebTan:

\\ nozern-bl otingis;
\\ sauzern-bl otingis;
\\ vestern-bl otingis;
\\ pol imerazul i j aWvuri reaqciis.

\\ \\ \\ ra ewodeba fermentebs, roml ebic amoicnoben specifikuri orZafiani dnm-is Tanamimdevrobebs da Wriian mas amocnobil saitebSi an mis Soriagl os?

\\ restriqciul i endonukl eaza;
\\ dnm pol imeraza;
\\ dnm l igaza;
\\ rnm pol imeraza.

\\ \\ CamoTvl il Tagan romel ia ol igonukl eotiduri wyvil i, romel ic gamoiyeneba dnm-is sinTezis dasawyebad PCR-reaqciaSi?

\\ pal indromi;
\\ praimer i;
\\ kompl ementarul i dnm;
\\ veqtori.

\\ \\ CamoTvl il Tagan romel ia dnm-is monakveTi, roml is nukl eotiduri Tanamimdevroba 5'-3' mimarTul ebiT wakiTxul saitSi erTnairia dnm-is orive ZafSi?

\\ zondi;
\\ praimer i;
\\ pal indromi;
\\ veqtori.

\\ \\ CamoTvl il Tagan romel ia dnm-is mol ekul is monakveTi, romel Sic kl onirebul ia sakvl evi geni an dnm-is fragmenti da miRebul rekombinantul mol ekul as SeuZl ia repl icireba garkveul maspinZel uj redSi:

\\ zondi;
\\ praimer i;
\\ pal indromi;
\\ veqtori.

\\ \\ CamoTvl il Tagan dnm-is mol ekul is romel i monakveTi SeiZl eba gamovi yenoT veqtorad?
\\ \\ zondi;
\\ \\ praimer i;
\\ \\ pal indromi;
\\ \\ pl azmi da.

\\ \\ romel ia veqtorSi kl onirebisaTvis saTanado sigrZis dnm-is fragmentebis kol eqcia, romel ic mi iReba Sesabamisi dnm-s daWris Sedegad restriqciul i fermentiT?
\\ \\ genomuri bibl ioTeka;
\\ \\ pl azmi debis bibl ioTeka;
\\ \\ veqtorebis bibl ioTeka;
\\ \\ kompl ementarul i dnm-is (k-dnm-is) bibl ioTeka.

\\ \\ CamoTvl il Tagan romel ia i-rnm-is popul aciis kompl ementarul i dnm-is asl ebis kol eqcia?
\\ \\ genomuri bibl ioTeka;
\\ \\ pl azmi debis bibl ioTeka;
\\ \\ veqtorebis bibl ioTeka;
\\ \\ kompl ementarul i dnm-is (k-dnm-is) bibl ioTeka.

\\ \\ CamoTvl il Tagan umetesad romel i meTodiT xdeba bibl ioTekebis skringi?
\\ \\ sauzern-bl otingiT;
\\ \\ seqvenirebiT;
\\ \\ pol imerazul i j aWvuri reaqci iT;
\\ \\ nukl einis mJavas hibridizaci iT.

\\ \\ CamoTvl il Tagan dnm-is mol ekul is romel i monakveTis gamoyenebaa yvel aze mosaxerxebel i erTi fuZis mutaciis deteqciisTvis?
\\ \\ sinTezuri ol igonukl eotiduri zondis
\\ \\ veqtoris;
\\ \\ pal indromis;
\\ \\ pl azmidis;

\\ \\ CamoTvl il Tagan romel i meTodis dros iyeneben fl uorescentul i saRebaviT moniSnul i zondebis hibridizacias dnm-Tan, rac gvaZl evs qromosomul i aberaciebis vizual izaciis saSual ebas?
\\ \\ sauzern-bl otingis;
\\ \\ fl uorescentul i in situ hibridizaciis (FISH);
\\ \\ PCR;
\\ \\ kl onirebis.

\\ \\ romel i meTodis dros gamoiyeneba 24 saxis zondi metafazuri qromosomebis SesaRebad:
\\ \\ sauzern bl otingis;
\\ \\ vestern bl otingis;
\\ \\ speqtrul i kariotipirebis;
\\ \\ pol imerazul i j aWvuri reaqcia.

\\ \\ CamoTvl il Tagan romel mol ekul ur-genetikuri kvl evis meTods iyeneben garkveul i dnm-is segmentis or sxvadasxva nimuSs Soris gansxvavebaTa gamovl enis mizniT, rac gul isxmobs maTSi Semaval i asl ebis raodenobisa da dozebis Sefasebas?

\\ sauzern-bl otings;
\\ fl uorescentul in situ hibridizacias (FISH);
\\ polimerazul j aWvur reacqias;
\\ SedarebiT genomur hibridizacias (CGH).

\\ \\ qvemoT CamoTvl il i romel i uj redebidan aris SesaZl ebel i dnm-is eqstracqia sadiagnostiko procedurebisTvis?

\\ kardiomiocitidan;
\\ bukal uri uj redebidan;
\\ Trombocitebidan;
\\ eriTrocitebidan.

\\ \\ CamoTvl il Tagan romel meTods iyeneben kunTis cil a distrofinis defeqtis gamovlenis da misi zomis gansazRvris mizniT?

\\ sauzern-bl otings;
\\ fl uorescentul in situ hibridizacias (FISH);
\\ polimerazul j aWvur reacqias;
\\ vestern-bl otings.

\\ \\ CamoTvl il Tagan romel meTods gamoiyenebT Tu gindaT SeafasoT distrofinis i-rnm-is Semcvel oba kunTis nimuSSi, romel ic aRebul ia DMD-is iol i formiT daavadebul i pacientisagan?

\\ nozern-bl otings;
\\ fl uorescentul in situ hibridizacias (FISH);
\\ polimerazul j aWvur reacqias;
\\ vestern-bl otings.

\\ \\ CamoTvl il Tagan romel meTods gamoiyenebT im mutaciebis deteqciisaTvis, roml ebic fuZeTa mcire ricxvs Seexeba?

\\ vestern-bl otings;
\\ seqvenirebas;
\\ polimerazul j aWvur reacqias;
\\ kl onirebas.

\\ \\ \\ specifikur maspinZel uj redSi kl onirebis unaris mqone dnm-is mol ekul a aris:

\\ CanarTi;
\\ oligonukl eotidi;
\\ veqtori;
\\ zondi.

\\ \\ \\ dnm, romel ic sinTezebul ia i-rnm-is matricidan ferment ukutranstriftazas moqmedebiT CamoTvl il Tagan aris

\\ kl oni;
\\ oligonukl eotidi;
\\ zondi;
\\ k-dnm.

\\ \\ \\ damoukidebl ad repl icirebad eqstraqromosomul dnm-is rgol ur mol ekul ebs baqteriaSi an safuarSi ewodeba

\\ pl azmi da;
\\ promotori;
\\ proteomi;
\\ praimer i.

\\\ meTods, romel ic xorciel deba rnm-is mol ekul ebis gansxvavebul i zomis
 fragmentebad dayofa ewodeba:
 \\\ CanarTi;
 \\\ ol igonukl eotidi;
 \\\ zondi;
 \\\ pl azmida.

\\\ meTods, romel ic axdens rnm-is mol ekul ebis deteqcias kompl imenturi
 dnm-is zondTan hibridizaciis gziT ewodeba
 \\\ sauzern-bl oti;
 \\\ vestern-bl oti;
 \\\ nozern-bl oti;
 \\\ mikroarei.

\\\ meTods, romel ic gamoiyeneba cil is deteqciisTvis ewodeba
 \\\ sauzern-bl otigi;
 \\\ nozern-bl otigi;
 \\\ mikroarei;
 \\\ vestern-bl otingi.

\\\ fil trs, romel zec gadaaqvT cil is mol ekul ebi gel -el eqtroforezis
 CamoTvl il Tagan ewodeba
 \\\ vestern-bl oti;
 \\\ nozern-bl oti;
 \\\ sauzern-bl oti;
 \\\ mikroarei.

\\\ praimerebis wyvil s Soris I okal izebul i dnm-is fragmentis fermentul
 ampl ifikacias CamoTvl il Tagan ewodeba
 \\\ sauzern-bl oti;
 \\\ mikroarei;
 \\\ pol imerazul i j aWvuri reaqcia;
 \\\ vestern-bl oti.

\\\ fermentebis, roml ebic amoicnoben specifiuri orZafiani dnm-is
 Tanmimdevrobebs da Wrian amocnobil saitebSi ewodeba
 \\\ l igazebi;
 \\\ pol imerazebi;
 \\\ restriqciul i endonukl eazebi;
 \\\ hel ikazebi.

\\\ kl onirebul dnm-is an rnm-is mol ekul as, romel ic moniSnul ia
 radiaqtiuri izotopebiT CamoTvl il Tagan ewodeba
 \\\ veqtori;
 \\\ pl azmida;
 \\\ praimer i;
 \\\ zondi.

\\\ CamoTvl il Tagan romel i fermenti monawil eobs k-dnm-is sinTezSi
 \\\ l igaza;
 \\\ hel ikaza;
 \\\ restriqciul i endonukl eaza;
 \\\ ukutransqtriptaza.

\\\ k-dnm CamoTvl il Tagan Seicavs
 \\\ rogorc egzonebs, ise intronebs;

\\ mxol od egzonebs;
\\ mxol od intronebs;
\\ pirvel adi rnm-is asl s.

\\ \\ CamoTvl il Tagan romel i mutaciebis aRmoCena SeiZl eba sauzern-
bl otingis saSual ebiT
\\ mcirericxovan fuZeTa del eciis;
\\ cal keul i fuZis cvl il ebis;
\\ ramdenime fuZis cvl il ebis;
\\ didi ubnebis del eciis an CanarTebis.

\\ \\ \\ CamoTvl il Tagan romel i mutaciebis aRmoCena SeiZl eba al el
specifikuri ol igonukl eotiduri zondebiT
\\ erTeul i an ramdenime fuZis cvl il ebis;
\\ didi ubnebis del eciiebis;
\\ didi ubnebis CanarTebis;
\\ yvel a maTganis.

\\ \\ \\ CamoTvl il Tagan romel ia dnm-is da rnm-is nimuSebis saanal izo
standartul i meTodi sxvadasxva profil is kvl eviT l aboratoriebsi
\\ sauzern-bl otingi;
\\ vestern-bl otingi;
\\ pol imerazul i j aWvuri reaqcia;
\\ nozern-bl otingi.

\\ \\ \\ sxvadasxva qromosomis fragmentebis Semcvel i aberaciul i qromosomebi
CamoTvl il Tagan advil ad ganirCeva
\\ fl uorescentul i in situ hibridizaciiT;
\\ seqvenirebis meTodiT;
\\ pol imerazul i j aWvuri reaqciiT;
\\ speqtrul i kariotipireba (SKY).

\\ \\ \\ erTeul i an ramdenime fuZis cvl il ebis aRmoCena CamoTvl il Tagan
SeiZl eba
\\ sauzern-bl otingiT;
\\ vestern-bl otingiT;
\\ al el specifikuri ol igonukl eotiduri zondebiT;
\\ nozern-bl otingiT.

\\ \\ \\ dnm-sdidi ubnebis del eciis an CanarTebis aRmoCena CamoTvl il Tagan
SeiZl eba
\\ sauzern-bl otingiT;
\\ vestern-bl otingiT;
\\ al el specifikuri ol igonukl eotiduri zondebiT;
\\ nozern-bl otingiT.

\\ \\ \\ ra upiratesoba gaaCnia pol imerazul j aWvur reaqcias nukl einmJavebis
saanal izo sxva meTodebTan SedarebiT
\\ swrafia;
\\ iafia;
\\ mgrZnobiare da nakl ebad pretenziul ia;
\\ iafi da swrafia.

\\ \\ romel i gansazRvreba Seesabameba erTi an wyvil i mutanturi al el iT gamowveul darRvevas?

\\ \\ mul tifaqtorul i;

\\ \\ monogenuri;

\\ \\ qromosomul i;

\\ \\ pol igenuri.

\\ \\ CamoTvl il Tagan, romel i Seesabameba genis al ternatiul formas?

\\ \\ araal el i;

\\ \\ kompaundi;

\\ \\ hemizigota;

\\ \\ al el i.

\\ \\ bevr gens gaaCnia erTi normal uri forma, romel ic individTa did umravl esobaSia gavrcel ebul i. CamoTvl il Tagan, romel i Seesabameba genis am formas?

\\ \\ mutanturi al el i;

\\ \\ hapl otipi;

\\ \\ vel uri tipi;

\\ \\ pol imorfizmi.

\\ \\ popul acia garkveul I okusSi atarebs or an met gansxvavebul al el s. CamoTvl il Tagan, romel i Seesabameba am ganmartebas?

\\ \\ homozigoturi;

\\ \\ heterozigoturi;

\\ \\ pol imorfizmi;

\\ \\ kompaundi.

\\ \\ CamoTvl il Tagan romel i definicia asaxavs genis mdebareobas qromosomaSi?

\\ \\ I okusi;

\\ \\ saiti;

\\ \\ promotori;

\\ \\ praimer i.

\\ \\ ra ewodeba I okusSi arsebul al el ebis nakrebs an I okusebis kl asters qromosomebSi?

\\ \\ vel uri tipi;

\\ \\ pol imorfizmi;

\\ \\ homozigota;

\\ \\ hapl otipi.

\\ \\ romel i ganmarteba Seesabameba al el ebis nakrebs, romel ic qmnis individis genetikur konstitucias?

\\ \\ fenotipi;

\\ \\ genotipi;

\\ \\ kompaundi;

\\ \\ heterozigota.

\\ \\ CamoTvl il Tagan, romel i ganmarteba Seesabameba individis genotipis gamovl inebas, romel ic mis morfol ogiur niSan-TvisebaSi aisaxeba?

\\ \\ heterozigota;

\\ \\ homozigota;

\\ \\ fenotipi;

\\ genotipi.

\\ \\ CamoTvl il Tagan, romel ia identur al el Ta wyvil is mqone individi?

\\ homozigoti;

\\ heterozigoti;

\\ hemizigoti;

\\ diheterozigoti

\\ \\ CamoTvl il Tagan, romel ia araidentur al el Ta wyvil is mqone individi?

\\ homozigoti;

\\ heterozigoti;

\\ hemizigoti;

\\ diheterozigoti

\\ \\ CamoTvl il Tagan, kompaund heterozigotas erTi da igive l okusSi mutantur al el Ta ra ricxvi gaaCnia?

\\ ori;

\\ sami;

\\ xuTi;

\\ rva.

\\ \\ ra ewodeba pirovnebas roml is mimaTac adgenen sagvar tomo nusxas?

\\ konsul taciis obieqti;

\\ probandi;

\\ sibsebi;

\\ mSobl ebi.

\\ \\ ra ewodeba pirovnebas, romel sac sWirdeba eqim-genetikosis rCeva?

\\ probandi;

\\ propoziti;

\\ gamosakvl evi piri;

\\ konsul taciis obieqti.

\\ \\ CamoTvl Tagan, ra ewodeba darRvevas, romel sac axl adwar moqni l i mutacia ganapirobebs?

\\ sporadul i;

\\ monogenuri;

\\ mul tifaqtorul i;

\\ pol igenuri.

\\ \\ CamoTvl il Tagan, romel i gansazRvreba Seesabameba ama Tu im genis raime al baTobiT gamovl enas?

\\ eqspresiul oba;

\\ pl eiotropia;

\\ penetrantoba;

\\ variabel uri eqspresiul oba.

\\ \\ CamoTvl il Tagan, romel i definicia Seesabameba fenotipuri niSnis gamovl enis xarisxs?

\\ penetrantoba;

\\ eqspresia;

\\ pl eiotropia;

\\ arasrul i penetrantoba.

\\ \\ CamoTvl il Tagan, ra faqtorebi vl indeba hantingtonis daavadebis SemTxvevaSi?

\\ variabel uri eqspresiul oba;
\\ asakze damokidebul i penetrantoba;
\\ arasrul i penetrantoba;
\\ arasrul i penetrantoba da cval ebadi eqspresiul oba.

\\ \\ CamoTvl il Tagan, ra faqtorebi vl indeba memkvidreobiT hemoqromatozis dros?

\\ arasrul i penetrantoba da cval ebadi eqspresiul oba;
\\ mxol od variabel uri eqspresiul oba;
\\ asakze damokidebul i penetrantoba;
\\ mxol od arasrul i penetrantoba.

\\ \\ CamoTvl il Tagan, heterogenurobis romel formas Seesabameba rodesac sxvadasxva saxis mutaciaa erTi da imave l okusSi ganapirobebs erTi da igive daavadebis gansxvavebul i an msgavsi fenotipis ganviTarebas?

\\ genetikuri;
\\ al el uri;
\\ l okusuri;
\\ fenotipuri.

\\ \\ sxvadasxva l okusSi sxvadasxva saxis mutaciit gamowveul erTi da igive daavadebebs?

\\ al el uri;
\\ genetikuri;
\\ l okusuri;
\\ fenotipuri.

\\ \\ romel organizmSi vl indeba autosomur-recesiul i fenotipi:

\\ homozigotebSi;
\\ heterozigotebSi;
\\ diheterozigotebSi
\\ hemizigotebSi.

\\ \\ rogori simZimit vl indeba sqesTan mimarTebaSi autosomur-recesiul i daavadeba?

\\ orive sqesi Tanabari riskis qveS imyofeba;
\\ ufro xSirad vl indeba qal ebSi;
\\ mamakacebi avaddebian gacil ebiT xSirad;
\\ qal ebi saerTod ar avaddebian.

\\ \\ zogierTi autosomur-recesiul i darRveva sqesiTaa ganpirobebul i, is mJRavndeba orive sqesi, magram gansxvavebul i simZimit. CamoTvl il Tagan, romel i autosomur-recesiul i daavadebaa, romel ic mamakacebSi ufro xSirad da mZimed vl indeba?

\\ hemoqromatozi;
\\ kisturi fibrozi;
\\ Tei-saqsis daavadeba;
\\ Tal asema.

\\ \\ CamoTvl il Tagan, romel ia yvel aze gavrcel ebul i autosomur-recesiul i daavadeba TeTrkani an bavSvebSi?

\\ fenil ketonuria;
\\ kisturi fibrozi;
\\ Tei-saqsis daavadeba;
\\ namgl iseburuj redovani anemia.

\\ \\ ra sixSiriT gamovl indeba or heterozigoturi niSnis matarebel i mSobl ebis STamomavl obaSi autosomur-recesiul i niSani?

\\ 4-dan 1 SemTxveva;

\\ \\ 4-dan 4 SemTxveva;

\\ \\ 4-dan 3 SemTxveva;

\\ \\ 4-dan 2 SemTxveva.

\\ \\ ra ewodeba axl o naTesaaur qorwinebas?

\\ \\ imprintingi;

\\ \\ inbridingi;

\\ \\ izol ati;

\\ \\ asortati.

\\ \\ memkvidreobis ra formasTan gvaqvs saqme, rodesac yovel daavadebul individs hyavs daavadebul i mSobel i?

\\ \\ autosomur-dominanturi;

\\ \\ autosomur-recesiul i;

\\ \\ X-SeWidul i recesiul i;

\\ \\ Y-Tan SeWidul i.

\\ \\ CamoTvl il Tagan, memkvidreobis ra formasTan gvaqvs saqme, rodesac mamrobiTi da mdedrobiTi sqesis individebs aqvT Tanabari SesaZl ebl oba memkvidreobiT gadascen Taviani fenotipi orive sqesis Svil ebs?

\\ \\ X-SeWidul i dominanturi;

\\ \\ autosomur-dominanturi;

\\ \\ X-SeWidul i recesiul i;

\\ \\ Y-Tan SeWidul i.

\\ \\ CamoTvl il Tagan, memkvidreobis ra formis dros aris daavadebul i mSobl is TiToeul i Svil is risk-faqtoris al baToba 50%?

\\ \\ X-SeWidul i recesiul i;

\\ \\ Y-Tan SeWidul i;

\\ \\ autosomur-dominanturi;

\\ \\ autosomur-recesiul i.

\\ \\ CamoTvl il Tagan, memkvidreobis romel i formis dros gadaecema daavadebis ganmsazRvrel i geni mamisagan yvel a qal iSvil s?

\\ \\ autosomur-dominanturi;

\\ \\ autosomur-recesiul i;

\\ \\ X-SeWidul i recesiul i;

\\ \\ y-Tan SeWidul i.

\\ \\ romel i daavadebis dros gadascems mama yvel a qal iSvil s mutantur al el s?

\\ \\ diuSenis kunTovani distrofiis;

\\ \\ Tei-saqsis daavadebis;

\\ \\ hiperqol isterinemiis;

\\ \\ neirofibromatozis.

\\ \\ CamoTvl il Tagan, memkvidreobis romel i formis dros hyavs daavadebul mamakacs, romel ic daqorwinda j anmrTel qal ze, mxol od j anmrTel i vaJebi da daavadebul i qal iSvil ebi?

\\ \\ autosomur-recesiul i;

\\ \\ X-SeWidul i dominanturi;

\\ \\ autosomur-dominanturi;

\\ \\ Y-Tan SeWidul i.

\\ CamoTvl il Tagan, romel i daavadeba memkvidreobeobs X-SeWidul i dominanturi formiT?
\\ hipofosfaturi raqiti;
\\ ferebis sibrmave;
\\ diuSenis kunTovani distrofia;
\\ hanteris sindromi.

\\ CamoTvl il Tagan, romel i X-SeWidul i dominanturi daavadebaa I etal uri mxol od mamakacebisaTvis?
\\ retis sindromi;
\\ Tei-saqsis daavadeba;
\\ aqondropl azia;
\\ hiperqol esterinemia.

\\ CamoTvl il Tagan, romel ia sisxl is ABO jgufis sistemaSi orive dominanturi al el is erTdroul i eqspresiis SemTxveva?
\\ domini reba;
\\ arasrul i domini reba;
\\ kodomini reba;
\\ zedomini reba.

\\ X-Tan SeWidul i genebis mixedviT mamakacebi arian:
\\ hemizigoturebi;
\\ homozigoturebi;
\\ heterozigoturebi;
\\ kompaunde bi.

\\ CamoTvl il Tagan, romel daavadebaSi vl indeba genis eqspresiaSi dedis da mamisgan memkvidreobiT miRebul al el ebs Soris imprintingis Sedegi?
\\ prader-vil is sindromi;
\\ fragil uri X qromosomis sindromi;
\\ miotonuri distrofia;
\\ fridrixis ataqsia.

\\ CamoTvl il Tagan, romel i daavadebis dros vl indeba mamiseul i genomuri imprintingi?
\\ fragil uri X qromosomis sindromi;
\\ miotonuri distrofia;
\\ angel manis sindromi;
\\ prader-vil is sindromi.

\\ CamoTvl il Tagan, romel i daavadebis dros vl indeba dediseul i genomuri imprintingi?
\\ fragil uri X qromosomis sindromi;
\\ miotonuri distrofia;
\\ prader-vil is sindromi;
\\ angel manis sindromi.

\\ CamoTvl il Tagan, romel i paTol ogiuri mdgomareoba warmoadgens homopl azmuri mitoqondriul i dnm-is mutaciis dediseul i memkvidreobis magal iTs?
\\ progresul i neirosensorul i siyrue;
\\ qronikul i progresul i garegani ofTal mopl egia;
\\ I is sindromi;
\\ kerns-sairis sindromi.

\\ CamoTvl il Tagan, romel i paTol ogiuri mdgomareoba wadmoadgens heteropl azmuri mitoqondriul i dnm-is mutaciis dediseul i memkvidreobeobis magal iTs?

\\ qronikul i progresul i garegani ofTal mopl egia;

\\ progresul i neirosensorul i siyrue;

\\ I eberis memkvidreobul i optikuri neiropaTia;

\\ arasindromul i sensoneironul i siyrue.

\\ CamoTvl il Tagan, ramden gens Seicavs mitoqondriul i dnm?

\\ 13;

\\ 22;

\\ 25;

\\ 37.

\\ CamoTvl il Tagan, ramden pol ipeptids akodirebs mitoqondriul i dnm-is genebi?

\\ 13;

\\ 18;

\\ 15;

\\ 25.

\\ ramden satransporto rnm-s akodirebs mitoqondriul i dnm?

\\ 22;

\\ 25;

\\ 28;

\\ 30.

\\ CamoTvl il Tagan, mutaciis romel i kategoriaa, romel ic birTvl i an mitoqondriul i genomis dnm-is Tanmimdevrobas cvl is?

\\ genuri;

\\ genomuri;

\\ qromosomul i;

\\ dinamikuri.

\\ mutaciis romel kategoria ganekuTvneba dauzianebel i struqturis mqone qromosomaTa ricxvis cvl il eba?

\\ genurs;

\\ genomurs;

\\ dinamikurs;

\\ qromosomul s.

\\ Mmutaciis romel kategorias ganekuTvnebian cal keul i qromosomis struqturbSi momxdari cvl il ebebi?

\\ genurs;

\\ qromosomul s;

\\ genomurs;

\\ dinamkurs.

\\ mutaciis romel kategorias miekuTvnebaMmeiozis procesSi qromosomaTa wyvil is araswori segregacia

\\ genomurs;

\\ qromosomul s;

\\ somaturs;

\\ genurs.

\\ \\ ra aris monogenuri memkvidreoba?
\\ \\ memkvidreoba, romel sac ganapirobebs ramdenime genis mutacia;
\\ \\ memkvidreoba, romel sac ganapirobebs erTi genis mutacia
\\ \\ memkvidreoba, romel sac ganapirobebs genTa urTierTqmedeba;
\\ \\ memkvidreoba, romel sac ganapirobeben genetikuri da aragenetikuri faqtorebi.

\\ \\ ras uwodeben monogenur memkvidreobas?
\\ \\ kompl eqsurs;
\\ \\ mul tifaqtorul s;
\\ \\ mendel iseul s;
\\ \\ mitoqondriul s.

\\ \\ ra ewodeba dnm-is romel ime segments qromosomaSi?
\\ \\ al el i;
\\ \\ l okusi;
\\ \\ promotori;
\\ \\ enhanseri.

\\ \\ ra ewodeba genis al ternatiul formebs?
\\ \\ l okusebi;
\\ \\ modifikatorebi;
\\ \\ al el ebi;
\\ \\ kl asterebi.

\\ \\ ra ewodeba erTi qromosomis sxvadasxva l okusSi moTavsebul al el ebi s nakrebs?
\\ \\ genotipi;
\\ \\ fenotipi;
\\ \\ hapl otipi;
\\ \\ genomi.

\\ \\ ra ganapirobebs l okusis pol imorfizms?
\\ \\ l okusSi erTnairi al el ebi;
\\ \\ l okusSi „vel uri“ tipis erTnairi al el ebi;
\\ \\ l okusSi gansxvavebul i al el ebi s arseboba;
\\ \\ l okusSi erTi al el i.

\\ \\ \\ ra aris genotipi;
\\ \\ erTnairi al el ebi s kompl eqti;
\\ \\ sxvadasxva l okusSi genTa erTobl ioba;
\\ \\ al ternatiul i al el ebi s kompl eqti;
\\ \\ erTi qromosomis al el ebi.

\\ \\ \\ ra aris fenotipi?
\\ \\ al el ebi s nakrebi;
\\ \\ l okusebis kompl eqti;
\\ \\ genotipis maxasiaTebel i uj redul da morfologiur doneze;
\\ \\ genebis erTobl ioba.

\\ \\ \\ ra aris pl eiotropia?
\\ \\ genis eqspresiul obis xarisxi;
\\ \\ genis sixSire popul aciaSi;
\\ \\ genis mravl obiTi moqmedeba;
\\ \\ genTa urTierTqmedeba.

\\\ ra aris hemizigoturoba?
\\\ erT l okusSi erTnairi al el ebi;
\\\ erT l okusSi gansxvavebul i al el ebi;
\\ mamakacis X-qromosomaSi moTavsebul i genebis raodenoba;
\\\ qal is X-qromosomaSi moTavsebul i genebis raodenoba

\\\ ra aris geneal ogiuri ruka?
\\\ avadmyofis kl inikuri skriningi;
\\\ avadmyofis parakl inikuri gamokvl evebis istoria;
\\\ avadmyofobis istoria;
\\ avadmyofis oj axuri istoria.

\\\ ra ewodeba gamosakvl ev pirs sagvartomo rukaze?
\\\ sibsi;
\\\ naxevradsibsi;
\\ probandi
\\\ mutanti

\\\ ra aris Semguebl oba – fitnes-faqtori avadmyofisTvis?
\\\ somaturi statusi;
\\\ fsiqikuri mdgomareoba;
\\ normal uri reproduqtiul i unari;
\\\ daqveiTebl i intel eqti

\\\ rogoria fenotipi, romel ic mxol od homozigotebSi vl indeba?
\\\ dominanturi;
\\\ X-SeWi dul i;
\\ recesiul i;
\\\ Y-SeWi dul i.

\\\ rogoria dominanturi fenotipi?
\\\ vl indeba mxol od homozigotebSi;
\\\ vl indeba mxol od heterozigotebSi;
\\ vl indeba homo- da heterozigotebSi.
\\\ vl indeba mxol od kompaund heterozigotebSi.

\\\ ra ewodeba al el Ta urTierTqmedebas, rodesac maTi moqmedeba erTnairi siZl ieriT vl indeba fenotipSi?
\\\ domini reba;
\\\ zedomini reba;
\\ kodomini reba;
\\\ arasrul i domini reba

\\\ ra ewodeba genTa urTierTqmedebas, rodesac dominanturi al el is eqspresia heterozigotebSi daqveiTebl ia?
\\\ domini reba;
\\ arasrul i domini reba;
\\\ kodomini reba;
\\\ zedomini reba

\\\ ra ewodeba genis fenotipurad gamovl enis xarixs?
\\\ penetrantoba;
\\\ domini reba;
\\ eqspresiul oba;
\\\ arasrul i domini reba.

\\ ra ewodeba genis eqspresiul obis (fenotipuri gamovl enis) sixSires popul aciaSi?

\\ penetrantoba;

\\ eqspresiul oba;

\\ zedomini reba

\\ domini reba

\\ ra ewodeba mdgomareobas, rodesac genis gamovl enis sixSire (al baToba) popul aciaSi 100%-ze nakl ebia?

\\ srul i penetrantoba;

\\ daqvei Tebul i penetrantoba;

\\ srul i eqspresiul oba;

\\ variabel uri eqspresiul oba

\\ ra ewodeba mdgomareobas, rodesac erTi da igive genotipis mqone individebs Soris genis eqspresia da fenotipi gansxvavebul ia?

\\ srul i eqspresiul oba;

\\ srul i penetrantoba;

\\ variabel uri eqspresiul oba;

\\ arasrul i penetrantoba

\\ romel daavadebas axasiaTebis "rZiani yavis" feris l aqebi da neirofibromatozul i kvanZebi?

\\ daunis sindroms;

\\ al chimeris daavadebs;

\\ neirofibromatozs;

\\ pol ikistozs.

\\ memkvidreobis rogori tipi axasiaTebis neirofibromatozs:

\\ autosomur-recesiul i;

\\ autosomur-dominanturi;

\\ X-SeWi dul i-dominanturi;

\\ X-SeWi dul i- recesiul i

\\ ra genis ra Tviseba vl indeba neirofibromatozis dros?

\\ dozi reba;

\\ al ternatiul oba;

\\ pl eiotropia;

\\ kodomini reba

\\ rogori penetrantoba axasiaTebis zogj er neirofibromatozs?

\\ srul i;

\\ arasrul i;

\\ daqvei Tebul i;

\\ variabel uri

\\ rogoria mutanturi genis eqspresiul oba neirofibromatozis dros?

\\ srul i;

\\ arasrul i;

\\ variabel uri;

\\ daqvei Tebul i

\\ razea damokidebul i neirofibromatozis penetrantoba?

\\ simaRI eze;

\\ wonaze;

\\ asakze;
\\ intel eqtze.

\\ \\ romel i cil is funqciis dakargva axasiaTebS neurofibromatozs?
\\ \\ frataqsini;
\\ \\ neurofibrominis;
\\ \\ -proteinis;
\\ \\ -gl obinis

\\ \\ \\ rogoria neurofibromatozis ganviTarebis riski, Tu orive mSobel i mutanturi genis heterozigotul i matarebel ia?
\\ \\ 100%
\\ \\ 25%
\\ \\ 75%
\\ \\ 50%

\\ \\ \\ rogoria sibsebSi neurofibromatozis ganviTarebis riski, Tu oj axSi probandi warmoadgens erT sporadul SemTxvevas (de novo mutacia)?
\\ \\ 100%;
\\ \\ 75%;
\\ \\ 0%;
\\ \\ 25%

\\ \\ \\ rogoria neurofibromatozis ganviTarebis riski, Tu daavadebul ia mxol od erTi mSobel i (heterozigoti), meore ki aris j anmrTel i?
\\ \\ 100%;
\\ \\ 25%;
\\ \\ 50%;
\\ \\ 75%.

\\ \\ \\ ra aris al el uri heterogenuroba?
\\ \\ mutacia sxvadasxva I okusSi;
\\ \\ mutacia sxvadasxva qromosomaSi;
\\ \\ sxvadasxva mutacia erT I okusSi;
\\ \\ sxvadasxva mutacia arahomol ogiur qromosomebSi

\\ \\ \\ ra ewodeba sxvadasxva I okusSi momxdari mutaciebis dros genetikur fenomens, romel ic iwvevs erTi da igive fenotipis ganviTarebas?
\\ \\ I okusuri (araal el uri) heterogenuroba;
\\ \\ al el uri heterogenuroba;
\\ \\ popul aciuri pol imorfizmi;
\\ \\ oj axuri pol imorfizmi

\\ \\ \\ ra ewodeba genetikur fenomens, rodesac oj axis wevrTa Soris gansxvavebul i fenotipebis mizezi aris sxvadasxva mutacia erT genSi:
\\ \\ genotipuri heterogenuroba;
\\ \\ kl inikuri (fenotipuri) heterogenuroba;
\\ \\ popul aciuri heterogenuroba;
\\ \\ araal el uri heterogenuroba.

\\ \\ \\ romel i daavadebis dros viTardeba kuWqveSa jirkvl is, fil tvebis da mamakacebSi saTesl eebis fibrozi?
\\ \\ neurofibromatozis;
\\ \\ pigmenturi qserodermis;

\\ kistozuri fibrozis;
\\ Tal asemiss dros.

\\ \\ ra aris imis mizezi, rom zogjer kistozuri fibrozis dros viTardeba mxol od mamakacis unayofoba?

\\ \\ araal el uri heterogenuroba;
\\ \\ I okusuri heterogenuroba;
\\ \\ al el uri heterogenuroba;
\\ \\ oj axuri heterogenuroba

\\ \\ \\ memkvidreobis tipi kistozuri fibrozis dros aris:

\\ \\ \\ autosomur-dominanturi;
\\ \\ \\ autosomur-recesiuli;
\\ \\ \\ X-SeWiduli-recesiuli;
\\ \\ \\ X-SeWiduli-dominanturi

\\ \\ \\ romeli daavadebis dros aRiniSneba I okusuri heterogenurobis gamo memkvidreobis autosomur-dominanturi, autosomur-recesiuli da X-SeWiduli formebi:

\\ \\ \\ kistozuri fibrozis;
\\ \\ \\ neirofibromatozis;
\\ \\ \\ pigmenturi retinitis;
\\ \\ \\ retis sindromis dros.

\\ \\ \\ aRniSneT fenotipuri heterogenurobis magaliTi:

\\ \\ \\ terneris sindromi;
\\ \\ \\ daunis sindromi;
\\ \\ \\ hirSprungis sindromi;
\\ \\ \\ retis sindromi

\\ \\ \\ autosomur-recesiuli daavadeba viTardeba Tu individi aris:

\\ \\ \\ homozigoti;
\\ \\ \\ heterozigoti;
\\ \\ \\ hemizigoti;
\\ \\ \\ kompaundi heterozigoti.

\\ \\ \\ romeli nivTierebis gaZlierebuli SeTvisebis unari aqvs hemoqromatozian avadmyofs?

\\ \\ \\ natriumis;
\\ \\ \\ kaliumis;
\\ \\ \\ rkinis;
\\ \\ \\ kalciumis.

\\ \\ \\ \\ aRniSneT hemoqromatozis memkvidreobis tipi:

\\ \\ \\ \\ autosomur-recesiuli;
\\ \\ \\ \\ autosomur-dominanturi;
\\ \\ \\ \\ X-SeWiduli-recesiuli;
\\ \\ \\ \\ X-SeWiduli-dominanturi

\\ \\ \\ \\ aRniSneT sqesiT ganpirobebuli daavadeba:

\\ \\ \\ \\ kistozuri fibrozi;
\\ \\ \\ \\ neirofibromatozi;
\\ \\ \\ \\ hemoqromatozi;
\\ \\ \\ \\ msxvili nawlavis agangliozi (hirSprungis daavadeba)

\\ \\ \\ \\ aRniSneT pigmenturi qserodermiss memkvidreobis tipi:

- \\ autosomur- dominanturi;
- \\ autosomur-recesiul i;
- \\ X-SeWi dul i-recesiul i;
- \\ X-SeWi dul i-dominanturi

- \\ \\ romel daavadebas axasiaTebS dnm-s reparaciis moSI a?
- \\ kistozur fibrozS;
- \\ terneris sindromS;
- \\ pigmentur qserodermas;
- \\ retis sindromS.

- \\ \\ CamoTvl il Tagan romel ia neirodegeneraciul i daavadeba, romel ic viTardeba bavSvebSi 6 Tvis asaki dan:
- \\ kistozuri fibrozi;
- \\ neirofibromatozi;
- \\ Tei-saqsis daavadeba;
- \\ pigmenturi qseroderma

- \\ \\ aRni SneT Tei-saqsis daavadebis memkvidreobis tipi:
- \\ autosomur-recesiul i;
- \\ autosomur- dominanturi;
- \\ X-SeWi dul i-recesiul i;
- \\ X-SeWi dul i-dominanturi

- \\ \\ genTa urTierTqmedebis romel i tipi axasiaTebS zogj er aqondropl azias?
- \\ domini reba;
- \\ kodomini reba
- \\ arasrul i domini reba;
- \\ zedomini reba

- \\ \\ romel i daavadebis dros viTardeba anomal uri ConCxi?
- \\ neirofibromatozis;
- \\ aqondropl aziis;
- \\ kisturi fibrozi;
- \\ hiperqol esterinemiis dros.

- \\ \\ rogoria autosomur- dominanturi daavadebis ganviTarebis riski, Tu daavadebul ia mxol od erTi mSobel i da is aris homozigoti?
- \\ 100%
- \\ 25%
- \\ 50%
- \\ 75%

- \\ \\ rogoria autosomur- dominanturi daavadebis ganviTarebis riski, Tu daavadebul ia mxol od erTi mSobel i da is aris heterozigoti?
- \\ 100%
- \\ 75%
- \\ 50%
- \\ 25%

- \\ \\ rogoria autosomur- dominanturi daavadebis riski, Tu daavadebul ia orive mSobel i da is ini heterozigotebi arian?
- \\ 100%
- \\ 50%
- \\ 75%

\\ 25%

\\ \\ romel i autosomur-dominanturi daavadeba uwyobs xel s gul is koronarul daavadebas da ufro mZimed mimdinareobs homozigotebSi?

\\ \\ neirofibromatozi;

\\ \\ aqondropl azia;

\\ \\ hiperqol esterinemia

\\ \\ kistozuri fibrozi

\\ \\ \\ memkvidreobis romel i tipi axasiaTebis vaJebis naadrev momwifebas?

\\ \\ autosomur-recesiul i;

\\ \\ X-SeWidul i-recesiul i;

\\ \\ autosomur-dominanturi;

\\ \\ X-SeWidul i-dominanturi

\\ \\ \\ ra aris mizezi, rom zogjer autosomur-dominanturi daavadebis dros sagvartomo rukaze aris erTi sporadul i SemTxveva?

\\ \\ mutacia;

\\ \\ rekombinacia;

\\ \\ daqveiTebul i Senguebl oba;

\\ \\ normal uri fitnes-faqtori

\\ \\ \\ aRniSneT sqesiT SezRudul i autosomuri daavadebebi:

\\ \\ oj axuri hiperqol esterinemia, Saqriani diabeti;

\\ \\ neiroqromatozi da pigmenturi retiniti;

\\ \\ hemoqromatozi, oj axuri testikul otoqsikozi;

\\ \\ aqondropl azia da mukoviscidozi

\\ \\ \\ aRniSneT mizezi, ris gamoc X-SeWidul i-recesiul i daavadebebi vl indeba mamakacebSi:

\\ \\ heterozigoturoba;

\\ \\ homozigoturoba;

\\ \\ hemizigoturoba;

\\ \\ X-qromosomis inaqtivacia

\\ \\ \\ ratom aris X-SeWidul i recessiul i memkvidreoba qal ebSi sxvadasxva simZimis?

\\ \\ heterozigoturobis gamo;

\\ \\ homozigoturobis gamo;

\\ \\ X-qromosomis inaqtivaciis gamo;

\\ \\ hemizigoturobis gamo.

\\ \\ \\ rogoria hemofil iis riski, Tu mama daavadebul ia da deda j anmrTel i?

\\ \\ vaJi - daavadebul i;

\\ \\ vaJi - matarebel i;

\\ \\ qal i - matarebel i;

\\ \\ qal i - daavadebul i

\\ \\ \\ rogoria hemofil iis riski, Tu mama j anmrTel ia, deda ki - matarebel i?

\\ \\ vaJebi yvel a j anmrTel ia, qal ebi - avadmyofebi;

\\ \\ qal ebi yvel a avadmyofebi;

\\ \\ vaJebi 50% daavadebul i, qal ebis 50% - matarebel i;

\\ \\ qal ebi yvel a j anmrTel i.

\\ \\ ra SemTxvevaSi vl indeba hemofil ia qal ebSi?

\\ \\ mama – j anmrTel i, deda - matarebel i;

\\ \\ mama – daavadebul i, deda – j anmrTel i;

\\ \\ mama – daavadebul i, deda – matarebel i;

\\ \\ mama – matarebel i, deda – j anmrTel i

\\ \\ romel i daavadebaa X-SeWidul i recesiul i?

\\ \\ neirofibromatozi;

\\ \\ kistozuri fibrozi;

\\ \\ dal tonizmi;

\\ \\ fenil ketonuria

\\ \\ ratom ar vl indeba zogj er qal ebSi X-SeWidul i memkvidreoba?

\\ \\ heterozigoturobis gamo;

\\ \\ homozigoturobis gamo;

\\ \\ daubal ansebel i inaqtivaciis gamo;

\\ \\ dabal ansebul i inaqtivaciis gamo.

\\ \\ aRniSneT memkvidreobis tipi, rodesac daavadebul i mamis yvel a qal iSvil i daavadebul ia:

\\ \\ X-SeWidul i-dominanturi;

\\ \\ X-SeWidul i-recesiul i;

\\ \\ autosomur-dominanturi;

\\ \\ autosomur-recesiul i

\\ \\ rogoria X-SeWidul i-dominanturi daavadebis ganviTarebis riski, Tu avadmyofi dedaa?

\\ \\ 100%

\\ \\ 75%;

\\ \\ 50%;

\\ \\ 25%

\\ \\ aRniSneT X-SeWidul i-dominanturi daavadeba:

\\ \\ hemofil ia

\\ \\ dal tonizmi;

\\ \\ hipofosfaturi raqiti;

\\ \\ mukoviscidozi

\\ \\ aRniSneT retis sindromis memkvidreobis tipi:

\\ \\ autosomur-dominanturi;

\\ \\ autosomur-recesiul i;

\\ \\ X-SeWidul i-dominanturi;

\\ \\ X-SeWidul i-recesiul i;

\\ \\ qal ebSi romel daavadebas axasiaTebis nevrologiuri darRvevebi, autizmi, epilepsiyuri gul yrebi, mikrocefalia, intel eqtis daqveiTeba?

\\ \\ hemofilias;

\\ \\ dal tonizms;

\\ \\ retis sindroms;

\\ \\ daunis sindroms.

\\ \\ rogori tipiT memkvidreobs diuSenis miodistrofia?

\\ \\ autosomur-recesiul i;

\\ \\ autosomur-dominanturi;

\\ \\ X-SeWidul i-recesiul i;

\\ X-SeWidul i-dominanturi

\\ \\ romel daavadebas axasiaTebis kunTebis ganl eva, moZraobaTa koordinaciis darRveva, fsiqikis defeqtebi?

\\ \\ hemofilias;

\\ \\ retis sindroms;

\\ \\ diuSenis sindroms;

\\ \\ al binizms.

\\ \\ rogori tipis mutacia axasiaTebis diuSenis mi odistrofias vaJebSi Semguebl obis mixedviT?

\\ \\ spontanuri;

\\ \\ inducirebuli;

\\ \\ naxebradl etaluri;

\\ \\ l etaluri

\\ \\ ra aris fsevdoautosomuri memkvudreobis mizezi?

\\ \\ autosomuri rekombinaciebi;

\\ \\ autosomuri del eciebi;

\\ \\ rekombinaciebi X- da Y-qromosomis zogierT regionebs Soris;

\\ \\ transl okaciebi

\\ \\ vis gadaecema fsevdoautosomuri daavadebebi?

\\ \\ mxol od qal ebs;

\\ \\ mxol od mamakacebs;

\\ \\ orive sqesis warmoamdgenl ebs;

\\ \\ arcerTs

\\ \\ ra aris segmenturi neurofibromatozis da arasruli osteogenezis mizezi?

\\ \\ fsevdoautosomuri memkvudreoba;

\\ \\ dominireba;

\\ \\ mozaicizmi;

\\ \\ imprintingi

\\ \\ Tu janmrTel mSobl ebs gauCnda genetikuri defeqtis mqone Svili, romel i tipis mutaciaa amis mizezi:

\\ \\ dominanturi;

\\ \\ recesiuli;

\\ \\ axali;

\\ \\ sqesTan SeWidul i

\\ \\ ra aris somaturi mozaicizmis mizezi?

\\ \\ mutacia embriogenezis bol o stadiaze;

\\ \\ mutacia proembrionalur periodSi;

\\ \\ mutacia embriogenezis sawyis stadiaze;

\\ \\ mutacia postnatalur periodSi

\\ \\ romel i daavadebis dros aRiniSneba Canasaxovani mozaicizmi?

\\ \\ kistozuri fibrozis;

\\ \\ Tal asemiis;

\\ \\ arasruli osteogenezis;

\\ \\ namgl iseburuj redovani anemiis dros.

\\ \\ romel daavadebas axasiaTebis genomuri imprintingi?

\\ \\ diuSenis mi odistrofias;

\\ kistozur fibrozis;
\\ ol braitis osteodistrofias;
\\ neirofibromatozis.

\\ \\ aRniSneT dediseul i genomuri imprintingis magal iTi:
\\ \\ prader-vil is sindromi;
\\ \\ al chaimeris sindromi;
\\ \\ angel manis sindromi;
\\ \\ ol braitis sindromi

\\ \\ romel i daavadeba wadmoadgens mamiseul i genomis imprintingis magal iTs?
\\ \\ angel manis sindromi;
\\ \\ al chaimeris sindromi;
\\ \\ prader-vil is sindromi;
\\ \\ daunis sindromi

\\ \\ aRniSneT uniparentul i disomiis magal iTi
\\ \\ daunis sindromi;
\\ \\ pataus sindromi;
\\ \\ prader-vil is sindromi;
\\ \\ al chaimeris sindromi

\\ \\ ra ewodeba nukl eotidTa Tanamdevrobemis raodenobis zrdas?
\\ \\ dupl ikacia;
\\ \\ del ecia;
\\ \\ eqspansia;
\\ \\ transl okacia

\\ \\ ra ewodeba nukl eotidTa eqspansiis zrdas momdevno TaobebSi da
kl inikuri suraTis damZimebas?
\\ \\ dupl ikacia;
\\ \\ transmisia;
\\ \\ anticipacia;
\\ \\ transl okacia

\\ \\ razea damokidebuli nukl eotidTa ganmeorebadobemis eqspansiit
gamowveul daavadebebSi momdevno TaobebSi kl inikuri suraTis damZimeba da
daavadebis "gaaxal gazrdaveba"?
\\ \\ nukl eotidTa dakargvaze;
\\ \\ nukl eotidTa gadaadgil ebaze;
\\ \\ nukl eotidTa eqspansiaze zRvrul i raodenobis zeviT;
\\ \\ nukl eotidTa eqspansiis Semcirebaze.

\\ \\ ra ewodeba cvl il ebas, rodesac nukl eotidTa raodenoba momatebul ia,
da uaxl ovdeba zRvrul s?
\\ \\ spontanuri mutacia;
\\ \\ l etal uri mutacia;
\\ \\ premutacia;
\\ \\ naxebrad l etal uri mutacia

\\ \\ ra aris memkvidrul i paTol ogiis maRal i sixSiris mizezi mcirericxovan
popul aciaSi (izol ati)?
\\ \\ epistazi;
\\ \\ pol imeria;
\\ \\ "damfuZnebl is" efeqti;
\\ \\ genTa bal ansis darRveva

\\ \\ romel daavadebas axasiaTebis nukl eotidTa Tanmimdevrobis eqspansia?
\\ \\ hemofilias;
\\ \\ Tal asemas;
\\ \\ hantingtonis qoreas;
\\ \\ kisturi fibrozi.

\\ \\ aRniSneT hantingtonis qoreis damemkvidrebis tipi:
\\ \\ autosomur-recesiuli;
\\ \\ autosomur-dominanturi;
\\ \\ X-SeWiduli recesiuli;
\\ \\ X-SeWiduli dominanturi

\\ \\ CamoTvlil Taganra aRniSneba hantingtonis qoreis dros:
\\ \\ genomuri mutacia;
\\ \\ qromosomuli aberacia;
\\ \\ daqveitebuli penetrantoba da variabeluri eqspresia;
\\ \\ klirikis erTferovneba Taobidan TaobaSi

\\ \\ romel daavadebas axasiaTebis nukl eotidTa eqspansiit gamowveuli
fsiqikuri, moZraobiti da kognituri darRvebi?
\\ \\ kisturi fibrozis;
\\ \\ hemofilias;
\\ \\ hantingtonis qoreas;
\\ \\ daunis sindroms.

\\ \\ ra ganapirobebs hantingtonis qoreis sqesspecificurobas?
\\ \\ damemkvidrebis tipi;
\\ \\ al el Ta daTiSva;
\\ \\ spermatogenezis maRali produqtiuli oba:
\\ \\ ovogenezis specificuroba

\\ \\ darRvevaTa rajgufts miekuTvneba, hantingtonis qorea:
\\ \\ amiloidis genis mutacias;
\\ \\ fenilalaninis deficits;
\\ \\ poliglutamini darRvebs;
\\ \\ l aqtozis cvl is defeqts.

\\ \\ razea damokidebuli hantingtonis qoreis asakit ganpirobebuli
penetrantoba?
\\ \\ nukl eotidTa gadaadgil ebaze;
\\ \\ nukl eotidTa Canacvl ebaze;
\\ \\ nukl eotidTa eqspansiis maCvenebel ze;
\\ \\ nukl eotidTa raodenobis normal ur maCvenebel ze

\\ \\ ra aris "fragiluri" X-qromosomis sindromis mizezi?
\\ \\ nukl eotidTa eqspansia;
\\ \\ nukl eotidTa transl okacia;
\\ \\ nukl eotidTa del ecia;
\\ \\ nukl eotidTa duplikacia

\\ \\ ramdeni nukl eotidis eqspansia iwvevs X-qromosomis fragilurobas?
\\ \\ 10 asli;
\\ \\ 100 asli;
\\ \\ 200 meti asli;
\\ \\ 200 naklebi asli

\\ ramdeni tripl etis asl is ganmeorebis dros viTardeba fragil uri X-qromosomis premutacia?

\\ 10-60-mde;

\\ 1-60-mde;

\\ 60-200-mde;

\\ 6-10-mde

\\ romel daavadebas axasiaTebis nevrologiuri darRvevebi, ataqsia, tremori da 40 wl is asakis qal ebSi sakvercxeebis funqciis dakargva?

\\ daunis sindroms;

\\ diuSenis sindroms;

\\ fragil uri X-qromosomis sindroms;

\\ miotonuri distrofias.

\\ aRniSneT miotonuri distrofiis memkvidreobis tipi:

\\ X-SeWidul i;

\\ Y- SeWidul i;

\\ autosomur-dominanturi;

\\ autosomur-recesiul i

\\ romel daavadebas axasiaTebis miotonia, kunTovani distrofia, kataraqta, hipogonadizmi, diabeti, gamel oteba?

\\ fragil uri X-qromosomis sindroms;

\\ diuSenis miodistrofias;

\\ miotonur miodistrofias;

\\ fridirixis ataqsiis.

\\ CamoTvl il Tagan romel daavadebas axasiaTebis anticipacia?

\\ daunis sindroms;

\\ hemofilias;

\\ miotonur distrofias;

\\ Tal asemlas.

\\ rar aris miotonuri distrofiis dedis xaziT gadacemis mizezi?

\\ X-SeWidul oba;

\\ Y-qromosomis inaqtivacia;

\\ oogenezis Tavisebureba;

\\ eqstrogenebis deficiiti

\\ aRniSneT fridirixis ataqsiis damenkvidreobis tipi:

\\ X-SeWidul i-recesiul i;

\\ X-SeWidul i-dominanturi;

\\ autosomur-recesiul i;

\\ autosomur-dominanturi

\\ rar aris fridirixis ataqsiis mizezi?

\\ birTvis genomis cvl il ebebi;

\\ genuri mutaciebi;

\\ birTvSi da mitoqondriaSi saTanado tripl etebis amflifikacia;

\\ genTa urTierTqmedeba

\\ romel daavadebas axasiaTebis kidurebis moZraobebis koordinaciis moSl a, metyvel ebis gaZnel eba, myesebis refl eqsebis uqonl oba?

\\ daunis sindroms;

\\ fragil uri X- qromosomis sindroms;
\\ fridrixis ataqsias;
\\ miotonuri distrofias.

\\ \\ ra aris segmenturi aneusomiis (mosazRvre genis sindromis) mi zezi?
\\ Sesabamisi genis mezobel l okusSi ori an meti genis nakl eboba an siWarbe;
\\ Sesabamisi genis dakargva;
\\ genis dnm-is monakveTis inversia;
\\ wakiTxvis CarCos gadaadgil eba

\\ \\ ra ewodeba genetikur fenomens, rodesac romel ime genis mezobel l okusSi ori an meti genis nakl ebobaa an siWarbe?
\\ segmenturi aneusomia;
\\ pol isoma;
\\ monosomia;
\\ segmenturi mozaicizmi

\\ \\ romel i daavadeba emsgavseba segmenturi aneusomis gamo mendel iseul s:
\\ parkinsonis sindromi;
\\ al chaimeris sindromi;
\\ daunis sindromi;
\\ pataus sindromi

\\ \\ ramden dnm-is mol ekul as Seicavs somaturi uj redis mitoqondriebi?
\\ 10;
\\ 100;
\\ 1000;
\\ 10 000

\\ \\ ramden dnm-is mol ekul as Seicavs oocitis mitoqondriebi?
\\ 10;
\\ 100;
\\ 1000;
\\ 100 000.

\\ \\ ramden gens Seicavs mitoqondriul i dnm?
\\ 10;
\\ 30;
\\ 37;
\\ 40.

\\ \\ CamoTvl il Tagan romel ia mitoqondriul i daavadeba?
\\ parkinsonis daavadeba;
\\ al chaimeris daavadeba;
\\ mioklonuri epilepsia;
\\ diuSenis mi distrofia

\\ \\ ra ewodeba mitoqondriul i dnm-is mravl obiTi asl ebis SemTxveviT gadanawil ebas axl ad warmoqmnil mitoqondriebSi mitozis da meiozis dros?
\\ konservatul i replikacia;
\\ rekombinaciul i reparacia;
\\ replikaciul i segregacia;
\\ transl okacia

\\ \\ ra ewodeba movl enas, rodesac uj redi Seicavs mxol od normal ur an mxol od mutantur mitoqondriul dnm-s?

\\ \\ repl ikaciuri segregacia;

\\ \\ heteropl azmia;

\\ \\ homopl azmia;

\\ \\ segmenturi aneusomia

\\ \\ ra ewodeba movl enas, rodesac uj redi Seicavs rogorc normal ur ise mutantur mitoqondriul i dnm-is popul aciebs?

\\ \\ homopl azmia;

\\ \\ heterozigoturoba;

\\ \\ heteropl azmia;

\\ \\ homozigoturoba.

\\ \\ CamoTvl il Tagan romel ia mitoqondriul i daavadeba?

\\ \\ fridrixis ataqsia;

\\ \\ daunis sindromi;

\\ \\ I eberis sindromi;

\\ \\ al chaimeris sindromi

\\ \\ ra aris mitoqondriul i daavadebis ganviTarebis mizezi qal is yvel a STamomaval Si?

\\ \\ heteropl azmia;

\\ \\ heterozigoturoba;

\\ \\ homopl azmia;

\\ \\ homozigoturoba

\\ \\ ra aris variabel uri eqspresiis mizezi mitoqondriul i memkvidreobis dros?

\\ \\ homopl azmia;

\\ \\ homozigoturoba;

\\ \\ heteropl azmia;

\\ \\ heterozigoturoba

\\ \\ wertil ovanma mutaciam dnm-is TanamimdevrobaSi SeiZl eba gamoiwvios tripl etSi fuZis Secvl a da Sesabamis cil aSi erTi aminomJavis meoreTi Canacvl eba, mutaciis romel formas ganekuTvneba aRni Snul i mutacia?

\\ \\ misensi;

\\ \\ seimsensi;

\\ \\ nonsensi;

\\ \\ freimSifti.

\\ \\ Mmutaciis ra formaa rodesac erT-erTi aminomJavas normal uri kodonis Canacvl eba xdeba sami terminaciul i kodonidan erT-erTiT?

\\ \\ misensi;

\\ \\ seimsensi;

\\ \\ Nnonsensi;

\\ \\ freimSifti.

\\ \\ ra tipis mutacia ar cvl is azrobrivad kodons?

\\ \\ seimsensi;

\\ \\ misensi;

\\ \\ freimSifti;

\\ \\ Nnonsensi.

\\ \\ CamoTvl il idan romel ia is nukl eotiduri cvl il eba, romel ic iwvevs erTi purinul i fuZis Secvl as meore purinul i fuZiT?

\\ transversia;

\\ tranzicia;

\\ inversia;

\\ del ecia.

\\ \\ ra ewodeba nukl eotidur cvl il ebas, romel ic iwvevs erTi pirimidinuri fuZis Secvl ias meore pirimidinuri fuZiT?

\\ inversia;

\\ Ddel ecia;

\\ tranzicia;

\\ transversia.

\\ \\ CamoTvl il idan romel ia nukl eotiduri cvl il eba, romel ic iwvevs purinul i fuZis Secvl as pirimidinul i fuZiT - an piriqiT?

\\ transversia;

\\ tranzicia;

\\ del ecia;

\\ inversia.

\\ \\ mutaciis romel i formaa namgl isebruj redovani anemiis gamowvevi?

\\ seimsensi;

\\ misensi;

\\ nonsensi;

\\ freimSifti.

\\ \\ CamoTvl il idan romel i daavadebis ganviTarebas ganapirobebs dinamikuri mutacia, romel ic moicavs trinukl eotidur ganmeorebaTa amfl ipikacias makodirebel ubanSi?

\\ miotonuri distrofiis;

\\ hantingtonis;

\\ fridrixis ataqsiis;

\\ al chaimeris.

\\ \\ CamoTvl il idan romel i daavadeba miekuTvneba dinamikur mutaciis Sedegs, romel ic moicavs trinukl eotidur gameorebaTa amfl ipikacias genis transkribirebad, magram ara transl irebad ubanSi?

\\ fragil uri X sindromi;

\\ hantigtonis daavadeba;F

\\ fridrixis ataqsia;

\\ al chaimeris daavadeba.

\\ \\ CamoTvl il idan romel i kodonis eqspansiaa hantingtonis daavadebis safuZvel i?

\\ citozini, adenini, guanini;

\\ citozini, adenini, citozini;

\\ adenini, citozini, guanini;

\\ adenini, Timini, Timini.

\\ \\ romel i antisxeul i gaaCnia. A j gufis sisxl is mqone adamianebs SratSi?

\\ Anti beta;

\\ Anti al fa;

\\ Anti sigma;
\\ Anti al fa, Anti beta.

\\ \\ romel i antisxeul i gaaCnia Sratsi B j gufis sisxl is mqone adaminebs?
\\ Anti beta;
\\ Anti al fa;
\\ Anti sigma;
\\ Anti al fa, Anti beta.

\\ \\ romel i antisxeul i gaaCnia Sratsi IV j gufis sisxl is mqone adaminebs?
\\ Anti beta;
\\ Anti al fa;
\\ Anti sigma;
\\ arcerTi.

\\ \\ romel i antisxeul ebi gaCnia 0 j gufis sisxl is mqone adaminebs Sratsi?
\\ Anti beta;
\\ Anti al fa;
\\ Anti sigma;
\\ Anti al fa, beta.

\\ \\ CamoTvl il Tagan, ra SemTxvevaSi aris 0 mniSvnel ovani ABOda rezus sistemis antigenebis Seswavl a?
\\ areis genomuri hibridizaciisaTvis;
\\ qsovil Ta da organoTa transpl antaciisaTvis;
\\ kriptomul i sistemis dadgenisaTvis;
\\ Mmol ekul uri kl onirebisaTvis.

\\ \\ CamoTvl il idan, ra SemTxvevaSia samarTI iani hardi-vainbergis kanoni?
\\ didi popul aciisa da SemTxveviTi SeuRI ebis dros;
\\ mcire popul aciisa da arCeviTi SeuRI ebis dros;
\\ didi popul aciisa da naTesauri qorwinebisas;
\\ nebismeri popul aciis, magram Tavisufal i Sej varebisas.

\\ \\ popul aciaSi autosomur-recesiul i memkvidreobisas ra faqtori iwevs hardi-vainbergis kanonis darRvevas?
\\ axal i mutaciebi;
\\ didi popul aciebi;
\\ erTgvarovani garemo;
\\ migraciis ar arseboba.

\\ \\ ra movl enasTan gvaqvs saqme stratifikaciisa da pozituri SerCeviTi SeuRI ebis dros?
\\ izrdeba homozigoturi genotipi;
\\ mcirdeba homozigoturoba;
\\ mcirdeba hemizigoturoba;
\\ izrdeba heterozigoturoba.

\\ \\ ra ewodeba mcire popul aciaSi SemTxveviTi mizezebis gamo Taobidan TaobaSi al el Ta sixSiris cvl il ebas?
\\ genetikuri tvirTi;
\\ genebis dreifi;
\\ genebis konversia;
\\ genetikuri bal ansi.

\\ ra ewodeba qromosomis ZI ier SeWidul I okusebSi Sewyvil ebul i genebis j gufs, romel ic memkvudreobs rogorc erTi erTeul i?

\\ hapl otipi;

\\ hapetini;

\\ hamartoma;

\\ heterodisomia.

\\ \\ CamoTvl il Tagan APOE genis romel i al el ebia yvel aze gavrcel ebul i?

\\ E1, E2 da E3;

\\ E2, E3 da E4;

\\ E1, E3 da E4

\\ E2, E4 da E5.

\\ \\ CamoTvl il Tagan romel i genis pol imorfizmi ganapirobebs al chaimeris daavadebisadmi genetikur winaswarganwyobas?

\\ BRCA;

\\ MTHFR;

\\ APOE;

\\ CFTR.

\\ \\ CamoTvl il Tagan romel ia marTebul i al chaimeris daavadebis mqone pacientebTan mimarTebaSi?

\\ yvel a patients aqvs APOE genis E4 al el i;

\\ yvel a adamians, romel sac aqvs APOE genis E4 al el i, ganuvi Tardeba daavadeba;

\\ APOE genis E4 al el is mtarebl oba zrdis daavadebis ganviTarebis al baTobas;

\\ yvel a adamiანი, romel sac aqvs APOE geni, ganuvi Tardeba daavadeba.

\\ \\ CamoTvl il Tagan romel genSi momxdari mutacia ukavSirdeba Rrma venebis Trombozis ganviTarebas?

\\ kisturi fibrozis transmembranul i regul atoris (CFTR geni);

\\ I eidenis V faqtoris (FV geni, G1691A);

\\ dihidrofol at reduqtazas (**DHFR** geni);

\\ fenil al anihidroqsil azas (PAH geni).

\\ \\ romel ia proTrombinis genis mutacia?

\\ 20210 poziciaSi A >G;

\\ 20210 poziciaSi G >A;

\\ 20120 poziciaSi G >A;

\\ 20120 poziciaSi A >G.

\\ \\ CamoTvl il Tagan romel ia sayovel Taod aRiarebul i Cveneba V faqtoris (I eidenis mutaciaze) an proTrombinis genis 20210G>A mutaciaze testirebisaTvis?

\\ nebismieri venuri Trombozi individSi, roml is asaki ar aRemateba 55 wel s;

\\ venuri Trombozi da Trombozul i daavadebebiT dautvirTavi oj axuri istoria;

\\ uCveul o I okal izaciis venuri Trombozi (rogoricaa RviZi is, mezenterul i an Tavis tvinis venebi);

\\ venuri Trombozi orsul qal ebSi an qal ebSi, roml ebic ar Rebul oben oral ur kontrceptivebs.

\\ \\ CamoTvl il Tagan romel ia sayovel Taod aRiarebul i Cveneba
V faqtoris (l eidenis mutaciaze) anproTrombinis genis 20210G>A mutaciaze
testirebisaTvis?

\\ \\ nebismieri venuri Trombozi individSi, roml is asaki ar aRemateba 50
wel s;

\\ \\ venuri Trombozi da Trombozul i daavadebebiT dautvirTavi oj axuri
istoria;

\\ \\ Cveul i l okal izaciis venuri Trombozi (rogoricaa kiduris venebi);

\\ \\ venuri Trombozi orsul qal ebSi an qal ebSi, roml ebic ar Rebul oben
oral ur kontrceptivebs.

\\ \\ CamoTvl il Tagan romel ia sayovel Taod aRiarebul i Cveneba

V faqtoris (l eidenis mutaciaze) anproTrombinis genis 20210G>A mutaciaze
testirebisaTvis?

\\ \\ nebismieri venuri Trombozi individSi, roml is asaki ar aRemateba 55
wel s;

\\ \\ venuri Trombozis ganmeorebiTi SemTxveva;

\\ \\ Cveul i l okal izaciis venuri Trombozi (rogoricaa kiduris venebi);

\\ \\ venuri Trombozi orsul qal ebSi an qal ebSi, roml ebic ar Rebul oben
oral ur kontrceptivebs.

\\ \\ CamoTvl il Tagan romel ia sayovel Taod aRiarebul i Cveneba

V faqtoris (l eidenis mutaciaze) anproTrombinis genis 20210G>A mutaciaze
testirebisaTvis?

\\ \\ nebismieri venuri Trombozi individSi, roml is asaki ar aRemateba 55
wel s;

\\ \\ venuri Trombozi da Trombozul i daavadebebiT dautvirTavi oj axuri
istoria;

\\ \\ uCveul o l okal izaciis venuri Trombozi (rogoricaa RviZl is,
mezenterul i an Tavis tvinis venebi);

\\ \\ venuri Trombozi orsul qal ebSi an qal ebSi, roml ebic ar Rebul oben
oral ur kontrceptivebs.

\\ \\ CamoTvl il Tagan romel ia sayovel Taod aRiarebul i Cveneba

V faqtoris (l eidenis mutaciaze) anproTrombinis genis 20210G>A mutaciaze
testirebisaTvis?

\\ \\ nebismieri venuri Trombozi individSi, roml is asaki ar aRemateba 55
wel s;

\\ \\ venuri Trombozi da Trombozul i daavadebebiT dautvirTavi oj axuri
istoria;

\\ \\ miokardiumis infarqtis SemTxvevebi mwevel qal ebSi, romel Ta asaki ar
aRemateba 50 wel s;

\\ \\ venuri Trombozi orsul qal ebSi an qal ebSi, roml ebic ar Rebul oben
oral ur kontrceptivebs.

\\ \\ CamoTvl il Tagan romel ia sayovel Taod aRiarebul i Cveneba

V faqtoris (l eidenis mutaciaze) anproTrombinis genis 20210G>A mutaciaze
testirebisaTvis?

\\ \\ nebismieri venuri Trombozi individSi, roml is asaki ar aRemateba 75
wel s;

\\ \\ venuri Trombozis pirvel adi SemTxveva;

\\ venuri TromboziT daavadebul i naTesavebi, romel Ta asaki ar aRemateba 50
wel s;

\\ venuri Trombozi orsul qal ebSi an qal ebSi, roml ebic ar Rebul oben
oral ur kontrceptivebs.

\\ \\ CamoTvl il Tagan romel i cil is makodirebel i genia APOE?

\\ apoproteini E;

\\ acetil fosfati;

\\ apol ipoproteini E;

\\ adenin dinukl eotid fosfati E.

\\ \\ CamoTvl il Tagan romel daavadebas axasiaTebS kompl eqsuri memkvidreoba?

\\ venur Trombozs;

\\ fenil ketonurias;

\\ Tal asemias;

\\ kistur fibrozs.

\\ \\ CamoTvl il Tagan romel daavadebas axasiaTebS kompl eqsuri memkvidreoba?

\\ al chimeris daavadebas;

\\ MELAS;

\\ Tal asemias;

\\ diuSenis mi distrofias.

\\ \\ CamoTvl il Tagan romel daavadebas axasiaTebS kompl eqsuri
memkvidreoba?

\\ namgl iseburuj redovan anemias;

\\ MELAS;

\\ 1-el i tipis Saqrian diabets;

\\ homocistinurias.

\\ \\ CamoTvl il Tagan romel daavadebas axasiaTebS kompl eqsuri memkvidreoba?

\\ namgl iseburuj redovan anemias;

\\ nervul i mil is defeqtebs;

\\ fenil ketonurias;

\\ homocistinurias.

\\ \\ CamoTvl il Tagan romel ia kompl eqsuri memkvidreobiT ganpi robebul i
nervul i mil is defeqtebi?

\\ gapobil i tuCi;

\\ gapobil i sasa;

\\ spina bifida;

\\ gul is Tandayol il i mankebi.

\\ \\ CamoTvl il Tagan romel ia kompl eqsuri memkvidreobiT ganpi robebul i
nervul i mil is defeqtebi?

\\ gapobil i tuCi;

\\ gapobil i sasa;

\\ anencefal ia;

\\ gul is Tandayol il i mankebi.

\\ ra paTol ogiis ganviTarebasTan aris dakavSirebul i dedis organi zmSi fol iumis mJavas defici ti?

\\ 1-el i tipis Saqriani diabetis;

\\ nervul i mil is defeqtebis;

\\ gul is Tandayol il i mankebis;

\\ I anti trifsinis defici ti s.

\\ \\ CamoTvl il Tagan romel i fermentis makodirebel i genis misens mutaciis zemoqmedebi T ZI ierdeba fol iumis mJavas defici ti?

\\ hel ikazas;

\\ praimerazas;

\\ meTiI entetrahidrofol at reduqtazas;

\\ meTiI transferazas.

\\ \\ h^2 simbol o gamoiyeneba Semdegi movl enis aRsani Snavad?

\\ cval ebadobis;

\\ modi fikaciis;

\\ memkvidreobis;

\\ mutaciis.

\\ \\ CamoTvl il Tagan, romel i memkvidreobis tips axasiaTebS, rom daavadebul i adami anis naTesavebs eqnebaT erTi da imave daavadebis mimarT winaswarganwyobis al el ebi ufro meti sixSiriT, vidre aramonaTesave indivi debs?

\\ autosomur dominanturs;

\\ kompl eqsur memkvidreobas;

\\ autosomur recesiul s;

\\ X SeWi dul dominanturs.

\\ \\ CamoTvl il Tagan romel memkvidreobis tips axasiaTebS, rom daavadeba ufro xSiria probandis axl o naTesavebSi da SedarebiT iSviaTia Soreul naTesavebSi, radgan maT daavadebis mimarT winaswarganwyobis nakl ebi saerTo al el ebi aqvT?

\\ autosomur dominanturs;

\\ kompl eqsur memkvidreobas;

\\ autosomur recesiul s;

\\ mi toqondriul memkvidreobas.

\\ \\ CamoTvl il Tagan romel memkvidreobis tips axasiaTebS, rom daavadebis mimarT konkordantoba metia monozigotur tyupebSi dizigoturTan Sedarebi T?

\\ autosomur dominanturs;

\\ kompl eqsur memkvidreobas;

\\ autosomur recesiul s;

\\ X SeWi dul dominanturs.

\\ \\ memkvidreobi Tobis gamoTvl isas (h^2), Tuki ni Sni s variabel oba umTavresad garemo pirobebiTaa ganpirobebul i, maSin dizigotur tyupebs Soris dispersia monozigoturi tyupebis maCvenebl is msgavsi iqneba da, Sesabamisad, h^2 -is mni Svel oba dauaxl ovdeba:

\\ 1-s;

\\ 0.1-s;

\\ 0-s;

\\ 0.01-s.

\\ \\ memkvidreobi Tobis gamoTvl isas (h^2), Tuki ni Sni s variabel oba ganpi robebul ia mxol od da mxol od genetikuri faqtorebi T, maSin monozigoturi wyvil ebis dispersia nul ia da Sesabamisad, h^2 -is mni Svel oba gautol deba:

\\ 1-s;

\\ 0.1-s;

\\ 0-s;

\\ 0.01-s.

\\ \\ CamoTvl il Tagan romel i termini Seesabameba, rodesac erTi oj axis or biol ogiurad monaTesave wevrs aqvs daavadebisadmi erTnairi winaswarganwyoba da erTi da igive daavadeba:

\\ korkondantul i;

\\ diskordantul i;

\\ genokopia;

\\ fenokopia.

\\ \\ tyupebis meTodiT kvl evis SesaZI ebl obaTa SezRudul oba ganpi robebul ia?

\\ erTnairi somaturi rekonstruqci iT;

\\ MZ tyupebis zustad erTnairi genebi T;

\\ MZ tyupebs zustad erTnairi genebis eqspresi iT;

\\ SemTxvevi Ti X inaqtivaci iT.

\\ \\ CamoTvl il idan eqspresiis mixedviT rogor kl asificirdeba cil ebi?

\\ qsovil specifikuri;

\\ fermentul i;

\\ transportul i;

\\ imunuri.

\\ \\ romel i cil ebis eqspresiaSi monawil eobs uj redis dnm-is 90%?

\\ qsovil specifikuri;

\\ hemogl obinis;

\\ Si dameurneobis;

\\ nei rotransmi terebis.

\\ \\ \\ uj redis dnm-is ramdeni procenti kodirebs qsovil specifikuri cil ebis sinTezs?

\\ \\ 20%

\\ \\ 30%

\\ \\ 10%

\\ \\ 50%

\\ \\ \\ ra ewodeba SemTxvevas, rodesac erTi mutantis genomuri produqts AseuZl ia gamoasworos meore mutantis bioqimiuri defeqti::

\\ \\ kompl ementacia;

\\ \\ srul i dominireba

\\ \\ pol imeria;

\\ \\ epistaza.

\\ \\ \\ CamoTvl il idan romel ia Sidameurneobis cil ebi

\\ \\ beta amil oidi;

\\ \\ Ddnm-pol imeraza;

\\ \\ aqtini;

\\ \\ miozini.

\\ \\ \\ CamoTvl il idan romel ia Sidameurneobis cil ebi

\\ \\ beta amil oidi;

\\ \\ Dhistonebi;

\\ \\ aqtini;

\\ \\ miozini.

\\ \\ \\ CamoTvl il idan romel ia qsovil specifikuri cil ebi

\\ \\ rnm-pol imeraza;

\\ \\ Ddnm-pol imeraza;

\\ \\ aqtini;

\\ \\ histonebi.

\\ \\ \\ romel i procesebi ar emTxveva erTmaneTs fenil ketonuriis dros?

\\ \\ mutaciis da paTol ogiis saiti;

\\ \\ transkripcia da transl acia;

\\ \\ eqspresia da fol dingi;

\\ \\ iniciacia da el ongacia.

\\ \\ \\ CamoTvl il idan romel i daavadebis dros mdebareobs paTol ogiis saiti Tavis tvinSi?

\\ \\ hiperqol esterinemiis;

\\ \\ Tei-saqsis;

\\ \\ kisturi fibrozis;

\\ \\ osteogenezis.

\\ \\ \\ narCeni funqciis al el ebis mqone individebSi rogor vl indeba zogi memkvidrul i davadebiSTvis damaxasiaTebel i paTol ogiuri fenotipi?

\\ \\ srul i dominantobiT;

\\ paTol ogiis erTeul i SemTxvevis an mcire j gufis manifestaciIT;
\\ paTol ogiis srul i manifestaciIT;
\\ adreul asakSi manifestaciIT.

\\ \\ \\ fenil ketonuriis dros organizmis Txevad garemoSi romel i
nivTierebis Warbi dagrovebiT aris gamowveul i gonebrivi
CamorCenil oba?

\\ aminomJavas;
\\ sfingol ipidis;
\\ tau-cil is;
\\ amil oidis.

\\ \\ \\ romel i fermentis deficiiti viTardeba fenil ketonuriis dros?
\\ gl ukozo-6-fosfat-dehidrogenaza;
\\ gal aktozo-1-uridil transferaza;
\\ fenil al anin-hidroqsil aza;
\\ A-heqsozoami ni daza.

\\ \\ \\ aRniSneT fenil ketonuriis memkvidreobis tipi:
\\ autosomur-dominanturi;
\\ autosomur-recesiul i;
\\ X-SeWidul i dominanturi;
\\ X-SeWidul i recessiul i.

\\ \\ \\ ra grovdeba sisxl Si fenil ketonuriis dros?
\\ al anin-pterin-reduqtaza;
\\ fenil -piroyurZnis mJava;
\\ fenil -al anin-hidroqsil aza;
\\ fenil -al anin-fol atreduqtaza.

\\ \\ \\ ra aminomJavad unda gardaiqmnes fenil al anini j anmrTel
adami anSi?
\\ argininad;
\\ I izinad;
\\ Tirozinad;
\\ gl icinad.

\\ \\ \\ romel i organosaTvis aris yvel aze saSiSi
hiperfenil al aninemia?
\\ gul isTvis;
\\ Tirkmel isTvis;
\\ Tavis tvinisTvis;
\\ el entisTvis.

\\ \\ \\ rogoria fenil ketonuriis riski, Tu orive mSobel i aRniSnul i
daavadebis genis j anmrTel i matarebel ia?
\\ 10%;
\\ 20%;
\\ 25%;
\\ 50%.

\\ \\ \\ როგორია ფენილ კეტონურიის განვითარების რისკი, თუ ერთი მსობელი
ჯანმრთელია, მეორე კი – ავადმყოფი?

\\ \\ 10%;

\\ \\ 25%;

\\ \\ 0%;

\\ \\ 100%.

\\ \\ \\ როგორია ფენილ კეტონურიის განვითარების რისკი, თუ ერთი მსობელი
ავადმყოფია, მეორე კი მუტანური გენის ჯანმრთელი მატარებელი?

\\ \\ 10%;

\\ \\ 25%;

\\ \\ 50%;

\\ \\ 100%.

\\ \\ \\ ფენილ კეტონურიისათვის დამახასიათებელი სიმპტომებია:

\\ \\ რვიზიის უკმარისობა;

\\ \\ ტირკმლის უკმარისობა;

\\ \\ გონებრივი გამოცდები;

\\ \\ ფილტვების დაზიანება.

\\ \\ \\ რა ნივთიერება უნდა იყოს ამოღებული რაციონიდან
ფენილ კეტონურიის მკურნალობის დროს?

\\ \\ ტიროზინი;

\\ \\ ტიროსინი;

\\ \\ ფენილალანინი;

\\ \\ არგინინი.

\\ \\ \\ რა არის დამახასიათებელი ფენილ კეტონურიის არაკლასიკური
ფორმისათვის?

\\ \\ ფენილალანინის დეფიციტი;

\\ \\ BH4-ის სინთეზის დაზიანება;

\\ \\ ფენილალანინ-ჰიდროქსილ აზოტოვანი მკურნალობის დაწყების
შემდეგ;

\\ \\ ფენილალანინის მკურნალობის დაწყების შემდეგ.

\\ \\ \\ რა არის დამახასიათებელი Non-ფენილ კეტონურიისათვის?

\\ \\ ფენილალანინ-ჰიდროქსილ აზოტოვანი მკურნალობის დაწყების
შემდეგ;

\\ \\ ფენილალანინის მკურნალობის დაწყების შემდეგ ნორმალური
სიმპტომების გამოვლინება;

\\ \\ ფენილალანინის მკურნალობის დაწყების შემდეგ მკურნალობის
შემდეგ;

\\ \\ ფენილალანინის მკურნალობის დაწყების შემდეგ მკურნალობის
შემდეგ.

\\ \\ \\ რა არის ნევროლოგიური დარღვევების მიზეზი ფენილ კეტონურიის
დაავადებულ ბავშვებში მიუხედავად იმისა, რომ ისინი იყვნენ დიეტით
მკურნალები?

\\ \\ ფენილალანინ-ჰიდროქსილ აზოტოვანი მკურნალობის დაწყების
შემდეგ;

\\ \\ ფენილალანინ-ფოლ-ატრედუქტაზის სინთეზის დაზიანება;

\\ \\ ფენილალანინ-ჰიდროქსილ აზოტოვანი მკურნალობის დაწყების
შემდეგ მკურნალობის დაწყების შემდეგ მკურნალობის დაწყების
შემდეგ;

\\ \\ ფენილალანინ-დეჰიდროპტერინ-ატრედუქტაზის სინთეზის დაზიანება.

\\ \\ ras iwvevs tetrahidrobiopterinis metabol izmis dar Rveva?
\\ \\ fenil al anin-hidroqsil azas siWarbes;
\\ \\ Tirozin- hidroqsil azas siWarbes;
\\ \\ Tirozin- hidroqsil azas deficits;
\\ \\ triptofan-hidroqsil azas siWarbes.

\\ \\ ras ganapirobebs mravl obiTi mutaciebi fenil ketonuriis dros?
\\ \\ al el ur homogenurobas;
\\ \\ al el ur kompl ementacias;
\\ \\ al el ur heterogenurobas;
\\ \\ al el ur daTiSvas.

\\ \\ ra aris dediseul i fenil ketonuriis mizezi?
\\ \\ axal i mutacia;
\\ \\ dietoTerapia orsul obis dros;
\\ \\ dietoTerapiis dauvel oba orsul obis dros;
\\ \\ dinamikuri mutacia.

\\ \\ ra aris fenil ketonuriis kl inikuri pol imorfizmis mizezi?
\\ \\ homozigoturoba;
\\ \\ hemizigoturoba;
\\ \\ al el uri da l okusuri heterogenuroba;
\\ \\ al el uri da l okusuri homogenuroba.

\\ \\ fenil ketonuriit daavadebul ebi popul aciaSi SeiZl eba Seesabamebodnen?
\\ \\ hemizigotebs;
\\ \\ heterozigotebs;
\\ \\ kompaund-heterozigotebs;
\\ \\ kompaund-homozigotebs.

\\ \\ romel i aminomJavas Warbi dagroveba aris fenil ketonuriis gamomwvevi mizezi?
\\ \\ val inis;
\\ \\ Tirozinis;
\\ \\ fenil il aninis;
\\ \\ gl utaminis.

\\ \\ fenil ketonuriis dros nervul sistemaze romel i nivTierebis dagroveba moqmedebs damazianebl ad?
\\ \\ Tirozinis;
\\ \\ fenil al aninis;
\\ \\ sfingol ipidis;
\\ \\ mel aninis.

\\ \\ fenil il aninis al ternatiul i metabol izmis Sedegad warmoqmnil i romel i nivTiereba gamoiyofa organizmi dan SardTan erTad?
\\ \\ heqsoamini daza;
\\ \\ fenil piroyurZnis mJava;

\\ meTil en-fol ati;
\\ kobal amini.

\\ \\ fenil ketonuriis diagnozis dadgenis mizniT romel bioareSi xdeba Ffenil il aninis donis gansazRvra?

\\ sisxl Si;
\\ SardSi;
\\ ofl Si;
\\ nerwyvSi.

\\ \\ romel bioareSi xdeba fenil piroyurZnis mJavas donis gansazRvra fenil ketonuriis diagnozis dadgenis mizniT?

\\ sisxl Si;
\\ SardSi;
\\ ofl Si;
\\ I imfaSi.

\\ \\ romel organoSi mdebareobs paTol ogiis saiti fenil ketonuriis dros?

\\ RviZl Si;
\\ Tavis tvinSi;
\\ zurgis tvinSi;
\\ naTxemSi.

\\ \\ romel organoSi mdebareobs fenil ketonuriis gamomwvevi genis mutaciis saiti?

\\ RviZl Si;
\\ Tavis tvinSi;
\\ mogrZo tvinSi;
\\ naTxemSi.

\\ \\ romel i nivTiereba warmoiqmneba fenil il aninis al ternatiul i metabol izmis Sedegad?

\\ \\ sfingol ipidi;
\\ fenil piroyurZnis mJava;
\\ kobal amini;
\\ cistaTioni.

\\ \\ CamoTvl il idan, romel idaavadebis dros aris SesaZl ebel i dietis gamoyeneba?

\\ fenil ketonuriis;
\\ Tei-saqsis;
\\ Tal asemiis;
\\ al chaimeris.

\\ \\ romel i davadebis dros aris gamarTl ebul i axal Sobil Ta masobrivi skriningi?

\\ fenil ketonuriis;
\\ hiperqromatozis;
\\ kunTovani distrofiis;
\\ terneris sindromis.

\\ \\ dabadebis pirvel i dReebidanve mkurnal obis gareSe romel i davadebis dros viTardeba gardauval i mZime gonebrivi CamorCenil oba?

\\ \\ retinobl astomis;

\\ \\ Tei-saqsis;

\\ \\ fenil ketonuriis;

\\ \\ Tal asemiis.

\\ \\ romel i daavadebis diagnozis dasadgenad ar aris gamarTI ebul i

axal Sobil Ta masobrivi skriningi da mkurnal oba dabadebidan 24 saatis periodSi?

\\ \\ Tei-saqsis;

\\ \\ gargoil izmis;

\\ \\ homocistinuriis;

\\ \\ fenil ketonuriis;

\\ \\ fenil ketonuriis romel i forma azianebs yvel aze metad Tavis tvins?

\\ \\ arakl asikuri;

\\ \\ kl asikuri;

\\ \\ non _ fenil ketonuria;

\\ \\ non_fenil ketonuria hiperal aninemia.E

\\ \\ fenil ketonuriis kl asikuri formis dros sicocxl is ra periodSi aris saval debul o dietis dacva?

\\ \\ orsul obis;

\\ \\ zrdasrul asakSi;

\\ \\ xandazmul asakSi;

\\ \\ mTel i sicocxl is manZil ze;

\\ \\ CamoTvl il idan, ramdeni genis mutaciaa fenil ketonuriis gamomwvevi mizezi?

\\ \\ erTi;

\\ \\ xuTi;

\\ \\ sami;

\\ \\ eqvsi.

\\ \\ CamoTvl il Tagan, romel i daavadeba memkvidreobs autosomur – recesiul i tipiT?

\\ \\ oj axuri hiperqol esterinemia;

\\ \\ aqondropl azia;

\\ \\ fenil ketonuria;

\\ \\ al chaimeris daavadeba.

\\ \\ romel i daavadebis gamomwvevi nivTierabis deteqciisTvis tardeba axal Sobil Ta skriningi dabadebidan ramdenime dReSi?

\\ \\ fenil ketonuriis;

\\ \\ gargoil izmis;

\\ \\ kisturi fibrozis;

\\ homocistinuriis.

\\ \\ CamoTvl il idan, romel i daavadebis dros viTardeba gonebrivi CamorCenil obis Seuqcevadi procesi dabadebidan oTxi kviris Semdeg?

\\ gargoil izmis;

\\ fenil ketonuriis;

\\ hemofil iis;

\\ sendhofis.

\\ \\ ra saxis paTol ogias miekuTvneba fenil ketonuria?

\\ strukturul i cil ebis;

\\ aminoacidopaTias;

\\ l izosomuri cil ebis;

\\ transmembranul i cil ebis G

\\ \\ CamoTvl il Tagan, romel i daavadebis gamomwvevi mizezi aris tetrahidrobiofterinis masinTezebel i genis mutacia?

\\ fenil ketonuriis;

\\ [kisturi](#) fibrozis;

\\ hemofil iis;

\\ kunTovani distrofiis.

\\ \\ fenil ketonuriis SemTxvevaSi dietis gamoyenebiT mkurnal oba romel i nivTierebis deficitis dros aris uSedego?

\\ fenil al anin_hidroqsil azas;

\\ tetrahidrobiofterinis;

\\ heqsozami ni dazas;

\\ hidrol azas.

\\ \\ romel i genetikuri daavadebis dros aris gamarTI ebul i kofaqtoris gazrdil i doziT miwodeba?

\\ Tei-saqsis;

\\ al chaimeris;

\\ fenil ketonuriis;

\\ kunTovani distrofiis. E

\\ \\ romel i autosomur-recesiul i daavadebis genis matarebel i heterozigoti bavSvebi ibadebian Tandayol il i gonebasustobiT imitom, rom homozigotma dedam orsul obamde da orsul obis periodSi ar daicva Sesabamisi dieta?

\\ mukopol isaqaridozis;

\\ fenil ketonuriis;

\\ kisturi fibrozis;

\\ sendhofis sindromis.

\\ \\ ra funqcia aqvs tetrahidrobiopterins fenil ketonuriis ganviTarebaSi?

\\ fenil al anin_hidroqsil azas inhibitoria;

\\ aneutral ebs ketonaerTebis;

\\ warmoqmnis piroyurZnis mJavas;

\\ fenil al anin_hidroqsil azas aqtiurebs.

\\ \\ romel i daavadebebis gamomwvev mi zezs warmoadgens
hidrol azebis deficiiti?
\\ \\ aqondropl aziis;
\\ \\ hemoqromatozis;
\\ \\ neirofibromatozis;
\\ \\ I izosomuri deponirebis;

\\ \\ CamoTvl il Tagan romel i nivTiereba grovdeba I izosomebSi
hidrol izuri fermentebis deficiitis gamo?
\\ \\ iodi;
\\ \\ atf;
\\ \\ nukl eotidi;
\\ \\ gangl iozidi.

\\ \\ substratis TandaTanobiTi dagrovebis gamo romel i
daavadebebis dros viTardeba masis mateba kl inikurad dazianebul
organoSi an qsovil Si?
\\ \\ hantingtonis;
\\ \\ marfanis;
\\ \\ retis sindromis;
\\ \\ I izosomuri deponirebis.

\\ \\ romel i warmoadgens deponirebis daavadebebis mkurnal obis
ZiriTad meTods?
\\ \\ qirurgiul i;
\\ \\ qimioTerapia;
\\ \\ genuri Terapi a;
\\ \\ fermentis Canacvl ebiTi Terapi a.

\\ \\ nervul uj reddebSi romel i daavadebis dros ar xdeba
gangl iozidis
daSl a?
\\ \\ fenil ketonuriis;
\\ \\ Tei_saqsis;
\\ \\ al chaimeris;
\\ \\ Tal asemi is.

\\ \\ Tei_saqsis daavadebis dros romel i dauSl el i
nivTierebis dagrovebis Sedegad ziandeba nervul i qsovil i?
\\ \\ I ipidebis;
\\ \\ heqsozami nidazas;
\\ \\ gangl iozidis;
\\ \\ tau-cil is.

\\ \\ L CamoTvl il Tagan, romel i daavadeba viTardeba I izosomuri
fermentis heqsozami nidazas deficiitis Sedegad?
\\ \\ pigmenturi qseroderma;
\\ \\ kronis;
\\ \\ al chaimeris;
\\ \\ Tei_saqsis;

\\ \\ cil ebis romel kl ass mikuTvneba Tei_saqsis daavadebis ganvi Tarebaze

pasuxismgebel i heqsozami ni daza?

\\ \\ qsovil specifikurs;

\\ \\ Si dameurneobis;

\\ \\ membranul s;

\\ \\ qromosomul s.

H \\ \\ CamoTvl il idan romel organoze moqmedebs specifikurad heqsozami ni dazas deficiti?

\\ \\ naTxemze;

\\ \\ mogrZo tvinze;

\\ \\ zurgis tvinze;

\\ \\ Tavis tvinis qerqze;

\\ \\ ramdeni al el ia pasuxismgebel i Tei_saqsis daavadebis gamomwvev heqsozami ni dazas sinTezze?

\\ \\ erTi;

\\ \\ ori;

\\ \\ sami;

\\ \\ xuTi.

\\ \\ I izosomuri deponirebis daavadebis gamomwvevi romel i fermenti

Sedgeba al fa da beta suberTeul isa da cil a aqtivatorisagan?

\\ \\ hidrol aza;

\\ \\ idunorizidaza;

\\ \\ hidroqsil aza;

\\ \\ heqsozami ni daza;

\\ \\ heqsozami ni dazas romel i suberTeul is masinTezebel i genis mutacia aris Tei _ saqsis gamomwvevi erT-erTi mizezi?

\\ \\ al fa;

\\ \\ beta;

\\ \\ al fa da beta;

\\ \\ cil a aqtivatoris.

\\ \\ romel i suberTeul ebisgan Sedgeba Tei _ saqsis daavadebaze pasuxismgebel i fermenti heqsozami ni daza?

\\ \\ al fa da betasgan;

\\ \\ al fa da cil a aqtivatorisgan;

\\ \\ beta da cil a aqtivatorisgan;

\\ \\ al fa; beta da cil a aqtivatorisgan;

\\ \\ ramdeni mutaciuri geni aris pasuxismgebel i sendhofis daavadebis

ganvi Tarebaze?

\\ \\ erT

\\ \\ sami;

\\ \\ oTxi;

\\ xuTi.

\\ \\ romel i iSviaTi daavadebis gamomwvevia heqsozaminidazas beta _
suberTeul isa Dda cil a aqtivatoris masinTezebel i genis mutacia?

\\ Tei _ saqsis;

\\ sendhofis;

\\ hanteris;

\\ kisturi fibrozis.

\\ \\ heqsozaminidazas genis narCeni aqtivobis al el ebi Tei _ saqsis
daavadebis romel formasTanaa dakavSirebul i?

\\ gvian manifestaciasTan;

\\ kl asikur Tei _ saqsTan;

\\ srul eqspresiasTan;

\\ srul dominantobasTan.

\\ \\ Tei_saqsis daavadebis dros avadmyofs ra SemTxvevaSi aqvs
Senarcunebul i mxedvel oba da intel eqti?

\\ al el ebis narCeni aqtivobisas;

\\ daavadebis srul i penetrantobisas;

\\ daavadebis srul i eqspresiisas;

\\ daavadebis srul i dominantobisas.

\\ \\ Tei_saqsis daavadebaze pasuxismgebel i genis narCeni aqtivobis
al el ebis dros avadmyofs ra saxis darRvevebi aReniSneba?

\\ ataqsia;

\\ nakl ebad gamoxatul i nevrologiuri darRvevebi da ataqsia;

\\ mZime gonebrivi CamorCenil oba;

\\ kunTovani distrofia.

\\ \\ aRniSneT Tei-saqsis daavadebis memkvidreobis tipi:

\\ autosomur-dominanturi;

\\ autosomur-recesiuli;

\\ X-SeWiduli dominanturi;

\\ X-SeWiduli recesiuli.

\\ \\ romel daavadebaTa j gufs mi ekuTvneba Tei-saqsis daavadeba:

\\ qromosomul s;

\\ genomur s;

\\ l izosomur s;

\\ mitogondriul s.

\\ \\ rogoria Tei-saqsis daavadebis riski, Tu mSobl ebi mutanturi
genis matarebel ebi arian?

\\ 25%;

\\ 30%;

\\ 50%;

\\ 100%.

\\ \\ ra aris damaxasiaTebel i Tei-saqsis daavadebi saTvis?

\\ RviZl is ukmarisoba;

\\ Tirkml is ukmarisoba;
\\ neirodegeneracia;
\\ hiperaqtiuroba.

\\ \\ ra uviTardebaT Tei-saqsis daavadebis dros bavSvebs progresirebadi nevrologiuri darRvevebis garda:

\\ kardiodistrofia;
\\ polikistozi;
\\ sibrmave;
\\ filtvebis anTeba.

\\ \\ rogor vi indeba nervuli ujredების kvდომა Tval Si Tei-saqsis daavadebis dros?

\\ Iaqebi rqovanaze;
\\ feradi Iaqebi skleraze;
\\ alubli sferi Iaqaburaze;
\\ yviteli Iaqaburaze.

\\ \\ ra aris damaxasiaTebeli Tei-saqsis axal Sobili TaformისაTvis?

\\ normaluri mxdveloba da intel eqti;
\\ mxdvelobis da intel eqtis ganuviTareboba;
\\ intel eqtis umniSvnelo daqveiteba;
\\ mxdvelobis daqveiteba.

\\ \\ ra viTardeba Tei-saqsis moზრდილი Taformის dros Tavis tvინის ძაიანების garda?

\\ intel eqtis daqveiteba;
\\ mxdvelobis dakargva;
\\ zurgის tvინის და ნაTxემის degeneracia;
\\ Tavis tvინის ganuviTareboba.

\\ \\ რიტაიხსნება Tei-saqsis daavadebis მარალი სიქსირე ამერიკელი ასკენაზისებრაელი ებსი?

\\ alელი Ta fsevdodeficiტიT;
\\ alელი Ta გაTისვიT;
\\ დამფუზნების ეფექტიT;
\\ epistazის ეფექტიT.

\\ \\ როდის vi indeba Tei-saqsis daavadeba sustad?

\\ kodონირების dros;
\\ alელი Ta გაTისვის dros;
\\ alელიების fsevdodeficiტის dros;
\\ alელიების კომპლემენტაციის dros.

\\ \\ არნისნეTანტერის სინდრომის დამემკვიდრების ტიპი:

\\ ავტოსომურ-დომინანტური;
\\ ავტოსომურ-რეციული;
\\ X-სევიდული რეციული;
\\ X-სევიდული დომინანტური.

\\ \\ არნისნეTანტერის daavadebis დამემკვიდრების ტიპი:

- \\ autosomur-dominanturi;
- \\ autosomur-recesiul i;
- \\ X-SeWidul i recesiul i;
- \\ X-SeWidul i dominanturi.

\\ \\ ra genetikuri fenomeni vl indeba zogj er hanteris da harl eris sindromebis mqone individTa urTierTqmedebis Sedegad?

- \\ al el uri daTiSva;
- \\ al el ebis fsevdodeficienti;
- \\ enetikuri kompl ementacia;
- \\ genomuri imprintingi.

\\ \\ ra aris al el Ta kompl ementaciis Sedegi?

- \\ erTi al el is mutanturi produqti (cil a) urTierTqmedebs meore mutanturi al el is mier warmoebul defeqtur cil asTan;
- \\ erTi al el is mier warmoebul i produqti Trgunavs meore al el is produqts;
- \\ al el ebis mier producirebul i cil ebi ar urTierTqmedeben;
- \\ erTi al el is mier warmoqnil i produqti nawil obriv Trgunavs meore al el is produqts.

\\ \\ ra uwodes hanteris da harl eris sindromebs damaxasiaTebel i saxis fenotipis gamo?

- \\ monRol oidizmi;
- \\ kretinizmi;
- \\ gargoil izmi;
- \\ autizmi.

\\ \\ romel i daavadebis dros ufro mZimea bavSvis gonebrivi CamorCena?

- \\ hanteris sindromi;
- \\ Seies sindromi;
- \\ harl eris sindromi;
- \\ terneris sindromi.

\\ \\ CamoTvl il idan, deponirebis romel genetikuri daavadebi sTvisaa

damaxasiaTebel i dabadebidan 4 _ 6 Tvis Semdeg progresul i nevrol ogiuri darRvevebi; sibrmave da mZime kl inikuri mimdinareoba?

- \\ Tei _ saqsis;
- \\ fenil ketonuriis;
- \\ kisturi fibrozis;
- \\ kunTovani distrofiis.

\\ \\ CamoTvl il idan deponirebis romel i genetikuri daavadebis dros iRupebian avadmyofebi ZiriTadad ori_oTxi wl is asakSi?

- \\ kunTovani distrofiis;
- \\ pigmenturi qserodermis;
- \\ fenil ketonuria;
- \\ Tei_saqsis daavadeba;

\\ \\ genetikuri mkurnal obis romel i meTodis winapiroba gaxda aRmoCena, rom mutanturi uj redbi uj redgare sivrcidan SeiTvi seben maTTvis deficitur

I izosomur ferments:

\\ \\ genuri Terapiis;

\\ \\ genotipis modifikaciis;

\\ \\ fermentis Canacvl ebiTi Terapiis;

\\ \\ rnm-is interferenciis.

\\ \\ \\ kisturi fibrozis dros epiTel uri qsovil is uj redbis apikal ur

membranaSi romel i el eqtrol itebis gamtari arxi aris dazianebul i?

\\ \\ ql oridis an kal iumis;

\\ \\ ql oridisa an natriumis;

\\ \\ ql oridis da magni umis;

\\ \\ ql oridis da kal ciumis.

\\ \\ \\ kisturi fibrozis dros romel i qsovil is uj redbis apikal ur membranaSi aris dazianebul i siTxisa da el eqtrol itebis gamtari arxi?

\\ \\ kunTovanSi;

\\ \\ Semaer Tebel Si;

\\ \\ epiTel urSi;

\\ \\ Zvl ovanSi.

\\ \\ \\ romel bioareSi xdeba kisturi fibrozis mTavari sadiagnostiko

niSnis - natriumisa da ql oridis gansazRvra?

\\ \\ ofI Si;

\\ \\ SardSi;

\\ \\ I imfSa;

\\ \\ sixl Si.

\\ \\ \\ romel i daavadebis diagnozis dadgena aris SesaZI ebel i ofI Si natriumis da ql oridis ionebis koncentraciis gansazRvriT?

\\ \\ avitami nozis;

\\ \\ hiperqol esterinemiis;

\\ \\ anemiis;

\\ \\ kisturi fibrozis.

\\ \\ \\ romel i daavadebis dros viTardeba paTol ogiuri procesi upirvel esad fil tvebsa da pankreasSi?

\\ \\ hiperqol esterinemiis;

\\ \\ ataqsii;

\\ \\ kisturi fibrozis;

\\ \\ fenil ketonuriis.

\\ \\ \\ kisturi fibrozis dros romel i faqtoria respiratorul i probl emebis gamomwvevi ZiriTadi mizezi?

\\ \\ gaZI ierebul i imuniteti;

\\ sqel i l orwos dagroveba;
\\\\ avi taminozi;
\\\\ anemia.

\\\\\\ epiTel uri qsovil is uj redebis apikal ur membranaSi romel i nivTierebis transportis darRveva aris kisturi fibrozis paTfiziol ogiis gamomwvevi ZiriTadi mizezi?

\\ siTxis da el eqtrol itebis;
\\\\ fermentebis da siTxis;
\\\\ vitaminebis da ionebis;
\\\\ siTxis da cil ebis.

\\\\\\ romel i meTodiT xdeba kisturi fibrozis gamomwvev genSi warmoqnil i mutaciis dadgena?

\\\\ oj axuri anamneziT;
\\\\ bioqimiuri anal iziT;
\\\\ citogenetikuri meTodiT;
\\\\ dnm-is mol ekul uri anal iziT.

\\\\\\ CamoTvl il idan, romel i kl inikuri niSani warmoadgens kisturi fibrozis fenotipur gamovl inebas?

\\\\ ConCxis deformacia;
\\ ofl Si natriumisa da ql oridebis siWarbe;
\\\\ mxedvel obis defeqtebi;
\\\\ gonebrivi CamorCenil oba.

\\\\\\ CamoTvl il idan, romel i daavadebis kl inikur niSans warmoadgens

ofl Si natriumisa da ql oridebis siWarbe da zrdis Seferxeba?

\\ kisturi fibrozi;
\\\\ fenil ketonuria;
\\\\ Tei-saqsi;
\\\\ hiperqol esterinemia.

\\\\\\ romel i daavadebisTvis aris damaxasiaTebel i fil tvebSi natriumis gaZl ierebul i adsorbacia?

\\ kisturi fibrozis;
\\\\ ConCxis deformaciis;
\\\\ pigmenturi qserodermis;
\\\\ sendhofis.

\\\\\\ kisturi fibrozis dros romel i darRveva ganapirobebs sasunTq gzebSi Sesqel ebul i l orwos dagrovebas?

\\\\ wamwamovani epiTel is disfunqcia;
\\\\ sasunTqi kunTebis ganuviTarebl oba;
\\\\ imunitetis daqveiTeba da natriumis gaZl ierebul i adsorbacia;
\\ natriumis gaZl ierebul i adsorbacia daql oris daqveiTebul i sekrecia.

\\\\\\ romel i daavadebisTvis aris damaxasiaTebel i sasunTq gzebSi ql oridis daqveiTebul i sekrecis mizeziT Sesqel ebul i l orwos

dagroveba?

- \\ kisturi fibrozis;
- \\ aqondropl aziis;
- \\ hemofil iis;
- \\ progeriis.

\\ \\ romel i kl inikuri fenotipi aris damaxasiaTebel i
fenil ketonuriiT

daavadebul ebisTvis:

- \\ respiratorul i probl emebi;
- \\ idiopaTiuri qronikul i hepatiti;
- \\ mekoniumis bl okada;
- \\ gonebrivi CamorCeniI oba.

\\ \\ CamoTvl il Tagan, romel i daavadeba aris dakavSirebul i
transmembranul i cil is funqciis moSI is eqvs kl asTan?

- \\ hemofil ia;
- \\ progeria;
- \\ kisturi fibrozi;
- \\ hemoqromatozi.

\\ \\ CamoTvl il Tagan, adamianta romel popul aciaSia gavr cel ebul i
maRal i sixSiriT kisturi fibrozis gamomwvevi CFTR genis mutacia?

- \\ TeTrkianebSi;
- \\ iaponel ebSi;
- \\ CineTis aRmosavl eTiT;
- \\ amerikis SavkianebSi.

\\ \\ kisturi fibrozis dros romel i qsovil is uj redebis apikal ur
membranaSia dazianebul i ql oridisa da natriumis arxis
transmembranul i cil a?

- \\ SemaerTebel i;
- \\ epiTel uri;
- \\ kunTovani;
- \\ nervul i.

\\ \\ romel i bioare gamoiyeneba kisturi fibrozis mTavari
sadiagnostiko niSnis - natriumisa da ql oridis koncentraciis
gansazRvrisTvis:

- \\ ofI i;
- \\ Sardi;
- \\ I imfa;
- \\ sisxl i.

\\ \\ romel i ionebis koncentraciis gansazRvriT aris Sesazl ebel i
kisturi

fibrozis diagnozis dadgena?

- \\ natriumis da ql oridis;
- \\ natriumis da magni umis;
- \\ ql oridis da kal iumis;
- \\ kal ciumis da natriumis.

\\ \\ kisturi fibrozis dros upirvel esad romel organoebSi viTardeba

paTol ogiuri procesi?

\\ fil tvebSi da pankreasSi;

\\ \\ fil tvebSi da RviZI Si;

\\ \\ pankreasSi da Tirkmel zeda jirkval Si;

\\ \\ fil tvebSi da Tirkml ebSi.

\\ \\ kisturi fibrozis dros romel i faqtoria respiratorul i probl emebis gamomwvevi ZiriTadi mizezi?

\\ \\ sqel i l orwos dagroveba;

\\ \\ gaZI ierebul i imuniteti;

\\ \\ avitami nozi;

\\ \\ anemi a.

\\ \\ \\ CamoTvl il idan romel i daavadebis kl inikur niSans warmoadgens ofl Si natriumisa da ql oridebis siWarbe da zrdis Seferxeba?

\\ \\ kisturi fibrozis;

\\ \\ fenil ketonuriis;

\\ \\ Tei-saqsis;

\\ \\ hiperqol esterinemiis.

\\ \\ \\ CamoTvl il Tagan transmembranul i cil is funqciis moSl is ramden kl asTanaa dakavSirebul i kisturi fibrozi?

\\ \\ xuTi;

\\ \\ Svidi;

\\ \\ eqvsi;

\\ \\ oTxi.

\\ \\ \\ CamoTvl il idan, romel i daavadebaa X -SeWidul i, mZime, SedarebiT gavr cel ebul i, progresirebadi da ganukurnebel i?

\\ \\ Tal asema;

\\ \\ kisturi fibrozi;

\\ \\ diuSenis kunTovani distrofia

\\ \\ pigmenturi qseroderma.

\\ \\ \\ CamoTvl il Tagan, romel i daavadebis dros iRupebian daavadebul i vajebi daaxl oebiT 20 wl is asakSi?

\\ \\ fragil uri X-sindromis;

\\ \\ neirofibromatozis;

\\ \\ diuSenis kunTovani distrofiis;

\\ \\ retinobl astomis.

\\ \\ \\ diuSenis kunTovani distrofiis dros paTol ogiis prekl inikur stadiaze sixl is SratSi romel i nivTierebis donea Zl ier momatebul i?

\\ \\ distrofinis;

\\ \\ kreatin-kinazas;

\\ \\ qol esterinis;

\\ fenilalaninis.

\\\ romelidaavadebis gamomwvevi mizezia distrofinis masintezebeligenismutacia?

\\ agondroplaziis;

\\ diuSenis da bekeris kunTovani distrofiis;

\\ hiperqol esterinemiis;

\\ parkinsonis.

\\\ miotonuri distrofiis damaxasiaTebelipl eiotropulimoqmedeba vl indeba:

\\ tremoriiT;

\\ daswavl is, mexsierebis darRveviT;

\\ qoreis saxiT;

\\ miokardiumis SekumSvis darRveviT.

\\\ bekeris kunTovani distrofiis dros:

\\ ciladistrofini ar sintezdeba;

\\ daavadeba vl indeba 10 wl is asakSi;

\\ ziandeba gul is da Tavis tvinis ujredebi;

\\ distrofini warmoiqmneba mcire raodenobiT.

\\\ romelimeTodi gamoiyeneba ciladistrofinis gansazRvrisTvis bekeris kunTovani distrofiis sadiagnostikod?

\\ nozern-bl otingi;

\\ sauzern - bl otingi;

\\ vestern-bl otingi;

\\ genomuri hibridizaciis.

\\\ CamoTvl il Tagan yvel aze Warbad romel qsovil Si sintezdeba ciladistrofini?

\\ kunTovanSi;

\\ SemaerTebel Si;

\\ epiTelurSi;

\\ parenqimul Si.

\\\ romelidaavadebisTvisaa damaxasiaTebel imexsierebisa da umaRlesi kognituri funqciebis progresulidegeneracia upiratesad moxucebul obis asakSi?

\\ fenilketonuriisTvis;

\\ Tei-saqsisTvis;

\\ alchaimerisTvis;

\\ homocistinuriisTvis. E

\\\ CamoTvl il Tagan, daunis sindromis dros romel i autosomur-dominanturi daavadeba aris gamowveulidubl ikaciis tipis mutaciiT?

\\ alchimeri;

\\ Tei-saqsi;

\\ fragiluri iqs-sindromi;

\\ fridrixis ataqsia.

\\ \\ al chaimeris daavadebis, romel formas iwvevs amil oidis prekursori cil isa da presel inebis mutacia?

\\ dominanturs;

\\ kombini rebul s ;

\\ recesiul s;

\\ kodominanturs.

\\ \\ al chaimeris daavadebis gamomwvevi romel i cil is masinTezebel i geni axdens gavlenas daavadebis dawyebis asakze?

\\ apol iproteinis;

\\ miozini;

\\ aqcini;

\\ distrofini.

\\ \\ Tavis tvinSi mimdinare procesebidan romel ia al chaimeris daavadebis ganviTarebaze pasuxismgebel i mniSvnel ovani paTol ogiuri gamovl ena:

\\ amil oidis polimerizacia;

\\ apil oproteinis E2 izoforma;

\\ tau-cil is gamol eqva;

\\ presel inis siWarbe.

\\ \\ normal ur pirobebSi neironis mikromil akebis warmoqmnaSi romel i cil a monawil eobs?

\\ tau-cil a;

\\ amil oidi;

\\ al fa-sekretaza;

\\ heqsozami ni daza.

\\ \\ al chaimeris daavadebis dros, romel i cil a monawil eobs uj redSida neurofibril arul i wnul ebis warmoqmnaSi ?

\\ gama-sekretaza;

\\ beta-sekretaza;

\\ amil oidi;

\\ tau-cil a.

\\ \\ al chaimeris sindromis dros mutanturi tau-cil is mier sad xdeba neurofibril arul i wnul ebis warmoqmna?

\\ neironTaSoris sivrceSi;

\\ sinapsebSi;

\\ neironebSi;

\\ aqsonebSi.

\\ \\ CamoTvl il idan, romel i nivTierebis gaZl ierebul i fosforil eba zrdis al chaimeris daavadebais ganviTarebis risks?

\\ al fa-sekretazas;

\\ fenil al aninis;

\\ tau-cil is;

\\ keratin-kinazas.

\\ \\ romel qromosomaSial okal izebul i al chaimeris daavadebaze pasuxismgebel i genebi?

\\ \\ pirveli; mecxramete; meTxuTmete; ocdameerTe;

\\ \\ pirveli; meToTxmete; ocdameerTe; meTxuTmete;

\\ \\ pirveli; ocdameerTe; mecxramete; mecamete

\\ \\ pirveli; meToTxmete; mecxramete; ocdameerTe;

\\ \\ romeli daavadebisTvisaa damaxasiaTebel i mexsierebisa da umaRI esi kognituri funqciebis progresul i degeneracia upiratesad moxucebul obis asakSi?

\\ \\ fenil ketonuria;

\\ \\ Tei-saqsis daavadeba;

\\ \\ al chaimeris daavadeba;

\\ \\ homocistinuria. E

\\ \\ CamoTvlil Tagan, daunis sindromis dros ZiriTadad romeli tipis mutaciaa al chaimeris daavadebis mizezi?

\\ \\ dublikacia;

\\ \\ inversia;

\\ \\ transl okacia;

\\ \\ del ecia.

\\ \\ al chaimeris romel formas iwvevs amil oidis winamorbedi cil isa da presel inebis mutacia?

\\ \\ dominanturs;

\\ \\ kombiniirebul s;

\\ \\ recesiul s;

\\ \\ kodiminanturs.

\\ \\ normal ur pirobebSi ra struqturebis warmoqmnaSi monawil eobs tau-cil a?

\\ \\ mikromil akebis;

\\ \\ membranis;

\\ \\ organoidebis;

\\ \\ miel inis garsis.

\\ \\ eqspresiis xasiaTis mixedvit ZiriTadad romel did kl asad iyofa cil ebi?

\\ \\ citopl azmuri;

\\ \\ qsovil spesifikuri;

\\ \\ membranuli;

\\ \\ fermentuli.

\\ \\ eqspresiis xasiaTis mixedvit ZiriTadad romel did kl asad iyofa cil ebi?

\\ citopl azmuri;
\\ Sidameurneobis;
\\ membranul i;
\\ fermentul i.

\\ \\ CamoTvl il idan, romel i cil is gaZl ierebul i sinTezi iwvevs
al chaimeris daavadebis ganviTarebas?

\\ al fa-sekretazas;
\\ fenil al aninis;
\\ amil oidis prekursoris;
\\ keratin-kinazas.

\\ \\ CamoTvl il idan, romel i daavadebis dros aris pirvel i rigis
naTesavi maRal i riskis matarebel i?

\\ Tei-saqsis;
\\ fragil uri X-sindromis;
\\ diuSenis miotonuri distrofiis;
\\ al chaimeris.

\\ \\ CamoTvl il idan, romel kategorias miekuTvneba al chaimeris
daavadeba?

\\ sqesTan SeWidul s;
\\ hemizigoturs;
\\ mul tifaqtorul s;
\\ modifikaciurs.

\\ \\ CamoTvl il Tagan, Tavis tvinis romel ubnebSi vl indeba
neirodegeneraciul i darRvevebi al chaimeris daavadebis dros?

\\ axal qerqSi;
\\ zol ian sxeul Si;
\\ Sav substanciaSi;
\\ kudian sxeul Si.

\\ \\ CamoTvl il Tagan, Tavis tvinis romel ubnebSi vl indeba
neirodegeneraciul i darRvevebi al chaimeris daavadebis dros?

\\ zol ian sxeul Si;
\\ hipokampSi;
\\ kudian sxeul Si;
\\ Sav substanciaSi.

\\ \\ CamoTvl il Tagan, Tavis tvinis romel ubnebSi vl indeba
neirodegeneraciul i darRvevebi al chaimeris daavadebis dros?

\\ zol ian sxeul Si;
\\ Sav substanciaSi;
\\ I imbur struqturebSi;
\\ kudian sxeul Si.

\\ \\ CamoTvl il Tagan, romel i paTol ogiuri mdgomareoba
uviTardebaT sabol ood al chaimeriT daavadebul ebs?

\\ spl enomegal ia;
\\ Sardis Seukavebl oba;

\\ hepatomegal ia;
\\ pirRebineba.

\\ \\ CamoTvl il Tagan, romel i paTol ogiuri mdgomareoba
uviTardebaT sabol ood al chaimeriT daavadebul ebs?
\\ rigidoba;
\\ gul isreva;
\\ pirRebineba;
\\ spl enomegal ia.

\\ \\ \\ CamoTvl il Tagan, romel i paTol ogiuri mdgomareoba
uviTardebaT sabol ood al chaimeriT daavadebul ebs?
\\ pirRebineba;
\\ spl enomegal ia;
\\ mutizmi;
\\ hepatomegal ia.

\\ \\ CamoTvl il Tagan, romel i warmoadgens al chaimeriT daavadebisTvis
yvel aze mniSvnel ovan risk-faqtors?
\\ moxucebul obis asaki;
\\ mamrobiTi sqesi;
\\ kri-du-Cetis sindromi;
\\ kl ainfel teris sindromi.

\\ \\ \\ CamoTvl il Tagan, romel i risk-faqtori warmoadgens al chaimeriT
daavadebisTvis yvel aze mniSvnel ovan risk-faqtors?
\\ kri-du-Cetis sindromi;
\\ mdedrobiTi sqesi;
\\ mamrobiTi sqesi;
\\ kl ainfel teris sindromi.

\\ \\ \\ CamoTvl il Tagan, romel i sindromis arseboba warmoadgens
al chaimeriT daavadebisTvis yvel aze mniSvnel ovan risk-faqtors?
\\ katis knavil is sindromi;
\\ terneris sindromi;
\\ daunis sindromi;
\\ kl ainfel teris sindromi.

\\ \\ \\ CamoTvl il idan, romel i qromosoma memkvidreobs mxol od dedis
xaziT?
\\ izoqromosoma;
\\ X qromosoma;
\\ autosomebi;
\\ mitoqondriul i. E

\\ \\ \\ rogori kanonzomierebiT ganawil deba Mmitoqondriul i dnm_is
mravl obiTi asl i Svil eul mitoqondriebSi?
\\ mowesrigebul ad;
\\ SemTxvevi Tad;

\\ Tanabrad;
\\ kanonzomi erad.

\\ \\ CamoTvl il Tagan, ra SemTxvevaSi Seicavs uj redi mxol od mutanturi mitoxondriul i dnm_is popul acias?

\\ homopl azmiis;
\\ heteropl azmiis;
\\ kombinirebul i segregaciis;
\\ tipiuri segregaciis dros.

\\ \\ heteropl azmiis SemTxvevaSi rogori kombinaci iT aris warmodgenil i uj redis mitoxondriul i genomi?

\\ wmin da mutantur iT;
\\ normal ur iT;
\\ kombinirebul iT;
\\ mamiseul iT.

\\ \\ CamoTvl il Tagan, CanasaxSi mamis xaziT miRebul i romel i genetikuri informacia eqvemdebareba el iminacias? M

\\ X qromosoma;
\\ mitoxondriul i dnm;
\\ Warbi dnm;
\\ arabal ansirebul i transl okacia.

\\ \\ CamoTvl il idan, romel i mutacia aris qromosomul i tipis?

\\ misensi;
\\ wertil ovani;
\\ freimSrifti;
\\ robertsonul i transl okacia.

\\ \\ CamoTvl il idan, romel i uj redebisTvis aris damaxasiaTebel i dnm-is

reduqciis Semdeg misi total uri ampl ifikacia?

\\ bl astocitistvis;
\\ spermatocitistvis;
\\ oocitistvis;
\\ qorionistvis.

\\ \\ CamoTvl il idan, romel i uj redistvis aris damaxasiaTebel i "boTl is yel is" efeqti?

\\ bl astocitistvis;
\\ spermatocitistvis;
\\ oocitistvis;
\\ qorionistvis.

\\ \\ CamoTvl il idan, mitoxondriul i genomistvis damaxasiaTebel romel cvl il ebas gul isxmobs "boTl is yel is" efeqti?

\\ reduqcias;
\\ ampl ifikacias;
\\ reduqciis Semdeg total ur ampl ifikacias;
\\ embrionSi Mmit. dnm_is el iminacias.

\\ \\ CamoTvl il idan, mutanturi Mmit.dnm_is memkvidreobis romel process ganapirobebs "boTl is yel is" efeqti?

\\ did variabel urobas;

\\ transl okacias;

\\ amplifikacias;

\\ dublikacias.

\\ \\ CamoTvl il idan, romel i daavadebaa mitoqondriul i dnm_is del eciIT

Ggamowveul i?

\\ kerns-sairis;

\\ kri-du-Cetis;

\\ prader-vil is;

\\ mil er-dikeris.

\\ \\ mitoqondriul i dnm-is mutaciebis raodenoba korel aciaSia fenotipur gamovl enasTan. ras Seesabameba mitoqondriul i Mdnm_is mutaciis 60 procenti?

\\ fenotipur zRurbl s;

\\ umoqmedo dones;

\\ moqmed dones;

\\ kl inikur cvl il ebas.

\\ \\ M mitoqondriul i dnm-is mutaciis Sedegad qveiTdeba ra energetikul i

cvl a, upirvel esad romel i sistema ziandeba?

[\\ nervul i](#) da parenqimul i;

\\ nerv-kurTovani;

[\\ grZnobaTa](#) organoebis;

\\ sayrdeni da parenqimul i.

\\ \\ mutanturi mitoqondriul genomis romel i mdgomareoba iwvevs neirosensorul siyrues aminogl ikoziduri antibiotikoTerapiis Sedegad?

\\ repl ikaciuri segregacia;

\\ t-rnm-is genis homopl azmia;

\\ t-rnm-is genis heteropl azmia;

\\ "boTl is yel is" efeqti.

\\ \\ mutanturi mitoqondriul genomis romel i tipis mutacia iwvevs neirosenso-

rul siyrues aminogl ikoziduri antibiotikoTerapiis Sedegad?

\\ Canacvl eba;

\\ del ecia;

\\ dublikacia;

\\ inversia.

\\ \\ ramdeni genia l okal izebul i mitoqondriul qromosomaSi?
\\ \\ 46
\\ \\ 26
\\ \\ 37
\\ \\ 42

\\ \\ uj redul i metabol izmis romel procesebSi monawil eoben
birTvul i genomiT kodirebul i mitoqondriul i cil ebi?
\\ JangviT fosforil ebaSi;
\\ hidrol izSi;
\\ metabol itebis inaqtivaciaSi;
\\ meTil irebaSi.

\\ \\ ra process iwvevs uj redebSi mitoqondriul i dnm-is mutaciis
Sedegad ganviTarebul i atf-is Semicirebul i produqcia?
\\ funqciis moSl asa da kvdomas;
\\ cil is siWarbes;
\\ funqciis gaZl ierebas;
\\ cil is dazi anebas.

\\ \\ JangviTi fosforil eba ra rol s asrul ebs uj redis
funqcionirebaSi?
\\ uzrunvel yofs transmembranul transports;
\\ transl aciis process;
\\ energiis produci rebas;
\\ raparaciis process.

\\ \\ CamoTvl il idan, ras warmoadgens mitoqondriul i daavadebis
gamomwvevi JangviTi fosforil ebiS Seferxebis dros warmoqmnil i
reaqtiul i Jangbadi?
\\ araZiriTad produqts;
\\ ZiriTad produqts;
\\ kofaqtors;
\\ piruvats.

\\ \\ mitoqondriul dnm-Si zomis del eci iT gamowveul i daavadeba:
\\ MELAS -s sindromi;
\\ I eberis optikuri neiropaTia;
\\ personis sindromi;
\\ I is sindromi.

\\ \\ mitoqondriul i genetikuri "boTl is yel is efeqti aris":
\\ homopl azmiis varirebis mizezi;
\\ mitoqondriul i dnm-is ampl ifikacia da Semdgomi Semicireba
oocitSi;
\\ mitoqondriul i dnm-is reduqcia da Semdgomi gamravl eba
spermatogenezSi;
\\ mitoqondriul i dnm-is Semicireba da Semdgomi ampl ifikacia
oogenezSi.

\\ \\ mitoqondriul i dnm-is mutaciis Sedegad ganviTarebul i l eberis optikuri neiropaTiis dros da X-SeWidul i hapl otipis SemTxvevaSi mamakacebSi mxedvel obis dakargvis riski ocdaTxuTmetj eraa gazrdil i. am SemTxvevaSi ra funqcias asrul ebs X-SeWidul i hapl otipi?

- \\ \\ stabil izatoris;
- \\ \\ induqtoris;
- \\ \\ gen-modifikatoris;
- \\ \\ supresoris.

\\ \\ \\ homocistinuria gamowveul ia:
\\ \\ cistaTion-reduqtazas sinTezis defici tiT;
\\ \\ meTionin-sinTazas funqciis gazrdiT;
\\ \\ cistaTion-sinTazas sinTezis defici tiT;
\\ \\ vitamin B₁₂-is siWarbiT.

\\ \\ \\ homocistinuria miekuTvneba daavadebaTa j gufs:
\\ \\ l izosomuri deponirebis;
\\ \\ aminoacidopaTiebs;
\\ \\ autosomur-dominanturs;
\\ \\ arastabil ur ganmeorebadobaTa eqspansi iT ganpi robebul s.

\\ \\ \\ aRni SneT homocistinuriis damemkvidrebis tipi:
\\ \\ autosomur-dominanturi;
\\ \\ autosomur-recesiul i;
\\ \\ X-SeWidul i recesiul i;
\\ \\ X-SeWidul i dominanturi.

\\ \\ \\ ra viTardeba homocistinuriis dros:
\\ \\ fenil al aninis defici ti;
\\ \\ l aqtozis defici ti;
\\ \\ cistationis defici ti;
\\ \\ meTioninis defici ti.

\\ \\ \\ romel vitaminze aris damokidebul i homocistinuria:
\\ \\ \\ vitamini .A;
\\ \\ \\ vitamini .D;
\\ \\ \\ vitamini B₁₂;
\\ \\ \\ vitamini C.

\\ \\ \\ ra aris homocistinuriis mizezi?
\\ \\ cistaTionsinTazas kofaqtorTan dakavSireba;
\\ \\ cistaTionsinTazas kofaqtorTan dakavSirebis daqvei Teba;
\\ \\ cistaTionis struqturis darRveva;
\\ \\ cistaTionis acetil ireba.

\\ \\ \\ aRni SneT cistaTionsinTazas kofaqtori:
\\ \\ \\ adenozin-fosfati;
\\ \\ \\ guanozin-fosfati;
\\ \\ \\ piridoqsal - fosfati;

\\ adenoziin-3-fosfati.

\\ \\ CamoTvl iTagan daasaxel eT fenokopia, romel ic gamowveul ia kofaqtorTa metabol izmis darRveviT:

\\ \\ hemofil ia;

\\ \\ fenil ketonuria;

\\ \\ vitamin-B₁₂-deficituri anemia;

\\ \\ gal aqtozemia.

\\ \\ \\ romel i vitaminis deficitis dros Seizl eba ganviTardes homocistinuriis msgavsi kl inika?

\\ \\ vitamin-A;

\\ \\ vitamin-C;

\\ \\ vitamin-B₁₂;

\\ \\ vitamin-D.

\\ \\ \\ homocistinurias iwvevs fermentTa sinTezis deficiiti aminmJavebis gardaqmnis cikli Si:

\\ \\ Tirozini—fenil al anini;

\\ \\ metionini—cisteini;

\\ \\ serini—gl icini;

\\ \\ glutaminis mJava —gl utaminad.

\\ \\ \\ al fa1-antitriptsini aris:

\\ \\ hidrol aza;

\\ \\ proteaza;

\\ \\ proteazebis kofaqtori;

\\ \\ serpini.

\\ \\ \\ al fa1-antitriptsinis deficiiti aris:

\\ \\ autosomur-dominanturi;

\\ \\ aminoacidopaTia;

\\ \\ cil is funqciis gazrdiT gamowveul i;

\\ \\ konformaciul i daavadeba.

\\ \\ \\ al fa1-antitriptsinis genis romel i al el i ukavSirdeba RviZl is daavadebas:

\\ \\ al fa;

\\ \\ beta,

\\ \\ zeta;

\\ \\ gama.

\\ \\ \\ al fa1-antitriptsinis genis zeta al el Tan asociirebul i RviZl is daavadeba dakavSirebul ia:

\\ \\ cil is raodenobis gazrdasTan;

\\ \\ cil is funqciis daqveitebasTan;

\\ \\ cil is struqturis Secvl asTan;

\\ \\ cil is funqciis zrdasTan.

\\ \\ al fa1--antitriფსინის დეფიციტის გამომწვევ ზეტა ალელთან დაკავშირებული ფილტვის დაავადება განირობებულია:
\\ \\ ელასტინის მომატებით ალვეოლის კედელში;
\\ \\ ალ fa1--antitriფსინის მომატებით პლ აზმასი;
\\ \\ ელ ასთაზა და - α_1 -AT-ს უნაწვრთბის დარღვევით;
\\ \\ ზეტა მუტანტი ცილის სეკრეციით რვიზიდან.

\\ \\ არნისნეტ ალ fa-1-antitriფსინის დამენკვიდრების ტიპი:
\\ \\ ავტოსომურ-დომინანტი;
\\ \\ ავტოსომურ-რეცესიული;
\\ \\ X-სევიდული დომინანტი;
\\ \\ X-სევიდული რეცესიული.

\\ \\ რას იწვევს ალ fa-1-antitriფსინის დეფიციტი:
\\ \\ ტირკმლის უკმარისობა;
\\ \\ ფილტვის უკმარისობა;
\\ \\ გულის უკმარისობა;
\\ \\ კუნთების დისტოფიას.

\\ \\ სად ეგსპრესირდება ალ fa-1-antitriფსინის გენი?
\\ \\ ტვინში;
\\ \\ რვიზიში;
\\ \\ ელენტში;
\\ \\ ფილტვში.

\\ \\ რა გართულება შეიქმნება განვითარდეს fa-1-antitriფსინის დეფიციტის პირობებში, თუ არნისნული დეფექტის მატარებელი აქალსობილი ჰომოზიგოტი?
\\ \\ პნევმონია;
\\ \\ ციროზი;
\\ \\ ინსულტი;
\\ \\ ინფარქტი.

\\ \\ რა ვითარდება კონფორმაციული დაავადებების დროს უკმარისი?
\\ \\ ამინომჟავების დეფიციტი;
\\ \\ ფერმენტის ფუნქციის დაკვეთება;
\\ \\ ცილის აგრეგაცია;
\\ \\ ნაქსირვლები დაგროვება.

\\ \\ რა ნივთიერება უარყოფითად გავლენას ახდენს რისკ-ფაქტორს ალ fa-1-antitriფსინის დეფიციტის დროს და ხელს უწყობს ფილტვის დაზიანებას?
\\ \\ მთვერი;
\\ \\ რადიაცია;
\\ \\ ტაბაკო;
\\ \\ სიცივე.

\\ \\ დაასახელეთ კონფორმაციული დაავადებები:
\\ \\ ნამგლი სებრუჯ რედოვანი ანემია, ალ fa-1-antitriფსინის დეფიციტი;
\\ \\ ნამგლი სებრუჯ რედოვანი ანემია; ფენილკეტონურია;

- \\ homocistonuria, fenil ketonuria;
- \\ homocistonuria, namgl isebruj redovani anemia.

- \\ \\ romel i daavadeba miekuTvneba ekogenetikurs?
- \\ daunis sindromi;
- \\ fenil ketonuria;
- \\ al fa-1-antitriptsinis deficiiti;
- \\ namgl isebruj redovani anemia.

- \\ \\ \\ oj axuri hiperqol isterinemiis ganviTareba ukavSirdeba:
- \\ qol esterinis sintezis darRvevas;
- \\ LDL-receptorebis da PCSK9 genis mutacias;
- \\ qol esterinis donis daqveiTebas;
- \\ LDL-receptorebis gaZl ierebul sintezs.

- \\ \\ \\ LDL-receptoris genis mutaciebSi gamoyofil ia 6 kl asi, maTgan yvel aze gavrcel ebul i daavadebaTa mizezia:
- \\ receptorebis recikl irebis darRveva;
- \\ receptoris Rrmul ebSi l okal izebis Seferxeba;
- \\ LDL-l igandebis gamonTavisufi ebis dabl okva;
- \\ nul ovani al el ebis SemTxveva.

- \\ \\ \\ ferment PCSK9-proteazas funqciaa:
- \\ LDL receptoris aRdgena;
- \\ qol esterinis donis gazrda;
- \\ receptoris endosomasTan dakavSirebis gaadvil eba;
- \\ receptorebis donis regul acia da Warbi qol esterinis gan dacva.

- \\ \\ \\ ra aris oj axuri hiperqol esterinemiis mizezi?
- \\ CFTR-receptoris funqciis dakargva;
- \\ LDL- receptoris funqciis dakargva;
- \\ testosteronis receptoris defeqti;
- \\ estrogenebis receptoris defeqti.

- \\ \\ \\ romel daavadebas iwvevs LDL-receptoris, apoprotein B-100-is, ARH-adaptoris da PCSK-9-proteazas genebis mutacia:
- \\ kistozur fibrozs;
- \\ al chimeris daavadebas;
- \\ oj axur hiperqol eterinemias;
- \\ Saqrian diabets.

- \\ \\ \\ romel i daavadeba warmoadgens risk-faqtors gul is koronarul i daavadebis SemTxvevaSi?
- \\ al chimeris sindromi;
- \\ Saqriani diabeti;
- \\ oj axuri hiperlipidemia;
- \\ fenil ketonuria.

\\ \\ რომელი დაავადების დროს ვითარდება ათრომები და კანტომები
სისხლ ჯარვებსი და კანკვეს?
\\ \\ ალ ჩაიმერის დაავადების;
\\ \\ საკრიანი დიაბეტის;
\\ \\ ოჯახური ჰიპერკოლ ესტერინემიის დროს;
\\ \\ დიუსენის მიოდისტროფიის დროს.

\\ \\ ოჯახური ჰიპერკოლ ესტერინემია ჰომოზიგოტებსი ვლინდება უფრო
ადრე, მიმდინარეობს უფრო მკვეთრად რადგან ადგილი აქვს:
\\ \\ გენის ეპისტაზის მოვლენას;
\\ \\ გენის დოზის ეფექტს;
\\ \\ გენის კომპლემენტარობას;
\\ \\ გენის დატისვას.

\\ \\ ყველაზე უფრო გავრცელებული მუტაციები ოჯახური
ჰიპერკოლ ესტერინემიის დროს არის:
\\ \\ ტრანსპორტ-დეფიციტური;
\\ \\ LDL-რეცეპტორის ნულ-ოვანი ალელები;
\\ \\ მუტანტური რეცეპტორის LDL-თან დაკავსირების;
\\ \\ რეცეპტორის რეციკლების დეფექტის.

\\ \\ რას იწვევენ PCSK-9-პროტეაზის გენის ფუნქციის გამაღიერებელი
მისენს-მუტაციები?
\\ \\ LDL-რეცეპტორის დეგრადაციას;
\\ \\ LDL-რეცეპტორის რეციკლების;
\\ \\ LDL-ლიგანდის გამოტავისუფლებას;
\\ \\ ხშირი LDL-ის სეტივების.

\\ \\ რა იწვევს ორგანიზმს წარბი კოლ ესტერინისგან?
\\ \\ მისენს-მუტაციები PCSK-9-პროტეაზის გენსი;
\\ \\ მისენს-მუტაცია LDL-რეცეპტორსი;
\\ \\ LDL-რეცეპტორის დეფიციტი;
\\ \\ პროტეაზის და LDL-რეცეპტორის კავსირის გაზნება.

\\ \\ PCSK-9-პროტეაზის ნონსენს-მუტაციები მოსახლეობას იწვევს შემდეგი
პათოლოგიისგან:
\\ \\ გულ-ის-კორონარული;
\\ \\ დიუსენის მიოდისტროფიისგან;
\\ \\ კისტოზური ფიბროზისგან;
\\ \\ საკრიანი დიაბეტისგან.

\\ \\ ჰომოცისტინურია მიეკუთვნება დაავადებათა ჯგუფს:
\\ \\ ლიზოსომური დეპონირების;
\\ \\ ამინოკომპარტების;
\\ \\ ავტოსომურ-დომინანტურს;
\\ \\ არასტაბილურ განმეორებადობათა ექსპანსიით განპირობებული.

\\ \\ მიტოქონდრიული დიდი ზომის დელიტ გამოწვეული დაავადება:
\\ \\ MELAS სინდრომი;

- \\ I eberis optikuri neiroPaTia;
- \\ pirsonis sindromi;
- \\ I is sindromi.

- \\ \\ mitoqondriul i genetikuri "boTI is yel is efeqti aris":
- \\ homopl azmiis variirebis mizezi;
- \\ mitoqondriul i dnm-is amplifikacia da Semdgomi Semicireba oocitSi;
- \\ mitoqondriul i dnm-is reduqcia da Semdgomi gamravleba spermatogenezSi;
- \\ mitoqondriul i dnm-is Semicireba da Semdgomi amplifikacia oogenezSi.

- \\ \\ aramakodirebel ganmeorebaTa eqspansiit ganpirobebul i daavadebaa (cil is funqciis dakargva):
- \\ hantiqtonis daavadeba;
- \\ fragil uri X-sindromi;
- \\ beker-diuSenis kunTovani distrofia;
- \\ al chaimeris daavadeba.

- \\ \\ CamoTvl il idan romel ia ganmeorebad TanamimdevrobaTa eqspansiisTvis damaxasiaTebel i ZiriTadi Tvi seba [\\ hapl oukmarisoba](#);
- \\ I okusuri heterogenul oba;
- \\ anticipacia;
- \\ mozaicizmi.

- \\ \\ CamoTvl il idan ganmeorebadi TanamimdevrobaTa eqspansiis gamovlenisTvis damaxasiaTebel i aucil ebel i pirobaa
- \\ fenotipuri zRurbl is efeqti.
- \\ homozigoturoba;
- \\ heterozigotul oba;
- \\ mozaicizmi.

- \\ \\ CamoTvl il idan romel uj redebSi xdeba ganmeorebad TanamimdevrobaTa eqspansia
- \\ kunTovanSi;
- \\ epiTel urSi;
- \\ cximovanSi;
- \\ [spermatogoni ebSi](#).

- \\ \\ CamoTvl il idan memkvidrul i masal is funqcionirebis romel etapze SeiZl eba warmoiqmnas trinukl eotiduri Tanamimdevrobis eqspansia
- \\ repl ikaciis;
- \\ transkripciis;
- \\ transl aciis;
- \\ procesingis.

\\ \\ CamoTvl il idan ZiriTadad rogori xasiaTis kl inikuri defeqtebia damaxasiaTebel i ganmeorebad TanamimdevrobaTa eqspansiisTvis
\\ nevrol ogiuri;
\\ hematol ogiuri;
\\ respiratorul i;
\\ ofTal mol ogiuri.

\\ \\ CamoTvl il idan dnm-is mol ekul aSi warmoqmnil i romel i procesi udevs safuZvl ad transkripciis inhibirebas X-SeWidul i fragil uri sindromis dros
[\\ del ecia;](#)
\\ dubl ikacia
\\ citozinis meTil ireba;
\\ inversia.

\\ \\ CamoTvl il idan romel i procesis bl okirebas iwevs citozinis meTil ireba X-SeWidul i fragil uri sindromis dros:
\\ transkripciis;
\\ transl aciis;
\\ procesingis;
\\ fol dingis.

\\ \\ X-SeWidul i fragil uri sindromis dros CamoTvl il idan genis romel ubanSi xdeba cgg tripl etis eqspansia
\\ transl irebad;
\\ aratransl irebad;
\\ egzonSi;
\\ terminatorSi.

\\ \\ hantingtonis daavadebis dros CamoTvl il idan genis romel ubanSi xdeba dinamikuri mutacia
\\ makodirebel Si;
\\ aramakodirebel Si;
\\ terminatorSi;
\\ promotorSi.

\\ \\ CamoTvl il idan mutaciis romel i tipi iwevs hantingtonis daavadebas
\\ del ecia;
\\ transl okacia;
\\ dinamikuri;
\\ inversia.

\\ \\ CamoTvl il idan ZiriTadad ra cvl il ebebs iwevs genis makodirebel ubanSi warmoqmnil i dinamikuri mutacia
[\\ eqtopur](#) eqspresias;
\\ heteroqronul eqspresias;
\\ anomal uri cil is warmoqmnas;
\\ cil is mier axal i Tvisebis SeZenas;

\\ \\ X-SeWidul i fragil uri sindromis dros CamoTvl il idan ra
procese bis inhibitoria mutacia genis transkribirebad magram
aratransl irebad ubanSi
\\ transkripciis; procesingis; transl aciis;
\\ repl ikaciis da reparaciis;
\\ posttransl aciuri procesingis;
\\ fol dingis da refo l dingis.

\\ \\ ra gavl enas axdens cil is funqciaze cgg tripl etis eqspansia
X-SeWidul i fragil uri sindromis dros
\\ funqcia izrdeba;
\\ axal T visebas iZens;
\\ funqcias kargavs;
\\ sinTezdeba arasaWiro adgil as.

\\ \\ CamoTvl il idan romel i cil is funqciis dakargva iwvevs
fridrixis ataqsi as
\\ hemogl obinis;
\\ heqsozami ni dazas;
\\ frataqsinis;
\\ hidroqsil azas.

\\ \\ CamoTvl il idan upirvel esad nervul i sistemis romel i nawil i
ziandeba fridrixis ataqsi is dros
\\ naTxemi da Suamdebare;
\\ naTxemi da zurgis tvini;
\\ Sua da mogrZo tvini;
\\ Sua da Suamdebare tvini.

\\ \\ CamoTvl il idan rogor zemoqmedebs fridrixis ataqsi is
gamomwvevi mutacia cil is funqciaze
\\ funqcias kargavs;
\\ axal T visebas iZens;
\\ funqcia Zl ierdeba;
\\ fol dingi ferxdeba.

\\ \\ mutaciis Sedegad cil is funqciis gazrda CamoTvl il idan
romel i daavadebis gamomwvevi mizezia
\\ fenil ketonuriis;
\\ kisturi fibrozis;
\\ al chaimeris;
\\ nayofis wyal mankis.

\\ \\ CamoTvl il idan romel i T viseba aris damaxasiaTebel i
arastabil uri
ganmeorebadi Tanami mdevrobaTa eqspansi isTvis
[\\ di nami kur oba;](#)
\\ transl okacia;

\\ insercia;
\\ del ecia.

\\ \\ CamoTvl il Tagan, romel ia aramakodirebel ganmeorebaTa eqspansiIT ganpirobebul i daavadeba romel ic xasiaTdeba axal i Tvissebebis miniWebiT:

\\ hantingtonis daavadeba;
\\ fridrixis ataqsia;
\\ miotonuri distrofia;
\\ zurgis tvinis da naTxemis ataqsia.

\\ \\ pol igl utaminuri daavadebaTa j gufs miekuTvneba:

\\ fragil uri X-sindromi;
\\ miotonuri distrofia;
\\ fridrixis ataqsia;
\\ hantingtonis daavadeba.

\\ \\ fragil uri X-sindromis dros aRiniSneba:

\\ makroorqidizmi, SemaerTebel i qsovil is displ azia;
\\ gaa-kodonis ganmeorebadobaTa eqspansia 200-dan 1700-asl amdea;
\\ cag-kodonis ganmeorebadobaTa eqspansia 200-asl amdea;
\\ cil a frataqsini kargavs funqcias.

\\ \\ fridrixis ataqsiiis dros aRiniSneba:

\\ gaa-kodonis ganmeorebadobaTa eqspansia 40 asl amde;
\\ frataqsiniis funqciis dakargva;
\\ eriTrocitSi hemis sinTezis daTrgunva;
\\ cag-kodonis 200-asl i.

\\ \\ genis makodirebel ubanSi arastabil uri ganmeorebadobis eqspansiIT gamowveul i daavadebaa:

\\ fragil uri X-sindromi;
\\ fridrixis ataqsia;
\\ miotonuri distrofia;
\\ hantingtonis daavadeba.

\\ \\ genis aramakodirebel ubanSi-intronSi arastabil uri ganmeorebadobis eqspansiIT gamowveul i daavadebaa:

\\ fragil uri X-sindromi;
\\ diuSenis kunTovani distrofia;
\\ miotonuri distrofia;
\\ hantingtonis daavadeba.

\\ \\ genis aramakodirebel ubanSi-promotorSi arastabil uri ganmeorebadobis eqspansiIT gamowveul i daavadebaa:

\\ fragil uri X-sindromi;
\\ fridrixis ataqsia;
\\ miotonuri distrofia;
\\ hantingtonis daavadeba.

\\ \\ hantingtonis sindromis dros:

\\ Tavis tvinSi aRiniSneba grZel i, moumwifebel i dendritul i morCebi;
\\ irRveva fsiqika, kognituri unari, aRiniSneba qorea;
\\ aRiniSneba gaa-kodonis ganmeorebadobaTa eqspansia;
\\ memkvidreoba aris autosomur-recesiul i.

\\ \\ CamoTvl il idan, memkvidreobis romel i tipi aris damaxasiaTebel i hantingtonis daavadebisTvis
\\ autosomur-dominanturi;
\\ autosomur-recesiul i;
\\ X-SeWidul i-dominanturi;
\\ X-SeWidul i-recesiul i.

\\ \\ CamoTvl il idan romel i procesi warmoaddgens monogenuri daavadebis ZiriTad gamomwvev mizezs?
\\ wertil ovani mutacia;
\\ rekombinacia;
\\ modifikacia;
\\ transl okacia.

\\ \\ CamoTvl il idan genis romel i cvl il eba ganapirobebs mol ekul uri daavadebis ganviTarebas genSi?
\\ mutacia;
\\ transl acia;
\\ transkripcia;
\\ modifikacia;

\\ \\ romel i nivTierebis Sedgenil oba Seicvl eba cil is masinTezebel i struqturul i genis mutaciis Sedegad?
\\ i-rnm;
\\ t-rnm;
\\ aminomJava;
\\ r. rnm.

\\ \\ CamoTvl il idan romel i epigenetikuri cvl il eba ganapirobebs daavadebis ganviTarebas?
\\ mutacia;
\\ transl okacia;
\\ meTil ireba;
\\ modifikacia.

\\ \\ CamoTvl il Tagan, romel i nivTiereba ar warmoadgens genis
produqts?
\\ \\ i-rnm;
\\ \\ cil a;
\\ \\ t-rnm;
\\ \\ aminomJava.

\\ \\ upirvel esad romel qsovil Si viTardeba paTol ogiuri procesi
mit-dnm-is mutaciis dros?
\\ \\ kunTovanSi;
\\ \\ SemaerTebel Si;
\\ \\ cximovanSi;
\\ \\ epiTel urSi.

\\ \\ CamoTvl il Tagan, romel i sistema ar miekuTvneba fenotipur
dones?
\\ \\ geni;
\\ \\ cil a;
\\ \\ uj redi;
\\ \\ popul acia.

\\ \\ CamoTvl il Tagan; romel i procesi aris al fa-Tal asemiis
gamomwvevi mizezi?
\\ \\ al fa gl obinis genis dozis Semcireba;
\\ \\ beta gl obinis genis dozis Semcireba;
\\ \\ transversia;
\\ \\ tranzicia.

\\ \\ cil is funqciis ra saxis cvl il eba gamoiwvevs kempis
Hhemogl obinis ganviTarebas?
\\ \\ heteroqronul i eqspresia;
\\ \\ funqciis daqveiTeba;
\\ \\ funqciis gaZl iereba;
\\ \\ eqtopuri eqspresia.

\\ \\ CamoTvl il idan cil is romel i cvl il ebaa aqondropl aziis
gamomwvevi mizezi?
\\ \\ heteroqronul i eqspresia;
\\ \\ funqciis daqveiTeba;
\\ \\ eqtopuri eqspresia.
\\ \\ funqciis gaZl iereba;

\\ \\ CamoTvl il idan cil is funqciis ra saxis cvl il eba gamoiwvevs
namgl isebruj redovani anemiis ganviTarebas?
\\ \\ heteroqronul i eqspresia;
\\ \\ funqciis daqveiTeba;

\\ eqtopuri eqspresia;
\\ axal i Tvissebebis SeZena;

\\ \\ ra daavadebas gamoiwvevs hemogl obinis mol ekul ebis gaerTianeba
Cxiriseburi formis pol imerebad?

\\ kempsis hemogl obins;
\\ methemogl obinemas;
\\ namgl isebruj redovan anemias;
\\ eriTroci tozs.

\\ \\ hemogl obinopaTiebis romel i formis dros kargavs eriTroci ti
el astiurobas?

\\ al fa-Tal asema;
\\ eriTroci tozis;
\\ namgl isebruj redovani daavadebis;
\\ mcire Tal asema.

\\ \\ romel i aminomJavebia evol uciis procesSi cil a gl obinis
mol ekul aSi ucvl el ad SenarCunebul i?

\\ histidini da fenil al anini;
\\ histidini da val ini;
\\ fenil anini da gl utamini;
\\ gl utamini da val ini.

\\ \\ xeTi kviris embrionisTvis romel i struqtura warmoadgens
hematopoezis sistemas?

\\ yviTris parki;
\\ RviZl i;
\\ el enTa;
\\ Wipl aris Rerovani uj redi. E

\\ \\ postnatal ur periodSi ZiriTadad romel i organo warmoadgens
hematopoezis organos?

\\ RviZl i;
\\ el enTa;
\\ Zvl is tvini;
\\ Rerovani uj redi. E

\\ \\ sami kviris embrionisTvis romel i struqtura warmoadgens
hematopoezis sistemas?

\\ RviZl i;
\\ el enTa;
\\ Wipl aris Rerovani uj redi. E
\\ yviTris parki;

\\ \\ ontogenezis romel periodSi xdeba beta-gl obinis kompensacia
gama gl obiniT?

\\ embrionul ;
\\ postnatal ur;
\\ xandazmul ;

\\ pubertantul .

\\ \\ pre- da postnatal ur periodSi gl obinis romel i j aWvis genebis mutacia iwvevs mZime daavadebas?

\\ gama;

\\ al fa;

\\ sigma;

\\ beta.

\\ \\ CamoTvl il idan hemogl obinis struqturul i variantebis warmoqmnaze ZiriTadad genis romel i nawil is mutaciaa pasuxismgebel i?

[\\ promotori;](#)

\\ enhanseri;

\\ makodirebel i;

\\ terminatori.

\\ \\ beta-gl obinis genis cvl il eba ZiriTadad mutaciis romel i formiTaris ganpirobetul i?

\\ didi del eciit;

\\ dubl ikaciiT;

\\ transl okaciiT;

\\ wertil ovaniT.

\\ \\ mama namgl isebruj redovani paTol ogiis recesiul i genis matarebel ia; deda homozigoti - j anmrTel ia. rogoria al baToba; rom maTi Svil i iqneba am genis matarebel i:

\\ 14 ;

\\ 13;

\\ 2\3;

\\ 1\1;

\\ \\ romel i daavadebis mol ekul ur safuZvel s warmoadgens beta-gl obinis genis struqturul i saitis mutacia?

\\ mukopol isaqaridozis;

\\ namgl isebruj redovani anemiis;

\\ al fa Tal asemiis;

\\ kompl eqsuri Tal asemiis.

\\ \\ namgl isebruj redovani paTol ogiis dros hemogl obinis tetrameris masinTezebel romel genSi aRiniSneba mutacia?

\\ al fas;

\\ betas;

\\ gamas;

\\ sigmas.

\\ \\ pol imerizaciis Sedegad hemogl obini kargavs Jangbadis mierTebis unars. romel i daavadeba viTardeba am SemTxvevaSi?

\\ mukopol isaqaridozi;

\\ namgl isebruj redovani anemia;

\\ kempsis hemogl obini;

\\ methemogl obinemia.

\\\ romel i individebis eriTrocitebis rezistentobis gamo gavr cel da maRal i sixSiriT namgl ise buj redovani paTol ogi is geni mal ari is kerebSi?

\\ heterozigotebis;

\\\ homozigotebis;

\\\ hemi zigotebis;

\\\ kompaund heterozigotebis.

\\\ CamoTvl il idan romel hemogl obinSi aris aminomJava fenil al anini Canacvl ebul i seriniT?

\\ arastabil ur hamersmitSi;

\\\ kempsis hemogl obinSi;

\\\ hemogl obin haid- parkSi;

\\\ methemogl obinSi.

\\\ hemogl obin hamersmitis mol ekul aSi romel i aminomJaviT Canacvl eba iwvevs

JangbadTan afinurobis Semcirebas?

\\ fenil al anins -seriniT;

\\\ gl utaminis - val iniT;

\\\ val inis - seriniT;

[\\fenil al aninis](#) - TiroziniT.

\\\ gl obinis romel i j aWvisgan aris agebul i hemogl obinis tetrameri bartsis hemogl obinis SemTxvevaSi?

\\ al fa;

\\ beta;

\\ gama;

\\ sigma.

\\\ gl obinis romel i mol ekul ebisgan xdeba bartsis homotetramerul i hemogl obinis mol ekul is warmoqmna?

\\ sigmas;

\\ gamas;

\\ betas;

\\ epsil onis.

\\\ ra pirobebSi imyofeba Canasaxi bartsis hemogl obinis maRal i Semcvel obis dros?

\\ hipoksi is;

\\ hipodinami is;

\\ normal uri;

\\ dehidrataci is.

\\\ rogoria did popul aciebSi beta – Tal asemiiT daavadebul picientTa umetesi nawil is genetikuri konstitucia?

\\ homozigoti;

\\ hemi zigoti;

\\ heterozigoti;
\\ kompaund-heterozigoti.

\\ \\ CamoTvl il idan mutaciis romel i forma iwvevs kompl eqsur
Tal asemias?
\\ del ecia;
\\ insercia;
\\ dubl ikacia;
\\ Finsercia.

\\ \\ CamoTvl il idan romel i meqanizmia martivi beta-Tal asemis
gamomwvevi mizezi?
\\ dubl ikacia;
\\ rnm-is kepirebis defeqti;
\\ transl okacia;
\\ transversia.

\\ \\ CamoTvl il idan romel i meqanizmia martivi beta-Tal asemis
gamomwvevi mizezi?
\\ dubl ikacia;
\\ i-rnm-is raodenobis Semcireba;
\\ transl okacia;
\\ tranzicia.

\\ \\ CamoTvl il idan romel i meqanizmia martivi beta-Tal asemis
gamomwvevi mizezi?
\\ dubl ikacia;
\\ rnm spl aising - mutacia
\\ transl okacia;
\\ tranzicia.

\\ \\ CamoTvl il idan romel i ubani aregul irebs beta-gl obinis
kl asterSi l okal izebul i genebis "CarTva-gamortvas" asakis
Sesabamisad?
\\ promotori;
\\ terminatori;
\\ qromatinis koncentratori;
\\ enhanseri.

\\ \\ CamoTvl il idan Tal asemis romel formas gamoiwvevs l okusis
makontrol ebel i ubnis del ecia:
\\ espanurs;
\\ betas;
\\ mcires;
\\ gamas.

\\ \\ CamoTvl il idan hemogl obinis mol ekul is romel i aminmJava
ikavSirebs hemis mol ekul as:

\\ gl utamini;
\\ serini;
\\ histidini;
\\ fenil al anini.

\\ \\ CamoTvl il idan ZiriTadad romel i tipis mutacia iwvevs al fa-Tal asemias:

\\ mi sensi;
\\ seimseni;
\\ del ecia;
\\ inversia.

\\ \\ CamoTvl il idan ZiriTadad mutaciis romel i meqanizmi udevs safuZvl ad al fa-genebis del ecias:

\\ inversia;
\\ araTanabari krosingoveri;
\\ dubl ikacia;
\\ dinamikuri mutacia.

\\ \\ romel i cil ebisgan sinTezdeba hemogl obinis tetrameri nayofis wyal mankis dros:

\\ al fa da beta;
\\ gama;
\\ al fa;
\\ sigma.

\\ \\ CamoTvl il idan hemogl obinopaTiis romel i forma aris gamowveul i ganviTarebis procesSi beta-gl obinis genebis "CarTva-gamorTvis" meqanizmis moSl iT:

\\ fetal uri hemogl obinis mdgradoba;
\\ nayofis wal manki;
\\ methemogl obinemia;
\\ namgl isebruj redovani anemia.

\\ \\ CamoTvl il idan mkurnal obis romel i meTodis gamoyenebaa SesaZl ebel i beta-gl obinis genis mutaciisas:

\\ epsil on gl obinis eqspresiis gaZl iereba;
\\ sigma gl obinis eqspresiis gaZl iereba;
\\ al fa gl obinis eqspresiis gaZl iereba;
\\ gama-gl obinis eqspresiis gaZl iereba.

\\ \\ CamoTvl il idan romel i tipis mutacia aris namgl isebruj redovani anemiis gamomwvevi mizezi:

\\ mi sensi;
\\ seimsensi;
\\ del ecia;
\\ dubl ikacia.

\\ \\ CamoTvl il idan romel i tipis mutacia aris kompl eqsuri Tal asemiis gamomwvevi mizezi:

\\ didi zomis del ecia;
\\ transl okacia;
\\ inversia;
\\ dubl ikacia.

\\ \\ CamoTvl il idan beta gl obinis kl asteris romel i l okusis del ecia aris kompl eqsuri Tal asemiis gamomwvevi mizezi:
\\ sigma-gl obinis;
\\ epsil onis;
\\ beta da gama-gl obinis;
\\ gama-gl obinis.

\\ \\ CamoTvl il idan romel i hemogl obini xasiaTdeba JangbadTan maRal i afinurobiT
\\ hemogl obin – hamersmiti;
\\ hemogl obin – A;
\\ hemogl obin – E;
\\ methemogl obini.

\\ \\ CamoTvl il idan romel hemogl obins axasiaTebS JangbadTan daqveiTebul i afinuroba
\\ hemogl obin – hamersmits;
\\ hemogl obin – kemss;
\\ hemogl obin – hai d-parks;
\\ methemogl obins.

\\ \\ CamoTvl il idan romel hemogl obins axasiaTebS eriTroci tebSi dakristal ebis unari
\\ hemogl obin – C;
\\ hemogl obin – A;
\\ hemogl obin – E;
\\ hemogl obini -M.

\\ \\ ra axal Tvisabas iZens hemogl obini hipoqsiis pirobebSi namgl isebruj redovani anemiis genis heterozigot matarebl ebSi
\\ kristal izebis;
\\ xsnadobis;
\\ fibril ebis;
\\ hidrofoburobis.

\\ \\ CamoTvl il idan romel i daavadebis gamomwvevia genis eqtopuri da heteroqronul i eqspresia
\\ namgl isebruj redovani anemiis;
\\ fetal uri hemogl obinis mdgradobis;
\\ al fa-Tal asemiis;
\\ beta-Tal asemiis.

\\ \\ CamoTvl il idan romel i daavadebis gamomwvevia mutacia al fa-gl obinis genis makodirebel ubanSi
\\ hemogl obin – hamersmitis;

\\ namgl isebruj redovani anemiis;
\\ nayofis wyal mankis;
\\ beta-Tal asemiis.

\\ \\ CamoTvl il idan romel i paTol ogiis dros aqvs adgil i genis
eqtopur da heteroqronul eqspresias
\\ beta-Tal asemiis;
\\ namgl isebruj redovani anemiis;
\\ al fa-Tal asemiis;
\\ simsi vneebis.

\\ \\ CamoTvl il idan romel daavadebas iwvevs mutaciis Sedegad cil is
funqciis gazrda
\\ kempis hemogl obini;
\\ fenil ketonurias;
\\ kistur fibrozis;
\\ nayofis wyal manks.

\\ \\ CamoTvl il idan romel i mutacia iwvevs kempis hemogl obinis
warmoqmnas
\\ misensi;
\\ freimSrifti;
\\ nonsensi;
\\ seimsensi.

\\ \\ CamoTvl il idan genis romel i ubnis mutacia iwvevs fetal uri
hemogl obinis memkvidreobiT mdgradobas
\\ regul atorul is;
\\ egzonis;
\\ intronis;
\\ terminatoris.

\\ \\ CamoTvl il idan genis romel i ubnis mutaciit aris gamowveul i
al fa-Tal asema
\\ regul atorul is da makodirebel i;
\\ intronis da regul atorul is;
\\ intronis;
\\ terminatoris.

\\ beta-gl obinis kl asteris romel i genis gaZl ierebul i
postnatal uri eqspresii Sedegad viTardeba fetal uri hemogl obinis
memkvidreobiTi mdgradoba
\\ epsil onis;
\\ gamas;
\\ sigmas;
\\ betas.

\\ CamoTvl il idan romel i aminomJava uzrunvel yofs hemogl obini s
mol ekul asTan hemis dakavSirebas
\\ fenil al anini;
\\ serini;
\\ gl utamini;
\\ val ini.

\\ CamoTvl il idan romel i hemogl obini ar gv xvdeba mozrdil i
adamianis sisxl is Semadgenl obaSi
\\ hemogl obin – gama;
\\ hemogl obin – A;
\\ hemogl obin – E;
\\ hemogl obin – epsil oni.

\\ CamoTvl il idan romel i aminomJavaa Canacvl ebul i hemogl obini s
mol ekul aSi namgl isebruj redovani anemiis dros
\\ gl utamini-l iziniT;
\\ gl utamini-val iniT;
\\ serini-val iniT;
\\ serini-gl utaminiT.

\\ CamoTvl il idan romel i organos infarqtis maRal i riskis
matarebl ebi arian heterozigotebi namgl isebruj redovani genis
mixedvi T
\\ RviZl is;
\\ Tirkml is;
\\ fil tvebis;
[\\ el enTis;](#)

\\ CamoTvl il Tagan, romel i daavadebisTvis aris efeqturi fermentis
Canacvl ebiTi Terapia?
\\ mZime kombini rebul i imunodeficienti;
\\ hirSsprungis daavadebisTvis;
\\ venuri Trombozistvis;
\\ pigmenturi retinitisTvis.

\\ aRniSneT namgl iseburuj redovani anemiis memkvidreobis tipi:
\\ autosomur-dominanturi;
\\ autosomur-recesiul i;
\\ X-SeWidul i-recesiul i;
\\ X-SeWidul i- dominanturi.

\\ gamoicani daavadeba, roml isadmi mdgradoba uviTardebaT
namgl isebur-uj redovani anemiis genis j anmrTel matarebl ebs
(heterozigotebs)?
\\ Tal asema;
\\ I ei Smaniozi;
\\ malaria;
\\ amebiazi.

\\ \\ mutanturi hemogl obinis romel i formis dros viTardeba namgl isebruj redovani anemia?

\\ \\ HbH;

\\ \\ HbC;

\\ \\ HbS;

\\ \\ HbK.

\\ \\ romel i daavadebis dros xdeba hemogl obinSi konformaciul i mutacia?

\\ \\ Tal asemiis;

\\ \\ rkinadeficituri anemiis;

\\ \\ namgl isebruj redovani anemiis;

\\ \\ methemogl obinemiis.

\\ \\ romel qromosomaSi aris ganl agebul i β -gl obinis genis kl asteri?

\\ \\ me-5 qromosomaSi;

\\ \\ X-qromosomaSi;

\\ \\ me-11 qromosomaSi;

\\ \\ me-16 qromosomaSi.

\\ \\ romel qromosomaSi aris moTavsebul i α -gl obinis genis kl asteri?

\\ \\ X-qromosomaSi;

\\ \\ Y-qromosomaSi;

\\ \\ me-16 qromosomaSi;

\\ \\ me-11 qromosomaSi.

\\ \\ romel i qimiuri el ementi Sedis hemogl obinis prostetul j gufSi:

\\ \\ \\ kal ciumi;

\\ \\ \\ kal iumi;

\\ \\ rkina;

\\ \\ magni umi.

\\ \\ romel i hemogl obinis dros aris Semcirebul i Jangbadis miwodeba qsovil ebSi da viTardeba pol icitemia?

\\ \\ HbF;

\\ \\ \\ HbA;

\\ \\ Hb Kempsey;

\\ \\ HbM.

\\ \\ romel i aminomJavaa Canacvl ebul i hemogl obinis β -pol ipeptidSi namgl iseburuj redovani anemiis dros?

\\ \\ arginini;

\\ \\ gl utamini;

\\ \\ arginini;

\\ \\ cisteini.

\\ \\ romel i aminomJavis Canacvl eba iwvevs hemogl obin-hamersmi tSi "hemi s" amovardnas?

\\ \\ arginini;

\\ \\ I eicinis;

\\ \\ fenil al aninis;

\\ Tirozinis.

\\\ romel hemogl obins axasiaTebis histidinis TiroziniT Canacvl ebis Sedegad methemogl obinemiis ganviTareba?

\\\ Hb Kempsey;

\\ Hb Sö

\\ Hb Hyde Park;

\\ HbC.

\\\ romel i faqtoris deficits ver itanen namgl iseburuj redovani anemiis genis mqone heterozigotebi?

\\ rkinis;

\\ kaliumis;

\\ Jangbadis;

\\ natriumis.

\\\ CamoTvl il idan romel i aris arastabil uri hemogl obini?

\\ HbS;

\\ HbC;

\\ Hb Hammersmith;

\\ Hb Kempsey.

\\\ CamoTvl il Tagan romel i hemogl obinisaTvis aris damaxasiaTebel i Jangbadis maRal i afinuroba:

\\ Hb Kempsey;

\\ HbC;

\\ Hb Hommersmith;

\\ HbS.

\\\ romel i daavadebis dros viTardeba hipoqromul i mikroci tul i eriTroci tebi da anemia?

\\\ namgl iseburuj redovani anemiis;

\\\ vitamin-B₁₂-deficituri anemiis;

\\ Tal asemiis.

\\ fenil ketonuriis.

\\\ romel i daavadebis dros qveiTdeba hemogl obinis j aWvebis raodenoba?

\\ Tal asemiis;

\\\ namgl isebruj redovani anemiis;

\\\ perniciozul i anemiis;

\\ methemogl obinemiis.

\\\ romel i daavadebis dros viTardeba hemogl obinis j aWvebis raodenobrivi disbal ansi?

\\ namgl iseburuj redovani anemiis;

\\ rkinadeficituri anemiis;

\\ Tal asemiis;

\\ vit-B₁₂-deficituri anemiis.

\\\ ra xdeba eri Trocitatebis naadrevi destruqciis mizezi Tal asemiis dros?

- \\ gl obinis j aWvebis disbal ansi;
- \\ dupl ikacia gl obinis j aWvebSi;
- \\ Canacvl eba gl obinis j aWvebSi;
- \\ gl obinis genis eqspresiis Sewyveta.

\\\ romel i hemogl obini iwvevs al fa-Tal asemiias da nayofis wyal manks?

- \\ HbS;
- \\ HbC;
- \\ Hb Bart's;
- \\ Hb Hammersmith.

\\\ romel i mutaciaa yvel aze xSiri al fa-Tal asemiis dros?

- \\ dupl ikacia;
- \\ inversia;
- \\ del ecia;
- \\ transl okacia.

\\\ ra Tvissebebi T xasiaTdeba Bart's-is hemogl obini?

- \\ gaaCnia Jangbadis gadatanis unari;
- \\ gaaCnia Jangbadis gamoTavisufl ebis unari;
- \\ ar gaaCnia Jangbadis gamoTavisufl ebis unari;
- \\ ar gaaCnia Jangbadis mierTebis unari.

\\\ romel i hemogl obinis siWarbea damaxasiaTebel i α -Tal asemiisaTvis?

- \\ HbA;
- \\ HbA_s;
- \\ Hb Bart's;
- \\ HbF.

\\\ aRniSneT eri Trocitatebis destruqciis mizezi Tal asemiis dros:

- \\ deficihuri gl obinis j aWvis dal eqva;
- \\ gl obinis j aWvebis damokl eba;
- \\ Warbi gl obinis j aWvis dal eqva;
- \\ gl obinis j aWvebis rekonstruireba.

\\\ romel i hemogl obinia α -Tal asemiis dros Jangbadis araefeqturi gadamtani?

- \\ Hb Bart's'
- \\ HbS;
- \\ HbA;
- \\ HbA_s.

\\\ aRniSneT Tal asemiis damemkvidrebis tipi:

- \\ autosomur-recesiuli;
- \\ autosomur-dominanturi;
- \\ X-SeWiduli-dominanturi;
- \\ X-SeWiduli-recesiuli.

\\ \\ romel i daavadebisadmia rezistentul i Tal asemiis genis heterozigoturi matarebel i?

\\ \\ amebiazis;

\\ \\ I ei Smaniozis;

\\ \\ mal aris;

\\ \\ toqsopl azmozis.

\\ \\ CamoTvl il Tagan romel daavadebas axasiaTebis hipogromul i anemia, mikroci tozi, Zvl is tvinis hiperpl azia, hepato- da spl enomegal ia, zrdis SeCereba, gonebrivi CamorCena:

\\ \\ fenil ketonuria;

\\ \\ vit-B₁₂-deficituri anemia;

\\ \\ Tal asemia;

\\ \\ kisturi fibrozi..

\\ \\ \\ gl obinis romel i j aWvebi xdeba Warbi da uxsnadi β -Tal asemiis dros?

\\ \\ β -j aWvebi;

\\ \\ γ -j aWvebi;

\\ \\ α -j aWvebi;

\\ \\ ε -j aWvebi.

\\ \\ \\ ra aris eri Troci tebis daSl is mizezi β -Tal asemiis dros?

\\ \\ β -j aWvebis gamol eqva;

\\ \\ γ -j aWvebis gamol eqva;

\\ \\ α -j aWvebis gamol eqva;

\\ \\ ε -j aWvebis gamol eqva.

\\ \\ \\ ras iwvevs gl obinis j aWvebis disbal ansi β -Tal asemiis dros?

\\ \\ gl obinis xsnadi tetramerebis sinTezs;

\\ \\ gl obinis genebis eqspresiis Sewyvetas;

\\ \\ α -gl obinis uxsnadi j aWvebis warmoqmnas;

\\ \\ gl obinis genebis gamorTvas.

\\ \\ romel i daavadebis dros viTardeba hipogromul i anemia, siyvi TI e, naRvel kenWovani daavadeba, el enTis, RviZl is da Zvl is tvinis displ azia da saxsrebis dazianeba, fsiqofiziol ogiuri CamorCena, saxis nakvTebis dismorfogenezi?

\\ \\ mal aria;

\\ \\ mukoviscidozi;

\\ \\ β -Tal asemia;

\\ \\ neirofibromatozi.

\\ \\ \\ romel daavadebas axasiaTebis β -gl obinis genis del ecia?

\\ \\ α -Tal asemia;

\\ \\ namgl iseburi anemia;

\\ \\ β -Tal asemia;

\\ \\ mal aria.

\\ \\ daasaxel eT daavadeba, roml is gamomwvevi mizezia freimSifti, non-sens, β -gl obinis genis da i-rnm-is spl aising mutaciebi:

\\ \\ α -Tal asema;

\\ \\ nua;

\\ \\ β -Tal asema;

\\ \\ vit. β_{12} deficituri anemia.

\\ \\ CamoTvl il Tagan hemogl obinis romel i j aWvis makodirebel i genis mutaciasTan aris dakavSirebuli namgl isebruj redovani anemiis yvel a kl inikuri gamovl ineba:

\\ \\ al fa gl obinis;

\\ \\ beta gl obinis;

\\ \\ beta da al fa gl obinis;

\\ \\ gama gl obinis.

\\ \\ \\ CamoTvl il Tagan memkvidreobis romel tips mi ekuTvneba namgl isebruj redovani anemia:

\\ \\ autosomur-dominanturs;

\\ \\ sqesTan SeWidul dominanturs;

\\ \\ autosomur-recesiul s;

\\ \\ sqesTan SeWidul recesiul s.

\\ \\ \\ CamoTvl il i hemogl obinopaTiebidan romel i memkvidreobs autosomur-dominanturi tipiT:

\\ \\ namgl isebruj redovani anemia;

\\ \\ hemogl obin-hamersmiti;

\\ \\ Tal asema;

\\ \\ hemogl obin-C.

\\ \\ \\ CamoTvl il Tagan romel i hemogl obinopaTia memkvidreobs autosomur-recesiul i gziT:

\\ \\ hemogl obin-hamersmiti;

\\ \\ namgl isebruj anemia;

\\ \\ hemogl obin haid-parki;

\\ \\ kempsis hemogl obini.

\\ \\ \\ CamoTvl il Tagan romel i daavadeba memkvidreobs autosomur-recesiul i gziT:

\\ \\ Tal asema;

\\ \\ aqondropl azia;

\\ \\ neirofibromatozi;

\\ \\ femofil ia.

\\ \\ \\ CamoTvl il Tagan romel i saxis mutaciebi udevs safuZvl ad struqturul i hemogl obinopaTiebs:

\\ \\ del eciebi;

\\ \\ inversiebi;

\\ \\ transl okaciebi;

\\ \\ wertil ovani mutaciebi.

\\ \\ CamoTvl il Tagan romel i j aWvebisgan Sedgeba bartsis hemogl obin:
\\ \\ 4 al fa-j aWvisgan;
\\ \\ 4 beta-j aWvisgan;
\\ \\ 2 al fa da 2 beta j aWvisgan;
\\ \\ 4 gama j aWvisgan.

\\ \\ CamoTvl il Tagan romel ia genetikuri daavadebis mkurnal obis uZvel esi da efeqturi meTodi?
\\ \\ genuri Terapi;a;
\\ \\ Canacvl ebiTi Terapi;a;
\\ \\ kvebis racionis SezRudva;
\\ \\ geneal ogiuri anal izi.

\\ \\ genetikuri daavadebebis mkurnal obis dros ratom eniWeba upiratesoba kvebis racionis SezRudvas?
\\ \\ maRal efeqturia;
\\ \\ advil i samarTavia;
\\ \\ dabal ansebul ia;
\\ \\ advil ad Sesrul ebadia.

\\ \\ genetikuri daavadebebis mkurnal obis romel i meTodia yvel aze rTul i, xangrZl ivi da damqancvel i?
\\ \\ dieta;
\\ \\ genis modifikacia;
\\ \\ qirurgiul i Careva;
\\ \\ cil is Canacvl eba.

\\ \\ ra ewodeba memkvidrul i daavadebebis dros ZiriTadi metabol itebis, kofaqtorebis an hormonebis miwodebiT mkurnal obas?
\\ \\ Canacvl eba;
\\ \\ inhi bireba;
\\ \\ gamodevna;
\\ \\ qimi oTerapi;a.

\\ \\ ra ewodeba saziانو metabol itebis koncentraciis SemcirebisaTvis al ternatul i metabol uri gzis gamoyenebas?
\\ \\ arapirdapiri Terapi;a;
\\ \\ genuri inJineria;
\\ \\ inhi bireba;
\\ \\ farmakoTerapi;a.

\\ \\ romel i nivTierebis dones amcirebs naRvl is mJavas sinTezi, rogorc metabol izmis al ternatul i gza?
\\ \\ qol esterinis;
\\ \\ fenil al aninis;
\\ \\ gl ukozis;
\\ \\ ketomJavis.

\\ \\ CamoTvl il Tagan romel i mcire zomis mol ekul ebi gamoiyeneba mutanturi cil is funqciis gasaZl ierebl ad?
\\ \\ vitaminebi;

\\ aminomJavebi;
\\ lipidebi;
\\ monosaqaridebi.

\\ \\ homocistinuriis SemTxvevaSi CamoTvl il Tagan, romel i mcire zomis mol ekul ebis miwodebis Semdeg aris SesaZl ebel i avadmyofis kl inikuri mdgomareobis gaumj obeseba?

\\ vitaminis;
\\ fermentis;
\\ tetrabiofterinis;
\\ glikozidis.

\\ \\ mutanturi cil is defeqtis gamosworeba xSirad SesaZl ebel ia swori fol dingis meSveobiT. ACamoTvl il Tagan am mizniT romel mcire zomis mol ekul ebs gamoiyeneben?

\\ aminomJavas;
\\ kurkumins;
\\ lipids;
\\ fol dazas.

\\ \\ kisturi fibrozis gamomwvevi mutanturi cil is swori fol dingis misaRwevad romel i mcire zomis mol ekul ebi gamoiyeneba?

\\ kurkumini;
\\ lipidi;
\\ biofterini;
\\ aminomJava.

\\ \\ CamoTvl il Tagan, romel i mol ekul ebi aZl iereben polipectidis daxvevas?

\\ vitaminebi;
\\ oligonukleotidi;
\\ polisaqaridi;
\\ lipidi.

\\ \\ CamoTvl il Tagan, romel saits gamotovebs mcire zomis mol ekul ebis zemoqmedebiT cil is masinTezebel i aparati?

\\ naadrev stop-kodons;
\\ terminators;
\\ egzons;
\\ promotors.

\\ \\ aminoglikoziduri antibiotikebidan romel i uzrunvel yofs cil is masinTezebel i aparatis mier naadrevi stop-kodonis gamotovebas?

\\ gentamicini;
\\ penicilini;
\\ rifamicini;
\\ ampicilini.

\\ \\ CamoTvl il Tagan, romel i metaboluri genetikuri daavadebaa mgrZnobiare vitaminis moqmedebis mimarT?

\\ \\ methemoglobinemia;

\\ homocisturia;
\\ Tal asema;
\\ Tei-saqsi.

\\ \\ romel i genetikuri daavadebis mkurnal obaa SesaZI ebel i cil is damatebiTi miwodebis meTodiT?

[\\ hemofil ia;](#)

[\\ al chaimer i;](#)

\\ kunTovani distrofia;

\\ hirsSprungis. E

\\ \\ memkvidrul i daavadebis mkurnal obis romel i meTodis dros aris patientis imunodeficitis an hepatitis virusiT dasnebovnebis maRal i riski?

\\ genuri Terapiis;

\\ cil is damatebiTi miwodebis;

\\ eqspresiis modul aciis;

\\ genuri inJineriis dros.

\\ \\ sad unda funqcionirebdes defeqturi cil a, rom SesaZI ebel i iyos mis mier gamowveul i genetikuri daavadebis koreqcia cil is damatebiTi miwodebiT?

\\uj redgare sivrceSi;

\\ organoidebis stromaSi;

\\ citopl azmaSi;

\\ kariopl azmaSi.

\\ \\ mkurnal obis romel i strategia gamoiyeneba hemoqromatoziT daavadebul i patientebisaTvis?

\\ gamodevna-fl ebotomia;

\\ Canacvl eba;

\\ arapi rdapiri Terapiia;

\\ inhi bireba.

\\ \\ hemoqromatozi vl indeba orive sqesis individebSi, magram sixSirisa da simZimis mixedviT mamakacebis daavadebad iTvl eba. CamoTvl il Tagan, romel i faqtori wadmoadgens am fenomenis mizezs?

\\ fiziol ogiuri Tavisebureba;

\\ srul i penetrantoba;

\\ aqtiuri cxovrebis niri;

\\ srul i eqspresia.

\\ \\ romel i l okusidan aris SesaZI ebel i genis eqspresiis gazrda?

\\ intaqturidan da dauzianebel idan;

\\ intaqturidan da sail enseridan;

\\ enhanseridan da promotoridan;

\\ gromatinis koncentratoridan.

\\ \\ romel i genetikuri daavadebis dros aris SesaZI ebel i mutaciis Sedegis kompensacia dauzianebel i genis eqspresiis gazrdiT?

\\ al chaimeris;

\\ kisturi fibrozis;
\\ daunis;
\\ namgl isebruj redovani anemiis.

\\ \\ hemogl obinis romel i j aWvis makodirebel i genis eqspresiis
gaZl ierebaa aucil ebel i namgl isebruj redovani daavadebis
samkurnal od?

\\ al fas;
\\ betas;
\\ gamas;
\\ epsil onis.

\\ \\ hemogl obinis romel i j aWvis makodirebel i genis eqspresiis
gaZl ierebaa aucil ebel i beta Tal asemit daavadebul ebis
samkurnal od?

\\ al fas;
\\ betas;
\\ gamas;
\\ epsil onis.

\\ \\ CamoTvl il Tagan, regeneraciul medicinaSi romel i teqno logiis
danergvaa yvel aze aqtaal uri?

\\ birTvis transpl antaciis;
\\ fermentis Canacvl ebis;
\\ rnm-s interferenciis;
\\ eqspresiis modifikaciis.

\\ \\ ra ewodeba kul turaSi organizmis diferencirebul i uj redebis
misaRebad Rerovani uj redis gamoyenebas?

\\ Terapiul i kl onireba;
\\ reproduqciul i kl onireba;
\\ birTvis transpl antacia;
\\ genis kl onireba.

\\ \\ romel i genetikuri daavadebis samkurnal od aris SesaZl ebel i
Terapiul i kl onirebit miRebul i uj redebis gamoyeneba?

\\ monogenuris;
\\ pol igenuris;
\\ mul tifaqtorul is;
\\ qromosomul is.

\\ \\ ra mizans emsaxureba oocitis citopl azmaSi somaturi uj redis
birTvis transpl antacia?

\\ kl onirebas;
\\ Tal asemebis mkurnal obas;
\\ rnm-is interferencias;
\\ dnm-is modifikacias.

\\ \\ romel i procesis aRdgena SesaZl ebel i dazianebul i an dakargul i
qsovil is Sesabamisi tipis Rerovani uj redebis gamoyenebit?

\\ regeneraciis;

\\ eqspresiis regul aciis;
\\ transkripciiis koreqcis;
\\ transl aciis iniciaciaciis.

\\ \\ CamoTvl il Tagan, ZiriTadad romel i tipis Rerovani uj redebi gamoiyeneba daavadebaTa koreqciis mizniT?

[\\ hemopoezuri;](#)

\\ nervul i qsovil is;
\\ primitiul i eqtodermis;
\\ RviZl is.

\\ \\ CamoTvl il Tagan, romel i Rerovani uj redi gamoiyeneba amJamad kl inikur praqtikaSi?

\\ rgovanas;
\\ eqtodermis;
\\ SemaerTebel i qsovil is;
\\ kanis.

\\ \\ romel i genetikuri daavadebis samkurnal od SeiZl eba hemopoezuri Rerovani uj redebis gamoyeneba?

\\ Tal asemiis;
\\ Tei-saqsis;
\\ kunTovani distrofiis;
\\ gal aqtozemiis.

\\ \\ CamoTvl il idan romel i sistemis Rerovani uj redebis transpl antacias aqvs upiratesoba?

\\ Wipl aris sixl is;
\\ Zvl is tvinis;
\\ kanis;
\\ nervul i qsovil is.

\\ \\ CamoTvl il idan romel i organos transpl antaciiT miRweva memkvidrul i metabol uri daavadebis mqone pacientis mdgomareobis mniSvnel ovani gaumj obeseba?

\\ RviZl is;
\\ Tirkmel is;
\\ el enTas;
\\ Zvl is tvinis.

\\ \\ memkvidrul i daavadebis genuri Terapiis meTodebiT mkurnal obis dros CamoTvl il idan ra SehyavT uj redSi?

\\ geni;
\\ dnm;
\\ t-rnm;
\\ qromosoma.

\\ \\ romel i genetikuri daavadebis koreqcia aris Sesazl ebel i genuri Terapiis meTodis gamoyenebiT?

\\ mwvave kombiniirebul i imunodeficitis;
\\ Tei-saqsis;

\\ naadrevi sqesobrivi momwifebis;
\\ aqondropl azis.

\\ \\ genuri Terapiis meTodis gamoyenebisas pacientis romel
uj redebSi

SehyavT normal uri geni?

\\ somaturSi;

\\ pl acentis;

\\ germinaciul Si;

\\ fol ikul Si.

\\ \\ Sesabamis somatur uj redSi normal uri genis Seyvanis Semdeg
mutanturi geni ganicdis:

\\ el iminacias;

\\ inaqtivacias;

\\ genomSi SenarCundebea;

\\ rekombinacias.

\\ \\ ra warmoadgens memkvidrul i daavadebebis konsul taciisa da
mkurnal obis umTavress komponents oj axisTvis?

\\ informireba riskis Sesaxeb;

\\ mkurnal obis meTodis SerCeva;

\\ memkvidreobis tipis gansazRvra;

\\ geneal ogiuri nusxis Sedgena.

\\ \\ monogenuri daavadebebis mqone avadmyofisTvis mkurnal obis
romel i meTodia yvel aze efeqturi?

\\ normal uri genis gadatana;

\\ damemkvidreobis tipis gansazRvra;

\\ geneal ogiuri nusxis Sedgena;

\\ presimptomul i diagnozi.

\\ \\ monogenuri daavadebebis SemTxvevaSi avadmyofSi normal uri genis
asl is gadatanis Semdeg daavadebebis riskisgan Tavisufi deba?

\\ sagvartomo;

\\ sibsebi;

\\ avadmyofi;

\\ Taoba.

\\ \\ CamoTvl il Tagan, romel ia kl inikur fenotipze orientirebul i
mkurnal oba?

\\ qirurgiul i;

\\ Ppresimptomul i;

\\ genotipis modifikacia;

\\ genis modul acia.

\\ \\ CamoTvl il Tagan romel ia genetikuri daavadebebis mkurnal obis
warumatebl obis erT-erTi faqtori?

\\ araidenticirebul i makodirebel i geni;

\\ daavadebebis cnobil i paTogenezi;

\\ msubuqi fenotipuri gamovl inebebi;
\\ nayofis prognozirebadi anomal iebi.

\\ \\ CamoTvl il Tagan romel i daavadebis mkurnal obis dros aris
mniSvnel ovani l okusuri heterogenul obis gaTval iswineba?
\\ fenil ketonuriis;PKU
\\ al chaimeris daavadebis;
\\ diuSenis mi distrofiis;
\\ ₁ antitri fsinis deficitis.

\\ \\ CamoTvl il Tagan romel i daavadebis mkurnal obis dros gamoiyeneba
kvebis racionis SezRudva?
\\ fenil ketonuriis;PKU
\\ neirofibromatozis;
\\ hantingtonis qoreis;
\\ ₁ antitri fsinis deficitis.

\\ \\ CamoTvl il Tagan romel i daavadebis mkurnal obis dros gamoiyeneba
kvebis racionis SezRudva?
\\ hantingtonis qoreis;
\\ hiperqol esterinemiis;
\\ diuSenis mi distrofiis;
\\ ₁ antitri fsinis deficitis.

\\ \\ CamoTvl il Tagan romel i daavadebis mkurnal obis dros gamoiyeneba
aminomJavuri dieta?
\\ fenil ketonuriis;PKU
\\ neirofibromatozis;
\\ hiperqol esterinemiis;
\\ ₁ antitri fsinis deficitis.

\\ \\ CamoTvl il Tagan romel i daavadebis mkurnal obis dros aris
gansakuTrebiT mniSvnel ovani nikotinis moxmarebis SezRudva?
\\ hantingtonis qoreis;PKU
\\ neirofibromatozis;
\\ kisturi fibrozis;
\\ ₁ antitri fsinis deficitis.

\\ \\ nikotinis bol i Jangavs meTioninis naSTs da 2000-j er amci rebs
el astazas inhibirebas rac iwvevs:
\\ Trombozs;
\\ cirozs;
\\ emfizemas;
\\ bronqoeqtazias.

\\ \\ CamoTvl il Tagan perspeqtivaSi romel i daavadebis mkurnal obis
dros gamoiyeneba kvebis racionis SezRudva?
\\ hantingtonis qoreis;
\\ gal aqtozemiis;
\\ diuSenis mi distrofiis;
\\ ₁ antitri fsinis deficitis.

\\ \\ CamoTvl il Tagan romel i daavadebis mkurnal obis dros gamoiyeneba arapirdapiri TerapiiT saziانو metabol itebis koncentraciis Semcireba?

- \\ hiperqol esterinemiis;
- \\ Tandayol il i hipotiroidizmis;
- \\ Tei-saqsis;
- \\ , antitripsinis deficitis.

\\ \\ CamoTvl il Tagan romel i daavadebis mkurnal obis meTodia araabsorbirebadi fisebit narvl is mJavebis sintezis gaZl iereba?

- \\ hiperqol esterinemiis;
- \\ Tandayol il i hipotiroidizmis;
- \\ gal aqtozemiis;
- \\ kisturi fibrozis.

\\ \\ CamoTvl il Tagan romel i daavadebis mkurnal obis dros iyeneben fermentebis farmakol ogiuri inhibirebis meTods?

- \\ neirofibromatozis;
- \\ Tei-saqsis;
- \\ kisturi fibrozis;
- \\ hiperqol esterinemiis.

\\ \\ CamoTvl il Tagan mkurnal obis romel i meTods iyeneben RviZl iSi qol esterinis sintezis bl okirebisTvis?

- \\ gamodevna;
- \\ arapirdapiri Terapiia;
- \\ Canacvl eba;
- \\ inhibireba.

\\ \\ CamoTvl il Tagan romel i daavadebis mkurnal obis dros iyeneben fl ebotomiit rkinis gamodevnas?

- \\ neirofibromatozis;
- \\ hemoqromatozis;
- \\ Tal asemiis;
- \\ hemofil iis.

\\ \\ CamoTvl il Tagan romel i vitamini gamoiyeneba, cil is funqciis gasaZl ierebl ad, homocistinuriis SemTxvevaSi?

- \\ vitamini B₁₂;
- \\ vitamini C;
- \\ vitamini B₆;
- \\ vitamini E.

\\ \\ CamoTvl il Tagan romel i mutaciis Sedegad miRebul i kisturi fibrozis cil is defeqtis gamosworeba SeuZl ia nivTiereba kurkumins?

- \\ F508;
- \\ Arg553Stop;
- \\ Arg117His;
- \\ Arg46Leu.

\\ CamoTvl il Tagan romel i daavadebis dros aris SesaZl ebel i mutaciuri stop - kodonis gamotoveba (Arg553Stop) aminogl ikoziduri antibiotiki – gentamiciniT?

- \\ neurofibromatozis;
- \\ Tei-saqsis;
- \\ kisturi fibrozis;
- \\ hiperqol esterinemiis.

\\ CamoTvl il Tagan romel i daavadebis dros aris SesaZl ebel i deficituri cil is damatebiT miwodeba, rogorc intravenurad, ise inhal aciis gziT?

- \\ neurofibromatozis;
- \\ Tei-saqsis;
- \\ I antitripsinis deficitis;
- \\ hiperqol esterinemiis.

\\ cil ebis doneze mkurnal obis romel meTods miekuTvneba hemofil iit daavadebul ebSi sixl is Sededebis VIII faqtoris gadasxma?

- \\ mutanturi cil is funqciis gaZl ierebas;
- \\ mutanturi pol ipeptidis daxvevis gaZl ierebas;
- \\ cil is damatebiTi miwodebas;
- \\ fermentis Canacvl ebiTi Terapias.

\\ CamoTvl il Tagan romel i daavadebis mkurnal obis dros SeiZl eba gamoviyenoT genuri Terapi, transpl antacia da modificirebul i adozin deaminazas gadasxma purinebis dasaSl el ad?

- \\ neurofibromatozis;
- \\ Tei-saqsis;
- \\ I antitripsinis deficitis;
- \\ mZime kombiniirebul i imunodeficitis.

\\ genetikuri daavadebis mkurnal obis romel i meTodia farTod gamoyenebul i?

- \\ germinaciul i uj redebiT genuri Terapi;
- \\ cil ebiT Canacvl eba;
- \\ somaturi uj redebis Terapi;
- \\ mutaciebis in situ koreqcia uj redul i dnm-is reparaciis meqanizmiT.

\\ genetikuri daavadebis mkurnal obis romel i meTodia metad gamoyenebul i?

- \\ germinaciul i uj redebiT genuri Terapi;
- \\ Rerovani uj redebiT Terapi;
- \\ somaturi uj redebiT Terapi;
- \\ mutaciebis in situ koreqcia uj redul i dnm-is reparaciis meqanizmiT.

\\ romel i daavadebis samkurnal od aris yvel aze warmatebul i genuri Terapiis gamoyeneba?

- \\ kisturi fibrozis;
- \\ mZime kombinirebul i imunodeficitis (XL-SCID);
- \\ namgl isebruj redovani daavadebis;
- \\ al chaimeris daavadebis.

- \\ \\ romel i daavadebis samkurnal od aris yvel aze warmatebul i genuri Terapiis gamoyeneba?
- \\ kisturi fibrozis;
- \\ namgl isebruj redovani daavadebis;
- \\ hemofil iis;
- \\ al chaimeris daavadebis.

- \\ \\ genis eqspresiis modul aciis romel meTods miekuTneba dnm-is hipomeTil ireba decitabiniT, fetal uri hemogl obinis koncentraciis gasazrdel ad, namgl iseburuj redovani anemiis da -Tal asemiis dros:
- \\ genis eqspresiis gazrda dazianebebel i I okusidan;
- \\ dominanturi genis eqspresiis gazrda;
- \\ genis eqspresiis gazrda dauzianebebel i I okusidan;
- \\ dominanturi genis eqspresiis Semcireba.

- \\ \\ genis eqspresiis modul aciis romel meTods miekuTneba hantingtonis daavadebis dros cil a hantingtinis makodirebel i rnm-is degradacia interferencul i rnm-iT:
- \\ genis eqspresiis gazrda dazianebebel i I okusidan;
- \\ dominanturi genis eqspresiis gazrda;
- \\ genis eqspresiis gazrda dauzianebebel i I okusidan;
- \\ dominanturi genis eqspresiis Semcireba.

- \\ \\ CamoTvl il Tagan, romel i daavadebis mkurnal obis dros SeiZl eba gamoviyenoT rnm-is interferencia?
- \\ neirofibromatozis;
- \\ hantingtonis daavadeba;
- \\ I antitripsinis deficitis;
- \\ mZime kombinirebul i imunodeficitis.

- \\ \\ CamoTvl il Tagan, romel i meTodi gul isxmobs birTvis transpl antaciis Sedegad miRebul i embrionul i Rerovani uj redebis gamoyenebas kul turaSi organizmis diferencirebul i uj redebis misaRebad?
- \\ Rerovani uj redebis transpl antacia;
- \\ Terapiul i kl onireba;
- \\ birTvis transpl antacia;
- \\ reproduqciul i kl onireba;

- \\ \\ CamoTvl il Tagan, romel i meTodi gul isxmobs birTvebis transpl antaciis Sedegad miRebul i Canasaxis reimpl antacias surogati dedis saSvil osnoSi?
- \\ Rerovani uj redebis transpl antacia;
- \\ Terapiul i kl onireba;

- \\ birTvis transpl antacia;
- \\ reproduqciul i kl onireba.

- \\ \\ CamoTvl il Tagan, romel i daavadebis mkurnal oba iqneboda SesaZl ebel i RviZl is transpl antaciiT?

- \\ \\ neirofibromatozis;
- \\ \\ hantingtonis;
- \\ \\ Iantitriifsinis deficitis;
- \\ \\ mZime kombiniirebul i imunodeficitis.

- \\ \\ \\ genis Seyvanas uj redSi Terapiul i efeqtis miRwevis mizniT, ewodeba:

- \\ \\ \\ genuri inJineria;
- \\ \\ \\ Terapiul i kl onireba;
- \\ \\ \\ \\ genuri Terapia
- \\ \\ \\ \\ reproduqciul i kl onireba.

- \\ \\ \\ CamoTvl il Tagan, romel i uj redebi warmoadgenen ideal ur sami znes genis gadasatanad?

- \\ \\ \\ Rerovani uj redebi;
- \\ \\ \\ fibroblastebi;
- \\ \\ \\ miocitebi;
- \\ \\ \\ I eikocitebi.

- \\ \\ \\ CamoTvl il Tagan, sami strukturul genss Semcvl el s romel i virusebs iyeneben yvel aze farTod veqtorebis misaRebad?

- \\ \\ \\ retrovirusebs;
- \\ \\ \\ adenovirusebs;
- \\ \\ \\ adenoasociirebul i virusebs;
- \\ \\ \\ rotavirusebs.

- \\ \\ \\ CamoTvl il Tagan romel i kl asis virusebs SeuZl iaT dayofadi da aradayofadi uj redebis inficireba?

- \\ \\ \\ retrovirusebs;
- \\ \\ \\ adenovirusebs;
- \\ \\ \\ adenoasociirebul i virusebs;
- \\ \\ \\ rotavirusebs.

- \\ \\ \\ CamoTvl il Tagan romel i kl asis virusebs SeuZl iaT ZiriTadad mxol od dayofadi uj redebis inficireba?

- \\ \\ \\ retrovirusebs;
- \\ \\ \\ adenovirusebs;
- \\ \\ \\ adenoasociirebul i virusebs;
- \\ \\ \\ rotavirusebs.

- \\ \\ \\ CamoTvl il Tagan romel i virusul i veqtoris gamoyeneba aRmoCnda I etal uri Zl ieri imunuri reaqqiis gamo?

- \\ \\ \\ retrovirusul is;
- \\ \\ \\ adenovirusul is;
- \\ \\ \\ adenoasociirebul i virusul is;

\\ rotavirusul is.

\\ \\ CamoTvl il Tagan romel virusul veqtorebs SeuZl iaT gansxvavebul i uj redebis farTo speqtris inficireba da 3035 kbmde zomis CanarTebis akomodacia?

\\ retrovirusul ;

\\ adenovirusul s;

\\ adenoasocirebul virusul s;

\\ rotavirusul s.

\\ \\ CamoTvl il Tagan romel ia regul atorul i el ementebis Semcvel i k-dnm pl azmidaSi an mcire zomis interferenciul i rnm?

\\ xel ovnuri qromosomebi;

\\ gaSiSvl ebul i dnm;

\\ cil a-dnm-is koniugatebi;

\\ I iposomebSi dnm "Cal agebul i".

\\ \\ CamoTvl il Tagan romel i wadmoadgens bunebrivi qromosomis minimal ur funqciur komponents kombiniirebul s kdnmTan an sakvl ev genTan?

\\ xel ovnuri qromosomebi;

\\ gaSiSvl ebul i dnm;

\\ cil a-dnm-is koniugatebi;

\\ "Cal agebul i" I iposomebSi dnm.

\\ \\ CamoTvl il Tagan ra ewodeba qromosomas romel sac erTi mxari ufro mokl e aqvs meoresTan SedarebiT:

\\ metacentrul i;

\\ submetacentrul i;

\\ akrocentrul i;

\\ tel ocentrul i.

\\ \\ CamoTvl il Tagan ra ewodeba qromosomas romel sac erTi mxari mkveTrad mokl e aqvs meoresTan SedarebiT:

\\ metacentrul i;

\\ submetacentrul i;
\\ akrocentrul i;
\\ tel ocentrul i.

\\ \\ qromosomebis struqturul i darRveidan romel ia bal ansirebul i
cvl il eba
\\ \\ terminal uri del ecia;
\\ inversia;
\\ \\ intersticiul i del ecia;
\\ \\ defisensi.

\\ \\ \\ CamoTvl il Tagan centromeris mdebareobis mixedviT romel i saxis
qromosoma ar aris adamianis normal ur kariotipSi
\\ \\ metacentrul i;
\\ \\ submetacentrul i;
\\ \\ akrocentrul i;
\\ \\ tel ocentrul i.

\\ \\ \\ CamoTvl il Tagan romel i struqturul i darRveva iwvevs qromosomis
arabal ansirebul cvl il ebas
\\ \\ del ecia;
\\ \\ pericenturul i inversia;
\\ \\ transpozicia;
\\ \\ paracentrul i inversia.

\\ \\ \\ CamoTvl il Tagan romel i struqturul i darRveva iwvevs qromosomis
arabal ansirebul cvl il ebas
\\ \\ pericenturul i inversia;
\\ \\ dubl ikacia;
\\ \\ paracentrul i inversia
\\ \\ transpozicia.

\\ \\ \\ CamoTvl il Tagan romel i struqturul i darRveva iwvevs qromosomis
bal ansirebul cvl il ebas
\\ \\ dubl ikacia;
\\ \\ del ecia;
\\ \\ pericenturul i inversia;
\\ \\ izoqromosomebis warmoqmna.

\\ \\ \\ CamoTvl il Tagan romel i struqturul i darRveva iwvevs qromosomis
arabal ansirebul cvl il ebas
\\ \\ paracentrul i inversia;
\\ \\ izoqromosomebis warmoqmna;
\\ \\ pericenturul i inversia;
\\ \\ transpozicia.

\\ \\ \\ CamoTvl il Tagan romel i struqturul i darRveva iwvevs qromosomis
bal ansirebul i cvl il ebas
\\ \\ del ecia;
\\ \\ izoqromosomebis warmoqmna;
\\ \\ dubl ikacia;
\\ \\ transpozicia.

\\ \\ \\ CamoTvl il Tagan romel i struqturul i darRveva iwvevs qromosomis
bal ansirebul cvl il ebas
\\ \\ del ecia;

\\ izoqromosomebis warmoqmna;
\\ paracentrul i inversia;
\\ dubl ikacia.

\\ \\ CamoTvl il Tagan romel i sindromia genomuri imprintingis magal iTi
\\ \\ daunis;
\\ prader-vil is;
\\ \\ terneris;
\\ \\ kri-du-Cetis.

\\ \\ CamoTvl il Tagan romel i sindromia genomuri imprintingis magal iTi
\\ \\ terneris;
\\ \\ kl ainfel teris;
\\ \\ angel manis;
\\ \\ daunis.

\\ \\ CamoTvl il Tagan mamiseul i romel i qromosomis ubnis del eciis Sedegad
viTardeba prader-vil is sindromi
\\ me-15 q;
\\ \\ me-15 p;
\\ \\ me-14 q;
\\ \\ me-14 p.

\\ \\ CamoTvl il Tagan dediseul i romel i qromosomis ubnis del eciis Sedegad
viTardeba angel manis sindromi
\\ \\ me-14q;
\\ \\ me-14p;
\\ \\ me-15q;
\\ \\ me-15p.

\\ \\ CamoTvl il Tagan romel i sindromis mqone individebs aqvT ucnauri saxis
gamometryvel eba, mokl e tani, gonebrivi CamorCenil obis mZime forma, kunTebis
spastikuroba da krunCxvebi
\\ \\ pataus;
\\ \\ kri-du-Cetis;
\\ \\ edwardsis;
\\ \\ angel manis.

\\ \\ kariotipSi warmodgenil i erTi mSobl iseul i wyvil is orive homol ogis
arsebobis mdgomareobas CamoTvl il Tagan ewodeba
\\ \\ izogami a;
\\ \\ izodisomi a;
\\ \\ heterodisomi a;
\\ \\ heterogami a.

\\ \\ kariotipSi erTi mSobl iseul i qromosomis dubl icirebul i saxiT
arsebobas CamoTvl il Tagan ewodeba
\\ \\ heterodisomi a;
\\ \\ heterogami a;
\\ \\ izogami a;
\\ \\ izodisomi a.

\\ \\ CamoTvl il Tagan total uri buStnamqeri viTardeba Tu:
\\ \\ kariotipi aris 46,XY;

\\ X,23 spermatozoidi gaanayofierebs birTvi an kvercxuj reds;
\\ X,23 spermatozoidi gaanayofierebs ubirTvo kvercxuj reds;
\\ X,23 spermatozoidi gaanayofierebs X,23 kvercxuj reds.

\\ \\ CamoTvl il Tagan total uri buStnamqeris SemTxvevaSi qromosoma
\\ \\ yvel a dediseul ia;
\\ \\ yvel a mamiseul ia;
\\ \\ 50% dediseul ia, 50% mamiseul i;
\\ \\ 25% dediseul ia, 75% mamiseul i.

\\ \\ \\ CamoTvl il Tagan romel i qromosomul i kompl eqti aris damaxasiaTebel i
parcial uri buStnamqerisaTvis
\\ \\ hapl oiduri;
\\ \\ tripl oiduri;
\\ \\ dipl oiduri;
\\ \\ tetrapl oiduri.

\\ \\ \\ CamoTvl il Tagan romel i debul eba Seesabameba pl acentis kariotipis
46,XX/47,XX mdgomareobas
\\ \\ total uri buStnamqeri;
\\ \\ sakvercxis teratoma;
\\ \\ SezRudul i pl acenturi mozaicizmi;
\\ \\ mozaicizmi.

\\ \\ \\ CamoTvl il Tagan romel i daavadeba SeiZl eba ganviTardes uniparentul i
disomiis Sedegad
\\ \\ fenil ketonuria;
\\ \\ Tei-saqsis;
\\ \\ kisturi fibrozi;
\\ \\ Tal asemia.

\\ \\ \\ markerul i qromosomebis dasaxasiaTebel ad romel i meTodia ufro
mizanSewonil i?
\\ \\ flourescentul i hibridizaciis;B
\\ \\ citogenetikuri;
\\ \\ bioqimiuri;
\\ \\ statistikuri.

\\ \\ \\ romel qromosomul paTol ogias iwvevs qromosomis nawil is
dubl ikacia?
\\ \\ nawil obriv trisomias;
\\ \\ nawil obriv monosomias;
\\ \\ X qromosomis trisomias;
\\ \\ me-12 qromosomis trisomias.

\\ \\ \\ CamoTvl il Tagan meiozis romel periodSi xdeba aneupl oidiis
gamomwvevi homol ogiuri qromosomebis ganuridebl oba
\\ \\ interfazis dasawyisSi;
\\ \\ interfazis bol os;
\\ \\ pirvel meiozis anafazaSi;
\\ \\ meore meiozis profazaSi.

\\ \\ \\ CamoTvl il Tagan, romel i tipis kariotipireba Caenacvl a rutinul i
kariotipis anal izs?
\\ \\ mol ekul uri;

\\ citol ogiuri;
\\ qromosomul i;
\\ birTvul i.

\\ \\ uj reds qromosomul i anal izisaTvis unda hqondes kul turaSi zrdis da swrafad dayofis unari. qvemoTCamoTvl il Tagan romel i uj redebi akmayofil eben am moTxovnebs?

\\ T l imfocitebi;
\\ eriTrocitebi;
\\ neironebi;
\\ gl iuri uj redebi.

\\ \\ qvemoTCamoTvl il Tagan, trisomiis romel i formaa yvel aze xSiri cocxl adSobil Cvil ebSi

\\ trisomia _ 16;
\\ trisomia _ 17;
\\ trisomia _ 19;
\\ trisomia _ 21.

\\ \\ qromosomebis erTi nawil isaTvis damaxasiaTebel ia centromeris daaxl oebiT Sua ubanSi l okal izeba da orive mxaris erTnairi zoma. qvemoTCamoTvl il gan romel tips miekuTvneba aRniSnul i qromosoma?

\\ metacentrul s;
\\ submetacentrul s;
\\ akrocentrul s;
\\ tel ocentrul s.

\\ \\ kl inikurad mniSvnel ovani qromosomul i anomal iebidan romel ia yvel aze ufro xSiri:

\\ pol ipl oidia;
\\ aneupl oidia;
\\ tetrapl oidia;
\\ hapl oidia.

\\ \\ CamoTvl il Tagan romel autosomebs axasiaTebT genebis minimal uri Semcvel oba:

\\ 1,5,15;
\\ 2,8,9;
\\ 3,7,16;
\\ 13,18,21.

\\ \\ CamoTvl il Tagan l etal uri Sedegi mi iReba Semdegi autosomuri aneupl oidiis dros:

\\ monosomiis;
\\ rogorc tri- ise monosomiis;
\\ trisomiis;
\\ sasqeso X-qromosomis monosomiis.

\\ \\ CamoTvl il Tagan romel i qromosomis monosomiaa si cocxl esTan SeTavsebadi:

\\ autosomebis;
\\ me-5 qromosomis;
\\ X- qromosomis;
\\ me-18 qromosomis.

\\ \\ CamoTvl il Tagan, aneupl oidiis diagnozisaTvis Zal ian mniSvnel ovan da informaciul meTods warmoadgens:
\\ \\ sauzern-bl otingi;
\\ \\ PCR;
\\ \\ FISH;
\\ \\ vestern- bl otingi.

\\ \\ CamoTvl il Tagan romel i xuTi qromosomis aneupl oidiaa gamovl enil i cocxl adSobil adamianebSi:
\\ \\ 1,5,13,18,21;
\\ \\ 3,8,11,18,22;
\\ \\ 13,18,21,X,Y;
\\ \\ 11,15,21,22,X.

\\ \\ CamoTvl il Tagan qromosomebis romel i meiozuri gauTiSvel obis dros aris 24-qromosomian gametebSi rogorc dediseul i, ise mamiseul i qromosoma
\\ \\ pirvel i meiozuri gayofis;
\\ \\ meore meiozuri gayofis;
\\ \\ rogorc pirvel i, ise meore meiozuri gayofis;
\\ \\ meore meiozuri gayofis Semdeg.

\\ \\ CamoTvl il Tagan qromosomebis romel i meiozuri gauTiSvel obis dros aris 24-qromosomian gametebSi mxol od dediseul i an mxol od mamiseul i qromosomis 2 asl i:
\\ \\ pirvel i meiozuri;
\\ \\ meore meiozuri;
\\ \\ rogorc pirvel i ise meore meiozuri gayofis;
\\ \\ arasrul i meiosis dros.

\\ \\ CamoTvl il Tagan qromosomis struqturul i cvl il eba ra SemTxvevaSi aris bal ansirebul i, rodesac:
\\ \\ qromosomaTa nakrebs aqvs zedmeti genetikuri masal a;
\\ \\ qromosomaTa nakrebs aqvs nakl ebi genetikuri masal a;
\\ \\ genetikuri masal is raodenoba ucvl el ia;
\\ \\ adgil i aqvs transversias;

\\ \\ CamoTvl il Tagan qromosomis struqturul i cvl il eba rod is aris arabal ansirebul ia:
\\ \\ qromosomaTa nakrebs aqvs zedmeti genetikuri masal a;
\\ \\ genetikuri masal a srul ia da normal uria;
\\ \\ genetikuri masal a arasrul ia, magram normal uri;
\\ \\ genetikuri masal a srul ia, magram inversirebul i.

\\ \\ CamoTvl il Tagan qromosomis struqturul i cvl il eba rod is aris arabal ansirebul i, rodesac genetikuri masal a:
\\ \\ normal uri Semcvel obisaa;
\\ \\ srul i da normal uria;
\\ \\ nakl ebia normaze;
\\ \\ aris aTvl is CarCos gadaadgil eba.

\\ \\ robertsonul i transl okaciis dros erTmaneTs CamoTvl il Tagan erwymis:
\\ \\ 2 metacentrul i qromosomis grZel i mxari ;
\\ \\ 2 submetacentrul i qromosomis grZel i mxari;
\\ \\ 2 akrocentrul i qromosomis grZel i mxari;
\\ \\ 2 akrocentrul i qromosomis mokl e mxari.

\\ 2 akrocentrul i qromosomis grZel i mxris Serwymas CamoTvl il Tagan ewodeba

\\ krosingoveri;

\\ rgol uri qromosoma;

\\ robertsonul i transl okacia;

\\ reciprokul i transl okacia;

\\ CamoTvl il Tagan romel i daavadebis kariotipirebis dros aris xSiri izoqromosomebis arseboba?

\\ gapobil i tuCis da sasis;

\\ hematol ogiuri avTvisebiani neopl aziebis;

\\ venuri Trombozis;

\\ kisturi fibrozis.

\\ CamoTvl il Tagan akrocentrul i Qqromosomebis romel i transl okaciebia yvel aze xSiri

\\ 21q22q ;

\\ 15q18q ;

\\ 14q21 q ;

\\ 16q21 q.

\\ qromosomaTa garkveul nawil s erTi mxari meoresTan SedarebiT gacil ebiT grZel i aqvs, centromeri ki axl osaa erT romel ime bol osTan. qvemoT CamoTvl il Tagan romel tips miekuTvneba aRniSnul i qromosoma?

\\ Ametacentrul s;

\\ submetacentrul s;

\\ akrocentrul s;

\\ tel ocentrul s.

\\ qromosomaTa garkveul nawil s centromeri qromosomis erT bol oSi aqvs moTavsebul i da gaaCnia mxol od erTi mxari. qvemoT CamoTvl il Tagan romel tips miekuTvneba aRniSnul i qromosoma?

\\ Ametacentrul s;

\\ submetacentrul s;

\\ akrocentrul s;

\\ tel ocentrul s.

\\ srul i monosomiebi zogadad sicocxl esTan SeuTavsebadia.

CamoTvl il Tagan romel i qromosomis monosomia warmoadgens gamonakl is SemTxvevas;

\\ X- qromosomi s;

\\ 21_e qromosomi s;

\\ 22_e qromosomi s;

\\ me_17 qromosomi s.

\\ qvemoTCamoTvl il Tagan romel i qromosomebis srul i trisomia aRiniSneba cocxal Sobil ebSi:

\\ me_18; B

\\ me_17;

\\ me_19;

\\ me_20.

\\ qvemoTCamoTvl il Tagan romel i qromosomebis srul i trisomia aRiniSneba cocxl adSobil ebSi:

\\ me-17;
\\ me-19;
\\ me-20;
\\ me-13.

\\ \\ qvemoTCamoTvl il Tagan romel i qromosomebis srul i trisomia aRiniSneba cocxl adSobil ebSi:

\\ me-12;
\\ me-17;
\\ me-19;
\\ 21-e.

\\ \\ qvemoT dasaxel ebul i genomuri anomal iebidan romel i gv xvdeba yvel aze xSirad;

\\ pol ipl oidia;
\\ eupl oidia;
\\ aneupl oidia;
\\ hapl oidia.

\\ \\ qromosomul i segmentis romel paTol ogias Seesabameba termini - del ecia?

\\ Semobrunebas;
\\ gaormagebas;
\\ dakargvas;
\\ mraVal j erad gameorebas.

\\ \\ romel i struqturul i darRvevis dros SeimCneva gawvyvetis Sedegad dazianebul i segmentebis gacvl a arahomol ogiuri qromosomebs Soris.

\\ inversiebis;
\\ dubl ikaciebis;
\\ reciprokul i transl okaciis;
\\ del eciebis.

\\ \\ romel i paTol ogiuri mdgomareobis SemTxvevaSi aris rekomendebul i citogenetikuri anal izis Catareba;

\\ fenil ketonuriis;
\\ gal aqtozemiis;
\\ avTvisebiani neopl aziis;
\\ Saqriani diabetes.

\\ \\ CamoTvl il Tagan romel i qromosomebi miekuTvneba adamianis akrocentrul qromosomebs?

\\ me-3, me-7, me-9, me-11;
\\ XX da XY;
\\ me-17, me-18, da me-19;
\\ me-13, me-14, me-15, 21-e, 22-e.

\\ \\ CamoTvl il Tagan, romel fazaSi miiRweva maRal xarixiani bendirebis meTodiT, G an R bendirebiT qromosomebis SeRebva?

\\ profazaSi;
\\ interfazaSi;
\\ anafazaSi;
\\ tel ofazaSi.

\\ \\ adamianis genomSi gamovl enil ia 24 tipis qromosoma. QCamoTvl il Tagan, romel i meTodiTaa SesaZl ebel i maTi identifikacia;

\\ bioqimiuri;
\\ popul aciur-statistikuri;
\\ citogenetikuri;
\\ kl onirebis.

\\ \\ \\ adamanis genomSi gamovl enil ia 24 tipis qromosoma. QCamoTvl il Tagan, romel i meTodiTaa SesaZl ebel i maTi identifikacia;

\\ bioqimiuri;
\\ popul aciur-statistikuri;
\\ speqtrul i kariotipirebiT;
\\ kl onirebis.

\\ \\ \\ qvemoTCamoTvl il Tagan rogor qromosomebs miekuTvneba dicentrul i qromosomebi;

\\ gaormagebul s;
\\ homol ogiurs;
\\ anomal urs;
\\ dipl oidurs.

\\ \\ \\ romel i meTodis saSual ebiTaa SesaZl ebel i mozaicizmis dadgena?

\\ citogenetikuriT;
\\ tyupebis;
\\ popul aciur_statistikuriT;
\\ bioqimiuriT.

\\ \\ \\ qvemoTCamoTvl il Tagan ra SemTxvevaSi Znel deba mozaicizmis dadgena?

\\ kl inikuri suraTis arasebobisas;
\\ specifikuri kl inikuri suraTis arasebobisas;
\\ araspecificuri kl inikuri suraTis arasebobisas;
\\ saeWvo kl inikuri suraTis arasebobisas.A

\\ \\ \\ Tqven gaagzavneT dismorful i axal Sobil is sisxl is nimuSi laboratoriaSi. qromosomul i gamokvl evisas Ggairkva, rom bavSvs aqvs 46, XY kariotipi, del(18)(q12). ra darRvevaa kariotipSi;

\\ me_18 qromosomas erTnairi grZel i mxrebi aqvs;
\\ orive mxari erTnairi mokl e aqvs;
\\ erTi mxari Zal ian grZel i aqvs;
\\ me_18 qromosomas grZel i mxari normal urTan SedarebiT mokl e aqvs.

\\ \\ \\ Tqven gaagzavneT dismorful i axal Sobil is sisxl is nimuSi laboratoriaSi qromosomul i gamokvl evisas gairkva, rom bavSvs aqvs 46, XYkariotipi, del(18)(q12). LCamoTvl il Tagan ra mizniT iTxovs laboratoria mSobl ebis sisxl s?

\\ anomal ia mxol od mamisganaa;
\\ anomal ia mxol od dedisganaa;
\\ anomal ia mxol od oj axuria;
\\ anomal ia memkvidrul ia Tu axl ad warmoqmnil i;

\\ \\ \\ ra dros aqvs adgili ori akrocentrul i qromosomis Serwymas centromeris mimdebare regionSi mokl e mxrebis dakargviT;

\\ del eciis;
\\ dubl ikaciis;
\\ reciprokul i transl okaciis;
\\ robertsoniseul i transl okaciis.

\\ \\ ra ewodeba process, rodesac erTi qromosomis segmenti gadainacvl ebs sxva qromosomaSi sakuTari orientaciis SenarCunebiT an Sebrunebul i saxiT;
\\ \\ transl okacia;
\\ \\ dubl ikacia;
\\ \\ inversia;
\\ \\ insercia.

\\ \\ buStnamqeri - pl acentas anomal iaa, maTi umetesoba dipl oiduria 46,XX kariotipiT. CamoTvl il Tagan, romel i mSobl is warmoSobisaa es qromosomebi?
\\ \\ yvel a mamiseul ia;
\\ \\ 40%-ia dediseul i;
\\ \\ yvel a dediseul ia;
\\ \\ orive Taanabari raodenobiTaa.

\\ \\ miuxedavad imisa, rom aneupl oidiis gamomwvevi mizezi bol omde ar aris garkveul i cnobil ia rom misi yvel aze xSiri qromosomul i meqanizmi aris
\\ \\ mitozuri gauTiSvebl oba profazaSi;
\\ \\ mitozuri gauTiSvebl oba anafazaSi;
\\ \\ meiozuri gauTiSvebl oba profazaSi;
\\ \\ meiozuri gauTiSvebl oba anafazaSi.

\\ \\ ratom ar axl avs ZiriTadad fenotipuri efeqti qromosomis fragmentis mdebareobis Sevl iT gamowveul bal ansirebul darRvevebs, radgan:
\\ \\ informacia srul adaa warmodgenil i;
\\ \\ informacia ZiriTadad intronebSia;
\\ \\ informacia mitoqondriul ia;
\\ \\ informacia birTvul ia.

/// qvemoTCamoTvl il Tagan meiozis procesis romel etapze daSvebul i Secdoma ganapirobebs 47 XYYkariotipis warmoqmnas?
/// I meiozuri gayofa, spermatogenezi;
/// I meiozuri gayofa, oogenezi;
// II meiozuri gayofa, spermatogenezi;
/// II meiozuri gayofa, oogenezi.

\\ \\ CamoTvl il Tagan ra ganapirobebs qromosomul daavadebebs
\\ \\ genuri mutaciebi;
\\ \\ genomuri mutaciebi;
\\ \\ genebis urTierTqmedeba;
\\ \\ mraval i genis erTobl ivi moqmedeba.

\\ \\ damemkvidrebis romel tipTan gvaqvs saqme Tu daavadeba mSobl ebisgan Svil ebs yvel a TaobaSi gadaecema?
\\ \\ autosomur-recesiul Tan;
\\ \\ X-Tan SeWidul Tan;
\\ \\ Y-Tan SeWidul Tan;
\\ \\ autosomur_dominanturTan.

\\ \\ damemkvidrebis romel i tipis dros xdeba, rom daavadebul i mami vaJebi arian janmrTel ebi, xol o qal iSvil ebi -avadmyofebi?
\\ \\ X-Tan SeWidul i dominanturi;
\\ \\ X-Tan SeWidul i recesiul i;
\\ \\ Autosomur_dominanturi;
\\ \\ autosomur_recesiul i.

\\ \\ qromosomebis struqturul i darRvevebidan, romel ic dakavSirebul ia ubnebis adgil mdebareobis gacvl asTan cnobil ia.

\\ \\ didi zomis dubl ikaciebi;

\\ \\ didi zomis del eciebi;

\\ \\ mcire zomis del eciebi;

\\ \\ reciprokul i transl okaciebi.

\\ \\ aRniSneT, CamoTvl il Tagan romel i niSani aris damaxasiaTebel i mitogondriul i memkvidreobisTvis;

\\ \\ daavadeba ufro xSiria mamakacebSi;

\\ \\ daavadeba memkvidreobiT mxol od dedisgan gadadis;

\\ \\ avadmyof mamakacebs yvel a Svil i daavadebul i hyavs;

\\ \\ avaddebian mxol od qal ebi.

\\ \\ CamoTvl il Tagan, romel i mutaciebi ekuTvnis genomurs?

\\ \\ inversia;

\\ \\ del ecia;

\\ \\ aneupl oidia;

\\ \\ qromosomaTSorisi rekonstruqciebi.

\\ \\ CamoTvl il Tagan romel i kariotipi Seesabameba terneris sindroms?

\\ \\ 47,XXX;

\\ \\ 47,XXY;

\\ \\ 46,XX;

\\ \\ 45,X0.

\\ \\ CamoTvl il Tagan, qal is romel asakobriv interval ebSi izrdeba qromosomul i anomal iebis mqone bavSvis dabadebis riski.

\\ \\ 20-23;

\\ \\ 20-25;

\\ \\ 30-35;

\\ \\ 35-40.

\\ \\ romel i qromosomul i sindromisTvis aris damaxasiaTebel i Semdegi simptomebi: Tval is monRol oiduri Wril i, xel is gul ze, e.w. "maimunis Rari", woviTi refl eqsis deficiTi;

\\ \\ edwardsis;

\\ \\ pataus;

\\ \\ daunis;

\\ \\ "katis knavil is".

\\ \\ CamoTvl il Tagan, romel i mutacia miekuTvneba qromosomul s?

\\ \\ inversia;

\\ \\ tripl oidia;

\\ \\ aneupl oidia;

\\ \\ pol ipl oidia.

\\ \\ romel i warmoadgens qromosomul i daavadebebis zust sadiagnostiko meTods?

\\ \\ kl inikuri;

\\ \\ biqimiuri;

\\ \\ citogenetikuri;

\\ \\ geneal ogiuri.

\\ \\ qvemoTCamoTvl il Tagan, romel i daavadebis dros iyeneben citogenetikur anal iza
\\ \\ kataraktis;
\\ \\ anemiis;
\\ \\ Tandayol il i mankebis;
\\ \\ diabetes dros.

\\ \\ romel i qromosomul i nakrebi aris damaxasiaTebel i kl ainfel teris sindromisTvis?
\\ \\ 45, X0;
\\ \\ 47, XXX;
\\ \\ 47, XXY;
\\ \\ 47, XYY.

\\ \\ romel i qromosomul i nakrebi asaxavs qromosomaTa ricxvis mraval j erad gazrdas.
\\ \\ pol ipl oidia;
\\ \\ dipl oidia;
\\ \\ tripl oidia;
\\ \\ tetrapl oidia.

\\ \\ CamoTvl il Tagan, romel i qromosomul i nakrebi aris damaxasiaTebel i pataus sindromisTvis;
\\ \\ 47, XX, 18⁺;
\\ \\ 47 XY, 13⁺;
\\ \\ 47, XY, 19⁺;
\\ \\ 47, XX, 19⁺.

\\ \\ kariotipis romel i formul iT aRiniSneba edvardsis sindromi?
\\ \\ 46, XY, 13⁺;
\\ \\ 47, XY, 13⁺;
\\ \\ 47, XX, 12⁺;
\\ \\ 47, XX, 18⁺.

\\ \\ adamians or normal ur homol ogTan erTad damatebiT aqvs izoqromosomac. qvemoTCamoTvl il Tagan romel ia misi genotipi izoqromosomis mixedviT?
\\ \\ tetrasomuri;
\\ \\ monosomuri;
\\ \\ trisomuri;
\\ \\ pol isomuri.

\\ \\wyvil ma miakiTxa eqims, radganac pirvel i sami orsul oba spontanuri abortiT dasrul da. qromosomul ma anal izma gamoavl ina, rom col s aqvs ori uj redul i xazi l eikocitebSi, erTi xazis uj redebs akl ia X qromosoma(45,X), meore ki normal uria(46,XX). rogor daaxasiaTebdiT am qal is qromosomul kompl eqts?
\\ \\ qimerul i;
\\ \\ trisomul i;
\\ \\ mozaikuri;
\\ \\ eupl oiduri.

\\ \\gogona CamorCa ganviTarebaSi da gvian daiwyo metyvel eba. man daZl ia mesame kl asis programa, magram Zal ian gauWir da meoTxe kl asSi swavl a.

dedamisis msgavsad mas wagrZel ebul i habitusi da susti saxsrebi aqvs. qromosomul ma anal izma gamoavl ina 47, XXX kariotipi. fragil ur X-dnm-ze kvl evis Sedegi uaryofiTia. rogor daaxasiaTebdiT am anomal ias?

- \\ mozaicizmi;
- \\ pol ipl oidia;
- \\ sasqeso qromosomis aneupl oidia;
- \\ terneris sindromi.

\\ \\ CamoTvl il Tagan, kariotipis romel i formul aa Seesabameba daunis sindromis mqone individis kariotips ?

- \\ 47, XX, 13⁺, 47, XXX;
- \\ 47, XX, 22⁺; 47, XXY;
- \\ 46, XY, t(21/14), 47, XX, 21⁺;
- \\ 47, XXY; 47, XXY.

\\ \\ ra warmoadgens daunis daavadebis ganviTarebis erTerT ZiriTad mi zezs?

- \\ qromosomebis del ecia;
- \\ qromosomebis dubl ikacia;
- \\ qromosomebis insercia;
- \\ qromosomebis gauTiSvebl oba.

\\ \\ rogori tipis qromosomas uwodeben struqturul ad anomal ur 22-e qromosomas, romel ic xSiria l eikemi iT daavadebul i adamanis Zvl is tvinis uj redebSi?

- \\ fil adel fiurs;
- \\ pataras;
- \\ markerul s;
- \\ rgol urs.

\\ \\ rogori gamokvl eva unda Cautardes wyvil s, romel Ta erTaderT Svil s aqvs kisturi fibrozi?

- \\ citogenetikuri;
- \\ mol ekul ur-genetikuri;
- \\ rentgenol ogiuri;
- \\ endoskopuri.

\\ \\ CamoTvl il Tagan, romel uj redebs aqvT upiratesoba citogenetikuri anal izis Casatarebl ad?

- \\ Zvl is tvinis;
- \\ RviZl is;
- \\ gl iur;
- \\ kunTovan.

\\ \\ imprintingi normal uri procesia, romel ic gamowveul ia qromatinis cvl il ebebiT mxol od erT-erTi mSobl is germinaciul uj redebSi. es cvl il eba SeiZl eba iyos.

- \\ dnm-is meTil ireba;
- \\ rnm_is modifikacia;
- \\ dnm-endonukl eazas modifikacia;
- \\ rnm-pol imerazas modifikacia.

\\ \\ romel i sindromi viTardeba me-5 qromosomaSi mcire mxris fragmentis dakargvis Sedegad ?

\\ daunis;
\\ edwardsis;
\\ pataus;
\\ „katis knavil is“.

\\ \\ di_j orj is, vel okardiofascial uri an konotrunkal is saxis anomal uri sindromebi autosomur_dominanturia. qvemoTCamoTvl il Tagan romel i qromosomis mikrodel ecia warmoadgens samive sindromis mi zezs?

\\ 21q12.2;
\\ 22q11.2;
\\ X-is;
\\ Y-is.

\\ \\ ramden nukl eitidur wyvil s Seicavs adamianis hapl oiduri genomi?

\\ eqvsi mil ions;
\\ eqvsi mil iards;
\\ sami mil ions;
\\ sami mil iards.

\\ \\ reciprokul i transl okacia aris arahomol ogiuri qromosomebis gawyvetis Sedegi, rasac Tan mosdevs:

\\ qromosomebis segmentebis aRdgena;
\\ qromosomebis segmentebis damateba;
\\ qromosomebis segmentebis moSoreba;
\\ qromosomebis segmentebis gacvl a.

\\ \\ insercia aris transl okaciis arareciprokul i tipi, romel ic gvxxdeba maSin, rodesac erTi qromosomis segmenti gadainacvl ebs:

\\ sakuTari qromosomis bol oze;
\\ sakuTari qromosomis dasawyiSi;
\\ sakuTari qromosomis SuaSi;
\\ sxva qromosomaSi orientaciis SenarCunebiT.

\\ \\ normal uri qal ebis somatur uj redSi, adreul i ganviTarebis etapze xdeba X qromosomis inaqtivacia. CamoTvl il Tagan ra mizans unda emsaxurebodes es procesi?

\\ X_Tan SeWidul i genebis del ecias;
\\ X_Tan SeWidul i genebis gaaqtivebas;
\\ X_Tan SeWidul i genebis variabel obas;
\\ X_Tan SeWidul i genebis dozirebas.

\\ \\ ramdeni grosoma gaaCnia me-14 da 21-e qromosomis robertsoniseul i transl okaciis matarebel pirebs?

\\ 47;
\\ 46;
\\ 45;
\\ 44.

\\ \\ daunis sindromis romel i forma ar aris dakavSirebul i dedis asakTan?

\\ kl asikuri forma _ 21-e qromosomis trisomia;
\\ reciprokul i trasl okaciis;
\\ robertsoniseul i trasl okaciis;
\\ kl asikuri da reciprokul i transl okaciis.

\\ \\ romel i qromosomul i darRveva ar aRiniSneba daunis sindromis ganmsazRvrel kariotipSi?

\\ trisomia 21;
\\ robertsoniseul i transl okacia14q21q;
\\ 21q21q;
\\ 21q15q.

\\ \\ romel i monosomia ar aris sicocxl esTan SeTavsebadi
\\ X qromosomis;
\\ 21-e qromosomis;
\\ X an 21-e qromosomis;
\\ X an me-13-e qromosomis.

\\ \\ pacientebis ramden procentSi aris ganpirobetul i daunis sindromi 21-e qromosomis trisomiit
\\ 3%;
\\ 5%;
\\ 90%;
\\ 95%.

\\ \\ pacientebis ramdeni procentisTvis aris damaxasiaTebel i mozaikuri daunis sindromi
\\ 2%;
\\ 3%;
\\ 5%;
\\ 95%.

\\ \\ romel i qromosomis trisomiisas ar aRiniSneba daavadebul ebSi "akvnis Ziris" formis terfi
\\ me-18;
\\ me-13;
\\ rogorc me-13, ise me-18;
\\ 21-e.

\\ \\ romel i sindromisTvisaa damaxasiaTebel i gapobil i tuCi da sasa
\\ daunis;
\\ terneris;
\\ pataus;
\\ katis knavil is.

\\ \\ romel i qromosomis trisomiisas aRiniSneba Tval is anomal iebi (feradi garsis kol oboma, mikroftal mia, zogjer Tval ebis uqonl oba)
\\ 21-e;
\\ me-13;
\\ me-18;
\\ X-qromosomis.

\\ \\ CamoTvl il Tagan romel sindroms iwvevs me-5 qromosomis mokle mxris del ecia
\\ edwardsis;
\\ pataus;
\\ daunis;
\\ katis knavil is.

\\ \\ ra simptomi axasiaTebis me-5 qromosomis mokle mxris del ecis dros axal Sobilebs :

- \\ gapobil i tuCi da sasa;
- \\ "akvnis Ziris" formis terfebi;
- \\ tiril is dros specifikuri katis knavil is msgavsi xma;
- \\ spl enomegal ia.

- \\ \\ vin warmoadgens kl inikuri genetikis Seswavl is obieqts:
- \\ mxol od daavadebul i piri;
- \\ daavadebul i piri da misi avadmyofi naTesavebi;
- \\ daavadebul i piri da misi oj axis yvel a wevri;
- \\ daavadebul i piri da axl o naTesavebi.

- \\ \\ riT aris ganpirobepul i qromosomul i daavadebebi:
- \\ genuri mutaciebiT;
- \\ genomuri da qromosomul i mutaciebiT;
- \\ dnm-is genTaSorisi ubnebis cvl il ebiT;
- \\ mxol od garemo faqtorebis moqmedebiT.

- \\ \\ autosomur-dominanturi memkvidreobis maxasiaTebel ia:
- \\ daavadebul i bavSvis mSobl ebi fenotipurad j anmrTel i arian, magram anal ogiuri daavadeba gv xvdeba probandis sibsebSi;
- \\ vaJiSvil i arasdros iRebs daavadebas mami sgan memkvidreobiT;
- \\ daavadeba erTnairi sixSiriT gv xvdeba mamakacebsa da qal ebSi da yvel a TaobaSi;
- \\ niSani gadadis mamidan mxol od vaJebze.

- \\ \\ geneal ogiur nusxaSi sibsebi arian:
- \\ probandis yvel a naTesavi;
- \\ probandis da-Zmebi;
- \\ probandis naTesavebi, eqim-genetikosis mier gamokvl eul ebi;
- \\ probandis mSobl ebi.

- \\ \\ miuTiTeT niSnebze, roml ebic damaxasiaTebel ia X-SeWidul i recesiul i memkvidreobis tipisTvis:
- \\ daavadeba aReniSnebaT umetesad qal ebs;
- \\ daavadebul i mamakacis fenotipurad j anmrTel i yvel a qal iSvil i aris mtarebel i; amasTanave qal i-mtarebel is vaJiSvil Ta 50% iqneba Ddaavadebul i;
- \\ daavadebul i mamakacebi paTol ogiur al el s gadascemen vaJiSvil ebis 50%-s;
- \\ daavadebul i mamakacebi paTol ogiur al el s gadascemen vaJiSvil ebis 25%-s.

- \\ \\ qromosomul i anomal iebis romel i saxeebi ar gv xvdeba cocxal Sobil ebSi?
- \\ autosomuri trisomiebi;
- \\ sasqeso qromosomebis trisomiebi;
- \\ autosomebis monosomiebi;
- \\ X-qromosomis monosomia.

- \\ \\ miuTiTeT kariotipis formul a katis knavil is sindromis dros:

- \\ 45,X;
- \\ 46,XX,9P+ ;
- \\ 46,XX,del(5p);
- \\ 46,XX/45,X.

\\ \\ miuTiTeT CveneBa, roml is mixedviT xdeba citogenetikuri anal izis
Catareba

- \\ kataraqta, gonebrivi CamorCenil oba;
- \\ hemol izuri anemia;
- \\ gonebrivi CamorCenil oba, ganviTarebis Tandayol il i manki;
- \\ Saqriani diabeti.

\\ \\ miuTiTeT kariotipis formul a kl ainfel teris sindromis dros:

- \\ 45,X;
- \\ 47,XXX;
- \\ 47,XYY;
- \\ 47,XXY;

\\ \\ miuTiTeT kariotipis formul a androgenis mimarT ar amgrZnobi arobis
sindromis (testikul arul i feminizaciis) dros:

- \\ 46,XX;
- \\ 47,XXX;
- \\ 45,X:0
- \\ 46,XY.Y

\\ \\ miuTiTeT, romel i qromosomul i sindromisTvisaa damaxasiaTebel i
Semdegi simptomebi: gonebrivi CamorCenil oba, muStad Sekrul i xel i,
deformirebul i da dabl a msxdomi yurebi, gul is Tandayol il i manki:

- \\ edwardsis sindromi;
- \\ kl ainfel teris sindromi;
- \\ daunis sindromi;
- \\ katis knavil is sindromi.

\\ \\ miuTiTeT kariotipis formul a edwardsis sindromis dros:

- \\ 47,XY,21+ ;
- \\ 47,XXY;
- \\ 47,XY,13+ ;
- \\ 47,XX,18+ ;

\\ \\ trisomiebis warmoSobis mizezia:

- \\ qromosomaTa gauTiSvel oba;
- \\ wertil ovani mutaciebi;
- \\ qromosomul i aberaciebi;
- \\ genuri mutaciebi.

\\ \\ miuTiTeT kariotipis formul a Semdegi simptomebisas: zrdasa da
sqesobriv ganviTarebaSi CamorCena, frTisebrnaoWi ani kiseri, farTo mkerdis
Zval i:

- \\\ 47,XXY;
- \\ 45,X;
- \\\ 46,XX;
- \\\ 47,XYY;

- \\\ romel i situaciis drosaa misaRebi kariotipis gamokvl eva:
- \\ qal i erTi spontanuri abortis anamneziT;
- \\\ daunis sindromis kl asikuri formis mqone bavSvis mSobl ebi;
- \\ col -qmari anamnezSi erTi mkvdradSobadobiT da sami spontanuri abortiT;
- \\\ SizofreniiT daavadebul i mSobl ebisTvis.

- \\\ citogenetikuri anal izis Casatarebl ad gamoiyeneba:
- \\ Zvl is tvinis uj redebi an periferiul i sisxl is I imfocitebi;
- \\\ I imfocitebi an eriTrocitebi;
- \\\ fibrobl astebi da RviZl is uj redebi;
- \\\ I imfocitebi da RviZl is uj redebi.

- \\\ paTol ogiuri memkvidreobis romel i tipis diagnoscireba xdeba citogenetikuri meTodiT:
- \\\ nivTierebaTa cvl is memkvidrul i defeqtebis;
- \\\ mul tifaqtorul i daavadebebis;
- \\ daavadebebis, roml ebic ganpirobebul ia qromosomaTa raodenobisa da struqturis cvl il ebebiT;
- \\\ genuri daavadebebis.

- \\\ anamnezSi orsul obis I trimestrSi ganmeorebiTi spontanuri abortebiT da mkvdradSobadobiT citogenetikuri anal izi eni Sneba:
- \\ col -qmars;
- \\\ mxol od qal s;
- \\\ mxol od mamakacs;
- \\ qal is mSobl ebs.

- \\\ anamnezSi orsul obis I trimestrSi ganmeorebiTi spontanuri abortebiTa da mkvdradSobadobiT, citogenetikuri anal izi eni Sneba:
- \\ mxol od qal s;
- \\\ mxol od mamakacs;
- \\ nayofs;
- \\ qal is mSobl ebs.

- \\\ romel i daavadebebi eqvemdebareba masiur skrinings?
- \\\ neirofibromatozi;
- \\\ mukopol isaqaridozebi;
- \\ fenil ketonuria;
- \\\ hemoqromatozi.

- \\\ citogenetikur meTods gadamwyveti mniSvnel oba aqvs Semdegi paTol ogiebis diagnoscirebisTvis:

\\ mol ekul ur-genetikuri cvl il ebebis;
\\ qromosomul i paTol ogiebis;
\\ mul tifaqtorul i daavadebebis;
\\ nivTierebaTa cvl is memkvidrul i defeqtebis.

\\ \\ miuTiTeT daavadeba, roml is diagnoscireba Sesazl ebel ia prenatal urad
 citogenetikuri meTodiT:
\\ katis knavil is sindromi;
\\ Tal asema;
\\ kisturi fibrozi;
\\ fenil ketonuria.

\\ \\ CamoTvl il Tagan romel i maTganis diagnoscirebaa Sesazl ebel i
prenatal urad citogenetikuri meTodiT?
\\ hemofil iis;
\\ edwardsis sindromis;
\\ Saqriani diabetes;
\\ neirofibromatozis.

\\ \\ tetrapl oiduri kompl eqti yovel Tvis aris:
\\ 92,XXXX an 92,XXYY;
\\ 92,XXXY an 92,XXXX;
\\ 92,XYYY an 92,YYYY ;
\\ 92,YYYY an 92,XXYY;

\\ \\ romel i debul eba Seesabameba qromosomul i segmentis dakargvas;
\\ inversia;
\\ transl okacia;
\\ del ecia;
\\ dubl ikacia.

\\ \\ ras iwvevs qromosomis nawil is dubl ikacia:
\\ trisomias;
\\ nawil obriv trisomias;
\\ nawil obriv monosomias;
\\ monosomias;

\\ \\ qromosomas, romel sac ar aqvs erTi mxari, meore ki aris sarkiseburad
 gaormagebul i, ewodeba:
\\ markerul i;
\\ rgol ovani;
\\ izoqromosoma;
\\ dicentrul i.

\\ \\ prader-vil is da angel manis sindromis SemTxvevaSi romel i qromosomaa
 del ecirebul i?
\\ 21-e;
\\ me-16;
\\ me-15;
\\ me-5.

- \\ \\ qvemoT CamoTvl il kariotipTagan romel i Seesabameba Sedarebi T normal ur fenotips?
- \\ qal i 47,XXX;
- \\ qal i 47,XX,13+ ;
- \\ mamakaci 47,XY,18+ ;
- \\ mamakaci 46,XY,4p- ;

- \\ \\ romel i qromosomis monosomia aris sicocxl esTan SeTavsebadi?
- \\ me-7 qromosomis;
- \\ me-11 qromosomis;
- \\ X-qromosomis;
- \\ 21-e qromosomis.

- \\ \\ uj redSi 3 an meti hapl oiduri nakrebis arsebobas ewodeba:
- \\ dipl oidia;
- \\ eupl oidia;
- \\ trisomia;
- \\ monosomia.

- \\ \\ CamoTvl il idan rod is vl indeba ufro xSirad eTnikuri sxvaobebi daavadebebisas?
- \\ autosomur-dominanturi daavadebebis dros;
- \\ autosomur-recesiul i daavadebebis dros;
- \\ X-SeWidul i recesiul i daavadebebis dros;
- \\ sasqeso qromosomis aneupl oidiis dros.

- \\ \\ CamoTvl il Tagan, memkvidreobis romel i tipis mqone genetikuri daavadeba vl indeba mxol od mamakacebSi?
- \\ mul tifaqtorul i memkvidreobis;
- \\ X-SeWidul i recesiul i memkvidreobis;
- \\ autosomur-recesiul i memkvidreobis;
- \\ autosomur-dominanturi memkvidreobis.

- \\ \\ romel i tipis memkvidreoba axasiaTeb s genetikur daavadebas, roml is drosac, zrda srul i asakis patients awuxeb s koronarul i arteriebis daavadeba da arainsul indamokidebul i diabeti:
- \\ mul tifaqtorul i memkvidreoba;
- \\ X-SeWidul i recesiul i memkvidreoba;
- \\ autosomur-recesiul i memkvidreoba;
- \\ autosomur-dominanturi memkvidreoba.

- \\ \\ romel i qromosomul i anomal ia Seesabameba umetesad Semdeg kl inikur suraTs – brtyel i kefa, bruSfil dis l aqebi, gul is atrioventrikul uri arxis ukmarisoba, xel is gul ze erTi Raris arsebob a:
- \\ trisomia 13;
- \\ trisomia 18;
- \\ trisomia 21;
- \\ X monosomia.

- \\ \\ romel i qromosomul i anomal ia Seesabameba Semdeg kl inikur suraTs – mkvdradSobil i bavSvi hol oprozencefal i iT, pol idaqt il i iT, gapobil i tuCiTa da gapobil i sasiT:
- \\ trisomia 13;

\\ trisomia 18;
\\ trisomia 21;
\\ X monosomia.

\\ \\ romel i qromosomul i anomal ia Seesabameba Semdeg kl inikur suraTs:
amozneqil i kefis Zval i, Seweul i qveda yba, gamoweul i qusl is Zval i,
muStad Sekrul i TiTebis Taviseburi ganl ageba:

\\ trisomia 15;
\\ trisomia 18;
\\ trisomia 21;
\\ X monosomia.

\\ \\ CamoTvl il idan romel i debul ebaa marTebul i?

\\ me-18 trisomi iT (edwardsis sindromi T) daavadebul i bavSvebis sicocxl is
xangrZl ivoba aris daaxl oebi T 2 wel i;

\\ 47XYY mamakacebi fertil urebi arian;

\\ terneris sindromis kariotipi warmoadgens erTeul i qromosomul i
anomal is yvel aze iSviaT formas spontanur abortebSi;

\\ 47XYY mamakacebi fertil urebi ar arian;

\\ \\ SeRebvis romel i meTodi gamoiyeneba konstituciuri heteroqromatinis
specifikuri SeRebvisaTvis?

\\ R - bendireba;

\\ Q-- bendireba;

\\ G-- bendireba;

\\ C- bendireba.

\\ \\ individSi ori an meti sxvadasxva saxis qromosomul i nakrebis arsebobas
ewodeba:

\\ insercia;

\\ mozaicizmi;

\\ imprintingi;

\\ dublikacia.

\\ \\ romel i meTodi T xdeba sxvadasxva saxis genuri da qromosomul i
darRvevis

gamovl ena interfazul uj redebSi:

\\ polimerazul i j aWvuri reaqci iT;

\\ fl uorescentul i in situ hibridizaci T;

\\ citogenetikuri kvl evi T;

\\ bioqimiuri kvl evi T.

\\ \\ total uri buStnamqerebis umetesoba aris:

\\ tetraploiduri;

\\ dipl oiduri;

\\ tripl oiduri;

\\ trisomiul i.

\\ \\ SezRudul i pl acenturi mozaicizmis dros Canasaxi aris:

\\ trisomiul i;

\\ tripl oiduri;

\\ tetraploiduri;

\\ dipl oiduri.

\\\ romel ia genomuri imprintingis yvel aze kargad Seswavl il i magal iTebi
 adami anis daavadebebiSi:
 \\\ daunis sindromi;
 \\\ prader-vil isa da angel manis sindromebi;
 \\\ pataus da edwardsis sindromebi;
 \\\ terneris sindromi.

\\\ robertsonul i transkl okaciis dros adgil i aqvs:
 \\\ rgol ovani qromosomebis warmoqmna;
 \\\ qromosomis garkveul i ubnis gaormagebas;
 \\\ qromosomis garkveul i monakveTis 180 gradusiT Semobrunebas;
 \\\ ori akrocentrul i qromosomis Serwymas mokl e mxrebi dakargviT.

\\\ me-5 qromosomis del ecirebul ubanSi l okal izebul i genebis aRmosaCenad
 CamoTvl il i meTodebidan mizanSewonil ia
 \\\ mxol od fl uorescentul i in situ hibridizaciis meTodi (FISH)
 \\\ mxol od CGH-areis meTodi
 \\\ sauzern-bl otingi
 \\\ rogorc FISH, ise CGH-areis meTodi

\\\ me-5 qromosomis del ecirebul ubanSi l okal izebul i genebis aRmosaCenad
 CamoTvl il i meTodebidan mizanSewonil ia
 \\\ sauzern-bl otingi;
 \\\ FISH meTodi;
 \\\ nozern-bl otingi;
 \\\ PCR.

\\\ me-5 qromosomis del ecirebul ubanSi l okal izebul i genebis aRmosaCenad
 CamoTvl il i meTodebidan mizanSewonil ia
 \\\ PCR;
 \\\ nozern-bl otingi;
 \\\ CGH-areis meTodi;
 \\\ sauzern-bl otingi.

\\\ qromosomaTa identifikaciisTvis SemuSavebul ia SeRebvis randenime
 teqno logia, maT Soris Q SeRebva, roml is drosac:
 \\\ gamoiyeneba gimzis saRebavi;
 \\\ miRebul i Q bende bi zusta d Seesabameba G bendebs;
 \\\ DSesaZI ebel ia qromosomaTa morfol ogiis an heteromorfizmebis dadgena;
 \\\ specifikurad iRebeba qromosomis centromerul i ubnebi.

\\\ qromosomaTa identifikaciisTvis SemuSavebul ia SeRebvis randenime
 teqno logia, maT Soris C-SeRebva, roml is drosac:
 \\\ gamoiyeneba quanakrinis saRebavi;
 \\\ specifikurad iRebeba konstituciuri heteroqromatini;
 \\\ gamoiyeneba sinaTI is mikroskopi;
 \\\ iRebeba 2q, 8q, 10q qromosomebis centromerebTan mdebare ubnebi.

\\\ maRal xarixiani bendireba aris:
 \\\ qromosomaTa anal izi tel ofazaSi;
 \\\ qromosomaTa anal izi kondensirebul mdgomareobaSi;
 \\\ qromosomaTa C-SeRebva;
 \\\ qromosomaTa SeRebva profazasa da prometafazaSi G da R bendirebiT.

\\ \\ qromosomaTa identifikaciisTvis SemuSavebul ia SeRebvis ramdenime teqnol ogia, maT Soris C SeRebva, roml is drosac:
\\ \\ iRebeba specifikurad tel omerul i ubnebi;
\\ \\ iRebeba fragil uri saitebi;
\\ \\ iRebeba mxol od saSual o zomis qromosomebi;
\\ qromosomaTa centromerul i ubani da konstituciuri heteroqromatini.

\\ \\ qromosomaTa hapl oiduri nakrebis diferencial uri SeRebvis romel i meTodis gamoyenebisas Cans bendebis yvel aze meti raodenoba:
\\ \\ G an C SeRebvisas interfazaSi;
\\ \\ G an Q SeRebvisas metafazaSi;
\\ \\ G an R SeRebvisas prometafazaSi;
\\ \\ R an C SeRebvisas tel ofazaSi.

\\ \\ speqtrul i kariotipireba aris:
\\ \\ qromosomaTa rutinul i Seswavl is meTodi;
\\ \\ qromosomul i aberaciebis Sesaswavl i 2, 3 an 4 feriani deteqciis meTodi;
\\ \\ tel ofazaSi mraVal i Sesaswavl i zondis erTdroul i deteqciis meTodi;
\\ mTel i genomis 24 qromosomaTa SeRebva sxvadasxva feris saRebaviT da maTi fl uorescentul i signal ebis programul i uzrunvel yofa.

\\ \\ metafazaSi centromerebis ganl agebis mixedviT arCeven ramdenime tipis qromosomas. maT Soris satel itebi aqvT:
\\ \\ metacentrul (1,2,3) qromosomas;
\\ \\ submetacentrul (5,6,7,8) qromosomas;
\\ \\ akrocentrul (17,18,19) qromosomas;
\\ \\ akrocentrul (13,14,15,21,22) qromosomas.

\\ \\ adamianis romel i qromosoma aris genebiT yvel aze Raribi? ^
\\ \\ X-qromosoma;
\\ \\ Y-qromosoma;
\\ \\ 21-e qromosoma;
\\ \\ 22-e qromosoma.

\\ \\ CamoTvl il Tagan ramdeni genia Y-qromosomaSi
\\ \\ 50-mde;
\\ \\ 75;
\\ \\ 100;
\\ \\ 200.

\\ \\ sasqeso qromosomebis pseudoautosomul i ubnebi CamoTvl il Tagan moTavsebul ia
\\ \\ mxol od Pp-mxris distal ur ubanze;
\\ \\ mxol od Pq-mxris distal ur ubanze;
\\ \\ qromosomebis centromerul ubanSi;
\\ \\ rogorc Pp, ise q-mxris terminal ur ubnebSi.

\\ \\ CamoTvl il Tagan romel qromosomaSia l okal izebul i SRY-geni;
\\ \\ X-qromosomis Pp-mxarSi;
\\ \\ Y-qromosomis q-mxarSi;
\\ \\ Y-qromosomis p-mxarSi;
\\ \\ X-qromosomis q-mxarSi.

\\\ Tu moxda SRY-ubnis rekombinacia X- qromosomasTan CamoTvl il Tagan
 yal ibdeba:
 \\\ normal uri qal i;
 \\\ XX mamakaci;
 \\\ normal uri mamakaci;
 \\\ XXX qal i.

\\\ Tu moxda SRY-ubnis rekombinacia X- qromosomasTan CamoTvl il Tagan
 yal ibdeba
 \\\ normal uri mamakaci;
 \\\normal uri qal i;
 \\\ XY qal i;
 \\\ XXY-mamakaci.

\\\ CamoTvl il Tagan romel del eciebtanaa dakavSirebul i azoospermia?
 \\\ X-qromosomis grZel i mxris;
 \\\ Y-qromosomis mokl e mxris;
 \\\ X-qromosomis mokl e mxris;
 \\\ Y-qromosomis grZel i mxris.

\\\ CamoTvl il Tagan Y-qromosomis romel del eciebtanaa dakavSirebul i
 azoospermia?
 \\\ mokl e mxris terminal ur;
 \\\ grZel i mxris intersticial ur;
 \\\ mokl e mxris intersticial ur;
 \\\ grZel i mxris terminal ur.

\\\ adamianis kariotipis SedarebiTi tol erantoba X-qromosomis anomal iis
 mimarT Seizl eba aixsnas
 \\\ X-qromosomis zomiT;
 \\\ X-qromosomaSi moTavsebul i genebis raodenobiT;
 \\\ X-qromosomis inaqtivaci iT;
 \\\ X-qromosomis formiT.

\\\ CamoTvl il Tagan romel qromosomaSi l okal izebul i genebis eqspresiis
 mimarT
 arian qal ebi mozaikurni
 \\\ metacentrul autosomebSi;
 \\\ X-qromosomaSi;
 \\\ akrocentrul autosomebSi;
 \\\ submetacentrul autosomebSi.

\\\ CamoTvl il Tagan X-qromosomis romel i mutaciebis maRal i sixSire iwevs
 gonebriv CamorCeni l obas
 \\\ inserciebis;
 \\\ mikrodel eciebis;
 \\\ trasl okaciebis;
 \\\ inversiis.

\\\ CamoTvl il Tagan X-qromosomis romel i mutaciebis maRal i sixSire iwevs
 gonebriv CamorCeni l obas?
 \\\ trasl okaciebis;
 \\\ inserciebis;
 \\\ dubl ikaciebis;
 \\\ del eciebis.

\\ \\ CamoTvl il Tagan romel i kariotipis individebSi ar aRini Sneba
nayofierebis
darRveva

\\ \\ XXY;
\\ \\ XYY;
\\ \\ XXYY;
\\ \\ XXXYY.

\\ \\ \\ CamoTvl il Tagan ra ni Sani axasiaTebS XYY kariotipis mamakacebs
\\ \\ unayofoba;
\\ \\ impul suroba;
\\ \\ ginekomastia;
\\ \\ azoospermia.

\\ \\ \\ CamoTvl il Tagan ra ni Sani axasiaTebS XYY kariotipis mamakacebs
\\ \\ j uj oba;
\\ \\ ginekomastia;
\\ \\ yuradRebis defici ti;
\\ \\ sasqeso j irkvl ebis ganuvi Tarebl oba.

\\ \\ \\ CamoTvl il Tagan ra ni Sani axasiaTebS XYY kariotipis mamakacebs
\\ \\ ginekomastia;
\\ \\ hiperaqtiuroba;
\\ \\ azoospermia;
\\ \\ meoradi sasqeso ni Snebis ganuvi Tarebl oba.

\\ \\ \\ CamoTvl il Tagan romel i kariotipis individebs axasiaTebS saSual oze
odnav maRal i tani, nayofiereba, saSual oze dabal i IQ:
\\ \\ 47,XXX;
\\ \\ 45,X;
\\ \\ 48, XXXX;
\\ \\ 49,XXXXY.

\\ \\ \\ 47,XXX kariotipis gogonebisaTvis CamoTvl il Tagan damaxasiaTebel ia
\\ \\ tandabl oba;
\\ \\ nayofiereba;
\\ \\ gonaduri disgenezia;
\\ \\ frTisebri naoWebi kiserze.

\\ \\ \\ 47,XXX kariotipis gogonebisaTvis CamoTvl il Tagan damaxasiaTebel ia
\\ \\ unayofoba;
\\ \\ saSual oze odnav maRal i tani;
\\ \\ tandabl oba;
\\ \\ gonaduri disgenezia.

\\ \\ \\ 47,XXX kariotipis gogonebisaTvis CamoTvl il Tagan damaxasiaTebel ia
\\ \\ unayofoba;
\\ \\ tandabl oba;
\\ \\ fsiqopaTuri da antisocial uri ni Snebi;
\\ \\ frTisebri naoWebi kiserze.

\\ \\ \\ 47,XXX kariotipis gogonebisaTvis CamoTvl il Tagan damaxasiaTebel ia
\\ \\ tandabl oba;

\\ saSual oze dabal i JQ;
\\ gonaduri disgenezia;
\\ frTisebri naoWebi kiserze.

\\ \\ CamoTvl il Tagan terneris sindromis tipur darRvevas warmoadgens
\\ saSual oze maRal i tani;
\\ tandabl oba;
\\ yuradRebis deficiiti;
\\ hiperaqtiuroba.

\\ \\ CamoTvl il Tagan terneris sindromis tipur darRvevas warmoadgens
\\ gonaduri disgenezia;
\\ azoospermia;
\\ kunTebis tonusis daqveiTeBa;
\\ Zvl ebSi mineral uri maril ebis dakargva.

\\ \\ CamoTvl il Tagan terneris sindromis tipur darRvevas warmoadgens
\\ kunTebis tonusis daqveiTeBa;
\\ kanis frTisebri naoWebi kiserze;
\\ Zvl ebSi mineral uri maril ebis dakargva;
\\ ol igospermia.

\\ \\ CamoTvl il Tagan terneris sindromis tipur darRvevas warmoadgens
\\ ol igospermia;
\\ Tirkml isa da gul sisxl ZarRVTa sistemis anomal iis momatebul i sixSire;
\\ Zvl ebSi mineral uri maril ebis dakargva;
\\ kunTebis tonusis daqveiTeBa.

\\ \\ CamoTvl il Tagan romel i sindromisaTvis ar aris damaxasiaTebel i gonebrivi CamorCenil oba
\\ daunis;
\\ terneris;
\\ tetrasomia X-is;
\\ pentasomia X-is.

\\ \\ CamoTvl il Tagan romel i sindromisaTvis aris damaxasiaTebel i mZime gonebrivi CamorCenil oba
\\ tetrasomia X-is;
\\ daunis;
\\ kl ainfel teris;
\\ pentasomia X-is.

\\ \\ CamoTvl il Tagan romel i kariotipis mqone adami nebs axasiaTebT normal uri sqesobrivi ganviTareba
\\ 45,X;
\\ 47,XXY;
\\ 47,XYY;
\\ 47, trisomia 21.

\\ \\ CamoTvl il Tagan romel i sindromisaTvis aris damaxasiaTebel i yuradRebis deficiiti da impul suroba
\\ 47,XYY;
\\ 45,X0;
\\ 47,XXY;
\\ 47,XXX.

\\ \\ CamoTvl il Tagan romel i kariotipis mqone adami anebs axasiaTebT normal uri gonebrivi SesaZl ebl obebi

\\ 47,XYY;

\\ \\ 47,XXY;

\\ \\ 45,X;

\\ \\ 47,XXX.

\\ \\ \\ CamoTvl il Tagan sasqeso qromosomebis aneupl oidiis ra SemTxvevebisaTvis aris damaxasiaTebel i arafertil uri gonadebis tipebi?

\\ \\ 47,XXXX;

\\ \\ 47,XYY;

\\ \\ 47,XXX;

\\ \\ 45,X.

\\ \\ \\ CamoTvl il Tagan romel mutacias warmoadgens me-5 qromosomis mokl e mxris del ecia?

\\ \\ genurs;

\\ \\ qromosomul s;

\\ \\ genomurs;

\\ \\ somaturs.

\\ \\ \\ CamoTvl il Tagan romel mutacias miekuTvneba izoqromosoma?

\\ \\ qromosomul s;

\\ \\ genomurs;

\\ \\ somaturs;

\\ \\ genurs.

\\ \\ \\ CamoTvl il Tagan romel mutacias warmoadgens X-qromosomis monosomia?

\\ \\ qromosomul s;

\\ \\ genomurs;

\\ \\ somaturs;

\\ \\ genurs.

\\ \\ \\ CamoTvl il Tagan romel mutacias warmoadgens X-qromosomis trisomia?

\\ \\ qromosomul s;

\\ \\ genomurs;

\\ \\ somaturs;

\\ \\ genurs.

\\ \\ \\ CamoTvl il Tagan romel i qromosomul i aberaciis Sedegad viTardeba katis knavil is sindromi?

\\ \\ dubl ikaciis;

\\ \\ del eciis;

\\ \\ inversiis;

\\ \\ inserciis.

\\ \\ \\ katis knavil is sindromis ganmsazRvrel i me-5 qromosomis del ecirebul i ubani CamoTvl il Tagan moicavs

\\ \\ mokl e mxars mTl ianad;

\\ \\ grZel i mxris terminal ur ubans;

\\ \\ grZel mxars mTl ianad;

\\ \\ mokl e mxris nawil is terminal ur del ecias.

\\ \\ qvemoTCamoTvl il Tagan romel i procesisaTvisaa damaxasiaTebel i
uj redebis ukontrol o prol iferacia:
\\ neopl aziisTvis;
\\ \\ hiperpl aziisTvis;
\\ \\ apl aziisTvis;
\\ \\ hipopl aziisTvis.

\\ \\ qvemoTCamoTvl il idan romel i procesebi ganviTardeba, Tu simsvnuri
uj redebis zrda aRar daeqvemdebareba kontrol s?
\\ invazia ganviTardeba mezobel qsovil ebSi;
\\ \\ invazia ar ganviTardeba;
\\ \\ yvel a qsovil i gaxdeba invaziuri;
\\ \\ daiwyeba invaziis supresia.

\\ \\ qvemoTCamoTvl il idan ra SemTxvevaSi vrcel deba simsvnuri uj redebi
simsvnis keridan dacil ebul ubnebSi?
\\ \\ miomis dros;
\\ \\ karcinomis dros;
\\ \\ adenomis dros;
\\ \\ fibromis dros.

\\ \\ uj redebis diferenciaciis procesSi tel omeraza TandaTan funqcias
kargavs, ris Sedegadac tel omeri.
\\ \\ grZel deba;
\\ \\ mokl deba;
\\ \\ msxvil deba;
\\ \\ viwrovdeba.

\\ \\ CamoTvl il Tagan, rogori saxis prol iferaciis unars aniWebs simsvnis
uj redebs tel omerazas eqpresia?
\\ \\ gansazRvrul i prol iferaciis;
\\ \\ ganusazRvrel i prol iferaciis;
\\ \\ I okal uri prol iferacias;
\\ \\ nawil obrivi prol iferacias.

\\ \\ CamoTvl il Tagan, romel qromosomebs Soris momxdari transl okaciis
Sedegad viTardeba qronikul i miel ogenuri I eikemiisaTvis damaxasiaTebel i
e.w. fil adel fiuri qromosoma.
\\ \\ me-9 da me-10;
\\ \\ me-9da me-20;
\\ \\ me-9 da 22-e;
\\ \\ me-9 da 21-e.

\\ \\ qvemoTCamoTvl il Tagan, romel i genetikuri cvl il ebebi SeiZl eba iyos
uj redis onkogenezis safuZvel i?
\\ \\ qromosomul i transl okacia;
\\ \\ qromosomebis koniugacia;
\\ \\ qromosomebis krosingoveri;
\\ \\ qromosomebis repl ikacia.

\\ \\ qvemoTCamoTvl il Tagan, romel i miuTiTebis kibos oj axur formaze?
\\ \\ azbestis warmoebaSi momuSave fil tvis kiboTi daavadedul i mamakaci;
\\ \\ mamakaci, daavadedul i msxvil i nawl avis kiboTi;

\\ atomur reaqtorze momuSave l eikemiIT daavadebul i mamakaci;
\\ fil tvis kiboTi daavadebul i mwevel i qal i.

\\ \\ romel procesSi monawil e gens ewodeba simsiwnis supresori?
\\ uj redis prol iferaciaSi;
\\ I meiozur gayofaSi;
\\ II meiozuri gayofaSi;
\\ mitozur gayofaSi.

\\ \\ ra ewodeba normal ur gens, romel ic mutaciIT gaaqtivebisas gardaiqmneba onkogenad?
\\ supresori;
\\ regul atorul i;
\\ modifikatori.
\\ protoonkogeni;

\\ \\ romel i genis Secvl il funqcias an eqspresias mosdevs uj redis dayofisa da prol iferaciis anomal uri stimul acia ?
\\ supresori genis;
\\ onkogenis;
\\ regul atorul i genis;
\\ struqturul i genis.

\\ \\ gaaqtivebul i mutanturi al el is matarebl obis mosal odnel Sedegi aris:
\\ normal uri fenotipis ucvl el oba qal ebSi;
\\ normal uri fenotipis ucvl el oba mamrobiT sqesSi;
\\ normal uri fenotipis Secvl a avTvisebiani fenotipiT;
\\ normal uri fenotipis ucvl el oba orive sqesSi.

\\ \\ ras uwodeben simsiwnis supresor genebs, roml ebic uSual od aregul irebs uj redis prol iferacias?
\\ I etal ur genebs;
\\ al el ur genebs;
\\ konstituciur genebs;
\\ uj redul i cikl is mcvel genebs.

\\ \\ qvemoTCamoTvl il idan ras uwodeben struqturul ad anomal ur 22-e qromosomas, romel ic xSiria l eikemiIT daavadebul i adamanis Zvl is tvinis uj redebSi?
\\ rgol urs;
\\ markerul s;
\\ fil adel fiurs;
\\ dicentrul s.

\\ \\ qvemoTCamoTvl il idan romel i procesis ganviTarebas ganapi robebs protoonkogenebis eqtopiuri da heteroqronul i mutaciebi?
\\ saerTo kontrol is genebis gaaqtivebas;
\\ supresori genebis eqspresias;
\\ uj redTa daprogramebul i kvdomis inhibirebas;A
\\ avTvisebiani simsiwnis iniciacias.

\\ \\ CamoTvl il Tagan romel i ori gansxvavebul i kategoriis genebis mutaciebi iwvevs simsiwnes?
\\ saerTo kontrol is da uj redul i cikl is mcvel i;
\\ saerTo kontrol is da struqturul i genebi;

\\ onkogenebis da simsiivni supresori;
\\ onkogenebi da regul atorul i genebi.

\\ \\ CamoTvl il Tagan romel i daavadebaa, romel ic SeiZl eba gamowveul iqnas SxamqimikatebiT?

\\ RviZl is karcinoma;
\\ adenoma;
\\ saSvil osnos mioma;
\\ retinobl astoma.

\\ \\ CamoTvl il Tagan sigaretis bol Si Semaval i pol icikl uri naxSirwyal badebi ra gavl enss axdens dnm-ze?

\\ uSual od azianebs;
\\ transkripcias;
\\ repl ikacias;
\\ reparacias.

\\ \\ CamoTvl il Tagan genis romel i ZiriTadi Tviseba aris damaxasiaTebel i mraval i tipis simsiivniSTvis?

\\ ampl ifikacia;
\\ dubl ikaciebi;
\\ inserciebi;
\\ transl okaciebi.

\\ \\ miuTiTeT, romel i genebi iwvevs simsiivni ganviTarebis bl okirebas uj redul i cikl is sakontrol o_gamSveb ubanSi:

\\ struqturul i genebi;
\\ regul atorul i genebi;
\\ konstituciuri genebi;
\\ uj redul i cikl is mcvel i genebi;

\\ \\ CamoTvl il Tagan, romel i genebi akodireben uj redul i cikl is sakontrol o gamSvebi ubnis mraval gvar regul atorebs ?

\\ onkogenebi;
\\ protoonkogenebi;
\\ uj redul i cikl is mcvel i genebi;
\\ konstituciuri genebi.

\\ \\ CamoTvl il idan romel i warmoadgens onkomi rebs

\\ satransporto rnm;
\\ sainformacio rnm;
\\ mikro-rnm;
\\ ribosomul i rnm.

\\ \\ CamoTvl il Tagan romel i sindromiSTvis aris damaxasiaTebel i mamiseul i me-15 qromosomis(15q11q13)grZel i mxris proqsimal uri ubnis del ecia?

\\ prader-vil is;
\\ angel manis;
\\ kl ainfel teris;
\\ daunis.

\\ \\ CamoTvl il Tagan romel i sindromiSTvis aris damaxasiaTebel i dediseul i me-15 qromosomis(15q11q13)grZel i mxris proqsimal uri ubnis del ecia?

\\ prader-vil is;

\\ angel manis;
\\\\ terneris;
\\\\ daunis.

\\\\ SemTxvevas, rodesac individs aqvs ori citogenetikurad normal uri struqturis autosomuri qromosoma da orive miRebul ia erTi mSobl isgan, ewodeba:

\\ uniparentul i disomia;
\\\\ izodisomia;
\\\\ heterodisomia;
\\\\ biparentul i disomia.

\\\\ erTi mSobl isagan miRebul i ori qromosomis Semcvel i disomiuri uj redebis xazs, roca ori qromosoma erTmaneTis identuria, ewodeba:

\\ uniparentul i disomia;
\\ izodisomia;
\\\\ heterodisomia;
\\\\ biparentul i disomia.

\\\\ erTi mSobl isagan miRebul i ori qromosomis Semcvel i disomiuri uj redebis xazs, roca ori qromosoma erTmaneTis homologia, ewodeba:

\\ uniparentul i disomia;
\\\\ izodisomia;
\\ heterodisomia;
\\\\ biparentul i disomia.

\\\\ prader-vili is sindromi T daavadebul individTa ramden procentSi gamovl indeba uniparentul i disomia?

\\ 10%-Si;
\\ 20%-Si;
\\ 30%-Si;
\\ 40%-Si.

\\\\ paTologias, roml is drosac erTi X,23 spermatozoidi gaanayofierebs ubirTvo kvercxuj reds da SemdgomSi spermatozoidis qromosomebi ormagdebian, ewodeba:

\\ sakvercxis teratoma;
\\ parcial uri buStnamqeri;
\\ total uri buStnamqeri;
\\ hidatiuri kista.

\\\\ paTologias, romel ic viTardeba mxol od dediseul i qromosomebis Semcvel i 46,XX uj redebidan, ewodeba:

\\ sakvercxis teratoma;
\\ parcial uri buStnamqeri;
\\ total uri buStnamqeri;
\\ hidatiuri kista.

\\\\ paTologias, romel ic viTardeba tripl oiduri uj redebidan da qromosomebis zedmeti nakrebi mamiseul i warmoSobisaa, ewodeba:

\\ sakvercxis teratoma;
\\ parcial uri buStnamqeri;
\\ total uri buStnamqeri;
\\ hidatiuri kista.

\\ \\ ramdeni tipis gameta Seizl eba warmoiqmnaS indidivdSi, romel ic me-14 da 21-e qromosomis robertsonul i transl okaciis matarebel ia?

\\ \\ 2;

\\ \\ 4;

\\ \\ 6;

\\ \\ 8.

\\ \\ me-14 da 21-e qromosomis robertsonul i transl okaciis matarebl ebs SeuZl iaT 6 tipis gametis warmoqmna. amaTgan ramdenis ganayofierebiT aris SesaZl ebel i STamomavl obis miReba?

\\ \\ 1;

\\ \\ 2;

\\ \\ 3;

\\ \\ 4.

\\ \\ CamoTvl il Tagan romel i sindromiTvis aris damaxasiaTebel i muStad Sekrul i xel is Weris manera, sadac me-2 da me-5 TiTi gadafaravs me-3 da me-4 TiTs, terfs aqvs "akvnis Ziris" forma da gamoweul i quSl is Zval i?

\\ \\ me-18 qromosomis trisomiis;

\\ \\ terneris;

\\ \\ kl ainfel teris;

\\ \\ daunis.

\\ \\ CamoTvl il Tagan romel i sindromiTvis aris damaxasiaTebel i mikroftal mia, feradi garsis kol oboma da zogj er Tval ebis uqonl obac, aseve gapobil i tuCi da sasa, xel is mtevebsa da terfebbe postaqial uri pol idaqtill ia?

\\ \\ me-13 qromosomis trisomiis;

\\ \\ terneris;

\\ \\ kl ainfel teris;

\\ \\ daunis.

\\ \\ CamoTvl il Tagan romel i sindromiTvis aris damaxasiaTebel i me-5 qromosomis mokl e mxris nawil is terminal uri an intersticial uri del ecia?

\\ \\ prader-vill is;

\\ \\ angel manis;

\\ \\ katis knavill is;

\\ \\ daunis.

\\ \\ didi zomis fsevdoautosomuri regioni mdebareobs:

\\ \\ Xq da Yq qromosomaTa distal ur ubanSi;

\\ \\ Xq da Yq qromosomaTa proqsimal ur ubanSi;

\\ \\ Xp da Yp qromosomaTa distal ur ubanSi;

\\ \\ Xp da Yp qromosomaTa proqsimal ur ubanSi.

\\ \\ CamoTvl il Tagan romel i geni ganapirobebs, indiferentul i gonadidan, mamrobiTi sasqeso uj redis formirebas?

\\ \\ TDF;

\\ \\ AZF;

\\ \\ MTHFR;

\\ \\ CFTR.

\\ \\ CamoTvl il Tagan romel i geni eqspresirebs saTesl e jirkvl ebis diferenciaciis dawyebamde da ganapirobebs mamrobiTi sasqeso uj redis formirebas?

\\ AZF;
\\ MTHFR;
\\ CFTR.
\\ SRY;

\\ \\ CamoTvl il Tagan romel ia SRY genis eqvival enturi yvel a SesaZI o genetikuri Tu ganviTarebis kriteriumiT?

\\ AZF;
\\ TDF;
\\ MTHFR;
\\ CFTR.

\\ \\ CamoTvl il Tagan romel i genia dakavSirebul i mamakacebSi azoospermiisa da ol igospermiis ganviTarebasTan?

\\ AZF;
\\ TDF;
\\ CFTR.
\\ SRY;

\\ \\ CamoTvl il Tagan romel ia AZF genis erT-erTi ubani?

\\ AZFc;
\\ TDF;
\\ AZFd.
\\ SRY;

\\ \\ AZF genis romel i regioni Seicavs DAZ genebs?

\\ AZFb;
\\ AZFa;
\\ AZFc;
\\ AZFd.

\\ \\ CamoTvl il Tagan ra ganapirobebs adamiანis kariotipis Sedarebi T tol erantobas X qromosomis anomal iis mimarT?

\\ X qromosomis del ecia;
\\ X qromosomis transl okacia;
\\ X qromosomis inaqtivacia;
\\ X qromosomis inversia.

\\ \\ CamoTvl il Tagan ra ganapirobebs X qromosomis inaqtivacias?

\\ X qromosomis demeTil ireba;
\\ X qromosomis transl okacia;
\\ X qromosomis meTil ireba;
\\ X qromosomis inversia.

\\ \\ CamoTvl il Tagan ra ganapirobebs X qromosomis inaqtivacias?

\\ X qromosomis demeTil ireba;
\\ histonur kodSi H2B histonuri cil ebis siWarbe;
\\ histonur kodSi H2A histonuri cil ebis siWarbe;
\\ X qromosomis inversia.

\\ \\ CamoTvl il Tagan ra ganapirobebs X qromosomis inaqtivacias?

\\ X qromosomis demeTil ireba;
\\ X qromosomis transl okacia;
\\ histonur kodSi H2B histonuri cil ebis siWarbe;
\\ XIST genis eqspresia.

\\\ CamoTvl il Tagan romel qromosomaSi eqspresirebs XIST geni?
\\ aqtiur X qromosomaSi;
\\ araaqtiur X qromosomaSi;
\\\ Y qromosomaSi;
\\\ autosomur qromosomaSi.

\\\ CamoTvl il Tagan romel ia XIST genis produqti?
\\ r-rnm;
\\ aramakodirebel i rnm;
\\ i-rnm;
\\ t-rnm.

\\\ ra ewodeba mdgomareobas, roml is drosac avadmyofs erTdroul ad aqvs saTesl is da sakvercxis qsovil ebi?
\\ mdedrobiTi fsevdohermafroditi zmi;
\\ mamrobiTi fsevdohermafroditi zmi;
\\ hermafroditi zmi;
\\\ gonaduri disgenezia.

\\\ ra ewodeba mdgomareobas, roml is drosac individs aqvs 46,XX kariotipi, normal uri sakvercxis qsovil i, magram gaurkvevel i sqesis an mamrobiTi garegani sasqeso organoebi?
\\ mdedrobiTi fsevdohermafroditi zmi;
\\ mamrobiTi fsevdohermafroditi zmi;
\\ hermafroditi zmi;
\\\ gonaduri disgenezia.

\\\ CamoTvl il Tagan romel i sindromi viTardeba, roca saTesl eebi androgenebs gamoimuSaveben, magram organo, romel mac unda ganaxorciel os androgenebze sapisuxo reaqlia ver funqcionirebs saTanado samizne uj redebSi androgenul i receptorebis uqonl obis gamo?
\\ testikul uri feminizaciis sindromi;
\\\ denis-draSis sindromi;
\\\ frazieris sindromi;
\\\ kl ainfel teris sindromi.