



# SASOG

South African Society of Obstetricians & Gynaecologists



## Ukuhlolwa kwezempilo okwenziwa ngaphambi kokubeletha

Isisebenzi sezempilo esiqeqeshiwe (okungaba wuDokotela Ongungoti Kwezobelethisa, uDokotela Ojwayelekile noma uMhlengikazi Ongumbelethisi) sizokucela ukuba usivumele senze ukuhlolwa nokuxilongwa kwezempilo okuthile emzimbeni wakho ngenhloso yokubheka ukuthi konke kusahamba kahle yini mayelana nokukhulelwa kwakho. Okunye kwalokhu kuhlolwa kwezempilo akuphoqelekile neze futhi kuncike ekutheni wena uzoba nawo yini noma cha amandla okukhokhela lokho kuhlolwa.

Ukuhlolwa kwezempilo kubandakanya lokhu okulandelayo:

## Ukuhlolwa okujwayelekile kwesimo sempilo yakho kanye nobungozi obuphathelele nokukhulelwa kwakho

- Ukuhlolwa kohlobo lwegazi lakho, okungaba, wu-A, B, O noma i-Rhesus kanye namasosha omzimba (ngenhloso yokuhlola ukuthi umntwana wakho akekho yini engozini ye-anemiya (anaemia) noma ijondisi okungenzeka kubangelwe wukuthi mhlawumbe wena unohlobo lwegazi oluhlukile kwelikababa womntwana);
- Izinga lehayimogilobhini emzimbeni wakho (ngenhloso yokuhlola ukuthi awunayo yini i-anemiya);
- Ukuba khona kwamasosha omzimba alwisana nesimungumungwana, isandulelangculazi, isifo sesibindi (ihephathayithisi B) kanye nesipatsholo (“idrophu”) (ngenhloso yokuhlola ukuthi umntwana akekho yini engozini yokutheleleka ngaphambi kokuba abelethwe);
- Izinga likashukela egazini lakho (ezimweni ezithile) (ngenhloso yokuhlola isifo sika-shukela emzimbeni wakho, okungenzeka ukuthi ubuvele unaso ngaphambi kokukhulelwa, noma mhlawumbe sibangelwe yikhona ukukhulelwa kwakho);
- Umfutho wegazi lakho (ngenhloso yokuhlola ukuthi awunawo yini umfutho wegazi ophakeme, okungenzeka ukuthi ubuvele unawo ngaphambi kokukhulelwa, noma mhlawumbe ubangelwe yikhona ukukhulelwa kwakho esimweni esibizwa nge-*pre-eclampsia*, esiqala cishe sekuphele amaviki angamashumi amabili ukhulelwe);
- Umchamo wakho (ngenhloso yokuhlola ukuthi awunaso yini isifo esinyeni sakho, okuyisifo esiwuphawu lwe-*pre-eclampsia* noma esiwuphawu lokuba khona kwesifo sezinsu emzimbeni wakho);
- Ukuthathwa koketshezi esithweni sakho sangasese (ezimweni ezithile) ngenhloso yokuhlola ukuthi awunawo yini amagciwane abizwa nge-B streptococcus (abangela izifo ezihlukahlukene emzimbeni, njengomphimbo obuhlungu, inyumoniya, nezinye) esithweni sakho sangasese (ngoba lokhu kungaba yingozi kakhulu emntwaneni uma ebelethwe ngendlela ejwayelekile yokubeletha, lapho ephuma esithweni sakho sangasese);
- Ukuhlolwa okujwayelekile okwenziwa ngesithwebuli-mzimba (ultrasound) ukuhlolwa ubude besikhathi esesidlulile umama ekhulelwe, nokuthi ukhona yini umntwana esibelethweni futhi uyaphila, nokuthi umama ukhulelwe amawele noma cha, ukuhlola umthamo woketshezi oluzungeze umbungu esibelethweni kanye nesimo somzanyana, phecelezi i-placenta.



Ukuhlolwa kwezempilo okujwayelekile okwenziwa ngenhloso yokuthola ukuthi umntwana wakho akekho yini engozini yokuba nezinkinga eziphathelene nesimo nokwakheka komzimba wakhe noma isimo sengqondo.

Iningi labantwana likhula ngendlela ejwayelekile kepha-ke noma kunjalo konke ukukhulelwa kunabo ubungozi obuncane bokuthi umbungu (umntwana ongakabelethwa, osesesibelethweni sikanina) ungakhuli kahle, noma ngendlela ejwayelekile. Kusemqoka ukuthi sazi kahle kamhlophe ukuthi akukho ukuhlolwa noma inhlanganisela yezindlela zokuhlolwa ehambisana nesiqiniseko esiphelele sokuthi ngeke nakancane kube nephutha, futhi akekho ongaqinisekisa ngokuphelele ukuthi wena uzobeletha umntwana ngaphandle kokuhlangabezana nezinkinga.

Lobu bungozi obulandelayo buyinkomba yokuthi amathuba akho okukhulelwa umntwana onezinkinga ezithile ngokwempilo angaphezulu kwesilinganiso esijwayelekile futhi kusemqoka ukuba wazise udokotela wakho uma unokunye kwalokhu okulandelayo:

	Yebo noma Cha
Ngineminyaka yobudala engama-35 noma ngaphezulu	
Nginesifo sokuwa, isithuthwane (iziwombe zokudlikizela komzimba noma ukuquleka) futhi ngidla amaphilisi okudambisa lesi sifo	
Nginesifo sikashukela	
Ngidla amaphilisi okuthiba nokudambisa isifo esingalapheki noma esingamahlalakhona	
Njengoba ngikhulelwe nje, ngike ngayisebenzisa imithi ethengwa ekhemisi noma esitolo ngaphandle kwencwadi kadokotela/amakhambi/umuthi wesintu	
Ezinyangeni ezintathu ngaphambi kokuba ngikhulelwe bengidla amaphilisi okuthiba nokudambisa isifo esingalapheki noma esingamahlalakhona	
Ngaphambi kokukhulelwa bengingawadli amaphilisi ayizakhamzimba ezingamavithamini	
Phambilini ngake ngakhulelwa umbungu obungakhuli kahle futhi ongekho esimweni sempilo nesomzimba esikahle	
Phambilini ngake ngaphuphuyelwa yisisu sekusele isikhathi esincane ngaphambi kokuba ngibelethe	
Sengike ngaphuphuyelwa yisisu amahlandla angaphezu kwelilodwa	
Mina noma umlingani wami noma omunye oyilungu lomndeni wethu ngazalwa nginesimo sempilo noma somzimba esinenkinga	
Mina noma umlingani wami noma omunye oyilungu lomndeni wethu nginesifo sokukhubazeka kwengqondo	
Mina noma umlingani wami noma omunye oyilungu lomndeni wethu ngahushula isisu ngenxa yokukhulelwa umbungu ongakhuli kahle noma onesimo sempilo noma somzimba esinezinkinga	
Kunesifo esiwufuzo emndenini wami noma emndenini womlingani wami	
Njengoba ngikhulelwe nje, ngike ngawubhema ugwayi	



Njengoba ngikhulelwe nje, ngike ngabuphuza utshwala	
Njengoba ngikhulelwe nje, ngike ngazidla izidakamizwa (insangu, i-TIK, i-methamphetamine, i-heroin, i-cocaine njll...)	

Ukuhlolwa kwezempilo okutholakalayo njengamanje kubandakanya ukuxilongwa kowesifazane okhulelwe okungajulile kakhulu (screening test) kanye noxilongo lokuhlonza isifo (diagnostic test). Kokubili lokhu kuhlolwa akuphoqelekile neze, kodwa-ke kungahlinzeka ngolwazi olusemqoka futhi olungaba wusizo kakhulu ekulawulweni nasekuphathweni kowesifazane okhulelwe kanye nesimo sakhe.

### Ukuxilongwa okungajulile kakhulu kanye noxilongo lokuhlonza isifo

**Ukuxilongwa okungajulile kakhulu** kusho ukuhlolwa kwanoma wubani ofuna ukuhlolwa, kodwa-ke lokhu kuhlolwa akuhlinzeki ngempendulo ephelele futhi eqondile mayelana nokuthi isifo (isibonelo, i-Down syndrome) sikhona noma asikho emzimbeni. Lokhu kuhlolwa kunikeza kuphela inkomba yokuthi akhona amathuba okuthi isifo sikhona emzimbeni, futhi lokhu kwenziwa ngokunikeza izibalo namanani (njengokuthi amathuba obungozi angu-1 ku- xxx) noma kwenziwe ngokwesilinganiso sobungozi, njengokuthi buphansi, bumaphakathi, noma buphakeme. Imiphumela yokuxilongwa kweningi labantu (kodwa hhayi bonke) abathintekile ibonisa ukuthi “banobungozi obuphakeme”. Leyo ngxenye yabantu abahlonzwe wukuxilongwa njengabanokuthile okungalungile emizimbeni yabo babizwa ngezinga elibonisa imiphumela enembayo noma izinga lokuhlonzwa kwesifo eliphakeme. Ingxenye yabantu abangenalutho emzimbeni kepha abathole umphumela “wobungozi obuphakeme” ibizwa ngezinga lomphumela ophaphalazayo obonisa isifo kubona nakuba singekho (false positive rate). Imibungu enokungalungile okuthile emzimbeni kodwa ethole umphumela othi “inobungozi obuphansi”, kusho ukuthi asivelanga ngokweqiniso isimo sayo ngenkathi ihlolwa futhi lokhu kubizwa ngemiphumela ephaphalazayo ebonisa ukuthi konke kuhamba kahle emzimbeni wombungu nakuba ikhona inkinga (false negative). Kahle kahle, ukuxilongwa okungajulile kakhulu kudinga imiphumela enembayo ephakeme kakhulu (nakuba ingeke neze ibe ngama-100%) kanye nemiphumela ephaphalazayo ephansi (nakuba ingeke neze yehle ize ifinyelele ku-0%).

Ngakolunye uhlangothi, **uxilongo lokuhlonza isifo** luhlinzeka ngempendulo eqondile futhi enembayo yokuthi sikhona noma asikho yini isifo emzimbeni. Uxilongo lokuhlonza isifo luhambisana nezimo ezithile ezenza lungakulungeli kahle ukusetshenziswa okusabalele futhi okubanzi, okuyizimo ezinjengobungozi noma izindleko ezihlobene nalolu hlobo lokuxilongwa noma ukungatholakali kwalo kalula. Ukukhethwa koxilongo lokuhlonza isifo oluthile kuncike kuleso naleso sifo umuntu afuna ukusihlonza ukuthi sikhona ngempela emzimbeni noma afuna ukuhlonza ukuthi asikho ngempela emzimbeni. Izinhlobo zoxilongo lokuhlonza isifo okungakhethwa kuzona zibandakanya uxilongo olwenziwa wungoti esebenzisa isithwebula-mzimba (isib. ukukhubazeka okuthile noma ukungakhuli kahle kwezingxenye ezithile zomzimba wombungu) noma uxilongo lwethuluzi elingena ngaphakathi emzimbeni, okwenziwa ngokuthi kushuthekwe inaliti esikhumbeni sikamama idlule iyongena esibeletweni lapho ifike iqoqe khona amasampula azosetshenziswa ekuhlolweni okuphathelene nofuzo noma ekuhlolweni kokutheleleka kombungu (okunjenge-chorionic villus sampling okwenziwa ngenhloso yokuthola isicucwana somzanyana, ukuthathwa kwamasampula oketshezi oluzungeze umbungu, ukuthathwa kwamasampula egazi emithanjeni yegazi yombungu engxenyeni yenkaba yombungu engaphandle komzimba wombungu kepha exhumanisa umbungu nomzanyana). Zonke izindlela zokuhlolwa okubandakanya



ukushuthekwa kwethuluzi elithize esikhumbeni sikamama zinobungozi bokuthi zingaholela ekuphuphumeni kwesisu (amathuba okuthi kwenzeke lokho cishe angu-1:200). Ulwazi oluthe xaxa mayelana nezinhlobo ezithile zokuhlolwa okwenziwa ngokuthi kushuthekwe inaliti esikhumbeni sikamama ungaluthola ngokuthi exoxisane nombelethisi wakho noma umeluleki wezofuzo.

Izinhlobo zokuxilonga okungajulile kakhulu ezitholakalayo yilezi ezilandelayo.

## **Ukuxilonga okungajulile kakhulu okuphathelene nokukhubazeka okuthile emzimbeni**

### **1. Ukuhlolwa kwegazi (ukuhlolwa kwamakhemikhali egazini):**

*I-Maternal serum Alpha-Feto-Protein (MSAFP)* wukuhlolwa kwegazi okwenziwa phakathi kwamaviki ayi-15 kuya kwayi-19 futhi kusiza ngokuhlonza inkinga ebizwa nge-fetal spina bifida (umgogodla ovulekile) njengoba liye likhuphuke izinga nomthamo waleli khemikhali uma umgogodla wombungu ungavalekile kahle, okuyinto engaholela ekutheni kube nokukhubazeka komzimba. Lokhu kuhlolwa akunalo usizo olungako futhi akunaso isidingo uma ukuhlolwa kwesimo nokwakheka kwezingxenye zomzimba kuzokwenziwa wungoti, kepha-ke noma kunjalo kuyalekelela uma kwenziwe ngumbelethisi ojwayelekile. I-MSAFP ingahlonza cishe ama-60% emibungu enenkinga yomgogodla ovulekile, futhi lokhu kuhambisana nezinga elingama-5% lokutholakala kwemiphumela ephaphalazayo ebonisa ukuba khona kwenkinga yomgogodla ovulekile nakuba empeleni ingekho. Uma umphumela we-MSAFP ubonisa ukuthi kukhona okungahambi kahle emzimbeni wombungu, kusemqoka kakhulu ukuthi kwenziwe ukuhlolwa okujulile, okumele kwenziwe wungoti.

### **2. Ukuhlolwa okwenziwa ngesithwebuli-mzimba:**

Lihlukahlukile izinga lokuhlonzwa kokukhubazeka okuthile okukhona ezingxenye zomzimba wombungu. Lokhu kuncike kakhulu ezimweni okuzohlolwa ngaphansi kwazo, ulwazi nobuchwepheshe bomuntu osebenzisa isithwebuli-mzimba kanye nobude besikhathi sokuhlolwa. Kungenzeka kube lukhunyana ukuhlonza ukukhubazeka ezingxenye zomzimba ezithile kanti futhi kungenzeka kube lula kwezinye. Okunye ukukhubazeka kubonakala kuphela sesihambe kakhulu isikhathi sokukhulelwa kanti futhi okunye kubonakala kuphela emva kokubeletha. Izinga lokuhlonzwa kokukhubazeka liphansi kakhulu uma kunezinkinga eziphathelene nokusebenza kwesithwebuli-mzimba ezingaholela ekutheni umshini ukhiphe isithombe esingacacile kahle. Lokhu kungaba yizinkinga ezibangelwa wukuthi umama ukhuluphele ngokweqile, uketshezi oluzungeze umbungu oluncane kakhulu noma oluningi ngokweqile, ukuba khona kwabantwana abangaphezu koyedwa esibeledweni, ukuhlala kabi noma ukuma kabi kombungu esibeledweni noma ukuma kabi komzanyana, ukuba khona kwezimila (fibroids) esibeledweni sikamama noma izibazi ngaphandle esiswini sikamama, njll.

Kuyinto engenakwenzeka ukuthi kuhlonzwe zonke izinkinga zokukhubazeka kombungu ngaphambi kokuba umama abelethe. Ngokujwayelekile kungama-50% kuphela ukuhlonzwa kokukhubazeka kanye nezinkinga ezinkulu zokukhula kombungu okungahlonzwa wukuhlolwa kwesimo nokwakheka kwezingxenye zomzimba (futhi kungama-50% okungeke kwahlonzeka kulokhu kuhlolwa ngesithwebuli-mzimba. Uma ongoti benza lokhu kuhlolwa okwenziwa ngesithwebuli-mzimba, kuvamise ukuthi izinga lokuhlonzwa kwezinkinga nezifo libe phezudlwana impela (cishe okungaba ngama-75%) njengoba bona



bengabantu abathole ukuqeqeshwa okunzulu, ngakho-ke banolwazi oluthe xaxa uma beqhathaniswa nababelethisi abajwayelekile. Ukuhlola ngesithwebuli-mzimba okwenziwa wungoti kuvamise ukubiza kakhudlwana uma kuqhathaniswa nokuhlolwa okujwayelekile, ngoba phela ongoti basebenzisa imishini ebizayo futhi bathatha isikhathi eside ngenkathi behlola umama okhulelwe. Inani longoti abakhona kuleli lizwe alanele ukuthi lingahlinzeka ngosizo kubo bonke omama abakhulelwe. Ngakho-ke kungaba wumqondo omuhle ukuthi ongoti basetshenziswe kuphela komama abakhulelwe ababhekene nobungozi noma-ke futhi basetshenziswe uma ukuhlolwa okujwayelekile okwenziwe ngumbelethisi ojwayelekile kubonisa ukuthi kunezinkinga ezithile kumama okhulelwe.

## **Ukuxilongwa okungajulile kakhulu okuphathelene nezifo ezidluliseka ngofuzo**

Inhloso enkulu yalokhu wukuhlonza imibungu ebhekene nobungozi obukhulu bokungenwa yi-Down syndrome njengoba lesi kungesinye sezifo ezivamise kakhulu eziphathelene nofuzo, esinomthelela omkhulu kulabo esibaphethe. Ziningi izinhlobo zokuhlolwa okuhlukahlukene okutholakalayo, futhi lokhu kuhlolwa kungasetshenziswa futhi kuxutshwe ngezindlela ezihlukahlukene. Ngokujwayelekile, ukuhlolwa okumba eqolo noma okubiza imali eningi yikona okubonisa izinga eliphakeme lokuhlonzwa kwezifo FUTHI kusenjalo izinga lokukhishwa kwemiphumela ephaphalazayo liphansi kakhulu. Lokhu kuholela ekutheni abe mancane kakhulu amathuba okungahlonzwa kwe-Down syndrome ngendlela efanele FUTHI mancane kakhulu namathuba okuthola umphumela “obonisa ubungozi obuphakeme”, okuyinto eyenza kube nesidingo sokwenza okunye ukuhlolwa okujulile, okungenzeka kubandakanye ngisho nokuhlolwa ngoshuthekwa kwamathuluzi athile emzimbeni kamama imbala ngenhloso yokuhlonza isifo. Njengoba iminyaka kamama ingabukhuphula ubungozi bokungenwa komntwana yi-Down syndrome (bheka ithebula elihlinzekwe lapha ngezansi), iminyaka yakhe iyabhekiswa njalo uma kubalwa izinga lobungozi. Kahle kahle into esemqoka yisikhathi sobudala beqanda elilumbane nembewu yowesilisa kwavela umbungu, ngakho-ke kumele umazise udokotela wakho uma iminyaka yalo ihlukile kweyakho. Iminyaka yobudala inomthelela futhi ekukhiqizweni kwemiphumela yeningi lokuxilongwa eqondile futhi enembayo futhi ubuqiniso nokunemba kwamanani ahlinzekwe kule ncwajana kuqondene nowesifazane oneminyaka engama-30 (amaqanda akhe). Mayelana nabesafazane abangaphansi kakhulu kwalokhu, izinga lobungozi bokungenwa kombungu yi-Down syndrome liphansi kakhulu futhi kuleso simo-ke kuyingcosana kakhulu ukuhlolwa okukhipha imiphumela ephaphalazayo ebonisa ukuba khona kwe-Down syndrome nakuba ingekho kepha-ke noma kunjalo maningi amathuba okuthi ukuhlolwa kuhluleke ukubonisa i-Down syndrome nakuba ikhona (okusho, izinga lokuhlonzwa kwesifo eliphansi). Kwabesifazane abaneminyaka engaphezudlwana kwama-30 kuye kwenzeka isimo esiphambene nalokhu okushiwo lapha ngenhla – njengoba bona bebonisa izinga eliphakeme lokuhlonzwa kwesifo futhi kusenjalo maningi namathuba okuba bathole umbiko ophaphalazayo, obonisa ukuba khona kwesifo nakuba singekho.



**1. Ukuhlolwa kwegazi (ukuhlolwa okuphathelene namakhemikhali okususelwe ezingeni lamakhemikhali athile atholakala egazini likamama):**

- Ukuhlolwa kwegazi likamama lihlolwa i-PAPP-A kanye ne-free  $\beta$ -HCG, okwenziwa esikhathini esingamaviki ayisi-8-14 (kungakuhle kakhulu uma lokhu kuhlolwa kwenziwa ngaphambi kwalesi sikhathi esishiwo lapha).
- Ukuhlolwa kwegazi likamama lihlolwa i-AFP, HCG kanye ne-estriol (Ukuhlolwa okuthathu), okwenziwa esikhathini esingamaviki ayi-15-20.
- Ngaphambi kokuba kwenziwe lokhu kuhlolwa kwegazi kumele kwenziwe ukuhlolwa okwenziwa ngesithwebuli-mzimba ngenhloso yokuhlonza isikhathi okuyisonasona futhi esiqondile esibonisa ukuthi ukukhulelwa kwakho sekuhambe isikhathi esingakanani futhi ukuze kutholakale isiqiniseko sokuthi awukhulelwe amawele noma ukuphuphunyelwa yisisu. Lokhu kuhlolwa kwegazi kubonisa izinga lokunemba kwemiphumela yokuhlonza i-Down syndrome ngama-60% (okusho ukuthi ukuhlolwa kwegazi kungahlonza imibungu eyisithupha kweyishumi enesifo se-Down syndrome) futhi izinga lokuphuma kwemiphumela ephaphalazayo ebonisa ukuba khona kwe-Down syndrome nakuba ingekho lingama-5%, emkhawulweni wobungozi olinganiselwa ku-1:300.
- Ukuhlolwa kolibofuzo okungadingi amangqamuzana (cells) omzimba, futhi okubizwa ngokuthi yi-NIPT (Ukuhlolwa Okungadingi Ukuba Kushuthekwe Inaliti Emzimbeni Kamama). Lokhu kuhlolwa kukhiqiza imiphumela enembayo kakhulu ekuhlonzeni i-Down syndrome (njengoba izinga lemiphumela enembayo lingama-99% futhi izinga lemiphumela ephaphalazayo ebonisa ukuba khona kwesifo nakuba singekho lingaphansi kwe-1%). Lokhu kuhlolwa kungenziwa noma nini emva kwamaviki ayi-10, kodwa ke ngaphambi kokuba kwenziwe, nakho kudinga ukuthi kwenziwe ukuhlolwa okwenziwa ngesithwebuli-mzimba ukuze kuqinisekise ukuthi azikho izinkinga ezinjengokukhubazeka okukhulu kwezitho zomzimba wombungu, ukukhulelwa amawele noma ukuphuphuma kwesisu. Njengamanje kubiza imali enkulu ukwenza i-NIPT futhi ayikho ohlwini lwezindleko lwezinkampani eziningi ezihlinzeka ngezinhlelo zokukhokhela usizo lokwelashwa. Ngaphandle nje kwe-Down syndrome, lokhu kuhlolwa kuhlonza nezinye izifo eziningi eziphathelene nofuzo, ngakho-ke kudingeka ukwelulekwa kwengqondo okunzulu ngaphambi kokuba kwenziwe ukuhlolwa okunjengalokhu.

**2. Ukuhlolwa ngesithwebuli-mzimba (se-sonogramu, i-scan, i-sonar):**

- “Ukuhlolwa Okulula Okwenziwa ngesithwebuli-mzimba okukala i-NT” (Simple NT), okwenziwa esikhathini esingamaviki ayi-11 – 13 nezinsuku eziyisithupha. Igama elithi “NT” lisho ukukalwa kwezinga lokushuba nokujiya koketshezi olusesikhaleni esingemuva komqala wombungu, kulesi sikhala kuqoqana uketshezi futhi luyajiya lolu ketshezi emibungwini eminingi enesifo se-Down syndrome. Lokhu kuhlolwa kunezinga lokuhlonzwa kwesifo ngempumelelo elingama-70% futhi izinga lokuphuma kwemiphumela ephaphalazayo ebonisa ukuba khona kwe-Down syndrome nakuba ingekho lingama-5% emkhawulweni wobungozi olinganiselwa koku-1:300 uma lokhu kuhlolwa kwenziwe yisisebenzi esinolwazi olunzulu futhi esesiwenze isikhathi eside lo msebenzi.
- “Ukuhlolwa Okweluliwe Okwenziwa ngesithwebuli-mzimba okukala i-NT” (Extended NT), okwenziwa esikhathini esingamaviki ayi-11 – 13 nezinsuku eziyisithupha. Lokhu akubandakanyi nje kuphela ukuhlolwa kwe-NT kodwa futhi kubandakanya nokuhlolwa kwethambo lekhalala, amaphethini okuhamba kwegazi emzimbeni wombungu kanye nohlaka olubanzi futhi olujulile lwesimo nokwakheka



komzimba wombungu. Ukuhlolwa ngesithwebuli-mzimba kwalolu hlobo kunezinga lokuhlonzwa kwesifo ngempumelelo elingama-85% futhi izinga lokuphuma kwemiphumela ephaphalazayo ebonisa ukuba khona kwe-Down syndrome nakuba ingekho lingama-5%, emkhawulweni wobungozi olinganiselwa ku-1:100 kuya ku-1:200. Bayingcosana kakhulu kuleli lizwe abantu abaqeqeshelwe ukwenza lokhu.

- “Ukuhlolwa okujwayelekile kwesimo nokwakheka komzimba wombungu okwenziwa ngesithwebuli-mzimba”, okwenziwa ngumbeletisi wakho, esikhathini esingamaviki ayi-18 – 22. Lokhu kuhlolwa kubonisa izinga lokunemba kwemiphumela yokuhlonza i-Down syndrome ngama-40% nje kuphela, ngamanye amagama NGEKE kukwazi ukuhlonza iningi lemibungu ene-Down syndrome.
- “Isonogramu ephathelene nofuzo” eyenziwa wungoti, esikhathini esingamaviki ayi-18-22. Lolu wuhlobo olujulile futhi olubanzi lokuhlolwa okwenziwa ngesithwebuli-mzimba futhi kubandakanya uhlu olude lwezimpawu ezincanyana ezibonisa izakhi zofuzo zombungu ezinokukhubazeka noma ezinokuthile okungahambi kahle. Lokhu kuhlolwa kubonisa izinga lokunemba kwemiphumela yokuhlonza isifo cishe ngama-75% futhi izinga lokuphuma kwemiphumela ephaphalazayo ebonisa ukuba khona kwesifo nakuba singekho lingama-10%.

### **3. Ukuhlolwa okuyinhlanganisela:**

- Ukuhlolwa kwegazi likamama okwenziwa ezinyangeni ezintathu zokuqala emva kokukhulelwa FUTHI kuphinde kwenziwe nasezinyangeni eziyisithupha. Izinga lokukhiqizwa kwemiphumela enembayo yalokhu kuhlolwa okuhlangene lokuhlonza i-Down syndrome lingama-80-85% kanti futhi izinga lokuphuma kwemiphumela ephaphalazayo ebonisa ukuba khona kwesifo nakuba singekho lingama-10%, emkhawulweni wobungozi olinganiselwa koku-1:300 ngesampula ngalinye (uma umphumela ubalwa futhi usetshenziswe kuphela emva kwesampula yesibili, izinga lokuphuma kwemiphumela ephaphalazayo ebonisa ukuba khona kwesifo nakuba singekho lingaba ngaphansi kakhulu kwalokhu).
- Ukuhlolwa kwegazi likamama ezinyangeni ezintathu zokuqala emva kokukhulelwa okuhambisana “Nokuhlolwa Okulula Okwenziwa ngesithwebuli-mzimba okukala i-NT”. Lokhu kubizwa ngokuhlolwa okuyinhlanganisela “okwenziwa ngenkathi umama esanda kukhulelwa” futhi izinga lokukhiqizwa kwemiphumela enembayo yokuhlonza i-Down syndrome lingama-85% kanti futhi izinga lokuphuma kwemiphumela ephaphalazayo ebonisa ukuba khona kwesifo nakuba singekho lingama-5%, emkhawulweni wobungozi olinganiselwa koku-1:300.
- Ukuhlolwa kwegazi likamama okwenziwa ezinyangeni ezintathu zokuqala emva kokukhulelwa okuhambisana “nokuhlolwa okweluliwe okwenziwa ngesithwebuli-mzimba okukala i-NT” okwenziwa wungoti. Lokhu kuhlolwa okuhlangene kukhiqiza imiphumela enembayo yokuhlonza isifo ngokwezinga elingama-95% futhi izinga lokuphuma kwemiphumela ephaphalazayo ebonisa ukuba khona kwesifo nakuba singekho lilinganiselwa kuma-3%.



**IMININGWANE EFINGQIWE yokuxilongwa okungakhethwa kukhona**

<b>Uhlobo lokuhlolwa</b>	<b>Izinga lokuhlonzwa kwe-Down syndrome</b>	<b>Izinga lokuhlonzwa kokukhubazeka okukhona emzimbeni wombungu</b>
<b>Ezinyangeni ezintathu zokuqala zokukhulelwa</b>		
Ukuhlolwa kwamakhelikhali egazini likamama (PAPP-A, b-HCG)	60%	0%
Ukuhlolwa Okulula Okwenziwa ngesithwebuli-mzimba okukala i-NT	70%	30%
Ukuhlolwa okweluliwe okwenziwa ngesithwebuli-mzimba okukala i-NT	85%	40%
Ukuhlolwa okuyinhlanganisela (okubandakanya Ukuhlolwa Okulula Okwenziwa ngesithwebuli-mzimba okukala i-NT)	80%	30%
Ukuhlolwa okuyinhlanganisela (okubandakanya Ukuhlolwa okweluliwe okwenziwa ngesithwebuli-mzimba okukala i-NT)	95%	40%
Ukuhlolwa kwe-NIPT	99%	0%
<b>Ezinyangeni eziyithupha zokukhulelwa</b>		
Ukuhlolwa kwamakhelikhali egazini likamama (Ukuhlolwa okuthathu, kubandakanya ne-MSAFP)	60%	60% mayelana nomgogodla ovulekile
Ukuhlolwa kwamakhemikhali egazini likamama okwenziwa ezinyangeni ezintathu zokuqala emva kokukhulelwa FUTHI kuphinde kwenziwe nasezinyangeni eziyisithupha	80%	60% mayelana nomgogodla ovulekile
Ukuhlolwa kwesimo nokwakheka komzimba wombungu okwenziwa wumbelethisi ojwayelekile noma ngumlawuli wesithwebuli-mzimba oqeqeshiwe (i-sonographer) esebenzisa isithwebuli-mzimba	40%	45-50%
Ukuhlolwa okwenziwa wungoti esebenzisa isithwebuli-mzimba	75%	75%

Ukuba imali beyingeyona inkinga futhi kunongoti abanele kuleli lizwe, uhlobo lokuhlolwa oluphuma phambili obelungasetshenziswa wukuhlolwa okuyinhlanganisela ye-NIPT IHAMBISANA nokuhlolwa kwe-NT ngesithwebuli-mzimba okwenziwa wungoti KANYE nokuhlolwa kwesimo nokwakheka komzimba wombungu okwenziwa wungoti ngesithwebuli-mzimba KANYE nokuphindwa kokuhlolwa okwenziwa wungoti ngesithwebuli-mzimba ezinyangeni ezintathu zokugcina zokukhulelwa. Ukuba beyingasebenziseka le





nhlanganisela yezindlela zokuhlola beyingahlonza ama-99% emibungu ene-Down syndrome, futhi ihlinzeke ngohlu oluphelele lwezifo ezikhona eziphathelene nofuzo futhi ihlonze neningi lezimo zokukhubazeka ezikhona emzimbeni wombungu. Nakuba zikhona iziguli ezingaqoka ukuyisebenzisa le ndlela yokuhlolwa, imba eqolo (njengoba ibiza imali eyevile ku-R15 000 ngowesifazane ngamunye okhulelwe) futhi esikhathini samanje nasesikhathini esifushane esizayo akubona bonke omama abakhulelwe abazokwazi ukufinyelela kuyona. Le nkinga akuyona neze inkinga ebhekene neNingizimu Afrika nje kuphela njengoba namazwe amaningi asetshukile enayo. Ngenxa yalesi sizathu-ke, kunamanye amasu okuhlolwa komama abakhulelwe angasetshenziswa futhi athathwe njengamasu okuhlolwa amukelekile, kepha-ke lokhu kumele kwenziwe ngokubeka eqhulwini lawo masu anobungozi obuncane ukuze kube yiwona asetshenziswayo ezimweni eziningi.

**Ezimweni zokukhulelwa okuhambisana nobungozi obuncane:** Kumele kwenziwe ukuhlolwa kwegazi ezinyangeni ezintathu zokuqala zokukhulelwa FUTHI lokhu kuphindwe esikhathini esiyizinyanga eziyisithupha (bese kubalwa kabusha izinga lobungozi obuphathelene ne-Down syndrome emva kokuphela kwezinyanga eziyisithupha) KANYE nokuhlolwa okwenziwa ngumbelethisi ojwayelekile ngesithwebuli-mzimba ezinyangeni ezintathu zokuqala zokukhulelwa FUTHI kuphindwe esikhathini esiyizinyanga eziyisithupha. Kungakuhle ukuba umama okhulelwe athunyelwe kungoti uma imiphumela yokuhlolwa kokuqala noma yokuhlolwa okuyinhlanganisela ibonisa ubungozi obuphakeme be-Down syndrome, noma uma izinga le-MSAFP liphakeme noma uma umbelethisi enokukhathazeka ngokuthile okuvezwe yimiphumela yesithwebuli-mzimba. Ungoti uzoyihlolisisa kabusha imiphumela etholakele bese uma kunesidingo eluleka ngokuthi kwenziwe ukuhlolwa okuthe xaxa noma ukulawulwa kwesimo esitholakele emiphumeleni. Uma imiphumela yesithwebuli-mzimba ibonisa ukuthi konke kuhamba kahle futhi uma kungahleliwe noma kungenakwenzeka ukuthi umama okhulelwe adluliselwe kungoti, kumele anikezwe ukuhlolwa kwe-NIPT uma ubungozi be-Down syndrome bubonisa ukuba ngaphezulu koku-1:1000. Mayelana nemiphumela yokuhlolwa engaphansi kwalokho, kuvamise ukuba abasebenzi basehhovisi bayidlulisele ngocingo kubanikazi bayo futhi asikho isidingo sokulandelela ngenhloso yokuba kwenziwe ukuhlolwa okuthe xaxa.

**Ezimweni zokukhulelwa okuhambisana nobungozi obuphakeme:** Kumele kwenziwe ukuhlolwa kwegazi ezinyangeni ezintathu zokuqala zokukhulelwa kanye nokuhlolwa okweluliwe okwenziwa ngesithwebuli-mzimba okukala i-NT, uma lokhu kuhlolwa kubonisa ubungozi obuphansi (<1:1000), akukho okunye ukuhlolwa okumele kwenziwe. Uma ukuhlolwa kubonisa ubungozi obuphakeme be-Down syndrome (>1:100), kumele kwenziwe ukuhlolwa okwenziwa ngokushuthekwa kwenaliti emzimbeni kamama (okuvamise ukuthi kube wukuthathwa kwamasampula oketshezi oluzungeze umbungu (amniocentesis) noma ukuthathwa kwesicucwana somzanyana (chorionic villus sampling)). Mayelana nobungozi obumaphakathi (1:100 – 1:1000) ukuhlolwa okungenziwa kubandakanya uxilongo olujulile lokuhlolwa isifo, i-NIPT noma ukuhloliswa kabusha okwenziwa wungoti wezofuzo esebenzisa isithwebuli-mzimba sesonogramu. Uma isiguli esibhekene nobungozi obukhulu singakwazi ukufinyelela ekuhlolweni okweluliwe okwenziwa ngesithwebuli-mzimba okukala i-NT, kumele kwenziwe i-NIPT futhi uma kudingekile kufakwe nokuhlolwa okwenziwa wungoti esebenzisa isithwebuli-mzimba ezinyangeni eziyisithupha umama ekhulelwe.

### **Ulwazi ozonikezwa lona emva kokuhlolwa**

- Uzohlinzekwa ngolwazi mayelana nobungozi obukhona bokuba umbungu owuthwele ungenwe yi-Down syndrome, ngokususela kulokho okuvezwe yimiphumela yokuhlolwa



- Noma yiziphi ezinye izifo asengozini enkulu yokuba azithole umntwana wakho, ngokususela emlandweni wakho wezempilo nokwelashwa noma ngokususela kulokho okuvezwe yimiphumela yokuhlolwa
- Noma yikuphi ukukhubazeka okubonakala ezithweni zomzimba wombungu noma okuphathelene nesimo nokwakheka komzimba
- Noma yiziphi “izimpawu ezincanyana” eziboniswa yisithwebuli-mzimba ezingaba nomthelela empilweni yombungu futhi ezidinga ukuthi kwenziwe ukuhlolwa okuthe xaxa
- Ubulili bombungu, kodwa kuphela uma wena unesifiso sokwaziswa ngalokho

### Ukwelulekwa ngokwengqondo okuphathelene nofuzo

Lezi zindlela zokuhlolwa okungakhethwa kuzona zingaholela ekutheni kube nokudideka. Uma udinga ulwazi oluthe xaxa, futhi ikakhulukazi, uma umndeni wakho unomlando wesifo esiphathelene nofuzo, kungaba kuhle ukuthi ubonane nomeluleki wengqondo wezifo zofuzo. Kulesi sigcawu sokubonana kwakho nomeluleki kuzobhekiswa ngokujulile umlando womndeni wakho kanye nokukhulelwa, futhi wena uzohlinzekwa ngemininingwane ephelele yobuhle nobubi bezindlela zokuhlolwa ezihlukahlukene ongazisebenzisa, kanye nanoma yiluphi olunye ulwazi oludingayo ukuze ukwazi ukuthatha isinqumo usuhlonyiswe ngalo lonke ulwazi olungaba wusizo kuwena. Uma kunomlando womndeni obonisa isifo esiphathelene nofuzo esingavamile noma kunezimo ezithanda ukuba lukhunyanisa impela futhi eziyinkimbinkimbi, kumele umama okhulelwe athunyelwe kudokotela ongungoti wezifo eziphathelene nofuzo (esikhundleni sokumthumela kumeluleki wezofuzo).

### Uhlu lwezincazelo zamagama

Ukutholakala kwemiphumela enembayo = Izinga Lokuhlonzwa Kwesifo	Kusho amathuba okuhlonza isifo noma ukukhubazeka, uma kukhona (isib. ukutholakala kwemiphumela enembayo ebonisa amathuba angama-60% okungenwa yi-Down syndrome kusho ukuthi ebantwaneni abayi-10 abane-Down syndrome, abayisithupha kubona bazothola imiphumela ekhombisa “ubungozi obuphakeme” bese kuthi abane kubona bathole umphumela obonisa ubungozi obuphansi)
Izinga lokutholakala komphumela ophaphalazayo obonisa ukuba khona kwesifo nakuba singekho	Kusho amathuba okutholakala komphumela obonisa “ubungozi obuphakeme” nakuba umntwana engenalutho olubi emzimbeni wakhe (isib. izinga lokutholakala komphumela ophaphalazayo obonisa ukuba khona kwesifo nakuba singekho lingama-5% okusho ukuthi ngokwemiphumela yokuhlolwa etholakele owesifazane oyedwa kwabangama-20 uzohlonzwa njengonobungozi obuphakeme)
Izinga lokutholakala komphumela ophaphalazayo obonisa ukuthi isifo asikho nakuba empeleni sikhona	Kusho amathuba okutholakala komphumela obonisa “ubungozi obuphansi” nakuba umntwana enesifo noma ukukhubazeka okuthile emzimbeni wakhe – esikhathini esiningi lokhu kuvamise ukuholela ekutheni isifo noma ukukhubazeka kuhlonzwe kuphela emva kokubeletha

### Ukuhlela

Mina/thina siyaqinisekisa ukuthi mina/thina ngi/silufundile lolu lwazi olubhalwe ngenhla futhi ngi/sihlinzekiwe ngethuba lokuxoxisana nodokotela mayelana nemibuzo yami/yethu. Mina/thina ngi/siyawuqonda umehluko nemikhawulo ephathelene nezinhlobo zokuhlolwa ezihlukahlukene ezikhona futhi ngi/sizizwa ngi/siqinisekile ukuthi ngi/sihlinzekwe ngolwazi olwanele oluzokwenza ngi/sikwazi ukuthatha isinqumo mayelana nokuthi yikuphi ukuhlolwa okumele ngi/sizikhethela khona mayelana nalokhu kukhulelwa. Ngi/sikhetha lokhu okulandelayo:



Uhlobo lokuhlolwa	Yebo	Cha	Uma kudingekile
Ukuhlolwa kwamakhelikhali egazini likamama okwenziwa ezinyangeni ezintathu zokuqala zokukhulelwa (ukuhlolwa kwegazi likamama)			
Ukuhlolwa kwamakhelikhali egazini likamama okwenziwa ezinyangeni eziyisithupha zokukhulelwa (ukuhlolwa kwegazi likamama)			
I-MS-AFP (ukuhlolwa kwegazi likamama)			
Ukuhlolwa kolibofuzo okungadingi amangqamuzana (cells) omzimba, (NIPT) (ukuhlolwa kwegazi likamama)			
Ukuhlolwa Okulula Okwenziwa ngesithwebuli-mzimba okukala i-NT			
Ukuhlolwa okweluliwe okwenziwa ngesithwebuli-mzimba okukala i-NT (okwenziwa wungoti)			
Ukuhlolwa kwesimo nokwakheka komzimba wombungu			
Ukuhlolwa okujulile futhi okubanzi kwesimo nokwakheka komzimba wombungu okwenziwa ezinyangeni eziyisithupha zokukhulelwa/ ukuhlolwa okuphathelene nofuzo okwenziwa ngesithwebuli-mzimba (wungoti)			
Ukuhlolwa okuphathelene nofuzo okwenziwa ngokushutheka inaliti emzimbeni kamama			
Ukuhlolwa kwesimo sokukhula kombungu okwenziwa ngesithwebuli-mzimba			
Ukuhlolwa okujulile futhi okubanzi kwesimo nokwakheka komzimba wombungu okwenziwa ezinyangeni ezintathu zokugcina zokukhulelwa (wungoti)			
Ukwelulekwa kwengqondo okuphathelene nofuzo (okwenziwa ngumeluleki noma ngudokotela owungoti wezifo zofuzo)			

Isayinwe e-..... mhlaka .....

Isiguli (igama) ..... isiginesha .....

Udokotela (igama) ..... isiginesha .....

Ufakazi (igama) ..... isiginesha .....



Umlando wobungozi bami mayelama ne-Down syndrome, ngesikhathi engahlolwa ngaso, ngokubheka kuphela ubude besikhathi seqanda, ngu-1 ku .....

Maternal age (years)	Gestational age (weeks)					
	10	12	14	16	20	40
20	1/983	1/1068	1/1140	1/1200	1/1295	1/1527
25	1/870	1/946	1/1009	1/1062	1/1147	1/1352
30	1/576	1/626	1/668	1/703	1/759	1/895
31	1/500	1/543	1/580	1/610	1/658	1/776
32	1/424	1/461	1/492	1/518	1/559	1/659
33	1/352	1/383	1/409	1/430	1/464	1/547
34	1/287	1/312	1/333	1/350	1/378	1/446
35	1/229	1/249	1/266	1/280	1/302	1/356
36	1/180	1/196	1/209	1/220	1/238	1/280
37	1/140	1/152	1/163	1/171	1/185	1/218
38	1/108	1/117	1/125	1/131	1/142	1/167
39	1/82	1/89	1/95	1/100	1/108	1/128
40	1/62	1/68	1/72	1/76	1/82	1/97
41	1/47	1/51	1/54	1/57	1/62	1/73
42	1/35	1/38	1/41	1/43	1/46	1/55
43	1/26	1/29	1/30	1/32	1/35	1/41
44	1/20	1/21	1/23	1/24	1/26	1/30
45	1/15	1/16	1/17	1/18	1/19	1/23

*Snijders RJ, Sundberg K, Holzgreve W, Henry G, Nicolaides KH. Ultrasound Obstet Gynecol. 1999 Mar;13(3):167-70.*

Maternal age (years) = (Iminyaka) yobudala kamama

Gestational age (weeks) = Ubude besikhathi sokukhulelwa (amaviki)

**Isiqapheliso:**

Le ncwajana ihlanganiswe ngamathimba abasebenzi bezempilo abavela emikhakheni ehluahlukene besebenzisa ubufakazi nemithombo yolwazi enohlonze etholakalayo, okukholakala ukuthi ihlinzeka ngolwazi oluqondile futhi olunembayo ngesikhathi okukhishwe ngaso le ncwajana. Ngale ncwajana kuhloswe ukuhlinzeka ngolwazi olujwayelekile kanye nezeluleko ezingasetshenziswa ukuthatha izinqubo eziphathelene nosizo lokwelashwa. Abakwa-SASOG ngeke bathwale icala mayelana nezigameko ezibangelwe wukuguquka kwesimo noma ngenxa yolwazi olutholakale emva kokushicilelwa kwale ncwajana. Akufanele kuthenjwe kule ncwajana kuphela futhi akufanele isetshenziswe esikhundleni sokuhlolwa nokuxilongwa kwezidingo zesiguli ngasinye.